

**PHASE 1 AND 2 GEOTECHNICAL AND  
GEO-ENVIRONMENTAL SITE INVESTIGATION**

**LAND AT GOLDTHORPE ROAD,  
GOLDTHORPE**

**FOR**

**W. REDMILE & SONS LTD.**



**42241-001**

**2 March 2018**

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**ISSUE 1**

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- Appendix 2** Envirocheck Report  
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## 1.0 EXECUTIVE SUMMARY

1. The approximately 3.3 hectare site is located to the east of Goldthorpe Road in Goldthorpe and is centred on national grid reference 446130, 403820. It is proposed to construct residential properties across the site.
2. The majority of the site currently comprises open land, with an electricity substation adjacent to the north-western boundary. A parcel of land formerly occupied by a public house is separated from main site body by an access strip. Asphalt hardstanding associated with the former pub is still present. The site slopes towards the south at around 1 in 25, steepening to around 1 in 22 in the north.
3. Service plans show gas and water pipes along with electricity and communications cables crossing onto the site. The majority are understood to be related to the previous development and may therefore have been disconnected. However, a surface water sewer crossing the site from north to south appears to form part of the wider network.
4. Historical maps show that the southern and western part of site has been occupied by a school and public house since the 1930s. We understand the demolition of the pub took place during the mid-2000s and the school during the 2010s. The northern part of the site has remained undeveloped.
5. The site is shown to be underlain by the Pennine Middle Coal Measures Formation, comprising mudstone, siltstone and sandstone. The Shafton Coal is recorded to outcrop approximately 550 m to the south-west.
6. The site is not located within a floodplain.
7. The underlying solid geology at the site is classified as a Secondary A Aquifer. The site is not within a groundwater source protection zone.
8. 15no. trial pits (TP01 to TP10 inclusive of TP02A, TP05B and SA01 to SA03) and 12no. rotary boreholes (R01 to R12) were carried out. Monitoring wells were installed within five selected boreholes.
9. Beneath the reworked topsoil surfacing of the site, granular and cohesive made ground extends between approximately 0.5 m and 3.4 m bgl. Locally made ground is absent. Natural firm becoming stiff high strength slightly sandy slightly gravelly clay overlying extremely weak siltstone at depths of between 1.7 m and 3.4 m bgl is present beneath this.

10. A banded coal typically 1.5 m to 2.4 m thick was encountered outcropping across the south-western part of the site, dipping to the north. In the south-eastern corner of the site, broken ground between 2.4 m and 2.5 m thick was recorded at depths of between 4.0m and 5.0m. There is less than 10 times seam thickness in overlying rock cover. Drilling and grouting of the plots will therefore be required. Due to the shallow nature of the workings, unrecorded shafts cannot be discounted. Drilling and grouting of roads could also be required.
11. Groundwater was not encountered within any trial pits during the investigation. Perched water seepage was recorded locally in made ground within two trial pits at depths of 0.8 m and 3.4 m bgl. Within monitoring wells, groundwater was typically recorded to be standing at depths of between 2.24 m and 2.93 m bgl.
12. Reinforced strip or trench-fill footings are considered appropriate following the drilling and grouting works. Based on the clay soils being classified as having a medium volume change potential, a minimum founding depth of 900 mm below current or finished ground level, whichever is lower, will be required. All foundations must be taken down to bear on undisturbed, non-desiccated natural ground and deepened near to trees. Heave precautions will be required where the footing depth due to trees exceeds 1500 mm.
13. Due to the shallow depth of the bedrock, there may be both clay and siltstone in the same foundation at formation. To prevent differential settlement, it would be prudent to deepen the foundations onto the same ground type i.e. onto the siltstone.
14. A precast or reinforced suspended concrete floor will be suitable. If gas protection measures are required, a precast floor with underlying minimum 250 mm ventilated void will be needed.
15. No radon precautions are required. One round of gas monitoring has been undertaken to date, with a further five proposed. The results so far indicate CS1 conditions and that no gas protection measures are necessary. However, this will need to be confirmed on completion of the monitoring programme.
16. Infiltration tests were carried out in three locations and did not drain past the 25% effective depth. Soakaways are not considered to be viable. A piped connection will be required and on site attenuation may be necessary.
17. Topsoil encountered within the main body of the site is considered suitable for re-use within gardens and public open space (POS). Elevated concentrations metals and PAH compounds have been identified within the topsoil from the parcel of land (former pub) in the north-west.

Currently the topsoil in this location is not considered to be suitable for reuse at surface within private gardens and POS, therefore the topsoil should be either capped or removed.

18. A 600 mm thick clean capping layer is recommended for gardens and soft landscaped areas where granular made ground remains. This should be increased to 1 m clean capping layer where shallow coal or coal rich soils are present to prevent any potential combustion. For areas underlain by the cohesive made ground deposits, a 300 mm thick growing medium is proposed.
19. DS-2 AC-2 sulphate precautions are considered prudent for concrete in contact with made ground. DS1 and AC2z should be assumed for natural ground only.
20. The results of the chemical testing will need to be forwarded to the water company so that appropriate water supply pipes can be selected. It is not expected that protective measures will be required for pipes laid in the natural ground.
21. The conclusions made in this report in relation to contamination are subject to agreement by the approving bodies such as the Local Authority and the NHBC if applicable.

## **2.0 INTRODUCTION**

### **2.1 Terms of Reference**

This report presents the findings of a Phase 1 and Phase 2 geotechnical and geo-environmental site investigation carried out by Eastwood & Partners (Consulting Engineers) Ltd for, and on the behalf of W. Redmile & Sons Limited (Redmile Homes). Any other parties using the information in this report do so at their own risk and any duty of care is excluded.

### **2.2 Context**

No previous geotechnical or geo-environmental investigations are known to have been undertaken on the site.

### **2.3 Aims and Objectives**

The aims and objectives of this investigation were as follows.

- Assimilate Phase 1 data to derive an outline conceptual model identifying potential contaminants, pathways and receptors, as well as possible linkages between these;
- Obtain additional information and incorporate with previous data enabling refinement and subsequent further testing of the conceptual model;
- Detail the ground conditions and their geotechnical properties enabling outline foundation proposals to be made for the proposed low rise residential development;
- Carry out tiered risk assessment to establish the likely risks to future receptors, involving the use of generic assessment criteria and where unacceptable risks are identified, site specific assessment criteria within a detailed quantitative risk assessment;
- Identify feasible remediation options if unacceptable risks are highlighted; and
- Develop an appropriate remediation strategy where remediation is required.

### **2.4 Scope of Investigation**

This document is split into two sections. These constitute the findings of the Phase 1 and Phase 2 investigations, consecutively.

#### **2.4.1 Phase 1**

The Phase 1 investigation involved a review of information extracted from published documentation as well as that obtained from a site reconnaissance. Information regarding the current and former land uses both on and surrounding the site, as well as the environmental sensitivity of the site location as determined by factors including geology, hydrogeology and hydrology have been examined.

Information analysed in this section of the report has been obtained from a variety of sources and included the following:

- A Landmark Envirocheck report. This includes historical Ordnance Survey maps, as well as information regarding environmental issues such as abstraction licenses, pollution incidents and waste facilities. It compiles information obtained from amongst others, the Environment Agency and the Local Authority;
- Coal Authority Mining Report;
- Geological Maps and associated Geological Memoirs;
- The British Geological Survey website; and
- A site walkover.

The results of the Phase 1 investigation were used to derive an outline conceptual model from which a preliminary risk assessment was made.

#### **2.4.2 Phase 2**

This part of the investigation consisted of intrusive works and laboratory analysis. The findings were used to test the conceptual model and produce a final risk assessment. The intrusive works comprised trial pits and rotary boreholes which were undertaken to enable:

- Examination of the shallow ground conditions;
- In situ description of soils, enabling any localised lateral and vertical changes in soil conditions to be logged;
- Assessment of any contamination identified using visual and olfactory methods;
- Collection of soil samples for chemical and geotechnical testing; and

- An assessment of the likelihood of historical mining below the site at shallow depth.

## **2.5 Limitations of Investigation**

This report is based on the assumption that the site will be developed with residential properties, each with private gardens and areas of hardstanding. The dwellings will be of conventional construction and will be three storeys or less in height, and it is assumed that existing ground levels will not alter significantly. If this is not the case, then the advice given in this report may not be appropriate.

Where assessments of site areas affected in particular ways are given, these are approximate. All information, comments and opinions given in this report are based on the ground conditions encountered during the site work, on the results of laboratory testing carried out as part of the investigation and information gained from a geological and historical desk study. However, there may be conditions at the site that have not been taken into account, such as unpredictable soil strata and water conditions between or below investigation points. It should be noted that groundwater levels vary due to seasonal or other effects, and may at times differ from those measured during the investigation.

This report considers the ground and groundwater and does not cover any buildings or their fabric or the constituents of any existing hardstanding materials. Generally, testing has only been carried out for contaminants identified as potentially present with no assessment made of biological contamination. Risks to ecological receptors, such as bats, have not been considered.

### **3.0 THE SITE**

#### **3.1 Description**

The site has an area of approximately 3.3 hectares and is located to the east of Goldthorpe Road, in Goldthorpe, South Yorkshire. The site is irregular in shape, measuring approximately 200 m north-south on the long axis by 190 m east-west on the short axis, and is centred on national grid reference 446130, 403820. The site slopes gently down from approximately 37 m Above Ordnance Datum (AOD) in the north to 28 m AOD in the south at an angle of approximately 1 in 25, steepening to 1 in 22 in the north.

The majority of the site currently comprises open land, used for grazing in the southern part and overgrown by scrub and saplings in the north, separated centrally by palisade fencing orientated east to west. In the east, a smaller parcel of land comprising a small mound covered by scrub vegetation is separated from the larger site by palisade fencing. In the north-west, a parcel of land, understood to have been formerly occupied by a public house is separated from the main body of the site by a strip of land providing access to a neighbouring bungalow. An asphalt hardstanding associated with the former pub is still present in this area. An electricity sub-station is presented adjacent to the sites western boundary.

Abundant litter including food and drink packaging is present along the southern and western boundaries. A number of semi-mature and mature trees of various species are located along the site boundaries and a number within the northern part of the site. An area of dense vegetation comprising trees and scrub is present centrally in the northern part of the site.

The surrounding land is predominantly residential in use. A school and leisure centre are present to the south with associated playing fields to the east.

#### **3.2 History**

Historical Ordnance Survey maps, obtained as part of the Envirocheck Report, have been reviewed to assess the previous use of the site and surrounding area. Copies of the maps are presented in Appendix 2.

##### **3.2.1 The Site**

The earliest map reviewed, dated 1854, shows the site to comprise open agricultural land forming part of a number of fields with associated field boundaries and a pond is recorded within the northern part. Goldthorpe Lane is recorded in its current position adjacent to the sites western

boundary. No changes are indicated until 1930 when the Buxton Arms Hotel has been constructed in the north-west along Goldthorpe Road.

By the late 1930s a school, named later as Dearnside County Secondary School, has been constructed in the southern half of the site and by 1961 further development around the school site appears to have taken place, including a number of mounds present adjacent to the north-eastern corner of the school, in the centre of the site.

By 1976 the mounds are no longer recorded, with a number of structures assumed to be temporary classrooms present in their place. An electricity sub-station is recorded adjacent to the northern part of the sites western boundary.

Aerial photography dated 1999 records significant extension to the main school building to the north and east.

No other significant changes or development of the site are shown on subsequent maps. It is understood that demolition of the pub took place during the mid-2000s. The school and associated structures was demolished sometime during the 2010s.

### **3.2.2 The Surrounding Area**

The earliest historical maps show the surrounding area mainly to comprise open fields, with the village of Goldthorpe adjacent to the north.

By 1906 the Bolton-on-Deane Brick Works with associated engine house has been constructed approximately 250 m to the southwest. During this time the construction of the Deane Valley Railway branch of the London Midland and Scottish Railway is underway, orientated approximately east to west, 200m to the north.

By the 1930s the railway with associated cutting has been completed along with significant residential development to the north and west of the site. Expansion of the brick works has also taken place. Goldthorpe Colliery is recorded approximately 600 m to the north-east.

Mapping dated from the late 1940s record southward extension of the clay pit associated with the brickworks, with further expansion taking place up to the early 1960s. By this time a works and garage are recorded adjacent to the sites north-eastern boundary, with some minor earth-works appearing to have taken place in the construction of the garage. The road adjoining the southern boundary of the site has been constructed along with a number of structures beyond.

By the mid-1960s the brick works / clay pit appear to be disused and by the 1970s they are recorded as fishing ponds.

During the 1970s an air shaft is recorded approximately 210 m to the south and a refuse heap, assumed to be associated with levelling of sports pitches, is recorded 130 m to the south-east. Further development, assumed to be associated with the school and/or nearby sports pitches, has taken place and by the late 1970s the air shaft is no longer recorded.

By 1993 further development has taken place beyond the southern boundary and by the early 2000s the buildings in the west have been demolished and replaced by car parking. By this time the structure is named as a recreation centre.

A college has been constructed to the west of the recreation centre by 2017. No further significant changes are shown on the historical maps.

### **3.3 Geology**

The geological maps for the area, Sheet 275 SE (1:10,560 scale) indicate the site to be underlain by strata of the Pennine Middle Coal Measures recorded by the BGS to typically comprise mudstone, siltstone and sandstone of Carboniferous age. The Shafton Coal is recorded to outcrop approximately 550 m to the south-west.

The strata are indicated to dip towards the north at an angle of 5°.

No superficial deposits are indicated to be present, and no faults or other lines of weakness are shown to cross the site at surface.

The BGS holds record of seven boreholes drilled within the 250 m of the site. The closest is 26 m to the south-west and records 0.45 m of topsoil overlying dark brown clay to a depth of 0.9 m bgl. Beneath the clay, a 0.5 m thick band of soft clayey coal was encountered underlain by grey mudstone to a depth of 3.0 bgl.

A deeper borehole drilled 65 m north-west of the site records bedrock from a depth of 2.7 m comprising interbedded siltstone, sandstone and shales, proven to a depth of approximately 30 m bgl. A thin, approximately 0.05 m thick, flash of coal was recorded at a depth of 10.5 m. Another, more significant band (0.7 m thick), named as the Top Thorncliffe, was recorded below at a depth of 19.9 m bgl.

### **3.4 Hydrogeology**

The Envirocheck report identifies that the bedrock below the site is classified as a Secondary A Aquifer. This is defined 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.

Information within the Envirocheck Report also states that the site does not lie within a groundwater Source Protection Zone.

#### **3.4.2 Groundwater Abstractions**

According to the Envirocheck report, there is a single groundwater abstraction license within 500 m of the site. The record is located 257 m to the south at Dearne Brickyard Fishing Ponds and is operated by Barnsley Metropolitan Borough Council for pond level maintenance. The licence has now lapsed.

### **3.5 Hydrology**

The Envirocheck Report records the nearest surface water feature to be located 96 m south west of the site. This appears to be a drainage ditch. This is unlikely to be affected by activities on site.

### **3.6 Mining**

The geological map of the area, Sheet 275 SE, indicates the Shafton Coal to outcrop approximately 550 m to the south-west, dipping to the north, beneath the site. Two shallower un-named seams are recorded by the BGS in the generalised succession above the Shafton Coal at approximately 8 m and 60 m, however these are not recorded on geological mapping in the vicinity of the site.

The geological memoir for Barnsley records the Shafton Coal to be between 1.2 m and 1.5 m thick in this area and to have been largely worked at outcrop. The Shafton Coal is recorded to have been worked at a depth of 57 m bgl at Goldthorpe Colliery and 43 m bgl at Highgate Colliery some 670 m to the north-east and 920 m to the north-west, respectively.

The Highgate coal, typically recorded to be in the region of 0.45 m thick, is recorded within the geological memoir to have been encountered approximately 30 m above the Shafton Coal in this area and is recorded to have been worked at the Highgate Colliery at a depth of 14 m bgl.

An unnamed coal seam is recorded on the geological map of the area, outcropping in a railway cutting approximately 330 m north-west and another approximately 550 m to the east. It is considered that these outcrops may be representative of the Highgate Coal and is likely to outcrop

to the north of the site. However, the presence of the Highgate Coal beneath the site cannot be discounted at this stage.

A Coal Authority mining report has been obtained and is included in Appendix 2. This states that the site is in a surface area that could be affected by of past underground mining in four seam of coal at depths of between 230 m and 640 m, last worked in 1979. Any movement in the ground due to mining within these seams should have stopped.

In addition the property is in an area where the Coal Authority believe there is coal at or close to the surface. This coal may have been worked at some time in the past.

The site is not in an area where the Coal Authority has granted or plans to grant a licence for future removal of coal. However it should be noted that reserves of coal exist in the area which could be worked at some point in the future.

There are no known coal mine entries within, or within 20 m of, the boundary of the site. Although Coal Authority records may be incomplete and unrecorded shafts could exist. The Coal Authority has no record of mine gas emissions that have required any action.

There are three claims for alleged coal mining related subsidence within 50 m of the property boundary that do not match the property address. These are located on properties to the north of the site. The status of the claims is not provided, but may be available for the Coal Authority for additional cost.

There is no current stop notice delaying the start of remedial works or repairs to the development property.

Based on the above, it is considered likely that the site may affected by shallow coal mining, and a borehole investigation is required. This has been undertaken as part of the Phase 2 works. Remedial works such as drilling and grouting may be required if shallow workings are encountered.

### **3.7 Ground Gas**

The site is in a lower probability radon area, with less than 1% of homes estimated to be at or above the action level, according to the Envirocheck report. No radon protective measures are necessary in the construction of new dwellings or extensions.

The Envirocheck report lists a BGS recorded landfill site approximately 200 m south of the site named Marsh Tip. No further information is provided, however, a historical landfill of the same name

and location is recorded to have accepted inert, industrial, commercial and household waste, and liquid sludge between 31<sup>st</sup> December 1970 and 31<sup>st</sup> December 1979.

A local authority recorded landfill is recorded approximately 240 m to the south of the site. No further information is provided. No additional landfill sites are recorded within 250 m of the site.

The Envirocheck report records a licensed waste management facility on site, however the address supplied relates to a site some 5.5 km west of the site. The operator is named as R & JM Shaw Waste Disposal and the licence was surrendered in 2004. It is possible this may relate to the garage recorded adjacent to the north-east of the site.

Two areas of potentially infilled land (non-water) are recorded approximately 140 m and 220 m to the south-east and south-west, respectively. These are considered to be associated with levelling of sports pitches in the south-east and the former clay pit in the south-west.

Three areas of potentially infilled land (water) are recorded within 250 m of the site. The closest is recorded on site and relates to the former pond in the central northern part of the site. The remaining two are recorded approximately 140 m and 150 m to the north and north-west, respectively.

Deep made ground (>2.5 m) may be present on site in the vicinity of the infilled pond and beneath the former development, if it had basements. These are both considered potential sources of ground gas, however, given the age of the infilled pond this is considered unlikely in this case.

If shallow coal workings are present the site may be at risk of mine gas.

### **3.8 Pollution Incidents to Controlled Waters**

The Envirocheck Report does not record any pollution incidents to controlled waters within 250 m of the site.

### **3.9 Discharge Consents**

The Envirocheck Report records no discharge consents within 250 m of the site.

### **3.10 Flooding**

Information provided in the Envirocheck Report shows that the site does not lie within a flood zone (zone 2 or 3) at risk of flooding from rivers or seas.

Parts of the central and northern area of the site are recorded to be at low to high risk from surface flooding. Goldthorpe road to the west, Hall Street to the north and the unnamed road to the south are all at risk from surface water flooding, ranging from low to high risk.

The northern part of the site is located within an area recorded to have limited potential for groundwater flooding to occur.

### 3.11 Soil Geochemistry

The soil geochemistry maps included in the Envirocheck report estimate the following concentrations of arsenic, cadmium, chromium, nickel and lead to be present in the natural soil at the site:

| Contaminant | Estimated Concentration (mg/kg) | Assessment Value (mg/kg) |
|-------------|---------------------------------|--------------------------|
| Arsenic     | <15 to 25                       | 37                       |
| Cadmium     | <1.8                            | 11                       |
| Chromium    | 60 to 90                        | 910                      |
| Lead        | <100                            | 200                      |
| Nickel      | 15 to 30                        | 180                      |

Based on the above, the levels of these contaminants are not expected to exceed the residential assessment value within the natural ground.

## **4.0 OUTLINE CONCEPTUAL MODEL**

The site is being considered for low-rise residential development with private gardens and areas of soft landscaping.

### **4.1 Potential sources of Contamination**

The site has previously been occupied by a school and public house before they were demolished during the 21<sup>st</sup> Century.

Made ground / reworked topsoil is expected to be present below the site, and may contain elevated concentrations of heavy metals/metalloids, polycyclic aromatic hydrocarbons (PAHs) and sulphates. Asbestos fibres may also be present.

### **4.2 Ground Gas**

No radon protective measures are required.

Deep made ground (>2.5 m) may be present on site in the form of an infilled pond and beneath the former development if it had basements. Significant sources of offsite made ground include two recorded landfills approximately 200 m and 240 m to the south.

If shallow coal workings are present the site may be at risk from mines gas.

Given the above, there is considered to be a risk from ground gas / mines gas posed to the future development and site users.

### **4.3 Potential Contaminant Linkages**

The following table details the possible sources and associated contaminants of concern, pathways and receptors, highlighted by the Phase 1 investigation as potentially present:

## Potential Contaminant Linkages

| Source                                                                                                                            | Pathway                                                                                 | Receptor                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Heavy metals, asbestos and PAHs in made ground and shallow natural soils</li> </ul>        | <ul style="list-style-type: none"> <li>Ingestion, inhalation, direct contact</li> </ul> | <ul style="list-style-type: none"> <li>Site residents and visitors</li> <li>Construction workers</li> </ul> |
|                                                                                                                                   | <ul style="list-style-type: none"> <li>Root Uptake</li> </ul>                           | <ul style="list-style-type: none"> <li>Plants</li> </ul>                                                    |
|                                                                                                                                   | <ul style="list-style-type: none"> <li>Migration through ground</li> </ul>              | <ul style="list-style-type: none"> <li>Controlled waters (Secondary A Aquifer)</li> </ul>                   |
| <ul style="list-style-type: none"> <li>Sulphates in made ground or natural ground</li> </ul>                                      | <ul style="list-style-type: none"> <li>Direct contact</li> </ul>                        | <ul style="list-style-type: none"> <li>Below ground concrete</li> </ul>                                     |
| <ul style="list-style-type: none"> <li>Ground Gas from mine workings, nearby landfill and/or areas of deep made ground</li> </ul> | <ul style="list-style-type: none"> <li>Migration through ground</li> </ul>              | <ul style="list-style-type: none"> <li>Site residents and visitors</li> <li>Construction Workers</li> </ul> |

## **5.0 GROUND INVESTIGATION**

### **5.1 Site Works**

We visited site between 17<sup>th</sup> and 19<sup>th</sup> January 2018 and excavated 15no. trial pits (TP01 to TP10, inclusive of TP02A, TP05A and soakaway pits SA01 to SA03) to depths of between 0.2 m and 3.5 m bgl. Exploratory hole locations were positioned to give good site coverage.

Rotary open-hole drilling was carried out at 12no. positions (R01 to R12) across the site, to depths of between 8.4 m and 30 m bgl to determine the presence of shallow coal seams and/or workings beneath the site. Gas and groundwater monitoring wells were installed within five selected boreholes (R01, R03, R05, R07 and R08).

A small parcel of land, bounded by palisade fencing, in the eastern part of the site was inaccessible during the works. Access to the area of the former pond was also restricted by dense vegetation comprising trees and scrub.

One round of gas monitoring has been carried out so far on 14 February 2018.

Copies of the trial pit and borehole logs are presented in Appendix 3, and their locations are plotted on the Exploratory Hole Location Plan, Drawing number 42241/001 revision A in Appendix 1.

### **5.2 Laboratory Testing**

Eight samples of natural clay, one sample extremely weak siltstone and one sample of cohesive made ground were dispatched for geotechnical testing at Professional Soils Laboratory in Doncaster. The geotechnical test results are presented in Appendix 4 and discussed further in Section 7.

Ten samples of topsoil/sub-soil, eight samples of made ground and four samples of natural ground were despatched for chemical testing. Soil samples were taken in 500 g plastic tubs, 250 ml and 60 ml amber glass jars and analysed at Chemtest Limited, Newmarket using MCERTs accredited methodologies where available.

Laboratory testing results are presented in Appendix 4 and discussed further in Sections 8.0 and 9.0.

## **6.0 GROUND CONDITIONS**

Rotary probe-hole logs are based on chippings returned to surface by flush returns. Given the above, ground conditions for shallow natural soils are based off findings within trial pits only.

### **6.1 Surface Covering**

All trial pits encountered between 100 mm and 500 mm of topsoil from surface typically comprising a brown slightly gravelly sandy clay with roots and rootlets. The gravel was of mixed lithologies including sandstone, siltstone and mudstone with rare brick fragments. Reworked topsoil encountered within TP06, In the vicinity of the former Buxton Arms Hotel, was recorded to contain inclusions of ash and clinker.

### **6.2 Made Ground**

Made ground was encountered in eleven of the trial pits during the investigation to depths of between 0.5 m and 3.4 m bgl.

In the northern part of the site, along with the south-western corner (TP01), made ground underlying reworked topsoil was typically found to be absent, with the exception of TP06 and TP08 where reworked natural strata comprising firm slightly sandy gravelly clay was encountered to depths of between 0.5 m and 1.0 m bgl. The granular component was recorded to be tabular lithorelicts of siltstone with rare fragments of brick.

In the south eastern part of the site (TP05, TP05A, TP04 and SA03), made ground comprising slightly sandy gravelly clay with a granular content of limestone, sandstone, brick, concrete and rare ceramic was encountered to depths of between 0.5 m and 1.2 m bgl. Locally, ashy inclusions were noted within TP04. Within TP04, beneath the overlying cohesive made ground, a wedge of slightly clayey sandy gravel of coal fragments with inclusions of limestone, pockets of clay and ash was recorded extending to a depth of 2.0 m bgl in the northern part of the trial pit.

Within the central and western area of the southern part of the site, within the vicinity of the former school building, reworked topsoil was recorded to be underlain by demolition rubble to a depth of 0.4 m bgl typically comprising slightly sandy clayey gravel of crushed brick with occasional sandstone and concrete.

Beneath the footprint of the former school building, deep made ground of variable makeup was recorded beneath the demolition rubble to depths of between 2.0 m and 3.4 m bgl. Made ground comprising black very clayey sandy gravel of angular coal and black shale with occasional brick, sandstone and ash was encountered within TP02A to a depth of 2.0 m bgl. TP03 recorded brown

slightly sandy slightly gravelly clay with a granular component of angular brick, siltstone and sandstone. Grey / brown slightly sandy gravelly clay with medium cobble content was recorded to a depth of 3.4 m bgl within TP10. The granular component was recorded to comprise brick, shale and coal fragments, with rare plastic and timber.

The full depth of made ground was not proven within TP02 due to the presence of a possible service and within TP05 due to refusal on a concrete slab. TP02A and TP05A were excavated to their full extent in the vicinity of the respective positions.

Locally, the sides of the trenches were observed to be loose and unstable.

### **6.3 Natural Ground**

Completely weathered / residual strata of the Pennine Middle Coal Measures Formation was encountered beneath made ground / reworked top-soil in all of the trial pits with the exception of TP02 and TP05. This generally comprised firm becoming stiff high strength slightly sandy slightly gravelly clay with granular component of angular tabular lithorelicts of siltstone. Thin (up to 100 mm thick) flashes of completely weathered coal were recorded in TP05A and TP06, within the natural cohesive strata at depths of 2.3 m and 2.8 m, respectively.

Where encountered, bedrock, typically comprising extremely weak de-structured siltstone was recorded from depths of between 1.7 m and 3.4 m bgl. Within TP02A a 1.0 m thick band of intact coal was recorded overlying the siltstone, directly beneath made ground soils from a depth of 2.0 m. Given the high coal content of the overlying made ground at this location, it is considered some form of extraction may have taken place.

Within SA02, a thin (100 mm thick) band of black shale was recorded to overly the siltstone bedrock at a depth of 1.7 m bgl.

Rotary probe holes encountered rock-head, typically comprising interbedded sandstone and grey mudstone from depths of between 1.4 m and 3.2 m bgl to a maximum proven depth of 30 m bgl.

A banded coal was encountered out-cropping / sub-cropping in the south-western part of the site (R02 and R05), dipping to the north east to a maximum depth of 12.2 m bgl recorded in R07. The seam is noted to be absent in R01 in the south-western corner. Where the full seam thickness was encountered, the seam was recorded to be between 1.5 m and 2.4 m thick. In the south-eastern corner of the site, within R03 and R10, broken ground between 2.4 m and 2.5 m thick was recorded at depths of between 4.0 m and 5.0 m, respectively.

Two thin impersistent seams of coal between 0.1 m and 0.3 m thick were recorded locally approximately 5.0 m to 7.2 m, and 12.2 m to 14.5 m beneath the banded coal seam, respectively.

Given above it appears that underground abstraction of the coal has taken place in the south-eastern corner of the site, seeming to extend off site to the east. Additionally, based on information obtained from trial pitting, surface abstraction of the banded coal appears to have taken place locally at crop, either as a resource and/or to facilitate founding of the former structures.

#### **6.4 Obstructions**

An old / redundant electric cable was encountered with TP02 at a depth 0.2 m within the made ground. It is possible other services related to the former development may be present. Service plans show gas and water pipes along with electricity and communications cables crossing onto the site. The majority are understood to be related to the previous development, however, a surface water sewer crossing the site from north to south appears to form part of the wider network.

The excavation of TP05 was terminated on a concrete slab, assumed to be associated with the former school.

A number of brick walls and footings were identified within trial pits, particularly within the areas of deep made ground in the vicinity of the former school. This is considered to be an indication of possible historical basements in this area or over-deepening of foundations due to the presence of near surface coal.

Obstructions were not encountered in any of the other trial pits, apart from termination within the underlying bedrock at depths in excess of 1.9 m bgl.

#### **6.5 Groundwater**

Groundwater was not encountered in any trial pits during the investigation. However perched water seepage was recorded within the made ground in TP02A and TP10 at depths of 0.8 m and 3.4 m bgl, respectively.

During the first monitoring visit water was found standing in wells at depths of between 2.24 m and 2.93 m bgl, with the exception of R05 which was recorded to be dry at 2.98 m bgl.

## **6.6 Evidence of Contamination**

No visual or olfactory evidence of possible significant contamination was identified in any of the exploratory holes. However, soils containing components of ash, clinker, coal, brick and concrete etc. were encountered. These soils can often contain elevated concentrations of metals, PAHs and asbestos containing materials.

## **7.0 GEOTECHNICAL APPRAISAL**

### **7.1 General**

Our investigations indicate that beneath the reworked topsoil surfacing, made ground of gravel or clay extends to between approximately 0.5 m and 3.4 m bgl. Locally the made ground is absent. Natural firm becoming stiff high strength slightly sandy slightly gravelly clay overlying extremely weak siltstone is present beneath this.

Eight samples of natural clay, one sample of cohesive made ground and one sample of siltstone were sent for geotechnical testing.

Modified plasticity indices of between 13.4% and 40% have been calculated for the clay samples, which relate to low to high volume change potential. Given that the lower limit of high plasticity clay is 40%, with the majority of the samples falling below this and the highest value just reaching the lower limit, the natural clays at the site should be regarded as being of medium shrinkability in accordance with NHBC Chapter 4.2 guidance.

A modified plasticity index of 21.32% has been calculated for the cohesive made ground, indicating medium volume change potential.

The sample of siltstone was found to be non-plastic.

Consistency indices (CI) calculated for the eight samples of natural cohesive soil recorded values of between 0.92% and 1.28%, representative of stiff to very stiff soils.

11 no. hand shear vane tests carried out within the natural clay at depths of between 0.8 m and 3.0 m bgl recorded shear strengths ( $C_u$ ) of between 90 kPa and 201 kPa (mean and median of 133 kPa and 135 kPa, respectively). A safe bearing capacity of at least 150 kN/m<sup>2</sup> is considered appropriate for the natural clay.

### **7.2 Coal Mining Assessment**

Coal was encountered within three trial pits. In TP02A the coal seam was encountered at 2.0 m bgl, beneath made ground, to a depth of 3.0 mbgl. Within TP10 the coal was encountered in one face of the trial pit from a depth of 3.0 m, proven to 3.4 m bgl. As the above coal was recorded directly below or adjacent to made ground soils it is considered representative of crop workings, or over deepening of foundations to accommodate for the presence of shallow coal / basements.

A thin band of coal, 0.1 m thick, was recorded within residual natural soils in TP05 at a depth of 2.3 m bgl.

Rotary boreholes were drilled in 12no. locations to depths of up to 30 m bgl. Broken ground, indicative of partially collapsed workings, was found in two of the 12no. holes, in the south-eastern corner of the site. The rest recorded a solid banded coal seam, between 1.5 m and 2.4 m thick (where full thickness was encountered), with the exception of R01 in the south-western corner, where only thin traces of coal were encountered. It is considered likely that R01 is drilled to the west of outcrop, and thus did not record any coal to be present.

Given the location of outcrop, the coal is considered possibly representative of the Highgate Coal, however, the thickness of coal encountered is more representative of the Shafton Coal. It is possible that the coal encountered is an unrecorded seam.

Borehole R02 and R05 recorded the coal seam at out-crop / sub-crop in the south western part of the site.

The results are summarised below, listed from the most south-westerly (where the seam was expected to be shallowest) to north east (where the seam is expected to be deeper):

|       | Total Depth of Exploratory Hole (m bgl) | Depth of Solid Coal (m bgl)                                     | Depth of Broken Ground (m bgl) |
|-------|-----------------------------------------|-----------------------------------------------------------------|--------------------------------|
| R01   | 30                                      | 8.6 - 8.7 (0.1)<br>15.5 - 15.8 (0.3)                            | -                              |
| TP02A | 3.2                                     | <b>2.0 - 3.0 (1.0)*</b>                                         | -                              |
| R02   | 30                                      | <b>2.1 - 3.5 (1.4)*</b><br>18.0 - 18.2 (0.2)                    | -                              |
| R05   | 30                                      | <b>2.8 - 4.0 (1.2)*</b><br>9.0 - 9.1 (0.1)<br>16.8 - 17.0 (0.2) | -                              |
| TP10  | 3.4                                     | <b>3 - 3.4 (0.4)*</b>                                           | -                              |
| R12   | 15                                      | <b>3.8 - 6.2 (2.4)</b>                                          | -                              |
| R03   | 9                                       | -                                                               | <b>4.0 - 6.5 (2.5)</b>         |
| R11   | 15                                      | 4.8 - 7.0 (2.2)                                                 | -                              |
| R10   | 8.4                                     | -                                                               | <b>5.0 - 7.4 (2.4)</b>         |
| TP05A | 3.1                                     | 2.3 - 2.4 (0.1)                                                 | -                              |
| R04   | 30                                      | <b>5.5 - 7.0 (1.5)</b><br>20.7 - 20.9 (0.2)                     | -                              |
| R06   | 12                                      | <b>7.9 - 10.1 (2.2)</b>                                         | -                              |
| R09   | 30                                      | <b>9.0 - 11.1 (2.1)</b><br>23.3 - 23.4 (0.1)                    | -                              |
| R08   | 15                                      | <b>10.8 - 13.1 (2.3)</b>                                        | -                              |
| R07   | 30                                      | <b>12.2 - 14.4 (2.2)</b>                                        | -                              |

Thicknesses summarised in brackets, banded coal seam highlighted in bold, \* - full thickness not encountered

The geological memoir for Barnsley states that the Shafton Coal has been worked below ground in the area, as well as at crop. The Highgate Coal has been worked at Highgate Colliery some distance to the north.

The Shafton seam is expected to be between 1.2 m and 1.5 m thick and the Highgate Coal approximately 0.45 m thick. The results of the borehole investigation recorded between 1.5 m and 2.5 m of coal and/or broken ground.

Underground coal workings require ten times the workable seam thickness in overlying competent rock cover for drilling and grouting to not be required. Using a workable seam thickness of up to 2.4 m, workings would require at least 24 m of cover.

There is therefore not more than 10 times seam thickness in overlying rock cover. Drilling and grouting of plots will therefore be required below the majority of the site. This will be needed below plot positions and is likely to be undertaken around a grid formation of probably 3 m spacing. It may also be necessary to drill and grout beneath roads where the coal workings are present at shallow depth. This requirement will need to be discussed with the Local Authority.

At this stage, the presence of unrecorded mine workings between exploratory hole positions cannot be discounted. However, it is anticipated that a round of confirmatory drilling, undertaken in order to delineate the workings, would refine the area where drilling and grouting is necessary to the south-eastern corner of the site.

Due to the shallow nature of the workings, unrecorded shafts or mine entries (adits or bell pits) could be encountered. Any mine entries or shafts that are encountered will need to be drilled to confirm that they have been filled, and then grout stabilised, and capped at rockhead using a reinforced concrete cap.

### **7.3 Foundations**

Following drilling and grouting of the mine workings beneath the plot positions it is expected that reinforced strip or trench-fill footings can be used within the natural clay. The reinforcement will comprise a layer of B785 mesh within the top and bottom of the footing. All footings should be a minimum of 450 mm thick.

Where mine workings can be proven to be absent through additional probing, it is expected unreinforced strip or trench-fill footings can be used.

Where areas of deep made ground are encountered, it is anticipated that foundations will be deepened through the made ground to found in the underlying natural strata.

Based on the clay soils being classified as having a medium volume change potential, a minimum founding depth of 900 mm below current or finished ground level, whichever is lower, will be required. All foundations must be taken down to bear on undisturbed, non-desiccated natural ground of adequate bearing capacity.

Due to the shallow depth of the bedrock, there may be both clay and siltstone or mudstone in the same foundation at formation level. In this case, to prevent unacceptable amounts of differential settlement, it would be prudent to deepen the foundations onto the same ground type i.e. on to the siltstone or mudstone.

Where coal or coal-rich strata is encountered in foundation trenches, this should be blinded using a lean mix of concrete. The footing should be deepened to bear onto the competent ground below the coal seam.

Foundations within clay soils will need to be deepened in accordance with NHBC Standards, Chapter 4.2 where existing or proposed trees are within influencing distance of the foundation. However, foundations need not be deepened further upon reaching non-shrinkable bedrock. Heave precautions should be included in the footings where the footing depth due to trees is in excess of 1500 mm.

#### **7.4 Ground Floors**

Reinforced suspended slabs or precast beam and block floors are considered most suitable for the proposed development. However, ground bearing floor slabs could also be considered where made ground is less than 600 mm in depth.

If footings required heave precautions due to trees, a minimum 250 mm ventilated void below will be required.

The type of floor slab proposed will need to be reviewed upon completion of the gas monitoring programme which is being undertaken currently. If gas protective measures are shown to be necessary, precast concrete floors with a ventilated void below will be required for all plots. A fully lapped and sealed gas resistant membrane would also need to be included.

#### **7.5 Superstructure Precautions**

Due to the shallow mining beneath the site, additional superstructure precautions such as masonry reinforcement should be allowed for in all plots at this stage.

## 7.6 Excavation Problems

Locally some loose sides were observed within the made ground. The stability of any trenches is likely to be variable due to the presence of re-worked ground. Support will be required in accordance with current Health & Safety Regulations wherever access is required to trenches deeper than 1.2 m or less where there is risk of collapse.

## 7.7 Problems due to Past Development

The southern and north-western parts of the site were previously occupied by a school and pub respectively. Both of which have now been demolished, aside from a small patch of asphalt hardstanding adjacent to the former pub. Foundations and services associated with these buildings may still be present which will need to be removed where they conflict with new foundations or structures.

## 7.8 Surface Water Drainage

Infiltration tests were undertaken within three trial pits, referenced SA01 to SA03. The results and calculation of infiltration rates are provided in Appendix 4, and are summarised in the table below.

| Pit  | BRE365 Soil Infiltration Rate ( $\times 10^{-6}$ ) m/s | Average Infiltration Rate<br>m/s |
|------|--------------------------------------------------------|----------------------------------|
| SA01 | -                                                      | $1.2 \times 10^{-5}$             |
| SA02 | -                                                      | $1.4 \times 10^{-5}$             |
| SA03 | -                                                      | $5.4 \times 10^{-6}$             |

The water did not drain past the 25% effective depth within any of the soakaway pits after periods of between 3 and 4 hours. Within SA03, water failed to drain past the 75% effective depth after 3 hours. It was not possible to calculate a BRE365 infiltration rate for any of the tests undertaken. Soakaway drainage is not therefore considered to be viable for the proposed development.

It is likely that the previous development connected to the local sewer network, and this connection may still be present, and may be suitable for re-use for the new development, subject to approval by the Local Authority and the water company. However, additional on-site attenuation is likely to be required.

## 8.0 REFINEMENT OF OUTLINE CONCEPTUAL MODEL

### 8.1 Source Characterisation

An outline conceptual model, detailing the possible sources and associated contaminants of concern, potential pathways and receptors identified in the Phase 1 study was detailed in Section 4.0.

This section of the report documents the works undertaken to obtain information to test and refine this model enabling a risk assessment to be produced and, where significant risks are expected, remediation recommendations.

### 8.2 Investigation of Potential Contamination Sources

The investigation works undertaken to cover each of the sources of potential contamination outlined in Section 4 are detailed in the table below:

| Source                                                                   | Potential Contaminants                                                                     | Exploratory hole used to investigate source                                                          |
|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Made ground and shallow natural soils                                    | Elevated levels of metals/metalloids, sulphates, PAHs, asbestos                            | Made ground was encountered within the majority of trial pits across the site                        |
| Natural ground                                                           | Naturally occurring contaminants such as pyrite (resulting in elevated levels of sulphate) | The natural ground was encountered in all holes across the site with the exception of TP02 and TP05. |
| Possible mine workings, nearby landfill and/or areas of deep made ground | Ground gas                                                                                 | Gas monitoring wells installed within five selected boreholes                                        |

### 8.3 Ground Gas

No radon precautions are required at the site.

A BGS recorded landfill named Marsh Tip is recorded approximately 200 m south of the site.

An area of infilled land is recorded on site, relating to a former pond in the central northern part of the site. Exploratory holes did not encounter evidence of the infilled pond, however, access was restricted in this area due to the presence of trees.

Deep made ground (>2.5 m) was encountered within two trial pits (TP03 and TP10) in the vicinity of the former school building.

Broken ground, indicative of collapsed / backfilled mine workings, was recorded within rotary probe holes (R03 and R10) in the south-eastern corner of the site at depths of between 4.0m and 5.0m bgl.

Monitoring wells were installed at R01, R03, R05, R07 and R09. At the time of writing, one round of gas monitoring has been undertaken during a time of falling atmospheric pressure. The following results were recorded:

- No methane;
- Maximum 1.7% carbon dioxide;
- Oxygen concentrations ranging from 18.5% to 20.3%; and
- maximum positive flow of 0.6l /hr.

Based on these results, the site would classify as characteristic gas situation (CS) 1 and not require gas protection measures. This will need to be confirmed on completion of the monitoring programme. A further five monitoring visits are scheduled over the forthcoming months.

#### 8.4 Unexpected Contamination

No other visual or olfactory observations of unexpected contamination were noted. No indication of any potential PCB contamination was identified in any of the trial pits near to the substation. As the substation is still live, no trial pits were undertaken in close proximity to this feature.

Made ground soils containing brick, coal, ash and clinker were encountered. These soils can often contain elevated concentrations of heavy metals, metalloids, PAHs and asbestos containing materials (ACMs)

#### 8.5 Chemical Testing

Nine samples of reworked topsoil, eight samples of made ground and four samples of natural ground were dispatched for chemical testing. Each of the samples was analysed for the suite of contaminants listed below:

| Contaminant Type  | Actual Contaminants                                                                         |
|-------------------|---------------------------------------------------------------------------------------------|
| Metals/Metalloids | Arsenic, cadmium, chromium (VI and total), lead, mercury, nickel, selenium, copper and zinc |
| pH                | pH                                                                                          |
| PAHs              | Speciated PAH                                                                               |
| Sulphates*        | water soluble sulphate, total (acid soluble sulphate) and sulphur                           |

\*Made and natural ground only

In addition to the above:

- The samples of topsoil and made ground were screened for asbestos; and
- Two samples of made ground and one sample of in-situ coal were tested for calorific value.

Testing was undertaken by Chemtest Limited, using MCERTs accredited methodologies, where available.

## 8.6 Assessment Criteria

Residential properties are proposed for the site, each having a private garden. The assessment criteria relating to a residential with home-grown produce end use have been used initially, and then also compared with assessment criteria relating to a public open space (POS) near housing end use.

Tables detailing the relevant assessment concentrations used are included in Appendix 4.

## 8.7 Chemical Test Results

Some preliminary risk assessment is undertaken in this section of the report where determinants can be readily discounted.

### 8.7.1 Topsoil

Eight samples of topsoil were tested from the main site body and a single sample was tested from the parcel of land formerly occupied by the Buxton Arms Hotel in the north-western corner of the site. Given the geographical separation and the observation of ash and clinker within the topsoil encountered within the vicinity of the former Buxton Arms, the two materials are considered to be distinct.

#### **Main Site**

Two samples were tested for TOC, recording an average of 0.29% which is equivalent to a SOM of 0.50%. The results have been compared to assessment values derived using 1% SOM where applicable.

A single sample of topsoil (SA02 at 0.1 m) recorded an arsenic concentration of 56 mg/kg, in excess of the assessment value of 37 mg/kg. The same sample exceeds the phytotoxic assessment value of 50 mg/kg. The modified mean calculated for all eight samples of topsoil records an arsenic concentration of 38 mg/kg, marginally in exceedance of the human health assessment value.

Copper was recorded in excess of the phytotoxic assessment value of 200 mg/kg within one sample of topsoil, within TP05, at a concentration of 420 mg/kg. The modified mean calculated for all eight samples records the sample tested from TP05 to be an outlier.

No other metals/metalloids were found to be elevated.

Two samples recorded two elevated PAH concentrations. These are summarised in the table below:

| Contaminant          | Assessment Value – Residential with Home-grown Produce (mg/kg) | Assessment Value – POS near Housing (mg/kg) | Concentration Recorded (Sample) (mg/kg)    | Modified Mean (mg/kg) |
|----------------------|----------------------------------------------------------------|---------------------------------------------|--------------------------------------------|-----------------------|
| Benzo(b)fluoranthene | 2.6                                                            | 7.1                                         | 3.2 (TP04 at 0.10m)<br>3.1 (TP05 at 0.20m) | 2.49                  |
| Benzo(a)pyrene       | 2.2                                                            | 5.7                                         | 2.4 (TP04 at 0.10m)<br>2.3 (TP05 at 0.20m) | 1.76                  |

The modified mean calculations for the two PAH determinands both fall below the assessment values for residential with home-grown produce. Given the above, following mixing as part of the topsoil strip, PAHs within topsoil from the main site body are not considered to pose a risk to human health and are not considered further.

Asbestos was not detected in any of the samples.

No other contaminants were found to be elevated within any of the samples of the topsoil tested within the main site body.

#### **Parcel of land formerly occupied by the Buxton Arms Hotel**

The sample of topsoil tested within TP06 at 0.3 m recorded an arsenic concentration of 43 mg/kg and a lead concentration of 250 mg/kg, in excess of the assessment values of 37 mg/kg and 200 mg/kg, respectively.

No other metals/metalloids were found to be elevated.

The sample recorded four elevated PAH concentrations. These are summarised in the table overleaf:

| Contaminant           | Assessment Value<br>– Residential with<br>Home-grown<br>Produce (mg/kg) | Assessment Value<br>– POS near<br>Housing (mg/kg) | Concentration<br>Recorded (Sample)<br>(mg/kg) | Modified<br>Mean<br>(mg/kg) |
|-----------------------|-------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------|-----------------------------|
| Benzo(a)anthracene    | 7.2                                                                     | 29                                                | <b>11</b> (TP06 at 0.3m)                      | N/A                         |
| Benzo(b)fluoranthene  | 2.6                                                                     | 7.1                                               | <b>12</b> (TP06 at 0.3m)                      | N/A                         |
| Benzo(a)pyrene        | 2.2                                                                     | 5.7                                               | <b>9.8</b> (TP06 at 0.3m)                     | N/A                         |
| Dibenz(a,h)anthracene | 0.24                                                                    | 0.57                                              | <b>1.1</b> (TP06 at 0.3m)                     | N/A                         |

Asbestos was not detected in the sample.

No other contaminants were found to be elevated.

### 8.7.2 Made Ground

Six samples of cohesive made ground and three samples of granular made ground were tested.

#### **Cohesive Made Ground**

Two samples of cohesive made ground (TP02A at 1.0 m and TP06 at 0.8 m) recorded arsenic concentrations of 43 mg/kg and 40 mg/kg respectively, slightly exceeding the assessment value of 37 mg/kg.

A single sample of mercury recorded an elevated concentration of 1.8 mg/kg, in exceedance the screening value of 1.2 mg/kg and phytotoxic screening value of 1 mg/kg.

Asbestos was not detected in any of the samples.

Calorific value was recorded for a single sample of cohesive made ground at 2.5 MJ/kg.

No other contaminants were found to be elevated within any of the samples of cohesive made ground tested.

#### **Granular made ground**

A sample of granular made ground tested for TOC, recording an value of 4.4% which is equivalent to a SOM of 7.6%. The results have been compared to assessment values derived using 6% SOM where applicable.

No metals/metalloids were found to be elevated.

Two of the three samples tested recorded elevated PAH concentrations. These are summarised in the table below:

| Contaminant           | Assessment Value – Residential with Home-grown Produce (mg/kg) | Assessment Value – POS near Housing (mg/kg) | Concentration Recorded (Sample) (mg/kg)                 | Modified Mean (mg/kg) |
|-----------------------|----------------------------------------------------------------|---------------------------------------------|---------------------------------------------------------|-----------------------|
| Benzo(a)anthracene    | 13                                                             | 29                                          | <b>56</b> (TP08 at 0.40m)                               | N/A                   |
| Chrysene              | 27                                                             | 57                                          | <b>51</b> (TP08 at 0.40m)                               | N/A                   |
| Benzo(b)fluoranthene  | 3.7                                                            | 7.2                                         | <b>59</b> (TP08 at 0.40m)<br><b>6.8</b> (TP10 at 0.30m) | N/A                   |
| Benzo(a)pyrene        | 3.0                                                            | 5.7                                         | <b>54</b> (TP08 at 0.40m)<br><b>5.6</b> (TP10 at 0.30m) | N/A                   |
| Dibenz(a,h)anthracene | 0.3                                                            | 0.58                                        | <b>0.54</b> (TP10 at 0.30m)                             | N/A                   |

Calorific value was tested on one sample of granular made ground, recording a value of 8.1 MJ/kg.

Asbestos was not detected in any of the samples.

No other contaminants were found to be elevated within any of the samples of granular made ground tested.

### 8.7.3 Natural Ground

Three samples of natural clay and a single sample of coal were tested.

The sample of coal was tested for calorific value, recording a value of 17 MJ/kg.

None other contaminants in the samples of natural ground tested exceeded their respective residential assessment values.

### 8.7.4 Sulphates

In accordance with BRE Special Digest 1 (2005), the site has been taken as a Brownfield location in relation to the Aggressive Chemical Environment. Groundwater is expected to be mobile through the near surface soils.

#### Made Ground

The samples of made ground tested recorded water soluble sulphate results of between 10 mg/l and 1600 mg/l for which a characteristic value of 915 mg/l has been calculated. This would equate to a Design Sulphate Class of DS-2, of which the upper limit is 1500 mg/l.

The total potential sulphate results for the made ground were between 0.044% and 0.31%, which equates to a Design Sulphate Class of DS-2, of which the upper limit is 0.6%.

The pH varies between 7.0 and 8.9.

The test results indicate a Design Sulphate Class of DS-2 and an ACEC class of AC-2 (for mobile groundwater) will be required for concrete in contact with the made ground.

#### Natural Ground

The samples of natural ground tested recorded water soluble sulphate results of between 10 mg/l and 190 mg/l. This would equate to a Design Sulphate Class of DS-1, of which the upper limit is 500 mg/l.

The total potential sulphate results for the natural ground were between 0.029% and 0.095%, which equates to a Design Sulphate Class of DS-1, of which the upper limit is 0.24%.

The pH varies between 5.3 and 7.8.

The test results indicate a Design Sulphate Class of DS-1 and an ACEC class of AC-2z (for mobile groundwater) will be required for concrete in contact with the natural ground.

## 8.8 Significant Pollutant Linkages

The significant pollutant linkages identified during this investigation are documented in the table below:

| Source                                                                                                                                                         | Pathway                                                                                 | Receptor                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Elevated lead and PAHs within topsoil from parcel of land formerly occupied by Buxton Arms Hotel</li> </ul>             | <ul style="list-style-type: none"> <li>Ingestion, inhalation, direct contact</li> </ul> | <ul style="list-style-type: none"> <li>Site residents and visitors</li> <li>Construction workers</li> </ul> |
| <ul style="list-style-type: none"> <li>Elevated arsenic within topsoil</li> </ul>                                                                              | <ul style="list-style-type: none"> <li>Migration through ground</li> </ul>              | <ul style="list-style-type: none"> <li>Controlled waters (secondary A aquifer)</li> </ul>                   |
| <ul style="list-style-type: none"> <li>Elevated arsenic and mercury within cohesive made ground</li> </ul>                                                     | <ul style="list-style-type: none"> <li>Direct Contact</li> </ul>                        | <ul style="list-style-type: none"> <li>Water supply pipes</li> </ul>                                        |
| <ul style="list-style-type: none"> <li>Elevated PAHs in granular made ground</li> </ul>                                                                        |                                                                                         |                                                                                                             |
| <ul style="list-style-type: none"> <li>Elevated arsenic and copper within topsoil</li> <li>Elevated arsenic and mercury within cohesive made ground</li> </ul> | <ul style="list-style-type: none"> <li>Root uptake</li> </ul>                           | <ul style="list-style-type: none"> <li>Plants</li> </ul>                                                    |
| <ul style="list-style-type: none"> <li>Ground Gas from mine workings, areas of deep made ground and off site landfill. (gas monitoring ongoing)</li> </ul>     | <ul style="list-style-type: none"> <li>Migration through ground</li> </ul>              | <ul style="list-style-type: none"> <li>Site residents and visitors</li> <li>Construction Workers</li> </ul> |
| <ul style="list-style-type: none"> <li>Sulphates in Made Ground</li> </ul>                                                                                     | <ul style="list-style-type: none"> <li>Direct contact</li> </ul>                        | <ul style="list-style-type: none"> <li>Below ground concrete</li> </ul>                                     |

## **9.0 RISK ASSESSMENT**

### **9.1 Human Health – Future Residents and Visitors**

#### Topsoil

Two samples of topsoil and two samples of cohesive made ground recorded elevated concentrations of arsenic (between 40 mg/kg and 56 mg/kg) compared to the generic assessment value for human health of 37 mg/kg.

The BGS online arsenic contaminant distribution map indicates that the natural soils in this particular region are naturally elevated in arsenic.

The generic assessment value, the S4UL, is based on a comparison of predicted human exposure against a Health Criteria Value (HCV). The HCV for arsenic is based on epidemiological studies of people exposed via drinking water. Sequestration as a result of adsorption, partitioning, and/or chemical bonding as well as its potential presence in discrete mineral phases is likely to mean that the arsenic will be more tightly bound within the soil in comparison to the medium of the exposure study. The generic assessment value for arsenic also assumes that all of the contaminant is bioavailable referring to the fraction of the arsenic that can be absorbed by the human body through the gastrointestinal system, the pulmonary system and the skin. In reality, this is generally not the case and bioaccessibility testing would be expected to demonstrate that the concentrations recorded would be unlikely to present significant risks.

A Physiologically Based Extraction Test (PBET) can be used to determine the amount of arsenic that is bioaccessible, which is the fraction of a contaminant released into solution from the soil during digestion. The PBET is a laboratory based test that mimics the conditions of the gut. It stimulates leaching of a solid matrix to determine the total fraction of arsenic available for absorption during transit through the gastrointestinal tract. The bioavailable fraction will generally be lower than the bioaccessible fraction as there is likely to be incomplete absorption during transit through the gastrointestinal tract in reality.

A PBET was undertaken on a sample of topsoil in which the highest arsenic concentration was recorded. The samples recorded a bioaccessible fraction 2.4%.

We have recently used higher bioavailability values which have been input into the CLEA Software Version 1.07, and a Site Specific Assessment Concentration (SSAC) of 103 mg/kg is derived for a bioavailable fraction of 24%. The recorded bioavailable fraction in this case was significantly below this value, as were the total arsenic concentrations, and therefore there is not considered to be a

significant risk to human health from arsenic within any of the soils tested. The CLEA worksheets can be provided if required.

Elevated concentrations of lead and PAHs recorded within the topsoil in the parcel of land formerly occupied by the Buxton Arms Hotel are likely associated with the inclusions of ash and clinker recorded. Given the above, the material is considered to pose a risk to human health and remedial measures may therefore be required. This is expected to comprise the removal of this topsoil from site, or placement of a capping layer above the existing topsoil.

Given the above, topsoil from the main body of the site is considered to be suitable for reuse assuming appropriate segregation is undertaken.

Topsoil recovered from the parcel of land formerly occupied by the Buxton Arms Hotel is not considered suitable for reuse in private gardens. Further testing may be able to delineate the contaminated soils if the inclusions of ash and clinker (assumed to be the source chemical exceedances) are localised in nature. Should this not be possible further testing may reduce the modified mean values of the above determinands and enable reuse in areas of POS. Discussion with the regulators is recommended before undertaking additional sampling however, to gain approval of this method of additional risk assessment. Otherwise, where the material remains beneath gardens and soft landscaped area, the impacted topsoil should be placed beneath a 450 mm thick permeable capping layer (i.e. further topsoil), or the material should be removed from site.

### Made Ground

A single sample of cohesive made ground recorded an elevated concentration of mercury at concentration of 1.8 mg/kg. Mercury is most commonly encountered in the environment in elemental form, as inorganic mercuric compounds, or as monomethyl mercury compounds. Assessment values have been derived for the three different chemical forms of mercury. Science Report SC050021 states that 'For general surface contamination and to simplify the assessment, the SGVs for inorganic mercury can normally be compared with chemical analysis for total mercury content because the equilibrium concentrations of elemental and methylmercury compounds are likely to be very low'. The assessment value according to LQM for inorganic mercury is 40 mg/kg and therefore significant risks to human health would not be expected from the concentrations recorded.

The cohesive made ground is not expected to present a significant risk to human health, but due to its physical properties a 300 mm topsoil growing medium is recommended to be placed for plants.

Elevated PAH compounds were recorded within two of the three samples of granular made ground tested. These are considered likely to be associated with inclusions of coal and ash encountered within this material. This material is considered to pose a risk to human health.

Given the elevated concentrations of PAHs within the granular made ground it is considered that a 600 mm clean cover system is required for gardens and POS areas where granular made ground remains. Alternatively, this material could be placed beneath hardstanding areas, such as parking courts.

Elevated calorific values were recorded in a sample of coal rich granular made ground and a sample of intact coal. A 1 m capping will be required for any gardens that overlie coal or coal rich made ground that is outcropping or at very shallow depth to reduce the potential for combustion, should bonfires or barbeques be used within the private gardens.

## **9.2 Human Health – Construction Workers**

Ground workers employed during the construction phase of the development are most at risk of harm due to them having direct contact with the affected soils. However, the contact is generally of short duration, and all competent ground workers will be aware of the potential risks associated with soils of this nature. Therefore the overall risk to the health of construction workers is considered to be low.

All ground workers employed on the site should be made aware that elevated concentrations of PAHs are present, and normal site procedures such as the wearing of gloves when handling soils, and the washing of hands prior to eating should be implemented.

Any unusual, brightly coloured, ashy or odorous material encountered during construction should be brought to the attention of the site staff and investigated.

## **9.3 Plants**

An elevated concentration of arsenic was recorded in one sample of topsoil at 56 mg/kg compare to the phytotoxic assessment value of 50 mg/kg. The arsenic concentrations in the other samples of topsoil were all between 18 mg/kg and 32 mg/kg. A significant risk to plants from arsenic is therefore not anticipated.

A single sample of topsoil also returned an elevated concentration of copper at 420 mg/kg compared to the assessment value of 200 mg/kg. Copper concentrations in the other samples range between 25 mg/kg and 57 mg/kg. The modified mean calculation records the exceedance, taken within TP05 at 0.2 m, to be a statistical outlier. However, it is noted that the modified mean falls

below the assessment value. Given the above, following mixing as part of the topsoil strip, copper is not expected to pose a significant risk to plants.

Mercury was recorded in exceedance of the phytotoxic guideline value within a single sample of granular made ground. The 600 mm thick clean capping layer proposed will provide a suitable growing medium and barrier to the slightly elevated levels of mercury.

No other phytotoxic concentrations of contaminants were recorded.

#### **9.4 Controlled Waters**

The elevated concentrations of metals and PAHs are present locally within the topsoil and made ground, and do not appear to be leaching or migrating down into the natural ground in any significant concentration.

The site overlies a Secondary A Aquifer and there are no groundwater source protection zones.

Based on this, and the cohesive nature of the natural soils, the overall conclusion is that the risk to controlled waters is very low.

#### **9.5 Construction Materials**

The chemical test results indicate that DS-2 and AC-2 sulphate precautions are required for below ground concrete which will be in contact with the made ground.

A design sulphate class of DS1 and ACEC class of AC2z should be assumed for concrete in contact with natural ground only.

It is not considered that protective measures will be required for new drinking water supply pipes laid within the natural ground, however, protection should be anticipated for pipes laid within granular made ground. The test results will need to be submitted to the water supplier for review.

#### **9.6 Ground Gas**

Radon precautions are not required.

A risk of landfill gas generation or migration is considered to be present resulting from areas of deep made ground both on site (associated with infilled pond and former school construction) and off site (BGS recorded landfill 200m to the south). Shallow mine workings were also encountered in the south-eastern corner of the site. Five monitoring wells were therefore installed across the site. Gas monitoring is ongoing with one round out of six completed to date.

No methane was found during the initial visit, and a maximum positive flow of 0.6 l/hr was recorded. A maximum concentration of 1.7% carbon dioxide was recorded. Since no methane was recorded a minimum concentration of 0.1 ppmv is assumed. This produces a GSV of 0.0006l/hr for methane and 0.0102 for carbon dioxide.

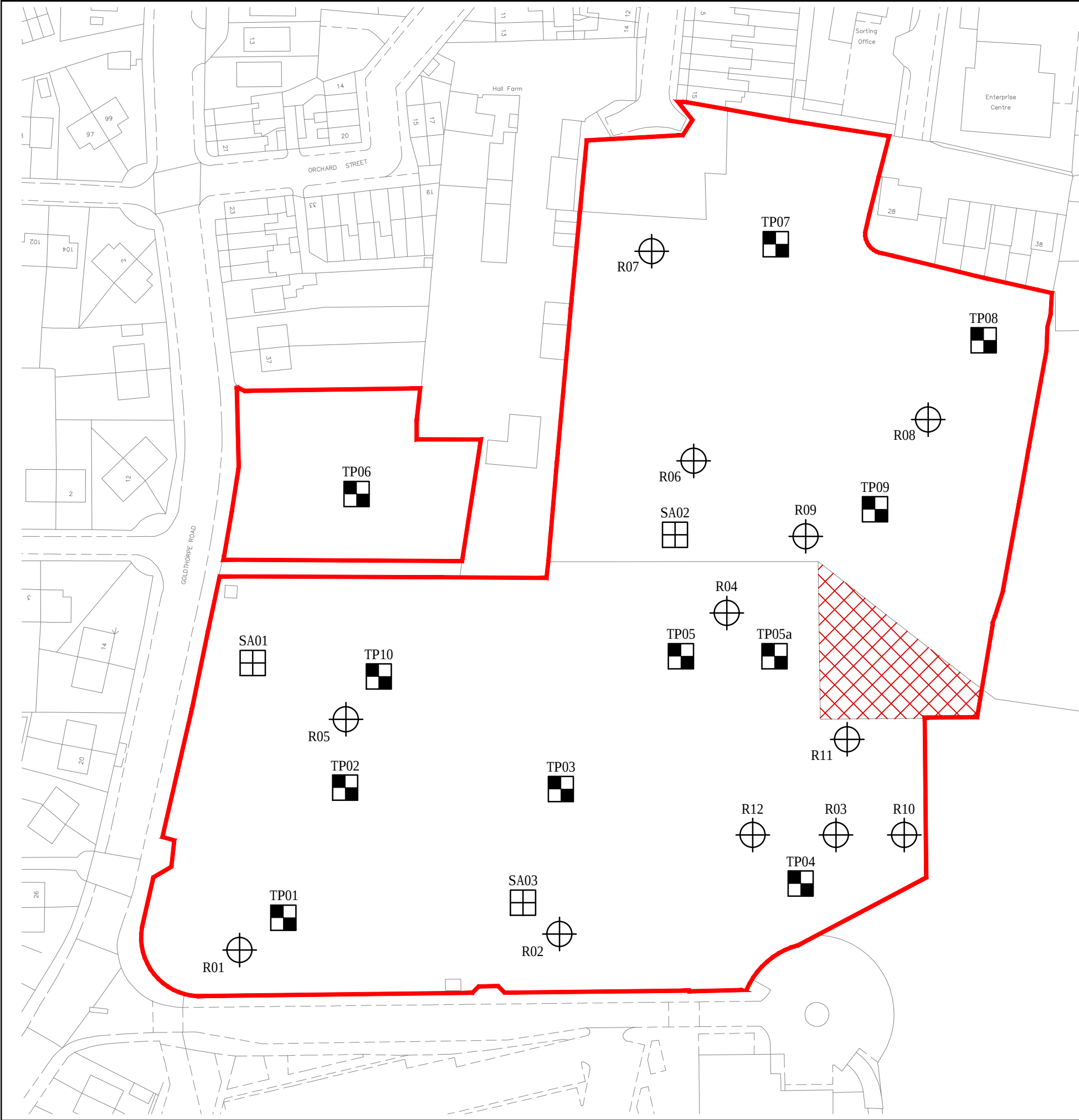
Based on results recorded so far, the site would be classified as characteristic gas situation (CS) 1 or 'green' under the NHBC traffic light system, as detailed in CIRIA C665 and not require gas protection. However, further monitoring is required to confirm this. The results of the gas monitoring, which is ongoing, will be reported on in due course.

## **10.0 CONTAMINATION - RECOMMENDATIONS AND APPROVALS**

1. A 600 mm clean capping layer is recommended for gardens and soft landscaping where the granular ground is present. Where cohesive made ground is present, a 300 mm thick topsoil growing medium is recommended.
2. The capping thickness should be increased to 1 m where shallow coal is present in the south west.
3. The site won topsoil is considered to be suitable for reuse, with the exception of topsoil encountered within the parcel of land formerly occupied by the Buxton Arms Hotel. In this area clean topsoil will need to be imported and the existing material either be capped with at least 450 mm of inert soil, or be removed from site and replaced.
4. The natural arisings are considered suitable for reuse within the proposed development.
5. Sulphate precautions comprising DS-2 AC-2 are recommended for below ground concrete in contact with made ground. DS1 and AC2z should be assumed for below ground concrete in contact with natural ground only.
6. Based on results recorded so far, the site would be classified as characteristic gas situation (CS) 1 or 'green' under the NHBC traffic light system, and not require gas protection. This will be confirmed upon completion of the gas monitoring programme.
7. The conclusions made in this report in relation to contamination are subject to agreement by the approving bodies such as the Local Authority and the NHBC, if applicable.

## **Appendix 1**

‘Exploratory Hole Location Plan’, drawing reference 42241-001A



INFORMATION WITHIN THIS DRAWING IS NOT NECESSARILY PRODUCED TO SCALE.  
ALWAYS USE FIGURED DIMENSIONS AND CO-ORDINATES - IF IN DOUBT, ASK.

KEY:

-  Approximate location of trial pits excavated by Eastwood & Partners on 00.00.00.
-  Approximate location of soakaway tests carried out by Eastwood & Partners on 00.00.00.
-  Approximate location of rotary borehole drilled by Eastwood & Partners on 00.00.00.
-  Approximate area not accessible during site investigation

|     |              |     |     |      |
|-----|--------------|-----|-----|------|
| A   | First Issue. |     |     |      |
| REV | DESCRIPTION  | SIG | CHK | DATE |

REDMILE HOMES LTD

GOLDTHORPE ROAD, GOLDTHORPE

EXPLORATORY HOLE LOCATION PLAN

**Eastwood & Partners**  
CONSULTING ENGINEERS



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23 Kingfield Road  
Sheffield  
S11 9AS

Tel 0114 255 4554  
Fax 0114 255 4330

mail@eastwoodandpartners.com  
www.eastwoodandpartners.com

|                                    |               |                  |                               |          |
|------------------------------------|---------------|------------------|-------------------------------|----------|
| SCALE WHEN PLOTTED AT A3<br>1:1000 |               |                  | DRAWING STATUS<br>INFORMATION |          |
| DRAWN<br>RH                        | CHECKED<br>DN | DATE<br>22.01.18 | DRAWING NUMBER<br>42241/001   | REV<br>A |

## **Appendix 2**

Envirocheck Report  
Coal Authority Mining Report

## Envirocheck<sup>®</sup> Report:

### Datasheet

#### Order Details:

**Order Number:**

152348835\_1\_1

**Customer Reference:**

42241

**National Grid Reference:**

446130, 403850

**Slice:**

A

**Site Area (Ha):**

3.28

**Search Buffer (m):**

1000

#### Site Details:

Site at 446110, 403820

#### Client Details:

Miss E Turner  
Eastwood & Partners Ltd  
St Andrews House  
23 Kingfield Road  
Sheffield  
S11 9AS

| Report Section        | Page Number |
|-----------------------|-------------|
| Summary               | -           |
| Agency & Hydrological | 1           |
| Waste                 | 21          |
| Hazardous Substances  | -           |
| Geological            | 28          |
| Industrial Land Use   | 32          |
| Sensitive Land Use    | 45          |
| Data Currency         | 46          |
| Data Suppliers        | 52          |
| Useful Contacts       | 53          |

## Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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## Report Version v53.0

| Data Type                                                     | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m<br>(*up to 2000m) |
|---------------------------------------------------------------|-------------|---------|-----------|-------------|--------------------------------|
| <b>Agency &amp; Hydrological</b>                              |             |         |           |             |                                |
| BGS Groundwater Flooding Susceptibility                       | pg 1        | Yes     | Yes       | Yes         | n/a                            |
| Contaminated Land Register Entries and Notices                |             |         |           |             |                                |
| Discharge Consents                                            | pg 1        |         |           | 4           | 11                             |
| Prosecutions Relating to Controlled Waters                    |             |         | n/a       | n/a         | n/a                            |
| Enforcement and Prohibition Notices                           |             |         |           |             |                                |
| Integrated Pollution Controls                                 | pg 5        |         |           |             | 1                              |
| Integrated Pollution Prevention And Control                   |             |         |           |             |                                |
| Local Authority Integrated Pollution Prevention And Control   |             |         |           |             |                                |
| Local Authority Pollution Prevention and Controls             | pg 5        |         |           | 5           | 4                              |
| Local Authority Pollution Prevention and Control Enforcements |             |         |           |             |                                |
| Nearest Surface Water Feature                                 | pg 6        |         | Yes       |             |                                |
| Pollution Incidents to Controlled Waters                      | pg 6        |         |           | 1           | 15                             |
| Prosecutions Relating to Authorised Processes                 |             |         |           |             |                                |
| Registered Radioactive Substances                             |             |         |           |             |                                |
| River Quality                                                 | pg 9        |         |           |             | 2                              |
| River Quality Biology Sampling Points                         |             |         |           |             |                                |
| River Quality Chemistry Sampling Points                       |             |         |           |             |                                |
| Substantiated Pollution Incident Register                     | pg 9        |         |           |             | 1                              |
| Water Abstractions                                            | pg 10       |         |           | 1           | (*11)                          |
| Water Industry Act Referrals                                  | pg 12       |         |           |             | 1                              |
| Groundwater Vulnerability                                     | pg 13       | Yes     | n/a       | n/a         | n/a                            |
| Drift Deposits                                                |             |         | n/a       | n/a         | n/a                            |
| Bedrock Aquifer Designations                                  | pg 13       | Yes     | n/a       | n/a         | n/a                            |
| Superficial Aquifer Designations                              |             |         | n/a       | n/a         | n/a                            |
| Source Protection Zones                                       |             |         |           |             |                                |
| Extreme Flooding from Rivers or Sea without Defences          |             |         |           | n/a         | n/a                            |
| Flooding from Rivers or Sea without Defences                  |             |         |           | n/a         | n/a                            |
| Areas Benefiting from Flood Defences                          |             |         |           | n/a         | n/a                            |
| Flood Water Storage Areas                                     |             |         |           | n/a         | n/a                            |
| Flood Defences                                                |             |         |           | n/a         | n/a                            |
| OS Water Network Lines                                        | pg 13       |         | 5         | 10          | 46                             |

| Data Type                                                           | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m (*up to 2000m) |
|---------------------------------------------------------------------|-------------|---------|-----------|-------------|-----------------------------|
| <b>Waste</b>                                                        |             |         |           |             |                             |
| BGS Recorded Landfill Sites                                         | pg 21       |         | 1         |             |                             |
| Historical Landfill Sites                                           | pg 21       |         | 1         | 1           |                             |
| Integrated Pollution Control Registered Waste Sites                 |             |         |           |             |                             |
| Licensed Waste Management Facilities (Landfill Boundaries)          |             |         |           |             |                             |
| Licensed Waste Management Facilities (Locations)                    | pg 21       | 1       |           | 1           | 6                           |
| Local Authority Landfill Coverage                                   | pg 23       | 1       | n/a       | n/a         | n/a                         |
| Local Authority Recorded Landfill Sites                             | pg 23       |         | 1         | 1           | 1                           |
| Potentially Infilled Land (Non-Water)                               | pg 23       |         | 2         |             | 2                           |
| Potentially Infilled Land (Water)                                   | pg 24       | 1       | 2         |             | 5                           |
| Registered Landfill Sites                                           | pg 24       |         |           | 2           |                             |
| Registered Waste Transfer Sites                                     | pg 25       |         |           |             | 1                           |
| Registered Waste Treatment or Disposal Sites                        | pg 25       |         |           | 1           | 6                           |
| <b>Hazardous Substances</b>                                         |             |         |           |             |                             |
| Control of Major Accident Hazards Sites (COMAH)                     |             |         |           |             |                             |
| Explosive Sites                                                     |             |         |           |             |                             |
| Notification of Installations Handling Hazardous Substances (NIHHS) |             |         |           |             |                             |
| Planning Hazardous Substance Consents                               |             |         |           |             |                             |
| Planning Hazardous Substance Enforcements                           |             |         |           |             |                             |

| Data Type                                                         | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m (*up to 2000m) |
|-------------------------------------------------------------------|-------------|---------|-----------|-------------|-----------------------------|
| <b>Geological</b>                                                 |             |         |           |             |                             |
| BGS 1:625,000 Solid Geology                                       | pg 28       | Yes     | n/a       | n/a         | n/a                         |
| BGS Estimated Soil Chemistry                                      | pg 28       | Yes     | Yes       |             | Yes                         |
| BGS Recorded Mineral Sites                                        | pg 29       |         |           | 1           | 5                           |
| BGS Urban Soil Chemistry                                          |             |         |           |             |                             |
| BGS Urban Soil Chemistry Averages                                 |             |         |           |             |                             |
| CBSCB Compensation District                                       |             |         | n/a       | n/a         | n/a                         |
| Coal Mining Affected Areas                                        | pg 30       | Yes     | n/a       | n/a         | n/a                         |
| Mining Instability                                                | pg 30       | Yes     | n/a       | n/a         | n/a                         |
| Man-Made Mining Cavities                                          |             |         |           |             |                             |
| Natural Cavities                                                  |             |         |           |             |                             |
| Non Coal Mining Areas of Great Britain                            |             |         |           | n/a         | n/a                         |
| Potential for Collapsible Ground Stability Hazards                | pg 30       | Yes     |           | n/a         | n/a                         |
| Potential for Compressible Ground Stability Hazards               | pg 31       |         | Yes       | n/a         | n/a                         |
| Potential for Ground Dissolution Stability Hazards                |             |         |           | n/a         | n/a                         |
| Potential for Landslide Ground Stability Hazards                  | pg 31       | Yes     | Yes       | n/a         | n/a                         |
| Potential for Running Sand Ground Stability Hazards               | pg 31       |         | Yes       | n/a         | n/a                         |
| Potential for Shrinking or Swelling Clay Ground Stability Hazards | pg 31       | Yes     | Yes       | n/a         | n/a                         |
| Radon Potential - Radon Affected Areas                            |             |         | n/a       | n/a         | n/a                         |
| Radon Potential - Radon Protection Measures                       |             |         | n/a       | n/a         | n/a                         |
| <b>Industrial Land Use</b>                                        |             |         |           |             |                             |
| Contemporary Trade Directory Entries                              | pg 32       |         | 3         | 19          | 62                          |
| Fuel Station Entries                                              | pg 39       |         |           | 1           | 1                           |
| Points of Interest - Commercial Services                          | pg 40       |         |           | 8           | 16                          |
| Points of Interest - Education and Health                         | pg 42       |         | 1         |             |                             |
| Points of Interest - Manufacturing and Production                 | pg 42       |         | 1         | 2           | 1                           |
| Points of Interest - Public Infrastructure                        | pg 42       |         |           | 5           | 13                          |
| Points of Interest - Recreational and Environmental               | pg 44       |         | 2         |             | 5                           |
| Gas Pipelines                                                     |             |         |           |             |                             |
| Underground Electrical Cables                                     |             |         |           |             |                             |

| Data Type                            | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m (*up to 2000m) |
|--------------------------------------|-------------|---------|-----------|-------------|-----------------------------|
| <b>Sensitive Land Use</b>            |             |         |           |             |                             |
| Ancient Woodland                     |             |         |           |             |                             |
| Areas of Adopted Green Belt          | pg 45       |         | 1         |             | 2                           |
| Areas of Unadopted Green Belt        |             |         |           |             |                             |
| Areas of Outstanding Natural Beauty  |             |         |           |             |                             |
| Environmentally Sensitive Areas      |             |         |           |             |                             |
| Forest Parks                         |             |         |           |             |                             |
| Local Nature Reserves                |             |         |           |             |                             |
| Marine Nature Reserves               |             |         |           |             |                             |
| National Nature Reserves             |             |         |           |             |                             |
| National Parks                       |             |         |           |             |                             |
| Nitrate Sensitive Areas              |             |         |           |             |                             |
| Nitrate Vulnerable Zones             | pg 45       | 1       |           |             |                             |
| Ramsar Sites                         |             |         |           |             |                             |
| Sites of Special Scientific Interest |             |         |           |             |                             |
| Special Areas of Conservation        |             |         |           |             |                             |
| Special Protection Areas             |             |         |           |             |                             |
| World Heritage Sites                 |             |         |           |             |                             |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Limited Potential for Groundwater Flooding to Occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | A13NW (N)                              | 0                            | 1       | 446134 403950 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Limited Potential for Groundwater Flooding to Occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | A13NE (N)                              | 0                            | 1       | 446150 403900 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding to Occur at Surface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A13SW (SW)                             | 203                          | 1       | 445900 403600 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding to Occur at Surface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A13SE (S)                              | 221                          | 1       | 446250 403550 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A13SE (SE)                             | 298                          | 1       | 446400 403550 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A8NE (S)                               | 365                          | 1       | 446250 403400 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding to Occur at Surface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A8NE (S)                               | 414                          | 1       | 446250 403350 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A14NW (NE)                             | 418                          | 1       | 446600 404150 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Limited Potential for Groundwater Flooding to Occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | A18SW (N)                              | 426                          | 1       | 445950 404350 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding to Occur at Surface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A14NW (NE)                             | 439                          | 1       | 446650 404100 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A14NW (NE)                             | 447                          | 1       | 446600 404200 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Limited Potential for Groundwater Flooding to Occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | A18SE (N)                              | 455                          | 1       | 446350 404400 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Limited Potential for Groundwater Flooding to Occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | A18SW (N)                              | 500                          | 1       | 446000 404450 |
| 1      | <b>Discharge Consents</b><br>Operator: Yorkshire Water Services Ltd<br>Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY)<br>Location: Furlong Pond Cso Off Furlong Road, Goldthorpe, Rotherham, South Yorkshire<br>Authority: Environment Agency, North East Region<br>Catchment Area: Don Tributaries<br>Reference: 3640<br>Permit Version: 1<br>Effective Date: 23rd August 1982<br>Issued Date: 23rd August 1982<br>Revocation Date: 27th March 2003<br>Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company<br>Discharge Environment: Freshwater Stream/River<br>Receiving Water: Far Moor Dyke<br><b>Status:</b> Transferred from Rivers (Prevention of Pollution) Act 1951-1961<br>Positional Accuracy: Located by supplier to within 100m | A8NE (S)                               | 357                          | 2       | 446200 403400 |
| 2      | <b>Discharge Consents</b><br>Operator: Yorkshire Water Services Ltd<br>Property Type: Not Given<br>Location: Mexbrough Road, DARTON, South Yorkshire<br>Authority: Environment Agency, North East Region<br>Catchment Area: Dearne<br>Reference: S/UD/53<br>Permit Version: Not Supplied<br>Effective Date: Not Supplied<br>Issued Date: Not Supplied<br>Revocation Date: Not Supplied<br>Discharge Type: Storm /emergency overflow<br>Discharge Environment: Freshwater Stream/River<br>Receiving Water: Far Moor Dyke<br><b>Status:</b> Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                                                                                                             | A8NW (S)                               | 365                          | 2       | 446100 403390 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 2      | <b>Discharge Consents</b><br>Operator: Yorkshire Water Services Ltd<br>Property Type: Sewerage Network - Sewers<br>Location: Goldthorpe Furlong Road, South Yorkshire<br>Authority: Environment Agency, North East Region<br>Catchment Area: Dearne<br>Reference: S/UD/53<br>Permit Version: Not Supplied<br>Effective Date: Not Supplied<br>Issued Date: 28th May 1963<br>Revocation Date: Not Supplied<br>Discharge Type: Sewage Effluent Discharge-Storm Effluent<br>Discharge: Unknown<br>Environment:<br>Receiving Water: Not Supplied<br><b>Status: Not Supplied</b><br>Positional Accuracy: Located by supplier to within 100m                                                                                                                                                                                                                | A8NW (S)                               | 370                          | 2       | 446100<br>403385 |
| 3      | <b>Discharge Consents</b><br>Operator: Yorkshire Water Services Ltd<br>Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY)<br>Location: Furlong Pond Cso Off Furlong Road, Goldthorpe, Rotherham, South Yorkshire<br>Authority: Environment Agency, North East Region<br>Catchment Area: Don Tributaries<br>Reference: 3640<br>Permit Version: 2<br>Effective Date: 28th March 2003<br>Issued Date: 28th March 2003<br>Revocation Date: Not Supplied<br>Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Far Moor Dyke<br><b>Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)</b><br>Positional Accuracy: Located by supplier to within 10m                                      | A8NE (S)                               | 406                          | 2       | 446160<br>403350 |
| 4      | <b>Discharge Consents</b><br>Operator: Yorkshire Water Services Ltd<br>Property Type: Pumping Station<br>Location: Highgate Lane Ps, Highgate Lane, South Yorkshire<br>Authority: Environment Agency, North East Region<br>Catchment Area: Dearne<br>Reference: WADC218<br>Permit Version: Not Supplied<br>Effective Date: Not Supplied<br>Issued Date: Not Supplied<br>Revocation Date: Not Supplied<br>Discharge Type: Storm sewage overflow discharge<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Thurnscoe Dyke<br><b>Status: Not Supplied</b><br>Positional Accuracy: Located by supplier to within 100m                                                                                                                                                                                                          | A12SE (SW)                             | 577                          | 2       | 445480<br>403570 |
| 5      | <b>Discharge Consents</b><br>Operator: Yorkshire Water Services Ltd<br>Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY)<br>Location: West View Crescent Pumping Station Highgate Lane No:2, Goldthorpe, Rotherham, South Yorkshire<br>Authority: Environment Agency, North East Region<br>Catchment Area: Don Tributaries<br>Reference: Wra7687<br>Permit Version: 1<br>Effective Date: 6th March 2001<br>Issued Date: 6th March 2001<br>Revocation Date: Not Supplied<br>Discharge Type: Sewage Discharges - Pumping Station - Water Company<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Tributary Of Carr Dike<br><b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b><br>Positional Accuracy: Located by supplier to within 10m | A7NW (SW)                              | 651                          | 2       | 445420<br>403520 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 6      | <b>Discharge Consents</b><br>Operator: Yorkshire Water Services Ltd<br>Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY)<br>Location: Highgate Lane Pumping Station Goldthorpe, Barnsley, South Yorkshire, England<br>Authority: Environment Agency, North East Region<br>Catchment Area: Don Tributaries<br>Reference: C5499<br>Permit Version: 2<br>Effective Date: 6th March 2001<br>Issued Date: 6th March 2001<br>Revocation Date: Not Supplied<br>Discharge Type: Sewage Discharges - Pumping Station - Water Company<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Tributary Of Carr Dike<br><b>Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)</b><br>Positional Accuracy: Located by supplier to within 10m | A7NW (SW)                              | 760                          | 2       | 445310 403500 |
| 6      | <b>Discharge Consents</b><br>Operator: Yorkshire Water Services Ltd<br>Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY)<br>Location: Highgate Lane Pumping Station Goldthorpe, Barnsley, South Yorkshire, England<br>Authority: Environment Agency, North East Region<br>Catchment Area: Don Tributaries<br>Reference: C5499<br>Permit Version: 1<br>Effective Date: 14th April 1989<br>Issued Date: 14th April 1989<br>Revocation Date: 5th March 2001<br>Discharge Type: Sewage Discharges - Pumping Station - Water Company<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Tributary Of Carr Dike<br><b>Status: Transferred from COPA 1974</b><br>Positional Accuracy: Located by supplier to within 10m                                                      | A7NW (SW)                              | 760                          | 2       | 445310 403500 |
| 7      | <b>Discharge Consents</b><br>Operator: British Coal<br>Property Type: Not Given<br>Location: Location Description Not Available<br>Authority: Environment Agency, North East Region<br>Catchment Area: Not Given<br>Reference: 43292672<br>Permit Version: Not Supplied<br>Effective Date: Not Supplied<br>Issued Date: 10th January 1995<br>Revocation Date: Not Supplied<br>Discharge Type: Trade Effluent<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Not Supplied<br><b>Status: Not Supplied</b><br>Positional Accuracy: Located by supplier to within 100m                                                                                                                                                                                                                 | A14NE (E)                              | 854                          | 2       | 447100 403900 |
| 8      | <b>Discharge Consents</b><br>Operator: Yorkshire Water Services Ltd<br>Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY)<br>Location: Hamilton Road Cso Hamilton Road/Kathleen Stret Jct, Goldthorpe, Rotherham, South Yorkshire<br>Authority: Environment Agency, North East Region<br>Catchment Area: Don Tributaries<br>Reference: Wra9261<br>Permit Version: 1<br>Effective Date: 4th September 2007<br>Issued Date: 4th September 2007<br>Revocation Date: 16th May 2012<br>Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Thurnscoe Dike<br><b>Status: Surrendered under EPR 2010</b><br>Positional Accuracy: Located by supplier to within 10m                            | A23SW (N)                              | 953                          | 2       | 445970 404910 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 8      | <b>Discharge Consents</b><br>Operator: Yorkshire Water Services Ltd<br>Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY)<br>Location: Southfield Lane Cso/Hamilton Rd Cso Southfield Lane/Hamilton Road, Thurnscoe/Goldthorpe, Barnsley, South Yorkshire<br>Authority: Environment Agency, North East Region<br>Catchment Area: Don Tributaries<br>Reference: S/Ud/54<br>Permit Version: 1<br>Effective Date: 28th May 1963<br>Issued Date: 28th May 1963<br>Revocation Date: Not Supplied<br>Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Thurnscoe Dike<br><b>Status:</b> Transferred from Rivers (Prevention of Pollution) Act 1951-1961<br>Positional Accuracy: Located by supplier to within 10m | A23SW (N)                              | 955                          | 2       | 445977 404913 |
| 8      | <b>Discharge Consents</b><br>Operator: Yorkshire Forward<br>Property Type: MINING OF COAL + LIGNITE<br>Location: Hickleton Former Colliery Site, Thurnscoe, South Yorkshire, England<br>Authority: Environment Agency, North East Region<br>Catchment Area: Don Tributaries<br>Reference: Wra7499<br>Permit Version: 1<br>Effective Date: 16th March 1999<br>Issued Date: 16th March 1999<br>Revocation Date: 31st December 1999<br>Discharge Type: Trade Discharges - Site Drainage<br>Discharge: Ditch<br>Environment:<br>Receiving Water: Thurnscoe Dyke<br><b>Status:</b> New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)<br>Positional Accuracy: Located by supplier to within 10m                                                                                          | A23SW (N)                              | 961                          | 2       | 445980 404920 |
| 8      | <b>Discharge Consents</b><br>Operator: Yorkshire Forward<br>Property Type: MINING OF COAL + LIGNITE<br>Location: Hickleton Former Colliery Site, Thurnscoe, South Yorkshire, England<br>Authority: Environment Agency, North East Region<br>Catchment Area: Don Tributaries<br>Reference: Wra7499<br>Permit Version: 2<br>Effective Date: 1st January 2000<br>Issued Date: 16th March 1999<br>Revocation Date: 23rd September 2003<br>Discharge Type: Trade Discharges - Site Drainage<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Thurnscoe Dyke<br><b>Status:</b> Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)<br>Positional Accuracy: Located by supplier to within 10m                                                                          | A23SW (N)                              | 961                          | 2       | 445980 404920 |
| 8      | <b>Discharge Consents</b><br>Operator: Yorkshire Forward<br>Property Type: MINING OF COAL + LIGNITE<br>Location: Hickleton Former Colliery Site, Thurnscoe, South Yorkshire, England<br>Authority: Environment Agency, North East Region<br>Catchment Area: Don Tributaries<br>Reference: WRA7499<br>Permit Version: 1<br>Effective Date: 16th March 1999<br>Issued Date: 16th March 1999<br>Revocation Date: 31st December 1999<br>Discharge Type: Trade Discharges - Site Drainage<br>Discharge: Ditch<br>Environment:<br>Receiving Water: Thurnscoe Dyke<br><b>Status:</b> New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)<br>Positional Accuracy: Located by supplier to within 10m                                                                                          | A23SW (N)                              | 962                          | 2       | 445980 404921 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 8      | <b>Discharge Consents</b><br>Operator: Yorkshire Forward<br>Property Type: MINING OF COAL + LIGNITE<br>Location: Hickleton Former Colliery Site, Thurnscoe, South Yorkshire, England<br>Authority: Environment Agency, North East Region<br>Catchment Area: Don Tributaries<br>Reference: Wra7499<br>Permit Version: 2<br>Effective Date: 1st January 2000<br>Issued Date: 16th March 1999<br>Revocation Date: 23rd September 2003<br>Discharge Type: Trade Discharges - Site Drainage<br>Discharge: Ditch<br>Environment:<br>Receiving Water: Thurnscoe Dyke<br><b>Status:</b> <b>Revoked (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b><br>Positional Accuracy: Located by supplier to within 10m | A23SW (N)                              | 962                          | 2       | 445980 404921 |
| 9      | <b>Integrated Pollution Controls</b><br>Name: Idi Europe Ltd (Dissolved)<br>Location: Unit 20, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Authority: Environment Agency, North East Region<br>Permit Reference: AB4176<br>Dated: 28th February 1992<br>Process Type: IPC new application<br>Description: 4.5 A (H) Inorganic Chemical processes within the Chemical Industry<br><b>Status:</b> <b>Authorisation revokedRevoked</b><br>Positional Accuracy: Automatically positioned to the address                                                                                                                                                                                            | A6NE (W)                               | 980                          | 2       | 445092 403458 |
| 10     | <b>Local Authority Pollution Prevention and Controls</b><br>Name: Launderama<br>Location: High Street, Goldthorpe, Rotherham, S63 9HJ<br>Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards<br>Permit Reference: PPC/B/72<br>Dated: Not Supplied<br>Process Type: Local Authority Pollution Prevention and Control<br>Description: PG6/46 Dry cleaning<br><b>Status:</b> <b>Application Refused Or Cancelled</b><br>Positional Accuracy: Manually positioned to the road within the address or location                                                                                                                                                                                                    | A18SE (N)                              | 314                          | 3       | 446200 404286 |
| 11     | <b>Local Authority Pollution Prevention and Controls</b><br>Name: Clean 'N' Mend<br>Location: 47 Barnsley Road, Goldthorpe, Rotherham, S63 9LT<br>Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards<br>Permit Reference: PPC/B/76<br>Dated: 22nd August 2007<br>Process Type: Local Authority Pollution Prevention and Control<br>Description: PG6/46 Dry cleaning<br><b>Status:</b> <b>Permitted</b><br>Positional Accuracy: Manually positioned to the address or location                                                                                                                                                                                                                              | A18SW (N)                              | 352                          | 3       | 446065 404315 |
| 12     | <b>Local Authority Pollution Prevention and Controls</b><br>Name: Dearneside Motors<br>Location: DEARNESIDE MOTOR CO. LIMITED, 106 Barnsley Road, Goldthorpe, ROTHERHAM, South Yorkshire, S63 9AE<br>Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards<br>Permit Reference: ppc/b/88<br>Dated: 7th January 2002<br>Process Type: Local Authority Air Pollution Control<br>Description: PG1/14 Petrol filling station<br><b>Status:</b> <b>Authorised</b><br>Positional Accuracy: Automatically positioned to the address                                                                                                                                                                                  | A18SW (NW)                             | 434                          | 3       | 445887 404323 |
| 12     | <b>Local Authority Pollution Prevention and Controls</b><br>Name: H & A Motors<br>Location: Barnsley Road, Goldthorpe, Rotherham, South Yorkshire, S63 9AA<br>Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards<br>Permit Reference: Epa111<br>Dated: 3rd July 2001<br>Process Type: Local Authority Air Pollution Control<br>Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input<br><b>Status:</b> <b>Authorised</b><br>Positional Accuracy: Automatically positioned to the address                                                                                                                                                                                            | A18SW (NW)                             | 441                          | 3       | 445893 404336 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 13     | <b>Local Authority Pollution Prevention and Controls</b><br>Name: M A Morrow<br>Location: Central Services Garage, Furlong Road, Rotherham, South Yorkshire, S63 9PR<br>Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards<br>Permit Reference: Not Supplied<br>Dated: Not Supplied<br>Process Type: Local Authority Air Pollution Control<br>Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input<br><b>Status: Authorisation revokedRevoked</b><br>Positional Accuracy: Automatically positioned to the address | A7NE (SW)                              | 449                          | 3       | 445778 403385 |
| 14     | <b>Local Authority Pollution Prevention and Controls</b><br>Name: Bh Motors<br>Location: Gosling Gate Lane, Goldthorpe, Rotherham, S63 9LU<br>Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards<br>Permit Reference: PPC/B/111<br>Dated: Not Supplied<br>Process Type: Local Authority Pollution Prevention and Control<br>Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input<br><b>Status: Permitted</b><br>Positional Accuracy: Located by supplier to within 10m                                            | A18SW (N)                              | 537                          | 3       | 446012 404492 |
| 15     | <b>Local Authority Pollution Prevention and Controls</b><br>Name: Monks Hill Service Station<br>Location: Barnsley Road Highgate, Goldthorpe, ROTHERHAM, South Yorkshire, S63 9AP<br>Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards<br>Permit Reference: PPC/B/106<br>Dated: 24th March 1999<br>Process Type: Local Authority Air Pollution Control<br>Description: PG1/14 Petrol filling station<br><b>Status: Authorised</b><br>Positional Accuracy: Automatically positioned to the address                                        | A17SE (NW)                             | 595                          | 3       | 445597 404295 |
| 16     | <b>Local Authority Pollution Prevention and Controls</b><br>Name: Hoyland Fox Goldthorpe<br>Location: Unit 2 Fieldsend Industrial Estate, Fields End Road, Goldthorpe, Rotherham, S63 9AF<br>Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards<br>Permit Reference: PPC/B/73<br>Dated: 4th December 2006<br>Process Type: Local Authority Pollution Prevention and Control<br>Description: PG6/23 Coating of metal and plastic<br><b>Status: Site Closed</b><br>Positional Accuracy: Located by supplier to within 10m                   | A18NW (N)                              | 669                          | 3       | 445891 404590 |
| 17     | <b>Local Authority Pollution Prevention and Controls</b><br>Name: British Coal<br>Location: Goldthorpe Colliery, Goldthorpe, ROTHERHAM, South Yorks, S63 9DY<br>Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards<br>Permit Reference: Not Supplied<br>Dated: Not Supplied<br>Process Type: Local Authority Air Pollution Control<br>Description: PG3/5 Coal, coke and coal product processes<br><b>Status: Authorisation revokedRevoked</b><br>Positional Accuracy: Located by supplier to within 100m                                  | A14NE (E)                              | 773                          | 3       | 447000 404100 |
|        | <b>Nearest Surface Water Feature</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A13SW (SW)                             | 96                           | -       | 445984 403672 |
| 18     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Miscellaneous Premises: Unknown<br>Location: Rd Bridge/Bolton Brdg B6098 Dearne 05<br>Authority: Environment Agency, North East Region<br>Pollutant: Unknown<br>Note: Not Supplied<br>Incident Date: 27th May 1992<br>Incident Reference: 133396<br>Catchment Area: Not Given<br>Receiving Water: No Pollution<br>Cause of Incident: Not Given<br>Incident Severity: Category 2 - Significant Incident<br>Positional Accuracy: Located by supplier to within 100m                                                 | A18SW (NW)                             | 407                          | 2       | 445900 404300 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 19     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Abandoned mine<br>Location: Thurnscoe Dyke Downstream Of, Colliery<br>Authority: Environment Agency, North East Region<br>Pollutant: Mining Water<br>Note: Pollution Found; No Fish Killed<br>Incident Date: 26th November 1996<br>Incident Reference: SH960488<br>Catchment Area: Dearne Tributaries<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Unknown<br>Incident Severity: Category 2 - Significant Incident<br>Positional Accuracy: Located by supplier to within 100m                                                                                   | A17NE (NW)                             | 768                          | 2       | 445700<br>404600 |
| 20     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Water Company Sewage: Surface Water Outfall<br>Location: Tributary Of Carr Dyke<br>Authority: Environment Agency, North East Region<br>Pollutant: Sewage - Wrong Connection<br>Note: No Fish Killed<br>Incident Date: 26th September 1997<br>Incident Reference: SH970517<br>Catchment Area: Dearne Tributaries<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Not Given<br>Incident Severity: Category 3 - Minor Incident<br>Positional Accuracy: Located by supplier to within 100m                                                                             | A7NW (SW)                              | 770                          | 2       | 445300<br>403500 |
| 21     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Other General Premises<br>Location: Meadowgates, Bolton On Dearne<br>Authority: Environment Agency, North East Region<br>Pollutant: Sewage - Wrong Connection<br>Note: Ings/Carr/Thurnscoe Dikes; No Fish Killed<br>Incident Date: 27th May 1998<br>Incident Reference: SH980238<br>Catchment Area: Dearne Tributaries<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Not Given<br>Incident Severity: Category 2 - Significant Incident<br>Positional Accuracy: Located by supplier to within 100m                                                                | A12SW (W)                              | 802                          | 2       | 445250<br>403550 |
| 21     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Other General Premises<br>Location: Meadowgates, Bolton On Dearne<br>Authority: Environment Agency, North East Region<br>Pollutant: Miscellaneous - Inert Suspended Solids<br>Note: Ings/Carr/Thurnscoe Dikes; No Fish Killed<br>Incident Date: 16th June 1998<br>Incident Reference: SH980235<br>Catchment Area: Dearne Tributaries<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Not Given<br>Incident Severity: Category 3 - Minor Incident<br>Positional Accuracy: Located by supplier to within 100m                                                        | A12SW (W)                              | 804                          | 2       | 445250<br>403545 |
| 21     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Water Company Sewage: Surface Water Outfall<br>Location: Carr Dyke, Meadowgates, BOLTON UPON DEARNE<br>Authority: Environment Agency, North East Region<br>Pollutant: Sewage - Wrong Connection<br>Note: Watercourse :Ings/Carr/Thurnscoe Dikes; From Houghton Beck To River Dearne<br>Incident Date: 8th February 1998<br>Incident Reference: SH980037<br>Catchment Area: Dearne Tributaries<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Unknown<br>Incident Severity: Category 3 - Minor Incident<br>Positional Accuracy: Located by supplier to within 100m | A7NW (W)                               | 830                          | 2       | 445230<br>403520 |
| 22     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Industrial Premises<br>Location: Rd Brdg/Markers Brdg B6273 Dearne 07<br>Authority: Environment Agency, North East Region<br>Pollutant: Coal Solids<br>Note: Not Supplied<br>Incident Date: 15th October 1992<br>Incident Reference: 137703<br>Catchment Area: Not Given<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Not Given<br>Incident Severity: Category 2 - Significant Incident<br>Positional Accuracy: Located by supplier to within 100m                                                                                                              | A17NE (NW)                             | 826                          | 2       | 445600<br>404600 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 23     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Miscellaneous Premises: Unknown<br>Location: Markers Bridge B6273, /Darfld A635 Dearne 08<br>Authority: Environment Agency, North East Region<br>Pollutant: Unknown<br>Note: Not Supplied<br>Incident Date: 17th July 1992<br>Incident Reference: 135113<br>Catchment Area: Not Given<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Not Given<br>Incident Severity: Category 2 - Significant Incident<br>Positional Accuracy: Located by supplier to within 100m             | A17NE (NW)                             | 853                          | 2       | 445700<br>404700 |
| 24     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Industrial Premises<br>Location: Rd Bridge/Bolton Brdg B6098 Dearne 05<br>Authority: Environment Agency, North East Region<br>Pollutant: Mining Water<br>Note: Not Supplied<br>Incident Date: 15th April 1994<br>Incident Reference: 150595<br>Catchment Area: Not Given<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Not Given<br>Incident Severity: Category 3 - Minor Incident<br>Positional Accuracy: Located by supplier to within 100m                                | A14SE (E)                              | 863                          | 2       | 447100<br>403800 |
| 25     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Miscellaneous Premises: Unknown<br>Location: Rd Brdg/Markers Brdg B6273 Dearne 07<br>Authority: Environment Agency, North East Region<br>Pollutant: Mud/Clay/Soil<br>Note: Not Supplied<br>Incident Date: 18th March 1992<br>Incident Reference: 131388<br>Catchment Area: Not Given<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Not Given<br>Incident Severity: Category 3 - Minor Incident<br>Positional Accuracy: Located by supplier to within 100m                    | A17NE (NW)                             | 903                          | 2       | 445600<br>404695 |
| 25     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Other General Premises<br>Location: Rd Brdg/Markers Brdg B6273 Dearne 07<br>Authority: Environment Agency, North East Region<br>Pollutant: Cement/Mortar<br>Note: Not Supplied<br>Incident Date: 26th March 1992<br>Incident Reference: 131635<br>Catchment Area: Not Given<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Not Given<br>Incident Severity: Category 3 - Minor Incident<br>Positional Accuracy: Located by supplier to within 100m                             | A17NE (NW)                             | 907                          | 2       | 445600<br>404700 |
| 26     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Industrial: Other<br>Location: Tributary Of Carr Dyke<br>Authority: Environment Agency, North East Region<br>Pollutant: Chemicals - Alkali<br>Note: No Fish Killed<br>Incident Date: 10th September 1997<br>Incident Reference: SH970483<br>Catchment Area: Dearne Tributaries<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Not Given<br>Incident Severity: Category 3 - Minor Incident<br>Positional Accuracy: Located by supplier to within 100m                          | A11SE (W)                              | 925                          | 2       | 445100<br>403700 |
| 27     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Water Company Sewage: Other<br>Location: Thurnscoe Dyke, Near Goldthorpe<br>Authority: Environment Agency, North East Region<br>Pollutant: Unknown Sewage<br>Note: Fish Killed: No Information<br>Incident Date: 4th January 1996<br>Incident Reference: SH960026<br>Catchment Area: Dearne Tributaries<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Not Given<br>Incident Severity: Category 3 - Minor Incident<br>Positional Accuracy: Located by supplier to within 100m | A17NE (NW)                             | 936                          | 2       | 445700<br>404795 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 27     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Water Company Sewage: Other<br>Location: Thurnscoe Dyke Near, GOLDTHORPE<br>Authority: Environment Agency, North East Region<br>Pollutant: Unknown Sewage<br>Note: Pollution Found; Fish Killed: No Information<br>Incident Date: 4th January 1996<br>Incident Reference: SH960026<br>Catchment Area: Dearne Tributaries<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Unknown<br>Incident Severity: Category 3 - Minor Incident<br>Positional Accuracy: Located by supplier to within 100m | A17NE (NW)                             | 940                          | 2       | 445700<br>404800 |
| 28     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Restaurant/Hotels/Pubs<br>Location: Potto Carr Farm, Potto<br>Authority: Environment Agency, North East Region<br>Pollutant: Crude Sewage<br>Note: No Fish Killed; Ditch<br>Incident Date: 1st September 1997<br>Incident Reference: DT970352<br>Catchment Area: Swale Tributaries<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Not Given<br>Incident Severity: Category 3 - Minor Incident<br>Positional Accuracy: Located by supplier to within 100m                                     | A3NE (S)                               | 965                          | 2       | 446300<br>402800 |
| 29     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Industrial Premises<br>Location: Rd Brdg/Markers Brdg B6273 Dearne 07<br>Authority: Environment Agency, North East Region<br>Pollutant: Animal Waste/Slurry<br>Note: Not Supplied<br>Incident Date: 27th July 1992<br>Incident Reference: 135293<br>Catchment Area: Not Given<br>Receiving Water: Freshwater Stream/River<br>Cause of Incident: Not Given<br>Incident Severity: Category 2 - Significant Incident<br>Positional Accuracy: Located by supplier to within 100m                                    | A17NE (NW)                             | 990                          | 2       | 445600<br>404800 |
|        | <b>River Quality</b><br>Name: West_Moor_Dyke<br>GQA Grade: River Quality E<br>Reach: Goldthorpe_Pit_River_Dearn<br>Estimated Distance (km): 1.8<br>Flow Rate: Flow less than 0.31 cumecs<br>Flow Type: River<br>Year: 2000                                                                                                                                                                                                                                                                                                                                                        | A14SE (E)                              | 872                          | 2       | 447099<br>403717 |
|        | <b>River Quality</b><br>Name: Ings/Carr/Thurnscoe_Dikes<br>GQA Grade: River Quality C<br>Reach: Hickleton_Main_Colli_Houghton_Bec<br>Estimated Distance (km): 2.6<br>Flow Rate: Flow less than 0.31 cumecs<br>Flow Type: River<br>Year: 2000                                                                                                                                                                                                                                                                                                                                      | A17NE (NW)                             | 925                          | 2       | 445659<br>404760 |
| 30     | <b>Substantiated Pollution Incident Register</b><br>Authority: Environment Agency - North East Region, Yorkshire Area<br>Incident Date: 12th December 2003<br>Incident Reference: 206454<br>Water Impact: Category 4 - No Impact<br>Air Impact: Category 2 - Significant Incident<br>Land Impact: Category 3 - Minor Incident<br>Positional Accuracy: Located by supplier to within 10m<br>Pollutant: Atmospheric Pollutants And Effects: Smoke                                                                                                                                   | A7SE (S)                               | 806                          | 2       | 445787<br>402988 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 31     | <b>Water Abstractions</b><br>Operator: Barnsley Metropolitan Borough Council<br>Licence Number: 2/27/08/101<br>Permit Version: Not Supplied<br>Location: Dearne Brickyard Fishing Ponds, Goldthorpe, ROTHERHAM, South Yorkshire<br>Authority: Environment Agency, North East Region<br>Abstraction: Pond level maintenance<br>Abstraction Type: Not Supplied<br>Source: Groundwater<br>Daily Rate (m3): 264<br>Yearly Rate (m3): 86000<br>Details: Status: Lapsed<br>Authorised Start: Not Supplied<br>Authorised End: Not Supplied<br>Permit Start Date: Not Supplied<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                        | A8NW (S)                               | 257                          | 2       | 446000<br>403500 |
|        | <b>Water Abstractions</b><br>Operator: Thomas Black Limited<br>Licence Number: 2/27/08/102<br>Permit Version: Not Supplied<br>Location: Location Description Not Available<br>Authority: Environment Agency, North East Region<br>Abstraction: General Industrial<br>Abstraction Type: Not Supplied<br>Source: Surface<br>Daily Rate (m3): 968<br>Yearly Rate (m3): 227300<br>Details: Licence Revoked<br>Authorised Start: Not Supplied<br>Authorised End: Not Supplied<br>Permit Start Date: Not Supplied<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                                   | A15NW (E)                              | 1067                         | 2       | 447300<br>404095 |
|        | <b>Water Abstractions</b><br>Operator: Thomas Black Limited<br>Licence Number: 2/27/08/095<br>Permit Version: Not Supplied<br>Location: Location Description Not Available<br>Authority: Environment Agency, North East Region<br>Abstraction: General Industrial<br>Abstraction Type: Not Supplied<br>Source: Surface<br>Daily Rate (m3): 968<br>Yearly Rate (m3): 227000<br>Details: Licence Lapsed<br>Authorised Start: Not Supplied<br>Authorised End: Not Supplied<br>Permit Start Date: Not Supplied<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                                    | A15NW (E)                              | 1068                         | 2       | 447300<br>404100 |
|        | <b>Water Abstractions</b><br>Operator: W Nash<br>Licence Number: 2/27/08/125<br>Permit Version: 2<br>Location: Inland Water - River Dearne<br>Authority: Environment Agency, North East Region<br>Abstraction: Aquaculture: Make-Up or Top Up Water<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: The Area Of Land Near Lowfield Road, Wath Upon Dearne, Rotherham, South Yorkshire<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 30th August 2002<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | (S)                                    | 1646                         | 2       | 445970<br>402110 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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|        | <b>Water Abstractions</b><br>Operator: W Nash<br>Licence Number: 2/27/08/125<br>Permit Version: 2<br>Location: River Dearne-Lowfield Lane-Wath On Dearne<br>Authority: Environment Agency, North East Region<br>Abstraction: Aquaculture: Make-Up or Top Up Water<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: The Area Of Land Near Lowfield Road, Wath Upon Dearne, Rotherham, South Yorkshire<br>Authorised Start: 01 September<br>Authorised End: 31 March<br>Permit Start Date: 30th August 2002<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | (S)                                    | 1646                         | 2       | 445970<br>402110 |
|        | <b>Water Abstractions</b><br>Operator: W Nash<br>Licence Number: 2/27/08/125<br>Permit Version: 1<br>Location: River Dearne<br>Authority: Environment Agency, North East Region<br>Abstraction: Aquaculture: Make-Up or Top Up Water<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): 20<br>Yearly Rate (m3): 2500<br>Details: The Area Of Land Near Lowfield Road, Wath Upon Dearne, Rotherham, South Yorkshire<br>Authorised Start: 01 September<br>Authorised End: 31 March<br>Permit Start Date: 20th September 1999<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                             | (S)                                    | 1646                         | 2       | 445970<br>402110 |
|        | <b>Water Abstractions</b><br>Operator: Wendy Nash<br>Licence Number: 2/27/09/175<br>Permit Version: Not Supplied<br>Location: Location Description Not Available<br>Authority: Environment Agency, North East Region<br>Abstraction: Pond level maintenance<br>Abstraction Type: Not Supplied<br>Source: Surface<br>Daily Rate (m3): 875<br>Yearly Rate (m3): 6125<br>Details: River Dearne<br>Authorised Start: Not Supplied<br>Authorised End: Not Supplied<br>Permit Start Date: Not Supplied<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                                                           | (S)                                    | 1646                         | 2       | 445970<br>402110 |
|        | <b>Water Abstractions</b><br>Operator: A Ogden & Sons Ltd<br>Licence Number: 2/27/08/120<br>Permit Version: 101<br>Location: River Dearne<br>Authority: Environment Agency, North East Region<br>Abstraction: Mineral Products: General Use(High Loss)<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Common Lane Off Mexborough Road, Near Bolton -On -Dearne<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 15th March 2000<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m   | (S)                                    | 1755                         | 2       | 446000<br>402000 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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|        | <b>Water Abstractions</b><br>Operator: A Ogden & Sons Ltd<br>Licence Number: 2/27/08/120<br>Permit Version: 100<br>Location: River Dearne<br>Authority: Environment Agency, North East Region<br>Abstraction: Mineral Products: General Use(High Loss)<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Common Lane Off Mexborough Road, Near Bolton -On -Dearne<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 25th June 1997<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m | (S)                                    | 1755                         | 2       | 446000<br>402000 |
|        | <b>Water Abstractions</b><br>Operator: A Ogden & Sons Limited<br>Licence Number: 2/27/08/129<br>Permit Version: Not Supplied<br>Location: Common Lane, Off Mexborough Road, BOLTON UPON DEARNE<br>Authority: Environment Agency, North East Region<br>Abstraction: General Industrial<br>Abstraction Type: Not Supplied<br>Source: Surface<br>Daily Rate (m3): 432<br>Yearly Rate (m3): 129600<br>Details: River Stream or Lake; Pump<br>Authorised Start: Not Supplied<br>Authorised End: Not Supplied<br>Permit Start Date: Not Supplied<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                              | (S)                                    | 1755                         | 2       | 446000<br>402000 |
|        | <b>Water Abstractions</b><br>Operator: Gateways Fuels Ltd<br>Licence Number: 2/27/08/127<br>Permit Version: 1<br>Location: Inland Water - Tributary Of River Dearne<br>Authority: Environment Agency, North East Region<br>Abstraction: Mineral Products: Dust Suppression<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Manvers Depot, Common Lane, Bolton Road, Wath Upon Dearne, Rotherham<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 2nd August 2002<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m | (S)                                    | 1760                         | 2       | 445900<br>402000 |
|        | <b>Water Abstractions</b><br>Operator: British Coal<br>Licence Number: 2/27/08/022<br>Permit Version: Not Supplied<br>Location: Manvers Main Colliery, WATH-UPON-DEARNE<br>Authority: Environment Agency, North East Region<br>Abstraction: General Industrial<br>Abstraction Type: Not Supplied<br>Source: Surface<br>Daily Rate (m3): 10583<br>Yearly Rate (m3): 3750450<br>Details: Not Supplied<br>Authorised Start: Not Supplied<br>Authorised End: Not Supplied<br>Permit Start Date: Not Supplied<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                                                | (S)                                    | 1960                         | 2       | 445400<br>401900 |
| 32     | <b>Water Industry Act Referrals</b><br>Name: Multiscreen Glass Ltd<br>Location: MULTISCREEN GLASS LTD, UNIT 20 COMMERCIAL ROAD, GOLDTHORPE IND EST, ROTHERHAM, SOUTH YORKSHIRE, S63 9BL<br>Authority: Environment Agency, North East Region<br>Permit Reference: AE1947<br>Dated: 18th February 1992<br>Process Type: Permissions or amendments to discharge under the Water Industry Act 1991<br>Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations<br><b>Status: Application cancelled</b><br>Positional Accuracy: Automatically positioned to the address                                            | A6NE (W)                               | 981                          | 2       | 445092<br>403458 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                             | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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|        | <b>Groundwater Vulnerability</b><br>Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise<br>Map Sheet: Sheet 12 Vale of York<br>Scale: 1:100,000 | A13SW (W)                              | 0                            | 2       | 446134 403854 |
|        | <b>Drift Deposits</b><br>None                                                                                                                                                                                                                                                                                                                       |                                        |                              |         |               |
|        | <b>Bedrock Aquifer Designations</b><br>Aquifer Designation: Secondary Aquifer - A                                                                                                                                                                                                                                                                   | A13SW (W)                              | 0                            | 1       | 446134 403854 |
|        | <b>Superficial Aquifer Designations</b><br>No Data Available                                                                                                                                                                                                                                                                                        |                                        |                              |         |               |
|        | <b>Extreme Flooding from Rivers or Sea without Defences</b><br>None                                                                                                                                                                                                                                                                                 |                                        |                              |         |               |
|        | <b>Flooding from Rivers or Sea without Defences</b><br>None                                                                                                                                                                                                                                                                                         |                                        |                              |         |               |
|        | <b>Areas Benefiting from Flood Defences</b><br>None                                                                                                                                                                                                                                                                                                 |                                        |                              |         |               |
|        | <b>Flood Water Storage Areas</b><br>None                                                                                                                                                                                                                                                                                                            |                                        |                              |         |               |
|        | <b>Flood Defences</b><br>None                                                                                                                                                                                                                                                                                                                       |                                        |                              |         |               |
| 33     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 143.3<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1                                                                                                           | A13SW (SW)                             | 96                           | 4       | 445984 403672 |
| 34     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 63.0<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1                                                                                                            | A13SW (SW)                             | 175                          | 4       | 445956 403598 |
| 35     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 27.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1                                                                                                            | A13SW (SW)                             | 231                          | 4       | 445919 403554 |
| 36     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 412.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Far Moor Dike<br>Catchment Name: Don and Rother<br>Primacy: 1                                                                                                          | A13SW (SW)                             | 236                          | 4       | 445953 403533 |
| 37     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 1.3<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1                                                                                                             | A13SW (SW)                             | 237                          | 4       | 445940 403537 |

| Map ID | Details                                                                                                                                                                                                                                   | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 38     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 335.2<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1 | A14SW (E)                              | 315                          | 4       | 446541<br>403781 |
| 39     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 43.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1  | A14SW (E)                              | 316                          | 4       | 446549<br>403822 |
| 40     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 135.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1 | A12SE (W)                              | 407                          | 4       | 445615<br>403831 |
| 41     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 8.7<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1   | A14SW (SE)                             | 423                          | 4       | 446574<br>403560 |
| 42     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 386.9<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1 | A14SW (SE)                             | 430                          | 4       | 446582<br>403560 |
| 43     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 1.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1   | A14SW (SE)                             | 430                          | 4       | 446582<br>403560 |
| 44     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 6.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1   | A14SW (SE)                             | 431                          | 4       | 446584<br>403560 |
| 45     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 133.3<br>Watercourse Level: Underground<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1       | A14SW (SE)                             | 437                          | 4       | 446590<br>403559 |
| 46     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 451.0<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 2 | A8NE (S)                               | 477                          | 4       | 446258<br>403287 |

| Map ID | Details                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 47     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 74.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Far Moor Dike<br>Catchment Name: Don and Rother<br>Primacy: 1  | A8NE (S)                               | 477                          | 4       | 446258<br>403287 |
| 48     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 436.0<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 2  | A8NE (S)                               | 536                          | 4       | 446317<br>403241 |
| 49     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 70.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Far Moor Dike<br>Catchment Name: Don and Rother<br>Primacy: 1  | A8NE (S)                               | 536                          | 4       | 446317<br>403241 |
| 50     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 333.7<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1  | A14SW (E)                              | 539                          | 4       | 446751<br>403692 |
| 51     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 464.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 2  | A8NE (S)                               | 579                          | 4       | 446384<br>403217 |
| 52     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 74.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Far Moor Dike<br>Catchment Name: Don and Rother<br>Primacy: 1  | A8NE (S)                               | 579                          | 4       | 446384<br>403217 |
| 53     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 298.2<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1  | A8SW (SW)                              | 620                          | 4       | 445813<br>403175 |
| 54     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 143.3<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1  | A7SE (SW)                              | 622                          | 4       | 445788<br>403183 |
| 55     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 462.4<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Far Moor Dike<br>Catchment Name: Don and Rother<br>Primacy: 1 | A8NE (SE)                              | 629                          | 4       | 446454<br>403195 |

| Map ID | Details                                                                                                                                                                                                                                     | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 56     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 212.6<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1   | A7NW (SW)                              | 647                          | 4       | 445423<br>403521 |
| 57     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 100.2<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1   | A18NW (N)                              | 735                          | 4       | 446010<br>404695 |
| 58     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 146.4<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1   | A8SW (S)                               | 777                          | 4       | 445912<br>402988 |
| 59     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 148.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1   | A8SW (S)                               | 777                          | 4       | 445912<br>402988 |
| 60     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 60.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1    | A8SW (S)                               | 789                          | 4       | 446064<br>402966 |
| 61     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 454.0<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: West Moor Dike<br>Catchment Name: Don and Rother<br>Primacy: 1 | A14SE (E)                              | 806                          | 4       | 447006<br>403621 |
| 62     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 105.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1   | A18NE (N)                              | 811                          | 4       | 446381<br>404759 |
| 63     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 24.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1    | A18NE (N)                              | 813                          | 4       | 446357<br>404765 |
| 64     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 312.7<br>Watercourse Level: Not Supplied<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1        | A12SW (W)                              | 816                          | 4       | 445235<br>403552 |

| Map ID | Details                                                                                                                                                                                                                                     | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 65     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 627.9<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: West Moor Dike<br>Catchment Name: Don and Rother<br>Primacy: 1 | A9NE (E)                               | 829                          | 4       | 447001<br>403521 |
| 66     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 174.0<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1   | A14SE (E)                              | 837                          | 4       | 447018<br>403547 |
| 67     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 75.6<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1    | A8SW (S)                               | 842                          | 4       | 446038<br>402912 |
| 68     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 207.0<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1   | A9SW (SE)                              | 850                          | 4       | 446698<br>403084 |
| 69     | <b>OS Water Network Lines</b><br>Watercourse Form: Lake<br>Watercourse Length: 23.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1            | A18NE (N)                              | 878                          | 4       | 446146<br>404852 |
| 70     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 63.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1    | A8SW (S)                               | 889                          | 4       | 446098<br>402866 |
| 71     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 15.7<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1    | A17NE (NW)                             | 890                          | 4       | 445745<br>404767 |
| 72     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 26.7<br>Watercourse Level: Underground<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1          | A17NE (NW)                             | 892                          | 4       | 445740<br>404766 |
| 73     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 20.5<br>Watercourse Level: Underground<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1          | A17NE (NW)                             | 895                          | 4       | 445752<br>404775 |

| Map ID | Details                                                                                                                                                                                                                                     | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 74     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 440.3<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Thurnsoe Dike<br>Catchment Name: Don and Rother<br>Primacy: 1  | A17NE (NW)                             | 898                          | 4       | 445612<br>404698 |
| 75     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 464.2<br>Watercourse Level: Underground<br>Permanent: True<br>Watercourse Name: Thurnscoe Dike<br>Catchment Name: Don and Rother<br>Primacy: 1       | A17NE (N)                              | 901                          | 4       | 445767<br>404788 |
| 76     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 454.9<br>Watercourse Level: Underground<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1         | A17NE (N)                              | 901                          | 4       | 445767<br>404788 |
| 77     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 100.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1   | A18NE (N)                              | 901                          | 4       | 446141<br>404875 |
| 78     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 419.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1   | A18NE (N)                              | 904                          | 4       | 446359<br>404857 |
| 79     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 3.4<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1     | A17NE (NW)                             | 909                          | 4       | 445714<br>404772 |
| 80     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 325.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1   | A23SE (N)                              | 916                          | 4       | 446299<br>404880 |
| 81     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 266.6<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1   | A23SE (N)                              | 916                          | 4       | 446299<br>404880 |
| 82     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 82.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Crane Well Dike<br>Catchment Name: Don and Rother<br>Primacy: 1 | A3NE (S)                               | 919                          | 4       | 446154<br>402837 |

| Map ID | Details                                                                                                                                                                                                                                      | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 83     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 5.7<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1      | A19NE (NE)                             | 926                          | 4       | 446903<br>404579 |
| 84     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 294.6<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: West Moor Dike<br>Catchment Name: Don and Rother<br>Primacy: 1  | A15NW (E)                              | 939                          | 4       | 447185<br>403924 |
| 85     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 27.6<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1     | A19NE (NE)                             | 950                          | 4       | 446948<br>404567 |
| 86     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 26.2<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1     | A15NW (E)                              | 953                          | 4       | 447199<br>403937 |
| 87     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 45.4<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1     | A19NE (NE)                             | 957                          | 4       | 446936<br>404590 |
| 88     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 217.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Crane Well Dike<br>Catchment Name: Don and Rother<br>Primacy: 1 | A3NE (S)                               | 971                          | 4       | 446219<br>402786 |
| 89     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 111.9<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1    | A4NW (S)                               | 972                          | 4       | 446481<br>402835 |
| 90     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 184.0<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1    | A9SW (SE)                              | 975                          | 4       | 446622<br>402891 |
| 91     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 104.2<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 2    | A9SW (SE)                              | 975                          | 4       | 446622<br>402891 |

| Map ID | Details                                                                                                                                                                                                                                   | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 92     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 427.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1 | A15NW (E)                              | 997                          | 4       | 447243<br>403928 |
| 93     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 126.0<br>Watercourse Level: Not Supplied<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Don and Rother<br>Primacy: 1      | A23SW (N)                              | 997                          | 4       | 446118<br>404970 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 94     | <b>BGS Recorded Landfill Sites</b><br>Site Name: Marsh Tip<br>Location: Goldthorpe, ROTHERHAM, South Yorks<br>Authority: British Geological Survey, National Geoscience Information Service<br>Ground Water: Information not available<br>Surface Water: Information not available<br>Geology: N/A<br>Positional Accuracy: Positioned by the supplier<br>Boundary Accuracy: Derived                                                                                                                                                                                                                                                                                                           | A13SE (S)                              | 205                          | -       | 446227 403559 |
| 95     | <b>Historical Landfill Sites</b><br>Licence Holder: South Yorkshire County Council<br>Location: Goldthorpe, Rotherham, South Yorkshire<br>Name: Marsh Tip<br>Operator Location: Not Supplied<br>Boundary Accuracy: As Supplied<br>Provider Reference: EAHLD04441<br>First Input Date: 31st December 1970<br>Last Input Date: 31st December 1979<br>Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial and Household Waste, and Liquid Sludge<br>EA Waste Ref: 0<br>Regis Ref: Not Supplied<br>WRC Ref: 4400/0408<br>BGS Ref: 1547<br>Other Ref: 4400/B3, 2B3(5), WD2 B3                                                                                             | A13SE (S)                              | 205                          | 2       | 446227 403559 |
| 96     | <b>Historical Landfill Sites</b><br>Licence Holder: Barnsley Metropolitan Borough Council<br>Location: Off Highfield Avenue, Goldthorpe<br>Name: Railway Cutting<br>Operator Location: Amenities and Recreation Department, 50 Huddersfield Road, Barnsley<br>Boundary Accuracy: As Supplied<br>Provider Reference: EAHLD04442<br>First Input Date: 31st May 1985<br>Last Input Date: 17th November 1986<br>Specified Waste Type: Deposited Waste included Inert and Commercial Waste, and Liquid Sludge<br>EA Waste Ref: 0<br>Regis Ref: Not Supplied<br>WRC Ref: 4400/0416<br>BGS Ref: Not Supplied<br>Other Ref: 20B474(13), WD20 B474, 4400/B474                                          | A13NW (NW)                             | 325                          | 2       | 445884 404186 |
| 97     | <b>Licensed Waste Management Facilities (Locations)</b><br>Licence Number: 60561<br>Location: Hope Street, Low Valley, Barnsley, South Yorkshire, S73 0HX<br>Operator Name: R & J M Shaw Waste Disposal<br>Operator Location: Not Supplied<br>Authority: Environment Agency - North East Region, Yorkshire Area<br>Site Category: Household, Commercial And Industrial Transfer Stations<br><b>Licence Status: Surrendered</b><br>Issued: 13th March 1985<br>Last Modified: Not Supplied<br>Expires: Not Supplied<br>Suspended: Not Supplied<br>Revoked: Not Supplied<br>Surrendered: 5th July 2004<br>IPPC Reference: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | A13NE (NE)                             | 0                            | 2       | 446200 403950 |
| 98     | <b>Licensed Waste Management Facilities (Locations)</b><br>Licence Number: 60611<br>Location: Land At Marsh Tip, Barnburgh Lane, Goldthorpe, Barnsley, South Yorkshire, S63 9EU<br>Operator Name: Sedgwick Mr F<br>Operator Location: Not Supplied<br>Authority: Environment Agency - North East Region, Yorkshire Area<br>Site Category: Metal Recycling Sites (Mixed)<br><b>Licence Status: Issued</b><br>Issued: 15th July 1993<br>Last Modified: Not Supplied<br>Expires: Not Supplied<br>Suspended: Not Supplied<br>Revoked: Not Supplied<br>Surrendered: Not Supplied<br>IPPC Reference: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                         | A8NE (SE)                              | 313                          | 2       | 446350 403500 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 99     | <b>Licensed Waste Management Facilities (Locations)</b><br>Licence Number: 60610<br>Location: Goldthorpe H W R C, Nicholas Lane, Goldthorpe, Barnsley, South Yorkshire, S63 9AS<br>Operator Name: F C C Recycling ( U K ) Limited<br>Operator Location: Not Supplied<br>Authority: Environment Agency - North East Region, Yorkshire Area<br>Site Category: Household Waste Amenity Sites<br><b>Licence Status: Modified</b><br>Issued: 14th June 1993<br>Last Modified: 24th September 2012<br>Expires: Not Supplied<br>Suspended: Not Supplied<br>Revoked: Not Supplied<br>Surrendered: Not Supplied<br>IPPC Reference: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m      | A17NE (NW)                             | 784                          | 2       | 445600 404550 |
| 100    | <b>Licensed Waste Management Facilities (Locations)</b><br>Licence Number: 60556<br>Location: Land/premises At, Lowfield Road, Bolton On Dearne, Barnsley, South Yorkshire, S63 8JD<br>Operator Name: Number 1 Autosalvage<br>Operator Location: Not Supplied<br>Authority: Environment Agency - North East Region, Yorkshire Area<br>Site Category: Metal Recycling Sites (Vehicle Dismantlers)<br><b>Licence Status: Issued</b><br>Issued: 22nd November 1996<br>Last Modified: Not Supplied<br>Expires: Not Supplied<br>Suspended: Not Supplied<br>Revoked: Not Supplied<br>Surrendered: Not Supplied<br>IPPC Reference: Not Supplied<br>Positional Accuracy: Manually corrected supplier location | A8SW (S)                               | 838                          | 2       | 445800 402950 |
| 101    | <b>Licensed Waste Management Facilities (Locations)</b><br>Licence Number: 60544<br>Location: Lowfield Road, Bolton-on-dearne, Rotherham, South Yorkshire, S63 8JD<br>Operator Name: Lowfield Road Dismantlers Ltd<br>Operator Location: Not Supplied<br>Authority: Environment Agency - North East Region, Yorkshire Area<br>Site Category: Metal Recycling Sites (Vehicle Dismantlers)<br><b>Licence Status: Transferred</b><br>Issued: 9th June 1993<br>Last Modified: Not Supplied<br>Expires: Not Supplied<br>Suspended: Not Supplied<br>Revoked: Not Supplied<br>Surrendered: Not Supplied<br>IPPC Reference: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m            | A7SE (SW)                              | 863                          | 2       | 445750 402940 |
| 102    | <b>Licensed Waste Management Facilities (Locations)</b><br>Licence Number: 60612<br>Location: Lowfield Road, Side Of Railway Station, Bolton On Dearne, South Yorkshire<br>Operator Name: Wright Sid<br>Operator Location: Not Supplied<br>Authority: Environment Agency - North East Region, Yorkshire Area<br>Site Category: Metal Recycling Sites (Vehicle Dismantlers)<br><b>Licence Status: Surrendered</b><br>Issued: 9th September 1993<br>Last Modified: Not Supplied<br>Expires: Not Supplied<br>Suspended: Not Supplied<br>Revoked: Not Supplied<br>Surrendered: 1st November 2000<br>IPPC Reference: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                | A8SW (S)                               | 881                          | 2       | 445820 402900 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 103    | <b>Licensed Waste Management Facilities (Locations)</b><br>Licence Number: 60583<br>Location: Rear Of Greyhound Stadium, Nicholas Lane, Goldthorpe, Barnsley, South Yorkshire<br>Operator Name: Jones Barry<br>Operator Location: 52 Nicholas Lane, Athersley South, Barnsley, S Yorks, S71 3PR<br>Authority: Environment Agency - North East Region, Ridings Area<br>Site Category: Metal Recycling Sites (Mixed)<br><b>Licence Status: Issued</b><br>Issued: 15th June 1989<br>Last Modified: Not Supplied<br>Expires: Not Supplied<br>Suspended: Not Supplied<br>Revoked: Not Supplied<br>Surrendered: Not Supplied<br>IPPC Reference: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m | A17NE (NW)                             | 965                          | 2       | 445500 404700 |
| 103    | <b>Licensed Waste Management Facilities (Locations)</b><br>Licence Number: 60583<br>Location: Rear Of Greyhound Stadium, Nicholas Lane, Goldthorpe, Barnsley, South Yorkshire, S63 9AS<br>Operator Name: Wallis James<br>Operator Location: Not Supplied<br>Authority: Environment Agency - North East Region, Yorkshire Area<br>Site Category: Metal recycling, vehicle storage, depollution<br><b>Licence Status: Modified</b><br>Issued: 15th June 1989<br>Last Modified: 4th April 2016<br>Expires: Not Supplied<br>Suspended: Not Supplied<br>Revoked: Not Supplied<br>Surrendered: Not Supplied<br>IPPC Reference: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                  | A17NE (NW)                             | 965                          | 2       | 445500 404700 |
|        | <b>Local Authority Landfill Coverage</b><br>Name: Barnsley Metropolitan Borough Council<br>- Has supplied landfill data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                        | 0                            | 3       | 446134 403854 |
|        | <b>Local Authority Landfill Coverage</b><br>Name: Doncaster Metropolitan Borough Council<br>- Has supplied landfill data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                        | 925                          | 5       | 446925 404555 |
| 104    | <b>Local Authority Recorded Landfill Sites</b><br>Location: Not Supplied<br>Reference: 5<br>Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards<br><b>Last Reported Status: Unknown</b><br>Types of Waste: Not Supplied<br>Date of Closure: Not Supplied<br>Positional Accuracy: Positioned by the supplier<br>Boundary Quality: Good                                                                                                                                                                                                                                                                                                                                    | A8NE (S)                               | 239                          | 3       | 446216 403522 |
| 105    | <b>Local Authority Recorded Landfill Sites</b><br>Location: Not Supplied<br>Reference: 13<br>Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards<br><b>Last Reported Status: Unknown</b><br>Types of Waste: Not Supplied<br>Date of Closure: Not Supplied<br>Positional Accuracy: Positioned by the supplier<br>Boundary Quality: Moderate                                                                                                                                                                                                                                                                                                                               | A13NW (NW)                             | 325                          | 3       | 445876 404181 |
| 106    | <b>Local Authority Recorded Landfill Sites</b><br>Location: Lidget Lane, Thurnscoe<br>Reference: 102<br>Authority: Doncaster Metropolitan Borough Council, Environmental Services<br><b>Last Reported Status: Unknown</b><br>Types of Waste: Not Supplied<br>Date of Closure: Not Supplied<br>Positional Accuracy: Positioned by the supplier<br>Boundary Quality: Moderate                                                                                                                                                                                                                                                                                                                                       | A18NE (N)                              | 774                          | 5       | 446349 404726 |
| 107    | <b>Potentially Infilled Land (Non-Water)</b><br>Bearing Ref: SE<br>Use: Unknown Filled Ground (Pit, quarry etc)<br>Date of Mapping: 1988                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | A13SE (SE)                             | 139                          | -       | 446253 403645 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 108    | <b>Potentially Infilled Land (Non-Water)</b><br>Bearing Ref: SW<br>Use: Unknown Filled Ground (Pit, quarry etc)<br>Date of Mapping: 1988                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | A13SW (SW)                             | 223                          | -       | 445882 403589 |
| 109    | <b>Potentially Infilled Land (Non-Water)</b><br>Bearing Ref: S<br>Use: Unknown Filled Ground (Pit, quarry etc)<br>Date of Mapping: 1988                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | A8SW (S)                               | 667                          | -       | 445864 403110 |
| 110    | <b>Potentially Infilled Land (Non-Water)</b><br>Bearing Ref: NW<br>Use: Unknown Filled Ground (Pit, quarry etc)<br>Date of Mapping: 1988                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | A17NE (NW)                             | 739                          | -       | 445722 404580 |
| 111    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1956                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A13NE (NE)                             | 0                            | -       | 446163 403913 |
| 112    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1906                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A13NW (N)                              | 139                          | -       | 446067 404088 |
| 113    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1906                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A13NW (NW)                             | 148                          | -       | 446011 404051 |
| 114    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1956                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A14SW (SE)                             | 569                          | -       | 446738 403561 |
| 115    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1956                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A12SW (SW)                             | 605                          | -       | 445452 403565 |
| 116    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1894                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A18NE (N)                              | 635                          | -       | 446289 404595 |
| 117    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1956                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A7NW (SW)                              | 790                          | -       | 445417 403256 |
| 118    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1906                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A17NE (NW)                             | 898                          | -       | 445722 404767 |
| 119    | <b>Registered Landfill Sites</b><br>Licence Holder: Barnsley M.B.C.<br>Licence Reference: WD20 B 474<br>Site Location: Railway Cutting At Highfield Avenue, Goldthorpe, Rotherham, South Yorkshire<br>Licence Easting: 445900<br>Licence Northing: 404200<br>Operator Location: Cleansing Div. Smithies La.D Depot, Barnsley, South Yorkshire<br>Authority: Environment Agency - North East Region, Ridings Area<br>Site Category: Landfill<br>Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year)<br>Waste Source: No known restriction on source of waste<br>Restrictions:<br>Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled<br>Dated: 1st May 1985<br>Preceded By: Not Given<br>Licence:<br>Superseded By: Not Given<br>Licence:<br>Positional Accuracy: Manually positioned to the address or location<br>Boundary Accuracy: Not Applicable<br>Authorised Waste: Demolition Waste<br>Excavated Natural Materials \$<br>Horticultural/Landscape Industry Waste<br>Prohibited Waste: Asbestos<br>Liquids In Containers Over 4l Cap.<br>Slurry In Containers Over 4l Cap. | A13NW (NW)                             | 329                          | 2       | 445900 404200 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 120    | <b>Registered Landfill Sites</b><br>Licence Holder: Barnsley M.B.C.<br>Licence Reference: WD 2 B 3<br>Site Location: Barnburgh Road, Goldthorpe, Rotherham, South Yorkshire<br>Licence Easting: 446300<br>Licence Northing: 403400<br>Operator Location: As Site Address<br>Authority: Environment Agency - North East Region, Ridings Area<br>Site Category: Landfill<br>Max Input Rate: Undefined<br>Waste Source: No known restriction on source of waste<br>Restrictions:<br>Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled<br>Dated: 1st November 1976<br>Preceded By: Not Given<br>Licence:<br>Superseded By: Not Given<br>Licence:<br>Positional Accuracy: Manually positioned to the address or location<br>Boundary Accuracy: Not Applicable<br>Authorised Waste: Old Licence - Wastes Not To Hand                                                                                                                                                                                                                                                                                  | A8NE (S)                               | 379                          | 2       | 446300<br>403400 |
| 121    | <b>Registered Waste Transfer Sites</b><br>Licence Holder: B.D.R. Waste Disposal Ltd<br>Licence Reference: WD20 B 976 MOD 3<br>Site Location: Nicholas Lane, Thurnscoe, Rotherham, South Yorkshire<br>Operator Location: Thorncliffe Hall, Thorncliffe Park Estate, Chapeltown, SHEFFIELD, South Yorkshire, S35 2PQ<br>Authority: Environment Agency - North East Region, Ridings Area<br>Site Category: Civic Amenity<br>Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year)<br>Waste Source: No known restriction on source of waste<br>Restrictions:<br>Licence Status: Operational as far as is knownOperational<br>Dated: 1st June 1993<br>Preceded By: Not Given<br>Licence:<br>Superseded By: Not Given<br>Licence:<br>Positional Accuracy: Located by supplier to within 100m<br>Boundary Quality: Not Supplied<br>Authorised Waste: Domestic/Commercial Waste<br>Ferrous/Non-Ferrous Scrap Metal<br>Glass<br>Max.Waste Permitted By Licence<br>Mineral Oils<br>Motor Vehicle Batteries<br>Paper/Cardboard Waste<br>Textiles<br>Prohibited Waste: Asbestos<br>Waste N.O.S. | A17NE (NW)                             | 784                          | 2       | 445600<br>404550 |
| 122    | <b>Registered Waste Treatment or Disposal Sites</b><br>Licence Holder: F Sedgwick<br>Licence Reference: WD20 B 992 MOD 1<br>Site Location: Marsh Tip, Barnburgh Lane, Goldthorpe, Rotherham, South Yorkshire<br>Operator Location: 8 Stuart Street, Thurnscoe, BARNSELY, South Yorkshire, S63 0EF<br>Authority: Environment Agency - North East Region, Ridings Area<br>Site Category: Scrapyard - with Transfer Station<br>Max Input Rate: Very Small (Less than 10,000 tonnes per year)<br>Waste Source: No known restriction on source of waste<br>Restrictions:<br>Licence Status: Operational as far as is knownOperational<br>Dated: 1st July 1993<br>Preceded By: Not Given<br>Licence:<br>Superseded By: Not Given<br>Licence:<br>Positional Accuracy: Located by supplier to within 100m<br>Boundary Quality: Not Supplied<br>Authorised Waste: Cars/Light Comm'L Veh'S Max.Stor<br>Ferrous Metal Scrap Max.Stor<br>Non-Ferrous Metal Scrap<br>Non-Haz. H'Hold/Com./Ind.W. Max.Stor<br>Prohibited Waste: Liquid Wastes                                                                                            | A8NE (SE)                              | 313                          | 2       | 446350<br>403500 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 123    | <b>Registered Waste Treatment or Disposal Sites</b><br>Licence Holder: Number 1 Autosalvage<br>Licence Reference: WD20 B1127 MOD 2<br>Site Location: No 1 Autosalvage, Lowfield Road, Bolton Upon Dearne, Barnsley, South Yorkshire<br>Operator Location: As Site Address<br>Authority: Environment Agency - North East Region, Ridings Area<br>Site Category: Scrapyard<br>Max Input Rate: Very Small (Less than 10,000 tonnes per year)<br>Waste Source: No known restriction on source of waste<br>Restrictions:<br>Licence Status: Operational as far as is knownOperational<br>Dated: 22nd November 1996<br>Preceded By: WD20 B1003<br>Licence:<br>Superseded By: Not Given<br>Licence:<br>Positional Accuracy: Located by supplier to within 100m<br>Boundary Quality: Not Supplied<br>Authorised Waste: Max.Waste Permitted By Licence<br>Scrap Com.Vehs/Trailers/Cars Max.Stor<br>Tyres Max.Stor<br>Wet Cell Batteries<br>Prohibited Waste: Liquid Wastes<br>Waste N.O.S.                                                                                       | A8SW (S)                               | 838                          | 2       | 445800<br>402950 |
| 123    | <b>Registered Waste Treatment or Disposal Sites</b><br>Licence Holder: M D B White & M.A.Dobson t/a 1 Autosalvage<br>Licence Reference: WD20 B1003<br>Site Location: No 1 Autosalvage, Lowfield Road, Bolton Upon Dearne, Barnsley, South Yorkshire<br>Operator Location: 15 Lewes Road, CONISBROUGH, South Yorkshire, DN12 2NN<br>Authority: Environment Agency - North East Region, Ridings Area<br>Site Category: Scrapyard<br>Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year)<br>Waste Source: No known restriction on source of waste<br>Restrictions:<br>Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled<br>Dated: 1st September 1993<br>Preceded By: Not Given<br>Licence:<br>Superseded By: WD20 B1127 MOD 2<br>Licence:<br>Positional Accuracy: Manually positioned to the address or location<br>Boundary Quality: Not Supplied<br>Authorised Waste: Cars/Light Comm.Vehicles Max.Stor.<br>Wet Cell Batteries Max.Stor.<br>Prohibited Waste: Liquid Wastes<br>Waste N.O.S. | A8SW (S)                               | 838                          | 2       | 445800<br>402950 |
| 124    | <b>Registered Waste Treatment or Disposal Sites</b><br>Licence Holder: Mr Leach t/a Leach Brothers<br>Licence Reference: WD20 B1002 MOD 2<br>Site Location: Lowfield Road, Bolton Upon Dearne, Barnsley, South Yorkshire<br>Operator Location: c/o 71 Calder Road, BOLTON UPON DEARNE, South Yorkshire, S63 8JH<br>Authority: Environment Agency - North East Region, Ridings Area<br>Site Category: Scrapyard<br>Max Input Rate: Very Small (Less than 10,000 tonnes per year)<br>Waste Source: No known restriction on source of waste<br>Restrictions:<br>Licence Status: Operational as far as is knownOperational<br>Dated: 1st March 1997<br>Preceded By: WD20 B1002<br>Licence:<br>Superseded By: Not Given<br>Licence:<br>Positional Accuracy: Located by supplier to within 100m<br>Boundary Quality: Not Supplied<br>Authorised Waste: Cars Max.Stor<br>Light Commercial Vehicles<br>Max.Waste Permitted By Licence<br>Prohibited Waste: Liquid Wastes<br>Waste N.O.S.                                                                                        | A7SE (SW)                              | 863                          | 2       | 445750<br>402940 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 124    | <b>Registered Waste Treatment or Disposal Sites</b><br>Licence Holder: Mr Leach t/a Leach Brothers<br>Licence Reference: WD20 B1002<br>Site Location: Lowfield Road, Bolton Upon Dearne, Barnsley, South Yorkshire<br>Operator Location: c/o 71 Calder Road, BOLTON UPON DEARNE, South Yorkshire, S63 8JH<br>Authority: Environment Agency - North East Region, Ridings Area<br>Site Category: Scrapyard<br>Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year)<br>Waste Source: No known restriction on source of waste<br>Restrictions:<br>Licence Status: Record supersededSuperseded<br>Dated: 1st June 1993<br>Preceded By: Not Given<br>Licence:<br>Superseded By: WD20 B1002 MOD 2<br>Licence:<br>Positional Accuracy: Located by supplier to within 100m<br>Boundary Quality: Not Supplied<br>Authorised Waste: Batteries Max.Stor<br>Cars Max.Stor<br>Light Commercial Vehicles<br>Prohibited Waste: Liquid Wastes                                                                | A7SE (SW)                              | 863                          | 2       | 445750 402940 |
| 125    | <b>Registered Waste Treatment or Disposal Sites</b><br>Licence Holder: S Wright - Wath Autospares<br>Licence Reference: WD20 B 997 MOD 1<br>Site Location: Bolton Car Spares, Lowfield Road, Bolton Upon Dearne, Barnsley, South Yorkshire<br>Operator Location: As Site Address<br>Authority: Environment Agency - North East Region, Ridings Area<br>Site Category: Scrapyard<br>Max Input Rate: Very Small (Less than 10,000 tonnes per year)<br>Waste Source: No known restriction on source of waste<br>Restrictions:<br>Licence Status: Licence known to be surrenderedSurrendered<br>Dated: 1st September 1993<br>Preceded By: Not Given<br>Licence:<br>Superseded By: Not Given<br>Licence:<br>Positional Accuracy: Located by supplier to within 100m<br>Boundary Quality: Not Supplied<br>Authorised Waste: Ferrous Metal Scrap<br>Max.Waste Permitted By Licence<br>Non-Ferrous Metal Scrap<br>Scrap Vehs/Cars/Light Comm'ls Max Stor<br>Wet Cell Batteries Max Stor.<br>Prohibited Waste: Liquid Wastes<br>Waste N.O.S. | A8SW (S)                               | 881                          | 2       | 445820 402900 |
| 126    | <b>Registered Waste Treatment or Disposal Sites</b><br>Licence Holder: B Jones<br>Licence Reference: WD20 B 679 MOD 2<br>Site Location: Rear Of Greyhound Stadium, Nicholas Lane, Dearne, Barnsley, South Yorkshire<br>Operator Location: 52 Wingfield Road, South Athersley, BARNSLEY, South Yorkshire, S71 3PR<br>Authority: Environment Agency - North East Region, Ridings Area<br>Site Category: Scrapyard<br>Max Input Rate: Very Small (Less than 10,000 tonnes per year)<br>Waste Source: No known restriction on source of waste<br>Restrictions:<br>Licence Status: Site closed (licence partially revoked)Site Closed<br>Dated: 15th June 1989<br>Preceded By: Not Given<br>Licence:<br>Superseded By: Not Given<br>Licence:<br>Positional Accuracy: Manually positioned within the geographical locality<br>Boundary Quality: Not Supplied<br>Authorised Waste: Electrical Scrap<br>Ferrous Metal Scrap<br>Max.Storage In Licence<br>Max.Waste Permitted By Licence<br>Non-Ferrous Metal Scrap                          | A17NW (NW)                             | 994                          | 2       | 445450 404700 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                          | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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|        | <b>BGS 1:625,000 Solid Geology</b><br>Description: Pennine Middle Coal Measures Formation And South Wales Middle Coal Measures Formation (Undifferentiated)                                                                                                                                                                                                      | A13SW (W)                              | 0                            | 1       | 446134 403854 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Rural Soil<br>Arsenic: 15 - 25 mg/kg<br>Concentration:<br>Cadmium: <1.8 mg/kg<br>Concentration:<br>Chromium: 60 - 90 mg/kg<br>Concentration:<br>Lead Concentration: <100 mg/kg<br>Nickel: 15 - 30 mg/kg<br>Concentration: | A13SW (W)                              | 0                            | 1       | 446134 403854 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Rural Soil<br>Arsenic: 15 - 25 mg/kg<br>Concentration:<br>Cadmium: <1.8 mg/kg<br>Concentration:<br>Chromium: 60 - 90 mg/kg<br>Concentration:<br>Lead Concentration: <100 mg/kg<br>Nickel: 30 - 45 mg/kg<br>Concentration: | A13SE (S)                              | 200                          | 1       | 446232 403566 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Rural Soil<br>Arsenic: <15 mg/kg<br>Concentration:<br>Cadmium: <1.8 mg/kg<br>Concentration:<br>Chromium: 60 - 90 mg/kg<br>Concentration:<br>Lead Concentration: <100 mg/kg<br>Nickel: 15 - 30 mg/kg<br>Concentration:     | A18SE (N)                              | 246                          | 1       | 446204 404216 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Rural Soil<br>Arsenic: 15 - 25 mg/kg<br>Concentration:<br>Cadmium: <1.8 mg/kg<br>Concentration:<br>Chromium: 60 - 90 mg/kg<br>Concentration:<br>Lead Concentration: <100 mg/kg<br>Nickel: 30 - 45 mg/kg<br>Concentration: | A12SW (W)                              | 610                          | 1       | 445442 403578 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Rural Soil<br>Arsenic: <15 mg/kg<br>Concentration:<br>Cadmium: <1.8 mg/kg<br>Concentration:<br>Chromium: 60 - 90 mg/kg<br>Concentration:<br>Lead Concentration: <100 mg/kg<br>Nickel: 15 - 30 mg/kg<br>Concentration:     | A14SW (SE)                             | 624                          | 1       | 446794 403552 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Rural Soil<br>Arsenic: 15 - 25 mg/kg<br>Concentration:<br>Cadmium: <1.8 mg/kg<br>Concentration:<br>Chromium: 60 - 90 mg/kg<br>Concentration:<br>Lead Concentration: <100 mg/kg<br>Nickel: 15 - 30 mg/kg<br>Concentration: | A14SE (E)                              | 753                          | 1       | 446973 403713 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Rural Soil<br>Arsenic <15 mg/kg<br>Concentration:<br>Cadmium <1.8 mg/kg<br>Concentration:<br>Chromium 60 - 90 mg/kg<br>Concentration:<br>Lead Concentration: <100 mg/kg<br>Nickel 30 - 45 mg/kg<br>Concentration:                                                                                                                                                                                      | A8SW (S)                               | 754                          | 1       | 446134 403000 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Rural Soil<br>Arsenic 15 - 25 mg/kg<br>Concentration:<br>Cadmium <1.8 mg/kg<br>Concentration:<br>Chromium 60 - 90 mg/kg<br>Concentration:<br>Lead Concentration: <100 mg/kg<br>Nickel 15 - 30 mg/kg<br>Concentration:                                                                                                                                                                                  | A14SE (E)                              | 823                          | 1       | 447027 403631 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Rural Soil<br>Arsenic 15 - 25 mg/kg<br>Concentration:<br>Cadmium <1.8 mg/kg<br>Concentration:<br>Chromium 60 - 90 mg/kg<br>Concentration:<br>Lead Concentration: <100 mg/kg<br>Nickel 30 - 45 mg/kg<br>Concentration:                                                                                                                                                                                  | A17NE (NW)                             | 886                          | 1       | 445732 404755 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Rural Soil<br>Arsenic 15 - 25 mg/kg<br>Concentration:<br>Cadmium <1.8 mg/kg<br>Concentration:<br>Chromium 60 - 90 mg/kg<br>Concentration:<br>Lead Concentration: <100 mg/kg<br>Nickel 15 - 30 mg/kg<br>Concentration:                                                                                                                                                                                  | A8SE (S)                               | 909                          | 1       | 446447 402890 |
| 127    | <b>BGS Recorded Mineral Sites</b><br>Site Name: Furlong Road Brickworks<br>Location: Furlong Road, Goldthorpe, Barnsley, South Yorkshire<br>Source: British Geological Survey, National Geoscience Information Service<br>Reference: 13103<br>Type: Opencast<br><b>Status:</b> Ceased<br>Operator: Not Supplied<br>Operator Location: Not Supplied<br>Periodic Type: Carboniferous<br>Geology: Pennine Middle Coal Measures Formation<br>Commodity: Common Clay and Shale<br>Positional Accuracy: Located by supplier to within 10m           | A8NW (SW)                              | 333                          | 1       | 445910 403445 |
| 128    | <b>BGS Recorded Mineral Sites</b><br>Site Name: Goldthorpe Colliery<br>Location: Hickleton, Goldthorpe, Rotherham, South Yorkshire, S63 9hx<br>Source: British Geological Survey, National Geoscience Information Service<br>Reference: 184<br>Type: Underground<br><b>Status:</b> Ceased<br>Operator: Not Supplied<br>Operator Location: Not Supplied<br>Periodic Type: Carboniferous<br>Geology: Shafton Coal (West And South Yorkshire And Derbyshire)<br>Commodity: Coal - Deep<br>Positional Accuracy: Located by supplier to within 10m | A14NE (E)                              | 648                          | 1       | 446862 404128 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 128    | <b>BGS Recorded Mineral Sites</b><br>Site Name: Goldthorpe Colliery<br>Location: Goldthorpe, Doncaster, Yorkshire<br>Source: British Geological Survey, National Geoscience Information Service<br>Reference: 174783<br>Type: Underground<br><b>Status: Ceased</b><br>Operator: Not Supplied<br>Operator Location: Not Supplied<br>Periodic Type: Carboniferous<br>Geology: Shafton Coal (West And South Yorkshire And Derbyshire)<br>Commodity: Coal - Deep<br>Positional Accuracy: Located by supplier to within 10m            | A14NE (E)                              | 662                          | 1       | 446879 404121 |
| 129    | <b>BGS Recorded Mineral Sites</b><br>Site Name: Gas Works Clay Pit<br>Location: Bolton-Upon-Dearne, South Yorkshire<br>Source: British Geological Survey, National Geoscience Information Service<br>Reference: 108122<br>Type: Opencast<br><b>Status: Ceased</b><br>Operator: Not Supplied<br>Operator Location: Not Supplied<br>Periodic Type: Quaternary<br>Geology: Alluvium<br>Commodity: Common Clay and Shale<br>Positional Accuracy: Located by supplier to within 10m                                                    | A8SW (S)                               | 718                          | 1       | 445830 403066 |
| 130    | <b>BGS Recorded Mineral Sites</b><br>Site Name: Highgate Colliery, No. 2 Shaft<br>Location: Goldthorpe, Doncaster, Yorkshire<br>Source: British Geological Survey, National Geoscience Information Service<br>Reference: 174782<br>Type: Underground<br><b>Status: Ceased</b><br>Operator: Not Supplied<br>Operator Location: Not Supplied<br>Periodic Type: Carboniferous<br>Geology: Shafton Coal (West And South Yorkshire And Derbyshire)<br>Commodity: Coal - Deep<br>Positional Accuracy: Located by supplier to within 10m | A18NW (N)                              | 840                          | 1       | 445885 404770 |
| 130    | <b>BGS Recorded Mineral Sites</b><br>Site Name: Highgate Colliery<br>Location: Goldthorpe, Doncaster, South Yorkshire<br>Source: British Geological Survey, National Geoscience Information Service<br>Reference: 1459<br>Type: Underground<br><b>Status: Ceased</b><br>Operator: Not Supplied<br>Operator Location: Not Supplied<br>Periodic Type: Carboniferous<br>Geology: Shafton Coal (West And South Yorkshire And Derbyshire)<br>Commodity: Coal - Deep<br>Positional Accuracy: Located by supplier to within 10m          | A18NW (N)                              | 871                          | 1       | 445875 404800 |
|        | <b>BGS Measured Urban Soil Chemistry</b><br>No data available                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                              |         |               |
|        | <b>BGS Urban Soil Chemistry Averages</b><br>No data available                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                              |         |               |
|        | <b>Coal Mining Affected Areas</b><br>Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.                                                                                                                                                                                                                                                          | A13SW (W)                              | 0                            | 6       | 446134 403854 |
|        | <b>Mining Instability</b><br>Mining Evidence: Inconclusive Coal Mining<br>Source: Ove Arup & Partners<br>Boundary Quality: As Supplied                                                                                                                                                                                                                                                                                                                                                                                            | A13SW (W)                              | 0                            | -       | 446134 403854 |
|        | <b>Non Coal Mining Areas of Great Britain</b><br>No Hazard                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |                              |         |               |
|        | <b>Potential for Collapsible Ground Stability Hazards</b><br>Hazard Potential: Very Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                                                                                                                                                                                                                                                                             | A13SW (W)                              | 0                            | 1       | 446134 403854 |
|        | <b>Potential for Collapsible Ground Stability Hazards</b><br>Hazard Potential: No Hazard<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                                                                                                                                                                                                                                                                            | A8NE (S)                               | 230                          | 1       | 446186 403509 |

| Map ID | Details                                                                                                                                                                                                                                                                   | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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|        | <b>Potential for Compressible Ground Stability Hazards</b><br>Hazard Potential: No Hazard<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                   | A13SW (W)                              | 0                            | 1       | 446134 403854 |
|        | <b>Potential for Compressible Ground Stability Hazards</b><br>Hazard Potential: Moderate<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                    | A13SW (SW)                             | 227                          | 1       | 445896 403572 |
|        | <b>Potential for Compressible Ground Stability Hazards</b><br>Hazard Potential: Moderate<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                    | A8NE (S)                               | 230                          | 1       | 446186 403509 |
|        | <b>Potential for Compressible Ground Stability Hazards</b><br>Hazard Potential: Very Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                    | A8NE (S)                               | 245                          | 1       | 446237 403520 |
|        | <b>Potential for Ground Dissolution Stability Hazards</b><br>Hazard Potential: No Hazard<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                    | A13SW (W)                              | 0                            | 1       | 446134 403854 |
|        | <b>Potential for Landslide Ground Stability Hazards</b><br>Hazard Potential: Very Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                       | A13SW (W)                              | 0                            | 1       | 446134 403854 |
|        | <b>Potential for Landslide Ground Stability Hazards</b><br>Hazard Potential: Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                            | A13NE (N)                              | 223                          | 1       | 446211 404190 |
|        | <b>Potential for Running Sand Ground Stability Hazards</b><br>Hazard Potential: No Hazard<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                   | A13SW (W)                              | 0                            | 1       | 446134 403854 |
|        | <b>Potential for Running Sand Ground Stability Hazards</b><br>Hazard Potential: Very Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                    | A13SW (SW)                             | 227                          | 1       | 445896 403572 |
|        | <b>Potential for Running Sand Ground Stability Hazards</b><br>Hazard Potential: Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                         | A8NE (S)                               | 230                          | 1       | 446186 403509 |
|        | <b>Potential for Running Sand Ground Stability Hazards</b><br>Hazard Potential: Very Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                    | A8NE (S)                               | 245                          | 1       | 446237 403520 |
|        | <b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b><br>Hazard Potential: No Hazard<br>Source: British Geological Survey, National Geoscience Information Service                                                                                     | A13NE (N)                              | 0                            | 1       | 446150 403926 |
|        | <b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b><br>Hazard Potential: Very Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                      | A13SW (W)                              | 0                            | 1       | 446134 403854 |
|        | <b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b><br>Hazard Potential: Very Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                      | A13NE (N)                              | 43                           | 1       | 446157 404018 |
|        | <b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b><br>Hazard Potential: Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                           | A8NE (S)                               | 230                          | 1       | 446186 403509 |
|        | <b>Radon Potential - Radon Affected Areas</b><br>Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level).<br>Source: British Geological Survey, National Geoscience Information Service | A13SW (W)                              | 0                            | 1       | 446134 403854 |
|        | <b>Radon Potential - Radon Protection Measures</b><br>Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions<br>Source: British Geological Survey, National Geoscience Information Service                     | A13SW (W)                              | 0                            | 1       | 446134 403854 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                              | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 131    | <b>Contemporary Trade Directory Entries</b><br>Name: G E Gray & Son<br>Location: High Street Garage, High Street, Goldthorpe, Rotherham, South Yorkshire, S63 9DA<br>Classification: Mot Testing Centres<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                  | A13NE (NE)                             | 8                            | -       | 446235 403939 |
| 132    | <b>Contemporary Trade Directory Entries</b><br>Name: Dearne Valley Motors<br>Location: High Street, Goldthorpe, Rotherham, S63 9DE<br>Classification: Car Dealers<br><b>Status: Active</b><br>Positional Accuracy: Automatically positioned to the address                                                                           | A13NW (NW)                             | 96                           | -       | 446056 404024 |
| 133    | <b>Contemporary Trade Directory Entries</b><br>Name: F K Naylor<br>Location: The Blacksmiths Shop, Goldthorpe Green, Goldthorpe, Rotherham, South Yorkshire, S63 9EL<br>Classification: Blacksmiths & Forgemasters<br><b>Status: Inactive</b><br>Positional Accuracy: Manually positioned to the road within the address or location | A13SW (SW)                             | 168                          | -       | 445888 403664 |
| 134    | <b>Contemporary Trade Directory Entries</b><br>Name: Dearnside Sun Blinds<br>Location: 20-22, High Street, Goldthorpe, Rotherham, South Yorkshire, S63 9LR<br>Classification: Blinds, Awnings & Canopies<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                  | A18SE (N)                              | 328                          | -       | 446182 404301 |
| 135    | <b>Contemporary Trade Directory Entries</b><br>Name: Clean'N'Mend Dry Cleaners<br>Location: 47, Barnsley Road, Goldthorpe, Rotherham, South Yorkshire, S63 9LT<br>Classification: Dry Cleaners<br><b>Status: Active</b><br>Positional Accuracy: Automatically positioned to the address                                              | A18SW (N)                              | 352                          | -       | 446066 404315 |
| 135    | <b>Contemporary Trade Directory Entries</b><br>Name: Ironing Team<br>Location: 47, Barnsley Road, Goldthorpe, Rotherham, South Yorkshire, S63 9LT<br>Classification: Ironing & Home Laundry Services<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                      | A18SW (N)                              | 352                          | -       | 446066 404315 |
| 136    | <b>Contemporary Trade Directory Entries</b><br>Name: True Food International<br>Location: Fieldsend Rd, Goldthorpe, Rotherham, South Yorkshire, S63 9EU<br>Classification: Refrigeration Equipment - Commercial<br><b>Status: Inactive</b><br>Positional Accuracy: Manually positioned within the geographical locality              | A18SE (N)                              | 364                          | -       | 446259 404326 |
| 137    | <b>Contemporary Trade Directory Entries</b><br>Name: Smart Blinds<br>Location: 9, Barnsley Road, Goldthorpe, Rotherham, South Yorkshire, S63 9LS<br>Classification: Blinds, Awnings & Canopies<br><b>Status: Inactive</b><br>Positional Accuracy: Manually positioned to the address or location                                     | A18SE (N)                              | 369                          | -       | 446150 404343 |
| 138    | <b>Contemporary Trade Directory Entries</b><br>Name: Dearne Fabrications<br>Location: 2, Gosling Gate Road, Goldthorpe, Rotherham, South Yorkshire, S63 9LU<br>Classification: Tungsten Tool Manufacturers & Distributors<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                 | A18SW (N)                              | 405                          | -       | 446045 404364 |
| 139    | <b>Contemporary Trade Directory Entries</b><br>Name: Geejay Motors<br>Location: 98, Barnsley Road, Goldthorpe, Rotherham, South Yorkshire, S63 9AA<br>Classification: Mot Testing Centres<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                                 | A18SW (NW)                             | 424                          | -       | 445908 404324 |
| 139    | <b>Contemporary Trade Directory Entries</b><br>Name: Texaco<br>Location: 106, Barnsley Road, Goldthorpe, Rotherham, South Yorkshire, S63 9AE<br>Classification: Petrol Filling Stations<br><b>Status: Active</b><br>Positional Accuracy: Automatically positioned to the address                                                     | A18SW (NW)                             | 434                          | -       | 445887 404323 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 139    | <b>Contemporary Trade Directory Entries</b><br>Name: Dearnside Motor Company<br>Location: 106, Barnsley Road, Goldthorpe, Rotherham, South Yorkshire, S63 9AE<br>Classification: Mot Testing Centres<br><b>Status: Active</b><br>Positional Accuracy: Automatically positioned to the address                           | A18SW (NW)                             | 434                          | -       | 445887 404323 |
| 139    | <b>Contemporary Trade Directory Entries</b><br>Name: South Yorkshire Car Centre<br>Location: 98, Barnsley Road, Goldthorpe, Rotherham, S63 9AA<br>Classification: Car Dealers - Used<br><b>Status: Active</b><br>Positional Accuracy: Automatically positioned to the address                                           | A18SW (NW)                             | 440                          | -       | 445893 404335 |
| 139    | <b>Contemporary Trade Directory Entries</b><br>Name: H & A Motors<br>Location: Barnsley Road, Goldthorpe, Rotherham, South Yorkshire, S63 9AA<br>Classification: Garage Services<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                             | A18SW (NW)                             | 441                          | -       | 445893 404336 |
| 139    | <b>Contemporary Trade Directory Entries</b><br>Name: Gee Jay Motors<br>Location: Barnsley Road, Goldthorpe, Rotherham, South Yorkshire, S63 9AA<br>Classification: Car Dealers - Used<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                        | A18SW (NW)                             | 441                          | -       | 445893 404336 |
| 140    | <b>Contemporary Trade Directory Entries</b><br>Name: Tony Casagrande<br>Location: 10a, Market Street, Goldthorpe, Rotherham, South Yorkshire, S63 9HA<br>Classification: Hydraulic Equipment & Accessories - Sales & Service<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address | A18SE (N)                              | 431                          | -       | 446340 404376 |
| 141    | <b>Contemporary Trade Directory Entries</b><br>Name: Central Garage<br>Location: 202, Furlong Road, Goldthorpe, Rotherham, S63 9PR<br>Classification: Car Body Repairs<br><b>Status: Active</b><br>Positional Accuracy: Automatically positioned to the address                                                         | A7NE (SW)                              | 436                          | -       | 445771 403405 |
| 142    | <b>Contemporary Trade Directory Entries</b><br>Name: David Middleton<br>Location: Beever St, Goldthorpe, Rotherham, South Yorkshire, S63 9HT<br>Classification: Do It Yourself Wholesalers<br><b>Status: Inactive</b><br>Positional Accuracy: Manually positioned to the road within the address or location            | A19SW (NE)                             | 473                          | -       | 446581 404262 |
| 143    | <b>Contemporary Trade Directory Entries</b><br>Name: P & J Motor Services<br>Location: 13, Elizabeth Street, Goldthorpe, Rotherham, South Yorkshire, S63 9NA<br>Classification: Garage Services<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                              | A18SE (N)                              | 486                          | -       | 446244 404452 |
| 144    | <b>Contemporary Trade Directory Entries</b><br>Name: Scotts Classic Car Parts<br>Location: 114, Barnsley Road, Goldthorpe, Rotherham, South Yorkshire, S63 9AW<br>Classification: Classic Car Specialists<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                    | A17SE (NW)                             | 488                          | -       | 445763 404302 |
| 145    | <b>Contemporary Trade Directory Entries</b><br>Name: K T Fabrications<br>Location: 39, Kelly Street, Goldthorpe, Rotherham, South Yorkshire, S63 9NB<br>Classification: Gate Manufacturers<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                   | A18SW (N)                              | 490                          | -       | 446063 404457 |
| 145    | <b>Contemporary Trade Directory Entries</b><br>Name: King Street Garage<br>Location: King Street, Goldthorpe, Rotherham, South Yorkshire, S63 9LY<br>Classification: Plant & Machinery Repairs<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                               | A18SW (N)                              | 523                          | -       | 446087 404494 |
| 146    | <b>Contemporary Trade Directory Entries</b><br>Name: Tansley Haulage<br>Location: 21, Victoria Street, Goldthorpe, Rotherham, South Yorkshire, S63 9HS<br>Classification: Road Haulage Services<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                              | A19SW (NE)                             | 493                          | -       | 446488 404371 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                      | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 146    | <b>Contemporary Trade Directory Entries</b><br>Name: Arla Foods<br>Location: Beever St, Goldthorpe, Rotherham, South Yorkshire, S63 9HT<br>Classification: Dairies<br><b>Status: Inactive</b><br>Positional Accuracy: Manually positioned to the road within the address or location                                         | A19SW (NE)                             | 532                          | -       | 446524<br>404392 |
| 146    | <b>Contemporary Trade Directory Entries</b><br>Name: Performance Engineering Services<br>Location: Beever st, Goldthorpe, Rotherham, South Yorkshire, S63 9HT<br>Classification: Motor Cycle & Component Manufacturers<br><b>Status: Active</b><br>Positional Accuracy: Manually positioned within the geographical locality | A19SW (NE)                             | 533                          | -       | 446547<br>404375 |
| 147    | <b>Contemporary Trade Directory Entries</b><br>Name: Laundarama<br>Location: 71, Doncaster Road, Goldthorpe, Rotherham, South Yorkshire, S63 9HJ<br>Classification: Laundries & Launderettes<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                      | A18SE (NE)                             | 547                          | -       | 446444<br>404458 |
| 148    | <b>Contemporary Trade Directory Entries</b><br>Name: Crystal Blinds<br>Location: 25, Cranwell Court, Goldthorpe, Rotherham, S63 9GA<br>Classification: Blinds, Awnings & Canopies<br><b>Status: Active</b><br>Positional Accuracy: Automatically positioned to the address                                                   | A12NE (W)                              | 548                          | -       | 445490<br>403904 |
| 148    | <b>Contemporary Trade Directory Entries</b><br>Name: Crystal Blinds<br>Location: 25, Cranwell Court, Goldthorpe, Rotherham, South Yorkshire, S63 9GA<br>Classification: Blinds, Awnings & Canopies<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                | A12NE (W)                              | 549                          | -       | 445490<br>403904 |
| 149    | <b>Contemporary Trade Directory Entries</b><br>Name: B H Motors<br>Location: Gosling Gate Road, Goldthorpe, Rotherham, S63 9LU<br>Classification: Garage Services<br><b>Status: Active</b><br>Positional Accuracy: Automatically positioned to the address                                                                   | A18SW (N)                              | 554                          | -       | 446014<br>404511 |
| 150    | <b>Contemporary Trade Directory Entries</b><br>Name: Nissan Mobile<br>Location: 52, Doncaster Road, Goldthorpe, Rotherham, South Yorkshire, S63 9HU<br>Classification: Garage Services<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                            | A19SW (NE)                             | 568                          | -       | 446512<br>404444 |
| 151    | <b>Contemporary Trade Directory Entries</b><br>Name: Ian'S Car Sales<br>Location: Highgate Lane, Goldthorpe, Rotherham, South Yorkshire, S63 9BJ<br>Classification: Car Dealers<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                                   | A12NE (W)                              | 575                          | -       | 445507<br>404107 |
| 152    | <b>Contemporary Trade Directory Entries</b><br>Name: Yorkshire Crystal<br>Location: 6, West Street, Goldthorpe, Rotherham, South Yorkshire, S63 9JU<br>Classification: Glass Engravers & Decorators<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                               | A18SE (N)                              | 579                          | -       | 446368<br>404522 |
| 153    | <b>Contemporary Trade Directory Entries</b><br>Name: Total<br>Location: Barnsley Road Highgate, Goldthorpe, Rotherham, South Yorkshire, S63 9AP<br>Classification: Petrol Filling Stations<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                        | A17SE (NW)                             | 595                          | -       | 445597<br>404295 |
| 153    | <b>Contemporary Trade Directory Entries</b><br>Name: Monkhill Service Station<br>Location: Barnsley Road Highgate, Goldthorpe, Rotherham, South Yorkshire, S63 9AP<br>Classification: Petrol Filling Stations<br><b>Status: Active</b><br>Positional Accuracy: Automatically positioned to the address                       | A17SE (NW)                             | 595                          | -       | 445597<br>404295 |
| 154    | <b>Contemporary Trade Directory Entries</b><br>Name: House Fairies<br>Location: 11, Westmoor Close, Goldthorpe, Rotherham, South Yorkshire, S63 9GE<br>Classification: Cleaning Services - Domestic<br><b>Status: Active</b><br>Positional Accuracy: Automatically positioned to the address                                 | A12NW (W)                              | 656                          | -       | 445423<br>404109 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                            | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 155    | <b>Contemporary Trade Directory Entries</b><br>Name: Woodland Logistics<br>Location: Unit 1, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Road Haulage Services<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                      | A12SW (W)                              | 720                          | -       | 445303 403804 |
| 156    | <b>Contemporary Trade Directory Entries</b><br>Name: Vanquish<br>Location: 185, Barnsley Road Highgate, Goldthorpe, Rotherham, South Yorkshire, S63 9AU<br>Classification: Car Dealers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                                                  | A12NW (W)                              | 744                          | -       | 445353 404176 |
| 156    | <b>Contemporary Trade Directory Entries</b><br>Name: Mobility Assured<br>Location: 185, Barnsley Road Highgate, Goldthorpe, Rotherham, South Yorkshire, S63 9AU<br>Classification: Disability Equipment - Manufacturers & Suppliers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                     | A12NW (W)                              | 744                          | -       | 445353 404176 |
| 156    | <b>Contemporary Trade Directory Entries</b><br>Name: Vanquish<br>Location: 185, Barnsley Road Highgate, Goldthorpe, Rotherham, South Yorkshire, S63 9AU<br>Classification: Car Dealers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                                                  | A12NW (W)                              | 744                          | -       | 445353 404176 |
| 156    | <b>Contemporary Trade Directory Entries</b><br>Name: Vanquish<br>Location: 185, Barnsley Road Highgate, Goldthorpe, Rotherham, South Yorkshire, S63 9AU<br>Classification: Car Dealers - Used<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                                           | A12NW (W)                              | 744                          | -       | 445353 404176 |
| 157    | <b>Contemporary Trade Directory Entries</b><br>Name: Wilkinsons Light Haulage<br>Location: 1, Lower Mill Close, Goldthorpe, Rotherham, South Yorkshire, S63 9BY<br>Classification: Road Haulage Services<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                                | A12SW (W)                              | 762                          | -       | 445285 403576 |
| 158    | <b>Contemporary Trade Directory Entries</b><br>Name: Claremont Garments<br>Location: Goldthorpe Indust Est, Commercial Rd, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Clothing & Fabrics - Manufacturers<br><b>Status:</b> Inactive<br>Positional Accuracy: Manually positioned to the road within the address or location | A12NW (W)                              | 780                          | -       | 445248 403866 |
| 159    | <b>Contemporary Trade Directory Entries</b><br>Name: Solarframe<br>Location: Fields End Business Park, Thurnscoe, ROTHERHAM, South Yorkshire, S63 0JF<br>Classification: PVC-U Products - Manufacturers & Suppliers<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                                       | A18NW (N)                              | 795                          | -       | 445875 404719 |
| 160    | <b>Contemporary Trade Directory Entries</b><br>Name: B E T A Engineering Services Ltd<br>Location: Unit 2, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, S63 9BL<br>Classification: Precision Engineers<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                           | A12SW (W)                              | 806                          | -       | 445217 403818 |
| 160    | <b>Contemporary Trade Directory Entries</b><br>Name: Frontier Foods<br>Location: Unit 2, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Food Products - Manufacturers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                | A12SW (W)                              | 806                          | -       | 445217 403818 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 160    | <b>Contemporary Trade Directory Entries</b><br>Name: Helesi<br>Location: Unit 2, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Waste Disposal Services<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                   | A12SW (W)                              | 806                          | -       | 445217 403818 |
| 160    | <b>Contemporary Trade Directory Entries</b><br>Name: Emerald Pallets<br>Location: Unit 9c, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, ROTHERHAM, South Yorkshire, S63 9BL<br>Classification: Pallets, Crates & Packing Cases<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address | A12SW (W)                              | 830                          | -       | 445195 403831 |
| 160    | <b>Contemporary Trade Directory Entries</b><br>Name: Techniquial Engineering Ltd<br>Location: Unit 11a-11b, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, S63 9BL<br>Classification: Machine Shops<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                     | A12SW (W)                              | 832                          | -       | 445191 403801 |
| 160    | <b>Contemporary Trade Directory Entries</b><br>Name: Darfield Motor Controls Ltd<br>Location: Unit 11c, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, ROTHERHAM, South Yorkshire, S63 9BL<br>Classification: Control Panels<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address       | A12SW (W)                              | 832                          | -       | 445190 403783 |
| 160    | <b>Contemporary Trade Directory Entries</b><br>Name: Home Choose Blinds<br>Location: Unit 11A, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Blinds, Awnings & Canopies<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address  | A12SW (W)                              | 832                          | -       | 445191 403801 |
| 160    | <b>Contemporary Trade Directory Entries</b><br>Name: Tint Mania<br>Location: Unit 11e, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, ROTHERHAM, South Yorkshire, S63 9BL<br>Classification: Window Tinting<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                        | A12SW (W)                              | 833                          | -       | 445189 403772 |
| 160    | <b>Contemporary Trade Directory Entries</b><br>Name: Barrick Mouldings Ltd<br>Location: Unit 11f, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, S63 9BL<br>Classification: Door Manufacturers - Domestic<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address               | A12SW (W)                              | 833                          | -       | 445189 403766 |
| 161    | <b>Contemporary Trade Directory Entries</b><br>Name: Building Product Solutions<br>Location: Unit 13, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Builders' Merchants<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address    | A12SW (W)                              | 829                          | -       | 445195 403703 |
| 162    | <b>Contemporary Trade Directory Entries</b><br>Name: Motor Spares Uk<br>Location: Lowfield Road, Bolton-upon-Dearne, Rotherham, S63 8JD<br>Classification: Car Breakers & Dismantlers<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                                                          | A7SE (S)                               | 863                          | -       | 445771 402932 |
| 162    | <b>Contemporary Trade Directory Entries</b><br>Name: Lowfield Road Dismantlers<br>Location: Lowfield Road, Bolton-upon-Dearne, ROTHERHAM, South Yorkshire, S63 8JD<br>Classification: Car Breakdown & Recovery Services<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                        | A7SE (S)                               | 863                          | -       | 445771 402932 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                         | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 163    | <b>Contemporary Trade Directory Entries</b><br>Name: Elite Restorations Ltd<br>Location: 79, Parkgate, Goldthorpe, Rotherham, South Yorkshire, S63 9GW<br>Classification: Furniture - Repairing & Restoring<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                                          | A19SE (NE)                             | 866                          | -       | 447010<br>404336 |
| 164    | <b>Contemporary Trade Directory Entries</b><br>Name: Pyxis Animal Health<br>Location: Unit 10a, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Veterinary Pharmacies<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                              | A12SW (W)                              | 871                          | -       | 445152<br>403818 |
| 164    | <b>Contemporary Trade Directory Entries</b><br>Name: Chrisand Fabrications Ltd<br>Location: Unit 10d, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, ROTHERHAM, South Yorkshire, S63 9BL<br>Classification: Staircase, Balustrade & Handrail Manufacturers<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address | A12SW (W)                              | 872                          | -       | 445153<br>403840 |
| 164    | <b>Contemporary Trade Directory Entries</b><br>Name: Interlock Ltd<br>Location: Unit 10E, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Adhesive & Sealant Manufacturers & Distributors<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address          | A12SW (W)                              | 873                          | -       | 445153<br>403850 |
| 164    | <b>Contemporary Trade Directory Entries</b><br>Name: Mike Satur Ltd<br>Location: Unit 3d-3e, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Car Dealers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                           | A11SE (W)                              | 919                          | -       | 445106<br>403836 |
| 164    | <b>Contemporary Trade Directory Entries</b><br>Name: Howcroft Industrial Supplies<br>Location: Unit 3f, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Engineers - General<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                        | A11SE (W)                              | 920                          | -       | 445106<br>403854 |
| 165    | <b>Contemporary Trade Directory Entries</b><br>Name: Goldthorpe Solid Fuels<br>Location: 8, Pickhills Avenue, Goldthorpe, Rotherham, South Yorkshire, S63 9JE<br>Classification: Coal & Smokeless Fuel Merchants & Distributors<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                      | A19SE (NE)                             | 873                          | -       | 446902<br>404502 |
| 166    | <b>Contemporary Trade Directory Entries</b><br>Name: Wallace Metals<br>Location: Nicholas Lane, Goldthorpe, Rotherham, South Yorkshire, S63 9AT<br>Classification: Scrap Metal Merchants<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                                                                               | A17NE (NW)                             | 878                          | -       | 445546<br>404627 |
| 167    | <b>Contemporary Trade Directory Entries</b><br>Name: South Yorkshire Foiling<br>Location: 5, Fields End Business Park, Thurnscoe, Rotherham, South Yorkshire, S63 0JF<br>Classification: Lamination & Encapsulation Services<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                         | A18NW (N)                              | 885                          | -       | 445927<br>404830 |
| 168    | <b>Contemporary Trade Directory Entries</b><br>Name: Speed P V C Ltd<br>Location: Unit 13, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Window Frame Manufacturers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                              | A12SW (W)                              | 904                          | -       | 445131<br>403619 |
| 169    | <b>Contemporary Trade Directory Entries</b><br>Name: Elite Restorations<br>Location: 28, Cherry Grove, Goldthorpe, Rotherham, South Yorkshire, S63 9LE<br>Classification: Leather Goods - Cleaning<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                                                   | A17SW (NW)                             | 909                          | -       | 445312<br>404441 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                  | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 169    | <b>Contemporary Trade Directory Entries</b><br>Name: North East Truck & Van Ltd<br>Location: 21, Cherry Grove, Goldthorpe, Rotherham, South Yorkshire, S63 9LE<br>Classification: Commercial Vehicle Dealers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                                  | A17SW (NW)                             | 924                          | -       | 445290 404435 |
| 170    | <b>Contemporary Trade Directory Entries</b><br>Name: Cape Industrial Services Ltd<br>Location: 2, Fields End Business Park, Thurnscoe, Rotherham, South Yorkshire, S63 0JF<br>Classification: Industrial Services<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                                               | A18NW (N)                              | 913                          | -       | 445852 404836 |
| 170    | <b>Contemporary Trade Directory Entries</b><br>Name: Carlton Manufacturing Ltd<br>Location: 3, Fields End Business Park, Thurnscoe, Rotherham, S63 0JF<br>Classification: Concrete & Mortar Ready Mixed<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                                                         | A18NW (N)                              | 923                          | -       | 445818 404834 |
| 171    | <b>Contemporary Trade Directory Entries</b><br>Name: P J O Industrial<br>Location: Unit 5, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, ROTHERHAM, South Yorkshire, S63 9BL<br>Classification: Electronic Engineers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                             | A11SE (W)                              | 914                          | -       | 445112 403682 |
| 171    | <b>Contemporary Trade Directory Entries</b><br>Name: Inditherm<br>Location: Unit 5, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Insulation Materials<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                    | A11SE (W)                              | 914                          | -       | 445112 403682 |
| 172    | <b>Contemporary Trade Directory Entries</b><br>Name: Wilson<br>Location: Unit 3C, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Refrigerators & Freezers - Servicing & Repairs<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address            | A11SE (W)                              | 920                          | -       | 445103 403806 |
| 172    | <b>Contemporary Trade Directory Entries</b><br>Name: Morebrooke Ltd<br>Location: Unit 2, Goldthorpe Ind Est, Commercial Rd, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Engineers - General<br><b>Status:</b> Inactive<br>Positional Accuracy: Manually positioned within the geographical locality                               | A11SE (W)                              | 961                          | -       | 445063 403830 |
| 173    | <b>Contemporary Trade Directory Entries</b><br>Name: Nettlefolds<br>Location: Unit 15, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Nuts, Bolts & Fixings<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                | A6NE (W)                               | 963                          | -       | 445092 403518 |
| 174    | <b>Contemporary Trade Directory Entries</b><br>Name: Motorcycle Delivery Uk<br>Location: Unit 10 Commercial Road, Goldthorpe Industrial Estate, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Road Haulage Services<br><b>Status:</b> Active<br>Positional Accuracy: Manually positioned to the road within the address or location | A11NE (W)                              | 974                          | -       | 445055 403876 |
| 175    | <b>Contemporary Trade Directory Entries</b><br>Name: Tsunami Initiative Ltd<br>Location: Unit 8, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Screen Process Printers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                    | A11SE (W)                              | 979                          | -       | 445045 403721 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                        | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 176    | <b>Contemporary Trade Directory Entries</b><br>Name: Promar International<br>Location: Unit 20, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Laboratories<br><b>Status:</b> Inactive<br>Positional Accuracy: Manually positioned to the address or location                                               | A6NE (W)                               | 980                          | -       | 445092 403458 |
| 177    | <b>Contemporary Trade Directory Entries</b><br>Name: Admech Engineering Co Ltd<br>Location: Unit 2, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Engineers - General<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned in the proximity of the address                          | A11SE (W)                              | 995                          | -       | 445052 403548 |
| 177    | <b>Contemporary Trade Directory Entries</b><br>Name: V C Electronics Ltd<br>Location: Unit 14, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Electronic Equipment - Manufacturers & Assemblers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned in the proximity of the address | A11SE (W)                              | 995                          | -       | 445052 403548 |
| 177    | <b>Contemporary Trade Directory Entries</b><br>Name: Resitex Coatings<br>Location: Unit 3F, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Paint Manufacturers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned in the proximity of the address                                  | A11SE (W)                              | 995                          | -       | 445052 403548 |
| 177    | <b>Contemporary Trade Directory Entries</b><br>Name: W G F (Uk) Ltd<br>Location: Unit 30, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Textile Manufacturing<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned in the proximity of the address                                  | A11SE (W)                              | 995                          | -       | 445052 403548 |
| 177    | <b>Contemporary Trade Directory Entries</b><br>Name: Samantha Products<br>Location: Unit 11F, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Furniture Manufacturers - Home & Office<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned in the proximity of the address            | A11SE (W)                              | 995                          | -       | 445052 403548 |
| 177    | <b>Contemporary Trade Directory Entries</b><br>Name: Duve Components (Uk) Ltd<br>Location: Unit 28, Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, South Yorkshire, S63 9BL<br>Classification: Car Component Manufacturers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned in the proximity of the address                  | A11SE (W)                              | 995                          | -       | 445052 403548 |
| 178    | <b>Contemporary Trade Directory Entries</b><br>Name: Gefco Uk Ltd<br>Location: Fields End Business Park, Thurnscoe, ROTHERHAM, South Yorkshire, S63 0JF<br>Classification: Distribution Services<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                                                                                      | A23SW (N)                              | 995                          | -       | 445932 404945 |
| 179    | <b>Fuel Station Entries</b><br>Name: Dearnside Service Station<br>Location: 106, Barnsley Road, Goldthorpe, Rotherham, South Yorkshire, S63 9AE<br>Brand: Texaco<br>Premises Type: Petrol Station<br><b>Status:</b> Open<br>Positional Accuracy: Automatically positioned to the address                                                                                       | A18SW (NW)                             | 434                          | -       | 445887 404323 |
| 180    | <b>Fuel Station Entries</b><br>Name: Monkshill Service Station<br>Location: Barnsley Road Highgate, Goldthorpe, Rotherham, South Yorkshire, S63 9AP<br>Brand: Bp<br>Premises Type: Petrol Station<br><b>Status:</b> Open<br>Positional Accuracy: Manually positioned to the address or location                                                                                | A17SE (NW)                             | 595                          | -       | 445597 404295 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 181    | <b>Points of Interest - Commercial Services</b><br>Name: The Cambelt Clinic<br>Location: 91 Barnsley Road, Goldthorpe, Rotherham, S63 9AA<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location                             | A18SW (N)                              | 364                          | 7       | 445985 404298 |
| 182    | <b>Points of Interest - Commercial Services</b><br>Name: Dearnside Motor Co Ltd<br>Location: 106 Barnsley Road, Goldthorpe, Rotherham, S63 9AE<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location                        | A18SW (NW)                             | 434                          | 7       | 445887 404323 |
| 182    | <b>Points of Interest - Commercial Services</b><br>Name: Dearnside Motor Co Ltd<br>Location: 106 Barnsley Road, Goldthorpe, Rotherham, S63 9AE<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location                        | A18SW (NW)                             | 434                          | 7       | 445887 404323 |
| 182    | <b>Points of Interest - Commercial Services</b><br>Name: Dearnside Service Station<br>Location: 106, Barnsley Road, Goldthorpe, Rotherham, S63 9AE<br>Category: Personal, Consumer and other Services<br>Class Code: Vehicle Cleaning Services<br>Positional Accuracy: Positioned to address or location               | A18SW (NW)                             | 440                          | 7       | 445870 404319 |
| 182    | <b>Points of Interest - Commercial Services</b><br>Name: Car Wash<br>Location: 106 Barnsley Road, Goldthorpe, Rotherham, S63 9AE<br>Category: Personal, Consumer and other Services<br>Class Code: Vehicle Cleaning Services<br>Positional Accuracy: Positioned to address or location                                 | A18SW (NW)                             | 440                          | 7       | 445870 404319 |
| 183    | <b>Points of Interest - Commercial Services</b><br>Name: Central Service Garage<br>Location: Central Service Garage 202, Furlong Road, Goldthorpe, Rotherham, S63 9PR<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location | A7NE (SW)                              | 436                          | 7       | 445774 403404 |
| 183    | <b>Points of Interest - Commercial Services</b><br>Name: Central Garage<br>Location: 202 Furlong Road, Goldthorpe, Rotherham, S63 9PR<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location                                 | A7NE (SW)                              | 437                          | 7       | 445773 403403 |
| 183    | <b>Points of Interest - Commercial Services</b><br>Name: Central Service Garage<br>Location: 202 Furlong Road, Goldthorpe, Rotherham, S63 9PR<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location                         | A7NE (SW)                              | 449                          | 7       | 445778 403385 |
| 184    | <b>Points of Interest - Commercial Services</b><br>Name: B H Motors<br>Location: Gosling Gate Road, Goldthorpe, Rotherham, S63 9LU<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location                                    | A18SW (N)                              | 552                          | 7       | 446012 404508 |
| 185    | <b>Points of Interest - Commercial Services</b><br>Name: Nissan Mobile<br>Location: 52 Doncaster Road, Goldthorpe, Rotherham, S63 9HU<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location                                 | A19SW (NE)                             | 568                          | 7       | 446512 404444 |
| 185    | <b>Points of Interest - Commercial Services</b><br>Name: Nissan Mobile<br>Location: 52 Doncaster Road, Goldthorpe, Rotherham, S63 9HU<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location                                 | A19SW (NE)                             | 568                          | 7       | 446512 404444 |
| 186    | <b>Points of Interest - Commercial Services</b><br>Name: Monkshill Service Station<br>Location: Barnsley Road Highgate, Goldthorpe, Rotherham, S63 9AP<br>Category: Personal, Consumer and other Services<br>Class Code: Vehicle Cleaning Services<br>Positional Accuracy: Positioned to address or location           | A17SE (NW)                             | 595                          | 7       | 445597 404295 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                           | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 186    | <b>Points of Interest - Commercial Services</b><br>Name: Car Wash<br>Location: Barnsley Road Highgate, Goldthorpe, Rotherham, S63 9AP<br>Category: Personal, Consumer and other Services<br>Class Code: Vehicle Cleaning Services<br>Positional Accuracy: Positioned to address or location                                       | A17SE (NW)                             | 595                          | 7       | 445597 404295 |
| 187    | <b>Points of Interest - Commercial Services</b><br>Name: Cooperson Transport<br>Location: Unit 1 Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, S63 9BL<br>Category: Transport, Storage and Delivery<br>Class Code: Distribution and Haulage<br>Positional Accuracy: Positioned to address or location     | A12SW (W)                              | 720                          | 7       | 445303 403804 |
| 187    | <b>Points of Interest - Commercial Services</b><br>Name: Woodland Logistics<br>Location: Unit 1 Goldthorpe Industrial Estate, Commercial Road, Goldthorpe, Rotherham, S63 9BL<br>Category: Transport, Storage and Delivery<br>Class Code: Distribution and Haulage<br>Positional Accuracy: Positioned to address or location      | A12SW (W)                              | 721                          | 7       | 445302 403804 |
| 188    | <b>Points of Interest - Commercial Services</b><br>Name: Wilkinsons Light Haulage<br>Location: 1 Lower Mill Close, Goldthorpe, Rotherham, S63 9BY<br>Category: Transport, Storage and Delivery<br>Class Code: Distribution and Haulage<br>Positional Accuracy: Positioned to address or location                                  | A12SW (W)                              | 762                          | 7       | 445285 403576 |
| 189    | <b>Points of Interest - Commercial Services</b><br>Name: Lowfield Road Dismantlers<br>Location: Lowfield Road, Bolton-upon-Dearne, Rotherham, S63 8JD<br>Category: Recycling Services<br>Class Code: Scrap Metal Merchants<br>Positional Accuracy: Positioned to address or location                                              | A7SE (S)                               | 864                          | 7       | 445770 402932 |
| 189    | <b>Points of Interest - Commercial Services</b><br>Name: Breakers Yard<br>Location: S63<br>Category: Recycling Services<br>Class Code: Scrap Metal Merchants<br>Positional Accuracy: Positioned to address or location                                                                                                            | A7SE (S)                               | 865                          | 7       | 445774 402930 |
| 190    | <b>Points of Interest - Commercial Services</b><br>Name: Motorcycle Delivery UK<br>Location: Unit 10 Commercial Road, Goldthorpe Industrial Estate, Goldthorpe, Rotherham, S63 9BL<br>Category: Transport, Storage and Delivery<br>Class Code: Distribution and Haulage<br>Positional Accuracy: Positioned to address or location | A12SW (W)                              | 868                          | 7       | 445156 403817 |
| 191    | <b>Points of Interest - Commercial Services</b><br>Name: Wallace Metals<br>Location: Nicholas Lane, Goldthorpe, Rotherham, S63 9AT<br>Category: Recycling Services<br>Class Code: Scrap Metal Merchants<br>Positional Accuracy: Positioned to address or location                                                                 | A17NE (NW)                             | 878                          | 7       | 445546 404627 |
| 192    | <b>Points of Interest - Commercial Services</b><br>Name: S M Auto Services<br>Location: 7 Hollygrove, Goldthorpe, Rotherham, S63 9LA<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location                                             | A17SW (NW)                             | 989                          | 7       | 445133 404286 |
| 193    | <b>Points of Interest - Commercial Services</b><br>Name: Stanton Logistics<br>Location: Fields End Business Park, Thurnscoe, Rotherham, S63 0JF<br>Category: Transport, Storage and Delivery<br>Class Code: Distribution and Haulage<br>Positional Accuracy: Positioned to address or location                                    | A23SW (N)                              | 995                          | 7       | 445931 404944 |
| 193    | <b>Points of Interest - Commercial Services</b><br>Name: Gefco Ltd<br>Location: Fields End Business Park, Thurnscoe, Rotherham, S63 0JF<br>Category: Transport, Storage and Delivery<br>Class Code: Distribution and Haulage<br>Positional Accuracy: Positioned to address or location                                            | A23SW (N)                              | 995                          | 7       | 445932 404945 |

| Map ID | Details                                                                                                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 193    | <b>Points of Interest - Commercial Services</b><br>Name: Gefco UK Ltd<br>Location: Fields End Business Park, Thurnscoe, Rotherham, S63 0JF<br>Category: Transport, Storage and Delivery<br>Class Code: Distribution and Haulage<br>Positional Accuracy: Positioned to address or location                                  | A23SW (N)                              | 995                          | 7       | 445931<br>404944 |
| 194    | <b>Points of Interest - Education and Health</b><br>Name: Pain Management Solutions (Goldthorpe Primary Care Centre)<br>Location: Goldthorpe Green, Goldthorpe, Rotherham, S63 9EH<br>Category: Health Practitioners and Establishments<br>Class Code: Hospitals<br>Positional Accuracy: Positioned to address or location | A13SW (SW)                             | 204                          | 7       | 445826<br>403711 |
| 195    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Enterprise Centre<br>Location: S63<br>Category: Industrial Features<br>Class Code: Business Parks and Industrial Estates<br>Positional Accuracy: Positioned to an adjacent address or location                                                           | A13NE (NE)                             | 33                           | 7       | 446237<br>403975 |
| 196    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Works<br>Location: Not Supplied<br>Category: Industrial Features<br>Class Code: Unspecified Works Or Factories<br>Positional Accuracy: Positioned to an adjacent address or location                                                                     | A18SE (N)                              | 292                          | 7       | 446289<br>404246 |
| 196    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Works<br>Location: S63<br>Category: Industrial Features<br>Class Code: Unspecified Works Or Factories<br>Positional Accuracy: Positioned to an adjacent address or location                                                                              | A18SE (N)                              | 293                          | 7       | 446289<br>404247 |
| 197    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tanks<br>Location: S63<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to an adjacent address or location                                                                                             | A12NW (W)                              | 638                          | 7       | 445443<br>404113 |
| 198    | <b>Points of Interest - Public Infrastructure</b><br>Name: Goldthorpe Police Station<br>Location: Goldthorpe Police Station, Barnsley Road, Goldthorpe, Rotherham, S63 9LS<br>Category: Central and Local Government<br>Class Code: Police Stations<br>Positional Accuracy: Positioned to address or location              | A18SE (N)                              | 378                          | 7       | 446162<br>404352 |
| 198    | <b>Points of Interest - Public Infrastructure</b><br>Name: Goldthorpe Police Station<br>Location: Goldthorpe Police Station, Barnsley Road, Goldthorpe, Rotherham, S63 9LS<br>Category: Central and Local Government<br>Class Code: Police Stations<br>Positional Accuracy: Positioned to address or location              | A18SE (N)                              | 378                          | 7       | 446162<br>404352 |
| 199    | <b>Points of Interest - Public Infrastructure</b><br>Name: Texaco<br>Location: 106 Barnsley Road, Goldthorpe, Rotherham, S63 9AE<br>Category: Road And Rail<br>Class Code: Petrol and Fuel Stations<br>Positional Accuracy: Positioned to address or location                                                              | A18SW (NW)                             | 433                          | 7       | 445886<br>404322 |
| 199    | <b>Points of Interest - Public Infrastructure</b><br>Name: Dearnside Motor Company<br>Location: 106 Barnsley Road, Goldthorpe, Rotherham, S63 9AE<br>Category: Road And Rail<br>Class Code: Petrol and Fuel Stations<br>Positional Accuracy: Positioned to address or location                                             | A18SW (NW)                             | 440                          | 7       | 445870<br>404319 |
| 200    | <b>Points of Interest - Public Infrastructure</b><br>Name: Refuse Tip (Disused)<br>Location: S63<br>Category: Infrastructure and Facilities<br>Class Code: Refuse Disposal Facilities<br>Positional Accuracy: Positioned to an adjacent address or location                                                                | A14NW (NE)                             | 491                          | 7       | 446662<br>404188 |
| 201    | <b>Points of Interest - Public Infrastructure</b><br>Name: Monkshill Service Station<br>Location: Barnsley Road Highgate, Goldthorpe, Rotherham, S63 9AP<br>Category: Road And Rail<br>Class Code: Petrol and Fuel Stations<br>Positional Accuracy: Positioned to address or location                                      | A17SE (NW)                             | 595                          | 7       | 445596<br>404294 |

| Map ID | Details                                                                                                                                                                                                                                                                                                       | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 201    | <b>Points of Interest - Public Infrastructure</b><br>Name: Monkshill Service Station<br>Location: Barnsley Road Highgate, Goldthorpe, Rotherham, S63 9AP<br>Category: Road And Rail<br>Class Code: Petrol and Fuel Stations<br>Positional Accuracy: Positioned to address or location                         | A17SE (NW)                             | 595                          | 7       | 445597 404295 |
| 201    | <b>Points of Interest - Public Infrastructure</b><br>Name: Monkshill Service Station<br>Location: Barnsley Road Highgate, Goldthorpe, Rotherham, S63 9AP<br>Category: Road And Rail<br>Class Code: Petrol and Fuel Stations<br>Positional Accuracy: Positioned to address or location                         | A17SE (NW)                             | 595                          | 7       | 445597 404295 |
| 201    | <b>Points of Interest - Public Infrastructure</b><br>Name: Goldthorpe Rail Station<br>Location: S63<br>Category: Public Transport, Stations and Infrastructure<br>Class Code: Railway Stations, Junctions and Halts<br>Positional Accuracy: Positioned to address or location                                 | A17SE (NW)                             | 600                          | 7       | 445648 404354 |
| 201    | <b>Points of Interest - Public Infrastructure</b><br>Name: Goldthorpe Station<br>Location: St Michaels Close, S63<br>Category: Public Transport, Stations and Infrastructure<br>Class Code: Railway Stations, Junctions and Halts<br>Positional Accuracy: Positioned to address or location                   | A17SE (NW)                             | 600                          | 7       | 445648 404354 |
| 202    | <b>Points of Interest - Public Infrastructure</b><br>Name: Refuse Tip (Disused)<br>Location: S63<br>Category: Infrastructure and Facilities<br>Class Code: Refuse Disposal Facilities<br>Positional Accuracy: Positioned to an adjacent address or location                                                   | A14NE (E)                              | 701                          | 7       | 446932 404072 |
| 203    | <b>Points of Interest - Public Infrastructure</b><br>Name: Refuse Tip (Public)<br>Location: S63<br>Category: Infrastructure and Facilities<br>Class Code: Refuse Disposal Facilities<br>Positional Accuracy: Positioned to an adjacent address or location                                                    | A17SE (NW)                             | 750                          | 7       | 445584 404496 |
| 203    | <b>Points of Interest - Public Infrastructure</b><br>Name: Recycling Centre<br>Location: Nr Nicholas Lane, S63<br>Category: Infrastructure and Facilities<br>Class Code: Recycling Centres<br>Positional Accuracy: Positioned to address or location                                                          | A17SE (NW)                             | 760                          | 7       | 445582 404507 |
| 204    | <b>Points of Interest - Public Infrastructure</b><br>Name: Tesco Petrol Filling Station<br>Location: 105-109 Furlong Rd, Bolton-Upon-Dearne, Rotherham, South Yorkshire, S63 8HB<br>Category: Road And Rail<br>Class Code: Petrol and Fuel Stations<br>Positional Accuracy: Positioned to address or location | A7SE (SW)                              | 841                          | 7       | 445574 403050 |
| 205    | <b>Points of Interest - Public Infrastructure</b><br>Name: Cemetery<br>Location: Not Supplied<br>Category: Infrastructure and Facilities<br>Class Code: Cemeteries and Crematoria<br>Positional Accuracy: Positioned to an adjacent address or location                                                       | A7SE (SW)                              | 947                          | 7       | 445534 402949 |
| 205    | <b>Points of Interest - Public Infrastructure</b><br>Name: Cemetery<br>Location: S63<br>Category: Infrastructure and Facilities<br>Class Code: Cemeteries and Crematoria<br>Positional Accuracy: Positioned to an adjacent address or location                                                                | A7SE (SW)                              | 947                          | 7       | 445534 402949 |
| 206    | <b>Points of Interest - Public Infrastructure</b><br>Name: Spoil Heap (Disused)<br>Location: S63<br>Category: Infrastructure and Facilities<br>Class Code: Waste Storage, Processing and Disposal<br>Positional Accuracy: Positioned to an adjacent address or location                                       | A23SE (N)                              | 958                          | 7       | 446370 404910 |
| 207    | <b>Points of Interest - Public Infrastructure</b><br>Name: Cemetery<br>Location: S63<br>Category: Infrastructure and Facilities<br>Class Code: Cemeteries and Crematoria<br>Positional Accuracy: Positioned to an adjacent address or location                                                                | A7SW (SW)                              | 990                          | 7       | 445376 403013 |

| Map ID | Details                                                                                                                                                                                                                                      | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 208    | <b>Points of Interest - Recreational and Environmental</b><br>Name: Playground<br>Location: Goldthorpe Green, S63<br>Category: Recreational<br>Class Code: Playgrounds<br>Positional Accuracy: Positioned to an adjacent address or location | A13SW (SW)                             | 97                           | 7       | 445943<br>403708 |
| 208    | <b>Points of Interest - Recreational and Environmental</b><br>Name: Playground<br>Location: Not Supplied<br>Category: Recreational<br>Class Code: Playgrounds<br>Positional Accuracy: Positioned to an adjacent address or location          | A13SW (SW)                             | 98                           | 7       | 445943<br>403707 |
| 209    | <b>Points of Interest - Recreational and Environmental</b><br>Name: Playground<br>Location: Doncaster Road, S63<br>Category: Recreational<br>Class Code: Playgrounds<br>Positional Accuracy: Positioned to an adjacent address or location   | A19SW (NE)                             | 740                          | 7       | 446727<br>404491 |
| 209    | <b>Points of Interest - Recreational and Environmental</b><br>Name: Playground<br>Location: Not Supplied<br>Category: Recreational<br>Class Code: Playgrounds<br>Positional Accuracy: Positioned to an adjacent address or location          | A19SW (NE)                             | 753                          | 7       | 446734<br>404502 |
| 210    | <b>Points of Interest - Recreational and Environmental</b><br>Name: Play Area<br>Location: Not Supplied<br>Category: Recreational<br>Class Code: Playgrounds<br>Positional Accuracy: Positioned to an adjacent address or location           | A17SE (NW)                             | 742                          | 7       | 445473<br>404377 |
| 210    | <b>Points of Interest - Recreational and Environmental</b><br>Name: Play Area<br>Location: Nicholas Lane, S63<br>Category: Recreational<br>Class Code: Playgrounds<br>Positional Accuracy: Positioned to address or location                 | A17SE (NW)                             | 742                          | 7       | 445474<br>404377 |
| 211    | <b>Points of Interest - Recreational and Environmental</b><br>Name: Playground<br>Location: George Street, S63<br>Category: Recreational<br>Class Code: Playgrounds<br>Positional Accuracy: Positioned to address or location                | A12NW (W)                              | 755                          | 7       | 445309<br>404071 |

| Map ID | Details                                                                                                                                                                                                                       | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 212    | <b>Areas of Adopted Green Belt</b><br>Authority: Barnsley Metropolitan Borough Council, Planning Department<br>Plan Name: Barnsley Unitary Development Plan<br><b>Status:</b> <b>Adopted</b><br>Plan Date: 31st December 2000 | A13SE (SE)                             | 205                          | 9       | 446347<br>403627 |
| 213    | <b>Areas of Adopted Green Belt</b><br>Authority: Barnsley Metropolitan Borough Council, Planning Department<br>Plan Name: Barnsley Unitary Development Plan<br><b>Status:</b> <b>Adopted</b><br>Plan Date: 31st December 2000 | A17NE (NW)                             | 772                          | 9       | 445732<br>404625 |
| 214    | <b>Areas of Adopted Green Belt</b><br>Authority: Doncaster Metropolitan Borough Council<br>Plan Name: Doncaster Unitary Development Plan<br><b>Status:</b> <b>Adopted</b><br>Plan Date: 31st July 1998                        | A19SE (NE)                             | 923                          | 10      | 446946<br>404529 |
| 215    | <b>Nitrate Vulnerable Zones</b><br>Name: River Dearne Nvz<br>Description: Surface Water<br>Source: Environment Agency, Head Office                                                                                            | A13SW (W)                              | 0                            | 12      | 446134<br>403854 |

| Agency & Hydrological                                                                                                                                                                                                                                                                                                                                                | Version                                              | Update Cycle                                                                                     |
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| <b>Contaminated Land Register Entries and Notices</b><br>Doncaster Metropolitan Borough Council - Environmental Services<br>Rotherham Metropolitan Borough Council - Environmental Health Department<br>Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards<br>Wakefield City Metropolitan District Council - Environmental Health    | April 2014<br>April 2014<br>July 2013<br>March 2015  | Annual Rolling Update<br>Annual Rolling Update<br>Annual Rolling Update<br>Annual Rolling Update |
| <b>Discharge Consents</b><br>Environment Agency - North East Region                                                                                                                                                                                                                                                                                                  | October 2017                                         | Quarterly                                                                                        |
| <b>Enforcement and Prohibition Notices</b><br>Environment Agency - North East Region                                                                                                                                                                                                                                                                                 | March 2013                                           | As notified                                                                                      |
| <b>Integrated Pollution Controls</b><br>Environment Agency - North East Region                                                                                                                                                                                                                                                                                       | October 2008                                         | Not Applicable                                                                                   |
| <b>Integrated Pollution Prevention And Control</b><br>Environment Agency - North East Region                                                                                                                                                                                                                                                                         | October 2017                                         | Quarterly                                                                                        |
| <b>Local Authority Integrated Pollution Prevention And Control</b><br>Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards<br>Doncaster Metropolitan Borough Council - Environmental Services<br>Wakefield City Metropolitan District Council - Environmental Health<br>Rotherham Metropolitan Borough Council - Planning Department   | April 2014<br>June 2014<br>June 2014<br>October 2014 | Annual Rolling Update<br>Annual Rolling Update<br>Annual Rolling Update<br>Annual Rolling Update |
| <b>Local Authority Pollution Prevention and Controls</b><br>Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards<br>Doncaster Metropolitan Borough Council - Environmental Services<br>Wakefield City Metropolitan District Council - Environmental Health<br>Rotherham Metropolitan Borough Council - Planning Department             | April 2014<br>June 2014<br>June 2014<br>October 2014 | Annual Rolling Update<br>Annual Rolling Update<br>Annual Rolling Update<br>Annual Rolling Update |
| <b>Local Authority Pollution Prevention and Control Enforcements</b><br>Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards<br>Doncaster Metropolitan Borough Council - Environmental Services<br>Wakefield City Metropolitan District Council - Environmental Health<br>Rotherham Metropolitan Borough Council - Planning Department | April 2014<br>June 2014<br>June 2014<br>October 2014 | Annual Rolling Update<br>Annual Rolling Update<br>Annual Rolling Update<br>Annual Rolling Update |
| <b>Nearest Surface Water Feature</b><br>Ordnance Survey                                                                                                                                                                                                                                                                                                              | September 2017                                       |                                                                                                  |
| <b>Pollution Incidents to Controlled Waters</b><br>Environment Agency - North East Region                                                                                                                                                                                                                                                                            | December 1998                                        | Not Applicable                                                                                   |
| <b>Prosecutions Relating to Authorised Processes</b><br>Environment Agency - North East Region                                                                                                                                                                                                                                                                       | March 2013                                           | As notified                                                                                      |
| <b>Prosecutions Relating to Controlled Waters</b><br>Environment Agency - North East Region                                                                                                                                                                                                                                                                          | March 2013                                           | As notified                                                                                      |
| <b>Registered Radioactive Substances</b><br>Environment Agency - North East Region                                                                                                                                                                                                                                                                                   | January 2015                                         |                                                                                                  |
| <b>River Quality</b><br>Environment Agency - Head Office                                                                                                                                                                                                                                                                                                             | November 2001                                        | Not Applicable                                                                                   |
| <b>River Quality Biology Sampling Points</b><br>Environment Agency - Head Office                                                                                                                                                                                                                                                                                     | July 2012                                            | Annually                                                                                         |
| <b>River Quality Chemistry Sampling Points</b><br>Environment Agency - Head Office                                                                                                                                                                                                                                                                                   | July 2012                                            | Annually                                                                                         |
| <b>Substantiated Pollution Incident Register</b><br>Environment Agency - North East Region - Ridings Area<br>Environment Agency - North East Region - Yorkshire Area                                                                                                                                                                                                 | October 2017<br>October 2017                         | Quarterly<br>Quarterly                                                                           |
| <b>Water Abstractions</b><br>Environment Agency - North East Region                                                                                                                                                                                                                                                                                                  | October 2017                                         | Quarterly                                                                                        |
| <b>Water Industry Act Referrals</b><br>Environment Agency - North East Region                                                                                                                                                                                                                                                                                        | October 2017                                         | Quarterly                                                                                        |

| Agency & Hydrological                                                                                                 | Version       | Update Cycle   |
|-----------------------------------------------------------------------------------------------------------------------|---------------|----------------|
| <b>Groundwater Vulnerability</b><br>Environment Agency - Head Office                                                  | April 2015    | Not Applicable |
| <b>Drift Deposits</b><br>Environment Agency - Head Office                                                             | January 1999  | Not Applicable |
| <b>Bedrock Aquifer Designations</b><br>British Geological Survey - National Geoscience Information Service            | August 2015   | As notified    |
| <b>Superficial Aquifer Designations</b><br>British Geological Survey - National Geoscience Information Service        | August 2015   | As notified    |
| <b>Source Protection Zones</b><br>Environment Agency - Head Office                                                    | October 2017  | Quarterly      |
| <b>Extreme Flooding from Rivers or Sea without Defences</b><br>Environment Agency - Head Office                       | November 2017 | Quarterly      |
| <b>Flooding from Rivers or Sea without Defences</b><br>Environment Agency - Head Office                               | November 2017 | Quarterly      |
| <b>Areas Benefiting from Flood Defences</b><br>Environment Agency - Head Office                                       | November 2017 | Quarterly      |
| <b>Flood Water Storage Areas</b><br>Environment Agency - Head Office                                                  | November 2017 | Quarterly      |
| <b>Flood Defences</b><br>Environment Agency - Head Office                                                             | November 2017 | Quarterly      |
| <b>OS Water Network Lines</b><br>Ordnance Survey                                                                      | October 2017  | 6 Weekly       |
| <b>Surface Water 1 in 30 year Flood Extent</b><br>Environment Agency - Head Office                                    | October 2013  | As notified    |
| <b>Surface Water 1 in 100 year Flood Extent</b><br>Environment Agency - Head Office                                   | October 2013  | As notified    |
| <b>Surface Water 1 in 1000 year Flood Extent</b><br>Environment Agency - Head Office                                  | October 2013  | As notified    |
| <b>Surface Water Suitability</b><br>Environment Agency - Head Office                                                  | October 2013  | As notified    |
| <b>BGS Groundwater Flooding Susceptibility</b><br>British Geological Survey - National Geoscience Information Service | May 2013      | Annually       |

| Waste                                                                                                                                                                                                                                                                                                                                                      | Version                                      | Update Cycle                                                         |
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| <b>BGS Recorded Landfill Sites</b><br>British Geological Survey - National Geoscience Information Service                                                                                                                                                                                                                                                  | June 1996                                    | Not Applicable                                                       |
| <b>Historical Landfill Sites</b><br>Environment Agency - Head Office                                                                                                                                                                                                                                                                                       | October 2017                                 | Quarterly                                                            |
| <b>Integrated Pollution Control Registered Waste Sites</b><br>Environment Agency - North East Region                                                                                                                                                                                                                                                       | October 2008                                 | Not Applicable                                                       |
| <b>Licensed Waste Management Facilities (Landfill Boundaries)</b><br>Environment Agency - North East Region - Ridings Area<br>Environment Agency - North East Region - Yorkshire Area                                                                                                                                                                      | October 2017<br>October 2017                 | Quarterly<br>Quarterly                                               |
| <b>Licensed Waste Management Facilities (Locations)</b><br>Environment Agency - North East Region - Ridings Area<br>Environment Agency - North East Region - Yorkshire Area                                                                                                                                                                                | October 2017<br>October 2017                 | Quarterly<br>Quarterly                                               |
| <b>Local Authority Landfill Coverage</b><br>Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards<br>Doncaster Metropolitan Borough Council - Environmental Services<br>Rotherham Metropolitan Borough Council - Environmental Health Department<br>Wakefield City Metropolitan District Council - Environmental Health       | May 2000<br>May 2000<br>May 2000<br>May 2000 | Not Applicable<br>Not Applicable<br>Not Applicable<br>Not Applicable |
| <b>Local Authority Recorded Landfill Sites</b><br>Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards<br>Doncaster Metropolitan Borough Council - Environmental Services<br>Rotherham Metropolitan Borough Council - Environmental Health Department<br>Wakefield City Metropolitan District Council - Environmental Health | May 2000<br>May 2000<br>May 2000<br>May 2000 | Not Applicable<br>Not Applicable<br>Not Applicable<br>Not Applicable |
| <b>Potentially Infilled Land (Non-Water)</b><br>Landmark Information Group Limited                                                                                                                                                                                                                                                                         | December 1999                                | Not Applicable                                                       |
| <b>Potentially Infilled Land (Water)</b><br>Landmark Information Group Limited                                                                                                                                                                                                                                                                             | December 1999                                | Not Applicable                                                       |
| <b>Registered Landfill Sites</b><br>Environment Agency - North East Region - Ridings Area<br>Environment Agency - North East Region - Yorkshire Area                                                                                                                                                                                                       | March 2003<br>March 2003                     | Not Applicable<br>Not Applicable                                     |
| <b>Registered Waste Transfer Sites</b><br>Environment Agency - North East Region - Ridings Area<br>Environment Agency - North East Region - Yorkshire Area                                                                                                                                                                                                 | March 2003<br>March 2003                     | Not Applicable<br>Not Applicable                                     |
| <b>Registered Waste Treatment or Disposal Sites</b><br>Environment Agency - North East Region - Ridings Area<br>Environment Agency - North East Region - Yorkshire Area                                                                                                                                                                                    | March 2003<br>March 2003                     | Not Applicable<br>Not Applicable                                     |

| Hazardous Substances                                                                                                                                                                                                                                | Version                                                        | Update Cycle                                                                                     |
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| <b>Control of Major Accident Hazards Sites (COMAH)</b><br>Health and Safety Executive                                                                                                                                                               | September 2017                                                 | Bi-Annually                                                                                      |
| <b>Explosive Sites</b><br>Health and Safety Executive                                                                                                                                                                                               | March 2017                                                     | Bi-Annually                                                                                      |
| <b>Notification of Installations Handling Hazardous Substances (NIHHS)</b><br>Health and Safety Executive                                                                                                                                           | November 2000                                                  | Not Applicable                                                                                   |
| <b>Planning Hazardous Substance Enforcements</b><br>Rotherham Metropolitan Borough Council<br>Wakefield City Metropolitan District Council<br>Barnsley Metropolitan Borough Council - Planning Department<br>Doncaster Metropolitan Borough Council | February 2016<br>February 2016<br>January 2016<br>October 2015 | Annual Rolling Update<br>Annual Rolling Update<br>Annual Rolling Update<br>Annual Rolling Update |
| <b>Planning Hazardous Substance Consents</b><br>Rotherham Metropolitan Borough Council<br>Wakefield City Metropolitan District Council<br>Barnsley Metropolitan Borough Council - Planning Department<br>Doncaster Metropolitan Borough Council     | February 2016<br>February 2016<br>January 2016<br>October 2015 | Annual Rolling Update<br>Annual Rolling Update<br>Annual Rolling Update<br>Annual Rolling Update |
| Geological                                                                                                                                                                                                                                          | Version                                                        | Update Cycle                                                                                     |
| <b>BGS 1:625,000 Solid Geology</b><br>British Geological Survey - National Geoscience Information Service                                                                                                                                           | January 2009                                                   | Not Applicable                                                                                   |
| <b>BGS Estimated Soil Chemistry</b><br>British Geological Survey - National Geoscience Information Service                                                                                                                                          | October 2015                                                   | As notified                                                                                      |
| <b>BGS Recorded Mineral Sites</b><br>British Geological Survey - National Geoscience Information Service                                                                                                                                            | November 2017                                                  | Bi-Annually                                                                                      |
| <b>CBSCB Compensation District</b><br>Cheshire Brine Subsidence Compensation Board (CBSCB)                                                                                                                                                          | August 2011                                                    | Not Applicable                                                                                   |
| <b>Coal Mining Affected Areas</b><br>The Coal Authority - Property Searches                                                                                                                                                                         | March 2014                                                     | As notified                                                                                      |
| <b>Mining Instability</b><br>Ove Arup & Partners                                                                                                                                                                                                    | October 2000                                                   | Not Applicable                                                                                   |
| <b>Non Coal Mining Areas of Great Britain</b><br>British Geological Survey - National Geoscience Information Service                                                                                                                                | May 2015                                                       | Not Applicable                                                                                   |
| <b>Potential for Collapsible Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service                                                                                                                    | June 2015                                                      | Annually                                                                                         |
| <b>Potential for Compressible Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service                                                                                                                   | June 2015                                                      | Annually                                                                                         |
| <b>Potential for Ground Dissolution Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service                                                                                                                    | June 2015                                                      | Annually                                                                                         |
| <b>Potential for Landslide Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service                                                                                                                      | June 2015                                                      | Annually                                                                                         |
| <b>Potential for Running Sand Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service                                                                                                                   | June 2015                                                      | Annually                                                                                         |
| <b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service                                                                                                     | June 2015                                                      | Annually                                                                                         |
| <b>Radon Potential - Radon Affected Areas</b><br>British Geological Survey - National Geoscience Information Service                                                                                                                                | July 2011                                                      | As notified                                                                                      |
| <b>Radon Potential - Radon Protection Measures</b><br>British Geological Survey - National Geoscience Information Service                                                                                                                           | July 2011                                                      | As notified                                                                                      |

| Industrial Land Use                                                  | Version       | Update Cycle |
|----------------------------------------------------------------------|---------------|--------------|
| <b>Contemporary Trade Directory Entries</b><br>Thomson Directories   | November 2017 | Quarterly    |
| <b>Fuel Station Entries</b><br>Catalist Ltd - Experian               | November 2017 | Quarterly    |
| <b>Gas Pipelines</b><br>National Grid                                | July 2014     | Quarterly    |
| <b>Points of Interest - Commercial Services</b><br>PointX            | December 2017 | Quarterly    |
| <b>Points of Interest - Education and Health</b><br>PointX           | December 2017 | Quarterly    |
| <b>Points of Interest - Manufacturing and Production</b><br>PointX   | December 2017 | Quarterly    |
| <b>Points of Interest - Public Infrastructure</b><br>PointX          | December 2017 | Quarterly    |
| <b>Points of Interest - Recreational and Environmental</b><br>PointX | December 2017 | Quarterly    |
| <b>Underground Electrical Cables</b><br>National Grid                | December 2015 | Bi-Annually  |

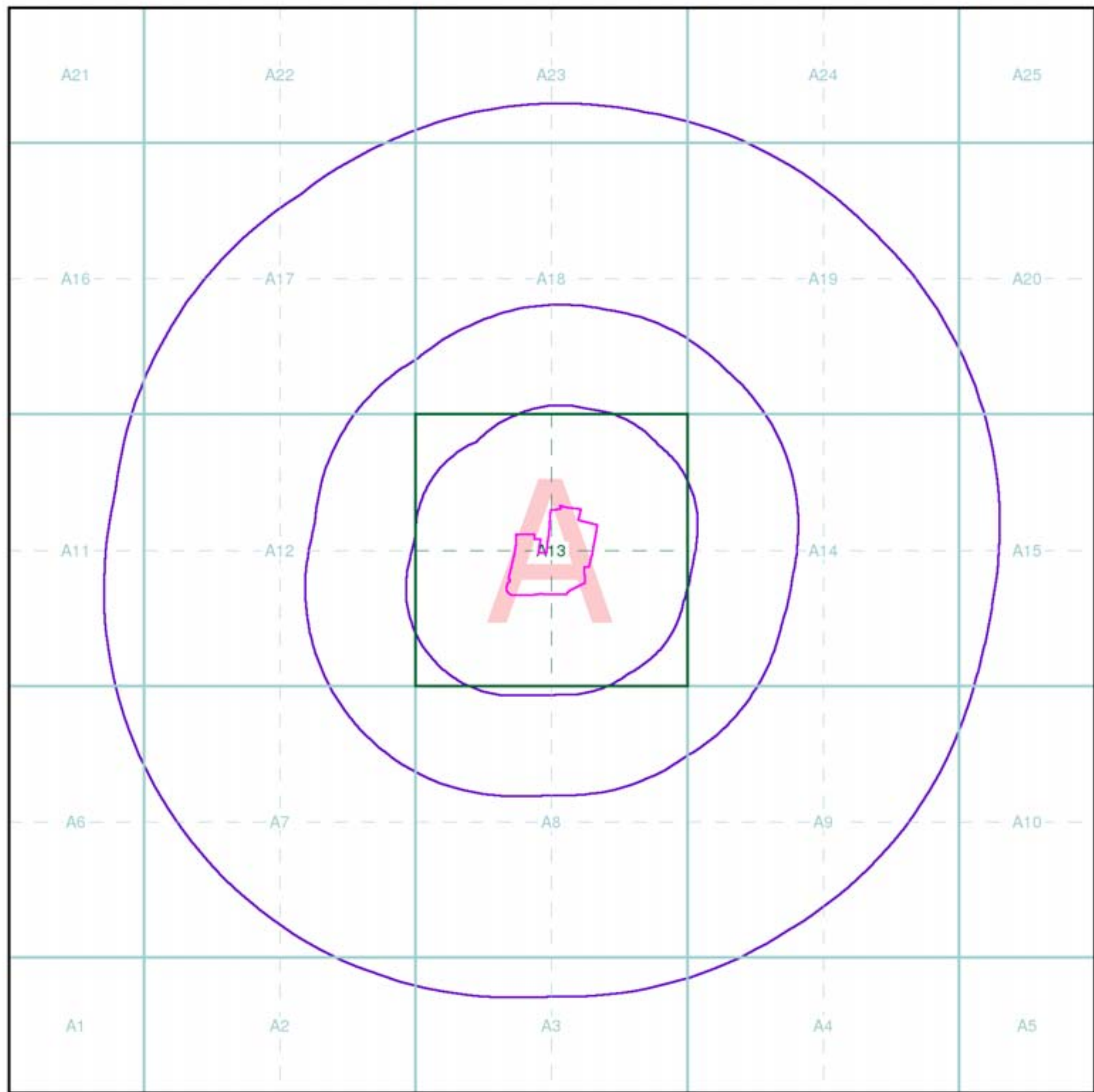
| Sensitive Land Use                                                                                                                                                                                                                      | Version                                                          | Update Cycle                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------|
| <b>Ancient Woodland</b><br>Natural England                                                                                                                                                                                              | October 2017                                                     | Bi-Annually                                              |
| <b>Areas of Adopted Green Belt</b><br>Barnsley Metropolitan Borough Council - Planning Department<br>Doncaster Metropolitan Borough Council<br>Rotherham Metropolitan Borough Council<br>Wakefield City Metropolitan District Council   | November 2017<br>November 2017<br>November 2017<br>November 2017 | As notified<br>As notified<br>As notified<br>As notified |
| <b>Areas of Unadopted Green Belt</b><br>Barnsley Metropolitan Borough Council - Planning Department<br>Doncaster Metropolitan Borough Council<br>Rotherham Metropolitan Borough Council<br>Wakefield City Metropolitan District Council | November 2017<br>November 2017<br>November 2017<br>November 2017 | As notified<br>As notified<br>As notified<br>As notified |
| <b>Areas of Outstanding Natural Beauty</b><br>Natural England                                                                                                                                                                           | August 2017                                                      | Bi-Annually                                              |
| <b>Environmentally Sensitive Areas</b><br>Natural England                                                                                                                                                                               | January 2017                                                     | Annually                                                 |
| <b>Forest Parks</b><br>Forestry Commission                                                                                                                                                                                              | April 1997                                                       | Not Applicable                                           |
| <b>Local Nature Reserves</b><br>Natural England                                                                                                                                                                                         | August 2017                                                      | Bi-Annually                                              |
| <b>Marine Nature Reserves</b><br>Natural England                                                                                                                                                                                        | August 2017                                                      | Bi-Annually                                              |
| <b>National Nature Reserves</b><br>Natural England                                                                                                                                                                                      | August 2017                                                      | Bi-Annually                                              |
| <b>National Parks</b><br>Natural England                                                                                                                                                                                                | August 2017                                                      | Bi-Annually                                              |
| <b>Nitrate Vulnerable Zones</b><br>Environment Agency - Head Office<br>Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)                                                                                       | December 2017<br>October 2015                                    | Bi-Annually                                              |
| <b>Ramsar Sites</b><br>Natural England                                                                                                                                                                                                  | August 2017                                                      | Bi-Annually                                              |
| <b>Sites of Special Scientific Interest</b><br>Natural England                                                                                                                                                                          | August 2017                                                      | Bi-Annually                                              |
| <b>Special Areas of Conservation</b><br>Natural England                                                                                                                                                                                 | August 2017                                                      | Bi-Annually                                              |
| <b>Special Protection Areas</b><br>Natural England                                                                                                                                                                                      | August 2017                                                      | Bi-Annually                                              |

A selection of organisations who provide data within this report

| Data Supplier                          | Data Supplier Logo                                                                                                                                                    |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ordnance Survey                        |                                                                                    |
| Environment Agency                     |                                                                                    |
| Scottish Environment Protection Agency |                                                                                    |
| The Coal Authority                     |                                                                                    |
| British Geological Survey              |  <b>British Geological Survey</b><br>NATURAL ENVIRONMENT RESEARCH COUNCIL          |
| Centre for Ecology and Hydrology       |  <b>Centre for Ecology &amp; Hydrology</b><br>NATURAL ENVIRONMENT RESEARCH COUNCIL |
| Natural Resources Wales                |                                                                                   |
| Scottish Natural Heritage              |                                                                                  |
| Natural England                        |                                                                                  |
| Public Health England                  |                                                                                  |
| Ove Arup                               |                                                                                  |
| Peter Brett Associates                 |                                                                                  |

| Contact | Name and Address                                                                                                                                                 | Contact Details                                                                                                                 |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 1       | <b>British Geological Survey - Enquiry Service</b><br>British Geological Survey, Kingsley Dunham Centre, Keyworth,<br>Nottingham, Nottinghamshire, NG12 5GG      | Telephone: 0115 936 3143<br>Fax: 0115 936 3276<br>Email: enquiries@bgs.ac.uk<br>Website: www.bgs.ac.uk                          |
| 2       | <b>Environment Agency - National Customer Contact Centre (NCCC)</b><br>PO Box 544, Templeborough, Rotherham, S60 1BY                                             | Telephone: 03708 506 506<br>Email: enquiries@environment-agency.gov.uk                                                          |
| 3       | <b>Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards</b><br>Central Offices, Kendray Street, Barnsley, South Yorkshire, S70 2TN | Telephone: 01226 770770<br>Fax: 01226 772599<br>Website: www.barnsley.gov.uk                                                    |
| 4       | <b>Ordnance Survey</b><br>Adanac Drive, Southampton, Hampshire, SO16 0AS                                                                                         | Telephone: 03456 05 05 05<br>Email: customerservices@ordnancesurvey.co.uk<br>Website: www.ordnancesurvey.gov.uk                 |
| 5       | <b>Doncaster Metropolitan Borough Council - Environmental Services</b><br>Floor 3, Council House, College Road, Doncaster, South Yorkshire, DN1 1RN              | Telephone: 01302 734444<br>Fax: 01302 734949<br>Website: www.doncaster.gov.uk                                                   |
| 6       | <b>The Coal Authority - Property Searches</b><br>200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG                                                        | Telephone: 0345 762 6848<br>Fax: 01623 637 338<br>Email: groundstability@coal.gov.uk<br>Website: www2.groundstability.com       |
| 7       | <b>PointX</b><br>7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY                                                                                        | Website: www.pointx.co.uk                                                                                                       |
| 8       | <b>Natural England</b><br>County Hall, Spetchley Road, Worcester, WR5 2NP                                                                                        | Telephone: 0300 060 3900<br>Email: enquiries@naturalengland.org.uk<br>Website: www.naturalengland.org.uk                        |
| 9       | <b>Barnsley Metropolitan Borough Council - Planning Department</b><br>Central Offices, Kendray Street, Barnsley, South Yorkshire, S70 2TN                        | Telephone: 01226 770770<br>Fax: 01226 772599<br>Website: www.barnsley.gov.uk                                                    |
| 10      | <b>Doncaster Metropolitan Borough Council</b><br>Danum House, St Sepulchre Gate, Doncaster, South Yorkshire, DN1 1UB                                             | Telephone: 01302 734854<br>Fax: 01302 734949<br>Website: www.doncaster.gov.uk                                                   |
| 11      | <b>Rotherham Metropolitan Borough Council</b><br>Bailey House, Rawmarsh Road, Rotherham, South Yorkshire, S60 1QT                                                | Telephone: 01709 382121<br>Fax: 01709 823810<br>Website: www.rotherham.gov.uk                                                   |
| 12      | <b>Environment Agency - Head Office</b><br>Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD                                          | Telephone: 01454 624400<br>Fax: 01454 624409                                                                                    |
| -       | <b>Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards</b><br>Chilton, Didcot, Oxfordshire, OX11 0RQ                  | Telephone: 01235 822622<br>Fax: 01235 833891<br>Email: radon@phe.gov.uk<br>Website: www.ukradon.org                             |
| -       | <b>Landmark Information Group Limited</b><br>Imperium, Imperial Way, Reading, Berkshire, RG2 0TD                                                                 | Telephone: 0844 844 9952<br>Fax: 0844 844 9951<br>Email: customerservices@landmarkinfo.co.uk<br>Website: www.landmarkinfo.co.uk |

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



## Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

### Slice

Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

### Segment

A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

### Quadrant

A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

## Client Details

Miss E Turner, Eastwood & Partners Ltd, St Andrews House, 23 Kingfield Road, Sheffield, S11 9AS

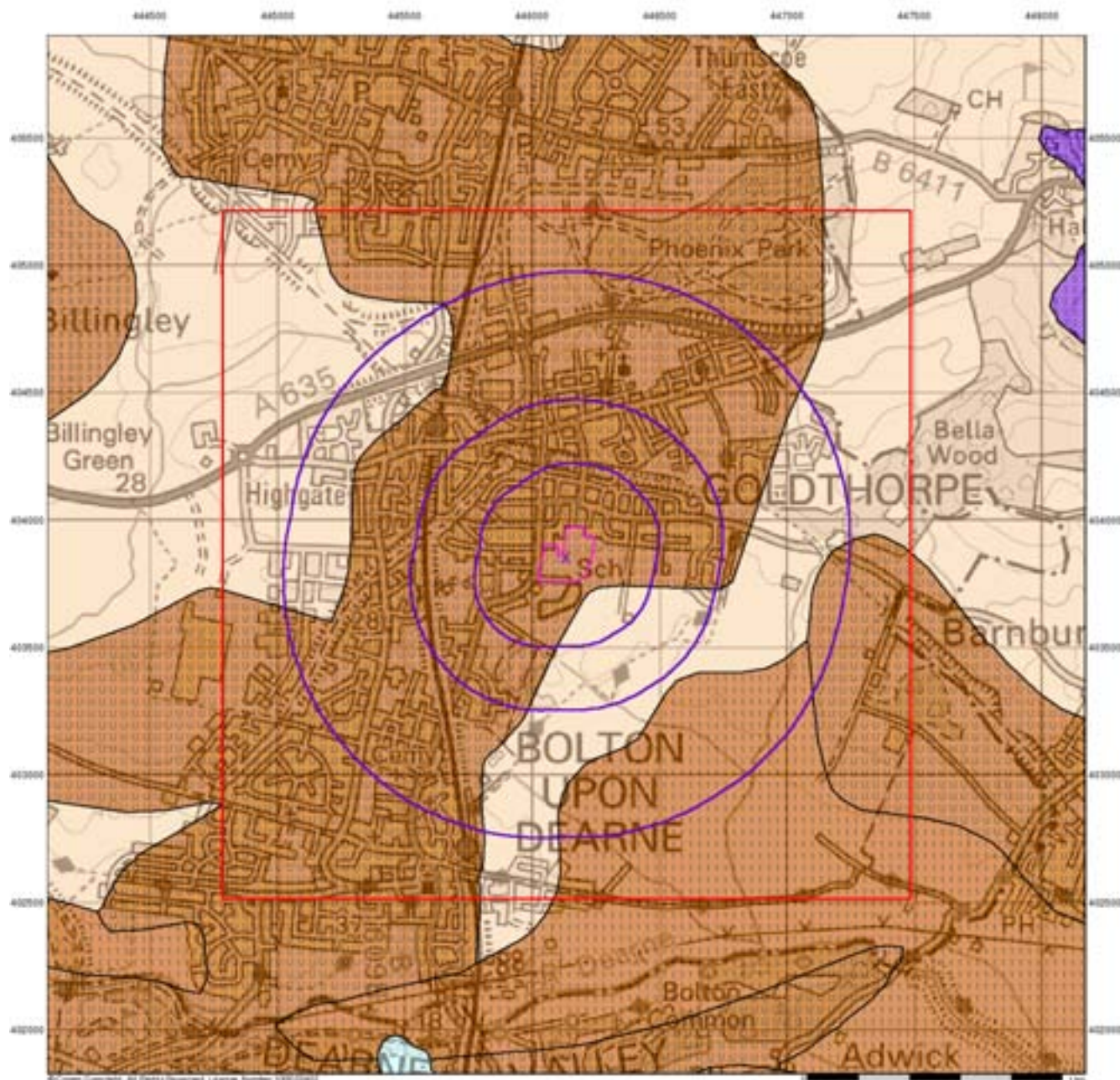
## Order Details

Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446140, 403850  
Site Area (Ha): 3.28  
Search Buffer (m): 1000

## Site Details

Site at 446110, 403820

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<http://www.landmarkinfo.co.uk/Terms/Show/515>



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## Groundwater Vulnerability

### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Site
- Map ID

### Agency and Hydrological

#### Geological Classes

Major Aquifer  
(Highly Permeable)

Minor Aquifer  
(Variably Permeable)

Non Aquifer  
(Negligibly Permeable)

Water or Sea

Soil Deposit

#### Soil Classes

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

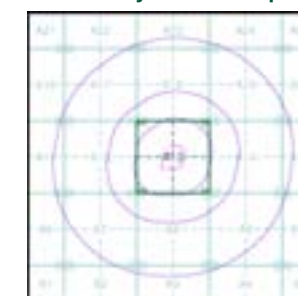
Low

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

Low

### Site Sensitivity Context Map - Slice A



### Order Details

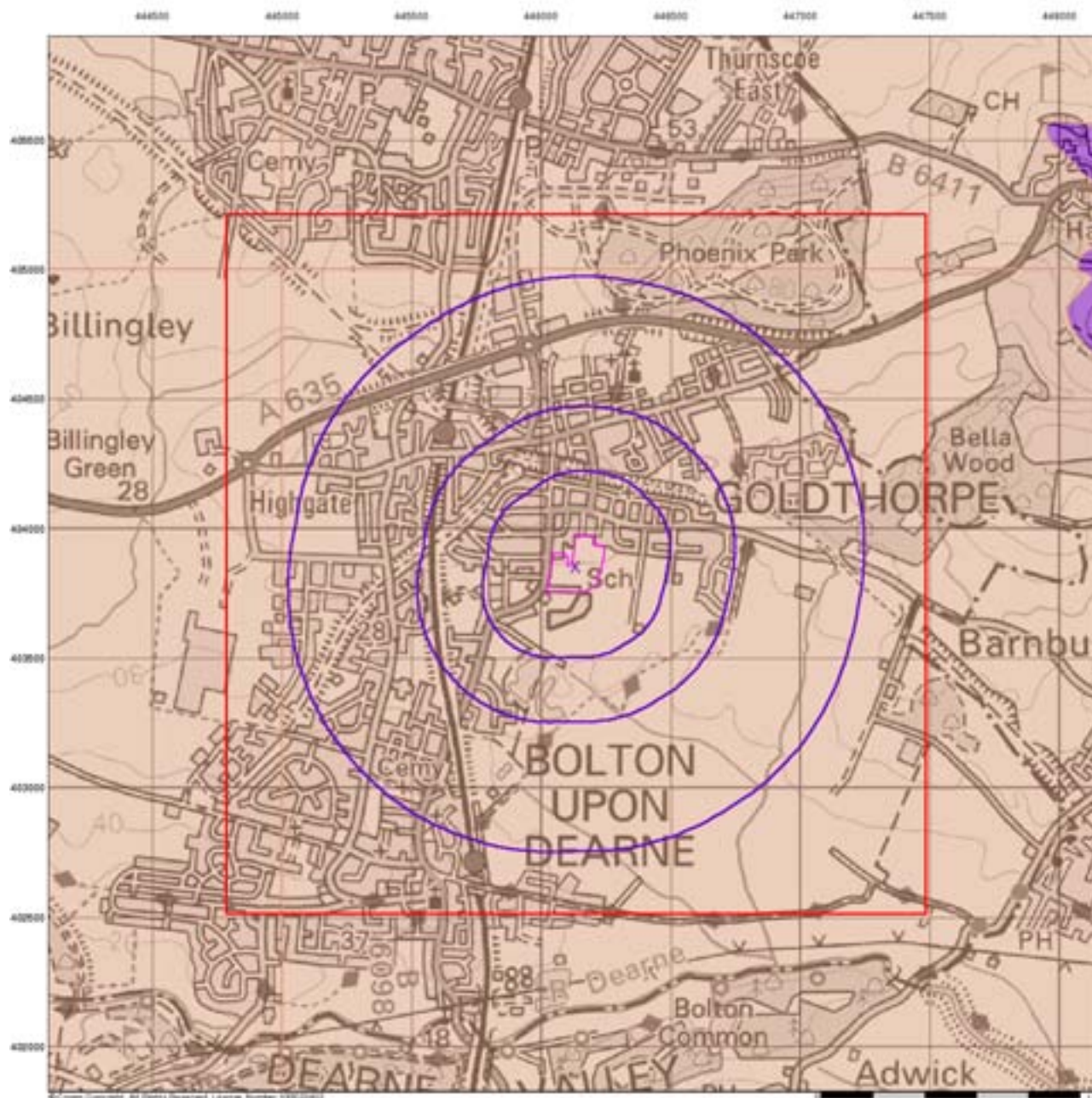
Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 1000

### Site Details

Site at 446110, 403820

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## Bedrock Aquifer Designation

### General

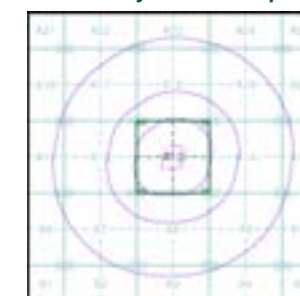
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Site
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

## Site Sensitivity Context Map - Slice A



### Order Details

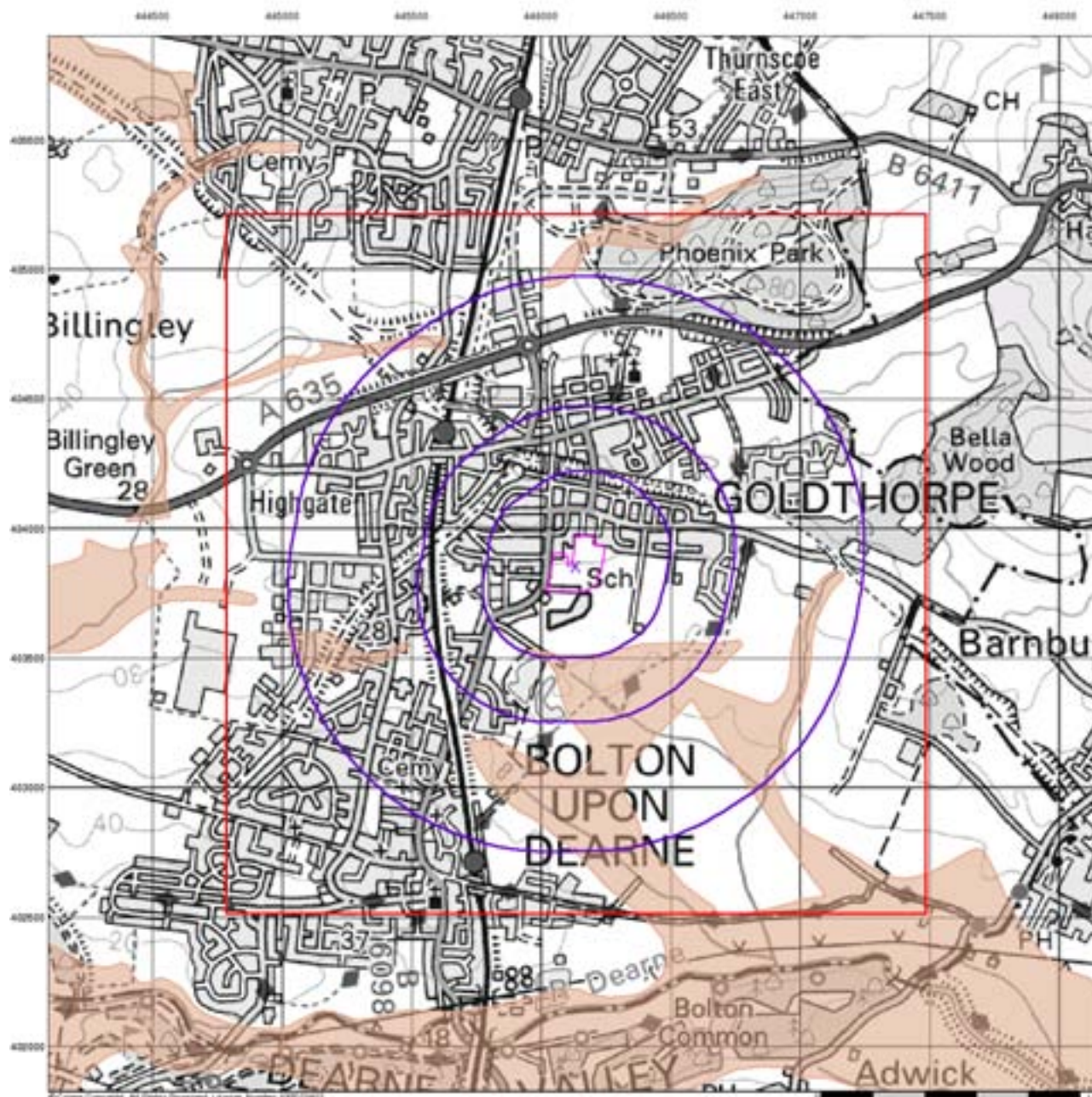
Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 1000

### Site Details

Site at 446110, 403820

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## Superficial Aquifer Designation

### General

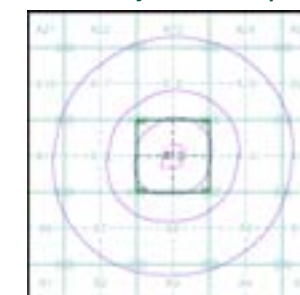
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Site
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice A



### Order Details

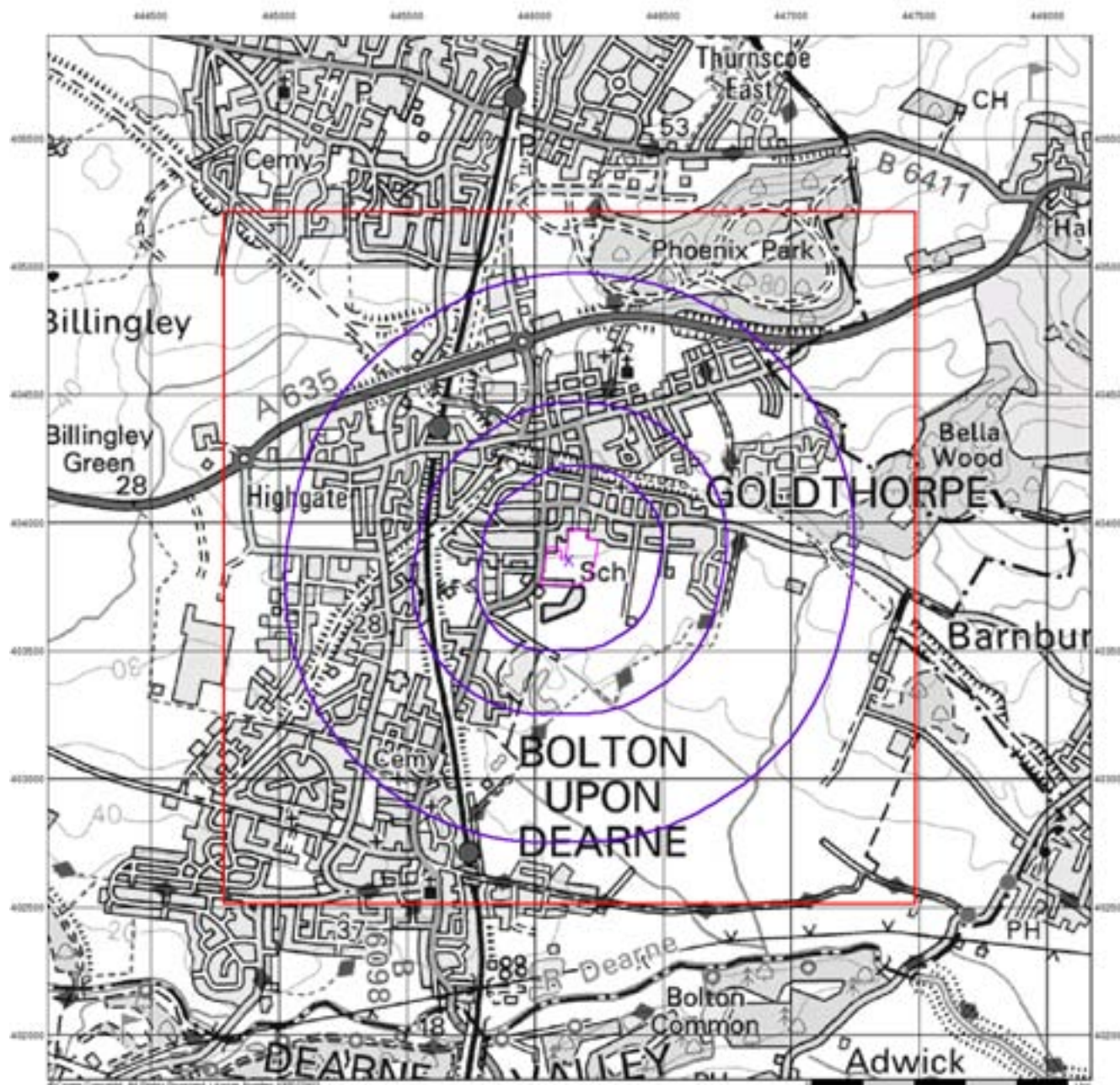
Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

### Site Details

Site at 446110, 403820

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## Source Protection Zones

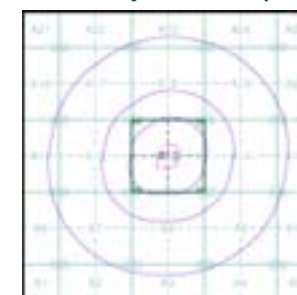
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Site
- Map ID

### Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)
- Source Protection Zone Boundary

## Site Sensitivity Context Map - Slice A



## Order Details

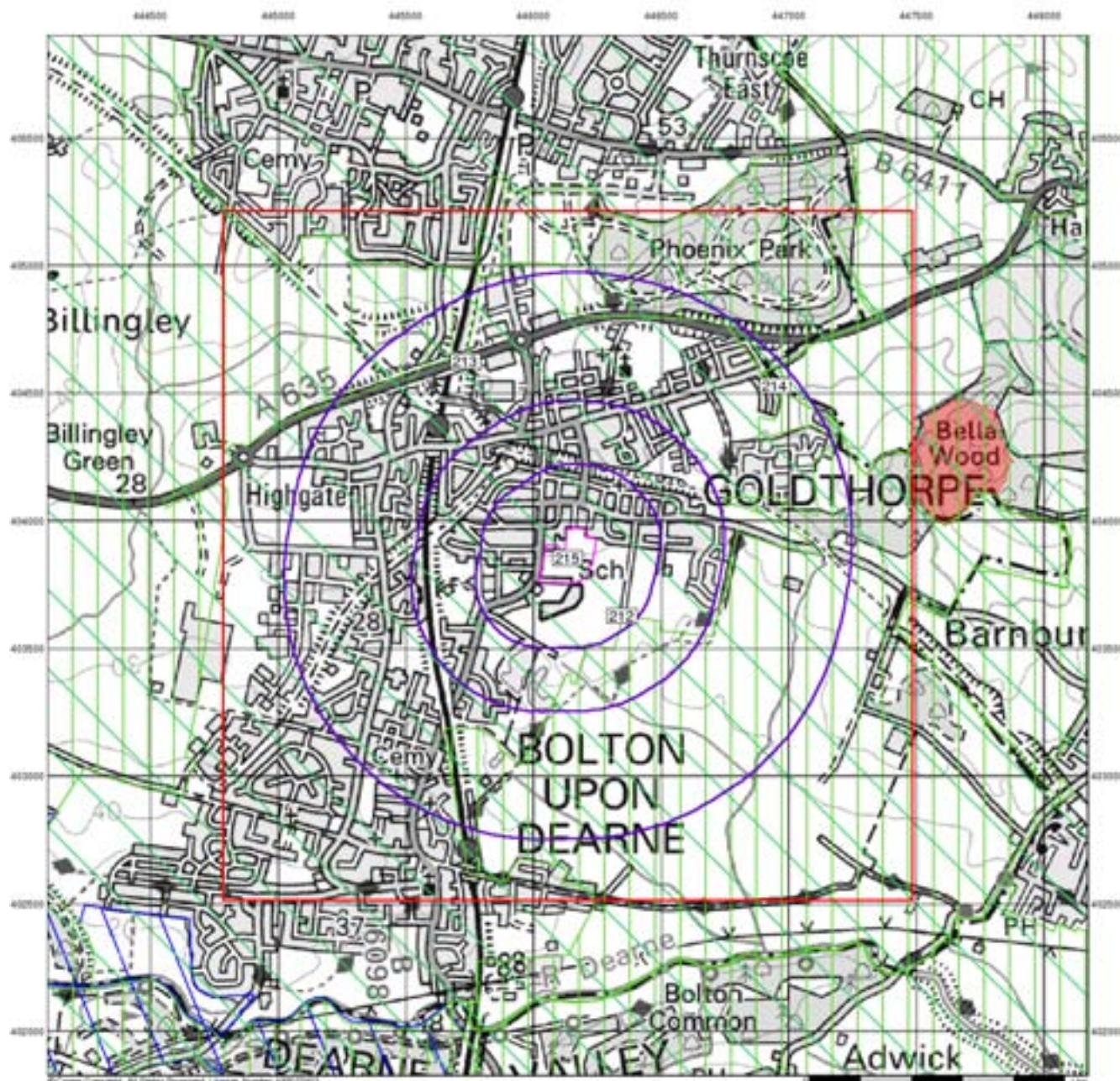
Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

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## Sensitive Land Uses

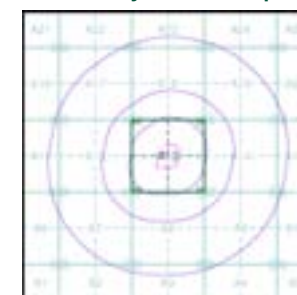
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Site
- Map ID

### Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

## Site Sensitivity Context Map - Slice A



### Order Details

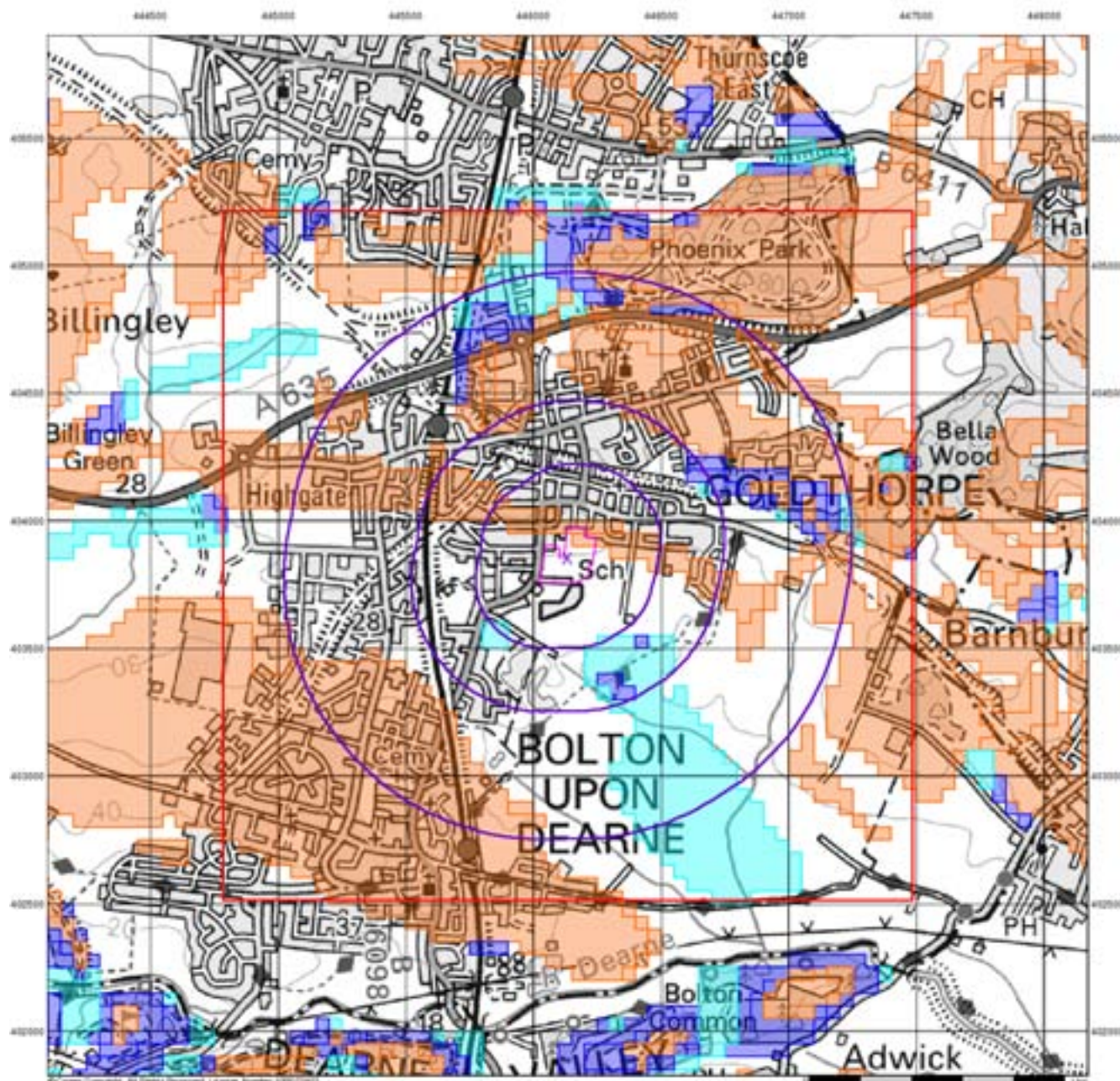
Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

### Site Details

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## BGS Flood GFS Data

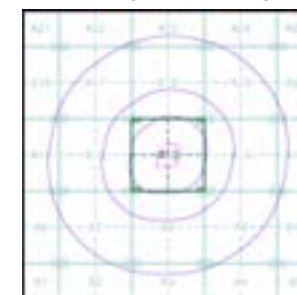
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice

### Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

## Site Sensitivity Context Map - Slice A



## Order Details

Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

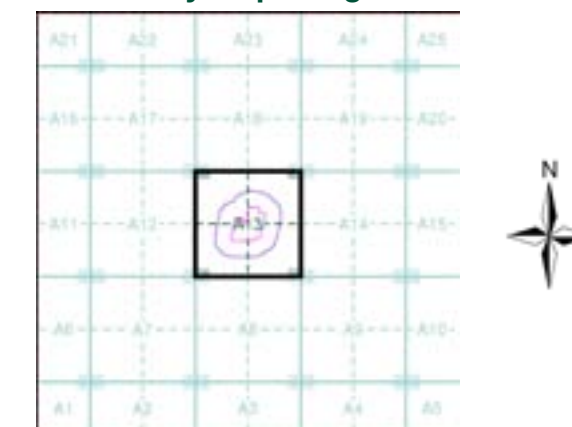
Site at 446110, 403820

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|                                                              |                                                        |
|--------------------------------------------------------------|--------------------------------------------------------|
| <b>General</b>                                               |                                                        |
| Specified Site                                               | Specified Buffer(s)                                    |
| Several of Type at Location                                  | Pylon                                                  |
| Bearing Reference Point                                      | Map ID                                                 |
| <b>Agency and Hydrological</b>                               |                                                        |
| Contaminated Land Register Entry or Notice (Location)        | BGS Recorded Landfill Site (Location)                  |
| Contaminated Land Register Entry or Notice                   | BGS Recorded Landfill Site                             |
| Discharge Consent                                            | EA Historic Landfill (Buried Pore)                     |
| Enforcement or Prohibition Notice                            | EA Historic Landfill (Pylon)                           |
| Integrated Pollution Control                                 | Integrated Pollution Control Registered Waste Site     |
| Integrated Pollution Prevention Control                      | Licensed Waste Management Facility (Landfill Boundary) |
| Local Authority Integrated Pollution Prevention and Control  | Licensed Waste Management Facility (Location)          |
| Local Authority Pollution Prevention and Control             | Local Authority Recorded Landfill Site (Location)      |
| Local Authority Pollution Prevention and Control Enforcement | Local Authority Recorded Landfill Site                 |
| Pollution Incident to Controlled Waters                      | Potentially Infilled Land (Non-water)                  |
| Prosecution Relating to Authorised Processes                 | Potentially Infilled Land (Non-water)                  |
| Prosecution Relating to Controlled Waters                    | Potentially Infilled Land (Water)                      |
| Registered Radioactive Substance                             | Potentially Infilled Land (Water)                      |
| River Network or Water Feature                               | Potentially Infilled Land (Water)                      |
| River Quality Sampling Point                                 | Potentially Infilled Land (Water)                      |
| Substantiated Pollution Incident Register                    | Registered Landfill Site                               |
| Water Abstraction                                            | Registered Landfill Site (Location)                    |
| Water Industry Act Referral                                  | Registered Landfill Site (Pore Buried to 100m)         |
| <b>Hazardous Substances</b>                                  |                                                        |
| COMAH Site                                                   | Registered Landfill Site (Pore Buried to 250m)         |
| Explosive Site                                               | Registered Waste Transfer Site (Location)              |
| HMHS Site                                                    | Registered Waste Transfer Site                         |
| Planning Hazardous Substance Consent                         | Registered Waste Treatment or Disposal Site (Location) |
| Planning Hazardous Substance Enforcement                     | Registered Waste Treatment or Disposal Site            |
| <b>Geological</b>                                            |                                                        |
| BGS Recorded Mineral Site                                    |                                                        |

## Site Sensitivity Map - Segment A13



## Order Details

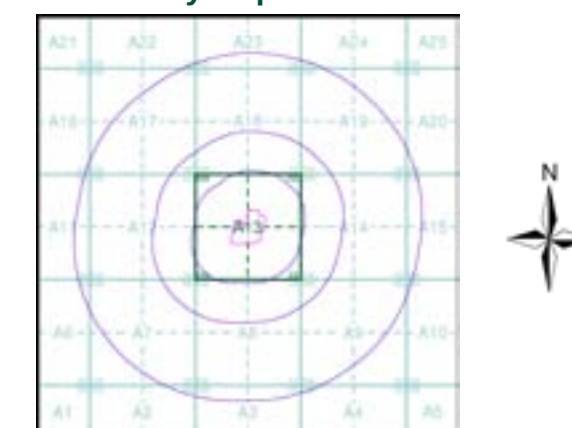
Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Plot Buffer (m): 100

## Site Details

Site at 446110, 403820

| General                                                      |                                                        |
|--------------------------------------------------------------|--------------------------------------------------------|
| Specified Site                                               | Specified Buffer(s)                                    |
| Severest of Type at Location                                 | Bearing Reference Point                                |
| Map ID                                                       |                                                        |
| Agency and Hydrological                                      |                                                        |
| Contaminated Land Register Entry or Notice (Location)        | BOS Recorded Landfill Site (Location)                  |
| Contaminated Land Register Entry or Notice (Location)        | BOS Recorded Landfill Site                             |
| Discharge Consent                                            | EA Historic Landfill (Buried Risk)                     |
| Enforcement or Prohibition Notice                            | EA Historic Landfill (Risk)                            |
| Integrated Pollution Control                                 | Integrated Pollution Control Registered Waste Site     |
| Integrated Pollution Prevention Control                      | Licensed Waste Management Facility (Landfill Boundary) |
| Local Authority Integrated Pollution Prevention and Control  | Licensed Waste Management Facility (Location)          |
| Local Authority Pollution Prevention and Control             | Local Authority Recorded Landfill Site (Location)      |
| Local Authority Pollution Prevention and Control Enforcement | Local Authority Recorded Landfill Site                 |
| Pollution Incident to Controlled Waters                      | Potentially Infilled Land (Non-water)                  |
| Prosecution Relating to Authorised Processes                 | Potentially Infilled Land (Non-water)                  |
| Prosecution Relating to Controlled Waters                    | Potentially Infilled Land (Non-water)                  |
| Registered Radioactive Substance                             | Potentially Infilled Land (Water)                      |
| River Network or Water Feature                               | Potentially Infilled Land (Water)                      |
| River Quality Sampling Point                                 | Potentially Infilled Land (Water)                      |
| Substantiated Pollution Incident Register                    | Potentially Infilled Land (Water)                      |
| Water Abstraction                                            | Registered Landfill Site (Location)                    |
| Water Industry Act Referral                                  | Registered Landfill Site (Five Buffers to 100m)        |
|                                                              | Registered Landfill Site (Five Buffers to 250m)        |
|                                                              | Registered Waste Transfer Site (Location)              |
|                                                              | Registered Waste Transfer Site                         |
|                                                              | Registered Waste Treatment or Disposal Site (Location) |
|                                                              | Registered Waste Treatment or Disposal Site            |
| Hazardous Substances                                         |                                                        |
| COMAH Site                                                   | Explosive Site                                         |
| HPHS Site                                                    |                                                        |
| Planning Hazardous Substance Consent                         |                                                        |
| Planning Hazardous Substance Enforcement                     |                                                        |
| Geological                                                   |                                                        |
| BOS Recorded Mineral Site                                    |                                                        |

## Site Sensitivity Map - Slice A



## Order Details

Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

Site at 446110, 403820

## Industrial Land Use Map

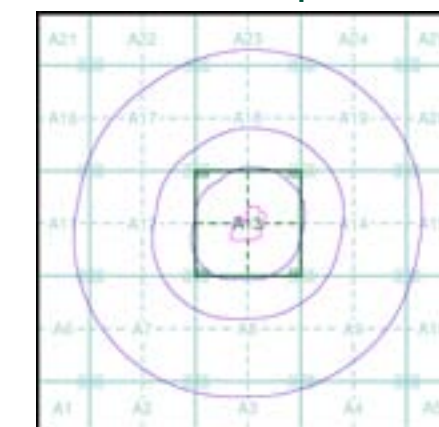
### General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point
-  Slice
-  Map ID

### Industrial Land Use

-  Contemporary Trade Directory Entry
-  Fuel Station Entry
-  Gas Pipeline
-  Points of Interest - Commercial Services
-  Points of Interest - Education and Health
-  Points of Interest - Manufacturing and Production
-  Points of Interest - Public Infrastructure
-  Points of Interest - Recreational and Environmental
-  Underground Electrical Cables

## Industrial Land Use Map - Slice A

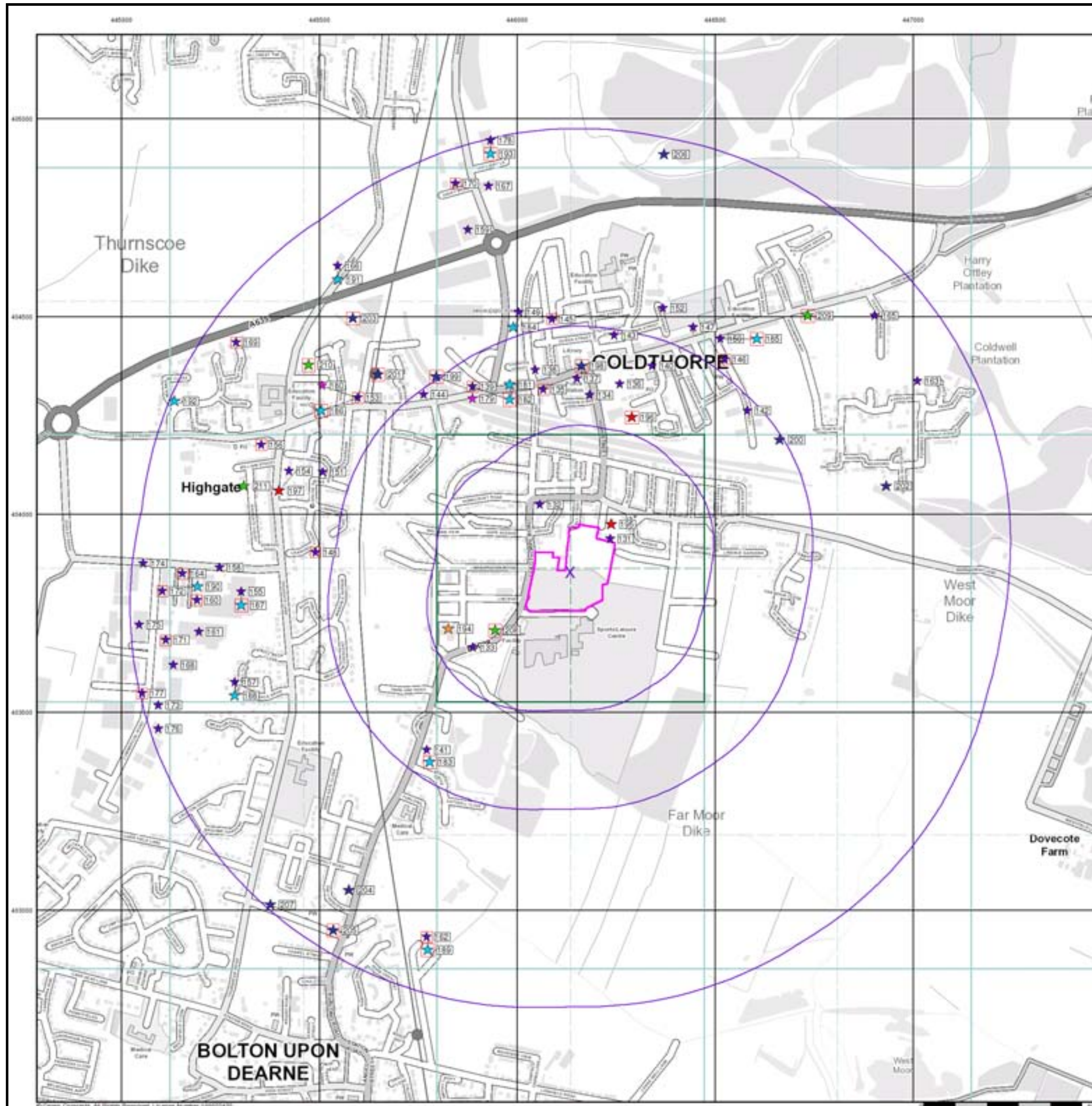


### Order Details

Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

### Site Details

Site at 446110, 403820



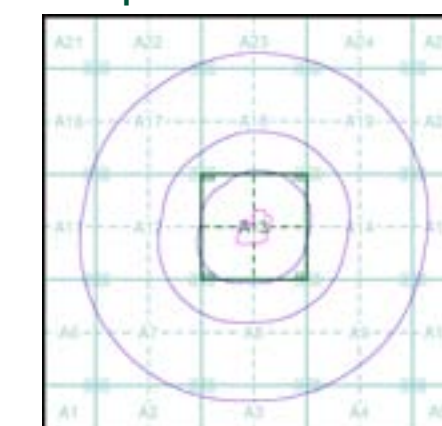
## General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point

## Agency and Hydrological (Flood)

-  Extreme Flooding from Rivers or Sea without Defences (Zone 2)
-  Flooding from Rivers or Sea without Defences (Zone 3)
-  Area Benefiting from Flood Defence
-  Flood Water Storage Areas
-  Flood Defence

## Flood Map - Slice A



## Order Details

Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

Site at 446110, 403820



## General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

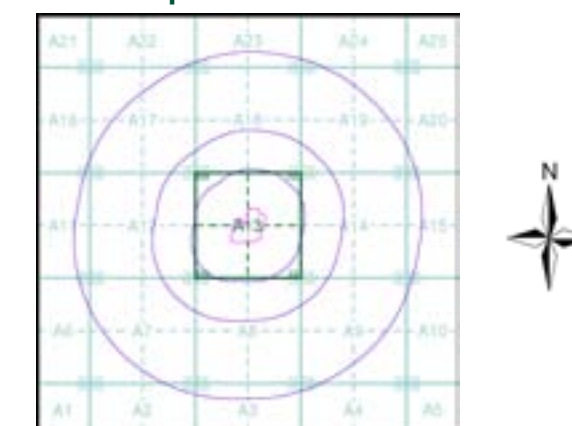
## Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of [www.envirocheck.co.uk](http://www.envirocheck.co.uk).

## Borehole Map - Slice A



## Order Details

Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

Site at 446110, 403820

## General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

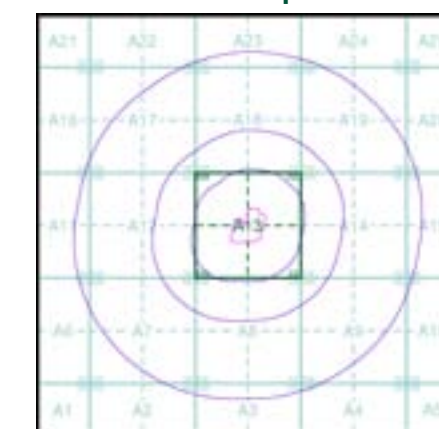
## OS Water Network Data

- |              |                         |
|--------------|-------------------------|
| Canal        | Drain                   |
| Reservoir    | Other                   |
| Foreshore    | Lake                    |
| Marsh        | Transfer                |
| Tidal River  | Lock Or Flight Of Locks |
| Inland River | Sea                     |

## Contours (height in meters)

- |                  |       |    |     |                 |
|------------------|-------|----|-----|-----------------|
| Standard Contour | 100   | 90 | MLW | Mean Low Water  |
| Master Contour   | 100   | 90 | MHW | Mean High Water |
| Spot Height      | 167.3 |    |     |                 |

## OS Water Network Map - Slice A

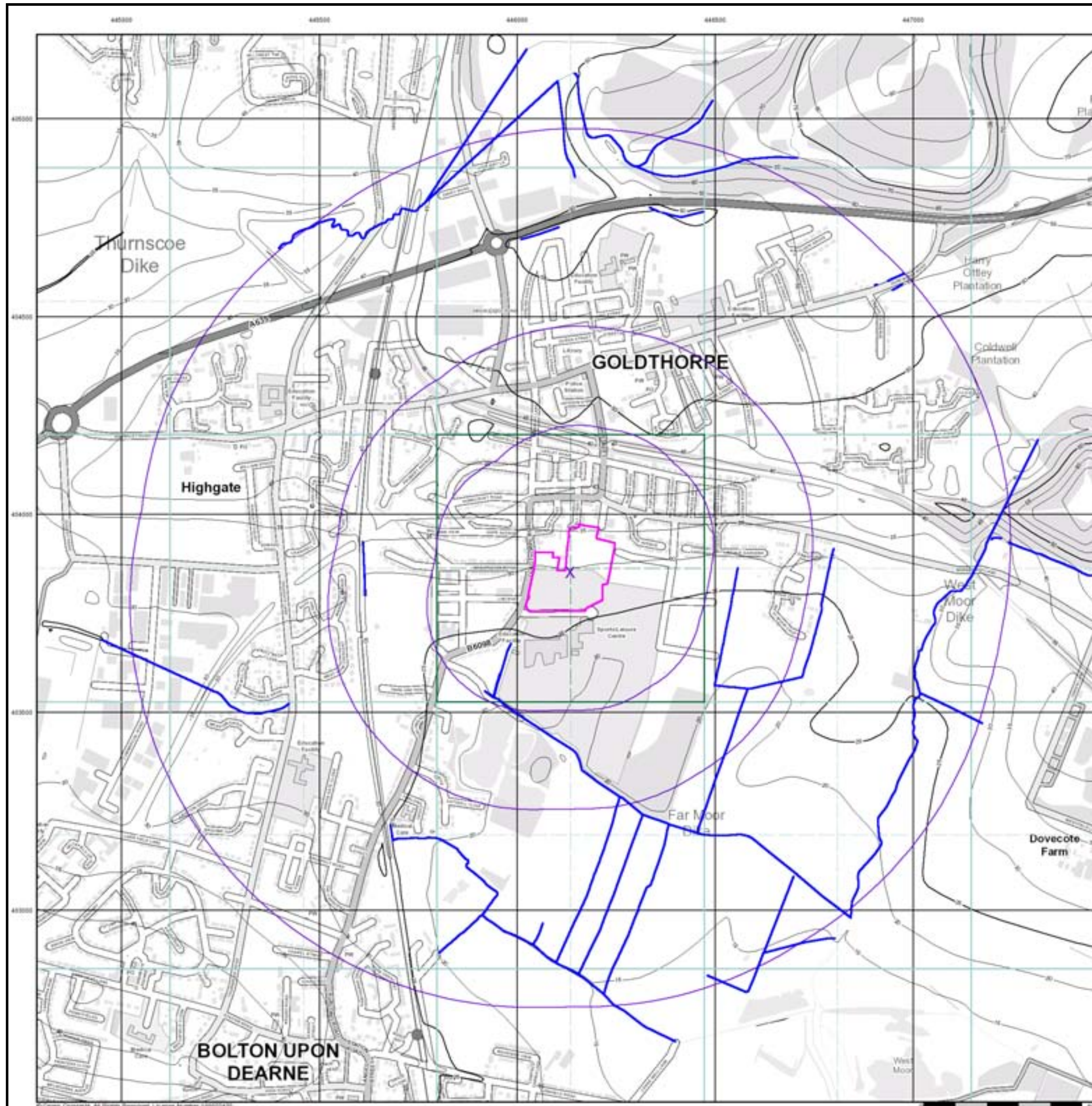


## Order Details

Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

Site at 446110, 403820



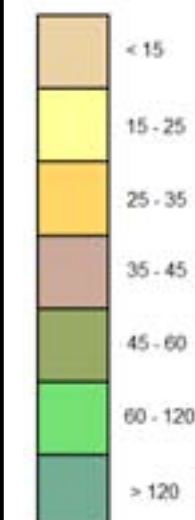


## General

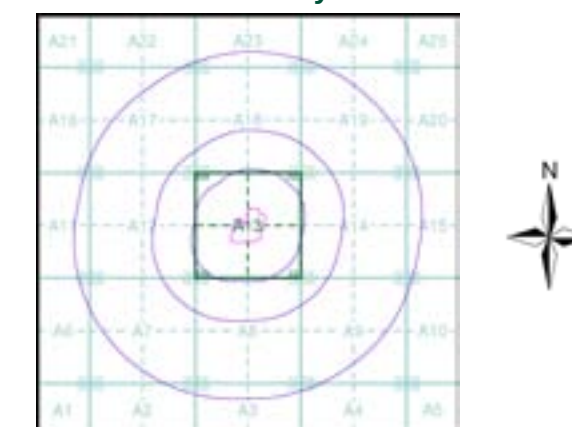
Specified Site Specified Buffer(s) Bearing Reference Point

## Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



## Estimated Soil Chemistry Arsenic - Slice A

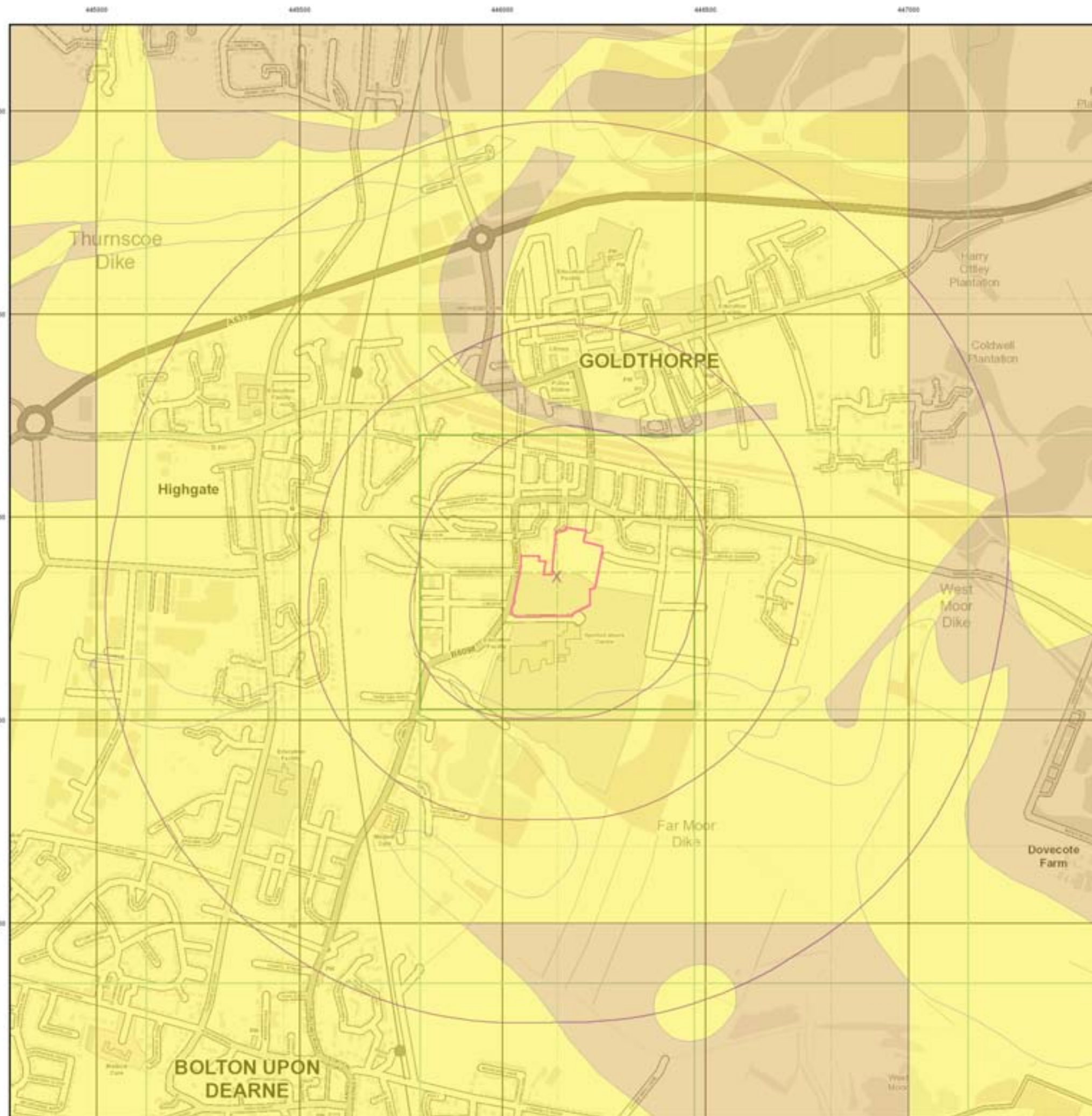


## Order Details

Order Details: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

Site at 446110, 403820

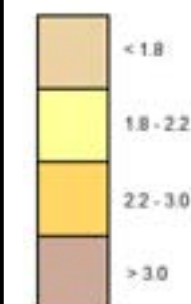


## General

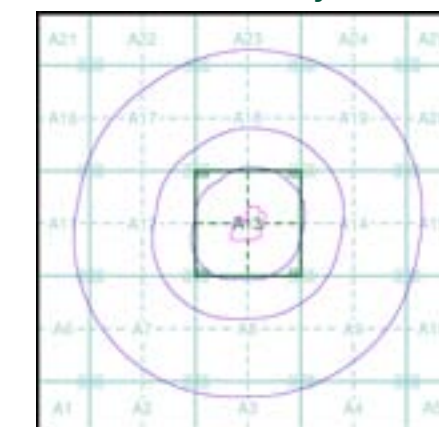
Specified Site Specified Buffer(s) Drawing Reference Point

## Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



## Estimated Soil Chemistry Cadmium - Slice A

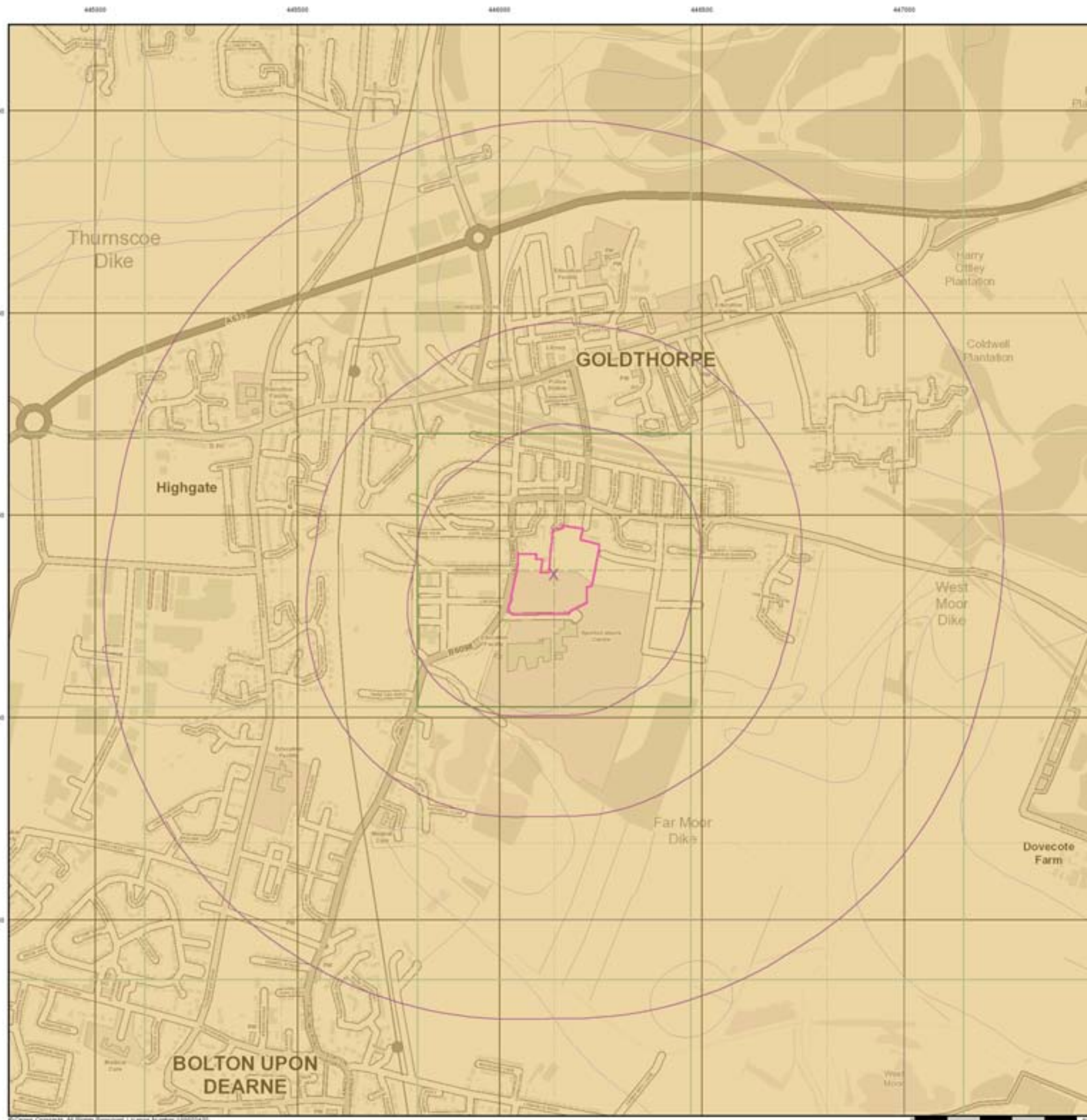


## Order Details

Order Details: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

Site at 446110, 403820

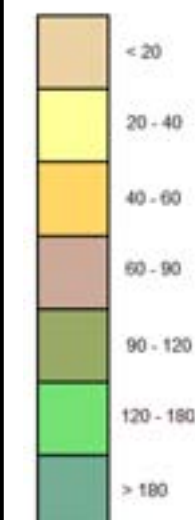


## General

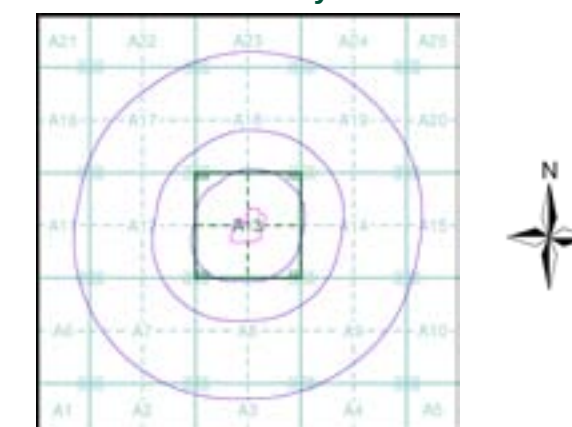
Specified Site Specified Buffer(s) Bearing Reference Point

## Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



## Estimated Soil Chemistry Chromium - Slice A

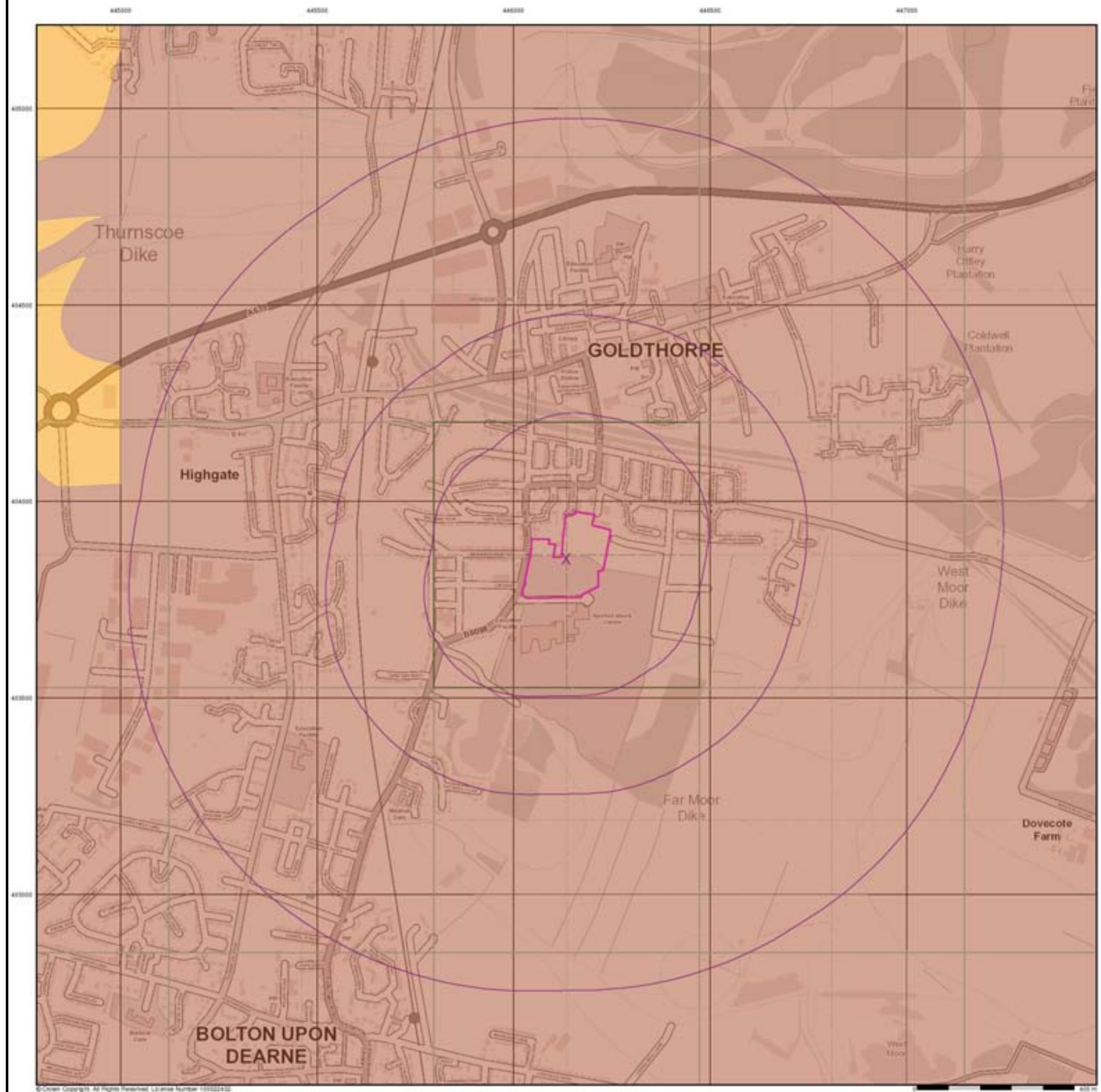


## Order Details

Order Details: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

Site at 446110, 403820

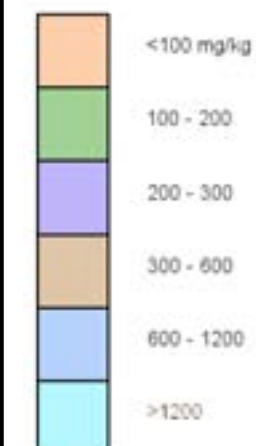


## General

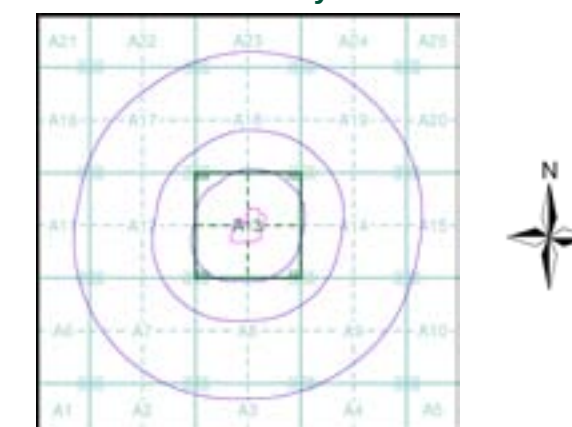
Specified Site Specified Buffer(s) Drawing Reference Point

## Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



## Estimated Soil Chemistry Lead - Slice A

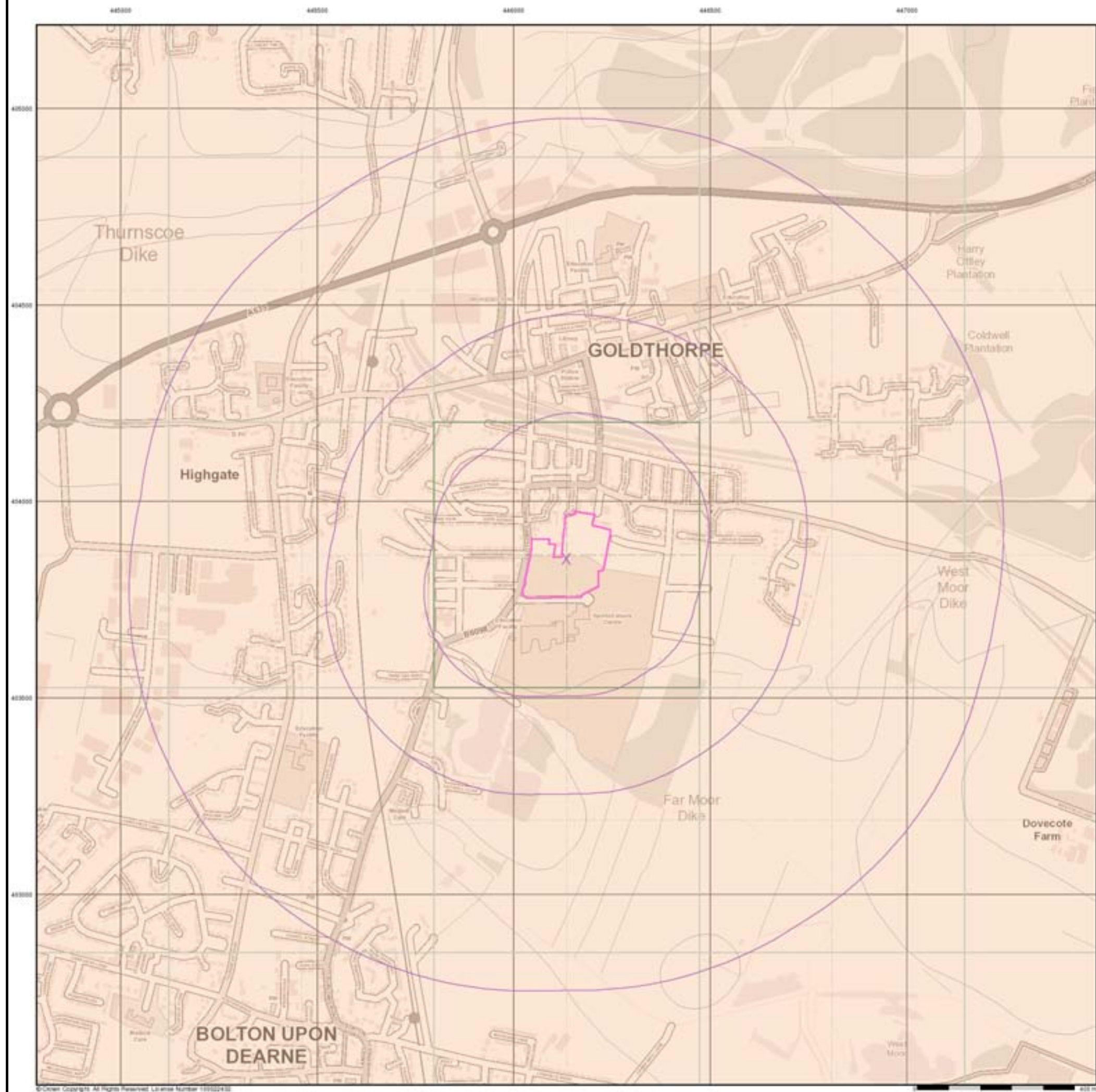


## Order Details

Order Details: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

Site at 446110, 403820

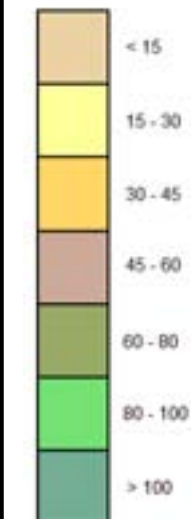


## General

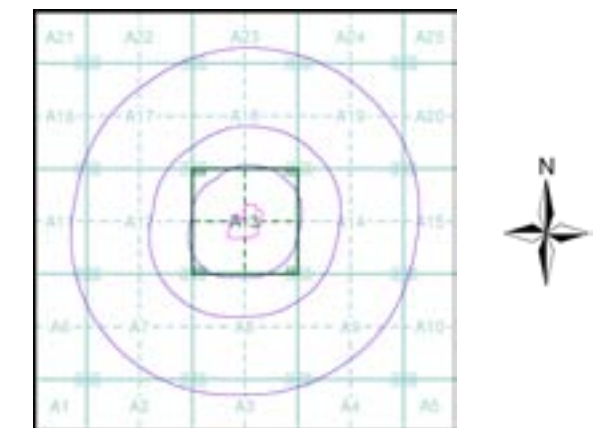
Specified Site Specified Buffer(s) Drawing Reference Point

## Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



## Estimated Soil Chemistry Nickel - Slice A



## Order Details

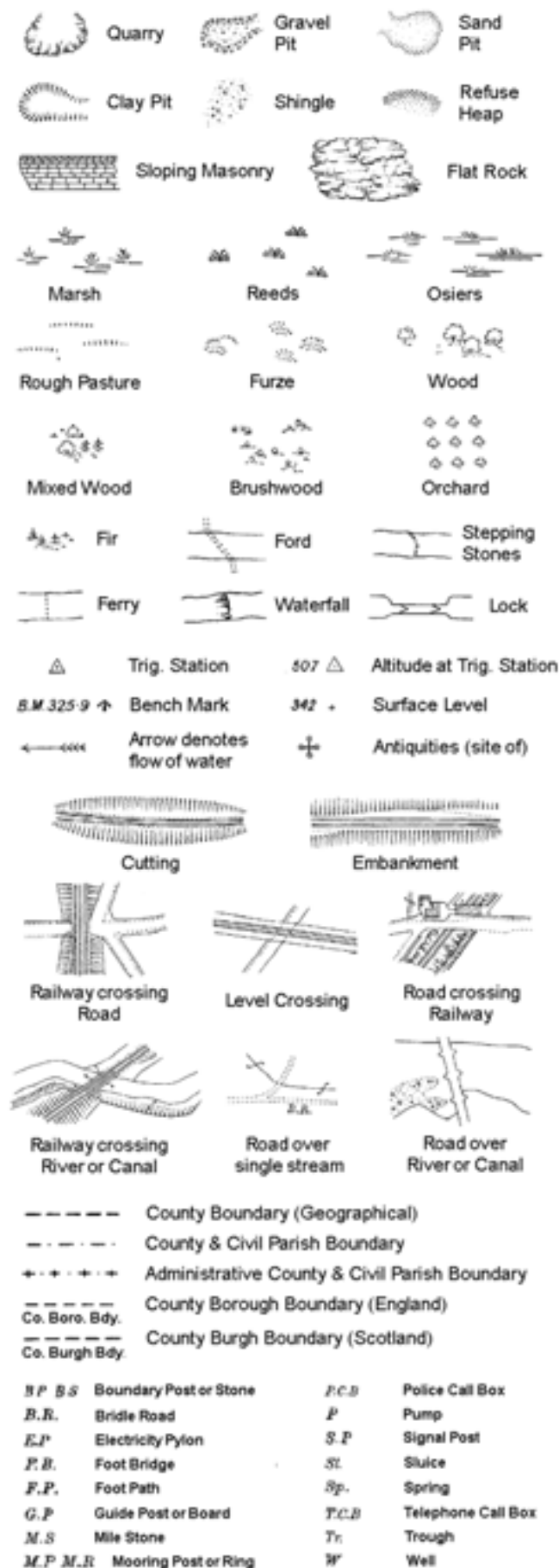
Order Details: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

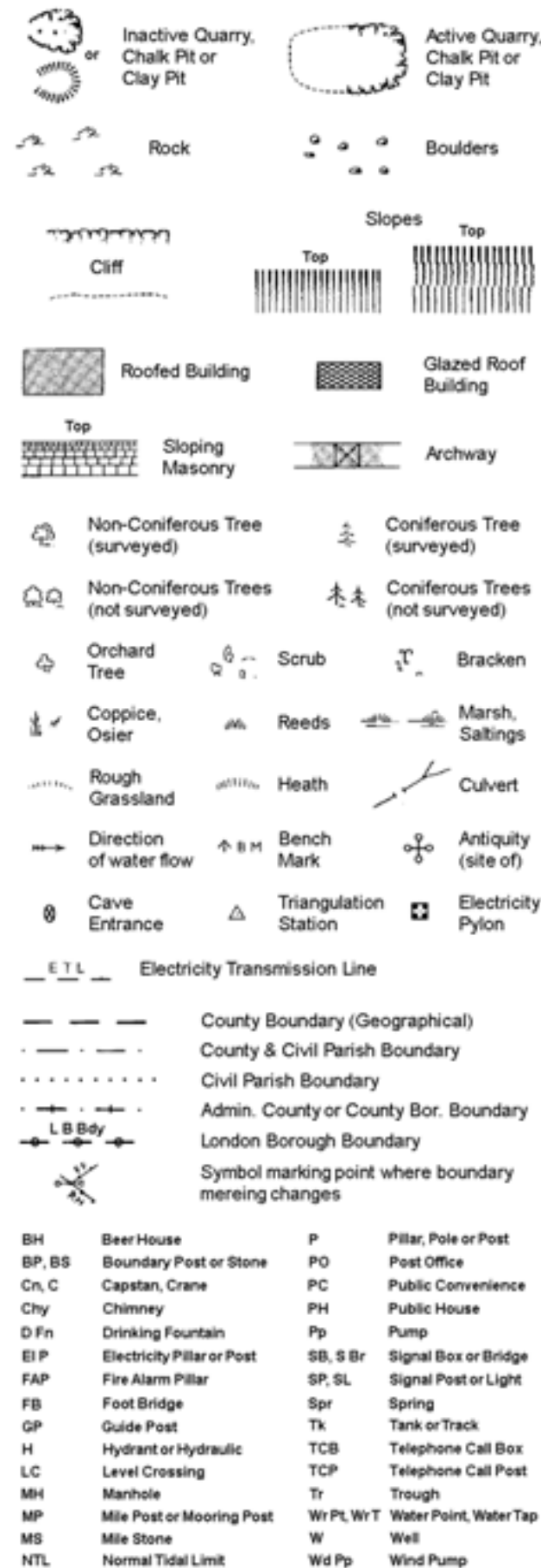
Site at 446110, 403820

# Historical Mapping Legends

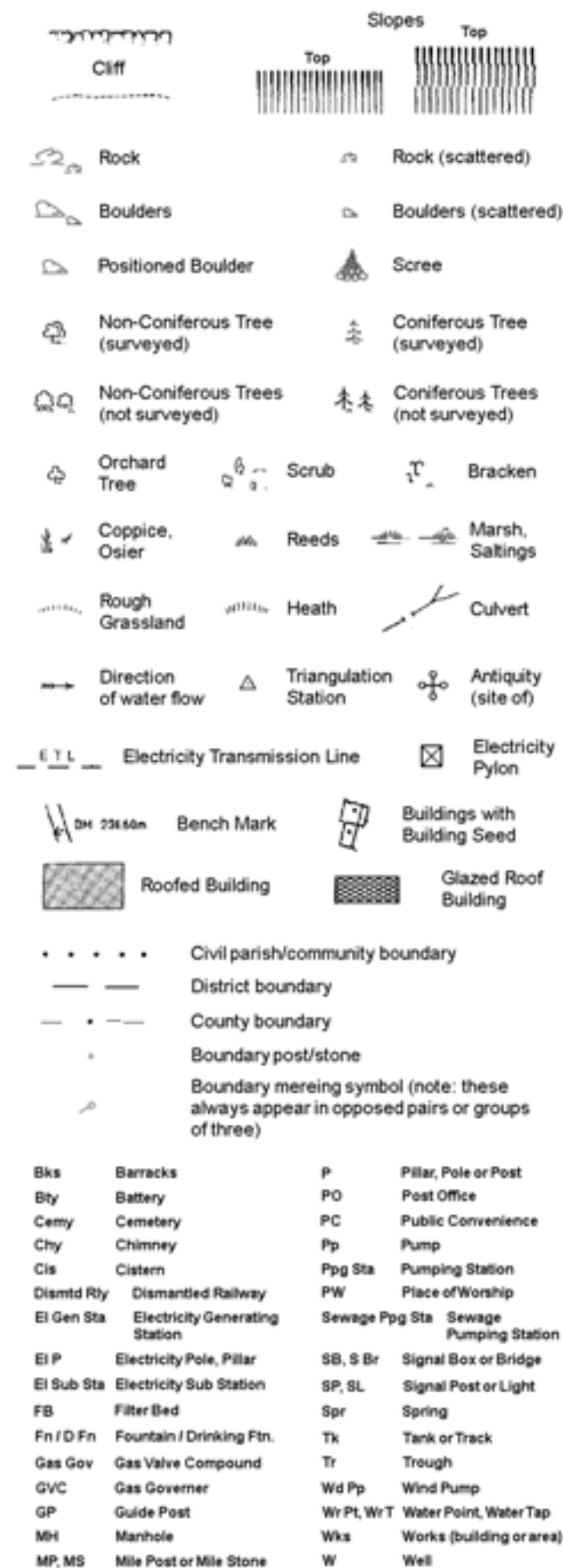
## Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



## Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



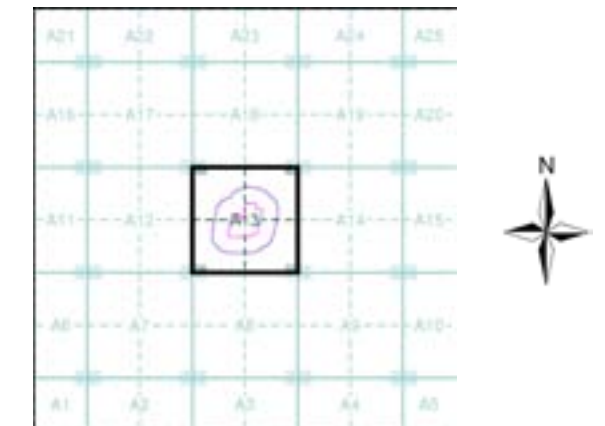
## Large-Scale National Grid Data 1:2,500 and 1:1,250



## Historical Mapping & Photography included:

| Mapping Type                   | Scale   | Date        | Pg |
|--------------------------------|---------|-------------|----|
| Yorkshire                      | 1:2,500 | 1892        | 2  |
| Yorkshire                      | 1:2,500 | 1906        | 3  |
| Yorkshire                      | 1:2,500 | 1930        | 4  |
| Ordnance Survey Plan           | 1:1,250 | 1961 - 1962 | 5  |
| Ordnance Survey Plan           | 1:2,500 | 1962        | 6  |
| Additional SIMs                | 1:1,250 | 1962 - 1991 | 7  |
| Ordnance Survey Plan           | 1:1,250 | 1965 - 1976 | 8  |
| Additional SIMs                | 1:1,250 | 1979        | 9  |
| Large-Scale National Grid Data | 1:1,250 | 1993        | 10 |
| Large-Scale National Grid Data | 1:1,250 | 1994        | 11 |
| Large-Scale National Grid Data | 1:1,250 | 1995        | 12 |
| Historical Aerial Photography  | 1:2,500 | 1999        | 13 |

## Historical Map - Segment A13



## Order Details

Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 100

## Site Details

Site at 446110, 403820

Yorkshire

Published 1892

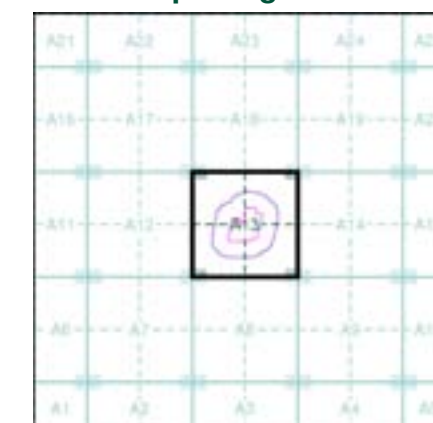
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)



## Historical Map - Segment A13

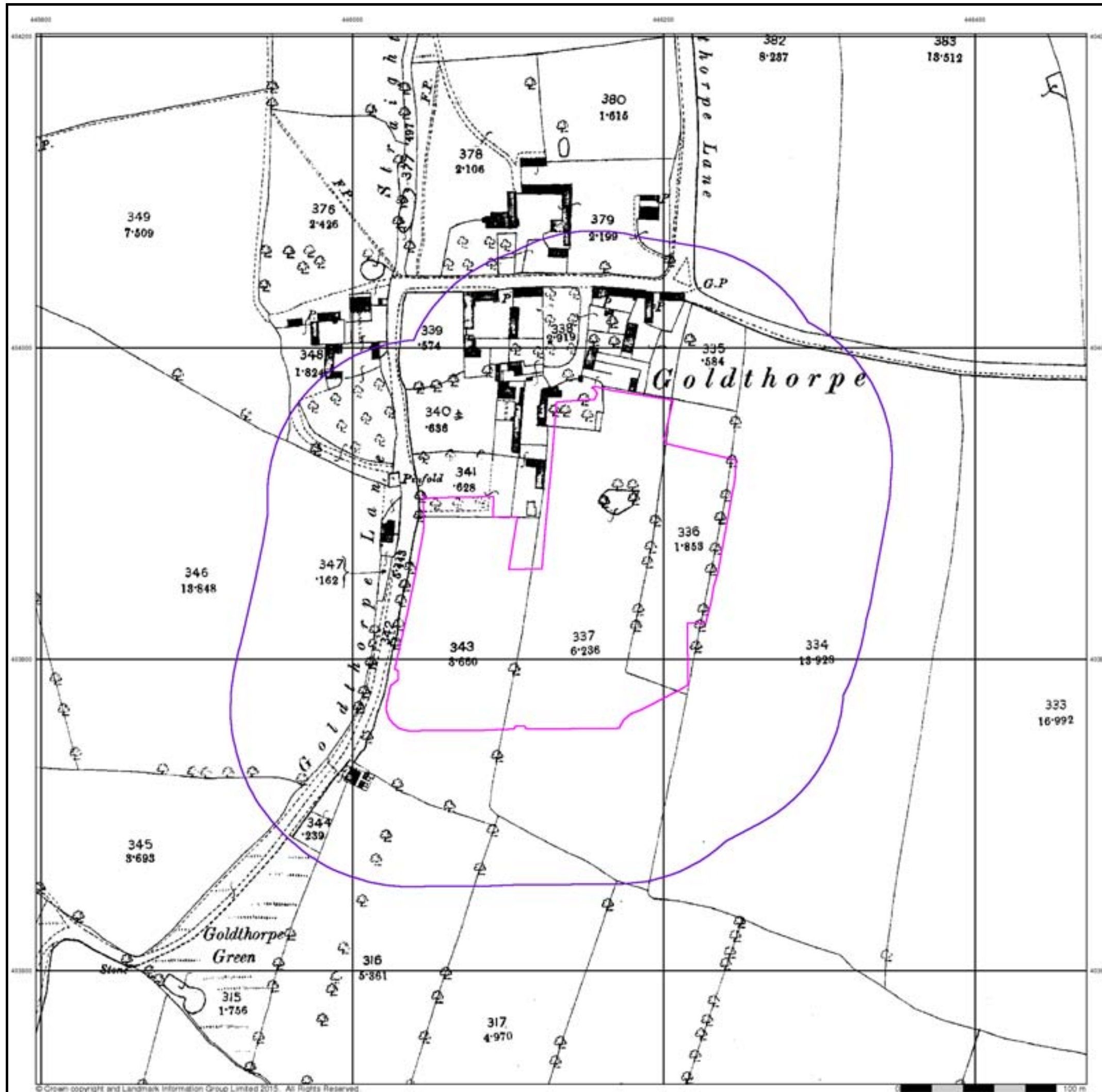


## Order Details

Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 100

## Site Details

Site at 446110, 403820



## Yorkshire

Published 1906

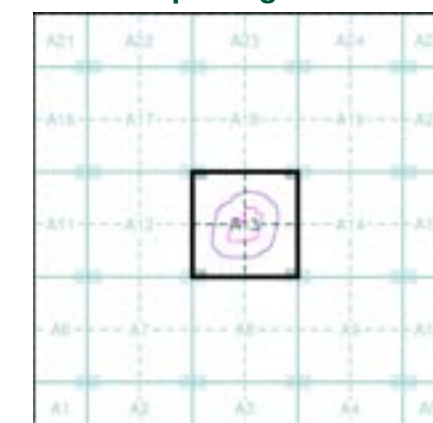
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)



### Historical Map - Segment A13

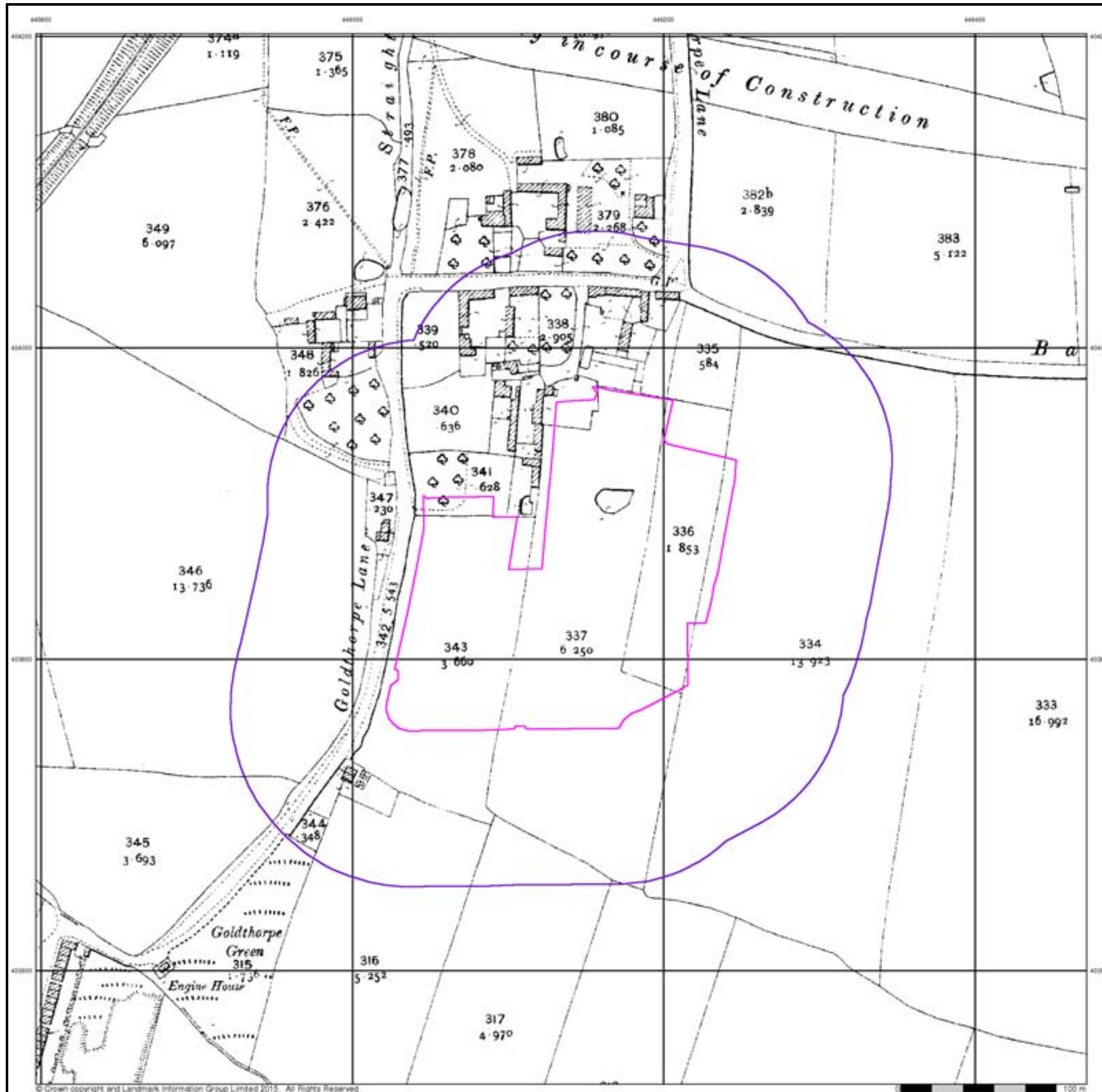


### Order Details

Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 100

### Site Details

Site at 446110, 403820



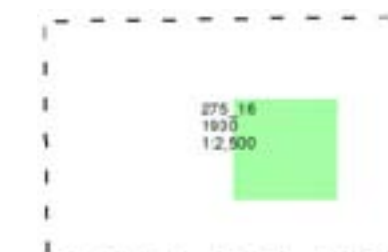
Yorkshire

Published 1930

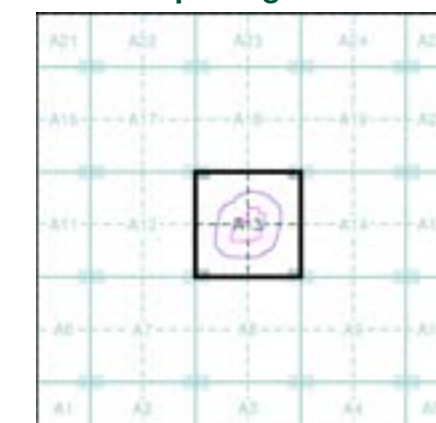
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)



## Historical Map - Segment A13

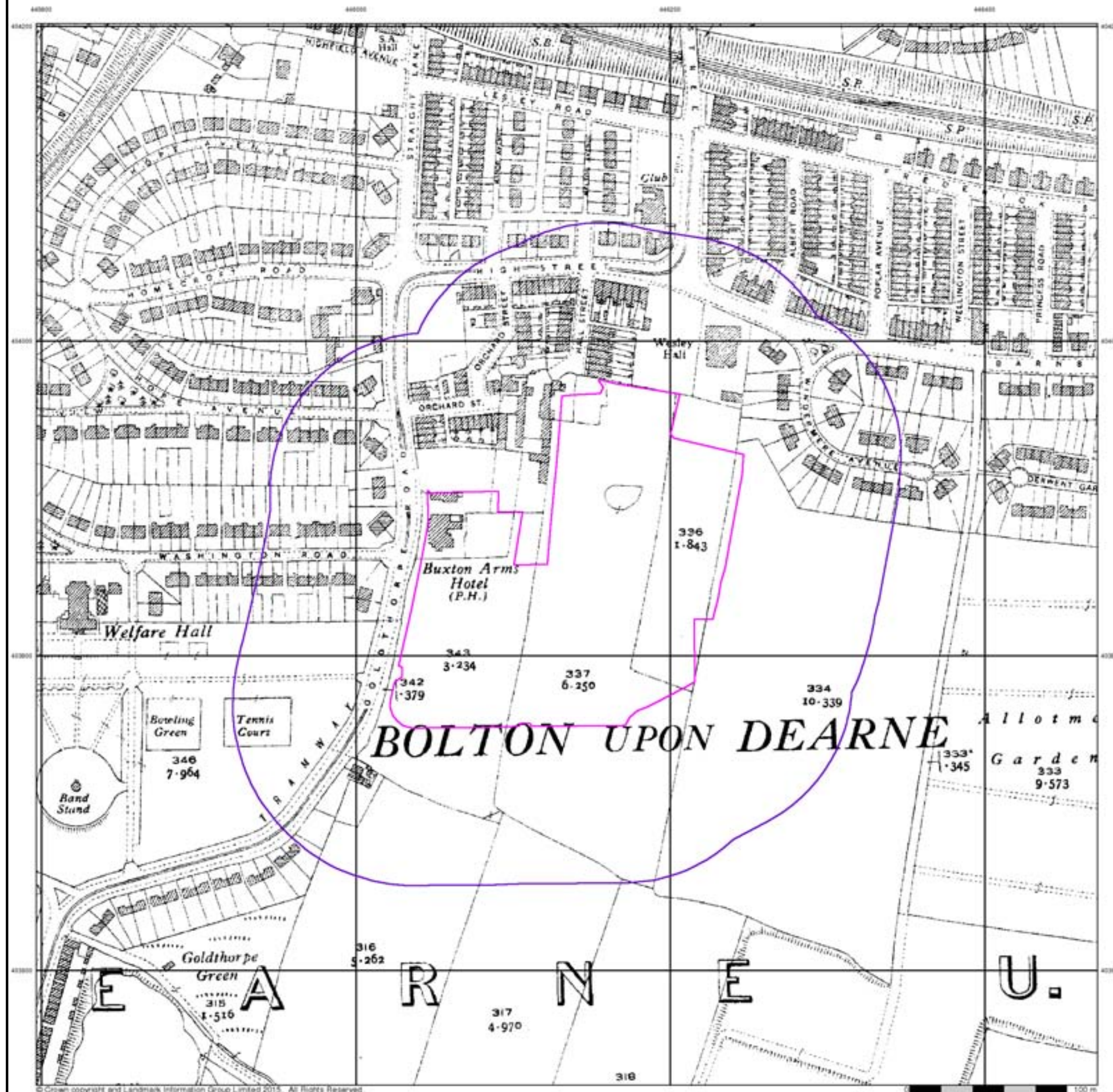


## Order Details

Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 100

## Site Details

Site at 446110, 403820



## Ordnance Survey Plan

Published 1961 - 1962

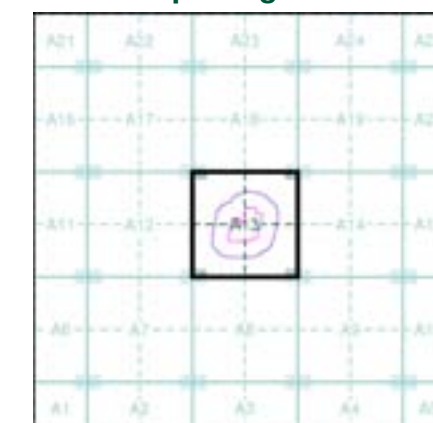
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)



## Historical Map - Segment A13

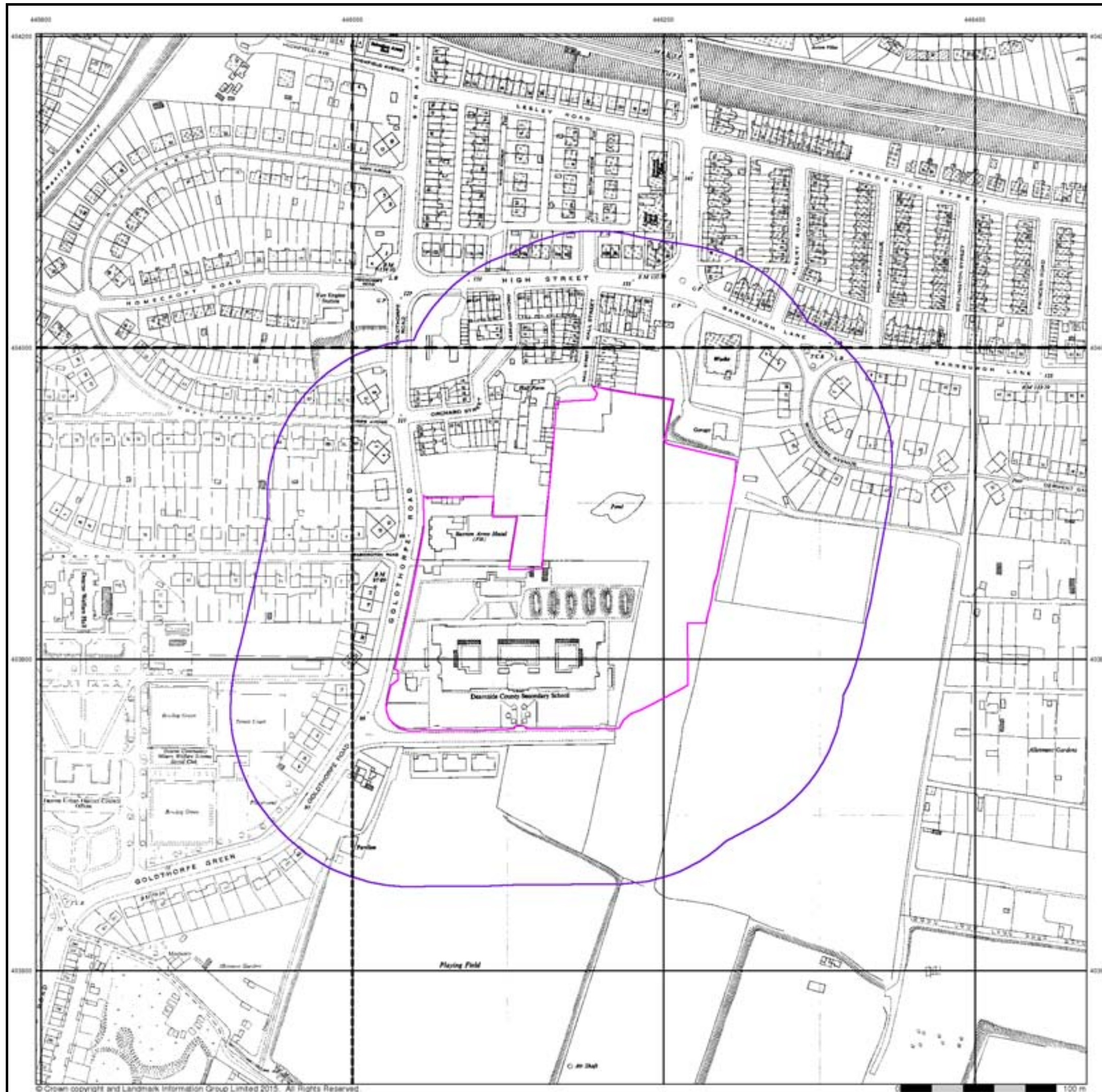


## Order Details

Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 100

## Site Details

Site at 446110, 403820



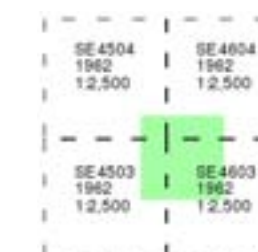
## Ordnance Survey Plan

Published 1962

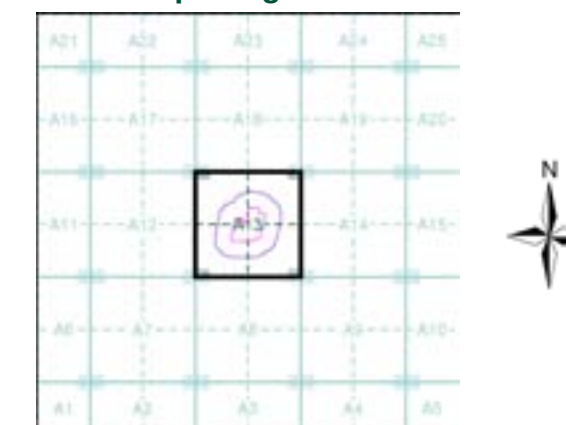
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)



## Historical Map - Segment A13

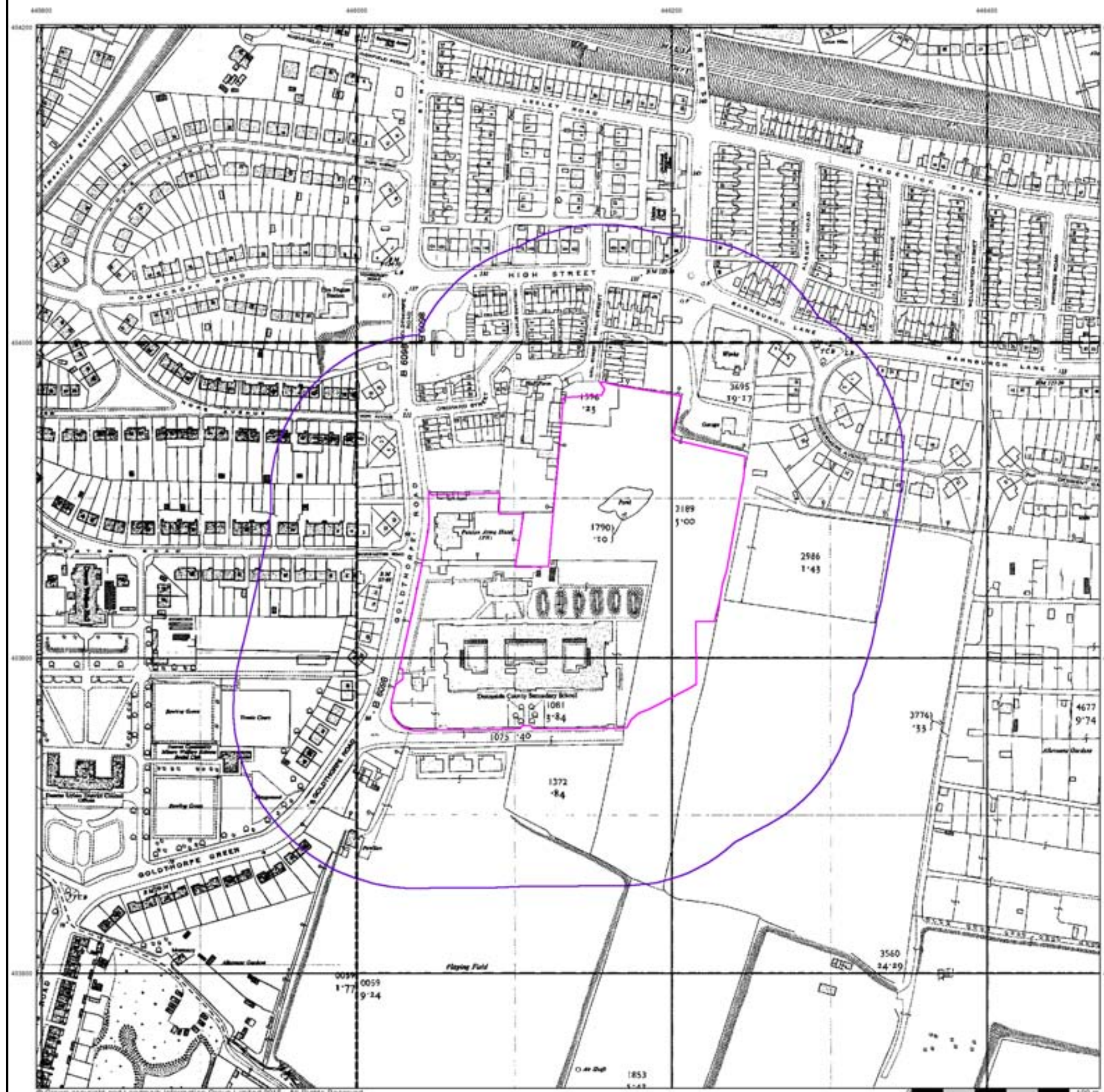


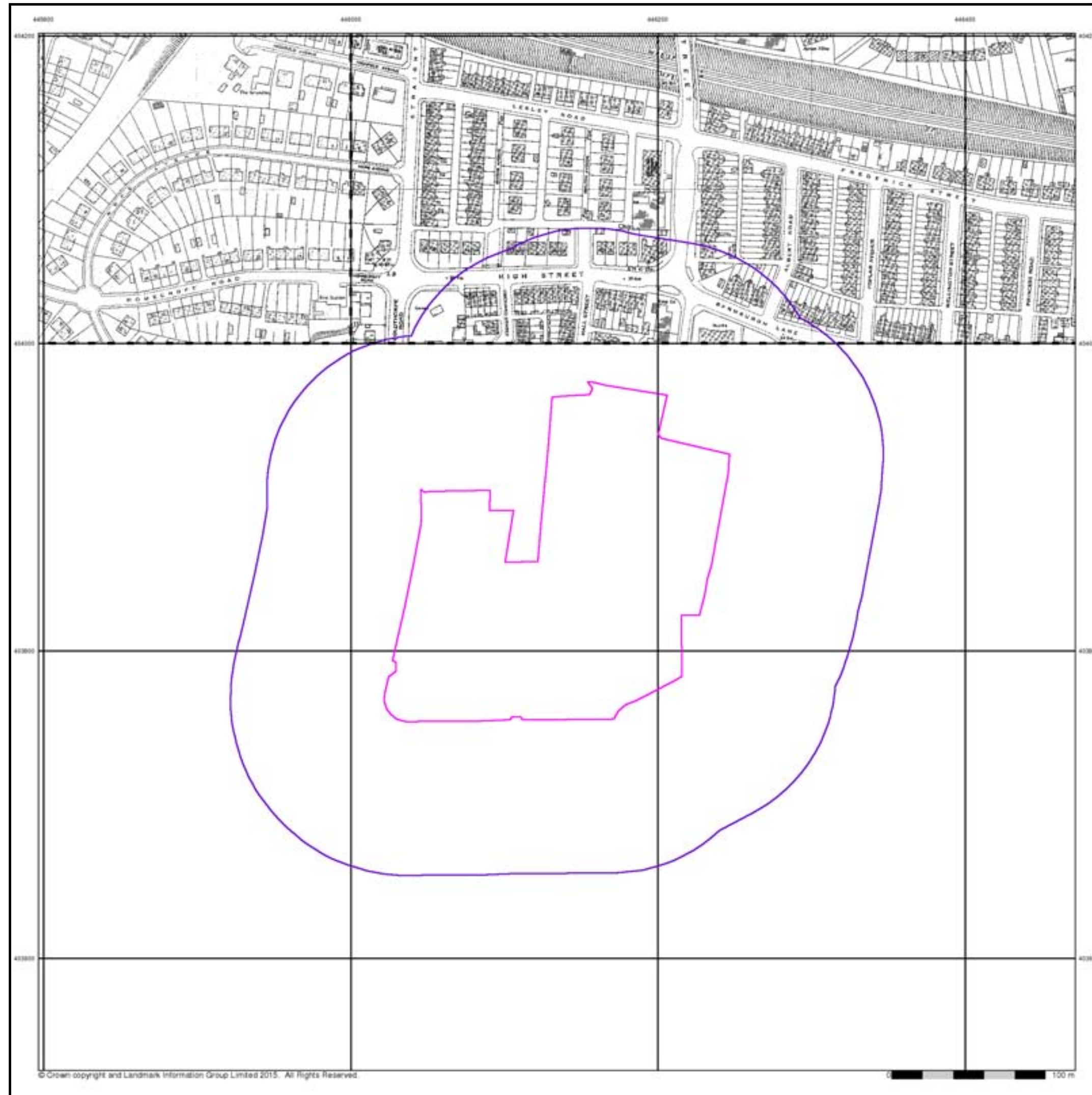
## Order Details

Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 100

## Site Details

Site at 446110, 403820





## Additional SIMs

Published 1962 - 1991

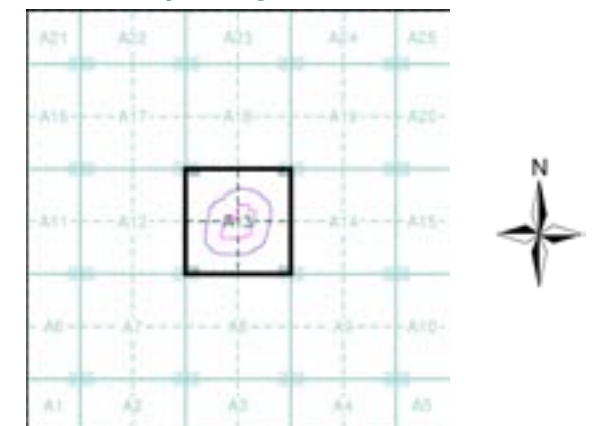
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

## Map Name(s) and Date(s)



## Historical Map - Segment A13

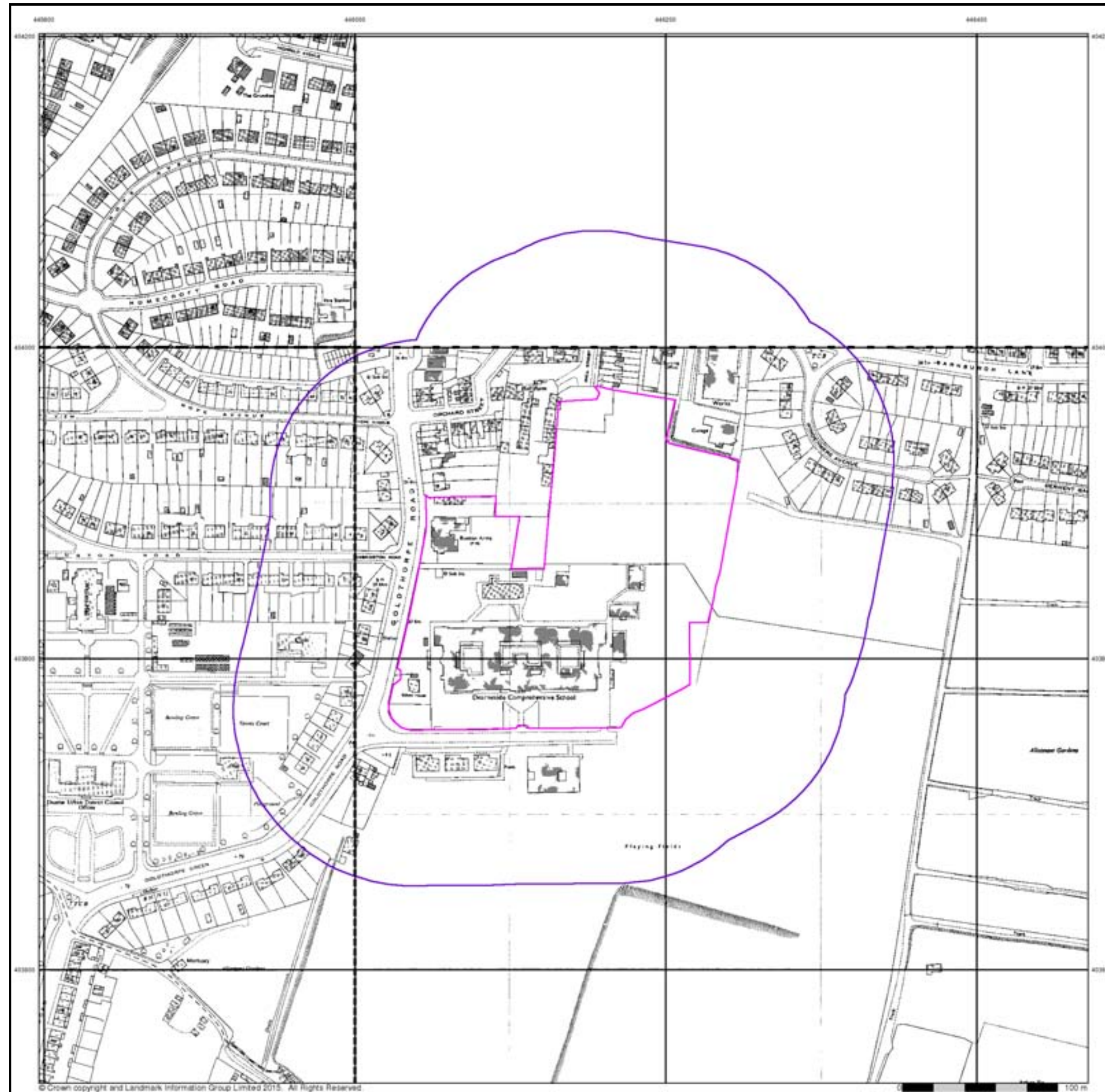


## Order Details

Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 100

## Site Details

Site at 446110, 403820



## Ordnance Survey Plan

Published 1965 - 1976

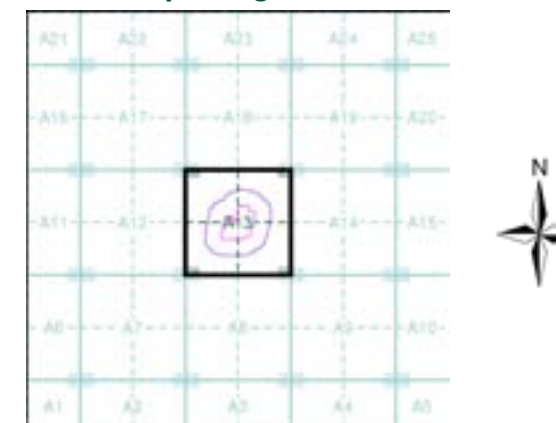
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)



## Historical Map - Segment A13

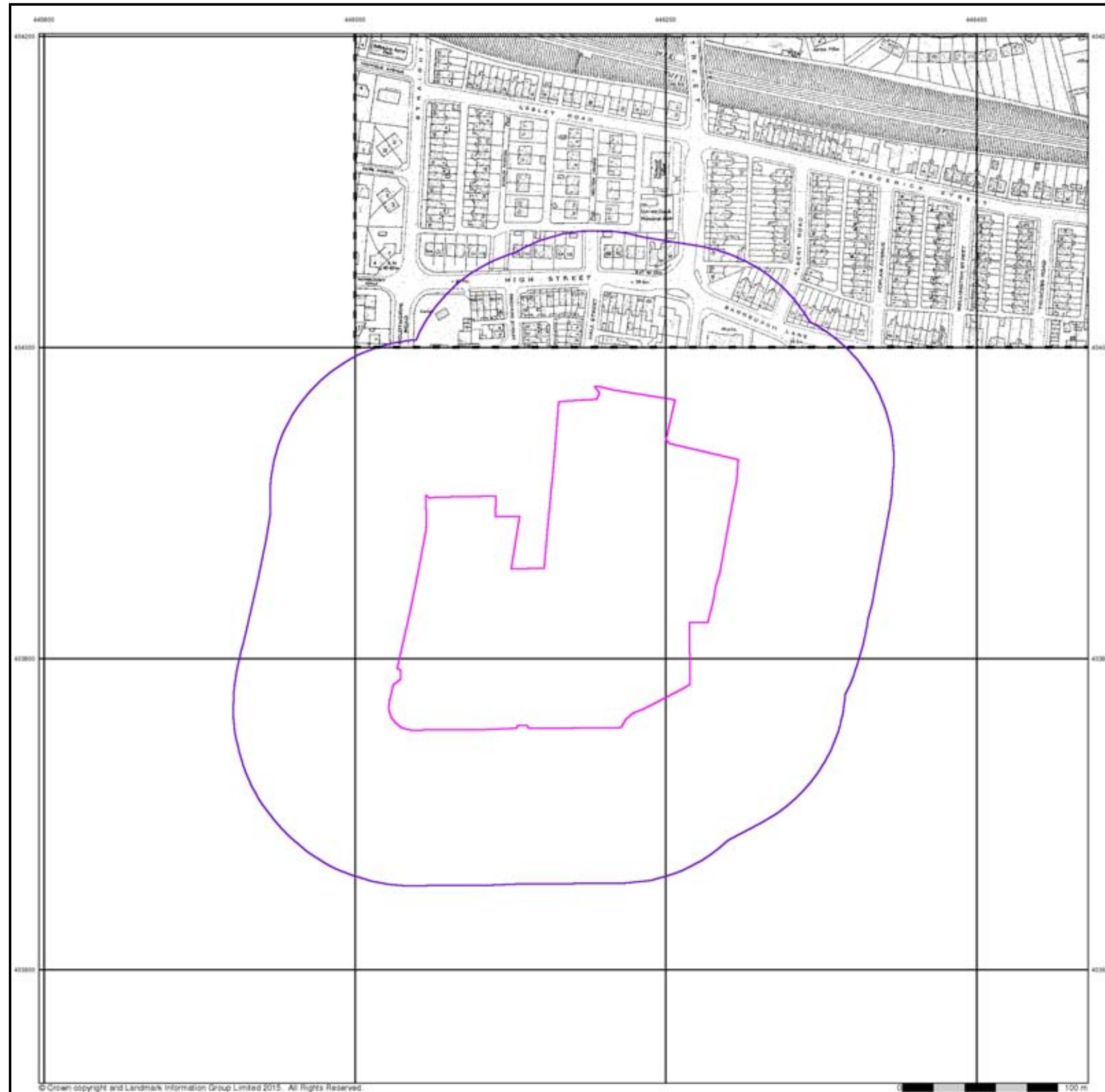


## Order Details

Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 100

## Site Details

Site at 446110, 403820



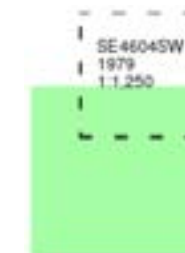
## Additional SIMs

Published 1979

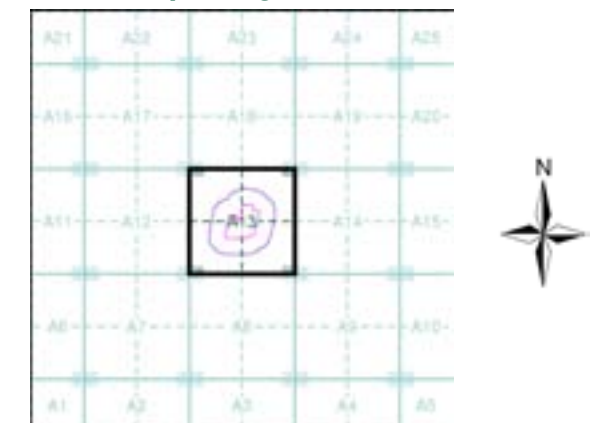
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

## Map Name(s) and Date(s)



## Historical Map - Segment A13

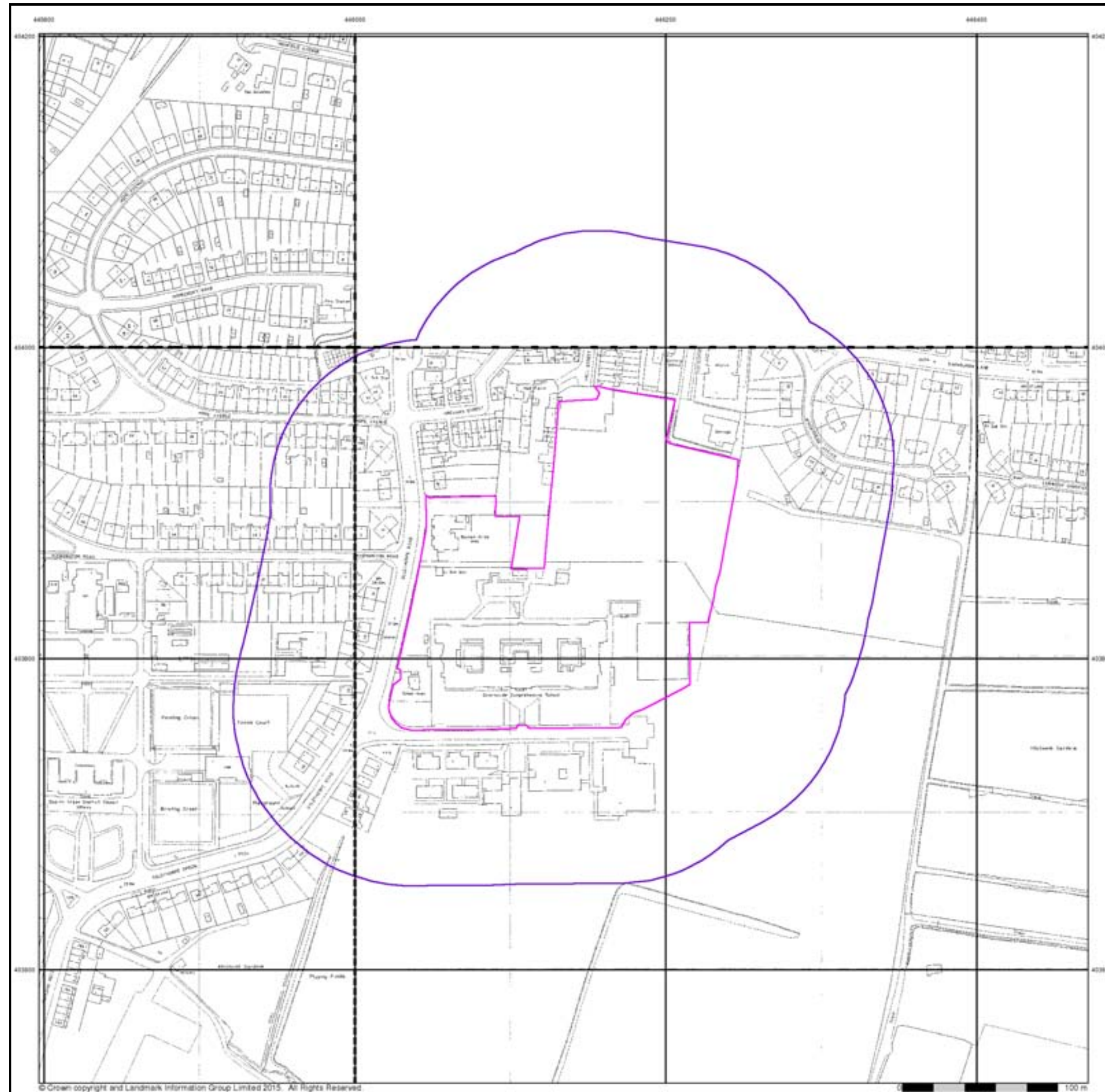


## Order Details

Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 100

## Site Details

Site at 446110, 403820



## Large-Scale National Grid Data

Published 1993

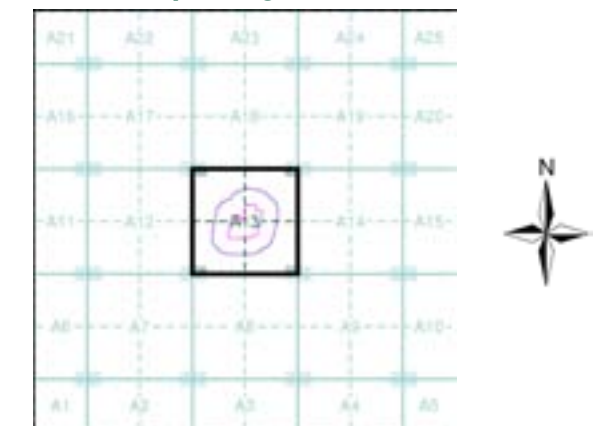
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

### Map Name(s) and Date(s)



### Historical Map - Segment A13

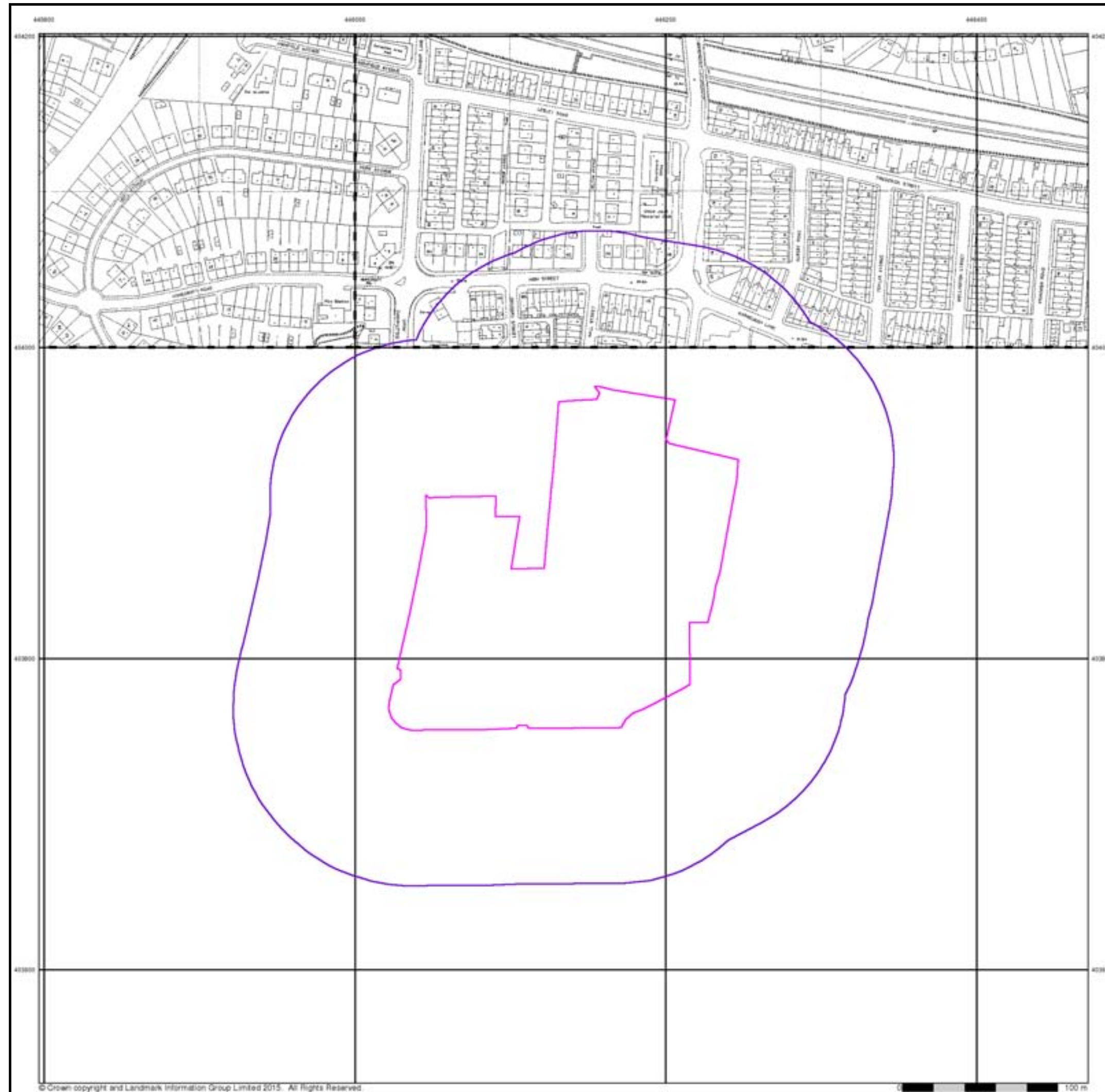


### Order Details

Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 100

### Site Details

Site at 446110, 403820



## Large-Scale National Grid Data

Published 1994

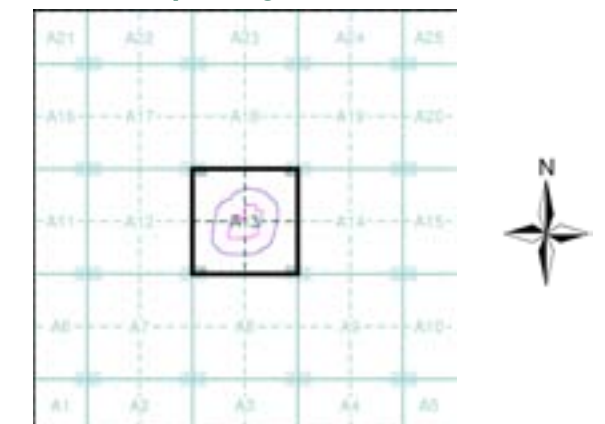
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

### Map Name(s) and Date(s)



### Historical Map - Segment A13

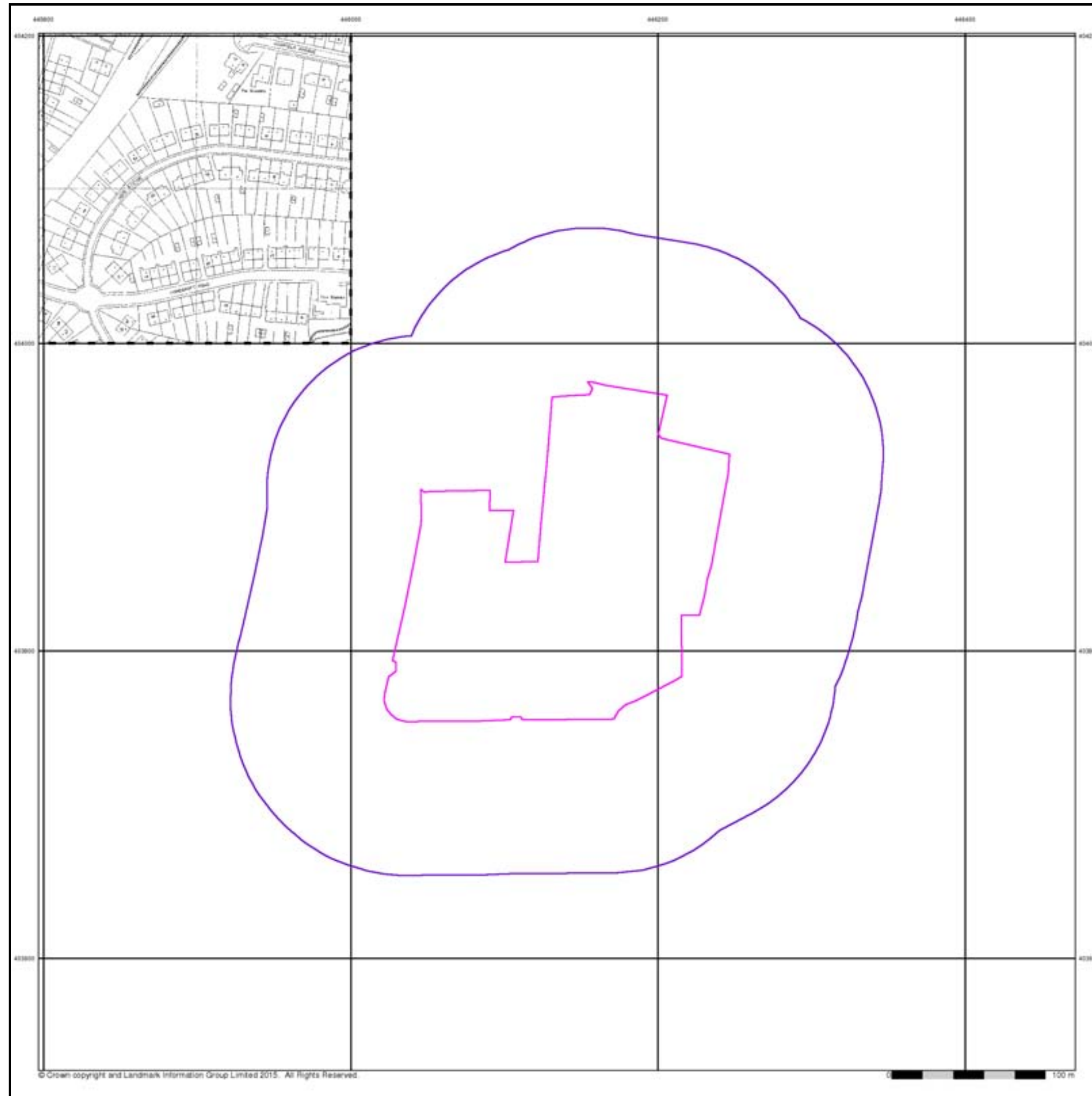


### Order Details

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Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 100

### Site Details

Site at 446110, 403820



Large-Scale National Grid Data

Published 1995

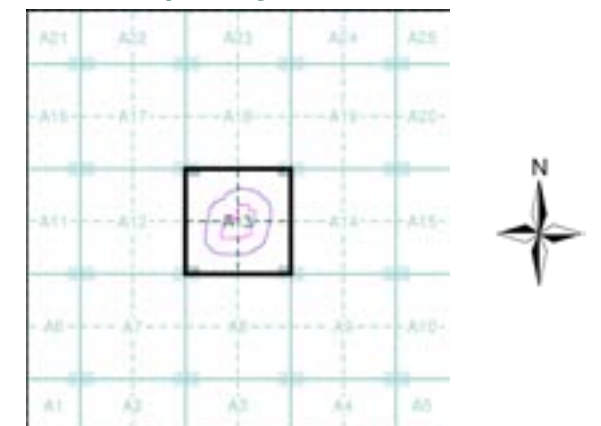
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 100

Site Details

Site at 446110, 403820



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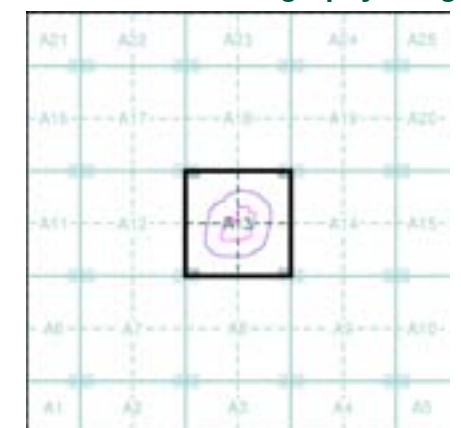
0 100 m

## Historical Aerial Photography

**Published 1999**

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

### Historical Aerial Photography - Segment A13



### Order Details

Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 100

### Site Details

Site at 446110, 403820

# Historical Mapping Legends

## Ordnance Survey County Series 1:10,560

|  |                                               |  |                             |  |               |
|--|-----------------------------------------------|--|-----------------------------|--|---------------|
|  | Gravel Pit                                    |  | Sand Pit                    |  | Other Pits    |
|  | Quarry                                        |  | Shingle                     |  | Orchard       |
|  | Osiers                                        |  | Reeds                       |  | Marsh         |
|  | Mixed Wood                                    |  | Deciduous                   |  | Brushwood     |
|  | Fir                                           |  | Furze                       |  | Rough Pasture |
|  | Arrow denotes flow of water                   |  | Trigonometrical Station     |  |               |
|  | Site of Antiquities                           |  | Bench Mark                  |  |               |
|  | Pump, Guide Post, Signal Post                 |  | Well, Spring, Boundary Post |  |               |
|  | •285 Surface Level                            |  |                             |  |               |
|  | Sketched Contour                              |  | Instrumental Contour        |  |               |
|  | Main Roads                                    |  | Minor Roads                 |  |               |
|  | Sunken Road                                   |  | Raised Road                 |  |               |
|  | Road over Railway                             |  | Railway over River          |  |               |
|  | Railway over Road                             |  | Level Crossing              |  |               |
|  | Road over River or Canal                      |  | Road over Stream            |  |               |
|  | Road over Stream                              |  |                             |  |               |
|  | County Boundary (Geographical)                |  |                             |  |               |
|  | County & Civil Parish Boundary                |  |                             |  |               |
|  | Administrative County & Civil Parish Boundary |  |                             |  |               |
|  | County Borough Boundary (England)             |  |                             |  |               |
|  | County Borough Boundary (Scotland)            |  |                             |  |               |
|  | Rural District Boundary                       |  |                             |  |               |
|  | Civil Parish Boundary                         |  |                             |  |               |

## Ordnance Survey Plan 1:10,000

|  |                                                                       |  |                                                         |
|--|-----------------------------------------------------------------------|--|---------------------------------------------------------|
|  | Chalk Pit, Clay Pit or Quarry                                         |  | Gravel Pit                                              |
|  | Sand Pit                                                              |  | Disused Pit or Quarry                                   |
|  | Refuse or Slag Heap                                                   |  | Lake, Loch or Pond                                      |
|  | Dunes                                                                 |  | Boulders                                                |
|  | Coniferous Trees                                                      |  | Non-Coniferous Trees                                    |
|  | Orchard                                                               |  | Scrub                                                   |
|  | Bracken                                                               |  | Heath                                                   |
|  | Marsh                                                                 |  | Reeds                                                   |
|  | Building                                                              |  | Glasshouse                                              |
|  | Sloping Masonry                                                       |  | Pylon                                                   |
|  | Cutting                                                               |  | Embankment                                              |
|  | Road Under                                                            |  | Road Over                                               |
|  | Level Crossing                                                        |  | Foot Bridge                                             |
|  | Standard Gauge Multiple Track                                         |  | Standard Gauge Single Track                             |
|  | Siding, Tramway or Mineral Line                                       |  | Narrow Gauge                                            |
|  | Geographical County                                                   |  | Administrative County, County Borough or County of City |
|  | Municipal Borough, Urban or Rural District, Burgh or District Council |  | Borough, Burgh or County Constituency                   |
|  | Civil Parish                                                          |  |                                                         |
|  | Boundary Post or Stone                                                |  | Police Station                                          |
|  | Church                                                                |  | Post Office                                             |
|  | Club House                                                            |  | Public Convenience                                      |
|  | Fire Engine Station                                                   |  | Public House                                            |
|  | Foot Bridge                                                           |  | Signal Box                                              |
|  | Fountain                                                              |  | Spring                                                  |
|  | Guide Post                                                            |  | Telephone Call Box                                      |
|  | Mile Post                                                             |  | Telephone Call Post                                     |
|  | Mile Stone                                                            |  | Well                                                    |

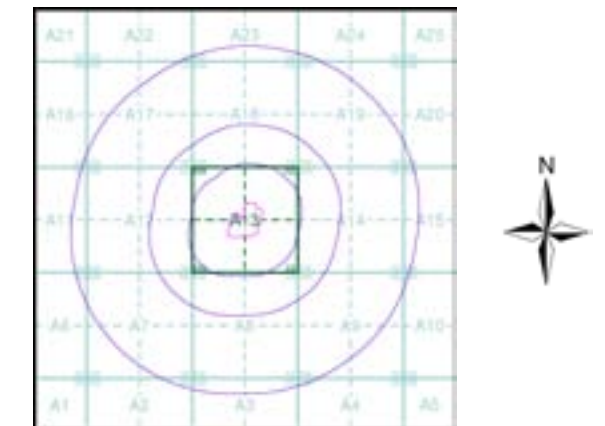
## 1:10,000 Raster Mapping

|  |                                                          |  |                                            |
|--|----------------------------------------------------------|--|--------------------------------------------|
|  | Gravel Pit                                               |  | Refuse tip or slag heap                    |
|  | Rock                                                     |  | Rock (scattered)                           |
|  | Boulders                                                 |  | Boulders (scattered)                       |
|  | Shingle                                                  |  | Mud                                        |
|  | Sand                                                     |  | Sand Pit                                   |
|  | Slopes                                                   |  | Top of cliff                               |
|  | General detail                                           |  | Underground detail                         |
|  | Overhead detail                                          |  | Narrow gauge railway                       |
|  | Multi-track railway                                      |  | Single track railway                       |
|  | County boundary (England only)                           |  | Civil, parish or community boundary        |
|  | District, Unitary, Metropolitan, London Borough boundary |  | Constituency boundary                      |
|  | Area of wooded vegetation                                |  | Non-coniferous trees                       |
|  | Non-coniferous trees (scattered)                         |  | Coniferous trees                           |
|  | Coniferous trees (scattered)                             |  | Positioned tree                            |
|  | Orchard                                                  |  | Coppice or Osiers                          |
|  | Rough Grassland                                          |  | Heath                                      |
|  | Scrub                                                    |  | Marsh, Salt Marsh or Reeds                 |
|  | Water feature                                            |  | Flow arrows                                |
|  | Mean high water (springs)                                |  | Mean low water (springs)                   |
|  | Telephone line (where shown)                             |  | Electricity transmission line (with poles) |
|  | Bench mark (where shown)                                 |  | Triangulation station                      |
|  | Point feature (e.g. Guide Post or Mile Stone)            |  | Pylon, flare stack or lighting tower       |
|  | Site of (antiquity)                                      |  | Glasshouse                                 |
|  | General Building                                         |  | Important Building                         |

## Historical Mapping & Photography included:

| Mapping Type         | Scale    | Date        | Pg |
|----------------------|----------|-------------|----|
| Yorkshire            | 1:10,560 | 1851 - 1855 | 2  |
| Yorkshire            | 1:10,560 | 1893        | 3  |
| Yorkshire            | 1:10,560 | 1894        | 4  |
| Yorkshire            | 1:10,560 | 1903 - 1907 | 5  |
| Yorkshire            | 1:10,560 | 1931 - 1932 | 6  |
| Yorkshire            | 1:10,560 | 1938 - 1948 | 7  |
| Yorkshire            | 1:10,560 | 1948 - 1950 | 8  |
| Ordnance Survey Plan | 1:10,000 | 1955 - 1956 | 9  |
| Ordnance Survey Plan | 1:10,000 | 1966 - 1967 | 10 |
| Ordnance Survey Plan | 1:10,000 | 1976        | 11 |
| Ordnance Survey Plan | 1:10,000 | 1980 - 1988 | 12 |
| Ordnance Survey Plan | 1:10,000 | 1989        | 13 |
| Ordnance Survey Plan | 1:10,000 | 1991        | 14 |
| 10K Raster Mapping   | 1:10,000 | 2000        | 15 |
| 10K Raster Mapping   | 1:10,000 | 2006        | 16 |
| VectorMap Local      | 1:10,000 | 2017        | 17 |

## Historical Map - Slice A

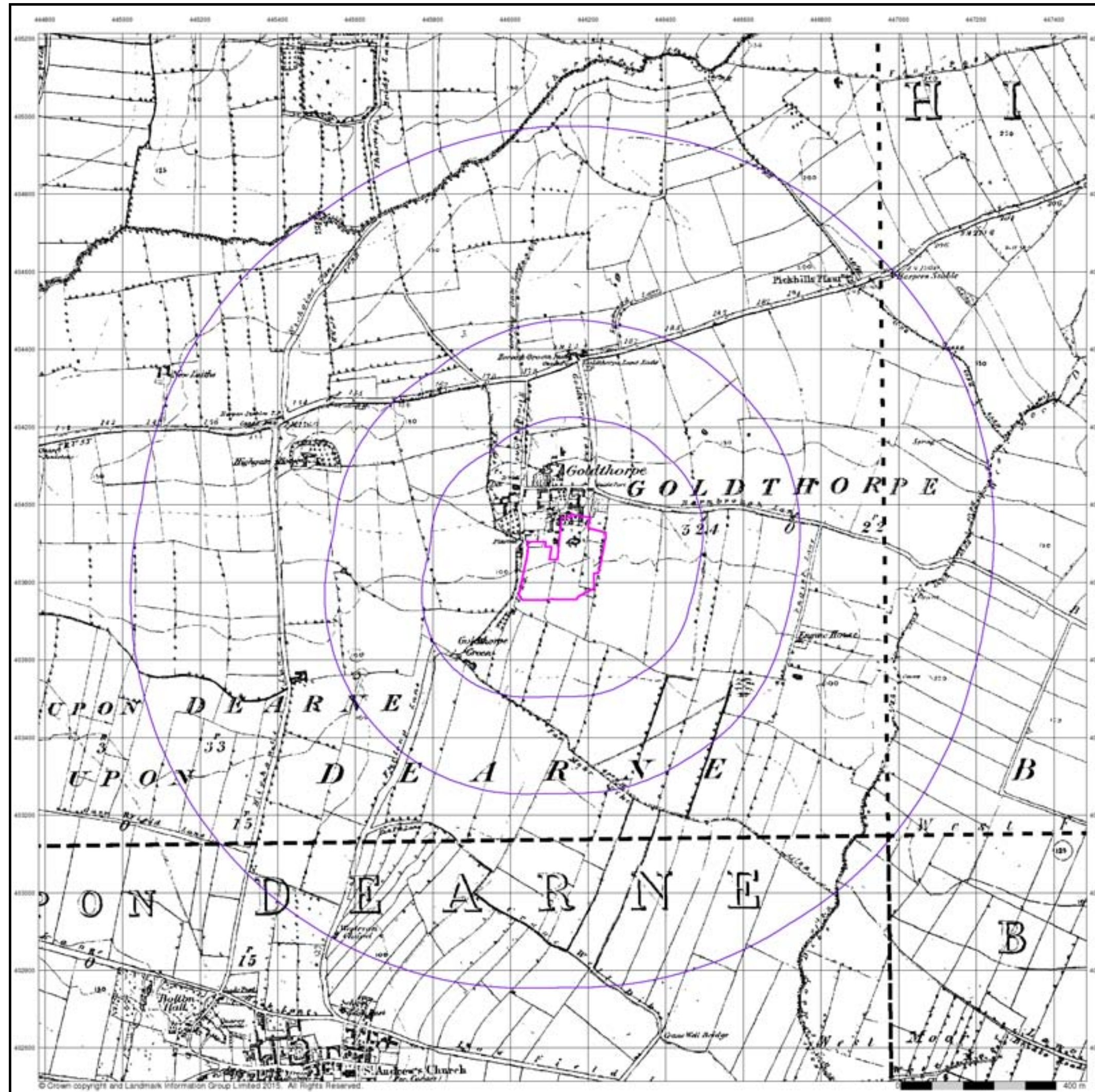


## Order Details

Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 1000

## Site Details

Site at 446110, 403820



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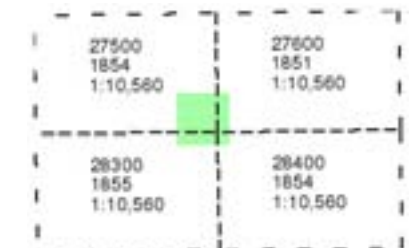
## Yorkshire

Published 1851 - 1855

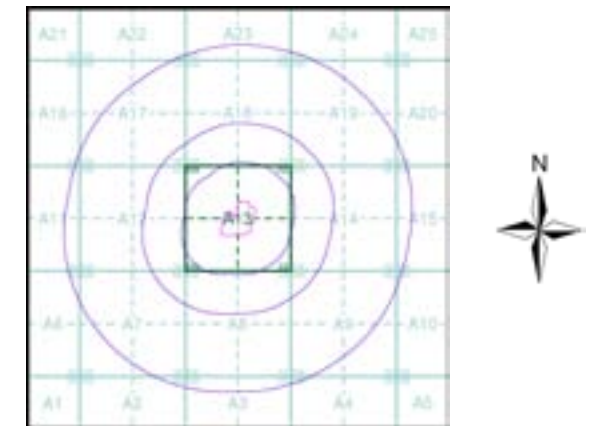
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)



### Historical Map - Slice A



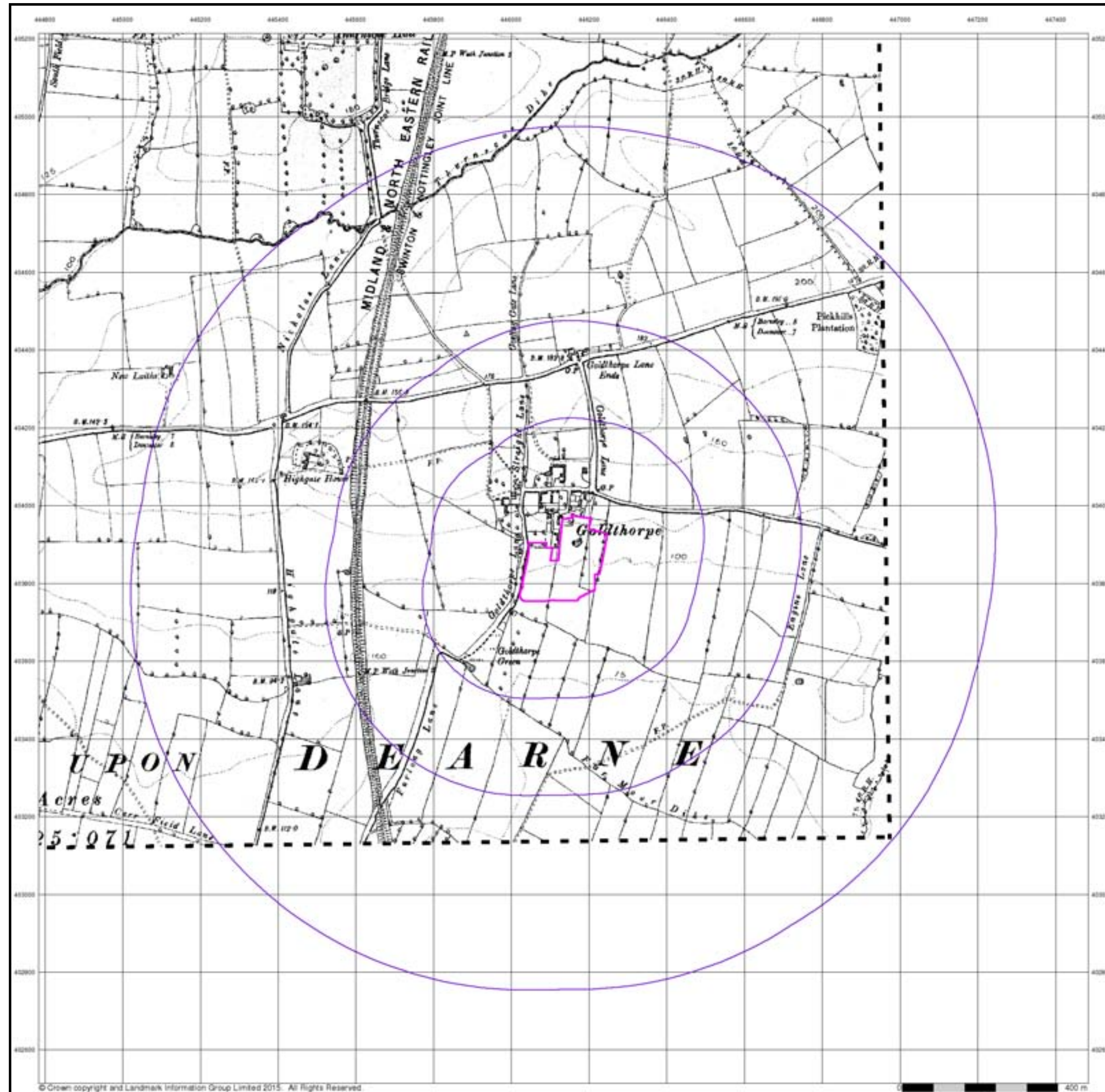
### Order Details

Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 1000

### Site Details

Site at 446110, 403820





## Yorkshire

Published 1894

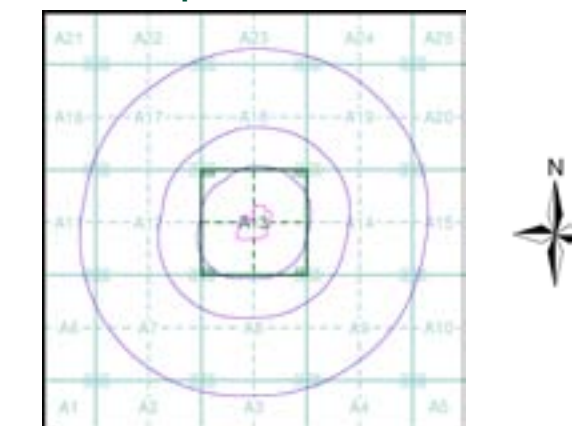
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

## Map Name(s) and Date(s)



## Historical Map - Slice A



## Order Details

Order Number: 152348835\_1\_1  
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 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

Site at 446110, 403820

## Yorkshire

Published 1903 - 1907

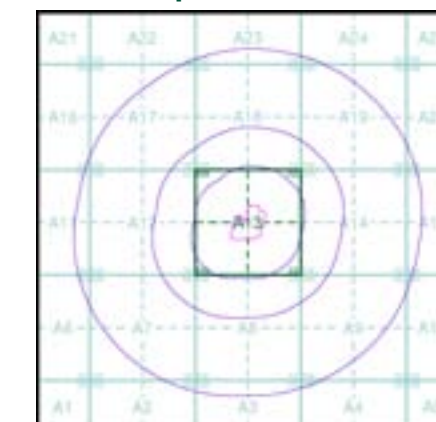
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)

|                           |                           |
|---------------------------|---------------------------|
| 275SE<br>1906<br>1:10,560 | 276SW<br>1907<br>1:10,560 |
| 283NE<br>1905<br>1:10,560 | 284NW<br>1903<br>1:10,560 |

### Historical Map - Slice A

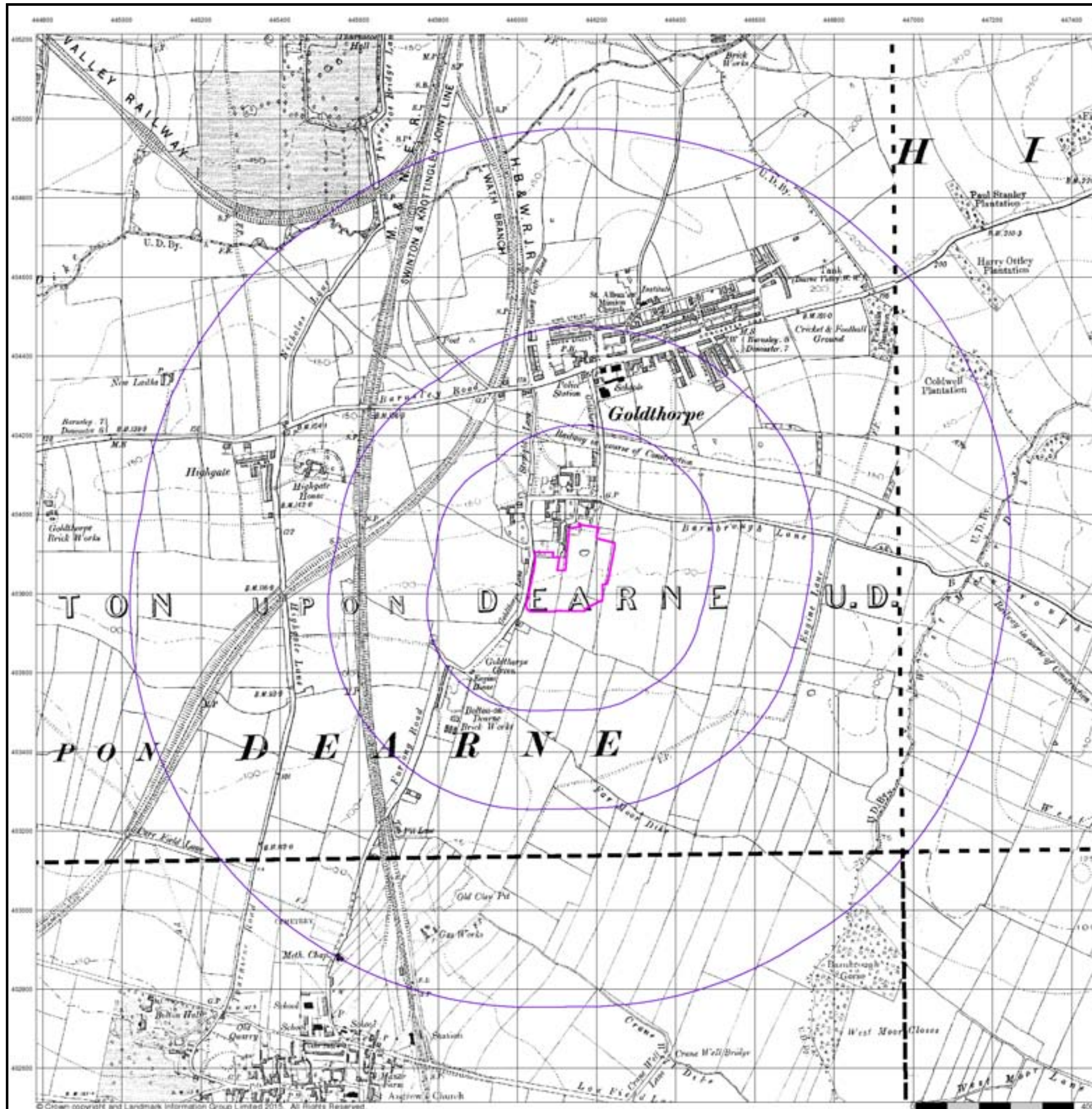


### Order Details

Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

### Site Details

Site at 446110, 403820



## Yorkshire

Published 1931 - 1932

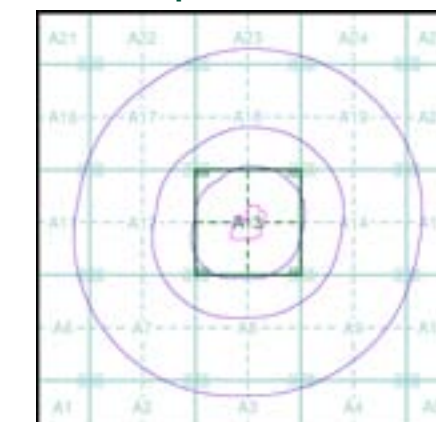
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)

|                           |                           |
|---------------------------|---------------------------|
| 275SE<br>1931<br>1:10,560 | 276SW<br>1932<br>1:10,560 |
| 283NE<br>1932<br>1:10,560 | 284NW<br>1932<br>1:10,560 |

### Historical Map - Slice A

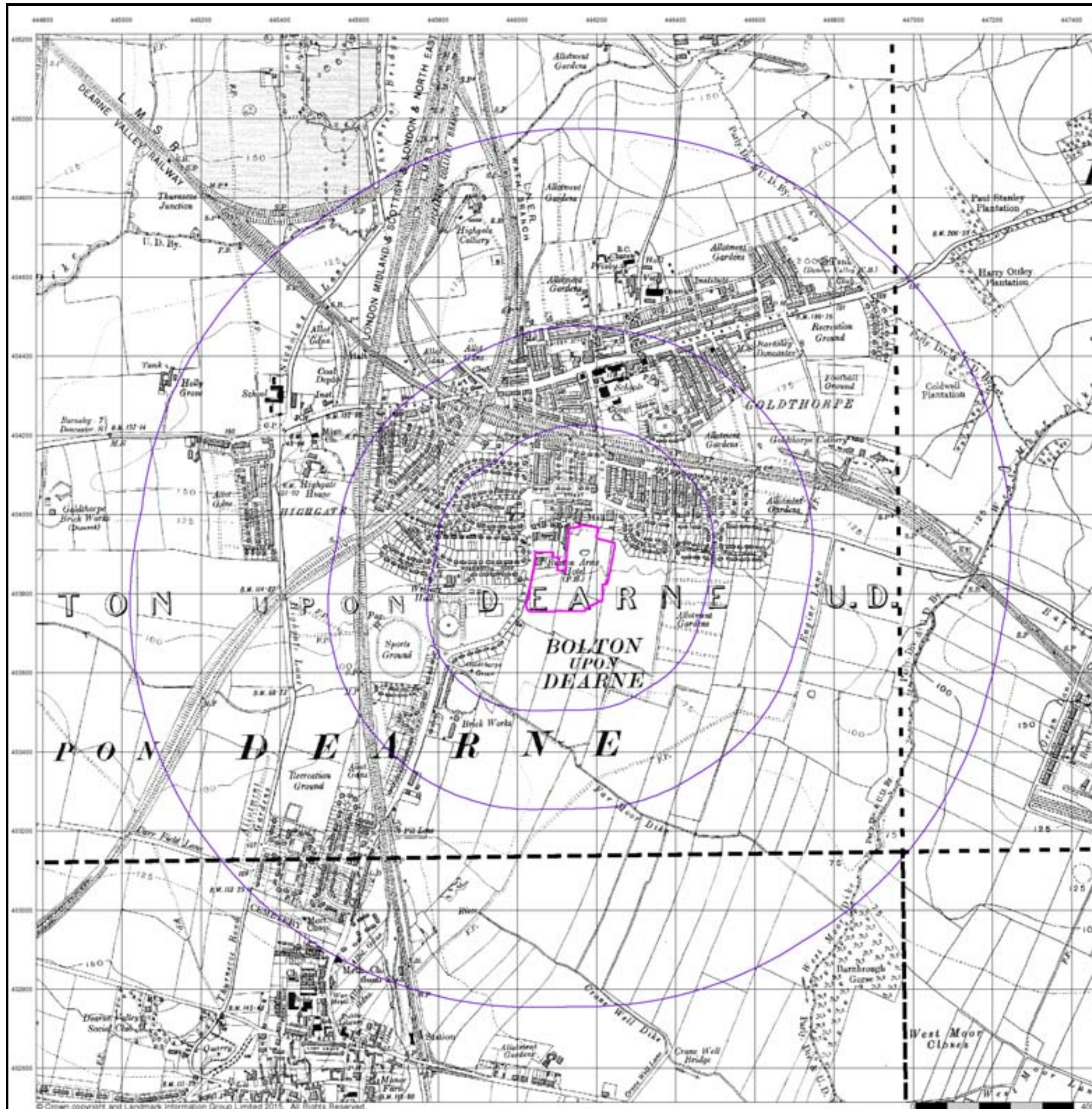


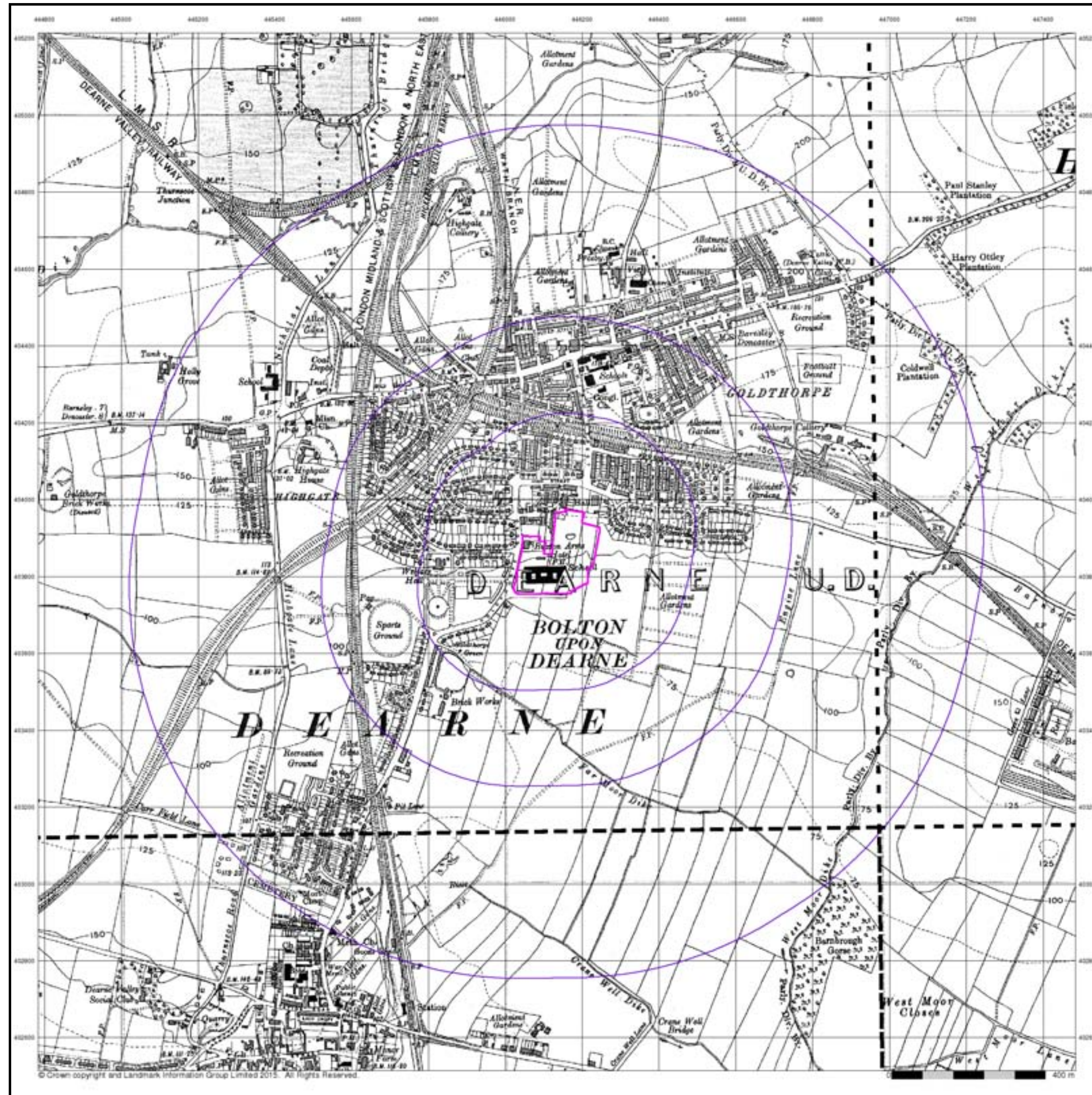
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 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

### Site Details

Site at 446110, 403820





## Yorkshire

Published 1938 - 1948

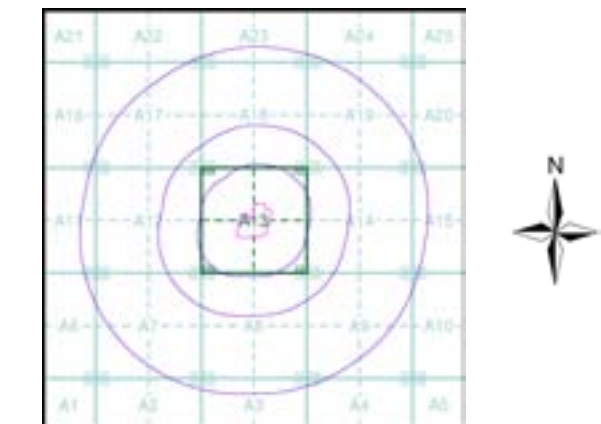
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)

|                           |                           |
|---------------------------|---------------------------|
| 275SE<br>1938<br>1:10,560 | 276SW<br>1948<br>1:10,560 |
| 283NE<br>1938<br>1:10,560 | 284NW<br>1948<br>1:10,560 |

### Historical Map - Slice A



### Order Details

Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 1000

### Site Details

Site at 446110, 403820

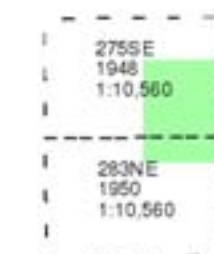
## Yorkshire

Published 1948 - 1950

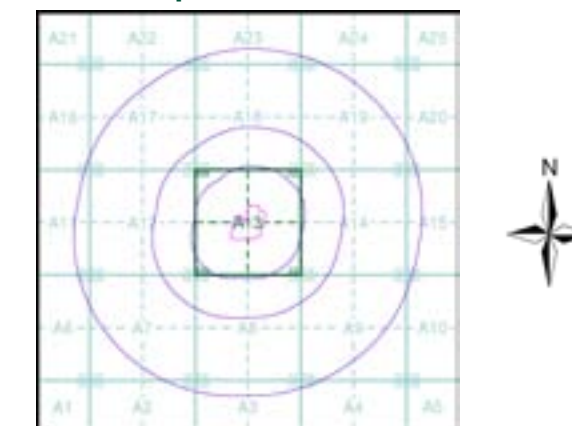
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)



### Historical Map - Slice A



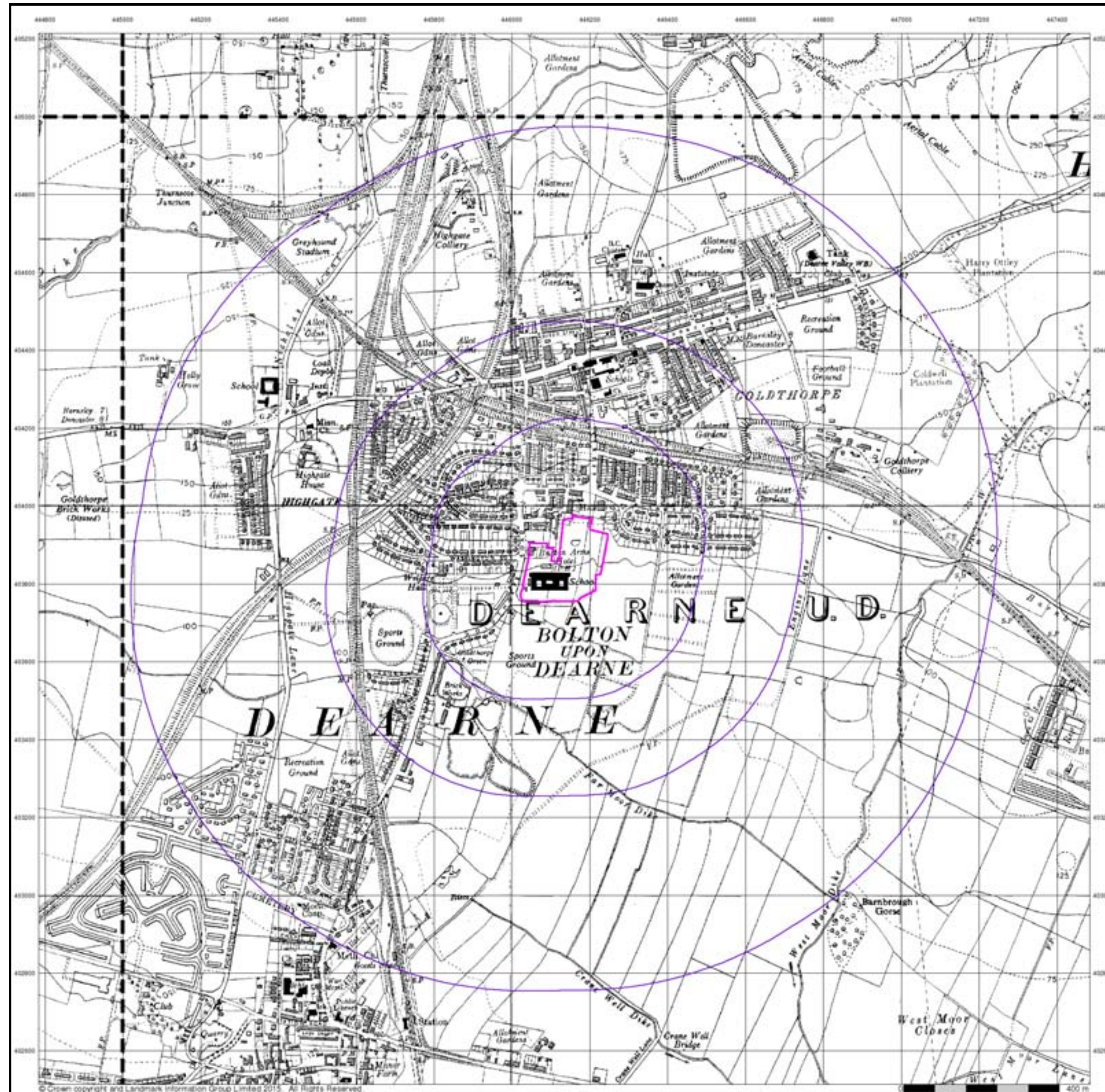
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 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

### Site Details

Site at 446110, 403820





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LANDMARK INFORMATION GROUP<sup>®</sup>

## Ordnance Survey Plan

**Published 1955 - 1956**

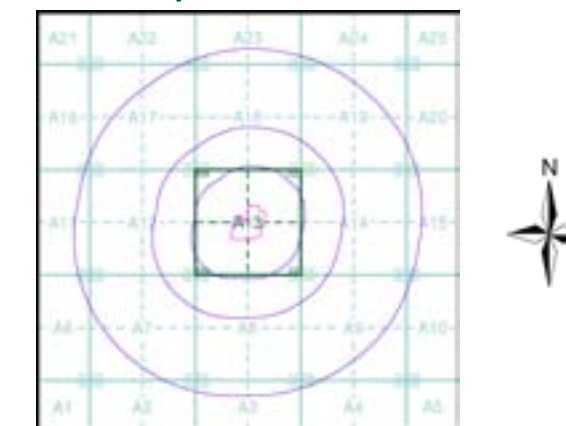
**Source map scale - 1:10,000**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

## Map Name(s) and Date(s)

|                            |                            |
|----------------------------|----------------------------|
| SE40NW<br>1955<br>1:10,560 | SE40NE<br>1956<br>1:10,560 |
| SE40SW<br>1956<br>1:10,560 | SE40SE<br>1956<br>1:10,560 |

### Historical Map - Slice A



## Order Details

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Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 1000

## Site Details

Site at 446110, 403820

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)

## Ordnance Survey Plan

Published 1966 - 1967

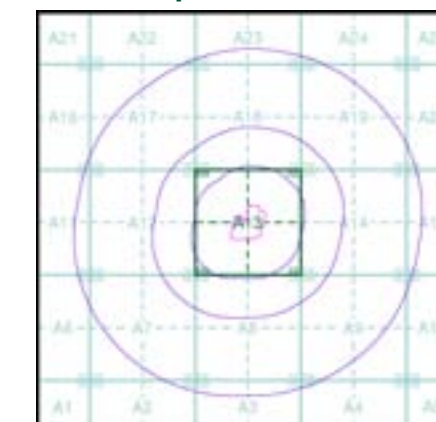
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

## Map Name(s) and Date(s)

|                            |                            |
|----------------------------|----------------------------|
| SE40NW<br>1967<br>1:10,560 | SE40NE<br>1966<br>1:10,560 |
| SE40SW<br>1967<br>1:10,560 | SE40SE<br>1966<br>1:10,560 |

## Historical Map - Slice A

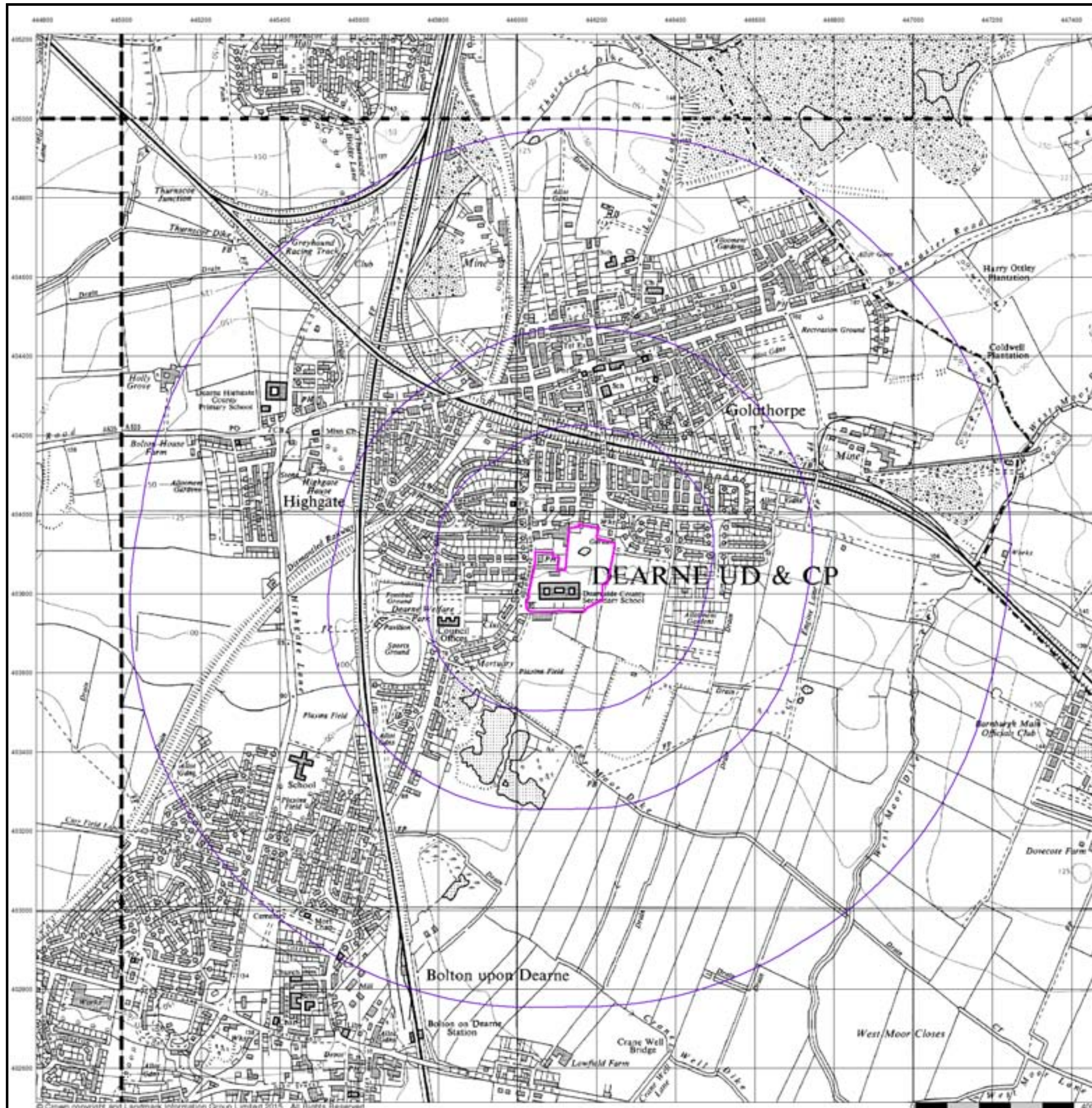


## Order Details

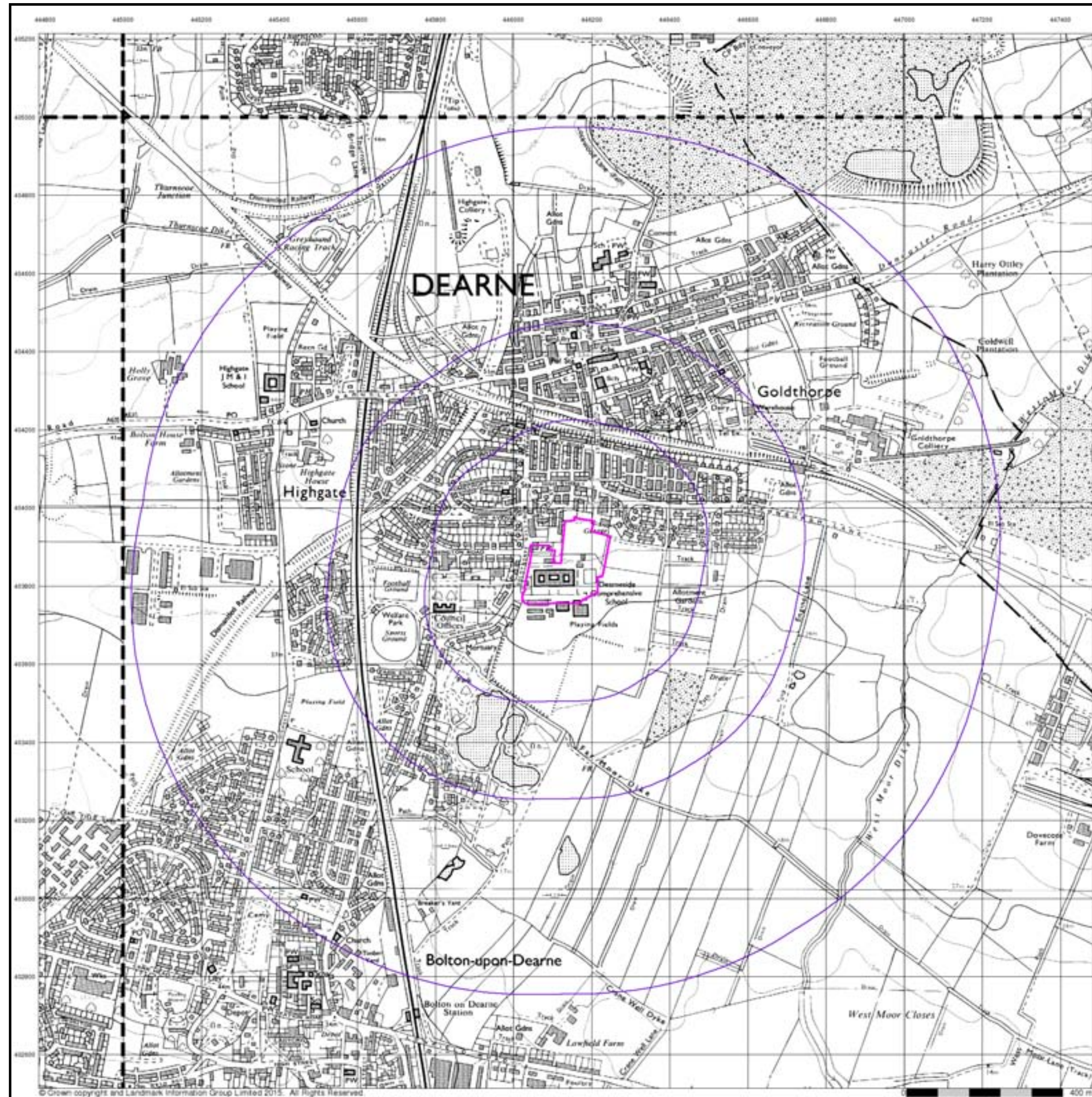
Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

Site at 446110, 403820







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## Ordnance Survey Plan

Published 1980 - 1988

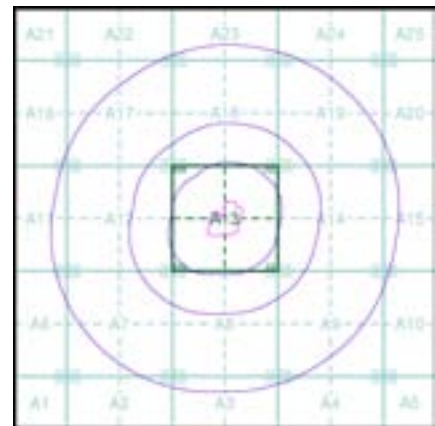
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

## Map Name(s) and Date(s)

|                            |                            |
|----------------------------|----------------------------|
| SE40NW<br>1983<br>1:10,000 | SE40NE<br>1983<br>1:10,000 |
| SE40SW<br>1980<br>1:10,000 | SE40SE<br>1988<br>1:10,000 |

## Historical Map - Slice A

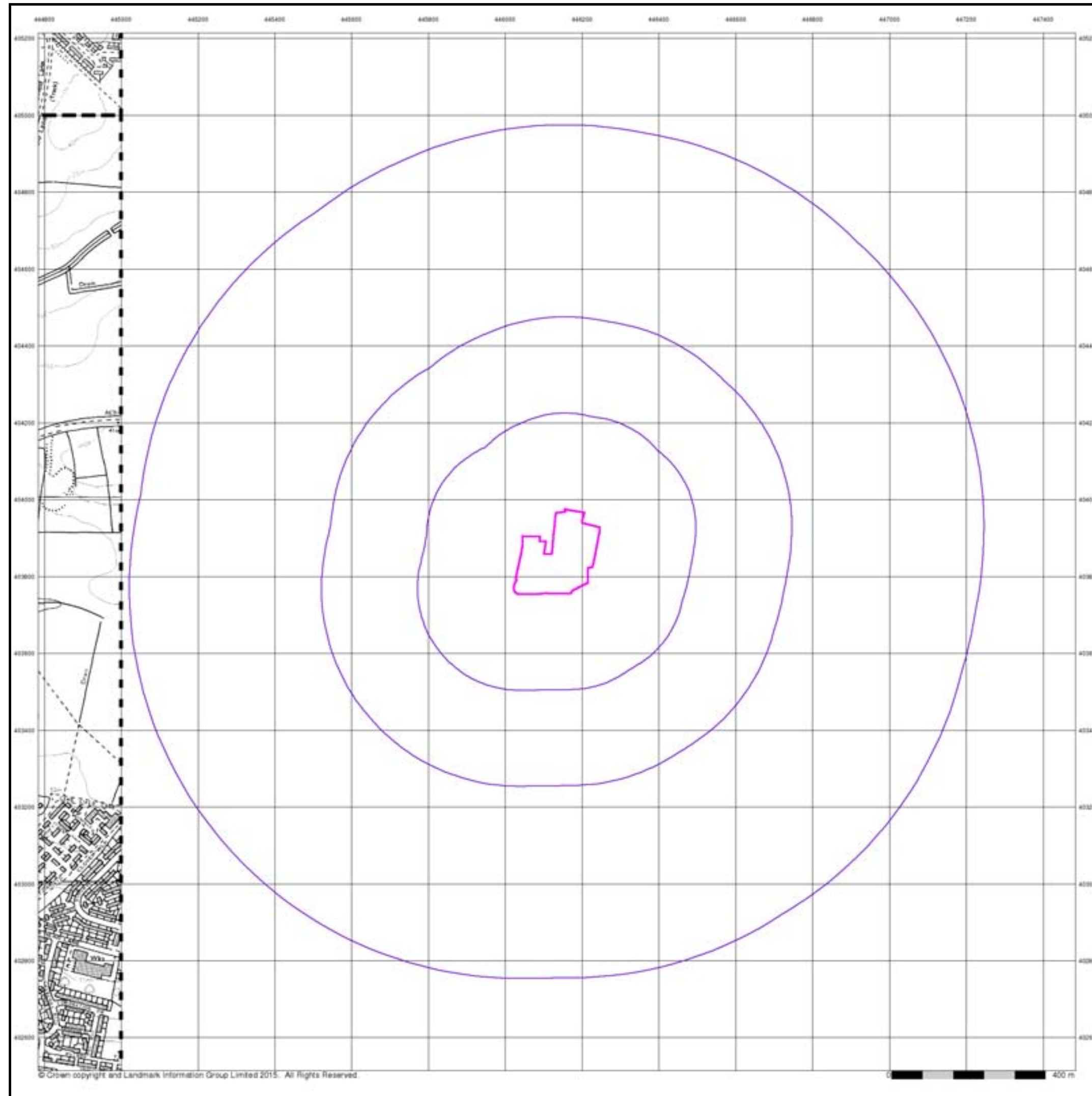


## Order Details

Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 1000

## Site Details

Site at 446110, 403820



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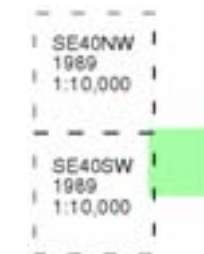
**Ordnance Survey Plan**

**Published 1989**

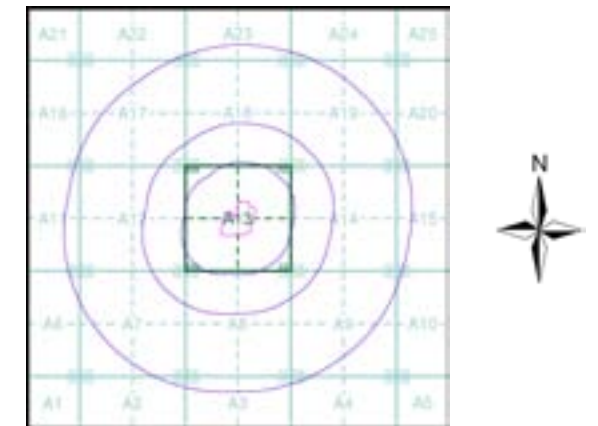
**Source map scale - 1:10,000**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

**Map Name(s) and Date(s)**



**Historical Map - Slice A**

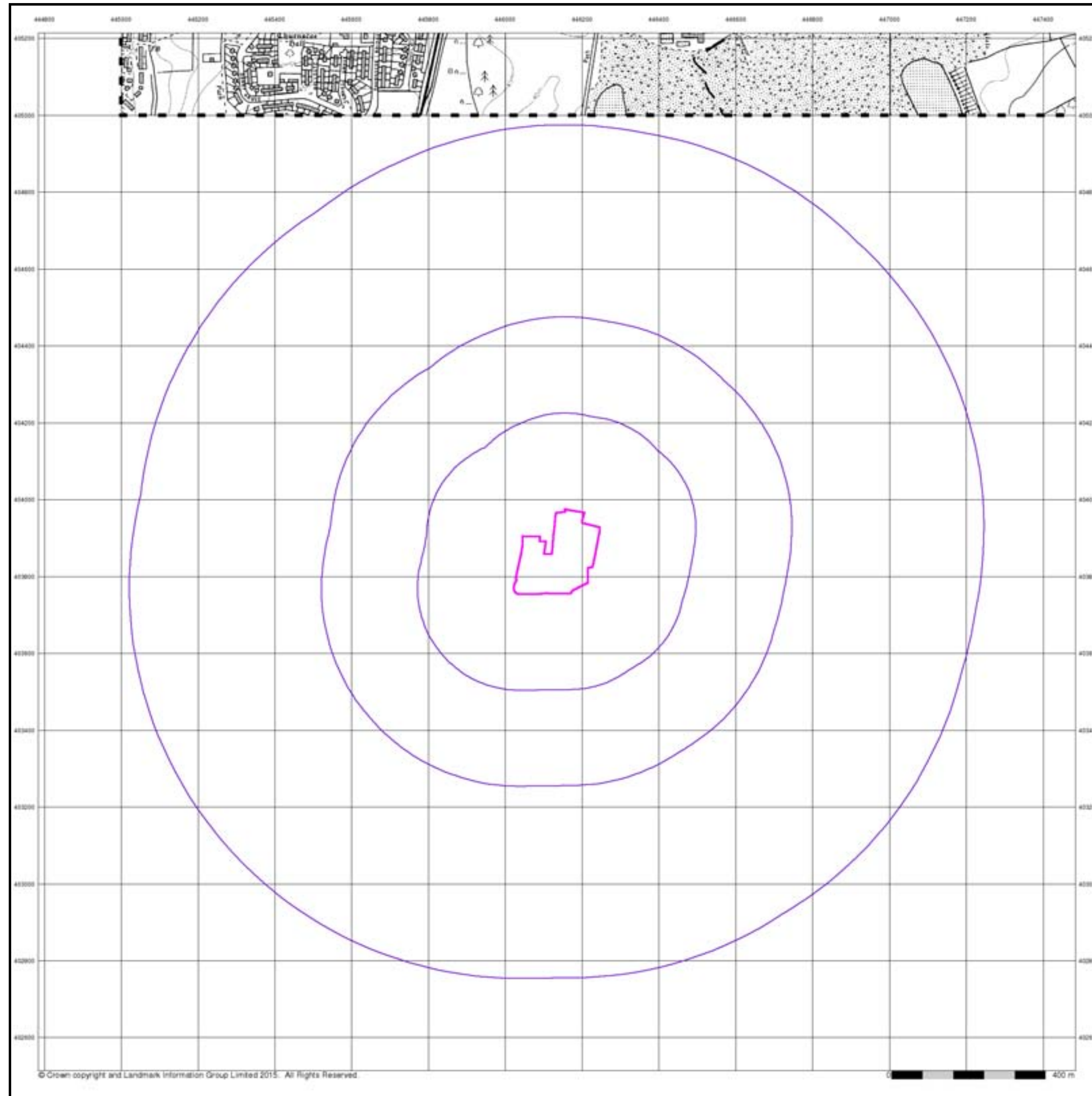


**Order Details**

Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 1000

**Site Details**

Site at 446110, 403820



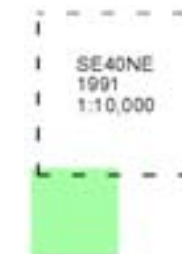
Ordnance Survey Plan

Published 1991

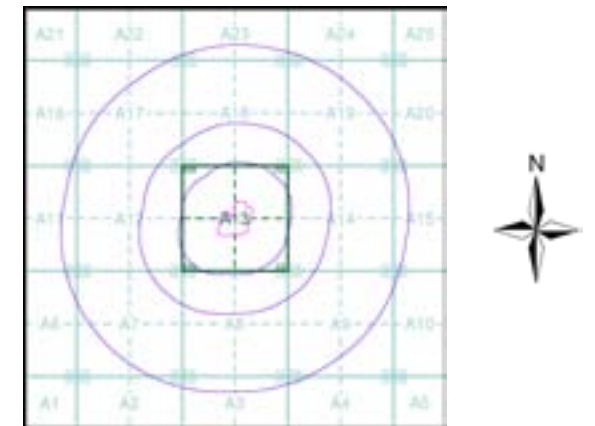
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

|                          |                |
|--------------------------|----------------|
| Order Number:            | 152348835_1_1  |
| Customer Ref:            | 42241          |
| National Grid Reference: | 446130, 403850 |
| Slice:                   | A              |
| Site Area (Ha):          | 3.28           |
| Search Buffer (m):       | 1000           |

Site Details

Site at 446110, 403820

## 10k Raster Mapping

Published 2000

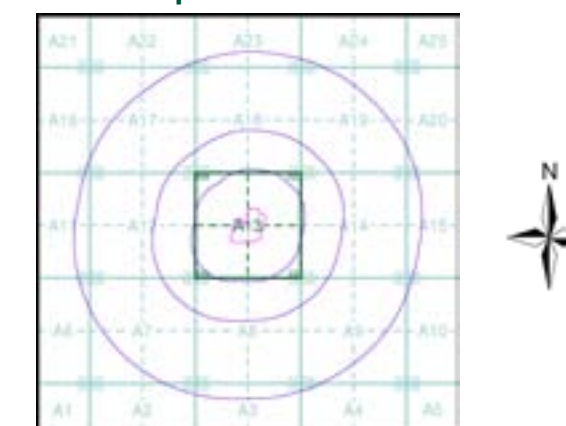
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

## Map Name(s) and Date(s)

|                            |                            |
|----------------------------|----------------------------|
| SE40NW<br>2000<br>1:10,000 | SE40NE<br>2000<br>1:10,000 |
| SE40SW<br>2000<br>1:10,000 | SE40SE<br>2000<br>1:10,000 |

## Historical Map - Slice A

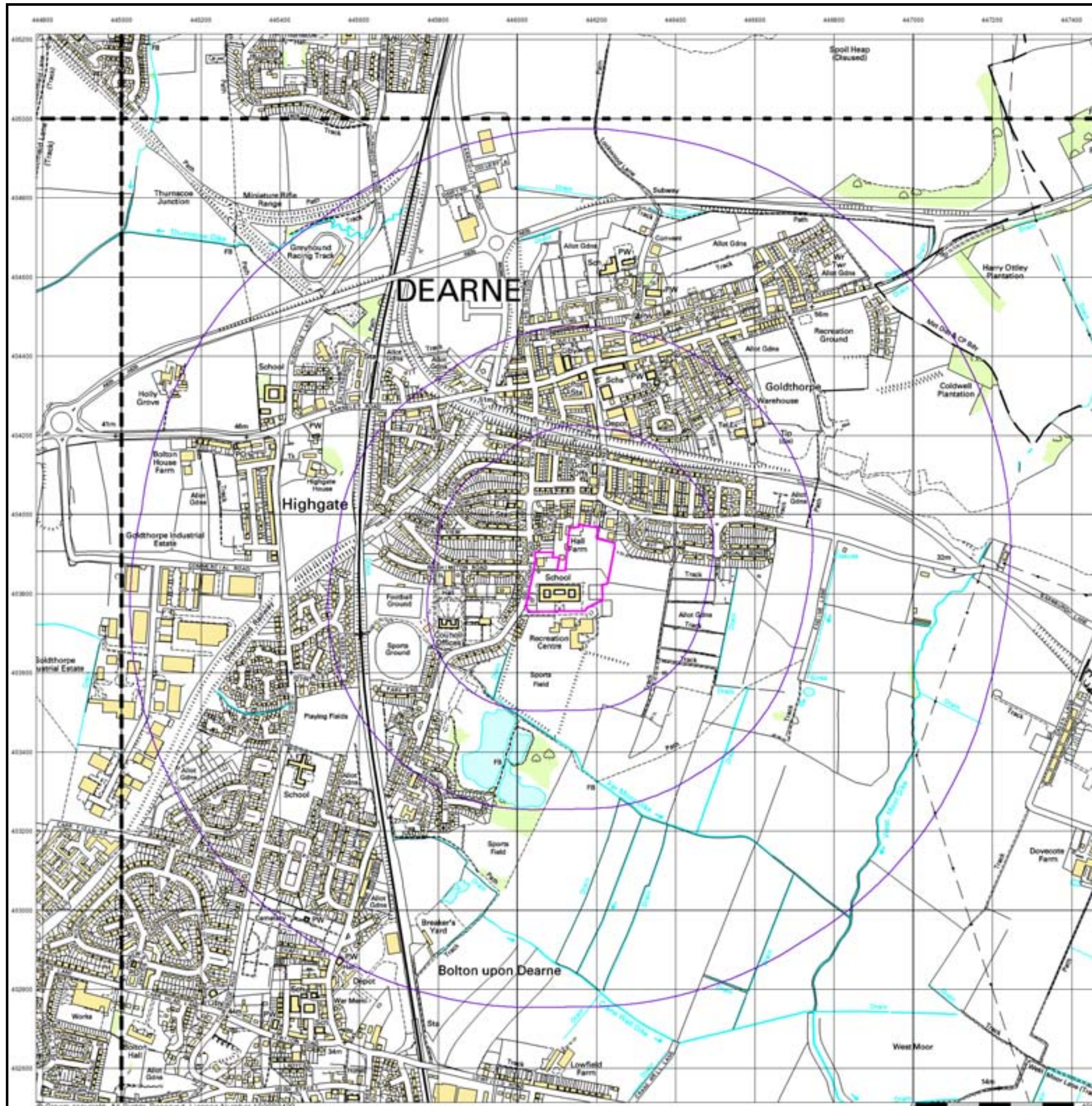


## Order Details

Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

Site at 446110, 403820



## 10k Raster Mapping

Published 2006

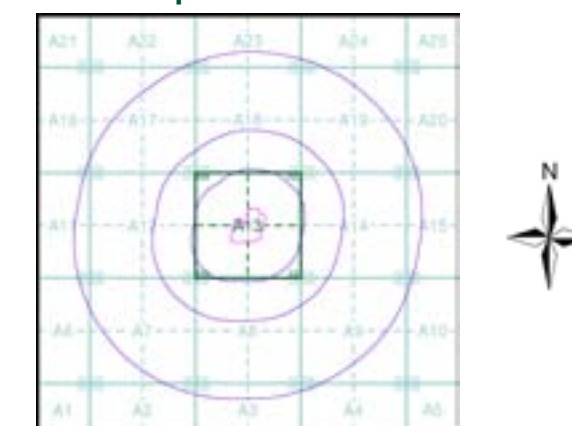
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

## Map Name(s) and Date(s)

|                            |                            |
|----------------------------|----------------------------|
| SE40NW<br>2006<br>1:10,000 | SE40NE<br>2006<br>1:10,000 |
| SE40SW<br>2006<br>1:10,000 | SE40SE<br>2006<br>1:10,000 |

## Historical Map - Slice A

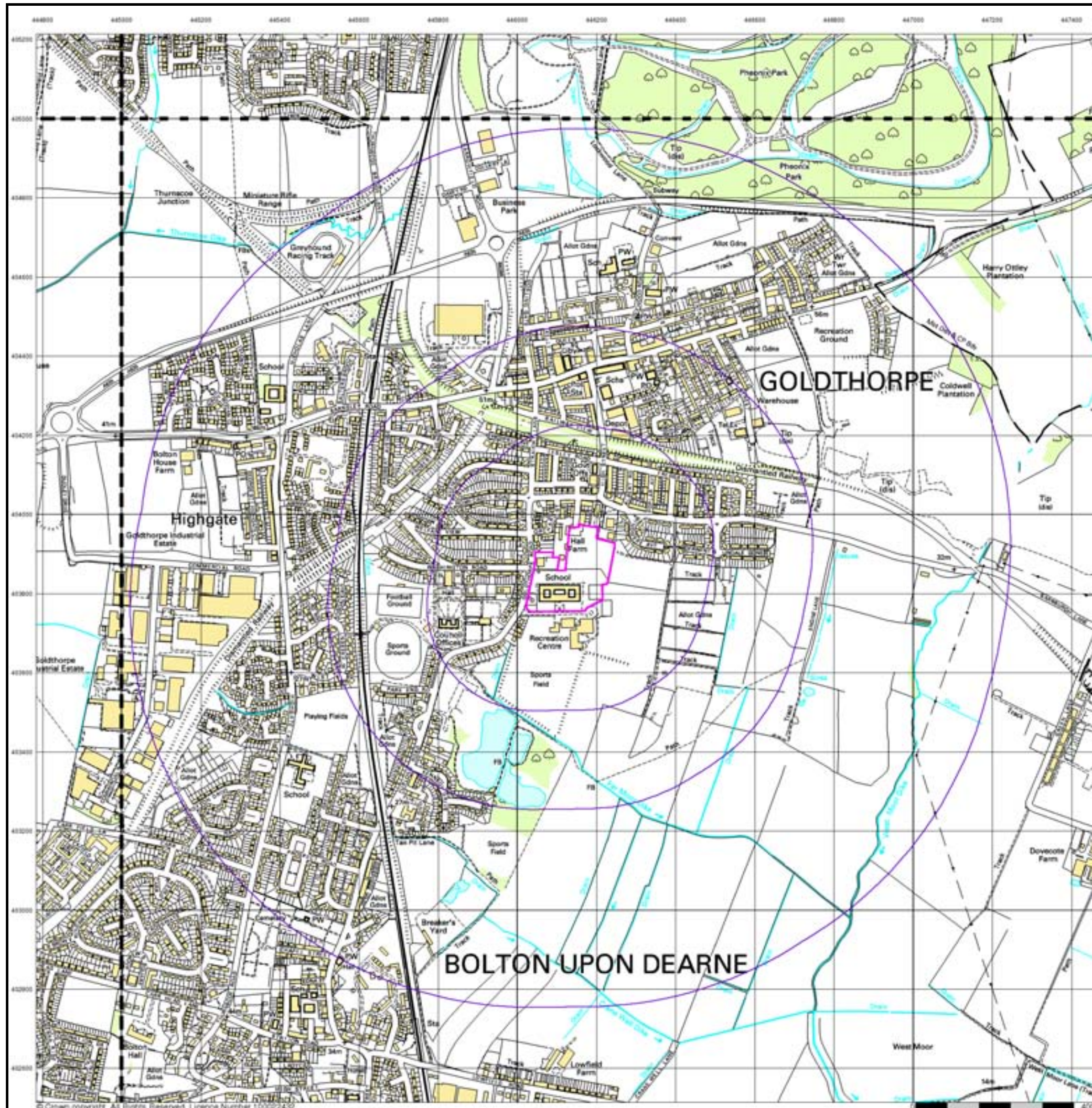


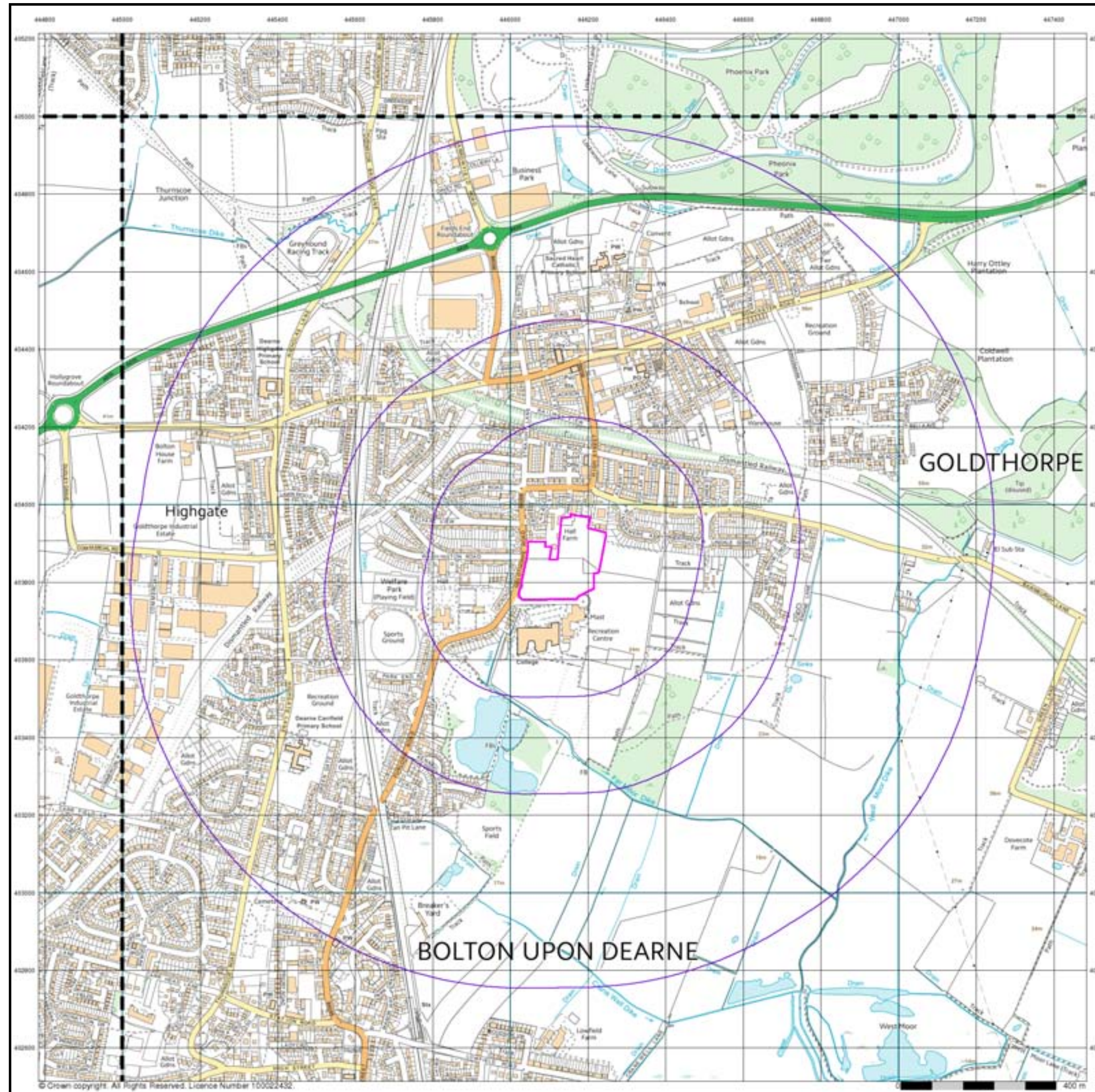
## Order Details

Order Number: 152348835\_1\_1  
 Customer Ref: 42241  
 National Grid Reference: 446130, 403850  
 Slice: A  
 Site Area (Ha): 3.28  
 Search Buffer (m): 1000

## Site Details

Site at 446110, 403820





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## VectorMap Local

Published 2017

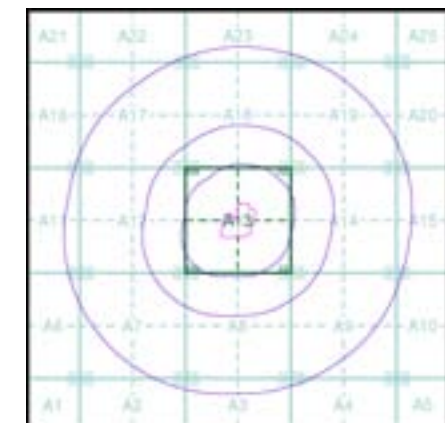
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities), 1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

## Map Name(s) and Date(s)

|                            |                            |
|----------------------------|----------------------------|
| SE40NW<br>2017<br>Variable | SE40NE<br>2017<br>Variable |
| SE40SW<br>2017<br>Variable | SE40SE<br>2017<br>Variable |

## Historical Map - Slice A



## Order Details

Order Number: 152348835\_1\_1  
Customer Ref: 42241  
National Grid Reference: 446130, 403850  
Slice: A  
Site Area (Ha): 3.28  
Search Buffer (m): 1000

## Site Details

Site at 446110, 403820



The Coal  
Authority

Resolving the **impacts** of mining

# CON29M Non-Residential Mining Report

SITE AT 446110, 403820  
SOUTH YORKSHIRE



|                        |                 |
|------------------------|-----------------|
| Date of enquiry:       | 09 January 2018 |
| Date enquiry received: | 09 January 2018 |
| Issue date:            | 09 January 2018 |

|                 |                |
|-----------------|----------------|
| Our reference:  | 51001754340001 |
| Your reference: | 152348835_2    |



# CON29M Non-Residential Mining Report

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

## Client name

LANDMARK INFORMATION GROUP LIMITED

## Enquiry address

SITE AT 446110, 403820, SOUTH YORKSHIRE

## How to contact us

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

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Mansfield  
Nottinghamshire  
NG18 4RG

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

 /company/the-coal-authority  
 /thecoalauthority  
 /coalauthority



Approximate position of property



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# Summary

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

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

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

# Detailed findings

## 1. Past underground coal mining

The property is in a surface area that could be affected by underground mining in 4 seams of coal at 230m to 640m depth, and last worked in 1979.

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

In addition the property is in an area where the Coal Authority believe there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered prior to any site works or future development activity. Your attention is drawn to the Comments on the Coal Authority information section of the report.

## 2. Present underground coal mining

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

## 3. Future underground coal mining

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

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

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

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

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

## 4. Mine entries

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

There may however be mine entries/additional mine entries in the local area which the Coal Authority has no knowledge of.

## **5. Coal mining geology**

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

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

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

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

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

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

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

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

## **9. Coal mining subsidence**

There are 3 claim(s) within 50 metres of the property boundary that do not match the property address. These are shown on the enquiry boundary plot.

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

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

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

## **10. Mine gas**

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

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

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

## **12. Withdrawal of support**

The property is in an area where notices to withdraw support were given in 1946 and 1982.

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

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

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

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

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

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

The property lies outside the Cheshire Brine Compensation District.

# Comments on the Coal Authority information

The Coal Authority own the copyright in this report and the information used is protected by our database right.

In view of the mining circumstances a prudent developer would seek appropriate technical advice before any works are undertaken.

Therefore if development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply good engineering practice developed for mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or mines of coal without the permission of the Coal Authority. Developers should be aware that the investigation of coal seams/former mines of coal may have the potential to generate and/or displace underground gases and these risks both under and adjacent to the development should be fully considered in developing any proposals. The need for effective measures to prevent gases entering into public properties either during investigation or after development also needs to be assessed and properly addressed. This is necessary due to the public safety implications of any development in these circumstances.

## Additional remarks

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

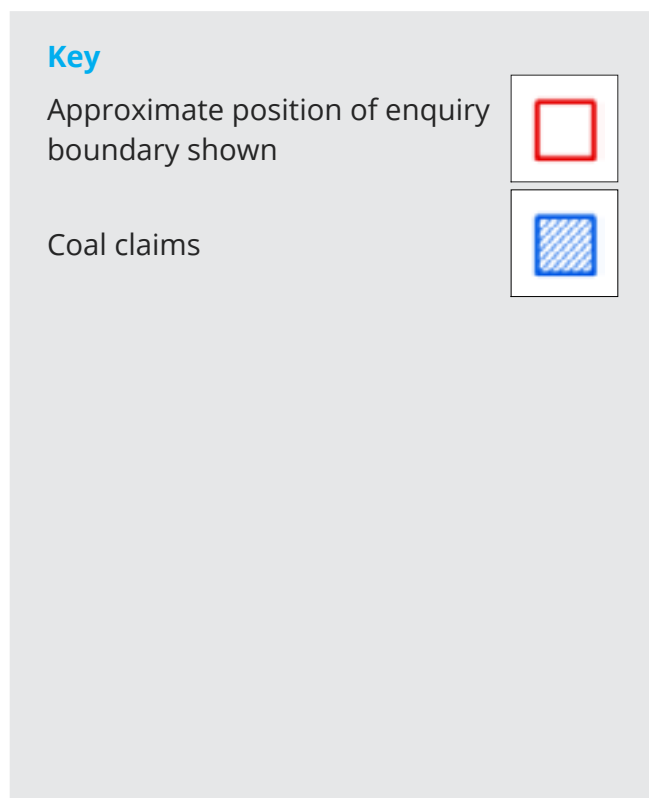
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## Alternative formats

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

# Enquiry boundary



## How to contact us

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+44 (0)1623 637 000 (International)

200 Lichfield Lane  
Mansfield  
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NG18 4RG

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

 /company/the-coal-authority

 /thecoalauthority

 /coalauthority



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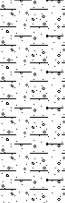
Ordnance Survey Licence number: 100020315

### **Appendix 3**

Trial Pit Logs, TP01 to TP10 inclusive of TP02A, TP05A and SA01 to SA03  
Borehole Logs, R01 to R12

|                                                                                  |  |  |                      |  |                      |                                            |                    |
|----------------------------------------------------------------------------------|--|--|----------------------|--|----------------------|--------------------------------------------|--------------------|
|  |  |  |                      |  |                      | TrialPit No<br><b>TP01</b><br>Sheet 1 of 1 |                    |
| Project Name<br>Goldthorpe Road, Goldthorpe                                      |  |  | Project No.<br>42241 |  | Co-ords: -<br>Level: |                                            | Date<br>17/01/2018 |
| Location: Goldthorpe                                                             |  |  |                      |  | Dimensions: m        |                                            | Scale<br>1:25      |
| Client: Redmile Homes                                                            |  |  |                      |  | Depth: 2.30m         |                                            | Logged<br>GB       |

| Samples & In Situ Testing |      |         | Depth (m) | Level (m AOD) | Legend                                                                             | Stratum Description                                                                                                                                                                                                                    |   |
|---------------------------|------|---------|-----------|---------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| Depth (m)                 | Type | Results |           |               |                                                                                    |                                                                                                                                                                                                                                        |   |
| 0.10                      | ES   | HVP=105 | 0.15      |               |   | MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy CLAY with roots and rootlets. Gravel is angular of mudstone, siltstone and rare brick.                                                                          | 1 |
| 0.20                      | ES   |         |           |               |                                                                                    | Firm becoming stiff orangish brown mottled grey slightly gravelly sandy CLAY of intermediate plasticity. Gravel is angular of tabular siltstone lithorelicts. [Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION] |   |
| 0.50                      | D    |         |           |               |                                                                                    | from 0.50m becoming stiff high strength                                                                                                                                                                                                |   |
| 0.50                      |      |         |           |               |                                                                                    |                                                                                                                                                                                                                                        |   |
| 1.40                      | D    | HVP=162 | 1.00      |               |   | Very stiff very high strength grey slightly sandy slightly gravelly CLAY. Gravel is angular of tabular siltstone lithorelicts and rare coal fragments. [Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION]        | 2 |
| 1.40                      |      |         |           |               |                                                                                    |                                                                                                                                                                                                                                        |   |
|                           |      |         | 1.70      |               |  | Extremely weak grey destructured SILTSTONE recovered as clayey gravel of angular tabular siltstone. [PENNINE MIDDLE COAL MEASURES FORMATION]                                                                                           | 3 |
|                           |      |         | 2.30      |               |                                                                                    | Trialpit Complete at 2.300m                                                                                                                                                                                                            | 4 |

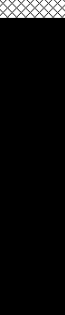
  

|                                                                                                                                                                                                                        |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Remarks: 1. Trial pit terminated at 2.30m bgl due to refusal on bedrock. 2. Groundwater not encountered. 3. Hand shear vane results presented as average of set of three. 4. Backfilled with arisings upon completion. |  |
| Stability:                                                                                                                                                                                                             |  |

|                                                                                                                                                     |      |         |                      |                  |                      |                                                                                                                                                               |                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|------|---------|----------------------|------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <div>Eastwood&amp;Partners<br/>CONSULTING ENGINEERS</div>                                                                                           |      |         |                      |                  |                      | TrialPit No<br><b>TP02</b><br>Sheet 1 of 1                                                                                                                    |                    |
| Project Name<br>Goldthorpe Road, Goldthorpe                                                                                                         |      |         | Project No.<br>42241 |                  | Co-ords: -<br>Level: |                                                                                                                                                               | Date<br>17/01/2018 |
| Location: Goldthorpe                                                                                                                                |      |         | Dimensions: m        |                  |                      | Scale<br>1:25                                                                                                                                                 |                    |
| Client: Redmile Homes                                                                                                                               |      |         | Depth: 0.20m         |                  |                      | Logged<br>GB                                                                                                                                                  |                    |
| Samples & In Situ Testing                                                                                                                           |      |         | Depth<br>(m)         | Level<br>(m AOD) | Legend               | Stratum Description                                                                                                                                           |                    |
| Depth (m)                                                                                                                                           | Type | Results |                      |                  |                      |                                                                                                                                                               |                    |
|                                                                                                                                                     |      |         | 0.10                 |                  |                      | MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy CLAY with roots and rootlets. Gravel is angular of mudstone, siltstone and rare brick. |                    |
|                                                                                                                                                     |      |         | 0.20                 |                  |                      | MADE GROUND: Reddish brown slightly sandy clayey GRAVEL of angular crushed brick with occasional sandstone and concrete.                                      |                    |
|                                                                                                                                                     |      |         |                      |                  |                      | Trialpit Complete at 0.200m                                                                                                                                   |                    |
|                                                                                                                                                     |      |         |                      |                  |                      | 1                                                                                                                                                             |                    |
|                                                                                                                                                     |      |         |                      |                  |                      | 2                                                                                                                                                             |                    |
|                                                                                                                                                     |      |         |                      |                  |                      | 3                                                                                                                                                             |                    |
|                                                                                                                                                     |      |         |                      |                  |                      | 4                                                                                                                                                             |                    |
| Remarks: 1. Trial pit terminated at 0.20m bgl due to possible service. 2. Groundwater not encountered. 3. Backfilled with arisings upon completion. |      |         |                      |                  |                      |                                                                                                                                                               |                    |
| Stability:                                                                                                                                          |      |         |                      |                  |                      |                                                                                                                                                               |                    |

|                                                                                  |  |  |                      |  |                                                                                                                                       |                                             |                    |
|----------------------------------------------------------------------------------|--|--|----------------------|--|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------|
|  |  |  |                      |  |                                                                                                                                       | TrialPit No<br><b>TP02A</b><br>Sheet 1 of 1 |                    |
| Project Name<br>Goldthorpe Road, Goldthorpe                                      |  |  | Project No.<br>42241 |  | Co-ords: -<br>Level:                                                                                                                  |                                             | Date<br>17/01/2018 |
| Location: Goldthorpe                                                             |  |  |                      |  | Dimensions: <div style="border: 1px solid black; width: 100px; height: 20px; display: inline-block; vertical-align: middle;"></div> m |                                             | Scale<br>1:25      |
| Client: Redmile Homes                                                            |  |  |                      |  | Depth: 3.20m                                                                                                                          |                                             | Logged<br>GB       |

| Samples & In Situ Testing |      |         | Depth (m) | Level (m AOD) | Legend                                                                              | Stratum Description                                                                                                                                                                         |
|---------------------------|------|---------|-----------|---------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Depth (m)                 | Type | Results |           |               |                                                                                     |                                                                                                                                                                                             |
| 0.05                      | ES   |         | 0.10      |               |    | MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy CLAY with roots and rootlets. Gravel is angular of mudstone, siltstone and rare brick.                               |
| 0.30                      | ES   |         | 0.40      |               |                                                                                     | MADE GROUND: Reddish brown slightly sandy clayey GRAVEL of angular crushed brick with occasional sandstone and concrete.                                                                    |
| 0.50                      | ES   |         | 0.80      |               |                                                                                     | MADE GROUND: Grey sandy very clayey GRAVEL of angular sandstone, siltstone and brick fragments.<br><br>at 0.60m redundant land drain                                                        |
| 1.00                      | ES   |         |           |               |  | MADE GROUND: Black very clayey sandy GRAVEL of angular coal and black shale with occasional fragments of brick, sandstone and rare inclusions of ash.                                       |
| 1.20 - 1.40               | B    |         | 2.00      |               |                                                                                     | Extremely weak black bituminous COAL with frequent interbeds of grey mudstone recovered as slightly clayey gravel of angular coal and mudstone.<br>[PENNINE MIDDLE COAL MEASURES FORMATION] |
| 2.50                      | ES   |         | 3.00      |               |                                                                                     | Extremely weak grey destructured SILTSTONE with occasional interbeds of mudstone recovered as clayey gravel of angular tabular siltstone.<br>[PENNINE MIDDLE COAL MEASURES FORMATION]       |
|                           |      |         | 3.20      |               |                                                                                     | Trialpit Complete at 3.200m                                                                                                                                                                 |

|                                                                                                                                                                        |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Remarks: 1. Trial pit terminated at 3.20m bgl due to refusal on bedrock. 2. Perched groundwater encountered at 0.80m bgl. 3. Backfilled with arisings upon completion. |  |
| Stability:                                                                                                                                                             |  |

|                             |              |                                                                                                                                                                                                                                                                                                               |            |
|-----------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Project Name                | Project No.  | Co-ords: -                                                                                                                                                                                                                                                                                                    | Date       |
| Goldthorpe Road, Goldthorpe | 42241        | Level:                                                                                                                                                                                                                                                                                                        | 17/01/2018 |
| Location: Goldthorpe        | Dimensions:  |                                                                                                                                                                                                                                                                                                               | Scale      |
| Client: Redmile Homes       | Depth: 3.50m | <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">E</div> <div style="border: 1px solid black; width: 100px; height: 40px; position: relative;"> <div style="position: absolute; top: 0; right: 0; width: 10px; height: 10px; background-color: black;"></div> </div> </div> | 1:25       |
|                             |              |                                                                                                                                                                                                                                                                                                               | Logged GB  |

| Samples & In Situ Testing |      |         | Depth (m) | Level (m AOD) | Legend                                                                              | Stratum Description                                                                                                                                             | CD |
|---------------------------|------|---------|-----------|---------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Depth (m)                 | Type | Results |           |               |                                                                                     |                                                                                                                                                                 |    |
| 0.05                      | ES   | HVP=67  | 0.10      |               |   | MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy CLAY with roots and rootlets. Gravel is angular of mudstone, siltstone and rare brick.   | 1  |
|                           |      |         | 0.40      |               |                                                                                     | MADE GROUND: Reddish brown slightly sandy clayey GRAVEL of angular crushed brick with occasional sandstone and concrete.                                        |    |
| 0.60                      | ES   |         |           |               |                                                                                     | MADE GROUND: Firm medium strength locally stiff high strength brown slightly sandy slightly gravelly CLAY. Gravel is angular of brick, siltstone and sandstone. |    |
| 0.80 - 0.90               | B    |         |           |               |                                                                                     |                                                                                                                                                                 |    |
| 0.80                      |      | HVP=81  |           |               |  |                                                                                                                                                                 | 2  |
|                           |      |         |           |               |                                                                                     |                                                                                                                                                                 |    |
| 1.80                      |      |         |           |               |                                                                                     | from 1.80m becoming stiff high strength                                                                                                                         |    |
|                           |      |         |           |               |                                                                                     | between 2.00m and 2.50m brick wall in western face                                                                                                              |    |
| 2.40                      | D    | HVP=162 |           |               |  |                                                                                                                                                                 | 3  |
|                           |      |         |           |               |                                                                                     |                                                                                                                                                                 |    |
|                           |      |         |           |               |                                                                                     | at 2.50m concrete (assumed footing)                                                                                                                             |    |
| 2.80                      |      |         |           |               |                                                                                     | from 2.80m becoming very stiff very high strength                                                                                                               |    |
| 3.40                      | D    |         | 3.30      |               |  | Extremely weak dark grey SILTSTONE with frequent thin interbeds of fine grained sandstone recovered as angular tabular gravel of siltstone.                     | 4  |
|                           |      |         | 3.50      |               |                                                                                     | [PENNINE MIDDLE COAL MEASURES FORMATION]                                                                                                                        |    |
|                           |      |         |           |               |                                                                                     | Trialpit Complete at 3.500m                                                                                                                                     |    |

Remarks: 1. Trial pit terminated at 3.50m bgl due to refusal on bedrock. 2. Groundwater not encountered. 3. Hand shear vane results presented as average of set of three. 4. Backfilled with arisings upon completion.

Stability:

|                             |               |                                                                                                   |            |
|-----------------------------|---------------|---------------------------------------------------------------------------------------------------|------------|
| Project Name                | Project No.   | Co-ords: -                                                                                        | Date       |
| Goldthorpe Road, Goldthorpe | 42241         | Level:                                                                                            | 17/01/2018 |
| Location: Goldthorpe        | Dimensions: m |                                                                                                   | Scale      |
| Client: Redmile Homes       | Depth: 3.20m  | £ <div style="border: 1px solid black; width: 100px; height: 30px; display: inline-block;"></div> | 1:25       |
|                             |               |                                                                                                   | Logged GB  |

| Samples & In Situ Testing |      |                             | Depth<br>(m) | Level<br>(m AOD) | Legend                                                                                                                            | Stratum Description                                                                                                                                                                                                                                                                                                | CD |   |
|---------------------------|------|-----------------------------|--------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|---|
| Depth (m)                 | Type | Results                     |              |                  |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                    |    |   |
| 0.10                      | ES   |                             | 0.20         |                  |                                                                                                                                   | MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy CLAY with roots and rootlets. Gravel is angular of mudstone, siltstone and rare brick.                                                                                                                                                      | 1  |   |
| 0.50                      | ES   |                             |              |                  |                                                                                                                                   | MADE GROUND: Soft to firm grey and brown slightly sandy gravelly CLAY. Gravel is angular to sub-angular of limestone, brick, sandstone and siltstone with rare inclusions of ash.                                                                                                                                  |    |   |
| 0.60                      | D    |                             |              |                  | MADE GROUND: Light grey sandy GRAVEL of angular limestone.                                                                        |                                                                                                                                                                                                                                                                                                                    |    |   |
|                           |      |                             |              |                  | MADE GROUND: Firm locally stiff brown slightly sandy slightly gravelly CLAY. Gravel is angular of brick, siltstone and sandstone. |                                                                                                                                                                                                                                                                                                                    |    |   |
| 1.30                      | ES   |                             |              |                  | 1.20                                                                                                                              | Stiff grey mottled brown slightly gravelly silty CLAY of high plasticity. Gravel is angular tabular lithorelicts of siltstone.                                                                                                                                                                                     |    | 2 |
| 1.40                      | D    |                             |              |                  |                                                                                                                                   | [Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION]                                                                                                                                                                                                                                           |    |   |
| 1.40                      | ES   |                             |              |                  |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                    |    |   |
| 1.50 - 1.60               | B    |                             |              |                  |                                                                                                                                   | <i>from 1.20m and 2.00m wedge of black slightly clayey sandy GRAVEL of angular coal fragments with rare inclusions of limestone, pockets of clay and ash in northern end of trial pit. Shallowing to the south (absent in southern part of trial pit). ES at 1.4m and B at 1.5 - 1.6m taken within made ground</i> |    |   |
| 2.50                      | D    |                             |              |                  | 3.10<br>3.20                                                                                                                      | Extremely weak grey destructured SILTSTONE recovered as clayey gravel of angular tabular siltstone.                                                                                                                                                                                                                |    | 3 |
|                           |      |                             |              |                  |                                                                                                                                   | [PENNINE MIDDLE COAL MEASURES FORMATION]                                                                                                                                                                                                                                                                           |    |   |
|                           |      | Trialpit Complete at 3.200m |              |                  |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                    |    |   |
|                           |      |                             |              |                  |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                    | 4  |   |

Remarks: 1. Trial pit terminated at 3.20m bgl due to refusal on bedrock. 2. Groundwater not encountered. 3. Hand shear vane results presented as average of set of three. 4. Backfilled with arisings upon completion.

Stability:

|                                                                                                                                                        |      |         |                      |                  |                                                                                   |                                                                                                                                                                         |                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------|----------------------|------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <div>Eastwood&amp;Partners<br/>CONSULTING ENGINEERS</div>                                                                                              |      |         |                      |                  |                                                                                   | TrialPit No<br><b>TP05</b><br>Sheet 1 of 1                                                                                                                              |                    |
| Project Name<br>Goldthorpe Road, Goldthorpe                                                                                                            |      |         | Project No.<br>42241 |                  | Co-ords: -<br>Level:                                                              |                                                                                                                                                                         | Date<br>17/01/2018 |
| Location: Goldthorpe                                                                                                                                   |      |         | Dimensions: m        |                  |                                                                                   | Scale<br>1:25                                                                                                                                                           |                    |
| Client: Redmile Homes                                                                                                                                  |      |         | Depth: 0.90m         |                  |                                                                                   | Logged<br>GB                                                                                                                                                            |                    |
| Samples & In Situ Testing                                                                                                                              |      |         | Depth<br>(m)         | Level<br>(m AOD) | Legend                                                                            | Stratum Description                                                                                                                                                     |                    |
| Depth (m)                                                                                                                                              | Type | Results |                      |                  |                                                                                   |                                                                                                                                                                         |                    |
| 0.20                                                                                                                                                   | ES   |         | 0.30                 |                  |  | MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy SILT with roots and rootlets. Gravel is angular of mudstone, siltstone and rare brick fragments. |                    |
| 0.60                                                                                                                                                   | ES   |         |                      |                  |                                                                                   | MADE GROUND: Soft to firm brown slightly sandy gravelly CLAY. Gravel is angular of limestone, sandstone and brick with rare concrete and ceramic.                       |                    |
|                                                                                                                                                        |      |         | 0.90                 |                  |  | Trialpit Complete at 0.900m                                                                                                                                             |                    |
|                                                                                                                                                        |      |         |                      |                  |                                                                                   |                                                                                                                                                                         | 1                  |
|                                                                                                                                                        |      |         |                      |                  |                                                                                   |                                                                                                                                                                         | 2                  |
|                                                                                                                                                        |      |         |                      |                  |                                                                                   |                                                                                                                                                                         | 3                  |
|                                                                                                                                                        |      |         |                      |                  |                                                                                   |                                                                                                                                                                         | 4                  |
| Remarks: 1. Trial pit terminated at 0.90m bgl due to refusal on concrete. 2. Groundwater not encountered. 3. Backfilled with arisings upon completion. |      |         |                      |                  |                                                                                   |                                                                                                                                                                         |                    |
| Stability:                                                                                                                                             |      |         |                      |                  |                                                                                   |                                                                                                                                                                         |                    |

|                                                                                  |  |  |                      |  |                                                                                                                                                                    |                                             |                    |
|----------------------------------------------------------------------------------|--|--|----------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------|
|  |  |  |                      |  |                                                                                                                                                                    | TrialPit No<br><b>TP05A</b><br>Sheet 1 of 1 |                    |
| Project Name<br>Goldthorpe Road, Goldthorpe                                      |  |  | Project No.<br>42241 |  | Co-ords: -<br>Level:                                                                                                                                               |                                             | Date<br>17/01/2018 |
| Location: Goldthorpe                                                             |  |  |                      |  | Dimensions: <span style="float: right;">m</span><br>Depth: <span style="float: right;">€</span> <span style="border: 1px solid black; padding: 2px 20px;"> </span> |                                             | Scale<br>1:25      |
| Client: Redmile Homes                                                            |  |  |                      |  |                                                                                                                                                                    |                                             | Logged<br>GB       |

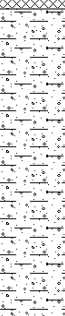
| Samples & In Situ Testing |      |         | Depth (m) | Level (m AOD) | Legend                                                                              | Stratum Description                                                                                                                                                                                                                                       |
|---------------------------|------|---------|-----------|---------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Depth (m)                 | Type | Results |           |               |                                                                                     |                                                                                                                                                                                                                                                           |
|                           |      |         | 0.30      |               |    | MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy SILT with roots and rootlets. Gravel is angular of mudstone, siltstone and rare brick fragments.                                                                                   |
|                           |      |         |           |               |    | MADE GROUND: Soft to firm brown slightly sandy gravelly CLAY. Gravel is angular of limestone, sandstone and brick with rare concrete and ceramic.                                                                                                         |
| 1.20                      | ES   | HVP=202 | 1.00      |               |    | Very stiff very high strength grey mottled brown slightly gravelly silty CLAY of high plasticity. Gravel is angular tabular lithorelicts of siltstone.<br>[Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION]                        |
| 1.40                      | D    |         |           |               |    |                                                                                                                                                                                                                                                           |
| 1.50                      |      |         |           |               |    |                                                                                                                                                                                                                                                           |
| 2.35                      | ES   | HVP=202 | 2.30      |               |  | Extremely weak completely weathered / residual black bituminous COAL with frequent thin interbeds of black shale recovered as angular tabular gravel of coal and black shale.<br>[Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION] |
| 2.50                      | D    |         | 2.40      |               |  |                                                                                                                                                                                                                                                           |
| 2.50                      |      |         | 2.70      |               |  |                                                                                                                                                                                                                                                           |
|                           |      |         | 3.10      |               |  |                                                                                                                                                                                                                                                           |
|                           |      |         |           |               |                                                                                     | Trialpit Complete at 3.100m                                                                                                                                                                                                                               |

|                                                                                                                                                                                                                        |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Remarks: 1. Trial pit terminated at 3.10m bgl due to refusal on bedrock. 2. Groundwater not encountered. 3. Hand shear vane results presented as average of set of three. 4. Backfilled with arisings upon completion. |  |
| Stability:                                                                                                                                                                                                             |  |

|                                                                                  |  |  |                      |  |                                                                                                                                        |                                            |                    |
|----------------------------------------------------------------------------------|--|--|----------------------|--|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------|
|  |  |  |                      |  |                                                                                                                                        | TrialPit No<br><b>TP06</b><br>Sheet 1 of 1 |                    |
| Project Name<br>Goldthorpe Road, Goldthorpe                                      |  |  | Project No.<br>42241 |  | Co-ords: -<br>Level:                                                                                                                   |                                            | Date<br>17/01/2018 |
| Location: Goldthorpe                                                             |  |  |                      |  | Dimensions: <div style="display: inline-block; border: 1px solid black; width: 100px; height: 30px; vertical-align: middle;"></div> m  |                                            | Scale<br>1:25      |
| Client: Redmile Homes                                                            |  |  |                      |  | Depth: 3.40m <div style="display: inline-block; border: 1px solid black; width: 100px; height: 30px; vertical-align: middle;"></div> £ |                                            | Logged<br>GB       |

| Samples & In Situ Testing |      |         | Depth (m)    | Level (m AOD) | Legend                                                                              | Stratum Description                                                                                                                                                                                                                                   |   |
|---------------------------|------|---------|--------------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| Depth (m)                 | Type | Results |              |               |                                                                                     |                                                                                                                                                                                                                                                       |   |
| 0.30                      | ES   |         | 0.50         |               |    | MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy SILT with roots and rootlets. Gravel is angular of brick, sandstone and siltstone with rare inclusions of ash and clinker.<br><br><i>between 0.30m and 0.35m becoming ashy</i> |   |
| 0.80                      | ES   |         |              |               |                                                                                     | MADE GROUND: Firm brown slightly sandy slightly gravelly CLAY. Gravel is angular tabular lithorelicts of siltstone.                                                                                                                                   |   |
| 1.20                      | D    |         | 1.00         |               |   | Firm becoming stiff orangish brown mottled grey slightly sandy slightly gravelly CLAY of intermediate plasticity. Gravel is angular tabular lithorelicts of siltstone. [Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION]       | 1 |
| 2.40<br>2.40              | D    | HVP=98  | 2.10         |               |                                                                                     | Stiff high strength grey mottled brown slightly sandy slightly gravelly CLAY of high plasticity. Gravel is angular tabular lithorelicts of siltstone. [Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION]                        | 2 |
|                           |      |         |              |               |  | <i>between 2.80m and 2.90m band of coal</i>                                                                                                                                                                                                           | 3 |
|                           |      |         | 3.20<br>3.40 |               |                                                                                     | Extremely weak grey destructured SILTSTONE recovered as clayey gravel of angular tabular siltstone. [PENNINE MIDDLE COAL MEASURES FORMATION]                                                                                                          | 4 |
|                           |      |         |              |               |                                                                                     | Trialpit Complete at 3.400m                                                                                                                                                                                                                           |   |

|                                                                                                                                                                                                                        |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Remarks: 1. Trial pit terminated at 3.40m bgl due to refusal on bedrock. 2. Groundwater not encountered. 3. Hand shear vane results presented as average of set of three. 4. Backfilled with arisings upon completion. |  |
| Stability:                                                                                                                                                                                                             |  |

|                                                                                  |  |  |                      |  |                                                                                                                                       |                                            |                    |
|----------------------------------------------------------------------------------|--|--|----------------------|--|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------|
|  |  |  |                      |  |                                                                                                                                       | TrialPit No<br><b>TP07</b><br>Sheet 1 of 1 |                    |
| Project Name<br>Goldthorpe Road, Goldthorpe                                      |  |  | Project No.<br>42241 |  | Co-ords: -<br>Level:                                                                                                                  |                                            | Date<br>18/01/2018 |
| Location: Goldthorpe                                                             |  |  |                      |  | Dimensions: <div style="display: inline-block; border: 1px solid black; width: 100px; height: 30px; vertical-align: middle;"></div> m |                                            | Scale<br>1:25      |
| Client: Redmile Homes                                                            |  |  |                      |  | Depth: 3.20m                                                                                                                          |                                            | Logged<br>GB       |

| Samples & In Situ Testing |      |         | Depth (m) | Level (m AOD) | Legend                                                                              | Stratum Description                                                                                                                                                                                                                                |   |   |
|---------------------------|------|---------|-----------|---------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|
| Depth (m)                 | Type | Results |           |               |                                                                                     |                                                                                                                                                                                                                                                    |   |   |
| 0.10                      | ES   | HVP=101 | 0.30      |               |    | MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy SILT with roots and rootlets. Gravel is angular of sandstone and siltstone with rare brick fragments.                                                                       | 1 |   |
| 0.40                      | ES   |         |           |               |    | Firm becoming stiff grey/brown slightly gravelly silty CLAY. Gravel is angular tabular lithorelicts of siltstone with rare coal fragments.<br>[Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION]                             |   |   |
| 0.60                      | D    |         |           |               |    |                                                                                                                                                                                                                                                    |   |   |
| 0.80                      |      |         |           |               |    |                                                                                                                                                                                                                                                    |   |   |
| 1.70                      | D    | HVP=90  | 1.40      |               |    | Stiff high strength grey mottled orangish brown slightly sandy slightly gravelly CLAY of intermediate plasticity. Gravel is angular tabular lithorelicts of siltstone.<br>[Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION] | 2 |   |
| 1.70                      |      |         |           |               |                                                                                     |                                                                                                                                                                                                                                                    |   |   |
| 3.00                      |      | HVP=135 | 3.20      |               |  |                                                                                                                                                                                                                                                    | 3 |   |
|                           |      |         |           |               |                                                                                     | Trialpit Complete at 3.200m                                                                                                                                                                                                                        |   | 4 |

|                                                                                                                                                                                            |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Remarks: 1. Trial pit complete at 3.20m bgl. 2. Groundwater not encountered. 3. Hand shear vane results presented as average of set of three. 4. Backfilled with arisings upon completion. |  |
| Stability:                                                                                                                                                                                 |  |

|                                                                                  |  |  |                      |  |                                                  |                                            |                    |
|----------------------------------------------------------------------------------|--|--|----------------------|--|--------------------------------------------------|--------------------------------------------|--------------------|
|  |  |  |                      |  |                                                  | TrialPit No<br><b>TP08</b><br>Sheet 1 of 1 |                    |
| Project Name<br>Goldthorpe Road, Goldthorpe                                      |  |  | Project No.<br>42241 |  | Co-ords: -<br>Level:                             |                                            | Date<br>18/01/2018 |
| Location: Goldthorpe                                                             |  |  |                      |  | Dimensions: <span style="float: right;">m</span> |                                            | Scale<br>1:25      |
| Client: Redmile Homes                                                            |  |  |                      |  | Depth: 3.20m                                     |                                            | Logged<br>GB       |

| Samples & In Situ Testing   |      |         | Depth (m) | Level (m AOD) | Legend                                                                              | Stratum Description                                                                                                                                                                                                                             |   |
|-----------------------------|------|---------|-----------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| Depth (m)                   | Type | Results |           |               |                                                                                     |                                                                                                                                                                                                                                                 |   |
| 0.40                        | ES   | HVP=90  | 0.30      |               |    | MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy CLAY with roots and rootlets. Gravel is angular of mudstone, siltstone and rare brick.                                                                                   |   |
| 0.60                        | ES   |         | 0.50      |               |    | MADE GROUND: Firm brown slightly sandy slightly gravelly CLAY. Gravel is angular tabular lithorelicts of siltstone with rare brick fragments.                                                                                                   |   |
| 0.80                        | D    |         |           |               |    | Firm medium strength grey/brown slightly gravelly silty CLAY of intermediate plasticity. Gravel is angular tabular lithorelicts of siltstone with rare coal fragments. [Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION] | 1 |
| 0.80                        |      |         |           |               |    |                                                                                                                                                                                                                                                 |   |
| 1.50                        | D    | HVP=135 | 1.10      |               |    | Stiff high strength grey mottled orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular tabular lithorelicts of siltstone. [Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION]                            |   |
| 1.50                        |      |         |           |               |    |                                                                                                                                                                                                                                                 |   |
| 1.60                        | ES   |         |           |               |   |                                                                                                                                                                                                                                                 | 2 |
|                             |      |         | 3.00      |               |  |                                                                                                                                                                                                                                                 |   |
|                             |      |         | 3.20      |               |  | Extremely weak grey destructured SILTSTONE recovered as angular tabular gravel of siltstone. [PENNINE MIDDLE COAL MEASURES FORMATION]                                                                                                           | 3 |
| Trialpit Complete at 3.200m |      |         |           |               |                                                                                     |                                                                                                                                                                                                                                                 |   |
|                             |      |         |           |               |                                                                                     |                                                                                                                                                                                                                                                 | 4 |

|                                                                                                                                                                                            |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Remarks: 1. Trial pit complete at 3.20m bgl. 2. Groundwater not encountered. 3. Hand shear vane results presented as average of set of three. 4. Backfilled with arisings upon completion. |  |
| Stability:                                                                                                                                                                                 |  |

|                                             |                      |                        |                    |
|---------------------------------------------|----------------------|------------------------|--------------------|
| Project Name<br>Goldthorpe Road, Goldthorpe | Project No.<br>42241 | Co-ords: -<br>Level:   | Date<br>18/01/2018 |
| Location: Goldthorpe                        | Dimensions: m        |                        | Scale<br>1:25      |
| Client: Redmile Homes                       | Depth: 2.40m         | £ <input type="text"/> | Logged<br>GB       |

| Samples & In Situ Testing   |      |         | Depth (m) | Level (m AOD)                                                                       | Legend                                                                                                                                                        | Stratum Description                                                                                                                                                                                                                        | SD |
|-----------------------------|------|---------|-----------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Depth (m)                   | Type | Results |           |                                                                                     |                                                                                                                                                               |                                                                                                                                                                                                                                            |    |
| 0.10                        | ES   | HVP=148 | 0.30      |                                                                                     |                                                                              | MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy CLAY with roots and rootlets. Gravel is angular of mudstone, siltstone and rare brick.                                                                              | 1  |
| 0.40                        | ES   |         |           |                                                                                     |                                                                              | Firm becoming stiff grey/brown slightly gravelly silty CLAY. Gravel is angular tabular lithorelicts of siltstone with rare coal fragments.<br>[Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION]                     |    |
|                             |      |         |           |                                                                                     |                                                                              | Stiff orangish brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is angular tabular lithorelicts of siltstone.<br>[Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION]                                  |    |
| 1.00                        | D    |         | 1.00      |                                                                                     |                                                                              | Stiff high strength grey mottled orangish brown slightly sandy slightly gravelly CLAY of high plasticity. Gravel is angular tabular lithorelicts of siltstone.<br>[Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION] |    |
| 1.20                        |      |         |           |                                                                                     |                                                                                                                                                               |                                                                                                                                                                                                                                            |    |
|                             |      |         |           |                                                                                     |                                                                                                                                                               |                                                                                                                                                                                                                                            |    |
|                             |      |         | 2.10      |  | Extremely weak grey destructured MUDSTONE recovered as clayey gravel of angular tabular lithorelicts of mudstone.<br>[PENNINE MIDDLE COAL MEASURES FORMATION] | 2                                                                                                                                                                                                                                          |    |
|                             |      |         | 2.30      |  | Extremely weak grey destructured SILTSTONE recovered as angular tabular gravel of siltstone.<br>[PENNINE MIDDLE COAL MEASURES FORMATION]                      |                                                                                                                                                                                                                                            |    |
|                             |      |         | 2.40      |                                                                                     |                                                                                                                                                               |                                                                                                                                                                                                                                            |    |
| Trialpit Complete at 2.400m |      |         |           |                                                                                     |                                                                                                                                                               |                                                                                                                                                                                                                                            | 3  |
|                             |      |         |           |                                                                                     |                                                                                                                                                               |                                                                                                                                                                                                                                            | 4  |

Remarks: 1. Trial pit terminated at 2.40m bgl due to refusal on bedrock. 2. Groundwater not encountered. 3. Hand shear vane results presented as average of set of three. 4. Backfilled with arisings upon completion.

Stability:

|                                                                                  |  |  |  |                      |  |                                                                                                                                                                                                                       |                                            |                    |
|----------------------------------------------------------------------------------|--|--|--|----------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------|
|  |  |  |  |                      |  |                                                                                                                                                                                                                       | TrialPit No<br><b>TP10</b><br>Sheet 1 of 1 |                    |
| Project Name<br>Goldthorpe Road, Goldthorpe                                      |  |  |  | Project No.<br>42241 |  | Co-ords: -<br>Level:                                                                                                                                                                                                  |                                            | Date<br>18/01/2018 |
| Location: Goldthorpe                                                             |  |  |  |                      |  | Dimensions: <span style="float: right;">m</span><br><div style="display: flex; align-items: center;">         Depth: € <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 5px;"></div> </div> |                                            | Scale<br>1:25      |
| Client: Redmile Homes                                                            |  |  |  |                      |  | 3.40m                                                                                                                                                                                                                 |                                            | Logged<br>GB       |

| Samples & In Situ Testing |      |         | Depth (m) | Level (m AOD) | Legend    | Stratum Description                                                                                                                                                                                                                                                                                     |   |
|---------------------------|------|---------|-----------|---------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| Depth (m)                 | Type | Results |           |               |           |                                                                                                                                                                                                                                                                                                         |   |
| 0.05                      | ES   |         | 0.10      |               | [Pattern] | MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy CLAY with roots and rootlets. Gravel is angular of mudstone, siltstone and rare brick.                                                                                                                                           |   |
| 0.30                      | ES   |         | 0.40      |               |           | MADE GROUND: Reddish brown slightly clayey sandy GRAVEL of angular crushed brick with occasional sandstone and concrete.                                                                                                                                                                                |   |
| 1.00                      | ES   |         |           |               |           | MADE GROUND: Soft to firm grey / brown slightly sandy gravelly CLAY of high plasticity with medium cobble content. Gravel is angular of brick, shale, siltstone and coal fragments with rare plastic and timber. Cobbles are of brick.                                                                  | 1 |
| 1.20 - 1.30               | B    |         |           |               |           | <i>from 1.50m brick wall orientated approximately north - south in eastern part of trial pit with obstruction (assumed concrete footing) at base. Natural strata beyond wall to the east from 1.50m comprising extremely weak siltstone. Coal encountered from 3.00m to maximum depth of trial pit.</i> |   |
|                           |      |         |           |               |           |                                                                                                                                                                                                                                                                                                         | 2 |
| 2.80                      | ES   |         |           |               |           | <i>ES sample at 2.80m taken within natural strata (coal)</i>                                                                                                                                                                                                                                            | 3 |
|                           |      |         | 3.40      |               |           | <i>at 3.40m assumed natural strata (sides unstable)</i><br>Trialpit Complete at 3.40m                                                                                                                                                                                                                   | 4 |

|                                                                                                                                                                                            |  |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|
| Remarks: 1. Trial pit terminated at 3.40m bgl (assumed natural strata). 2. Sides unstable. 3. Minor groundwater seepage encountered at 3.40m. 4. Backfilled with arisings upon completion. |  |  |  |  |  |  |  |
| Stability: Sides unstable                                                                                                                                                                  |  |  |  |  |  |  |  |

|                                                                                  |  |  |                      |  |                      |                                            |                    |
|----------------------------------------------------------------------------------|--|--|----------------------|--|----------------------|--------------------------------------------|--------------------|
|  |  |  |                      |  |                      | TrialPit No<br><b>SA01</b><br>Sheet 1 of 1 |                    |
| Project Name<br>Goldthorpe Road, Goldthorpe                                      |  |  | Project No.<br>42241 |  | Co-ords: -<br>Level: |                                            | Date<br>18/01/2018 |
| Location: Goldthorpe                                                             |  |  |                      |  | Dimensions: 2.60m    |                                            | Scale<br>1:25      |
| Client: Redmile Homes                                                            |  |  |                      |  | Depth: 2.40m         |                                            | Logged<br>GB       |

| Samples & In Situ Testing |      |         | Depth (m) | Level (m AOD) | Legend                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Stratum Description |
|---------------------------|------|---------|-----------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Depth (m)                 | Type | Results |           |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |
| 0.10                      | ES   |         | 0.15      |               | <br>MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy SILT with roots and rootlets. Gravel is angular of sandstone and siltstone with rare brick fragments.<br><br>MADE GROUND: Grey and brown slightly sandy slightly clayey GRAVEL of angular brick and sandstone.<br><i>from 0.20m and 0.80m brick wall in western trial pit face</i><br><br>MADE GROUND: Grey sandy GRAVEL of angular limestone. (sub-base)<br><br>Stiff grey mottled brown slightly sandy slightly gravelly CLAY. Gravel is angular tabular lithorelicts of mudstone.<br>[Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION]<br><i>at 0.80m concrete footing in western face</i> | 1                   |
|                           |      |         | 0.40      |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |
|                           |      |         | 0.60      |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |
|                           |      |         |           |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |
| 1.20                      | D    |         | 2.00      |               | <br>Extremely weak grey destructured SILTSTONE recovered as clayey gravel of angular tabular siltstone.<br>[PENNINE MIDDLE COAL MEASURES FORMATION]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2                   |
|                           |      |         | 2.40      |               | Trialpit Complete at 2.400m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3                   |
|                           |      |         |           |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 4                   |

|                                                                                                                                                                               |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Remarks: 1. Trial pit complete at 2.40m bgl and soakaway test carried out (see test sheet SA01). 2. Groundwater not encountered. 3. Backfilled with arisings upon completion. |  |
| Stability:                                                                                                                                                                    |  |

|                                                                                                                                                                               |      |         |                      |                  |                      |                                                                                                                                                                                                                      |                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------|----------------------|------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <div>Eastwood&amp;Partners<br/>CONSULTING ENGINEERS</div>                                                                                                                     |      |         |                      |                  |                      | TrialPit No<br><b>SA02</b><br>Sheet 1 of 1                                                                                                                                                                           |                    |
| Project Name<br>Goldthorpe Road, Goldthorpe                                                                                                                                   |      |         | Project No.<br>42241 |                  | Co-ords: -<br>Level: |                                                                                                                                                                                                                      | Date<br>18/01/2018 |
| Location: Goldthorpe                                                                                                                                                          |      |         | Dimensions: 2.70m    |                  |                      | Scale<br>1:25                                                                                                                                                                                                        |                    |
| Client: Redmile Homes                                                                                                                                                         |      |         | Depth: 1.90m         |                  |                      | Logged<br>GB                                                                                                                                                                                                         |                    |
| Samples & In Situ Testing                                                                                                                                                     |      |         | Depth<br>(m)         | Level<br>(m AOD) | Legend               | Stratum Description                                                                                                                                                                                                  |                    |
| Depth (m)                                                                                                                                                                     | Type | Results |                      |                  |                      |                                                                                                                                                                                                                      |                    |
| 0.10                                                                                                                                                                          | ES   |         | 0.30                 |                  |                      | MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy SILT with roots and rootlets. Gravel is angular of sandstone and siltstone with rare brick fragments.                                         |                    |
| 0.40                                                                                                                                                                          | ES   |         |                      |                  |                      | Firm becoming stiff grey mottled orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular tabular lithorelicts of siltstone. [Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION] |                    |
| 0.70                                                                                                                                                                          | D    |         |                      |                  |                      |                                                                                                                                                                                                                      |                    |
|                                                                                                                                                                               |      |         | 1.70                 |                  |                      | Extremely weak black SHALE recovered as angular tabular gravel of shale. [PENNINE MIDDLE COAL MEASURES FORMATION]                                                                                                    |                    |
|                                                                                                                                                                               |      |         | 1.80                 |                  |                      | Extremely weak grey destructured SILTSTONE with occasional thin interbeds of fine grained sandstone recovered as angular tabular gravel of siltstone. [PENNINE MIDDLE COAL MEASURES FORMATION]                       |                    |
|                                                                                                                                                                               |      |         | 1.90                 |                  |                      | Trialpit Complete at 1.900m                                                                                                                                                                                          |                    |
| Remarks: 1. Trial pit complete at 1.90m bgl and soakaway test carried out (see test sheet SA02). 2. Groundwater not encountered. 3. Backfilled with arisings upon completion. |      |         |                      |                  |                      |                                                                                                                                                                                                                      |                    |
| Stability:                                                                                                                                                                    |      |         |                      |                  |                      |                                                                                                                                                                                                                      |                    |

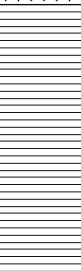
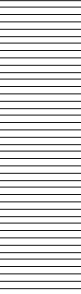
|                                                                                  |  |  |                      |  |                      |                                            |                    |
|----------------------------------------------------------------------------------|--|--|----------------------|--|----------------------|--------------------------------------------|--------------------|
|  |  |  |                      |  |                      | TrialPit No<br><b>SA03</b><br>Sheet 1 of 1 |                    |
| Project Name<br>Goldthorpe Road, Goldthorpe                                      |  |  | Project No.<br>42241 |  | Co-ords: -<br>Level: |                                            | Date<br>18/01/2018 |
| Location: Goldthorpe                                                             |  |  |                      |  | Dimensions: 2.60m    |                                            | Scale<br>1:25      |
| Client: Redmile Homes                                                            |  |  |                      |  | Depth: 2.00m         |                                            | Logged<br>GB       |

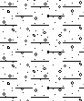
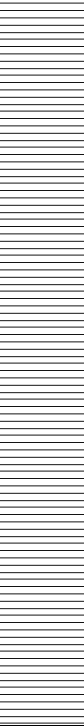
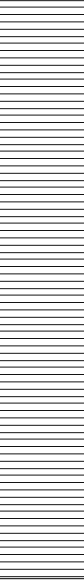
  

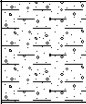
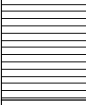
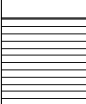
| Samples & In Situ Testing |      |         | Depth (m) | Level (m AOD) | Legend                                                                                                                                                                                                                                                                                         | Stratum Description         |
|---------------------------|------|---------|-----------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Depth (m)                 | Type | Results |           |               |                                                                                                                                                                                                                                                                                                |                             |
| 0.40                      | ES   |         | 0.10      |               | <br>MADE GROUND: Reworked TOPSOIL comprising brown slightly gravelly sandy CLAY with roots and rootlets. Gravel is angular of mudstone, siltstone and rare brick.                                             |                             |
|                           |      |         |           |               | <br>MADE GROUND: Brown slightly sandy gravelly CLAY. Gravel is angular of limestone and brick with rare inclusions of asphalt.                                                                                |                             |
|                           |      |         | 0.50      |               | <br><i>between 0.45m and 0.50m abundant gravel of asphalt</i>                                                                                                                                                 |                             |
|                           |      |         | 0.80      |               | <br>Stiff brown mottled grey slightly sandy slightly gravelly CLAY.<br>[Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION]                                                               |                             |
|                           |      |         | 2.00      |               | <br>Stiff grey mottled orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular tabular lithorelicts of siltstone.<br>[Completely weathered / residual PENNINE MIDDLE COAL MEASURES FORMATION] |                             |
|                           |      |         |           |               |                                                                                                                                                                                                                                                                                                | Trialpit Complete at 2.000m |

|                                                                                                                                                                               |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Remarks: 1. Trial pit complete at 2.00m bgl and soakaway test carried out (see test sheet SA03). 2. Groundwater not encountered. 3. Backfilled with arisings upon completion. |  |  |
| Stability:                                                                                                                                                                    |  |  |

|                                                                                                      |               |                             |       |         | <h1>Borehole Log</h1>          |           |                                                                                     | Borehole No.<br><b>R01</b><br>Sheet 1 of 1 |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------|-------|---------|--------------------------------|-----------|-------------------------------------------------------------------------------------|--------------------------------------------|-----------------|
| Project Name: Goldthorpe Road, Goldthorpe                                                                                                                                             |               |                             |       |         | Project No.<br>42241           |           | Co-ords: -                                                                          |                                            | Hole Type<br>RO |
| Location: Goldthorpe                                                                                                                                                                  |               |                             |       |         | Level:                         |           |                                                                                     | Scale<br>1:150                             |                 |
| Client: Redmile Homes                                                                                                                                                                 |               |                             |       |         | Dates: 18/01/2018 - 18/01/2018 |           |                                                                                     | Logged By<br>SDS                           |                 |
| Well                                                                                                                                                                                  | Water Strikes | Samples and In Situ Testing |       |         | Depth (m)                      | Level (m) | Legend                                                                              | Stratum Description                        |                 |
|                                                                                                                                                                                       |               | Depth (m)                   | Type  | Results |                                |           |                                                                                     |                                            |                 |
|                                                                                                     |               |                             |       |         | 1.40                           |           |    | Overburden                                 | 1               |
|                                                                                                                                                                                       |               |                             |       |         | 3.10                           |           |    | SANDSTONE                                  | 2               |
|                                                                                                                                                                                       |               |                             |       |         | 8.60                           |           |    | MUDSTONE                                   | 3               |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     |                                            | 4               |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     |                                            | 5               |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     |                                            | 6               |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     |                                            | 7               |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     |                                            | 8               |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     |                                            | 9               |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     |                                            | 10              |
|                                                                                                                                                                                       |               |                             |       |         | 8.70                           |           |    | COAL                                       | 11              |
|                                                                                                                                                                                       |               |                             |       |         | 15.50                          |           |   | MUDSTONE / Sandstone bands                 | 12              |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     |                                            | 13              |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     |                                            | 14              |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     |                                            | 15              |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     |                                            | 16              |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     |                                            | 17              |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     |                                            | 18              |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     |                                            | 19              |
|                                                                                                                                                                                       |               |                             |       |         | 15.80                          |           |  | COAL                                       | 20              |
|                                                                                                                                                                                       |               |                             | 30.00 |         |                                |           |                                                                                     | 21                                         |                 |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     | 22                                         |                 |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     | 23                                         |                 |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     | 24                                         |                 |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     | 25                                         |                 |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     | 26                                         |                 |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     | 27                                         |                 |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     | 28                                         |                 |
|                                                                                                                                                                                       |               |                             |       |         |                                |           |                                                                                     | 29                                         |                 |
|                                                                                                                                                                                       |               |                             |       |         |                                |           | End of borehole at 30.00 m                                                          | 30                                         |                 |
| Remarks<br>1 Borehole complete at 30m bgl. 2. Descriptions based on drillers logs of flush returns. 3. 50mm diameter gas and groundwater monitoring well installed as detailed above. |               |                             |       |         |                                |           |                                                                                     |                                            |                 |

|                                                                 |               |                             |      |         | <h1>Borehole Log</h1>          |                            |                                                                                    | Borehole No.<br><b>R02</b><br>Sheet 1 of 1                                          |                            |    |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------|------|---------|--------------------------------|----------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------|----|
| Project Name: Goldthorpe Road, Goldthorpe                                                                                                        |               |                             |      |         | Project No.<br>42241           |                            | Co-ords: -                                                                         |                                                                                     | Hole Type<br>RO            |    |
| Location: Goldthorpe                                                                                                                             |               |                             |      |         | Level:                         |                            |                                                                                    | Scale<br>1:150                                                                      |                            |    |
| Client: Redmile Homes                                                                                                                            |               |                             |      |         | Dates: 18/01/2018 - 18/01/2018 |                            |                                                                                    | Logged By<br>SDS                                                                    |                            |    |
| Well                                                                                                                                             | Water Strikes | Samples and In Situ Testing |      |         | Depth (m)                      | Level (m)                  | Legend                                                                             | Stratum Description                                                                 |                            |    |
|                                                                                                                                                  |               | Depth (m)                   | Type | Results |                                |                            |                                                                                    |                                                                                     |                            |    |
|                                                                                                                                                  |               |                             |      |         | 2.10                           |                            |   | Overburden                                                                          | 1                          |    |
|                                                                                                                                                  |               |                             |      |         | 3.50                           |                            |   | COAL (Banded)                                                                       | 2                          |    |
|                                                                |               |                             |      |         |                                |                            |  | Mudstone / Sandstone bands                                                          | 3                          |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 4                          |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 5                          |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 6                          |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 7                          |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 8                          |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 9                          |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 10                         |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 11                         |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 12                         |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 13                         |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 14                         |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 15                         |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 16                         |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 17                         |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |                                                                                     | 18                         |    |
|                                                                                                                                                  |               |                             |      |         |                                | 18.00<br>18.20             |                                                                                    |  | COAL                       | 19 |
|                                                                                                                                                  |               |                             |      |         |                                |                            |                                                                                    |  | Mudstone / Sandstone bands | 20 |
|                                                                                                                                                  |               |                             |      |         |                                |                            | 21                                                                                 |                                                                                     |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            | 22                                                                                 |                                                                                     |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            | 23                                                                                 |                                                                                     |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            | 24                                                                                 |                                                                                     |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            | 25                                                                                 |                                                                                     |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            | 26                                                                                 |                                                                                     |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            | 27                                                                                 |                                                                                     |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            | 28                                                                                 |                                                                                     |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |                            | 29                                                                                 |                                                                                     |                            |    |
|                                                                                                                                                  |               |                             |      | 30.00   |                                | End of borehole at 30.00 m |                                                                                    | 30                                                                                  |                            |    |
| Remarks<br>1 Borehole complete at 30m bgl. 2. Descriptions based on drillers logs of flush returns. 3. Backfilled with arisings upon completion. |               |                             |      |         |                                |                            |                                                                                    |                                                                                     |                            |    |

|  |               |                             |      | <h1>Borehole Log</h1>          |           |                  | Borehole No.<br><b>R03</b><br>Sheet 1 of 1                                        |                           |    |
|-----------------------------------------------------------------------------------|---------------|-----------------------------|------|--------------------------------|-----------|------------------|-----------------------------------------------------------------------------------|---------------------------|----|
| Project Name: Goldthorpe Road, Goldthorpe                                         |               |                             |      | Project No.<br>42241           |           | Co-ords: -       |                                                                                   | Hole Type<br>RO           |    |
| Location: Goldthorpe                                                              |               |                             |      | Level:                         |           | Scale<br>1:150   |                                                                                   |                           |    |
| Client: Redmile Homes                                                             |               |                             |      | Dates: 18/01/2018 - 18/01/2018 |           | Logged By<br>SDS |                                                                                   |                           |    |
| Well                                                                              | Water Strikes | Samples and In Situ Testing |      |                                | Depth (m) | Level (m)        | Legend                                                                            | Stratum Description       |    |
|                                                                                   |               | Depth (m)                   | Type | Results                        |           |                  |                                                                                   |                           |    |
|  |               |                             |      |                                | 2.00      |                  |  | Overburden                | 1  |
|                                                                                   |               |                             |      |                                |           |                  |  | MUDSTONE                  | 2  |
|                                                                                   |               |                             |      |                                | 4.00      |                  |  | Broken Ground             | 3  |
|                                                                                   |               |                             |      |                                | 6.50      |                  |  | Solid (No returns)        | 4  |
|                                                                                   |               |                             |      |                                | 9.00      |                  |  | End of borehole at 9.00 m | 5  |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 6  |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 7  |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 8  |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 9  |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 10 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 11 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 12 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 13 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 14 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 15 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 16 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 17 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 18 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 19 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 20 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 21 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 22 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 23 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 24 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 25 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 26 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 27 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 28 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 29 |
|                                                                                   |               |                             |      |                                |           |                  |                                                                                   |                           | 30 |

Remarks  
 1 Borehole complete at 9m bgl. 2. Descriptions based on drillers logs of flush returns. 3. 50mm diameter gas and groundwater monitoring well as detailed above.

|                                                                                   |  |  |  |  |                                |  |                  |                                            |                 |
|-----------------------------------------------------------------------------------|--|--|--|--|--------------------------------|--|------------------|--------------------------------------------|-----------------|
|  |  |  |  |  | <h1>Borehole Log</h1>          |  |                  | Borehole No.<br><b>R04</b><br>Sheet 1 of 1 |                 |
| Project Name: Goldthorpe Road, Goldthorpe                                         |  |  |  |  | Project No.<br>42241           |  | Co-ords: -       |                                            | Hole Type<br>RO |
| Location: Goldthorpe                                                              |  |  |  |  | Level:                         |  | Scale<br>1:150   |                                            |                 |
| Client: Redmile Homes                                                             |  |  |  |  | Dates: 18/01/2018 - 18/01/2018 |  | Logged By<br>SDS |                                            |                 |

| Well                                                                               | Water Strikes | Samples and In Situ Testing |      |         | Depth (m) | Level (m)      | Legend                     | Stratum Description        |                             |    |
|------------------------------------------------------------------------------------|---------------|-----------------------------|------|---------|-----------|----------------|----------------------------|----------------------------|-----------------------------|----|
|                                                                                    |               | Depth (m)                   | Type | Results |           |                |                            |                            |                             |    |
|  |               |                             |      |         |           |                | Overburden                 | 1                          |                             |    |
|                                                                                    |               |                             |      |         | 2.40      |                | MUDSTONE                   | 2                          |                             |    |
|                                                                                    |               |                             |      |         | 5.50      |                | COAL (Branded)             | 3                          |                             |    |
|                                                                                    |               |                             |      |         | 7.00      |                | Mudstone / Sandstone bands | 4                          |                             |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 5                           |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 6                           |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 7                           |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 8                           |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 9                           |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 10                          |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 11                          |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 12                          |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 13                          |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 14                          |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 15                          |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 16                          |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 17                          |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 18                          |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 19                          |    |
|                                                                                    |               |                             |      |         |           |                |                            |                            | 20                          |    |
|                                                                                    |               |                             |      |         |           | 20.70<br>20.90 |                            | COAL                       | Mudstone / Sandstone bands. | 21 |
|                                                                                    |               |                             |      |         |           |                |                            |                            |                             | 22 |
|                                                                                    |               |                             |      |         |           |                |                            |                            |                             | 23 |
|                                                                                    |               |                             |      |         |           |                |                            |                            |                             | 24 |
|                                                                                    |               |                             |      |         |           |                |                            |                            |                             | 25 |
|                                                                                    |               |                             |      |         |           |                |                            |                            |                             | 26 |
|                                                                                    |               |                             |      |         |           |                |                            |                            |                             | 27 |
|                                                                                    |               |                             |      |         |           |                |                            |                            |                             | 28 |
|                                                                                    |               |                             |      |         |           |                |                            |                            |                             | 29 |
|                                                                                    |               |                             |      |         |           | 30.00          |                            | End of borehole at 30.00 m |                             | 30 |

Remarks  
 1 Borehole complete at 30m bgl. 2. Descriptions based on drillers logs of flush returns. 3. Backfilled with arisings upon completion.

## Borehole Log

Borehole No.

R05

Sheet 1 of 1

Project Name: Goldthorpe Road, Goldthorpe

Project No.  
42241

Co-ords: -

Hole Type  
RO

Location: Goldthorpe

Level:

Scale  
1:150

Client: Redmile Homes

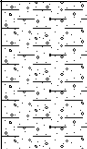
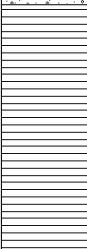
Dates: 18/01/2018 - 18/01/2018

Logged By  
SDS

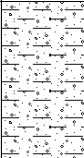
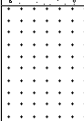
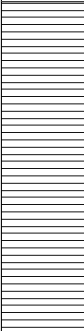
| Well | Water Strikes | Samples and In Situ Testing |      |         | Depth (m) | Level (m) | Legend | Stratum Description        |    |
|------|---------------|-----------------------------|------|---------|-----------|-----------|--------|----------------------------|----|
|      |               | Depth (m)                   | Type | Results |           |           |        |                            |    |
|      |               |                             |      |         |           |           |        | Over Burden                | 1  |
|      |               |                             |      |         | 2.80      |           |        |                            | 2  |
|      |               |                             |      |         | 4.00      |           |        | COAL (branded)             | 3  |
|      |               |                             |      |         |           |           |        | MUDSTONE                   | 4  |
|      |               |                             |      |         |           |           |        |                            | 5  |
|      |               |                             |      |         |           |           |        |                            | 6  |
|      |               |                             |      |         |           |           |        |                            | 7  |
|      |               |                             |      |         |           |           |        |                            | 8  |
|      |               |                             |      |         | 9.00      |           |        | COAL                       | 9  |
|      |               |                             |      |         | 9.10      |           |        | Mudstone / Sandstone bands | 10 |
|      |               |                             |      |         |           |           |        |                            | 11 |
|      |               |                             |      |         |           |           |        |                            | 12 |
|      |               |                             |      |         |           |           |        |                            | 13 |
|      |               |                             |      |         |           |           |        |                            | 14 |
|      |               |                             |      |         |           |           |        |                            | 15 |
|      |               |                             |      |         |           |           |        |                            | 16 |
|      |               |                             |      |         | 16.80     |           |        | COAL                       | 17 |
|      |               |                             |      |         | 17.00     |           |        | MUDSTONE                   | 18 |
|      |               |                             |      |         |           |           |        |                            | 19 |
|      |               |                             |      |         |           |           |        |                            | 20 |
|      |               |                             |      |         |           |           |        |                            | 21 |
|      |               |                             |      |         |           |           |        |                            | 22 |
|      |               |                             |      |         |           |           |        |                            | 23 |
|      |               |                             |      |         |           |           |        |                            | 24 |
|      |               |                             |      |         |           |           |        |                            | 25 |
|      |               |                             |      |         |           |           |        |                            | 26 |
|      |               |                             |      |         |           |           |        |                            | 27 |
|      |               |                             |      |         |           |           |        |                            | 28 |
|      |               |                             |      |         |           |           |        |                            | 29 |
|      |               |                             |      |         | 30.00     |           |        | End of borehole at 30.00 m | 30 |

## Remarks

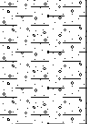
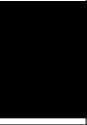
1 Borehole complete at 30m bgl. 2. Descriptions based on drillers logs of flush returns. 3. 50mm diameter gas and groundwater monitoring well installed as detailed above.

|                                                                 |               |                             |      |         | <h1>Borehole Log</h1>          |           |                                                                                   | Borehole No.<br><b>R06</b><br>Sheet 1 of 1                                          |                            |    |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------|------|---------|--------------------------------|-----------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------|----|
| Project Name: Goldthorpe Road, Goldthorpe                                                                                                        |               |                             |      |         | Project No.<br>42241           |           | Co-ords: -                                                                        |                                                                                     | Hole Type<br>RO            |    |
| Location: Goldthorpe                                                                                                                             |               |                             |      |         | Level:                         |           |                                                                                   | Scale<br>1:150                                                                      |                            |    |
| Client: Redmile Homes                                                                                                                            |               |                             |      |         | Dates: 18/01/2018 - 18/01/2018 |           |                                                                                   | Logged By<br>SDS                                                                    |                            |    |
| Well                                                                                                                                             | Water Strikes | Samples and In Situ Testing |      |         | Depth (m)                      | Level (m) | Legend                                                                            | Stratum Description                                                                 |                            |    |
|                                                                                                                                                  |               | Depth (m)                   | Type | Results |                                |           |                                                                                   |                                                                                     |                            |    |
|                                                                |               |                             |      |         | 3.00                           |           |  | Overburden                                                                          | 1                          |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |  | MUDSTONE                                                                            | 2                          |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   |                                                                                     | 3                          |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   |                                                                                     | 4                          |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   |                                                                                     | 5                          |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   |                                                                                     | 6                          |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   |                                                                                     | 7                          |    |
|                                                                                                                                                  |               |                             |      |         |                                | 7.90      |                                                                                   |    | COAL (branded)             | 8  |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   |                                                                                     | 9                          |    |
|                                                                                                                                                  |               |                             |      |         |                                | 10.10     |                                                                                   |   | MUDSTONE                   | 10 |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   |                                                                                     | 11                         |    |
|                                                                                                                                                  |               |                             |      |         |                                | 12.00     |                                                                                   |  | End of borehole at 12.00 m | 12 |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 13                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 14                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 15                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 16                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 17                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 18                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 19                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 20                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 21                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 22                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 23                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 24                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 25                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 26                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 27                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 28                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 29                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                   | 30                                                                                  |                            |    |
| Remarks<br>1 Borehole complete at 12m bgl. 2. Descriptions based on drillers logs of flush returns. 3. Backfilled with arisings upon completion. |               |                             |      |         |                                |           |                                                                                   |                                                                                     |                            |    |

|                                                                                   |  |  |  |  |                                |  |                  |                                            |                 |
|-----------------------------------------------------------------------------------|--|--|--|--|--------------------------------|--|------------------|--------------------------------------------|-----------------|
|  |  |  |  |  | <h1>Borehole Log</h1>          |  |                  | Borehole No.<br><b>R07</b><br>Sheet 1 of 1 |                 |
| Project Name: Goldthorpe Road, Goldthorpe                                         |  |  |  |  | Project No.<br>42241           |  | Co-ords: -       |                                            | Hole Type<br>RO |
| Location: Goldthorpe                                                              |  |  |  |  | Level:                         |  | Scale<br>1:150   |                                            |                 |
| Client: Redmile Homes                                                             |  |  |  |  | Dates: 18/01/2018 - 18/01/2018 |  | Logged By<br>SDS |                                            |                 |

| Well                                                                               | Water Strikes | Samples and In Situ Testing |      |         | Depth (m) | Level (m)                                                                           | Legend     | Stratum Description                                                                 |                                                                                    |                            |
|------------------------------------------------------------------------------------|---------------|-----------------------------|------|---------|-----------|-------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------|
|                                                                                    |               | Depth (m)                   | Type | Results |           |                                                                                     |            |                                                                                     |                                                                                    |                            |
|  |               |                             |      |         | 3.20      |    | Overburden | 1                                                                                   |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 5.50       |    | SANDSTONE                                                                          | 2                          |
|                                                                                    |               |                             |      |         |           |                                                                                     |            |                                                                                     |  | MUDSTONE                   |
|                                                                                    |               |                             |      |         | 12.20     |  |            |                                                                                     |                                                                                    | COAL (branded)             |
|                                                                                    |               |                             |      |         |           |                                                                                     | 14.40      |  |                                                                                    | Mudstone / Sandstone bands |
|                                                                                    |               |                             |      |         |           |                                                                                     |            |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     |            |                                                                                     | 7                                                                                  |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 8          |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 9          |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 10         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 11         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 12         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 13         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 14         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 15         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 16         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 17         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 18         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 19         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 20         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 21         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 22         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 23         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 24         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 25         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 26         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 27         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 28         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           |                                                                                     | 29         |                                                                                     |                                                                                    |                            |
|                                                                                    |               |                             |      |         |           | 30.00                                                                               |            | End of borehole at 30.00 m                                                          |                                                                                    | 30                         |

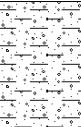
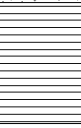
|                                                                                                                                                                             |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Remarks<br>1 Borehole complete at 30m bgl. 2. Descriptions based on drillers logs of flush returns. 3. 50mm diameter gas and groundwater monitoring well as detailed above. |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

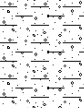
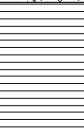
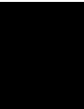
|    |               |                             |      |         | <h1>Borehole Log</h1>          |           |                                                                                   | Borehole No.<br><b>R08</b><br>Sheet 1 of 1                                         |                                                                                     |                |
|-------------------------------------------------------------------------------------|---------------|-----------------------------|------|---------|--------------------------------|-----------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------|
| Project Name: Goldthorpe Road, Goldthorpe                                           |               |                             |      |         | Project No.<br>42241           |           | Co-ords: -                                                                        |                                                                                    | Hole Type<br>RO                                                                     |                |
| Location: Goldthorpe                                                                |               |                             |      |         | Level:                         |           | Scale<br>1:150                                                                    |                                                                                    |                                                                                     |                |
| Client: Redmile Homes                                                               |               |                             |      |         | Dates: 18/01/2018 - 18/01/2018 |           | Logged By<br>SDS                                                                  |                                                                                    |                                                                                     |                |
| Well                                                                                | Water Strikes | Samples and In Situ Testing |      |         | Depth (m)                      | Level (m) | Legend                                                                            | Stratum Description                                                                |                                                                                     |                |
|                                                                                     |               | Depth (m)                   | Type | Results |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
|   |               |                             |      |         |                                |           |  | Overburden                                                                         | 1                                                                                   |                |
|                                                                                     |               |                             |      |         |                                |           |                                                                                   |  | MUDSTONE                                                                            | 2              |
|                                                                                     |               |                             |      |         |                                |           |                                                                                   |                                                                                    | MUDSTONE                                                                            | 3              |
|                                                                                     |               |                             |      |         |                                |           |                                                                                   |                                                                                    | MUDSTONE                                                                            | 4              |
|                                                                                     |               |                             |      |         |                                |           |                                                                                   |                                                                                    | MUDSTONE                                                                            | 5              |
|                                                                                     |               |                             |      |         |                                |           |                                                                                   |                                                                                    | MUDSTONE                                                                            | 6              |
|                                                                                     |               |                             |      |         |                                |           |                                                                                   |                                                                                    | MUDSTONE                                                                            | 7              |
|                                                                                     |               |                             |      |         |                                |           |                                                                                   |                                                                                    | MUDSTONE                                                                            | 8              |
|                                                                                     |               |                             |      |         |                                |           |                                                                                   |                                                                                    | MUDSTONE                                                                            | 9              |
|                                                                                     |               |                             |      |         |                                |           |                                                                                   |                                                                                    | MUDSTONE                                                                            | 10             |
|                                                                                     |               |                             |      |         |                                |           |                                                                                   |                                                                                    | MUDSTONE                                                                            | 11             |
|                                                                                     |               |                             |      |         |                                |           |                                                                                   |                                                                                    | MUDSTONE                                                                            | 12             |
|                                                                                     |               |                             |      |         |                                |           |                                                                                   |                                                                                    | MUDSTONE                                                                            | 13             |
|                                                                                     |               |                             |      |         |                                |           |                                                                                   |                                                                                    | MUDSTONE                                                                            | 14             |
|                                                                                     |               |                             |      |         |                                |           |                                                                                   |                                                                                    |  | COAL (branded) |
|  | MUDSTONE      | 16                          |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
|                                                                                     | MUDSTONE      | 17                          |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
|                                                                                     | MUDSTONE      | 18                          |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
|                                                                                     | MUDSTONE      | 19                          |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
|                                                                                     | MUDSTONE      | 20                          |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
|                                                                                     | MUDSTONE      | 21                          |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
|                                                                                     | MUDSTONE      | 22                          |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
|                                                                                     | MUDSTONE      | 23                          |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
|                                                                                     | MUDSTONE      | 24                          |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
|                                                                                     | MUDSTONE      | 25                          |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
|                                                                                     | MUDSTONE      | 26                          |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
|                                                                                     | MUDSTONE      | 27                          |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
|                                                                                     | MUDSTONE      | 28                          |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
|                                                                                     | MUDSTONE      | 29                          |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |
| MUDSTONE                                                                            | 30            |                             |      |         |                                |           |                                                                                   |                                                                                    |                                                                                     |                |

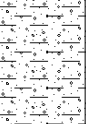
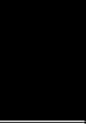
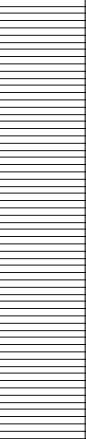
End of borehole at 15.00 m

Remarks  
 1 Borehole complete at 15m bgl. 2. Descriptions based on drillers logs of flush returns. 3. Backfilled with arisings upon completion.



|                                                                  |               |                             |      |         | <h1>Borehole Log</h1>          |           |                                                                                   | Borehole No.<br><b>R10</b><br>Sheet 1 of 1 |                 |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------|------|---------|--------------------------------|-----------|-----------------------------------------------------------------------------------|--------------------------------------------|-----------------|---|
| Project Name: Goldthorpe Road, Goldthorpe                                                                                                         |               |                             |      |         | Project No.<br>42241           |           | Co-ords: -                                                                        |                                            | Hole Type<br>RO |   |
| Location: Goldthorpe                                                                                                                              |               |                             |      |         | Level:                         |           | Scale<br>1:150                                                                    |                                            |                 |   |
| Client: Redmile Homes                                                                                                                             |               |                             |      |         | Dates: 18/01/2018 - 18/01/2018 |           | Logged By<br>SDS                                                                  |                                            |                 |   |
| Well                                                                                                                                              | Water Strikes | Samples and In Situ Testing |      |         | Depth (m)                      | Level (m) | Legend                                                                            | Stratum Description                        |                 |   |
|                                                                                                                                                   |               | Depth (m)                   | Type | Results |                                |           |                                                                                   |                                            |                 |   |
|                                                                  |               |                             |      |         | 2.60                           |           |  | Over Burden                                | 1               |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |  | MUDSTONE                                   | 2               |   |
|                                                                                                                                                   |               |                             |      |         | 5.00                           |           |  | Broken Ground                              | 3               |   |
|                                                                                                                                                   |               |                             |      |         | 7.40                           |           |  | Solid (No returns)                         | 4               |   |
|                                                                                                                                                   |               |                             |      |         | 8.40                           |           | ----- End of borehole at 8.40 m -----                                             |                                            |                 | 5 |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 6               |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 7               |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 8               |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 9               |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 10              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 11              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 12              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 13              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 14              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 15              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 16              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 17              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 18              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 19              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 20              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 21              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 22              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 23              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 24              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 25              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 26              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 27              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 28              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 29              |   |
|                                                                                                                                                   |               |                             |      |         |                                |           |                                                                                   |                                            | 30              |   |
| Remarks<br>1 Borehole complete at 8.4m bgl. 2. Descriptions based on drillers logs of flush returns. 3. Backfilled with arisings upon completion. |               |                             |      |         |                                |           |                                                                                   |                                            |                 |   |

|                                                                 |               |                             |      |         | <h1>Borehole Log</h1>          |           |                                                                                    | Borehole No.<br><b>R11</b><br>Sheet 1 of 1 |                                       |    |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------|------|---------|--------------------------------|-----------|------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------|----|
| Project Name: Goldthorpe Road, Goldthorpe                                                                                                        |               |                             |      |         | Project No.<br>42241           |           | Co-ords: -                                                                         |                                            | Hole Type<br>RO                       |    |
| Location: Goldthorpe                                                                                                                             |               |                             |      |         | Level:                         |           | Scale<br>1:150                                                                     |                                            |                                       |    |
| Client: Redmile Homes                                                                                                                            |               |                             |      |         | Dates: 18/01/2018 - 18/01/2018 |           | Logged By<br>SDS                                                                   |                                            |                                       |    |
| Well                                                                                                                                             | Water Strikes | Samples and In Situ Testing |      |         | Depth (m)                      | Level (m) | Legend                                                                             | Stratum Description                        |                                       |    |
|                                                                                                                                                  |               | Depth (m)                   | Type | Results |                                |           |                                                                                    |                                            |                                       |    |
|                                                                |               |                             |      |         | 2.20                           |           |   | Overburden                                 | 1                                     |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |   | MUDSTONE                                   | 2                                     |    |
|                                                                                                                                                  |               |                             |      |         | 4.80                           |           |                                                                                    |                                            |                                       | 3  |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                            |                                       | 4  |
|                                                                                                                                                  |               |                             |      |         |                                |           |   | COAL (branded)                             | 5                                     |    |
|                                                                                                                                                  |               |                             |      |         | 7.00                           |           |                                                                                    |                                            |                                       | 6  |
|                                                                                                                                                  |               |                             |      |         |                                |           |  | MUDSTONE                                   | 7                                     |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                            |                                       | 8  |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                            |                                       | 9  |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                            |                                       | 10 |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                            |                                       | 11 |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                            |                                       | 12 |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                            |                                       | 13 |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                            |                                       | 14 |
|                                                                                                                                                  |               |                             |      |         |                                | 15.00     |                                                                                    |                                            | <div>End of borehole at 15.00 m</div> | 15 |
| Remarks<br>1 Borehole complete at 15m bgl. 2. Descriptions based on drillers logs of flush returns. 3. Backfilled with arisings upon completion. |               |                             |      |         |                                |           |                                                                                    |                                            |                                       |    |

|                                                                 |               |                             |      |         | <h1>Borehole Log</h1>          |           |                                                                                    | Borehole No.<br><b>R12</b><br>Sheet 1 of 1                                          |                            |    |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------|------|---------|--------------------------------|-----------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------|----|
| Project Name: Goldthorpe Road, Goldthorpe                                                                                                        |               |                             |      |         | Project No.<br>42241           |           | Co-ords: -                                                                         |                                                                                     | Hole Type<br>RO            |    |
| Location: Goldthorpe                                                                                                                             |               |                             |      |         | Level:                         |           | Scale<br>1:150                                                                     |                                                                                     |                            |    |
| Client: Redmile Homes                                                                                                                            |               |                             |      |         | Dates: 18/01/2018 - 18/01/2018 |           | Logged By<br>SDS                                                                   |                                                                                     |                            |    |
| Well                                                                                                                                             | Water Strikes | Samples and In Situ Testing |      |         | Depth (m)                      | Level (m) | Legend                                                                             | Stratum Description                                                                 |                            |    |
|                                                                                                                                                  |               | Depth (m)                   | Type | Results |                                |           |                                                                                    |                                                                                     |                            |    |
|                                                                |               |                             |      |         |                                |           |   | Overburden                                                                          | 1                          |    |
|                                                                                                                                                  |               |                             |      |         | 2.50                           |           |   | MUDSTONE                                                                            | 2                          |    |
|                                                                                                                                                  |               |                             |      |         | 3.80                           |           |   | COAL (branded)                                                                      | 3                          |    |
|                                                                                                                                                  |               |                             |      |         | 6.20                           |           |  | MUDSTONE                                                                            | 4                          |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                                                                     |                            | 5  |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                                                                     |                            | 6  |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                                                                     |                            | 7  |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                                                                     |                            | 8  |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                                                                     |                            | 9  |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                                                                     |                            | 10 |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                                                                     |                            | 11 |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                                                                     |                            | 12 |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                                                                     |                            | 13 |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    |                                                                                     |                            | 14 |
|                                                                                                                                                  |               |                             |      |         |                                | 15.00     |                                                                                    |  | End of borehole at 15.00 m | 15 |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 16                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 17                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 18                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 19                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 20                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 21                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 22                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 23                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 24                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 25                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 26                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 27                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 28                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 29                                                                                  |                            |    |
|                                                                                                                                                  |               |                             |      |         |                                |           |                                                                                    | 30                                                                                  |                            |    |
| Remarks<br>1 Borehole complete at 15m bgl. 2. Descriptions based on drillers logs of flush returns. 3. Backfilled with arisings upon completion. |               |                             |      |         |                                |           |                                                                                    |                                                                                     |                            |    |

## **Appendix 4**

Geotechnical Test Results (PSL18/0446)

Chemical Test Results (Chemtest 18-01773-2)

Table of Assessment Values – Residential with Homegrown Produce

Table of Assessment Values – Public Open Space Near Housing

Infiltration Test Results



# LABORATORY REPORT



4043

**Contract Number: PSL18/0446**

Report Date: 09 February 2018  
Client's Reference: 42241  
Client Name: Eastwood & Partners  
St Andrews House  
23 Kingfield Road  
Sheffield  
S11 9AS

**For the attention of: Glen Burgin**

Contract Title: Goldthorpe Road, Goldthorpe  
Date Received: 26/1/2018  
Date Commenced: 26/1/2018  
Date Completed: 9/2/2018

**Notes: Opinions and Interpretations are outside the UKAS Accreditation**

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

R Gunson  
(Director)

A Watkins  
(Director)

R Berriman  
(Quality Manager)

L Knight  
(Senior Technician)

C Marshall  
(Laboratory Manager)

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Page 1 of

## SUMMARY OF LABORATORY SOIL DESCRIPTIONS

[illegible]

4043

**PSL**  
Professional Soils Laboratory

## Goldthorpe Road, Goldthorpe

**Contract No:**

**PSL18/0446**

**Client Ref:**

42241

# SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

| Hole Number | Sample Number | Sample Type | Top Depth<br>m | Base Depth<br>m | Moisture Content<br>%<br>Clause 3.2 | Linear Shrinkage<br>%<br>Clause 6.5 | Particle Density<br>Mg/m <sup>3</sup><br>Clause 8.2 | Liquid Limit<br>%<br>Clause 4.3/4 | Plastic Limit<br>%<br>Clause 5.3 | Plasticity Index<br>%<br>Clause 5.4 | Passing .425mm<br>% | Remarks                     |
|-------------|---------------|-------------|----------------|-----------------|-------------------------------------|-------------------------------------|-----------------------------------------------------|-----------------------------------|----------------------------------|-------------------------------------|---------------------|-----------------------------|
| TP01        |               |             | 0.50           |                 | 22                                  |                                     |                                                     | 36                                | 21                               | 15                                  | 96                  | Intermediate plasticity CI. |
| TP03        |               |             | 3.40           |                 | 23                                  |                                     |                                                     |                                   | NP                               |                                     |                     |                             |
| TP04        |               |             | 1.40           |                 | 25                                  |                                     |                                                     | 62                                | 24                               | 38                                  | 100                 | High plasticity CH.         |
| TP05A       |               |             | 1.40           |                 | 23                                  |                                     |                                                     | 65                                | 25                               | 40                                  | 100                 | High plasticity CH.         |
| TP06        |               |             | 1.20           |                 | 22                                  |                                     |                                                     | 50                                | 26                               | 24                                  | 97                  | Intermediate plasticity CI. |
| TP06        |               |             | 2.40           |                 | 19                                  |                                     |                                                     | 51                                | 26                               | 25                                  | 97                  | High plasticity CH.         |
| TP07        |               |             | 1.70           |                 | 22                                  |                                     |                                                     | 42                                | 24                               | 18                                  | 100                 | Intermediate plasticity CI. |
| TP08        |               |             | 0.80           |                 | 19                                  |                                     |                                                     | 36                                | 22                               | 14                                  | 96                  | Intermediate plasticity CI. |
| TP09        |               |             | 1.20           |                 | 28                                  |                                     |                                                     | 62                                | 25                               | 37                                  | 100                 | High plasticity CH.         |
| TP10        |               |             | 1.20           | 1.30            | 25                                  |                                     |                                                     | 53                                | 27                               | 26                                  | 82                  | High plasticity CH.         |
|             |               |             |                |                 |                                     |                                     |                                                     |                                   |                                  |                                     |                     |                             |
|             |               |             |                |                 |                                     |                                     |                                                     |                                   |                                  |                                     |                     |                             |
|             |               |             |                |                 |                                     |                                     |                                                     |                                   |                                  |                                     |                     |                             |
|             |               |             |                |                 |                                     |                                     |                                                     |                                   |                                  |                                     |                     |                             |
|             |               |             |                |                 |                                     |                                     |                                                     |                                   |                                  |                                     |                     |                             |
|             |               |             |                |                 |                                     |                                     |                                                     |                                   |                                  |                                     |                     |                             |
|             |               |             |                |                 |                                     |                                     |                                                     |                                   |                                  |                                     |                     |                             |
|             |               |             |                |                 |                                     |                                     |                                                     |                                   |                                  |                                     |                     |                             |
|             |               |             |                |                 |                                     |                                     |                                                     |                                   |                                  |                                     |                     |                             |
|             |               |             |                |                 |                                     |                                     |                                                     |                                   |                                  |                                     |                     |                             |
|             |               |             |                |                 |                                     |                                     |                                                     |                                   |                                  |                                     |                     |                             |

SYMBOLS : NP : Non Plastic

\* : Liquid Limit and Plastic Limit Wet Sieved.



4043



Goldthorpe Road, Goldthorpe

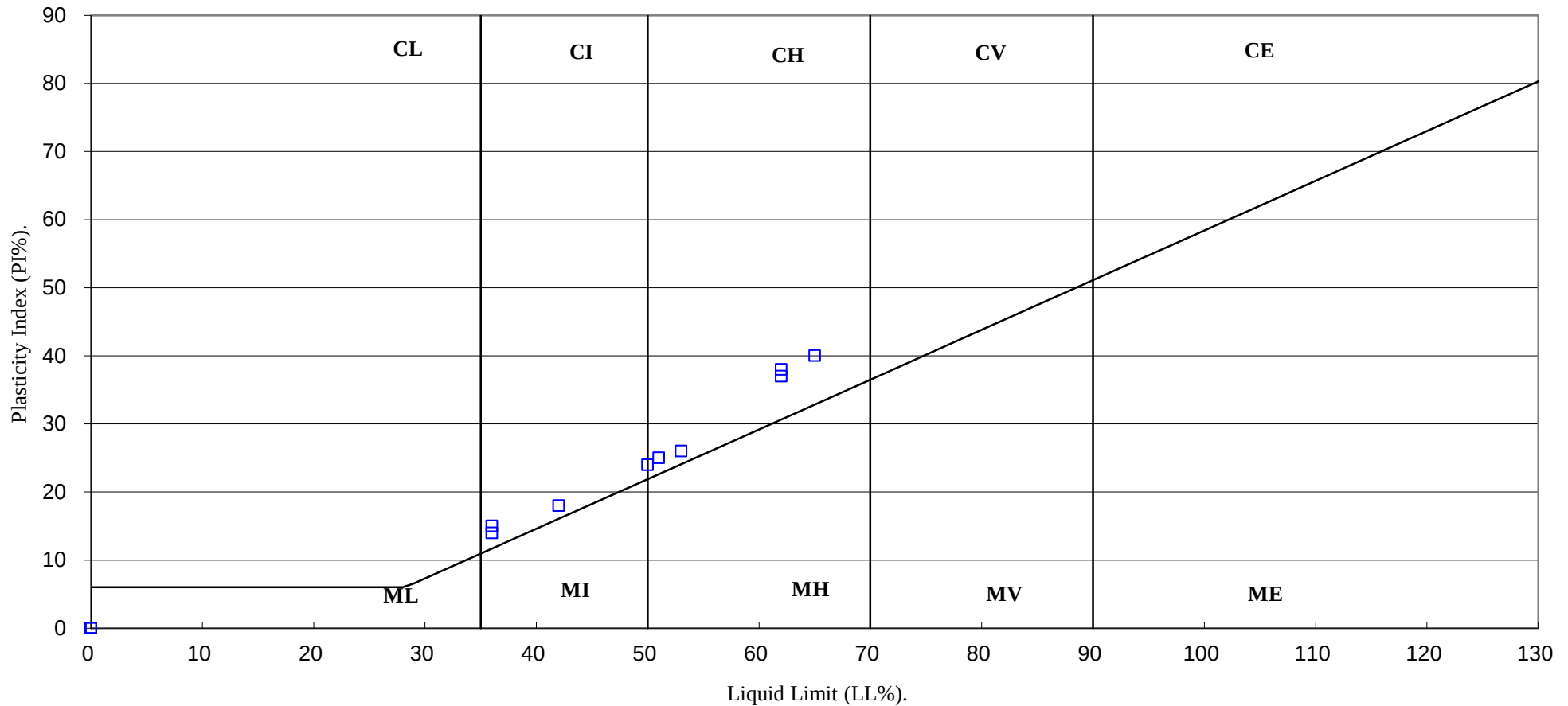
Contract No:

PSL18/0446

Client Ref:

42241

# PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



4043

**PSL**  
Professional Soils Laboratory

Goldthorpe Road, Goldthorpe

Contract No:

PSL18/0446

Client Ref:

42241



## Amended Report

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**Report No.:** 18-01773-2

**Initial Date of Issue:** 26-Jan-2018 **Date of Re-Issue:** 12-Feb-2018

**Client:** Eastwood & Partners

**Client Address:** St. Andrews House  
23 Kingfield Road  
Sheffield  
South Yorkshire  
S11 9AS

**Contact(s):** Geo

**Project:** 42241 Goldthorpe Road, Goldthorpe

**Quotation No.:** **Date Received:** 22-Jan-2018

**Order No.:** **Date Instructed:** 22-Jan-2018

**No. of Samples:** 22

**Turnaround (Wkdays):** 15 **Results Due:** 09-Feb-2018

**Date Approved:** 12-Feb-2018

**Approved By:**



**Details:** Martin Dyer, Laboratory Manager

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## Results - Soil

|                                        |                             |            |              |            |                      |             |                      |                      |             |                      |                      |                      |                      |
|----------------------------------------|-----------------------------|------------|--------------|------------|----------------------|-------------|----------------------|----------------------|-------------|----------------------|----------------------|----------------------|----------------------|
| <b>Client: Eastwood &amp; Partners</b> | <b>Chemtest Job No.:</b>    |            |              |            | 18-01773             | 18-01773    | 18-01773             | 18-01773             | 18-01773    | 18-01773             | 18-01773             | 18-01773             | 18-01773             |
| <b>Quotation No.:</b>                  | <b>Chemtest Sample ID.:</b> |            |              |            | 567139               | 567140      | 567143               | 567144               | 567145      | 567146               | 567147               | 567148               | 567149               |
| <b>Order No.:</b>                      | <b>Client Sample Ref.:</b>  |            |              |            | TP01                 | TP01        | TP02A                | TP02A                | TP02A       | TP03                 | TP03                 | TP04                 | TP04                 |
|                                        | <b>Client Sample ID.:</b>   |            |              |            | ES1                  | ES2         | ES3                  | ES4                  | ES5         | ES1                  | ES2                  | ES1                  | ES2                  |
|                                        | <b>Sample Type:</b>         |            |              |            | SOIL                 | SOIL        | SOIL                 | SOIL                 | SOIL        | SOIL                 | SOIL                 | SOIL                 | SOIL                 |
|                                        | <b>Top Depth (m):</b>       |            |              |            | 0.10                 | 0.20        | 0.50                 | 1.00                 | 2.50        | 0.05                 | 0.60                 | 0.10                 | 0.50                 |
|                                        | <b>Date Sampled:</b>        |            |              |            | 17-Jan-2018          | 17-Jan-2018 | 17-Jan-2018          | 17-Jan-2018          | 17-Jan-2018 | 17-Jan-2018          | 17-Jan-2018          | 17-Jan-2018          | 17-Jan-2018          |
|                                        | <b>Asbestos Lab:</b>        |            |              |            | COVENTRY             |             | COVENTRY             | COVENTRY             |             | COVENTRY             | COVENTRY             | COVENTRY             | COVENTRY             |
| <b>Determinand</b>                     | <b>Accred.</b>              | <b>SOP</b> | <b>Units</b> | <b>LOD</b> |                      |             |                      |                      |             |                      |                      |                      |                      |
| ACM Type                               | U                           | 2192       |              | N/A        | -                    |             | -                    | -                    |             | -                    | -                    | -                    | -                    |
| Asbestos Identification                | U                           | 2192       | %            | 0.001      | No Asbestos Detected |             | No Asbestos Detected | No Asbestos Detected |             | No Asbestos Detected | No Asbestos Detected | No Asbestos Detected | No Asbestos Detected |
| Moisture                               | N                           | 2030       | %            | 0.020      | 18                   | 15          | 12                   | 30                   | 25          | 18                   | 18                   | 15                   | 19                   |
| Soil Colour                            | N                           | 2040       |              | N/A        | Brown                | Brown       | Brown                | Brown                | Brown       | Brown                | Brown                | Brown                | Brown                |
| Other Material                         | N                           | 2040       |              | N/A        | Stones               | Stones      | NONE                 | Stones               | Stones      | Stones               | Stones               | Stones               | Stones               |
| Soil Texture                           | N                           | 2040       |              | N/A        | Clay                 | Clay        | Sand                 | Sand                 | Sand        | Sand                 | Sand                 | Sand                 | Sand                 |
| pH                                     | M                           | 2010       |              | N/A        | 8.0                  | 6.3         | 8.9                  | 7.2                  | 5.3         | 7.5                  | 7.7                  | 8.3                  | 7.0                  |
| Sulphate (2:1 Water Soluble) as SO4    | M                           | 2120       | g/l          | 0.010      |                      | 0.096       | 0.018                | 0.16                 | 0.14        |                      | 0.22                 |                      | 1.6                  |
| Calorific Value                        | N                           | 2140       | MJ/kg        | 0.10       |                      |             |                      | 8.1                  | 17          |                      |                      |                      |                      |
| Total Sulphur                          | M                           | 2175       | %            | 0.010      |                      | 0.038       | 0.094                | 0.42                 | 0.78        |                      | 0.090                |                      | 0.26                 |
| Sulphate (Acid Soluble)                | M                           | 2430       | %            | 0.010      |                      | 0.053       | 0.051                | 0.073                | 0.095       |                      | 0.073                |                      | 0.31                 |
| Arsenic                                | M                           | 2450       | mg/kg        | 1.0        | 31                   | 26          | 31                   | 29                   | 21          | 25                   | 27                   | 19                   | 43                   |
| Cadmium                                | M                           | 2450       | mg/kg        | 0.10       | 0.52                 | 0.18        | 0.82                 | 0.35                 | 0.14        | 0.30                 | 0.26                 | 0.60                 | 0.41                 |
| Chromium                               | M                           | 2450       | mg/kg        | 1.0        | 40                   | 26          | 120                  | 57                   | 14          | 29                   | 27                   | 46                   | 32                   |
| Copper                                 | M                           | 2450       | mg/kg        | 0.50       | 34                   | 14          | 15                   | 57                   | 46          | 34                   | 36                   | 57                   | 44                   |
| Mercury                                | M                           | 2450       | mg/kg        | 0.10       | 0.31                 | 0.19        | 0.36                 | 0.58                 | 0.37        | 0.23                 | 0.18                 | 0.34                 | 0.36                 |
| Nickel                                 | M                           | 2450       | mg/kg        | 0.50       | 28                   | 15          | 15                   | 34                   | 20          | 30                   | 49                   | 22                   | 39                   |
| Lead                                   | M                           | 2450       | mg/kg        | 0.50       | 51                   | 27          | 36                   | 47                   | 16          | 47                   | 32                   | 130                  | 46                   |
| Selenium                               | M                           | 2450       | mg/kg        | 0.20       | 0.62                 | 0.96        | < 0.20               | 2.8                  | 3.1         | 1.1                  | 1.6                  | 0.85                 | 2.8                  |
| Zinc                                   | M                           | 2450       | mg/kg        | 0.50       | 130                  | 67          | 84                   | 58                   | 21          | 110                  | 120                  | 190                  | 120                  |
| Chromium (Hexavalent)                  | N                           | 2490       | mg/kg        | 0.50       | < 0.50               | < 0.50      | < 0.50               | < 0.50               | < 0.50      | < 0.50               | < 0.50               | < 0.50               | < 0.50               |
| Total Organic Carbon                   | M                           | 2625       | %            | 0.20       |                      |             |                      | 4.4                  |             |                      |                      | < 0.20               |                      |
| As Stomach Bioaccessibility            | N                           | 2630       | mg/kg        | 0.20       |                      |             |                      |                      |             |                      |                      |                      |                      |
| As Intestinal Bioaccessibility 1       | N                           | 2630       | mg/kg        | 0.20       |                      |             |                      |                      |             |                      |                      |                      |                      |
| As Intestinal Bioaccessibility 2       | N                           | 2630       | mg/kg        | 0.20       |                      |             |                      |                      |             |                      |                      |                      |                      |
| As Bioaccessible Fraction              | N                           | 2630       | %            | 0.10       |                      |             |                      |                      |             |                      |                      |                      |                      |
| Naphthalene                            | M                           | 2800       | mg/kg        | 0.10       | 0.27                 | < 0.10      | < 0.10               | < 0.10               | 0.17        | < 0.10               | < 0.10               | < 0.10               | < 0.10               |
| Acenaphthylene                         | N                           | 2800       | mg/kg        | 0.10       | < 0.10               | < 0.10      | 0.79                 | < 0.10               | < 0.10      | < 0.10               | < 0.10               | < 0.10               | < 0.10               |
| Acenaphthene                           | M                           | 2800       | mg/kg        | 0.10       | < 0.10               | < 0.10      | 4.9                  | 0.24                 | < 0.10      | < 0.10               | < 0.10               | < 0.10               | < 0.10               |
| Fluorene                               | M                           | 2800       | mg/kg        | 0.10       | < 0.10               | < 0.10      | 7.2                  | 0.56                 | < 0.10      | < 0.10               | < 0.10               | < 0.10               | < 0.10               |
| Phenanthrene                           | M                           | 2800       | mg/kg        | 0.10       | 1.3                  | < 0.10      | 97                   | 9.9                  | 0.91        | 0.48                 | 0.35                 | 2.2                  | < 0.10               |
| Anthracene                             | M                           | 2800       | mg/kg        | 0.10       | 0.24                 | < 0.10      | 28                   | 2.2                  | 0.11        | < 0.10               | < 0.10               | 0.40                 | < 0.10               |
| Fluoranthene                           | M                           | 2800       | mg/kg        | 0.10       | 3.7                  | < 0.10      | 140                  | 14                   | 1.3         | 2.0                  | 0.65                 | 5.1                  | 0.19                 |
| Pyrene                                 | M                           | 2800       | mg/kg        | 0.10       | 3.5                  | < 0.10      | 110                  | 12                   | 1.8         | 1.9                  | 0.56                 | 4.5                  | 0.18                 |
| Benzo[a]anthracene                     | M                           | 2800       | mg/kg        | 0.10       | 1.7                  | < 0.10      | 56                   | 5.6                  | 0.32        | 0.86                 | 0.19                 | 2.3                  | < 0.10               |
| Chrysene                               | M                           | 2800       | mg/kg        | 0.10       | 1.9                  | < 0.10      | 51                   | 5.7                  | 0.35        | 1.1                  | 0.16                 | 2.5                  | < 0.10               |
| Benzo[b]fluoranthene                   | M                           | 2800       | mg/kg        | 0.10       | 2.2                  | < 0.10      | 59                   | 6.8                  | 0.28        | 1.7                  | < 0.10               | 3.2                  | < 0.10               |

## Results - Soil

Project: 42241 Goldthorpe Road, Goldthorpe

|                                        |                             |            |              |            |             |             |             |             |             |             |             |             |             |
|----------------------------------------|-----------------------------|------------|--------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Client: Eastwood &amp; Partners</b> | <b>Chemtest Job No.:</b>    |            |              |            | 18-01773    | 18-01773    | 18-01773    | 18-01773    | 18-01773    | 18-01773    | 18-01773    | 18-01773    | 18-01773    |
| Quotation No.:                         | <b>Chemtest Sample ID.:</b> |            |              |            | 567139      | 567140      | 567143      | 567144      | 567145      | 567146      | 567147      | 567148      | 567149      |
| Order No.:                             | Client Sample Ref.:         |            |              |            | TP01        | TP01        | TP02A       | TP02A       | TP02A       | TP03        | TP03        | TP04        | TP04        |
|                                        | Client Sample ID.:          |            |              |            | ES1         | ES2         | ES3         | ES4         | ES5         | ES1         | ES2         | ES1         | ES2         |
|                                        | Sample Type:                |            |              |            | SOIL        | SOIL        | SOIL        | SOIL        | SOIL        | SOIL        | SOIL        | SOIL        | SOIL        |
|                                        | Top Depth (m):              |            |              |            | 0.10        | 0.20        | 0.50        | 1.00        | 2.50        | 0.05        | 0.60        | 0.10        | 0.50        |
|                                        | Date Sampled:               |            |              |            | 17-Jan-2018 | 17-Jan-2018 | 17-Jan-2018 | 17-Jan-2018 | 17-Jan-2018 | 17-Jan-2018 | 17-Jan-2018 | 17-Jan-2018 | 17-Jan-2018 |
|                                        | Asbestos Lab:               |            |              |            | COVENTRY    |             | COVENTRY    | COVENTRY    |             | COVENTRY    | COVENTRY    | COVENTRY    | COVENTRY    |
| <b>Determinand</b>                     | <b>Accred.</b>              | <b>SOP</b> | <b>Units</b> | <b>LOD</b> |             |             |             |             |             |             |             |             |             |
| Benzo[k]fluoranthene                   | M                           | 2800       | mg/kg        | 0.10       | 0.65        | < 0.10      | 26          | 2.7         | < 0.10      | 0.50        | < 0.10      | 1.1         | < 0.10      |
| Benzo[a]pyrene                         | M                           | 2800       | mg/kg        | 0.10       | 1.4         | < 0.10      | 54          | 5.6         | 0.16        | 1.1         | < 0.10      | 2.4         | < 0.10      |
| Indeno(1,2,3-c,d)Pyrene                | M                           | 2800       | mg/kg        | 0.10       | 1.0         | < 0.10      | 32          | 3.9         | 0.10        | 1.2         | < 0.10      | 1.7         | < 0.10      |
| Dibenz(a,h)Anthracene                  | N                           | 2800       | mg/kg        | 0.10       | < 0.10      | < 0.10      | 6.8         | 0.54        | < 0.10      | 0.10        | < 0.10      | 0.16        | < 0.10      |
| Benzo[g,h,i]perylene                   | M                           | 2800       | mg/kg        | 0.10       | 1.1         | < 0.10      | 26          | 3.0         | 0.10        | 1.1         | < 0.10      | 1.6         | < 0.10      |
| Total Of 16 PAH's                      | N                           | 2800       | mg/kg        | 2.0        | 19          | < 2.0       | 700         | 73          | 5.6         | 12          | < 2.0       | 27          | < 2.0       |

## Results - Soil

Project: 42241 Goldthorpe Road, Goldthorpe

|                                        |                             |            |              |            |                      |                      |             |                      |                      |                      |                      |             |                      |
|----------------------------------------|-----------------------------|------------|--------------|------------|----------------------|----------------------|-------------|----------------------|----------------------|----------------------|----------------------|-------------|----------------------|
| <b>Client: Eastwood &amp; Partners</b> | <b>Chemtest Job No.:</b>    |            |              |            | 18-01773             | 18-01773             | 18-01773    | 18-01773             | 18-01773             | 18-01773             | 18-01773             | 18-01773    | 18-01773             |
| <b>Quotation No.:</b>                  | <b>Chemtest Sample ID.:</b> |            |              |            | 567152               | 567153               | 567154      | 567156               | 567157               | 567158               | 567159               | 567160      | 567161               |
| <b>Order No.:</b>                      | <b>Client Sample Ref.:</b>  |            |              |            | TP05                 | TP05                 | TP05A       | TP06                 | TP06                 | SA01                 | TP07                 | TP07        | SA02                 |
|                                        | <b>Client Sample ID.:</b>   |            |              |            | ES1                  | ES2                  | ES1         | ES1                  | ES2                  | ES1                  | ES1                  | ES2         | ES1                  |
|                                        | <b>Sample Type:</b>         |            |              |            | SOIL                 | SOIL                 | SOIL        | SOIL                 | SOIL                 | SOIL                 | SOIL                 | SOIL        | SOIL                 |
|                                        | <b>Top Depth (m):</b>       |            |              |            | 0.20                 | 0.60                 | 1.20        | 0.30                 | 0.80                 | 0.10                 | 0.10                 | 0.40        | 0.10                 |
|                                        | <b>Date Sampled:</b>        |            |              |            | 17-Jan-2018          | 17-Jan-2018          | 17-Jan-2018 | 17-Jan-2018          | 17-Jan-2018          | 18-Jan-2018          | 18-Jan-2018          | 18-Jan-2018 | 18-Jan-2018          |
|                                        | <b>Asbestos Lab:</b>        |            |              |            | COVENTRY             | COVENTRY             |             | COVENTRY             | COVENTRY             | COVENTRY             | COVENTRY             |             | COVENTRY             |
| <b>Determinand</b>                     | <b>Accred.</b>              | <b>SOP</b> | <b>Units</b> | <b>LOD</b> |                      |                      |             |                      |                      |                      |                      |             |                      |
| ACM Type                               | U                           | 2192       |              | N/A        | -                    | -                    |             | -                    | -                    | -                    | -                    |             | -                    |
| Asbestos Identification                | U                           | 2192       | %            | 0.001      | No Asbestos Detected | No Asbestos Detected |             | No Asbestos Detected | No Asbestos Detected | No Asbestos Detected | No Asbestos Detected |             | No Asbestos Detected |
| Moisture                               | N                           | 2030       | %            | 0.020      | 15                   | 17                   | 16          | 22                   | 14                   | 23                   | 25                   | 21          | 26                   |
| Soil Colour                            | N                           | 2040       |              | N/A        | Brown                | Brown                | Grey        | Brown                | Brown                | Brown                | Brown                | Brown       | Brown                |
| Other Material                         | N                           | 2040       |              | N/A        | Stones               | Stones               | NONE        | Stones               | Stones               | NONE                 | Stones               | Stones      | NONE                 |
| Soil Texture                           | N                           | 2040       |              | N/A        | Sand                 | Sand                 | Clay        | Sand                 | Sand                 | Clay                 | Clay                 | Sand        | Clay                 |
| pH                                     | M                           | 2010       |              | N/A        | 8.2                  | 8.1                  | 7.5         | 7.8                  | 8.0                  | 8.0                  | 6.5                  | 7.8         | 7.0                  |
| Sulphate (2:1 Water Soluble) as SO4    | M                           | 2120       | g/l          | 0.010      |                      | 0.018                | 0.19        |                      | < 0.010              |                      |                      | < 0.010     |                      |
| Calorific Value                        | N                           | 2140       | MJ/kg        | 0.10       |                      |                      |             |                      |                      |                      |                      |             |                      |
| Total Sulphur                          | M                           | 2175       | %            | 0.010      |                      | 0.096                | 0.037       |                      | 0.056                |                      |                      | 0.026       |                      |
| Sulphate (Acid Soluble)                | M                           | 2430       | %            | 0.010      |                      | 0.044                | 0.051       |                      | 0.060                |                      |                      | 0.029       |                      |
| Arsenic                                | M                           | 2450       | mg/kg        | 1.0        | 18                   | 29                   | 18          | 43                   | 28                   | 19                   | 32                   | 16          | 56                   |
| Cadmium                                | M                           | 2450       | mg/kg        | 0.10       | 0.59                 | 0.46                 | 0.12        | 0.57                 | 0.18                 | 0.29                 | 0.48                 | 0.34        | 0.76                 |
| Chromium                               | M                           | 2450       | mg/kg        | 1.0        | 23                   | 24                   | 23          | 26                   | 28                   | 24                   | 30                   | 33          | 31                   |
| Copper                                 | M                           | 2450       | mg/kg        | 0.50       | 420                  | 40                   | 39          | 110                  | 38                   | 25                   | 49                   | 29          | 53                   |
| Mercury                                | M                           | 2450       | mg/kg        | 0.10       | 0.34                 | 0.43                 | 0.20        | 0.41                 | 0.26                 | 0.24                 | 0.49                 | 0.17        | 0.71                 |
| Nickel                                 | M                           | 2450       | mg/kg        | 0.50       | 17                   | 26                   | 23          | 41                   | 33                   | 21                   | 44                   | 40          | 37                   |
| Lead                                   | M                           | 2450       | mg/kg        | 0.50       | 170                  | 73                   | 31          | 250                  | 49                   | 47                   | 74                   | 32          | 69                   |
| Selenium                               | M                           | 2450       | mg/kg        | 0.20       | 0.68                 | 0.97                 | 0.64        | 1.5                  | 0.85                 | 0.67                 | 1.5                  | 0.72        | 2.4                  |
| Zinc                                   | M                           | 2450       | mg/kg        | 0.50       | 190                  | 130                  | 64          | 170                  | 90                   | 92                   | 150                  | 120         | 140                  |
| Chromium (Hexavalent)                  | N                           | 2490       | mg/kg        | 0.50       | < 0.50               | < 0.50               | < 0.50      | < 0.50               | < 0.50               | < 0.50               | < 0.50               | < 0.50      | < 0.50               |
| Total Organic Carbon                   | M                           | 2625       | %            | 0.20       | 0.37                 |                      |             |                      |                      |                      |                      |             |                      |
| As Stomach Bioaccessibility            | N                           | 2630       | mg/kg        | 0.20       |                      |                      |             |                      |                      |                      |                      |             | 0.86                 |
| As Intestinal Bioaccessibility 1       | N                           | 2630       | mg/kg        | 0.20       |                      |                      |             |                      |                      |                      |                      |             | 1.3                  |
| As Intestinal Bioaccessibility 2       | N                           | 2630       | mg/kg        | 0.20       |                      |                      |             |                      |                      |                      |                      |             | 1.4                  |
| As Bioaccessible Fraction              | N                           | 2630       | %            | 0.10       |                      |                      |             |                      |                      |                      |                      |             | 2.4                  |
| Naphthalene                            | M                           | 2800       | mg/kg        | 0.10       | < 0.10               | 0.10                 | < 0.10      | 2.2                  | 0.43                 | < 0.10               | < 0.10               | < 0.10      | 0.25                 |
| Acenaphthylene                         | N                           | 2800       | mg/kg        | 0.10       | < 0.10               | < 0.10               | < 0.10      | 0.13                 | < 0.10               | < 0.10               | < 0.10               | < 0.10      | < 0.10               |
| Acenaphthene                           | M                           | 2800       | mg/kg        | 0.10       | < 0.10               | < 0.10               | < 0.10      | 1.2                  | < 0.10               | < 0.10               | < 0.10               | < 0.10      | < 0.10               |
| Fluorene                               | M                           | 2800       | mg/kg        | 0.10       | 0.20                 | < 0.10               | < 0.10      | 0.89                 | < 0.10               | < 0.10               | < 0.10               | < 0.10      | < 0.10               |
| Phenanthrene                           | M                           | 2800       | mg/kg        | 0.10       | 3.6                  | 0.56                 | < 0.10      | 16                   | 1.4                  | 0.28                 | < 0.10               | < 0.10      | 0.71                 |
| Anthracene                             | M                           | 2800       | mg/kg        | 0.10       | 0.83                 | < 0.10               | < 0.10      | 4.1                  | 0.18                 | < 0.10               | 0.10                 | < 0.10      | < 0.10               |
| Fluoranthene                           | M                           | 2800       | mg/kg        | 0.10       | 6.0                  | 1.4                  | < 0.10      | 25                   | 2.1                  | 0.36                 | 0.18                 | < 0.10      | 2.7                  |
| Pyrene                                 | M                           | 2800       | mg/kg        | 0.10       | 5.1                  | 1.2                  | < 0.10      | 21                   | 1.9                  | 0.29                 | 0.16                 | < 0.10      | 2.6                  |
| Benzo[a]anthracene                     | M                           | 2800       | mg/kg        | 0.10       | 2.4                  | < 0.10               | < 0.10      | 11                   | 0.81                 | < 0.10               | < 0.10               | < 0.10      | 1.0                  |
| Chrysene                               | M                           | 2800       | mg/kg        | 0.10       | 2.7                  | 0.48                 | < 0.10      | 12                   | 0.84                 | < 0.10               | < 0.10               | < 0.10      | 1.5                  |
| Benzo[b]fluoranthene                   | M                           | 2800       | mg/kg        | 0.10       | 3.1                  | < 0.10               | < 0.10      | 12                   | 0.76                 | < 0.10               | < 0.10               | < 0.10      | 2.3                  |

## Results - Soil

Project: 42241 Goldthorpe Road, Goldthorpe

|                                        |                             |            |              |            |             |             |             |             |             |             |             |             |             |
|----------------------------------------|-----------------------------|------------|--------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Client: Eastwood &amp; Partners</b> | <b>Chemtest Job No.:</b>    |            |              |            | 18-01773    | 18-01773    | 18-01773    | 18-01773    | 18-01773    | 18-01773    | 18-01773    | 18-01773    | 18-01773    |
| Quotation No.:                         | <b>Chemtest Sample ID.:</b> |            |              |            | 567152      | 567153      | 567154      | 567156      | 567157      | 567158      | 567159      | 567160      | 567161      |
| Order No.:                             | Client Sample Ref.:         |            |              |            | TP05        | TP05        | TP05A       | TP06        | TP06        | SA01        | TP07        | TP07        | SA02        |
|                                        | Client Sample ID.:          |            |              |            | ES1         | ES2         | ES1         | ES1         | ES2         | ES1         | ES1         | ES2         | ES1         |
|                                        | Sample Type:                |            |              |            | SOIL        | SOIL        | SOIL        | SOIL        | SOIL        | SOIL        | SOIL        | SOIL        | SOIL        |
|                                        | Top Depth (m):              |            |              |            | 0.20        | 0.60        | 1.20        | 0.30        | 0.80        | 0.10        | 0.10        | 0.40        | 0.10        |
|                                        | Date Sampled:               |            |              |            | 17-Jan-2018 | 17-Jan-2018 | 17-Jan-2018 | 17-Jan-2018 | 17-Jan-2018 | 18-Jan-2018 | 18-Jan-2018 | 18-Jan-2018 | 18-Jan-2018 |
|                                        | Asbestos Lab:               |            |              |            | COVENTRY    | COVENTRY    |             | COVENTRY    | COVENTRY    | COVENTRY    | COVENTRY    |             | COVENTRY    |
| <b>Determinand</b>                     | <b>Accred.</b>              | <b>SOP</b> | <b>Units</b> | <b>LOD</b> |             |             |             |             |             |             |             |             |             |
| Benzo[k]fluoranthene                   | M                           | 2800       | mg/kg        | 0.10       | 1.0         | 0.14        | < 0.10      | 5.0         | 0.24        | < 0.10      | < 0.10      | < 0.10      | 0.75        |
| Benzo[a]pyrene                         | M                           | 2800       | mg/kg        | 0.10       | 2.3         | 0.40        | < 0.10      | 9.8         | 0.37        | < 0.10      | < 0.10      | < 0.10      | 1.5         |
| Indeno(1,2,3-c,d)Pyrene                | M                           | 2800       | mg/kg        | 0.10       | 1.7         | 0.39        | < 0.10      | 5.9         | 0.27        | < 0.10      | < 0.10      | < 0.10      | 1.5         |
| Dibenz(a,h)Anthracene                  | N                           | 2800       | mg/kg        | 0.10       | 0.17        | < 0.10      | < 0.10      | 1.1         | < 0.10      | < 0.10      | < 0.10      | < 0.10      | 0.10        |
| Benzo[g,h,i]perylene                   | M                           | 2800       | mg/kg        | 0.10       | 1.5         | 0.38        | < 0.10      | 5.3         | 0.35        | < 0.10      | < 0.10      | < 0.10      | 1.5         |
| Total Of 16 PAH's                      | N                           | 2800       | mg/kg        | 2.0        | 31          | 5.1         | < 2.0       | 130         | 9.7         | < 2.0       | < 2.0       | < 2.0       | 16          |

Project: 42241 Goldthorpe Road, Goldthorpe

|                                        |                             |            |              |            |                      |                      |                      |                      |
|----------------------------------------|-----------------------------|------------|--------------|------------|----------------------|----------------------|----------------------|----------------------|
| <b>Client: Eastwood &amp; Partners</b> | <b>Chemtest Job No.:</b>    |            |              |            | 18-01773             | 18-01773             | 18-01773             | 18-01773             |
| Quotation No.:                         | <b>Chemtest Sample ID.:</b> |            |              |            | 567164               | 567167               | 567170               | 567171               |
| Order No.:                             | Client Sample Ref.:         |            |              |            | TP08                 | TP09                 | TP10                 | TP10                 |
|                                        | Client Sample ID.:          |            |              |            | ES1                  | ES1                  | ES2                  | ES3                  |
|                                        | Sample Type:                |            |              |            | SOIL                 | SOIL                 | SOIL                 | SOIL                 |
|                                        | Top Depth (m):              |            |              |            | 0.40                 | 0.10                 | 0.30                 | 1.00                 |
|                                        | Date Sampled:               |            |              |            | 18-Jan-2018          | 18-Jan-2018          | 18-Jan-2018          | 18-Jan-2018          |
|                                        | Asbestos Lab:               |            |              |            | COVENTRY             | COVENTRY             | COVENTRY             | COVENTRY             |
| <b>Determinand</b>                     | <b>Accred.</b>              | <b>SOP</b> | <b>Units</b> | <b>LOD</b> |                      |                      |                      |                      |
| ACM Type                               | U                           | 2192       |              | N/A        | -                    | -                    | -                    | -                    |
| Asbestos Identification                | U                           | 2192       | %            | 0.001      | No Asbestos Detected | No Asbestos Detected | No Asbestos Detected | No Asbestos Detected |
| Moisture                               | N                           | 2030       | %            | 0.020      | 20                   | 23                   | 15                   | 19                   |
| Soil Colour                            | N                           | 2040       |              | N/A        | Brown                | Brown                | Brown                | Brown                |
| Other Material                         | N                           | 2040       |              | N/A        | Stones               | Stones               | Stones               | Stones               |
| Soil Texture                           | N                           | 2040       |              | N/A        | Sand                 | Sand                 | Sand, Clay           | Sand                 |
| pH                                     | M                           | 2010       |              | N/A        | 7.4                  | 5.3                  | 7.5                  | 7.9                  |
| Sulphate (2:1 Water Soluble) as SO4    | M                           | 2120       | g/l          | 0.010      | < 0.010              |                      | < 0.010              | 0.23                 |
| Calorific Value                        | N                           | 2140       | MJ/kg        | 0.10       |                      |                      |                      | 2.5                  |
| Total Sulphur                          | M                           | 2175       | %            | 0.010      | 0.058                |                      | 0.062                | 0.19                 |
| Sulphate (Acid Soluble)                | M                           | 2430       | %            | 0.010      | 0.051                |                      | 0.061                | 0.10                 |
| Arsenic                                | M                           | 2450       | mg/kg        | 1.0        | 26                   | 36                   | 20                   | 40                   |
| Cadmium                                | M                           | 2450       | mg/kg        | 0.10       | 0.39                 | 0.38                 | 0.32                 | 0.24                 |
| Chromium                               | M                           | 2450       | mg/kg        | 1.0        | 29                   | 33                   | 20                   | 24                   |
| Copper                                 | M                           | 2450       | mg/kg        | 0.50       | 36                   | 51                   | 24                   | 38                   |
| Mercury                                | M                           | 2450       | mg/kg        | 0.10       | 0.22                 | 0.39                 | 0.45                 | 1.8                  |
| Nickel                                 | M                           | 2450       | mg/kg        | 0.50       | 35                   | 38                   | 22                   | 48                   |
| Lead                                   | M                           | 2450       | mg/kg        | 0.50       | 60                   | 89                   | 48                   | 29                   |
| Selenium                               | M                           | 2450       | mg/kg        | 0.20       | 0.96                 | 1.7                  | 0.85                 | 2.0                  |
| Zinc                                   | M                           | 2450       | mg/kg        | 0.50       | 110                  | 140                  | 130                  | 100                  |
| Chromium (Hexavalent)                  | N                           | 2490       | mg/kg        | 0.50       | < 0.50               | < 0.50               | < 0.50               | < 0.50               |
| Total Organic Carbon                   | M                           | 2625       | %            | 0.20       |                      |                      |                      |                      |
| As Stomach Bioaccessibility            | N                           | 2630       | mg/kg        | 0.20       |                      |                      |                      |                      |
| As Intestinal Bioaccessibility 1       | N                           | 2630       | mg/kg        | 0.20       |                      |                      |                      |                      |
| As Intestinal Bioaccessibility 2       | N                           | 2630       | mg/kg        | 0.20       |                      |                      |                      |                      |
| As Bioaccessible Fraction              | N                           | 2630       | %            | 0.10       |                      |                      |                      |                      |
| Naphthalene                            | M                           | 2800       | mg/kg        | 0.10       | < 0.10               | < 0.10               | < 0.10               | 0.48                 |
| Acenaphthylene                         | N                           | 2800       | mg/kg        | 0.10       | < 0.10               | < 0.10               | < 0.10               | < 0.10               |
| Acenaphthene                           | M                           | 2800       | mg/kg        | 0.10       | < 0.10               | < 0.10               | < 0.10               | < 0.10               |
| Fluorene                               | M                           | 2800       | mg/kg        | 0.10       | < 0.10               | < 0.10               | < 0.10               | < 0.10               |
| Phenanthrene                           | M                           | 2800       | mg/kg        | 0.10       | 0.98                 | 0.26                 | 0.35                 | 0.22                 |
| Anthracene                             | M                           | 2800       | mg/kg        | 0.10       | < 0.10               | < 0.10               | < 0.10               | < 0.10               |
| Fluoranthene                           | M                           | 2800       | mg/kg        | 0.10       | 1.4                  | 0.82                 | 0.72                 | 0.14                 |
| Pyrene                                 | M                           | 2800       | mg/kg        | 0.10       | 1.2                  | 0.62                 | 0.51                 | 0.14                 |
| Benzo[a]anthracene                     | M                           | 2800       | mg/kg        | 0.10       | 0.36                 | < 0.10               | 0.12                 | < 0.10               |
| Chrysene                               | M                           | 2800       | mg/kg        | 0.10       | 0.39                 | < 0.10               | 0.18                 | < 0.10               |
| Benzo[b]fluoranthene                   | M                           | 2800       | mg/kg        | 0.10       | 0.36                 | < 0.10               | < 0.10               | < 0.10               |

## Results - Soil

**Project: 42241 Goldthorpe Road, Goldthorpe**

|                                        |                             |            |              |            |             |             |             |             |
|----------------------------------------|-----------------------------|------------|--------------|------------|-------------|-------------|-------------|-------------|
| <b>Client: Eastwood &amp; Partners</b> | <b>Chemtest Job No.:</b>    |            |              |            | 18-01773    | 18-01773    | 18-01773    | 18-01773    |
| Quotation No.:                         | <b>Chemtest Sample ID.:</b> |            |              |            | 567164      | 567167      | 567170      | 567171      |
| Order No.:                             | Client Sample Ref.:         |            |              |            | TP08        | TP09        | TP10        | TP10        |
|                                        | Client Sample ID.:          |            |              |            | ES1         | ES1         | ES2         | ES3         |
|                                        | Sample Type:                |            |              |            | SOIL        | SOIL        | SOIL        | SOIL        |
|                                        | Top Depth (m):              |            |              |            | 0.40        | 0.10        | 0.30        | 1.00        |
|                                        | Date Sampled:               |            |              |            | 18-Jan-2018 | 18-Jan-2018 | 18-Jan-2018 | 18-Jan-2018 |
|                                        | Asbestos Lab:               |            |              |            | COVENTRY    | COVENTRY    | COVENTRY    | COVENTRY    |
| <b>Determinand</b>                     | <b>Accred.</b>              | <b>SOP</b> | <b>Units</b> | <b>LOD</b> |             |             |             |             |
| Benzo[k]fluoranthene                   | M                           | 2800       | mg/kg        | 0.10       | < 0.10      | < 0.10      | < 0.10      | < 0.10      |
| Benzo[a]pyrene                         | M                           | 2800       | mg/kg        | 0.10       | 0.21        | < 0.10      | < 0.10      | < 0.10      |
| Indeno(1,2,3-c,d)Pyrene                | M                           | 2800       | mg/kg        | 0.10       | 0.16        | < 0.10      | < 0.10      | < 0.10      |
| Dibenz(a,h)Anthracene                  | N                           | 2800       | mg/kg        | 0.10       | < 0.10      | < 0.10      | < 0.10      | < 0.10      |
| Benzo[g,h,i]perylene                   | M                           | 2800       | mg/kg        | 0.10       | 0.16        | < 0.10      | < 0.10      | < 0.10      |
| Total Of 16 PAH's                      | N                           | 2800       | mg/kg        | 2.0        | 5.2         | < 2.0       | < 2.0       | < 2.0       |

## Test Methods

| SOP  | Title                                                              | Parameters included                                                                                                                                                                                                                                                        | Method summary                                                                                                                                                                         |
|------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2010 | pH Value of Soils                                                  | pH                                                                                                                                                                                                                                                                         | pH Meter                                                                                                                                                                               |
| 2030 | Moisture and Stone Content of Soils(Requirement of MCERTS)         | Moisture content                                                                                                                                                                                                                                                           | Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.                                                                                   |
| 2040 | Soil Description(Requirement of MCERTS)                            | Soil description                                                                                                                                                                                                                                                           | As received soil is described based upon BS5930                                                                                                                                        |
| 2120 | Water Soluble Boron, Sulphate, Magnesium & Chromium                | Boron; Sulphate; Magnesium; Chromium                                                                                                                                                                                                                                       | Aqueous extraction / ICP-OES                                                                                                                                                           |
| 2140 | Calorific Value                                                    | Calorific Value                                                                                                                                                                                                                                                            | Bomb Calorimeter                                                                                                                                                                       |
| 2175 | Total Sulphur in Soils                                             | Total Sulphur                                                                                                                                                                                                                                                              | Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.                                                                                             |
| 2192 | Asbestos                                                           | Asbestos                                                                                                                                                                                                                                                                   | Polarised light microscopy / Gravimetry                                                                                                                                                |
| 2430 | Total Sulphate in soils                                            | Total Sulphate                                                                                                                                                                                                                                                             | Acid digestion followed by determination of sulphate in extract by ICP-OES.                                                                                                            |
| 2450 | Acid Soluble Metals in Soils                                       | Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc                                                                                                                   | Acid digestion followed by determination of metals in extract by ICP-MS.                                                                                                               |
| 2490 | Hexavalent Chromium in Soils                                       | Chromium [VI]                                                                                                                                                                                                                                                              | Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide. |
| 2625 | Total Organic Carbon in Soils                                      | Total organic Carbon (TOC)                                                                                                                                                                                                                                                 | Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.                                                                                             |
| 2630 | PBET                                                               | PBET                                                                                                                                                                                                                                                                       | Extraction at 37C / ICP-MS                                                                                                                                                             |
| 2800 | Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS | Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene* | Dichloromethane extraction / GC-MS                                                                                                                                                     |

## **Report Information**

### **Key**

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- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
- < "less than"
- > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

### **Sample Deviation Codes**

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- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

### **Sample Retention and Disposal**

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All soil samples will be retained for a period of 45 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

[customerservices@chemtest.co.uk](mailto:customerservices@chemtest.co.uk)

|                                                                              |                          |                            |
|------------------------------------------------------------------------------|--------------------------|----------------------------|
| <b>SITE: Goldthorpe Road, Goldthorpe</b>                                     | <b>Job No.<br/>42241</b> | <b>Date<br/>20/02/2018</b> |
| <b>SUBJECT: Mean and Maximum Value Test for Arsenic<br/>Site Won Topsoil</b> | <b>Prepared<br/>GCB</b>  | <b>Checked<br/>AJK</b>     |

| Results | Sample | Log x = y |
|---------|--------|-----------|
| 31.00   |        | 1.491     |
| 25.00   |        | 1.398     |
| 19.00   |        | 1.279     |
| 18.00   |        | 1.255     |
| 19.00   |        | 1.279     |
| 32.00   |        | 1.505     |
| 56.00   |        | 1.748     |
| 36.00   |        | 1.556     |

Number of results : n            8  
Mean :  $\bar{X}$  =                      29.50  
Standard deviation : s            12.68  
T value : t =                      1.895

**Corrected mean (95% confidence)**

**$= \bar{X} + t * s / n^{0.5} =$             38.00**

Max value =                      56.00

log xm = ym =                    1.748

Number of results : N            8  
Mean y =                          1.439

Standard deviation of            0.170

T = (ym-ya) / S =                1.815

Tcrit (fom table A1.3)            1.91

**Result probably not an outlier**

|                                          |                         |                           |
|------------------------------------------|-------------------------|---------------------------|
| <b>SITE: Goldthorpe Road, Goldthorpe</b> | <b>Job No.</b><br>42241 | <b>Date</b><br>20/02/2018 |
| <b>SUBJECT: Mean Value Test for Lead</b> | <b>Prepared</b><br>GCB  | <b>Checked</b><br>AJK     |

The method uses the geometric mean rather than the arithmetic mean which is used for other contaminants.

| Results<br>mg/kg | Sample | Log<br>Results |
|------------------|--------|----------------|
| 21.00            |        | 1.322          |
| 47.00            |        | 1.672          |
| 130.00           |        | 2.114          |
| 170.00           |        | 2.230          |
| 47.00            |        | 1.672          |
| 74.00            |        | 1.869          |
| 69.00            |        | 1.839          |
| 89.00            |        | 1.949          |

#### Calculations based on log results

Number of results : n = 8  
Mean :  $\bar{X} = 1.834$   
Standard deviation : s = 0.284  
T value : t = 1.895  
Corrected mean (95% confidence) =  
 $= \bar{X} + t * s / n^{0.5} = 2.024$

#### Final results

Mean :  $\bar{X} = 68 \text{ mg/kg}$

**Corrected mean (95% confidence) : 106 mg/kg**

|                                                                             |                          |                            |
|-----------------------------------------------------------------------------|--------------------------|----------------------------|
| <b>SITE: Goldthorpe Road, Goldthorpe</b>                                    | <b>Job No.<br/>42241</b> | <b>Date<br/>22/02/2018</b> |
| <b>SUBJECT: Mean and Maximum Value Test for Copper<br/>Site Won Topsoil</b> | <b>Prepared<br/>GCB</b>  | <b>Checked<br/>AJK</b>     |

| Results | Sample | Log x = y |
|---------|--------|-----------|
| 34.00   |        | 1.531     |
| 34.00   |        | 1.531     |
| 57.00   |        | 1.756     |
| 420.00  |        | 2.623     |
| 25.00   |        | 1.398     |
| 49.00   |        | 1.690     |
| 53.00   |        | 1.724     |
| 51.00   |        | 1.708     |

Number of results : n            8  
Mean :  $\bar{X}$  =                      90.38  
Standard deviation : s        133.66  
T value : t =                      1.895

**Corrected mean (95% confidence)**

**$= \bar{X} + t * s / n^{0.5} = 179.91$**

Max value =                      420.00

log xm = ym =                  2.623

Number of results : N            8  
Mean y =                          1.745

Standard deviation of        0.376

T = (ym-ya) / S =                2.337

Tcrit (fom table A1.3)        1.91

**Result probably an outlier**

end

#REF!

|                                                                                           |                          |                            |
|-------------------------------------------------------------------------------------------|--------------------------|----------------------------|
| <b>SITE: Goldthorpe Road, Goldthorpe</b>                                                  | <b>Job No.<br/>42241</b> | <b>Date<br/>20/02/2018</b> |
| <b>SUBJECT: Mean and Maximum Value Test for Benzo(b)flouranthene<br/>Site Won Topsoil</b> | <b>Prepared<br/>GCB</b>  | <b>Checked<br/>AJK</b>     |

| Results | Sample | Log x = y |
|---------|--------|-----------|
| 2.20    |        | 0.342     |
| 1.70    |        | 0.230     |
| 3.20    |        | 0.505     |
| 3.10    |        | 0.491     |
| 0.10    |        | -1.000    |
| 0.10    |        | -1.000    |
| 2.30    |        | 0.362     |
| 0.10    |        | -1.000    |

Number of results : n            8  
Mean : X =                        1.60  
Standard deviation : s            1.33  
T value : t =                        1.895

**Corrected mean (95% confidence)**

**= X + t \* s / n<sup>0.5</sup> =            2.49**

Max value =                        3.20

log xm = ym =                    0.505

Number of results : N            8  
Mean y =                            -0.134

Standard deviation of            0.723

T = (ym-ya) / S =                0.884

Tcrit (fom table A1.3)            1.91

**Result probably not an outlier**

end

#REF!

|                                                                                     |                          |                            |
|-------------------------------------------------------------------------------------|--------------------------|----------------------------|
| <b>SITE: Goldthorpe Road, Goldthorpe</b>                                            | <b>Job No.<br/>42241</b> | <b>Date<br/>20/02/2018</b> |
| <b>SUBJECT: Mean and Maximum Value Test for Benzo(a)pyrene<br/>Site Won Topsoil</b> | <b>Prepared<br/>GCB</b>  | <b>Checked<br/>AJK</b>     |

| Results | Sample | Log x = y |
|---------|--------|-----------|
| 1.40    |        | 0.146     |
| 1.10    |        | 0.041     |
| 2.40    |        | 0.380     |
| 2.30    |        | 0.362     |
| 0.10    |        | -1.000    |
| 0.10    |        | -1.000    |
| 1.50    |        | 0.176     |
| 0.10    |        | -1.000    |

Number of results : n            8  
Mean :  $\bar{X}$  =                        1.13  
Standard deviation : s            0.95  
T value : t =                        1.895

**Corrected mean (95% confidence)**

**$= \bar{X} + t * s / n^{0.5} =$             1.76**

Max value =                        2.40

log xm = ym =                    0.380

Number of results : N            8  
Mean y =                            -0.237

Standard deviation of            0.642

T = (ym-ya) / S =                0.962

Tcrit (fom table A1.3)            1.91

**Result probably not an outlier**

end

#REF!

|                                                                                  |                          |                          |
|----------------------------------------------------------------------------------|--------------------------|--------------------------|
| <b>SITE: Goldthorpe Road, Goldthorpe</b>                                         | <b>Job No.<br/>42241</b> | <b>Date<br/>20.02.18</b> |
| <b>SUBJECT: Mean and Maximum Value Test for Arsenic<br/>Cohesive Made Ground</b> | <b>Prepared<br/>GCB</b>  | <b>Checked<br/>AJK</b>   |

| Results | Sample | Log x = y |
|---------|--------|-----------|
| 27.00   |        | 1.431     |
| 43.00   |        | 1.633     |
| 29.00   |        | 1.462     |
| 28.00   |        | 1.447     |
| 26.00   |        | 1.415     |
| 40.00   |        | 1.602     |

Number of results : n            6  
Mean :  $\bar{X}$  =                        32.17  
Standard deviation : s            7.36  
T value : t =                        2.015

**Corrected mean (95% confidence)**

$$\underline{\underline{= \bar{X} + t * s / n^{0.5} = 38.22}}$$

Max value =                        43.00

log xm = ym =                    1.633

Number of results : N            6  
Mean y =                            1.499

Standard deviation of            0.094

T = (ym-ya) / S =                1.432

Tcrit (fom table A1.3)            1.73

**Result probably not an outlier**

end

#REF!

| Inorganic Compounds | Human Health - Residential with Homegrown Produce (mg/kg) |
|---------------------|-----------------------------------------------------------|
| Arsenic             | 37                                                        |
| Cadmium             | 11                                                        |
| Chromium (III)      | 910                                                       |
| Chromium (VI)       | 6                                                         |
| Lead                | 200                                                       |
| Mercury             | 1.2                                                       |
| Nickel              | 180                                                       |
| Selenium            | 250                                                       |
| Copper              | 2400                                                      |
| Zinc                | 3700                                                      |

| Organic Compounds      | Human Health - Residential with Homegrown Produce (mg/kg) |          |        |
|------------------------|-----------------------------------------------------------|----------|--------|
|                        | 1% SOM                                                    | 2.5% SOM | 6% SOM |
| Naphthalene            | 2.3                                                       | 5.6      | 13     |
| Acenaphthene           | 210                                                       | 510      | 1100   |
| Acenaphthylene         | 170                                                       | 420      | 920    |
| Fluorene               | 170                                                       | 400      | 860    |
| Phenanthrene           | 95                                                        | 220      | 440    |
| Anthracene             | 2400                                                      | 5400     | 11000  |
| Fluoranthene           | 280                                                       | 560      | 890    |
| Pyrene                 | 620                                                       | 1200     | 2000   |
| Benzo(a)anthracene     | 7.2                                                       | 11       | 13     |
| Chrysene               | 15                                                        | 22       | 27     |
| Benzo(b)fluoranthene   | 2.6                                                       | 3.3      | 3.7    |
| Benzo(k)fluoranthene   | 77                                                        | 93       | 100    |
| Benzo(a)pyrene         | 2.2                                                       | 2.7      | 3.0    |
| Dibenz(a,h)anthracene  | 0.24                                                      | 0.28     | 0.3    |
| Indeno(1,2,3-cd)pyrene | 27                                                        | 36       | 41     |
| Benzo(g,h,i)perylene   | 320                                                       | 340      | 350    |
| Benzene                | 0.087                                                     | 0.17     | 0.37   |
| Toluene                | 130                                                       | 290      | 660    |
| Ethylbenzene           | 47                                                        | 110      | 260    |
| o-Xylene               | 60                                                        | 140      | 330    |
| m-Xylene               | 59                                                        | 140      | 320    |
| p-Xylene               | 56                                                        | 130      | 310    |

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| Contaminant | Phytotoxicity    |                  |                  |            |
|-------------|------------------|------------------|------------------|------------|
|             | pH<br>5.0 to 5.5 | pH<br>5.5 to 6.0 | pH<br>6.0 to 6.5 | pH<br>>7.0 |
| Arsenic     | 50               |                  |                  |            |
| Cadmium     | 3                |                  |                  |            |
| Chromium    | 400              |                  |                  |            |
| Lead        | 300              |                  |                  |            |
| Mercury     | 1                |                  |                  |            |
| Nickel      | 50               | 60               | 75               | 110        |
| Copper      | 80               | 100              | 135              | 200        |
| Zinc        | 200              | 200              | 200              | 300        |

The assessment concentration for lead is the Category 4 Screening Level produced by Contaminated Land: Applications in Real Environments (CL:AIRE) and outlined in Appendix H of their report SP1010. The others have been taken from Nathanail, C. P., McCaffrey, C., Gillett, A., Ogden, R., and Nathanail, J., 2015, ***The LQM/CIEH S4ULs for Human Health Risk Assessment***, Land Quality Press, Nottingham. The metals/metalloids are based on a sandy loam soil and 6% soil organic matter. The assessment values are not intended to be applied to individual sample results where materials are similar, as the levels of contaminants will have a natural variability across the site. Instead, the modified mean value should be compared with the assessment concentration.

The assessment values for phytotoxicity are the levels at which plant growth is thought to be affected. They are taken from the maximum permissible and advisable concentrations in soil after application of soil sludge given in the ***The Code of Good Agricultural Practice for the Protection of Soil***, MAFF, 1998.

The assessment of sulphate, water soluble sulphate, elemental sulphur and sulphide is to determine the aggressive nature of the ground with respect to concrete and consequently the results are compared with BRE Special Digest 1:2005 ***Concrete in Aggressive Ground***.

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| TPH Fraction        | Intended Land Use Residential (mg/kg) |                               |                            |
|---------------------|---------------------------------------|-------------------------------|----------------------------|
|                     | 1% SOM                                | 2.5% SOM                      | 6% SOM                     |
| Aliphatic EC 5-6    | 42                                    | 78                            | 160                        |
| Aliphatic EC >6-8   | 100                                   | 230                           | 530                        |
| Aliphatic EC >8-10  | 27                                    | 65                            | 150                        |
| Aliphatic EC >10-12 | 130 (48) <sup>vap</sup>               | 330 (118) <sup>vap</sup>      | 760 (283) <sup>vap</sup>   |
| Aliphatic EC >12-16 | 1100 (24) <sup>sol</sup>              | 2400 (59) <sup>sol</sup>      | 4,300 (142) <sup>sol</sup> |
| Aliphatic EC >16-35 | 65,000 (8.48) <sup>f, sol</sup>       | 92,000 (21) <sup>f, sol</sup> | 110,000 <sup>f</sup>       |
| Aliphatic EC >35-44 | 65,000 (8.48) <sup>f, sol</sup>       | 92,000 (21) <sup>f, sol</sup> | 110,000 <sup>f</sup>       |
| Aromatic EC 5-7     | 70                                    | 140                           | 300                        |
| Aromatic EC >7-8    | 130                                   | 290                           | 660                        |
| Aromatic EC >8-10   | 34                                    | 83                            | 190                        |
| Aromatic EC >10-12  | 74                                    | 180                           | 380                        |
| Aromatic EC >12-16  | 140                                   | 330                           | 660                        |
| Aromatic EC >16-21  | 260 <sup>f</sup>                      | 540 <sup>f</sup>              | 930 <sup>f</sup>           |
| Aromatic EC >21-35  | 1,100 <sup>f</sup>                    | 1,500 <sup>f</sup>            | 1,700 <sup>f</sup>         |
| Aromatic EC >35-44  | 1,100 <sup>f</sup>                    | 1,500 <sup>f</sup>            | 1,700 <sup>f</sup>         |

<sup>f</sup> oral, dermal, and inhalation exposure compared with oral HCV

<sup>sol</sup> S4UL presented exceeds the solubility saturation limit, which is presented in brackets

<sup>vap</sup> S4UL presented exceed the vapour saturation limit, which is presented in brackets

The assessment criteria for each of the petroleum hydrocarbon fractions have been taken from Nathanail, C. P., McCaffrey, C., Gillett, A., Ogden, R., and Nathanail, J., 2015, ***The LQM/CIEH S4ULs for Human Health Risk Assessment***, Land Quality Press, Nottingham. These are also all based on a sandy loam soil.

Within the Environment Agency Science Report P5-080/TR3, Askari, K. & Pollard, S., 2005 ***The UK Approach for Evaluating Human Health Risks from Petroleum Hydrocarbons in Soils*** it is stated that the assessment values should not be considered individually; instead the potential additive effects should be calculated. This is achieved by calculating an individual Hazard Quotient (HQ) for each fraction. The HQ is the proportion of the assessment concentration represented by the recorded concentration. The HQs are then added together to form a Hazard Index (HI) and where this exceeds unity a potential significant risk to human health may exist.

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| Inorganic Compounds | Human Health – Public Open Space Near Housing<br>(mg/kg) |
|---------------------|----------------------------------------------------------|
| Arsenic             | 79                                                       |
| Cadmium             | 120                                                      |
| Chromium (III)      | 1500                                                     |
| Chromium (VI)       | 7.7                                                      |
| Lead                | 270-760                                                  |
| Mercury             | 16                                                       |
| Nickel              | 230                                                      |
| Selenium            | 1100                                                     |
| Copper              | 12000                                                    |
| Zinc                | 81000                                                    |

| Organic Compounds      | Human Health – Public Open Space Near Housing<br>(mg/kg) |          |        |
|------------------------|----------------------------------------------------------|----------|--------|
|                        | 1% SOM                                                   | 2.5% SOM | 6% SOM |
| Naphthalene            | 4900                                                     | 4900     | 4900   |
| Acenaphthene           | 15000                                                    | 15000    | 15000  |
| Acenaphthylene         | 15000                                                    | 15000    | 15000  |
| Fluorene               | 9900                                                     | 9900     | 9900   |
| Phenanthrene           | 3100                                                     | 3100     | 3100   |
| Anthracene             | 74000                                                    | 74000    | 74000  |
| Fluoranthene           | 3100                                                     | 3100     | 3100   |
| Pyrene                 | 7400                                                     | 7400     | 7400   |
| Benzo(a)anthracene     | 29                                                       | 29       | 29     |
| Chrysene               | 57                                                       | 57       | 57     |
| Benzo(b)fluoranthene   | 7.1                                                      | 7.2      | 7.2    |
| Benzo(k)fluoranthene   | 190                                                      | 190      | 190    |
| Benzo(a)pyrene         | 5.7                                                      | 5.7      | 5.7    |
| Dibenz(a,h)anthracene  | 0.57                                                     | 0.57     | 0.58   |
| Indeno(1,2,3-cd)pyrene | 82                                                       | 82       | 82     |
| Benzo(g,h,i)perylene   | 640                                                      | 640      | 640    |
| Benzene                | 72                                                       | 72       | 73     |
| Toluene                | 56000                                                    | 56000    | 56000  |
| Ethylbenzene           | 24000                                                    | 24000    | 25000  |
| o-Xylene               | 41000                                                    | 42000    | 43000  |
| m-Xylene               | 41000                                                    | 42000    | 43000  |
| p-Xylene               | 41000                                                    | 42000    | 43000  |

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| Contaminant | Phytotoxicity    |                  |                  |            |
|-------------|------------------|------------------|------------------|------------|
|             | pH<br>5.0 to 5.5 | pH<br>5.5 to 6.0 | pH<br>6.0 to 7.0 | pH<br>>7.0 |
| Arsenic     | 50               |                  |                  |            |
| Cadmium     | 3                |                  |                  |            |
| Chromium    | 400              |                  |                  |            |
| Lead        | 300              |                  |                  |            |
| Mercury     | 1                |                  |                  |            |
| Nickel      | 50               | 60               | 75               | 110        |
| Copper      | 80               | 100              | 135              | 200        |
| Zinc        | 200              | 200              | 200              | 300        |

The assessment concentration for lead is the Category 4 Screening Level produced by Contaminated Land: Applications in Real Environments (CL:AIRE) and outlined in Appendix H of their report SP1010.

The others have been taken from Nathanail, C. P., McCaffrey, C., Gillett, A., Ogden, R., and Nathanail, J., 2015, ***The LQM/CIEH S4ULs for Human Health Risk Assessment***, Land Quality Press, Nottingham. The metals/metalloids are based on a sandy loam soil and 6% soil organic matter. The assessment values are not intended to be applied to individual sample results where materials are similar, as the levels of contaminants will have a natural variability across the site. Instead, the modified mean value should be compared with the assessment concentration.

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The assessment of sulphate, water soluble sulphate, elemental sulphur and sulphide is to determine the aggressive nature of the ground with respect to concrete and consequently the results are compared with BRE Special Digest 1:2005 ***Concrete in Aggressive Ground***.

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| TPH Fraction        | Intended Land Use Public Open Space Near Housing (mg/kg) |                     |                     |
|---------------------|----------------------------------------------------------|---------------------|---------------------|
|                     | 1% SOM                                                   | 2.5% SOM            | 6% SOM              |
| Aliphatic EC 5-6    | 570000 (304) <sup>sol</sup>                              | 590000              | 600000              |
| Aliphatic EC >6-8   | 600000                                                   | 610000              | 620000              |
| Aliphatic EC >8-10  | 13000                                                    | 13000               | 13000               |
| Aliphatic EC >10-12 | 13000                                                    | 13000               | 13000               |
| Aliphatic EC >12-16 | 13000                                                    | 13000               | 13000               |
| Aliphatic EC >16-35 | 250000 <sup>f</sup>                                      | 250000 <sup>f</sup> | 250000 <sup>f</sup> |
| Aliphatic EC >35-44 | 250000 <sup>f</sup>                                      | 250000 <sup>f</sup> | 250000 <sup>f</sup> |
| Aromatic EC 5-7     | 56000                                                    | 56000               | 56000               |
| Aromatic EC >7-8    | 56000                                                    | 56000               | 56000               |
| Aromatic EC >8-10   | 5000                                                     | 5000                | 5000                |
| Aromatic EC >10-12  | 5000                                                     | 5000                | 5000                |
| Aromatic EC >12-16  | 5100                                                     | 5100                | 5000                |
| Aromatic EC >16-21  | 3800 <sup>f</sup>                                        | 3800 <sup>f</sup>   | 3800 <sup>f</sup>   |
| Aromatic EC >21-35  | 3800 <sup>f</sup>                                        | 3800 <sup>f</sup>   | 3800 <sup>f</sup>   |
| Aromatic EC >35-44  | 3800 <sup>f</sup>                                        | 3800 <sup>f</sup>   | 3800 <sup>f</sup>   |

<sup>f</sup> oral, dermal, and inhalation exposure compared with oral HCV

<sup>sol</sup> S4UL presented exceeds the solubility saturation limit, which is presented in brackets

The assessment criteria for each of the petroleum hydrocarbon fractions have been taken from Nathanail, C. P., McCaffrey, C., Gillett, A., Ogden, R., and Nathanail, J., 2015, ***The LQM/CIEH S4ULs for Human Health Risk Assessment***, Land Quality Press, Nottingham. These are also all based on a sandy loam soil.

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## **Appendix 5**

### Gas Monitoring Results

| Monitoring Date<br>14.02.18<br>DN | CH <sub>4</sub> % | CO <sub>2</sub> % | O <sub>2</sub> % | CO | H <sub>2</sub> S | Atmos P. (mb) | Flow (l/hr) | Water Level (mbgl) | Base of Pipe (mbgl) |
|-----------------------------------|-------------------|-------------------|------------------|----|------------------|---------------|-------------|--------------------|---------------------|
| R01                               | 0.0               | 0.4               | 20.2             | 0  | 0                | 985           | 0.0 to 0.6  | 2.24               | 3.16                |
| R03                               | Could not open.   |                   |                  |    |                  |               |             |                    |                     |
| R05                               | 0.0               | 0.2               | 20.2             | 0  | 0                | 985           | 0.0         | Dry                | 2.98                |
| R07                               | 0.0               | 1.7               | 18.5             | 0  | 0                | 988           | 0.1         | 2.73               | 3.02                |
| R09                               | 0.0               | 0.5               | 20.3             | 0  | 0                | 991           | 0.0         | 2.93               | 3.02                |

| Monitoring Date<br>xx.xx.xx | CH <sub>4</sub> % | CO <sub>2</sub> % | O <sub>2</sub> % | CO | H <sub>2</sub> S | Atmos P. (mb) | Flow (l/hr) | Water Level (mbgl) | Base of Pipe (mbgl) |
|-----------------------------|-------------------|-------------------|------------------|----|------------------|---------------|-------------|--------------------|---------------------|
| R01                         |                   |                   |                  |    |                  |               |             |                    |                     |
| R03                         |                   |                   |                  |    |                  |               |             |                    |                     |
| R05                         |                   |                   |                  |    |                  |               |             |                    |                     |
| R07                         |                   |                   |                  |    |                  |               |             |                    |                     |
| R09                         |                   |                   |                  |    |                  |               |             |                    |                     |

Concentration equates to  
Amber 1 classification

Concentration equates to  
Amber 2 classification

Concentration equates to  
Red classification

|                                                                                                                                                                                                                    |                                                                                                                            |                |                    |
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|                                                                                                                                                                                                                    |                                                                                                                            | <b>DATE</b>    | February 2018<br>- |