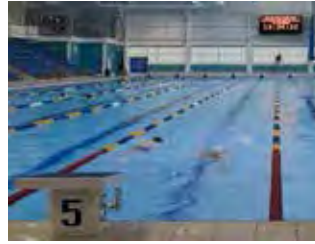




williamsaunders
architecture : engineering : building consultancy



PLOT 5, ASHROYD BUSINESS PARK, HOYLAND, BARNSELY

NETWORK SPACE DEVELOPMENTS LTD

PHASE 1 GEO-ENVIRONMENTAL REPORT

11717-WMS-ZZ-XX-RP-C-30901-S2-P1-PHASE_1_REPORT

MARCH 2018

Contract: Plot 5, Ashroyd Business Park, Hoyland, Barnsley**Document Title:** Phase 1 Geo-Environmental Report**Our Ref:** 11717-WMS-ZZ-XX-RP-C-30901-S2-P1-Phase_1_Report**Prepared by:** W. Dixon BSc (Hons) MSc FGS **Date:** MARCH 2018**RECORD OF AMENDMENTS TO DOCUMENT**

Ref	Description	Date

Verified by: A.C. Gibson BEng CEng MICE MCIHT MIRSE **Date:** MARCH 2018

C O N T E N T S

0.0	EXECUTIVE SUMMARY
1.0	INTRODUCTION
2.0	SITE DESCRIPTION
3.0	SITE HISTORY
4.0	LAND USE
5.0	ENVIRONMENTAL SETTING
6.0	SITE WALKOVER
7.0	REVIEW OF PREVIOUS WORK
8.0	PHASE 1 ENVIRONMENTAL RISK ASSESSMENT
9.0	RECOMMENDATIONS

APPENDICES

Appendix A	Location Plan
Appendix B	Development Proposals
Appendix C	Historical Mapping
Appendix D	Environmental Data
Appendix E	Coal Authority Mining Report
Appendix F	Site Walkover Photographs

EXECUTIVE SUMMARY

The development site currently comprises rough grassland and is an un-developed levelled plot of a business park. The majority of the plot lies at approx. 158mOD, there are batters along the northern, eastern and southern perimeters.

The site has remained undeveloped. The wider surroundings saw expansion of collieries from the mid-1800s to the mid-1900s, this saw development of rail lines to the north and north-east as well as extensive residential development to the south and east with the area to the west remaining relatively unchanged. The spoil heap to the north-east was no longer indicated by the early-1970s, the area was developed for industrial use which includes a factory east of the site boundary, rail lines were dismantled by the late-1980s. A major road was developed to the north by the year 2000, Ashroyd business park to the north was later developed periodically.

BGS mapping indicates the majority of the site lies on undifferentiated mudstone, siltstone and sandstone of the Pennine Middle Coal Measures Formation, the eastern corner is indicated to lie on sandstone of the Abdy Rock, no superficial deposits are indicated, made ground is indicated to the east. The bedrock is classified by the EA as a Secondary A aquifer. After reprofiling, the site consists of clay fill over natural deposits in the north and weathered sandstone in the south and east.

The site is in the likely zone of influence of workings in 9 seams of coal, at 120m to 470m depth, last worked in 1976, any ground movements should have stopped. The site is in an area where the CA believe there is coal at or close to the surface which may have been worked at some time in the past. There are no known mine entries in, or within 20m of, the site.

The Environment Agency's Flood Map indicates that the site is located within Flood Zone 1 (annual probability of river flooding less than 1 in 1000 (<0.1%)). Pluvial risk is generally very low across the site with areas of low, moderate and high risk restricted to the perimeters. The site is not susceptible to groundwater flooding.

The site is in an intermediate probability radon area and no radon protective measures are considered necessary in the construction of new buildings. Previous gas monitoring at the site has not noted any gas levels of concern.

The site lies within nitrate vulnerable zones for surface water from the River Dearne. There is an area of adopted Green Belt from approx. 130m west.

Based on the proposed light industrial end uses, the CSM indicates a potential high risk to human health, a potential moderate risk to the built environment and a potential low risk of causing harm to controlled waters.

Phase II investigation should comprise trial pits and sample chemical analysis along with establishing ground bearing capacity and permeability of the soils to enable engineering design of the proposed development. Levels of groundwater should be taken and gas monitoring is recommended.

1.0 INTRODUCTION

1.1 Background

William Saunders have been instructed by Network Space Developments Ltd to prepare a Phase 1 Geo Environmental Report for an industrial development at Plot 5, Ashroyd Business Park, Hoyland, Barnsley.

1.2 Objectives

The objective of this Phase 1 investigation is to provide, on the basis of information on historic and recent activities at the site, an opinion of the likely presence of soil contamination arising from historic, recent and current uses on and surrounding the subject site, the potential pathways and the resulting risks to water resources, ecological resources, building materials, on-site and off-site receptors.

This report also considers wider potential ground engineering development constraints.

1.3 Scope of works

The review comprised the following;

- Reconnaissance of the site and the immediate surrounding area.
- An assessment of historical land uses (as can be deduced from historic Ordnance Survey mapping) and activities at the site and neighbouring land to assess the potential for soil, groundwater and surface water contamination.
- An assessment of the environmental setting of the land through a review of the geology, hydrogeology, hydrology, waste management activities, hazardous installations, pollution control authorisations, past pollution incidents, radon hazards, ecological features and regulatory authority information.
- An assessment of the potential for contamination arising from the use of the site or surrounding land.
- Identification of the potential human health and environmental risks that may be associated with the site, taking into account past, current and planned future uses of the land and its environmental setting.

This review is based on is based on publicly available information, a site reconnaissance and information obtained from the relevant authorities. No sampling or analysis of soils, waters or

other materials was carried out for the purpose of this review. Recommendations are made for Phase II intrusive investigations.

2.0 SITE DESCRIPTION

- 2.1 The site currently comprises rough grassland and is an un-developed plot of a business park. The business park was initially developed from 2005 to 2006, plateaus were constructed into the pre-existing hillside to allow development.
- 2.2 The grid reference for the site is 436564E, 401164N or SE365011. The postcode of the site is S74 9ND. The site area is approximately 1.5 hectares. A location plan is given in Appendix A.
- 2.3 The northern boundary is defined as the base of the batter to the plateau of plot 4, the western boundary is to the highway, the southern boundary is the top of the batter, this is defined by a timber post and rail fence in the western section, a masonry wall in the central and a hedgerow in the eastern section. The eastern boundary is the top of the batter and is defined in part by existing metal palisade fencing.
- 2.4 To the north is plot 4 of Ashroyd business park, the western section is currently used as a self-storage warehouse, the eastern section currently has deemed planning permission for development of class B1, B2 and B8 use. To the west plot 3 is proposed to have similar uses. To the south is an existing residential area, to the east is an existing warehouse and to the south-east is Hampton House which is used as office space.
- 2.5 Further north are plots 1 and 2 of the business park with the A6195 Dearne Valley Parkway beyond. Further west the land is undeveloped consisting of rough grazing. Further east is Platts Common industrial estate and to the south is the residential area of Hoyland.
- 2.6 The A6195 is approx. 350m north and the M1 is approx. 1.9km south-west. The centre of Barnsley is approx. 5.5km NNW, Rotherham is approx. 10km south-east, Sheffield is approx. 13km south and Doncaster is approx. 20km east.
- 2.7 The site is a previously levelled plateau which lies at approx. 158mOD, there is a gentle fall to the west across the majority of the site. There are batters along the north (7m below site level), south (5m above site level) and east (2m above site level).
- 2.8 The proposals are to build 4 no. industrial units with partial first floors for office use, Appendix B.

3.0 SITE HISTORY

3.1. Ordnance Survey

Archive Ordnance Survey maps have been reviewed as an indicator of the previous uses of the site, these can be viewed in Appendix C. Findings are as follows:

3.1.1 Ordnance Survey County Series 1855 (1: 10,560)

The site appears to be undeveloped and consists of fields with a stream running through the site trending NW-SE.

There are two dwellings indicated approx. 30-50m south-east, Hawshaw Lane is present to the south of the site. The small village of Upper Hoyland is located from 220m WNW. Two coal shafts and 'coal pits' are located approx. 400m north-east with a rail line running to the south-east. There is a rail line to the north-west, as close as approx. 800m, High Royd Colliery is located approx. 850m north-west, there is also a tannery near this location.

3.1.2 Ordnance Survey County Series 1892-93 (1: 2,500)

The site remains undeveloped, however the watercourse through the centre is no longer indicated, there is now a footpath running north-south through the centre of the site as well as a footpath running along the southern boundary.

The two dwellings to the south-east are labelled as Hawshaw Farm and Cottage, beyond is Hawshaw Terrace. There is a covered reservoir located approx. 190m south.

From approx. 200m north and east is land associated with Hoyland Silkstone Collieries including spoil heaps, extensive rail sidings and a quarry, there is a powder magazine 200m NE, coke ovens 300m from the site and a brick yard 450m away. The rail line to the north-west is labelled as the Manchester, Sheffield and Lincolnshire Railway, the Hoyland Silkstone Branch connects to the colliery coming as close as 180m north of the site. Rockingham Colliery as well as a large reservoir are located approx. 1.2km WSW. There is a large clay pit indicated at Hoyland Brick Works approx. 850m NW, formerly High Royd Colliery.

3.1.3 Ordnance Survey County Series 1902-05 (1: 2500)

There appears to have been no change to the site.

There are two more coke oven buildings indicated from approx. 200m NE, part of Hoyland Silkstone Collieries. The Wharncliffe Branch is indicated to run parallel with the M.S&L.R.

3.1.4 Ordnance Survey County Series 1905-07 (1: 10,5600)

There appears to have been no change to the site.

There is another large building built over the rail sidings of Hoyland Silkstone Collieries.

3.1.5 Ordnance Survey County Series 1930-31 (1: 2,500)

There appears to have been no change to the site.

There are several buildings indicated from 90m east, the former quarry is now indicated to be a cooling pond, a rail siding reaches as close as 85m east. Much of the area north of the Hoyland Silkstone Colliery Branch is indicated to be a spoil heap.

There has been a residential development from 15m south as well as a significant residential development from 300m SSE. There is a covered reservoir indicated 200m south-west.

3.1.6 Ordnance Survey County Series 1938 (1: 10,560)

There appears to have been no change to the site.

There has been a large residential development from 120m south and south-east, there is a school indicated 360m south.

3.1.7 Ordnance Survey County Series 1948 (1: 10,560)

There appears to have been no change to the site.

Many of the larger buildings of Hoyland Silkstone Collieries are no longer indicated, however many still remain. There is an extensive spoil heap from approx. 700m west.

3.1.8 Ordnance Survey Plan 1956-62 (1: 2,500)

There appears to have been no change to the site.

The Hoyland Silkstone Colliery Branch although the embankments remain, the rail sidings of the colliery are no longer indicated. There has been a large residential development from 500m east.

3.1.9 Ordnance Survey Plan 1966 (1: 10,000)

There appears to have been no change to the site or the surroundings.

3.1.10 Ordnance Survey Plan 1972 (1: 1,250)

There is an embankment indicated immediately beyond the south-eastern boundary, there is a large rectangular building indicated approx. 15m east labelled as Hoyland Works with an east-west trending road to its north connecting from Chambers Road in the east to the eastern site boundary. There is a large engineering works approx. 120m east and several other smaller works and warehouses from 120m north-east in a new industrial estate.

3.1.11 Additional SIMs 1979 (1: 1,250)

There appears to have been no change to the site.

The embankment of the dismantled Hoyland Silkstone Colliery Branch is no longer indicated.

3.1.12 Ordnance Survey Plan 1980-82 (1: 10,000)

There appears to have been no change to the site.

The spoil heap of Rockingham Colliery to the west is indicated to cover land as close as 400m west.

3.1.13 Ordnance Survey Plan 1989 (1: 10,000)

There appears to have been no change to the site.

The two industrial buildings to the east are now partially connected. There has been slight infilling of the north-eastern industrial estate. The rail line approx. 800m north-east is indicated to have been dismantled.

3.1.14 Large-Scale National Grid Data 1993 (1: 2,500)

There appears to have been no change to the site or the surroundings.

3.1.15 Aerial Photo 1999

A roundabout is indicated approx. 75m east, a road trends north-south from this to a roundabout approx. 325m north.

3.1.16 10k Raster Mapping 2000 (1: 10,000)

The A6195 Dearne Valley Parkway trends roughly NE-SW approx. 340m north of the site, this runs through the former spoil heap of Rockingham Colliery which is no longer indicated.

3.1.17 10k Raster Mapping 2006 (1: 10,000)

There appears to have been no change to the site or the surroundings.

3.1.18 Street View 2009 (1: 10,000)

There appears to have been no change to the site.

There is an east-west trending road approx. 90m north which connects to Ryecroft Bank, at its western end there is a roundabout with a north-south trending road off either end, the southern stretch terminates at the north-western site boundary. There is a large rectangular building approx. 180m NNW (Ashroyd Business Park Plot 1).

3.1.19 Street View 2013 (1: 10,000)

There is a rectangular building immediately north of the site (Ashroyd Business Park Plot 4A).

3.1.20 Current Mapping 2018 (1: 10,000)

There appears to have been no change to the site.

There is a large rectangular building indicated approx. 130m north (Ashroyd Business Park Plot 2). A residential development is indicated beyond the south-western boundary off a new road labelled Hawshaw Bank.

3.2 Summary

The site has remained undeveloped. The wider surroundings saw expansion of collieries from the mid-1800s to the mid-1900s, this saw development of rail lines to the north and north-east as well as extensive residential development to the south and east with the area to the west remaining relatively unchanged. The spoil heap to the north-east was no longer indicated by the early-1970s, the area was developed for industrial use which includes a factory east of the site boundary, rail lines were dismantled by the late-1980s. A major road was developed to the north by the year 2000, Ashroyd business park to the north was later developed periodically.

4.0 LAND USE

4.1 The site

The site consists of a levelled plateau which is an undeveloped plot of a business park.

The site has not previously been developed although it has been levelled circa 2005 during the formation of Ashroyd Business Park. Prior to this there was a northward fall across the site and a footpath through the centre.

4.2 Surroundings

There is a light-industrial unit to the north currently used as self-storage, approx. 140m north and 180m NNW are large industrial buildings, there is also an industrial building beyond the eastern boundary. There is a small residential development to the south-west and more extensive residential areas to the south-east. Further north-east is another industrial estate.

Formerly the immediate surroundings have not seen significant development, however beyond 200m north-east was a rail line embankment and the spoil heap of Hoyland Silkstone Collieries.

5.0 ENVIRONMENTAL SETTING

A package of environmental data has been obtained from Envirocheck, to be found at Appendix D.

5.1 Geology

5.1.1 British Geological Survey 1: 50,000 scale Mapping

Artificial Geology

There is artificial ground (undivided made ground) indicated from approx. 5m east of the site and extending towards the north-west and north.

Superficial Deposits

British Geological Survey 1:50,000 scale mapping indicates no superficial deposits are present.

Bedrock Geology

British Geological Survey 1:50,000 scale mapping indicates the majority of the site lies on undifferentiated mudstone, siltstone and sandstone of the Pennine Middle Coal Measures Formation, the eastern corner is indicated to lie on sandstone of the Abdy Rock. There are several reputed faults present within 1km of the site, the majority of these trend NW-SE, the closest being approx. 210m north-east of the site, there are secondary NE-SW trending faults which are terminated by the former set.

There is a coal outcrop indicated towards the eastern boundary of the site and another approx. 110m south-west. A borehole from the site investigation from the development of the business park (BH119 in 1999) proved there was no coal in this location to a depth of 12m bgl. No coal workings were encountered in the wider ground investigation.

5.1.2 Previous Investigations

Records from a site investigation carried out in 1999 on the site and the surroundings prior to the earthworks involved with the cut and fill operation to develop the business park have been studied. Two boreholes were drilled on site before the site was re-profiled, these indicate the original conditions of the site in the west consisted of topsoil over 0.65m of clay over 6m of very weak to weak silty sandstone, the base was unproven. The east of the site was indicated to consist of topsoil over 6m of very weak to weak mudstone over 3m of weak siltstone over 2.5m of weak to moderately weak sandstone, the base was not proven. This area was subsequently excavated by approx. 4m and bedrock is therefore expected at the surface.

Two trial pits after reprofiling indicate the site consists of topsoil over 0.75m of stiff to firm silty clay (fill) with weathered silty sandstone at 1.1m bgl.

5.2 Mining

5.2.1 The site is in an area covered by The Coal Authority, a coal mining risk assessment has been acquired, Appendix E.

- The site is in the likely zone of influence of workings in 9 seams of coal, at 120m to 470m depth, last worked in 1976. Any ground movements should have stopped.
- The site is in an area where the CA believe there is coal at or close to the surface which may have been worked at some time in the past.
 - o For the initial redevelopment of the site in 1998, the South Yorkshire Mining Advisory Service (SYMAS) had indicated that there was an outcrop near to the site. During the redevelopment and reshaping of the site which William Saunders oversaw, no coal was encountered at the surface. A number of boreholes were sunk within the area of the assumed shallow seam to a depth of 12m below ground level, no coal was encountered supporting that there is evidence that there is no shallow coal which would have an effect on the development within Plot 5. Additional boreholes are proposed on site to further validate near surface condition.
- The site is not in the likely zone of influence of current underground coal workings.
- The Coal Authority has not granted, nor is currently considering any license to remove coal by underground methods.
- There are no known mine entries in, or within 20m of, the site, although records may be incomplete and entries may exist that the CA are not aware of.
- There are no known faults or lines of weakness due to coal mining at the site.
- The site is not reported to lie within the boundary of an historic opencast site.
- The site is not within 200m of current opencast operations. The site is not within 800m of presently proposed opencast mining.
- There have not been any subsidence claims within 50 metres of the property boundary since 31 October 1994.
- The CA have no record of mine gas emissions within the site.

- The site has not been subject to remedial works by or on behalf of The Coal Authority under its Surface Hazard call out procedures.
- The property is not in an area where a notice to withdraw support has been given.
- The property is not in an area where an order has been made, under the provisions of the Mines Act 1923 and 1966 or any statutory modification or amendment thereof.

5.2.2 There are 16 indicated BGS recorded mineral sites within 1km of the site:

- 386m NE – Hoyland Silkstone Colliery, Silkstone Shaft – underground, coal – operations have ceased,
- 406m NE - Hoyland Silkstone Colliery, Flockton Shaft – underground, coal – operations have ceased,
- 424m NE - Hoyland Silkstone Colliery, Parkgate Shaft – underground, coal – operations have ceased,
- 626m N – Upper Black, Blacker Hill – opencast, sandstone - operations have ceased,
- 692m NW – Bank Plantation – opencast, sandstone - operations have ceased,
- 703m WNW – Hay Royd Brick Works – opencast, common clay and shale - operations have ceased,
- 744m SW - Hoyland Common Occs – opencast, coal - operations have ceased,
- 783m NE - Woodhead Farm Occs - opencast, coal - operations have ceased,
- 821m SW - Hoyland Common Occs - opencast, coal - operations have ceased,
- 833m S – Fearnley's, Hoyland - opencast, sandstone - operations have ceased,
- 835m W - High Royd Brick Works - opencast, common clay and shale - operations have ceased,
- 840m SW - Hoyland Common Occs - opencast, coal - operations have ceased,
- 860m NW - High Royd Brick Works - opencast, common clay and shale - operations have ceased,
- 885m NW - Hay Royd Colliery - underground, coal – operations have ceased,
- 898m NW - Hay Royd Colliery - underground, coal – operations have ceased,
- 992m E - Halfway House, Jump Valley, Jump - opencast, sandstone - operations have ceased.

5.3 Hydrology

5.3.1 Surface Water Features

A v-ditch flows from the south-western corner of the site along the southern and eastern boundary and discharges to a manhole in the north-eastern corner into a similar drain in Plot 4

along the base of the batter. These v-drains convey water to the drainage system from the batters along the edges of the site.

There is a stream indicated approx. 750m ENE which flows towards the south-east with a small tributary reaching as close as 650m ESE flowing away from site. There is a drain indicated approx. 350m NNE lower than the site and flowing away. There are several drains indicated from 400m west trending NE-SW, these are associated with the re-landscaped spoil heap of Rockingham Colliery. The site is located towards the top of a hillside with all nearby watercourses flowing away.

5.3.2 Flooding

The Environment Agency's Flood Map indicates that the site is located within Flood Zone 1 (annual probability of river flooding less than 1 in 1000 (<0.1%)).

Pluvial risk is generally very low across the site (<0.1% annual probability of occurrence). Areas of high risk (>3.3% annual probability of occurrence) are limited to the south-eastern boundary, areas of moderate risk (1-3.3% annual probability of occurrence) are found along the southern and eastern boundaries and areas of low risk (0.1-1% annual probability of occurrence) are found along the western boundary which is indicated to be a minor northwards overland flow path. These areas of high risk coincide with the locations of v-drains.

The site is not indicated to be at risk of flooding as a result of reservoir failure.

BGS data indicates the site is not susceptible to groundwater flooding.

5.3.3 Surface Water Abstractions

There are no licenced surface water abstractions within 1km of the site.

5.4 **Hydrogeology**

5.4.1 Aquifers

Bedrock

The site is shown to lie on a Secondary A aquifer, see Appendix D.

Secondary A aquifers are defined by the EA 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. These are generally aquifers formerly classified as minor aquifers.’

Superficial Deposits

There are no superficial deposits indicated.

5.4.2 Leaching Potential

The site is classified as having high vulnerability (Minor aquifer high urban) in terms of groundwater pollution due to its classification as restored mineral workings/urban areas. This is a worst-case classification, until proven otherwise.

5.4.3 Source Protection Zones

The site does not lie within 1km of a Source Protection Zone.

5.4.4 Groundwater Abstractions

There are no licensed abstractions reported from the aquifer within 1km of the site.

5.5 Waste Activities

5.5.1 Operational Waste Activities

There is 1 licenced operational waste management facility within 1km of the site:

- 915m NW – Waste Management Facility - Land / Premises at Blacker Hill Sidings - Warwick Ward Machinery Ltd - Metal Recycling Sites (Vehicle Dismantlers).

5.5.2 Historic landfill sites

There are three historic landfill sites within 1km of the site:

- 518m SE – T & W Brown – Input 1985 to 1993 - Inert and commercial waste, construction and demolition waste, max input rate large (75,000-250,000 tonnes/year),
- 726m NW – Hoyland Marshall Limited (G R Stein Refractories Ltd formerly registered landfill site) – Input 1962 to 1990 - Inert and industrial waste, max input rate very small (<10,000 tonnes/year),
- 842m E – Capper Pass Limited – Input 1971 to NA - Commercial and Household Waste.

5.5.3 Discharge Consents

There are no active discharge consents within 1km of the site.

5.6 **Pollution Incidents to Controlled Waters**

There have been 2 pollution incidents to controlled waters recorded within 1km of the site:

- 640m E – 1991 - Significant incident – Gas oil,
- 732m SW – 1994 – Minor incident – Diesel.

None of these incidents are believed to have impacted the site.

5.7 **Ground Gas**

The site is in an intermediate probability radon area (1-3% of homes are estimated to be at or above the action level) and no radon protection measures are considered necessary in the construction of new buildings.

Ground gas may be produced by underground worked coal seams and filled ground. Gas monitoring at the site has not noted any gas levels of concern.

5.8 **Ecological**

The site lies within nitrate vulnerable zones for surface water from the River Dearne. There is an area of adopted Green Belt from approx. 130m west. There are areas of un-adopted Green Belt from approx. 371m north.

5.9 **Industrial Activity**

5.9.1 Areas of Infilled Ground

There are 9 areas of potentially infilled land shown within 500m of the site.

- On site from central north to south-east – water, unknown filled ground (pond, marsh, river, stream, dock etc.), appears to be a stream flowing north-westwards,
 - o This was removed during the 2005/6 earthworks programme,
- 91m E - non-water - Hoyland Silkstone Collieries,
- 170m S – water – former covered reservoir,
- 222m SE – water - unknown filled ground (pond, marsh, river, stream, dock etc.), appears to be former field drain,

- 363m E - water - unknown filled ground (pond, marsh, river, stream, dock etc.), appears to be former pond,
- 380m W – water - unknown filled ground (pond, marsh, river, stream, dock etc.),
- 400m SE – water - unknown filled ground (pond, marsh, river, stream, dock etc.),
- 412m E - water - unknown filled ground (pond, marsh, river, stream, dock etc.), appears to be a stream flowing eastwards,
- 414m E water - unknown filled ground (pond, marsh, river, stream, dock etc.), appears to be a former pond.

There is a further large area of potentially infilled land (non-water, pit/quarry etc.) from 680m west associated with Hoyland Brick Works and Rockingham Colliery.

5.9.2 Contemporary Trade Directories

There are 11 active contemporary trade directory entries within 500m of the site, many of these are on Platts Common Industrial Estate. These are:

- 84m S - Greeting Card Publishers & Wholesalers,
- 158m E - Commercial Vehicle Manufacturers,
- 167m NE - Control Panels,
- 236m NW - PVC-U Products - Manufacturers & Suppliers,
- 285m NE - Lift Manufacturers,
- 320m NE - Footwear Manufacturers & Wholesale,
- 357m NE - Glass Fibre Moulding, Materials & Manufacturers,
- 369m NE - Window Frame Manufacturers,
- 384m NE - Tyre Dealers,
- 432m NE - Garage Services,
- 455m NE - Air Conditioning & Refrigeration Contractors.

There are no active or inactive contemporary trade directory entries on-site.

5.9.3 Fuel Station Entries

There is one active fuel station entry within 1km of the site:

- 555m SE.

5.10 Summary

The site is indicated to lie on a bedrock of mudstone, siltstone and sandstone (Secondary A aquifer), with no superficial deposits present, made ground is indicated immediately to the east.

The aquifer is indicated to have a high vulnerability to pollution, the site is not in a groundwater source protection zone.

The site is indicated to consist of topsoil over silty clay (fill) with weathered silty sandstone at 1.1m bgl. Much of the site is covered by fill apart from southern and eastern areas. Deeper boreholes indicate layers of sandstone, siltstone and mudstone, highly weathered towards the surface.

There are no operational waste activities, historic/current landfill sites, mineral sites or areas of infilled ground within the site. The site is in an intermediate probability radon area. There are no active or in-active contemporary trade directory entries within the site.

6.0 SITE WALKOVER

- 6.1 A walkover survey of the site was carried out on the 26th March 2018. Photographs can be found in Appendix F.
- 6.2 The site consists of a levelled platform consisting of clay, it is currently waterlogged and surfaced in rough grass, some areas showed signs of semi-permanent surface water. The eastern area is slightly less vegetated, likely due to more shade from the batter and Hampton House. The site is approx. 4m below Hawshaw Lane to the south, approx. 3m above the highway to the north-west and 5-6m above Plots 4A and B to the north. The site is overlooked by residential land to the south-west and overlooks land to the north. Vegetation on all of the batters consists of semi-mature trees 4-6m in height, some evergreen bushes are present. No noxious weeds were noted.
- 6.3 The western area consists of an un-finished highway leading from a roundabout on the business park. The paved road surface terminates approximately in line with the north of the site, south of this point it is surfaced in grass although the footway is finished with street-lighting operational. In the location of the proposed site entrance the site is approx. 2-3m above the highway, currently the site can be accessed by vehicles just south of this point although concrete blocks would have to be removed on the highway. Services and manholes are present in this area of un-finished highway to level with the south of the site.
- 6.4 A drainage ditch runs along the southern and eastern boundaries to a manhole in the north-east. The water appeared clean with no signs of stagnation although no flow was seen at the time. The water level was approx. 0.5m below site level although the site was highly waterlogged. A frog was seen in the southern ditch, frogspawn was seen in the southern ditch and two waterlogged areas towards the centre of the site. An oily sheen was seen in surface water in two locations, these areas were not widespread.
- 6.5 Two domestic fly tips were seen, one on the southern batter from Hawshaw Lane, the other from Tinsley Road on the eastern batter. Two monitoring boreholes were seen on the site. There was no dominant source of noise at the time of the visit.

7.0 REVIEW OF PREVIOUS WORK

- 7.1 William Saunders' drawing no. E6924(C)44 indicates much of the site is covered by clay fill, up to 4.5m deep in the central north. Southern and eastern parts are not indicated to be covered and have been excavated, bedrock is expected at the surface.
- 7.2 Ground investigations for Phases 1 and 2 of Plot 2 of Ashroyd Business Park encountered groundwater in one borehole at 3.4m bgl, another borehole, drilled to 4.2m bgl, did not encounter groundwater. Boreholes from the original site investigation before the business park was reprofiled encountered groundwater in one borehole at 6.5m bgl, however this was approx. 250m north-west.
- 7.3 Groundwater and ground gas monitoring was carried out in one borehole on the site in 1999 from the development of the business park. A standpipe was installed to 12mbgl, groundwater was not encountered. Two separate monitoring visits encountered no Explosive gases (CH₄) or carbon dioxide, oxygen percentages were 20.5 and 20.7%.

8.0 PHASE I ENVIRONMENTAL RISK ASSESSMENT

The risk of any contaminants impacting on development is a function of the nature of the contaminant, the probability of exposure, the pathway by which exposure occurs and the likely effect on the receptor. A contaminant is defined by the Contaminated Land Exposure Assessment (CLEA) method as a substance that has the potential to cause harm, and a risk is considered to be present where a contaminant is present at sufficient concentration to cause harm and a pathway is present for a receptor to be exposed to that contaminant.

At this stage, the Phase 1 Risk Assessment is qualitative in nature, and aims to identify all potential source-pathway-receptor linkages irrespective of significance or uncertainty. The identification will cover the following scenario's: -

- Existing site conditions affecting the site itself,
- Existing site conditions affecting the environment more generally, and
- Existing off-site conditions affecting the site.

8.1 Potential Pollution Sources

Based on the findings of this Phase 1 Report, the potential sources of contaminants are: -

On site

- Underground mining,
- Contaminants in near-surface soils,
- Mobile hydrocarbons in near-surface soils,
- Filled ground.

Off site

- Deposits from former uses:
 - o Filled ground.

8.2 Potential Pathways

Potential pathways are as follows:

- Ingestion through direct contact or edible vegetable uptake,
- Skin contact,
- Inhalation of dust,
- Direct contact with buried structures,

- Leaching to ground and surface water,
- Surface run off,
- Accumulation of explosive or asphyxiative gases in confined spaces.

8.3 Potential Receptors

Human health

- Current site users,
- Construction workers,
- Future site users,
- Users of adjacent sites.

Construction materials

- Buried concrete in foundations,
- Buried pipe work,
- Buried brickwork.

Controlled waters

- Groundwater underlying the site, noted as a Secondary A aquifer,
- Surface water.

Flora and fauna

- Existing vegetation,
- Future development landscape planting.

8.4 Preliminary Conceptual Site Model

The Preliminary Conceptual Site Model (CSM) is a hypothetical review of the linkages between source, pathway and receptor as noted above. This is set within the identified ground and waters context of the site and the site's proposed end use.

No significance or uncertainty is attributed to any source-pathway-receptor pollutant linkage at this stage.

In tabular form, the CSM and attributable risk is as follows: -

Source	Pathway	Receptor	Probability	Consequence	Risk
On-site contaminants in near surface soils	Direct contact / ingestion	Long term – future site users	Unlikely	Moderate	Low
		Short term – construction workers	Medium	Moderate	Moderate
	Inhalation of dust	Long term – future site users	Unlikely	Moderate	Low
		Short term – construction workers	Medium	Moderate	Moderate
	Leaching through infiltration.	Secondary A aquifer	Low	Mild	Low
		Surface water	Low	Mild	Low
On-site mobile hydrocarbons in near surface soils	Leaching through infiltration.	Secondary A aquifer	Low	Mild	Low
		Surface water	Low	Mild	Low
	Direct contact	Short term – construction workers	Low	Moderate	Moderate / low
	Groundwater flow	Surface water	Low	Mild	Low
On-site aggressive ground conditions	Contact with buried structures	Built environment	Low	Moderate	Moderate / low
On and off-site ground gas from fill/colliery spoil/worked coal seams	Build-up in confined spaces	Long term – future site users	Medium	Severe	High
		Short term – construction workers	Medium	Severe	High
Filled ground	Differential settlement	Built environment	Low	Moderate	Moderate / low

Based on the proposed light industrial end uses, the CSM indicates a potential high risk to human health, principally due to potential ground gas accumulation produced from off-site made ground. The CSM indicates a potential moderate risk to the built environment due to differential settlement in filled ground and a potential low risk of causing harm to controlled waters.

9.0 RECOMMENDATIONS FOR FURTHER WORK

9.1 The Phase I investigation has noted potential geo-environmental risks as follows: -

- Mobile hydrocarbons and contaminants in the soils / groundwater,
- Potential ground gas evolution,
- Filled ground with the potential for differential settlement.

9.2 The Phase II investigation should investigate these risks as follows: -

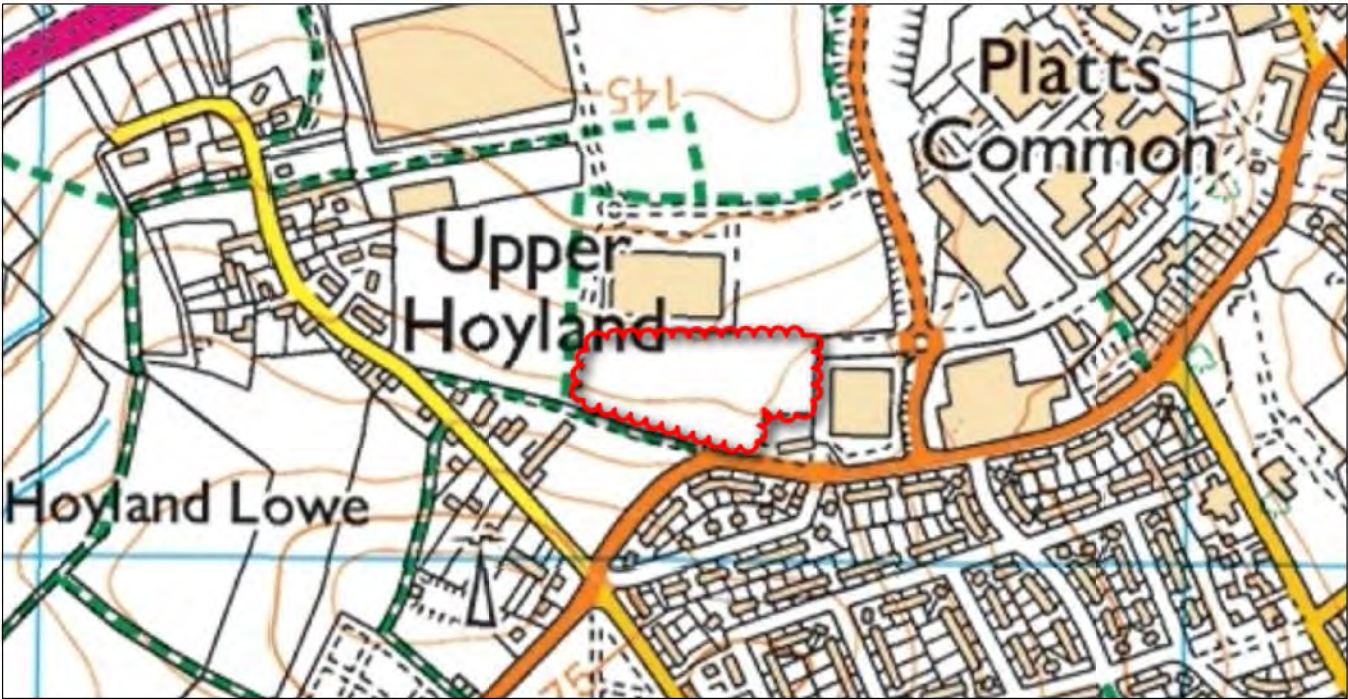
- Chemical analysis of near-surface soils,
- Ground gas monitoring.

9.3 In addition, the Phase 2 investigation should investigate the following matters in order to enable development design: -

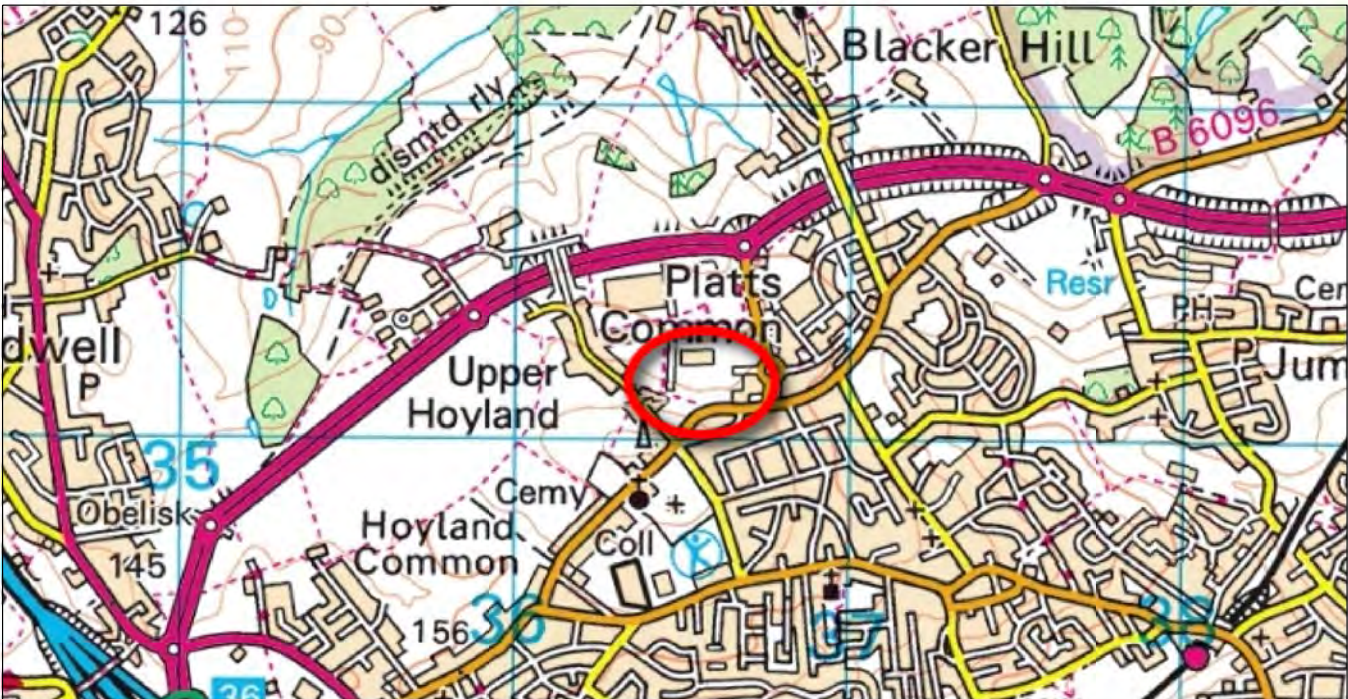
- Trial pits to assess the geo-technical characteristics of the soils to allow foundation design,
- Determine the level of groundwater beneath the site,
- Determine whether infiltration rates across the site are sufficient to allow infiltration drainage.

APPENDIX A

Site Location Plan



SCALE 1:25000



SCALE 1:50000

NGR: 436564, 401164

In accordance with CDM Regulations 7, 11 and 18, any significant risks (as defined in the Approved Code of Practice paragraph 133) relating to the design features shown on this drawing have been identified and are annotated thus: 

☒ No significant risks have been identified.

☐ Significant risks have been identified - refer to notes on drawing for information on residual risks and any control measures to be employed.

Refer to the current Designer's Risk Assessment sheets for further details.

Designer's Signature		Date	
Rev.	Description	Vf'd	Date
1	- Initial Issue	AG	Mar18
2			
3			

Project Plot 5, Ashroyd Business Park, Hoyland, Barnsley			
Client Network Space Ltd			
Title Site Location			
Drawing Status Information			
Project Ref.	Drawn	Date	Scale
11717	WD	Mar 18	As shown @A4
Drawing/Document Reference Project Originator Zone Level Type Role Number Status Rev.			
11717-WMS-ZZ-XX-DR-C-30001-S1-P1-LOCATION_PLAN			

williamsaunders

architecture: engineering: building consultancy

Sheppard Lockton House Tel: 01636 704361
Cafferata Way Fax: 01636 702809
Newark-on-Trent W: wm-saunders.co.uk
Nottinghamshire, NG24 2TN

Also at Leeds, Cardiff, Warksworth

William Saunders is the trading name of Wm Saunders Partnership LLP. Wm Saunders Partnership Limited Liability Partnership is registered in England and Wales with the Registration number OC 308323. The Registered Office is Sheppard Lockton House, Cafferata Way, Newark on Trent, Notts, NG24 2TN.

This drawing & any design thereon is the copyright of Wm Saunders Partnership LLP and must not be reproduced without their written consent. Contractors must verify all dimensions, levels & co-ordinates at the site before commencing any work or making any shop drawings: no dimensions to be taken from drawing.

APPENDIX B
Development Proposals



Ownership Boundary Line

Plot 5 Application Boundary Line (5.49 Acres / 2.22 Ha)

LEVELS

Existing levels
+000.00
Proposed levels
+000.00

Note: For further details regarding levels, refer to William Sanders latest levels layout proposal.

LANDSCAPING

Note: Landscape design shown indicatively, for further details regarding landscaping, refer to Vector Landscape Designers latest proposal.

Block	Red line and notation updated: Unit 5A & 5C amended	AT	DT
Drawn	Notation updated	AT	DT
Rev	Date	Description	Rev By
Project Title	Proposed Development Plot 5 Ashroyd Business Park Junction 36 M1 Barnsley S74 9SB		
Client	Network Space Ltd		
Status	Planning		
Scale	1:200	Drawn by	AO
Date	March 2018	Drawn by	AT
Checked	DT	Drawn by	AT
Drawing Title	Proposed Site Masterplan		
Job-Client No.	14698C-115	Rev	B
3rd Party	3rd Party North Waterside 1001 300A 1 0185 25100		
3rd Party	Carver Warehouse, 77 Dale Street, Manchester, M1 2NG 1 0141 238655		
3rd Party	The Old Rectory, 79 High Street, Newport, NP23 5JF 1 0185 211577		
3rd Party	101 London Road, Barnsley, S74 9SB 1 0185 760700		
3rd Party	101 Green Court, 101 Christchurch Place, London, W12 1JZ 1 007 409115		

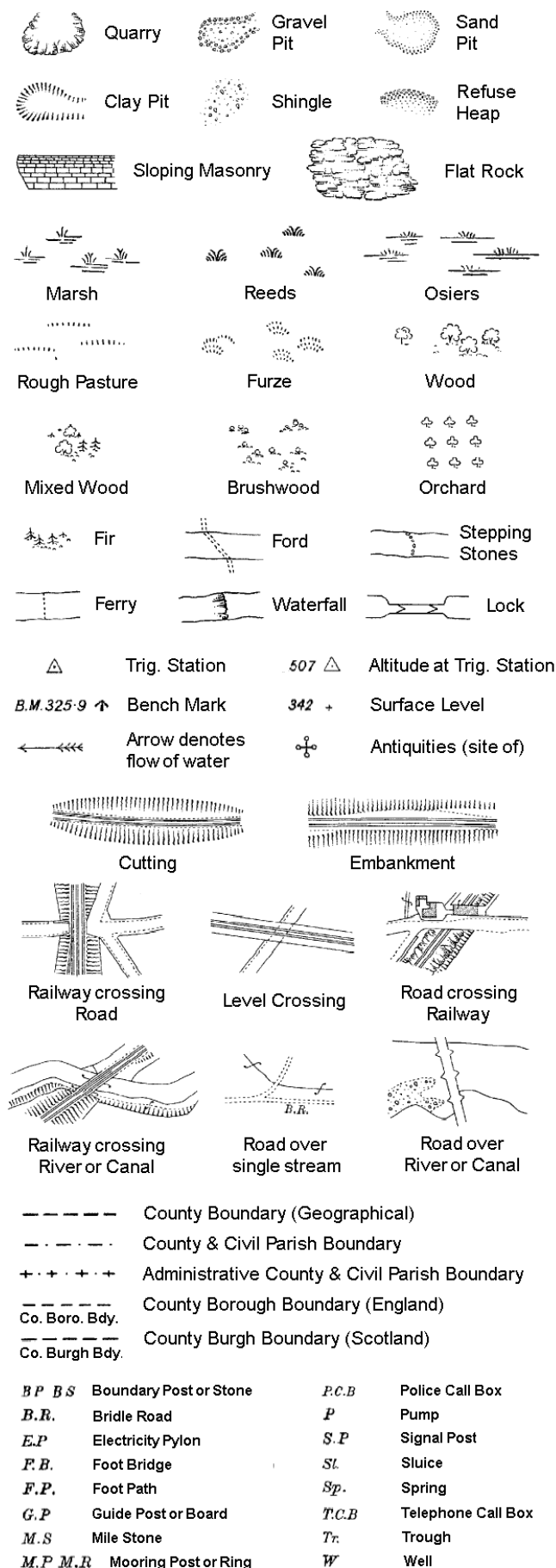


APPENDIX C

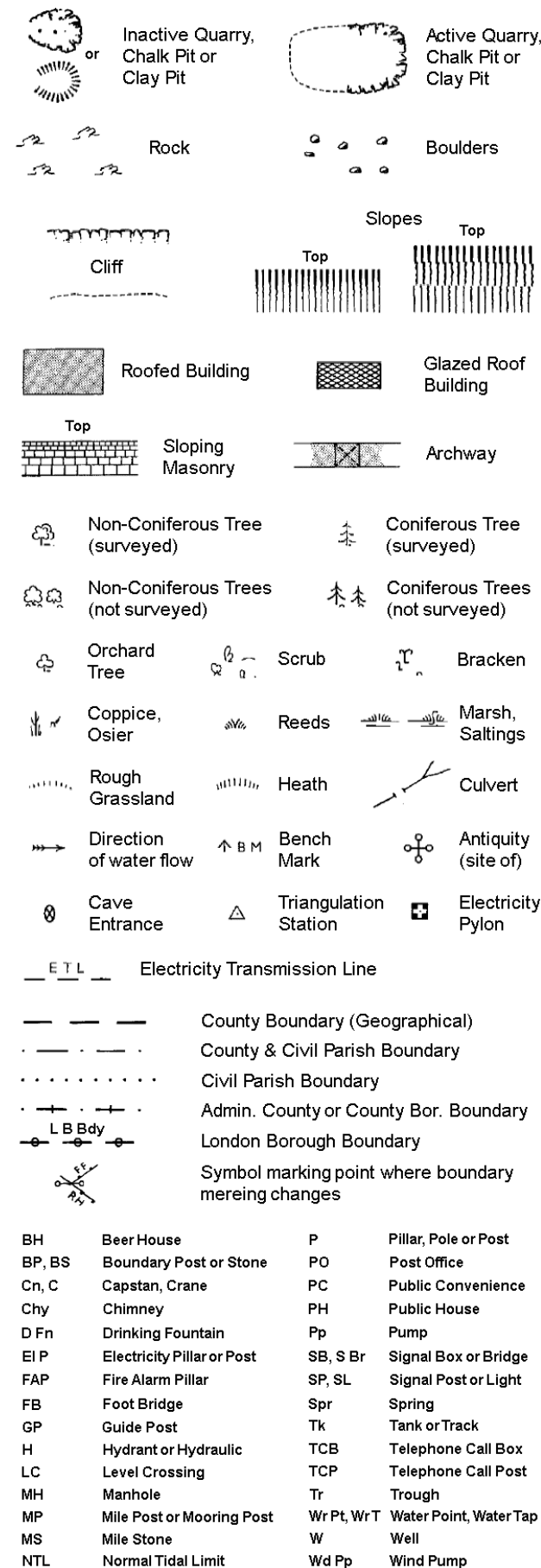
Historical Mapping

Historical Mapping Legends

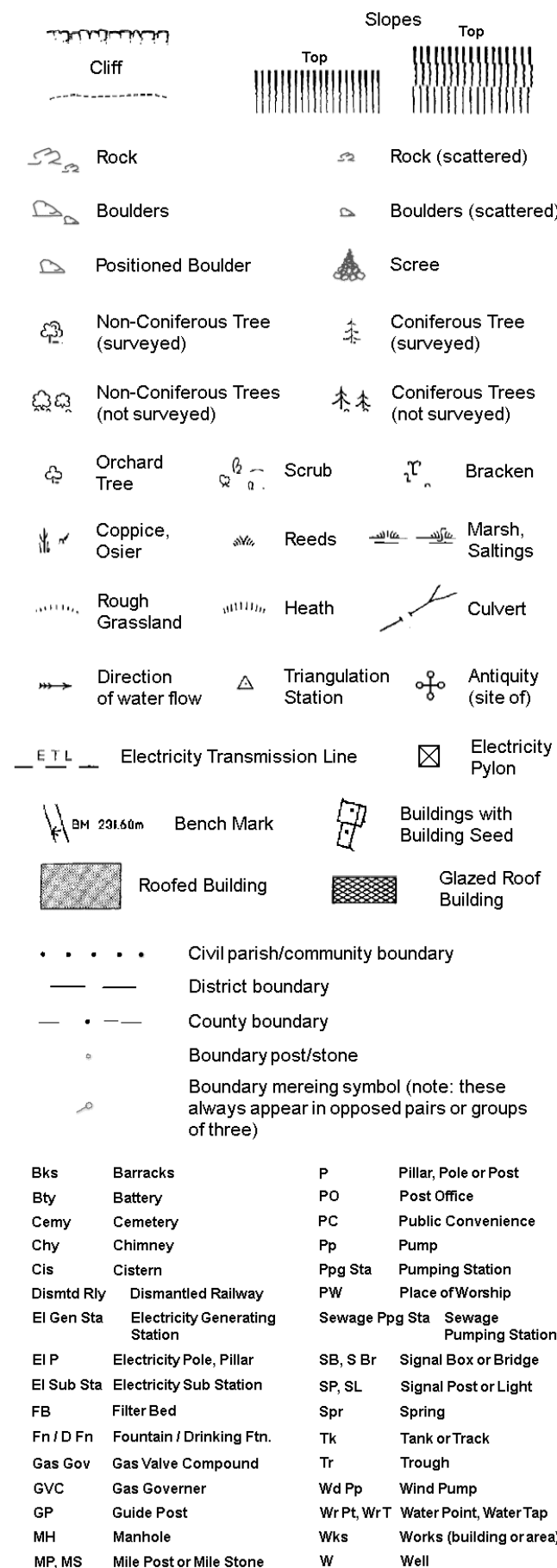
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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

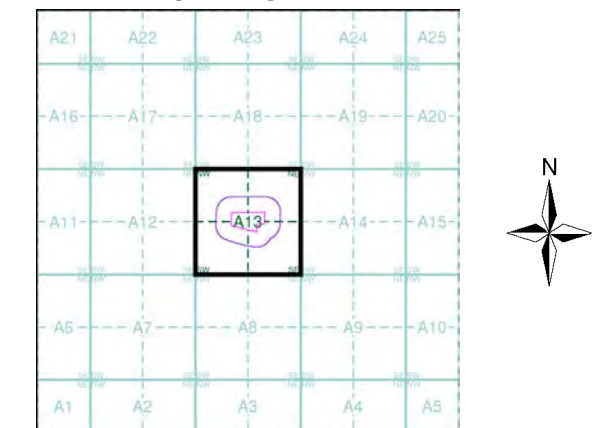


williamsaunders

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:2,500	1893	2
Yorkshire	1:2,500	1905	3
Yorkshire	1:2,500	1931	4
Ordnance Survey Plan	1:1,250	1956	5
Ordnance Survey Plan	1:2,500	1956 - 1962	6
Ordnance Survey Plan	1:1,250	1968 - 1975	7
Ordnance Survey Plan	1:2,500	1969	8
Additional SIMs	1:2,500	1979	9
Additional SIMs	1:1,250	1979 - 1985	10
Large-Scale National Grid Data	1:1,250	1993	11
Historical Aerial Photography	1:2,500	1999	12

Historical Map - Segment A13



Order Details

Order Number: 159551802_1_1
Customer Ref: 11717
National Grid Reference: 436570, 401170
Slice: A
Site Area (Ha): 2.1
Search Buffer (m): 100

Site Details

Plot 5, Ashroyd Business Park, Ashroyds Way, BARNSELY, S74 9SB

Landmark
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Yorkshire

Published 1893

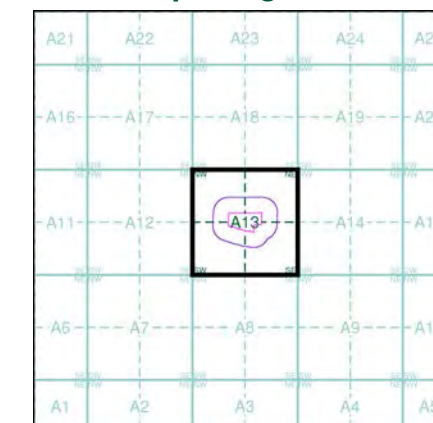
Source map scale - 1:2,500

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)

282_04
1893
1:2,500
282_08
1893
1:2,500

Historical Map - Segment A13

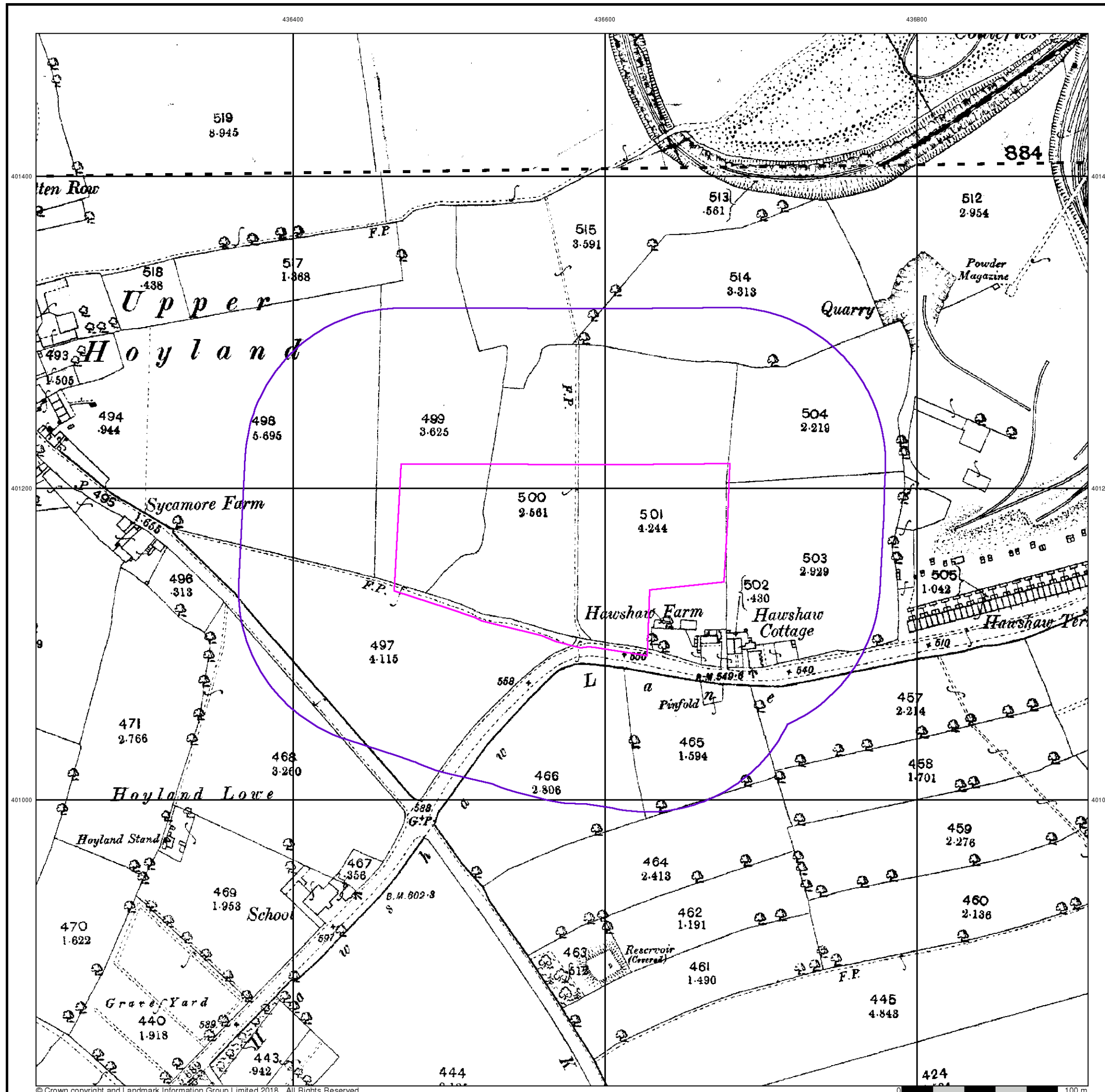


Order Details

Order Number: 159551802_1_1
 Customer Ref: 11717
 National Grid Reference: 436570, 401170
 Slice: A
 Site Area (Ha): 2.1
 Search Buffer (m): 100

Site Details

Plot 5, Ashroyd Business Park, Ashroyds Way, BARNSELY, S74 9SB



Yorkshire

Published 1905

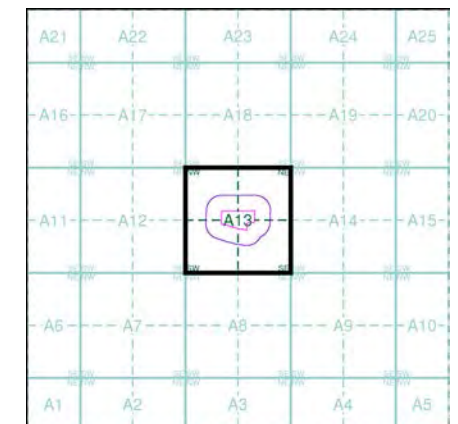
Source map scale - 1:2,500

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)

282_04
1905
1:2,500
282_08
1905
1:2,500

Historical Map - Segment A13

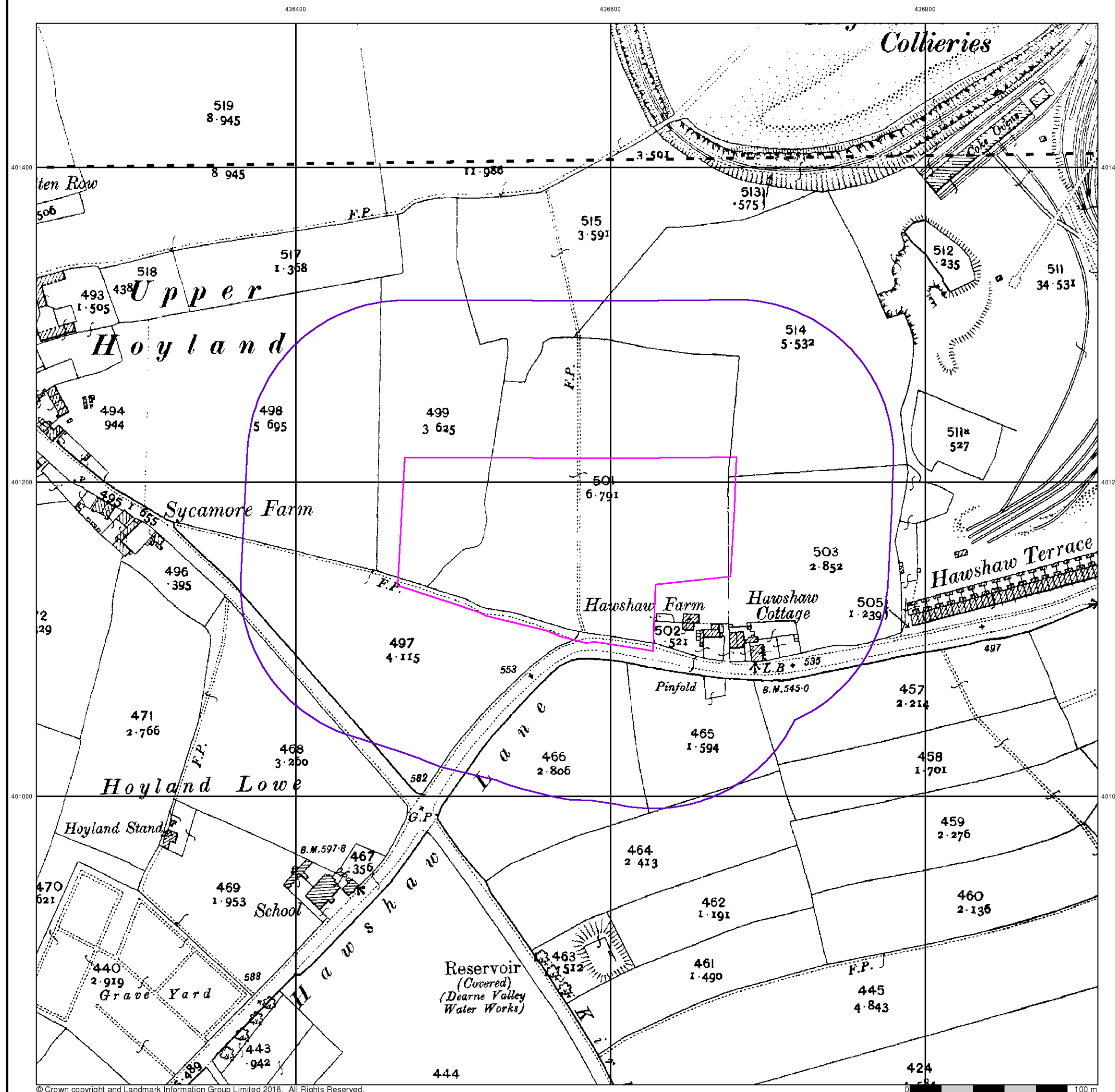


Order Details

Order Number: 159551802_1_1
 Customer Ref: 11717
 National Grid Reference: 436570, 401170
 Slice: A
 Site Area (Ha): 2.1
 Search Buffer (m): 100

Site Details

Plot 5, Ashroyd Business Park, Ashroyds Way, BARNSELY, S74 9SB



Yorkshire

Published 1931

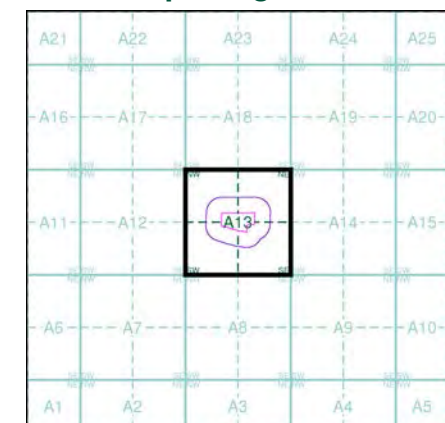
Source map scale - 1:2,500

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)

282_04
1931
1:2,500
282_08
1931
1:2,500

Historical Map - Segment A13

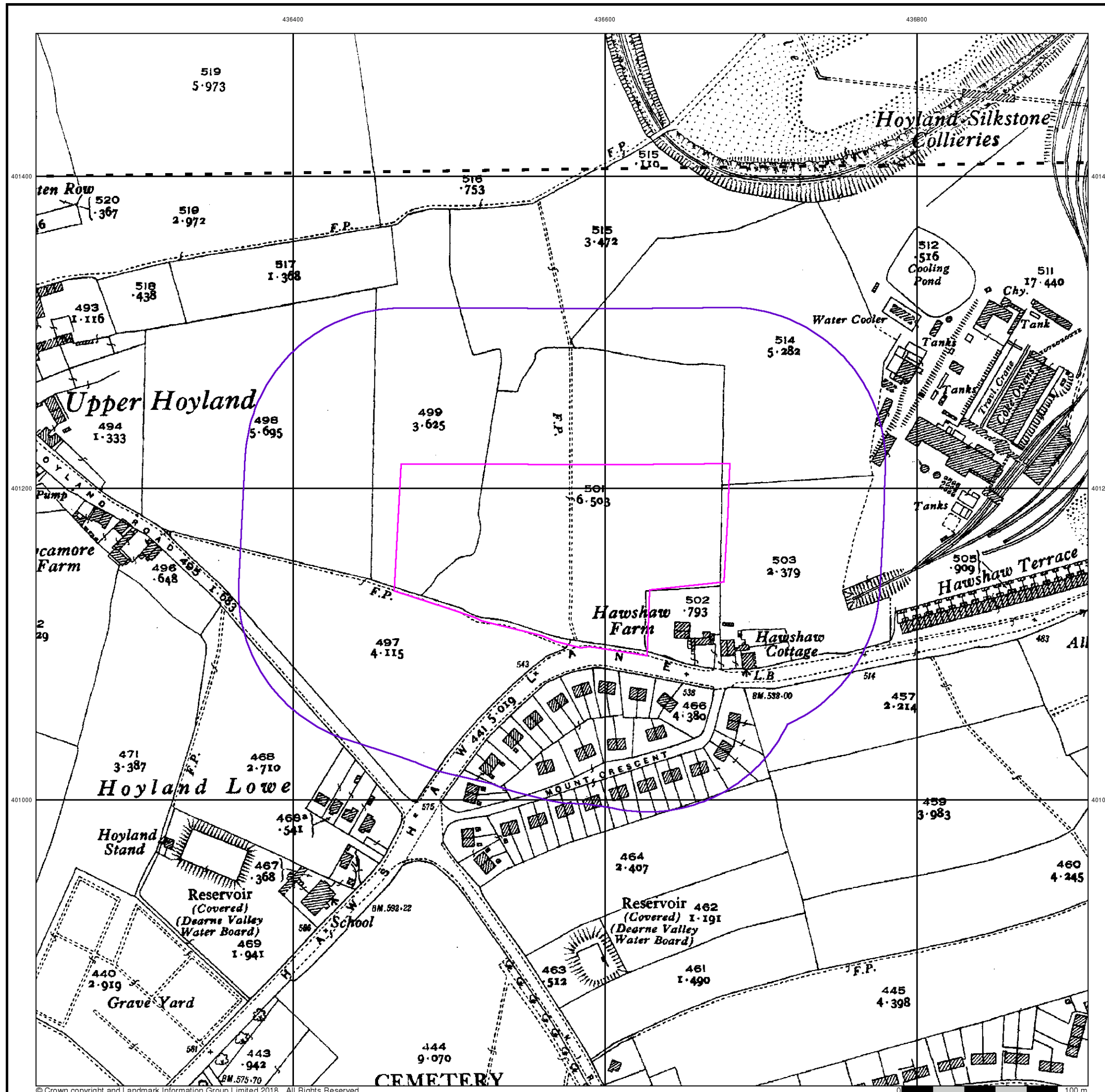


Order Details

Order Number: 159551802_1_1
 Customer Ref: 11717
 National Grid Reference: 436570, 401170
 Slice: A
 Site Area (Ha): 2.1
 Search Buffer (m): 100

Site Details

Plot 5, Ashroyd Business Park, Ashroyds Way, BARNSELY, S74 9SB



Ordnance Survey Plan

Published 1956

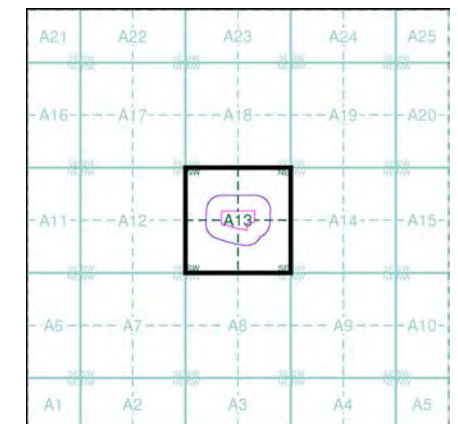
Source map scale - 1:1,250

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)

SE3601SE	1956	1:1,250
SE3600NW	1956	1:1,250
SE3600NE	1956	1:1,250

Historical Map - Segment A13

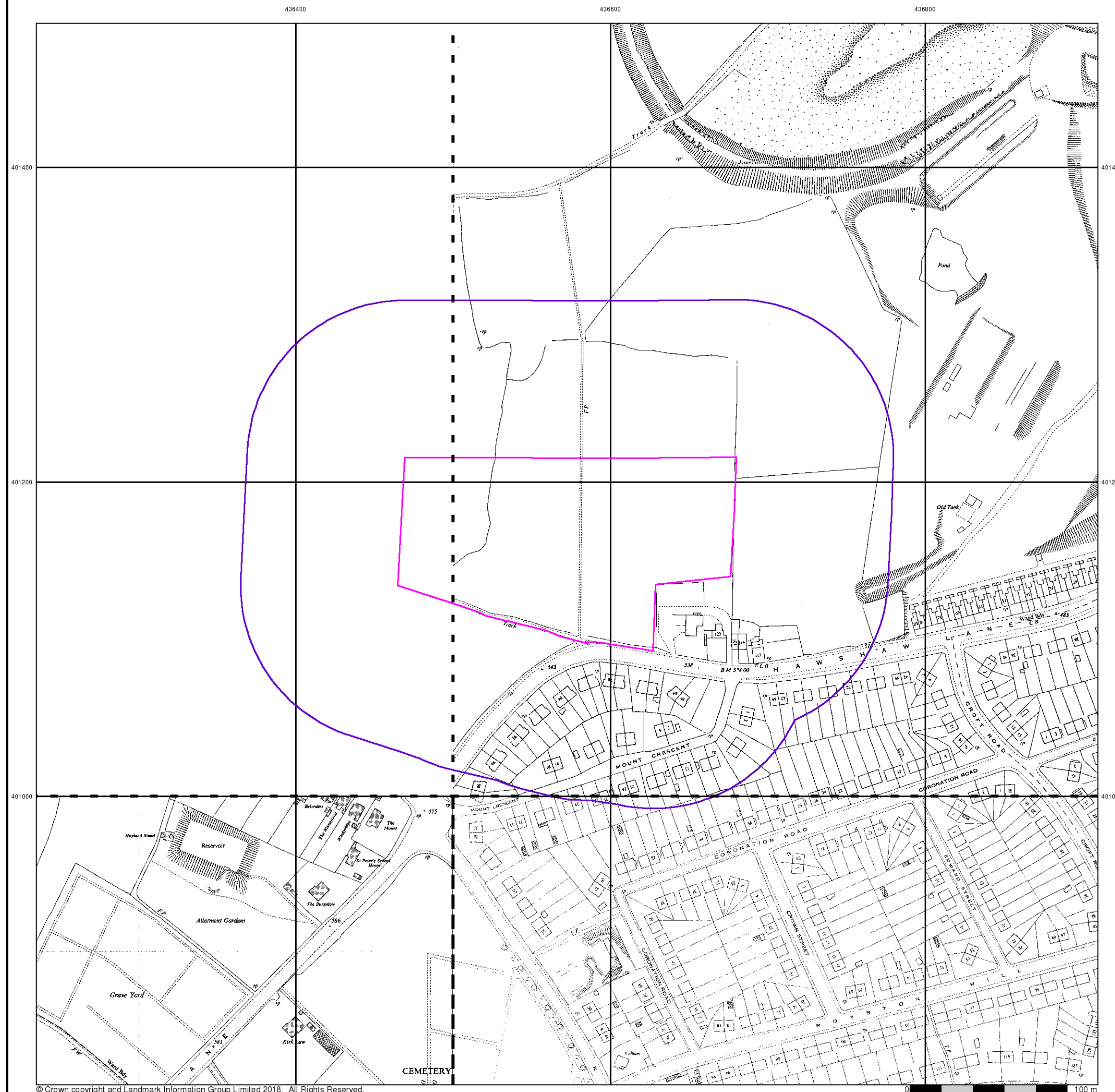


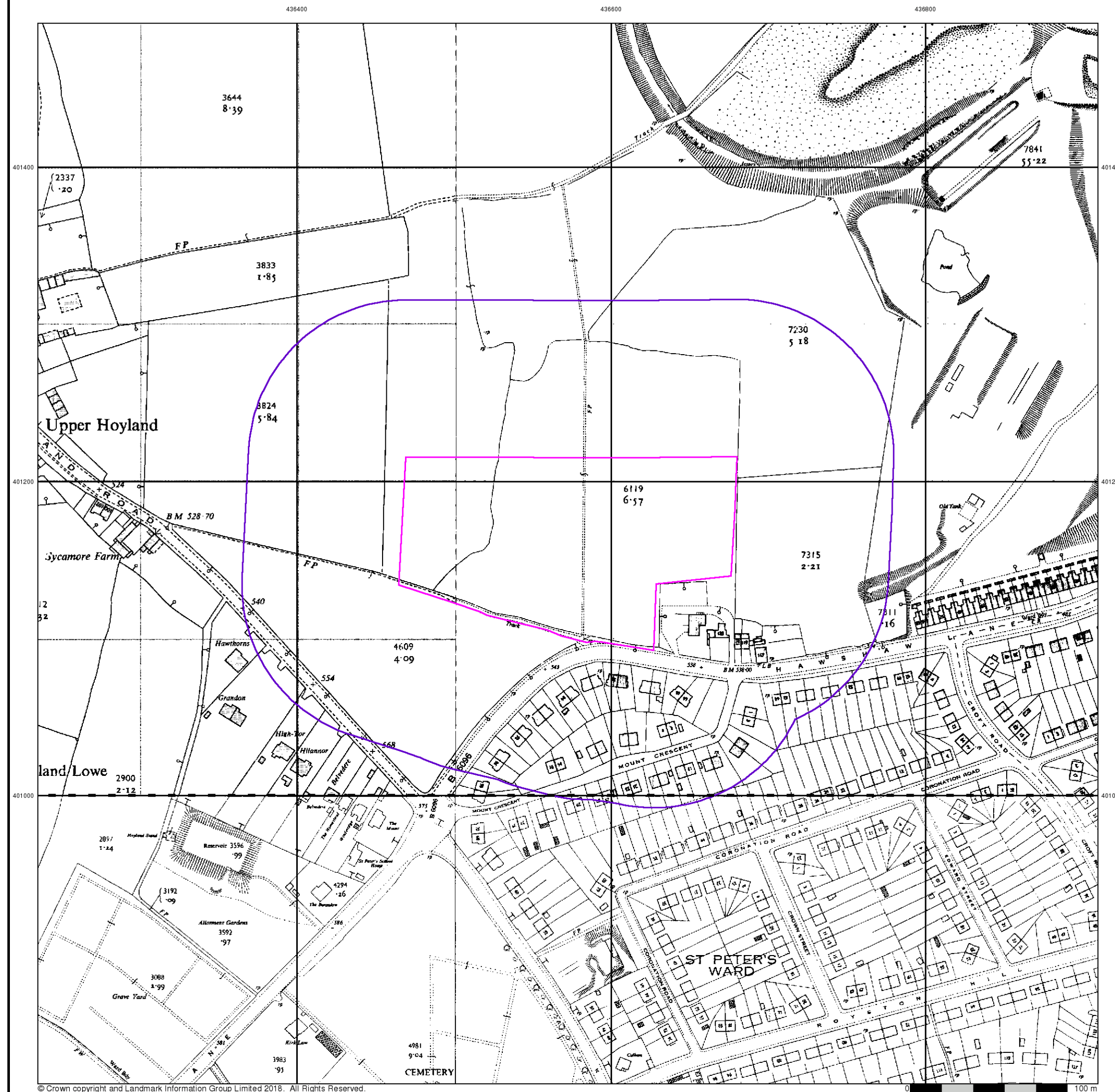
Order Details

Order Number: 159551802_1_1
 Customer Ref: 11717
 National Grid Reference: 436570, 401170
 Slice: A
 Site Area (Ha): 2.1
 Search Buffer (m): 100

Site Details

Plot 5, Ashroyd Business Park, Ashroyds Way, BARNSELY, S74 9SB





williamsaunders

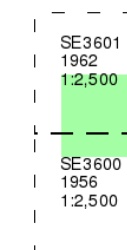
Ordnance Survey Plan

Published 1956 - 1962

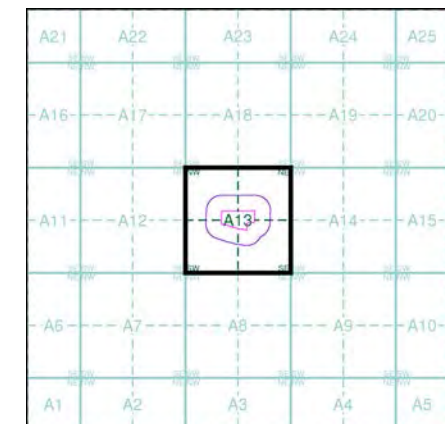
Source map scale - 1:2,500

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:	159551802_1_1
Customer Ref:	11717
National Grid Reference:	436570, 401170
Slice:	A
Site Area (Ha):	2.1
Search Buffer (m):	100

Site Details

Plot 5, Ashroyd Business Park, Ashroyds Way, BARNSELY,
S74 9SB

Landmark
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Ordnance Survey Plan

Published 1968 - 1975

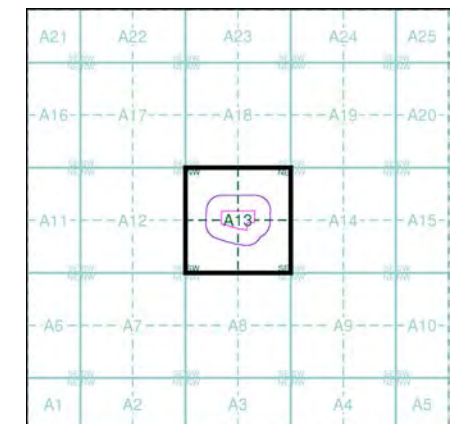
Source map scale - 1:1,250

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)

SE3601SE	1972	1:1,250
SE3600NW	1975	1:1,250
SE3600NE	1968	1:1,250

Historical Map - Segment A13

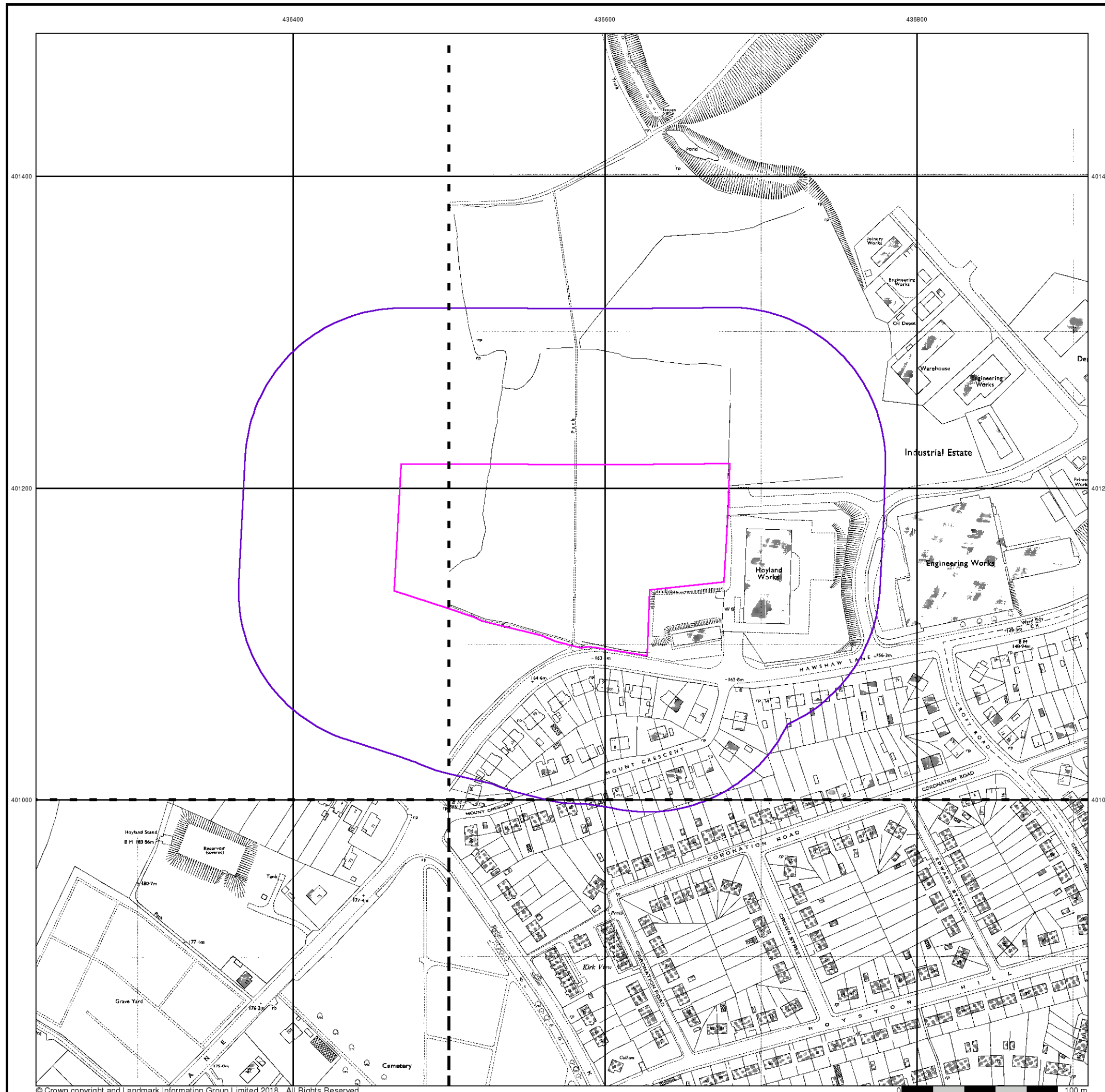


Order Details

Order Number: 159551802_1_1
 Customer Ref: 11717
 National Grid Reference: 436570, 401170
 Slice: A
 Site Area (Ha): 2.1
 Search Buffer (m): 100

Site Details

Plot 5, Ashroyd Business Park, Ashroyds Way, BARNSELY, S74 9SB



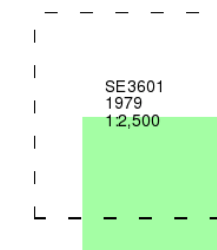
Additional SIMs

Published 1979

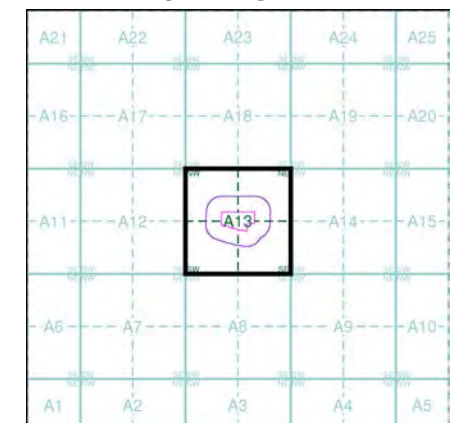
Source map scale - 1:2,500

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

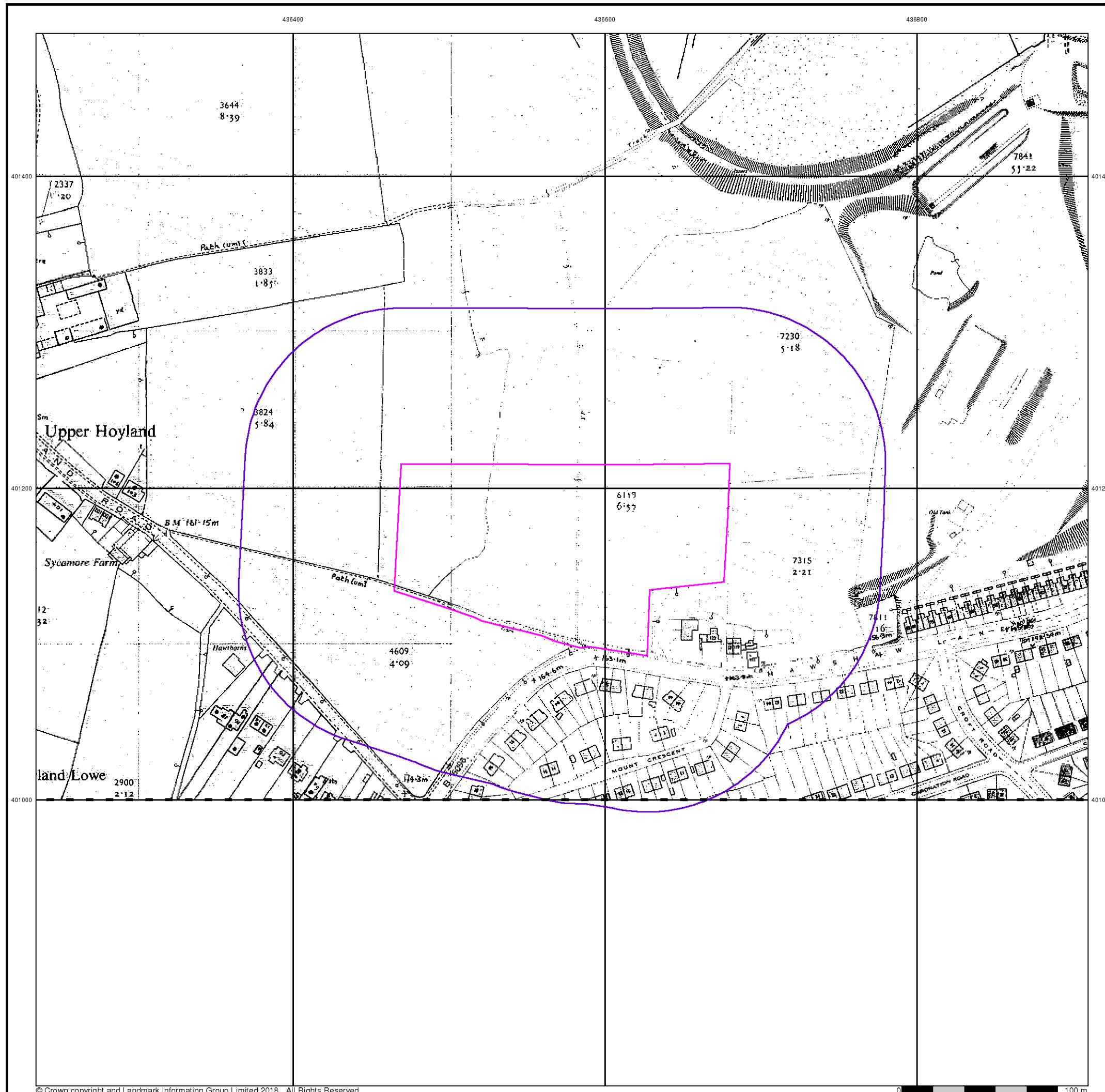


Order Details

Order Number: 159551802_1_1
Customer Ref: 11717
National Grid Reference: 436570, 401170
Slice: A
Site Area (Ha): 2.1
Search Buffer (m): 100

Site Details

Plot 5, Ashroyd Business Park, Ashroyds Way, BARNSELY, S74 9SB



Additional SIMs

Published 1979 - 1985

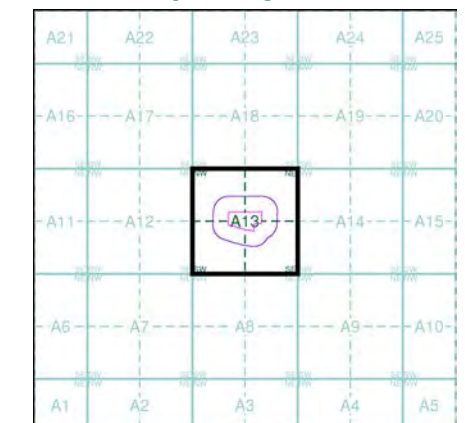
Source map scale - 1:1,250

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)

SE3601SE
1979
1:1,250
SE3600NE
1985
1:1,250

Historical Map - Segment A13

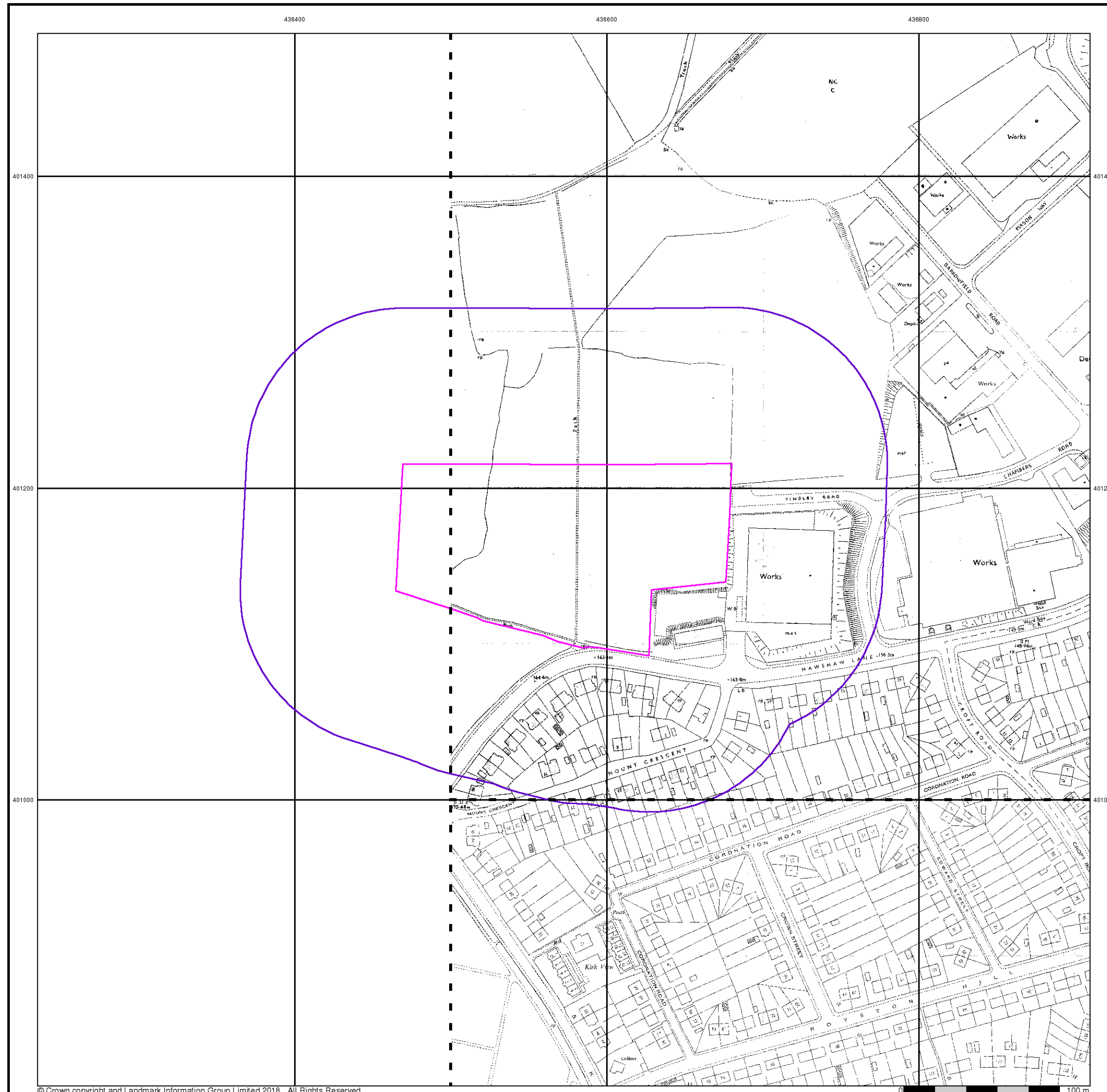


Order Details

Order Number: 159551802_1_1
 Customer Ref: 11717
 National Grid Reference: 436570, 401170
 Slice: A
 Site Area (Ha): 2.1
 Search Buffer (m): 100

Site Details

Plot 5, Ashroyd Business Park, Ashroyds Way, BARNSELY, S74 9SB



Large-Scale National Grid Data

Published 1993

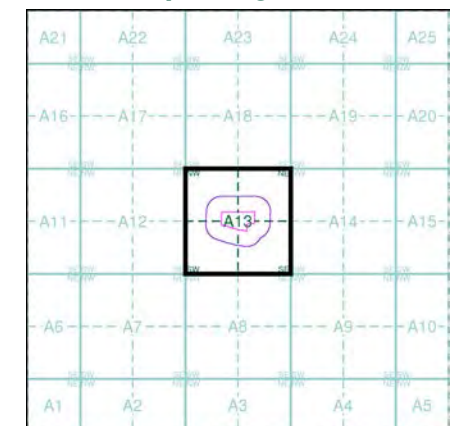
Source map scale - 1:1,250

'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)

SE3601SW 1993 1:1,250	SE3601SE 1993 1:1,250
SE3600NW 1993 1:1,250	SE3600NE 1993 1:1,250

Historical Map - Segment A13

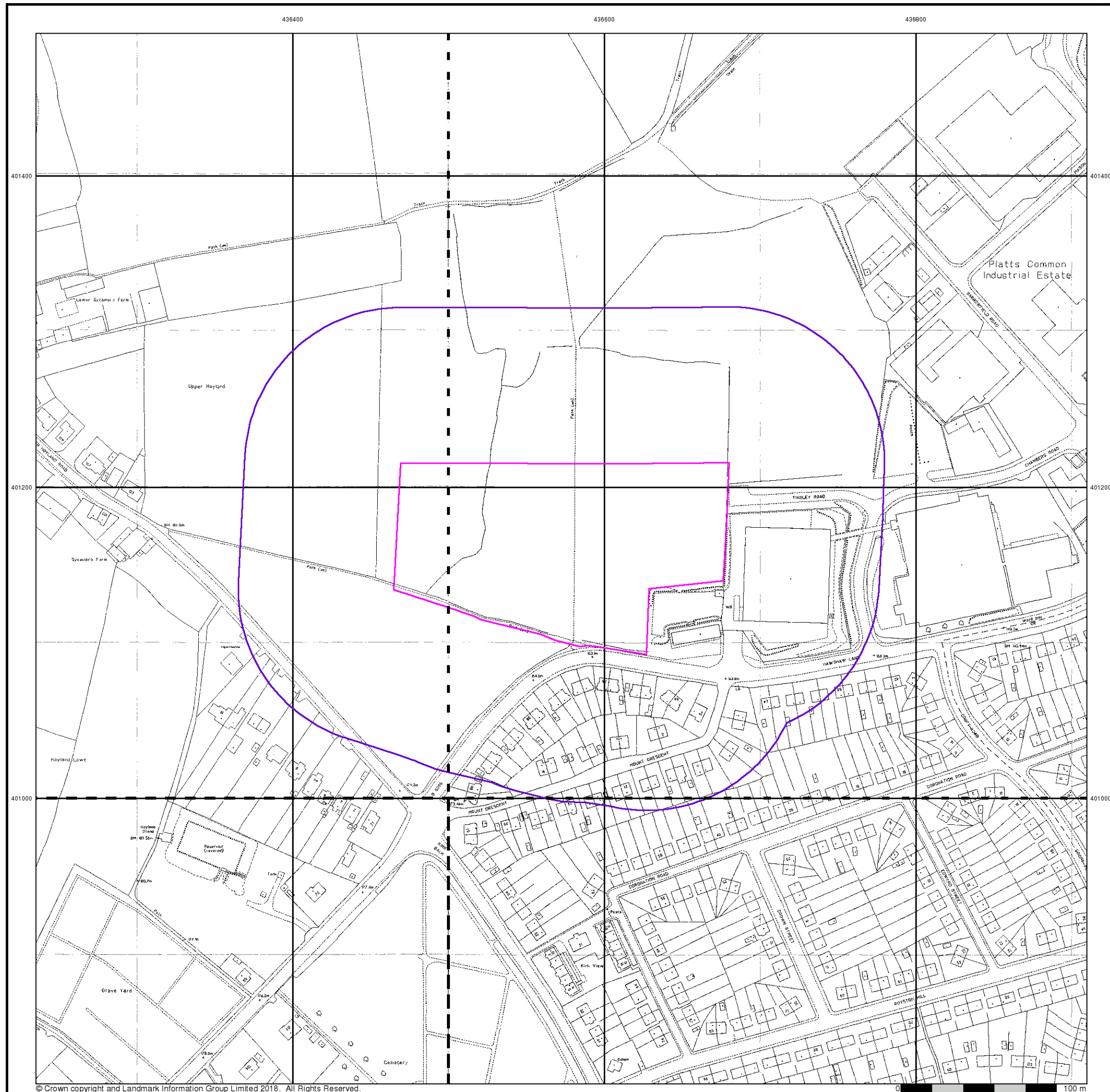


Order Details

Order Number: 159551802_1_1
 Customer Ref: 11717
 National Grid Reference: 436570, 401170
 Slice: A
 Site Area (Ha): 2.1
 Search Buffer (m): 100

Site Details

Plot 5, Ashroyd Business Park, Ashroyds Way, BARNSELY, S74 9SB

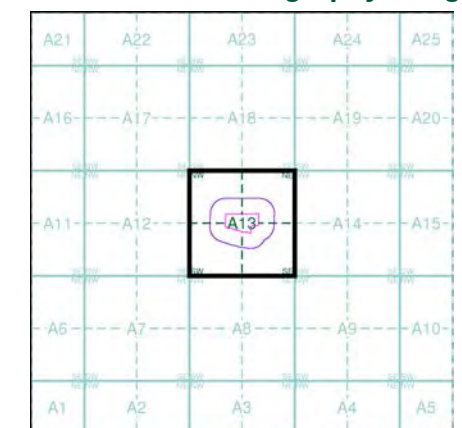


Historical Aerial Photography

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: 159551802_1_1
 Customer Ref: 11717
 National Grid Reference: 436570, 401170
 Slice: A
 Site Area (Ha): 2.1
 Search Buffer (m): 100

Site Details

Plot 5, Ashroyd Business Park, Ashroyds Way, BARNSELY, S74 9SB



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 Burgh 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		
	BP, BS 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

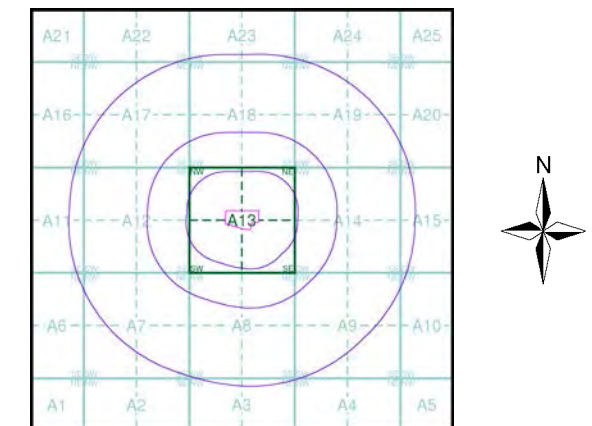
	Gravel Pit		Refuse tip or slag heap
	Rock		Rock (scattered)
	Boulders		Boulders (scattered)
	Shingle		Mud
	Sand		Sand Pit
	Slopes		Top of cliff
	General detail		Underground detail
	Overhead detail		Narrow gauge railway
	Multi-track railway		Single track railway
	County boundary (England only)		Civil, 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

williamsaunders

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:10,560	1855	2
Yorkshire	1:10,560	1893 - 1894	3
Yorkshire	1:10,560	1893 - 1894	4
Yorkshire	1:10,560	1905 - 1907	5
Yorkshire	1:10,560	1931 - 1932	6
Yorkshire	1:10,560	1938 - 1948	7
Yorkshire	1:10,560	1948	8
Ordnance Survey Plan	1:10,000	1956	9
Ordnance Survey Plan	1:10,000	1965 - 1966	10
Ordnance Survey Plan	1:10,000	1980 - 1982	11
Ordnance Survey Plan	1:10,000	1989	12
Ordnance Survey Plan	1:10,000	1991	13
10K Raster Mapping	1:10,000	2000	14
10K Raster Mapping	1:10,000	2006	15
VectorMap Local	1:10,000	2018	16

Historical Map - Slice A



Order Details

Order Number: 159551802_1_1
Customer Ref: 11717
National Grid Reference: 436570, 401170
Slice: A
Site Area (Ha): 2.1
Search Buffer (m): 1000

Site Details

Plot 5, Ashroyd Business Park, Ashroyds Way, BARNSELY, S74 9SB

Landmark
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Yorkshire

Published 1893 - 1894

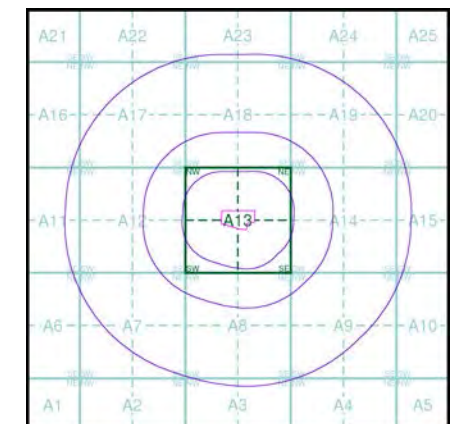
Source map scale - 1:10,560

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)

282NE	1893	1:10,560
282SE	1894	1:10,560

Historical Map - Slice A



Order Details

Order Number: 159551802_1_1
 Customer Ref: 11717
 National Grid Reference: 436570, 401170
 Slice: A
 Site Area (Ha): 2.1
 Search Buffer (m): 1000

Site Details

Plot 5, Ashroyd Business Park, Ashroyds Way, BARNSELY, S74 9SB

