GEOENVIRONMENTAL DESK STUDY REPORT

Willow Lane
Huddersfield

Reference	**6367-JPG-XX-XX-RP-G-0601-S2-P01**
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CONFIDENTIALITY STATEMENT

This report is addressed to and may be relied upon by the following:

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DOCUMENT HISTORY

Revision	Date	Revision Details	Status	Author(s)	Approved
P01	15.07.2024	First Issue.	Information	AJS	DMH

EXECUTIVE SUMMARY

Site Address	**Willow Lane, Huddersfield.**
National Grid Reference	414145, 417797.
Current Site Use	The site is triangular in shape and occupies an area of approximately 0.3 hectares. It comprises an area of hardstanding which has previously been utilised as a car park. The site's boundaries are formed by large trees.
Proposed End Use	The site is proposed to be utilised for container storage area.
Site History	The site has remained fairly undeveloped since the earliest mapping series until circa 2000, when the aerial imagery shows the site to comprise hardstanding and being utilised as a car park. The site remains the same to the present day.
Site Setting	**Geology** – Based on the BGS geological maps, majority of the site is shown to comprise worked ground. Furthermore, based on the site inspection it is evident that majority of the site comprises hardstanding. No superficial deposits are shown on the site. However, based on the BGS geological maps, the area abutting the northeastern boundary of the site is shown to be underlain with alluvium deposits comprising clay, sand and gravel. It is anticipated that the alluvium deposits encroach onto the eastern part of the site. The underlying bedrock comprises the Soft Bed Flags Sandstone which is recorded as a fine-grained, thinly-bedded and cross-bedded flaggy sandstone interbedded with mudstone. **Coal Mining** - The risk to the surface stability of the site due to shallow coal mining is considered to be negligible. **Hydrogeology** – The superficial deposits abutting the northeastern boundary of the site and the underlying bedrock geology are identified as a Secondary A Aquifers. There are two active recorded groundwater abstraction licences within 2km of the site. The nearest is located 807m to the east of the site. There are no Environment Agency Groundwater Source Protection Zones within 500m of the site. **Hydrology** – The nearest surface water feature is Hebble Beck, which is located 62m to the north east of the site. There are three active licenced discharge consents to surface water within 500m of the site. The nearest is located 77m to the east of the site. There are five active recorded surface water abstraction licences, all held by the Canal and Riser Trust, within 2km of the site. The nearest is located 620m to the east of the site. The site does not lie within a Zone 2 or Zone 3 floodplain. **Landfill** - There are no records of active or recently closed landfill sites within 500m of the site. There are no records of historical landfill sites within 500m of the site. **Radon Risks** – In accordance with the Building Research Establishment publication BR211, no radon protective measures are required for new properties constructed on the site.
Environmental Risk Assessment	On the basis of the proposed end use and known history of the site, the following potential pollutant linkages may be present: • Groundworkers, maintenance workers and site end users could come into contact with soils containing elevated concentrations of potential contaminants; and • The controlled waters could become contaminated due to the leaching and migration of potential contaminants from any made ground. These are based on current site conditions and do not consider exposure pathways following any remediation of the site. In lieu of any chemical testing, ground contamination information, or implementation of mitigation measures, the site should be considered to be low to moderate risk with respect to contamination.
Preliminary Engineering Assessment	**Foundations and Ground Floor Construction –** Based on the nature of the proposed end use, no engineering assessment is required for the foundations and ground floor slab construction. **Earthworks –** Based on the nature of the proposed end use, no earthworks are required. **Roads, Pavements and Hardstanding Surfaces –** Based on the nature of the proposed end use, no engineering assessment is required for the roads, pavements and hardstanding surfaces. **Groundwater -** The presence of groundwater will need to be assessed as part of any ground investigation. **Obstructions -** Given the history of the site it is unlikely that significant obstructions, e.g. relict foundations/slabs, will be encountered.
Further Work Required	In order to further assess the potential geotechnical and environmental constraints to the proposed end use, it is recommended that the following ground investigative works be carried out: • Window sample boreholes with in situ tests to provide geotechnical information in order to assess the nature of the sub-surface and confirm the depth and distribution of any made ground. These boreholes will facilitate the installation of groundwater monitoring wells. Samples will be collected from the boreholes and submitted for chemical and geotechnical analysis.

	• Chemical analysis of soil and water samples to determine the concentrations of potential contamination on the site and classify selected materials for disposal offsite (not including WAC testing). • Geotechnical testing to classify materials and inform foundation design and chemical testing to determine the Aggressive Chemical Environment for Concrete classification. • A Phase 2 geoenvironmental ground investigation report, including a Tier 2 Generic Quantitative Risk Assessment.
This sheet is intended as a summary only of the assessment of the site in relation to ground condition. It does not provide a definitive engineering analysis.	

1.0 INTRODUCTION

1.1 Instruction

JPG (Leeds) Limited (JPG) has been instructed by Teakwood Investments Limited to provide a geoenvironmental desk study report for a container storage area off Willow Lane, Huddersfield.

1.2 Objectives

The main objective of the geoenvironmental desk study is to identify potential geotechnical and environmental issues that may represent constraints to the proposed end use of the site.

1.3 Scope of Works

The scope of works for the desk study includes the following:

- Site inspection and description.
- Review of contemporary and historical Ordnance Survey publications.
- Obtain all necessary Coal Authority (CA) Mining Reports.
- Consultations with regulatory authorities, where appropriate.
- Review of geological publications (including hydrology, hydrogeology, and soil survey publications, where appropriate).
- Review of the radon status of the site.
- An environmental database search.
- Review of any previous reports provided.
- Outline environmental risk assessment.
- Preliminary recommendations with respect to foundations, ground floor and pavement design.
- Recommendations for further work, where appropriate; and,
- Presentation of the findings in a tabular non-technical summary.

1.4 Location

The site is located approximately 1.2km to the north of Huddersfield city centre. The approximate centre of the site is located at national grid reference 414145, 417797.

A site location plan is provided in Appendix A.

1.5 Site Description and Topography

A site inspection was carried out by a JPG engineer on 10 May 2024.

The site is triangular in shape and occupies an area of approximately 0.3 hectares. It comprises an area of hardstanding which has previously been utilised as a car park. The site's boundaries are formed by large trees. Access to the site is gained via Willow Lane, just beyond the northeastern boundary of the site.

The site is bound to the north by residential houses and Kelly's Café, beyond which is Bay Hall, Miln Road and residential houses. The site is bound to the east by the Britvic Huddersfield Factory and to the south by Willow Lane, beyond which is commercial developments. The site is bound to the west by St John's Road, beyond which is residential houses.

An aerial photograph of the site is provided as Figure 2 in Appendix A and selected photographs of the site are provided in Appendix B.

1.6 Development Proposals

The site is proposed to be used as a container storage area. A drawing showing the proposed end use is referenced below, and a copy is provided in Appendix A.

- SPX Architects. Proposed Container Storage Use. Land off Willow Lane, Huddersfield, HD1 5EB. As Proposed Site Plan. Drawing No. 024026-SK02, dated June 2024 for Teakwood Investments Limited.

1.7 Previous Reports

No previous reports for the site have been made available for review.

1.8 Limitations

The general limitations to the nature of the investigation are outlined in Appendix F.

2.0 SITE HISTORY

2.1 Ordnance Survey Mapping

Historical maps for the site were obtained from GroundSure (GS). These have been reviewed in order to establish any former uses of the site and identify any potentially contaminative historical uses or potential geotechnical constraints to the proposed end use.

A summary of the relevant map information is provided in Table 2.0 and copies of relevant maps are provided in Appendix C.

Table 2.0 – Summary of Relevant Historical Map Information

Date(s) & Scale	Feature*
1854 1:10,560	**The earliest available map shows the site to comprise an area of open land with a field boundary, trending east to west, splitting the site into two halves. No development is shown onsite.** Ball Hall is shown adjacent to the northern boundary of the site. Bay Hall Lane is shown 100m to the north of the site. Willow Lane is shown adjacent to the eastern boundary. Open fields are shown adjacent to the southern and western boundaries. A building is shown adjacent to the northwestern corner of the site. The London and North West Railway (L & N.W.R) is located 500m to the south east of the site, trending north east to south west.
1889-92 1:10,560, 1890 1:500 & 1893 1:2,500	**The site is bound to the east, south and west by trees. Trees are also shown in the centre of the site. Part of a path is shown in the southeastern and northwestern corners of the site.** Bay Hall Dye Works with an associated mill pond and tank is shown 50m to the north of the site. Bay Hall Works and Bay Hall Mills (Woolen) are shown 100m and 150m to the north of the site, respectively. Clough House Mill Beck is shown 60m to the north east of the site, trending north to south. Willow Lane is shown adjacent to the southern and western boundaries of the site. St. John's Church is shown 50m to the south west of the site. Fever Hospital is shown 250m to the west of the site. Bay Hall Dyke is shown 120m to the north west of the site.
1905 1:10,560 1907 1:2,500	**No significant changes are shown on the site.** The Bay Hall Works 100m to the north is shown as an iron works. A Mineral Water Works is shown 50m to the north east of the site. Residential housing is shown 100m to the north west of the site. Britannia Works are shown 400m to the north west of the site.
1918 1:2,500	**No significant changes are shown on the site.** Three chimneys are shown as part of the Bay Hall Iron Works and Woolen Mills. A railway and sidings are shown 90m to the east of the site. Leviathan Belt Works are shown 175m to the south. Residential housing is shown 25m to the west of the site.
1930-1931 1:10,560 1932 1:2,500	**No significant changes are shown on the site.** The Bay Hall Iron Works has expanded northwards. The railway to the east is shown as London Midland & Scottish Railway (L.M.S.R) Huddersfield Branch which connects to the L & N.W.R 600m to the south of the site. Unspecified buildings and tanks are shown 50m to the south east, on the other side of Willow Lane. St John's Works (Jam) with associated chimney is shown 200m to the south of the site, next to the Leviathan Belt Works.
1938 1:10,560	**No significant changes are shown on or adjacent to the site.**
1948 1:10,560	**No significant changes are shown on or adjacent to the site.**
1956 1:10,560 1958-60 1:1,250 1959-60 1:2,500	**No significant changes are shown on the site.** The chimneys to the north and south are no longer shown. The mill pond to the north is no longer shown. A large building is shown in place of the former three smaller buildings (Mineral Water Works) to the north east of the site. The tanks to the south are no longer shown and the unspecified buildings to the south are now shown as a Depot. A Works is shown 50m to the south of the site, adjacent to the Depot.
1965-66 1:10,560	**No significant changes are shown on or adjacent to the site.**

Date(s) & Scale	Feature*
1972-79 1:1,250 1975 1:10,000	**No significant changes are shown on the site.** The Huddersfield Branch railway to the east is shown as dismantled. The Depot to the south is no longer shown, instead it is shown in the former Works 50m to the south of the site. The former Depot has been replaced by Beck Road. The Leviathan Belt Works to the south of the site is now shown as a Printing Works. The St John's Works (Jam) to the south of the site is shown as a Warehouse.
1984-90 1:1,250 1985-88 1:10,000	**No significant changes are shown on the site.** Commercial development, comprising five units, is shown 120m to the south east of the site, adjacent to Beck Road.
1993-95 1:1,250	**No significant changes are shown on the site.** Commercial development, comprising four units, is shown 50m to the south east of the site, adjacent to Beck Road.
2001 1:10,000 2003 1:1,250	**No significant changes are shown on or adjacent to the site.**
2010 1:10,000	**No significant changes are shown on or adjacent to the site.**
2024 1:10,000	**No significant changes are shown on or adjacent to the site.**

*** All distances stated are approximate.**

2.2 Historical Aerial Imagery

Available aerial imagery dating from December 2002 to January 2022 has been reviewed on Google Earth Pro, along with those provided in the GS report.

A summary of the aerial photography is provided in Table 2.2.

Table 2.2 – Summary of Aerial Photography

Date(s) & Scale	Feature and Source
August 2000	The site is being utilised as a car park. GS Report.
December 2002	The site is shown to comprise an area of hardstanding, bordered by trees. Google Earth.
June 2009	No significant changes are shown on the site. Google Earth.
March 2012	No significant changes are shown on the site. GS Report.
June 2016	Cars are no longer shown on site and moss and surface vegetation has begun to grow over the hardstanding. Google Earth.
July 2018	No significant changes are shown on the site. GS Report.
May 2021	No significant changes are shown on the site. GS Report.
January 2022	No significant changes are shown on the site. Google Earth.

2.3 Summary of Site History

The site has remained fairly undeveloped since the earliest mapping series until circa 2000, when the aerial imagery shows the site to comprise hardstanding and being utilised as a car park. The site remains the same to the present day.

The surrounding area has been progressively developed to support commercial units and residential buildings.

3.0 SITE SETTING

3.1 Geology

The GS Report and the following geological publication have been consulted:

- British Geological Survey (BGS), Sheet 77, Huddersfield, 1:50,000 scale, Solid & Drift Edition, published 2003.
- BGS, Sheet SE11NW, Huddersfield 1:10,000 scale, published 2000.
- BGS Onshore GeoIndex (http://mapapps2.bgs.ac.uk/geoindex/home.html).
- BGS, Lexicon of Named Rock Units.

Based on the BGS geological maps, majority of the site is shown to comprise worked ground. Furthermore, based on the site inspection it is evident that majority of the site comprises hardstanding.

No superficial deposits are shown on the site. However, based on the BGS geological maps, the area abutting the northeastern boundary of the site is shown to be underlain with alluvium deposits comprising clay, sand and gravel. It is anticipated that the alluvium deposits encroach onto the eastern part of the site.

The underlying bedrock comprises the Soft Bed Flags Sandstone which is recorded as a fine-grained, thinly-bedded and cross-bedded flaggy sandstone interbedded with mudstone.

There are two normal faults shown within 500m of the site. The faults are located 148m and 188m to the north east of the site, both trending south east to north west.

Historical borehole records have been obtained from the BGS Onshore Geoindex. A summary of selected borehole records is provided below in Tables 3.1.1 to 3.1.4. Copies of the historical borehole logs are provided in Appendix D.

Table 3.1.1 – BGS Borehole Record Summary – SE11NW17 (Located 27m to the east of the site)

Depth (m bgl)	Geology
0.00 - 0.15	Stone Set
0.15 - 1.70	Made Ground
1.70 – 7.50	Clay and Stones
7.50 – 10.50	Shale
10.50 – 26.00	Clay and Shale
26.00 – 32.00	Hard Shale
32.00 – 33.00	Hard Rock
33.00 – 36.00	Hard White Rock
36.00 – 42.00	Hard Shale
42.00 – 52.00	Broken Hard Rock
52.00 – 65.00	Hard Shale

Table 3.1.2 – BGS Borehole Record Summary – SE11NW/1420/1776 Borehole No. 8 (Located 49m to the south east of the site)

Depth (m bgl)	Geology
0.00 – 0.30	MADE GROUND: Topsoil and bricks.
0.30 – 1.30	MADE GROUND: Soft light brown clay and shale fragments.
1.30 – 4.40	MADE GROUND: Loose shale fragments.
4.40 – 4.80	Firm greyish brown silty gravelly CLAY.
4.80 – 5.80	Stiff brown and grey mottled silty CLAY with shale.
5.80 – 6.90	Stiff brown silty sandy gravelly CLAY.
6.90 – 7.40	Brown highly weathered MUDSTONE, very weak.
7.40 – 7.70	Grey and brown highly weathered MUDSTONE, very weak.
7.70 – 9.00	Grey highly weathered MUDSTONE, very weak.

Table 3.1.3 – BGS Borehole Record Summary – SE11NW/1428/1776 Borehole No. 6 (Located 91m to the east of the site)

Depth (m bgl)	Geology
0.00 – 0.20	Topsoil.
0.20 – 0.90	MADE GROUND: Loose shale fragments.
0.90 – 1.30	MADE GROUND: Loose shale fragments and clay.
1.30 – 2.80	MADE GROUND: Medium dense shale fragments brick and clay.
2.80 – 3.30	MADE GROUND: Medium dense shale and clay.
3.30 – 5.80	MADE GROUND: Loose shale, brick and clay.
5.80 – 6.30	Soft dark grey and brown organic silty gravelly CLAY with roots and coal fragments.
6.30 – 6.80	Soft dark grey clayey SILT with coal and wood fragments.
6.80 – 7.40	Soft grey silty gravelly CLAY.
7.40 – 8.10	Very stiff greyish brown silty CLAY with sandstone fragments.
8.10 – 9.50	Brown highly weathered SANDSTONE, very weak.

Table 3.1.4 – BGS Borehole Record Summary – SE11NW/1423/1772 Borehole No. 9 (Located 98m to the south east of the site)

Depth (m bgl)	Geology
0.00 – 1.40	MADE GROUND: Shale and sandstone fragments.
1.40 – 1.90	MADE GROUND: Firm grey mottled silty clay with shale fragments.
1.90 – 2.30	MADE GROUND: Brown silty clay with sandstone.
2.30 – 4.30	MADE GROUND: Clay, shale and sandstone.
4.30 – 4.40	Soft blue-grey silty CLAY.
4.40 – 6.90	Firm brown silty CLAY with sandstone.
6.90 – 7.80	Brown highly weathered clayey SANDSTONE, very weak.
7.80 – 9.00	Grey highly weathered MUDSTONE, very weak.

3.2 Coal Mining

A Con29M Coal Mining Report has been obtained from the CA. This is provided in Appendix E and a summary of pertinent information is provided below.

The Con29M Coal Mining Report states the following:

- *'The property is not within a surface area that could be affected by any past recorded underground coal mining.'*
- *'The property is not within a surface area that could be affected by present underground mining.'*
- *'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.'*
- *'There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.'*
- *'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.'*
- *'The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.'*
- *'The property does not lie within 200m of the boundary of an opencast site from which coal is being removed by opencast methods.'*
- *'The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.'*
- *'There is no current Stop Notice delaying the start of remedial works or repairs to the property.'*
- *'The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.'*
- *'There are no licence requests outstanding, or licence requests to remove coal by opencast methods within 800m of the boundary which have been granted.'*
- *'The Coal Authority has no record of a mine gas emission requiring action.'*
- *'The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.'*

The risk to the surface stability of the site due to shallow coal mining is considered to be negligible.

3.3 Hydrogeology

The superficial deposits abutting the northeastern boundary of the site and the underlying bedrock geology are identified as a Secondary A Aquifers. These are described as '*permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers*'.

There are two active recorded groundwater abstraction licences within 2km of the site. These are located 807m to the east and 858m to the south east of the site and are utilised for general use related to secondary category and a heat pump, respectively.

There are no Environment Agency Groundwater Source Protection Zones within 500m of the site.

3.4 Hydrology

The nearest surface water feature is Hebble Beck, which is located 62m to the north east of the site.

The site is located within the Aire and Calder catchment area.

There are three active licenced discharge consents to surface water within 500m of the site. These records are summarised in Table 3.4 below.

Table 3.4 – Summary of Licenced Discharge Consents

Distance & Direction	Address	Permit Number	Effluent Type	Receiving Water	Issue and Effective Dates
77m East	Huddersfield Area CSO's, Huddersfield, North Yorkshire	S/CB/51	Sewage Discharges	Varies with Outlet	Issue Date: 25/01/1995 Effective Date: 06/03/1995
281m North	Crescent Road CSO, Opposite 18 Crescent Road, Birkby, Huddersfield	WRA8759	Sewage Discharges	Tributary of Grimscar Dike	Issue Date: 28/06/2007 Effective Date: 28/06/2007
400m North	Huddersfield Area CSO's, Huddersfield, North Yorkshire	S/CB/51	Sewage Discharges	Varies with Outlet	Issue Date: 25/01/1995 Effective Date: 06/03/1995

There are five active recorded surface water abstraction licences, all held by the Canal and River Trust, within 2km of the site. The nearest is located 620m to the east of the site and is for general use relating to secondary category.

Information on the EA website and provided in the GS report indicates that the site does not lie within a Zone 2 or Zone 3 floodplain. An area 23m to the north east of the site, lies within a Zone 2 floodplain.

The GS report indicates that there is a risk of surface water flooding on the site. The risk onsite is 1 in 30-year, 0.3m to 1.0m.

The risk of groundwater flooding onsite is low.

The susceptibility and the risk of surface water and groundwater flooding occurring at the site should be assessed based on site specific information.

It is likely that a flood risk assessment will be required by the Local Authority as part of any planning application for the site.

3.5 Pollution Incidents

There are three recorded Environment Agency Recorded Pollution Incidents with minor or significant impacts within 500m of the site. These incidents are summarised in Table 3.5 below.

Table 3.5 – Summary of All Recorded Pollution Incidents

Distance & Direction	Incident Date	Incident Identification	Pollutant	Impacts
116m, North west	21-Nov-2002	122311	General Biodegradable Materials and Wastes	Land impact: Category 3 (minor)
250m, East	20-Jul-2001	17694	Contaminated Water	Water impact: Category 3 (minor) Air Impact: Category 3 (minor)
272m, West	22-Feb-2007	471739	Oils and Fuel	Water Impact: Category 2 (significant)

3.6 Landfills and Waste

The GS report includes information on active and former landfill sites supplied by the Environment Agency, Local Authority and the BGS.

There are no records of active or recently closed landfill sites within 500m of the site.

There are no records of historical landfill sites within 500m of the site.

There are four records of active waste treatment sites within 500m of the site. These are referenced below in Table 3.6.

Table 3.6 – Summary of Active Waste Treatment Sites.

Distance & Direction	Site Name	Waste Type	Operator / Licence Holder	Environmental Permitting Regulations (Waste) Licence Number	Licence First Recorded and Surrendered
426m, North East	Alder Street Depot	Household, Commercial and Industrial Waste	Kirklees Metropolitan Council	KMC002	12/01/2007 and N/A
426m, North East	Alder Street Depot	Household, Commercial and Industrial Waste	Kirklees Metropolitan Council	638615	12/01/2007 and N/A
473m, South East	A K Auto Centre Limited	Vehicle Depollution	A K Auto Centre Limited	651798	31/08/2012 and N/A
484m, South East	A K Auto Centre Limited	Vehicle Depollution	A K Auto Centre Limited	AKA003	31/08/2012 and N/A

3.7 Environmental Permits, Incidents and Registers

There are no records of Part A(1) licenced industrial activities within 500m of the site.

There are no Part A (2) permitted activity (potential to cause air pollution) within 500m of the site.

There is one active Part B permitted activity (potential to cause air pollution) within 500m of the site. This activity involves unloading of petrol into storage at the Bridge Service Station, which is located 412m to the south east of the site.

There are no recorded pollutant releases to the public sewer within 500m of the site.

There are no recorded pollutant releases to surface waters (red list) within 500m of the site.

There are no active List 1 or List 2 discharges of dangerous substances within 500m of the site.

There are no active Radioactive Substances Authorisations within 500m of the site.

There are no recorded Control of Major Accidents Hazard (COMAH) or Notification of Installations Handling Hazardous Substances (NIHHS) sites within 500m of the site.

There are no sites determined as Contaminated Land under Part IIA EPA 1990 within 500m of the site.

There are 13 waste exemptions within 500m of the site. These are referenced below in Table 3.7.

Table 3.7 – Waste Exemptions

Distance & Direction	Site Address	Reference	Description
122m South East	Unit 14-16, The Ringway Centre, Beck Road, Huddersfield, HD1 5DG	WEX105893	1) Sorting mixed waste. 2) Recovery of textiles.
145m South	33, St John's Road, Huddersfield, HD1 5DX	WEX144069	1) Burning waste in the open
150m North West	-	WEX302968	1) Storage of waste in a secure place. 2) Preparatory treatments (baling, sorting, shredding etc). 3) Use of waste to manufacture finished goods
220m South East	Unit 13/14 The Ringway Centre HD1 5DG	EPR/YE5341KG/ A001	1) Storage of waste in a secure place. 2) Preparatory treatments (baling, sorting, shredding etc). 3) Sorting mixed waste.
224m South	Apartment 1, Excelsior House, 33, St. Johns Road, Huddersfield	WEX306115	1) Burning waste in the open
320m South East	Unit 29 Ringway Industrial Estate Beck Road Huddersfield Yorkshire HD1 5DG	EA/EPR/VP3741 FL/A001	1) Repair or refurbishment of WEEE
412m North East	40, Cobcroft Road, Huddersfield, HD2 2RY	WEX392923	1) Sorting and de-naturing of controlled drugs for disposal
453m North West	Lower Car Park, Macaulay Road, Huddersfield, HD2 2US	WEX108823	1) Use of waste in construction

3.8 Current Land Use

There are 15 records of potentially contaminative sites within 250m of the site. These are summarised below in Table 3.8.

Table 3.8 – Current Land Use

Distance & Direction	Site Name	Site Address	Activity
40m North East	Magic Rock Brewing Company Ltd	Willow Lane, Birkby, Huddersfield, West Yorkshire, HD1 5EB.	Alcoholic Drinks
72m North	Pro Drive Cars Ltd	Unit 3 Bay Hall Works, 6 Miln Road, Huddersfield, West Yorkshire, HD1 5EH	Second-hand Vehicles
76m South	Electricity Sub Station	West Yorkshire, HD1	Electrical Features
90m North West	Barden Print	Bay Hall Print Works, Common Road, Birkby, Huddersfield, West Yorkshire, HD1 5DG	Published Goods
111m North	Electricity Sub Station	West Yorkshire, HD1	Electrical Features
117m South East	Crowther & Shaw Ltd	Unit 23 The Ringway Centre, Beck Road, Huddersfield, West Yorkshire, HD1 5DG	Electrical Equipment Repair and Servicing
126m North	Works	West Yorkshire, HD1	Unspecified Works or Factories
153m North	Electricity Sub Station	West Yorkshire, HD1	Electrical Features
158m North	Camira Yarns Ltd	Bay Hall Mills, Bay Hall Common Road, Birkby, Huddersfield, West Yorkshire, HD1 5EP	Textiles, Fabrics, Silk and Machinery
194m East	Tyres 2 Go	39, Halifax Old Road, Huddersfield, West Yorkshire, HD1 6EE	Vehicle Parts and Accessories
194m North	Factory	West Yorkshire, HD2	Unspecified Works or Factories
216m West	The Body Repair Centre	89, Blacker Road, Huddersfield, West Yorkshire, HD1 5HN	Vehicle Repair, Testing and Servicing
224m North East	Electricity Sub Station	West Yorkshire, HD1	Electrical Features
237m North East	Auto Commercials	Unit 1 Mead Works, Mead Street, Fartown, Huddersfield, West Yorkshire, HD1 6HE	Vehicle Repair, Testing and Servicing
248m North	Deluxe Beds Ltd	King Cliffe Works, King Cliff Road, Birkby, Huddersfield, West Yorkshire, HD1 5ES	Beds and Bedding

There is one active petrol station within 500m of the site. The petrol station is owned by Texaco and is located 426m to the south east of the site.

3.9 Radon Risks

The site is not in a radon affected area as defined by the Health Protection Agency, as less than 1% of properties are above the action level. In accordance with the Building Research Establishment publication BR211, no radon protective measures are required for new properties constructed on the site.

4.0 ENVIRONMENTAL RISK ASSESSMENT

4.1 Introduction

The statutory definition of contaminated land is provided in the Environmental Protection Act, Part IIA, Section 78, 1990, which was introduced by the Environment Act, Section 57, Department of Environment, 1995 and is defined as:

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

- Significant harm is being caused or there is a significant possibility of such harm being caused (where harm is defined as harm to health of living organisms or other interference with the ecological systems of which they form a part and, in the case of man, includes harm to his property); and/or
- Significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused (by the land).

The potential for harm to occur requires three conditions to be satisfied:

- **Sources** – The presence of substances (potential contaminants/pollutants), in or under the ground, that may cause harm or pollution.
- **Receptors** - The presence of a receptor which may be harmed, e.g. the water environment or humans, buildings, fauna and flora; and
- **Pathway** - The existence of a linkage between the Source and the Receptor.

In summary, the presence of measurable concentrations of contaminants within the ground and subsurface environment does not automatically imply that a contamination problem exists, since contamination must be defined in terms of pollutant linkages and an unacceptable risk of harm to available receptors.

The nature and importance of both pathways and receptors, which are relevant to a particular site, will vary according to the sensitivity of the intended end use of the site and the site's characteristics and environmental setting.

Legislation and guidance on the assessment of contaminated sites acknowledges the need for a tiered risk-based approach. This is set out in the Environment Agency's manual Land contamination: risk management (LCRM), published in October 2020 and last updated on 20 July 2023. The LCRM outlines the following stages of risk assessment:

Tier 1: Preliminary risk assessment (PRA)	As part of this assessment, the overall site objectives are defined. Current and historical information about the site and the potential contaminants expected to be present are assessed and an outline conceptual model (CM) is developed. The risks are assessed qualitatively, and the findings reported in the PRA (or desk study). The report recommends what further works would be required in order to assess whether the site is suitable for its proposed use.
Tier 2: Generic quantitative risk assessment (GQRA)	The GQRA uses Generic Assessment Criteria and a standard set of generic assumptions based on specific end uses in order to assess the risks to receptors. It includes the collection of more detailed information including laboratory analysis of soil and water samples in order to inform and assess the risks.
Tier 3: Detailed quantitative risk assessment (DQRA)	If pollutant linkages are confirmed as part of the GQRA, these are known as relevant pollutant linkages (RPLs) and further detailed assessment is required. At this tier, detailed site-specific information is collected to estimate the risk or to develop site-specific assessment criteria (SSAC). This may include collecting information about the receptor.

This desk study report represents a Tier 1 Preliminary Risk Assessment.

4.2 Potential Sources

It is evident that site has had no prior development/use except from being utilised as a car park for the past 25 years. Based on this, the following potentially contaminative sources may be present on or adjacent to the site:

- Made ground associated with the construction of the car park.
- Fuel spillages from vehicles utilising the car park.
- Potential contaminants from off-site sources.

Potential contaminants which could be present on the site are listed below:

- Metals, metalloids and their compounds.
- Inorganic compounds, e.g. arsenic.
- Asbestos.
- Organic compounds including petroleum hydrocarbons (petrol/diesel/oils) and Polycyclic Aromatic Hydrocarbons (PAH).

4.3 Potential Pathways

Based on the available information and the proposed end use of the site, the following potential exposure pathways will require consideration:

- Ingestion and dermal contact with contaminated soil and groundwater.
- Inhalation of asbestos fibres.
- Leaching/migration of contaminants from soil into surface water and groundwater via surface and groundwater flow; and

4.4 Potential Receptors

The potential receptors considered are:

- Groundworkers and future maintenance workers.
- Future end users of the site, i.e. the public/employees; and
- Controlled Waters, i.e. underlying Secondary A Aquifers and Hebble Beck.

4.5 Pollutant Linkage Assessment

A potential pollutant linkage assessment has been completed and is summarised in the Conceptual Site Model which is provided as Table 4.6. This is based on the proposed end use of the site.

On the basis of the proposed end use and known history of the site, the following potential pollutant linkages may be present:

- Groundworkers, maintenance workers and site end users could come into contact with soils containing elevated concentrations of potential contaminants; and
- The controlled waters could become contaminated due to the leaching and migration of potential contaminants from any made ground.

These are based on current site conditions and do not consider exposure pathways following any remediation of the site. If the site can be shown to pose no "significant harm" or pollution to controlled waters, then the site can be considered to be uncontaminated.

4.6 Conceptual Site Model & Risk Rating

The conceptual model is summarised in Table 4.6 below.

Table 4.6 Preliminary Conceptual Model

Source	Pathway	Receptor	Risk Rating	Comments
Made ground associated with the construction of the car park. Fuel spillages from vehicles utilising the car park. Potential contaminants from off-site sources.	Inhalation Ingestion Dermal contact	Ground Workers Maintenance Workers. Future End Users	Low	Ground investigation and sampling may be required to establish levels of potential contamination present.
	Leaching/migration of potential contaminants via surface water and groundwater flow	Secondary A Aquifers	Low to Moderate	There are two active recorded groundwater abstraction licences within 2km of the site. Site is not located in a Groundwater Source Protection Zone.
		Hebble Beck		There are three active licenced discharge consents to surface water within 500m of the site. There are five active recorded surface water abstraction licences within 2km of the site.

4.7 Risk Classification

Based on the potential pollutant linkages present on the site, the site should be considered to be **low to moderate risk with respect to contamination**, prior to any sampling and testing of soils. This designation will be largely dependent on the nature of any made ground on or adjacent to the site.

In order to fully assess and classify the risks to human health, groundwater, surface water and buildings/services, a Phase 2 Intrusive Investigation, including chemical testing of soils and groundwater will be required.

5.0 PRELIMINARY ENGINEERING ASSESSMENT

5.1 Development Proposals

The site is proposed to be used as a container storage area. A drawing showing the proposed end use referenced below, and a copy is provided in Appendix A.

- SPX Architects. Proposed Container Storage Use. Land off Willow Lane, Huddersfield, HD1 5EB. As Proposed Site Plan. Drawing No. 024026-SK02, dated June 2024 for Teakwood Investments Limited.

5.2 Mining

A Con29M Coal Mining Report has been obtained from the CA.

The risk to the surface stability of the site due to shallow coal mining is considered to be negligible.

5.3 Foundations and Ground Floor Construction

Based on the nature of the proposed end use, no engineering assessment is required for the foundations and ground floor slab construction.

5.4 Earthworks

Based on the nature of the proposed end use, no earthworks are required.

5.5 Roads, Pavements and Hardstanding Surfaces

Based on the nature of the proposed end use, no engineering assessment is required for the roads, pavements and hardstanding surfaces.

5.6 Groundwater

The presence of groundwater will need to be assessed as part of any ground investigation.

5.7 Obstructions

Given the history of the site it is unlikely that significant obstructions, e.g. relict foundations/slabs, will be encountered.

6.0 FURTHER INVESTIGATIONS

In order to further assess the potential environmental and geotechnical constraints to the proposed end use, it is recommended that the following ground investigative works be carried out:

- Window sample boreholes with in situ tests to provide geotechnical information in order to assess the nature of the sub-surface and confirm the depth and distribution of any made ground. These boreholes will facilitate the installation of groundwater monitoring wells. Samples will be collected from the boreholes and submitted for chemical and geotechnical analysis.
- Chemical analysis of soil and water samples to determine the concentrations of potential contamination on the site and classify selected materials for disposal offsite (not including WAC testing).
- Geotechnical testing to classify materials and inform foundation design and chemical testing to determine the Aggressive Chemical Environment for Concrete classification.
- A Phase 2 geoenvironmental ground investigation report, including a Tier 2 Generic Quantitative Risk Assessment.

Appendix A Figures and Drawing

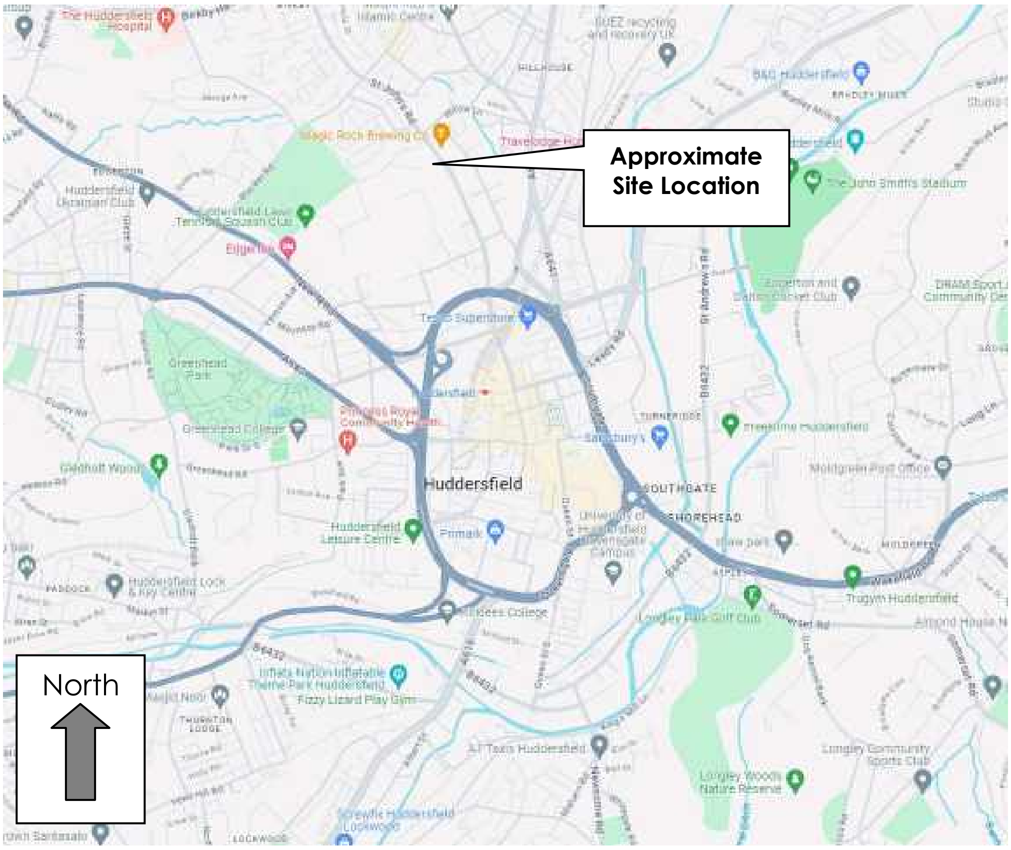


Figure 1 – Site Location Plan	
Site	**Willow Lane, Huddersfield**
Client	**Teakwood Investments Limited**
Job Number	**6367**

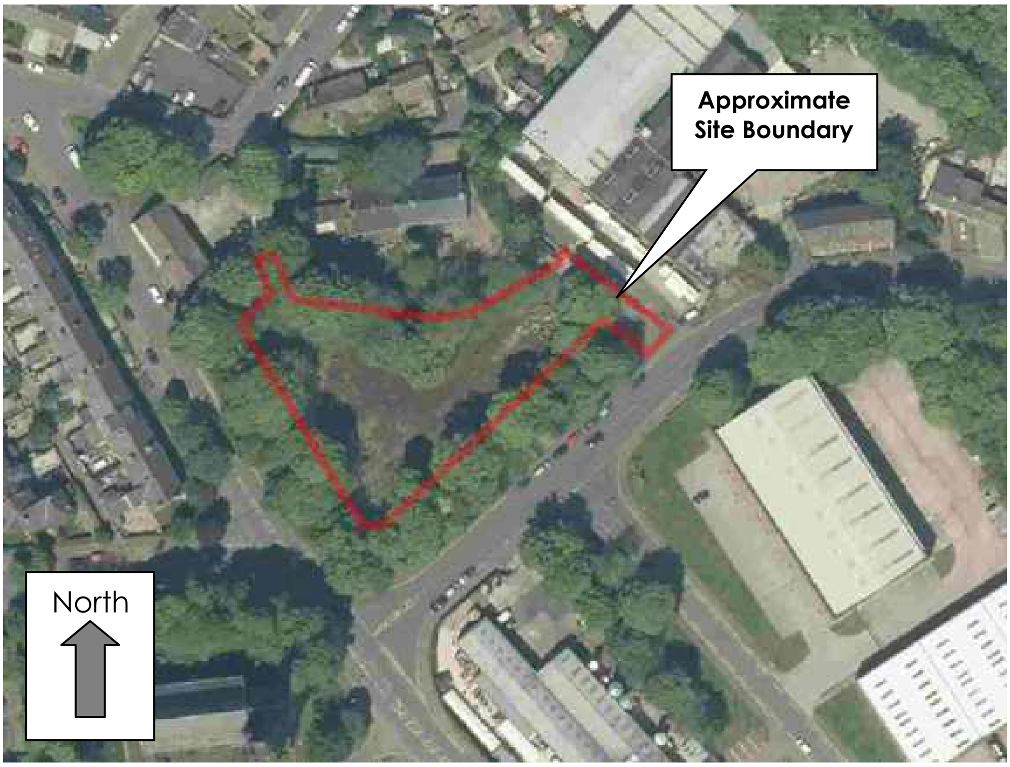
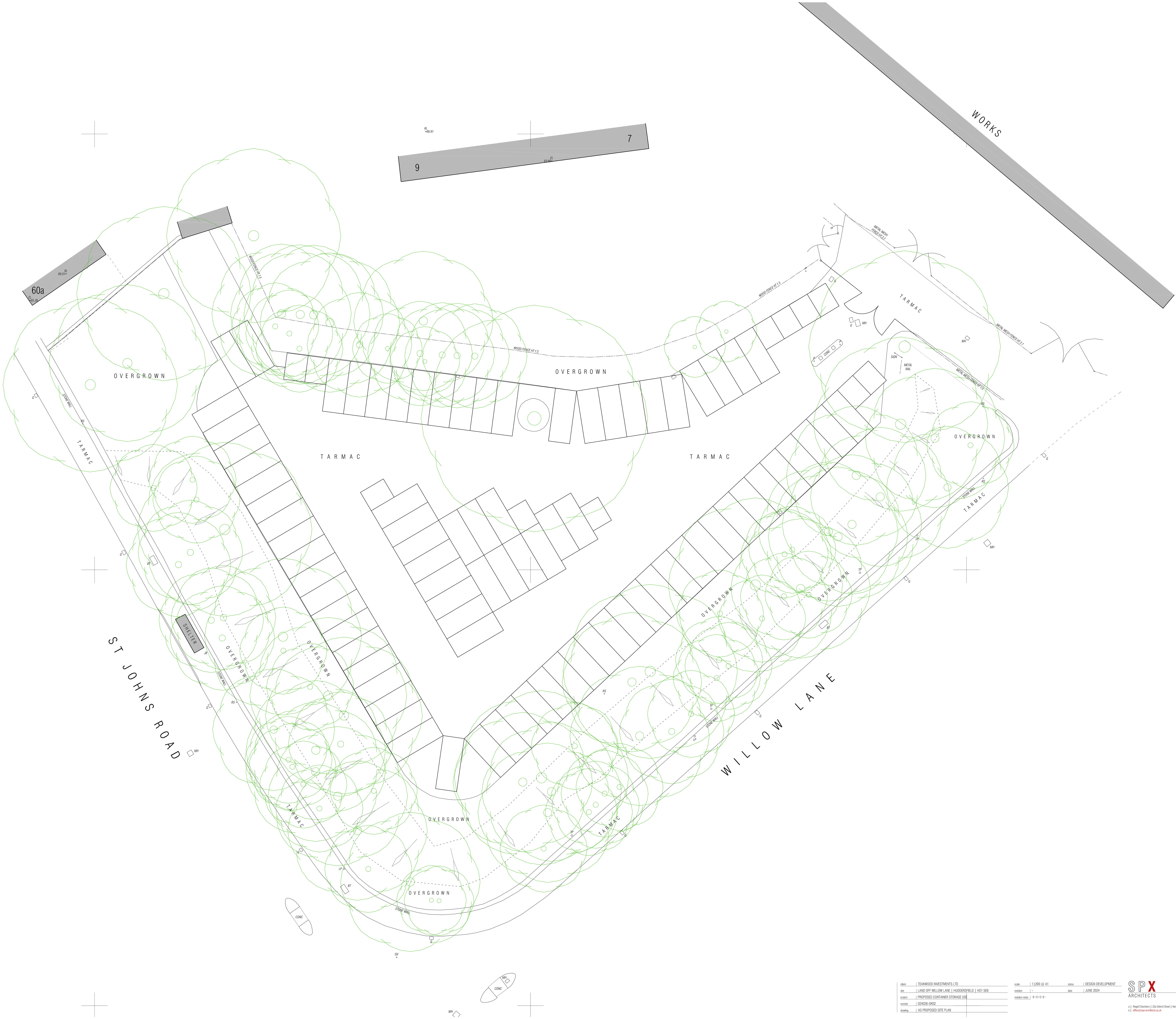


Figure 2 – Aerial Photograph	
Site	**Willow Lane, Huddersfield**
Client	**Teakwood Investments Limited**
Job Number	**6367**
Scale	**NTS**

notes

1. Do not scale from this drawing - use figured dimensions only
2. All set-out dimensions, levels, building positions and site boundaries to be checked by the Contractor, with any discrepancies reported before work starts
3. All works to be carried out to the satisfaction of the Local Authority and in accordance with Building Regulations, British Standards, CDM Regulations, Codes of Practice, Acts & Bylaws, manufacturers recommendations, specialist information and good building practice
4. References to Local Authority are also intended to read as for Approved Inspectors
5. This drawing is the copyright of SPX Architects and should only be reproduced with their written permission



PROPOSED SITE PLAN

0 2 4 6 8 10

N

client	TEAKWOOD INVESTMENTS LTD
site	LAND OFF WILLOW LANE | HUDDERSFIELD | HD1 5EB
project	PROPOSED CONTAINER STORAGE USE
number	024026-SK02
drawing	AS PROPOSED SITE PLAN

scale	1|200 @ A1	status	DESIGN DEVELOPMENT
revision	-	date	JUNE 2024
revision notes	-|--|--|--|-		

SPX ARCHITECTS

a | Regal Chambers | 22a Oxford Street | Harrogate | HG1 1PU
e | office@spx-architects.co.uk
t | 01423 520100
w | www.spx-architects.co.uk

Appendix B Site Photographs

Photograph 1: View Looking South West of the Hardstanding and Historical Car Parking Spaces.

Photograph 2: View Looking North West Across the Site.

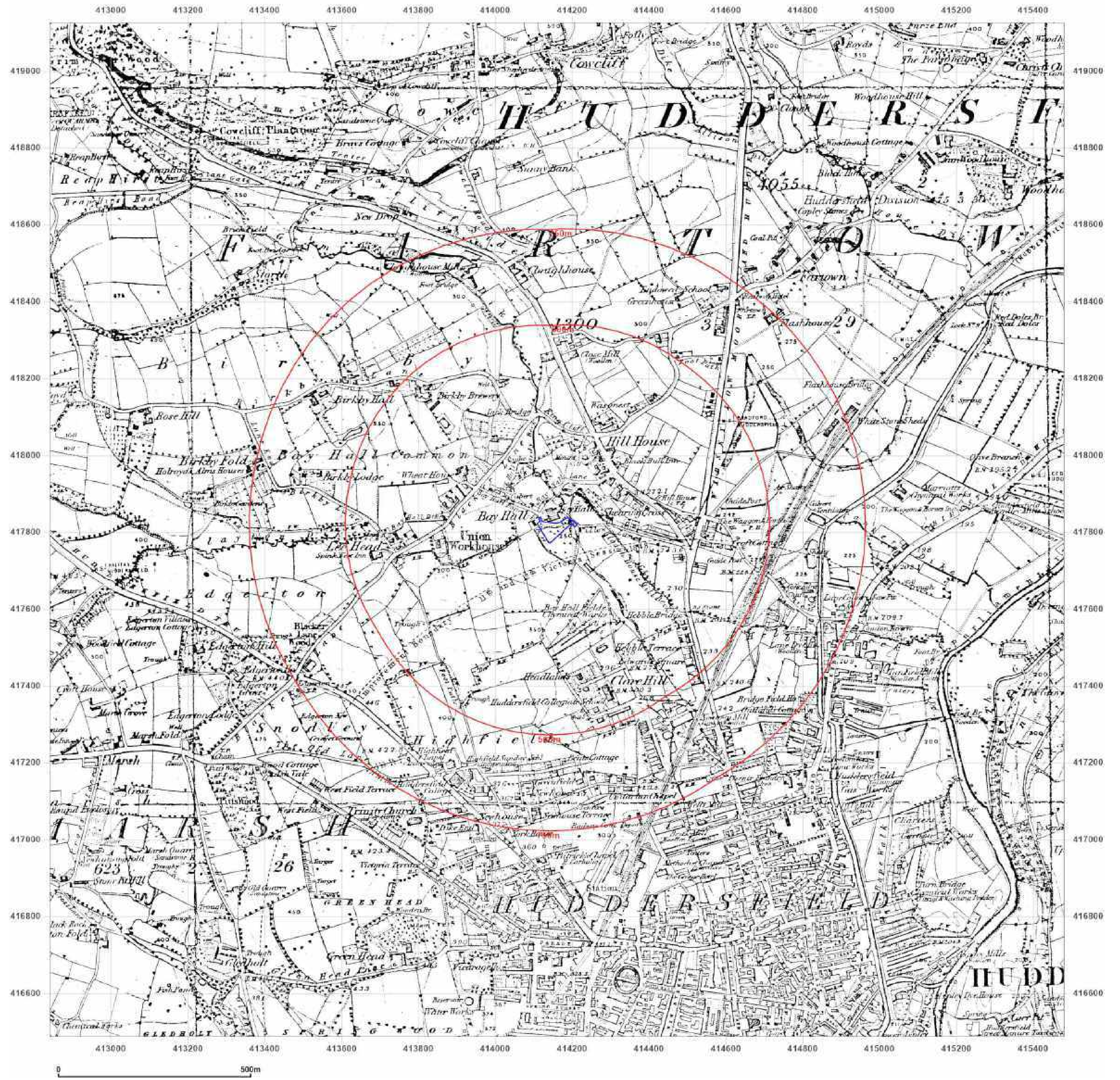
Photograph 3: View Looking South West Across the Site.

Photograph 4: View Looking West of the Entrance and Access to the Site.

Photograph 5: View Looking North West to the Access Road off Willow Lane

Photograph 6: View looking North West of the Northwestern Area.

Appendix C Historical Maps



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Report Ref: CMAPS-JPG-1170190-62914-130624HIS
Grid Ref: 414160, 417806

Map Name: County Series

Map date: 1854

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1850
Revised N/A
Edition 1854
Copyright N/A
Levelled 1853

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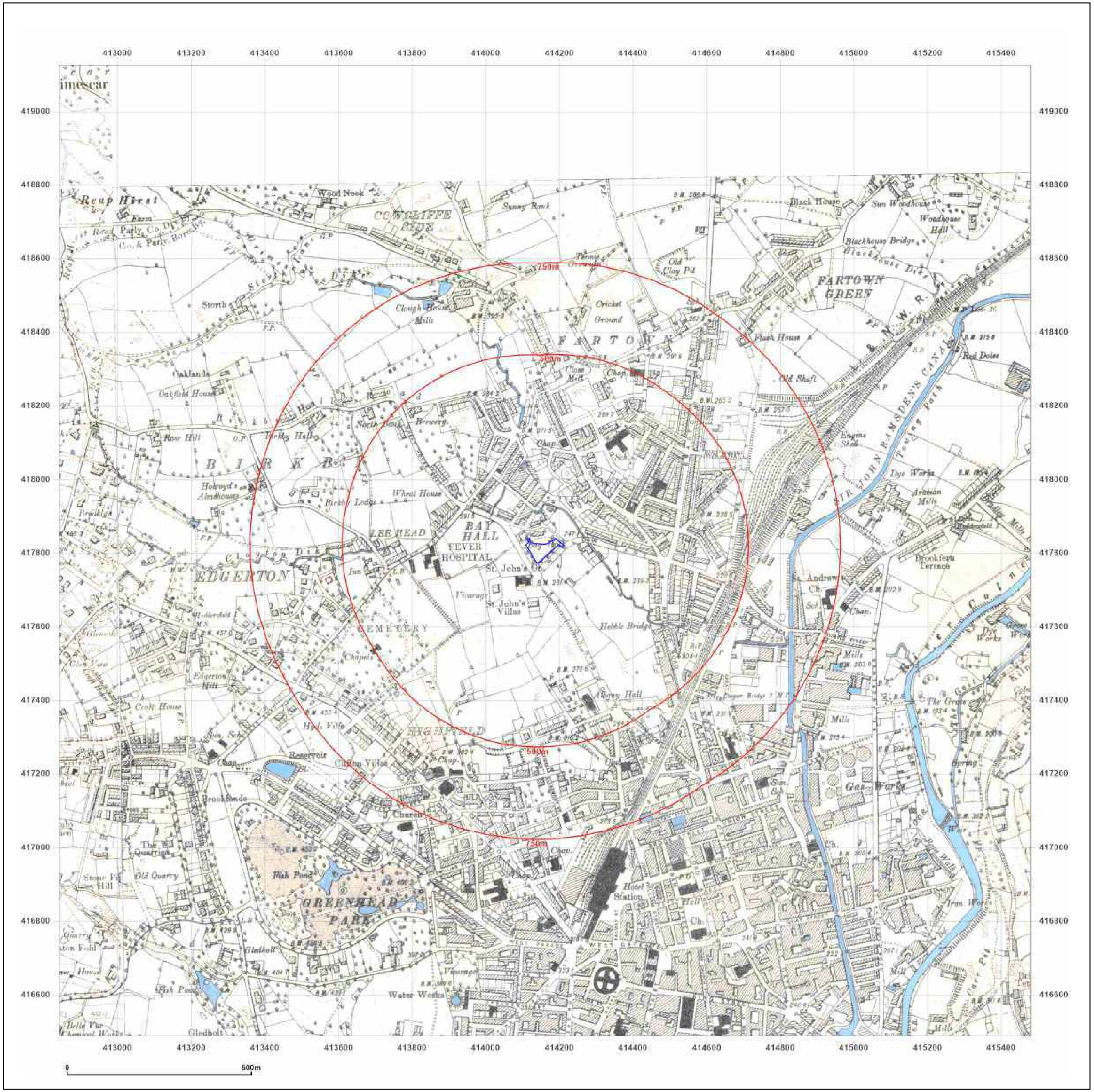

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Map Name: County Series

Map date: 1889-1892

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1892
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Edition N/A
Copyright N/A
Levelled N/A

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

Surveyed 1889
Revised 1889
Edition N/A
Copyright N/A
Levelled N/A

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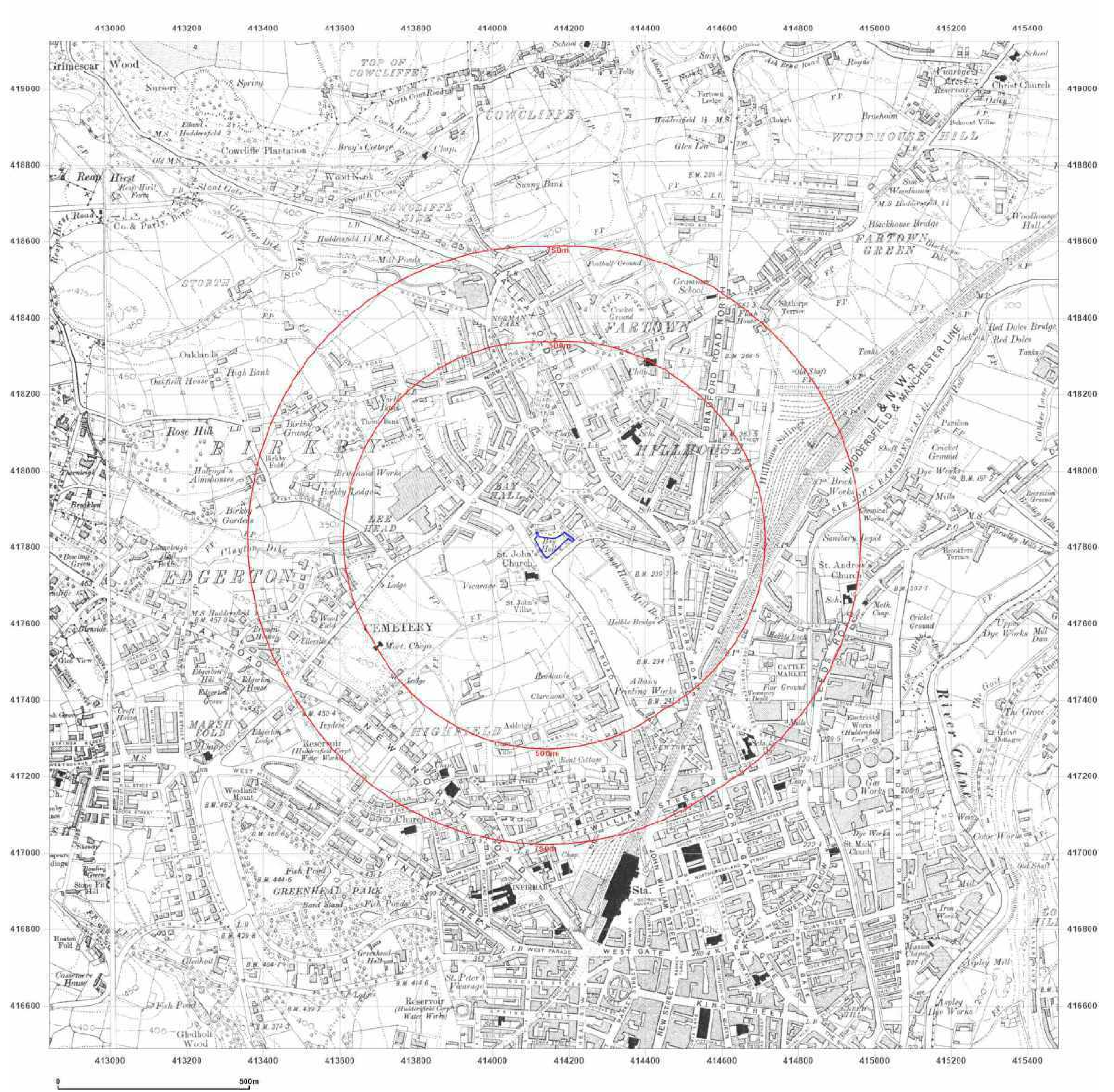

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Map Name: County Series

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Printed at: 1:10,560

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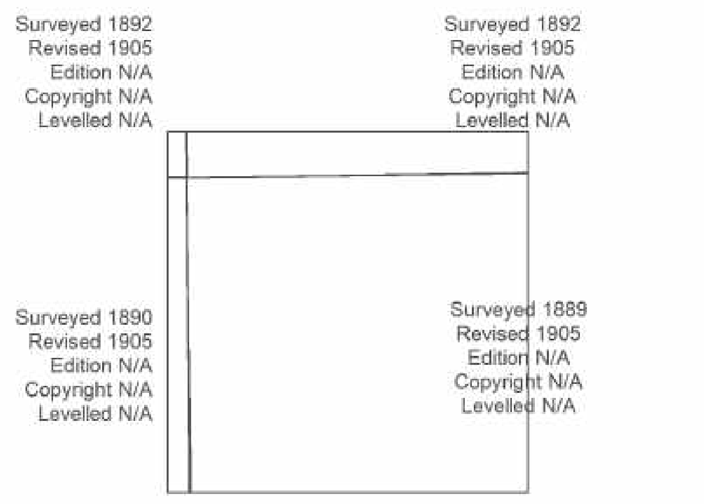

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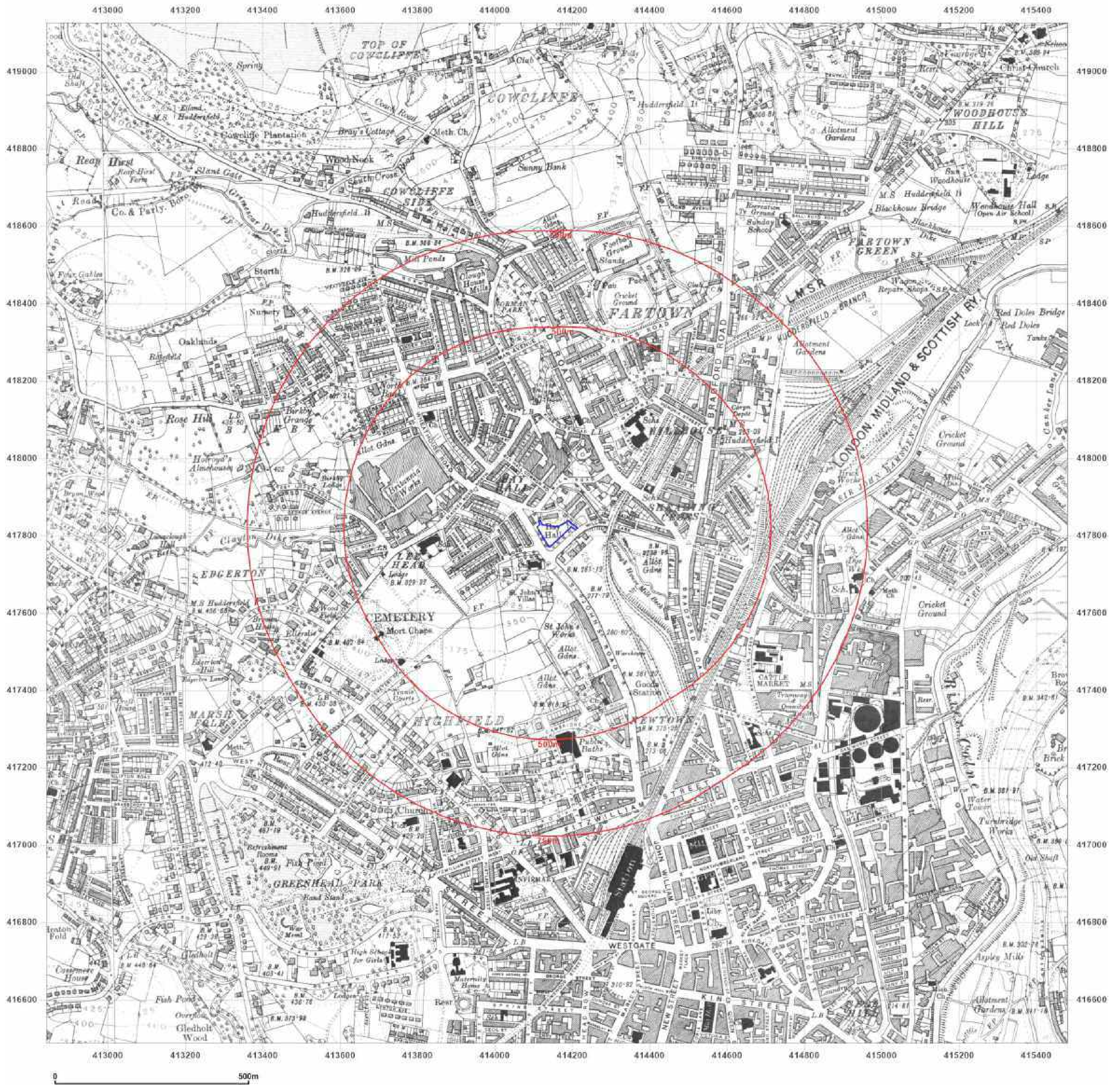

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Grid Ref: 414160, 417806

Map Name: County Series

Map date: 1930-1931

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1849 Revised 1930 Edition N/A Copyright N/A Levelled N/A	Surveyed 1850 Revised 1930 Edition N/A Copyright N/A Levelled N/A
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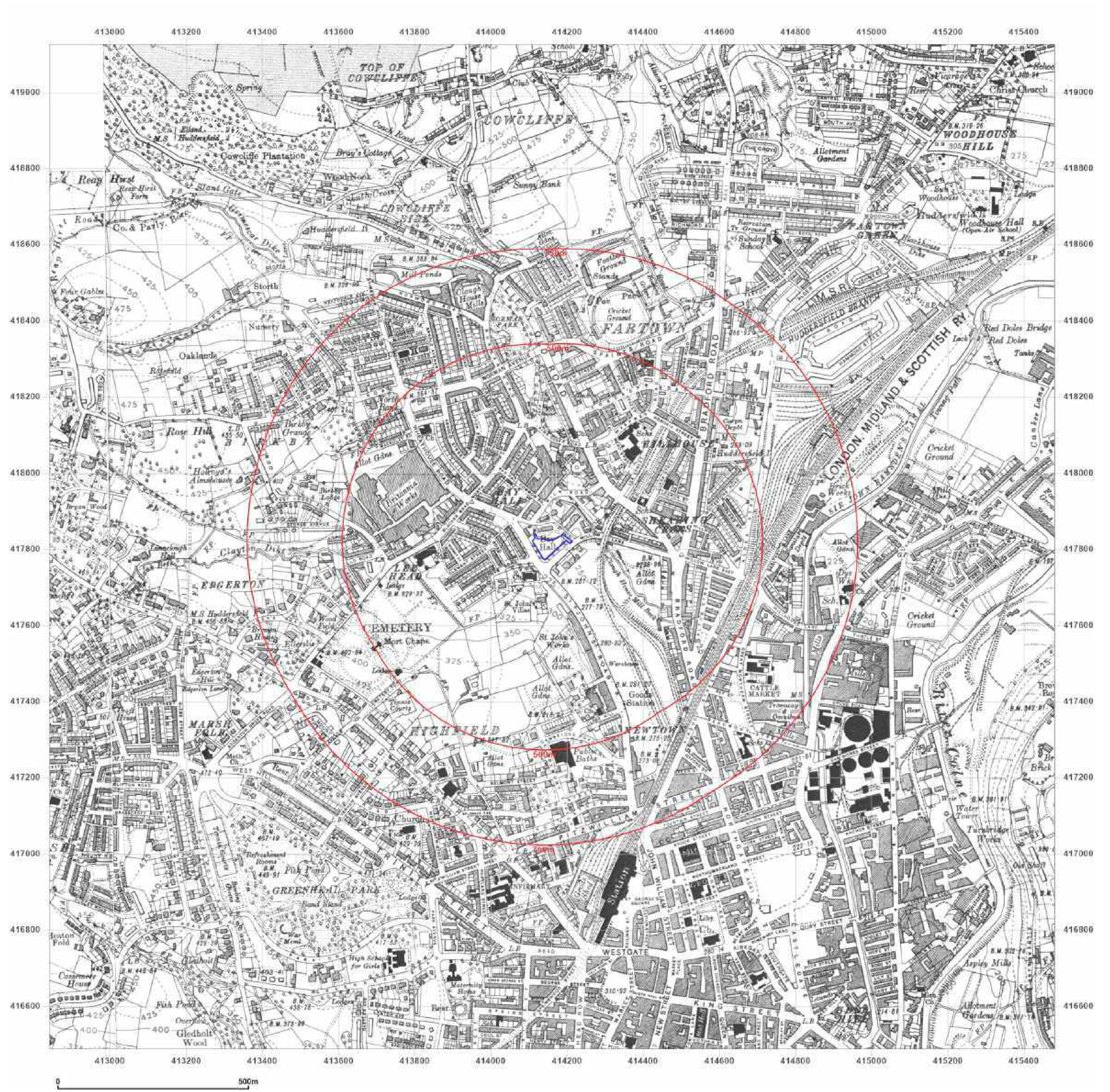

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Map Name: County Series

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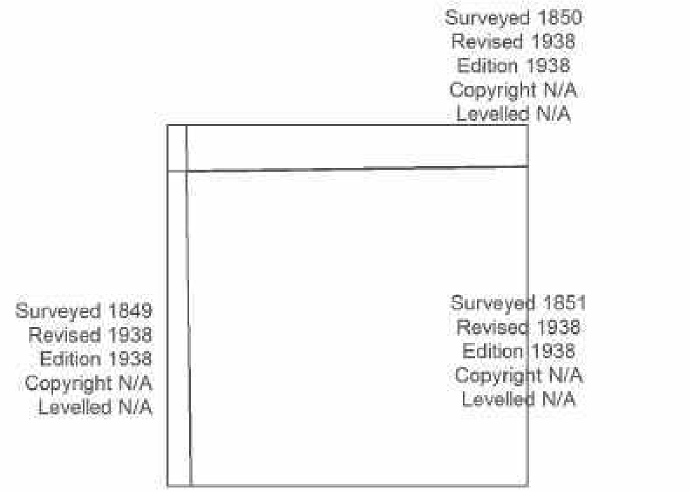

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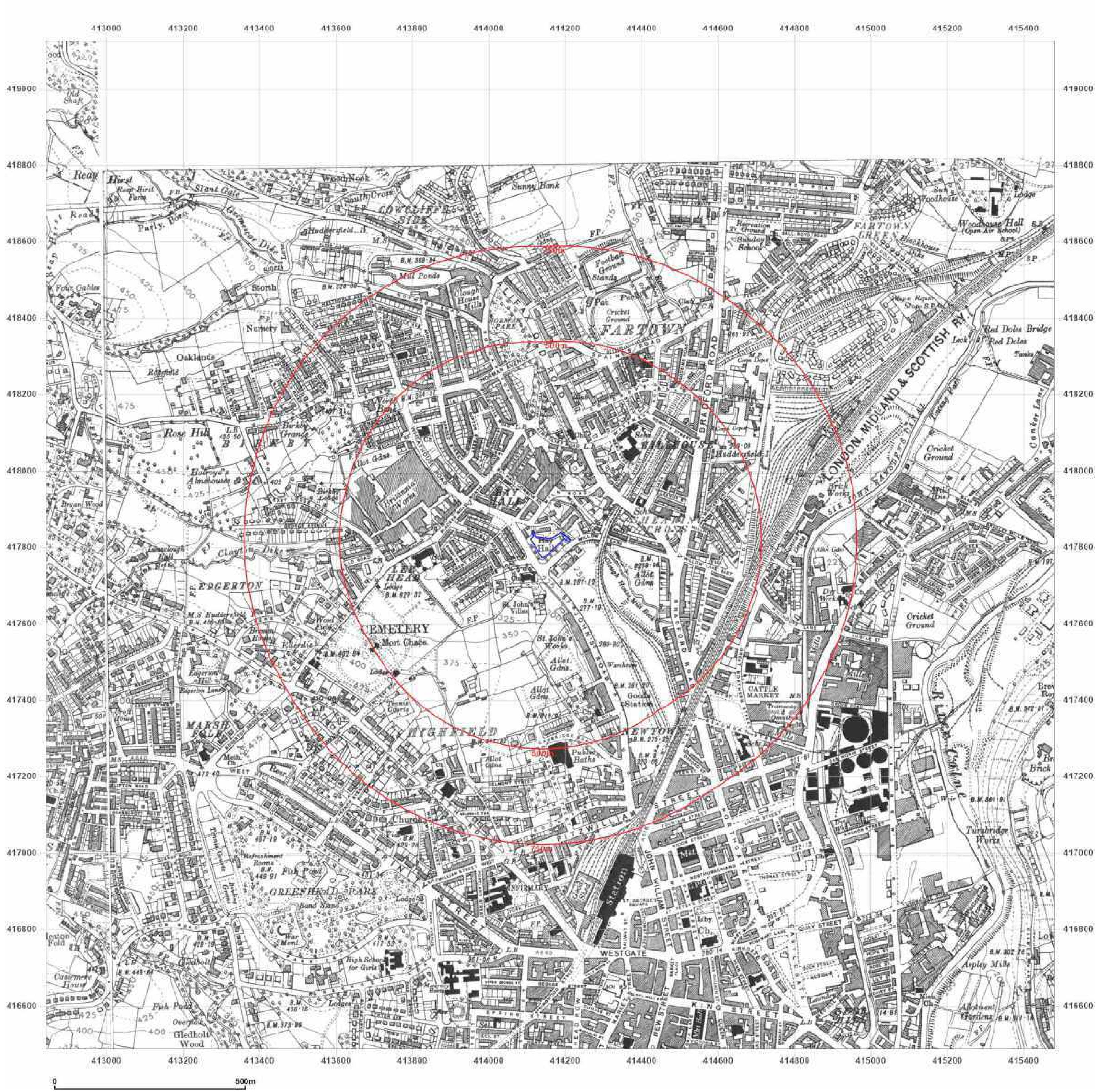

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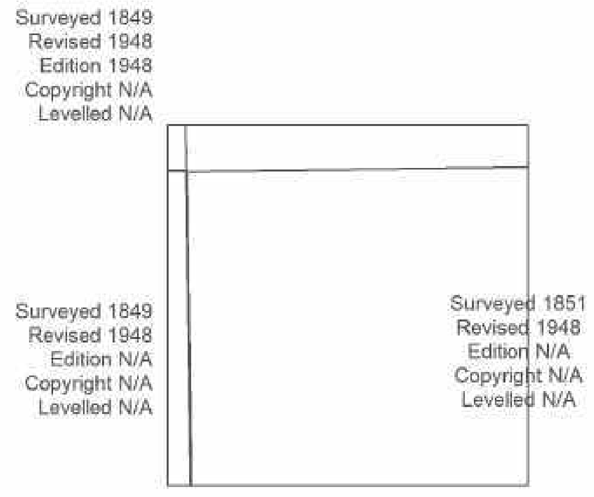

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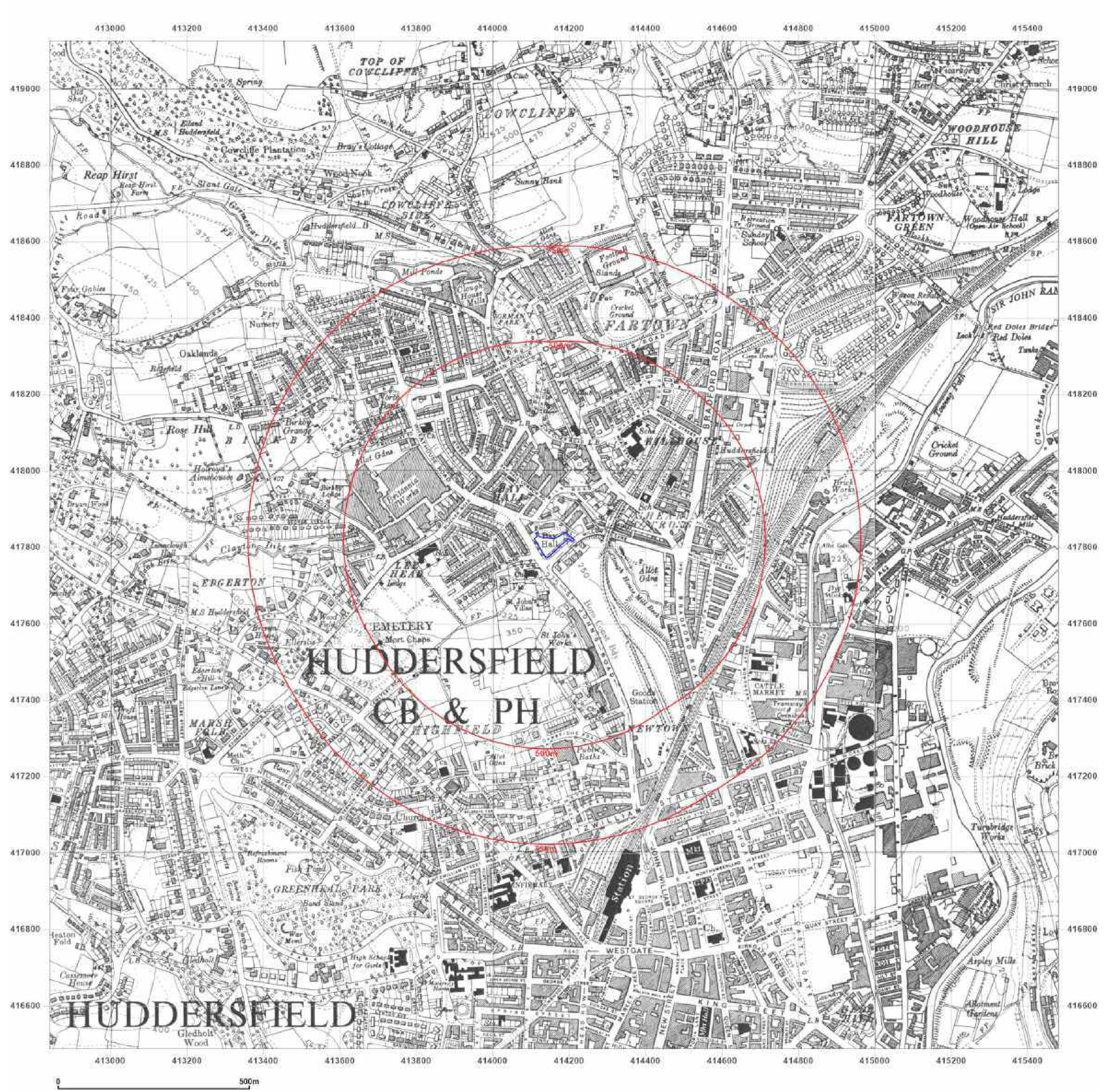

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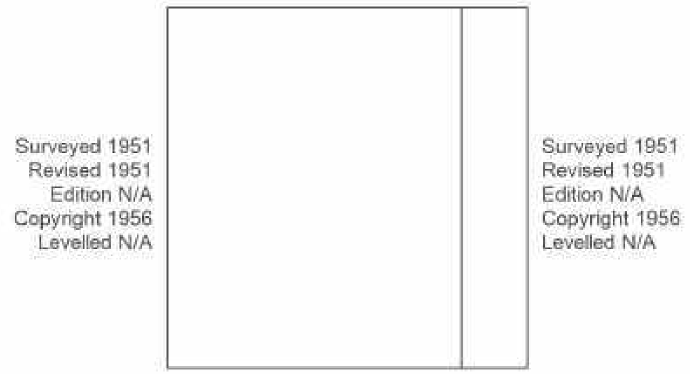
Printed at: 1:10,560



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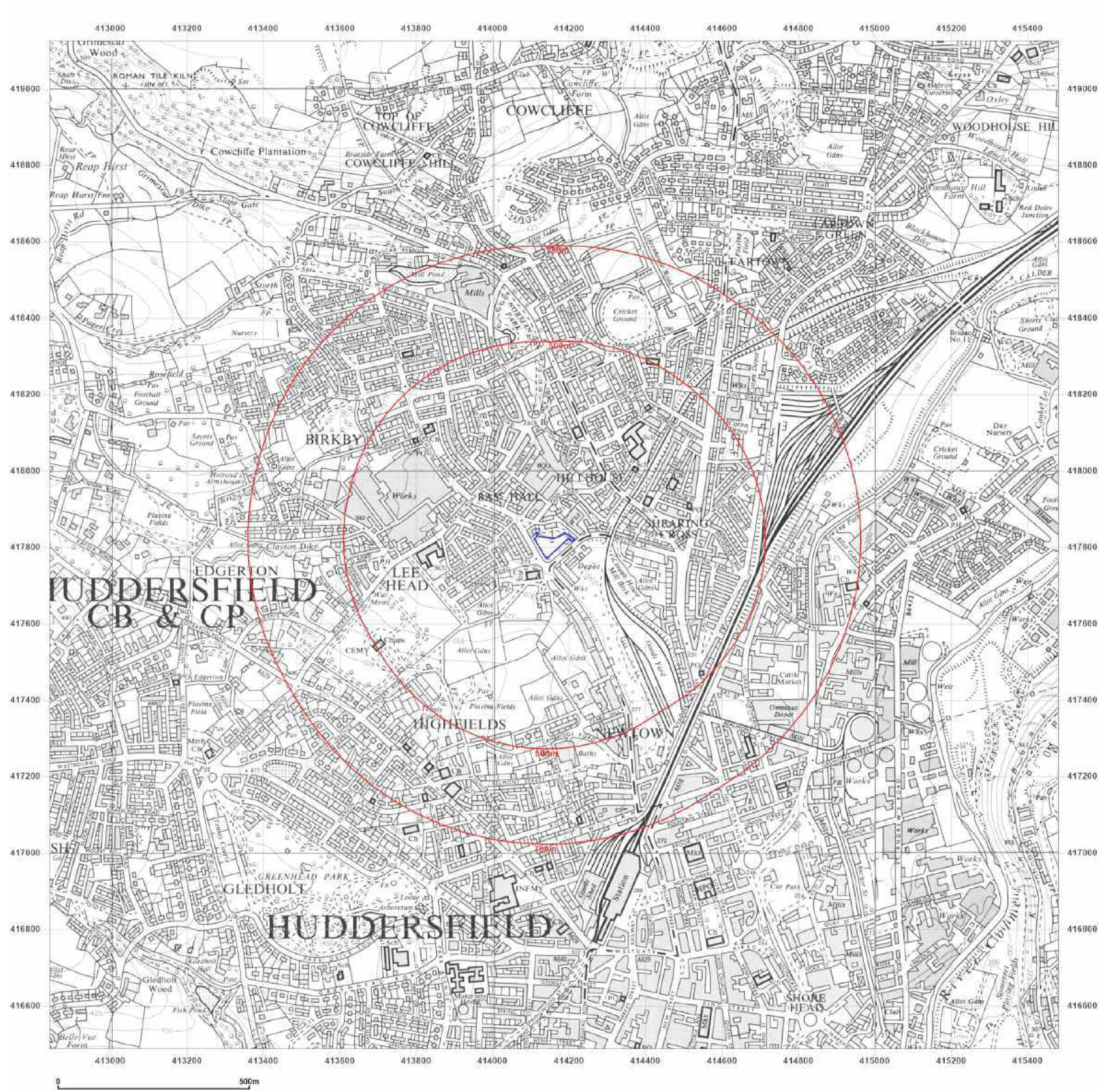

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Map Name: Provisional

Map date: **1965-1966**

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Printed at: 1:10,560

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Revised 1966
Edition N/A
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Surveyed 1965
Revised 1965
Edition N/A
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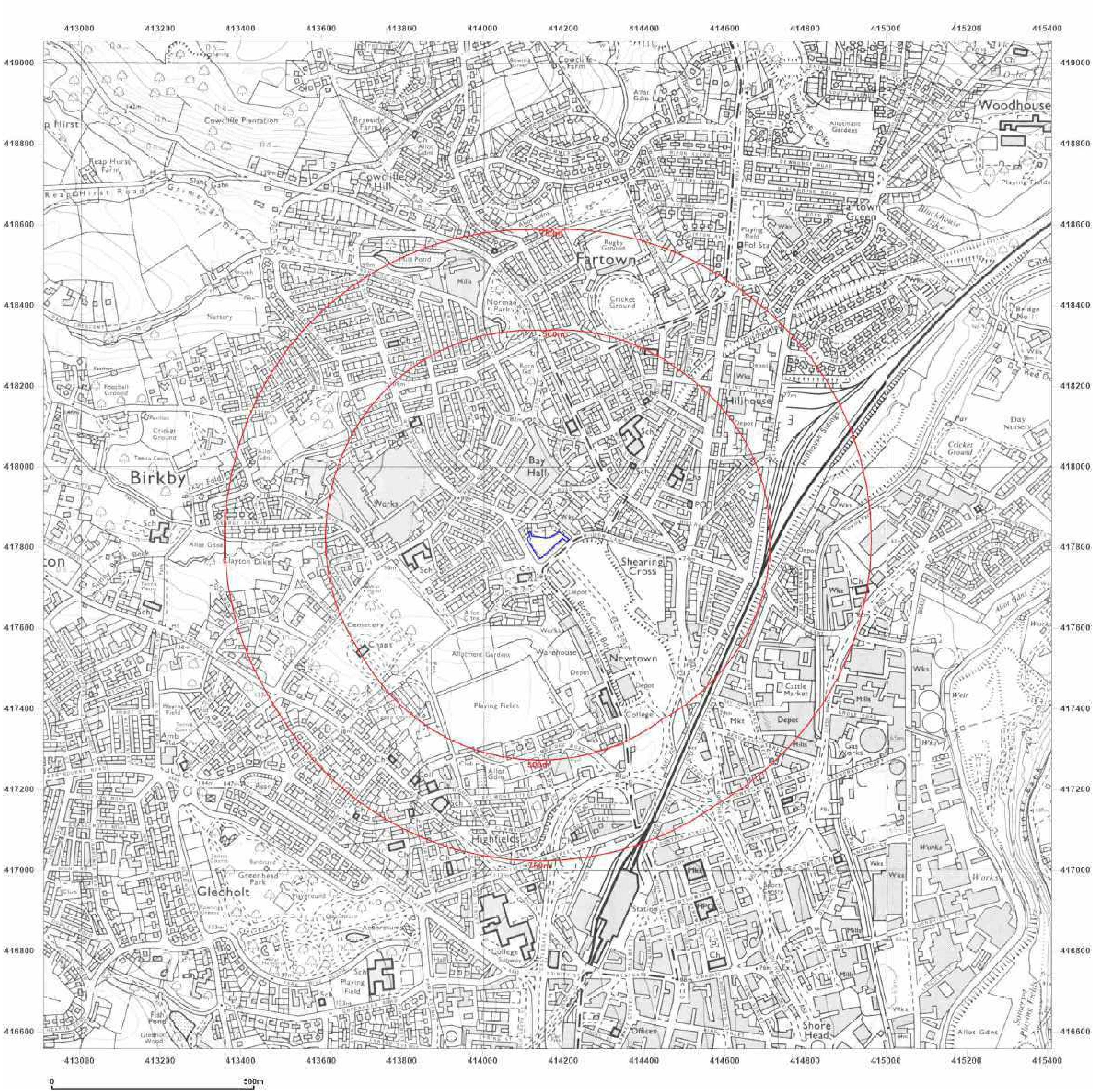

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Map Name: National Grid

Map date: **1975**

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Printed at: 1:10,000

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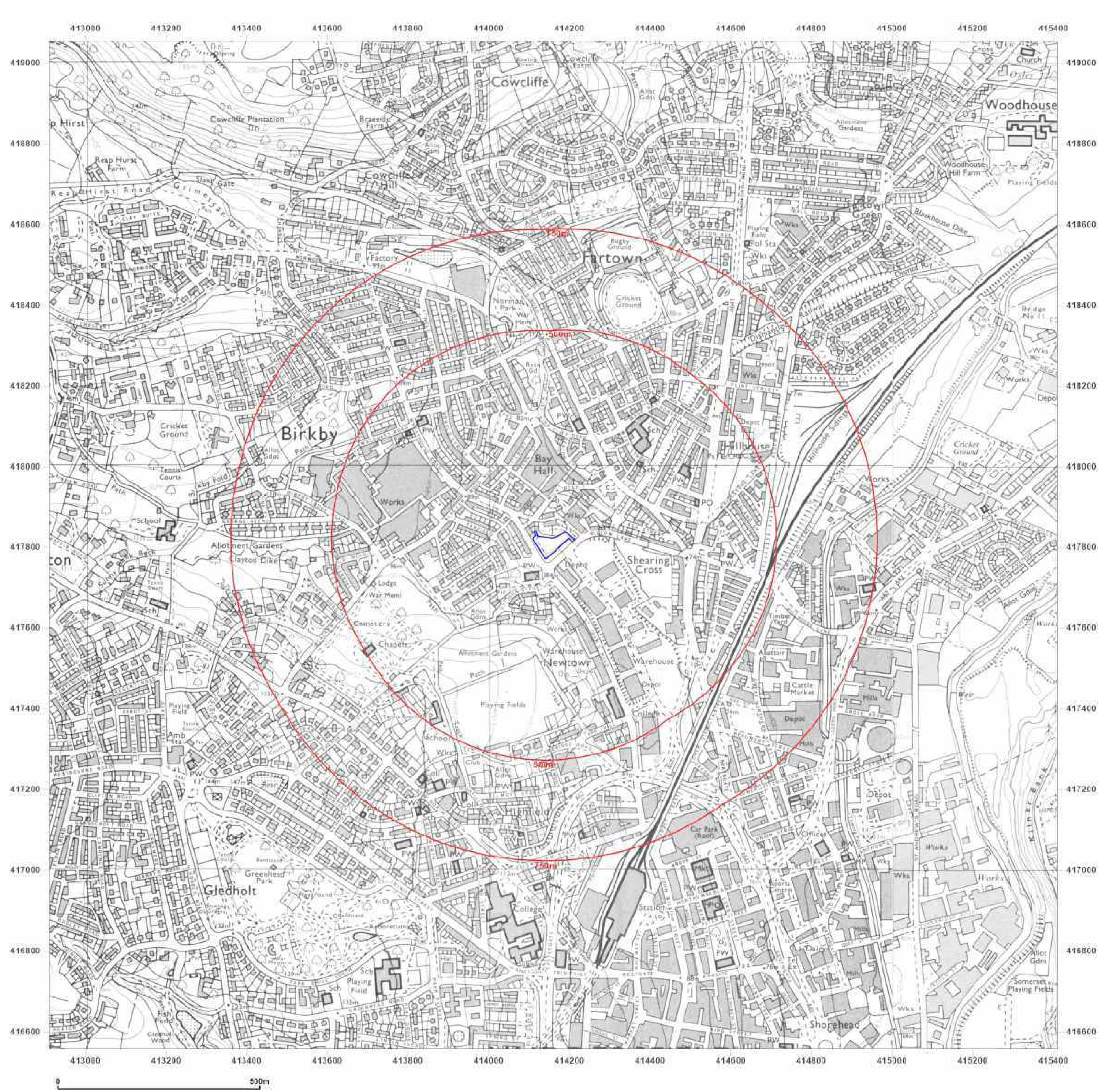

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Surveyed 1984
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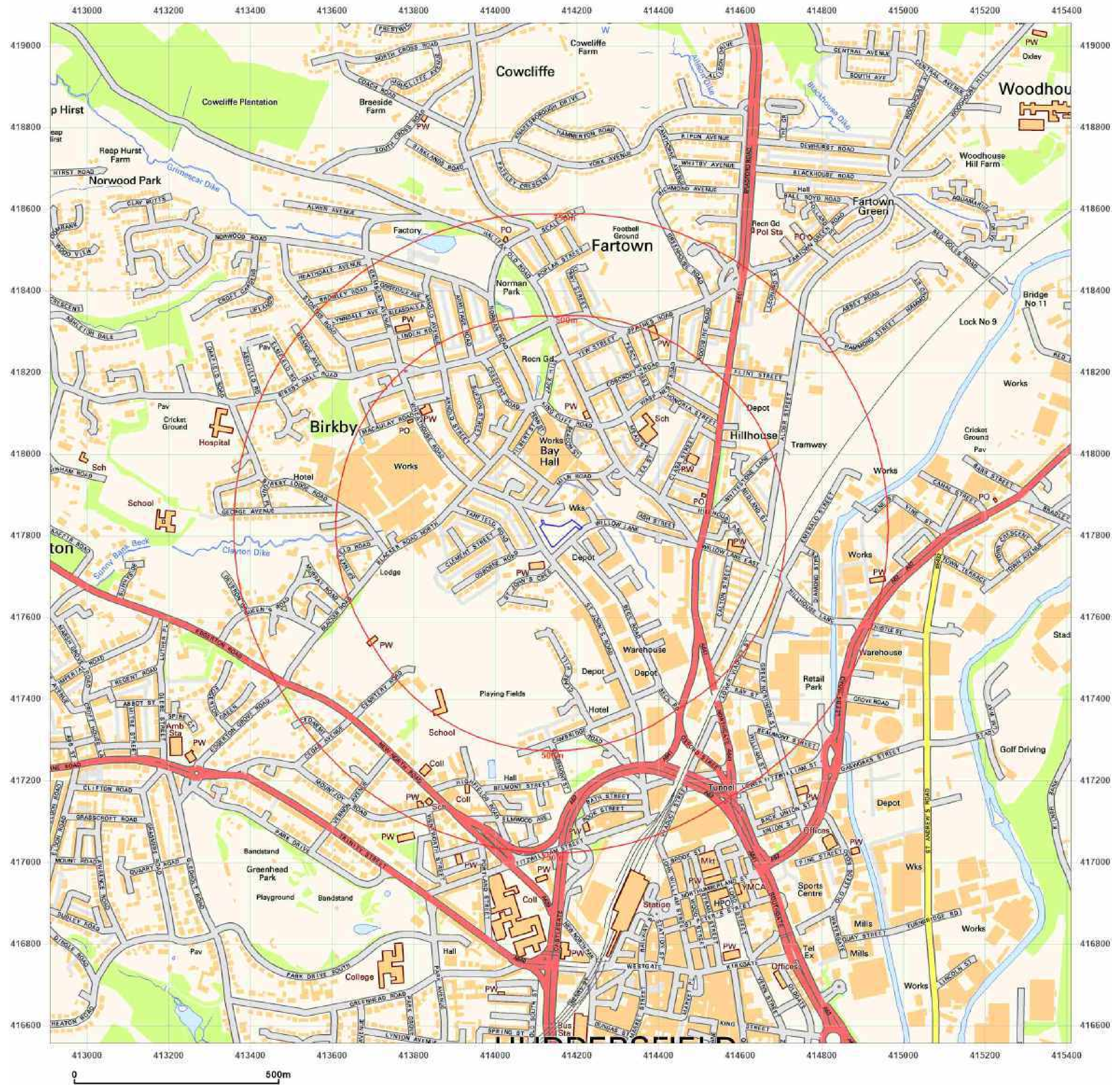

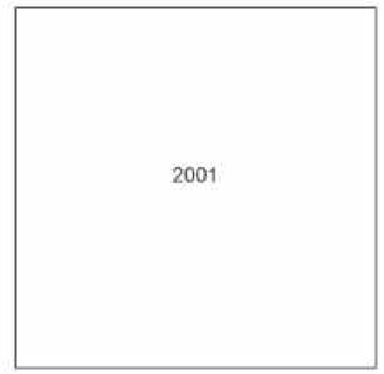

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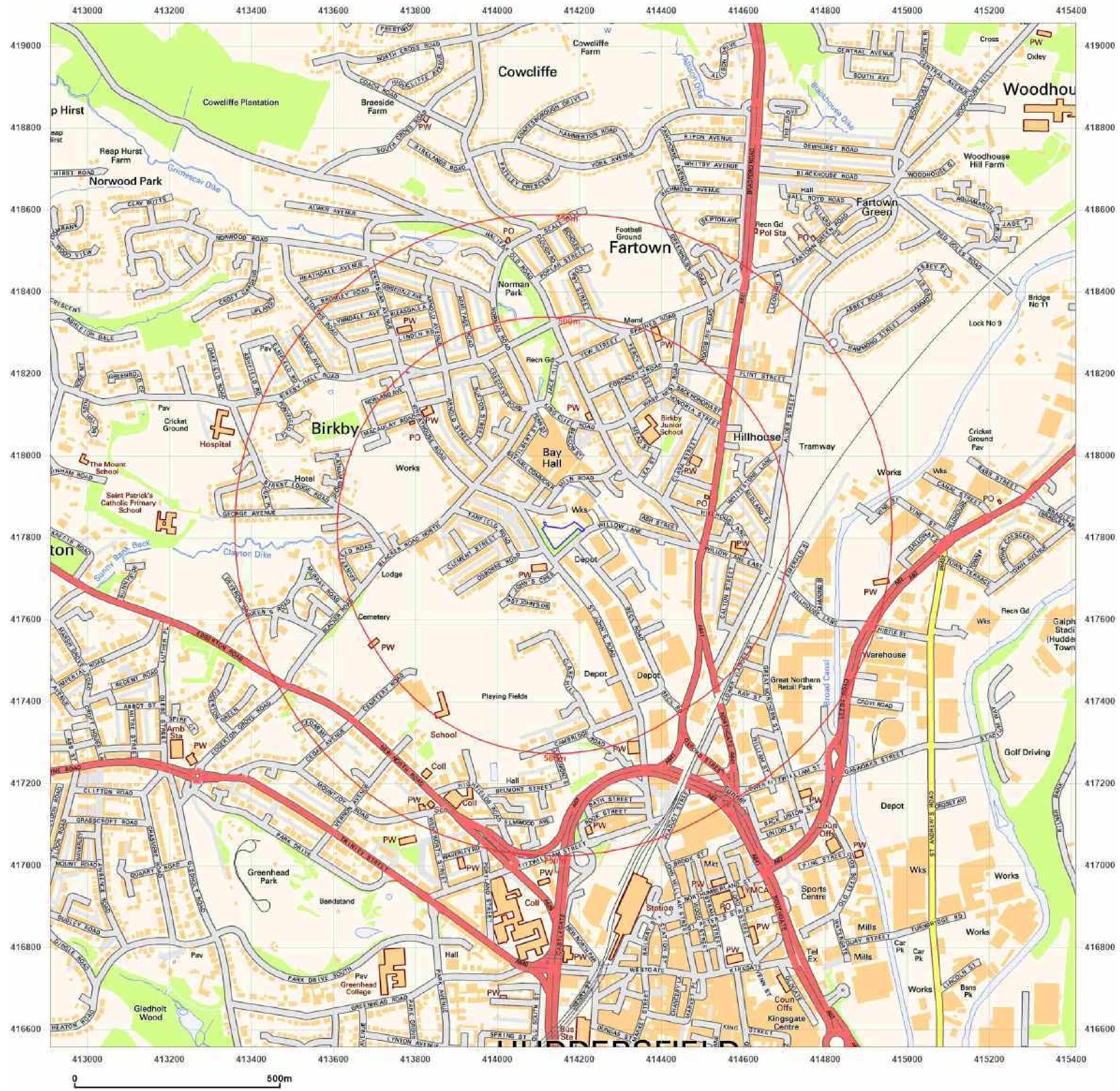

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Report Ref: CMAPS-JPG-1170190-62914-130624HIS
Grid Ref: 414160, 417806

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

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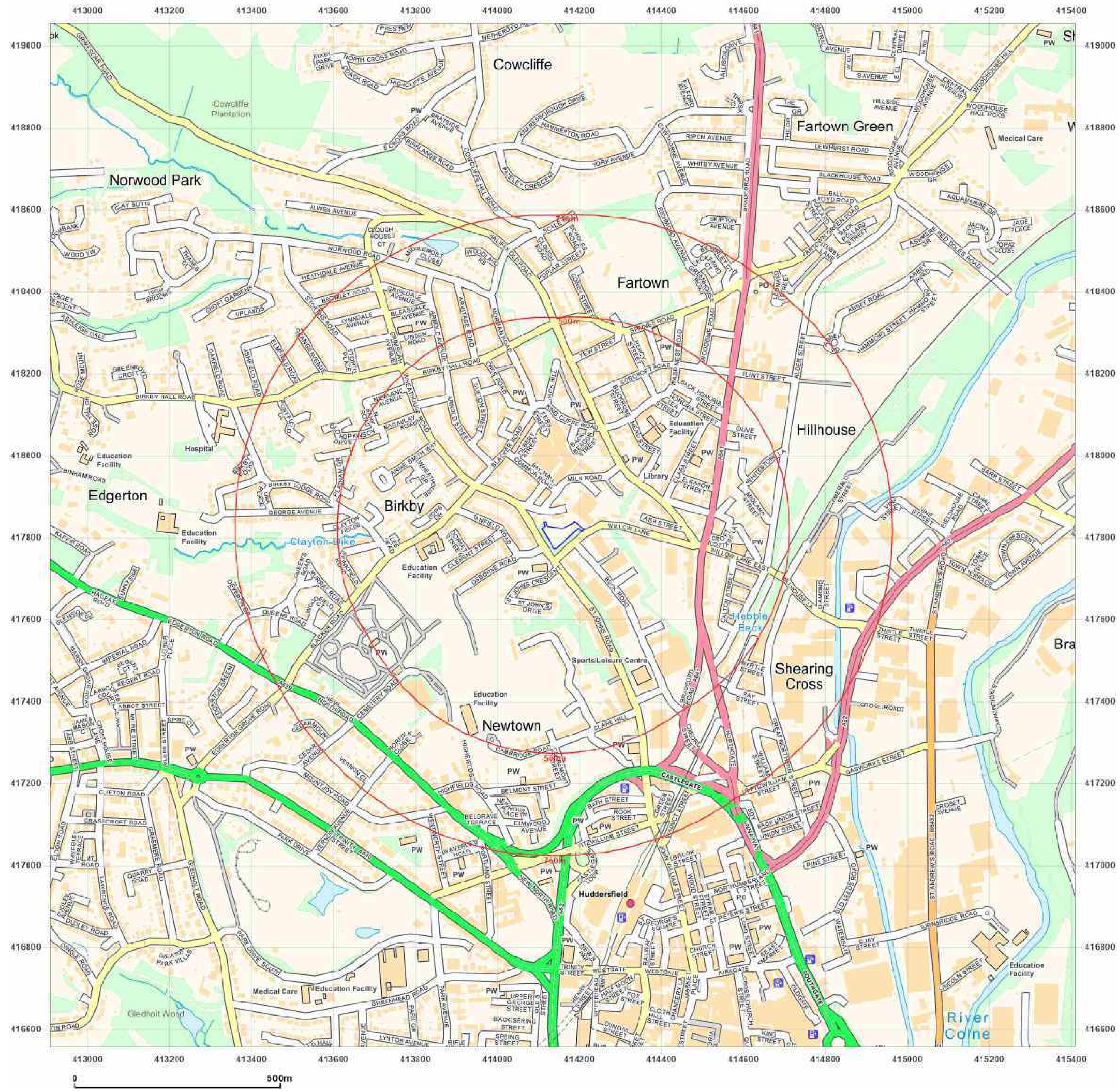

Site Details:

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Report Ref: CMAPS-JPG-1170190-62914-130624HIS
Grid Ref: 414160, 417806

Map Name: National Grid

Map date: **2024**

Scale: 1:10,000

Printed at: 1:10,000

2024

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Production date: 13 June 2024

Map legend available at:
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Appendix D BGS Historical Exploratory Hole Records

Norwest Holst Soil Engineering Ltd.

BOREHOLE LOG

Borehole No. 8

Contract No. F7508
Location Ringway Estate, Huddersfield
Client Slough Estates Ltd
Method of Boring Percussion
Diameter of Borehole 150mm

SE11NW
1420 1776

Sheet 1 of 1
Chainage
Ground Level .... m.A.O.D.
Date 22/6/87 - 23/6/87

Description of Strata	Depth Below G.L.(m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/ R.Q.D.%	Daily Progress
MADE GROUND: Topsoil and bricks	0.30					
MADE GROUND: Soft light brown clay and shale fragments	1.30			0.50	7	
MADE GROUND: Loose shale fragments	4.40			1.50 / 2.50 / 3.50	5 / 8 / 7	
Firm grey brown silty gravelly CLAY	4.80			4.50 (90)		
Stiff brown and grey mottled silty CLAY with shale	5.80					
Stiff brown silty sandy gravelly CLAY	6.90			6.00 (85)		
Brown highly weathered MUDSTONE, very weak	7.40		150mm to 7.50m	7.00 (120)		
Grey and brown highly weathered MUDSTONE, very weak	7.73					
Grey highly weathered MUDSTONE, very weak	9.00			8.50	70	
End of borehole						

Type of Sample
- S.P.T.
- C.P.T.
- Jar
- Bulk
- Undisturbed
- Vane
- Water
- Piezometer

Remarks (Observations of Ground Water etc.) () U100 blows

Groundwater seepage 5.50m to 9.00m, Final water level 8.80m (casing at 7.50m)

Water levels are subject to seasonal or tidal variations and should not be taken as constant

Norwest Holst Soil Engineering Ltd.

BOREHOLE LOG

Borehole No. 6

Contract No. F/5C8
Location Kingway Estate, Huddersfield
Client Slough Estates Ltd
Method of Boring Percussion
Diameter of Borehole 150mm

SE11NW
1428 1776

Sheet 1 of 1
Chainage
Ground Level m.A.O.D.
Date 23/5/57

Description of Strata	Legend	Depth Below G.L.(m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/ R.Q.D.%	Daily Progress
TOPSOIL		0.20					
MADE GROUND: Loose shale fragments		0.90			0.50	0	
MADE GROUND: Loose shale fragments and clay		1.30					
MADE GROUND: Medium dense shale fragments brick and clay		2.90			1.50	12	
					2.50	23	
MADE GROUND: Medium dense shale and clay		3.30					
MADE GROUND: Loose shale, brick and clay		5.80			3.50	6	
					4.50	7	
Soft dark grey and brown organic silty gravelly CLAY with roots and coal fragments		6.30			6.00 (50)		
Soft dark grey clayey SILT with coal and wood fragments		6.80					
		7.40			7.00 (60)		
Soft grey silty gravelly CLAY		8.10			7.70	50	
Very stiff grey brown silty CLAY with sandstone fragments				50mm to 9.00m			
Brown highly weathered SANDSTONE, very weak		9.50			9.00	78	
End of borehole							

Remarks (Observations of Ground Water etc.) ( ) U100 blows
Slow groundwater inflow at 5.30m (casing at 0.00m) rising to 5.20m, sealed by casing at 8.10m

Type of Sample
- S.P.T.
- C.P.T.
- Jar
- Bulk
- Undisturbed
- Vane
- Water
- Piezometer

Water levels are subject to seasonal or tidal variations and should not be taken as constant

Norwest Holst Soil Engineering Ltd.

BOREHOLE LOG

Borehole No. 9

Contract No. F/558
Location Ringway Estate, Huddersfield
Client Slough Estates Ltd
Method of Boring Percussion
Diameter of Borehole 150mm

SE11NW
1423 1772

Sheet 1 of 1
Chainage
Ground Level m.A.O.D.
Date 24/6/87

Description of Strata	Legend	Depth Below G.L.(m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/ R.Q.D.%	Daily Progress
MADE GROUND: Shale and sandstone fragments		1.40			0.50	5	
MADE GROUND: Firm grey mottled silty clay with shale fragments		1.80			1.50 (50)		
MADE GROUND: Brown silty clay with sandstone		2.30			2.50	7	
MADE GROUND: Clay, shale and sandstone		4.30			3.50	18	
Soft blue-grey silty CLAY		4.40			4.55 (50)		
Firm brown silty CLAY with sandstone		6.90		150mm to 7.50m	6.00 (130)		
Brown highly weathered clayey SANDSTONE, very weak		7.80			7.00	38	
Grey highly weathered MUDSTONE, very weak		9.00			8.00	59	
End of borehole							

Remarks (Observations of Ground Water etc.) ( ) U100 blows
Medium water inflow at 6.90m (casing at 6.00m)
Standing water level (20 mins) 6.50m

Type of Sample
Is S.P.T. ■ Undisturbed
Ic. C.P.T. ✕ Vane
O Jar Δ Water
● Bulk Piezometer

Water levels are subject to seasonal or tidal variations and should not be taken as constant

Norwest Holst Soil Engineering Ltd.

BOREHOLE LOG

Borehole No. 9

Contract No. F/558
Location Ringway Estate, Huddersfield
Client Slough Estates Ltd
Method of Boring Percussion
Diameter of Borehole 150mm

SE11NW
1423 1772

Sheet 1 of 1
Chainage
Ground Level m.A.O.D.
Date 24/8/84

Description of Strata	Legend	Depth Below G.L.(m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/ R.Q.D.%	Daily Progress
MADE GROUND: Shale and sandstone fragments		1.40			0.50	5	
MADE GROUND: Firm grey mottled silty clay with shale fragments		1.80			1.50 (50)		
MADE GROUND: Brown silty clay with sandstone		2.30			2.50	7	
MADE GROUND: Clay, shale and sandstone		4.30			3.50	18	
Soft blue-grey silty CLAY		4.40			4.50 (50)		
Firm brown silty CLAY with sandstone		6.90		150mm	6.00 (130)		
Brown highly weathered clayey SANDSTONE, very weak		7.80		to 7.50m	7.00	38	
Grey highly weathered MUDSTONE, very weak		9.00			8.00	69	
End of borehole							

Type of Sample
Ts S.P.T. ■ Undisturbed
Tc. C.P.T. ✕ Vane
O Jar Δ Water
● Bulk Piezometer

Remarks (Observations of Ground Water etc.) ( ) U100 blows
Medium water inflow at 6.90m (casing at 6.00m)
Standing water level (20 mins) 6.50m

Water levels are subject to seasonal or tidal variations and should not be taken as constant

Appendix E Coal Authority Reports

The Coal Authority

CON29M coal mining report

WILLOW LANE, HUDDERSFIELD, WEST YORKSHIRE, HD1 5EZ

Known or potential coal mining risks

Further action

No further reports from the Coal Authority are required. Further information on any next steps can be found in our Professional opinion.

For more information on our reports please visit www.groundstability.com

Professional opinion

According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. It is unlikely that these features will impact on the stability of the enquiry boundary.

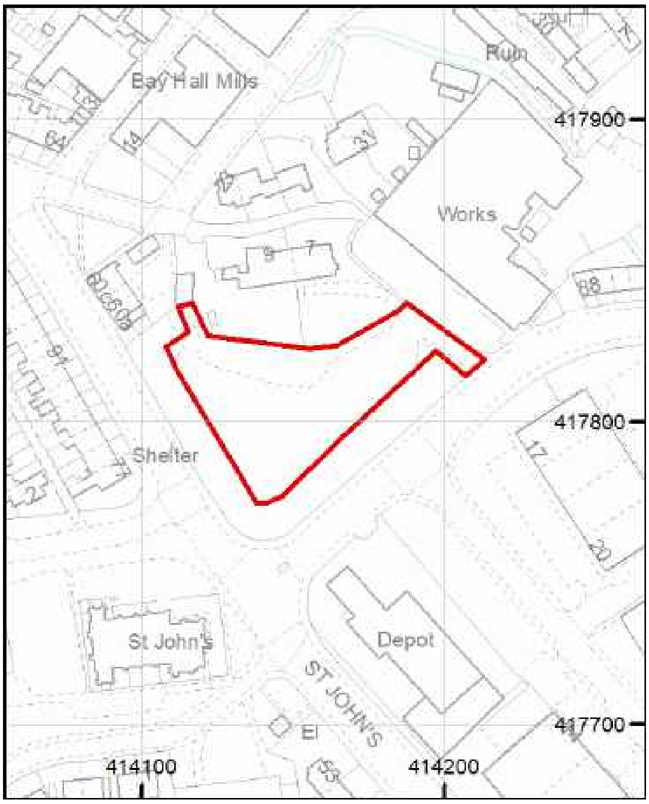
If you require any further assistance please contact our experts on:
0345 762 6848
groundstability@coal.gov.uk

The Law Society

Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is **on the coalfield**

Map data

This report is prepared in accordance with the latest Law Society's Guidance Notes 2018, the User Guide 2018 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.

Accessibility

If you would like this information in an alternative format, please contact our communications team on 0345 762 6848 or email communications@coal.gov.uk.

Professional opinion

Future development

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 specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority.

MINE GAS: Please note, if there are no recorded instances of mine gas within the enquiry boundary, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed. In these instances, the Coal Authority recommends that a more detailed Gas Risk Assessment is undertaken by a competent assessor.

If you are looking to develop, or undertake works, within a coal mining development high risk area your Local Authority planning department may require a Coal Mining Risk Assessment to be undertaken by a qualified mining geologist or engineer. Should you require any additional information then please contact the Coal Authority on 0345 762 6848 or email cmra@coal.gov.uk.

Detailed findings

Information provided by the Coal Authority in this report is compiled in response to the Law Society's CON29M Coal Mining enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL.

1 Past underground coal mining

The property is not within a surface area that could be affected by any past recorded underground coal mining.

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 received an application for, and is currently considering whether to grant a licence to remove or work coal by 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 recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

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

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

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

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

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 Coal Authority, under its Emergency Surface Hazard Call Out procedures.

12 Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

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

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.

Statutory cover

Coal mining subsidence

In the unlikely event of any coal mining related subsidence damage, the Coal Authority or the mine operator has a duty to take remedial action in respect of subsidence caused by the withdrawal of support from land or property in connection with lawful coal mining operations.

When the works are the responsibility of the Coal Authority, our dedicated public safety and subsidence team will manage the claim. The house or land owner ("the owner") is covered for these works under the terms of the Coal Mining Subsidence Act 1991 (as amended by the Coal Industry Act 1994). Please note, this Act does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

If you believe your land or property is suffering from coal mining subsidence damage and you need more information on what to do next, please use the following link to our website which sets out what your rights are and what you need to consider before making a claim.
www.gov.uk/government/publications/coal-mining-subsidence-damage-notice-form

Coal mining hazards

Our public safety and subsidence team provide a 24 hour a day, 7 days a week hazard reporting service, to help protect the public from hazards caused by past coal workings, such as a mine shaft or shallow working collapse. To report any hazards please call 0800 288 4242. Further information can be found on our website: www.gov.uk/coalauthority.

Glossary

Key terms

adit - horizontal or sloped entrance to a mine

coal mining subsidence - ground movement caused by the removal of coal by underground mining

Coal Mining Subsidence Act 1991 - the Act setting out the duties of the Coal Authority to repair damage caused by coal mining subsidence

coal mining subsidence damage - damage to land, buildings or structures caused by the removal of coal by underground mining

coal seams - bed of coal of varying thickness

future opencast coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal from the surface

future underground coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal underground. Although it is unlikely, remaining coal reserves could create a possibility for future mining, which would be licensed by the Coal Authority

mine entries - collective name for shafts and adits

mine gas - reports of alleged mine gas emissions received by the Coal Authority within the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded

payments to owners of former copyhold land - historically, copyhold land gave rights to coal to the copyholder. Legislation was set up to allow others to work this coal, but they had to issue a notice and pay compensation if a copyholder came forward

shaft - vertical entry into a mine

site investigation - investigations of coal mining risks carried out with the Coal Authority's permission

stop notice - a delay to repairs because further coal mining subsidence damage may occur and it would be unwise to carry out permanent repairs

subsidence claim - a formal notice of subsidence damage to the Coal Authority since it was established on 31 October 1994

withdrawal of support - a historic notice informing landowners that the coal beneath their property was going to be worked

working facilities orders - a court order which gave permission, restricted or prevented coal mine workings

Appendix F Notes on Limitations

General

JPG (Leeds) Ltd have prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from JPG (Leeds) Ltd; a charge may be levied against such approval.

JPG (Leeds) Ltd accepts no responsibility or liability for:

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

Phase I Desk Study Reports
The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources (including the Client), together with (where appropriate) a brief walk over inspection of the site and meetings and discussions with relevant authorities and other interested parties. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only to the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, JPG (Leeds) Ltd reserves the right to review such information and, if warranted, to modify the opinions accordingly.

It should be noted that any risks identified in this report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

Phase II Geo-Environmental Investigations

The investigation of the site has been carried out to provide sufficient information concerning the type and degree of contamination, geotechnical characteristics and ground and groundwater conditions to allow a reasonable assessment of the environmental risks together with engineering and development implications.

The objectives of the investigation have been limited to establishing the risks associated with potential human receptors, building materials, the environment (including adjacent land) and controlled waters (surface water and groundwater).

The number of sampling points and the methods of sampling and testing do not preclude the existence of localised "hotspots" of contamination where concentrations may be significantly higher than those actually encountered.

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

The scope of the investigation was selected on the basis of the specific development proposed by the Client and may be inappropriate to another form of development or scheme.

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