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CONSULTANCY



## Phase 1 Desk Study Site Investigation Report

<b>LOCATION</b>	Boothroyd Lane, Dewsbury WF13 2LF
<b>ISSUE DATE</b>	June 2025
<b>FOR</b>	Horizon Healthcare Homes Ltd c/o Homewood Design
<b>CLIENT REF.</b>	
<b>OUR REF.</b>	G25193

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**Appendix 1** – Historical Map Record

**Appendix 2** – GroundSure Enviro + GeoInsight Report

**Appendix 2** – The Coal Authority / CMRA Report

## Executive Summary

The major conclusions of this desk-based Phase one study are summarised in the table below:

Site Suitability	Desk Study Finding	Preliminary Assessment
Normal Foundations	Shallow rock anticipated, but some fill may be present from former buildings onsite. Risk of shallow mine-workings may require foundation mitigation or drilling and grouting	Possibly suitable
Soakaways	Shallow rock unlikely to offer sufficient permeability.	Unlikely to be suitable

Potential Risks	Desk Study Finding	Preliminary Risk Assessment
Radon Gas	Between 3% and 5% of properties affected	Low to Moderate
Chemical Contamination	Historical nearby and on-site land uses potentially giving rise to a range of inorganic and organic contaminants including asbestos, metals/metalloids, PAHs and petroleum hydrocarbons.	Low to Moderate
Hazardous Gas	Potential for hazardous gas to be generated in made/infilled ground deposits and shallow mining / mineshafts.	Moderate
Ground Instability/ subsidence	Potential for vegetation influence on shrink-swell clays which may be present, including risk of soil heave.	Low
	Potential for significant deposits of compressible made/infilled ground.	Low to Moderate
Ground Instability/ subsidence	Potential for unrecorded shallow coal mining.	Moderate to High

NB. Arbitrary potential hazard assessment: High (Red), Moderate (Amber), Low (Yellow), Very Low (Green), Negligible (uncoloured)

## 1. Introduction

In accordance with your instruction, Geoinvestigate Ltd. has carried out a Phase 1 Desk Study Investigation of the land at Boothroyd Lane, Dewsbury, WF13 2LF. The location of the site is shown on the Groundsure Enviro+Geo Insight report presented in Appendix 2.

The site currently comprises an area of land some 0.45 ha in size with access from Boothroyd Lane to the West. In general, the site is laid to rough grass, with some trees to the boundaries with some areas of hardstanding formerly an access road and a tennis court. The site slopes to the south and lies within a predominantly residential area.

It is understood that it is proposed to construct a new care home development at the site.

The purpose of the Phase 1 Desk Study investigation was to review the historical land use and geological information for the site in order to provide an assessment of the potential geotechnical/foundation problems together with a qualitative contamination and ground gas risk assessment.

## 2. Scope of Works

The investigation comprised a review of the following information:

- An extract from the 1:50,000 BGS geological mapping.
- Historical OS maps of various scales dating back to 1854 (presented in Appendix 1).
- Observations from a walkover study carried out by Geoinvestigate.

- Review of Coal Mining Report and Coal Mining Risk Assessment for the site.

### 3. Findings of Phase 1 Investigation

#### 3.1 Anticipated Geology

The extract of the 1: 50,000 BGS geological mapping indicates that little to no drift deposits will be present at the site with Mudstone, siltstone and sandstone bedrock belonging to the Pennine Lower Coal Measures and the Emley Rock formation probably present commencing from shallow depth.

Nearby BGS borehole records generally show shallow made ground underlain by silty clay and mudstone rock below 2.00m Other boreholes, corresponding with areas of quarrying encountered made ground to circa 2.00m underlain by sandstone rock.

#### 3.2 Historical OS Maps and Historical Land Use

Copies of historical OS maps were obtained for the site covering the period 1854 to 1994. Historical land uses and major features located within the site boundary and externally but potentially within influencing distance are summarised in Table 1 below. The earliest OS map of 1854 shows the site to be primarily undeveloped, with the southeastern corner comprising a neighbouring sandstone quarry.

**Table 1:** Summary of Historical OS Map Land Use & Potential Hazard Identification

Map Feature	Location	Appears	Absent	Notes
Methodist Chapel	Onsite	1855	Post 2003 mapping	Former place of worship demolished, post 2003. Evidence of footprint of building onsite. Use and demolition of building onsite might comprise possible contamination source.
Sandstone Quarry (*became chemical works after this date)	90m Southeast	1855	1890	Evidence of sandstone mining.
	90m South	1855	1890	
	120m East	1855	1890	
	190m South	1855	1890	
	250m Northwest	1855	1894*	
Colliery	125m South	1855	1890	Evidence of coal mining.
Coal Pit / Shaft	90m North (nearest)	1855	1890	Evidence of coal mining.
Brickfield	290m East	1855	1890	Evidence of clay mining.
Allotment Gardens	15m Southeast	1890	1931	Given the nature of allotment gardens there is some risk of contamination as a result of pesticides and fertilisers, but widespread and intensive use is unlikely to have taken place, especially given the date of the site use
	350m Southwest	1931	Latest	
	200m Northeast	1938	Latest	
Ironworks (*became Works in 1964, then timber yard from 1992 to latest map)	130m Southeast	1890	1964*	Potential for contamination associated with ironworks etc.
Chemical Works	250m Northwest	1894	1967	Purpose not stated
Railway Line	300m Southeast	1855	Latest	Railways can be a source of PAH and metals contamination through soot deposition.

NB. Arbitrary potential hazard assessment: High (Red), Moderate (Amber), Low (Yellow), Very Low (Green), Negligible (uncoloured)

A review of the historical OS maps has highlighted the land uses most likely to present (or have presented) a hazard or source of potentially harmful contamination to the study area. The primary feature of interest is the former building onsite and nearby sandstone quarries and coal pits. The other potential sources (such as the allotment gardens) are unlikely to have had any lasting effect on the or are too distant to have meaningfully affected the site.

### 3.3 GroundSure Enviro + GeoInsight Reports

The GroundSure Enviro+Geo Insight Report presented in Appendix 2 provides listings of potentially contaminative current and past land uses together with possible pathway and receptor information. It also covers other potential risks to the site including ground hazards associated with the area’s natural geological setting and man-made hazards such as those arising from development activities. A summary of the relevant Report findings is presented in Table 2 below and on the following pages:

An arbitrary potential hazard assessment has been made as follows: potentially significant (yellow), or unlikely to be significant (uncoloured). Potential receptors for contamination are highlighted blue.

**Table 2:** GroundSure Enviro+Geo Insight Summary:

Details	Feature	Location relative to site
<b>Past land use</b>		
Historical industrial land uses	Hospital (2)	35m N (closest)
	Old Air shaft	46m NW
	Infirmary / General Infirmery (2)	135m NW (closest)
	Chemical Works (3)	266m W (closest)
	Mortuary (3)	275m N (closest)
	Unspecified Quarry	296m W (closest)
	Unspecified Pit (2)	297m W (closest)
	Unspecified Ground Workings (3)	303m N (closest)
	Railway Sidings (9)	319m E (closest)
	Railway Station (6)	387m E (closest)
	Unspecified Works (2)	396m SE (closest)
	Unspecified Foundry	401m SE
	Unspecified Mill (11)	437m S (closest)
	Dispensary (2)	472m NE (closest)
	Unspecified Tank (3)	476m W (closest)
	Unspecified Commercial / Industrial	498m SE
Historical Tanks	Unspecified Tank (4)	177m SE (closest)
Historical Energy Features	Electrical Substation (20)	72m S (closest)
Historical garages	Garage (5)	333m SE (closest)
<b>Landfill and Other Waste Sites</b>		
Historical waste sites	Waste Transfer	439m SE
Licensed waste sites	25000 tonnes (4)	407m SE (closest)
	Unknown (3)	415m SE (closest)
	>= 25000 tonnes 75000 tonnes	415m SE
Waste exemptions	Treating waste exemption (16)	293m S (closest)
	Storing waste exemption (7)	308m S (closest)

Table 2 is continued on the following page

NB Arbitrary potential hazard assessment: potentially significant (yellow), or unlikely to be significant (uncoloured). Potential receptors for contamination are highlighted blue.

**Table 2 (ctd.):** GroundSure Enviro+Geo Insight Summary:

Details	Feature	Location relative to site
<b>Past land use</b>		
Recent industrial land uses	Electricity Sub Station (6) Works (3) Chimney H B Food Services Ltd High Works Diespeker	63m S (closest) 143m SE (closest) 175m SE 185m SE 196m SE 216m SE
Licensed pollutant release (Part A(2)/B)	Non-Ferrous Metal Foundry Processes	436m SE (closest)
Pollution Incidents (EA/NRW)	Commercial Waste Dust	336m SE 427m E
<b>Hydrogeology - Superficial aquifer</b>		
Superficial aquifer	Secondary A	Onsite
Bedrock aquifer	Secondary A	Onsite
Groundwater vulnerability	Medium	Onsite
Groundwater Abstractions		
Surface Water Abstractions	Historical (21) Active (4)	927m NE (closest) 1186m SE (closest)
<b>Hydrology</b>		
WFD Surface water body catchments	River WB catchment	Onsite
WFD Surface water bodies	River	451m SE
WFD Groundwater bodies	Aire & Calder Carb Limestone / Millstone Grit / Coal Measures.	Onsite
<b>Surface water flooding</b>		
Surface water flooding	Highest risk on site Highest risk within 50m	1 in 30 year, 0.3m - 1.0m 1 in 30 year, 0.3m - 1.0m
<b>Groundwater flooding</b>		
Groundwater flooding	Highest risk on site Highest risk within 50m	Negligible Negligible
<b>Environmental designations</b>		
Local Nature Reserves (LNR)	Lower Spen Wildlife Area Sparrow Wood	1184m SW 1448m SE
Green Belt	South and West Yorkshire Green Belt	989m NE
Nitrate Vulnerable Zone	Surface Water	413m W
<b>Agricultural and Habitat designations</b>		
Agricultural Land Classification	Urban	Onsite
<b>Geology 1:10,000 scale</b>		
Artificial and made ground (10k)	Worked Ground (Void) (5) Made Ground (artificial deposit) (9) Infilled Ground (artificial deposit)	130m SE (closest) 174m NW (closest) 458m E
Superficial geology (10k)	Alluvium – Clay, sand & Gravel	407m SE
Bedrock geology (10k)	Emley Rock – Sandstone (3) Pennine Lower Coal Measures Formation - Mudstone, Siltstone and Sandstone (4) Birstall Rock – Sandstone (5)	Onsite Onsite (closest) 179m SE (closest)
Bedrock faults and other linear features (10k)	Normal fault, inferred (4) Coal seam, inferred (5)	Onsite (closest) 105m SE (closest)

Table 2 is continued on the following page

NB Arbitrary potential hazard assessment: potentially significant (yellow), or unlikely to be significant (uncoloured). Potential receptors for contamination are highlighted blue.

**Table 2 (ctd.):** GroundSure Enviro+Geo Insight Summary:

Details	Feature	Location relative to site				
<b>Geology 1:50,000 scale</b>						
Artificial and made ground (50k)	Made Ground, Artificial Deposit	472m SE				
Superficial geology (50k)	Alluvium	413m SE				
Bedrock geology (50k)	Pennine Lower Coal Measure Formation - Mudstone, Siltstone and Sandstone (4)	Onsite (closest)				
	Emley Rock – Sandstone (3)	Onsite (closest)				
	Birstall Rock – Sandstone (5)	183m SE (closest)				
Bedrock permeability (50k)	Fracture (high to moderate)	Onsite				
	Fracture (moderate to low)	Onsite				
Bedrock faults and other linear features (50k)	Fault, inferred (4)	Onsite (closest)				
	Coal seam, inferred (5)	109m SE (closest)				
<b>Natural ground subsidence</b>						
Shrink swell clays	Negligible	Onsite				
	Very low	Onsite				
Running sands	Negligible	Onsite				
Compressible deposits	Negligible	Onsite				
Collapsible deposits	Very low	Onsite				
Landslides	Very Low	Onsite				
Ground dissolution of soluble rocks	Negligible	Onsite				
<b>Mining, ground workings and natural cavities</b>						
BritPits	Sandstone (8)	9m SE (closest)				
Underground workings	Airshaft	63m N				
	Colliery (2)	709m W (closest)				
	Unspecified Shaft	755m N				
	Tunnel (10)	844m NE (closest)				
Coal mining	The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site.	Onsite				
<b>Radon Risk</b>						
Radon Risk	Between 1%-3% No protection required	Onsite				
	Between 3% and 5%. Basic protection required	Onsite				
<b>Soil chemistry</b>						
Location	Arsenic mg/kg	Lead mg/kg	Bioaccessible Lead mg/kg	Cadmium mg/kg	Chromium mg/kg	Nickel mg/kg
On site	25-35	100-200	60-120	1.8	60-90	15-30
On site	35-45	100-200	60-120	1.8	90-120	30-45

NB Arbitrary potential hazard assessment: potentially significant (yellow), or unlikely to be significant (uncoloured). Potential receptors for contamination are highlighted blue.

The GeoInsight report has highlighted no additional potential risks to the site or the intended development arising due to historical or current land uses and the site's geological setting beyond those already discussed save for perhaps the records of a nearby scrap yard. Additionally, a nearby stream has been highlighted as a possible receptor.

### 3.4 Coal Authority & CMRA Report Summary

The Coal Authority (CA) report (see Appendix 3) states that:

- The site is in an area where underground coal mining has occurred in the Black Bed coal seam 251m in depth last worked in 1896. It suggests that movement associated with this activity should have since stopped.
- The coal authority believes that there is probable unrecorded shallow workings.
- There are no known coal mine entries within the boundary of the property but one is shown approximately 40m to the Southwest and are shown approximately 80m to the North.
- There has been no damage notice or claim for any property within 50m of the site and no records of mine gas, subsidence or remedial works are recorded for the site.
- The plan supplied with the report also shows a geological fault running directly through the site.

Based on the CA report, a significant risk of subsidence to the proposed development might be inferred as unrecorded shallow coal workings are considered probable.

The CMRA report suggests that there is a risk of shallow mine-workings at the site given the presence of a shallow coal seam (Flockton Thin) and evidence of shallow workings nearby. Rotary probe drilling works are required to determine the depth of any coal seams and workings therein.

### 3.5 Walkover Survey Observations

A site reconnaissance visit was undertaken on the 18 June 2025 by Anthony Montgomery of Geoinvestigate.

The site was as described in Section 1 of this report comprising open land with some evidence of demolished buildings and former site use.

The site currently comprises an area of land some 0.45 ha in size with access from Boothroyd Lane to the West. In general, the site is laid to rough grass, with some trees to the boundaries with some areas of hardstanding formerly an access road and a tennis court. The site slopes to the south and lies within a predominantly residential area, with level platforms occupying the former building and tennis court area.

Some large have been left in place within and around the perimeter of the site.

The inspection of the surface of the site found no obvious evidence of physical hazards or odours, staining, or residues that might be indicative of the presence of chemical (including hydrocarbon) contamination. On the basis of the walkover inspection only, the risk of a serious contamination hazard occurring at this site would be assessed to be very low given the current condition of the site and use. The hazardous gas risk at the site, based solely on the findings of the walkover survey, would also be assessed to be very low given it is unlikely any substantial gas source exists beneath the site. The limited evidence of minor groundworks does not indicate that significant made ground might be present.

The presence of trees might indicate a potential for vegetation influence on shrink-swell clays (if clay soils are present) and potentially soil heave following vegetation removal that has taken / may take place.

It is noted however that despite the apparent lack of evidence of any contamination encountered during the visual inspection described above, any planning application is likely to require confirmation that no contamination is likely to have occurred. Photographs taken during the walkover survey are presented below and on the following page:



**Photograph 1:** Entrance to site from Boothroyd Lane.



**Photograph 2:** View to the south west showing slope and level platform and former tennis court area.



**Photograph 3:** View to the north west across the site showing extensive vegetation.

## 4. Qualitative Risk Assessment

### 4.1 Methodology

In order to assess the potential risks to the site, information obtained on the potential sources of hazard identified in Section 3 have been reviewed and applied to a model of the site. This allows an assessment of the potential sources of contamination to be made by examining the potential pollutant linkages between these and the receptors at the site.

The risk assessment presented comprises a source-pathway-receptor model developed in the context of the intended end use of the site (Residential use).

It is noted that an alternative land use would present different pollutant linkages with more or less vulnerable receptors and differing pathways for exposure. Were the intended land use to be changed at the site, a revised risk assessment would be required.

Identified potential sources of hazard or contamination, vulnerable receptors, and possible pathways by which they may be exposed are presented in the Conceptual Ground Hazard Model (CGHM) presented in Figure 1, see Section 4.2.

In addition to risks to human health and controlled waters and aquifers posed by contamination and ground gas, the CGHM examines the potential risks to the construction of the development including its buildings from geological or geotechnical hazards.

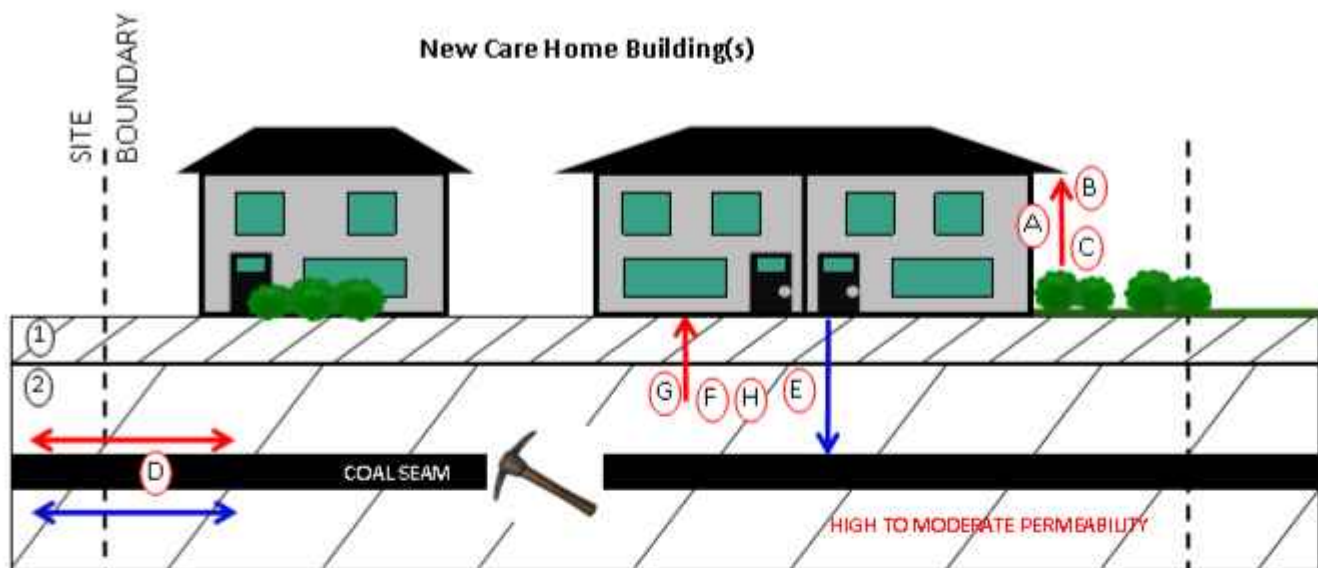
It allows an overall assessment to be made of the potential hazards and risks to the site and the proposed development with respect to “fitness for purpose”. Bedrock geology which is anticipated to underlie the site is assumed to exhibit potentially variable permeability and only limited superficial geology is expected.

## 4.2 Risk Assessment

The desk study has highlighted the presence of possible sources of contamination which could potentially affect (or have affected) the site, primarily comprising the adjacent allotment gardens and a nearby sandstone quarry and coal pit.

Contamination from external sources would require a favourable pathway for migration into the site and the majority of external sources of contamination are likely to be too distant or minor to pose any significant risk. The BGS extract does not record any superficial deposits so near-surface permeability is unknown.

Potential receptors at the site would include the end users of the site (residents), workers employed in the construction of the new development, the buildings themselves and their services, plants and vegetation, neighbouring sites (and their users/occupants), nearby surface water and ground water at depth. A representation of the potential hazards and pollutant linkages is shown in Figure 1 overleaf.

**Figure 1 – Conceptual Ground Hazard Model of site including a Source, Pathway and Receptor Model**


- ① SURFACE —TOPSOIL AND POTENTIAL MADE GROUND PRESENT.
- ② BEDROCK GEOLOGY —PENNINE LOWER COAL MEASURES FORMATION (SANDSTONE).

### IDENTIFIED HAZARDS Including Potential CONTAMINATION SOURCES

- Historical onsite land uses such as the previous development / demolition.
- Ground instability hazards due to potential made ground & former mining activities.
- Potential hazardous gases sourced from made ground within or near to site and mining.
- Contamination from nearby historical land uses and demolition.

### IDENTIFIED RECEPTORS and ASSOCIATED PATHWAY

- A— End Users through Direct Contact / Inhalation / Ingestion. Buildings and hard standing will encompass some of the site, removing any pathway to end users through direct contact in these areas.
- B— Plants and Trees through uptake, likely given the intended end use and configuration of the site.
- C— End Users through cultivation and consumption of vegetables / fruit. Likely given the intended end use of the site.
- D— Neighbouring Sites through lateral migration (in soil and water, including surface water run off).
- E— Ground water through leaching of sub-soil.
- F— Buildings and services through direct contact.
- G— End users and buildings through ground gas migration.
- H— Ground stability hazards (etc..)

The CGHM and the summary table below (Table 3) present the most likely potential sources of contamination, gas or geotechnical risk that are considered to be possible either within or near to the study site.

The identified potential contamination sources could feasibly have given rise to harmful and potentially mobile contamination of made ground which might underlie the site. No superficial geology is recorded for the site and there are no nearby borehole records, meaning permeability is unknown.

Therefore, assuming the worst-case scenario, the potential for harmful contamination to exist at the site from historical sources is assessed to be Low (as opposed to very low or negligible) owing to the potentially contaminative activities located near to and/or within the study area.

The hazardous gas risk is assessed to be Moderate due to the potential for some (>1.0m deep) made/infilled ground to be present, and in connection with the possible presence of shallow workings beneath the site and nearby mineshafts.

The actual current level of risk to the development and its users can only be ascertained for certain through confirmation of the ground conditions by a Phase 2 intrusive investigation, including a contamination survey, a rotary probe drilling exercise to check for shallow mining, and potentially a gas monitoring survey.

**Table 3: Summary of Conceptual Ground Hazard Model**

Potential Source	Nature of Hazard	Associated Contaminants	Pathway	Receptor	Preliminary Risk Rating
Historical land use and development.  Possible made ground.	Inorganic and organic chemical contaminants within soil.	-Trace metals -PAHs -Petroleum hydrocarbons -Asbestos	-Direct human contact -Ingestion of soil -Ingestion of dust -Inhalation of vapour	-Site Operatives -End Users -Vegetation -Controlled waters -Structures and services -Neighbouring sites/users	Low to Moderate
Possible made ground and shallow coal workings	Hazardous ground gas migration.	Landfill-type gases (CO <sub>2</sub> , CH <sub>4</sub> etc.)	-Inhalation -Explosion risk	-Site Operatives -End Users -Structures	Moderate
Local Geology	Radon gas migration	Radon gas	-Inhalation	-End Users	Low
Shallow coal mine workings	Ground instability via risk of settlement / collapse	N/A	Direct	-End Users -Structures	Moderate
Shrink-swell clays	Ground instability vegetation influence / heave	N/A	Direct	-End Users -Structures	Low
Infilled ground	Ground instability via risk of settlement	N/A	Direct	-End Users -Structures	Low to Moderate

NB. Arbitrary potential hazard assessment: High (Red), Moderate (Amber), Low (Yellow), Very Low (Green), Negligible (uncoloured)

## 5. Conclusions

A summary of the anticipated ground conditions, risks and implications based on the findings of Sections 3 and 4 of this report is presented in Table 4 below:

**Table 4:** Summary of Phase 1 Desk Study Findings

Concern	Desk Study Finding	Initial Risk Assessment	Potentially Useful Action in a Phase 2 Site Investigation
Normal Foundations	Shallow rock anticipated, but some fill may be present from former buildings onsite. Risk of shallow mine-workings may require foundation mitigation or drilling and grouting	Possibly suitable	Borehole investigation to confirm strength of ground with regard to supporting building loads. Soil analysis might also be included to establish risk with regard to shrink-swell clay to rule out vegetation influence, or assess strength of any potentially weaker soils.
Soakaways	Shallow rock unlikely to offer sufficient permeability.	Unlikely to be suitable	Water infiltration testing to quantify permeability of superficial deposits if granular strata are encountered
Radon Gas	Between 3% and 5% of properties affected	Low to Moderate	Basic radon protection required.
Chemical Contamination	Historical nearby and on-site land uses potentially giving rise to a range of inorganic and organic contaminants including asbestos, metals/metalloids, PAHs and petroleum hydrocarbons.	Low to Moderate	Chemical analysis for potential contaminants in soil samples (and potentially leachate). Samples should be recovered from made ground (if found) and topsoil, and also potentially underlying natural sub soils to check for potential leaching and/or migration into the site from possible external sources.
Hazardous Gas	Potential for hazardous gas to be generated in made/infilled ground deposits and shallow mining / mineshafts.	Moderate	Ground gas monitoring unlikely to be required unless significant (>1m deep) made ground deposits are encountered. Alternative means of assessment may be useful such as those described in CL:AIRE RB17.
Ground Instability/ subsidence	Potential for vegetation influence on shrink-swell clays which may be present, including risk of soil heave.	Low	Borehole investigation to confirm strength of both natural and made ground and shrinkage potential of any cohesive soils.
	Potential for significant deposits of compressible made/infilled ground.	Low to Moderate	
	Potential for unrecorded shallow coal mining.	Moderate to High	Rotary borehole investigation.

The initial risk assessment provided above is tentative as it is based only on the Phase 1 desk study. The risks will need to be reassessed and may perhaps change significantly becoming higher or lower depending on the results of the Phase 2 intrusive investigation and contamination/gas survey, should these be undertaken.

## 6. Recommendations

In light of the Phase 1 desk study findings it is recommended that a Phase 2 investigation be undertaken at the site to better explore the possible risks that have been identified. This should include contamination analyses and ground gas monitoring together with a geotechnical appraisal of the site to establish correct foundation requirements. As there are relative uncertainties, this work is

recommended in order to establish the actual site conditions and to properly assess both geotechnical and environmental risks.

The Phase 2 investigation should be designed to focus on the potential contaminants highlighted in the CGHM (Figure 1 and Table 4). As there is a potential hazardous gas risk, a gas survey is recommended.

**Table 5:** Proposed Phase 2 Site Investigation Specification

Action	Quantities	Justification/Details
Window Sampling Boreholes	Up to 8 boreholes. (up to 4-5m in depth – if achievable)	<p>Establish actual ground conditions and confirm strength of ground.</p> <p>Retrieve samples of possible made ground and natural soils for geotechnical testing and contamination analysis. Potentially recover ground water samples if encountered.</p> <p>Installation of ground gas monitoring wells (if appropriate).</p>
Hand excavated trial pits	Up to 3 (up to 1m in depth – if achievable)	Further inspect condition and composition of soils and recover additional samples for contamination analyses, including in locations which may be difficult for plant to access.
Rotary Open Hole Boreholes	Up to 3 to 6 boreholes (up to 30m in depth).	Inspect for evidence of shallow coal mining such as voiding / broken ground. Water flush should be used to ensure safe drilling.
Chemical Contamination Analysis of Soils and Leachate  (and possibly ground water if pertinent)	Up to 8 No. samples from topsoil and/or made ground at shallow depth (<1m) and potentially also deeper natural strata or made ground (if encountered).	<p>Quantify risk posed to receptors identified in CGHM (see Figure 1) for revised risk assessment.</p> <p>Determinands should include a range of metals/metalloids, speciated PAH content, petroleum hydrocarbon content, BTEX, asbestos presence, and soil organic matter content (to aid in revised risk assessment).</p>
Gas monitoring	Up to 6 No. visits over 3 months. Preferably including occasions of <1000mb and after sharp drop (may only be required in made ground encountered at site).	Quantify risk posed by potential hazardous gas from made/in-filled ground. Possible analysis of Total Organic Carbon (TOC) to support gas measure recommendations (or in the absence of gas monitoring data) using guidance published in CL:AIRE research bulletin RB17.
Geotechnical Testing	Up to 50+ No.  Up to 5 No.	<p>Moisture content determination to classify nature of soils.</p> <p>Atterberg Limit determinations to assess the shrinkage and swelling characteristics of the ground should clay soils be encountered.</p>
Provision of Factual and Interpretive Report	N/A	<p>Presentation of findings and implications including:</p> <ul style="list-style-type: none"> <li>• Site plan</li> <li>• Borehole and trial pit logs</li> <li>• Results of geotechnical testing</li> <li>• Contamination analysis results</li> <li>• Ground gas measurements (if appropriate)</li> <li>• Revised CGHM and chemical contamination risk assessment including appropriate soil assessment criteria.</li> <li>• Advice regarding any necessary remediation/validation</li> <li>• Advice regarding foundation design etc.</li> </ul>

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**END OF REPORT**

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Atlantic Street  
Altrincham  
WA14 5NQ  
Tel. 07795 845 729  
[enquiries@geoinvestigate.co.uk](mailto:enquiries@geoinvestigate.co.uk)

## **APPENDIX 1**

### Historical Map Record

**Site Details:**  
 LAND AT BOOTHROYD LANE,  
 DEWSBURY, KIRKLEES, WF13  
 2LF

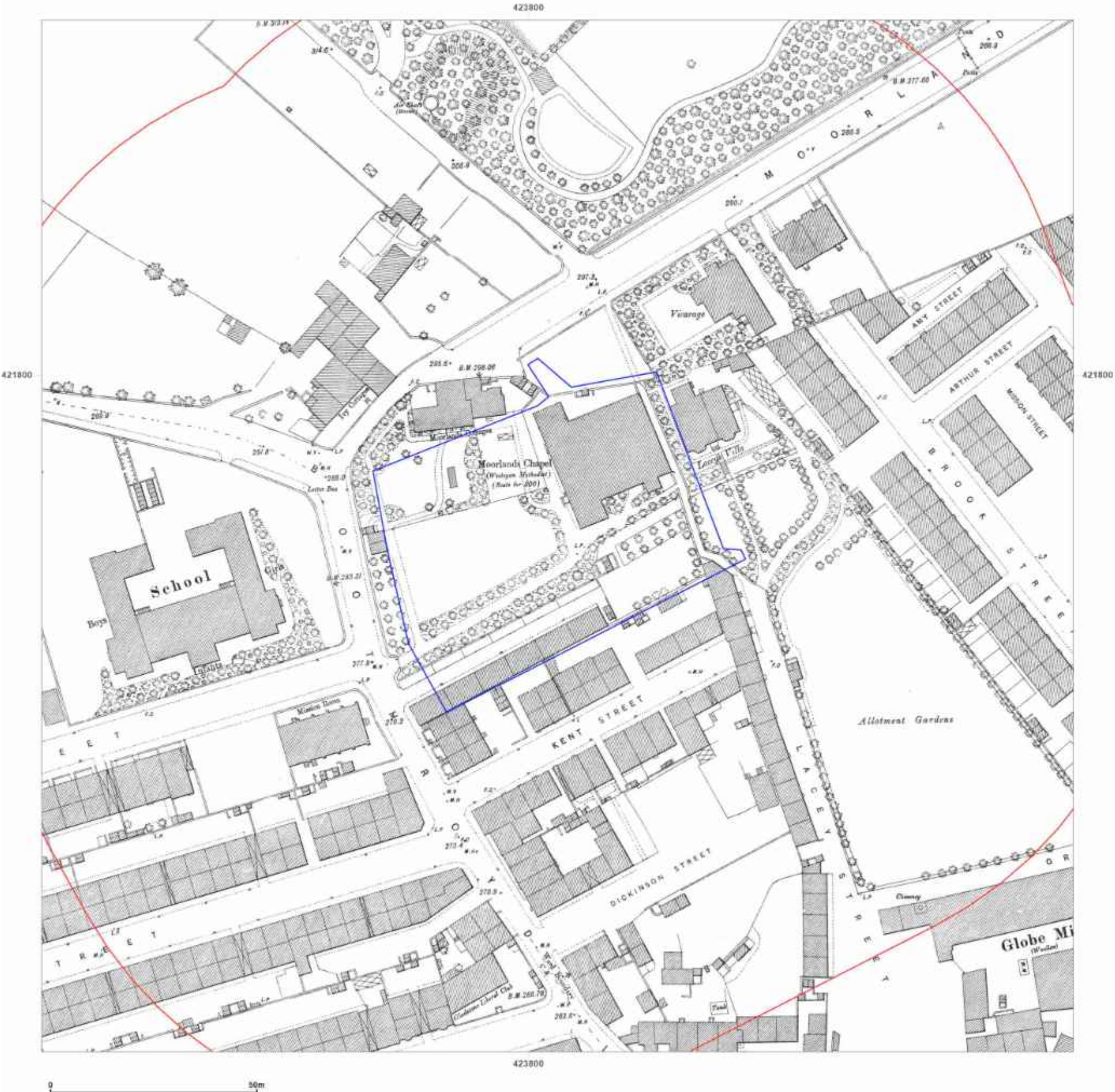
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**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** County Series Town Plan  
**Map date:** 1890  
**Scale:** 1:500  
**Printed at:** 1:1,000



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

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



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2LF

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**Grid Ref:** 423807, 421761

**Map Name:** County Series

**Map date:** 1893

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1893  
Revised 1893  
Edition N/A  
Copyright N/A  
Levelled N/A

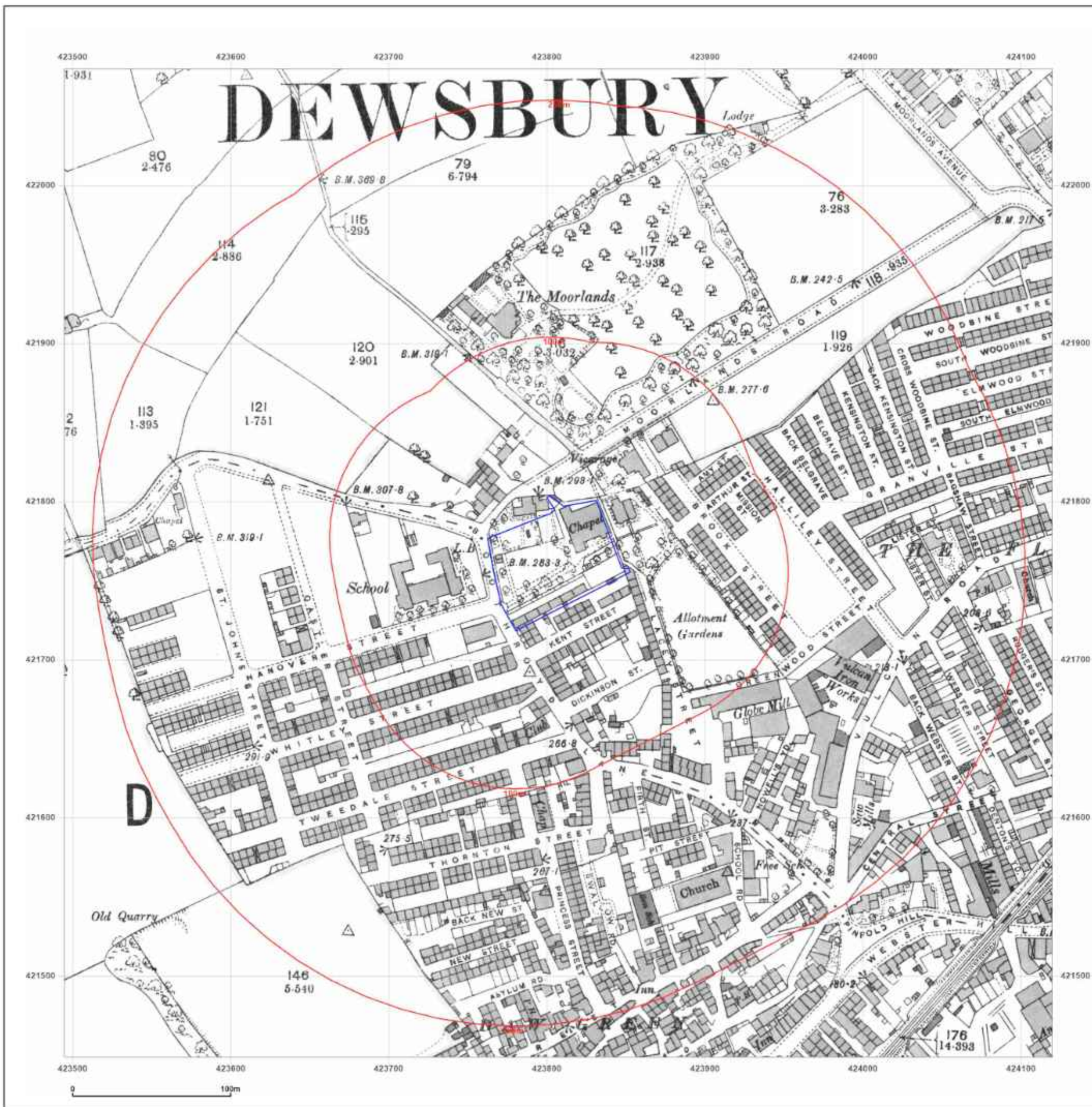


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**Map Name:** County Series

**Map date:** 1907

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1907  
Revised 1907  
Edition N/A  
Copyright N/A  
Levelled N/A

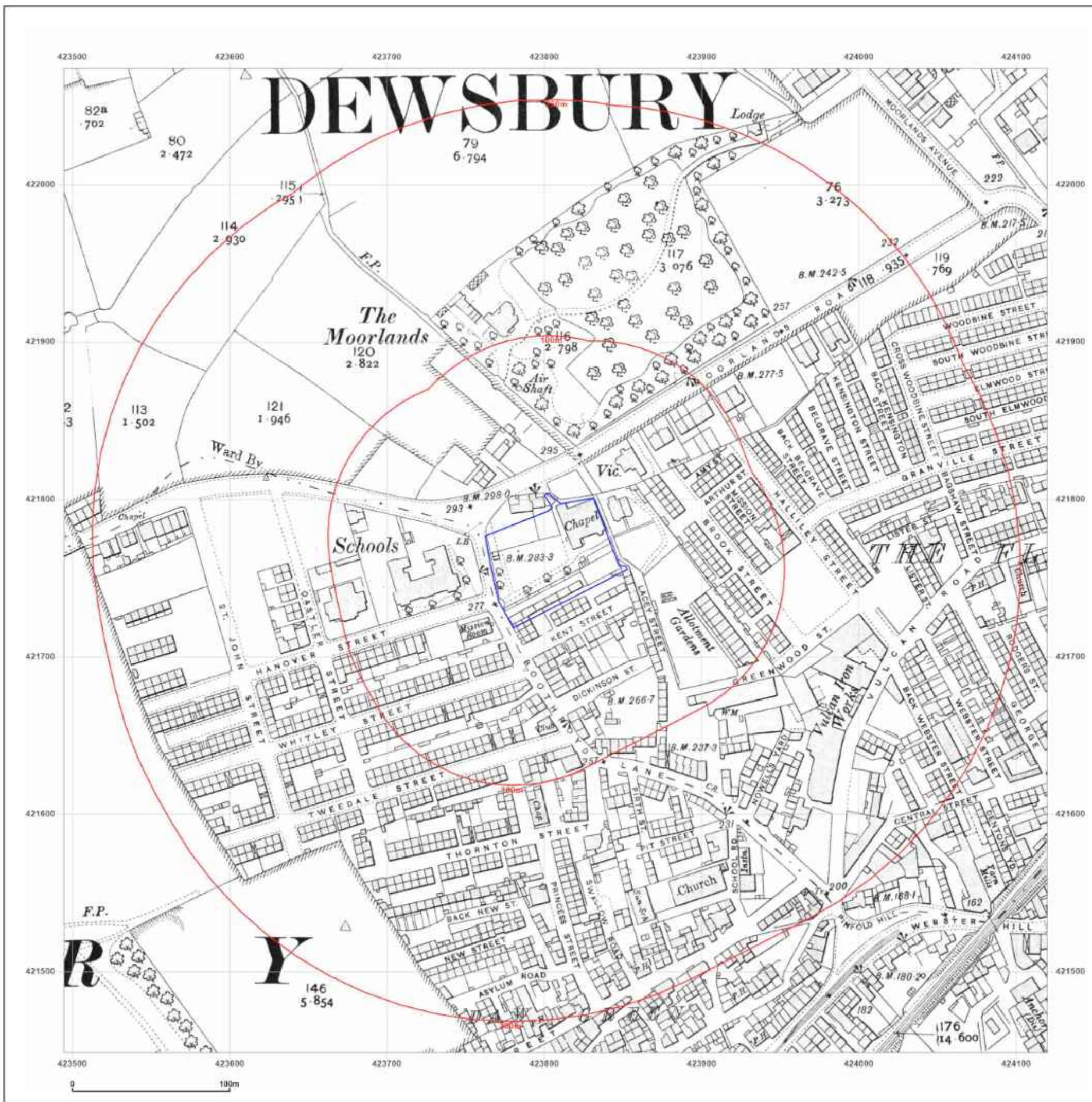


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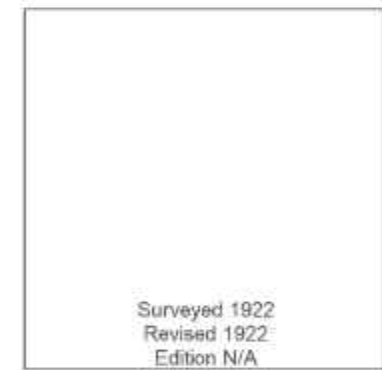
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**Map date:** 1922

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**Printed at:** 1:2,500



Surveyed 1922  
Revised 1922  
Edition N/A  
Copyright N/A  
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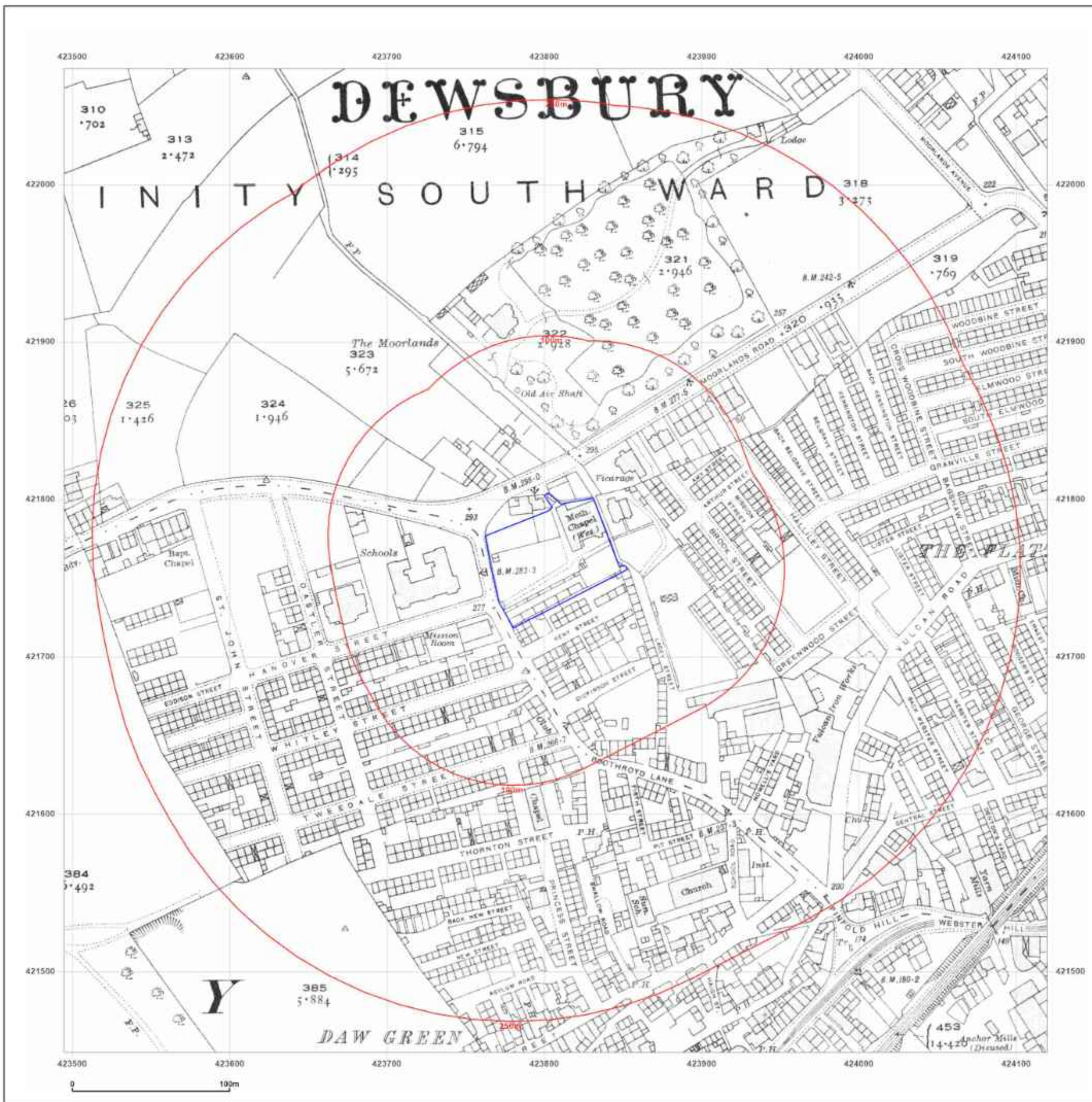


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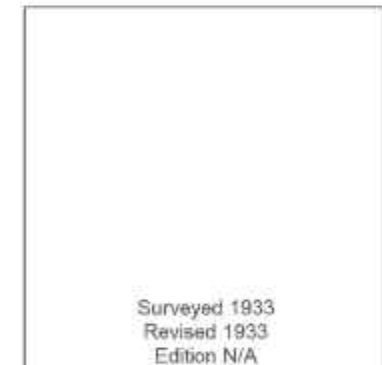
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**Map Name:** County Series

**Map date:** 1933

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**Printed at:** 1:2,500



Surveyed 1933  
Revised 1933  
Edition N/A  
Copyright N/A  
Levelled N/A

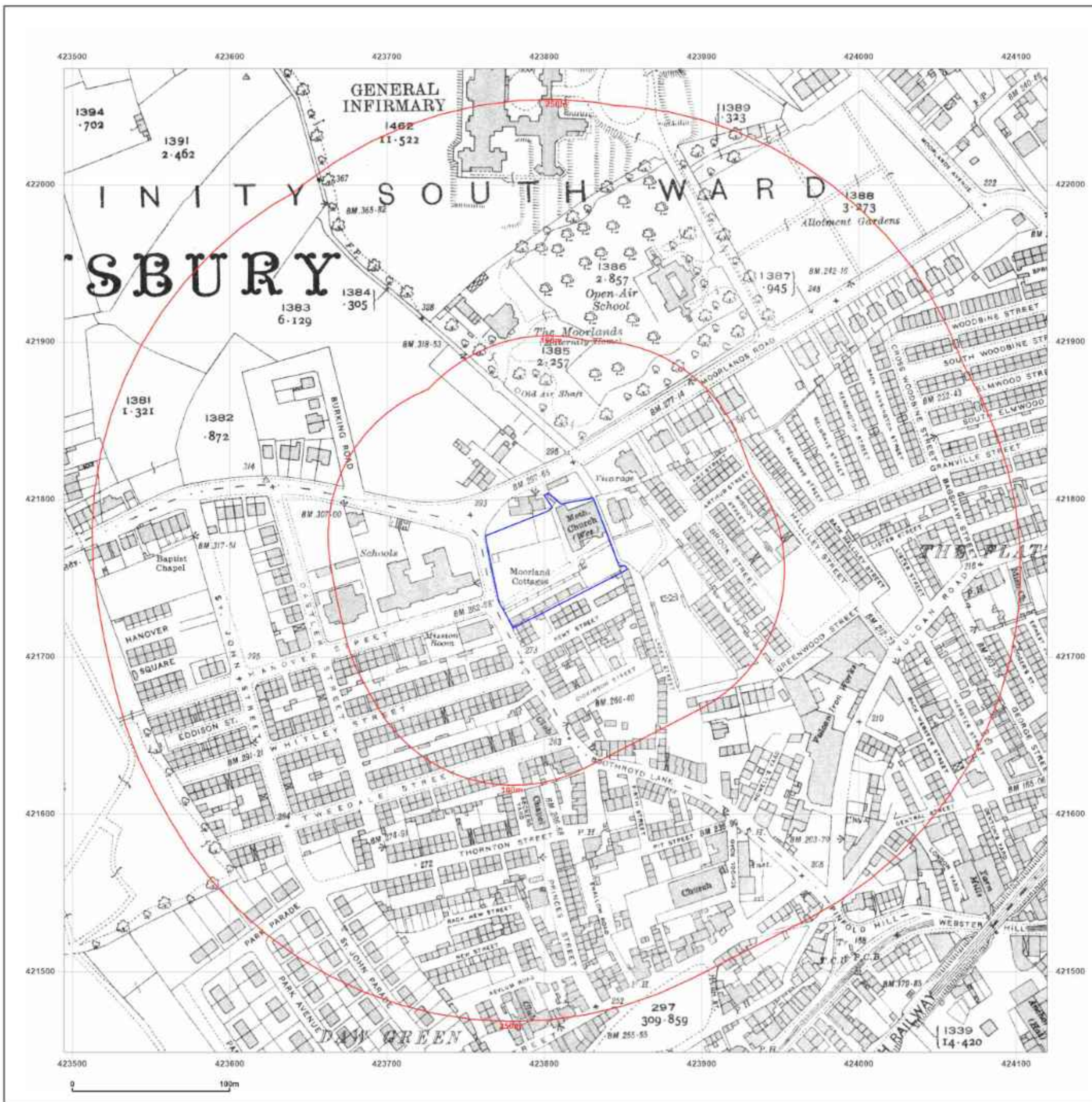


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**Grid Ref:** 423807, 421761

**Map Name:** County Series

**Map date:** 1938

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1938  
Revised 1938  
Edition N/A  
Copyright N/A  
Levelled N/A

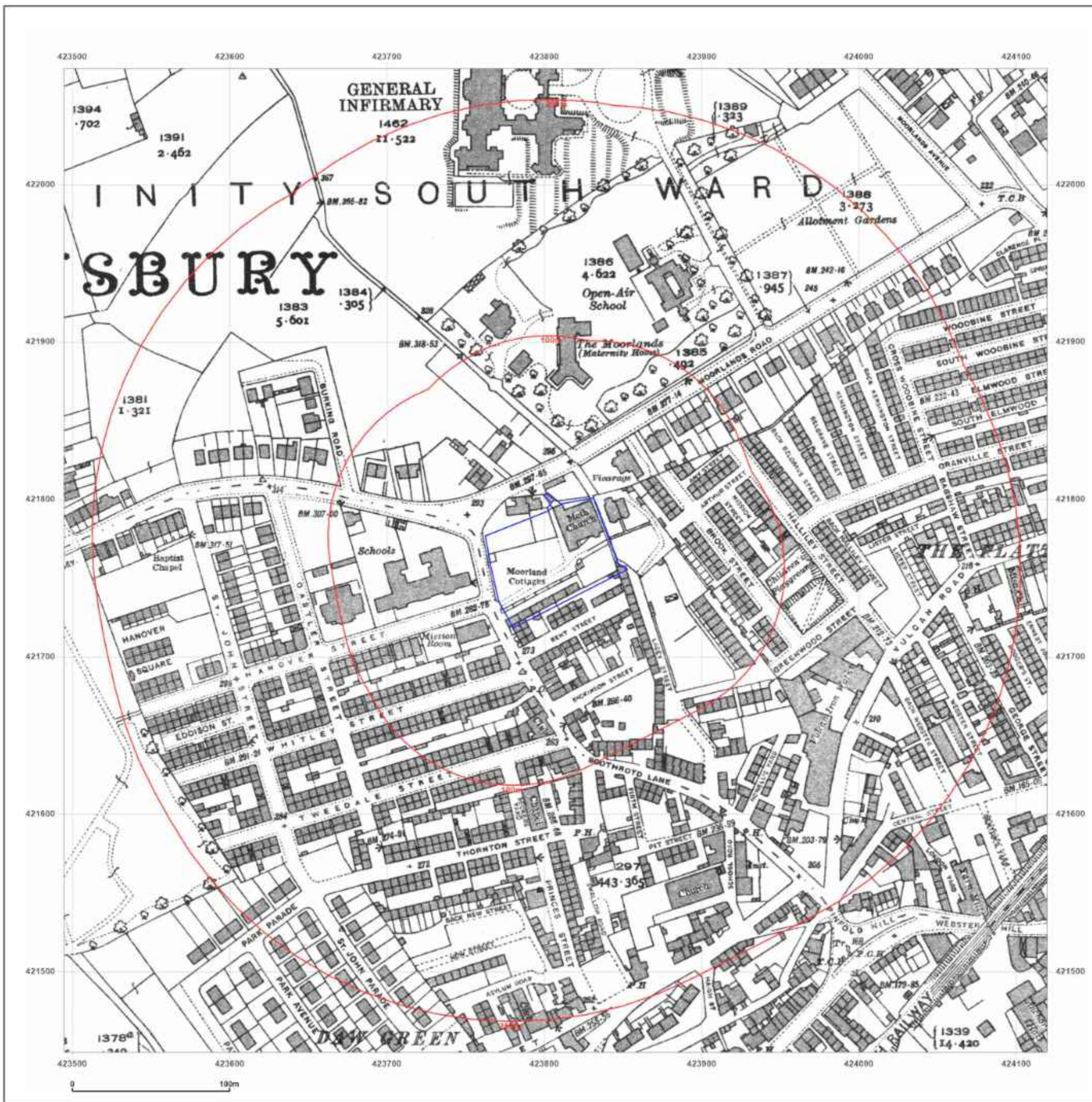


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**Grid Ref:** 423807, 421761

**Map Name:** National Grid

**Map date:** 1955

**Scale:** 1:1,250

**Printed at:** 1:2,000



Surveyed 1955  
Revised 1955  
Edition N/A  
Copyright N/A  
Levelled 1931

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

Surveyed 1955  
Revised 1955  
Edition N/A  
Copyright N/A  
Levelled 1931

Surveyed 1955  
Revised 1955  
Edition N/A  
Copyright N/A  
Levelled 1931

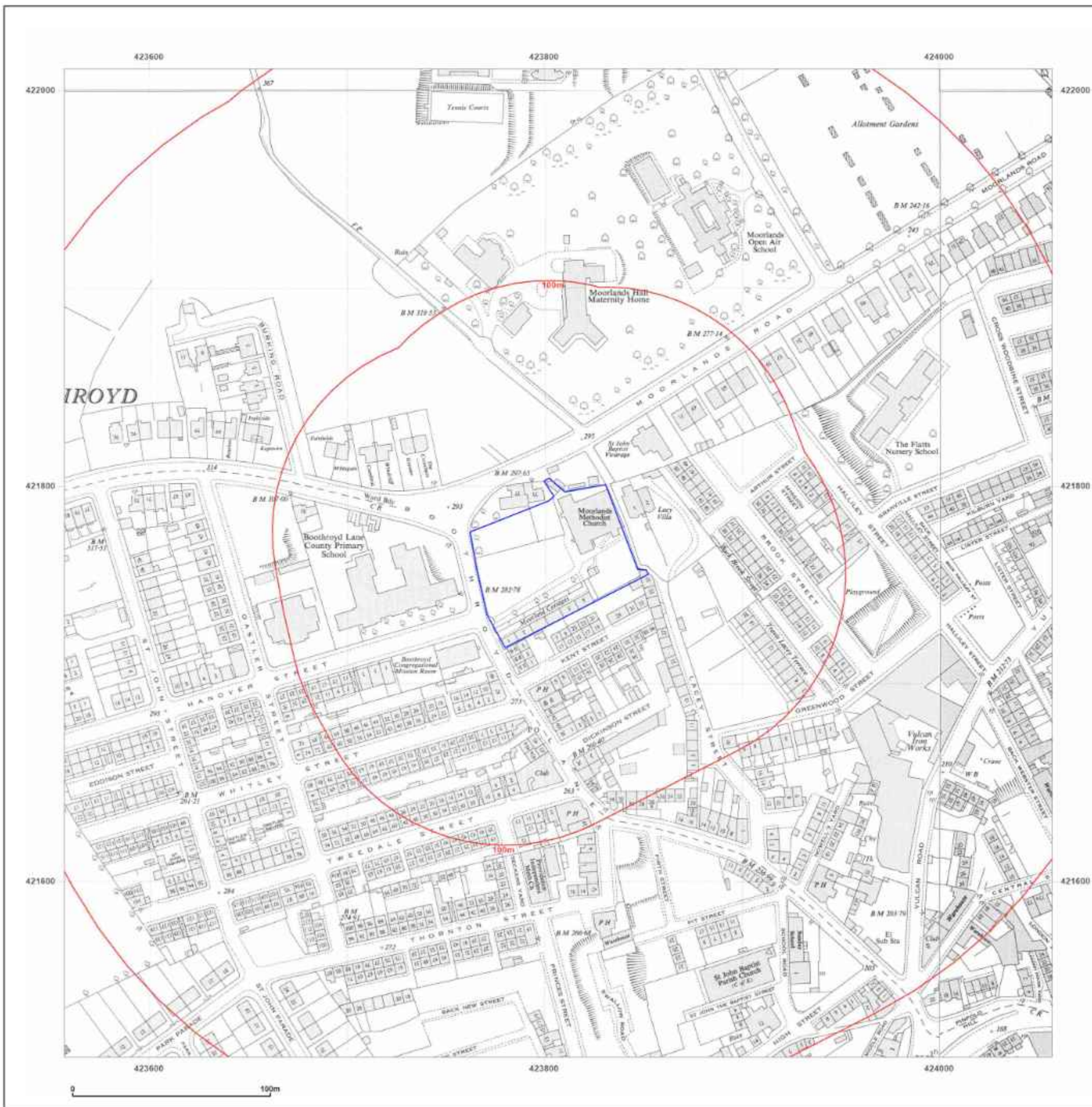


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**Client Ref:** G25193  
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**Grid Ref:** 423807, 421761

**Map Name:** National Grid

**Map date:** 1956

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1955  
Revised 1955  
Edition N/A  
Copyright 1956  
Levelled 1931

Surveyed N/A  
Revised N/A  
Edition 1956  
Copyright N/A  
Levelled 1931

Surveyed 1955  
Revised 1955  
Edition 1956  
Copyright N/A  
Levelled 1931

Surveyed 1954  
Revised 1955  
Edition 1956  
Copyright N/A  
Levelled 1931

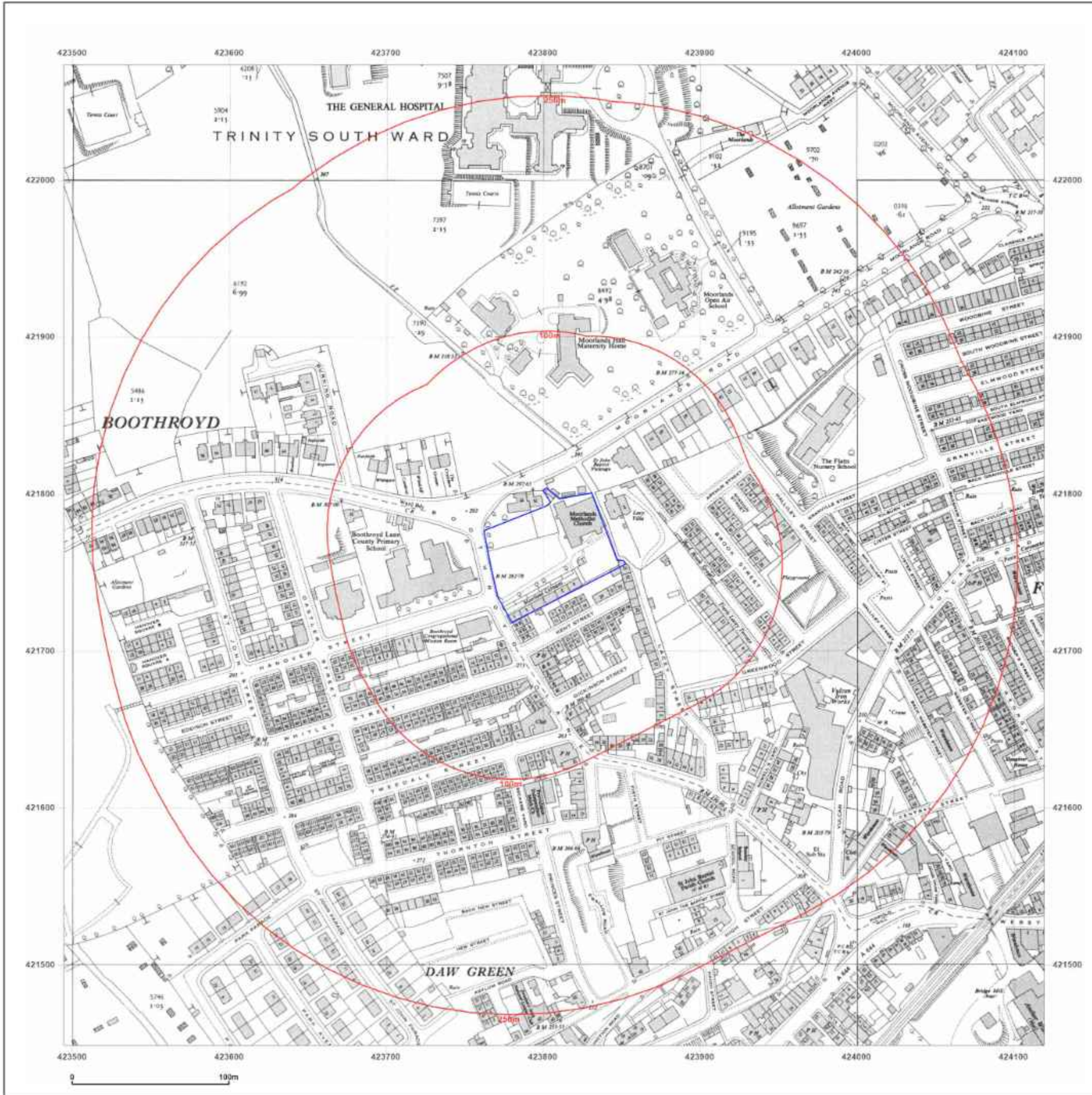


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2LF

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**Grid Ref:** 423807, 421761

**Map Name:** National Grid

**Map date:** 1964

**Scale:** 1:1,250

**Printed at:** 1:2,000



Surveyed 1955  
Revised 1963  
Edition N/A  
Copyright 1964  
Levelled 1962

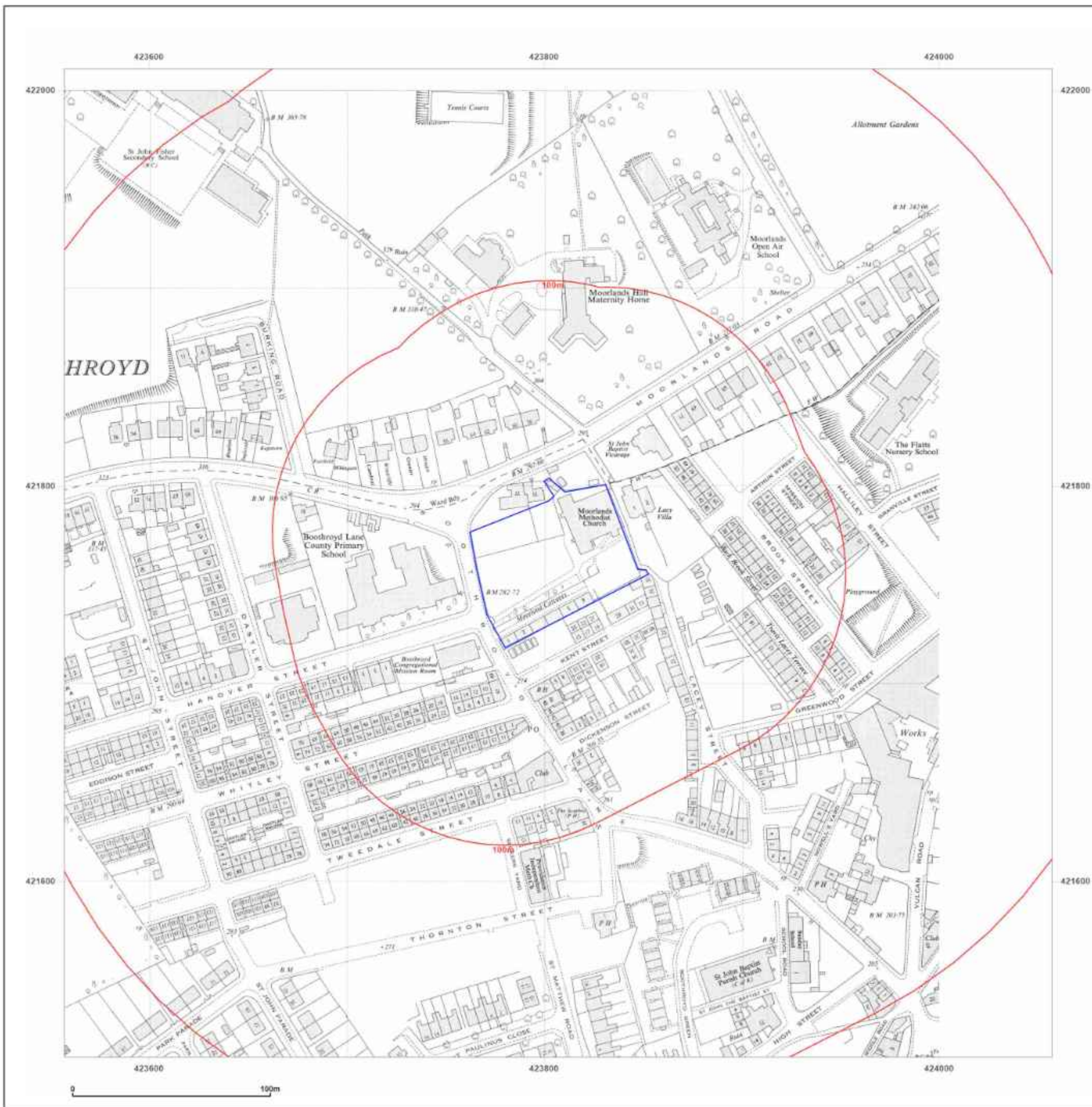


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2LF

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**Map Name:** National Grid

**Map date:** 1968-1972

**Scale:** 1:1,250

**Printed at:** 1:2,000



Surveyed 1955  
Revised 1971  
Edition N/A  
Copyright 1972  
Levelled 1962

Surveyed 1955  
Revised 1970  
Edition N/A  
Copyright 1971  
Levelled 1962

Surveyed 1955  
Revised 1967  
Edition N/A  
Copyright 1968  
Levelled 1962

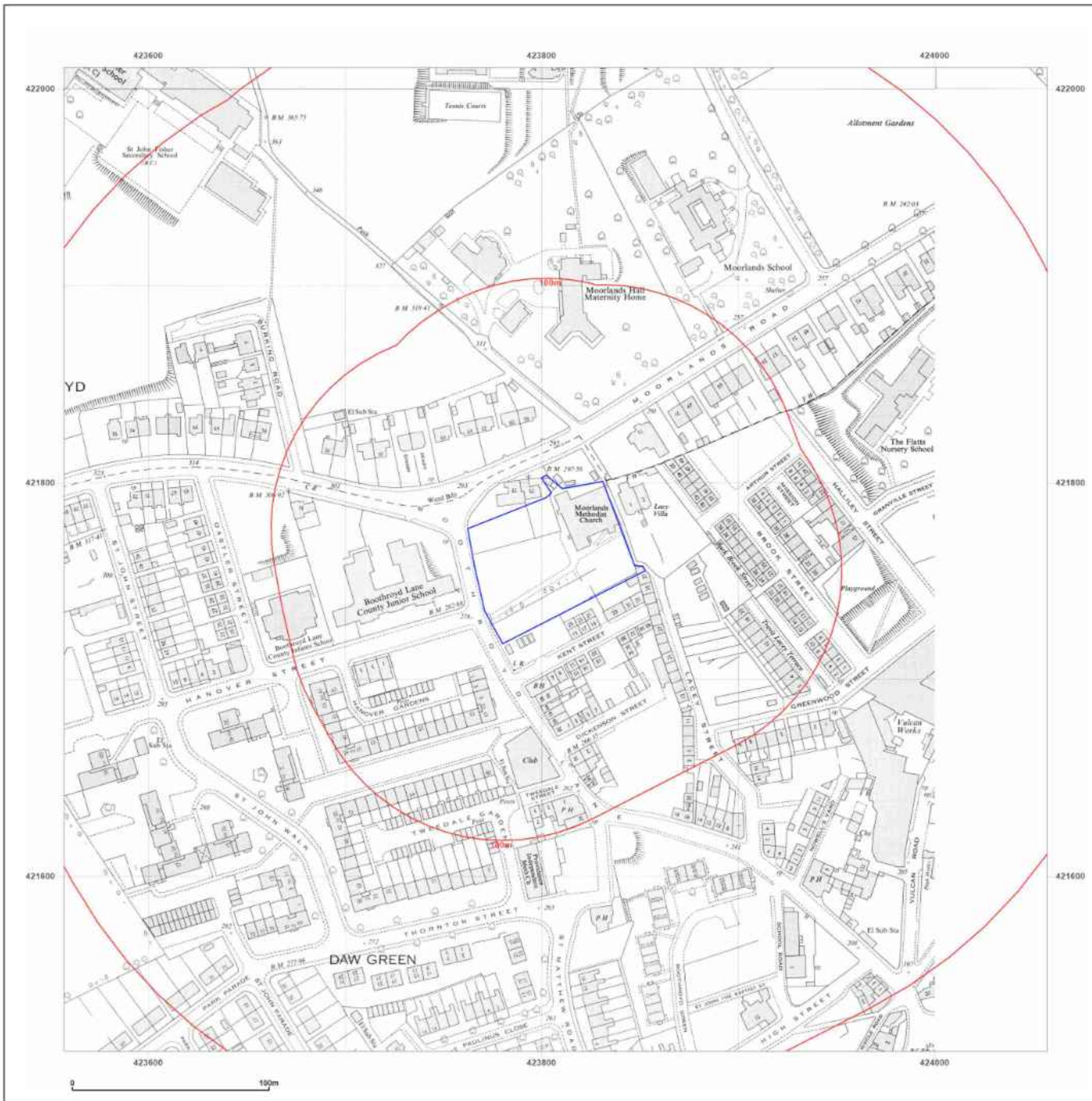


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2LF

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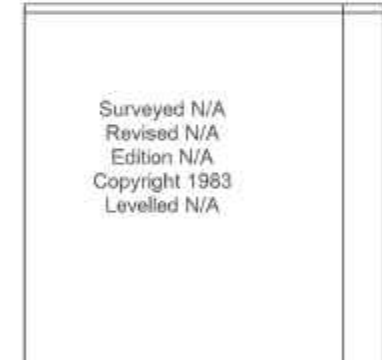
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Revised 1987  
Edition N/A  
Copyright 1987  
Levelled 1962



Surveyed N/A  
Revised N/A  
Edition N/A  
Copyright 1983  
Levelled N/A

Surveyed 1955  
Revised 1983  
Edition N/A  
Copyright 1983  
Levelled 1962

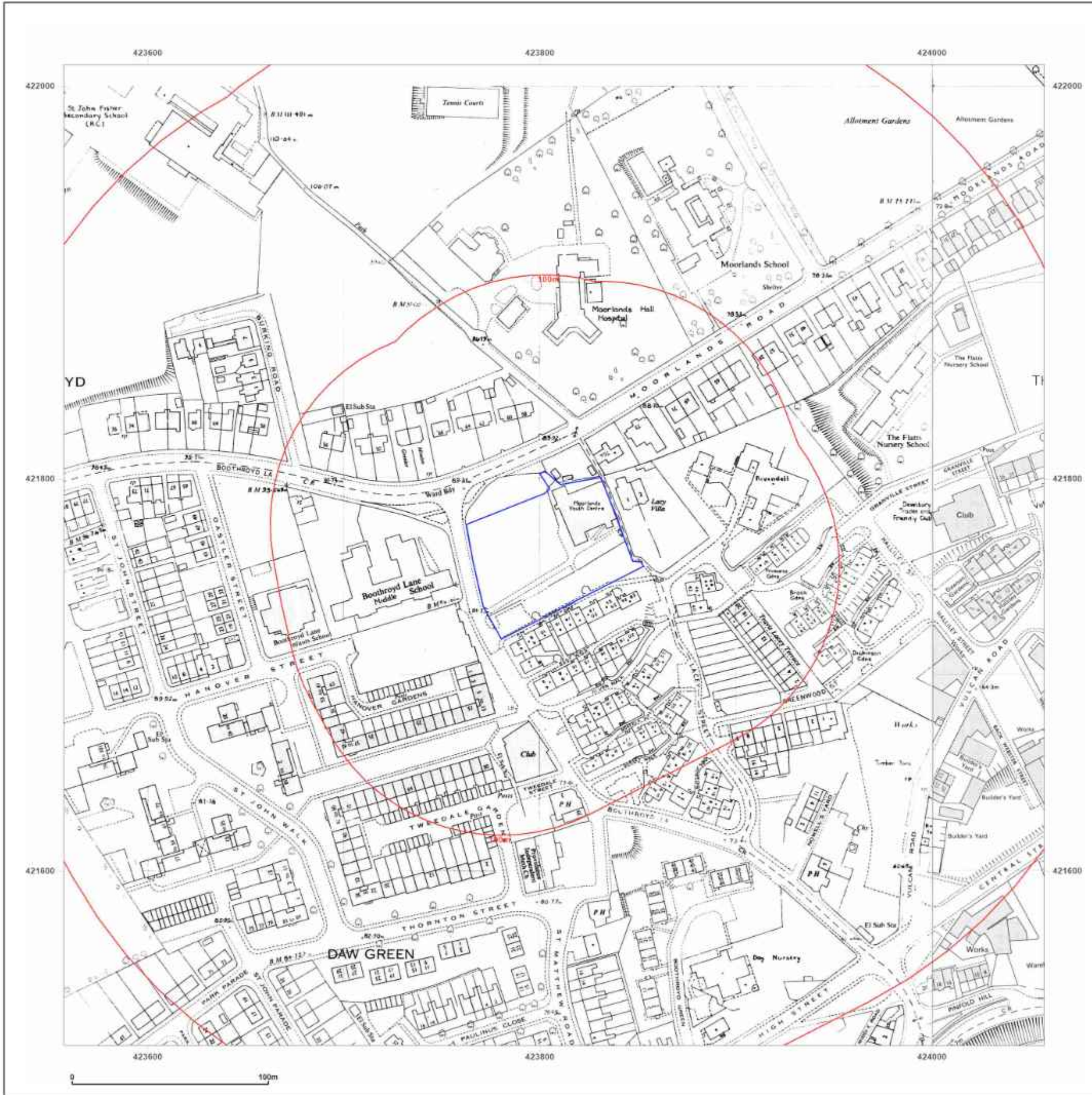


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**Grid Ref:** 423807, 421761

**Map Name:** National Grid

**Map date:** 1990-1992

**Scale:** 1:1,250

**Printed at:** 1:2,000



Surveyed N/A  
Revised N/A  
Edition N/A  
Copyright 1992  
Levelled N/A

Surveyed 1962  
Revised 1990  
Edition N/A  
Copyright 1990  
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2LF

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**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** National Grid

**Map date:** 1992-1994

**Scale:** 1:1,250

**Printed at:** 1:2,000



Surveyed N/A  
Revised N/A  
Edition N/A  
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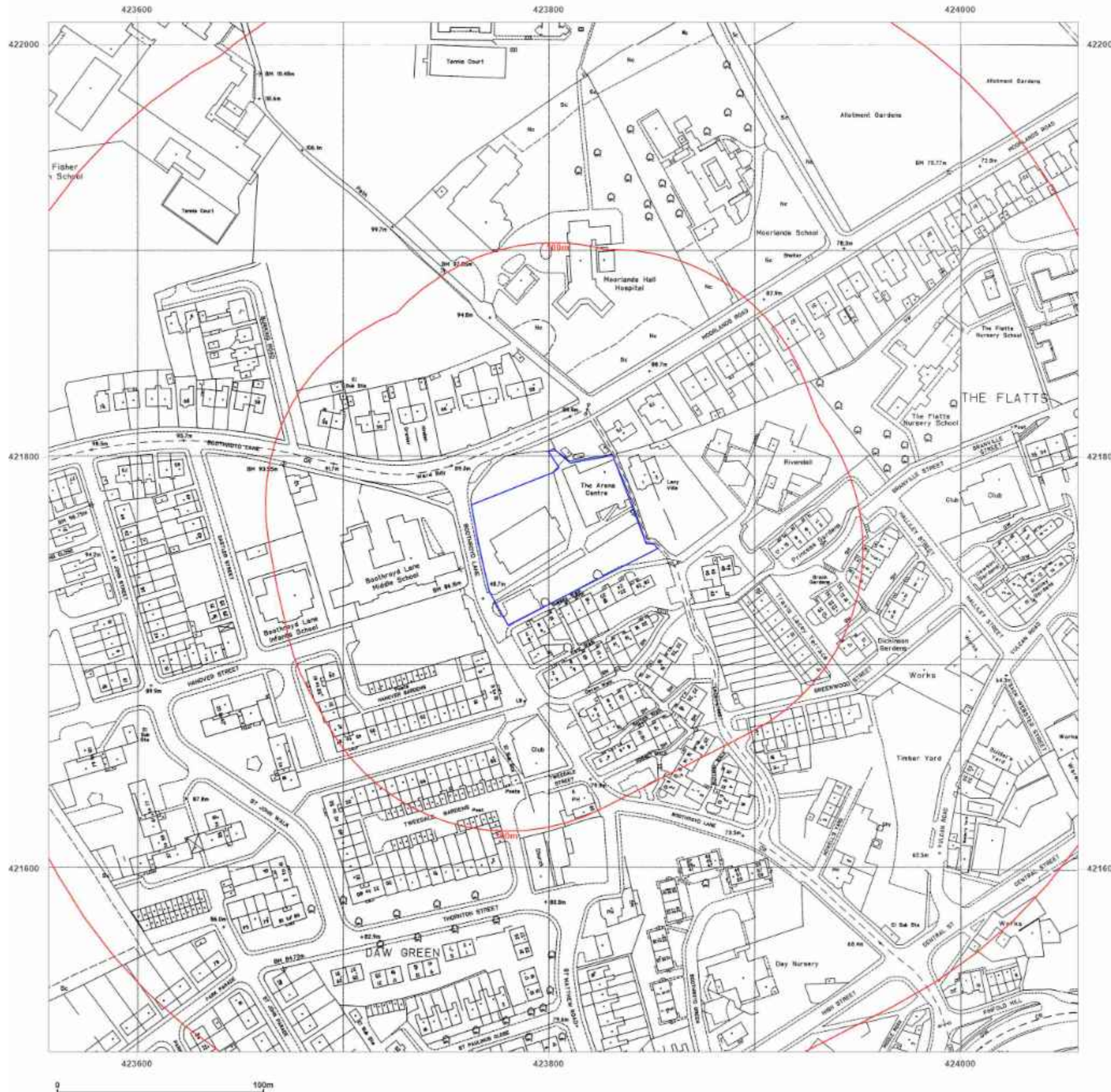


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Revised N/A  
Edition N/A  
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Levelled N/A

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Revised N/A  
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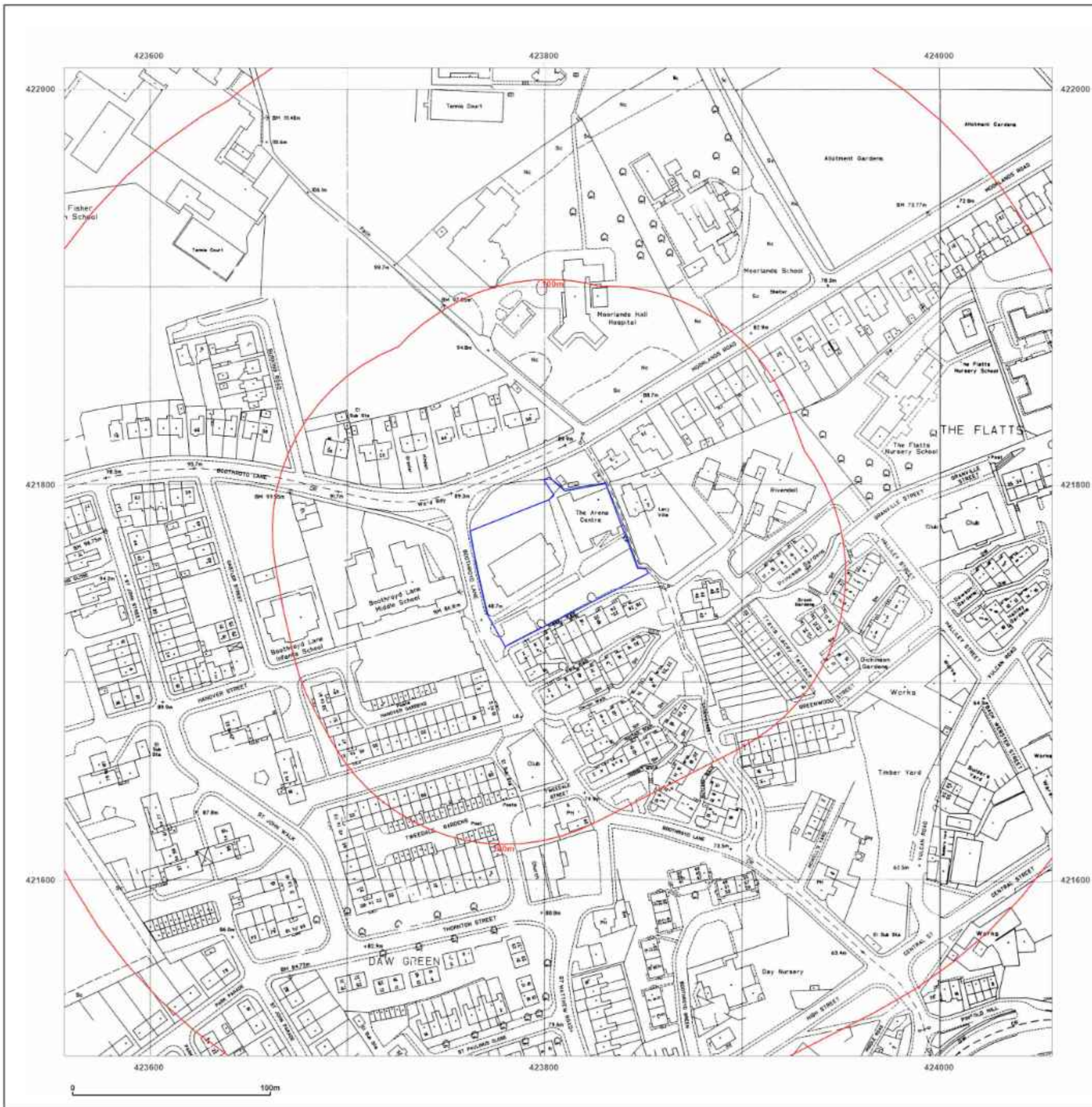


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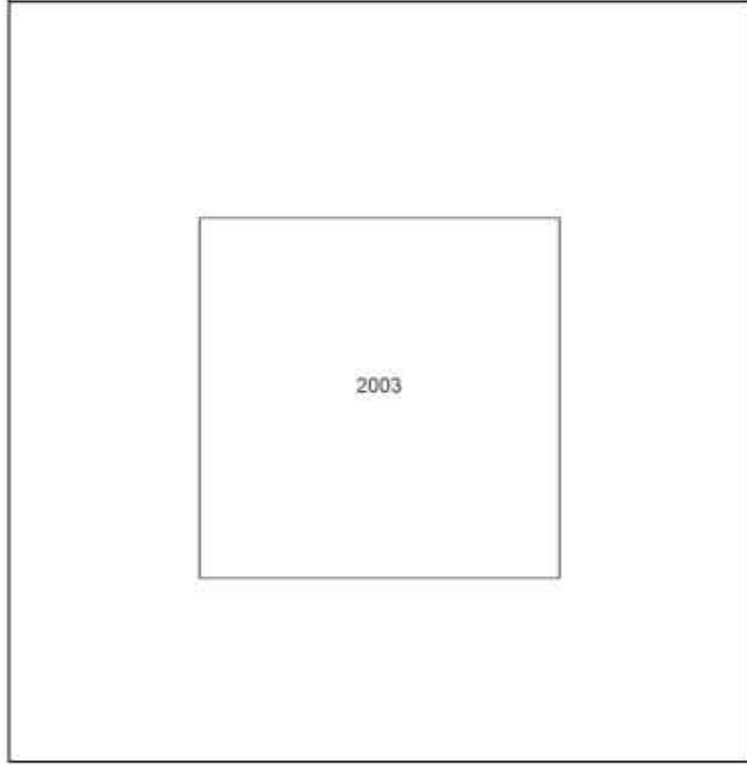
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**Map Name:** LandLine

**Map date:** 2003

**Scale:** 1:1,250

**Printed at:** 1:1,250



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2LF

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**Report Ref:** GS-KLD-WV4-DWS-U12  
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**Map date:** 1854-1855

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1847  
Revised N/A  
Edition 1854  
Copyright N/A  
Levelled N/A



Surveyed 1851  
Revised N/A  
Edition 1855  
Copyright N/A  
Levelled N/A

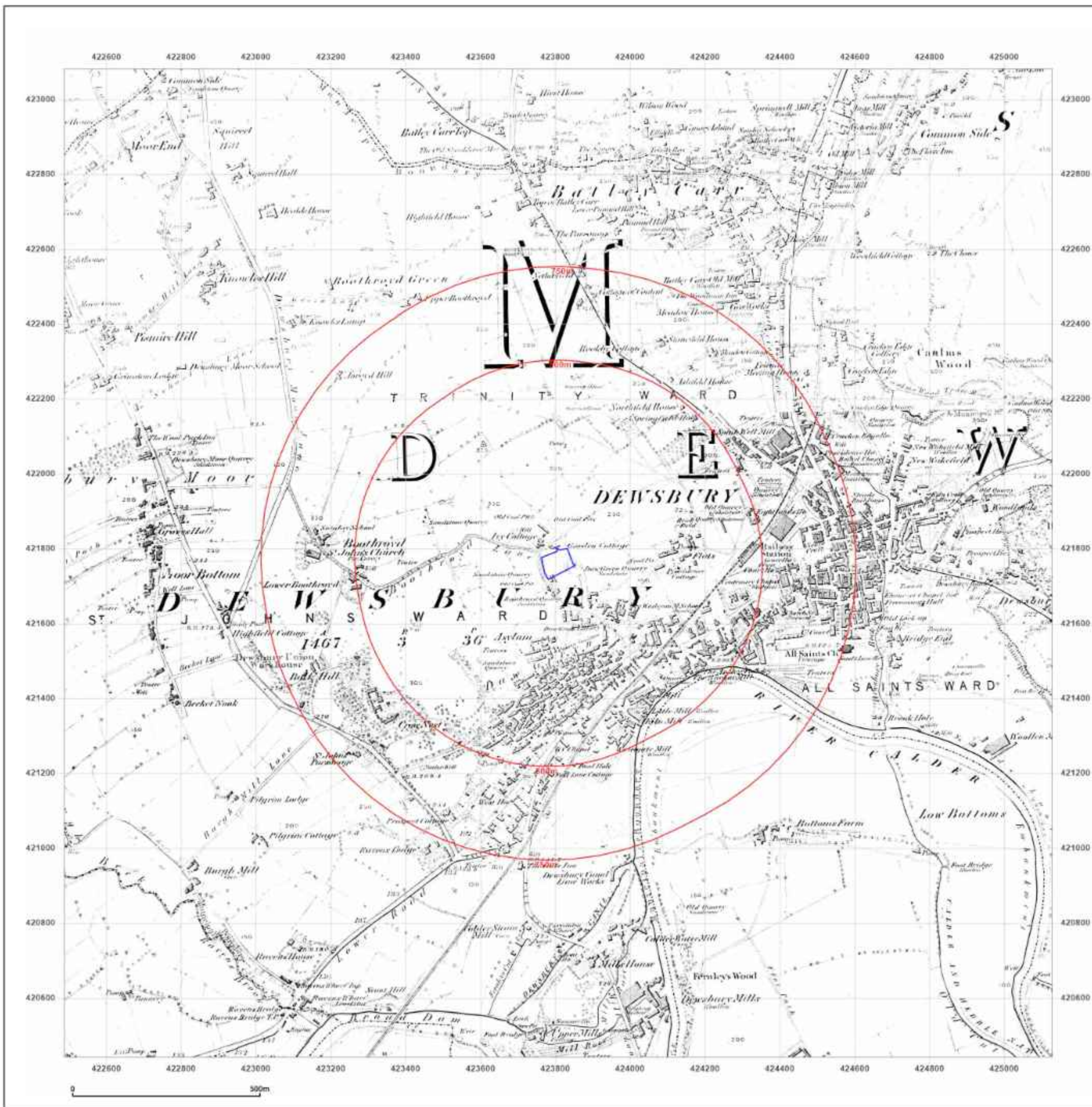


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2LF

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**Map Name:** County Series

**Map date:** 1892

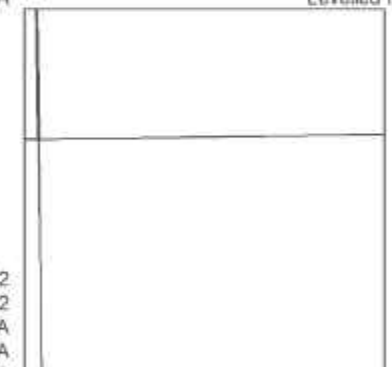
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Revised 1892  
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Levelled N/A

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



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Edition N/A  
Copyright N/A  
Levelled N/A

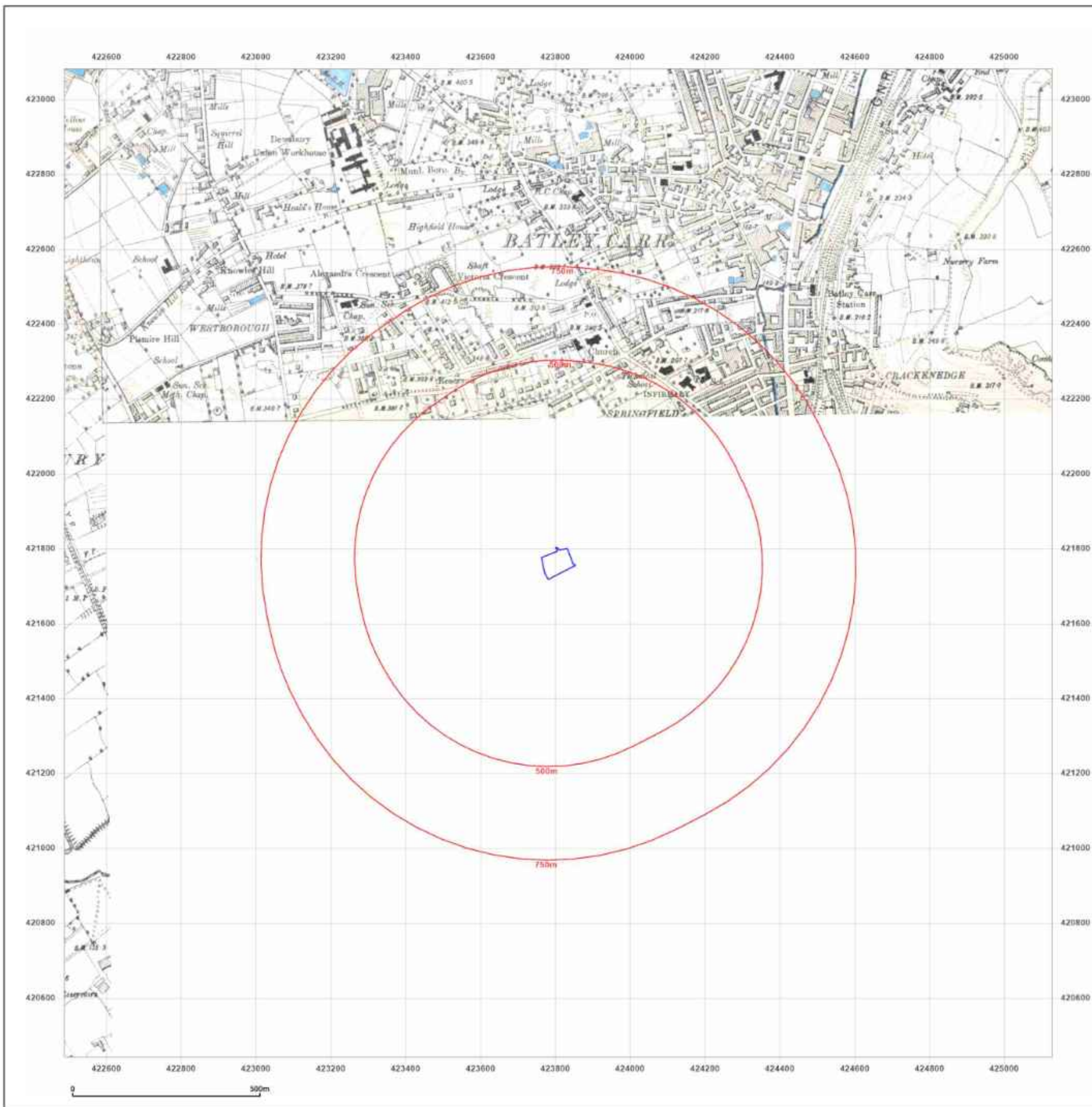


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2LF

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**Grid Ref:** 423807, 421761

**Map Name:** County Series

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

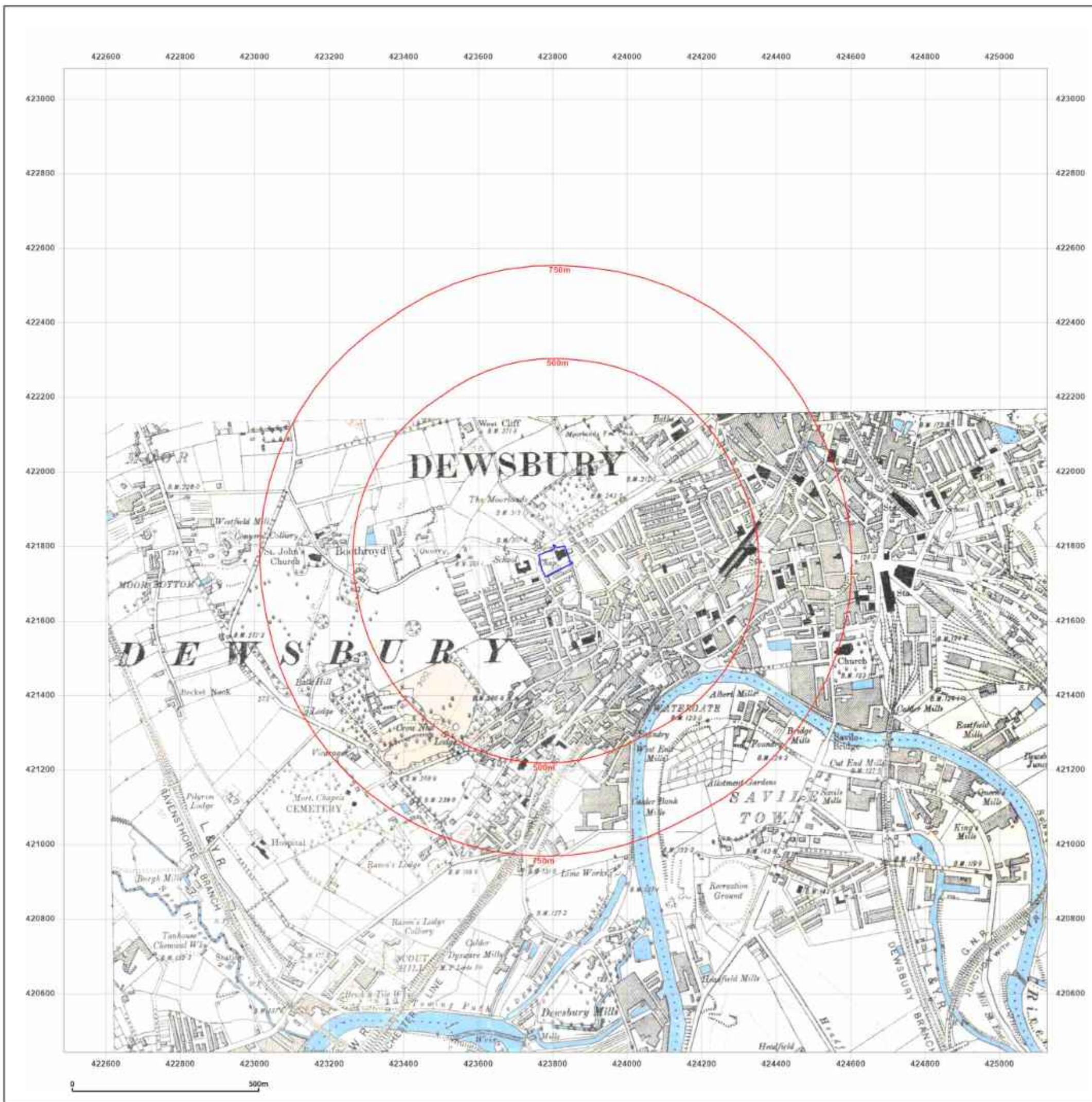


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[www.groundsure.com/sites/default/files/groundsure\\_legend.pdf](http://www.groundsure.com/sites/default/files/groundsure_legend.pdf)



**Site Details:**

LAND AT BOOTHROYD LANE,  
DEWSBURY, KIRKLEES, WF13  
2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** County Series

**Map date:** 1894

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1892  
Revised N/A  
Edition 1894  
Copyright N/A  
Levelled N/A

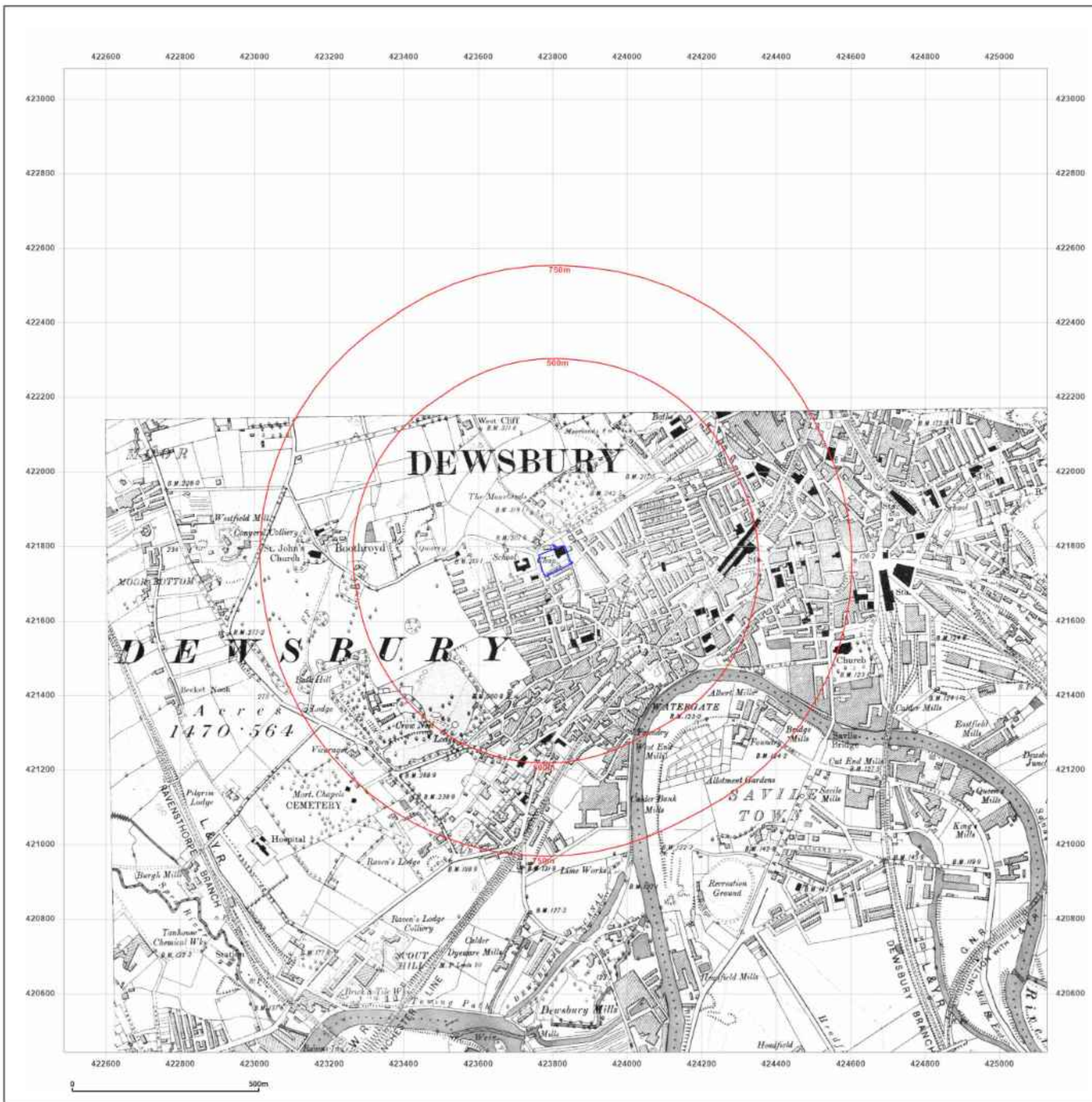


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**Site Details:**

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DEWSBURY, KIRKLEES, WF13  
2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** County Series

**Map date:** 1905

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1889  
Revised 1905  
Edition N/A  
Copyright N/A  
Levelled N/A



Surveyed 1892  
Revised 1905  
Edition N/A  
Copyright N/A  
Levelled N/A

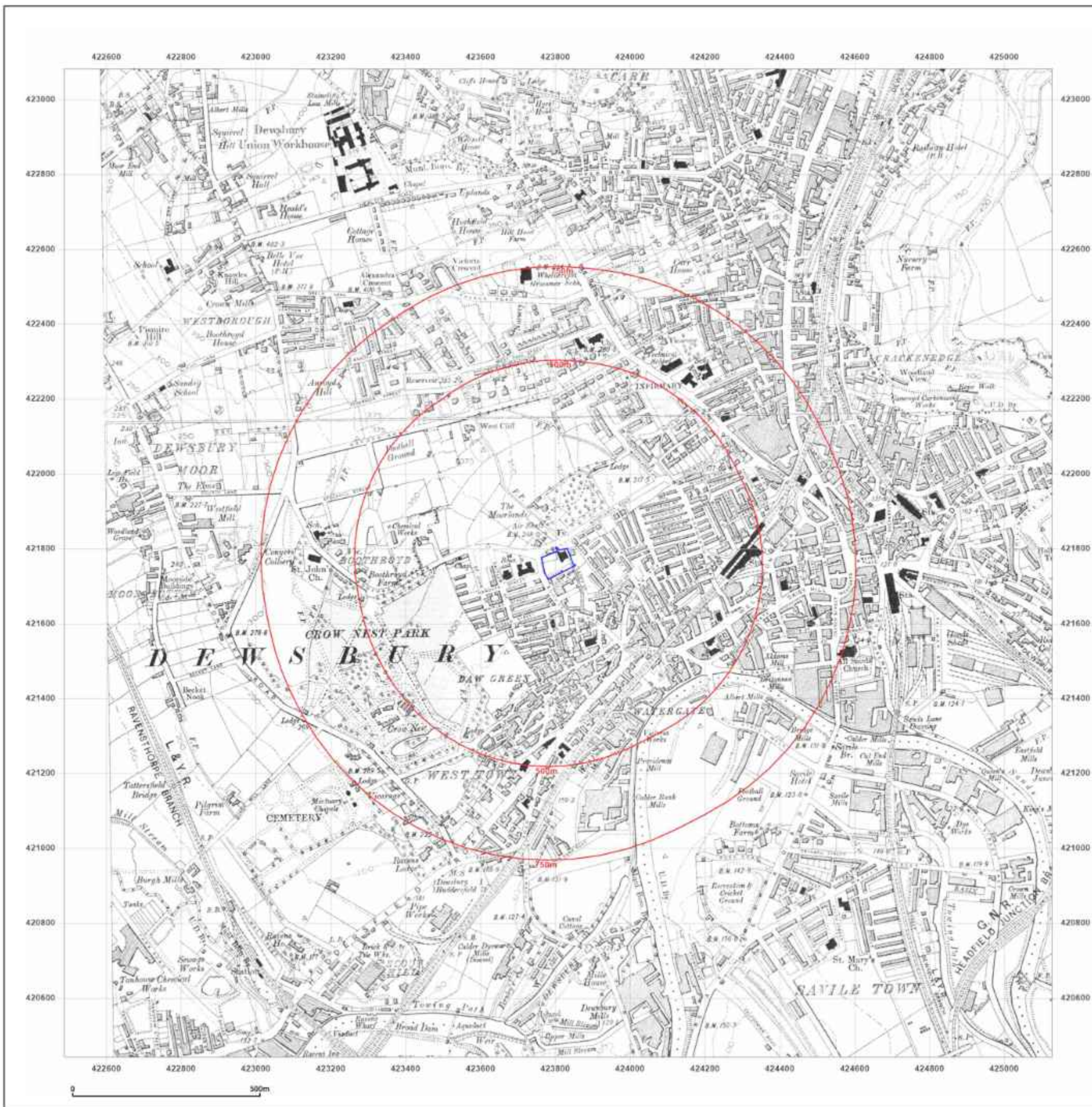


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**Site Details:**

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2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** County Series

**Map date:** 1931

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1851  
Revised 1931  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1851  
Revised 1931  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1851  
Revised 1931  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1851  
Revised 1931  
Edition N/A  
Copyright N/A  
Levelled N/A

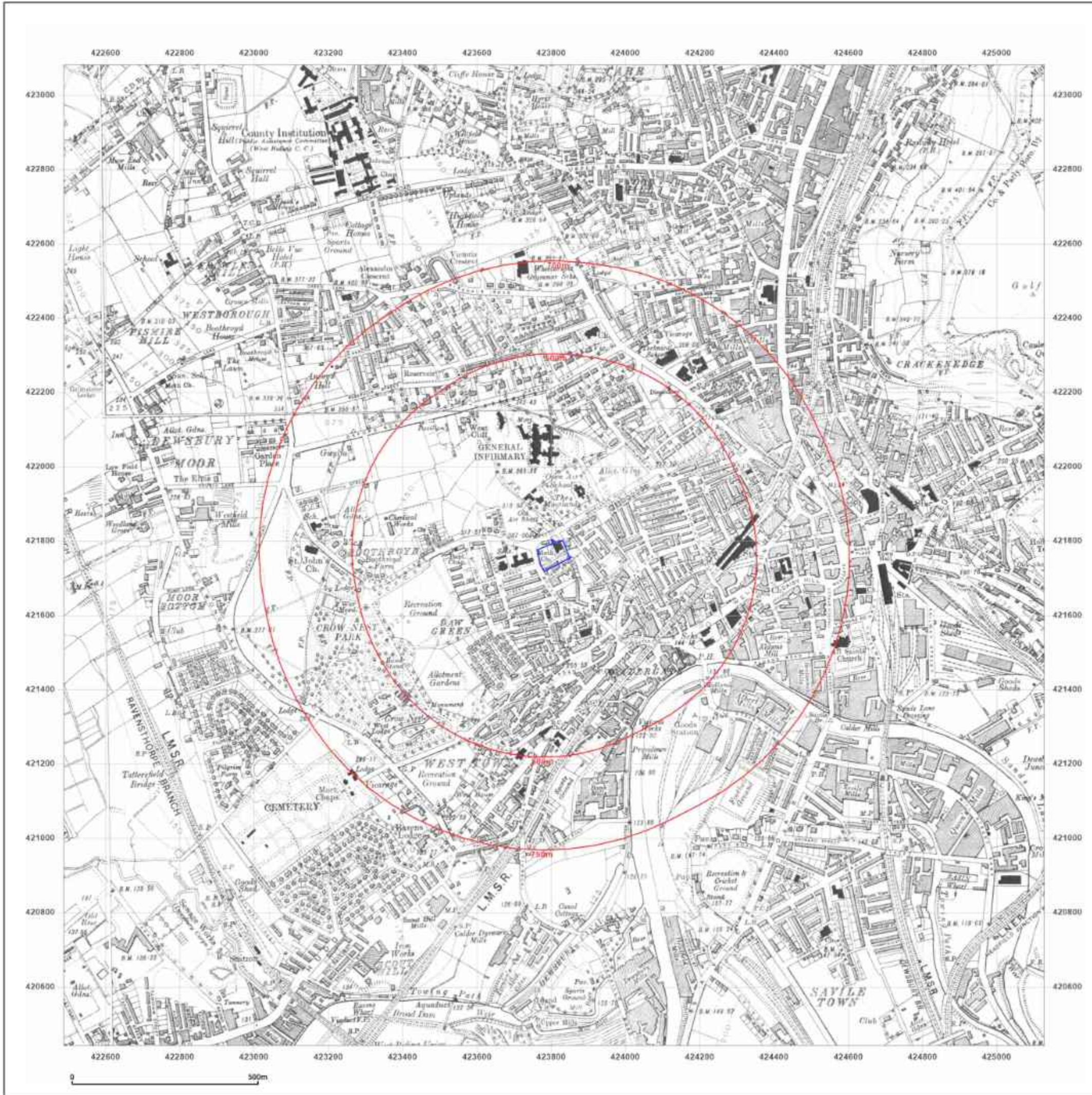


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**Site Details:**

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DEWSBURY, KIRKLEES, WF13  
2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** County Series

**Map date:** 1938

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1851  
Revised 1938  
Edition N/A  
Copyright N/A  
Levelled 1931

Surveyed 1851  
Revised 1938  
Edition N/A  
Copyright N/A  
Levelled 1931

Surveyed 1851  
Revised 1938  
Edition 1938  
Copyright N/A  
Levelled N/A

Surveyed 1851  
Revised 1938  
Edition 1938  
Copyright N/A  
Levelled N/A

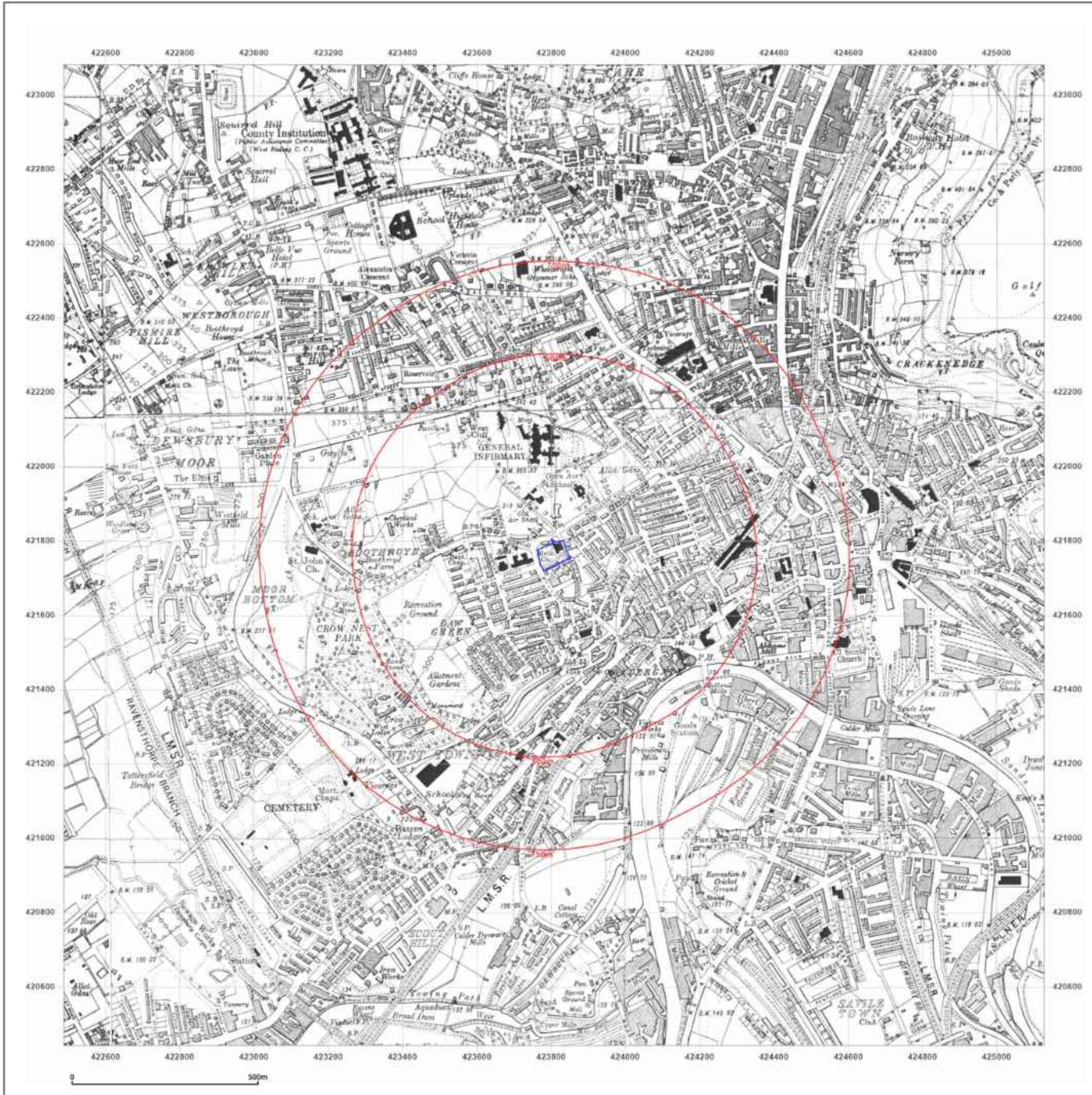


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**Site Details:**

LAND AT BOOTHROYD LANE,  
DEWSBURY, KIRKLEES, WF13  
2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** County Series

**Map date:** 1938

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1851  
Revised 1938  
Edition N/A  
Copyright N/A  
Levelled 1931

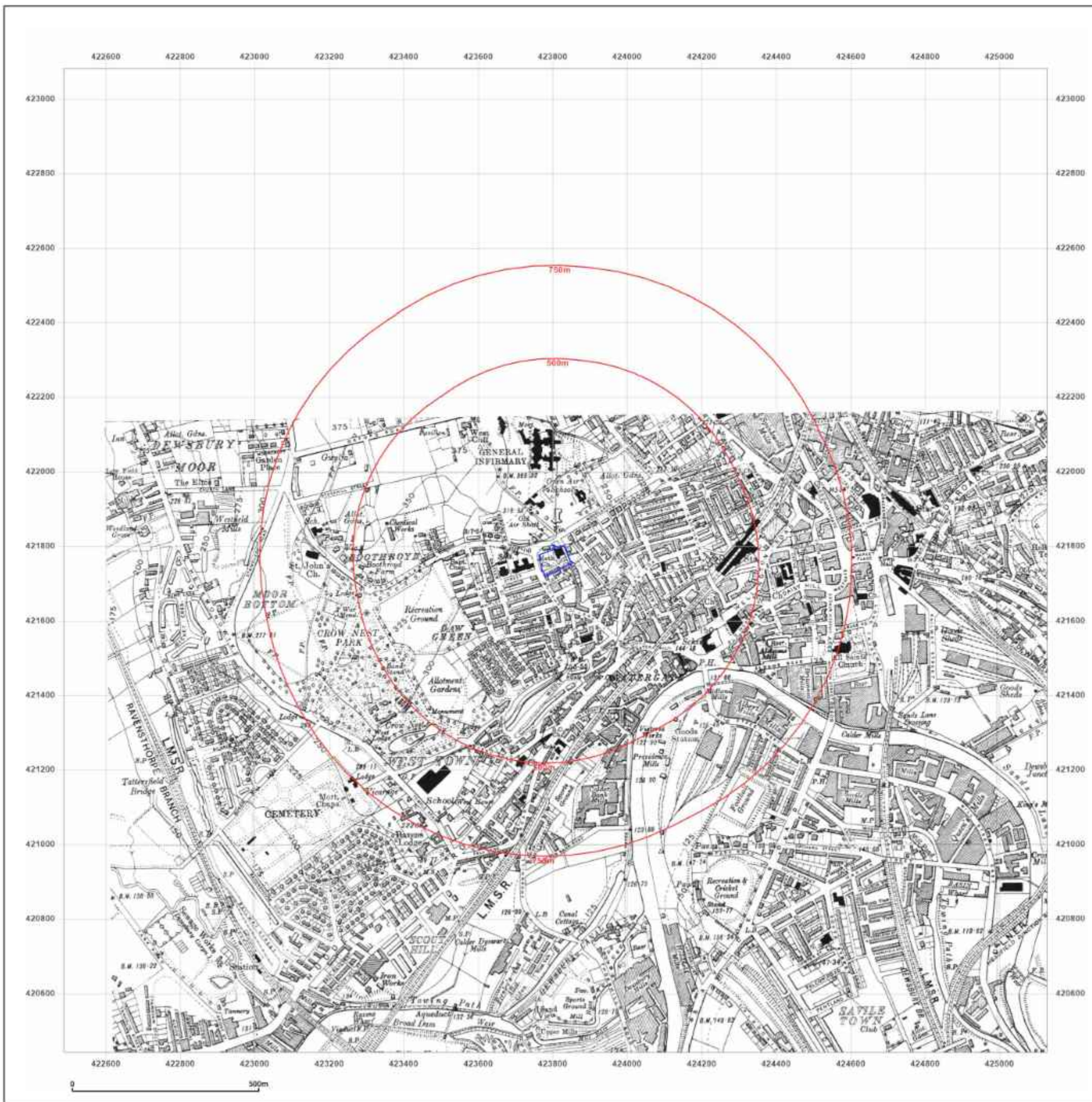


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**Site Details:**

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2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** County Series

**Map date:** 1948

**Scale:** 1:10,560

**Printed at:** 1:10,560



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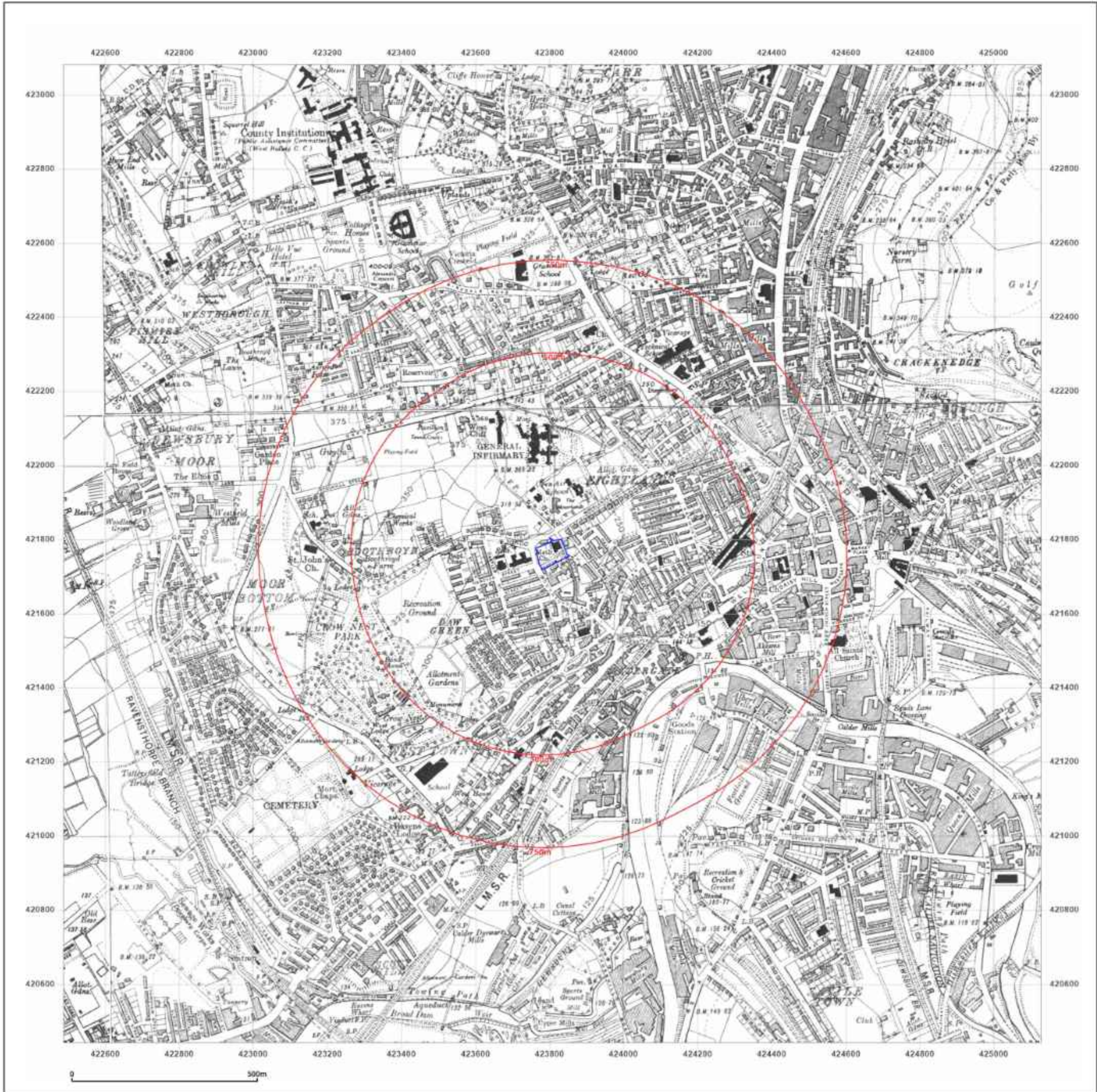


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**Site Details:**

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DEWSBURY, KIRKLEES, WF13  
2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** County Series

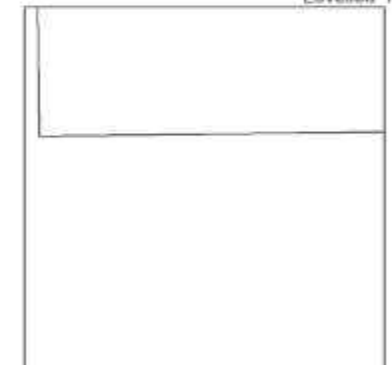
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**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1851  
Revised 1948  
Edition N/A  
Copyright N/A  
Levelled 1931

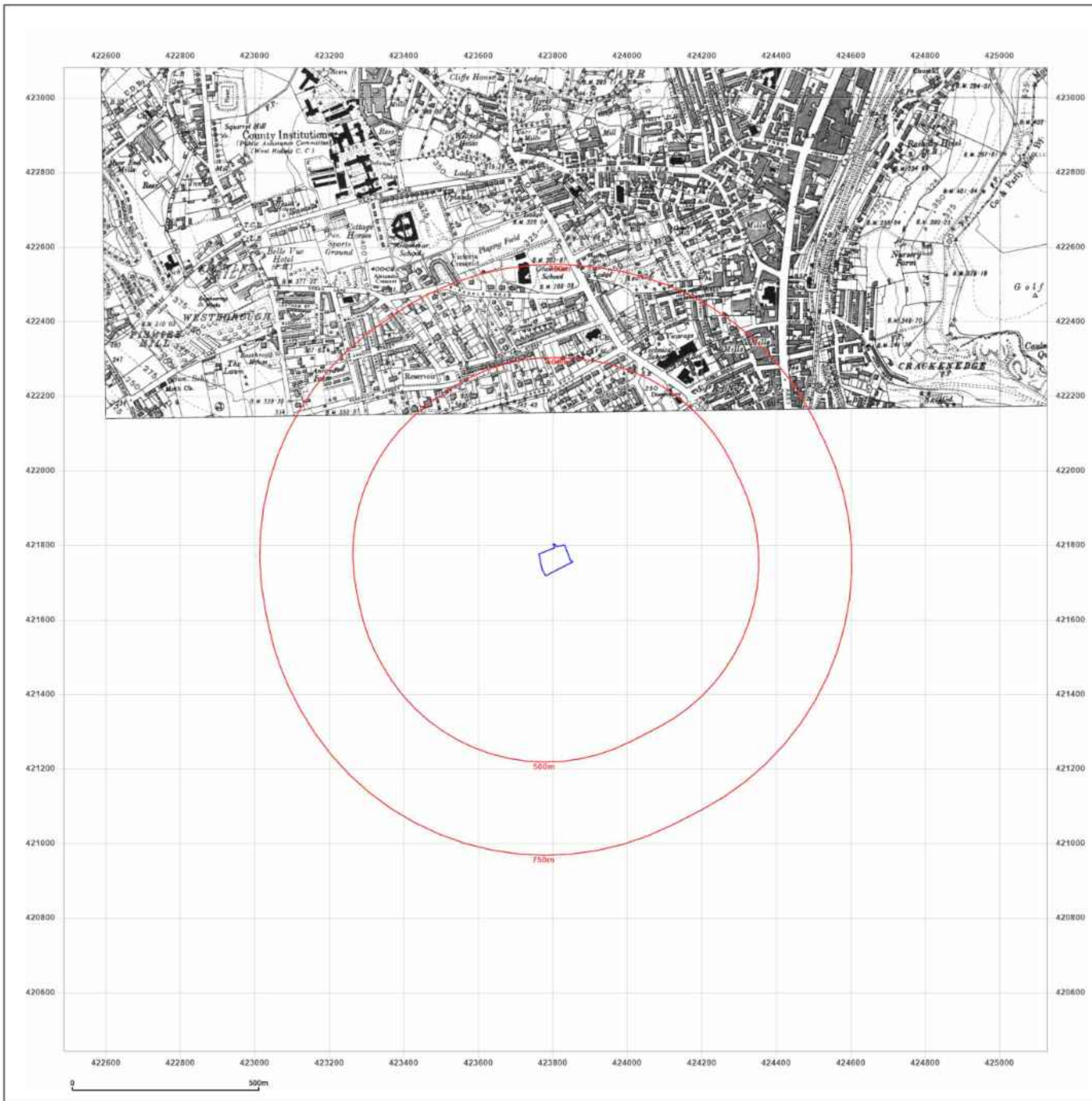


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**Site Details:**

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DEWSBURY, KIRKLEES, WF13  
2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** Provisional

**Map date:** 1955-1957

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1951 Revised 1955 Edition N/A Copyright N/A Levelled N/A	Surveyed 1957 Revised 1957 Edition N/A Copyright N/A Levelled N/A
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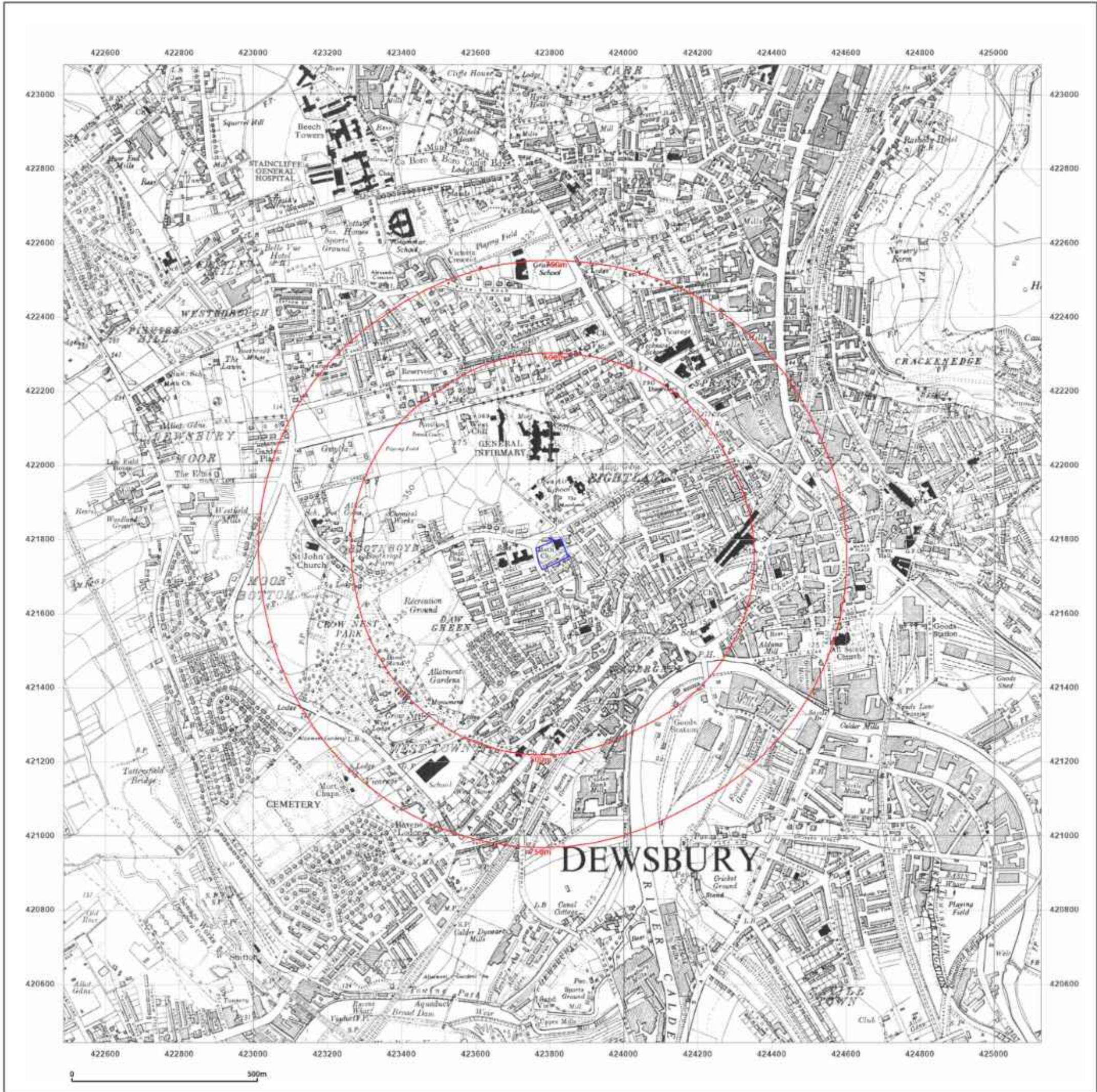


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**Site Details:**

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DEWSBURY, KIRKLEES, WF13  
2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** Provisional

**Map date:** 1967

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1967  
Revised 1967  
Edition N/A  
Copyright N/A  
Levelled N/A

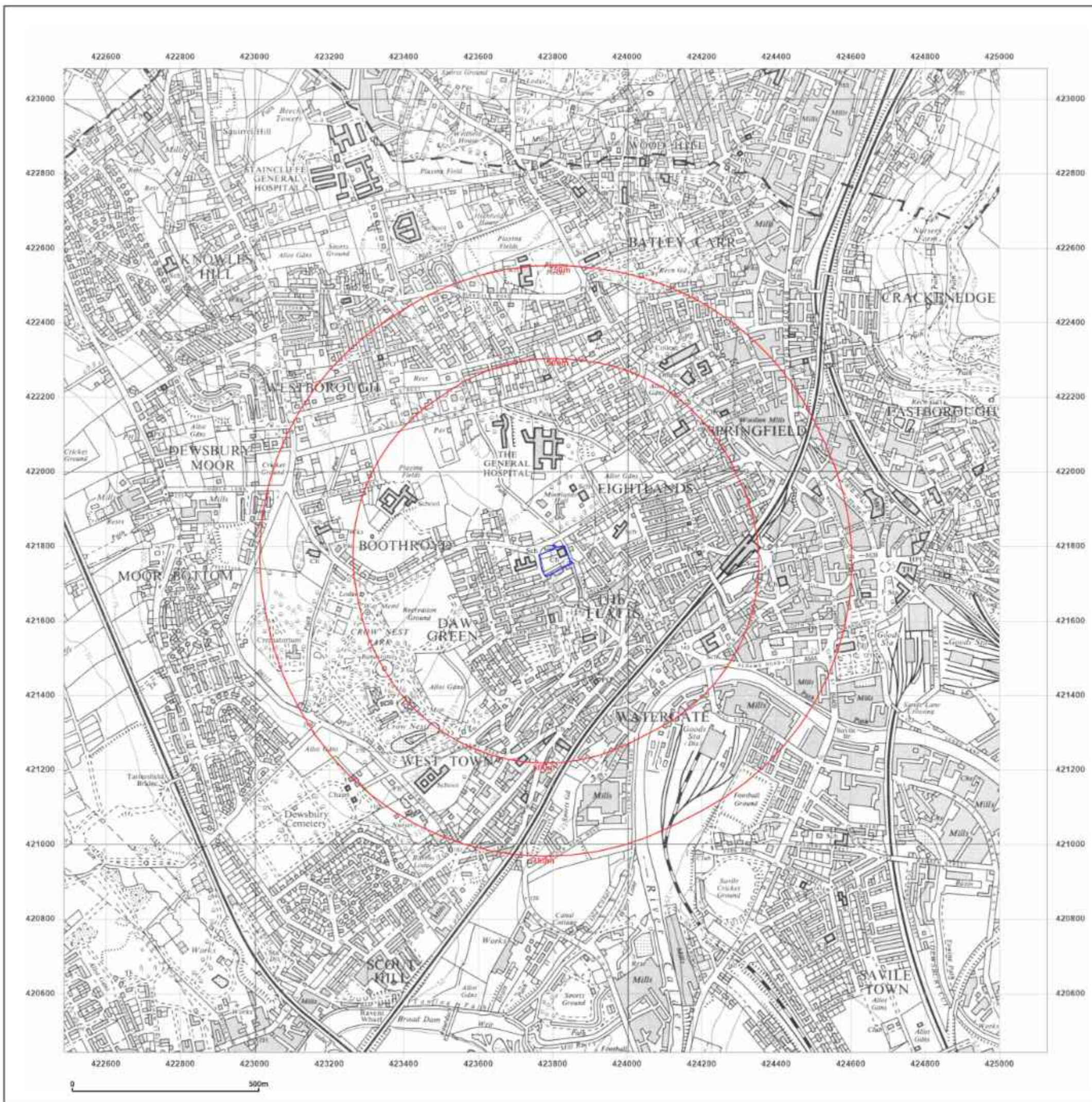


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**Site Details:**

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2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** National Grid

**Map date:** 1971-1974

**Scale:** 1:10,000

**Printed at:** 1:10,000



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

Surveyed 1971  
Revised 1971  
Edition N/A  
Copyright N/A  
Levelled N/A

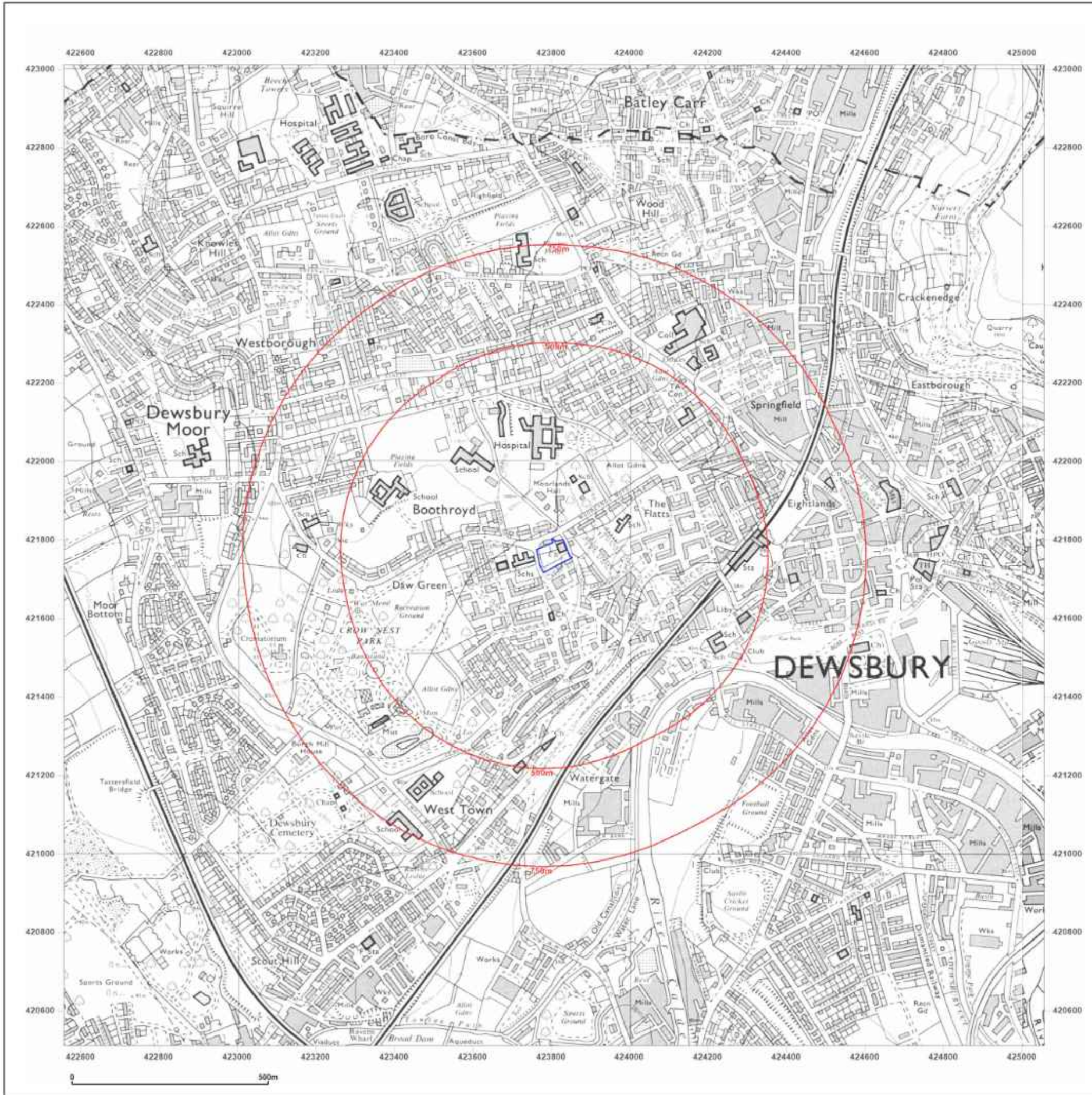


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**Site Details:**

LAND AT BOOTHROYD LANE,  
DEWSBURY, KIRKLEES, WF13  
2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** National Grid

**Map date:** 1980-1981

**Scale:** 1:10,000

**Printed at:** 1:10,000



Surveyed 1977  
Revised 1981  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1979  
Revised 1980  
Edition N/A  
Copyright N/A  
Levelled N/A

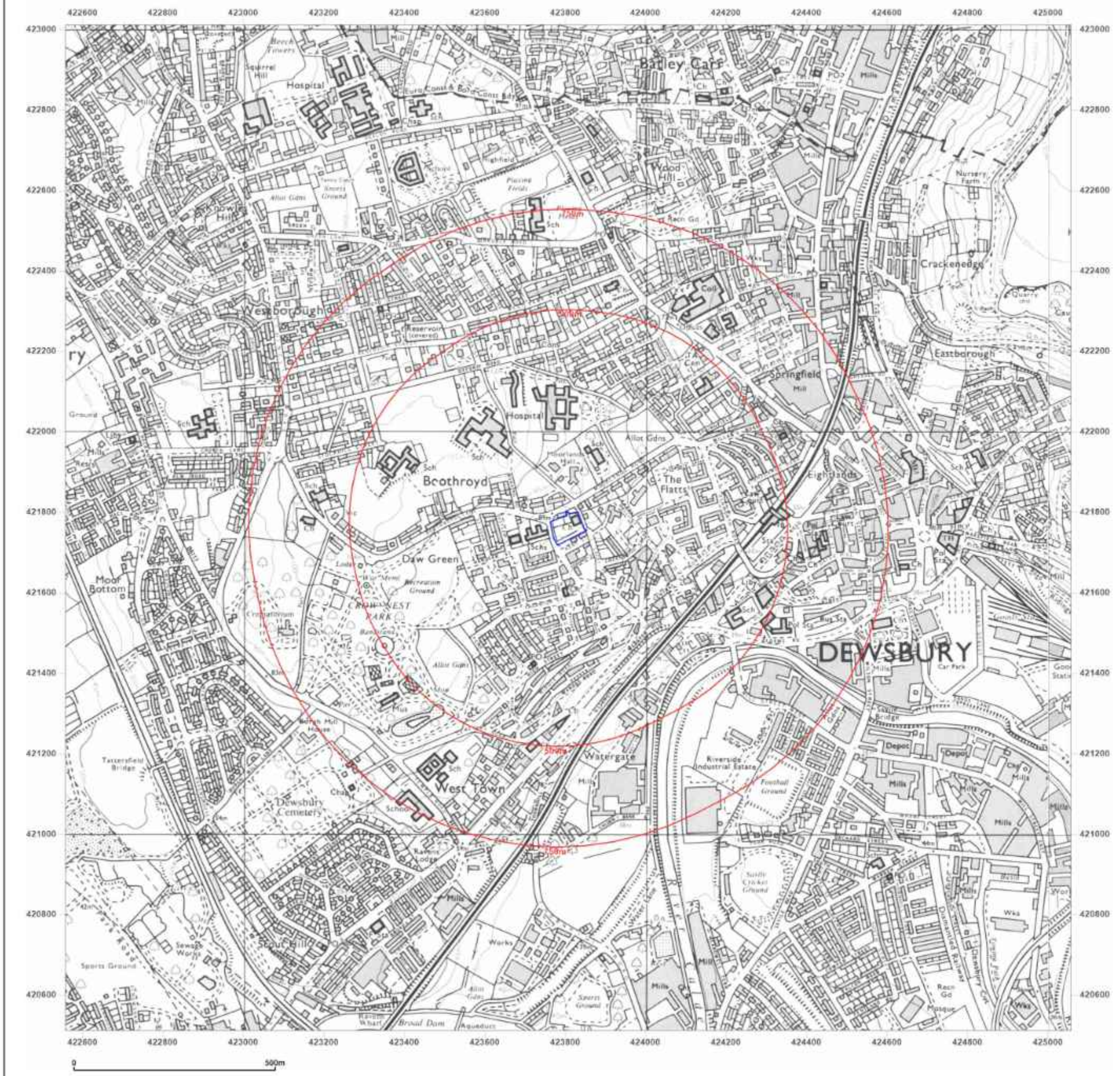


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**Site Details:**

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DEWSBURY, KIRKLEES, WF13  
2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** National Grid

**Map date:** 1988-1992

**Scale:** 1:10,000

**Printed at:** 1:10,000



Surveyed 1985  
Revised 1988  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1989  
Revised 1992  
Edition N/A  
Copyright N/A  
Levelled N/A

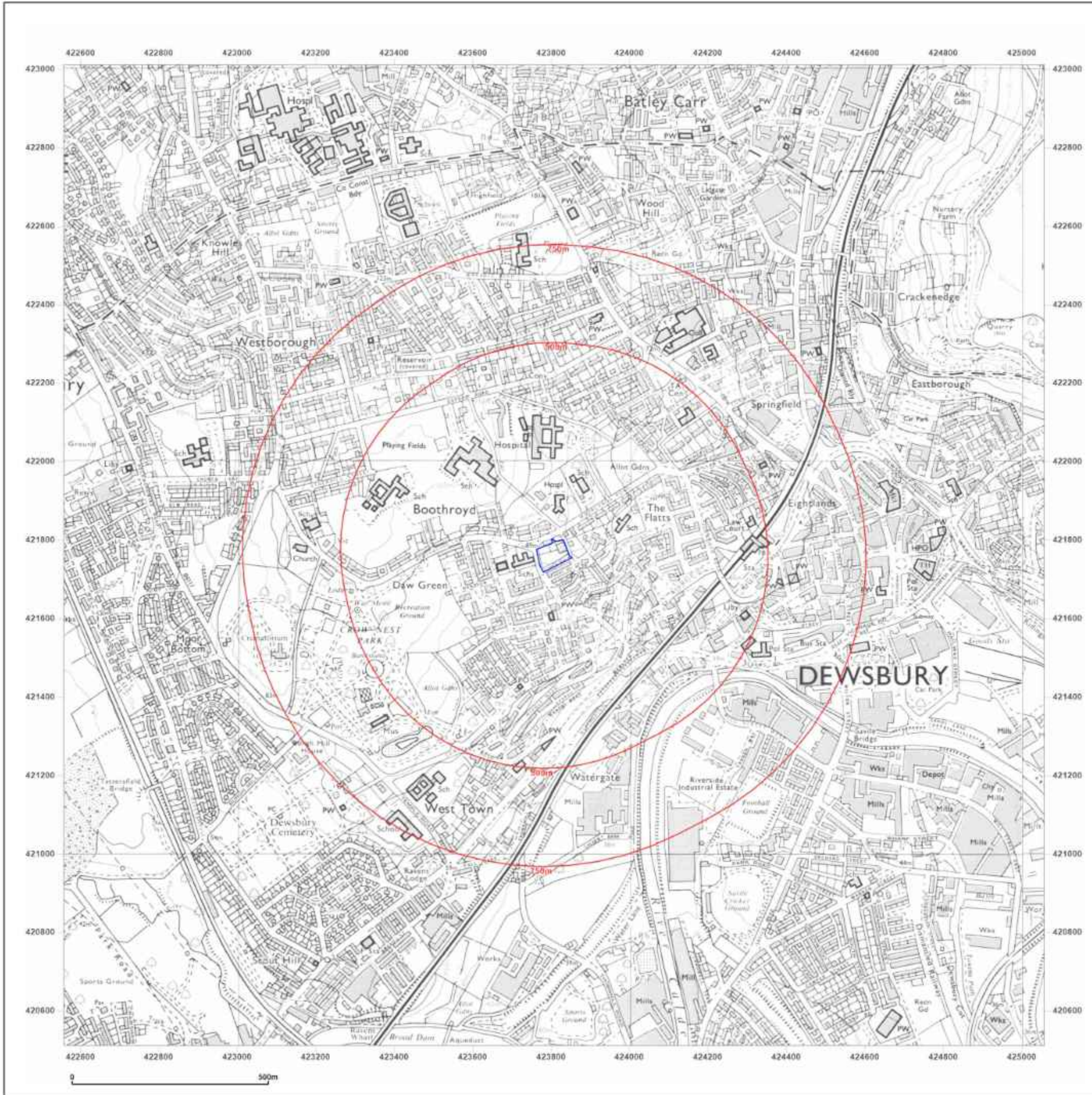


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**Site Details:**

LAND AT BOOTHROYD LANE,  
DEWSBURY, KIRKLEES, WF13  
2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** National Grid

**Map date:** 2001

**Scale:** 1:10,000

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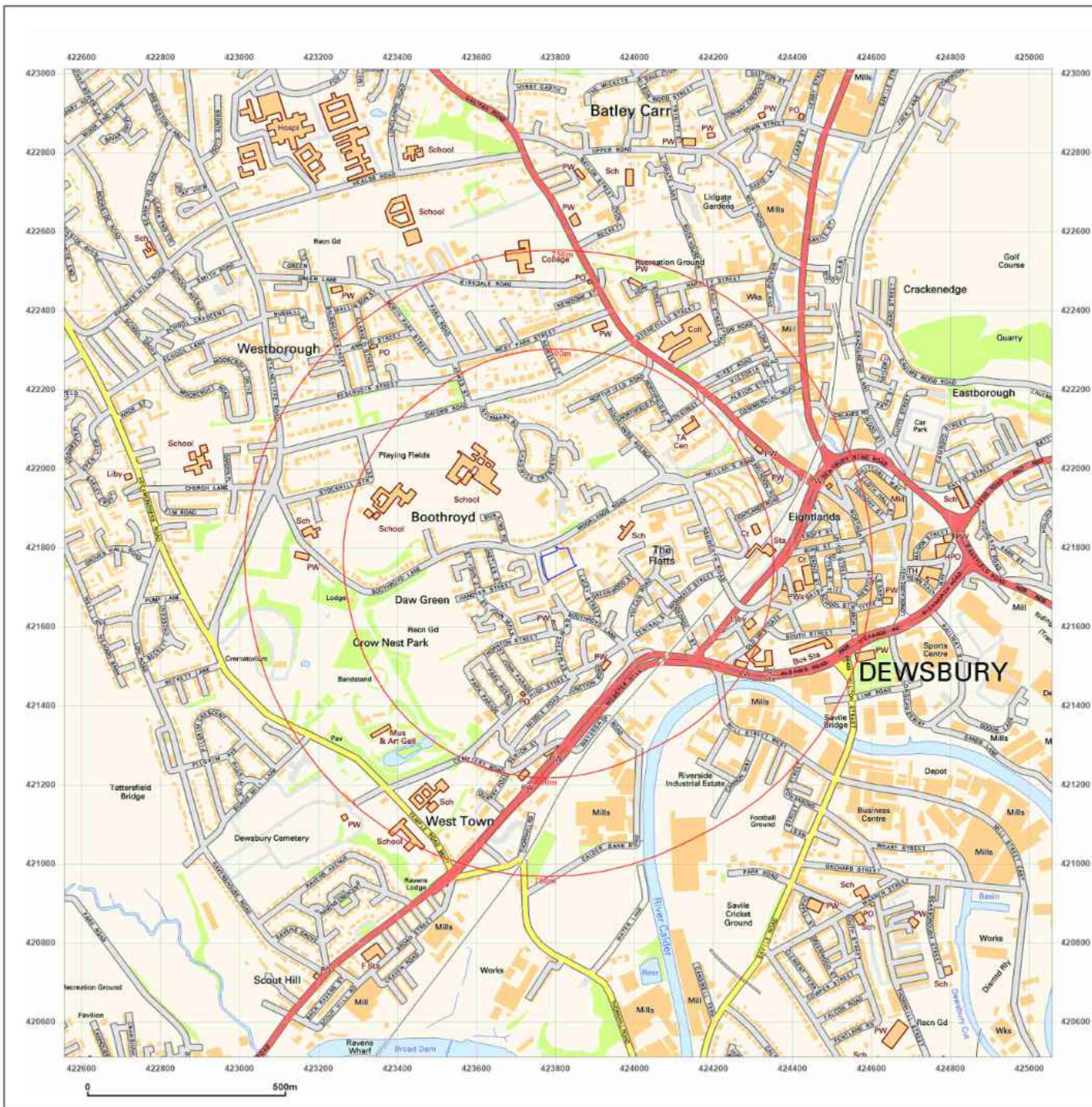


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**Site Details:**

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2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** National Grid

**Map date:** 2010

**Scale:** 1:10,000

**Printed at:** 1:10,000

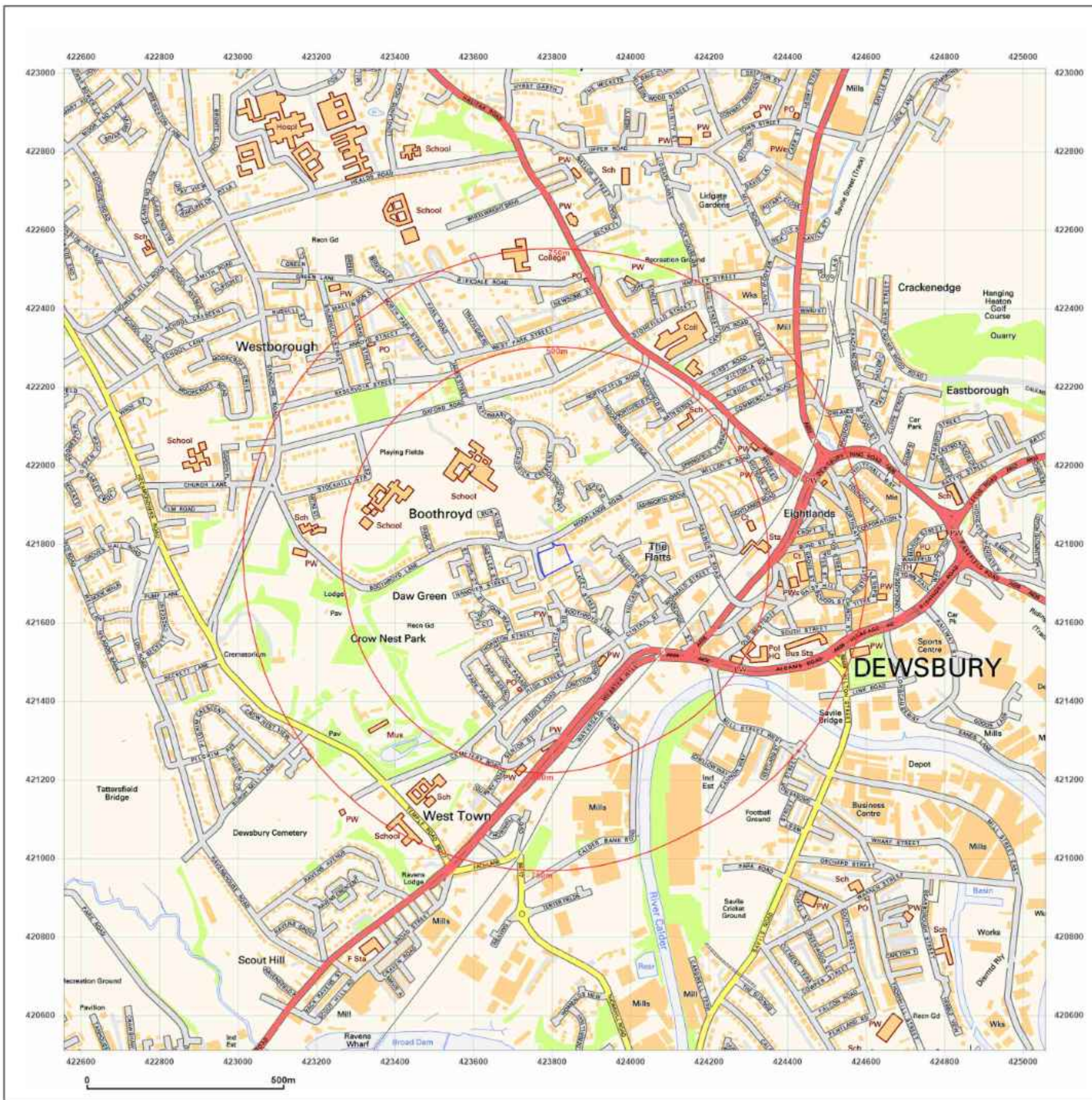


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**Site Details:**

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2LF

**Client Ref:** G25193  
**Report Ref:** GS-KLD-WV4-DWS-U12  
**Grid Ref:** 423807, 421761

**Map Name:** National Grid

**Map date:** 2025

**Scale:** 1:10,000

**Printed at:** 1:10,000

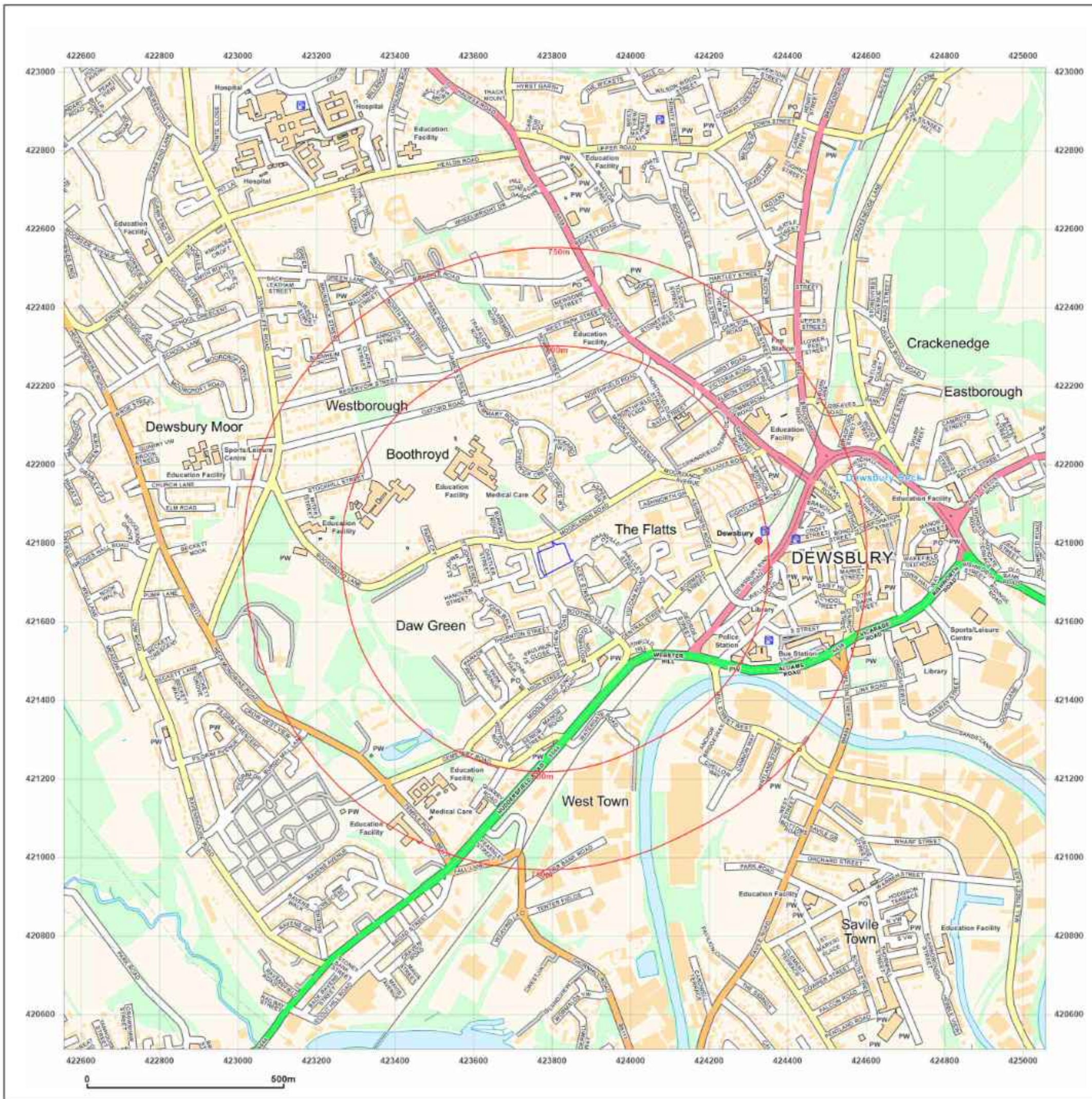


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## **APPENDIX 2**

### GroundSure Enviro + GeoInsight Report

LAND AT BOOTHROYD LANE, DEWSBURY, KIRKLEES, WF13 2LF

**Order Details**

**Date:** 06/06/2025  
**Your ref:** G25193  
**Our Ref:** GS-TAL-36S-TR9-Y4H

**Site Details**

**Location:** 423803 421762  
**Area:** 0.45 ha  
**Authority:** [Kirklees Council](#) ↗



**Summary of findings**

[p. 2 >](#) **Aerial image**

[p. 9 >](#)

**OS MasterMap site plan**

[p.13 >](#) [Insight User Guide](#) ↗

Contact us with any questions at:

[info@groundsure.com](mailto:info@groundsure.com) ↗

01273 257 755

Certified



Corporation

## Summary of findings

Page	Section	<a href="#">Past land use &gt;</a>	On site	0-50m	50-250m	250-500m	500-2000m
<a href="#">14 &gt;</a>	<a href="#">1.1 &gt;</a>	<a href="#">Historical industrial land uses &gt;</a>	0	2	3	47	-
<a href="#">17 &gt;</a>	<a href="#">1.2 &gt;</a>	<a href="#">Historical tanks &gt;</a>	0	0	3	1	-
<a href="#">17 &gt;</a>	<a href="#">1.3 &gt;</a>	<a href="#">Historical energy features &gt;</a>	0	0	12	8	-
18	1.4	Historical petrol stations	0	0	0	0	-
<a href="#">18 &gt;</a>	<a href="#">1.5 &gt;</a>	<a href="#">Historical garages &gt;</a>	0	0	0	5	-
19	1.6	Historical military land	0	0	0	0	-
Page	Section	<a href="#">Past land use - un-grouped &gt;</a>	On site	0-50m	50-250m	250-500m	500-2000m
<a href="#">20 &gt;</a>	<a href="#">2.1 &gt;</a>	<a href="#">Historical industrial land uses &gt;</a>	0	2	7	58	-
<a href="#">23 &gt;</a>	<a href="#">2.2 &gt;</a>	<a href="#">Historical tanks &gt;</a>	0	0	12	1	-
<a href="#">24 &gt;</a>	<a href="#">2.3 &gt;</a>	<a href="#">Historical energy features &gt;</a>	0	0	31	24	-
26	2.4	Historical petrol stations	0	0	0	0	-
<a href="#">26 &gt;</a>	<a href="#">2.5 &gt;</a>	<a href="#">Historical garages &gt;</a>	0	0	0	9	-
Page	Section	<a href="#">Waste and landfill &gt;</a>	On site	0-50m	50-250m	250-500m	500-2000m
28	3.1	Active or recent landfill	0	0	0	0	-
28	3.2	Historical landfill (BGS records)	0	0	0	0	-
29	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
29	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
<a href="#">29 &gt;</a>	<a href="#">3.5 &gt;</a>	<a href="#">Historical waste sites &gt;</a>	0	0	0	1	-
<a href="#">30 &gt;</a>	<a href="#">3.6 &gt;</a>	<a href="#">Licensed waste sites &gt;</a>	0	0	0	8	-
<a href="#">32 &gt;</a>	<a href="#">3.7 &gt;</a>	<a href="#">Waste exemptions &gt;</a>	0	0	0	23	-
Page	Section	<a href="#">Current industrial land use &gt;</a>	On site	0-50m	50-250m	250-500m	500-2000m
<a href="#">35 &gt;</a>	<a href="#">4.1 &gt;</a>	<a href="#">Recent industrial land uses &gt;</a>	0	0	13	-	-
36	4.2	Current or recent petrol stations	0	0	0	0	-
36	4.3	Electricity cables	0	0	0	0	-
37	4.4	Gas pipelines	0	0	0	0	-
37	4.5	Sites determined as Contaminated Land	0	0	0	0	-



37	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
37	4.7	Regulated explosive sites	0	0	0	0	-
37	4.8	Hazardous substance storage/usage	0	0	0	0	-
38	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
38	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
<b>38 &gt;</b>	<b>4.11 &gt;</b>	<b><u>Licensed pollutant release (Part A(2)/B) &gt;</u></b>	0	0	0	2	-
38	4.12	Radioactive Substance Authorisations	0	0	0	0	-
39	4.13	Licensed Discharges to controlled waters	0	0	0	0	-
39	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
39	4.15	Pollutant release to public sewer	0	0	0	0	-
39	4.16	List 1 Dangerous Substances	0	0	0	0	-
39	4.17	List 2 Dangerous Substances	0	0	0	0	-
<b>40 &gt;</b>	<b>4.18 &gt;</b>	<b><u>Pollution Incidents (EA/NRW) &gt;</u></b>	0	0	0	2	-
40	4.19	Pollution inventory substances	0	0	0	0	-
40	4.20	Pollution inventory waste transfers	0	0	0	0	-
41	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	<b>Hydrogeology &gt;</b>	On site	0-50m	50-250m	250-500m	500-2000m
<b>42 &gt;</b>	<b>5.1 &gt;</b>	<b><u>Superficial aquifer &gt;</u></b>	Identified (within 500m)				
<b>43 &gt;</b>	<b>5.2 &gt;</b>	<b><u>Bedrock aquifer &gt;</u></b>	Identified (within 500m)				
<b>44 &gt;</b>	<b>5.3 &gt;</b>	<b><u>Groundwater vulnerability &gt;</u></b>	Identified (within 50m)				
45	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
45	5.5	Groundwater vulnerability- local information	None (within 0m)				
<b>46 &gt;</b>	<b>5.6 &gt;</b>	<b><u>Groundwater abstractions &gt;</u></b>	0	0	0	0	25
<b>53 &gt;</b>	<b>5.7 &gt;</b>	<b><u>Surface water abstractions &gt;</u></b>	0	0	0	0	12
56	5.8	Potable abstractions	0	0	0	0	0
56	5.9	Source Protection Zones	0	0	0	0	-
56	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	<b>Hydrology &gt;</b>	On site	0-50m	50-250m	250-500m	500-2000m
57	6.1	Water Network (OS MasterMap)	0	0	0	-	-

57	6.2	Surface water features	0	0	0	-	-
<a href="#">58</a> >	<a href="#">6.3</a> >	<a href="#">WFD Surface water body catchments</a> >	1	-	-	-	-
<a href="#">58</a> >	<a href="#">6.4</a> >	<a href="#">WFD Surface water bodies</a> >	0	0	0	-	-
<a href="#">59</a> >	<a href="#">6.5</a> >	<a href="#">WFD Groundwater bodies</a> >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
60	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
60	7.2	Historical Flood Events	0	0	0	-	-
60	7.3	Flood Defences	0	0	0	-	-
61	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
61	7.5	Flood Storage Areas	0	0	0	-	-
62	7.6	Flood Zone 2	None (within 50m)				
62	7.7	Flood Zone 3	None (within 50m)				
Page	Section	<a href="#">Surface water flooding</a> >					
<a href="#">63</a> >	<a href="#">8.1</a> >	<a href="#">Surface water flooding</a> >	1 in 30 year, 0.1m - 0.3m (within 50m)				
Page	Section	<a href="#">Groundwater flooding</a> >					
<a href="#">65</a> >	<a href="#">9.1</a> >	<a href="#">Groundwater flooding</a> >	Negligible (within 50m)				
Page	Section	<a href="#">Environmental designations</a> >	On site	0-50m	50-250m	250-500m	500-2000m
66	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
67	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
67	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
67	10.4	Special Protection Areas (SPA)	0	0	0	0	0
67	10.5	National Nature Reserves (NNR)	0	0	0	0	0
<a href="#">68</a> >	<a href="#">10.6</a> >	<a href="#">Local Nature Reserves (LNR)</a> >	0	0	0	0	2
68	10.7	Designated Ancient Woodland	0	0	0	0	0
68	10.8	Biosphere Reserves	0	0	0	0	0
68	10.9	Forest Parks	0	0	0	0	0
69	10.10	Marine Conservation Zones	0	0	0	0	0
<a href="#">69</a> >	<a href="#">10.11</a> >	<a href="#">Green Belt</a> >	0	0	0	0	3
69	10.12	Proposed Ramsar sites	0	0	0	0	0

69	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
70	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
70	10.15	Nitrate Sensitive Areas	0	0	0	0	0
<a href="#">70</a> >	<a href="#">10.16</a> >	<a href="#">Nitrate Vulnerable Zones</a> >	0	0	0	1	0
<a href="#">71</a> >	<a href="#">10.17</a> >	<a href="#">SSSI Impact Risk Zones</a> >	1	-	-	-	-
72	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
73	11.1	World Heritage Sites	0	0	0	-	-
73	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
73	11.3	National Parks	0	0	0	-	-
73	11.4	Listed Buildings	0	0	0	-	-
74	11.5	Conservation Areas	0	0	0	-	-
74	11.6	Scheduled Ancient Monuments	0	0	0	-	-
74	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	<a href="#">Agricultural designations</a> >	On site	0-50m	50-250m	250-500m	500-2000m
<a href="#">75</a> >	<a href="#">12.1</a> >	<a href="#">Agricultural Land Classification</a> >	Urban (within 250m)				
76	12.2	Open Access Land	0	0	0	-	-
76	12.3	Tree Felling Licences	0	0	0	-	-
76	12.4	Environmental Stewardship Schemes	0	0	0	-	-
76	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
77	13.1	Priority Habitat Inventory	0	0	0	-	-
77	13.2	Habitat Networks	0	0	0	-	-
77	13.3	Open Mosaic Habitat	0	0	0	-	-
77	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	<a href="#">Geology 1:10,000 scale</a> >	On site	0-50m	50-250m	250-500m	500-2000m
<a href="#">78</a> >	<a href="#">14.1</a> >	<a href="#">10k Availability</a> >	Identified (within 500m)				
<a href="#">79</a> >	<a href="#">14.2</a> >	<a href="#">Artificial and made ground (10k)</a> >	0	0	4	11	-
<a href="#">81</a> >	<a href="#">14.3</a> >	<a href="#">Superficial geology (10k)</a> >	0	0	0	1	-

82	14.4	Landslip (10k)	0	0	0	0	-
<a href="#">83</a> >	<a href="#">14.5</a> >	<a href="#">Bedrock geology (10k)</a> >	2	0	5	5	-
<a href="#">84</a> >	<a href="#">14.6</a> >	<a href="#">Bedrock faults and other linear features (10k)</a> >	1	0	3	5	-
Page	Section	<a href="#">Geology 1:50,000 scale</a> >	On site	0-50m	50-250m	250-500m	500-2000m
<a href="#">85</a> >	<a href="#">15.1</a> >	<a href="#">50k Availability</a> >	Identified (within 500m)				
<a href="#">86</a> >	<a href="#">15.2</a> >	<a href="#">Artificial and made ground (50k)</a> >	0	0	0	1	-
87	15.3	Artificial ground permeability (50k)	0	0	-	-	-
<a href="#">88</a> >	<a href="#">15.4</a> >	<a href="#">Superficial geology (50k)</a> >	0	0	0	1	-
89	15.5	Superficial permeability (50k)	None (within 50m)				
89	15.6	Landslip (50k)	0	0	0	0	-
89	15.7	Landslip permeability (50k)	None (within 50m)				
<a href="#">90</a> >	<a href="#">15.8</a> >	<a href="#">Bedrock geology (50k)</a> >	2	0	4	6	-
<a href="#">91</a> >	<a href="#">15.9</a> >	<a href="#">Bedrock permeability (50k)</a> >	Identified (within 50m)				
<a href="#">91</a> >	<a href="#">15.10</a> >	<a href="#">Bedrock faults and other linear features (50k)</a> >	1	0	3	5	-
Page	Section	<a href="#">Boreholes</a> >	On site	0-50m	50-250m	250-500m	500-2000m
<a href="#">93</a> >	<a href="#">16.1</a> >	<a href="#">BGS Boreholes</a> >	0	20	58	-	-
Page	Section	<a href="#">Natural ground subsidence</a> >					
<a href="#">97</a> >	<a href="#">17.1</a> >	<a href="#">Shrink swell clays</a> >	Very low (within 50m)				
<a href="#">98</a> >	<a href="#">17.2</a> >	<a href="#">Running sands</a> >	Negligible (within 50m)				
<a href="#">99</a> >	<a href="#">17.3</a> >	<a href="#">Compressible deposits</a> >	Negligible (within 50m)				
<a href="#">100</a> >	<a href="#">17.4</a> >	<a href="#">Collapsible deposits</a> >	Very low (within 50m)				
<a href="#">101</a> >	<a href="#">17.5</a> >	<a href="#">Landslides</a> >	Very low (within 50m)				
<a href="#">102</a> >	<a href="#">17.6</a> >	<a href="#">Ground dissolution of soluble rocks</a> >	Negligible (within 50m)				
Page	Section	<a href="#">Mining and ground workings</a> >	On site	0-50m	50-250m	250-500m	500-2000m
<a href="#">104</a> >	<a href="#">18.1</a> >	<a href="#">BritPits</a> >	0	1	3	4	-
107	18.2	Surface ground workings	0	0	0	-	-
<a href="#">107</a> >	<a href="#">18.3</a> >	<a href="#">Underground workings</a> >	0	0	1	0	13
108	18.4	Underground mining extents	0	0	0	0	-
108	18.5	Historical Mineral Planning Areas	0	0	0	0	-



108	18.6	Non-coal mining	0	0	0	0	0	
108	18.7	JPB mining areas	None (within 0m)					
108	18.8	The Coal Authority non-coal mining	0	0	0	0	-	
109	18.9	Researched mining	0	0	0	0	-	
109	18.10	Mining record office plans	0	0	0	0	-	
109	18.11	BGS mine plans	0	0	0	0	-	
<b>109</b>	<b>&gt;</b>	<b>18.12</b>	<b>&gt;</b>	<b>Coal mining</b>				<b>&gt;</b>
110	18.13	Brine areas	None (within 0m)					
110	18.14	Gypsum areas	None (within 0m)					
110	18.15	Tin mining	None (within 0m)					
110	18.16	Clay mining	None (within 0m)					
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m	
111	19.1	Natural cavities	0	0	0	0	-	
111	19.2	Mining cavities	0	0	0	0	0	
111	19.3	Reported recent incidents	0	0	0	0	-	
111	19.4	Historical incidents	0	0	0	0	-	
Page	Section	Radon						
<b>113</b>	<b>&gt;</b>	<b>20.1</b>	<b>&gt;</b>	<b>Radon</b>				<b>&gt;</b>
			Between 3% and 5% (within 0m)					
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m	
<b>115</b>	<b>&gt;</b>	<b>21.1</b>	<b>&gt;</b>	<b>BGS Estimated Background Soil Chemistry</b>				<b>&gt;</b>
115	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-	
115	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-	
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m	
116	22.1	Underground railways (London)	0	0	0	-	-	
116	22.2	Underground railways (Non-London)	0	0	0	-	-	
116	22.3	Railway tunnels	0	0	0	-	-	
116	22.4	Historical railway and tunnel features	0	0	0	-	-	
116	22.5	Royal Mail tunnels	0	0	0	-	-	
117	22.6	Historical railways	0	0	0	-	-	

117	22.7	Railways	0	0	0	-	-
117	22.8	Crossrail 2	0	0	0	0	-
117	22.9	HS2	0	0	0	0	-

## Recent aerial photograph

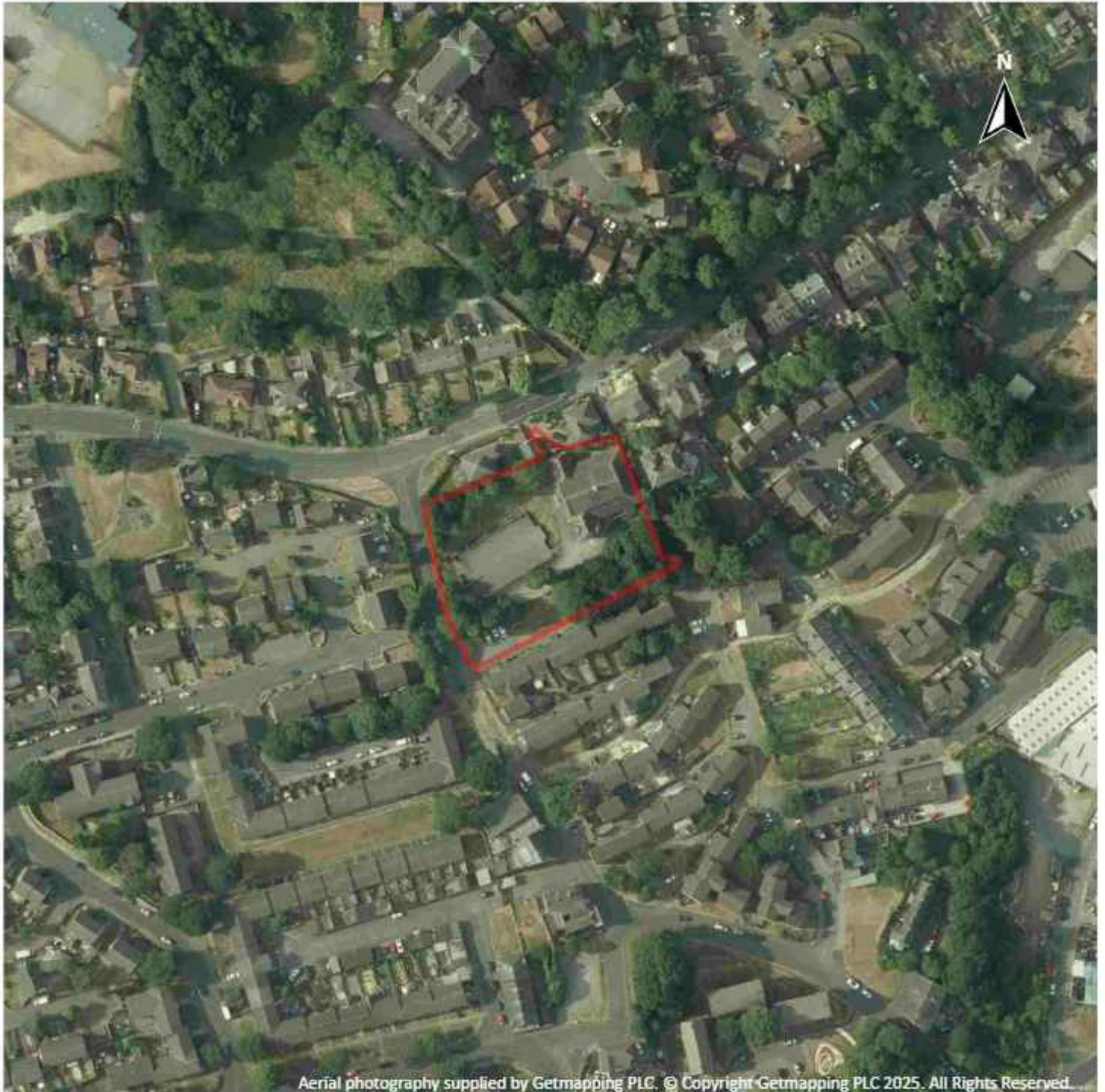


Capture Date: 30/05/2021

Site Area: 0.45ha



## Recent site history - 2018 aerial photograph

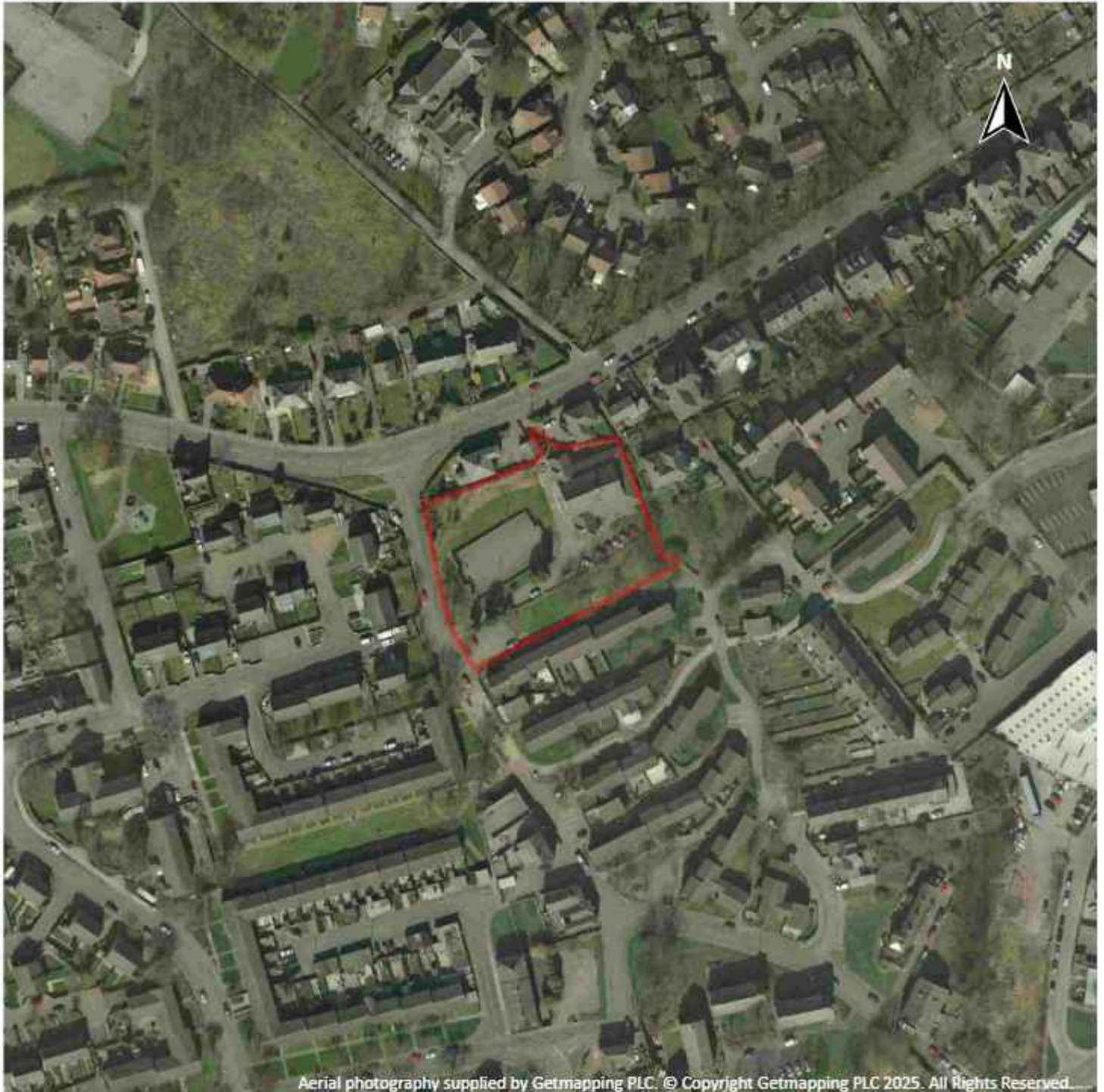


Capture Date: 01/07/2018

Site Area: 0.45ha



## Recent site history - 2012 aerial photograph



Capture Date: 26/03/2012

Site Area: 0.45ha



## Recent site history - 1999 aerial photograph

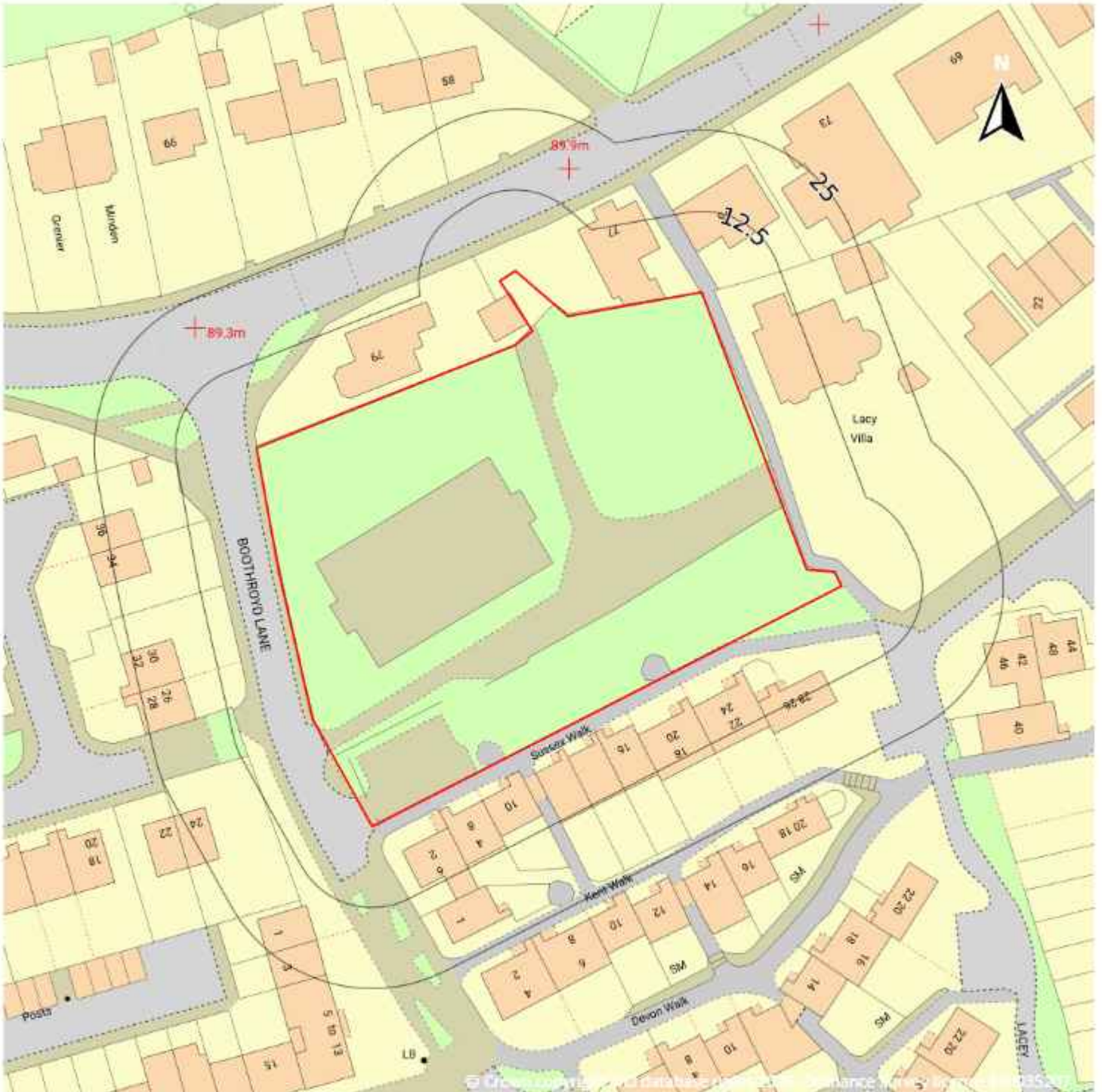


Capture Date: 10/07/1999

Site Area: 0.45ha



## OS MasterMap site plan



Site Area: 0.45ha

## 1 Past land use



### 1.1 Historical industrial land uses

Records within 500m

52

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 14 >](#)

ID	Location	Land use	Dates present	Group ID
1	35m N	Hospital	1988	1475127

ID	Location	Land use	Dates present	Group ID
2	46m NW	Old Air Shaft	1938	1454157
A	135m NW	Infirmary	1948 - 1955	1532680
A	136m NW	General Infirmary	1938	1446136
A	138m NW	Hospital	1967 - 1988	1512040
E	266m W	Chemical Works	1938 - 1948	1572259
A	275m N	Mortuary	1938	1507301
A	279m N	Mortuary	1955	1569388
E	290m W	Chemical Works	1905	1516175
A	295m NW	Mortuary	1948	1446316
E	296m W	Unspecified Quarry	1892	1464817
E	297m W	Unspecified Pit	1938	1506463
A	303m N	Unspecified Ground Workings	1955	1439260
G	319m SE	Railway Sidings	1938	1497532
H	332m SE	Railway Sidings	1948	1562128
H	332m SE	Railway Sidings	1905	1578921
G	352m E	Railway Sidings	1892	1527300
G	357m E	Railway Sidings	1967	1490813
G	357m E	Railway Sidings	1955	1580054
E	363m W	Unspecified Ground Workings	1905	1439262
E	372m W	Chemical Works	1955	1530664
G	387m E	Railway Station	1938 - 1948	1493952
G	387m E	Railway Station	1905	1556844
G	390m E	Railway Station	1892	1516877
G	391m E	Railway Station	1955 - 1967	1559022
G	395m E	Railway Station	1974	1556161
K	396m SE	Unspecified Works	1938	1542682
K	398m SE	Unspecified Works	1905	1499099
K	401m SE	Unspecified Foundry	1892	1449101



ID	Location	Land use	Dates present	Group ID
E	402m W	Unspecified Pit	1892	1450248
E	403m W	Unspecified Ground Workings	1955	1439261
G	429m E	Railway Station	1981 - 1988	1498041
L	437m S	Unspecified Mills	1905	1538580
M	472m NE	Dispensary	1948	1551439
M	475m NE	Dispensary	1931	1503498
N	476m W	Unspecified Tank	1955	1472520
O	479m SE	Unspecified Mill	1905	1515565
O	479m SE	Unspecified Mill	1948	1529393
N	482m W	Unspecified Tank	1948	1472522
L	489m SE	Unspecified Mills	1955 - 1988	1559416
P	489m SE	Unspecified Mills	1938	1552209
L	492m SE	Unspecified Mills	1948	1575551
P	493m SE	Unspecified Mill	1905	1448427
R	495m SE	Unspecified Mills	1938	1493249
P	495m SE	Unspecified Mills	1892	1540944
S	495m E	Railway Sidings	1905	1518634
S	495m E	Railway Sidings	1948	1532254
B	497m SW	Unspecified Tank	1948	1472523
S	498m SE	Railway Sidings	1938 - 1948	1537736
R	498m SE	Unspecified Commercial/Industrial	1981	1495542
R	498m SE	Unspecified Mills	1955 - 1974	1517408
R	498m SE	Unspecified Mills	1988	1543495

*This data is sourced from Ordnance Survey / Groundsure.*



## 1.2 Historical tanks

Records within 500m

4

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 14 >](#)

ID	Location	Land use	Dates present	Group ID
B	177m SE	Unspecified Tank	1955 - 1999	259290
D	212m E	Unspecified Tank	1975 - 1983	249387
D	212m E	Unspecified Tank	1993	257525
J	402m SE	Unspecified Tank	1954	242643

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.3 Historical energy features

Records within 500m

20

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 14 >](#)

ID	Location	Land use	Dates present	Group ID
3	72m S	Electricity Substation	1968 - 1999	160750
4	82m NW	Electricity Substation	1968 - 1999	159048
C	185m W	Electricity Substation	1968	160181
C	185m W	Electricity Substation	1994 - 1999	150366
5	201m S	Electricity Substation	1968 - 1999	148548
D	214m E	Electricity Substation	1983	158480
B	214m SE	Electricity Substation	1968	152841

ID	Location	Land use	Dates present	Group ID
B	214m SE	Electricity Substation	1955 - 1956	162104
B	215m SE	Electricity Substation	1994 - 1999	147354
D	230m E	Electricity Substation	1993	161904
D	230m E	Electricity Substation	1975	146165
D	230m E	Electricity Substation	1983	147424
F	296m N	Electricity Substation	1996	154207
F	301m N	Electricity Substation	1955 - 1993	150605
A	392m NW	Electricity Substation	1955 - 1972	159915
A	393m NW	Electricity Substation	1993 - 1996	149293
B	454m NW	Electricity Substation	1989	143939
Q	491m NE	Electricity Substation	1987 - 1990	153323
Q	492m NE	Electricity Substation	1993	151022
M	496m NE	Electricity Substation	1955 - 1993	148474

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.4 Historical petrol stations

**Records within 500m**

**0**

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.5 Historical garages

**Records within 500m**

**5**

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.



Features are displayed on the Past land use map on [page 14 >](#)

ID	Location	Land use	Dates present	Group ID
I	333m SE	Garage	1983 - 1992	50824
I	334m SE	Garage	1995	49021
I	334m SE	Garage	1973	47498
J	362m SE	Garage	1955 - 1956	47989
7	491m S	Garage	1984 - 1992	46978

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.6 Historical military land

**Records within 500m**

**0**

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

*This data is sourced from Ordnance Survey / Groundsure / other sources.*

## 2 Past land use - un-grouped



### 2.1 Historical industrial land uses

Records within 500m

67

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 20](#) >

ID	Location	Land Use	Date	Group ID
1	35m N	Hospital	1988	1475127
2	46m NW	Old Air Shaft	1938	1454157
C	135m NW	Infirmary	1948	1532680

ID	Location	Land Use	Date	Group ID
C	136m NW	General Infirmary	1938	1446136
C	138m NW	Hospital	1988	1512040
C	138m NW	Hospital	1981	1512040
C	138m NW	Hospital	1974	1512040
C	138m NW	Hospital	1967	1512040
C	138m NW	Infirmary	1955	1532680
H	266m W	Chemical Works	1938	1572259
C	275m N	Mortuary	1938	1507301
C	279m N	Mortuary	1955	1569388
H	290m W	Chemical Works	1948	1572259
H	290m W	Chemical Works	1905	1516175
C	295m NW	Mortuary	1948	1446316
H	296m W	Unspecified Quarry	1892	1464817
H	297m W	Unspecified Pit	1938	1506463
H	297m W	Unspecified Pit	1938	1506463
C	303m N	Unspecified Ground Workings	1955	1439260
J	319m SE	Railway Sidings	1938	1497532
K	332m SE	Railway Sidings	1948	1562128
K	332m SE	Railway Sidings	1905	1578921
J	352m E	Railway Sidings	1892	1527300
J	357m E	Railway Sidings	1967	1490813
J	357m E	Railway Sidings	1955	1580054
H	363m W	Unspecified Ground Workings	1905	1439262
H	372m W	Chemical Works	1955	1530664
J	387m E	Railway Station	1948	1493952
J	387m E	Railway Station	1905	1556844
J	387m E	Railway Station	1938	1493952
J	390m E	Railway Station	1892	1516877



ID	Location	Land Use	Date	Group ID
J	391m E	Railway Station	1967	1559022
J	391m E	Railway Station	1955	1559022
J	395m E	Railway Station	1974	1556161
N	396m SE	Unspecified Works	1938	1542682
N	398m SE	Unspecified Works	1905	1499099
N	401m SE	Unspecified Foundry	1892	1449101
H	402m W	Unspecified Pit	1892	1450248
H	403m W	Unspecified Ground Workings	1955	1439261
J	429m E	Railway Station	1988	1498041
J	429m E	Railway Station	1981	1498041
B	437m S	Unspecified Mills	1905	1538580
O	472m NE	Dispensary	1948	1551439
O	475m NE	Dispensary	1931	1503498
P	476m W	Unspecified Tank	1955	1472520
Q	479m SE	Unspecified Mill	1948	1529393
Q	479m SE	Unspecified Mill	1905	1515565
P	482m W	Unspecified Tank	1948	1472522
R	489m SE	Unspecified Mills	1988	1559416
R	489m SE	Unspecified Mills	1981	1559416
R	489m SE	Unspecified Mills	1974	1559416
R	489m SE	Unspecified Mills	1967	1559416
R	489m SE	Unspecified Mills	1955	1559416
S	489m SE	Unspecified Mills	1938	1552209
R	492m SE	Unspecified Mills	1948	1575551
S	493m SE	Unspecified Mill	1905	1448427
V	495m SE	Unspecified Mills	1938	1493249
S	495m SE	Unspecified Mills	1892	1540944
W	495m E	Railway Sidings	1948	1532254



ID	Location	Land Use	Date	Group ID
W	495m E	Railway Sidings	1905	1518634
5	497m SW	Unspecified Tank	1948	1472523
6	498m SE	Railway Sidings	1938	1537736
V	498m SE	Unspecified Mills	1988	1543495
V	498m SE	Unspecified Commercial/Industrial	1981	1495542
V	498m SE	Unspecified Mills	1974	1517408
V	498m SE	Unspecified Mills	1967	1517408
V	498m SE	Unspecified Mills	1955	1517408

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.2 Historical tanks

<b>Records within 500m</b>	<b>13</b>
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Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 20 >](#)

ID	Location	Land Use	Date	Group ID
D	177m SE	Unspecified Tank	1956	259290
D	177m SE	Unspecified Tank	1968	259290
D	177m SE	Unspecified Tank	1955	259290
D	177m SE	Unspecified Tank	1964	259290
D	178m SE	Unspecified Tank	1997	259290
D	178m SE	Unspecified Tank	1994	259290
D	178m SE	Unspecified Tank	1996	259290
D	178m SE	Unspecified Tank	1999	259290
G	212m E	Unspecified Tank	1983	249387
G	212m E	Unspecified Tank	1993	257525
G	213m E	Unspecified Tank	1983	249387
G	213m E	Unspecified Tank	1975	249387



ID	Location	Land Use	Date	Group ID
M	402m SE	Unspecified Tank	1954	242643

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.3 Historical energy features

Records within 500m

55

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

Features are displayed on the Past land use - un-grouped map on [page 20 >](#)

ID	Location	Land Use	Date	Group ID
A	72m S	Electricity Substation	1968	160750
A	72m S	Electricity Substation	1997	160750
A	72m S	Electricity Substation	1994	160750
A	72m S	Electricity Substation	1996	160750
A	72m S	Electricity Substation	1999	160750
B	82m NW	Electricity Substation	1968	159048
B	82m NW	Electricity Substation	1997	159048
B	82m NW	Electricity Substation	1994	159048
B	82m NW	Electricity Substation	1996	159048
B	82m NW	Electricity Substation	1999	159048
E	185m W	Electricity Substation	1968	160181
E	185m W	Electricity Substation	1997	150366
E	185m W	Electricity Substation	1994	150366
E	185m W	Electricity Substation	1996	150366
E	185m W	Electricity Substation	1999	150366
F	201m S	Electricity Substation	1968	148548
F	201m S	Electricity Substation	1997	148548
F	201m S	Electricity Substation	1994	148548
F	201m S	Electricity Substation	1996	148548



ID	Location	Land Use	Date	Group ID
F	201m S	Electricity Substation	1999	148548
G	214m E	Electricity Substation	1983	158480
D	214m SE	Electricity Substation	1968	152841
D	214m SE	Electricity Substation	1955	162104
D	214m SE	Electricity Substation	1956	162104
D	215m SE	Electricity Substation	1997	147354
D	215m SE	Electricity Substation	1994	147354
D	215m SE	Electricity Substation	1996	147354
D	215m SE	Electricity Substation	1999	147354
G	230m E	Electricity Substation	1993	161904
G	230m E	Electricity Substation	1983	147424
G	230m E	Electricity Substation	1975	146165
I	296m N	Electricity Substation	1996	154207
I	301m N	Electricity Substation	1971	150605
I	301m N	Electricity Substation	1956	150605
I	302m N	Electricity Substation	1993	150605
I	302m N	Electricity Substation	1955	150605
I	302m N	Electricity Substation	1972	150605
C	392m NW	Electricity Substation	1971	159915
C	392m NW	Electricity Substation	1956	159915
C	393m NW	Electricity Substation	1955	159915
C	393m NW	Electricity Substation	1972	159915
C	393m NW	Electricity Substation	1996	149293
C	393m NW	Electricity Substation	1993	149293
A	454m NW	Electricity Substation	1989	143939
T	491m NE	Electricity Substation	1987	153323
T	491m NE	Electricity Substation	1990	153323
T	491m NE	Electricity Substation	1990	153323



ID	Location	Land Use	Date	Group ID
T	492m NE	Electricity Substation	1993	151022
O	496m NE	Electricity Substation	1993	148474
O	496m NE	Electricity Substation	1987	148474
O	496m NE	Electricity Substation	1990	148474
O	496m NE	Electricity Substation	1990	148474
O	496m NE	Electricity Substation	1956	148474
O	497m NE	Electricity Substation	1955	148474
O	497m NE	Electricity Substation	1971	148474

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.4 Historical petrol stations

**Records within 500m**

**0**

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

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.5 Historical garages

**Records within 500m**

**9**

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

Features are displayed on the Past land use - un-grouped map on [page 20 >](#)

ID	Location	Land Use	Date	Group ID
L	333m SE	Garage	1983	50824
L	333m SE	Garage	1992	50824
L	333m SE	Garage	1992	50824
L	334m SE	Garage	1995	49021
L	334m SE	Garage	1973	47498

ID	Location	Land Use	Date	Group ID
M	362m SE	Garage	1955	47989
M	362m SE	Garage	1956	47989
U	491m S	Garage	1984	46978
U	491m S	Garage	1992	46978

*This data is sourced from Ordnance Survey / Groundsure.*



## 3 Waste and landfill



### 3.1 Active or recent landfill

**Records within 500m** **0**

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

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

### 3.2 Historical landfill (BGS records)

**Records within 500m** **0**

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

*This data is sourced from the British Geological Survey.*

### 3.3 Historical landfill (LA/mapping records)

Records within 500m

0

Landfill sites identified from Local Authority records and high detail historical mapping.

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

### 3.4 Historical landfill (EA/NRW records)

Records within 500m

0

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

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

### 3.5 Historical waste sites

Records within 500m

1

Waste site records derived from Local Authority planning records and high detail historical mapping.

Features are displayed on the Waste and landfill map on [page 28 >](#)

ID	Location	Address	Further Details	Date
B.	439m SE	Site Address: C & J Blackburn, West End Mills, Watergate Road, DEWSBURY, West Yorkshire, WF12 9QB	Type of Site: Waste Transfer Planning application reference: 00/90019 Description: Scheme comprises the construction of a new building to contain waste paper transfer operations, the building is open fronted with one industrial door and the project also includes some demolition. The total floor area for the project is 990 sqm. Construction - block, steel cladding walls; insitu concrete floor; steel cladding roof, fire, industrial doors (unspecified) doors; pad foundations; steel frame; fire alarm system fittings. Detailed plans have been submitted. We have been unable to determine a building programme for the project at this stage. A committee date has not been confirmed for the application at this stage. (21/03/2000) Data source: Historic Planning Application Data Type: Point	-

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

### 3.6 Licensed waste sites

Records within 500m

8

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation. Features are displayed on the Waste and landfill map on [page 28 >](#)

ID	Location	Details		
B	407m SE	Site Name: Cartwright Mill Site Address: Cartwright Mill, Watergate Road, Dewsbury, West Yorkshire, WF12 9QB Correspondence Address: -	Type of Site: 75kte HCl Waste TS + treatment Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PWS001 EPR reference: EA/EPR/AB3402FA/A001 Operator: Price Waste Services Limited Waste Management licence No: 400585 Annual Tonnage: 74999	Issue Date: 23/09/2013 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
B	415m SE	Site Name: Cartwright Mill Site Address: Cartwright Mill, Watergate Road, Dewsbury, West Yorkshire, WF12 9QB Correspondence Address: -	Type of Site: 75kte HCl Waste TS + treatment Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: 631532 EPR reference: EA/EPR/AB3402FA Operator: Price Waste Services Limited Waste Management licence No: 400585 Annual Tonnage: 0	Issue Date: 23/09/2013 Effective Date: 23/09/2013 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired
B	415m SE	Site Name: Cartwright Mill Site Address: Cartwright Mill, Watergate Road, Dewsbury, West Yorkshire, WF12 9QB Correspondence Address: -	Type of Site: 75kte HCl Waste TS + treatment Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 655247 EPR reference: EA/EPR/AB3402FA Operator: Price Waste Services Limited Waste Management licence No: 400585 Annual Tonnage: 74999	Issue Date: 23/09/2013 Effective Date: 23/09/2013 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired



ID	Location	Details		
B	421m SE	Site Name: Ingham Works Site Address: Ing Mills, Watergate Road, Dewsbury, West Yorkshire, WF12 9QB Correspondence Address:-	Type of Site: Household, Commercial & Industrial Waste T Stn Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: 650824 EPR reference: EA/EPR/XP3192ZD Operator: M & G Skips Limited Waste Management licence No: 65284 Annual Tonnage: 0	Issue Date: 31/03/2004 Effective Date: 31/03/2004 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired
B	421m SE	Site Name: Ingham Works Site Address: Ing Mills, Watergate Road, Dewsbury, West Yorkshire, WF12 9QB Correspondence Address:-	Type of Site: Household, Commercial & Industrial Waste T Stn Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 657310 EPR reference: EA/EPR/XP3192ZD Operator: M & G Skips Limited Waste Management licence No: 65284 Annual Tonnage: 24999	Issue Date: 31/03/2004 Effective Date: 31/03/2004 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired
B	428m SE	Site Name: M G Skip Hire Ltd Site Address: Cartwright Mills, Watergate Road, Dewsbury, West Yorkshire, WF12 9QB Correspondence Address:-	Type of Site: Household, Commercial & Industrial Waste T Stn Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: 644943 EPR reference: EA/EPR/QP3392ZW Operator: M G Skip Hire Limited Waste Management licence No: 65499 Annual Tonnage: 0	Issue Date: 04/09/2006 Effective Date: 04/09/2006 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired
B	428m SE	Site Name: M G Skip Hire Ltd Site Address: Cartwright Mills, Watergate Road, Dewsbury, West Yorkshire, WF12 9QB Correspondence Address:-	Type of Site: Household, Commercial & Industrial Waste T Stn Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 639127 EPR reference: EA/EPR/QP3392ZW Operator: M G Skip Hire Limited Waste Management licence No: 65499 Annual Tonnage: 9130	Issue Date: 04/09/2006 Effective Date: 04/09/2006 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired



ID	Location	Details		
B	448m SE	Site Name: C & J Blackburn Site Address: West End Mills, Watergate Road, Dewsbury, West Yorkshire, WF12 9QB Correspondence Address:-	Type of Site: Household, Commercial & Industrial Waste T Stn Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 644500 EPR reference: EA/EPR/KP3695ZQ Operator: C & J Blackburn Waste Management licence No: 61026 Annual Tonnage: 24999	Issue Date: 06/06/1996 Effective Date: 06/06/1996 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued

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

### 3.7 Waste exemptions

Records within 500m

23

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on [page 28 >](#)

ID	Location	Site	Reference	Category	Sub-Category	Description
A	293m S	Pharmacyd, 78 High Street, Westtown, Dewsbury, Wf13 2qq	WEX238797	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
A	308m S	78, High Street, Westtown, Dewsbury, Wf13 2qq	WEX135101	Storing waste exemption	Not on a farm	Storage of waste in secure containers
A	308m S	78, High Street, Westtown, Dewsbury, Wf13 2qq	WEX135101	Storing waste exemption	Not on a farm	Storage of waste in a secure place
A	308m S	78, High Street, Westtown, Dewsbury, Wf13 2qq	WEX135101	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
A	308m S	78, High Street, Westtown, Dewsbury, Wf13 2qq	WEX135101	Storing waste exemption	Not on a farm	Storage of sludge
C	417m SE	Victoria Centre - Pharmacyd, Wellington Road, Dewsbury, Wf13 1hn	WEX147643	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
C	417m SE	Victoria Centre, Wellington Road, Dewsbury, Wf13 1hn	WEX135099	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
C	417m SE	Victoria Centre, Wellington Road, Dewsbury, Wf13 1hn	WEX135099	Storing waste exemption	Not on a farm	Storage of waste in secure containers



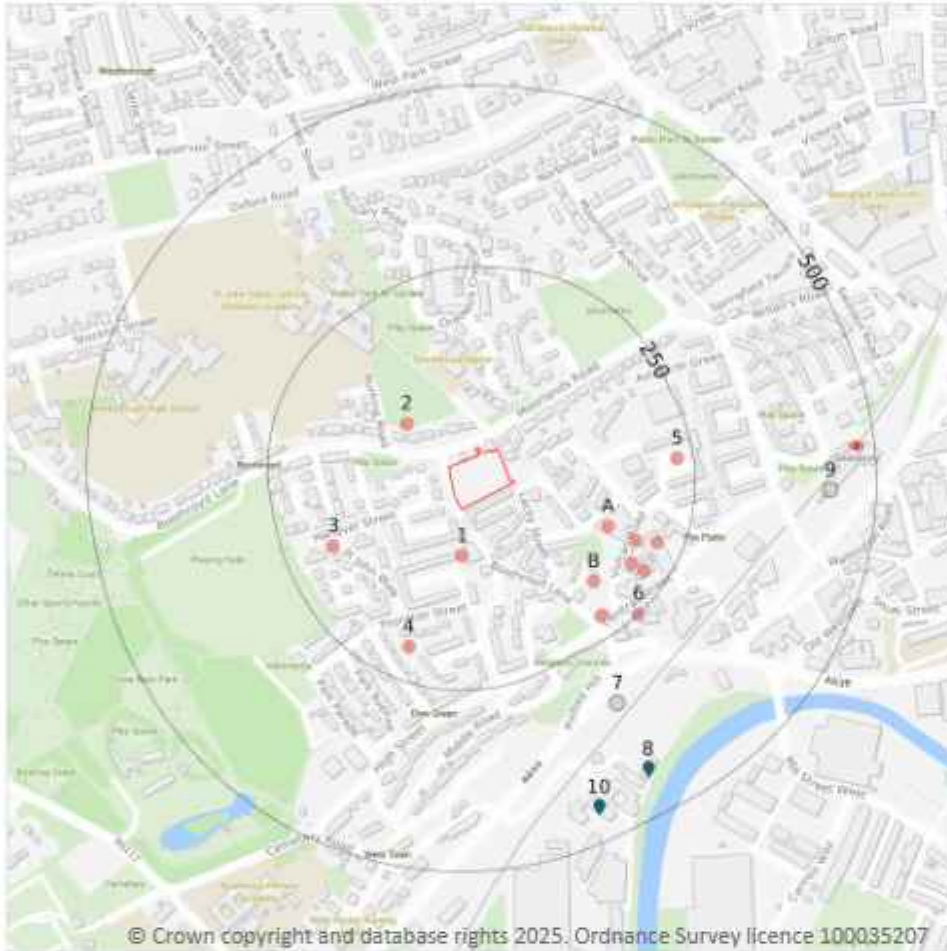
ID	Location	Site	Reference	Category	Sub-Category	Description
C	417m SE	Victoria Centre, Wellington Road, Dewsbury, Wf13 1hn	WEX135099	Storing waste exemption	Not on a farm	Storage of sludge
C	417m SE	Victoria Centre, Wellington Road, Dewsbury, Wf13 1hn	WEX135099	Storing waste exemption	Not on a farm	Storage of waste in a secure place
C	417m SE	Victoria Centre, Wellington Road, Dewsbury, Wf13 1hn	WEX290677	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
C	417m SE	Dewsbury Health Centre, Victoria Centre, Wellington Road, Dewsbury, Wf13 1hn	WEX427055	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
C	417m SE	DewsburyHealthCentre, VictoriaCentre, Wellington Road, Dewsbury, Wf13 1hn	WEX429372	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
B	434m SE	West End Mills Watergate Road Dewsbury West Yorkshire Wf12 9qb	EPR/FF0606LJ/A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in a secure place
B	434m SE	West End Mills Watergate Road Dewsbury West Yorkshire Wf12 9qb	EPR/FF0606LJ/A001	Treating waste exemption	Non-agricultural waste only	Preparatory treatments (baling, sorting, shredding etc)
1	463m E	Eightlands Surgery Wellington Road Dewsbury West Yorkshire Wf13 1hn	EPR/WF0939N K/A001	Treating waste exemption	Non-agricultural waste only	Sorting and de-naturing of controlled drugs for disposal
B	465m SE	West End Mills, Watergate Road, Dewsbury, Wf12 9qb	WEX257861	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
B	465m SE	West End Mills, Watergate Road, Dewsbury, Wf12 9qb	WEX116764	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
B	468m SE	Victoria Mills, Watergate Road, Dewsbury, Wf12 9qb	WEX246818	Treating waste exemption	Not on a farm	Recovery of textiles
B	468m SE	Victoria Mills, Watergate Road, Dewsbury, Wf12 9qb	WEX246818	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
B	468m SE	Victoria Mills, Watergate Road, Dewsbury, Wf12 9qb	WEX104763	Treating waste exemption	Not on a farm	Recovery of textiles
B	468m SE	Victoria Mills, Watergate Road, Dewsbury, Wf12 9qb	WEX104763	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
B	468m SE	West End Mills, Watergate Road, Dewsbury, Wf12 9qb	WEX385702	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)



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



## 4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- ◆ Licensed pollutant release (Part A(2)/B)
- Pollution Incidents (EA/NRW)

### 4.1 Recent industrial land uses

Records within 250m

13

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 35](#) >

ID	Location	Company	Address	Activity	Category
1	64m S	Electricity Sub Station	West Yorkshire, WF13	Electrical Features	Infrastructure and Facilities
2	84m NW	Electricity Sub Station	West Yorkshire, WF13	Electrical Features	Infrastructure and Facilities
A	143m SE	Works	West Yorkshire, WF13	Unspecified Works Or Factories	Industrial Features



ID	Location	Company	Address	Activity	Category
B	175m SE	Chimney	West Yorkshire, WF13	Chimneys	Industrial Features
3	181m W	Electricity Sub Station	West Yorkshire, WF13	Electrical Features	Infrastructure and Facilities
A	185m SE	H B Food Services Ltd	Vulcan Road, Eightfands, Dewsbury, West Yorkshire, WF13 2NA	Catering and Non Specific Food Products	Foodstuffs
A	196m SE	High Works	West Yorkshire, WF13	Unspecified Works Or Factories	Industrial Features
4	203m S	Electricity Sub Station	West Yorkshire, WF13	Electrical Features	Infrastructure and Facilities
A	214m SE	Works	West Yorkshire, WF13	Unspecified Works Or Factories	Industrial Features
A	216m SE	Diespeker	Unit 1 and 2 Central Works, Central Street, Dewsbury, West Yorkshire, WF13 2LZ	Glass Fibre Services	Industrial Products
B	220m SE	Electricity Sub Station	West Yorkshire, WF13	Electrical Features	Infrastructure and Facilities
5	227m E	Electricity Sub Station	West Yorkshire, WF13	Electrical Features	Infrastructure and Facilities
6	250m SE	Works	West Yorkshire, WF13	Unspecified Works Or Factories	Industrial Features

*This data is sourced from Ordnance Survey.*

## 4.2 Current or recent petrol stations

Records within 500m

0

Open, closed, under development and obsolete petrol stations.

*This data is sourced from Experian.*

## 4.3 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

*This data is sourced from National Grid.*



#### 4.4 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

*This data is sourced from National Grid.*

#### 4.5 Sites determined as Contaminated Land

Records within 500m

0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

*This data is sourced from Local Authority records.*

#### 4.6 Control of Major Accident Hazards (COMAH)

Records within 500m

0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

*This data is sourced from the Health and Safety Executive.*

#### 4.7 Regulated explosive sites

Records within 500m

0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

*This data is sourced from the Health and Safety Executive.*

#### 4.8 Hazardous substance storage/usage

Records within 500m

0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

*This data is sourced from Local Authority records.*



## 4.9 Historical licensed industrial activities (IPC)

Records within 500m

0

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

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

## 4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

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

## 4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m

2

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on [page 35 >](#)

ID	Location	Address	Details	
8	436m SE	Swiftparts Ltd, Anchor Mills, Watergate, Dewsbury, WF12 9QS	Process: Non-ferrous Metal Foundry Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
10	453m SE	Swiftparts Ltd (t/a Fred Smithson), Anchor Mills, Watergate, Dewsbury, WF12 9QB	Process: Non-ferrous Metal Foundry Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

*This data is sourced from Local Authority records.*

## 4.12 Radioactive Substance Authorisations

Records within 500m

0

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

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



### 4.13 Licensed Discharges to controlled waters

Records within 500m

0

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

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

### 4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

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

### 4.15 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

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

### 4.16 List 1 Dangerous Substances

Records within 500m

0

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

### 4.17 List 2 Dangerous Substances

Records within 500m

0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

## 4.18 Pollution Incidents (EA/NRW)

Records within 500m

2

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on [page 35](#) >

ID	Location	Details	
7	336m SE	Incident Date: 22/03/2002 Incident Identification: 65781 Pollutant: Specific Waste Materials Pollutant Description: Commercial Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)
9	437m E	Incident Date: 26/06/2002 Incident Identification: 87475 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

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

## 4.19 Pollution inventory substances

Records within 500m

0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

*This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.*

## 4.20 Pollution inventory waste transfers

Records within 500m

0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

*This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.*



## 4.21 Pollution inventory radioactive waste

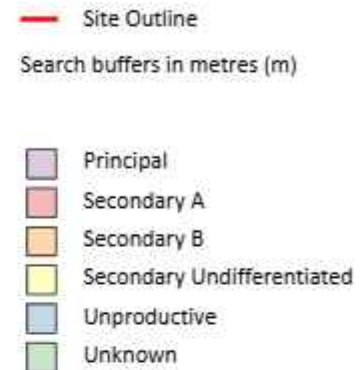
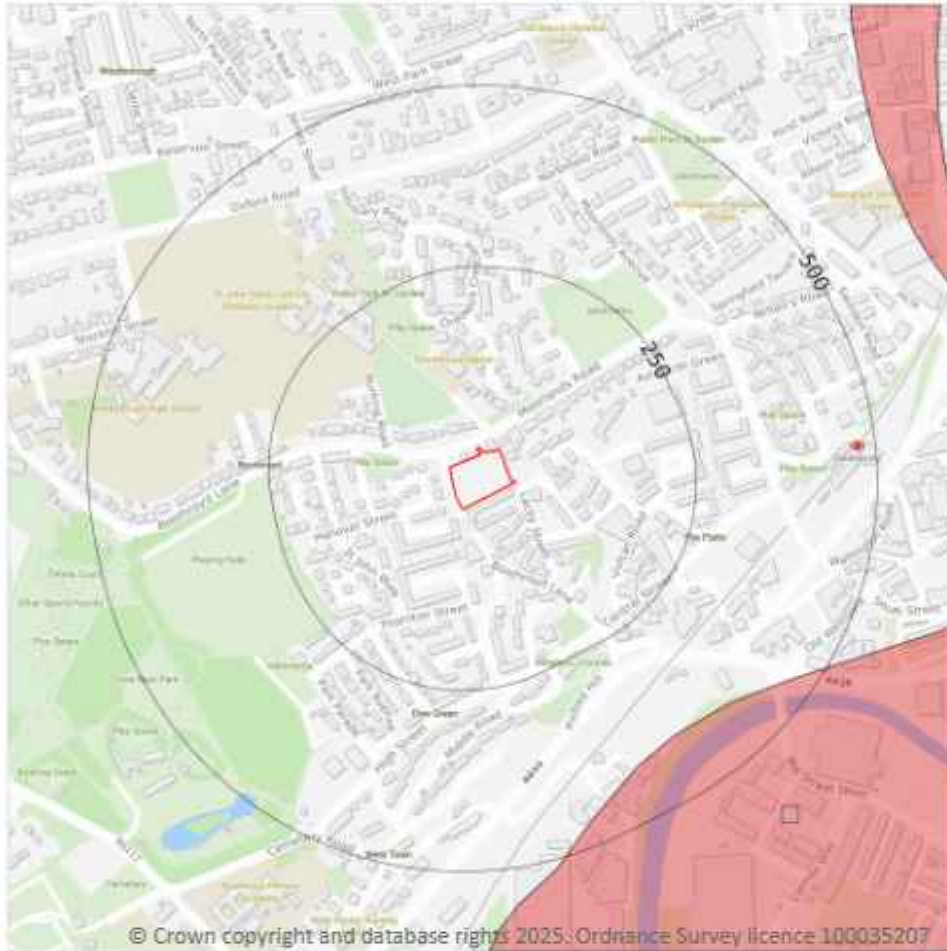
Records within 500m

0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

*This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.*

## 5 Hydrogeology - Superficial aquifer



### 5.1 Superficial aquifer

Records within 500m

1

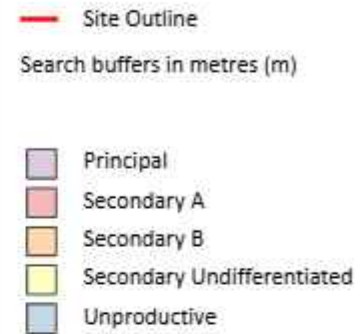
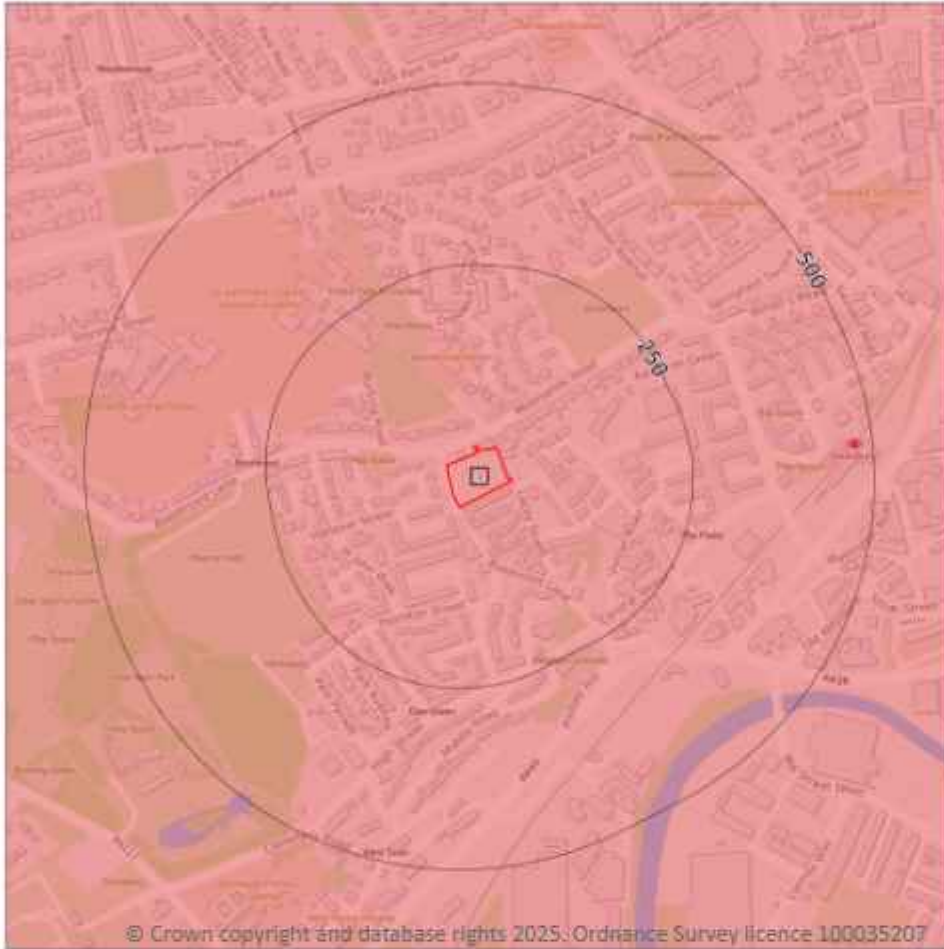
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 42 >](#)

ID	Location	Designation	Description
1	413m SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

## Bedrock aquifer



### 5.2 Bedrock aquifer

Records within 500m

1

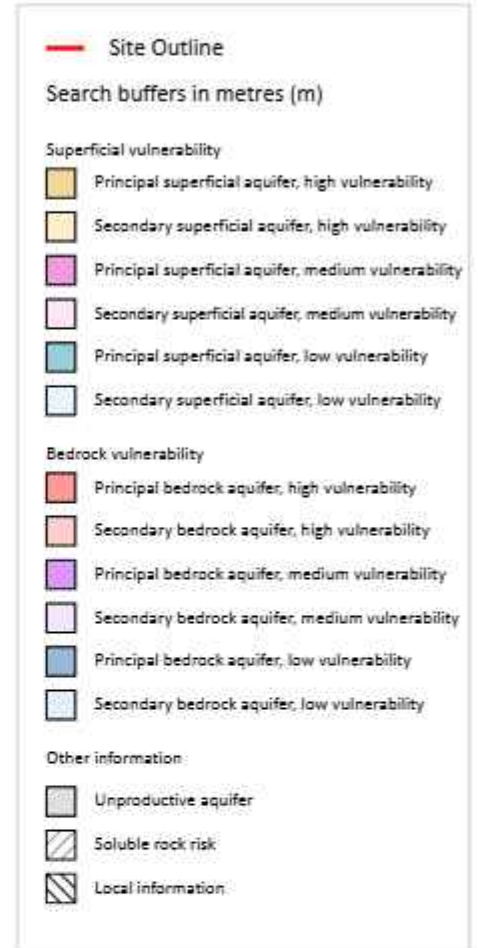
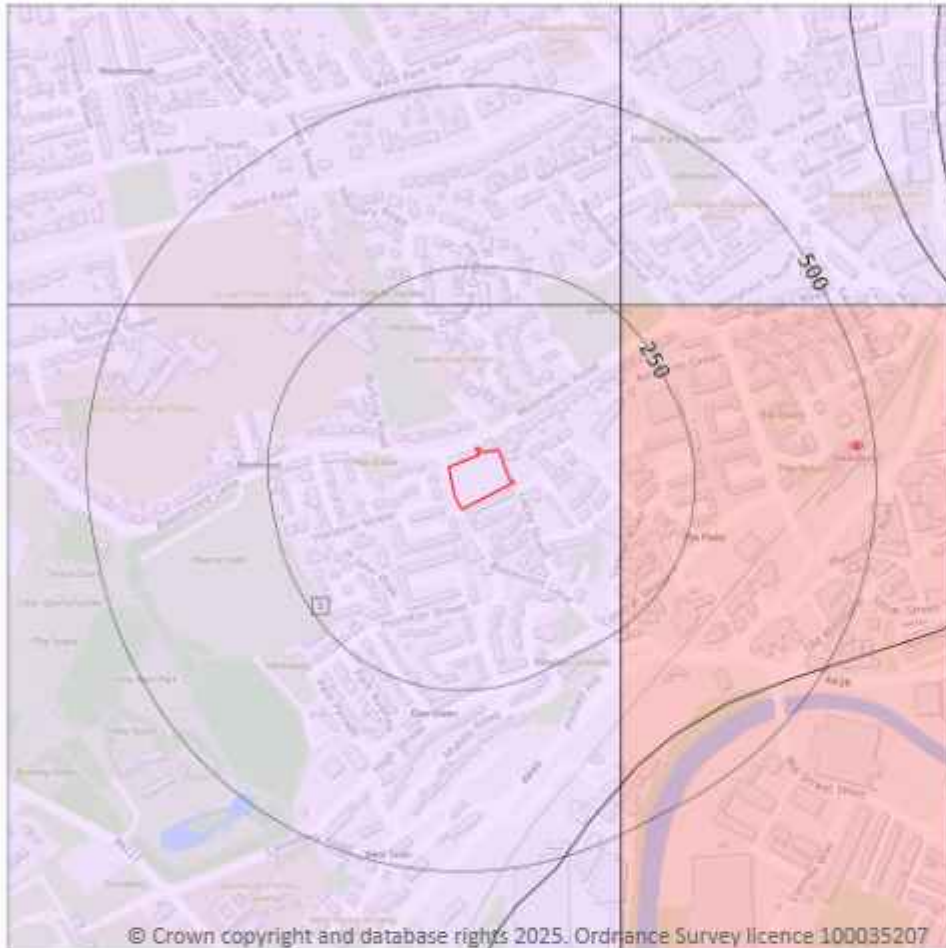
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 43](#) >

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

## Groundwater vulnerability



### 5.3 Groundwater vulnerability

Records within 50m

1

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on [page 44](#) >

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300- 550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: No Data	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures

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

## 5.4 Groundwater vulnerability- soluble rock risk

<b>Records on site</b>	<b>0</b>
------------------------	----------

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

*This data is sourced from the British Geological Survey and the Environment Agency.*

## 5.5 Groundwater vulnerability- local information

<b>Records on site</b>	<b>0</b>
------------------------	----------

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk) ↗.

*This data is sourced from the British Geological Survey and the Environment Agency.*

## Abstractions and Source Protection Zones



### 5.6 Groundwater abstractions

Records within 2000m

25

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 46 >](#)

ID	Location	Details	
-	927m NE	Status: Historical Licence No: 2/27/13/046 Details: General use relating to Secondary Category (High Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: JOSHUA ELLIS & COMPANY LIMITED Easting: 424300 Northing: 422600	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -
-	927m NE	Status: Historical Licence No: 2/27/13/046 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: JOSHUA ELLIS & COMPANY LIMITED Easting: 424300 Northing: 422600	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -
-	927m NE	Status: Historical Licence No: 2/27/13/046 Details: Process water Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: JOSHUA ELLIS & COMPANY LIMITED Easting: 424300 Northing: 422600	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -
-	927m NE	Status: Historical Licence No: 2/27/13/046 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: JOSHUA ELLIS & COMPANY LIMITED Easting: 424300 Northing: 422600	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -

ID	Location	Details	
-	927m NE	Status: Historical Licence No: 2/27/13/046 Details: General use relating to Secondary Category (High Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: JOSHUA ELLIS & COMPANY LIMITED Easting: 424300 Northing: 422600	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -
-	927m NE	Status: Historical Licence No: 2/27/13/046 Details: Process water Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: JOSHUA ELLIS & COMPANY LIMITED Easting: 424300 Northing: 422600	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -
-	1186m SE	Status: Active Licence No: 2/27/13/169 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: THOMAS CHADWICK & SONS LTD Easting: 424900 Northing: 421200	Annual Volume (m <sup>3</sup> ): 140000 Max Daily Volume (m <sup>3</sup> ): 576 Original Application No: 6451 Original Start Date: 26/01/1993 Expiry Date: - Issue No: 100 Version Start Date: 25/04/1997 Version End Date: -
-	1186m SE	Status: Historical Licence No: 2/27/13/169 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: THOMAS CHADWICK & SONS LIMITED Easting: 424900 Northing: 421200	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 26/01/1993 Expiry Date: - Issue No: 100 Version Start Date: 25/04/1997 Version End Date: -

ID	Location	Details	
-	1235m E	Status: Active Licence No: 2/27/13/169 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: THOMAS CHADWICK & SONS LTD Easting: 425000 Northing: 421300	Annual Volume (m <sup>3</sup> ): 140000 Max Daily Volume (m <sup>3</sup> ): 576 Original Application No: 6451 Original Start Date: 26/01/1993 Expiry Date: - Issue No: 100 Version Start Date: 25/04/1997 Version End Date: -
-	1235m E	Status: Historical Licence No: 2/27/13/169 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: THOMAS CHADWICK & SONS LIMITED Easting: 425000 Northing: 421300	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 26/01/1993 Expiry Date: - Issue No: 100 Version Start Date: 25/04/1997 Version End Date: -
-	1296m S	Status: Historical Licence No: 2/27/13/226 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: CALDER DYEING LTD Easting: 424090 Northing: 420460	Annual Volume (m <sup>3</sup> ): 75000 Max Daily Volume (m <sup>3</sup> ): 330 Original Application No: - Original Start Date: 19/10/2007 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 19/10/2007 Version End Date: -
-	1296m S	Status: Historical Licence No: 2/27/13/226/R01 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: CALDER DYEING LTD Easting: 424090 Northing: 420460	Annual Volume (m <sup>3</sup> ): 75000 Max Daily Volume (m <sup>3</sup> ): 330 Original Application No: - Original Start Date: 01/04/2015 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/04/2015 Version End Date: -

ID	Location	Details	
-	1306m S	Status: Active Licence No: 2/27/13/226/R01 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: CALDER DYEING LTD Easting: 424093 Northing: 420451	Annual Volume (m <sup>3</sup> ): 115000 Max Daily Volume (m <sup>3</sup> ): 500 Original Application No: NPS/WR/033441 Original Start Date: 01/04/2015 Expiry Date: 31/03/2027 Issue No: 2 Version Start Date: 15/05/2020 Version End Date: -
-	1431m SW	Status: Active Licence No: 2/27/13/200 Details: General Washing/Process Washing Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - RAVENSTHORPE - DEWSBURY Data Type: Point Name: Ly Manufacturing Ltd Easting: 423080 Northing: 420470	Annual Volume (m <sup>3</sup> ): 28800 Max Daily Volume (m <sup>3</sup> ): 960 Original Application No: NPS/WR/043879 Original Start Date: 23/06/1999 Expiry Date: - Issue No: 104 Version Start Date: 20/02/2025 Version End Date: -
-	1431m SW	Status: Historical Licence No: 2/27/13/200 Details: General Washing/Process Washing Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: WILLIAM S GRAHAM LIMITED Easting: 423080 Northing: 420470	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 23/06/1999 Expiry Date: - Issue No: 100 Version Start Date: 23/06/1999 Version End Date: -
-	1621m NW	Status: Historical Licence No: 2/27/13/189 Details: Evaporative Cooling Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: MORTON INTERNATIONAL Easting: 422430 Northing: 422700	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 30/04/1997 Expiry Date: 31/12/2006 Issue No: 100 Version Start Date: 30/04/1997 Version End Date: -
-	1621m NW	Status: Historical Licence No: 2/27/13/189 Details: Evaporative Cooling Direct Source: GROUNDWATERS Point: BOREHOLE-COAL MEASURES-DEWSBURY Data Type: Point Name: RHOM & HAAS (UK) LTD Easting: 422430 Northing: 422700	Annual Volume (m <sup>3</sup> ): 270000 Max Daily Volume (m <sup>3</sup> ): 725 Original Application No: - Original Start Date: 30/04/1997 Expiry Date: 31/12/2006 Issue No: 101 Version Start Date: 02/05/2000 Version End Date: -

ID	Location	Details
-	1796m NW	Status: Historical Licence No: 2/27/13/193 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: THOMAS CARR LIMITED C/O BERNARD KAYE Easting: 422750 Northing: 423260 Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 04/03/1998 Expiry Date: 31/12/2008 Issue No: 100 Version Start Date: 04/03/1998 Version End Date: -
-	1796m NW	Status: Historical Licence No: 2/27/13/193 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - STAINCLIFFE DEWSBURY Data Type: Point Name: THOMAS CARR LTD Easting: 422750 Northing: 423260 Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 04/03/1998 Expiry Date: 31/12/2008 Issue No: 100 Version Start Date: 04/03/1998 Version End Date: -
-	1959m SW	Status: Historical Licence No: 2/27/13/202 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - DEWSBURY - COAL MEASURES Data Type: Point Name: RIVERSTONE SPINNING LTD Easting: 422620 Northing: 420140 Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 24/04/2000 Expiry Date: 31/12/2005 Issue No: 2 Version Start Date: 23/04/2002 Version End Date: -
-	1959m SW	Status: Historical Licence No: 2/27/13/218 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - DEWSBURY - COAL MEASURES Data Type: Point Name: ULSTER YARNS LTD Easting: 422620 Northing: 420140 Annual Volume (m <sup>3</sup> ): 100000 Max Daily Volume (m <sup>3</sup> ): 500 Original Application No: - Original Start Date: 01/01/2006 Expiry Date: 31/12/2010 Issue No: 2 Version Start Date: 23/03/2007 Version End Date: -

ID	Location	Details	
-	1959m SW	Status: Historical Licence No: NE/027/0013/005 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE AT RAVENSTHORPE MILLS, DEWSBURY Data Type: Point Name: ULSTER YARNS LTD Easting: 422620 Northing: 420140	Annual Volume (m <sup>3</sup> ): 50000 Max Daily Volume (m <sup>3</sup> ): 250 Original Application No: - Original Start Date: 01/01/2011 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/01/2011 Version End Date: -
-	1959m SW	Status: Historical Licence No: NE/027/0013/005 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - RAVENSTHORPE MILLS, DEWSBURY Data Type: Point Name: ULSTER YARNS LTD Easting: 422620 Northing: 420140	Annual Volume (m <sup>3</sup> ): 50000 Max Daily Volume (m <sup>3</sup> ): 250 Original Application No: - Original Start Date: 01/01/2011 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/01/2011 Version End Date: -
-	1968m NW	Status: Historical Licence No: 2/27/13/193 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: THOMAS CARR LIMITED C/O BERNARD KAYE Easting: 422650 Northing: 423400	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 04/03/1998 Expiry Date: 31/12/2008 Issue No: 100 Version Start Date: 04/03/1998 Version End Date: -
-	1968m NW	Status: Historical Licence No: 2/27/13/193 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - STAINCLIFFE DEWSBURY Data Type: Point Name: THOMAS CARR LTD Easting: 422650 Northing: 423400	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 04/03/1998 Expiry Date: 31/12/2008 Issue No: 100 Version Start Date: 04/03/1998 Version End Date: -

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



## 5.7 Surface water abstractions

Records within 2000m

12

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 46 >](#)

ID	Location	Details	
-	767m SE	Status: Historical Licence No: 2/27/13/129 Details: Boiler Feed Direct Source: SURFACE WATER Point: RIVER CALDER Data Type: Point Name: ARONSTEAD LIMITED Easting: 424510 Northing: 421360	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 24/02/1971 Expiry Date: - Issue No: 100 Version Start Date: 16/03/1978 Version End Date: -
-	847m SE	Status: Active Licence No: 2/27/13/163 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER CALDER - DEWSBURY Data Type: Point Name: Henry Day and Sons Ltd Easting: 424560 Northing: 421290	Annual Volume (m <sup>3</sup> ): 15000 Max Daily Volume (m <sup>3</sup> ): 90.92 Original Application No: 6210 Original Start Date: 01/06/1989 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2024 Version End Date: -
-	847m SE	Status: Historical Licence No: 2/27/13/163 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER CALDER Data Type: Point Name: HENRY DAY & SONS LTD Easting: 424560 Northing: 421290	Annual Volume (m <sup>3</sup> ): 15000 Max Daily Volume (m <sup>3</sup> ): 90.92 Original Application No: - Original Start Date: 01/06/1989 Expiry Date: - Issue No: 100 Version Start Date: 01/06/1989 Version End Date: -

ID	Location	Details	
-	1013m SE	Status: Historical Licence No: 2/27/13/191 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER CALDER - DEWSBURY X 2 ABSTRACTION POINTS Data Type: Point Name: CALDER MASONARY Easting: 424700 Northing: 421200	Annual Volume (m <sup>3</sup> ): 9720 Max Daily Volume (m <sup>3</sup> ): 36 Original Application No: 6812 Original Start Date: 23/05/1997 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2008 Version End Date: -
-	1013m SE	Status: Historical Licence No: 2/27/13/191 Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER CALDER Data Type: Point Name: CALDER MASONARY Easting: 424700 Northing: 421200	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 23/05/1997 Expiry Date: - Issue No: 100 Version Start Date: 23/05/1997 Version End Date: -
-	1383m SW	Status: Active Licence No: 2/27/13/211/R01 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER CALDER-RAVENSING MILLS-RAVENSTHORPE Data Type: Point Name: Ly Manufacturing Ltd Easting: 423140 Northing: 420493	Annual Volume (m <sup>3</sup> ): 350000 Max Daily Volume (m <sup>3</sup> ): 960 Original Application No: NPS/WR/043877 Original Start Date: 01/04/2015 Expiry Date: 31/03/2027 Issue No: 3 Version Start Date: 20/02/2025 Version End Date: -
-	1385m SW	Status: Historical Licence No: 2/27/13/211 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER CALDER-RAVENSING MILLS-RAVENSTHORPE Data Type: Point Name: Lawton Yarns Ltd Easting: 423140 Northing: 420490	Annual Volume (m <sup>3</sup> ): 350000 Max Daily Volume (m <sup>3</sup> ): 960 Original Application No: - Original Start Date: 21/11/2002 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 06/08/2014 Version End Date: -



ID	Location	Details	
-	1483m S	Status: Historical Licence No: 2/27/13/230 Details: Mineral Washing Direct Source: SURFACE WATER Point: RIVER CALDER - DEWSBURY Data Type: Point Name: LAFARGE AGGREGATES LTD Easting: 423890 Northing: 420240	Annual Volume (m <sup>3</sup> ): 680000 Max Daily Volume (m <sup>3</sup> ): 2520 Original Application No: - Original Start Date: 07/07/2008 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 26/09/2013 Version End Date: -
-	1483m S	Status: Historical Licence No: 2/27/13/230 Details: Dust Suppression Direct Source: SURFACE WATER Point: RIVER CALDER - DEWSBURY Data Type: Point Name: LAFARGE AGGREGATES LTD Easting: 423890 Northing: 420240	Annual Volume (m <sup>3</sup> ): 680000 Max Daily Volume (m <sup>3</sup> ): 2520 Original Application No: - Original Start Date: 07/07/2008 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 26/09/2013 Version End Date: -
-	1842m SW	Status: Historical Licence No: 2/27/13/179 Details: Non-Evaporative Cooling Direct Source: SURFACE WATER Point: RIVER CALDER - THORNHILL POWER STATION - DEWSBURY Data Type: Point Name: Canal and River Trust Easting: 422830 Northing: 420140	Annual Volume (m <sup>3</sup> ): 25842000 Max Daily Volume (m <sup>3</sup> ): 70800 Original Application No: 6708 Original Start Date: 22/04/1996 Expiry Date: - Issue No: 101 Version Start Date: 21/01/2008 Version End Date: -
-	1842m SW	Status: Historical Licence No: 2/27/13/179 Details: Non-Evaporative Cooling Direct Source: SURFACE WATER Point: RIVER CALDER Data Type: Point Name: BRITISH WATERWAYS Easting: 422830 Northing: 420140	Annual Volume (m <sup>3</sup> ): 25842000 Max Daily Volume (m <sup>3</sup> ): 70800 Original Application No: - Original Start Date: 22/04/1996 Expiry Date: - Issue No: 100 Version Start Date: 28/08/1996 Version End Date: -
-	1952m NE	Status: Historical Licence No: 2/27/13/206 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: BATLEY BECK Data Type: Point Name: CULLINGWORTH SUMMERS & CO LTD Easting: 424810 Northing: 423490	Annual Volume (m <sup>3</sup> ): 11500 Max Daily Volume (m <sup>3</sup> ): 60 Original Application No: - Original Start Date: 21/08/2001 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 23/05/2005 Version End Date: -

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

## 5.8 Potable abstractions

**Records within 2000m**

**0**

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

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

## 5.9 Source Protection Zones

**Records within 500m**

**0**

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

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

## 5.10 Source Protection Zones (confined aquifer)

**Records within 500m**

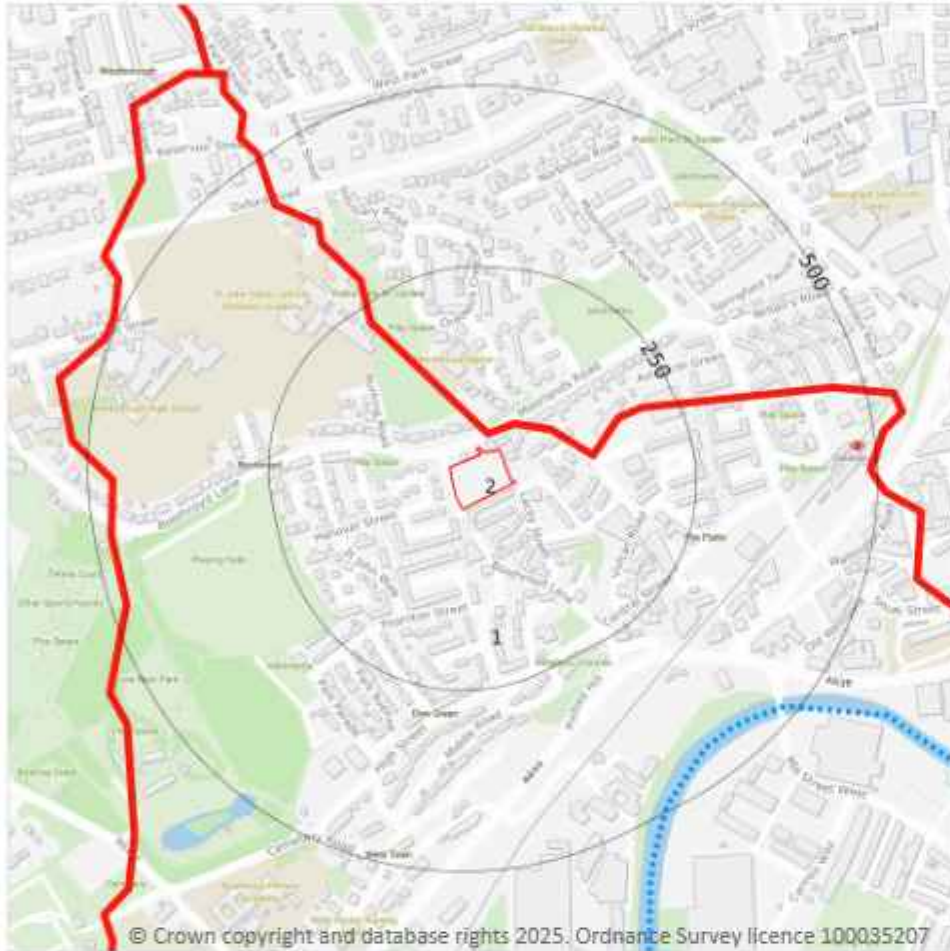
**0**

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

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



## 6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

### 6.1 Water Network (OS MasterMap)

Records within 250m

0

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

*This data is sourced from the Ordnance Survey.*

### 6.2 Surface water features

Records within 250m

0

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

*This data is sourced from the Ordnance Survey.*

### 6.3 WFD Surface water body catchments

**Records on site**

**1**

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on [page 57 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River	Calder from River Colne to River Chald	GB104027062631	Calder Lower	Aire and Calder

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

### 6.4 WFD Surface water bodies

**Records identified**

**1**

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on [page 57 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
5	451m SE	River	Calder from River Colne to River Chald	<a href="#">GB104027062631</a> ↗	Moderate	Fail	Moderate	2019

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



## 6.5 WFD Groundwater bodies

Records on site

1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on [page 57 >](#)

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	On site	Aire & Calder Carb Limestone / Millstone Grit / Coal Measures.	<a href="#">GB40402G700400 ↗</a>	Poor	Poor	Good	2019

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

## 7 River and coastal flooding

### 7.1 Risk of flooding from rivers and the sea

Records within 50m

0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

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

### 7.2 Historical Flood Events

Records within 250m

0

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

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

### 7.3 Flood Defences

Records within 250m

0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

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

## 7.4 Areas Benefiting from Flood Defences

Records within 250m

0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

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

## 7.5 Flood Storage Areas

Records within 250m

0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

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

## River and coastal flooding - Flood Zones

### 7.6 Flood Zone 2

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

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

### 7.7 Flood Zone 3

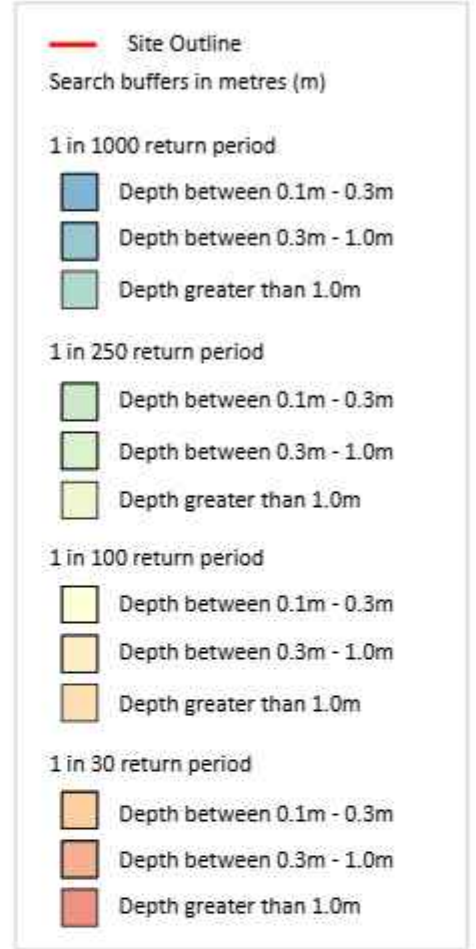
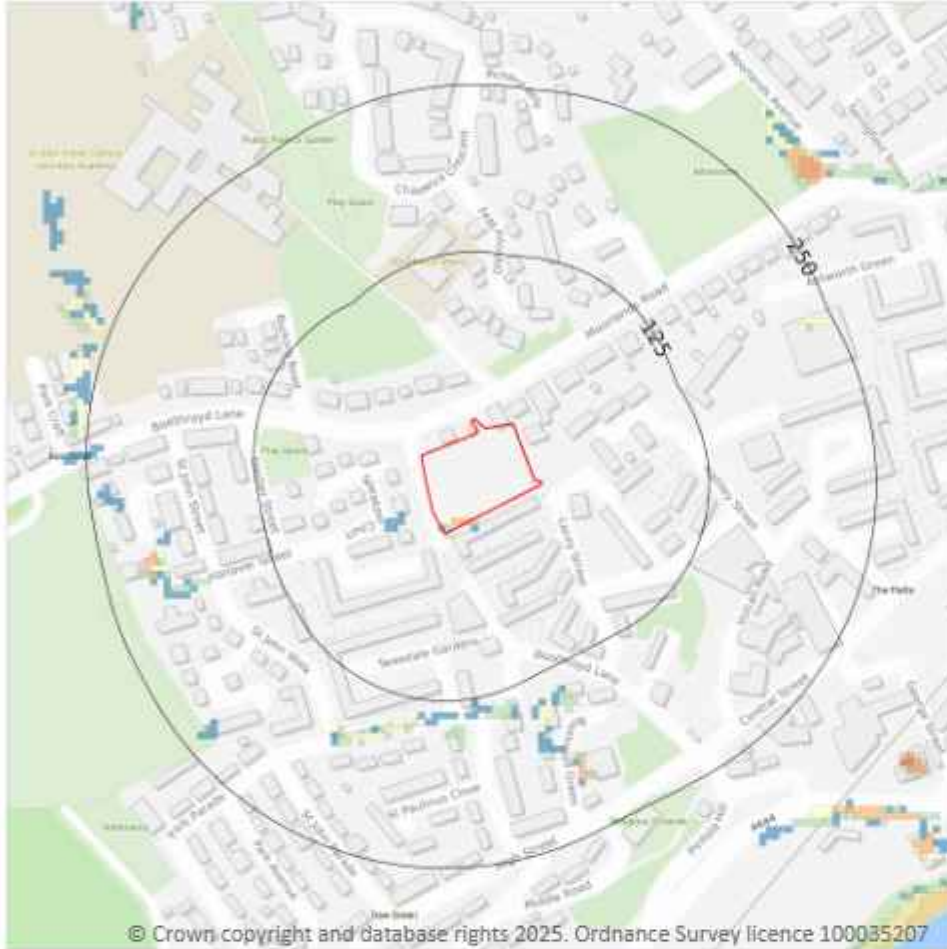
Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

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

## 8 Surface water flooding



### 8.1 Surface water flooding

**Highest risk on site**

**1 in 30 year, 0.1m - 0.3m**

**Highest risk within 50m**

**1 in 30 year, 0.1m - 0.3m**

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on [page 63](#) >

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Between 0.3m and 1.0m
1 in 250 year	Between 0.1m and 0.3m
1 in 100 year	Between 0.1m and 0.3m
1 in 30 year	Between 0.1m and 0.3m

*This data is sourced from Ambiental Risk Analytics.*

## 9 Groundwater flooding



— Site Outline  
Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

### 9.1 Groundwater flooding

**Highest risk on site**

**Negligible**

**Highest risk within 50m**

**Negligible**

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on [page 65](#) >

*This data is sourced from Ambiental Risk Analytics.*

## 10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- + Local Nature Reserves (LNR)
- % Green Belt

### 10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

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

## 10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

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

## 10.3 Special Areas of Conservation (SAC)

Records within 2000m

0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

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

## 10.4 Special Protection Areas (SPA)

Records within 2000m

0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

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

## 10.5 National Nature Reserves (NNR)

Records within 2000m

0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

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



## 10.6 Local Nature Reserves (LNR)

**Records within 2000m****2**

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

Features are displayed on the Environmental designations map on [page 66](#) >

ID	Location	Name	Data source
3	1184m SW	Lower Spen Wildlife Area	Natural England
-	1448m SE	Sparrow Wood	Natural England

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

## 10.7 Designated Ancient Woodland

**Records within 2000m****0**

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

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

## 10.8 Biosphere Reserves

**Records within 2000m****0**

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

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

## 10.9 Forest Parks

**Records within 2000m****0**

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

*This data is sourced from the Forestry Commission.*



## 10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

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

## 10.11 Green Belt

Records within 2000m

3

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

Features are displayed on the Environmental designations map on [page 66 >](#)

ID	Location	Name	Local Authority name
1	989m NE	South and West Yorkshire Green Belt	Kirklees
2	1144m W	South and West Yorkshire Green Belt	Kirklees
5	1510m SE	South and West Yorkshire Green Belt	Kirklees

*This data is sourced from the Ministry of Housing, Communities and Local Government.*

## 10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

*This data is sourced from Natural England.*

## 10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

*This data is sourced from Natural England and Natural Resources Wales.*



## 10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

*This data is sourced from Natural England.*

## 10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

*This data is sourced from Natural England.*

## 10.16 Nitrate Vulnerable Zones

Records within 2000m

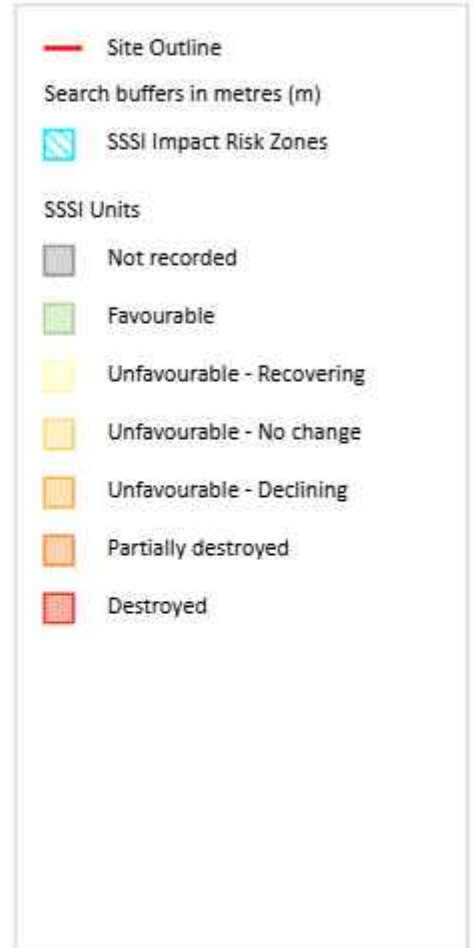
1

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
413m W	Spenn Beck from Source to River Calder NVZ	Surface Water	271	Existing

*This data is sourced from Natural England and Natural Resources Wales.*

## SSSI Impact Zones and Units



### 10.17 SSSI Impact Risk Zones

**Records on site** **1**

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on [page 71](#) >

ID	Location	Type of developments requiring consultation
1	On site	<a href="https://irz.geodata.org.uk/IRZ/step2.html?irzcode=0000000630000&amp;notes=&amp;location=424739,422878%20(IRZ%20polygon%20centre)">https://irz.geodata.org.uk/IRZ/step2.html?irzcode=0000000630000&amp;notes=&amp;location=424739,422878%20(IRZ%20polygon%20centre)</a>

*This data is sourced from Natural England.*

## 10.18 SSSI Units

Records within 2000m

0

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

*This data is sourced from Natural England and Natural Resources Wales.*

## 11 Visual and cultural designations

### 11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

### 11.2 Area of Outstanding Natural Beauty

Records within 250m

0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

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

### 11.3 National Parks

Records within 250m

0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

*This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.*

### 11.4 Listed Buildings

Records within 250m

0

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.



*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

## 11.5 Conservation Areas

Records within 250m

0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

## 11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

## 11.7 Registered Parks and Gardens

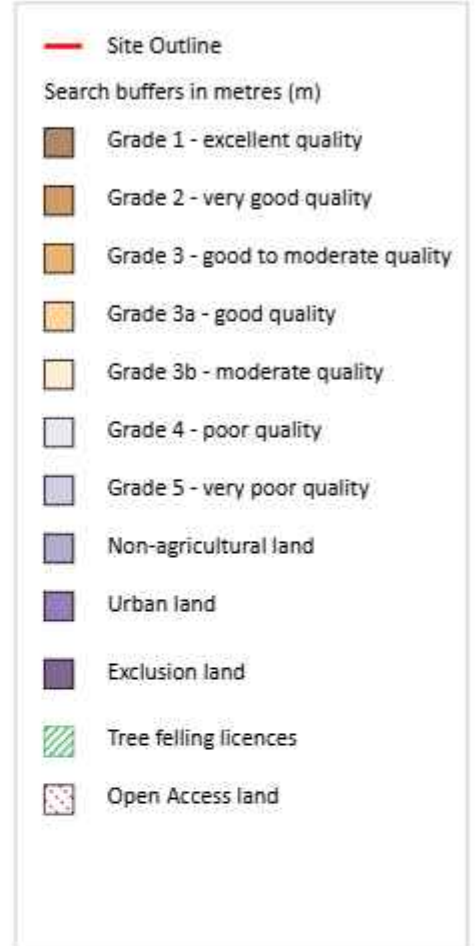
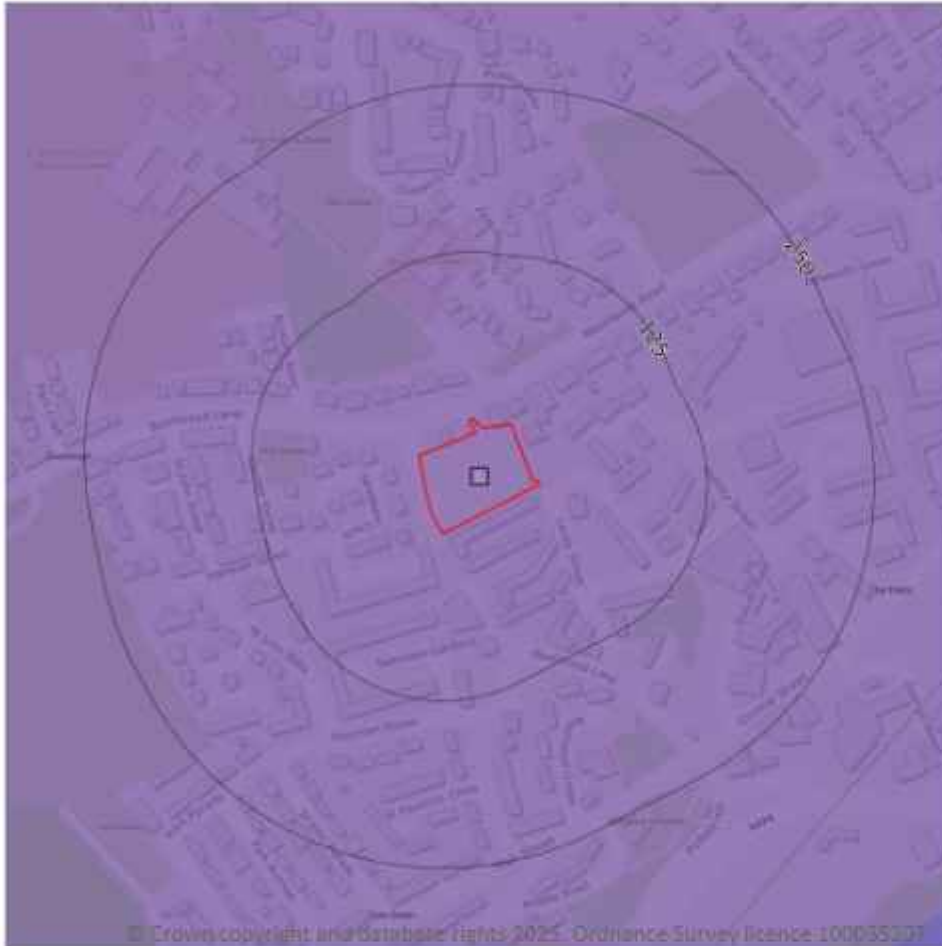
Records within 250m

0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

## 12 Agricultural designations



### 12.1 Agricultural Land Classification

Records within 250m

1

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on [page 75](#) >

ID	Location	Classification	Description
1	On site	Urban	Non-agricultural/no quality assigned

*This data is sourced from Natural England.*

## 12.2 Open Access Land

Records within 250m

0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

*This data is sourced from Natural England and Natural Resources Wales.*

## 12.3 Tree Felling Licences

Records within 250m

0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

*This data is sourced from the Forestry Commission.*

## 12.4 Environmental Stewardship Schemes

Records within 250m

0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

*This data is sourced from Natural England.*

## 12.5 Countryside Stewardship Schemes

Records within 250m

0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

*This data is sourced from Natural England.*

## 13 Habitat designations

### 13.1 Priority Habitat Inventory

Records within 250m

0

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

*This data is sourced from Natural England.*

### 13.2 Habitat Networks

Records within 250m

0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

*This data is sourced from Natural England.*

### 13.3 Open Mosaic Habitat

Records within 250m

0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

*This data is sourced from Natural England.*

### 13.4 Limestone Pavement Orders

Records within 250m

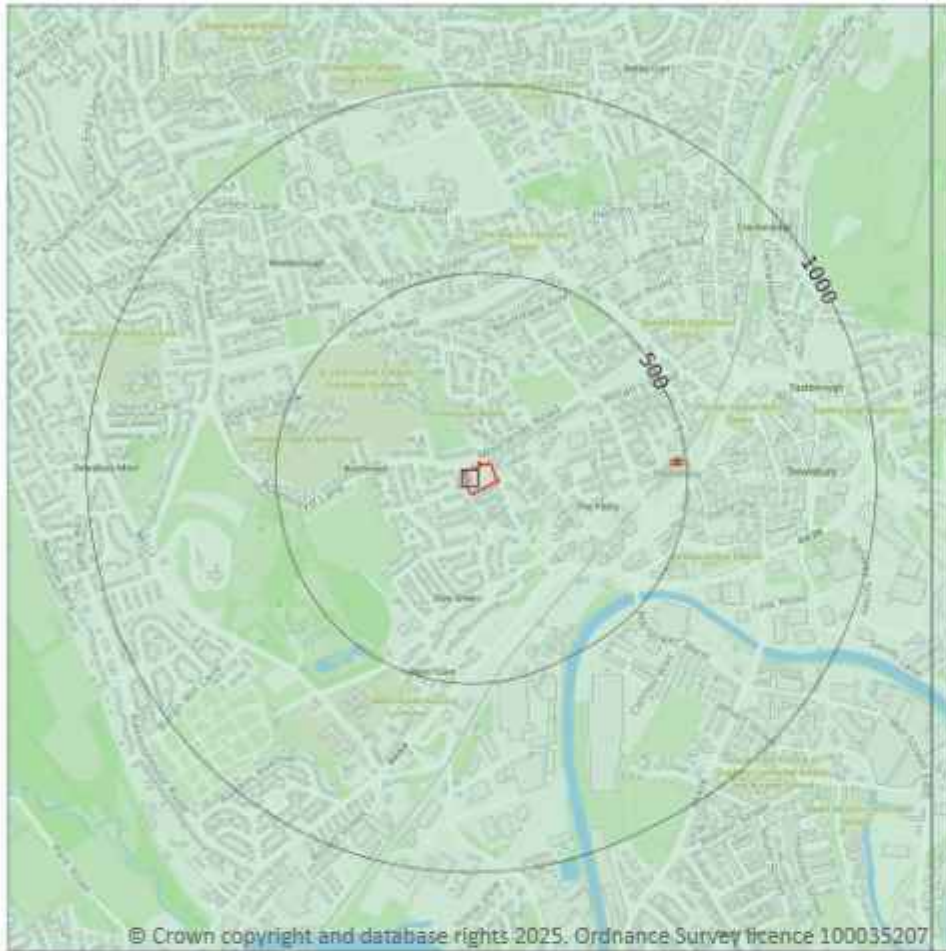
0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

*This data is sourced from Natural England.*



## 14 Geology 1:10,000 scale - Availability



— Site Outline  
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

### 14.1 10k Availability

Records within 500m

1

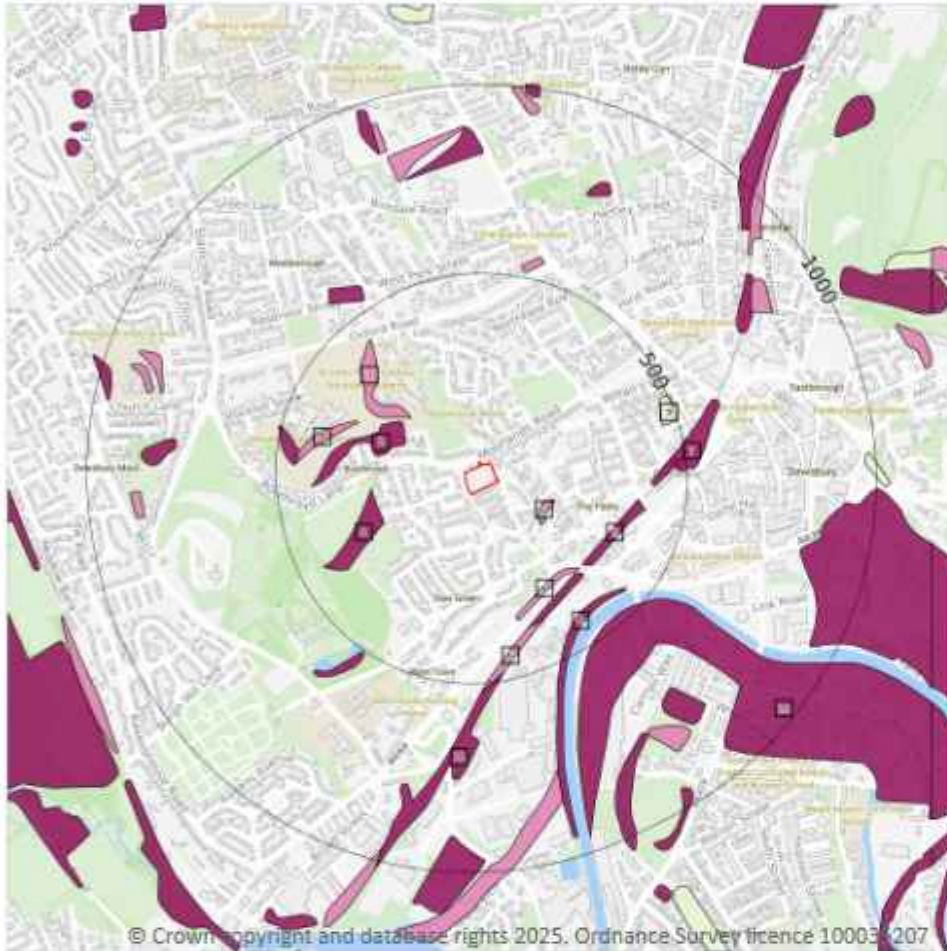
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on [page 78 >](#)

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SE22SW

*This data is sourced from the British Geological Survey.*

## Geology 1:10,000 scale - Artificial and made ground



— Site Outline  
Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

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### 14.2 Artificial and made ground (10k)

Records within 500m

15

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 79 >](#)

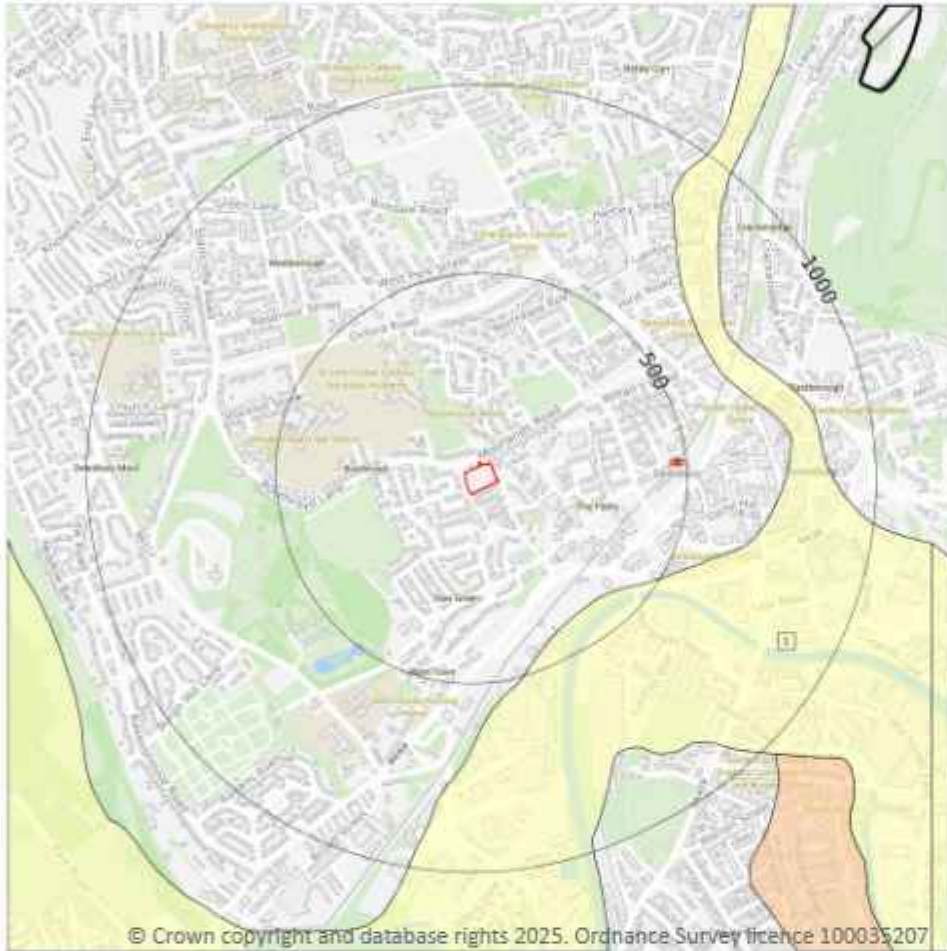
ID	Location	LEX Code	Description	Rock description
1	130m SE	WGR-VOID	Worked Ground (Undivided)	Void
2	174m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	203m NW	WGR-VOID	Worked Ground (Undivided)	Void
4	239m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit



ID	Location	LEX Code	Description	Rock description
A	290m SE	WGR-VOID	Worked Ground (Undivided)	Void
B	310m NW	WGR-VOID	Worked Ground (Undivided)	Void
5	312m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
A	319m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	382m SE	WGR-VOID	Worked Ground (Undivided)	Void
7	406m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
B	407m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
B	443m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
9	458m E	WMGR-ARTDP	Infilled Ground	Artificial Deposit
10	473m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
11	479m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

*This data is sourced from the British Geological Survey.*

## Geology 1:10,000 scale - Superficial



- Site Outline
- Search buffers in metres (m)
- Landslip (10k)
- Superficial geology (10k)  
Please see table for more details.

### 14.3 Superficial geology (10k)

Records within 500m

1

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 81](#) >

ID	Location	LEX Code	Description	Rock description
1	407m SE	ALV-XCSV	Alluvium - Clay, Sand And Gravel	Clay, Sand And Gravel

*This data is sourced from the British Geological Survey.*

## 14.4 Landslip (10k)

Records within 500m

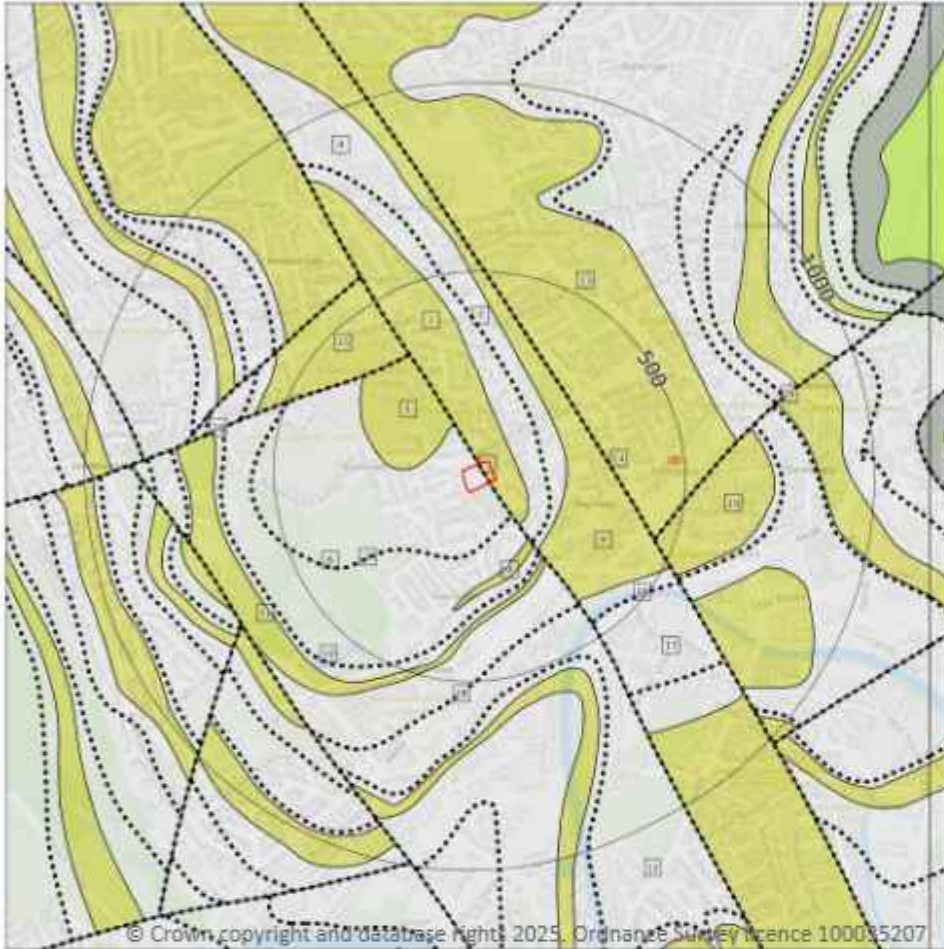
0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

*This data is sourced from the British Geological Survey.*



## Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (10k)

Bedrock geology (10k)  
 Please see table for more details.

### 14.5 Bedrock geology (10k)

Records within 500m

12

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 83](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	ER-SDST	Emley Rock - Sandstone	Langsetian Sub-age
2	On site	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsetian Sub-age
4	63m E	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsetian Sub-age

ID	Location	LEX Code	Description	Rock age
5	88m NW	ER-SDST	Emley Rock - Sandstone	Langsettian Sub-age
8	179m SE	BRSR-SDST	Birstall Rock - Sandstone	Langsettian Sub-age
9	183m E	BRSR-SDST	Birstall Rock - Sandstone	Langsettian Sub-age
11	241m SE	BRSR-SDST	Birstall Rock - Sandstone	Langsettian Sub-age
12	255m SE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
13	268m NE	BRSR-SDST	Birstall Rock - Sandstone	Langsettian Sub-age
15	333m NW	BRSR-SDST	Birstall Rock - Sandstone	Langsettian Sub-age
17	388m SE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
19	448m E	ER-SDST	Emley Rock - Sandstone	Langsettian Sub-age

*This data is sourced from the British Geological Survey.*

## 14.6 Bedrock faults and other linear features (10k)

**Records within 500m**

**9**

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 83](#) >

ID	Location	Category	Description
3	On site	FAULT	Normal fault, inferred; downthrow not specified
6	105m SE	ROCK	Coal seam, inferred
7	129m E	ROCK	Coal seam, inferred
10	224m SE	ROCK	Coal seam, inferred
14	268m NE	FAULT	Normal fault, inferred; downthrow not specified
16	333m NW	FAULT	Normal fault, inferred; downthrow not specified
18	396m SE	ROCK	Coal seam, inferred
20	448m E	FAULT	Normal fault, inferred; downthrow not specified
21	456m SE	ROCK	Coal seam, inferred

*This data is sourced from the British Geological Survey.*



## 15 Geology 1:50,000 scale - Availability



— Site Outline  
Search buffers in metres (m)

Geological map tile

### 15.1 50k Availability

Records within 500m

1

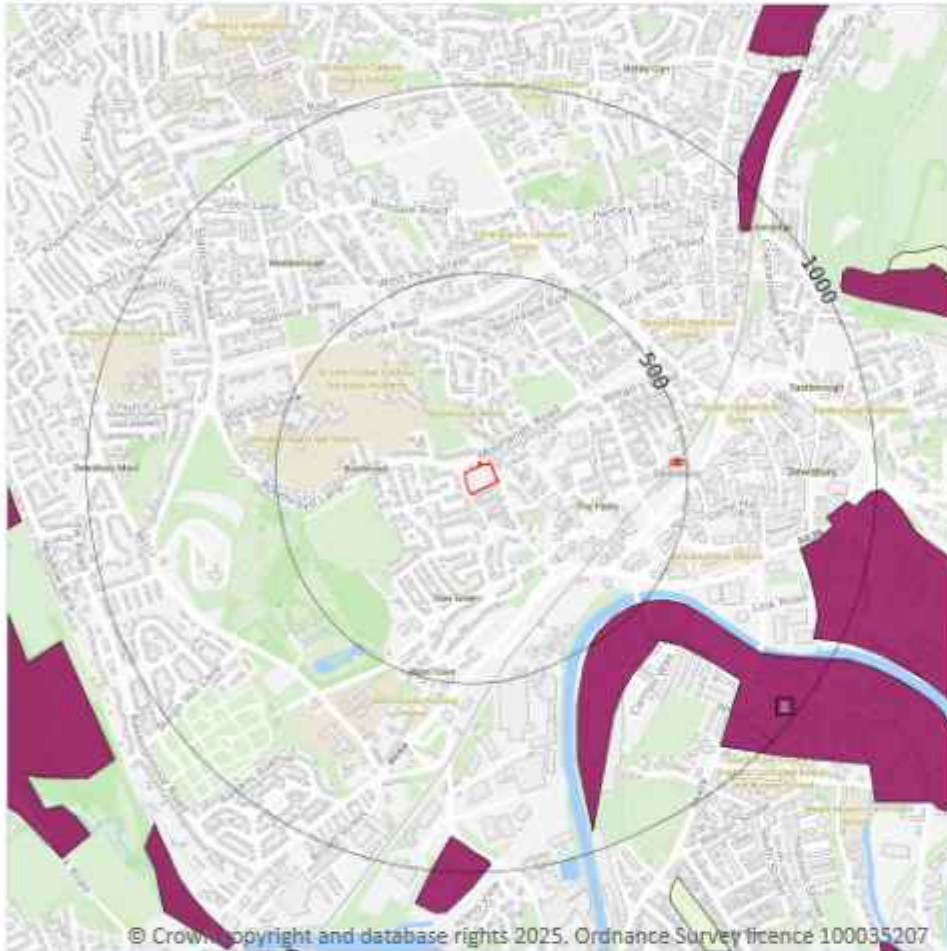
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 85 >](#)

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW077_huddersfield_v4

*This data is sourced from the British Geological Survey.*

## Geology 1:50,000 scale - Artificial and made ground



— Site Outline  
Search buffers in metres (m)

- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

### 15.2 Artificial and made ground (50k)

Records within 500m

1

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on [page 86 >](#)

ID	Location	LEX Code	Description	Rock description
1	472m SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

*This data is sourced from the British Geological Survey.*

### 15.3 Artificial ground permeability (50k)

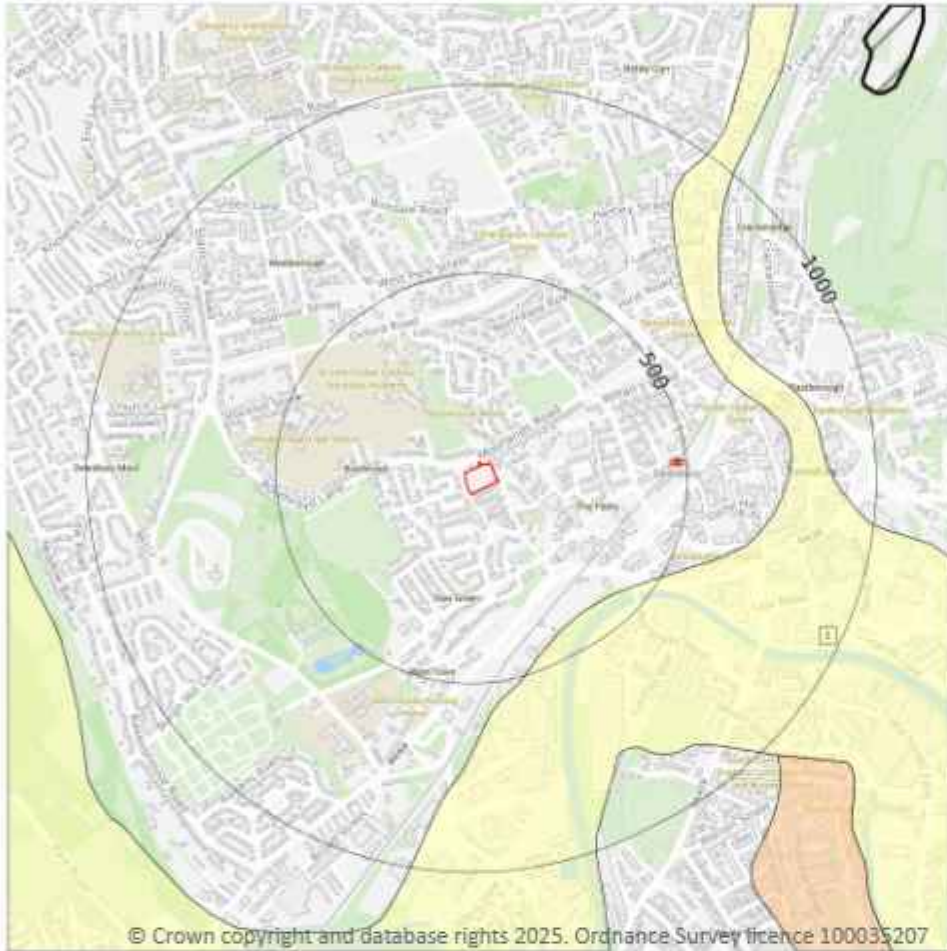
Records within 50m

0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

*This data is sourced from the British Geological Survey.*

## Geology 1:50,000 scale - Superficial



- Site Outline
- Search buffers in metres (m)
- Landslip (50k)
- Superficial geology (50k)  
Please see table for more details.

### 15.4 Superficial geology (50k)

Records within 500m

1

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 88 >](#)

ID	Location	LEX Code	Description	Rock description
1	413m SE	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

*This data is sourced from the British Geological Survey.*

## 15.5 Superficial permeability (50k)

Records within 50m

0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

*This data is sourced from the British Geological Survey.*

## 15.6 Landslip (50k)

Records within 500m

0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

*This data is sourced from the British Geological Survey.*

## 15.7 Landslip permeability (50k)

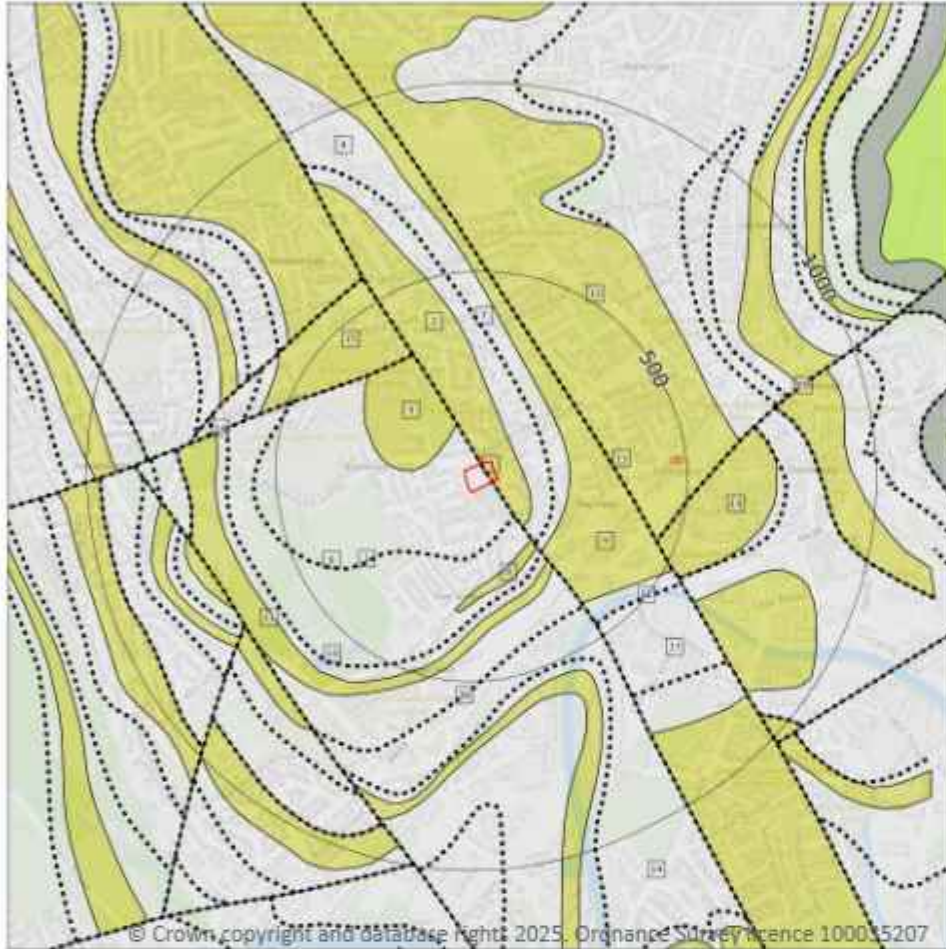
Records within 50m

0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

*This data is sourced from the British Geological Survey.*

## Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

..... Bedrock faults and other linear features (50k)

Bedrock geology (50k)  
 Please see table for more details.

### 15.8 Bedrock geology (50k)

Records within 500m

12

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 90](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
2	On site	ER-SDST	EMLEY ROCK - SANDSTONE	WESTPHALIAN
4	66m NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
5	85m NW	ER-SDST	EMLEY ROCK - SANDSTONE	WESTPHALIAN
8	183m SE	BRSR-SDST	BIRSTALL ROCK - SANDSTONE	WESTPHALIAN
9	188m E	BRSR-SDST	BIRSTALL ROCK - SANDSTONE	WESTPHALIAN
11	254m SE	BRSR-SDST	BIRSTALL ROCK - SANDSTONE	WESTPHALIAN
12	268m NE	BRSR-SDST	BIRSTALL ROCK - SANDSTONE	WESTPHALIAN
14	275m SE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
15	331m NW	BRSR-SDST	BIRSTALL ROCK - SANDSTONE	WESTPHALIAN
17	396m SE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
19	450m E	ER-SDST	EMLEY ROCK - SANDSTONE	WESTPHALIAN

*This data is sourced from the British Geological Survey.*

## 15.9 Bedrock permeability (50k)

<b>Records within 50m</b>	<b>2</b>
---------------------------	----------

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Moderate	Low
On site	Fracture	High	Moderate

*This data is sourced from the British Geological Survey.*

## 15.10 Bedrock faults and other linear features (50k)

<b>Records within 500m</b>	<b>9</b>
----------------------------	----------

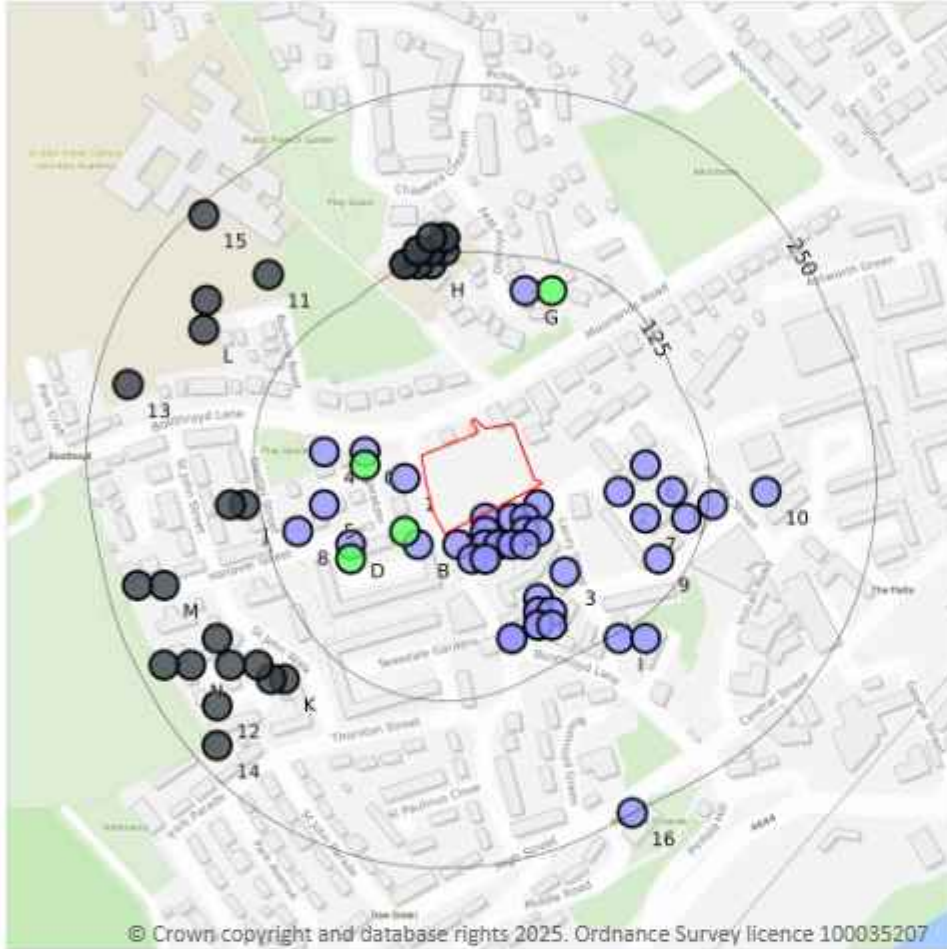
Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 90 >](#)

ID	Location	Category	Description
3	On site	FAULT	<b>Fault, inferred</b>
6	109m SE	ROCK	Coal seam, inferred
7	135m E	ROCK	Coal seam, inferred
10	225m SE	ROCK	Coal seam, inferred
13	268m NE	FAULT	Fault, inferred
16	331m NW	FAULT	Fault, inferred
18	404m SE	ROCK	Coal seam, inferred
20	450m E	FAULT	Fault, inferred
21	463m SE	ROCK	Coal seam, inferred

*This data is sourced from the British Geological Survey.*

## 16 Boreholes



— Site Outline  
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

### 16.1 BGS Boreholes

Records within 250m

78

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on [page 93](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	3m SE	423810 421730	DEWSBURY FLATTS PHASE 2 TP 21	2.0	N	<a href="#">78069</a> ↗
A	12m SE	423790 421710	DEWSBURY FLATTS PHASE 2 TP 19	2.0	N	<a href="#">78067</a> ↗
A	12m SE	423810 421720	DEWSBURY FLATTS PHASE 2 TP 20	2.0	N	<a href="#">78068</a> ↗

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	12m SE	423830 421730	DEWSBURY FLATTS PHASE 2 TP 23	2.0	N	<a href="#">78071</a> ↗
A	13m SE	423850 421740	DEWSBURY FLATTS PHASE 2 TP 24	3.0	N	<a href="#">78072</a> ↗
1	15m W	423750 421760	BOTHROYD LANE DEWSBURY TP 9	2.0	N	<a href="#">78297</a> ↗
A	17m SE	423840 421730	DEWSBURY FLATTS PHASE 2 TP 22	3.0	N	<a href="#">78070</a> ↗
A	21m SE	423810 421710	DEWSBURY FLATTS PHASE 2 TP 5	3.0	N	<a href="#">78053</a> ↗
B	22m SW	423760 421710	BOTHROYD LANE DEWSBURY TP 1	3.0	N	<a href="#">78292</a> ↗
A	26m SE	423800 421700	DEWSBURY FLATTS PHASE 2 TP 1	2.0	N	<a href="#">78049</a> ↗
B	26m SW	423750 421720	BOTHROYD LANE DEWSBURY 1	12.0	N	<a href="#">78288</a> ↗
A	26m SE	423820 421710	DEWSBURY FLATTS PHASE 2 TP 4	3.0	N	<a href="#">78052</a> ↗
A	26m SE	423840 421720	DEWSBURY FLATTS PHASE 2 TP 7	3.0	N	<a href="#">78055</a> ↗
A	30m SE	423810 421700	DEWSBURY FLATTS PHASE 2 TP 2	2.0	N	<a href="#">78050</a> ↗
A	30m SE	423810 421700	DEWSBURY FLATTS PHASE 2 TP 3	2.0	N	<a href="#">78051</a> ↗
A	30m SE	423830 421710	DEWSBURY FLATTS PHASE 2 TP 6	3.0	N	<a href="#">78054</a> ↗
A	30m SE	423850 421720	DEWSBURY FLATTS PHASE 2 TP 9	3.0	N	<a href="#">78057</a> ↗
A	35m SE	423840 421710	DEWSBURY FLATTS PHASE 2 TP 8	3.0	N	<a href="#">78056</a> ↗
C	42m W	423720 421780	BOTHROYD LANE DEWSBURY TP 8	2.0	N	<a href="#">78296</a> ↗
C	43m W	423720 421770	BOTHROYD LANE DEWSBURY R2	30.0	N	<a href="#">78291</a> ↗
2	58m E	423910 421750	DEWSBURY FLATTS PHASE 2 TP 27	2.0	N	<a href="#">78075</a> ↗
D	66m W	423710 421710	BOTHROYD LANE DEWSBURY TP 3	3.0	N	<a href="#">78293</a> ↗
3	66m SE	423870 421690	DEWSBURY FLATTS PHASE 2 TP 14	1.0	N	<a href="#">78062</a> ↗
D	70m SW	423710 421700	BOTHROYD LANE DEWSBURY R1	30.0	N	<a href="#">78290</a> ↗
4	72m W	423690 421780	BOTHROYD LANE DEWSBURY TP 4	2.0	N	<a href="#">78294</a> ↗
E	75m SE	423850 421670	DEWSBURY FLATTS PHASE 2 TP 13	3.0	N	<a href="#">78061</a> ↗
5	78m W	423690 421740	BOTHROYD LANE DEWSBURY TP 7	2.0	N	<a href="#">78295</a> ↗
6	79m E	423930 421770	DEWSBURY FLATTS PHASE 2 TP 34	2.0	N	<a href="#">78082</a> ↗
7	82m E	423930 421730	DEWSBURY FLATTS PHASE 2 TP 28	1.0	N	<a href="#">78076</a> ↗
E	84m SE	423850 421660	DEWSBURY FLATTS PHASE 2 TP 11	3.0	N	<a href="#">78059</a> ↗
E	88m SE	423860 421660	DEWSBURY FLATTS PHASE 2 TP 18	3.0	N	<a href="#">78066</a> ↗



ID	Location	Grid reference	Name	Length	Confidential	Web link
E	93m SE	423830 421640	DEWSBURY FLATTS PHASE 2 TP 15	1.0	N	<a href="#">78063 ↗</a>
E	93m SE	423830 421640	DEWSBURY FLATTS PHASE 2 TP 16	3.0	N	<a href="#">78064 ↗</a>
E	93m SE	423850 421650	DEWSBURY FLATTS PHASE 2 TP 10	2.0	N	<a href="#">78058 ↗</a>
E	93m SE	423850 421650	DEWSBURY FLATTS PHASE 2 TP 12	2.0	N	<a href="#">78060 ↗</a>
E	97m SE	423860 421650	DEWSBURY FLATTS PHASE 2 TP 17	3.0	N	<a href="#">78065 ↗</a>
F	98m E	423950 421750	DEWSBURY FLATTS PHASE 2 TP 33	1.0	N	<a href="#">78081 ↗</a>
G	100m N	423840 421900	DEWSBURY HOSPITAL TP 11	2.0	N	<a href="#">78259 ↗</a>
B	102m W	423670 421720	BOTHROYD LANE DEWSBURY 2	2.0	N	<a href="#">78289 ↗</a>
G	103m N	423860 421900	DEWSBURY HOSPITAL 7	30.0	N	<a href="#">78247 ↗</a>
9	104m SE	423940 421700	DEWSBURY FLATTS PHASE 2 TP 29	2.0	N	<a href="#">78077 ↗</a>
F	111m E	423960 421730	DEWSBURY FLATTS PHASE 2 TP 30	1.0	N	<a href="#">78078 ↗</a>
H	120m N	423770 421920	MOORLANDS ROAD DEWSBURY TP3	-	Y	N/A
H	123m N	423760 421920	MOORLANDS ROAD DEWSBURY BH5	-	Y	N/A
H	127m NW	423750 421920	MOORLANDS ROAD DEWSBURY TP5	-	Y	N/A
H	127m NW	423750 421920	MOORLANDS ROAD DEWSBURY BH6	-	Y	N/A
H	128m N	423780 421930	MOORLANDS ROAD DEWSBURY TP1	-	Y	N/A
F	128m E	423980 421740	DEWSBURY FLATTS PHASE 2 TP 31	2.0	N	<a href="#">78079 ↗</a>
I	129m SE	423910 421640	DEWSBURY FLATTS PHASE 2 TP 25	3.0	N	<a href="#">78073 ↗</a>
H	130m N	423770 421930	MOORLANDS ROAD DEWSBURY BH3	-	Y	N/A
H	133m N	423760 421930	MOORLANDS ROAD DEWSBURY TP4	-	Y	N/A
H	133m N	423760 421930	MOORLANDS ROAD DEWSBURY BH4	-	Y	N/A
H	133m N	423760 421930	MOORLANDS ROAD DEWSBURY BH7	-	Y	N/A
J	137m W	423630 421740	ST JOHNS WALK DEWSBURY TP11	-	Y	N/A
H	138m N	423780 421940	MOORLANDS ROAD DEWSBURY TP2	-	Y	N/A
H	138m N	423780 421940	MOORLANDS ROAD DEWSBURY BH1	-	Y	N/A
H	138m N	423780 421940	MOORLANDS ROAD DEWSBURY BH8	-	Y	N/A
I	139m SE	423930 421640	DEWSBURY FLATTS PHASE 2 TP 26	2.0	N	<a href="#">78074 ↗</a>
H	140m N	423770 421940	MOORLANDS ROAD DEWSBURY BH2	-	Y	N/A

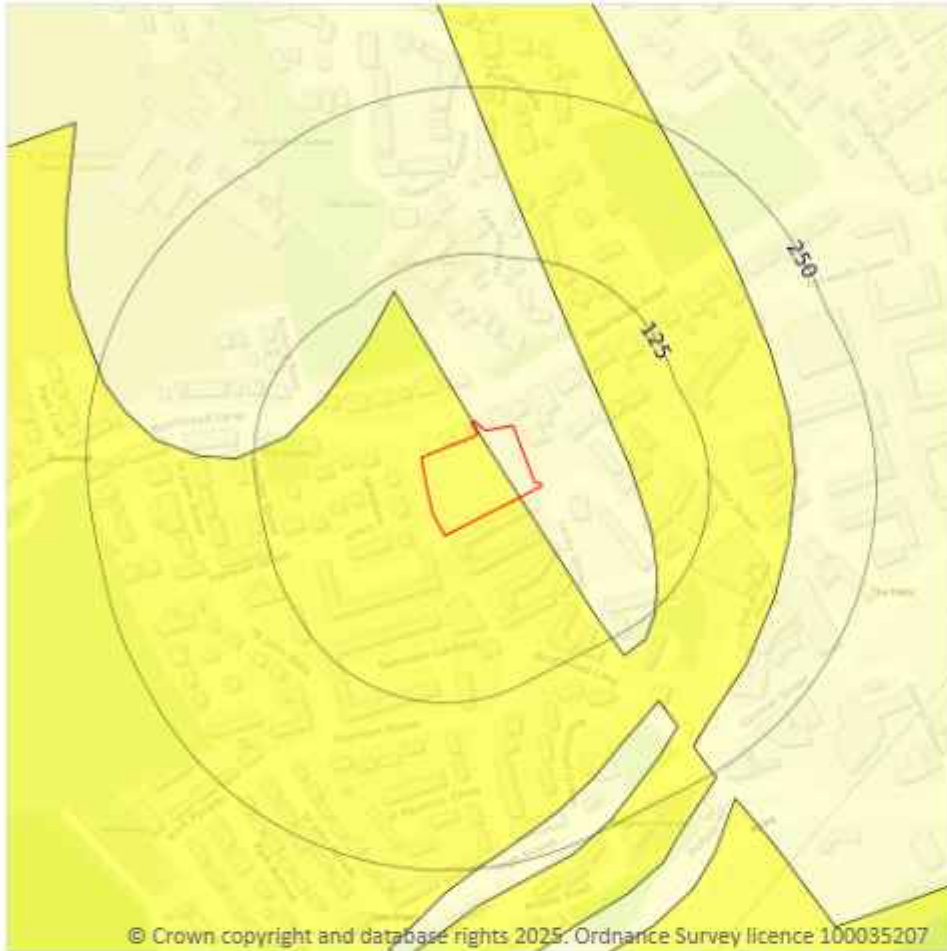


ID	Location	Grid reference	Name	Length	Confidential	Web link
J	147m W	423620 421740	ST JOHNS WALK DEWSBURY TP10	-	Y	N/A
K	162m SW	423660 421610	ST JOHNS WALK DEWSBURY 2	-	Y	N/A
10	168m E	424020 421750	DEWSBURY FLATTS PHASE 2 TP 32	3.0	N	<a href="#">78080 ↗</a>
K	169m SW	423650 421610	ST JOHNS WALK DEWSBURY TP3	-	Y	N/A
K	171m SW	423640 421620	ST JOHNS WALK DEWSBURY TP4	-	Y	N/A
11	177m NW	423648 421912	KIRKLEES BSF - ST JOHN FISHER CATHOLIC SCHOOL BH105	-	Y	N/A
K	187m SW	423610 421640	ST JOHNS WALK DEWSBURY TP6	-	Y	N/A
L	188m NW	423600 421871	KIRKLEES BSF - ST JOHN FISHER CATHOLIC SCHOOL HA107	-	Y	N/A
K	188m SW	423620 421620	ST JOHNS WALK DEWSBURY TP5	-	Y	N/A
L	198m NW	423602 421893	KIRKLEES BSF - ST JOHN FISHER CATHOLIC SCHOOL WS112	-	Y	N/A
M	208m W	423570 421680	ST JOHNS WALK DEWSBURY TP9	-	Y	N/A
12	213m SW	423610 421590	ST JOHNS WALK DEWSBURY TP2	-	Y	N/A
N	214m SW	423590 421620	ST JOHNS WALK DEWSBURY TP7	-	Y	N/A
13	226m W	423543 421830	KIRKLEES BSF - ST JOHN FISHER CATHOLIC SCHOOL HA106	-	Y	N/A
M	228m W	423550 421680	ST JOHNS WALK DEWSBURY TP8	-	Y	N/A
N	232m SW	423570 421620	ST JOHNS WALK DEWSBURY 1	-	Y	N/A
14	232m SW	423610 421560	ST JOHNS WALK DEWSBURY TP1	-	Y	N/A
15	243m NW	423600 421957	KIRKLEES BSF - ST JOHN FISHER CATHOLIC SCHOOL WS107	-	Y	N/A
16	249m SE	423920 421510	MIDDLE ROAD DEWSBURY TP 6	2.0	N	<a href="#">78127 ↗</a>

*This data is sourced from the British Geological Survey.*



## 17 Natural ground subsidence - Shrink swell clays



— Site Outline  
Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

### 17.1 Shrink swell clays

Records within 50m

2

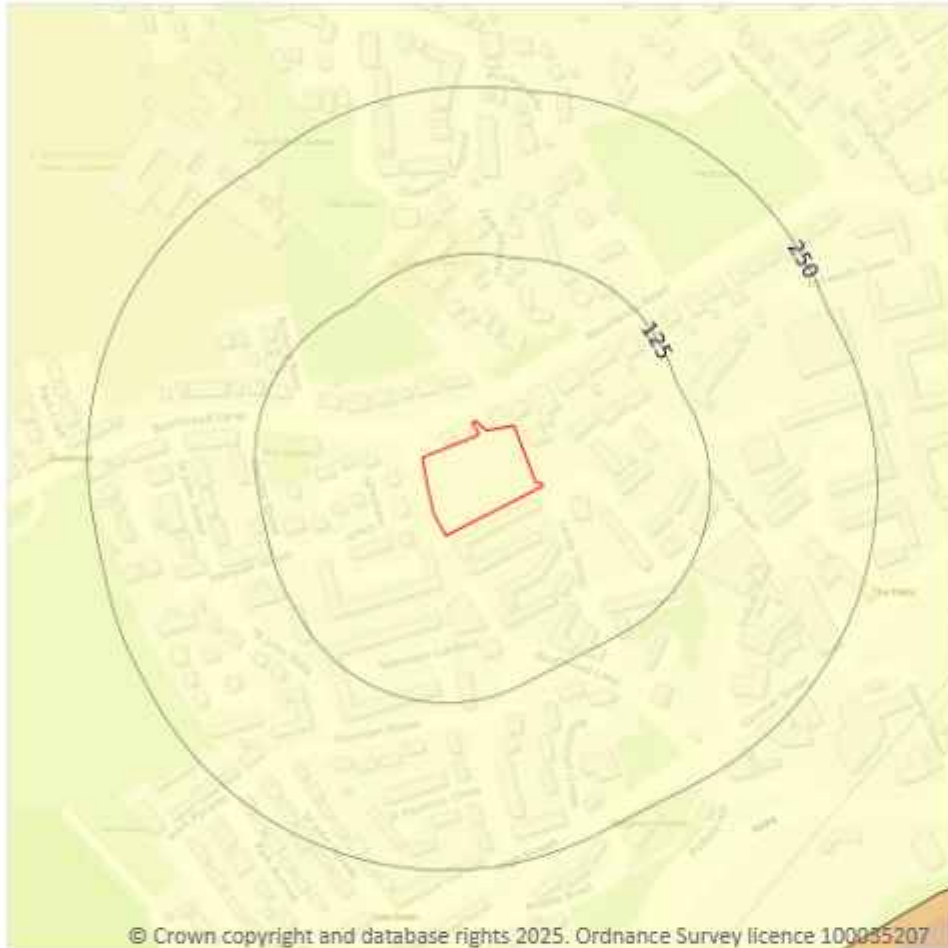
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 97 >](#)

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

*This data is sourced from the British Geological Survey.*

## Natural ground subsidence - Running sands



— Site Outline  
Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

### 17.2 Running sands

Records within 50m

1

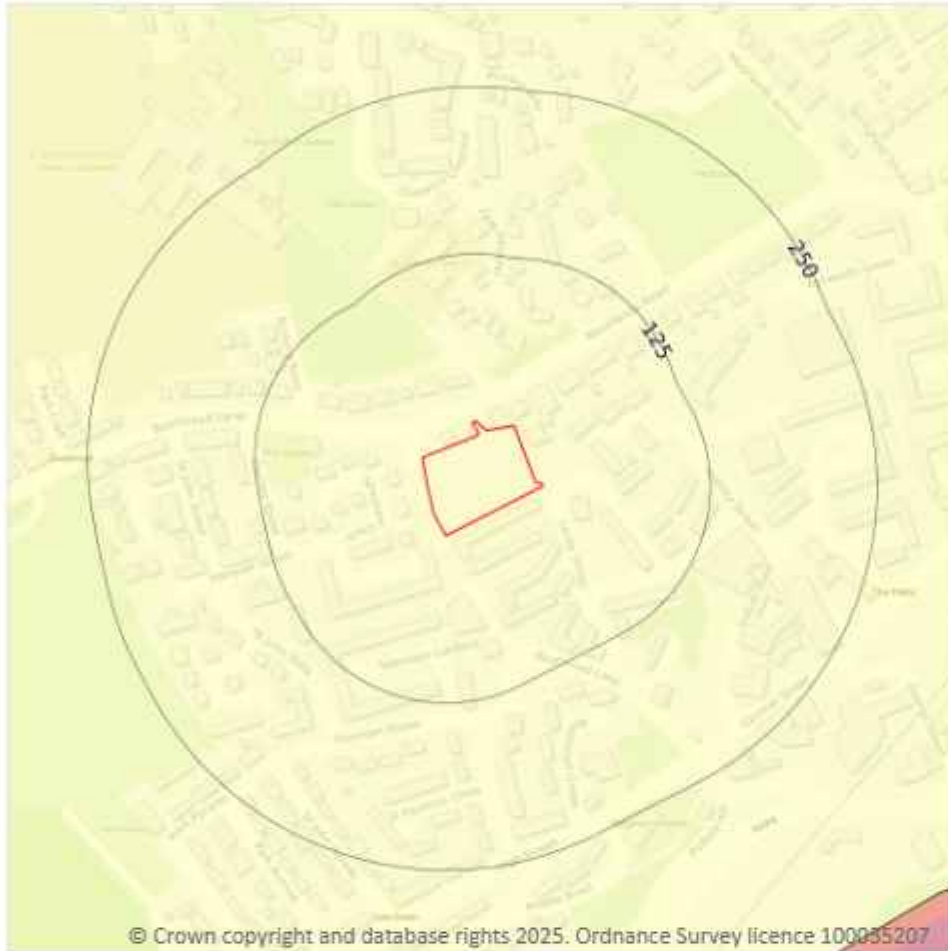
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on [page 98](#) >

Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

*This data is sourced from the British Geological Survey.*

## Natural ground subsidence - Compressible deposits



— Site Outline  
Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

### 17.3 Compressible deposits

Records within 50m

1

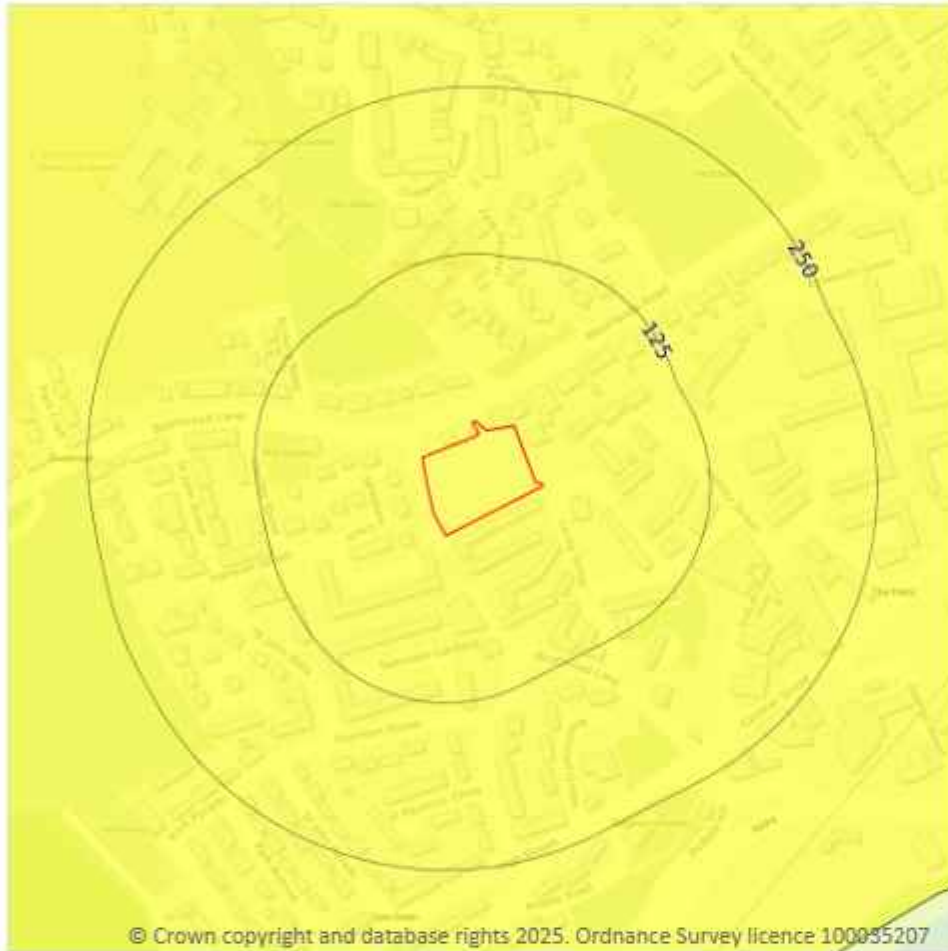
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 99 >](#)

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.

*This data is sourced from the British Geological Survey.*

## Natural ground subsidence - Collapsible deposits



— Site Outline  
Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

### 17.4 Collapsible deposits

Records within 50m

1

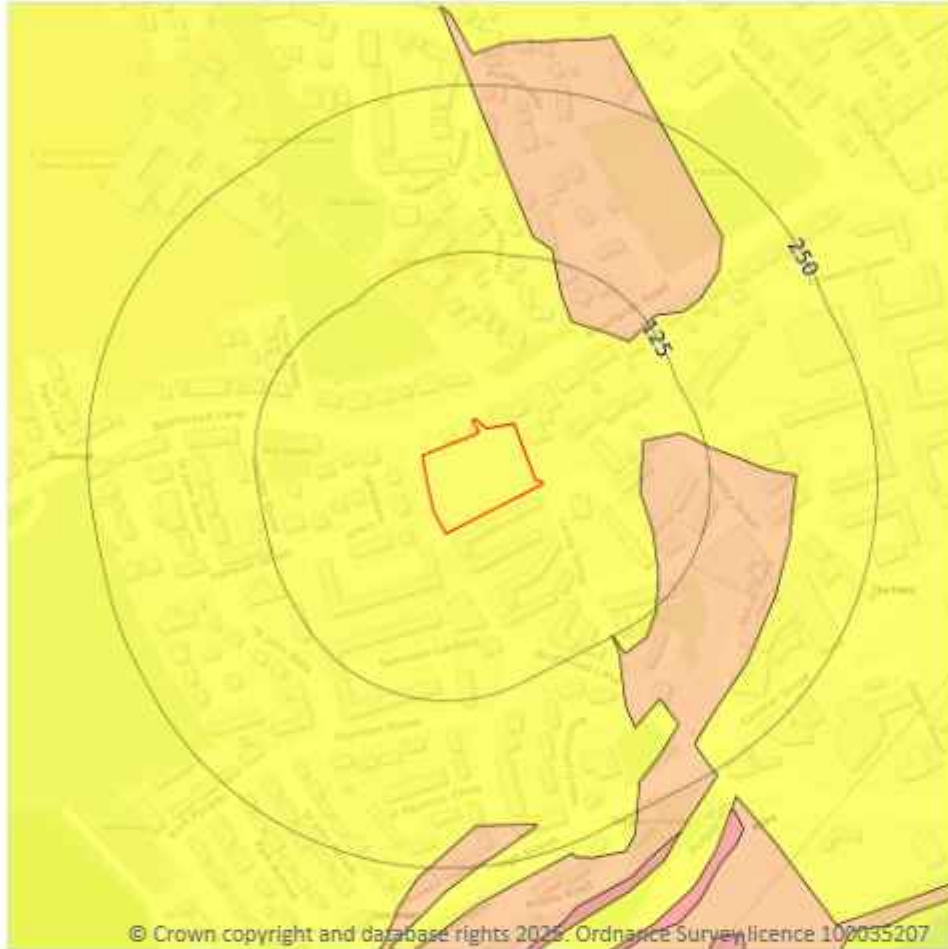
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 100 >](#)

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

*This data is sourced from the British Geological Survey.*

## Natural ground subsidence - Landslides



— Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

### 17.5 Landslides

Records within 50m

1

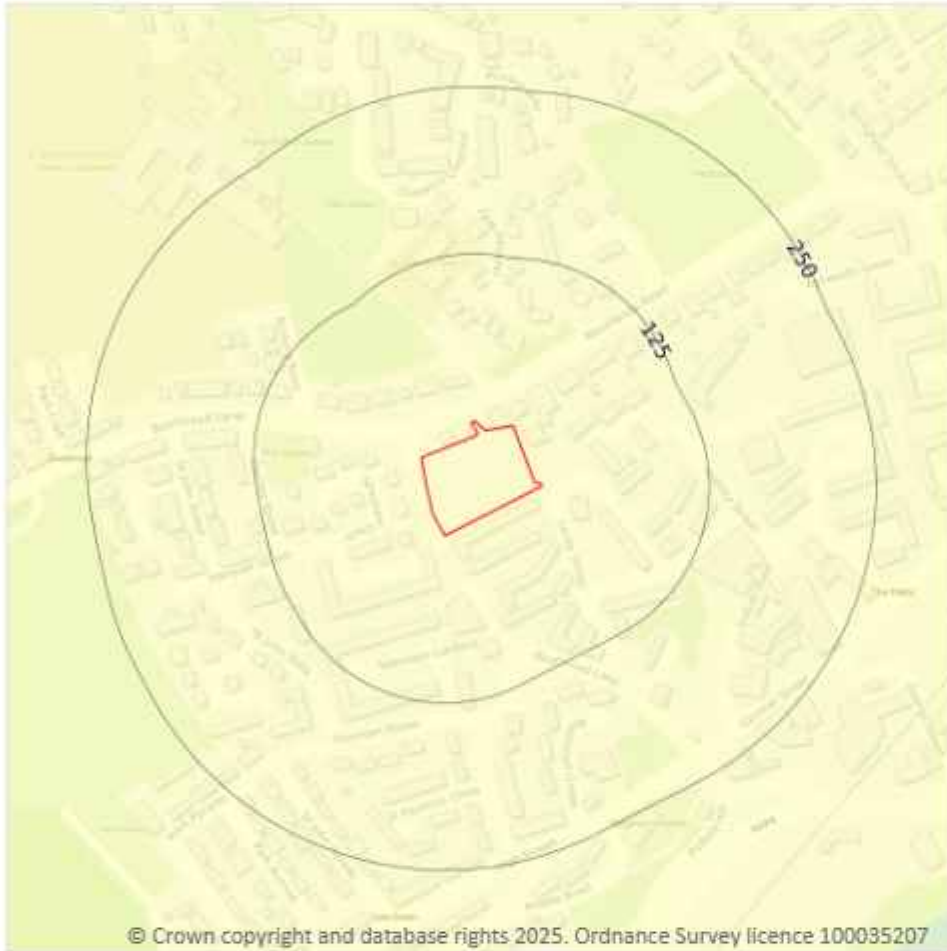
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on [page 101](#) >

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

*This data is sourced from the British Geological Survey.*

## Natural ground subsidence - Ground dissolution of soluble rocks



— Site Outline  
Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

### 17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

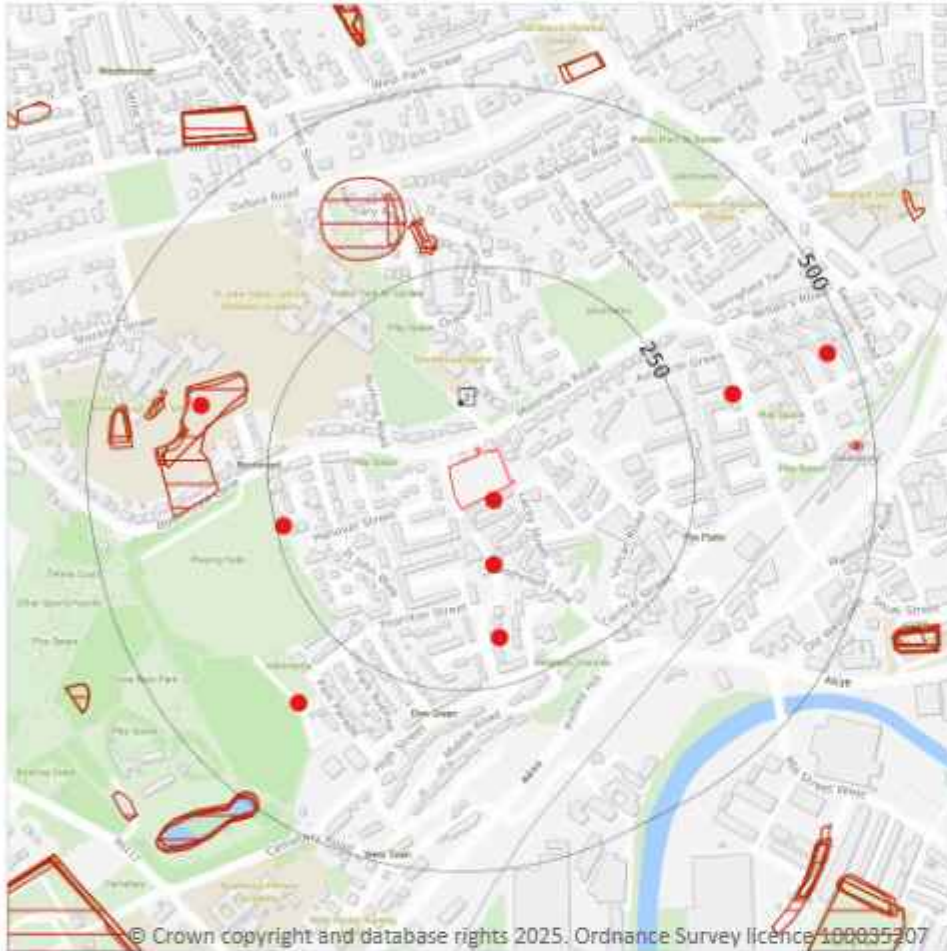
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 102 >](#)

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

*This data is sourced from the British Geological Survey.*



## 18 Mining and ground workings



### 18.1 BritPits

Records within 500m

8

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining and ground workings map on [page 104](#) >

ID	Location	Details	Description
1	9m SE	Name: Daw Green Quarry Address: Boothroyd, DEWSBURY, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
3	89m SE	Name: Boothroyd Quarry Address: Boothroyd, DEWSBURY, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
4	184m S	Name: Daw Green Address: Boothroyd, DEWSBURY, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
5	240m W	Name: Boothroyd Address: Boothroyd, DEWSBURY, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.



ID	Location	Details	Description
6	325m E	Name: Dewsbury Address: DEWSBURY, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
7	350m SW	Name: Daw Green Address: Boothroyd, DEWSBURY, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
B	352m W	Name: Boothroyd Address: Boothroyd, DEWSBURY, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
8	468m E	Name: Dewsbury Address: DEWSBURY, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

*This data is sourced from the British Geological Survey.*



## 18.2 Surface ground workings

Records within 250m

0

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

*This is data is sourced from Ordnance Survey/Groundsure.*

## 18.3 Underground workings

Records within 1000m

14

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

Features are displayed on the Mining and ground workings map on [page 104 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
2	63m N	Air Shaft	1905	1:10560
-	709m W	Colliery	1892	1:10560
-	752m W	Colliery	1905	1:10560
-	755m N	Unspecified Shaft	1892	1:10560
-	844m NE	Tunnel	1905	1:10560
-	850m NE	Tunnel	1988	1:10000
-	850m NE	Tunnel	1981	1:10000
-	850m NE	Tunnel	1974	1:10000
-	850m NE	Tunnel	1967	1:10560
-	850m NE	Tunnel	1955	1:10560
-	956m E	Tunnel	1905	1:10560
-	990m E	Tunnel	1974	1:10000
-	990m E	Tunnel	1967	1:10560
-	990m E	Tunnel	1955	1:10560

*This is data is sourced from Ordnance Survey/Groundsure.*

## 18.4 Underground mining extents

Records within 500m

0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

*This data is sourced from Groundsure.*

## 18.5 Historical Mineral Planning Areas

Records within 500m

0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

*This data is sourced from the British Geological Survey.*

## 18.6 Non-coal mining

Records within 1000m

0

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

*This data is sourced from the British Geological Survey.*

## 18.7 JPB mining areas

Records on site

0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

*This data is sourced from Johnson Poole and Bloomer.*

## 18.8 The Coal Authority non-coal mining

Records within 500m

0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the



Coal Authority and permission should be sought from Groundsure prior to any re-use.

*This data is sourced from The Coal Authority.*

## 18.9 Researched mining

Records within 500m

0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

*This data is sourced from Groundsure.*

## 18.10 Mining record office plans

Records within 500m

0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

*This data is sourced from Groundsure.*

## 18.11 BGS mine plans

Records within 500m

0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

*This data is sourced from Groundsure.*

## 18.12 Coal mining

Records on site

1

Areas which could be affected by past, current or future coal mining.

Location	Details
On site	The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site. This can be ordered directly through Groundsure or your preferred search provider.

*This data is sourced from the Coal Authority.*

### 18.13 Brine areas

Records on site	0
-----------------	---

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

*This data is sourced from the Cheshire Brine Subsidence Compensation Board.*

### 18.14 Gypsum areas

Records on site	0
-----------------	---

Generalised areas that may be affected by gypsum extraction.

*This data is sourced from British Gypsum.*

### 18.15 Tin mining

Records on site	0
-----------------	---

Generalised areas that may be affected by historical tin mining.

*This data is sourced from Groundsure.*

### 18.16 Clay mining

Records on site	0
-----------------	---

Generalised areas that may be affected by kaolin and ball clay extraction.

*This data is sourced from the Kaolin and Ball Clay Association (UK).*

## 19 Ground cavities and sinkholes

### 19.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

*This data is sourced from Stantec UK Ltd.*

### 19.2 Mining cavities

Records within 1000m

0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

*This data is sourced from Stantec UK Ltd.*

### 19.3 Reported recent incidents

Records within 500m

0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

*This data is sourced from Groundsure.*

### 19.4 Historical incidents

Records within 500m

0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

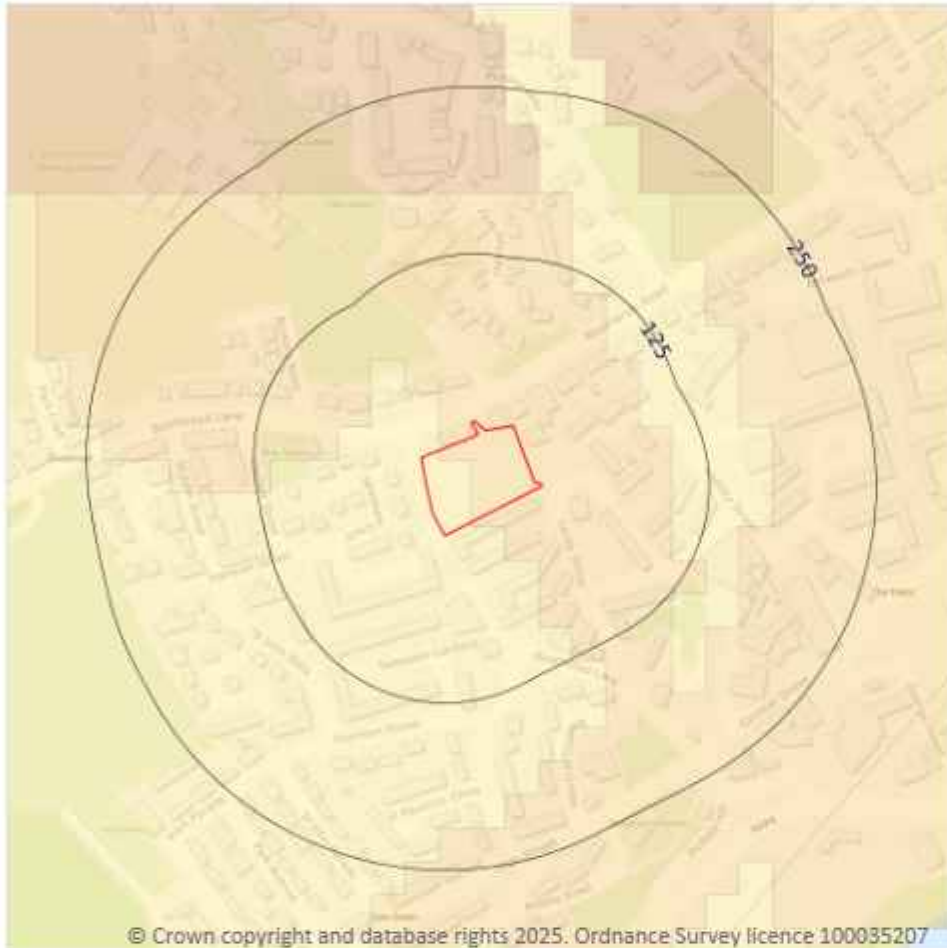
Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.



*This data is sourced from Groundsure.*



## 20 Radon



— Site Outline  
 Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

### 20.1 Radon

**Records on site**

**2**

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 113 >](#)

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



Location	Estimated properties affected	Radon Protection Measures required
On site	Between 3% and 5%	Basic

*This data is sourced from the British Geological Survey and UK Health Security Agency.*



## 21 Soil chemistry

### 21.1 BGS Estimated Background Soil Chemistry

Records within 50m

2

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km<sup>2</sup>. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km<sup>2</sup>; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	25 - 35 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg

*This data is sourced from the British Geological Survey.*

### 21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km<sup>2</sup>).

*This data is sourced from the British Geological Survey.*

### 21.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km<sup>2</sup>.

*This data is sourced from the British Geological Survey.*



## 22 Railway infrastructure and projects

### 22.1 Underground railways (London)

Records within 250m

0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

*This data is sourced from publicly available information by Groundsure.*

### 22.2 Underground railways (Non-London)

Records within 250m

0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

*This data is sourced from publicly available information by Groundsure.*

### 22.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

*This data is sourced from the Ordnance Survey.*

### 22.4 Historical railway and tunnel features

Records within 250m

0

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

*This data is sourced from Ordnance Survey/Groundsure.*

### 22.5 Royal Mail tunnels

Records within 250m

0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.



*This data is sourced from Groundsure/the Postal Museum.*

## 22.6 Historical railways

Records within 250m

0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

*This data is sourced from OpenStreetMap.*

## 22.7 Railways

Records within 250m

0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

*This data is sourced from Ordnance Survey and OpenStreetMap.*

## 22.8 Crossrail 2

Records within 500m

0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

*This data is sourced from publicly available information by Groundsure.*

## 22.9 HS2

Records within 500m

0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

*This data is sourced from HS2 ltd.*

## Data providers

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

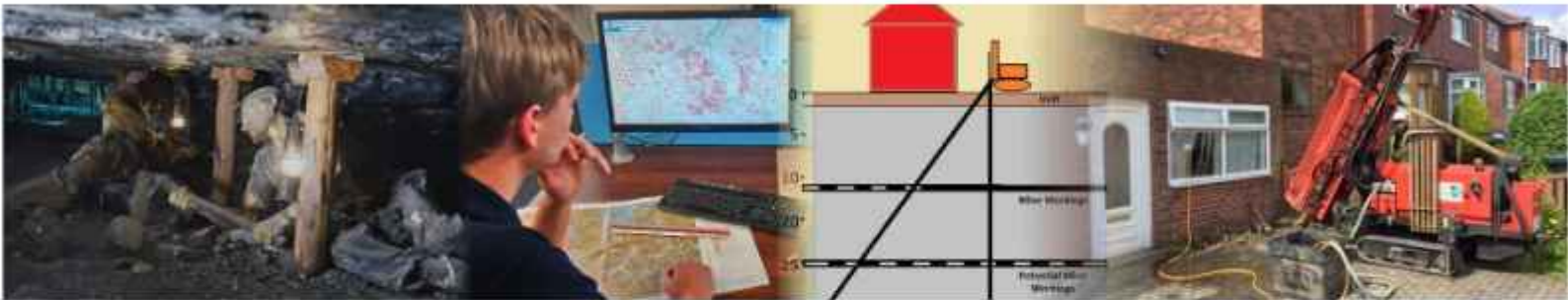
## Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: [www.groundsure.com/terms-and-conditions-april-2023/](http://www.groundsure.com/terms-and-conditions-april-2023/) ↗.



## **APPENDIX 3**

### The Coal Authority & CMRA Reports



## GEOINVESTIGATE LIMITED

### Coal Mining Risk Assessment (CMRA)

<b>LOCATION</b>	Land at Boothroyd Lane, Dewsbury, WF13 2LF
<b>ISSUE DATE</b>	25 <sup>th</sup> June 2025
<b>FOR</b>	Horizon Healthcare Homes Ltd c/o Homewood Design
<b>CLIENT REF.</b>	
<b>OUR REF.</b>	G24193

Prepared by



Jonathan Bell BSc (Hons), MSc, FGS  
Geotechnical Engineer

Checked by



Ross Nicolson BSc (Hons) MSc (Eng) CEng MIMMM  
Principal Geotechnical Engineer

## 1. CMRA INTRODUCTION & COAL MINING HAZARDS

### 1.1 Site Location and Description

The approximate centre of the site lies at grid reference E 423804, N 421772 with surface ground height about 87m AOD. The site occupies a gradual slope falling to the south.

The boundary shown in RED on the Coal Authority (CA) report provided in Appendix A corresponds with the planning application area.

The west end of the property is currently occupied by a derelict tennis court while the east was previously occupied by a former Methodist Church building demolished between 2018 and 2019. Site images are provided in Appendix B. It is proposed to develop the site with a residential care home including hardstanding for access and parking and soft landscaped garden areas, as per the development plans in Appendix C.

### 1.2 Historical Maps

A desk study of limited available historical OS maps shows from the late 1800s the site occupied by Moorlands Methodist Chapel/Church and its grounds. Old Coal Pits and sandstone quarries are shown in the distant surrounding area. An Air Shaft is present to the north of the property.

No evidence of surface mining activity, clay, sand or gravel pitting or stone quarrying is recorded on the historical maps within or adjacent to the site.

### 1.3 Anticipated Geology

The location of the site is shown on the extract of British Geological Survey (BGS) 1:50,000 Solid and Drift geology map (Sheet 77, Huddersfield) and the 1:10,000 geological map (Sheet SE22SW) both presented in Appendix D. These maps show the site underlain by negligible thickness of superficial deposits in turn underlain by Pennine Lower Coal Measures Formation bedrock comprising Mudstone, Siltstone and Sandstone including named coal horizons.

A North – South trending geological fault passes beneath the eastern end of the property previously occupied by the Methodist Church.

The site is underlain within very shallow depth (< 10m), or shallow depth (< 30m) by the Flockton Thin (FN) Coal, in turn underlain by the First Brown then Second Brown Metal Coals.

Nearby BGS borehole log SE22SW/813 presented in Appendix E records drift/bedrock depth of 1.90m while logs SE22SW/807 and 806 some 50m and 70m west of the site, record intact 0.97m thick coal at 8.43m and mine void (0.46m) at 8m depth respectively with a further narrow horizon of coal (0.36m) at 17m and (0.30m) at 16m with no further coal horizons noted below this to 30m depth. In Geoinvestigate's opinion, it is likely that the coal and mine workings at 8m depth are within in the Flockton Thin Coal and similar coal seam depth and/or underground workings are to be expected to be present beneath the Care Home development area. However, no workings are anticipated in the thinner coal at 16m to 17m depth.

What is presumed to be shaft 423421-03 identified in the CA report, some 30m west of the site was encountered in BGS borehole SE22SW/804 which records 11.5m of shaft infill. Allowing for a 2m deep water collection sump at the bottom of the shaft places the top of seam workings in the Flockton Thin Coal horizon connecting with the shaft at around 8.5m depth, adjacent to the development area.

The tentative elevation of the site, relative to the vertical geology column is shown below the map.

In Geoinvestigate's opinion, the possible presence of mine working within very shallow depth below the site poses a significant surface ground stability risk to the proposed development requiring further intrusive site investigation.

#### **1.4 Mine Workings & Mine Shafts**

The CA report in Appendix A identifies 1 level of past recorded underground mining beneath the property at 255m depth dipping 3 degrees East and last mined in 1896. In Geoinvestigate's opinion these workings lie too deep to impact surface ground stability in the development area.

However, the site is in an area of probable shallow coal mine workings. The CA define Probable Unrecorded Shallow Workings as "*Areas where the Coal believes there to be unrecorded coal workings that exist at or close to the surface*" (i.e., less than 30m).

Section 1.3 of Geoinvestigates CMRA identifies a significant very shallow mine working hazard to the proposed development, requiring further intrusive site investigation.

The CA report identifies the nearest mine shaft 423421-003 some 55m to the SW of the new building and 3 more distant shafts to the north. Borehole SE22SW/804 in Appendix E probably sunk within this shaft, records the shaft bottom at 11.50m with, in Geoinvestigates opinion, probable underground seam mine working connecting with the shaft around 8m to 8.5m depth, close to the site.

In Geoinvestigates opinion all 4 mine entries are too distant to impact ground stability in the development area though their presence, particularly that of 423421-003 within 30m of the west site boundary, raises further concern about the possible presence of very shallow underground mine working at this locality.

#### **1.5 Geological Faults Fissures & Breaklines**

The CA report and BGS mapping both identify a geological fault passing beneath the footprint of the former Methodist Church building located at the east end of the property. Though rare faults in combination with mine working can give rise to ongoing surface creep movement though typically movement is small. No mining subsidence claim has been reported within or adjacent to the property suggesting that the previous building was not affected by fault related creep movement.

#### **1.6 Mine Gas**

According to the CA report no mine gas incident or remediation have been recorded within 500m of the enquiry boundary and typically on the UK coalfields mine gas risk to surface development is low. Circumstances where gas risk increases include proximity (typically < 50m) to mine entries (adits and shafts), proximity to recorded mine gas incidents, where development is located above or adjacent to very shallow and shallow (< 30m) unflooded mine workings or roadway tunnels. In addition, increased mine gas risk may be attributable to: coal seams with a history of spontaneous combustion, natural or artificial pathways providing routes for gas migration eg permeable soil cover, pathways created by geological faults, mining induced breaklines/fractures, collapsed mine roof strata, mining subsidence, mining sinkholes/crown holes and unsealed boreholes.

This CMRA has indicated that conditions may exist at this site increasing mine gas risk namely the possible presence of very shallow mine workings, as well as a geological fault the latter providing a pathway to surface. However, the risk may be less as there has been no reported mine gas incident at this locality and typically surface mine gas is low risk on the UK's coalfields.

## **2. RISK ASSESSMENT OF SITE-SPECIFIC COAL MINING ISSUES**

The risk assessment methodology adopted in this section is based on CA publication RISK BASED APPROACH TO DEVELOPMENT MANAGEMENT - GUIDANCE FOR DEVELOPERS Version 3, 2014 and Version 4 - 2017. The template contained therein is broadly adopted in the table below with amendments made by Geoinvestigate Limited. The factual information it is based on, is derived mostly from the CA Consultants Coal Mining Report and additional desk study information including available historical maps, geological maps & memoirs, BGS boreholes, online articles etc. It is not an exhaustive desk study review. Therefore, if new information is released or found in the future, this CMRA may require updating.

The table also provides advice on next step mitigation and the likely planning decision.

RISK ASSESSMENT & MITIGATION		
Coal Mining Issues/Hazards	Risk	Next Step Mitigation
Past underground coal mining	YES	Too deep to impact surface development
Probable unrecorded shallow workings	M	Drilling to enable further assessment
Outcrop	NONE	
Spine roadways at shallow depth	NONE	
Mine entries	YES	Too distant to be impactful
Geological faults, fissures and breaklines	L M	Fault under east end of property
Mine gas	M	Drilling to enable further assessment
Opencast mines within 500m	NONE	
Coal mining subsidence claims within 50m	NONE	
Site investigations within 50m	YES	SI on East side but no information available
Likely Planning Decision	Yes/No	Reason
Is planning permission likely to be given with respect to coal mining legacy issues <b>CONDITIONAL</b> upon carrying out further intrusive investigation leading to possible building design mitigation at a future date but before construction begins?	Yes	Yes. Because the site is NOT impacted by known mine entry proximity hazard and the site-specific ground stability and possible mine gas risks to the proposed development identified in this CMRA can be mitigated by further intrusive site investigation and if required thereafter by routine engineering solutions.

Assessed risk level – High Medium Low. NONE

### 3. CMRA OUTCOME & RECOMMENDATIONS

This CMRA has identified increased risk to the proposed development from possible shallow mine workings as well as perhaps mine gas. Drilling investigation is required to further assess both risks. However as both risks can be mitigated by routine engineering solutions **planning permission should not in our opinion be withheld with respect to coal mining legacy issues** providing further intrusive investigation is carried out at a future date and the permission is **CONDITIONED** accordingly.

In Geoinvestigate's opinion, a minimum of 3 to 6 rotary open boreholes without core sample recovery should be made at the site to depths up to 30m (but not necessarily reaching 30m) to establish bedrock depth and mine working depth (if any) beneath the site. One hole should be located on the east side of the geological fault. Boreholes may be reduced to 20m if both coal horizons are encountered within this depth. Depending on the outcome of the drilling investigation further drilling may be required.

A Coal Authority Permit needs to be obtained (ahead of) further intrusive exploratory drilling. As per the table below Water Drill Flush to be used when drilling. The permit application must state **WATER ONLY DRILL FLUSH** for the safety of the public and drill crew. **Failure to do so may result in prosecution by the HSE and a hefty fine.**

Risks for Different Drilling Scenarios					
Air flush	Mist flush	Foam flush	Water flush	Mud flush	Additional controls
HIGH	HIGH / MED/M	HIGH / MED/M	LOW	LOW	<ul style="list-style-type: none"> <li>Monitoring at rig and other open holes.</li> <li>Seal boreholes</li> </ul>

Boreholes must be sealed on completion.

Gas monitoring **MUST** be carried out during drilling and may provide further indication of mine gas risk.

However, if the drilling investigation encounters shallow mine working longer term gas monitoring in specially installed gas wells may be required to further assess the ground gas risk.

Alternatively, longer term gas monitoring may be avoidable if the installation of precautionary gas protection measures are included in the design of the new buildings in line with "Characteristic Situation 2" (CS2) based upon the CIRIA 665 (revised) report – "Assessing the risks posed by hazardous ground gases to buildings". However, agreement will be required from the Local Planning Authority for this alternative proposal.

In addition to deeper coal legacy investigation shallower geotechnical/geoenvironmental investigation is also required to enable foundation design and to check the land for ground contamination though the latter is not expected to pose a major problem to redevelopment of this site.

**WHAT TO DO NEXT? Obtain quotes** for the intrusive site investigation works. The cost of the SI works should be a "lump sum" fixed price. Geoinvestigate can provide advice and assistance with helping you find suitable site investigation & drilling contractors. Call us on 01642 713779 or email [enquiries@geoinvestigate.co.uk](mailto:enquiries@geoinvestigate.co.uk).

**Appendices:**

- A. CA Consultants Coal Mining Report issued 6<sup>th</sup> June 2025 ref. 51003503547001
- B. Site Images
- C. Proposed Development
- D. Geology Map Extracts
- E. BGS Borehole Logs

APPENDIX A  
COAL MINING REPORT



The Coal  
Authority

# Consultants Coal Mining Report

Land At Boothroyd Lane  
Dewsbury  
Kirklees  
WF13 2LF

Date of enquiry: 6 June 2025  
Date enquiry received: 6 June 2025  
Issue date: 6 June 2025

Our reference: 51003503547001  
Your reference: G25193



# Consultants

## Coal Mining Report

This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

### Client name

GEOINVESTIGATE

### Enquiry address

Land At Boothroyd Lane  
Dewsbury  
Kirklees  
WF13 2LF


### How to contact us

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

200 Lichfield Lane  
Mansfield  
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NG18 4RG

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

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



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# Section 1 – Mining activity and geology

## Past underground mining

Collery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	BLACK BED	Coal	62N7	251	North-West	3.0	East	74	1896
unnamed	BLACK BED	Coal	62N6	255	Beneath Property	3.0	East	74	1896

## Probable unrecorded shallow workings

Yes.

## Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

## Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	423421-003	423744 421699	Treatment details unknown.*	Coal	
Shaft	423421-005	423746 421880	Treatment details unknown.*	Coal	
Shaft	423421-006	423782 421871	Treatment details unknown.*	Coal	
Shaft	423421-007	423793 421881	Treatment details unknown.*	Coal	

\*For your information, before the coal industry was nationalised in 1947, there was no requirement for a mine operator to record mine entry treatment details when a mine was abandoned. Therefore, it is not unusual for us to have no treatment details for many of the 176,000 recorded mine entries on our database. Despite this lack of information, please be assured that the fact we have no treatment recorded does not necessarily mean that the mine entries were left untreated when abandoned.

### Abandoned mine plan catalogue numbers

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

FGB709	FGB627	CT40
11051	PO0	5181
FGB357	FGB488	FGB356

Our records show we have more plans than those shown above which could affect the enquiry boundary.

**Please contact us on 0345 762 6848** to determine the exact abandoned mine plans you require based on your needs.

### Outcrops

No outcrops recorded.

### Geological faults, fissures and breaklines

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

Fault under or close to the property recorded.

### Opencast mines

None recorded within 500 metres of the enquiry boundary.

### Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

## Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

### Site investigations

Distance to site Investigation (m)	Direction
27.2	East

See Section 4 for further information.

### Remediated sites

None recorded within 50 metres of the enquiry boundary.

### Coal mining subsidence

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

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

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

### Mine gas

None recorded within 500 metres of the enquiry boundary.

### Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

## Section 3 – Licensing and future mining activity

### Future underground mining

None recorded.

### Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

### Court orders

None recorded.

### Section 46 notices

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

### Withdrawal of support notices

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

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

### Payments to owners of former copyhold land

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

## Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

### 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 500m of 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.

### Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

### Site investigations

The site is within an area of previous interest. It is close to where the Coal Authority has received information relating to past site investigations.

The site requires further investigation and may influence how you approach your risk assessment.

**For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at [groundstability@coal.gov.uk](mailto:groundstability@coal.gov.uk).**

## Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at [groundstability@coal.gov.uk](mailto:groundstability@coal.gov.uk)**.

### **Past underground coal mining**

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

### **Probable unrecorded shallow workings**

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

### **Spine roadways at shallow depth**

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

### **Mine entries**

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

### **Abandoned mine plan catalogue numbers**

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

### **Outcrops**

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

### **Geological faults, fissures and breaklines**

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

### **Opencast mines**

Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

### **Coal Authority managed tips**

Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

### **Site investigations**

Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

### **Remediated sites**

Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

### **Coal mining subsidence**

Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

### **Mine gas**

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. 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.

### **Mine water treatment schemes**

Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

### **Future underground mining**

Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

### **Coal mining licensing**

Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

### **Court orders**

Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

### **Section 46 notices**

Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

### **Withdrawal of support notices**





Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

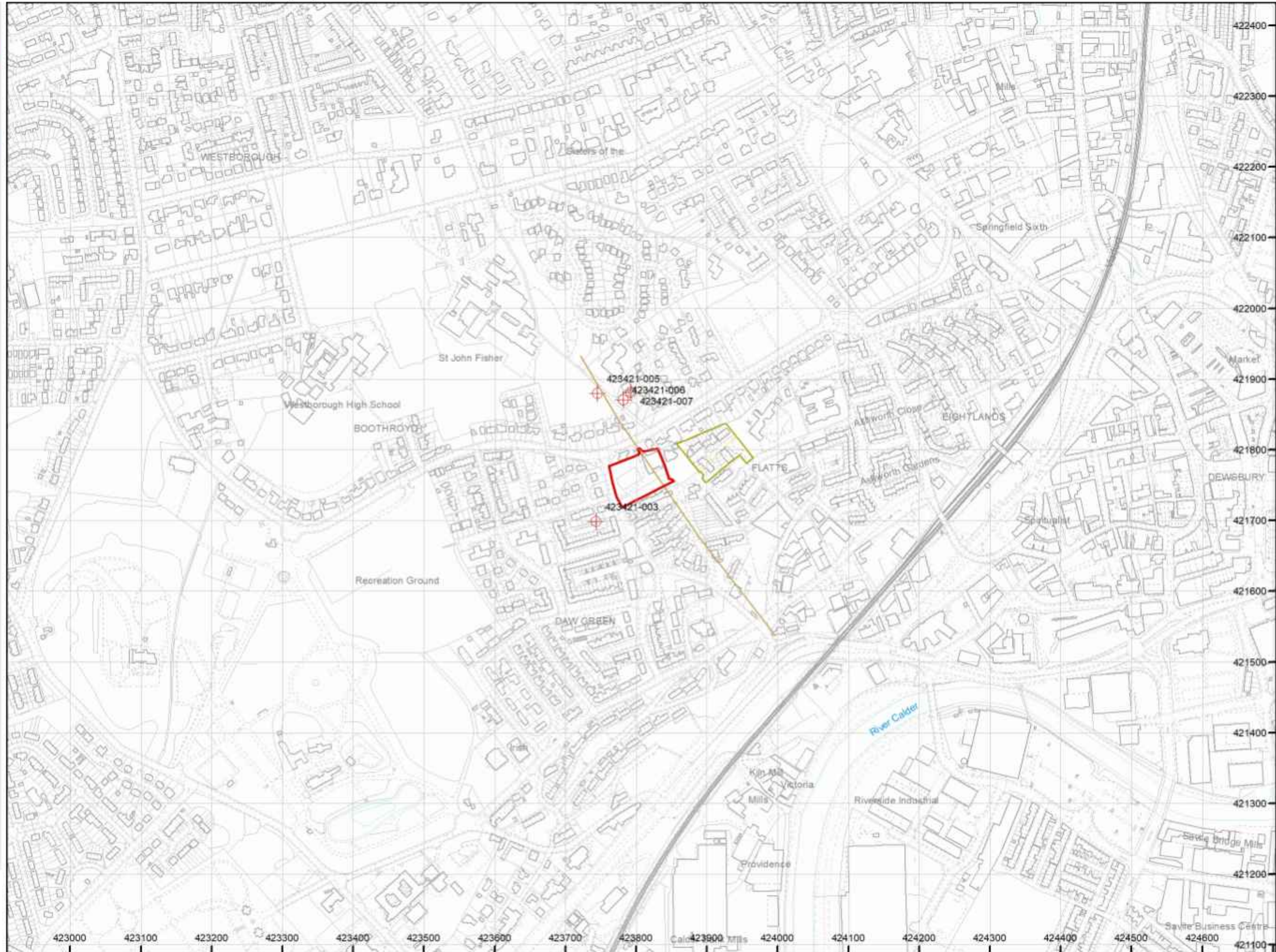
### **Payment to owners of former copyhold land**

Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

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

**Key**

- Approximate position of the enquiry boundary shown 
- Disused mine shaft 
- Geological faults 
- Site investigations 



APPENDIX B  
SITE IMAGES

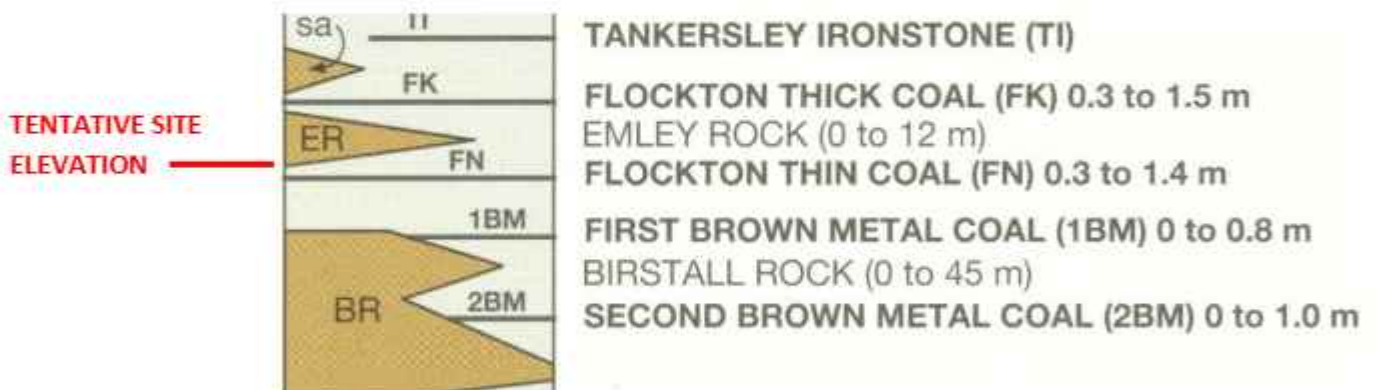
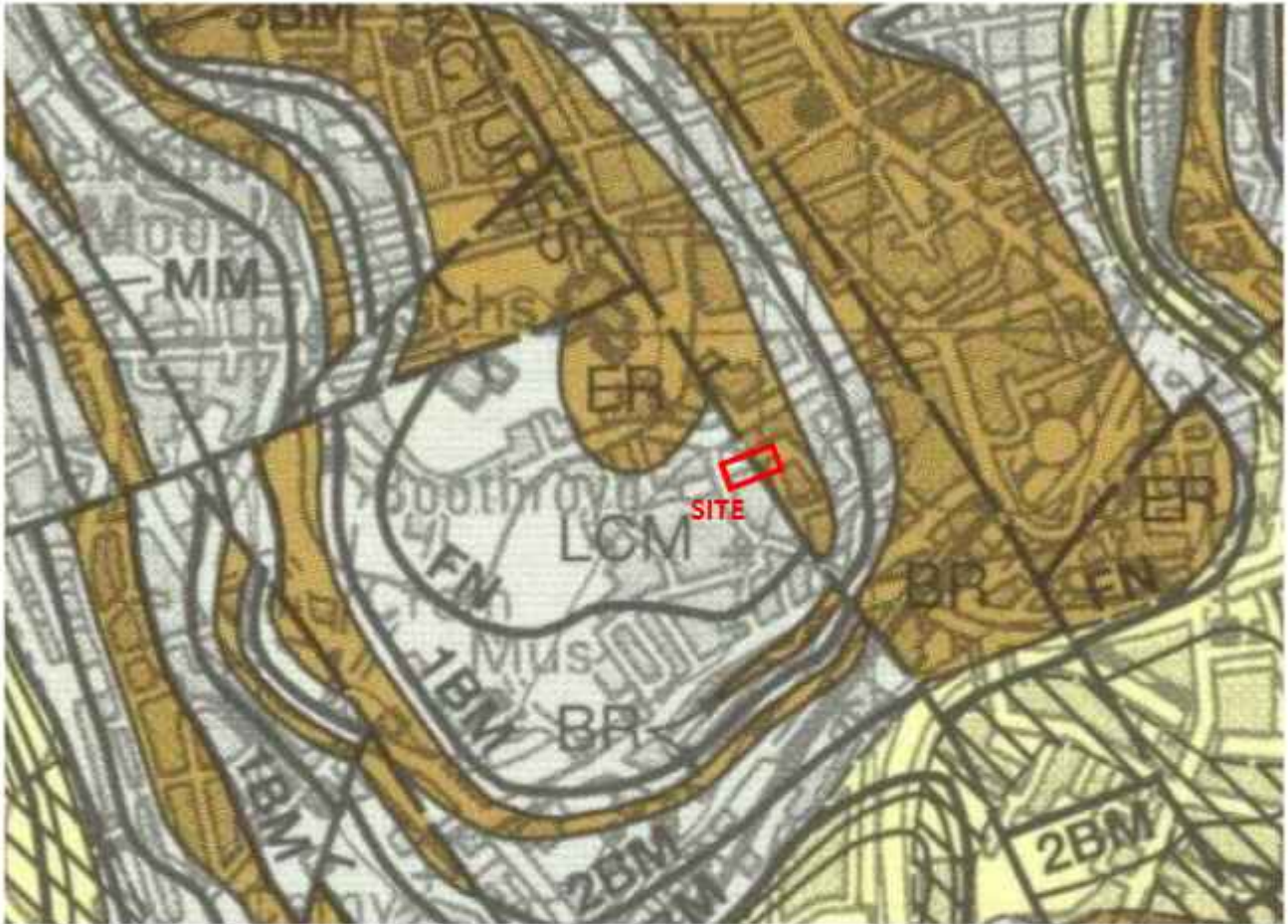




APPENDIX C  
PROPOSED DEVELOPMENT



## APPENDIX D GEOLOGY MAP EXTRACTS





TENTATIVE SITE  
ELEVATION



# APPENDIX E

## BGS LOGS SE22SW/813, 807, 813 & SHAFT LOG 804



British Geological Survey

BGS ID: 78297 : BGS Reference: SE22SW813  
British National Grid (27700) : 423750,421760

<b>SUB SURFACE LTD</b> <small>SITE INVESTIGATION AND SPECIALIST GEOTECHNICAL CONSULTANTS                      3 Park Street, Preston, PR2 3GS. Tel: 07723 561136 Fax: 07723 304907</small>				80074801D LANE, DEVERBURY. <b>SE 22 SW 813</b>		Sheet <b>TP9</b>
Work Order Trialpitt.		Date 27/05/94 - 27/05/94		Client CHARTRY HOUSING ASSOCIATION. 2375 2176		Sheet 1/1
Firm MECHANICAL EXCAVATOR (JOB 3CX)		Location AS PLAN		Engineer CURTINS, CONSULTING ENGINEERS.		Great Level 80.52
Depth (m)	Sample Code	True Strata	Level (mOD)	Depth (Reference)	Description	Logmark
0.50	B		86.42	(0.70)	RADE GROUND: bituminous macadam surfacing	
			85.82	(0.60)	Brown very silty CLAY with coal fragments (possible MADE GROUND)	
1.00	B		85.82	(0.50)	Fine orange brown and light grey mottled slightly friable silty CLAY (Boulder Clay)	
1.50	B		80.32	(0.70)	Stiff brown and grey mottled very friable silty CLAY with many mudstone lithoclasts	
2.10	B		84.67	(0.70)	Very weak dark grey, grey, stark brown and brown thickly laminated highly weathered micaceous silty MUDSTONE with clay bands	
		27/05/94: dry	85.92	2.60	Trialpit completed at 2.60m	
Plan				Remarks Trial pit dry. Pit walls vertical and stable.		
				Sheet No. PN/2P	Scale (vertical) 1:25	Page No. 461356, 1799

Produced by the Mechanical Division, 31 June 1994 (REVISED), Printed at: 1994 AF, Humber Avenue, St. 1994, 1994




<b>SUB SURFACE LTD</b> SITE INVESTIGATION AND SPECIALIST GEOTECHNICAL CONSULTANTS 3 Paul Street, Preston, PR1 2QS Tel: 01772 561135 Fax 01772 204907						To: SE22SW 807 2372 2177 BOOTHBOYS LANE, DEWSBURY		Reference Number: R2	
Number: RES0			Date: 01/06/94 - 01/06/94			Client: CHANTRY HOUSING ASSOCIATION		Sheet: 1/3	
Pit: AIR/MIST FLUSH			Location: AS FLAK			Engineer: DMTING CONSULTING ENGINEERS		Ground Level (mOD): 90.07	
Rig Size: 120.00mm									
Method: ROTARY OPEN HOLE									
Depth (m)	TCN	SCN	RQD	RI	Pit Records	Level (mOD)	Depth (Below)	Description	Legend
						89.99	0.08	MADE GROUND: bituminous macadam surfacing	
						89.79	0.28	MADE GROUND: hardcore	
							(1.57)	Soft brown CLAY	
						88.22	1.85	Dark grey weathered MUDSTONE	
							(5.65)		
						82.59	7.48	Light grey and brown SANDSTONE	
							(0.95)		
						81.64	8.43	Dark grey/black shaley COAL and carbonaceous SHALE	
							(0.97)		
						80.67	9.40	Light grey MUDSTONE	
Remarks: No loose drilling No loss of flush Casing to 1.95m (P size) Excavate trial pit to check for services 0.5 hour								Legend No: PA/JR	Scale: 1:50
For any other enquiries and applications								Figure No: ME1584_R2	

FN

SUB SURFACE LTD SITE INVESTIGATION AND SPECIALIST GEOTECHNICAL CONSULTANTS 3 Peel Street, Preston, PR2 2QS. Tel: 07723 861136 Fax: 07723 204907										To: BOOTHROYD LANE, DEWESBURY <i>SE22SW 807</i>		Sheet- Number R2
Number: WES0		Date: 01/06/94 - 01/06/94		Client: CRANTRY HOUSING ASSOCIATION		Sheet: 2/3						
Depth: AIR/MIST FLUSH		Location: AS PLAN		Engineer: CLINTONS CONSULTING ENGINEERS		Ground Level (mOD): 90.07						
No. Test: 120.00m												
Method: ROTARY OPEN HOLE												
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (Metres)	Description	Legend			
							(3.60)	Light grey MUDSTONE				
						77.07	13.00	Dark grey MUDSTONE				
							(8.70)					
						74.37	15.70	Light grey and grey MUDSTONE				
					Medium inflow at 16, 10m, not sealed.		(1.34)					
						75.03	17.04	Dark grey/black shaley COAL and carbonaceous SHALE				
						72.67	(0.36) 17.40	Grey MUDSTONE				
							(2.30)					
						70.37	19.70	Light grey SANDSTONE				
Remarks: No loose drilling No loss of flush  See log sheet for symbols and abbreviations							Logged by PK/JR	Check approved TJS	Figure No. WES04 - R2			

18M

 <b>SUB SURFACE LTD</b> SITE INVESTIGATION AND SPECIALIST GEOTECHNICAL CONSULTANTS 3 Paul Street, Preston, PR2 2DS - Tel: 07723 561326 Fax 07723 204807					No: BOOTHROYD LAKE, DENSBURY <i>SE 22SW 807</i>			Drawing Number: <b>R2</b>	
Method: RESO Risk: AIR/WEST FLUID No. Sls: 120.00mm Method: ROTARY OPEN HOLE		Date: 01/06/94 - 01/06/94			Client: CHANTRY HOUSING ASSOCIATION		Sheet: 3/3		
Location: AS PLAN					Engineer: CURTINS CONSULTING ENGINEERS		Ground level (height): 90.07		
Depth (m)	TCN	SCN	ROD	FI	Field Records	Level (MSL)	Depth in (m)	Description	Legend
							(1.00)	Light grey SANDSTONE	
						69.27	20.80	Grey silty MUDSTONE	
							(1.01)		
						68.26	21.81	Brown SANDSTONE	
							(1.40)		
						66.86	25.21	Light grey SANDSTONE	
							(0.64)		
						66.22	23.85	Light grey SILTSTONE	
							(6.15)		
						01/06/94:16.22m	60.07	30.00	
Remarks: No loose grilling No loss of flush							Legend By: <i>PK/JS</i>		Scale: 1:50
See log sheet for symbols and abbreviations							Figure No.: <b>MS136A.02</b>		

SE22 SW 806

SUB SURFACE LTD SITE INVESTIGATION AND SPECIALIST GEOTECHNICAL CONSULTANTS 3 Pool Street, Preston, PR2 2DS. Tel: 01772 561125 Fax 01772 204807						To: BOOTHROYD LANE, DEVISBURY 2371 270		Sheet Number: R1	
Method: NEDC Flush: AIR/MIST FLUSH No. Size: 120.00mm Method: ROTARY OPEN HOLE			Date: 31/05/96 - 31/05/96			Client: CHANTRY HOUSING ASSOCIATION		Sheet: 1/3	
			Location: AS PLAN			Engineer: CURTINS CONSULTING ENGINEERS		Ground level (mOD): 85.31	
Depth (m)	TCN	SCN	BOH	FI	Field Records	Level (mOD)	Depth to (Thickness)	Description	Log Key
						86.16	(0.15) 0.15	MADE GROUND: bituminous macadam surfacing	
							(1.68)	MADE GROUND: orange brown clay and brick rubble	
						84.48	1.85	Dark grey MUDSTONE	
							(4.17)		
						80.31	8.00	Brown and grey SILTSTONE	
							(0.75)		
						79.56	8.75	Light grey SANDSTONE	
							(1.29)		
						78.27	8.04	VOID	
						77.81	(0.46) 8.50	No Flush	
							(1.45)		
						76.36	9.95		

Remarks:  
Loss of Flush from 8.04m to 9.95m  
Void from 8.04m to 8.50m  
Casing to 2.39m (P size) 10.65m (H size)

Logged By: PB/2R Date Logged: 1/50  
Figure No: NETSOL 81



<b>SS SUB SURFACE LTD</b> SITE INVESTIGATION AND SPECIALIST GEOTECHNICAL CONSULTANTS 3 Peel Street, Preston, PR2 2QS. Tel: 07723 661135 Fax: 07723 204903						No: <b>BOOTHROYD LANE, DENSBURY SE228AJ 806</b>		Drawing No: <b>R1</b>			
Ally: <b>RESO</b>			Date: <b>31/05/94 - 31/05/94</b>			Client: <b>CHANTREY HOUSING ASSOCIATION</b>			Sheet: <b>2/3</b>		
Meth: <b>AIR/WEST FLUSH</b>			Location: <b>AS PLAN</b>			Engineer: <b>DURTIMS CONSULTING ENGINEERS</b>			Ground level (mOD): <b>86.31</b>		
No. of: <b>120, 00mm</b>						Description:			Depth (m):		Legend:
Method: <b>ROTARY OPEN HOLE</b>			Total Records:			Level (mOD):		Depth (m):		Description:	
TCK			SCR			KQD			FI		
			Medium (Inflow at 12.00m, not sealed)			16.00			Grey MUDSTONE		
						70.31 16.00			Dark grey/black shaley COAL and carbonaceous SHALE		
						70.01 16.30			Grey MUDSTONE		
						69.31 17.00			Grey silty MUDSTONE		
						(1.65)					
						67.66 18.65			Light grey SANDSTONE		
Remarks:								Legend By: <b>PR/JR</b>		Scale: <b>1:50</b>	
See also sheet SE22SW806 and SE22SW807								Figure No.:		<b>ME1584_R1</b>	

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SUB SURFACE LTD SITE INVESTIGATION AND SPECIALIST GEOTECHNICAL CONSULTANTS 3 Paul Street, Preston, PRU 2QS. Tel: 07723 581135 Fax: 07723 204907				To: 8001801D LANE, DELVESLEY SE22SW 804 2375 2172		Sheet 1
Boring Method Shell and Auger.		Date: 26/05/94 - 26/05/94		Client: CHANTRY HOUSING ASSOCIATION		Sheet 1/2
Diameter: 150mm Cased to 11.50m		Location: AS FLAK		Engineer: CURTINS CONSULTING ENGINEERS		Ground Level m(OD) -B4.90
Depth (m)	Sample Type	Field Records	Level (m(OD))	Depth to (Metres)	Description	Legend
0.50	R			(0.00)	MADE GROUND: bituminous macadam surfacing over a brown, grey brown and grey clayey topsoil and gravel to cobble sized angular stone	
0.90	D		84.10	0.00	MADE GROUND: orange brown and grey friable highly weathered to moderately weathered clayey mudstone with occasional clay bands and slightly weathered gravel sized fragments of coal	
1.20-1.65 1.20-1.65	SPT N=6 D	1,1/1,1,2,2				
1.70-2.00	R			(2.20)		
2.00-2.45 2.00-2.45	SPT N=4 D	1,1/1,1,1,1				
3.00-3.45 3.00-3.45	SPT N=4 D	1,1/1,1,1,1	81.90	3.00	MADE GROUND: brown, orange brown, grey brown and grey slightly friable slightly gravelly silty clay with bands of very clayey highly weathered mudstone, gravel sized fragments of coal and occasional wood	
3.50-3.80	R					
4.00-4.45 4.00-4.45	SPT N=6 D	1,1/1,1,1,1				
5.50-5.95 5.50-5.95	SPT N=4 D	1,1/1,1,1,1				
7.00-7.45 7.00-7.45	SPT N=4 D	1,1/1,1,1,1		(8.50)		
7.50-7.80	R					
8.50-8.95 8.50-8.95	SPT N=5 D	1,0/1,0,2,2				
10.00-10.45	SPT N=5	2,2/2,1,1,1				

Notes:  
A 50mm diameter slotted p.v.c. gas monitoring standpipe with gravel surround, bentonite seal, gas valve and lockable cover was installed to 12.80m depth  
Hand excavate to check for services 1.25 hrs.

Logged by: PW/JR  
Scale: 1:50  
Figure No: NE1384.1

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SUB SURFACE LTD SITE INVESTIGATION AND SPECIALIST GEOTECHNICAL CONSULTANTS 3 Peel Street, Preston, PR2 2GS Tel: (0772) 561135 Fax (0772) 204807					To: BOOTHROD LANE, DEWSBURY SE22SW 804		Drawn Number: 1
Boring Method: + Shell and Auger.		Date: 26/05/94 - 26/05/94		Client: CHANNY HOUSING ASSOCIATION		Sheet: 2/2	
Borehole: 150mm Cased to 11.50m		Location: AS PLAN		Engineer: CURTIS CONSULTING ENGINEERS		Ground Level mOD: 64.90	
Depth (m)	Sample / Test	Field Records	Level (mOD)	Depth or (Thickness)	Description	Legend	
10.00-10.45	D				MADE GROUND: brown, orange, brown, grey brown and grey slightly friable slightly gravelly silty clay with bands of very clayey highly weathered mudstone, gravel sized fragments of coal and occasional wood		
11.30-11.95	SPT N=100	Slight Seepage at 11.30m, not sealed.	73.40	11.50	Light grey, grey and brown friable moderately weathered thinly laminated micaceous sandy SILTSTONE with sandstone laminae		
11.30-11.95	D	25,25,25,25,25		(1.30)			
12.30-12.76	SPT N=100	25,25,25,25,25			.....at 12.60m thin band of coal.		
12.30-12.80	D		72.10	12.80	Borehole completed at 12.80m		
<p>Remarks: Slight seepage below 11.50m insufficient for sample A 50mm diameter slotted p.v.c. gas monitoring standpipe with gravel surround, bentonite seal, gas valve and lockable cover was installed to 12.80m depth Desludging from 11.50m to 12.50m for 1 hour.</p>						<p>Logged By: PW/JR</p> <p>Scale vertical: 1:50</p> <p>Figure No. NET384.1</p>	



SUB SURFACE LTD SITE INVESTIGATION AND SPECIALIST GEOTECHNICAL CONSULTANTS 3 Peel Street, Peaslip, PR2 2DB. Tel: 01772 561135 Fax: 01772 204907						BOOTHROYD LAKE, DEWSBURY SE 22SW 806		Drawn Number R1	
Machine : HES0		Date : 31/05/94 - 31/05/94		Client : CHANTRY HOUSING ASSOCIATION		Sheet : 3/3		Overall Scale (m:00) 06:31	
Flush : AIR/NEST FLUSH		Location : AS PLAW		Engineer : CURTINS CONSULTING ENGINEERS					
Bore Size : 120.00mm									
Method : ROTARY OPEN HOLE									
Depth (m)	TCR	SCR	RQP	FI	F&M Remarks	Level (mOD)	Depth (mBelow)	Description	Legend
							(4.35)	Light grey SANDSTONE	
						43.31	25.00	Grey silty MUDSTONE	
							(7.00)		
31/05/94:12.80m						56.31	30.00		
<p>Notes:</p> <p>See key sheet for symbols and abbreviations</p>								<p>Logged By PH/JR</p> <p>Scale As per 1:50</p> <p>Figure No. ME1356_R1</p>	