



Haigh Huddleston & Associates

Civil & Structural Engineering Consultants

Firth Buildings, 99 - 101 Leeds Road, Dewsbury, WF12 7BU

📞 01924 464342 📠 01924 450662 ✉ martin@haighhuddleston.co.uk

Phase 2 Geo-environmental Report

ON

PROPOSED HOSPITALITY BUILDING

AT

**DEWSBURY MOOR ARLFC, CORNFIELD,
HECKMONDWIKE ROAD, DEWSBURY MOOR**

FOR

Mr M DELANEY

MAR 2023

E23/8043/R001

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Appendix A Site Location Plan
 Site Investigation Plan
 Typical Site Conceptual Model

Appendix B Trial Hole Logs

Appendix C Chemical Analysis of Samples

Appendix D Groundsure Report
 Historical Plans

0.0 EXECUTIVE SUMMARY

SITE	The area to be developed forms part of the car parking area to Dewsbury Moor ARLFC. The area to be developed is currently occupied by shipping containers on the compacted made ground of the parking area. The site is generally level.
HISTORY	The site was shown as open field until it was labelled as a rugby football ground from 2001 onwards. There has been little development in the immediate vicinity of the site until the residential development immediately to the east in 2001. From 1931-1981, sewage works were indicated 200m south west of the site.
GEOLOGY	No artificial or superficial strata was shown overlying the site. The site is shown to be underlain by the Pennine Lower Coal measures Formation consisting of Mudstone, Siltstone and Sandstone. The trial pits proved up to 1.6m of re-engineered clays overlying natural sandy clays.
MINING/QUARRYING	A Coal Mining Risk Assessment has been undertaken by Abbeydale BEC and states that the site is an area where there is a low to moderate risk of unrecorded workings. Recommendations were made for the proposed foundation construction to mitigate any small movements associated with historic mine workings.
HYDROLOGY	The nearest open surface water feature to the site is an un-named watercourse located 174m south west of the site. It is an inland river not influenced by normal tidal action.
HYDROGEOLOGY	The bedrock strata underlying the site is classified as a Secondary (A) aquifer. No groundwater was encountered during the trial pit excavations.
CONTAMINATION	No elevated levels of contaminants were proven in the samples taken from site.
GROUND GAS	Due to the low risk of ground gas migration from the historical landfill located 80m to the west, and possible shallow mine workings, it is proposed to classify the site as CS2 by BS 8485:2015 Table 2 as a precautionary measure

REMEDIATION	No remediation measures are required with regards to the existing ground. Gas protection measures to score a minimum of 3.5 points from BS 8485:2015 tables 5-7 are required and are detailed in 10.2.
FOUNDATIONS	As recommended in the CMRA, due to the low risk of ground movement from historical mining, it is proposed to utilise a heavily reinforced raft foundation designed to span 3m and cantilever 1.5m. The raft should be placed on a minimum 500mm thickness of 6F2 material extending 750mm beyond the raft foundation.

1.0 INTRODUCTION

- 1.1 As requested by Mr Michael Delaney, this practice carried out ground and contamination investigation works to the proposed hospitality building at Dewsbury Moor ARLFC, Heckmondwike Road, Dewsbury Moor, Dewsbury.
- 1.2 The purpose of the report was to:-
 - 1.2.1 Identify the nature of the near surface strata, in order to enable recommendations to be made as to the most economic foundation solution for the proposed residential development.
 - 1.2.2 To identify any areas of contaminated ground.
- 1.3 Soil sampling was undertaken via trial pits to determine the near surface strata. Distributed samples were taken for testing to ascertain the nature of the soils and fills present.
- 1.4 The conclusions and recommendations made in this report are limited to the findings of the preliminary Geotechnical Survey. The report is made on condition that Haigh Huddleston Associates will not in any circumstances be liable for loss, arising directly or indirectly from ground conditions encountered between trial pits, which have not been revealed by the investigation.
- 1.5 Any opinion given on the possible configuration of strata between trial pit locations and below maximum depth of the investigation is for guidance only. Any remarks on groundwater conditions made are based solely on observations made at the time of investigation. Kindly note that levels may differ from those reported due to seasonal variations or other influences.
- 1.6 Furthermore, there is the possibility that any trial pits undertaken as part of the investigatory works may be within the influence of existing or proposed foundations or excavations. Haigh Huddleston Associates cannot be held responsible for any failure of any excavations, foundations or structures within the influence of the trial pits.

2.0 THE SITE

- 2.1 The proposed hospitality building is to be constructed in the north east corner of the existing facilities at Cornfield, off Heckmondwike Road, Dewsbury Moor and is situated around Ordnance Survey grid reference 422435, 422190. A site location plan is included in Appendix A.
- 2.2 The land for the proposed hospitality building is currently occupied by metal shipping containers providing temporary storage/shelter for the ground. The shipping containers are stood on the compacted made ground that forms the parking area. To the east is a residential property with private garden area, to the north is Carr Road with a playing field beyond. To the south and west is the car park with playing fields further to the south west.
- 2.3 The site is generally level. No topographical survey was available for the site at the time of writing the report.
- 2.4 It is proposed to construct a single storey L-shaped hospitality building containing storage areas, toilets, ticket sales and a refreshments area. The building will only be in use during matchdays and training periods. Access to the main storage area is through a roller shutter that will not be airtight.

3.0 SITE HISTORY

A number of historical Ordnance Survey plans from 1854-2023 have been consulted. These are contained for reference within Appendix C to the rear of the report. Below is a brief description outlining the significant developments that may affect future construction of the site.

Date	Historical uses on site	Historical findings within 100m perimeter of the site	Historical findings further than 100m perimeter of the site
1854	i) The area to be developed is shown as open field.	i) Highway shown to the north of the area to be developed. ii) Open fields surrounding site.	i) Residential buildings approximately 200m to the east and west. ii) Burgh Beck approximately 300m west of the site. iii) Park Colliery 500m north west of site.
1892	i) On site features same as before.	i) Railway line heading north west to south east located 80m west of the site.	i) Sewage works 500m north west of site on former Park Colliery. ii) Park Farm colliery 500m west of site.
1931-1976	i) On site features same as before.	i) No significant developments within 100m of the site.	i) Old shafts shown at location of former Park Farm colliery 500m west of site. ii) Sewage works extended to 400m west of site. iii) Sewage works/sludge beds shown 200m south west of site.
1981	i) On site features same as before.	i) No significant developments within 100m of the site.	i) Sewage works/sludge beds no longer shown 200m to the south west.
1992	i) On site features same as before.	i) Railway line 80m west of the site shown as dismantled.	i) No Significant developments within 500m of the site.
2001-2010	i) Site labelled as rugby football ground.	i) Residential development immediately east of site.	i) Recreation ground labelled 10m north of site.
2023	i) On site features same as before.	i) No significant developments within 100m of the site.	i) Ponds shown 250m south of the site.

4.0 SITE GEOLOGY & MINING

- 4.1 The BGS Digital Geological Map of Great Britain at 1:10,000 scale has been consulted and we would report as follows:-
- 4.2 No artificial strata is shown overlying the site. However a large area of made ground is shown beneath the playing field approximately 8m north of the proposed development.
- 4.3 No superficial geology is shown to be overlying the site.
- 4.4 The site is shown to be underlain by the Pennine Lower Coal Measures Formation consisting of Mudstone, Siltstone and Sandstone.
- 4.5 There are no fault lines in the immediate vicinity of the site.
- 4.6 A Coal Mining Risk Assessment has previously been undertaken by Abbeydale BEC (Ref: PJJ/714097Let1 dated July 2013) and states that the site is in an area where there is a low to moderate risk of unrecorded workings.
- 4.7 The property is in within the likely zone of influence in workings in two seams of coal at 40-200m depth and last worked in 1905. In addition to this, the Wheatley Lime Coal seam is anticipated to be at a depth of 20-35m beneath the site, the seam thickness is recorded locally as being 0.4-0.5m thick.
- 4.8 Due to the depth of the recorded seams and limited evidence of workings, it is considered that there is a low to moderate risk of unrecorded workings in the area.
- 4.9 In lieu of intrusive investigation works, and due to the low loadings and small size of the proposed hospitality buildings, recommendations have been made for the foundation construction of the building which are discussed in Section 10.1
- 4.10 There are no available recorded deep BGS boreholes in the immediate vicinity of the site.

5.0 ENVIRONMENTAL CONSIDERATIONS

5.1 Radon

The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

No Radon Protective Measures are necessary.

5.2 Landfill Sites

There are two historical landfill sites located within 250m of the site. The closest is located 81m southwest of the site and accepted Household, Commercial and Industrial waste and closed in 1996. The second was located 200m south west and accepted commercial waste.

5.3 Flood Risk

The proposed hospitality building does not lie within an Environment Agency designated Flood Zone.

5.4 Groundwater

The bedrock strata is classified as a Secondary (A) aquifer. These are 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.

There are no groundwater or surface water abstraction licences recorded within 250m of the site.

There are no licensed discharge consents to controlled waters within 250m of the site.

There are no recorded pollution incidents in controlled waters recorded within 250m of the site.

The site is not located in a source protection zone.

The nearest open surface water feature to the site is an un-named watercourse located 174m south west of the site. It is an inland river not influenced by normal tidal action.

6.0 PRELIMINARY CONCEPTUAL SITE MODEL

- 6.1 The initial stage in assessing the risks posed from contaminated land during the redevelopment of a site is to prepare a conceptual model. A generalised conceptual model can be developed highlighting the main pollutant linkages through a contaminant ► pathway ► receptor model for an industrial unit. In order to prepare the conceptual model for a particular site the following parameters need to be reviewed as discussed below.
- 6.2 Contamination of existing land can be caused by a number of factors, including:-
- i) Possible historical/current industrial activities.
 - ii) Disposal of waste materials.
 - iii) Storage of materials.
 - iv) A number of natural processes can also lead to hazardous gases and elevated heavy metals.
- 6.3 Potential pathways can include ground and surface water, permeable strata, existing services providing a conduit and voided ground. Potential receptors can include human health, ecosystems, controlled waters and building structures. There are a number of ways that a receptor can be exposed to the contaminant these include, inhalation, direct contact, ingestion, dermal contact and uptake.
- 6.4 The site has been shown as being in industrial usage since the earliest historical maps. There is a risk of contamination from the following:-
- i) Historical industrial usage of the site and surrounding land.
 - ii) Potential made ground used in levelling ground beneath floor slabs/hardstanding.
- The risk of existing contamination from historic activities on site is therefore considered to be moderate.
- 6.5 Considering the proposed commercial end use, there will be two possible human receptor groups exposed to the existing onsite contamination:-
- a) Site operatives during development.
 - b) End users, future site users (the critical receptor is a 17 year old female).
- 6.6 Human receptors may be exposed to site contamination by a number of possible pathways. These pathways are summarised in Table 1 below.

Table 1- Potential Human Exposure Pathways

<u>Human Exposure Pathway</u>	<u>Site Residents</u>	<u>Construction Workers</u>
Soil Ingestion	YES	YES
Consumption of Home Grown Vegetables	NO	NO
Dermal Contact	YES	YES
Dust Inhalation	YES	YES
Gases/Vapours	YES	NO

- 6.7 The construction workers will come into contact with any contaminated soil to a far greater extent than future residents. The exposure pathways are generally through dermal contact and indirect ingestion. However their exposure will be for a limited time and the provision and correct use of personnel protective equipment and adequate welfare facilities during construction should restrict their risks to acceptable levels
- 6.8 The risk of pollution to controlled waters by existing contamination is considered low. There have been no historical uses of the site likely to have caused on site contamination. There are no licensed water abstractions within 250m of the site.
- 6.9 No specific areas of ecological importance have been identified in the initial desk top study. Therefore the site is considered to be in a low risk environmental setting. The potential for phototoxic materials to exist at shallow depth should be considered, these could pose a potential risk to new planting and soft landscaping areas within the proposed development.
- 6.10 The proposed planning drawings indicates a single storey L-shaped hospitality building. The presence of elevated sulphates and hydrocarbons could affect the long term integrity of buried concrete structures, including foundations and drainage pipes. Plastic water supply pipes can also be damaged by the presence of hydrocarbon contamination.
- 6.11 Due to the low risk of potential ground gas migration from the existing historic landfill located approximately 80m to the west of the site at its closest point, as well as from possible shallow mine workings in the vicinity, it is proposed to classify the site as CS2 in accordance with BS 8485:2015 Table 2 as a precautionary measure. The landfill is situated at a lower level than the proposed hospitality building and is

understood to have last accepted material circa 30 years ago and vent stacks have been installed to prevent the build up of ground gases.

- 6.12 There has been no development between the landfill and the proposed hospitality building, so the preferential pathway for ground gases would be primarily vertically through the overlying topsoils instead of laterally towards the site. There are no known services/drainage ducts between the landfill and the site which would provide a direct pathway to the proposed building.
- 6.13 The site itself has been regraded to provide a level surface through the use of natural clays excavated from the field immediately north of the site, providing a barrier to the migration of gases in this direction. The risk of ground gas migration is therefore considered low.
- 6.14 The building itself will only be in use for short durations during matchdays and training periods, and not in continuous occupation. Access to the main storage area is through a roller shutter that will not be airtight. Therefore the risk to the site users through the ordinary use of the building is also considered low.

7.0 FIELDWORK

- 7.1 Site investigation works were undertaken on 14th February 2023 using a 3-tonne tracked excavator with 600mm wide bucket. A total of two trial pits were excavated throughout the site.
- 7.2 Materials encountered in the trial pits were examined and categorised. Trial pit logs recording the materials on site are contained within Appendix B.
- 7.3 The site investigation works were designed to achieve comprehensive site coverage within the proposed development area. The trial pit locations were restricted by stockpiled materials and storage containers in the location of the proposed buildings, as well as the sites continued use as a car park.
- 7.4 Soil samples were removed from the made ground deposits within the trial pits. The samples were removed by operatives wearing gloves and placed into airtight clean plastic containers and glass bottles for transportation to the laboratory.
- 7.5 A total of two samples from the natural and made ground deposits were recovered from the trial holes for chemical analysis. The testing was carried out by a UKAS accredited laboratory to nationally or accredited in-house methods. The results of the contamination testing are contained within Appendix C of this report.
- 7.6 A suite of common potential contaminants consisting of heavy metals, phytotoxic metals, sulphates, sulphides and poly-aromatic hydrocarbons was analysed for, including a range of metals and inorganic substances and Asbestos.

8.0 RESULTS OF THE INVESTIGATION

8.1 GEOTECHNICAL INVESTIGATION

- 8.1.1 A copy of the trial pit logs providing a complete record of strata encountered beneath the proposed development is presented in Appendix B.
- 8.1.2 The fieldwork generally proved made ground extending to near the base of the trial pits, with an underlying natural clay encountered in one of the trial pits.
- 8.1.3 The surface of all the trial pits proved up to 1.6m of made ground consisting of a mixture of re-engineered clays and gravels with the occasional crushed brick. The re-engineered clay is understood to have come from beneath the playing field located to the north of the site. TP02 terminated in this strata at a depth of 1.2m below existing ground levels.
- 8.1.4 Beneath the made ground in TP01, a natural firm yellowish brown sandy clay was encountered at 1.6m below existing ground levels and extended to the base of the trial pit at 1.8m below existing ground levels.

8.2 GROUNDWATER

- 8.2.1 No groundwater was encountered in the trial pit excavations.
- 8.2.2 It should be recognised that ground water levels may vary throughout the year. During periods of heavy rainfall the groundwater levels may be substantially higher than the results revealed in these investigations.

9.0 CONTAMINATION

9.1 HUMAN HEALTH RISK ASSESSMENT

9.1.1 The appraisal of contaminated land within the UK is based on a risk assessment approach. The method involves the principle of defining a source ► pathway ► receptor, linkage to establish a human health risk. For any risk to exist to a potential receptor from an identified contaminant there must be an unbroken source ► pathway ► target relationship.

9.1.2 In the first instance site data for the contaminant levels are compared against guidance such as the CLEA values published by DEFRA. Should the site values exceed the guidance criteria, the contamination levels are recognised to have the potential to pose a risk to human health. Two scenarios are then available:-

- a) To break or remove one of the source ► pathway ► receptor linkages, by specifying an appropriate level of remedial work. Examples of remedial action may include the removal of the contaminated material or alternatively specifying a sufficient capping layer.
- b) The alternative approach is to provide a more detailed human health site specific risk assessment. This will involve examining factors such as soil properties, exposure assumptions, groundwater flows and contamination composition.

9.2 CONTAMINATION RESULTS

9.2.1 As stated above, in order to put the analytical results into context, the data has in the first instance been assessed in relation to several sets of guidelines: -

9.2.2 The analytical results have been assessed via an initial screening assessment with regard to the current Contaminated Land Exposure Assessment model (CLEA UK) for human health, which has been produced for the Environment Agency and the Department of Environment, Food and Rural Affairs (DEFRA). The CLEA model provides Soil Guideline Values (SGVs) for a limited range of contaminants only, and these are based on risk to human health. As such they do not take into account potential risks to other receptors eg groundwater and third party land.

- 9.2.3 It is proposed to construct a single storey hospitality building with the car park remaining untouched. Soil results have therefore been assessed against the CLEA SGV's for commercial use, as these are considered to be the most suitable guidelines to protect the most critical targets from contaminants via all possible exposure routes.
- 9.2.4 Where no CLEA SGV has been published, Generic Assessment Criteria (GAC) based on guidelines from the Chartered Institute of Environmental Health (CIEH) and Land Quality Management Ltd (LQM) S4UL document residential land use with plant uptake has been used. Where there is no GAC, guidance limits have been adopted from sources referenced in the table below.
- 9.2.5 A new approach has now been adopted for the calculation of SGV based on an acceptably low level of risk. These Category 4 Screening Levels (C4SL) have been calculated for six substances to date by modifying the toxicological/exposure parameters within CLEA. C4SLs have been used as tier 1 trigger levels within this assessment, superseding the previous CIEH and LQM SGVs.
- 9.2.6 Assessment of risk is considered as a tiered approach. Assessment based on non intrusive means is considered Tier 1 assessment, comparison against SGVs and GACs is a Tier 2 assessment, and the generation of and comparison with Site Specific Assessment Criteria (SSAC) is a Tier 3 assessment and is conducted where deemed appropriate following the Tier 2 assessment.
- 9.2.7 The sulphate and acid concentrations have been compared against the BRE digest "Concrete in Aggressive Ground" parts 1-4. This will enable the concrete class to be specified in relation to possible contact with aggressive soils.
- 9.2.8 The results of the chemical analysis are presented on the laboratory analysis sheets with Appendix C. A summary of the significance of the results is presented in Table 4.

Table 4**Comparison of contaminant against accepted guidance values for commercial use**

<u>CONTAMINANT</u>	<u>SGV</u>	<u>CONCENTRATION IN</u>	<u>No. OF</u>	<u>PERCENTAGE</u>
	<u>MG/KG</u>	<u>ALL SOILS.</u>	<u>SAMPLES</u>	<u>OF SAMPLES</u>
		<u>MG/KG</u>	<u>EXCEEDING</u>	<u>EXCEEDING</u>
			<u>GUIDANCE</u>	<u>GUIDELINE</u>
			<u>VALUES</u>	<u>VALUE</u>
Arsenic	40 (4)	5.4-14	0/2	
Cadmium	220 (4)	<0.1-0.1	0/2	
Chromium (Total)	130 (2)	7.6-15	0/2	
Lead	2300 (4)	11-25	0/2	
Mercury (Total)	58 (1)	<0.05	0/2	
Selenium	12000 (1)	<0.5	0/2	
Copper	68000(1)	6-29	0/2	
Nickel	980 (1)	6.2-20	0/2	
Zinc	730000 (1)	24-56	0/2	
Sulphate	0.24% (3)	0.06-0.07%	0/2	
Thiocyanate	50	<0.6	0/2	
Sulphide	250	<10	0/2	
Naphthalene	190 (1)	<0.1	0/2	
Benzo(a)pyrene	77 (4)	<0.1-0.2	0/2	
Dibenzo[ah]anthracene	3.5 (1)	<0.1	0/2	
PAH (Total)	100	<1.6-2.3	0/2	
Phenols	760 (1)	<0.3	0/2	
Asbestos	No fibres	None	0/2	
pH	6-8	7.3-8.4	0/2	

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(2) DEFRA CLR SGV's withdrawn used for initial comparison

(3) BS 8110 1985 Table 6.1

(4) Category 4 Screening Levels

9.2.9 No elevated levels of heavy or phytotoxic metals were recorded in the samples of made ground from site.

9.2.10 No elevated levels of PAH (Total) or individual PAH compounds were recorded in the samples of made ground taken from site.

9.2.11 No asbestos was recorded in the samples taken from site.

9.2.12 A peak sulphate value of 0.07% was recorded in the samples of made ground on site, therefore a design sulphate class DS-1, ACEC class AC-1, when compared against the BRE Special Digest 1 "Concrete in aggressive ground".

9.3 **QUALITATIVE RISK ASSESSMENT**

9.3.1 The Qualitative Risk Assessment is based upon the previously discussed source ► pathway ► receptor principle. In relation to the proposed site these may be described as follows:-

9.3.2 **SOURCE**

- i) No elevated contaminants within the made ground on site.
- ii) Potential ground gas migration from historical landfill west of the site.

9.3.3 **PATHWAYS**

- i) Ingestion of contamination material.
- ii) Inhalation of contaminated particles.
- iii) Dermal contact with the known contamination.
- iv) Leaching to controlled waters.

9.3.4 **RECEPTORS**

- i) Commercial site users.
- ii) Construction and maintenance workers.
- iii) Controlled waters.
- iv) The building structure.

9.3.5 Each of the receptors will now be appraised and attribute the likely risks involved.

i) Commercial site users.

Based on the chemical results obtained it is considered that there is currently a **negligible** risk to end users from contamination on-site.

No elevated levels of heavy or phytotoxic metals, Total (PAH) or individual PAH compounds has been recorded in the samples of made ground taken from site.

No asbestos was recorded in the samples taken from site.

There is a low risk of ground gas migration from the historical landfill recorded approximately 80m west of the site. As a precautionary measure, it is therefore proposed to classify the site as CS2 by BS 8485:2015 Table 2.

ii) Construction and Maintenance Workers.

It is considered that there is a **low** risk to construction and maintenance workers from the redevelopment of the site.

Construction workers should always wear PPE including overalls, boots and gloves when handling the contaminated materials onsite. In addition eating, drinking and smoking should be restricted to designated areas where the above hygiene facilities are available.

iii) Controlled Waters

There has been no historical uses of the site likely to have caused contamination. The nearest open surface water feature is located approximately 174m south west of the site. There are no licensed water abstractions recorded within 250m of the site.

There is therefore considered to be a **low** risk to controlled waters from possible contamination on site.

iv) Building Structures.

A peak sulphate value of 0.07% was recorded in the samples of made ground on site, therefore a design sulphate class DS-1, ACEC class AC-1, when compared against the BRE Special Digest 1 "Concrete in aggressive ground".

Service providers should be forwarded the final validated chemical levels in order for them to provide an accurate specification for the apparatus to be provided. New services should be surrounded and backfilled with clean material to afford some protection to the apparatus and allow any future maintenance work to be undertaken in clean material.

10.0 CONCLUSIONS AND RECOMMENDATIONS

10.1 GEOTECHNICAL ASSESSMENT

- 10.1.1 The fieldwork generally proved approximately 1.6m of re-engineered clays overlying natural clays.
- 10.1.2 Due to the low risk of ground movement from historical mining, it has been proposed in the CMRA, and accepted by the Coal Authority, that a heavily reinforced raft foundation designed to span 3m and cantilever 1.5m should be used.
- 10.1.3 The raft should be placed on a minimum of 500mm thickness of 6F2 material extending a minimum of 750mm beyond the raft and compacted to achieve a net bearing pressure of 40 kN/m².
- 10.1.4 All foundations should be placed below a line of 45deg drawn up from the base of any services or other structures.
- 10.1.5 If any existing foundations or structures are encountered during construction, these should be totally removed from the excavations to enable the new foundations to be constructed without obstructions.
- 10.1.6 At present it is not anticipated that excessive ground water control measures will be required, however perched water was encountered in the north of the site. Please note that ground water flows can vary throughout the year and a further assessment should be undertaken if construction work is proposed following a prolonged rainfall event.
- 10.1.7 A peak sulphate value of 0.07% was recorded in the samples of made ground on site, therefore a design sulphate class DS-1, ACEC class AC-1, when compared against the BRE Special Digest 1 "Concrete in aggressive ground".

10.2 GROUND FLOOR SLAB – GAS MEASURES

10.2.1 As discussed in paragraphs 6.11-6.14 previously, due to the low risk of ground gas migration from the landfill 80m to the west and possible shallow mine workings in the vicinity to the eventual users of the hospitality building, it is proposed to classify the site as CS2 by BS 8485:2015 Table 2 as a precautionary measure.

10.2.2 No Radon Protection measures are required for the site.

10.2.3 When consulting BS 8485:2015 Tables 3 and 4, the development can be classified as a Type B building, and for a CS2 classification, a gas protection score of 3.5 points is required. Consulting tables 5 - 7 we would recommend the following to achieve a score above 3.5:

- Cast in situ monolithic heavily reinforced raft foundation with minimal penetrations. 1.0 Points
- No fines 6F2 crushed granular material stone blanket to base of raft foundation extending 750mm beyond footprint of raft. Trench to extend to surface to rear of property to allow venting to surface 1.0 Points
- A Suitable Gas Barrier meeting all of the following criteria: 2.0 Points
 - Sufficiently impervious to gasses with a methane gas Transmission rate <40.0ml/day/m²/atm (average) for sheets and joints (tested in accordance with BS ISO 15105-1 manometric method).
 - Sufficiently durable to remain serviceable for the anticipated life of the building and duration of gas Emissions.
 - Sufficiently strong to withstand in-service stresses (eg. Settlement if placed below a flood slab).
 - Sufficiently strong to withstand the installation process And following trades until covered (eg. Penetrations From steel fibres in fibre reinforced concrete, Penetration from reinforcement ties, tearing due to Working above it, dropping tools etc.)
 - Capable, after installation, of providing a complete Barrier to the entry of the relevant gas.
 - Verified in accordance with CIRIA C735 [N1]

Total

4.0 Points

10.3 CONTAMINATION ASSESSMENT

10.3.1 No elevated levels of heavy or phytotoxic metals were recorded in the samples of made ground from site.

10.3.2 No elevated levels of PAH (Total) or individual PAH compounds were recorded in the samples of made ground taken from site.

10.3.3 No asbestos was recorded in the samples taken from site.

10.3.4 There are no areas of soft landscaping proposed, so it is not envisaged at this time that any materials will need to be imported to site.

10.3.5 Any material removed from site to accommodate the proposed foundation construction should be taken to a licensed waste facility and waste transfer tickets retained to confirm their safe removal from site.

10.3.6 Should any suspected areas of contamination be exposed during site strip/construction, an engineer should be contacted to determine if additional chemical testing should be undertaken. The on-site staff should maintain a photographic record and dates of any exposed contaminated material.

11.0 SUGGESTED FURTHER WORK

11.1 Inspection and validation of gas protection measures.

12.0 APPROVALS

12.1 Proposals for the remediation of contaminated land may require the approval of numerous bodies.

These include:

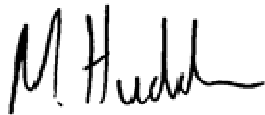
- a) Kirklees Council Environmental Health Department as required by the building and planning regulations.
- b) The NHBC or similar as they will provide the insurance costs to cover the property.
- c) The Environment Agency if there are risks of contamination to ground or surface water systems. They will also require notification if material is removed from site and taken to an appropriate tip.
- d) Relevant highways and drainage authorities and other service companies may also wish to know about the level of contaminants.
- e) Building Control regarding any geotechnical issues identified

Prepared by



M. Dean. BSc (Hons) HND

Checked by



M. Huddleston. Meng

March 2023

This report is subject to the provisions of the Copyright Acts and is for the sole benefit of Mr Michael Delaney in respect of the proposals described.

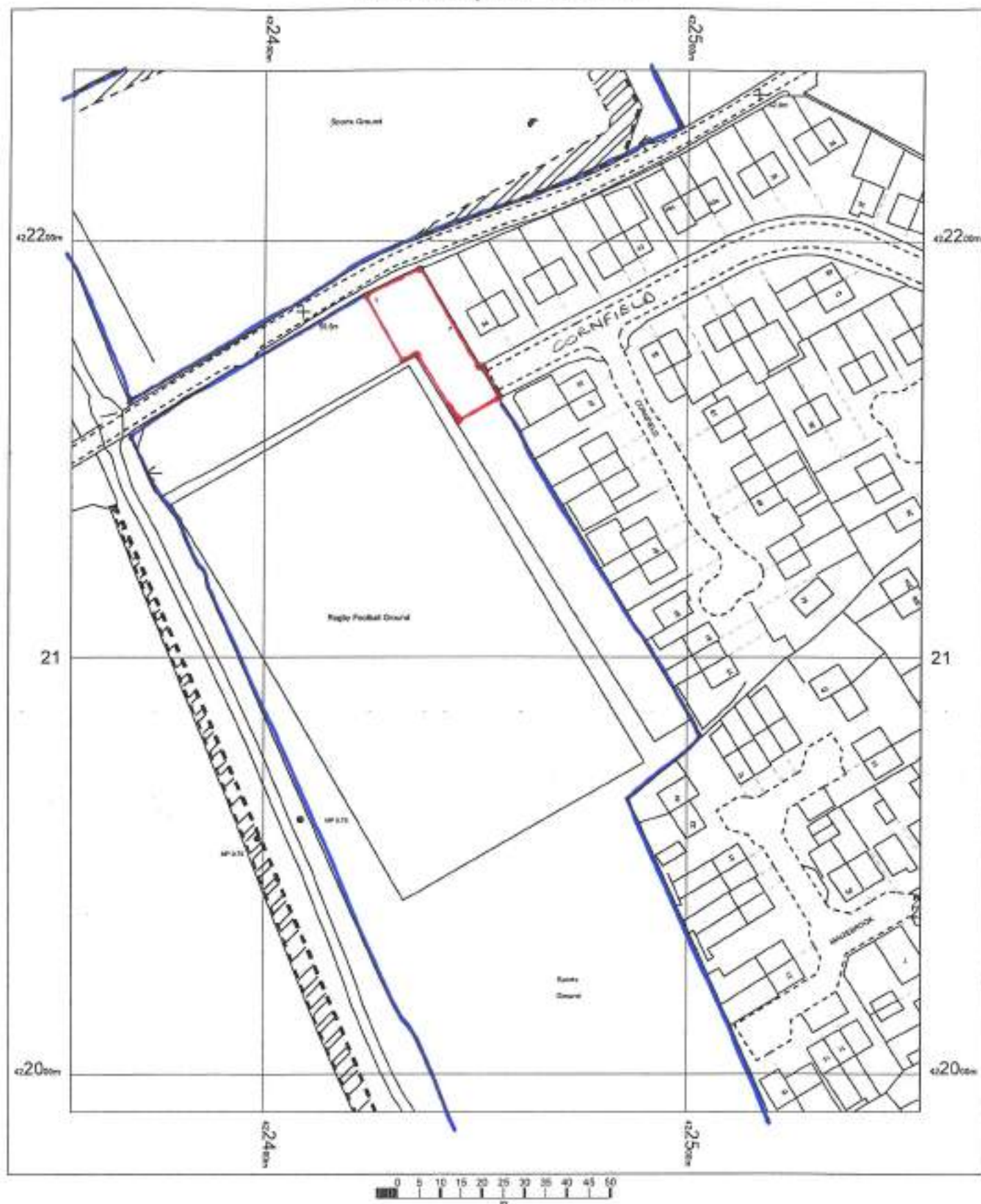
APPENDIX A

Site Location Plan

Site investigation Plan

Typical Site Conceptual Model

location plan 1:1250



OS MasterMap 1250/2500/10000 scale
22 April 2016, ID: BW1-00521845
maps.blackwell.co.uk

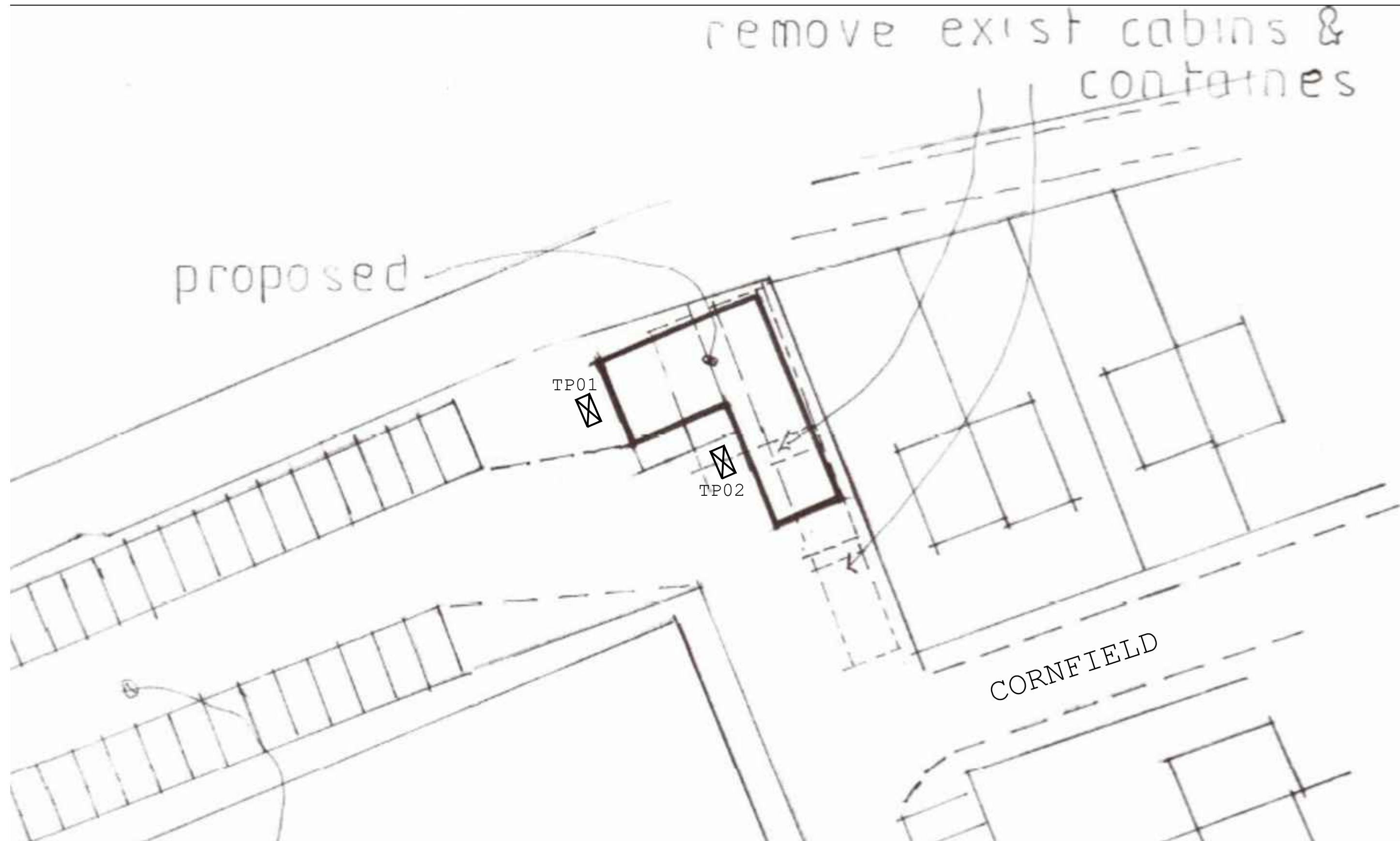
1:1250 scale print at A4, Centre: 422455 E, 422116 N

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BLACKWELL'S
www.blackwellmapping.co.uk

TEL: 0113 245 2623
comments@maps.blackwell.co.uk



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Civil Structural Engineering Consultants

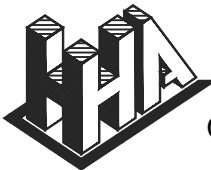
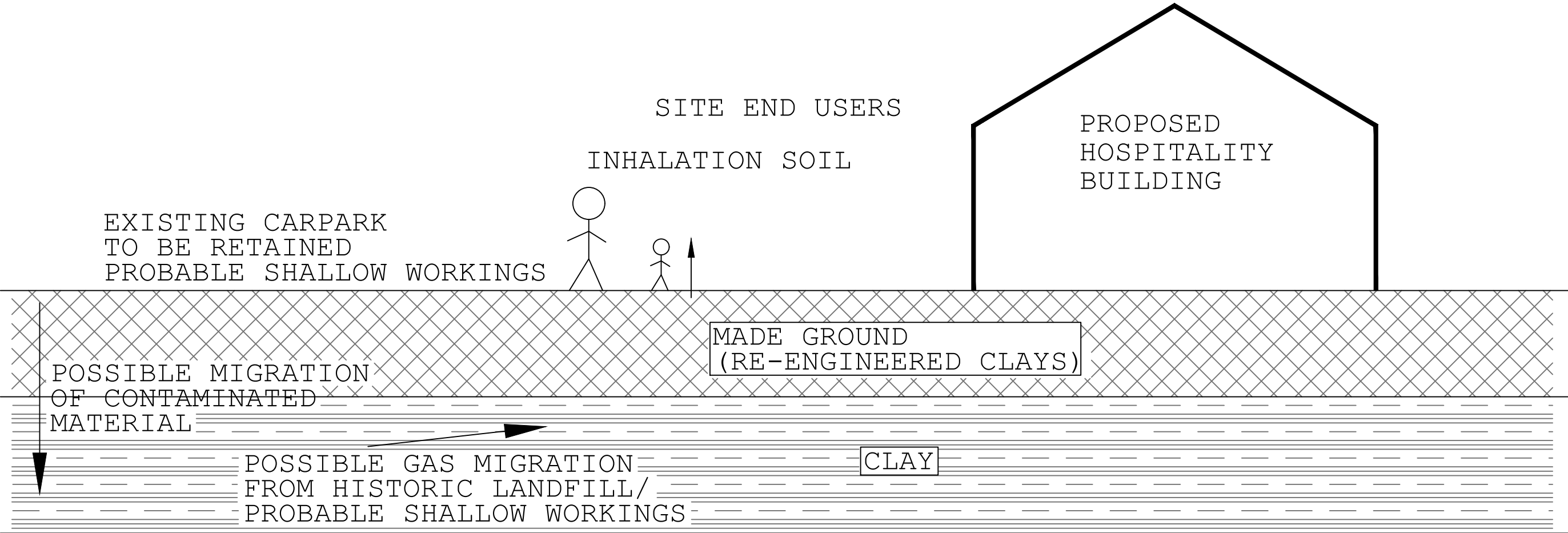
Firth Buildings, 99 - 101 Leeds Rd, Dewsbury, WF12 7BU t 01924 464342 f 01924 450662
e martin@haighhuddleston.co.uk

Client
Mr M DELANEY

Project
DEWSBURY MOOR ARLFC

Detail
SITE INVESTIGATION PLAN

Scale	Dwn	Chkd	Date	Dwg No.
NTS	MD		Mar'23	E23/8043/03



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e martin@haighhuddleston.co.uk

Client
Mr M DELANEY

Project
DEWSBURY MOOR ARLFC

Detail
Typical Site Conceptual Model

Scale	Dwn	Chkd	Date	Dwg No.
NTS	MD		Mar'23	E23/8043/32

APPENDIX B

Trial Hole Logs



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Civil & Structural Engineering Consultants

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T 01924 484342 F 01924 450552 e martin@haighhuddleston.co.uk

TRIAL HOLE NO. 1

(mini excavator)

Client :	MICHAEL DELANEY	Job No :	8043
Site :	DEWSBURY MOOR RUGBY CLUB	Date :	14 FEBRUARY 2023

0.0		
		Made ground re-engineered material primarily consisting of clay and gravels with occasional crushed brick.
0.5		
1.0		
1.5		
	1.6	
	1.8	Firm yellowish brown sandy clay.
2.0		
2.5		
3.0		
3.5		
4.0		

REMARKS:

Ground water encountered during excavation NO
Sample taken NO
Sides of excavation remained stable YES
Level

NOTES:

.....
.....



Haigh Huddleston & Associates

Civil & Structural Engineering Consultants

Firth Buildings, 88 - 101 Leeds Road, Dewsbury, WF12 7BU

T 01924 484342 F 01924 450552 e martin@haighhuddleston.co.uk

TRIAL HOLE NO. 2

(mini excavator)

Client :	MICHAEL DELANEY	Job No :	8043
Site :	DEWSBURY MOOR RUGBY CLUB	Date :	14 FEBRUARY 2023

0.0

		Made ground, re-engineered material primarily consisting of clays and gravels with occasional crushed brick.
0.5		
1.0		
	1.2	

1.5		
2.0		
2.5		
3.0		
3.5		
4.0		

REMARKS:

Ground water encountered during excavation NO
Sample taken NO
Sides of excavation remained stable YES
Level

NOTES:

.....
.....

APPENDIX C

Chemical Analysis of Samples



Certificate of Analysis

Certificate Number 23-03762

Issued: 23-Feb-23

Client Haigh Huddleston & Associates Ltd
Firth Buildings
99-101 Leeds Road
Dewsbury
WF12 7BU

Our Reference 23-03762

Client Reference 8043

Order No (not supplied)

Contract Title DEWSBURY MOOR RUGBY CLUB

Description 2 Soil samples.

Date Received 16-Feb-23

Date Started 16-Feb-23

Date Completed 23-Feb-23

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

A handwritten signature in black ink, appearing to read "Kirk Bridgewood".

Kirk Bridgewood
General Manager



Summary of Chemical Analysis

Matrix Descriptions

Our Ref 23-03762

Client Ref 8043

Contract Title DEWSBURY MOOR RUGBY CLUB

Sample ID	Depth	Lab No	Completed	Matrix Description
TP01	0.3	2125522	23/02/2023	Brown gravelly, sandy CLAY
TP02	0.3	2125523	23/02/2023	Brown gravelly, sandy CLAY

Summary of Chemical Analysis

Soil Samples

Our Ref 23-03762

Client Ref 8043

Contract Title DEWSBURY MOOR RUGBY CLUB

Lab No	2125522	2125523
Sample ID	TP01	TP02
Depth	0.30	0.30
Other ID		
Sample Type	SOIL	SOIL
Sampling Date	14/02/2023	14/02/2023
Sampling Time	n/s	n/s

Test	Method	LOD	Units		
Metals					
Arsenic	DETSC 2301#	0.2	mg/kg	14	5.4
Cadmium	DETSC 2301#	0.1	mg/kg	0.1	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg	15	7.6
Copper	DETSC 2301#	0.2	mg/kg	29	6.0
Lead	DETSC 2301#	0.3	mg/kg	25	11
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	20	6.2
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	56	24
Inorganics					
pH	DETSC 2008#		pH	8.4	7.3
Thiocyanate	DETSC 2130#	0.6	mg/kg	< 0.6	< 0.6
Total Organic Carbon	DETSC 2084#	0.5	%	2.2	1.0
Sulphide	DETSC 2024*	10	mg/kg	< 10	< 10
Sulphate as SO ₄ , Total	DETSC 2321#	0.01	%	0.06	0.07
PAHs					
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	0.2
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	0.4
Pyrene	DETSC 3301	0.1	mg/kg	0.1	0.5
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	0.2
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	0.3
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	0.2
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	0.2
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
PAH 16 Total	DETSC 3301	1.6	mg/kg	< 1.6	2.3
Phenols					
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3

Summary of Asbestos Analysis Soil Samples

Our Ref 23-03762

Client Ref 8043

Contract Title DEWSBURY MOOR RUGBY CLUB

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2125522	TP01 0.30	SOIL	NAD	none	Vicky Convery
2125523	TP02 0.30	SOIL	NAD	none	Vicky Convery

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-03762
 Client Ref 8043
 Contract DEWSBURY MOOR RUGBY CLUB

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2125522	TP01 0.30 SOIL	14/02/23	GJ 250ml, PT 1L		
2125523	TP02 0.30 SOIL	14/02/23	GJ 250ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETSC 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETSC 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETSC 2024	Sulphide	mg/kg	10	Air Dried	No	Yes	Yes
DETSC 2076	Sulphate Aqueous Extract as SO ₄	mg/l	10	Air Dried	No	Yes	Yes
DETSC 2084	Total Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETSC 2321	Total Sulphate as SO ₄	%	0.01	Air Dried	No	Yes	Yes
DETSC 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETSC 3049	Sulphur (free)	mg/kg	0.75	Air Dried	No	Yes	Yes
DETSC2123	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETSC2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETSC2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETSC2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETSC2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETSC2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETSC2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETS 062	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

End of Report

APPENDIX D

Groundsure Report

Historical Plans

54, CORNFIELD, DEWSBURY MOOR, DEWSBURY, WF13 3UY

Order Details

Date: 17/03/2023
Your ref: DELANEY_8043
Our Ref: GS-9430459

Site Details

Location: 422441 422177
Area: 0.05 ha
Authority: [Kirklees Council](#)



Summary of findings

p. 2

Aerial image

p. 8

OS MasterMap site plan

p.12

groundsure.com/insightuserguide

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
13	1.1	Historical industrial land uses	0	0	10	89	-
17	1.2	Historical tanks	0	0	2	87	-
21	1.3	Historical energy features	0	0	0	8	-
21	1.4	Historical petrol stations	0	0	0	0	-
22	1.5	Historical garages	0	0	0	4	-
22	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
23	2.1	Historical industrial land uses	0	0	20	132	-
29	2.2	Historical tanks	0	0	3	159	-
35	2.3	Historical energy features	0	0	0	32	-
37	2.4	Historical petrol stations	0	0	0	0	-
37	2.5	Historical garages	0	0	0	6	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
38	3.1	Active or recent landfill	0	0	1	0	-
39	3.2	Historical landfill (BGS records)	0	0	0	1	-
39	3.3	Historical landfill (LA/mapping records)	0	0	1	1	-
39	3.4	Historical landfill (EA/NRW records)	0	0	1	0	-
40	3.5	Historical waste sites	0	0	0	3	-
40	3.6	Licensed waste sites	0	0	0	2	-
41	3.7	Waste exemptions	0	0	0	4	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
43	4.1	Recent industrial land uses	0	0	0	-	-
43	4.2	Current or recent petrol stations	0	0	0	0	-
44	4.3	Electricity cables	0	0	0	0	-
44	4.4	Gas pipelines	0	0	0	0	-
44	4.5	Sites determined as Contaminated Land	0	0	0	0	-



44	4.6	<u>Control of Major Accident Hazards (COMAH)</u>	0	0	1	0	-
45	4.7	Regulated explosive sites	0	0	0	0	-
45	4.8	<u>Hazardous substance storage/usage</u>	0	0	0	1	-
45	4.9	<u>Historical licensed industrial activities (IPC)</u>	0	0	0	20	-
48	4.10	<u>Licensed industrial activities (Part A(1))</u>	0	0	0	9	-
49	4.11	<u>Licensed pollutant release (Part A(2)/B)</u>	0	0	1	0	-
50	4.12	Radioactive Substance Authorisations	0	0	0	0	-
50	4.13	<u>Licensed Discharges to controlled waters</u>	0	0	0	39	-
56	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
57	4.15	Pollutant release to public sewer	0	0	0	0	-
57	4.16	<u>List 1 Dangerous Substances</u>	0	0	0	3	-
57	4.17	<u>List 2 Dangerous Substances</u>	0	0	0	3	-
58	4.18	<u>Pollution Incidents (EA/NRW)</u>	0	0	0	4	-
58	4.19	<u>Pollution inventory substances</u>	0	0	0	1	-
59	4.20	<u>Pollution inventory waste transfers</u>	0	0	0	1	-
62	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
63	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
64	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
65	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
66	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
66	5.5	Groundwater vulnerability- local information	None (within 0m)				
67	5.6	<u>Groundwater abstractions</u>	0	0	0	0	15
71	5.7	<u>Surface water abstractions</u>	0	0	0	0	2
72	5.8	Potable abstractions	0	0	0	0	0
72	5.9	Source Protection Zones	0	0	0	0	-
73	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
74	6.1	<u>Water Network (OS MasterMap)</u>	0	0	9	-	-

75	6.2	<u>Surface water features</u>	0	0	3	-	-
76	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
76	6.4	<u>WFD Surface water bodies</u>	0	0	0	-	-
76	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
78	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
78	7.2	Historical Flood Events	0	0	0	-	-
78	7.3	Flood Defences	0	0	0	-	-
79	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
79	7.5	Flood Storage Areas	0	0	0	-	-
80	7.6	Flood Zone 2	None (within 50m)				
80	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
81	8.1	<u>Surface water flooding</u>	1 in 30 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding					
83	9.1	<u>Groundwater flooding</u>	Negligible (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
84	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
85	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
85	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
85	10.4	Special Protection Areas (SPA)	0	0	0	0	0
85	10.5	National Nature Reserves (NNR)	0	0	0	0	0
86	10.6	<u>Local Nature Reserves (LNR)</u>	0	0	0	0	1
86	10.7	Designated Ancient Woodland	0	0	0	0	0
86	10.8	Biosphere Reserves	0	0	0	0	0
86	10.9	Forest Parks	0	0	0	0	0
87	10.10	Marine Conservation Zones	0	0	0	0	0
87	10.11	<u>Green Belt</u>	0	0	1	0	0
87	10.12	Proposed Ramsar sites	0	0	0	0	0



87	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
88	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
88	10.15	Nitrate Sensitive Areas	0	0	0	0	0
88	10.16	<u>Nitrate Vulnerable Zones</u>	1	0	0	0	0
89	10.17	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
90	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
91	11.1	World Heritage Sites	0	0	0	-	-
91	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
91	11.3	National Parks	0	0	0	-	-
91	11.4	Listed Buildings	0	0	0	-	-
92	11.5	Conservation Areas	0	0	0	-	-
92	11.6	Scheduled Ancient Monuments	0	0	0	-	-
92	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
93	12.1	<u>Agricultural Land Classification</u>	Grade 3 (within 250m)				
94	12.2	Open Access Land	0	0	0	-	-
94	12.3	Tree Felling Licences	0	0	0	-	-
94	12.4	Environmental Stewardship Schemes	0	0	0	-	-
94	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
95	13.1	<u>Priority Habitat Inventory</u>	0	0	3	-	-
96	13.2	Habitat Networks	0	0	0	-	-
96	13.3	Open Mosaic Habitat	0	0	0	-	-
96	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
97	14.1	<u>10k Availability</u>	Identified (within 500m)				
98	14.2	<u>Artificial and made ground (10k)</u>	0	2	2	5	-
100	14.3	<u>Superficial geology (10k)</u>	0	0	1	0	-



101	14.4	Landslip (10k)	0	0	0	0	-
102	14.5	<u>Bedrock geology (10k)</u>	1	0	6	7	-
103	14.6	<u>Bedrock faults and other linear features (10k)</u>	0	0	5	6	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
105	15.1	<u>50k Availability</u>	Identified (within 500m)				
106	15.2	<u>Artificial and made ground (50k)</u>	0	1	1	1	-
107	15.3	<u>Artificial ground permeability (50k)</u>	0	1	-	-	-
108	15.4	<u>Superficial geology (50k)</u>	0	0	1	0	-
109	15.5	Superficial permeability (50k)	None (within 50m)				
109	15.6	Landslip (50k)	0	0	0	0	-
109	15.7	Landslip permeability (50k)	None (within 50m)				
110	15.8	<u>Bedrock geology (50k)</u>	1	0	6	5	-
111	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
111	15.10	<u>Bedrock faults and other linear features (50k)</u>	0	0	5	6	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
113	16.1	<u>BGS Boreholes</u>	0	0	70	-	-
Page	Section	Natural ground subsidence					
117	17.1	<u>Shrink swell clays</u>	Very low (within 50m)				
118	17.2	<u>Running sands</u>	Very low (within 50m)				
120	17.3	<u>Compressible deposits</u>	Very low (within 50m)				
122	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
123	17.5	<u>Landslides</u>	Very low (within 50m)				
124	17.6	<u>Ground dissolution of soluble rocks</u>	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
126	18.1	Natural cavities	0	0	0	0	-
127	18.2	<u>BritPits</u>	0	0	0	1	-
127	18.3	<u>Surface ground workings</u>	0	0	17	-	-
128	18.4	<u>Underground workings</u>	0	0	0	7	19
129	18.5	Historical Mineral Planning Areas	0	0	0	0	-



129	18.6	Non-coal mining	0	0	0	0	0
130	18.7	Mining cavities	0	0	0	0	0
130	18.8	JPB mining areas	None (within 0m)				
130	18.9	<u>Coal mining</u>	Identified (within 0m)				
130	18.10	Brine areas	None (within 0m)				
131	18.11	Gypsum areas	None (within 0m)				
131	18.12	Tin mining	None (within 0m)				
131	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
132	19.1	<u>Radon</u>	Less than 1% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
134	20.1	<u>BGS Estimated Background Soil Chemistry</u>	1	1	-	-	-
134	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
134	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
135	21.1	Underground railways (London)	0	0	0	-	-
135	21.2	Underground railways (Non-London)	0	0	0	-	-
136	21.3	Railway tunnels	0	0	0	-	-
136	21.4	<u>Historical railway and tunnel features</u>	0	0	3	-	-
136	21.5	Royal Mail tunnels	0	0	0	-	-
136	21.6	<u>Historical railways</u>	0	0	1	-	-
137	21.7	Railways	0	0	0	-	-
137	21.8	Crossrail 1	0	0	0	0	-
137	21.9	Crossrail 2	0	0	0	0	-
137	21.10	HS2	0	0	0	0	-



Recent aerial photograph



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Capture Date: 30/05/2021

Site Area: 0.05ha



Recent site history - 2018 aerial photograph



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Capture Date: 02/07/2018

Site Area: 0.05ha



Recent site history - 2012 aerial photograph



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Capture Date: 26/03/2012

Site Area: 0.05ha



Recent site history - 1999 aerial photograph



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Capture Date: 10/07/1999

Site Area: 0.05ha



OS MasterMap site plan



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Site Area: 0.05ha



1 Past land use



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

1.1 Historical industrial land uses

Records within 500m

99

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 13**

ID	Location	Land use	Dates present	Group ID
A	108m NW	Cuttings	1892	1512279



ID	Location	Land use	Dates present	Group ID
A	160m NW	Cuttings	1905 - 1948	1486800
A	165m NW	Cuttings	1931	1537284
A	165m NW	Cuttings	1955	1543213
B	204m SW	Sewage Works	1974	1485644
B	204m SW	Sewage Works	1955 - 1967	1522568
B	205m SW	Sewage Works	1931 - 1948	1524750
C	223m SE	Unspecified Mills	1955 - 1967	1488691
C	229m SE	Unspecified Mills	1938	1463132
B	235m SW	Sludge Beds	1967 - 1974	1543041
C	257m SE	Unspecified Commercial/Industrial	1988	1410969
C	257m SE	Unspecified Mills	1974 - 1981	1505162
E	260m N	Tannery	1892	1456301
E	288m NW	Cuttings	1892	1501378
1	289m SE	Unspecified Pit	1892	1452021
C	290m SE	Unspecified Mills	1948	1474723
E	293m NW	Chemical Works	1931	1479539
E	293m NW	Chemical Works	1948	1511500
F	295m N	Railway Sidings	1931	1472357
E	297m NW	Unspecified Works	1974 - 1988	1499038
E	297m NW	Chemical Works	1955 - 1967	1536090
F	298m N	Railway Sidings	1938	1479624
F	299m N	Railway Sidings	1948	1463178
F	299m N	Railway Sidings	1931	1463209
C	300m S	Mill Ponds	1905	1411475
E	303m N	Chemical Works	1931	1506651
E	305m N	Chemical Works	1938	1543275
E	305m NW	Unspecified Tanks	1988	1425858
E	308m N	Railway Sidings	1955	1477006



ID	Location	Land use	Dates present	Group ID
E	310m N	Disused Tannery	1905	1436422
E	311m N	Railway Sidings	1974	1479234
G	332m W	Sewage Works	1974 - 1988	1516207
G	333m W	Sewage Works	1955 - 1967	1539300
E	334m NW	Unspecified Old Shaft	1955	1418170
E	335m N	Unspecified Tip	1948	1436220
E	337m NW	Unspecified Old Shaft	1931	1464226
E	337m NW	Unspecified Old Shaft	1948	1524927
E	338m N	Railway Sidings	1967	1507732
2	338m E	Unspecified Ground Workings	1967	1412340
G	338m W	Urban District Council Sewage Works	1931	1540504
E	339m NW	Unspecified Old Shaft	1938	1466091
G	339m W	Sewage Works	1931	1509645
G	339m W	Sewage Works	1948	1520899
E	339m NW	Unspecified Old Shaft	1931	1508987
G	339m W	Sewage Works	1938	1484299
G	341m W	Unspecified Tanks	1955	1470287
G	341m W	Filter Beds	1967 - 1988	1530978
3	341m W	Unspecified Tanks	1948	1479232
G	342m W	Unspecified Tanks	1938	1536563
G	345m W	Unspecified Tip	1948	1436221
4	354m SW	Sludge Beds	1967 - 1974	1461199
G	356m W	Filter Beds	1948	1512175
G	359m W	Filter Beds	1974 - 1988	1531592
E	360m NW	Cuttings	1974 - 1988	1488824
H	376m SE	Unspecified Mills	1955 - 1974	1502403
H	376m SE	Unspecified Commercial/Industrial	1981 - 1988	1553504
H	378m SE	Unspecified Mills	1938	1554652



ID	Location	Land use	Dates present	Group ID
I	382m W	Sewage Works	1892 - 1905	1514230
G	384m W	Unspecified Tanks	1967 - 1988	1500019
G	386m W	Unspecified Tanks	1938	1529475
G	387m W	Unspecified Tanks	1931	1460370
E	388m N	Unspecified Tanks	1931 - 1938	1478009
G	389m W	Unspecified Tanks	1948	1495403
I	390m NW	Sludge Beds	1974 - 1988	1505873
E	393m N	Unspecified Tanks	1955	1520737
H	394m SE	Unspecified Mill	1905	1473000
E	397m N	Unspecified Ground Workings	1931	1482544
E	398m N	Unspecified Ground Workings	1938	1548764
E	398m N	Unspecified Ground Workings	1931	1479197
E	398m N	Unspecified Ground Workings	1948	1504098
H	398m SE	Unspecified Mill	1892	1465158
E	405m N	Unspecified Ground Workings	1955	1476765
J	432m E	Unspecified Tank	1892	1433488
I	433m NW	Unspecified Pit	1955	1452019
H	434m SE	Unspecified Mills	1948	1512153
J	437m E	Unspecified Heap	1967	1415252
K	441m S	Sewage Works	1938	1522123
G	441m W	Unspecified Tanks	1938	1468868
E	443m N	Cuttings	1955	1409817
K	450m S	Sewage Farm	1905	1443570
K	454m S	Disused Sewage Works	1981 - 1988	1538792
I	458m NW	Unspecified Tanks	1974 - 1988	1554784
6	462m SE	Colliery	1892	1506703
L	467m NW	Storm Beds	1974	1418379
L	473m NW	Unspecified Bed	1967	1451670



ID	Location	Land use	Dates present	Group ID
M	480m W	Unspecified Heap	1967 - 1988	1506669
K	485m S	Sewage Works	1931	1527054
K	485m S	Sewage Works	1948	1542294
K	487m S	Filter Beds	1905	1425534
G	489m W	Disused Colliery	1905	1431704
G	489m W	Refuse Heap	1955	1525968
M	489m W	Refuse Heap	1931 - 1948	1490668
G	491m W	Refuse Heap	1938	1526135
G	491m W	Refuse Heaps	1905	1419327
M	492m W	Refuse Heap	1905	1502140
G	495m W	Refuse Heap	1948	1541655
G	495m W	Refuse Heap	1931	1553766
8	496m W	Colliery	1892	1469019
9	496m SE	Colliery	1905	1535965

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

89

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 13**

ID	Location	Land use	Dates present	Group ID
D	224m SW	Unspecified Tank	1955 - 1968	236101
D	224m SW	Unspecified Tank	1955	238406
C	277m SE	Filter Tanks	1955 - 1972	241032
E	297m NW	Unspecified Tank	1993 - 1997	247694



ID	Location	Land use	Dates present	Group ID
C	300m SE	Tanks	1955	239044
C	301m SE	Tanks	1938	230575
E	301m NW	Unspecified Tank	1997	237061
E	301m NW	Unspecified Tank	1993 - 1997	244781
E	302m NW	Tanks	1993	230572
E	303m NW	Unspecified Tank	1997	223818
E	316m N	Tanks	1922	230574
E	321m NW	Unspecified Tank	1997	247171
E	322m N	Tanks	1988 - 1995	239191
E	322m N	Unspecified Tank	1955 - 1968	247387
C	330m SE	Unspecified Tank	1907 - 1982	241064
C	330m SE	Unspecified Tank	1982	248790
C	331m SE	Unspecified Tank	1955	223638
E	332m N	Tanks	1955 - 1968	241834
E	333m N	Unspecified Tank	1995	223819
E	337m N	Tanks	1988	243754
E	344m NW	Tanks	1997	230569
E	347m N	Tanks	1988 - 1995	235200
E	351m N	Unspecified Tank	1995	234073
E	351m N	Unspecified Tank	1988	245228
G	352m W	Humus Tanks	1955	237076
G	352m W	Humus Tanks	1955 - 1968	236541
G	355m W	Humus Tanks	1938	248876
G	359m W	Humus Tanks	1955 - 1968	244900
G	362m W	Humus Tanks	1933 - 1938	241299
E	368m N	Unspecified Tank	1955	245991
E	369m N	Unspecified Tank	1955	248945
E	371m N	Unspecified Tank	1995	223814



ID	Location	Land use	Dates present	Group ID
E	377m NW	Tanks	1995	230571
E	377m N	Unspecified Tank	1995	235673
E	378m N	Unspecified Tank	1988	243245
E	386m N	Unspecified Tank	1995	223813
E	386m N	Unspecified Tank	1979 - 1995	246260
G	386m W	Tanks	1922 - 1997	245949
G	386m W	Tanks	1993	245950
E	386m N	Unspecified Tank	1973	250187
G	389m W	Tanks	1993 - 1997	235825
E	391m N	Tanks	1938	249464
I	391m NW	Unspecified Tank	1955 - 1968	236511
E	391m N	Unspecified Tank	1955	249696
E	392m N	Tanks	1955	234035
I	394m W	Unspecified Tank	1938	223817
G	396m W	Unspecified Tank	1955 - 1968	235258
E	397m N	Unspecified Tank	1955	234949
E	398m N	Tanks	1988	240077
E	399m N	Tanks	1995	240912
G	400m W	Unspecified Tank	1938	223816
G	401m W	Unspecified Tank	1993 - 1997	241691
E	402m N	Tanks	1933 - 1938	235221
E	405m N	Tanks	1955	247428
E	407m N	Tanks	1955	237828
I	414m NW	Unspecified Tank	1993	235425
I	414m NW	Unspecified Tank	1997	235746
I	419m NW	Unspecified Tank	1993 - 1997	245016
I	422m NW	Unspecified Tank	1993	237081
I	422m NW	Unspecified Tank	1997	245454



ID	Location	Land use	Dates present	Group ID
G	423m W	Unspecified Tank	1955 - 1968	243752
I	429m NW	Unspecified Tank	1993 - 1997	249149
I	429m NW	Tanks	1922	230573
E	434m N	Tanks	1988 - 1995	236053
E	437m N	Unspecified Tank	1988 - 1995	243747
I	438m NW	Unspecified Tank	1993 - 1997	242957
I	443m NW	Unspecified Tank	1993 - 1997	247362
E	454m N	Unspecified Tank	1995	248890
E	454m N	Unspecified Tank	1988	236161
E	461m N	Unspecified Tank	1988 - 1995	241704
E	462m N	Unspecified Tank	1988 - 1995	245220
I	463m NW	Precipitation Tanks	1933 - 1938	235786
I	464m NW	Tanks	1968	240137
I	464m NW	Tanks	1955	247411
I	465m NW	Tanks	1922	242640
K	466m S	Detritus Tanks	1955	233062
I	467m NW	Tanks	1955	234514
E	476m N	Tanks	1995	230570
E	477m N	Tanks	1988 - 1995	244341
E	477m N	Unspecified Tank	1988	242518
E	477m N	Tanks	1988 - 1995	241253
K	487m S	Tanks	1985	245651
K	488m S	Tanks	1955	233599
E	488m N	Unspecified Tank	1988	239503
K	488m S	Settling Tanks	1955	250031
K	493m S	Detritus Tanks	1955	233064
K	494m S	Tanks	1955 - 1985	242903
K	495m S	Tanks	1955 - 1985	236600



ID	Location	Land use	Dates present	Group ID
K	495m S	Detritus Tanks	1955	233063

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	8
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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 13**

ID	Location	Land use	Dates present	Group ID
C	319m SE	Electricity Substation	1972 - 1982	141252
C	328m SE	Electricity Substation	1982	129124
5	391m NE	Electricity Substation	1955 - 1997	134910
E	394m N	Electricity Substation	1973 - 1995	139789
H	451m SE	Electricity Substation	1982 - 1997	144727
7	464m SE	Electricity Substation	1982 - 1997	140006
N	494m E	Electricity Substation	1969 - 1997	140348
N	499m E	Electricity Substation	1968	136623

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0
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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

4

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 13**

ID	Location	Land use	Dates present	Group ID
H	398m SE	Garage	1972	41975
H	402m SE	Garage	1982 - 1992	45562
H	402m SE	Garage	1982	43366
H	403m SE	Garage	1993 - 1997	46193

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



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

2.1 Historical industrial land uses

Records within 500m

152

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 23**

ID	Location	Land Use	Date	Group ID
A	108m NW	Cuttings	1892	1512279
A	160m NW	Cuttings	1948	1486800
A	160m NW	Cuttings	1931	1486800

ID	Location	Land Use	Date	Group ID
A	160m NW	Cuttings	1905	1486800
A	161m NW	Cuttings	1938	1486800
A	165m NW	Cuttings	1931	1537284
A	165m NW	Cuttings	1931	1537284
A	165m NW	Cuttings	1955	1543213
B	204m SW	Sewage Works	1974	1485644
B	204m SW	Sewage Works	1967	1522568
B	204m SW	Sewage Works	1955	1522568
B	205m SW	Sewage Works	1938	1524750
B	205m SW	Sewage Works	1938	1524750
B	218m SW	Sewage Works	1948	1524750
B	218m SW	Sewage Works	1931	1524750
C	223m SE	Unspecified Mills	1967	1488691
C	223m SE	Unspecified Mills	1955	1488691
C	229m SE	Unspecified Mills	1938	1463132
B	235m SW	Sludge Beds	1974	1543041
B	235m SW	Sludge Beds	1967	1543041
C	257m SE	Unspecified Commercial/Industrial	1988	1410969
C	257m SE	Unspecified Mills	1981	1505162
C	257m SE	Unspecified Mills	1974	1505162
E	260m N	Tannery	1892	1456301
E	288m NW	Cuttings	1892	1501378
1	289m SE	Unspecified Pit	1892	1452021
C	290m SE	Unspecified Mills	1948	1474723
E	293m NW	Chemical Works	1948	1511500
E	293m NW	Chemical Works	1931	1479539
F	295m N	Railway Sidings	1931	1472357
F	295m N	Railway Sidings	1931	1472357



ID	Location	Land Use	Date	Group ID
E	297m NW	Unspecified Works	1988	1499038
E	297m NW	Unspecified Works	1981	1499038
E	297m NW	Unspecified Works	1974	1499038
E	297m NW	Chemical Works	1967	1536090
E	297m NW	Chemical Works	1955	1536090
F	298m N	Railway Sidings	1938	1479624
F	299m N	Railway Sidings	1948	1463178
F	299m N	Railway Sidings	1931	1463209
C	300m S	Mill Ponds	1905	1411475
E	303m N	Chemical Works	1931	1506651
E	303m N	Chemical Works	1931	1506651
E	305m N	Chemical Works	1938	1543275
E	305m NW	Unspecified Tanks	1988	1425858
E	308m N	Railway Sidings	1955	1477006
E	310m N	Disused Tannery	1905	1436422
E	311m N	Railway Sidings	1974	1479234
G	332m W	Sewage Works	1988	1516207
G	332m W	Sewage Works	1981	1516207
G	332m W	Sewage Works	1974	1516207
G	333m W	Sewage Works	1967	1539300
G	333m W	Sewage Works	1955	1539300
E	334m NW	Unspecified Old Shaft	1955	1418170
E	335m N	Unspecified Tip	1948	1436220
E	337m NW	Unspecified Old Shaft	1948	1524927
E	337m NW	Unspecified Old Shaft	1931	1464226
E	338m N	Railway Sidings	1967	1507732
2	338m E	Unspecified Ground Workings	1967	1412340
G	338m W	Urban District Council Sewage Works	1931	1540504



ID	Location	Land Use	Date	Group ID
E	339m NW	Unspecified Old Shaft	1938	1466091
G	339m W	Sewage Works	1948	1520899
G	339m W	Sewage Works	1931	1509645
E	339m NW	Unspecified Old Shaft	1931	1508987
E	339m NW	Unspecified Old Shaft	1931	1508987
G	339m W	Sewage Works	1938	1484299
G	341m W	Filter Beds	1988	1530978
G	341m W	Filter Beds	1981	1530978
G	341m W	Filter Beds	1974	1530978
G	341m W	Filter Beds	1967	1530978
G	341m W	Unspecified Tanks	1955	1470287
3	341m W	Unspecified Tanks	1948	1479232
G	342m W	Unspecified Tanks	1938	1536563
G	342m W	Urban District Council Sewage Works	1931	1540504
G	345m W	Unspecified Tip	1948	1436221
H	354m SW	Sludge Beds	1974	1461199
H	354m SW	Sludge Beds	1967	1461199
G	356m W	Filter Beds	1948	1512175
G	359m W	Filter Beds	1988	1531592
G	359m W	Filter Beds	1981	1531592
G	359m W	Filter Beds	1974	1531592
E	360m NW	Cuttings	1988	1488824
E	360m NW	Cuttings	1981	1488824
E	360m NW	Cuttings	1974	1488824
I	376m SE	Unspecified Commercial/Industrial	1988	1553504
I	376m SE	Unspecified Commercial/Industrial	1981	1553504
I	376m SE	Unspecified Mills	1974	1502403
I	376m SE	Unspecified Mills	1967	1502403



ID	Location	Land Use	Date	Group ID
I	376m SE	Unspecified Mills	1955	1502403
I	378m SE	Unspecified Mills	1938	1554652
J	382m W	Sewage Works	1892	1514230
G	384m W	Unspecified Tanks	1988	1500019
G	384m W	Unspecified Tanks	1981	1500019
G	384m W	Unspecified Tanks	1974	1500019
G	384m W	Unspecified Tanks	1967	1500019
J	385m W	Sewage Works	1905	1514230
G	386m W	Unspecified Tanks	1938	1529475
G	387m W	Unspecified Tanks	1931	1460370
G	387m W	Unspecified Tanks	1931	1460370
E	388m N	Unspecified Tanks	1931	1478009
E	388m N	Unspecified Tanks	1931	1478009
G	389m W	Unspecified Tanks	1948	1495403
G	389m W	Unspecified Tanks	1931	1460370
E	390m N	Unspecified Tanks	1938	1478009
J	390m NW	Sludge Beds	1988	1505873
J	390m NW	Sludge Beds	1981	1505873
J	390m NW	Sludge Beds	1974	1505873
E	393m N	Unspecified Tanks	1955	1520737
I	394m SE	Unspecified Mill	1905	1473000
E	397m N	Unspecified Ground Workings	1931	1482544
E	397m N	Unspecified Ground Workings	1931	1482544
E	398m N	Unspecified Ground Workings	1938	1548764
E	398m N	Unspecified Ground Workings	1948	1504098
E	398m N	Unspecified Ground Workings	1931	1479197
I	398m SE	Unspecified Mill	1892	1465158
E	405m N	Unspecified Ground Workings	1955	1476765



ID	Location	Land Use	Date	Group ID
L	432m E	Unspecified Tank	1892	1433488
J	433m NW	Unspecified Pit	1955	1452019
I	434m SE	Unspecified Mills	1948	1512153
L	437m E	Unspecified Heap	1967	1415252
M	441m S	Sewage Works	1938	1522123
M	441m S	Sewage Works	1938	1522123
G	441m W	Unspecified Tanks	1938	1468868
E	443m N	Cuttings	1955	1409817
M	450m S	Sewage Farm	1905	1443570
M	454m S	Disused Sewage Works	1981	1538792
J	458m NW	Unspecified Tanks	1988	1554784
J	458m NW	Unspecified Tanks	1981	1554784
J	458m NW	Unspecified Tanks	1974	1554784
4	462m SE	Colliery	1892	1506703
O	467m NW	Storm Beds	1974	1418379
O	473m NW	Unspecified Bed	1967	1451670
P	480m W	Unspecified Heap	1988	1506669
P	480m W	Unspecified Heap	1981	1506669
P	480m W	Unspecified Heap	1974	1506669
P	480m W	Unspecified Heap	1967	1506669
M	485m S	Sewage Works	1948	1542294
M	485m S	Sewage Works	1931	1527054
M	487m S	Filter Beds	1905	1425534
M	487m S	Disused Sewage Works	1988	1538792
G	489m W	Disused Colliery	1905	1431704
G	489m W	Refuse Heap	1955	1525968
P	489m W	Refuse Heap	1938	1490668
P	489m W	Refuse Heap	1938	1490668



ID	Location	Land Use	Date	Group ID
G	491m W	Refuse Heap	1938	1526135
G	491m W	Refuse Heaps	1905	1419327
P	492m W	Refuse Heap	1948	1490668
P	492m W	Refuse Heap	1905	1502140
P	492m W	Refuse Heap	1931	1490668
G	495m W	Refuse Heap	1948	1541655
G	495m W	Refuse Heap	1931	1553766
G	496m W	Colliery	1892	1469019
5	496m SE	Colliery	1905	1535965

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

162

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 23**

ID	Location	Land Use	Date	Group ID
D	224m SW	Unspecified Tank	1968	236101
D	224m SW	Unspecified Tank	1955	236101
D	224m SW	Unspecified Tank	1955	238406
C	277m SE	Filter Tanks	1972	241032
C	277m SE	Filter Tanks	1955	241032
C	278m SE	Filter Tanks	1955	241032
E	297m NW	Unspecified Tank	1997	247694
E	297m NW	Unspecified Tank	1993	247694
C	300m SE	Tanks	1955	239044
C	300m SE	Tanks	1955	239044
C	301m SE	Tanks	1938	230575



ID	Location	Land Use	Date	Group ID
E	301m NW	Unspecified Tank	1997	237061
E	301m NW	Unspecified Tank	1997	244781
E	301m NW	Unspecified Tank	1993	244781
E	302m NW	Tanks	1993	230572
E	303m NW	Unspecified Tank	1997	223818
E	313m NW	Unspecified Tank	1997	237061
E	316m N	Tanks	1922	230574
E	321m NW	Unspecified Tank	1997	247171
E	322m N	Tanks	1995	239191
E	322m N	Tanks	1988	239191
E	322m N	Tanks	1988	239191
E	322m N	Unspecified Tank	1955	247387
E	323m N	Unspecified Tank	1968	247387
E	323m N	Unspecified Tank	1955	247387
C	330m SE	Unspecified Tank	1907	241064
C	330m SE	Unspecified Tank	1922	241064
C	330m SE	Unspecified Tank	1933	241064
C	330m SE	Unspecified Tank	1938	241064
C	330m SE	Unspecified Tank	1982	248790
C	331m SE	Unspecified Tank	1982	241064
C	331m SE	Unspecified Tank	1972	241064
C	331m SE	Unspecified Tank	1955	223638
E	332m N	Tanks	1955	241834
E	332m N	Tanks	1968	241834
E	332m N	Tanks	1955	241834
E	333m N	Unspecified Tank	1995	223819
E	337m N	Tanks	1988	243754
E	337m N	Tanks	1988	243754



ID	Location	Land Use	Date	Group ID
E	344m NW	Tanks	1997	230569
E	347m N	Tanks	1995	235200
E	348m N	Tanks	1988	235200
E	348m N	Tanks	1988	235200
E	351m N	Unspecified Tank	1995	234073
E	351m N	Unspecified Tank	1988	245228
E	351m N	Unspecified Tank	1988	245228
G	352m W	Humus Tanks	1955	237076
G	352m W	Humus Tanks	1968	236541
G	352m W	Humus Tanks	1955	236541
G	355m W	Humus Tanks	1938	248876
G	359m W	Humus Tanks	1968	244900
G	359m W	Humus Tanks	1955	244900
G	359m W	Humus Tanks	1955	244900
G	362m W	Humus Tanks	1933	241299
G	362m W	Humus Tanks	1938	241299
E	368m N	Unspecified Tank	1955	245991
E	369m N	Unspecified Tank	1955	248945
E	371m N	Unspecified Tank	1995	223814
E	377m NW	Tanks	1995	230571
E	377m N	Unspecified Tank	1995	235673
E	378m N	Unspecified Tank	1988	243245
E	378m N	Unspecified Tank	1988	243245
E	386m N	Unspecified Tank	1995	223813
E	386m N	Unspecified Tank	1979	246260
E	386m N	Unspecified Tank	1988	246260
E	386m N	Unspecified Tank	1988	246260
G	386m W	Tanks	1997	245949

ID	Location	Land Use	Date	Group ID
G	386m W	Tanks	1993	245950
E	386m N	Unspecified Tank	1973	250187
E	387m N	Unspecified Tank	1995	246260
G	388m W	Tanks	1922	245949
G	389m W	Tanks	1997	235825
G	389m W	Tanks	1993	235825
E	391m N	Tanks	1938	249464
J	391m NW	Unspecified Tank	1968	236511
J	391m NW	Unspecified Tank	1955	236511
E	391m N	Unspecified Tank	1955	249696
J	391m NW	Unspecified Tank	1955	236511
E	391m N	Unspecified Tank	1955	249696
E	392m N	Tanks	1955	234035
E	392m N	Tanks	1955	234035
J	394m W	Unspecified Tank	1938	223817
G	396m W	Unspecified Tank	1955	235258
G	396m W	Unspecified Tank	1968	235258
G	396m W	Unspecified Tank	1955	235258
E	397m N	Unspecified Tank	1955	234949
E	397m N	Unspecified Tank	1955	234949
E	398m N	Tanks	1988	240077
E	398m N	Tanks	1988	240077
E	399m N	Tanks	1995	240912
G	400m W	Unspecified Tank	1938	223816
G	401m W	Unspecified Tank	1997	241691
G	401m W	Unspecified Tank	1993	241691
E	402m N	Tanks	1933	235221
E	402m N	Tanks	1938	235221



ID	Location	Land Use	Date	Group ID
E	405m N	Tanks	1955	247428
E	405m N	Tanks	1955	247428
E	407m N	Tanks	1955	237828
E	407m N	Tanks	1955	237828
J	414m NW	Unspecified Tank	1997	235746
J	414m NW	Unspecified Tank	1993	235425
J	419m NW	Unspecified Tank	1997	245016
J	419m NW	Unspecified Tank	1993	245016
J	422m NW	Unspecified Tank	1997	245454
J	422m NW	Unspecified Tank	1993	237081
G	423m W	Unspecified Tank	1968	243752
G	423m W	Unspecified Tank	1955	243752
G	423m W	Unspecified Tank	1955	243752
G	428m W	Tanks	1993	245950
G	428m W	Tanks	1993	245950
J	429m NW	Unspecified Tank	1997	249149
J	429m NW	Unspecified Tank	1993	249149
J	429m NW	Tanks	1922	230573
E	434m N	Tanks	1995	236053
E	434m N	Tanks	1988	236053
E	434m N	Tanks	1988	236053
E	437m N	Unspecified Tank	1988	243747
E	437m N	Unspecified Tank	1988	243747
E	437m N	Unspecified Tank	1995	243747
J	438m NW	Unspecified Tank	1997	242957
J	438m NW	Unspecified Tank	1993	242957
J	443m NW	Unspecified Tank	1997	247362
J	443m NW	Unspecified Tank	1993	247362



ID	Location	Land Use	Date	Group ID
E	454m N	Unspecified Tank	1995	248890
E	454m N	Unspecified Tank	1988	236161
E	454m N	Unspecified Tank	1988	236161
E	461m N	Unspecified Tank	1995	241704
E	462m N	Unspecified Tank	1995	245220
E	462m N	Unspecified Tank	1988	241704
E	462m N	Unspecified Tank	1988	241704
E	462m N	Unspecified Tank	1988	245220
E	462m N	Unspecified Tank	1988	245220
J	463m NW	Precipitation Tanks	1933	235786
J	463m NW	Precipitation Tanks	1938	235786
J	464m NW	Tanks	1968	240137
J	464m NW	Tanks	1955	247411
J	464m NW	Tanks	1955	247411
J	465m NW	Tanks	1922	242640
M	466m S	Detritus Tanks	1955	233062
J	467m NW	Tanks	1955	234514
J	467m NW	Tanks	1955	247411
E	476m N	Tanks	1995	230570
E	477m N	Tanks	1995	244341
E	477m N	Unspecified Tank	1988	242518
E	477m N	Unspecified Tank	1988	242518
E	477m N	Tanks	1995	241253
E	478m N	Tanks	1988	244341
E	478m N	Tanks	1988	244341
E	479m N	Tanks	1988	241253
E	479m N	Tanks	1988	241253
M	487m S	Tanks	1985	245651



ID	Location	Land Use	Date	Group ID
M	488m S	Tanks	1955	233599
E	488m N	Unspecified Tank	1988	239503
E	488m N	Unspecified Tank	1988	239503
M	488m S	Settling Tanks	1955	250031
M	493m S	Detritus Tanks	1955	233064
M	494m S	Tanks	1985	242903
M	494m S	Tanks	1955	242903
M	495m S	Settling Tanks	1955	250031
M	495m S	Tanks	1985	236600
M	495m S	Detritus Tanks	1955	233063
M	496m S	Tanks	1955	236600

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

32

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 23**

ID	Location	Land Use	Date	Group ID
C	319m SE	Electricity Substation	1982	141252
C	319m SE	Electricity Substation	1972	141252
C	328m SE	Electricity Substation	1982	129124
K	391m NE	Electricity Substation	1997	134910
K	391m NE	Electricity Substation	1994	134910
K	391m NE	Electricity Substation	1996	134910
K	391m NE	Electricity Substation	1993	134910
K	392m NE	Electricity Substation	1968	134910
K	392m NE	Electricity Substation	1955	134910



ID	Location	Land Use	Date	Group ID
K	392m NE	Electricity Substation	1955	134910
K	392m NE	Electricity Substation	1969	134910
E	394m N	Electricity Substation	1979	139789
E	394m N	Electricity Substation	1988	139789
E	394m N	Electricity Substation	1988	139789
E	394m N	Electricity Substation	1973	139789
E	395m N	Electricity Substation	1995	139789
I	451m SE	Electricity Substation	1997	144727
I	451m SE	Electricity Substation	1993	144727
I	451m SE	Electricity Substation	1982	144727
I	451m SE	Electricity Substation	1992	144727
I	451m SE	Electricity Substation	1982	144727
N	464m SE	Electricity Substation	1982	140006
N	464m SE	Electricity Substation	1992	140006
N	464m SE	Electricity Substation	1997	140006
N	464m SE	Electricity Substation	1993	140006
N	464m SE	Electricity Substation	1982	140006
Q	494m E	Electricity Substation	1997	140348
Q	494m E	Electricity Substation	1994	140348
Q	494m E	Electricity Substation	1996	140348
Q	494m E	Electricity Substation	1993	140348
Q	495m E	Electricity Substation	1969	140348
Q	499m E	Electricity Substation	1968	136623

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**6**

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 23**

ID	Location	Land Use	Date	Group ID
I	398m SE	Garage	1972	41975
I	402m SE	Garage	1982	45562
I	402m SE	Garage	1992	45562
I	402m SE	Garage	1982	43366
I	403m SE	Garage	1997	46193
I	403m SE	Garage	1993	46193

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Active or recent landfill
- Historical landfill (EA/NRW)
- Historical landfill (BGS)
- Historical landfill (LA/OS)
- Historical waste sites
- ◆ Licensed waste sites
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

1

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation. Features are displayed on the Waste and landfill map on **page 38**

ID	Location	Details	
A	81m SW	Operator: Kirklees Council Site Address: Lower Spen Valley, Park Road, Ravensthorpe, Dewsbury, West Yorkshire, WF12	WML Number: 61058 EPR Reference: KIR008 Landfill type: A04: Household, Commercial & Industrial Waste Landfill Status: Closure IPPC Reference: - EPR Number: EA/EPR/FP3295ZH/A001



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

3.2 Historical landfill (BGS records)

Records within 500m

1

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.

Features are displayed on the Waste and landfill map on **page 38**

ID	Location	Address	BGS Number	Risk	Waste Type
4	362m S	Carlanes, off Heckmand Rd, Dewsbury, Cleckheaton	1883	No risk to aquifer	N/A

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m

2

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

Features are displayed on the Waste and landfill map on **page 38**

ID	Location	Site address	Source	Data type
A	71m W	Lower Spen Valley	Kirklees Metropolitan Council	Polygon
2	275m SW	Carr Lane	Kirklees Metropolitan Council	Polygon

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

3.4 Historical landfill (EA/NRW records)

Records within 500m

1

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.

Features are displayed on the Waste and landfill map on **page 38**



ID	Location	Details		
A	199m SW	Site Address: Carr Lane, Off Heckmondwike Road, Dewsbury, Cleckheaton, West Yorkshire Licence Holder Address: -	Waste Licence: - Site Reference: - Waste Type: Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: Spenborough Borough Council Licence Holder: - First Recorded 11/07/1972 Last Recorded: -

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

3.5 Historical waste sites

Records within 500m	3
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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 38**

ID	Location	Address	Further Details	Date
6	490m W	Site Address: N/A	Type of Site: Ground Workings and Refuse Heap Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1907
C	491m W	Site Address: N/A	Type of Site: Ground Workings and Refuse Heap Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1922
C	492m W	Site Address: N/A	Type of Site: Ground Workings and Refuse Heap Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1933

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

3.6 Licensed waste sites

Records within 500m	2
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Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on **page 38**



ID	Location	Details		
B	483m NW	Site Name: Former Spenborough Sewage Treatment Works Site Address: Former Spenborough S T W, Smithies Lane, Heckmondwike, West Yorkshire, WF16 0PR Correspondence Address: -	Type of Site: Deposit of waste to land as a recovery operation Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: DOM009 EPR reference: EA/EPR/CB3604MF/A001 Operator: The Dome Regeneration Co Ltd Waste Management licence No: 402187 Annual Tonnage: 127500	Issue Date: 08/07/2015 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
B	483m NW	Site Name: Former Spenborough Sewage Treatment Works Site Address: Former Spenborough S T W, Smithies Lane, Heckmondwike, West Yorkshire, WF16 0PR Correspondence Address: -	Type of Site: Deposit of waste to land as a recovery operation Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: DOM009 EPR reference: EA/EPR/CB3604MF/A001 Operator: The Dome Regeneration Co Ltd Waste Management licence No: 402187 Annual Tonnage: 127500	Issue Date: 08/07/2015 Effective Date: - 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	4
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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 38**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	260m N	245, HECKMONDWIKE ROAD, DEWSBURY, WF13 3NF	WEX134865	Disposing of waste exemption	Not on a farm	Burning waste in the open
3	346m SE	119, HECKMONDWIKE ROAD, DEWSBURY, WF13 3NT	WEX243865	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal



ID	Location	Site	Reference	Category	Sub-Category	Description
5	412m E	Is a empty land wich wasn't clean for a long time.	WEX267285	Disposing of waste exemption	Not on a farm	Burning waste in the open
B	449m NW	Former Sewage Treatment Works Smithies Lane Heckmondwike Yorkshire WF16 OPR	EPR/GF0409G D/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction

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



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Control of Major Accident Hazards
- ▲ Hazardous substance storage/usage
- Historical licensed industrial activities
- ⬮ Part A(1) industrial activities
- Licensed pollutant release (Part A(2)/B)
- Licensed Discharges to controlled waters
- List 1 Dangerous Substances
- List 2 Dangerous Substances
- Pollution Incidents (EA/NRW)
- Pollution inventory substances
- Pollution inventory waste transfers

4.1 Recent industrial land uses

Records within 250m

0

Current potentially contaminative industrial sites.

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**1**

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.

Features are displayed on the Current industrial land use map on **page 43**

ID	Location	Company	Address	Operational status	Tier
A	204m N	Morton International Ltd	Morton International Ltd, Heckmondwike Road, Dewsbury, WF13 3NG	Historical NIHHS Site	-

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

1

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.

Features are displayed on the Current industrial land use map on **page 43**

ID	Location	Details	
5	437m N	Application reference number: 99/93038 Application status: Approved Application date: 21/10/1999 Address: Rohm & Haas (UK) Ltd, Lighthouse Chemical Works, Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, England, WF13 3NG	Details: Deemed hazardous substances consent for the presence of toxic substances (B.2) and substances dangerous for the environment (B.10.i AND B.10.ii) Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m

20

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.

Features are displayed on the Current industrial land use map on **page 43**

ID	Location	Details	
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: AK7949	Original Permit Number: IPCAIRAPP Date Approved: 22-2-1994 Effective Date: 1-3-1994 Status: Superseded By Variation



ID	Location	Details	
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: AK7957	Original Permit Number: IPCAIRAPP Date Approved: 21-2-1994 Effective Date: 1-3-1994 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: AN4229	Original Permit Number: IPCMINVAR Date Approved: 1-7-1994 Effective Date: 1-7-1994 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: AN9581	Original Permit Number: IPCMINVAR Date Approved: 28-7-1994 Effective Date: 31-7-1994 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: AN9603	Original Permit Number: IPCMINVAR Date Approved: 28-7-1994 Effective Date: 31-7-1994 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: AO7096	Original Permit Number: IPCMINVAR Date Approved: 15-10-1994 Effective Date: 15-10-1994 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: AO7118	Original Permit Number: IPCMINVAR Date Approved: 15-10-1994 Effective Date: 15-10-1994 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: AX0437	Original Permit Number: IPCMINVAR Date Approved: 11-11-1996 Effective Date: 11-11-1996 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: BA1885	Original Permit Number: IPCMINVAR Date Approved: 26-1-1998 Effective Date: 26-1-1998 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: BD0192	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation



ID	Location	Details	
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: BE2204	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: BI3989	Original Permit Number: IPCMAJVAR Date Approved: 18-8-2000 Effective Date: 25-8-2000 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: BI7470	Original Permit Number: IPCMINVAR Date Approved: 20-7-2000 Effective Date: 24-7-2000 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: BI7488	Original Permit Number: IPCMINVAR Date Approved: 20-7-2000 Effective Date: 24-7-2000 Status: Revoked
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: BK9776	Original Permit Number: IPCMINVAR Date Approved: 26-4-2001 Effective Date: 26-4-2001 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: BM0737	Original Permit Number: IPCMINVAR Date Approved: 19-9-2001 Effective Date: 24-9-2001 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: BS6459	Original Permit Number: IPCMINVAR Date Approved: 16-9-2002 Effective Date: 16-9-2002 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: BV5564	Original Permit Number: IPCMINVAR Date Approved: 18-8-2003 Effective Date: 25-8-2003 Status: Superseded By Variation
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: CA4013	Original Permit Number: IPCMINVAR Date Approved: 17-8-2006 Effective Date: 17-8-2006 Status: Superseded By Variation



ID	Location	Details	
A	396m N	Operator: Rohm and Haas (UK) Ltd Address: Heckmondwike Road, Dewsbury Moor, Dewsbury, West Yorkshire, WF13 3NG Process: Manufacture And Use Of Organic Chemicals Permit Number: CA9201	Original Permit Number: IPCMINVAR Date Approved: 17-10-2006 Effective Date: 17-10-2006 Status: Revoked - Now Ippc

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m

9

Records of Part A(1) 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 43**

ID	Location	Details	
D	429m N	Operator: DOW CHEMICAL COMPANY LTD Installation Name: DEWSBURY MOOR CHEMICAL SITE EPR/DP3432RV Process: ASSOCIATED PROCESS Permit Number: DP3432RV Original Permit Number: DP3432RV	EPR Reference: - Issue Date: 08/04/2016 Effective Date: 15/04/2016 Last date noted as effective: 01/12/2022 Status: TRANSFER EFFECTIVE
D	429m N	Operator: DOW CHEMICAL COMPANY LTD Installation Name: DEWSBURY MOOR CHEMICAL SITE EPR/DP3432RV Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS Permit Number: DP3432RV Original Permit Number: DP3432RV	EPR Reference: - Issue Date: 08/04/2016 Effective Date: 15/04/2016 Last date noted as effective: 01/12/2022 Status: TRANSFER EFFECTIVE
D	429m N	Operator: DOW CHEMICAL COMPANY LTD Installation Name: DEWSBURY MOOR CHEMICAL SITE EPR/DP3432RV Process: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING PHYSICO- CHEMICAL TREATMENT Permit Number: DP3432RV Original Permit Number: DP3432RV	EPR Reference: - Issue Date: 08/04/2016 Effective Date: 15/04/2016 Last date noted as effective: 01/12/2022 Status: TRANSFER EFFECTIVE
D	429m N	Operator: ROHM AND HAAS (UK) LTD Installation Name: DEWSBURY MOOR CHEMICAL SITE EPR/NP3430LV Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS Permit Number: PP3937MR Original Permit Number: NP3430LV	EPR Reference: - Issue Date: 12/02/2007 Effective Date: 12/02/2007 Last date noted as effective: 01/12/2022 Status: SUPERCEDED



ID	Location	Details	
D	429m N	Operator: ROHM AND HAAS (UK) LTD Installation Name: DEWSBURY MOOR CHEMICAL SITE EPR/NP3430LV Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS Permit Number: NP3430LV Original Permit Number: NP3430LV	EPR Reference: - Issue Date: 18/12/2006 Effective Date: 18/12/2006 Last date noted as effective: 01/12/2022 Status: SUPERCEDED
D	429m N	Operator: ROHM AND HAAS (UK) LTD Installation Name: DEWSBURY MOOR CHEMICAL SITE EPR/NP3430LV Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS Permit Number: RP3030VJ Original Permit Number: NP3430LV	EPR Reference: - Issue Date: 17/03/2014 Effective Date: 17/03/2014 Last date noted as effective: 01/12/2022 Status: SUPERCEDED
D	429m N	Operator: ROHM AND HAAS (UK) LTD Installation Name: DEWSBURY MOOR CHEMICAL SITE EPR/NP3430LV Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS Permit Number: FP3136UQ Original Permit Number: NP3430LV	EPR Reference: - Issue Date: 28/09/2007 Effective Date: 28/09/2007 Last date noted as effective: 01/12/2022 Status: SUPERCEDED
D	429m N	Operator: ROHM AND HAAS (UK) LTD Installation Name: DEWSBURY MOOR CHEMICAL SITE EPR/NP3430LV Process: ASSOCIATED PROCESS Permit Number: RP3030VJ Original Permit Number: NP3430LV	EPR Reference: - Issue Date: 17/03/2014 Effective Date: 17/03/2014 Last date noted as effective: 01/12/2022 Status: SUPERCEDED
D	429m N	Operator: ROHM AND HAAS (UK) LTD Installation Name: DEWSBURY MOOR CHEMICAL SITE EPR/NP3430LV Process: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING PHYSICO- CHEMICAL TREATMENT Permit Number: RP3030VJ Original Permit Number: NP3430LV	EPR Reference: - Issue Date: 17/03/2014 Effective Date: 17/03/2014 Last date noted as effective: 01/12/2022 Status: SUPERCEDED

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

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

Records within 500m

1

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 43**



ID	Location	Address	Details	
1	195m N	W G Commercial Services Ltd, Low Mill Lane, Ravensthorpe, Dewsbury, WF13 3LN	Process: Waste Oil Burner 0.4 MW Status: New Legislation Applies 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
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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	39
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Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on **page 43**

ID	Location	Address	Details	
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 10 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 11/10/1968 Effective Date: 01/07/1969 Revocation Date: 05/05/1980
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 10 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 11/10/1968 Effective Date: 01/07/1969 Revocation Date: 05/05/1980
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 10 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 11/10/1968 Effective Date: 01/07/1969 Revocation Date: 05/05/1980



ID	Location	Address	Details	
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 8 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 30/03/1966 Effective Date: 30/03/1966 Revocation Date: 10/10/1968
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 8 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 30/03/1966 Effective Date: 30/03/1966 Revocation Date: 10/10/1968
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 8 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 30/03/1966 Effective Date: 30/03/1966 Revocation Date: 10/10/1968
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 9 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 11/10/1968 Effective Date: 11/10/1968 Revocation Date: 30/06/1969
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 9 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 11/10/1968 Effective Date: 11/10/1968 Revocation Date: 30/06/1969
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 9 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 11/10/1968 Effective Date: 11/10/1968 Revocation Date: 30/06/1969
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 1 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM 1978 ORDER Issue date: 06/05/1980 Effective Date: 06/05/1980 Revocation Date: 27/04/1986



ID	Location	Address	Details	
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 1 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM 1978 ORDER Issue date: 06/05/1980 Effective Date: 06/05/1980 Revocation Date: 27/04/1986
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 2 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM COPA 1974 Issue date: 28/04/1986 Effective Date: 28/04/1986 Revocation Date: 15/01/1990
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 2 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM COPA 1974 Issue date: 28/04/1986 Effective Date: 28/04/1986 Revocation Date: 15/01/1990
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 3 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 16/01/1990 Effective Date: 16/01/1990 Revocation Date: 31/03/1992
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 3 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 16/01/1990 Effective Date: 16/01/1990 Revocation Date: 31/03/1992
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 4 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 16/01/1990 Effective Date: 01/04/1992 Revocation Date: 21/10/1998
B	324m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 4 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 16/01/1990 Effective Date: 01/04/1992 Revocation Date: 21/10/1998



ID	Location	Address	Details	
B	345m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 5 Receiving Water: SPEN RIVER	Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 22/10/1998 Effective Date: 22/10/1998 Revocation Date: 15/11/1998
B	357m W	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E56 Permit Version: 5 Receiving Water: SPEN RIVER	Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 22/10/1998 Effective Date: 22/10/1998 Revocation Date: 15/11/1998
4	378m S	YWS UNKNOWN SITES DEFAULT, .	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: S/CB/48 Permit Version: 1 Receiving Water: VARIES WITH OUTLET	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 10/05/1963 Effective Date: 10/05/1963 Revocation Date: 10/06/1993
C	388m NW	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 8 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 30/03/1966 Effective Date: 30/03/1966 Revocation Date: 10/10/1968
C	388m NW	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 1 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM 1978 ORDER Issue date: 06/05/1980 Effective Date: 06/05/1980 Revocation Date: 27/04/1986
C	388m NW	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 1 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM 1978 ORDER Issue date: 06/05/1980 Effective Date: 06/05/1980 Revocation Date: 27/04/1986



ID	Location	Address	Details	
C	388m NW	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 2 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM COPA 1974 Issue date: 28/04/1986 Effective Date: 28/04/1986 Revocation Date: 15/01/1990
C	388m NW	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 2 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM COPA 1974 Issue date: 28/04/1986 Effective Date: 28/04/1986 Revocation Date: 15/01/1990
C	388m NW	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 3 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 16/01/1990 Effective Date: 16/01/1990 Revocation Date: 31/03/1992
C	388m NW	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 3 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 16/01/1990 Effective Date: 16/01/1990 Revocation Date: 31/03/1992
C	388m NW	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 4 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 16/01/1990 Effective Date: 01/04/1992 Revocation Date: 21/10/1998
C	388m NW	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 4 Receiving Water: SPEN RIVER	Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 16/01/1990 Effective Date: 01/04/1992 Revocation Date: 21/10/1998



ID	Location	Address	Details	
C	410m NW	SPEN VALLEY WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE, WF13 3RD	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WRA7549 Permit Version: 1 Receiving Water: R. CALDER/R. SPEN/HUNSWORTH BK	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 25/10/1999 Effective Date: 01/04/2000 Revocation Date: 31/03/2009
C	410m NW	SPEN VALLEY WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE, WF13 3RD	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WRA7549 Permit Version: 2 Receiving Water: R. CALDER/R. SPEN/HUNSWORTH BK	Status: SURRENDERED UNDER EPR 2010 Issue date: 25/02/2005 Effective Date: 31/03/2010 Revocation Date: 18/09/2010
C	410m NW	SPEN VALLEY WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE, WF13 3RD	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WRA7549 Permit Version: 3 Receiving Water: R. CALDER/R. SPEN/HUNSWORTH BK	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 14/10/2008 Effective Date: 01/04/2009 Revocation Date: 30/03/2010
C	410m NW	SPENBOROUGH SPS STORM TANK SITE, SMITHIES LANE, LIVERSEDGE, CLECKHEATON, WEST YORKSHIRE, WF16 0PN	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: NPSWQD009808 Permit Version: 1 Receiving Water: RIVER CALDER AND RIVER SPEN	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 15/03/2010 Effective Date: 15/03/2010 Revocation Date: -
C	410m NW	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 5 Receiving Water: SPEN RIVER	Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 22/10/1998 Effective Date: 22/10/1998 Revocation Date: 15/11/1998
C	410m NW	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 5 Receiving Water: SPEN RIVER	Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 22/10/1998 Effective Date: 22/10/1998 Revocation Date: 15/11/1998



ID	Location	Address	Details	
C	410m NW	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 6 Receiving Water: RIVER CALDER AND SPEN RIVER	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 01/07/1999 Effective Date: 01/07/1999 Revocation Date: 31/03/2000
C	410m NW	SPENBOROUGH WWTW, THE BOTTOMS, SMITHIES LANE, HECKMONDWIKE, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E56 Permit Version: 7 Receiving Water: RIVER CALDER AND SPEN RIVER	Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 22/10/1998 Effective Date: 16/11/1998 Revocation Date: 30/06/1999
E	484m NW	HECKMONDWIKE NO 2 CSO, SMITHIES LANE (OFF), HECKMONDWIKE, WEST YORKSHIRE, WF16 OPN	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA8208 Permit Version: 2 Receiving Water: RIVER SPEN	Status: VARIED UNDER EPR 2010 Issue date: 20/11/2019 Effective Date: 20/11/2019 Revocation Date: -
E	487m NW	HECKMONDWIKE NO 2 CSO, SMITHIES LANE (OFF), HECKMONDWIKE, WEST YORKSHIRE, WF16 OPN	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA8208 Permit Version: 1 Receiving Water: RIVER SPEN	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 21/04/2004 Effective Date: 21/04/2004 Revocation Date: 19/11/2019

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

3

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.

Features are displayed on the Current industrial land use map on **page 43**

ID	Location	Name	Status	Receiving Water	Authorised Substances
B	325m W	Spenborough (cleckheaton) Stw	Not Active	Calder, Spen, River Ryburn	-
A	396m N	Rohm And Haas Uk Ltdl, Dewsbury Moor, Dewsbury	Not Active	Dummy Site	Mercury (other), Cadmium
A	396m N	Rohm And Haas Uk Ltd Dewsbury Wf13 3ng	Not Active	Dummy Site	Mercury (other), Cadmium

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

4.17 List 2 Dangerous Substances

Records within 500m

3

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.

Features are displayed on the Current industrial land use map on **page 43**

ID	Location	Name	Status	Receiving Water	Authorised Substances
B	325m W	Priority Platers, Wakefield Road	Active	-	Chromium, Copper, Cyanide, Nickel, Silver, Zinc
B	325m W	Spenborough Stw	Not Active	Spen Beck	-
B	356m W	Spen Valley	Not Active	Spen Beck	-

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



4.18 Pollution Incidents (EA/NRW)

Records within 500m

4

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 43**

ID	Location	Details	
2	322m NW	Incident Date: 12/07/2004 Incident Identification: 250325 Pollutant: Organic Chemicals/Products Pollutant Description: Other Organic Chemical or Product	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
3	358m SW	Incident Date: 14/03/2002 Incident Identification: 64020 Pollutant: Inert Materials and Wastes Pollutant Description: Soils and Clay	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
6	466m N	Incident Date: 30/07/2002 Incident Identification: 95892 Pollutant: Contaminated Water Pollutant Description: Urban Run-Off	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
E	481m NW	Incident Date: 14/10/2005 Incident Identification: 353417 Pollutant: Sewage Materials Pollutant Description: Other Sewage Material	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m

1

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.

Features are displayed on the Current industrial land use map on **page 43**

ID:	D, Location: 429m N, Permit: DP3432RV
Operator:	Dow Chemical Company Ltd
Activity:	ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS
Address:	Rohm and Haas (UK) Ltd Dewsbury Moor Chemical Site Heckmondwike Road Dewsbury Moor West Yorkshire WF13 3NG
Sector	Chemicals, Sub-sector: Chemicals



Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Carbon dioxide	10000000kg	Below Reporting Threshold
Air	Ammonia	1000kg	Below Reporting Threshold
Wastewater	Zinc	100kg	Below Reporting Threshold

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

4.20 Pollution inventory waste transfers

Records within 500m

1

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.

Features are displayed on the Current industrial land use map on **page 43**

ID: D, Location: 429m N, Permit: DP3432RV
 Operator: Dow Chemical Company Ltd
 Activity: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS
 Address: Rohm and Haas (UK) Ltd Dewsbury Moor Chemical Site Heckmondwike Road Dewsbury Moor West Yorkshire WF13 3NG
 Sector: Chemicals, Sub-sector: Chemicals
 Releases:

Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12 (eg evaporation, drying, calcination, etc.)	29	Absolute Value	06 02 04	sodium and potassium hydroxide	1
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	8	Absolute Value	06 02 04	sodium and potassium hydroxide	1



Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	3	Absolute Value	07 01 01	aqueous washing liquids and mother liquors	1
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12 (eg evaporation, drying, calcination, etc.)	1	Absolute Value	07 02 01	aqueous washing liquids and mother liquors	1
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12 (eg evaporation, drying, calcination, etc.)	1.71	Absolute Value	08 01 12	waste paint and varnish other than those mentioned in 08 01 11	0
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	6	Absolute Value	08 01 12	waste paint and varnish other than those mentioned in 08 01 11	0
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	2.351	Absolute Value	08 01 12	waste paint and varnish other than those mentioned in 08 01 11	0
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	119	Absolute Value	08 01 16	aqueous sludges containing paint or varnish other than those mentioned in 08 01 15	0
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12 (eg evaporation, drying, calcination, etc.)	17.13	Absolute Value	08 01 18	wastes from paint or varnish removal other than those mentioned in 08 01 17	0



Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	2	Absolute Value	13 07 01	fuel oil and diesel	1
R5	Recycling/reclamation of other inorganic materials	23.34	Absolute Value	15 01 03	wooden packaging	0
R5	Recycling/reclamation of other inorganic materials	3.06	Absolute Value	15 01 06	mixed packaging	0
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	6.28	Absolute Value	15 01 10	packaging containing residues of or contaminated by dangerous substances	1
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	2.1	Absolute Value	16 03 03	inorganic wastes containing dangerous substances	1
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	8.15	Absolute Value	16 03 05	organic wastes containing dangerous substances	1
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	2.52	Absolute Value	16 03 05	organic wastes containing dangerous substances	1
D10	Incineration on Land	2.28	Absolute Value	16 03 05	organic wastes containing dangerous substances	1
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	15.355	Absolute Value	16 05 06	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	1
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)	0.329	Absolute Value	16 05 08	discarded organic chemicals consisting of or containing dangerous substances	1



Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	0.07	Absolute Value	16 09 03	peroxides, for example hydrogen peroxide	1
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	0.1	Absolute Value	17 05 05	dredging spoil containing dangerous substances	1
D1	Deposit into or onto land (eg landfill, etc.)	12.06	Absolute Value	20 03 01	mixed municipal waste	0
R5	Recycling/reclamation of other inorganic materials	0.03	Absolute Value	20 01 02	glass	0

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

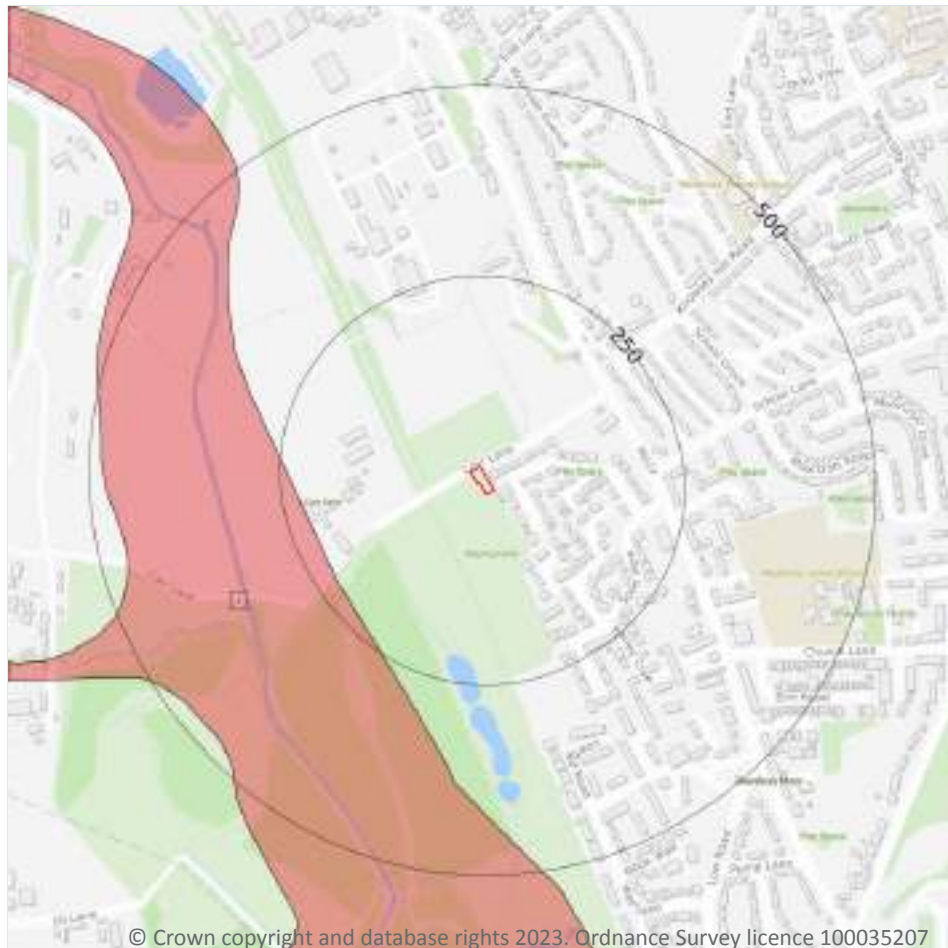
4.21 Pollution inventory radioactive waste

Records within 500m	0
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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



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive
 - Unknown

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 63**

ID	Location	Designation	Description
1	219m W	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



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

1

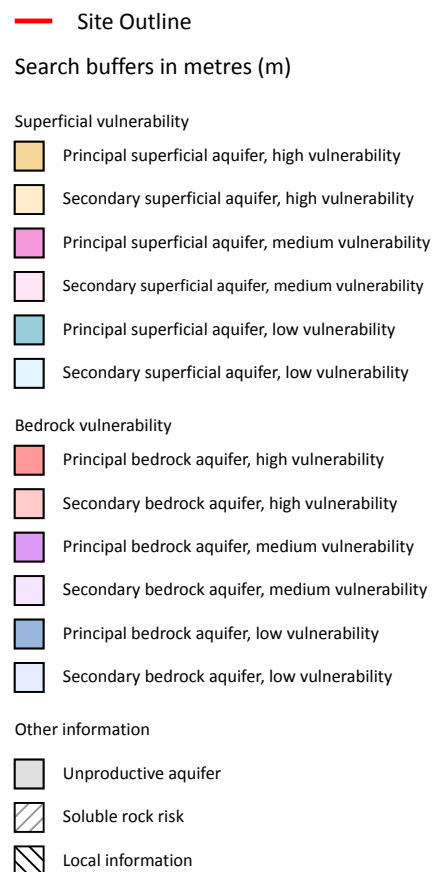
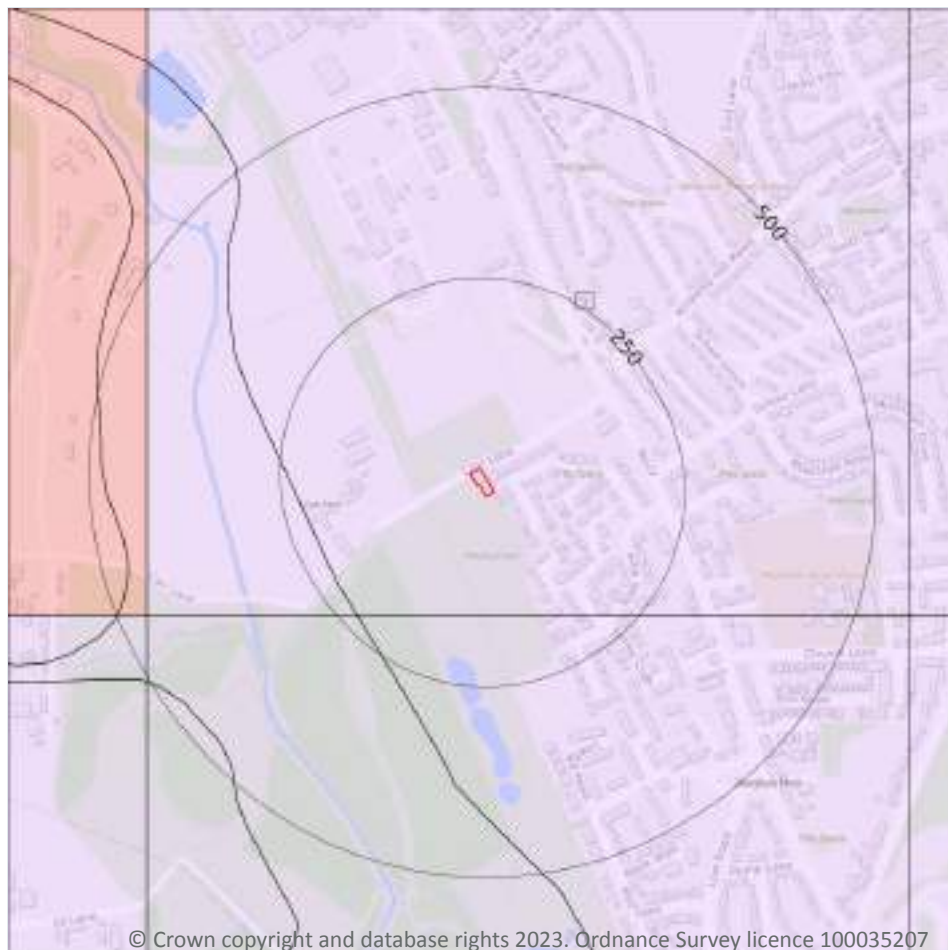
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 64**

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 65**

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: <3m 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

Records on site	0
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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

Records on site	0
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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.

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

Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)
- Source Protection Zone 1
Inner catchment
- Source Protection Zone 2
Outer catchment
- Source Protection Zone 3
Total catchment
- Source Protection Zone 4
Zone of Special Interest
- Source Protection Zone 1c
Inner catchment - confined aquifer
- Source Protection Zone 2c
Outer catchment - confined aquifer
- Source Protection Zone 3c
Total catchment - confined aquifer
- Drinking water abstraction licences
Polygon features
- Drinking water abstraction licences
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m

15

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 67**

ID	Location	Details	
A	506m N	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 ³): - Max Daily Volume (m ³): - 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: -
A	506m N	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 ³): 270000 Max Daily Volume (m ³): 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: -
-	1111m N	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 ³): - Max Daily Volume (m ³): - 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: -
-	1111m N	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 ³): - Max Daily Volume (m ³): - 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: -



ID	Location	Details	
-	1225m N	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 ³): - Max Daily Volume (m ³): - 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: -
-	1225m N	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 ³): - Max Daily Volume (m ³): - 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: -
-	1615m W	Status: Historical Licence No: 2/27/13/231 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - MIRFIELD Data Type: Point Name: JOHN L BARBER & SON Easting: 420920 Northing: 421600	Annual Volume (m ³): 25000 Max Daily Volume (m ³): 103 Original Application No: - Original Start Date: 08/09/2008 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 08/09/2008 Version End Date: -
-	1802m S	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 ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/06/1999 Expiry Date: - Issue No: 100 Version Start Date: 23/06/1999 Version End Date: -



ID	Location	Details	
-	1802m S	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: Lawton Yarns Ltd Easting: 423080 Northing: 420470	Annual Volume (m ³): 28,800 Max Daily Volume (m ³): 960 Original Application No: NPS/WR/016408 Original Start Date: 23/06/1999 Expiry Date: - Issue No: 102 Version Start Date: 06/08/2014 Version End Date: -
-	1895m E	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 ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -
-	1895m E	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 ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -
-	1895m E	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 ³): - Max Daily Volume (m ³): - 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	
-	1895m E	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 ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -
-	1895m E	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 ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -
-	1895m E	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 ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

2

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 67**



ID	Location	Details	
-	1803m SE	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: Lawton Yarns Ltd Easting: 423140 Northing: 420493	Annual Volume (m ³): 350,000 Max Daily Volume (m ³): 960 Original Application No: NPS/WR/017905 Original Start Date: 01/04/2015 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/04/2015 Version End Date: -
-	1806m SE	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 ³): 350000 Max Daily Volume (m ³): 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: -

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

9

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

Features are displayed on the Hydrology map on **page 74**

ID	Location	Type of water feature	Ground level	Permanence	Name
B	174m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
B	177m SW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
B	179m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	197m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	207m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	211m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	215m S	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	217m S	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	229m S	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

3

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.

Features are displayed on the Hydrology map on **page 74**

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 74**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River	Spenn Beck from Source to River Calder	GB104027062710	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 74**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
3	328m W	River	Spenn Beck from Source to River Calder	GB104027062710	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 74**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	Aire & Calder Carb Limestone / Millstone Grit / Coal Measures.	<u>GB40402G700400</u>	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

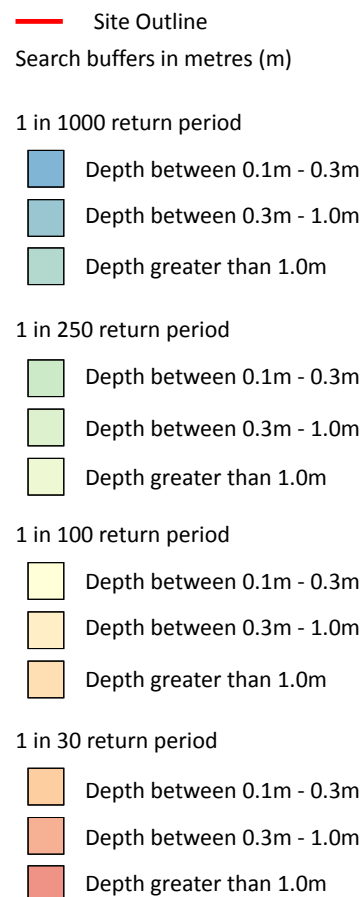
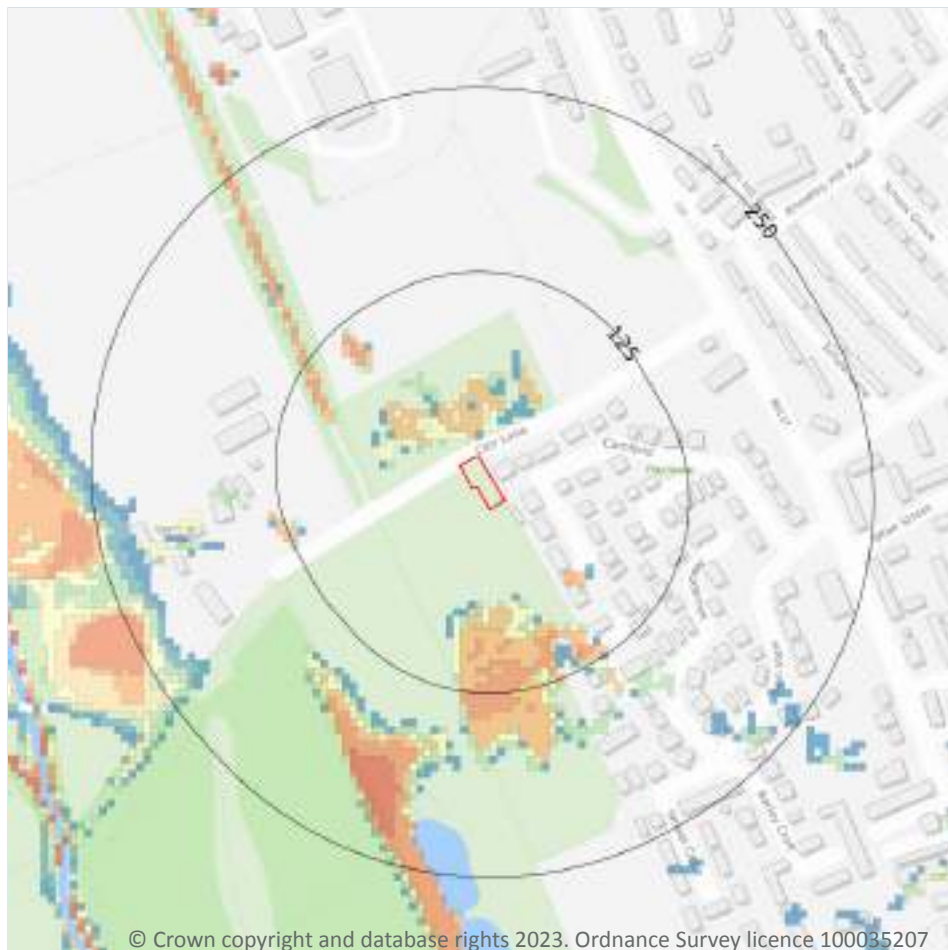
0

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

Negligible

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 81**

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.

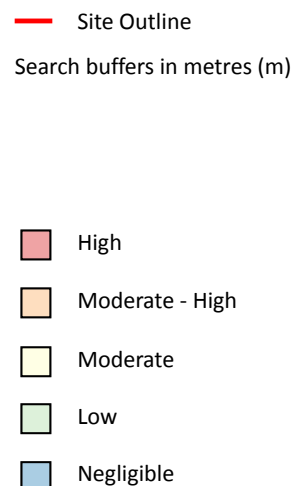
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



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 83**

This data is sourced from Ambiantal 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

1

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 84**

ID	Location	Name	Data source
2	1221m S	Lower Spen Wildlife Area	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**1**

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

Features are displayed on the Environmental designations map on **page 84**

ID	Location	Name	Local Authority name
1	76m W	South and West Yorkshire	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**

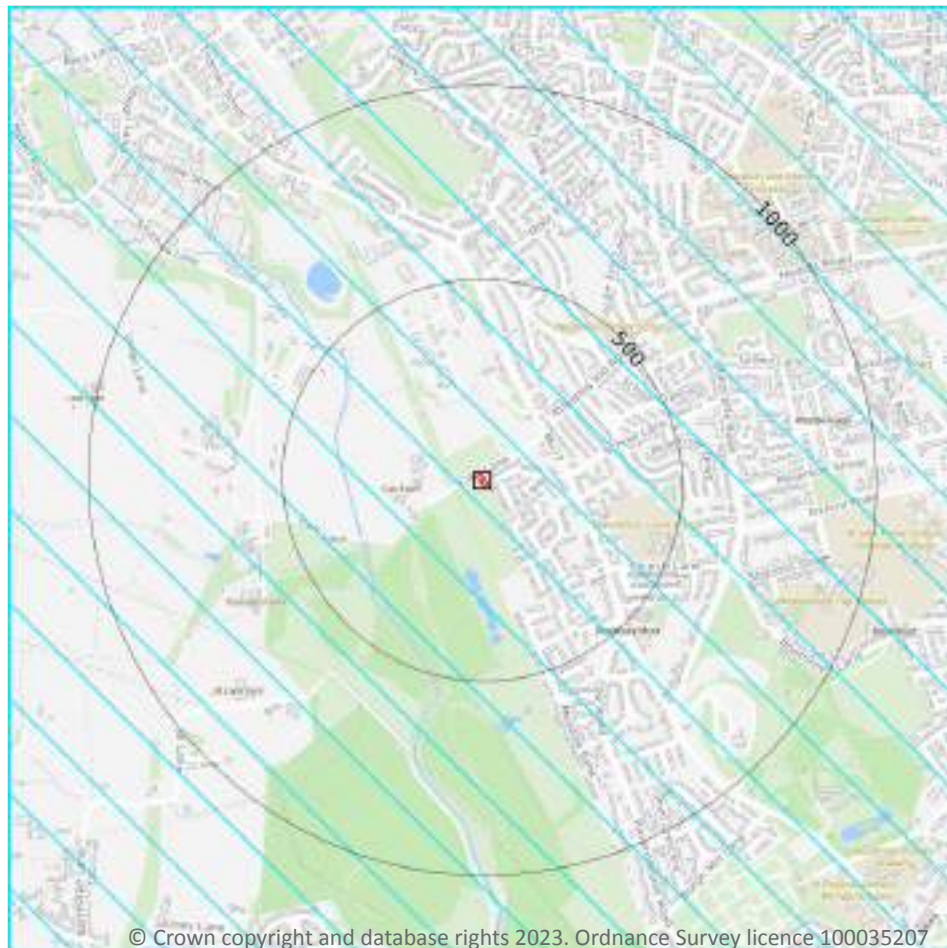
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	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



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

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 89**

ID	Location	Type of developments requiring consultation
1	On site	Air pollution - Livestock & poultry units with floorspace > 500m ² , slurry lagoons & digestate stores > 4000m ² . Combustion - General combustion processes >50mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

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



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

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12.1 Agricultural Land Classification

Records within 250m

2

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 93**

ID	Location	Classification	Description
1	On site	Urban	-
2	62m W	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

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



- Site Outline
- Search buffers in metres (m)
- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders
- Habitat Networks
- Primary Habitat
- Restorable Habitat
- Associated Habitats
- Habitat Restoration-Creation
- Network Enhancement Zone 1
- Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m

3

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

Features are displayed on the Habitat designations map on **page 95**

ID	Location	Main Habitat	Other habitats
1	169m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	191m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	240m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

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.

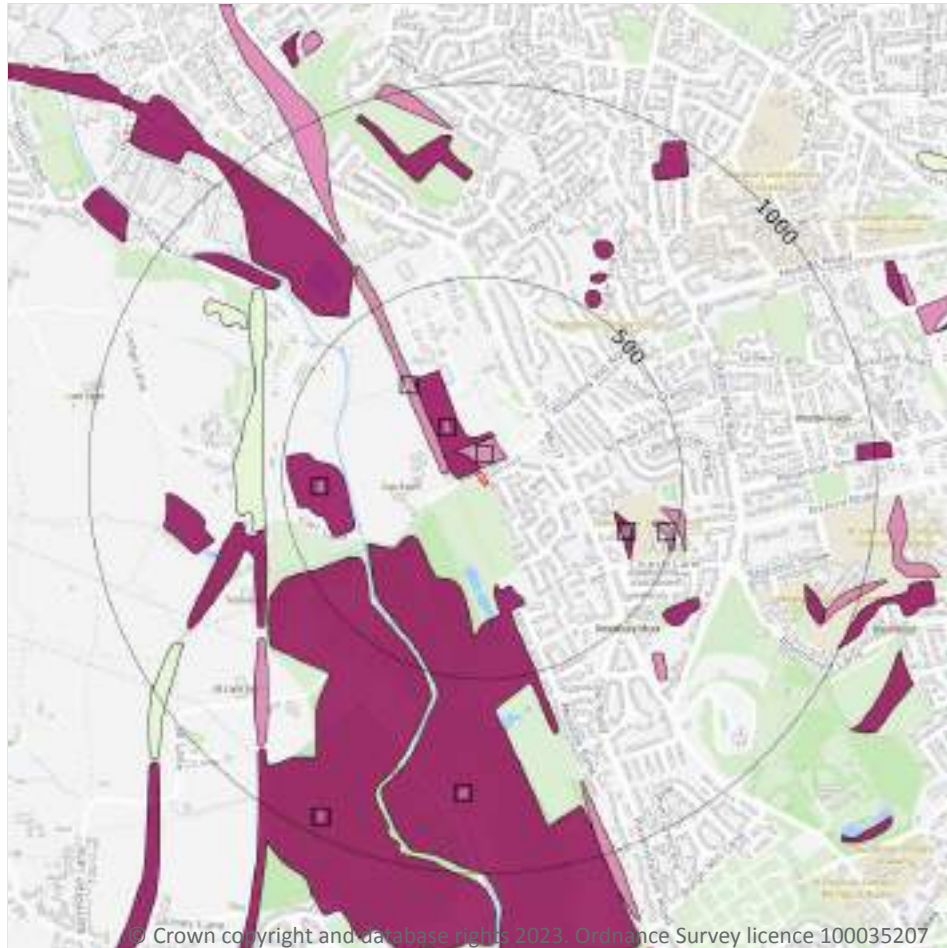
Features are displayed on the Geology 1:10,000 scale - Availability map on **page 97**

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

14.2 Artificial and made ground (10k)

Records within 500m

9

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 98**

ID	Location	LEX Code	Description	Rock description
1	8m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	8m N	WGR-VOID	Worked Ground (Undivided)	Void
3	73m W	WGR-VOID	Worked Ground (Undivided)	Void
4	222m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

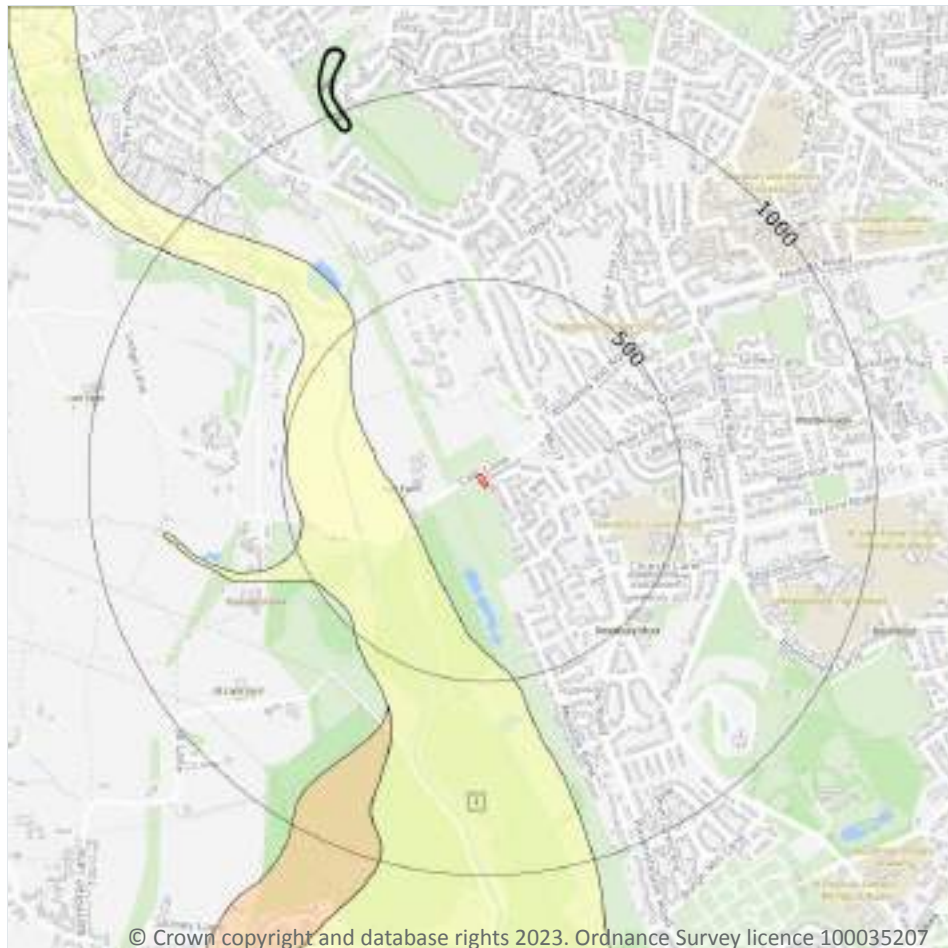


ID	Location	LEX Code	Description	Rock description
5	333m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	335m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
7	367m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
A	436m E	WGR-VOID	Worked Ground (Undivided)	Void
A	451m E	WGR-VOID	Worked Ground (Undivided)	Void

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 100**

ID	Location	LEX Code	Description	Rock description
1	200m SW	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

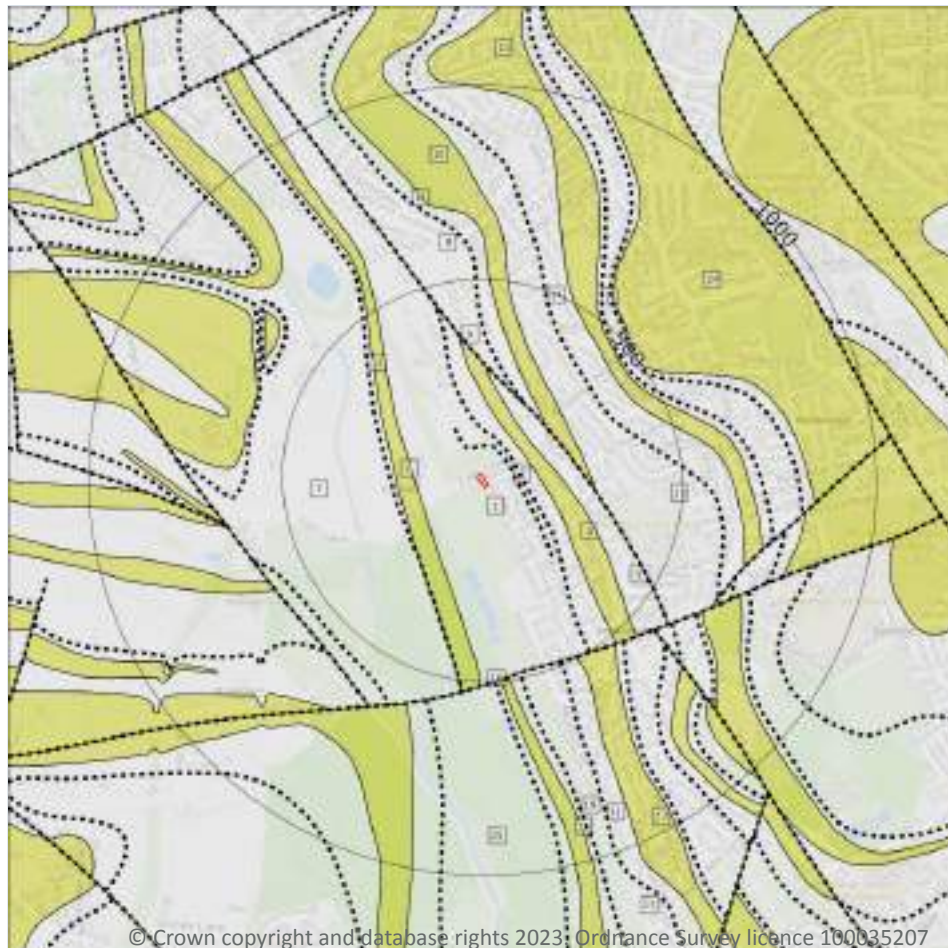
0

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

14

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 102**

ID	Location	LEX Code	Description	Rock age
1	On site	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
4	117m NE	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
5	150m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age



ID	Location	LEX Code	Description	Rock age
6	156m W	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
7	203m W	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
8	205m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
10	206m NE	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
13	250m E	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
15	423m NE	LPE-SDST	Lepton Edge Rock - Sandstone	Langsettian Sub-age
17	483m S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
22	493m S	LPE-SDST	Lepton Edge Rock - Sandstone	Langsettian Sub-age
23	496m SE	BRSR-SDST	Birstall Rock - Sandstone	Langsettian Sub-age
24	497m NE	BRSR-SDST	Birstall Rock - Sandstone	Langsettian Sub-age
25	498m S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And 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

11

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 102**

ID	Location	Category	Description
2	70m N	ROCK	Coal seam, inferred
3	85m E	ROCK	Coal seam, inferred
9	205m NE	FAULT	Normal fault, inferred; downthrow not specified
11	213m NE	ROCK	Coal seam, inferred
12	216m W	ROCK	Coal seam, inferred
14	354m NE	ROCK	Coal seam, inferred



ID	Location	Category	Description
16	464m NE	ROCK	Coal seam, inferred
18	483m S	FAULT	Normal fault, inferred; downthrow not specified
19	486m S	ROCK	Coal seam, inferred
20	488m NE	ROCK	Coal seam, inferred
21	489m 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.

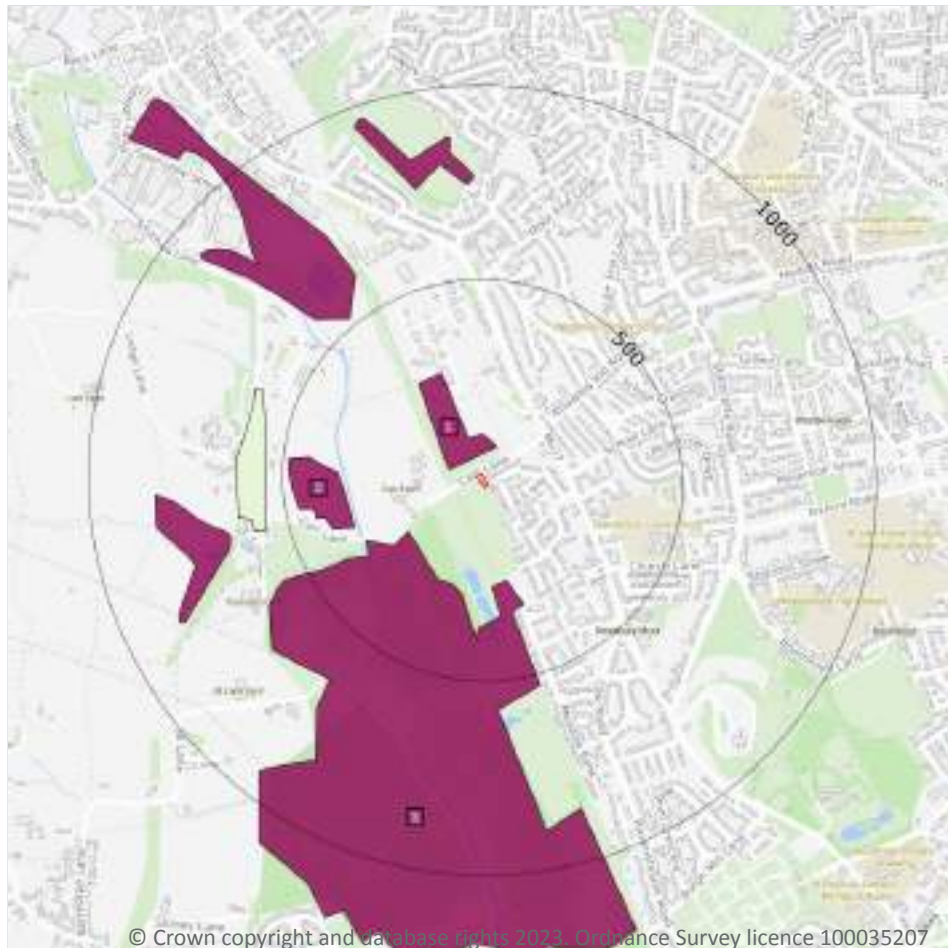
Features are displayed on the Geology 1:50,000 scale - Availability map on **page 105**

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

3

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 106**

ID	Location	LEX Code	Description	Rock description
1	44m N	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	223m SW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	337m W	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

1

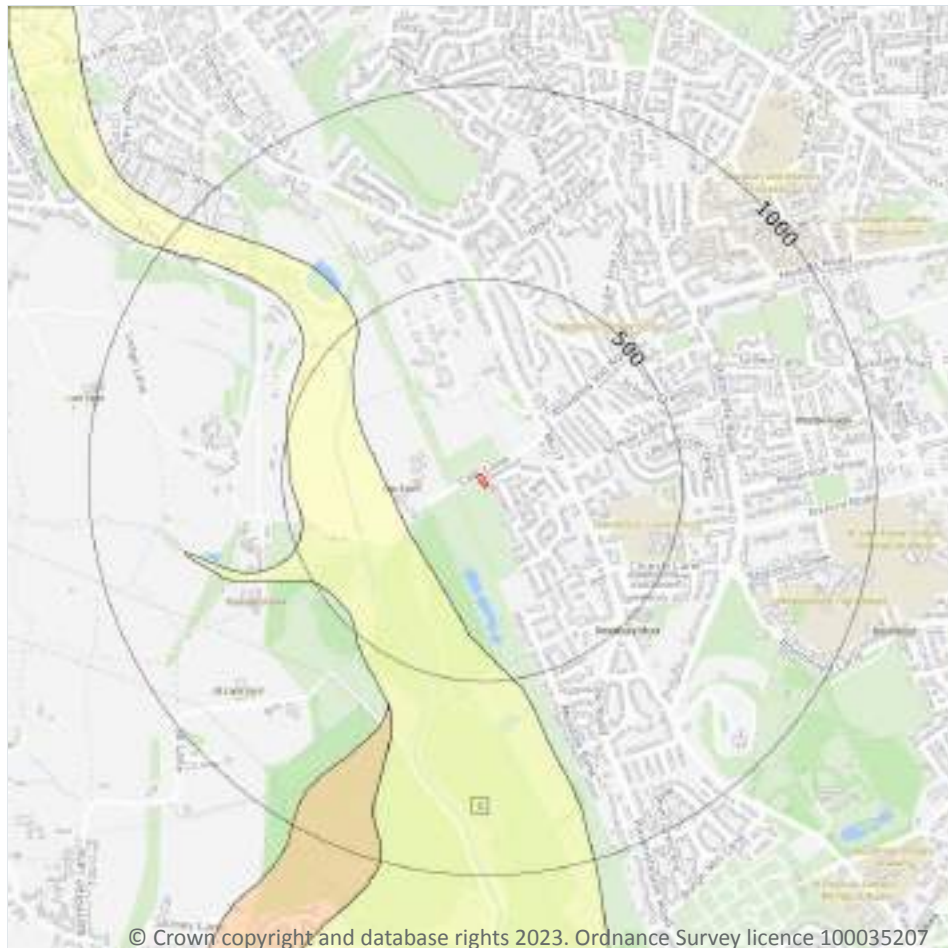
A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
44m N	Mixed	Very High	Low

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 108**

ID	Location	LEX Code	Description	Rock description
1	219m W	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 110**

ID	Location	LEX Code	Description	Rock age
1	On site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
4	118m NE	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
5	153m W	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
6	155m NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
7	204m NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
9	207m NE	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
10	210m W	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
13	253m NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
15	426m NE	LPE-SDST	LEPTON EDGE ROCK - SANDSTONE	WESTPHALIAN
17	491m S	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
20	493m NE	BRSR-SDST	BIRSTALL ROCK - SANDSTONE	WESTPHALIAN
23	495m S	LPE-SDST	LEPTON EDGE ROCK - SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m

1

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

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

11

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 110**

ID	Location	Category	Description
2	66m E	ROCK	Coal seam, inferred
3	93m E	ROCK	Coal seam, inferred
8	204m NE	FAULT	Fault, inferred
11	210m W	ROCK	Coal seam, inferred
12	214m NE	ROCK	Coal seam, inferred
14	354m NE	ROCK	Coal seam, inferred
16	460m NE	ROCK	Coal seam, inferred
18	491m S	FAULT	Fault, inferred
19	493m S	ROCK	Coal seam, inferred
21	493m NE	ROCK	Coal seam, inferred
22	494m 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

70

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 113**

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	62m NE	422500 422210	MOORSIDE/H'MONDWIKE RD 51/1	-	Y	N/A
A	65m E	422520 422170	MOORSIDE/H'MONDWIKE RD 17/3	-	Y	N/A
A	66m E	422510 422200	MOORSIDE/H'MONDWIKE RD 51/3	-	Y	N/A



ID	Location	Grid reference	Name	Length	Confidential	Web link
A	67m E	422520 422180	MOORSIDE/H'MONDWIKE RD 17/1	-	Y	N/A
A	75m E	422530 422170	MOORSIDE/H'MONDWIKE RD 17/4	-	Y	N/A
A	76m NE	422510 422220	MOORSIDE/H'MONDWIKE RD 51/2	-	Y	N/A
A	76m NE	422510 422220	MOORSIDE/H'MONDWIKE RD 53/1	-	Y	N/A
A	77m E	422530 422180	MOORSIDE/H'MONDWIKE RD 17/2	-	Y	N/A
A	80m NE	422520 422210	MOORSIDE/H'MONDWIKE RD 51/4	-	Y	N/A
A	88m E	422540 422140	MOORSIDE/H'MONDWIKE RD 13/1	-	Y	N/A
A	88m E	422530 422210	MOORSIDE/H'MONDWIKE RD 53/3	-	Y	N/A
A	89m E	422540 422190	MOORSIDE/H'MONDWIKE RD 56/3	-	Y	N/A
A	91m SE	422540 422130	MOORSIDE/H'MONDWIKE RD 13/3	-	Y	N/A
A	92m E	422540 422200	MOORSIDE/H'MONDWIKE RD 56/1	-	Y	N/A
A	96m E	422550 422180	MOORSIDE/H'MONDWIKE RD R6	-	Y	N/A
A	98m E	422550 422140	MOORSIDE/H'MONDWIKE RD 13/2	-	Y	N/A
A	98m NE	422530 422230	MOORSIDE/H'MONDWIKE RD 53/2	-	Y	N/A
A	99m E	422550 422190	MOORSIDE/H'MONDWIKE RD 56/4	-	Y	N/A
A	100m SE	422550 422130	MOORSIDE/H'MONDWIKE RD 13/4	-	Y	N/A
A	102m E	422550 422200	MOORSIDE/H'MONDWIKE RD 56/2	-	Y	N/A
A	102m NE	422540 422220	MOORSIDE/H'MONDWIKE RD 53/4	-	Y	N/A
A	106m E	422560 422150	MOORSIDE/H'MONDWIKE RD 15/1	-	Y	N/A
A	115m E	422570 422170	MOORSIDE/H'MONDWIKE RD R5	-	Y	N/A
A	116m E	422570 422150	MOORSIDE/H'MONDWIKE RD 15/2	-	Y	N/A
A	116m E	422570 422150	MOORSIDE/H'MONDWIKE RD R7	-	Y	N/A
A	116m E	422570 422180	MOORSIDE/H'MONDWIKE RD 58/3	-	Y	N/A
A	117m E	422570 422140	MOORSIDE/H'MONDWIKE RD 15/3	-	Y	N/A
A	118m E	422570 422190	MOORSIDE/H'MONDWIKE RD 58/1	-	Y	N/A
A	123m SE	422570 422120	MOORSIDE/H'MONDWIKE RD 6/1	-	Y	N/A
A	125m E	422580 422170	MOORSIDE/H'MONDWIKE RD R4	-	Y	N/A
A	126m E	422580 422180	MOORSIDE/H'MONDWIKE RD 58/4	-	Y	N/A



ID	Location	Grid reference	Name	Length	Confidential	Web link
A	127m SE	422570 422110	MOORSIDE/H'MONDWIKE RD 6/3	-	Y	N/A
A	127m E	422580 422140	MOORSIDE/H'MONDWIKE RD 15/4	-	Y	N/A
A	128m E	422580 422190	MOORSIDE/H'MONDWIKE RD 58/2	-	Y	N/A
A	129m E	422580 422130	MOORSIDE/H'MONDWIKE RD 4/1	-	Y	N/A
A	132m E	422580 422120	MOORSIDE/H'MONDWIKE RD 4/3	-	Y	N/A
A	132m E	422580 422120	MOORSIDE/H'MONDWIKE RD 6/2	-	Y	N/A
A	136m SE	422580 422110	MOORSIDE/H'MONDWIKE RD 6/4	-	Y	N/A
A	136m E	422590 422180	MOORSIDE/H'MONDWIKE RD 60/3	-	Y	N/A
A	137m E	422590 422190	MOORSIDE/H'MONDWIKE RD 60/1	-	Y	N/A
A	139m E	422590 422130	MOORSIDE/H'MONDWIKE RD 3/1	-	Y	N/A
A	139m E	422590 422130	MOORSIDE/H'MONDWIKE RD 4/2	-	Y	N/A
A	142m E	422590 422120	MOORSIDE/H'MONDWIKE RD 3/3	-	Y	N/A
A	142m E	422590 422120	MOORSIDE/H'MONDWIKE RD 4/4	-	Y	N/A
A	145m E	422600 422160	MOORSIDE/H'MONDWIKE RD R3	-	Y	N/A
A	147m E	422600 422140	MOORSIDE/H'MONDWIKE RD 3/2	-	Y	N/A
A	147m E	422600 422140	MOORSIDE/H'MONDWIKE RD 2/1	-	Y	N/A
A	147m E	422600 422190	MOORSIDE/H'MONDWIKE RD 60/4	-	Y	N/A
A	147m E	422600 422190	MOORSIDE/H'MONDWIKE RD 60/2	-	Y	N/A
A	149m E	422600 422130	MOORSIDE/H'MONDWIKE RD 3/4	-	Y	N/A
A	149m E	422600 422130	MOORSIDE/H'MONDWIKE RD 2/3	-	Y	N/A
A	155m E	422610 422160	MOORSIDE/H'MONDWIKE RD R2	-	Y	N/A
A	155m E	422610 422150	MOORSIDE/H'MONDWIKE RD 1/2	-	Y	N/A
A	157m E	422610 422140	MOORSIDE/H'MONDWIKE RD 1/4	-	Y	N/A
A	157m E	422610 422140	MOORSIDE/H'MONDWIKE RD 2/2	-	Y	N/A
A	157m E	422610 422140	MOORSIDE/H'MONDWIKE RD 1/1	-	Y	N/A
A	158m E	422610 422130	MOORSIDE/H'MONDWIKE RD 1/3	-	Y	N/A
A	158m E	422610 422130	MOORSIDE/H'MONDWIKE RD 2/4	-	Y	N/A
A	162m E	422610 422210	MOORSIDE/H'MONDWIKE RD 62/1	-	Y	N/A



ID	Location	Grid reference	Name	Length	Confidential	Web link
A	165m E	422620 422150	MOORSIDE/H'MONDWIKE RD R1	-	Y	N/A
A	167m E	422620 422190	MOORSIDE/H'MONDWIKE RD 62/4	-	Y	N/A
A	169m E	422620 422200	MOORSIDE/H'MONDWIKE RD 62/7	-	Y	N/A
A	171m E	422620 422210	MOORSIDE/H'MONDWIKE RD 62/2	-	Y	N/A
A	171m E	422620 422210	MOORSIDE/H'MONDWIKE RD 62/6	-	Y	N/A
A	175m E	422630 422170	MOORSIDE/H'MONDWIKE RD 63/3	-	Y	N/A
A	176m E	422630 422180	MOORSIDE/H'MONDWIKE RD 63/1	-	Y	N/A
A	177m E	422630 422190	MOORSIDE/H'MONDWIKE RD 62/5	-	Y	N/A
A	179m E	422630 422200	MOORSIDE/H'MONDWIKE RD 62/3	-	Y	N/A
A	185m E	422640 422170	MOORSIDE/H'MONDWIKE RD 63/4	-	Y	N/A
A	186m E	422640 422180	MOORSIDE/H'MONDWIKE RD 63/2	-	Y	N/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

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17.1 Shrink swell clays

Records within 50m

1

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).

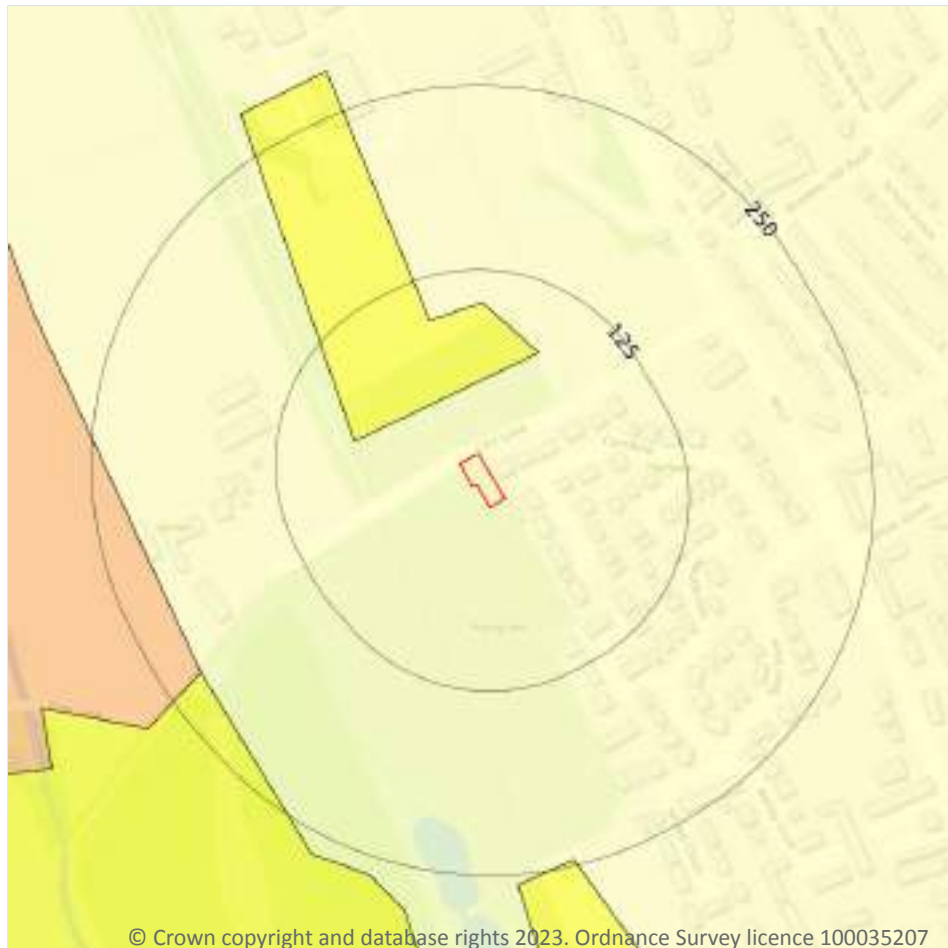
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 117**

Location	Hazard rating	Details
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

2

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 118**

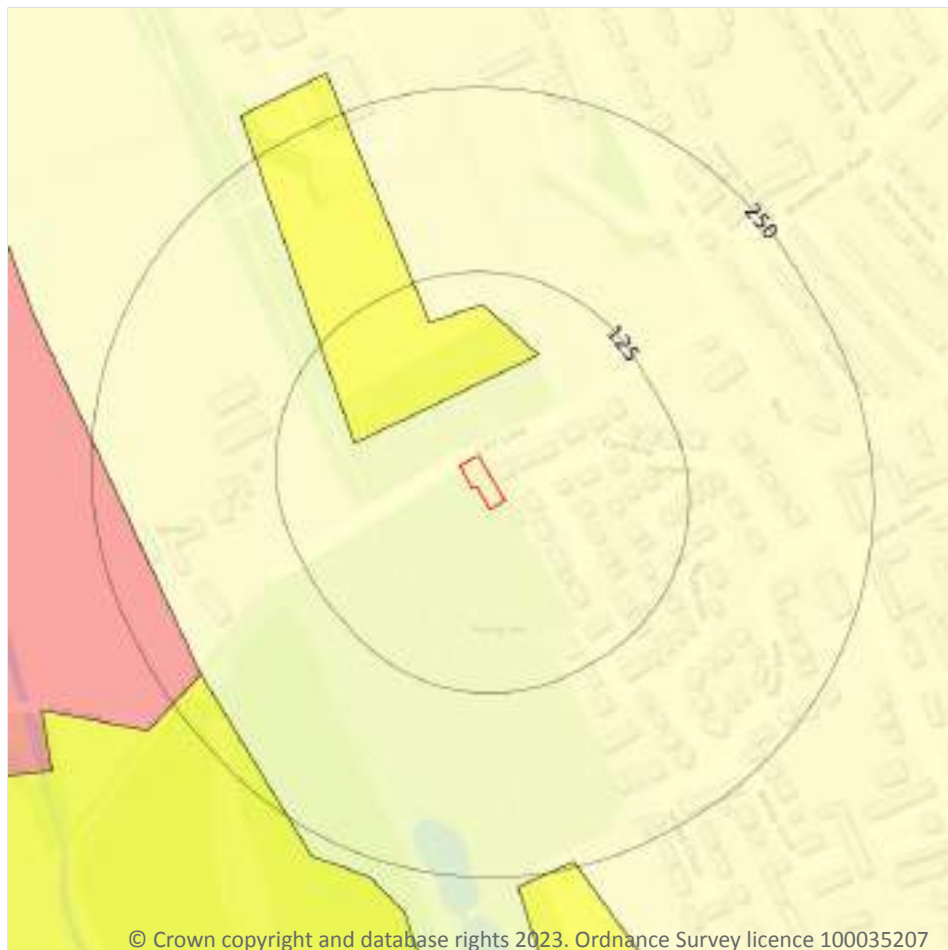
Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

Location	Hazard rating	Details
44m N	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

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

2

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.

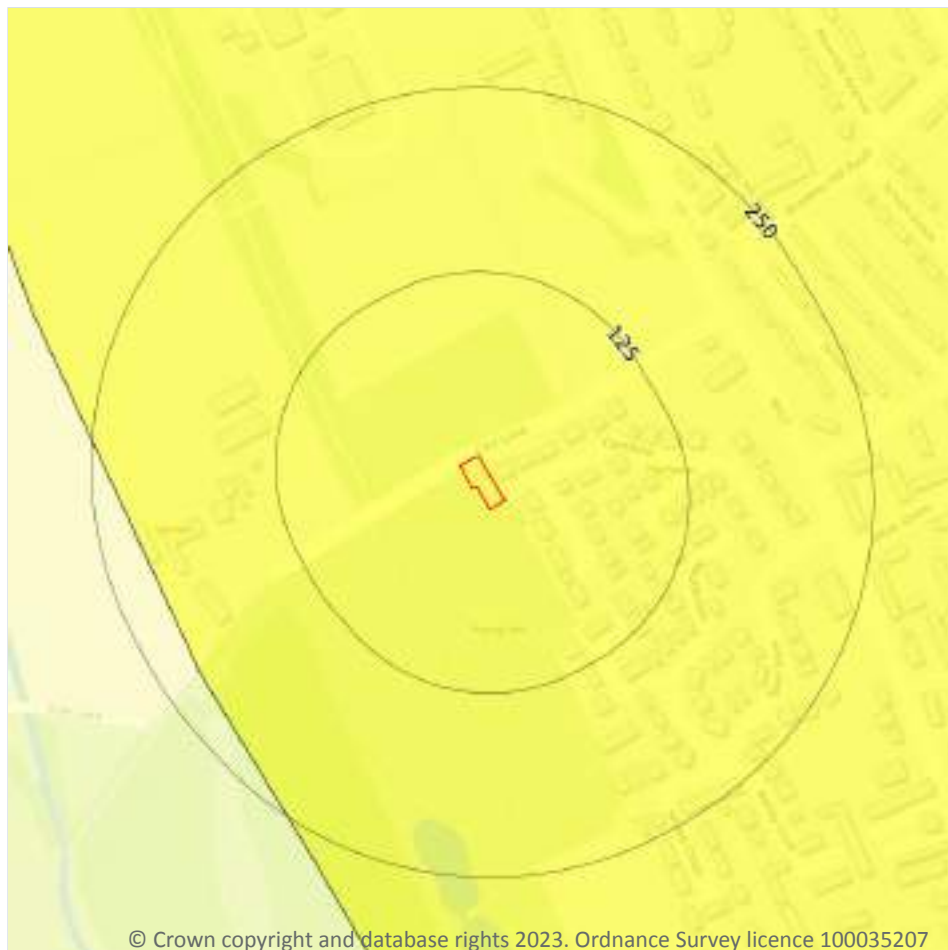
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 120**

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
44m N	Very low	Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.

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 122**

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 123**

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.

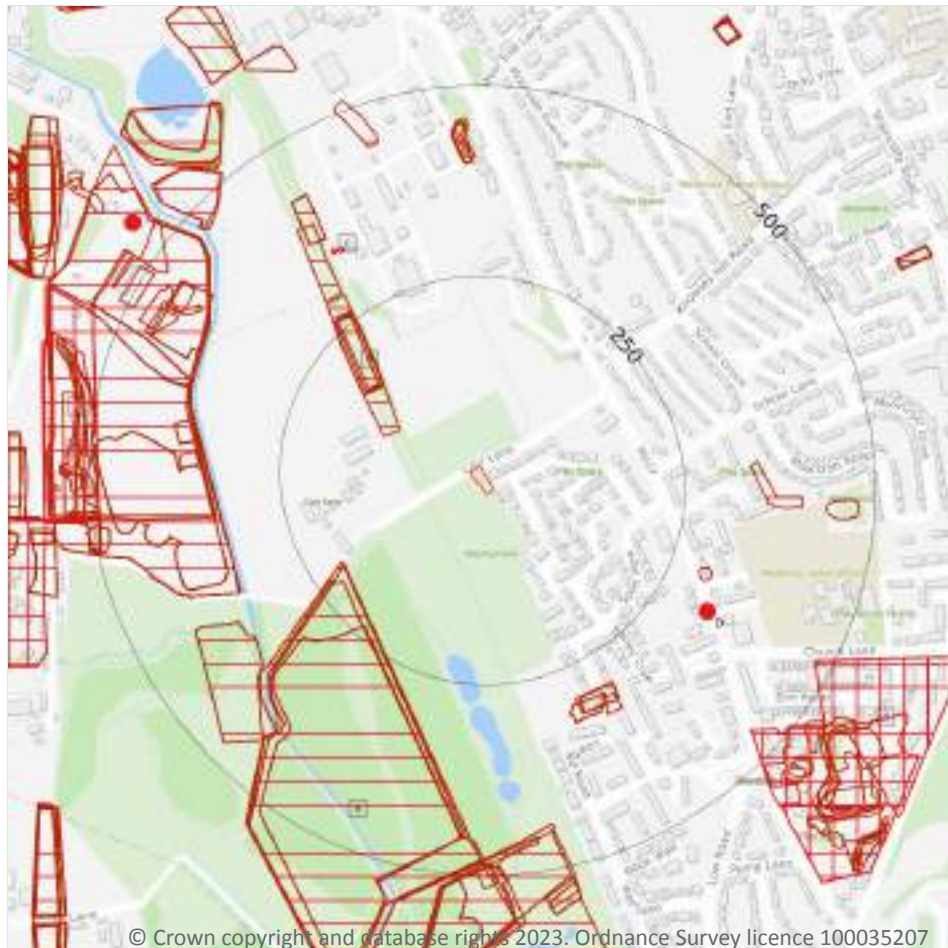
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 124**

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, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities
- Non Coal Mining
- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 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.

18.2 BritPits

Records within 500m

1

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, ground workings and natural cavities map on **page 126**

ID	Location	Details	Description
D	321m SE	Name: Dewsbury Moor Quarry Address: Boothroyd, DEWSBURY, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m

17

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.

Features are displayed on the Mining, ground workings and natural cavities map on **page 126**

ID	Location	Land Use	Year of mapping	Mapping scale
A	108m NW	Cuttings	1892	1:10560
A	160m NW	Cuttings	1948	1:10560
A	160m NW	Cuttings	1931	1:10560
A	160m NW	Cuttings	1905	1:10560
A	161m NW	Cuttings	1938	1:10560
A	165m NW	Cuttings	1931	1:10560
A	165m NW	Cuttings	1931	1:10560
A	165m NW	Cuttings	1955	1:10560
B	204m SW	Sewage Works	1974	1:10000
B	204m SW	Sewage Works	1967	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
B	204m SW	Sewage Works	1955	1:10560
B	205m SW	Sewage Works	1938	1:10560
B	205m SW	Sewage Works	1938	1:10560
B	218m SW	Sewage Works	1948	1:10560
B	218m SW	Sewage Works	1931	1:10560
B	235m SW	Sludge Beds	1974	1:10000
B	235m SW	Sludge Beds	1967	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

26

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, ground workings and natural cavities map on **page 126**

ID	Location	Land Use	Year of mapping	Mapping scale
C	334m NW	Unspecified Old Shaft	1951	1:10560
C	337m NW	Unspecified Old Shaft	1948	1:10560
C	337m NW	Unspecified Old Shaft	1931	1:10560
O	462m SE	Colliery	1892	1:10560
R	489m W	Disused Colliery	1905	1:10560
R	496m W	Colliery	1892	1:10560
O	496m SE	Colliery	1905	1:10560
R	524m W	Old Air Shaft	1931	1:10560
R	540m W	Unspecified Old Shaft	1931	1:10560
6	561m W	Colliery	1892	1:10560
-	762m W	Unspecified Disused Shafts	1988	1:10000
-	762m W	Unspecified Disused Shafts	1981	1:10000
-	762m W	Unspecified Disused Shafts	1974	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
-	762m W	Unspecified Disused Shafts	1967	1:10560
-	773m W	Unspecified Old Shafts	1951	1:10560
-	775m W	Unspecified Old Shafts	1948	1:10560
-	775m W	Unspecified Old Shafts	1931	1:10560
-	775m W	Unspecified Disused Shafts	1988	1:10000
-	775m W	Unspecified Disused Shafts	1981	1:10000
-	775m W	Unspecified Disused Shafts	1974	1:10000
-	775m W	Unspecified Disused Shafts	1967	1:10560
-	776m W	Unspecified Old Shafts	1948	1:10560
-	776m W	Unspecified Old Shafts	1931	1:10560
-	783m W	Unspecified Old Shafts	1951	1:10560
-	784m W	Unspecified Old Shafts	1948	1:10560
-	784m W	Unspecified Old Shafts	1931	1:10560

This data is sourced from Ordnance Survey/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 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.

18.8 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.

18.9 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.

18.10 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.



18.11 Gypsum areas

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

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

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

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

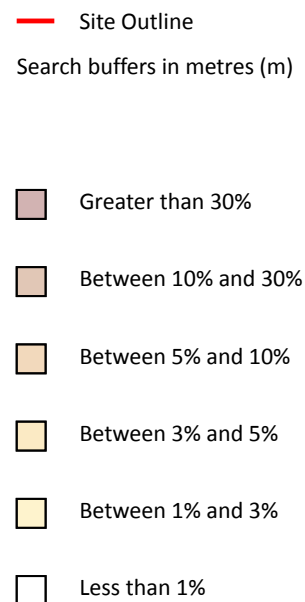
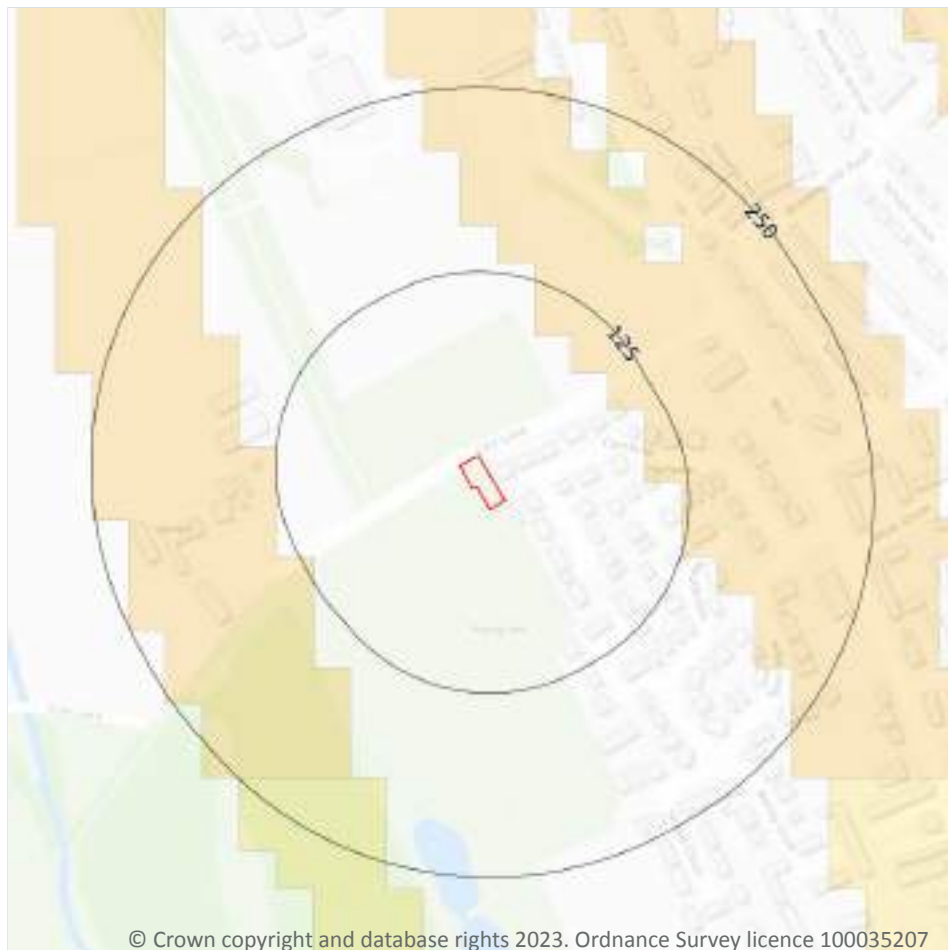
18.13 Clay mining

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 Radon



19.1 Radon

Records on site

1

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 132**

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None



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



20 Soil chemistry

20.1 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 km². 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 km²; 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	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
45m E	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 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 km²).

This data is sourced from the British Geological Survey.

20.3 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 km².

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C1 Crossrail 1 Stations
- Crossrail 1 Route
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

21.1 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.

21.2 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.

21.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m

3

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.

Features are displayed on the Railway infrastructure and projects map on **page 135**

Location	Land Use	Year of mapping	Mapping scale
169m NW	Railway Sidings	1955	1250
170m NW	Railway Sidings	1968	2500
170m NW	Railway Sidings	1955	2500

This data is sourced from Ordnance Survey/Groundsure.

21.5 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.

21.6 Historical railways

Records within 250m

1

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

Features are displayed on the Railway infrastructure and projects map on **page 135**



Location	Description
69m W	Historic

This data is sourced from OpenStreetMap.

21.7 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.

21.8 Crossrail 1

Records within 500m	0
---------------------	---

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

21.9 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.

21.10 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>.

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Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: County Series

Map date: 1854-1855

Scale: 1:10,560

Printed at: 1:10,560



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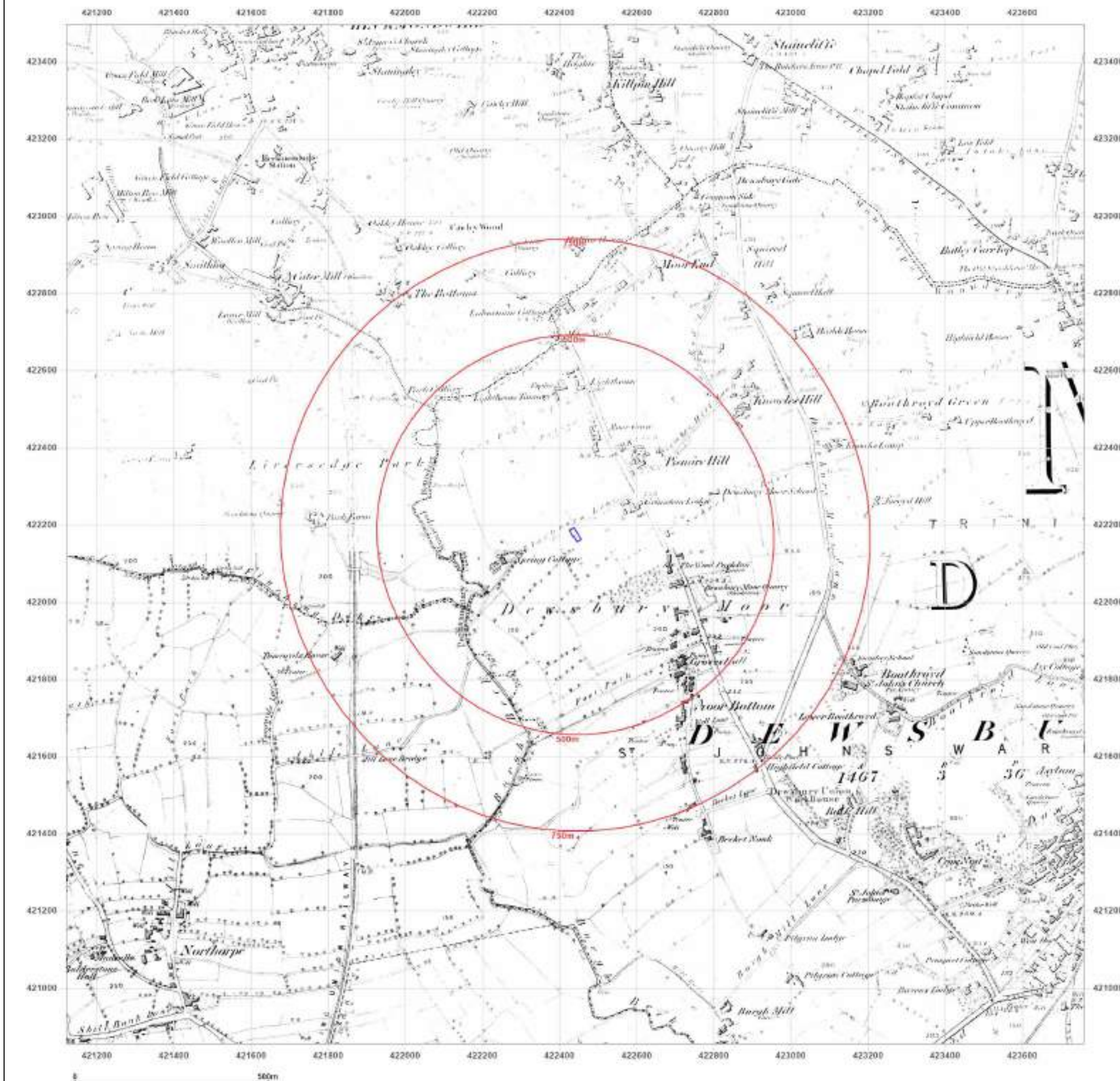


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Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: County Series

Map date: 1892

Scale: 1:10,560

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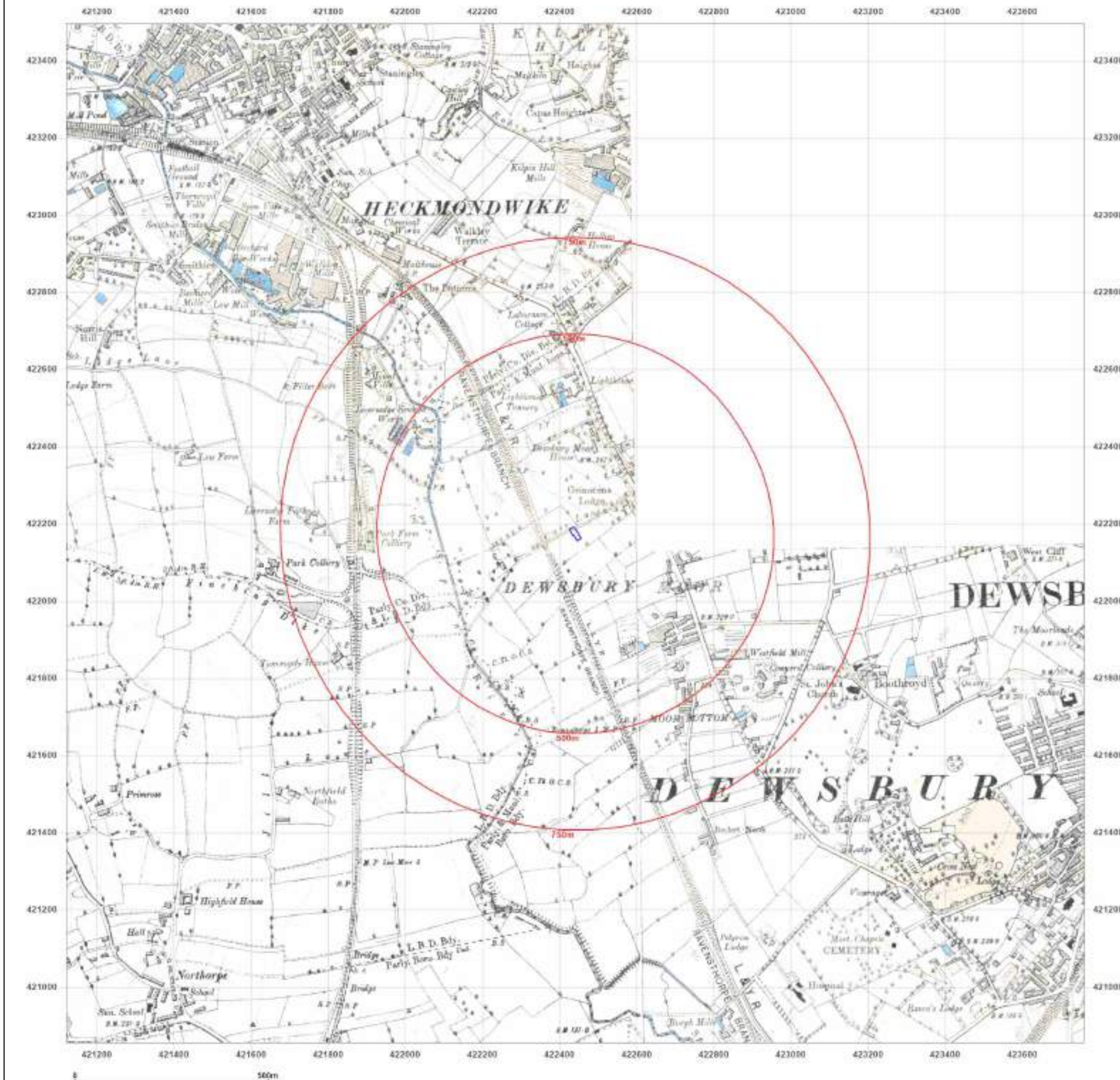


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Grid Ref: 422440, 422175

Map Name: County Series

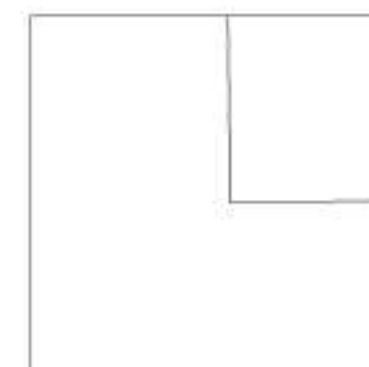
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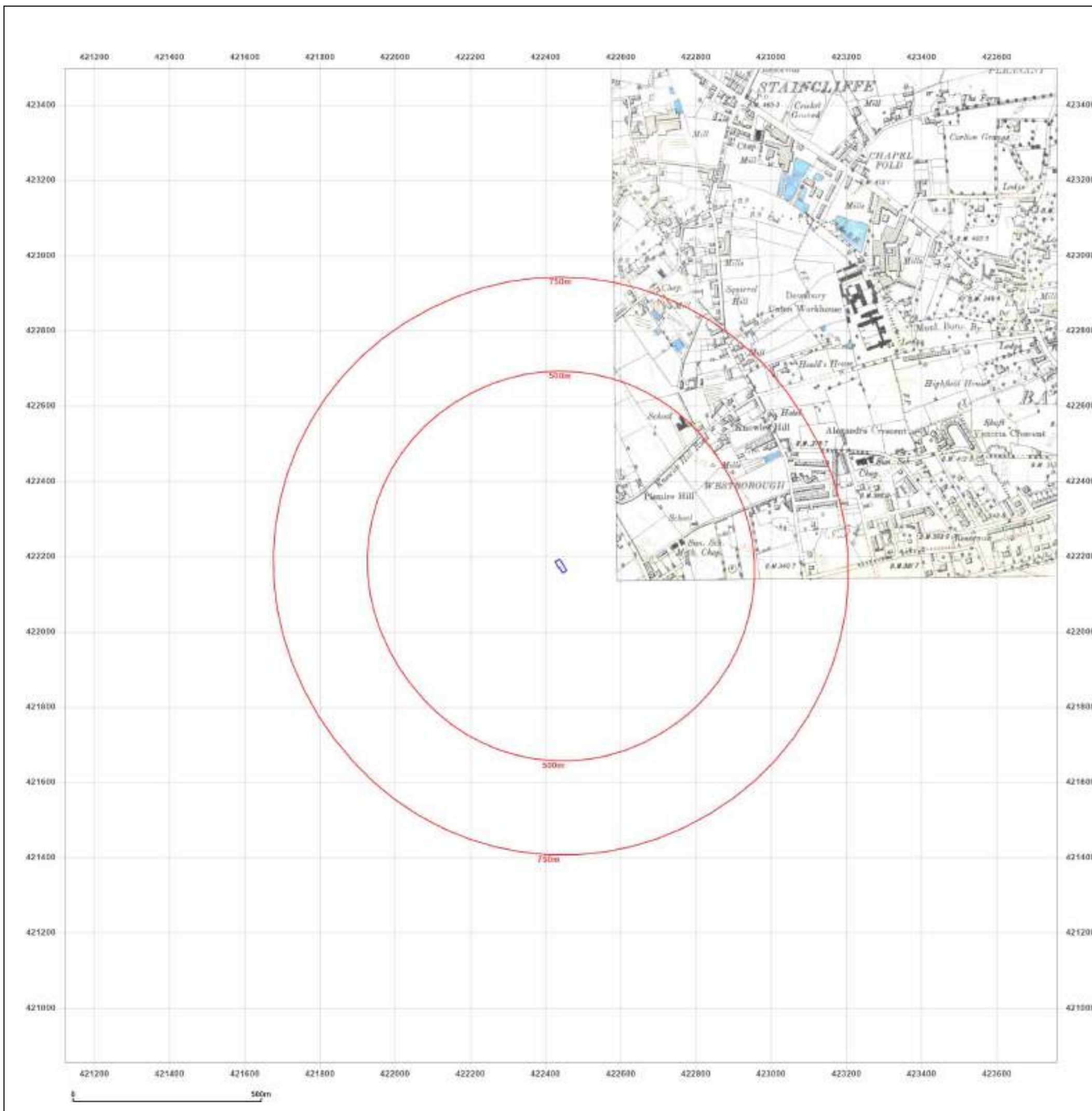


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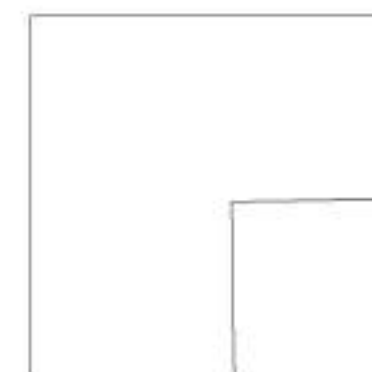
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Grid Ref: 422440, 422175

Map Name: County Series

Map date: 1894

Scale: 1:10,560

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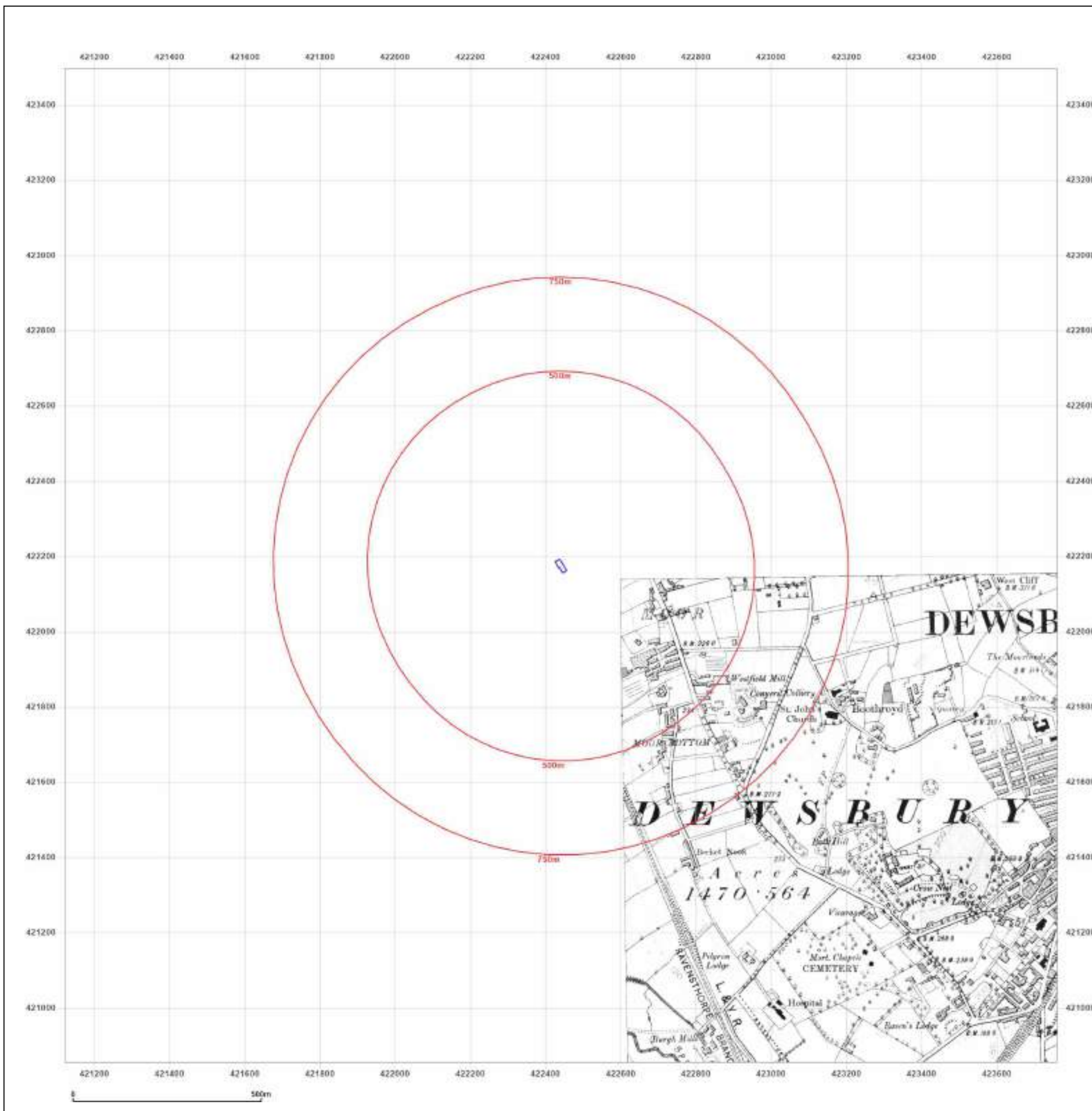


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Client Ref: DELANEY_8043
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Grid Ref: 422440, 422175

Map Name: County Series

Map date: 1905

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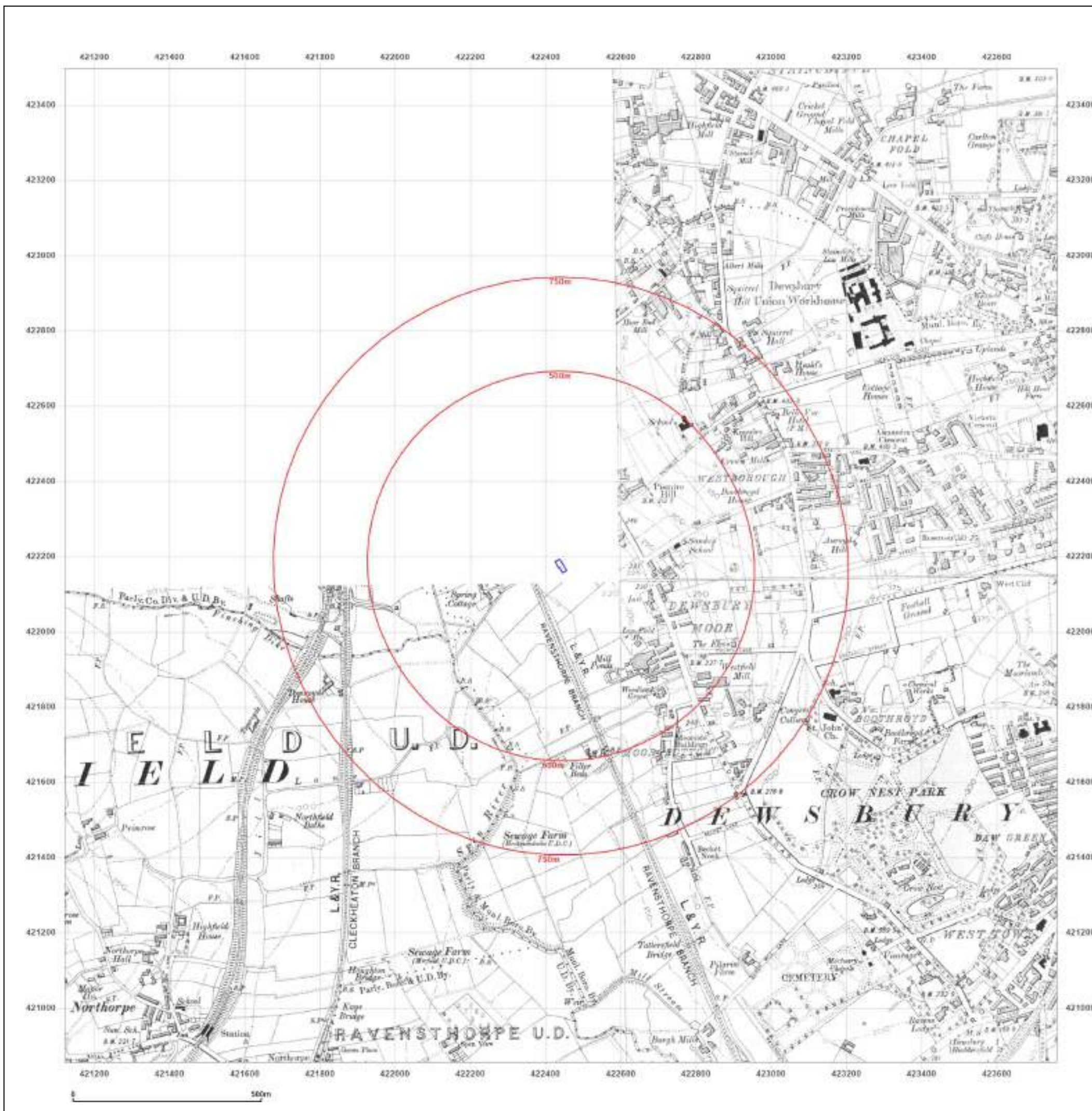


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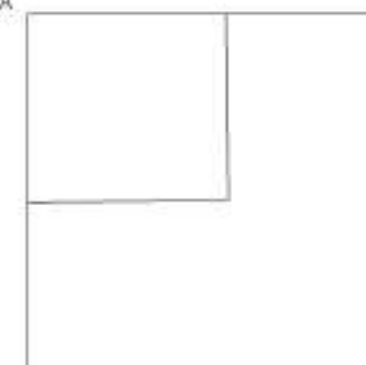
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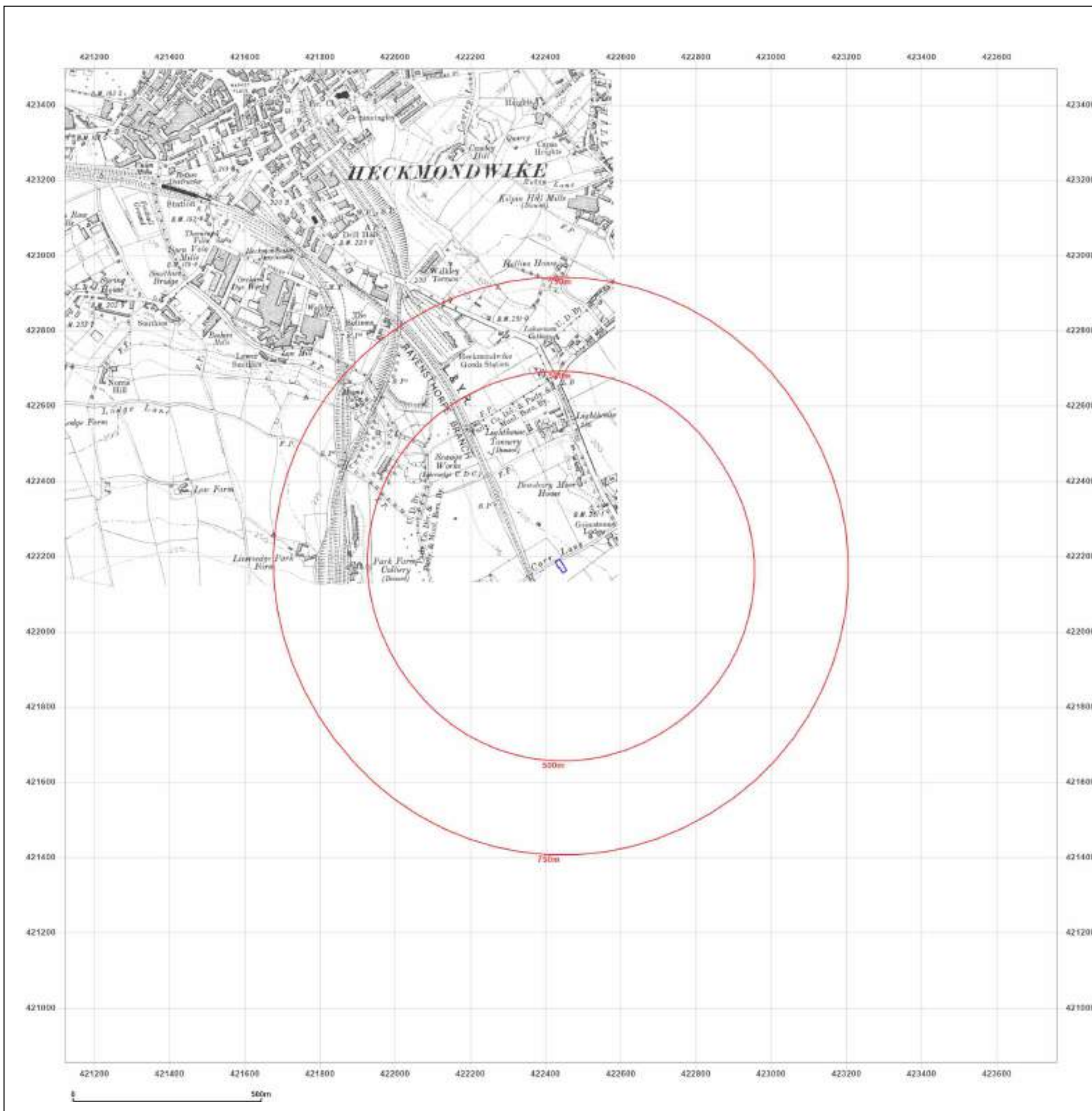


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Map Name: County Series

Map date: 1931

Scale: 1:10,560

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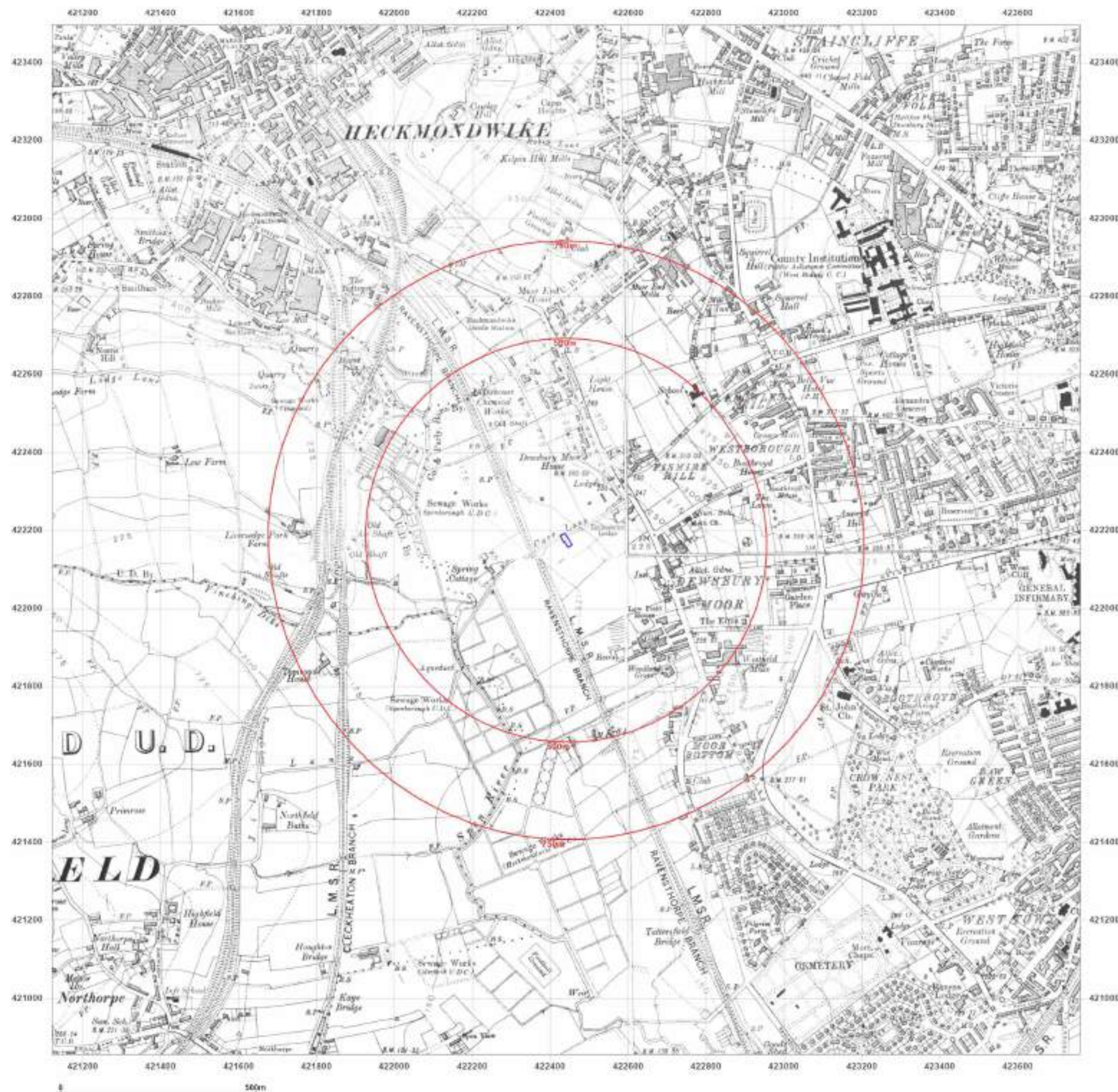


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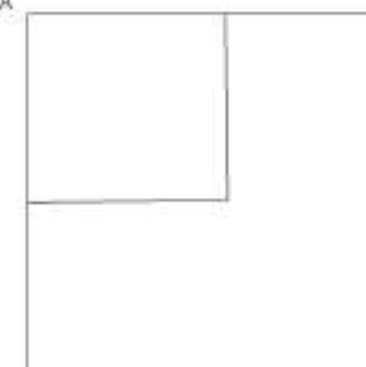
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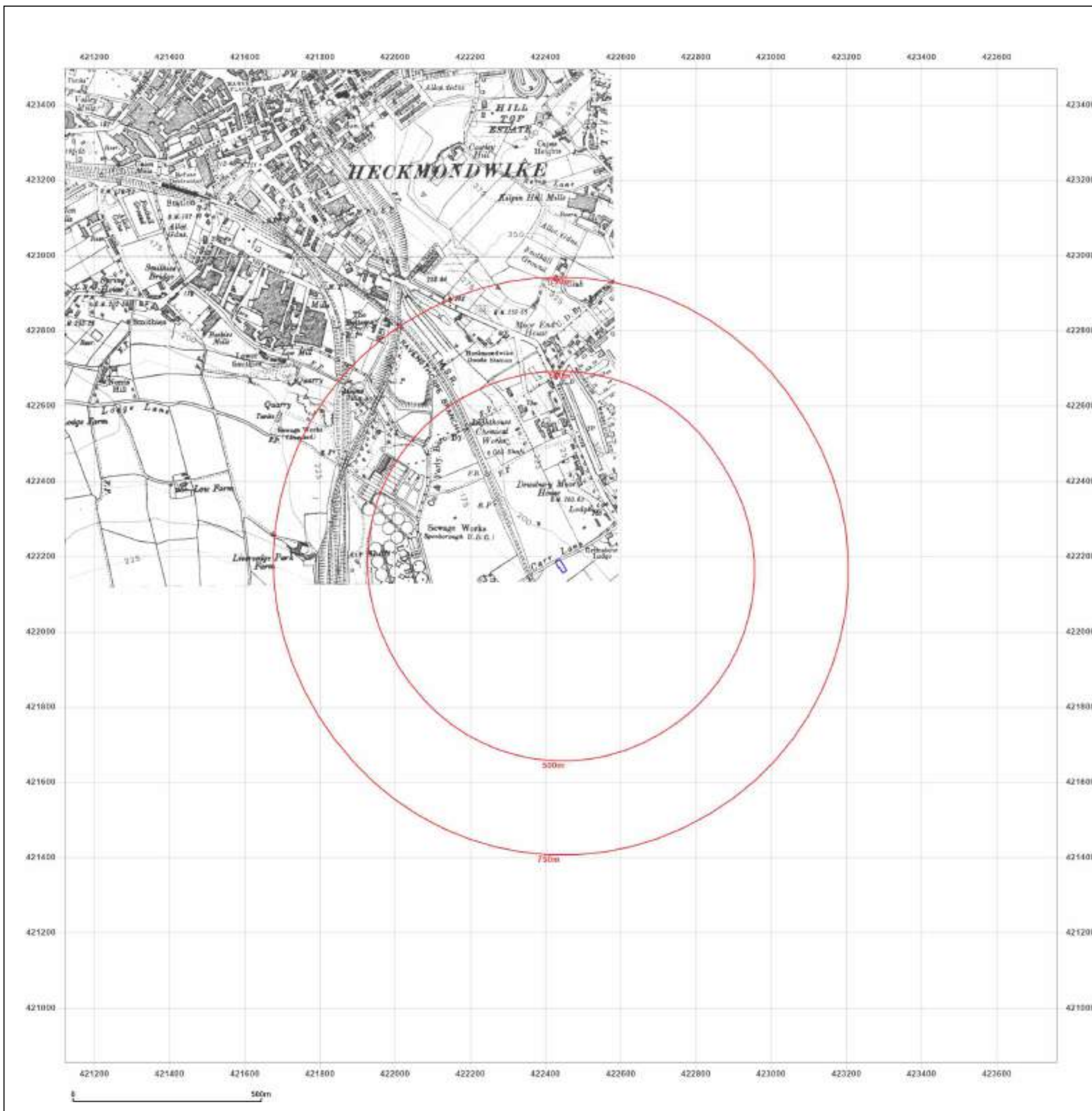


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: County Series

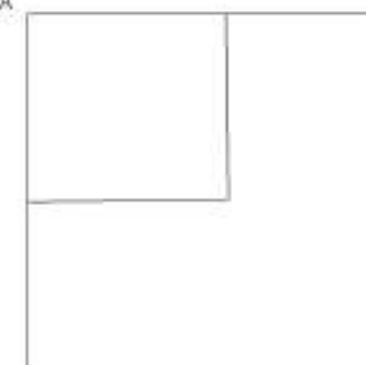
Map date: 1931

Scale: 1:10,560

Printed at: 1:10,560



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

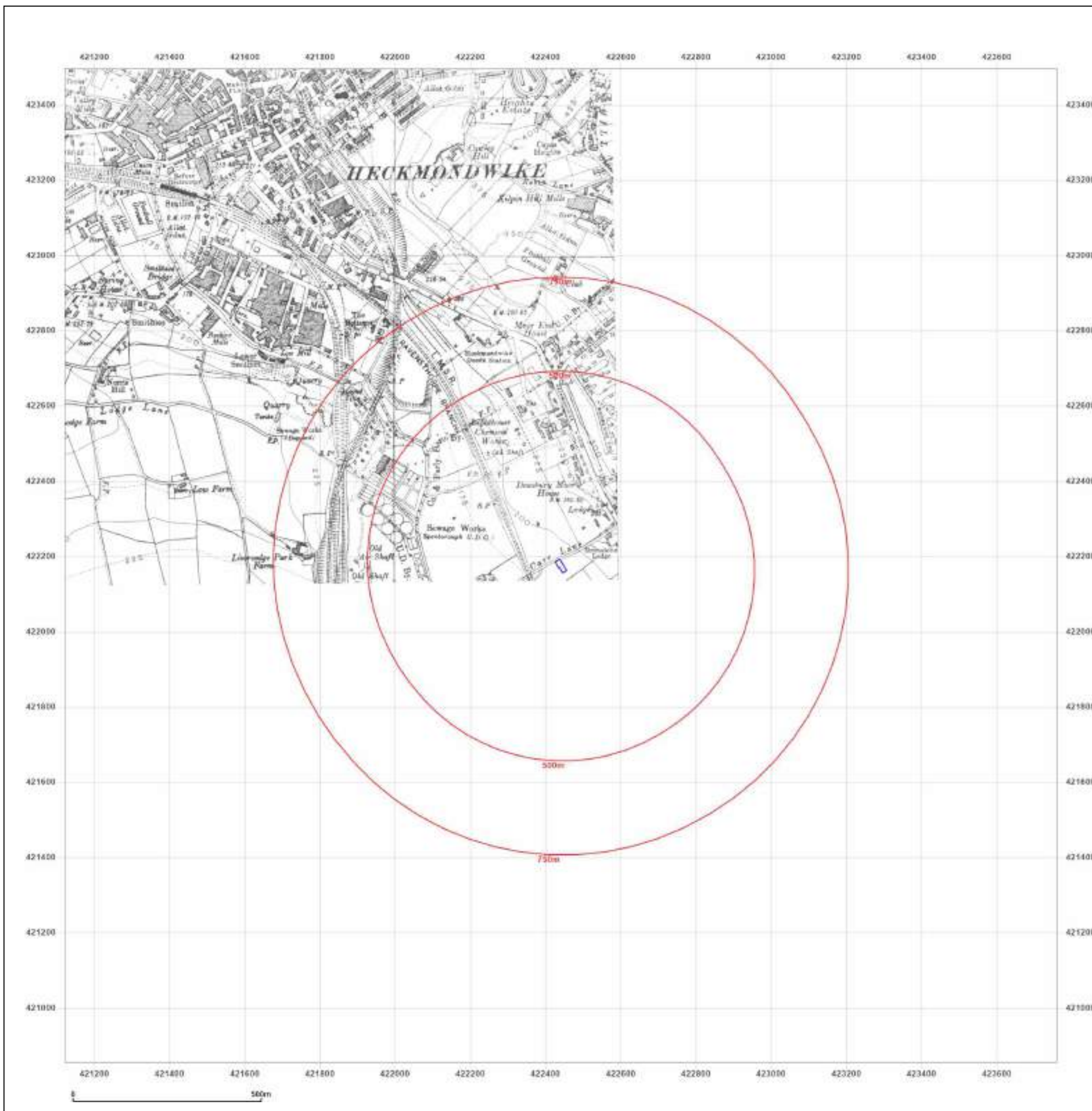


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

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 N/A
Copyright N/A
Levelled N/A

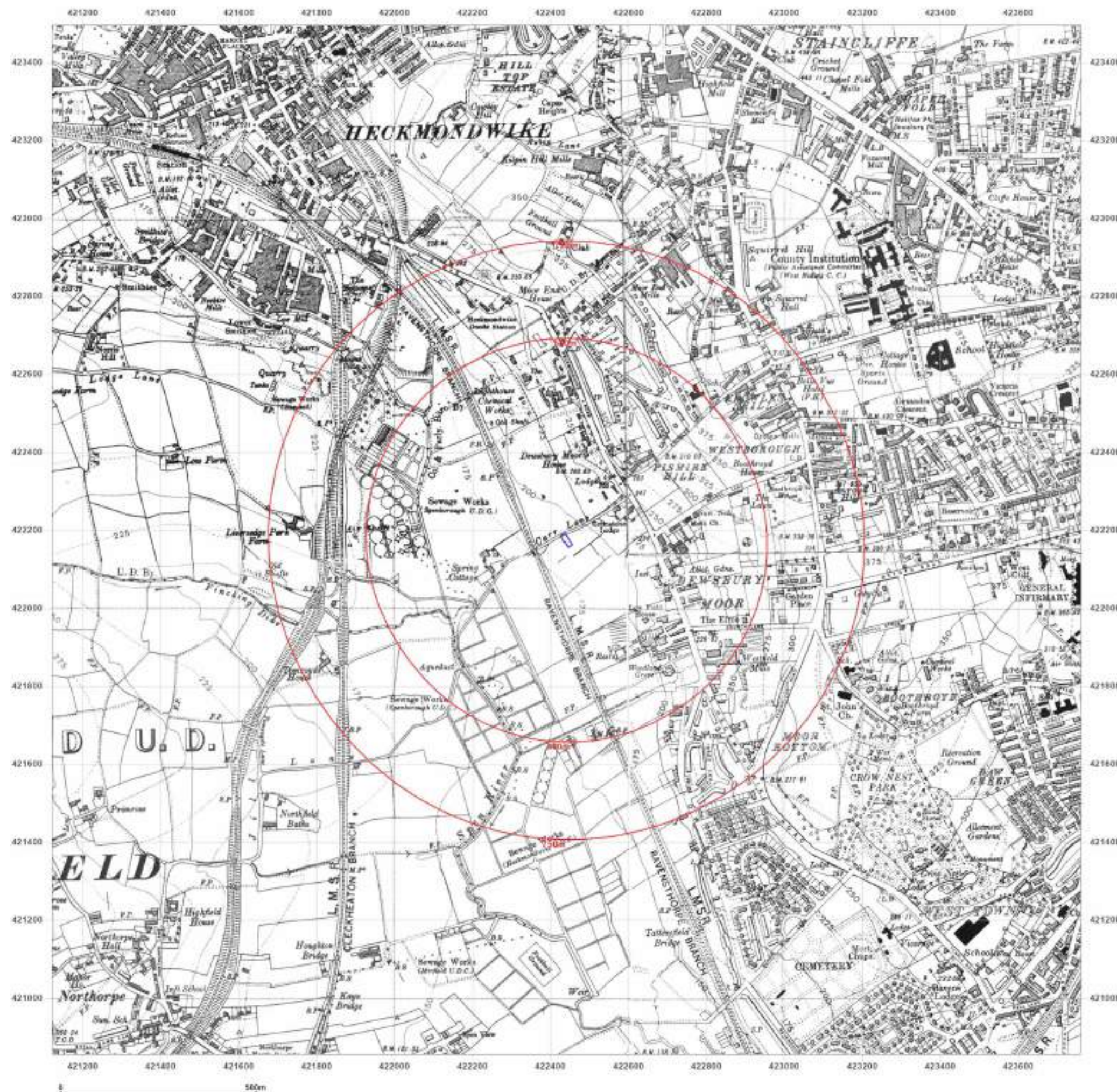


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

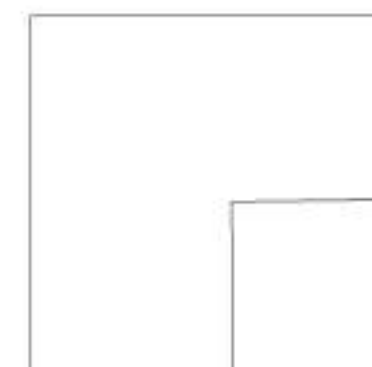
Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



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

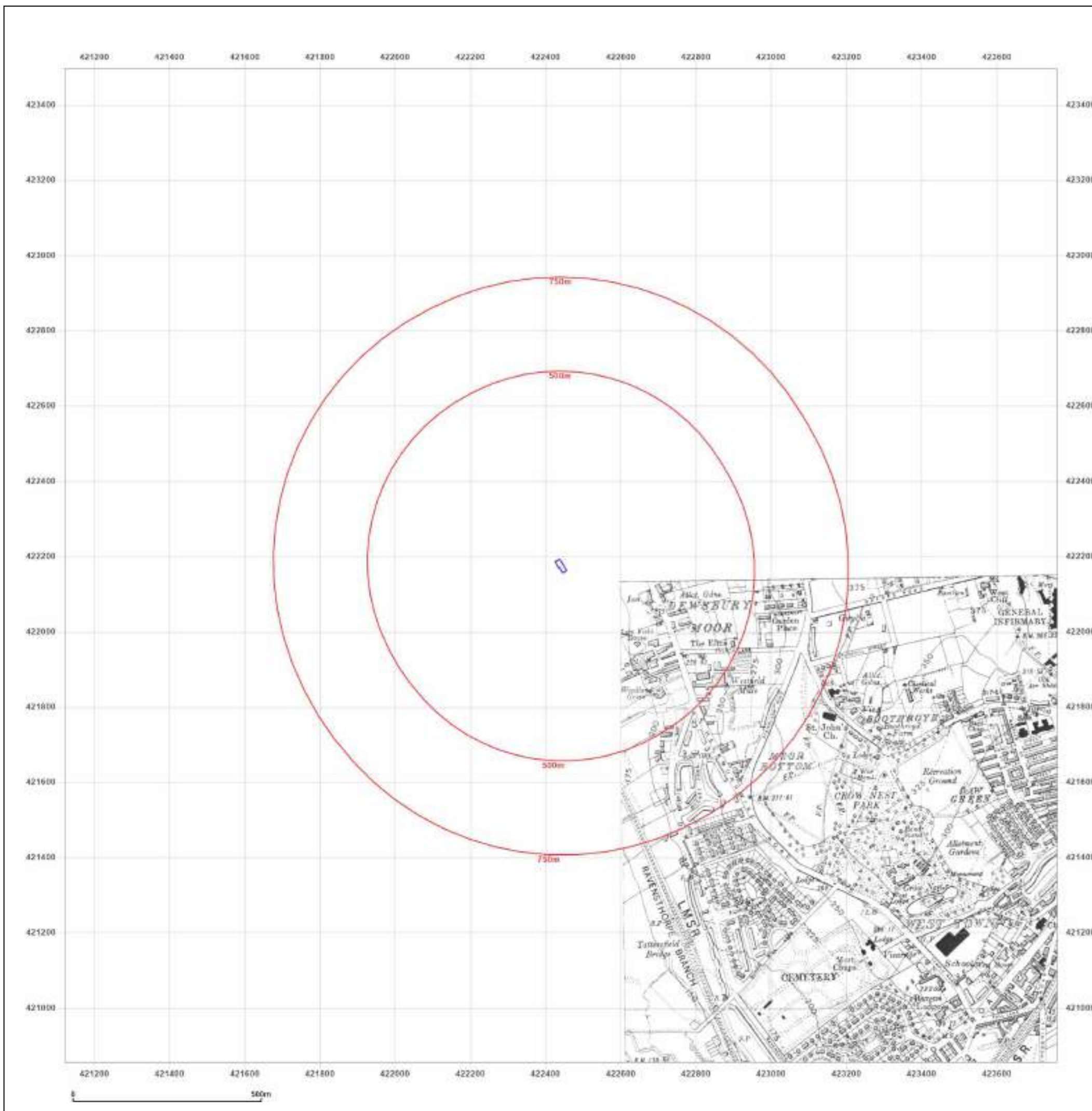


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

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 1931

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

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

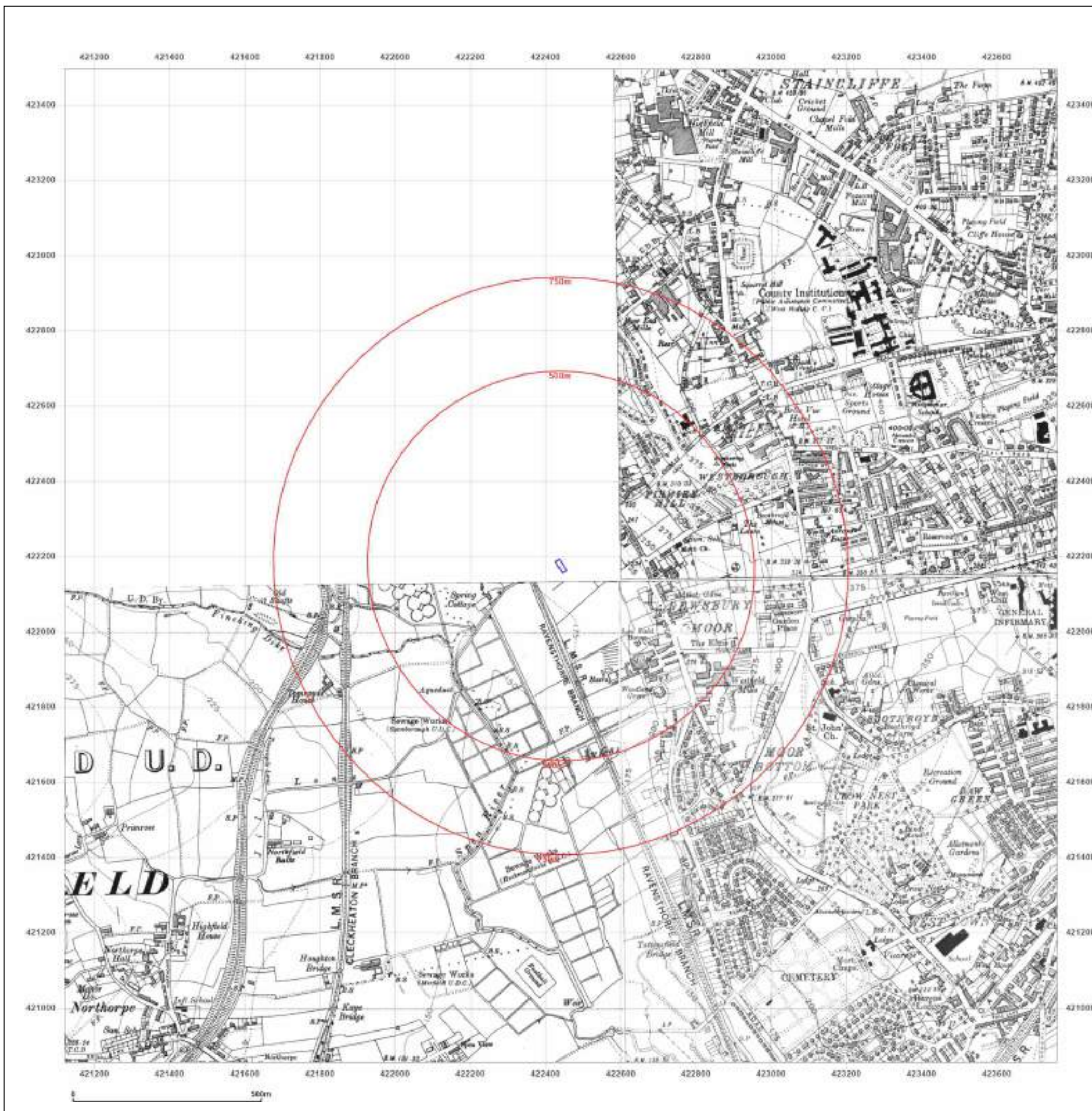


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: County Series

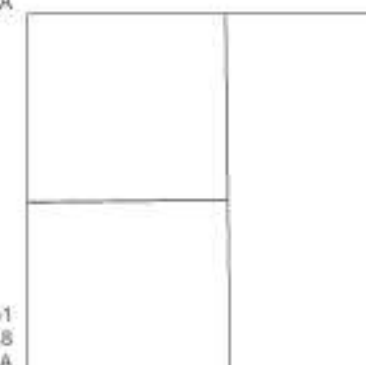
Map date: 1948

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

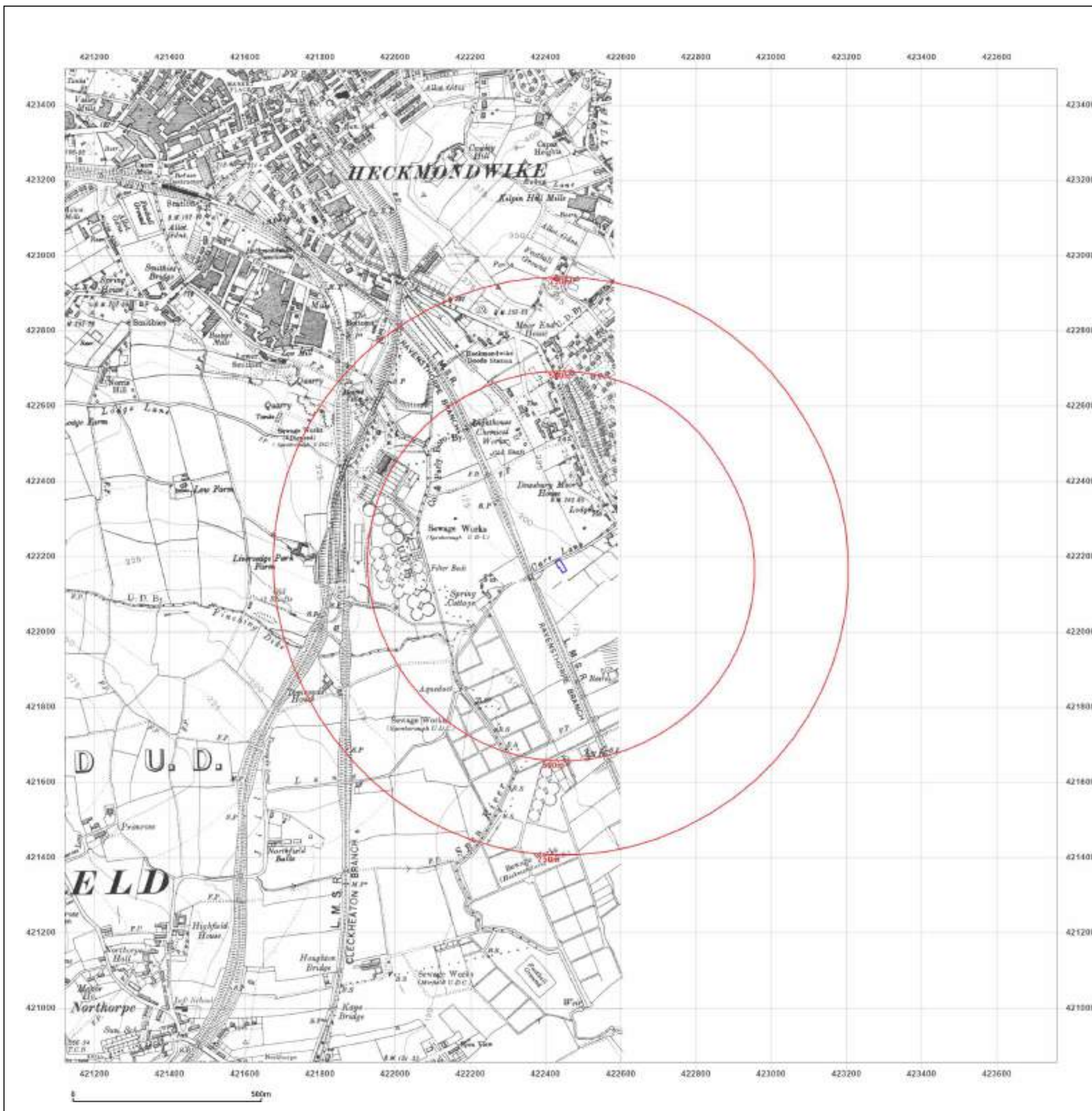


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: County Series

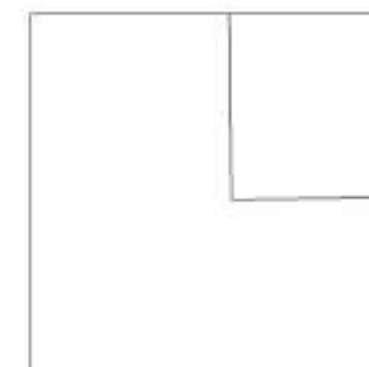
Map date: 1948

Scale: 1:10,560

Printed at: 1:10,560



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



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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: Provisional

Map date: 1955

Scale: 1:10,560

Printed at: 1:10,560



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

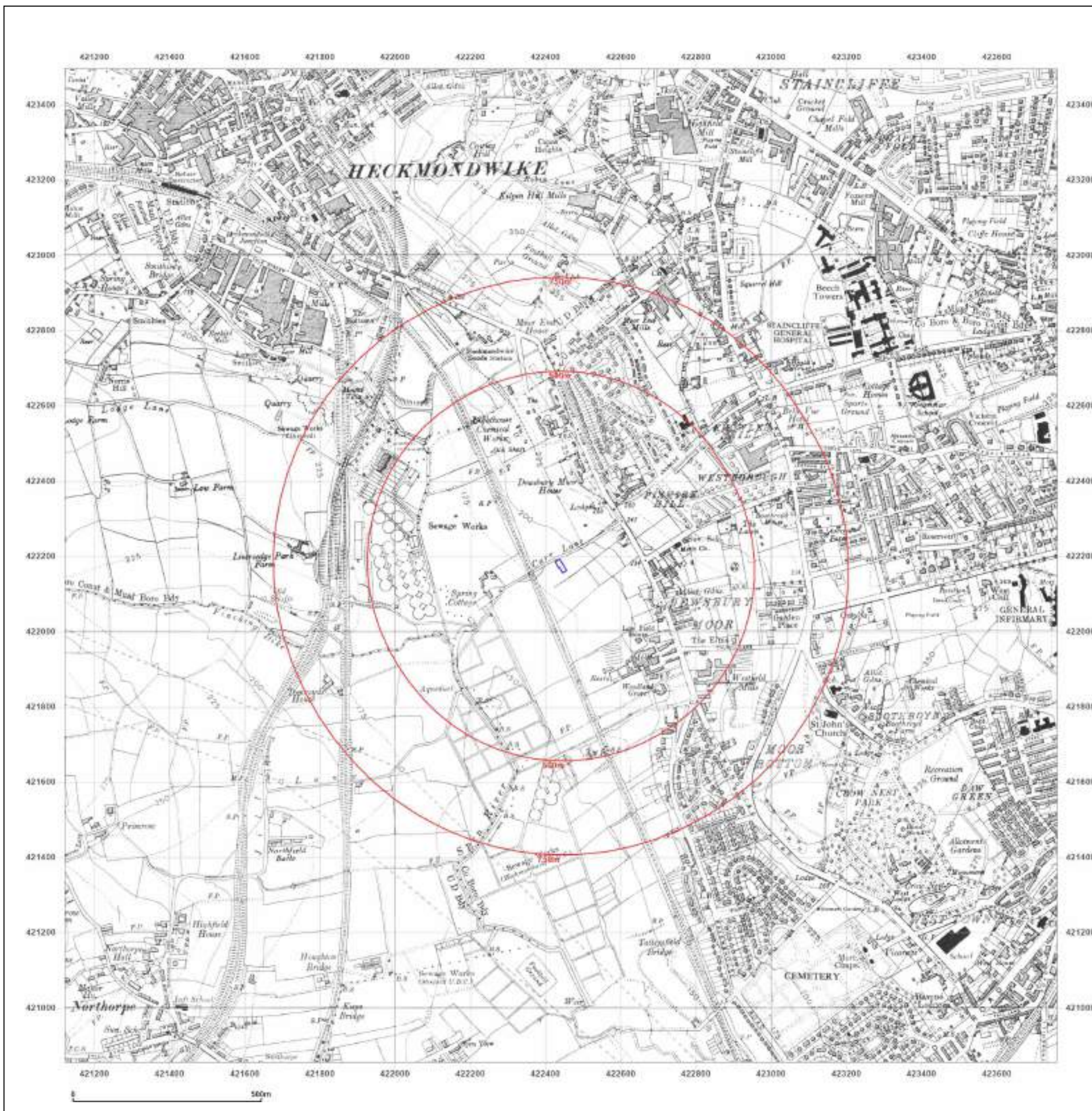


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

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

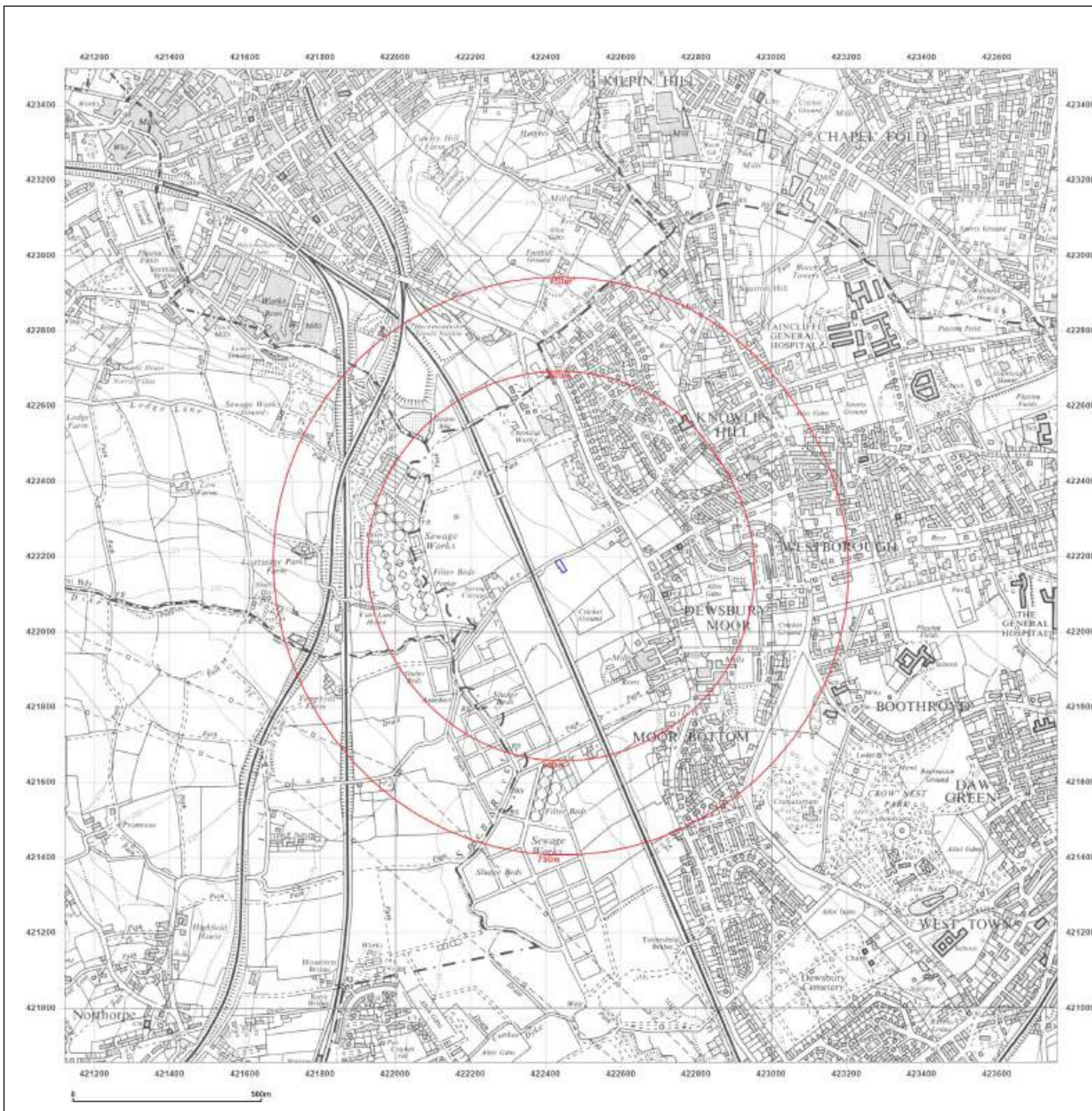


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 1974

Scale: 1:10,000

Printed at: 1:10,000



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

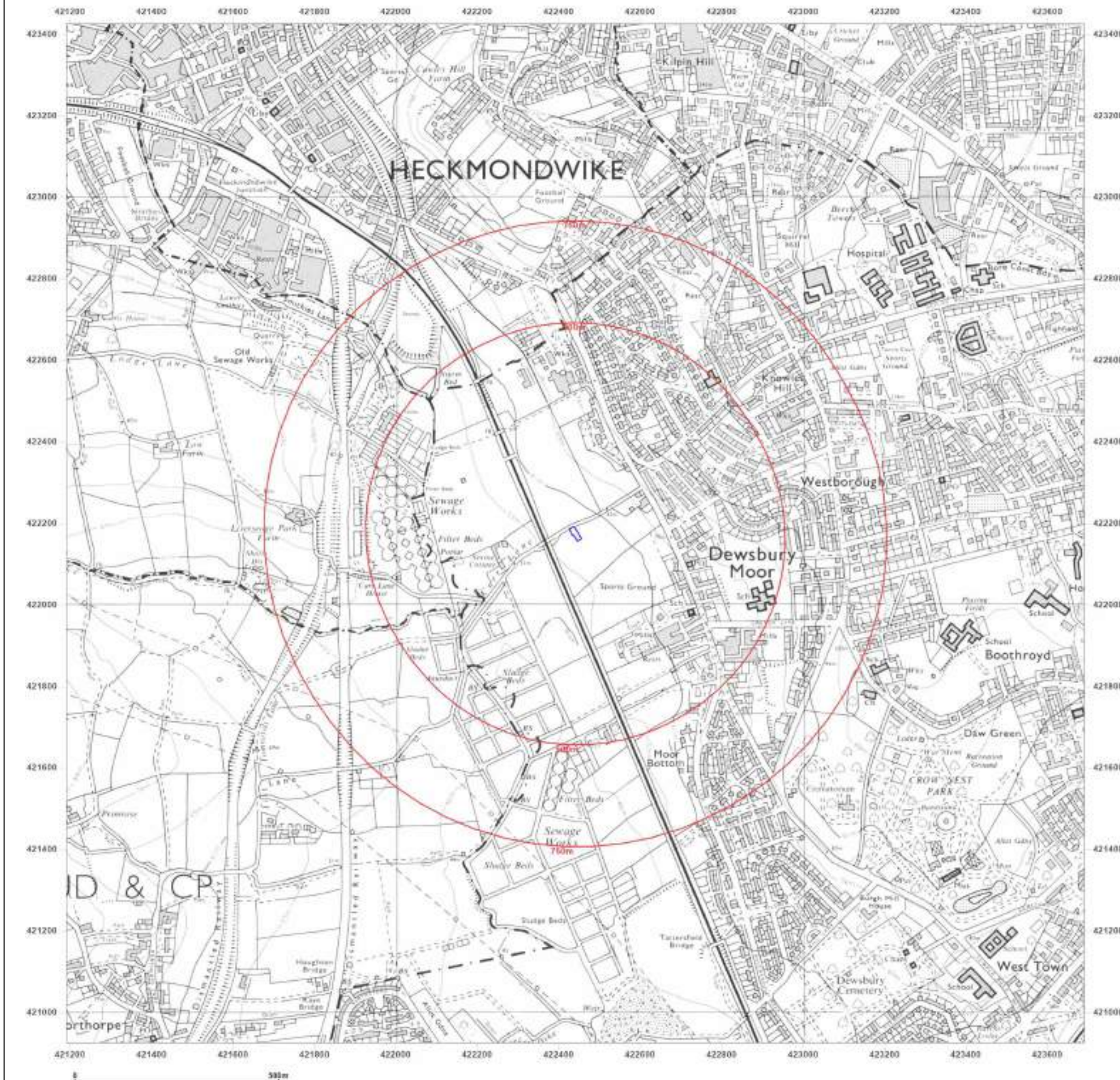


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Site Details:

54, CORNFIELD, DEWSBURY
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Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 1981

Scale: 1:10,000

Printed at: 1:10,000



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

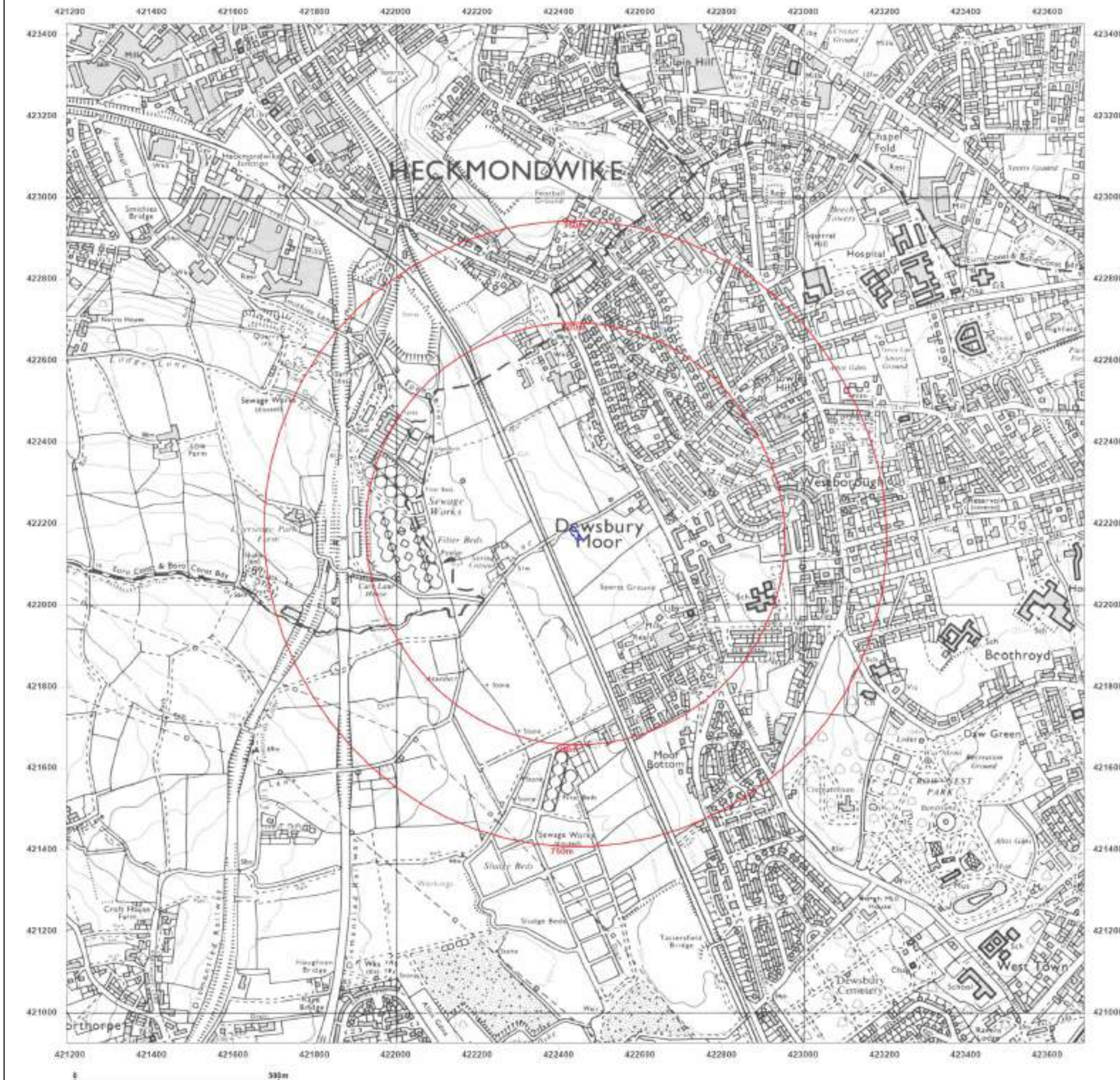


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Site Details:

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Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 1988

Scale: 1:10,000

Printed at: 1:10,000



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

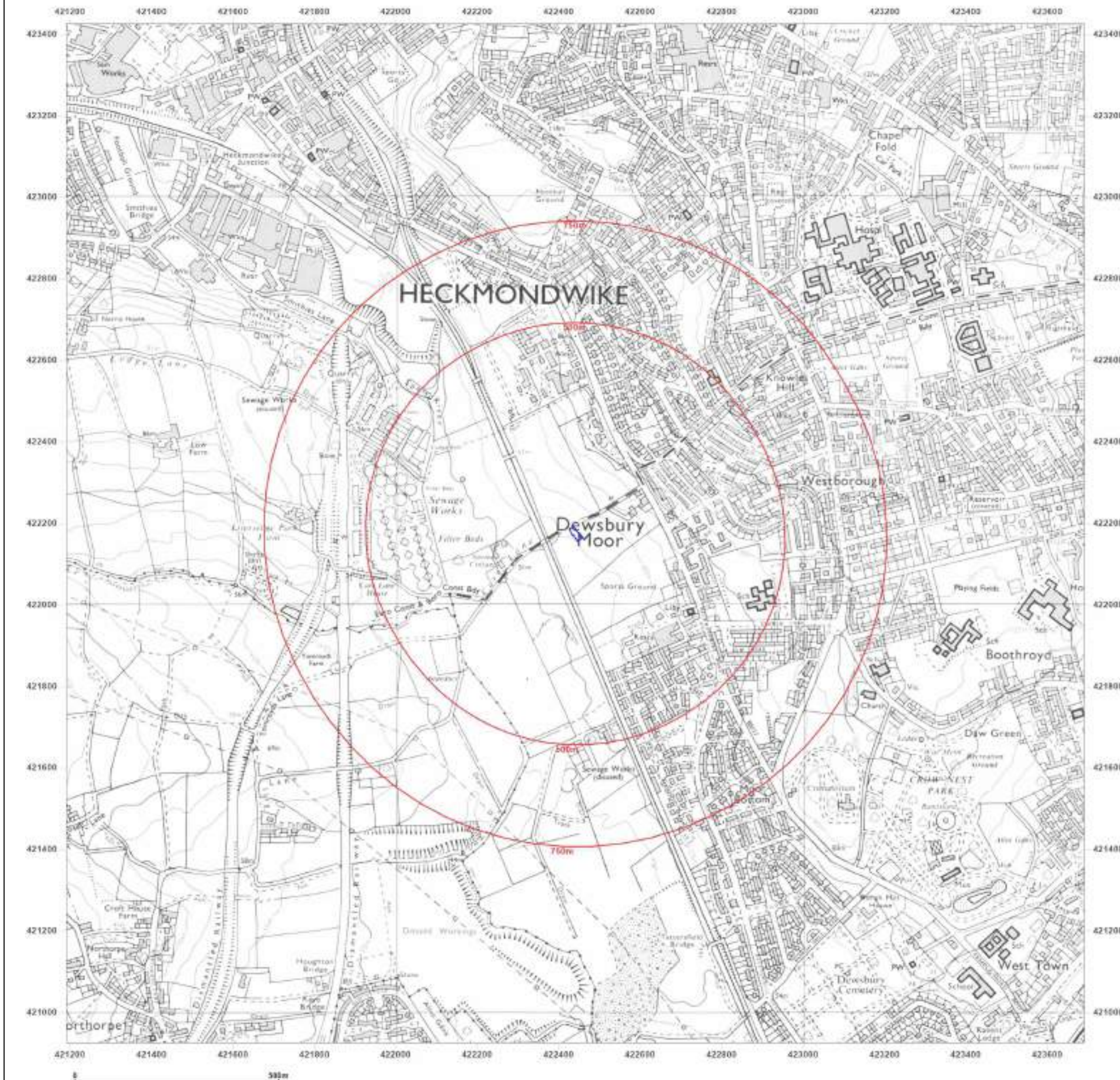


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Site Details:

54, CORNFIELD, DEWSBURY MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000

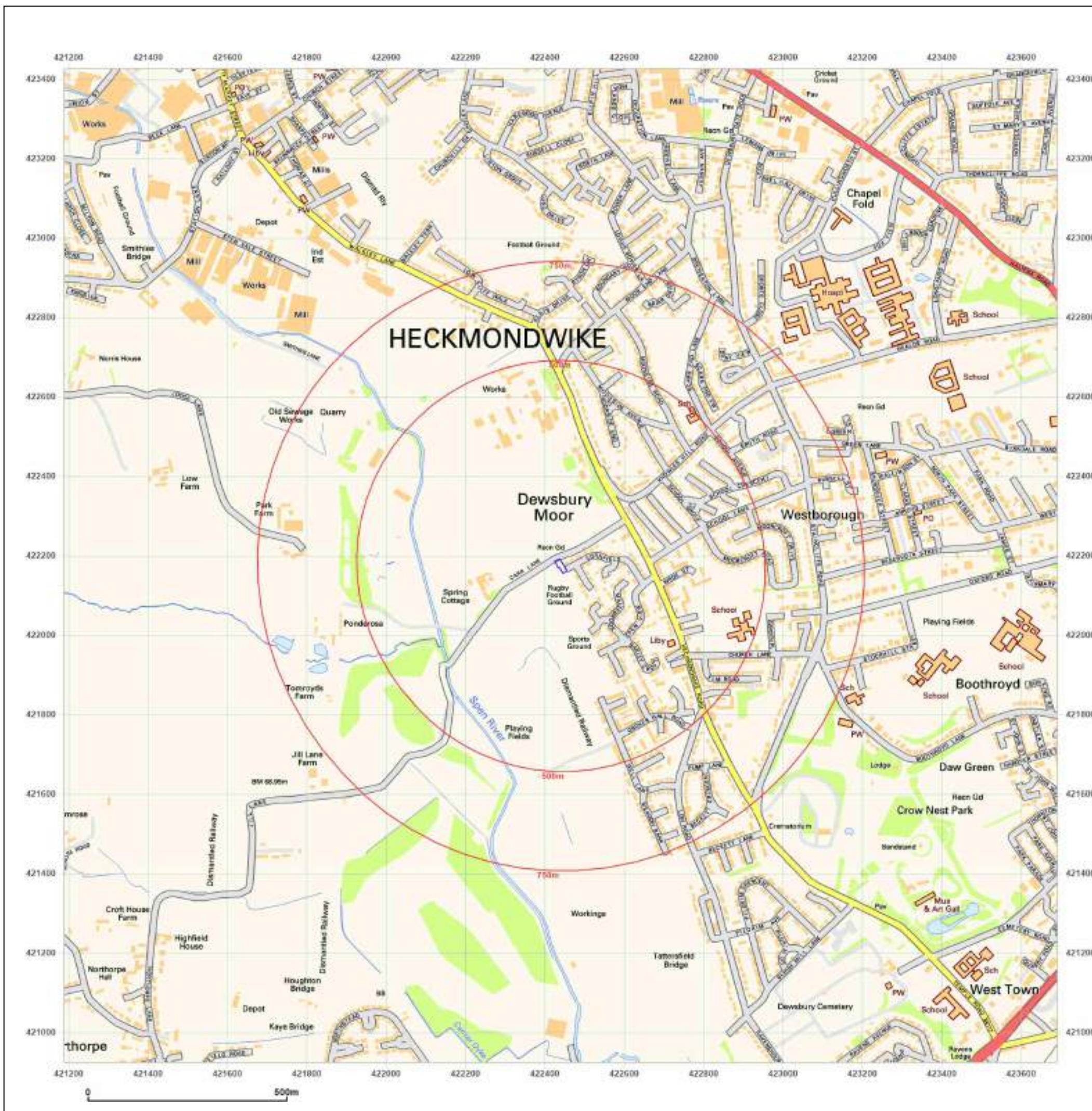


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000

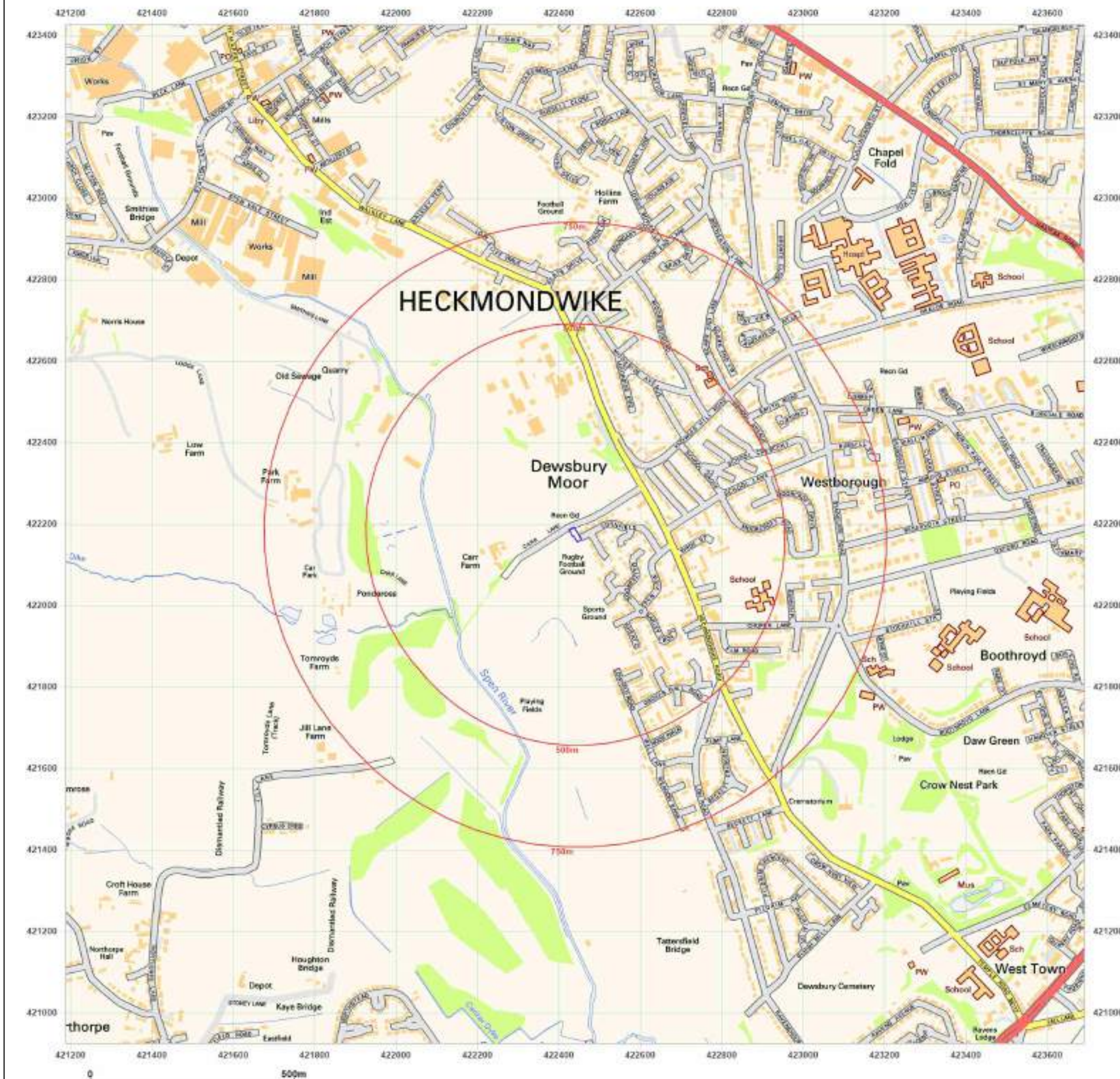


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Site Details:

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MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 2023

Scale: 1:10,000

Printed at: 1:10,000

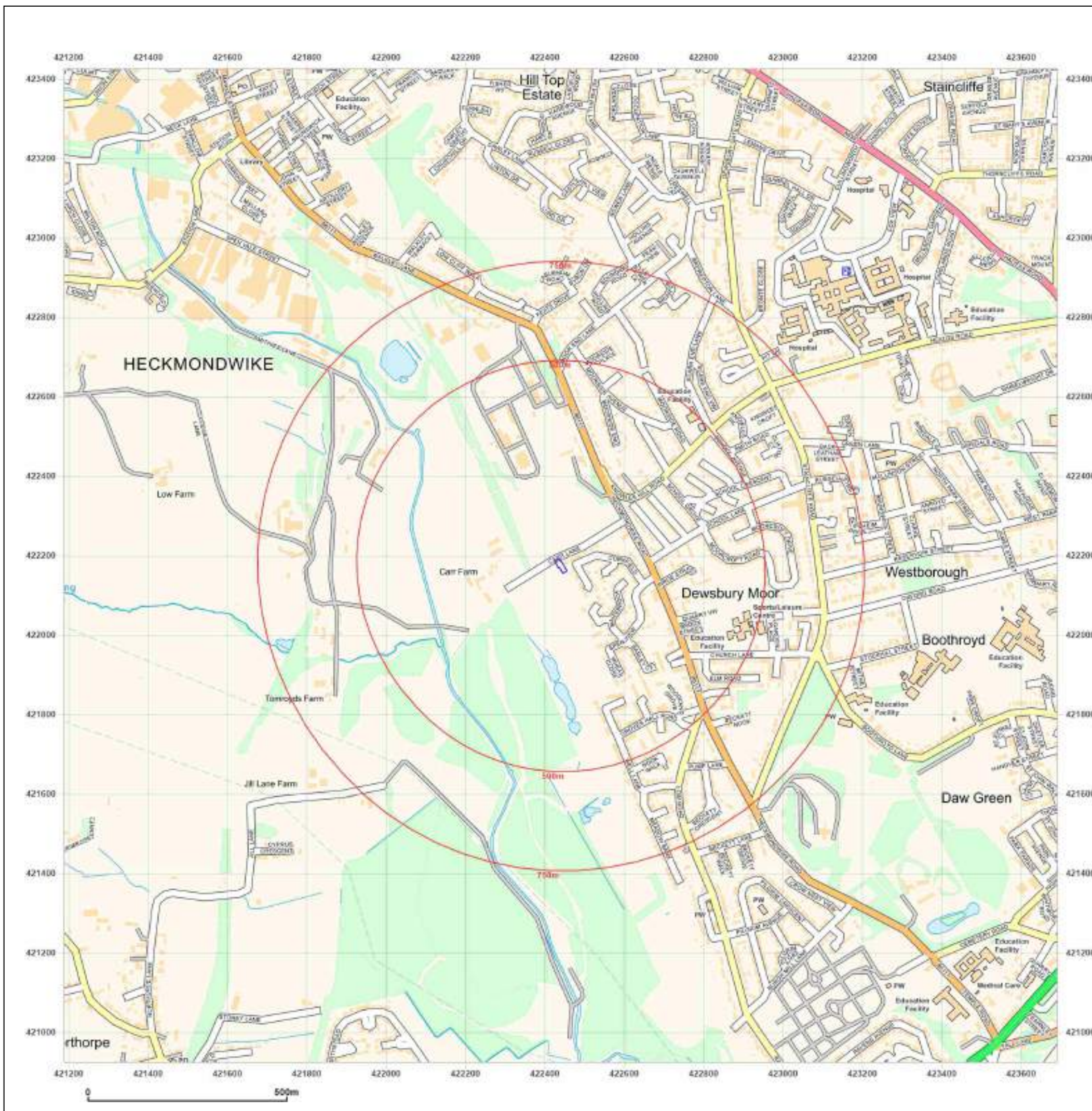


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Site Details:

54, CORNFIELD, DEWSBURY MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: County Series

Map date: 1892-1894

Scale: 1:2,500

Printed at: 1:2,500



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

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

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

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

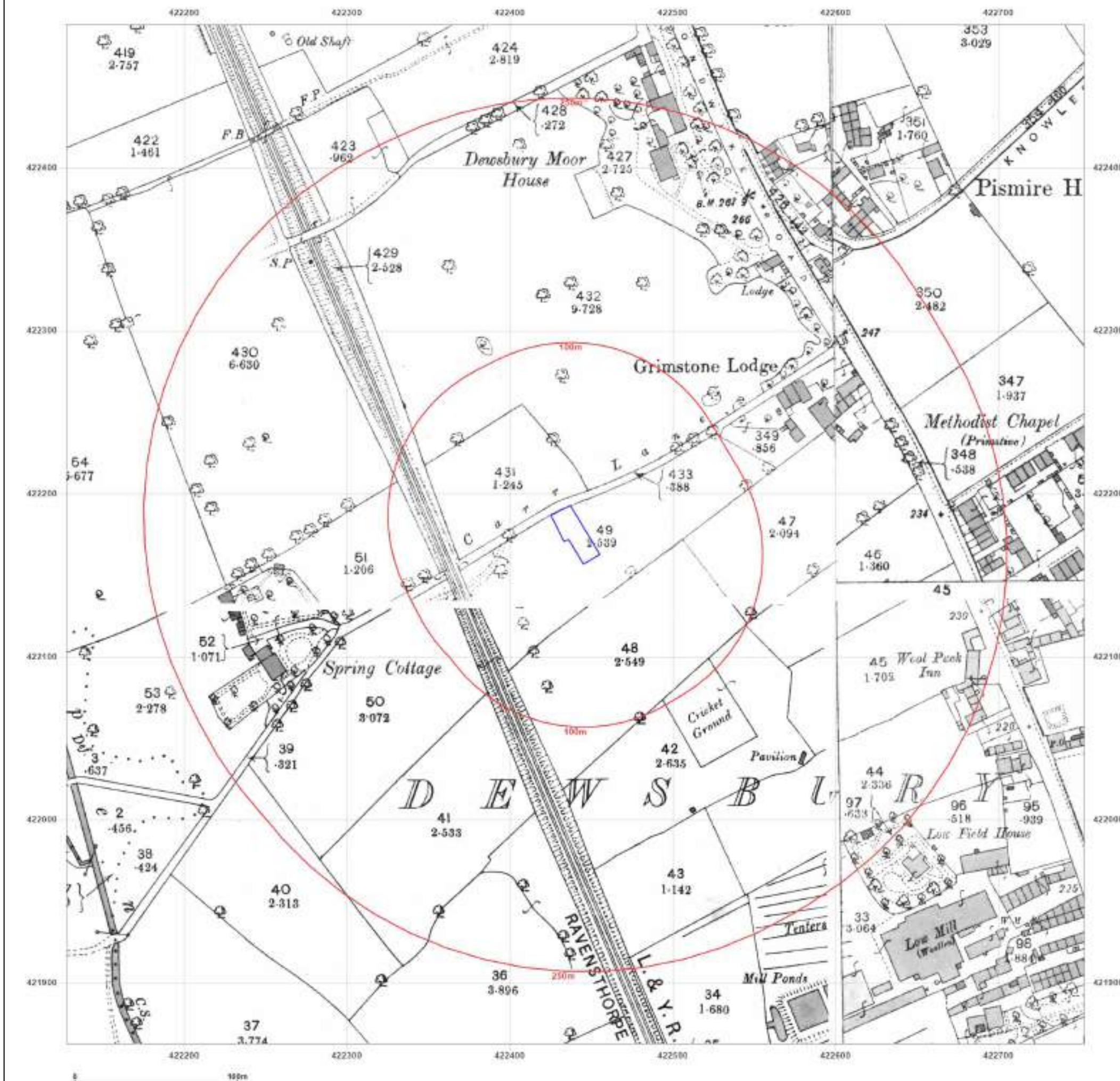


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Site Details:

54, CORNFIELD, DEWSBURY MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

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

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

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

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

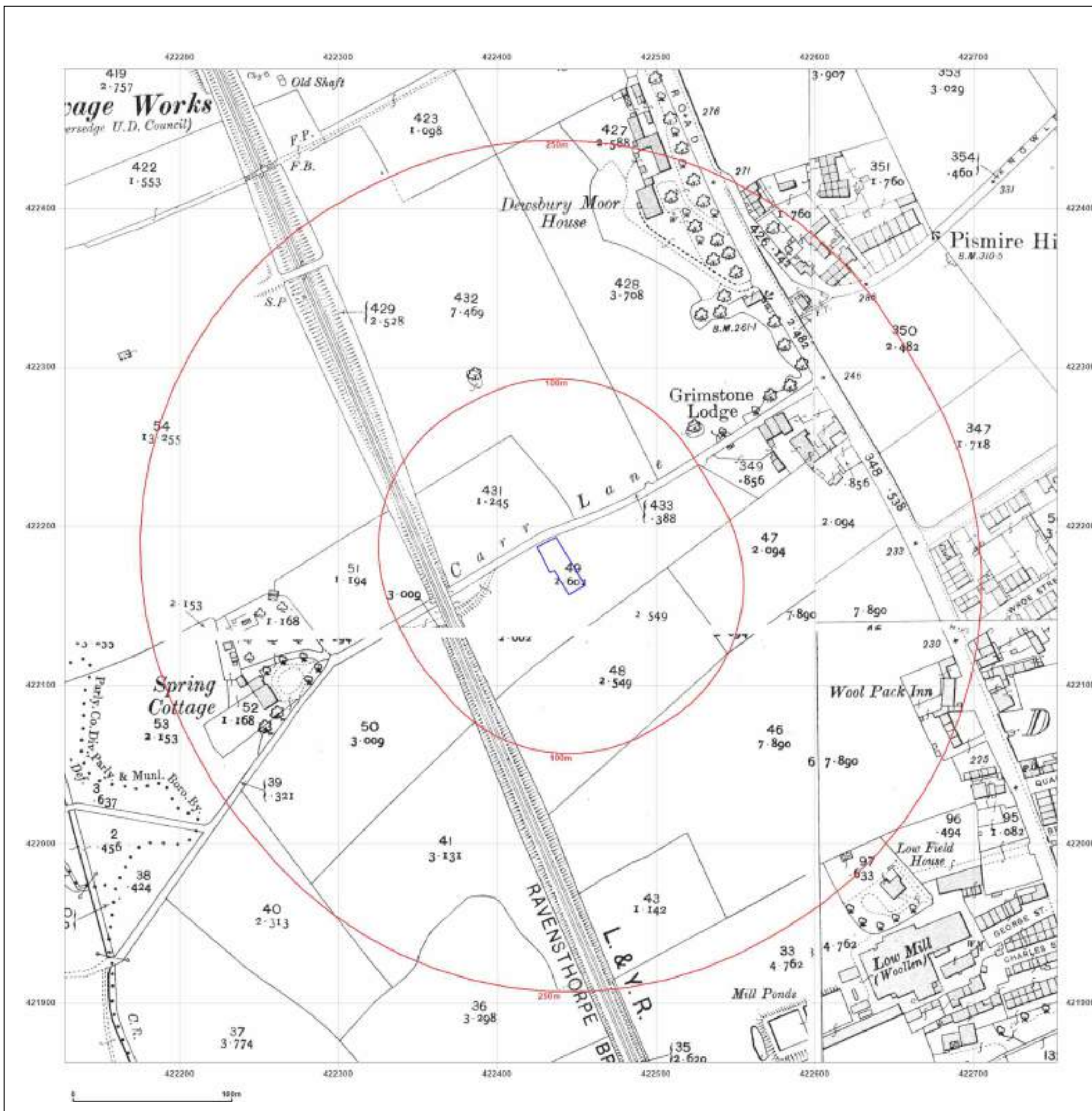


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Site Details:

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Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: County Series

Map date: 1922

Scale: 1:2,500

Printed at: 1:2,500



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

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

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

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

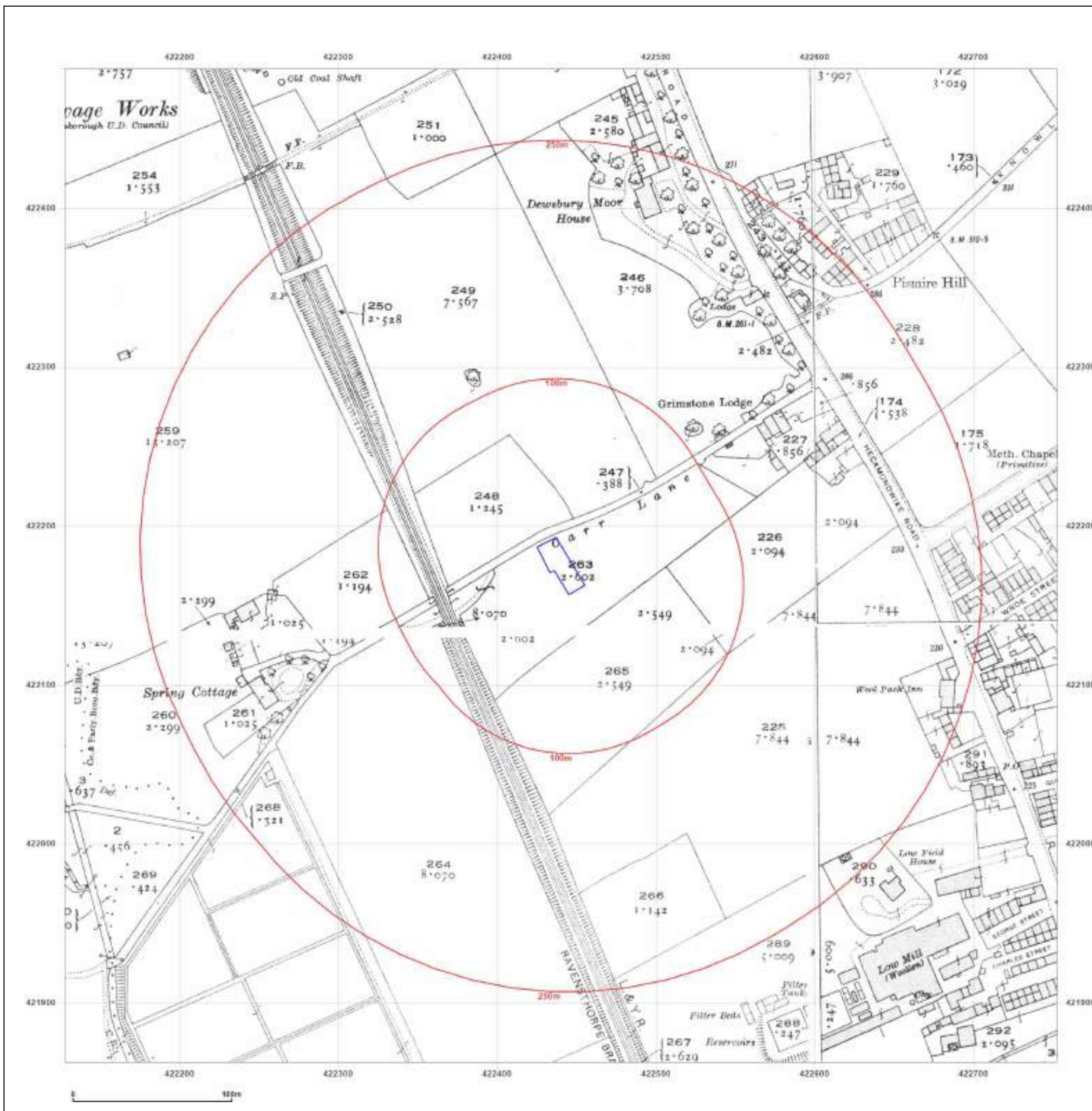


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Site Details:

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Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: County Series

Map date: 1933

Scale: 1:2,500

Printed at: 1:2,500



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

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

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

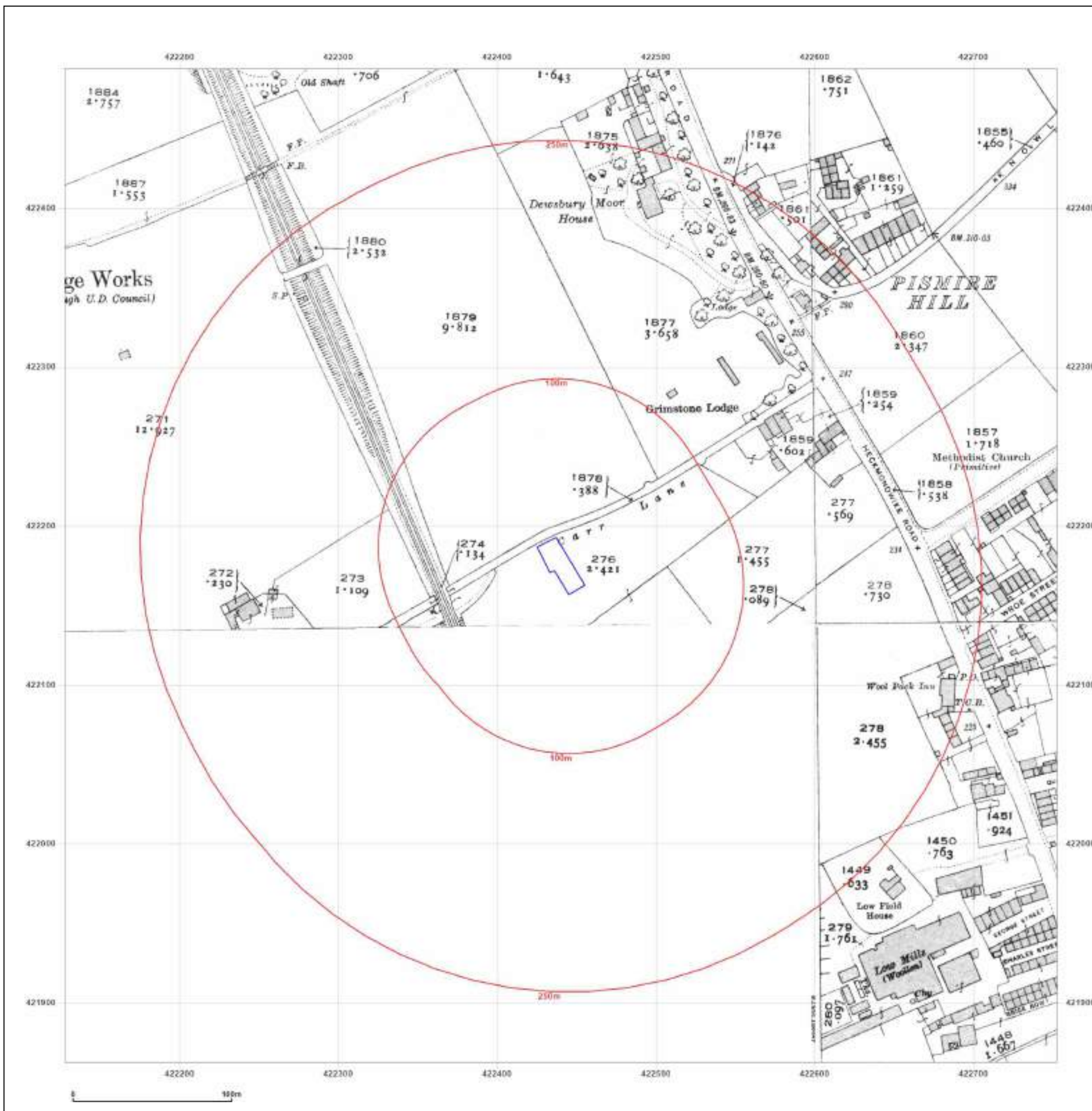


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: County Series

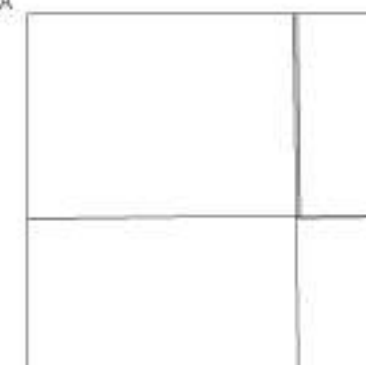
Map date: 1938

Scale: 1:2,500

Printed at: 1:2,500



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



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

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

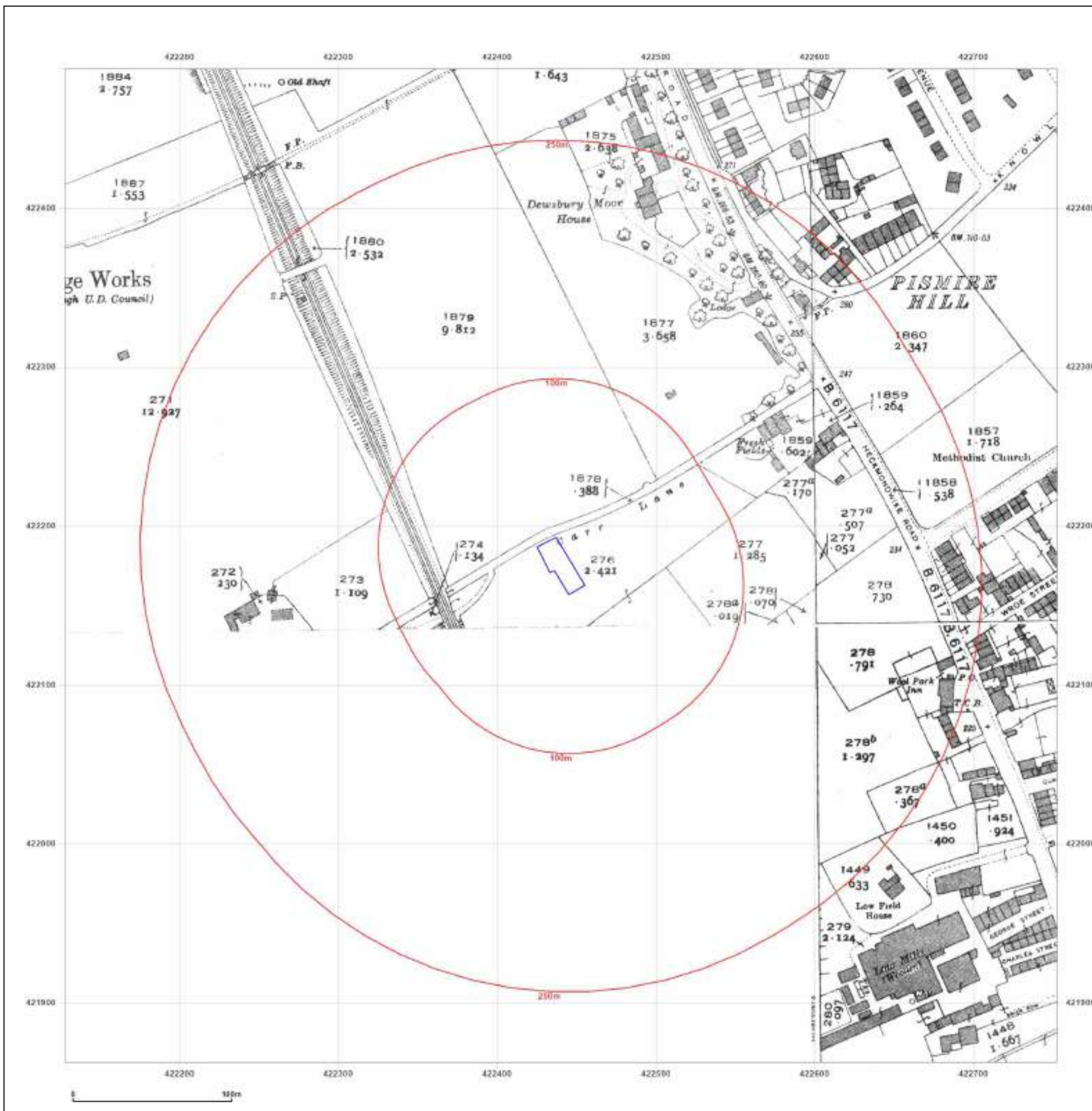


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

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 1931

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

Surveyed 1955
Revised 1955
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Copyright N/A
Levelled 1931

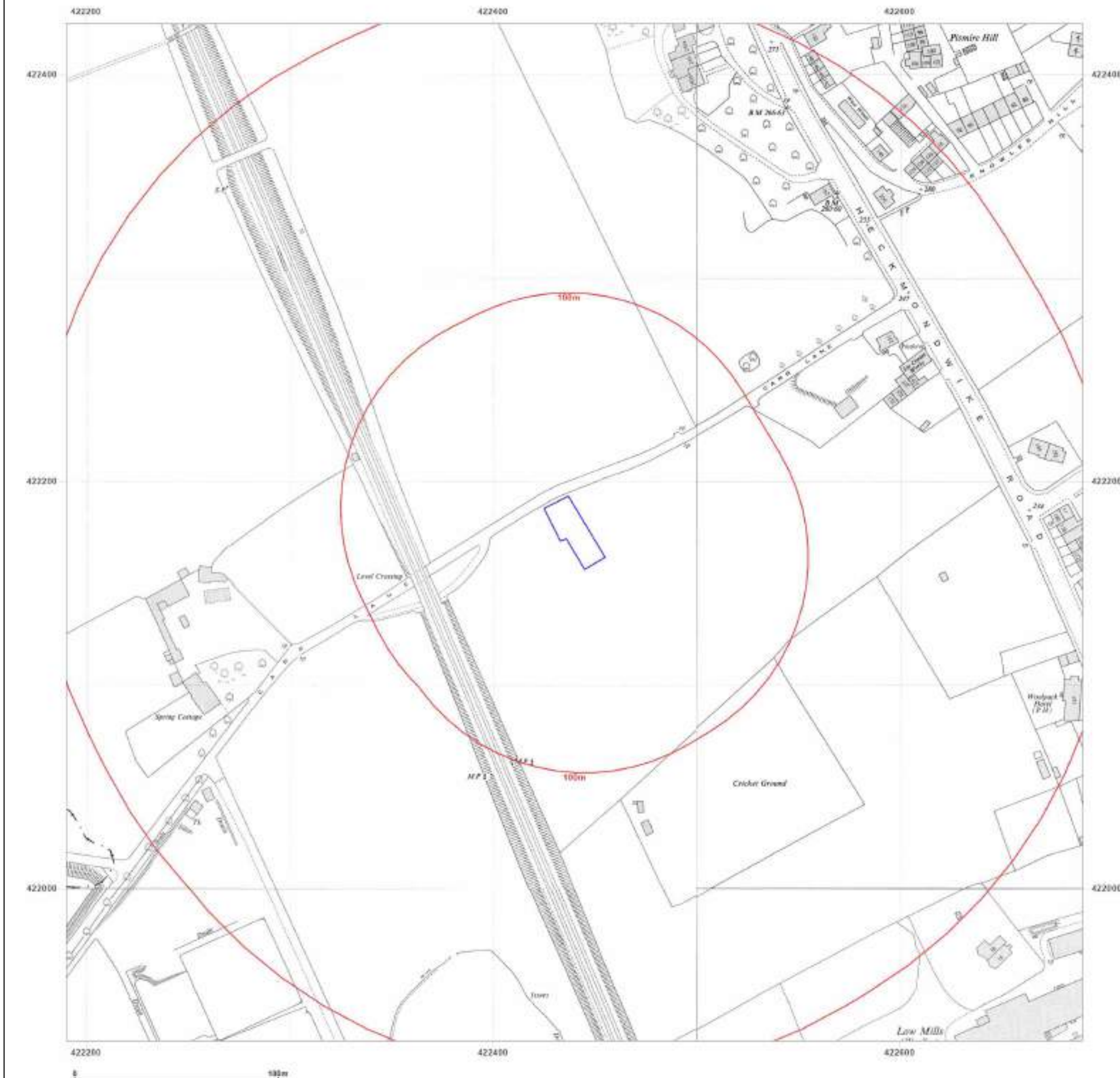


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 1956

Scale: 1:1,250

Printed at: 1:2,000



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

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

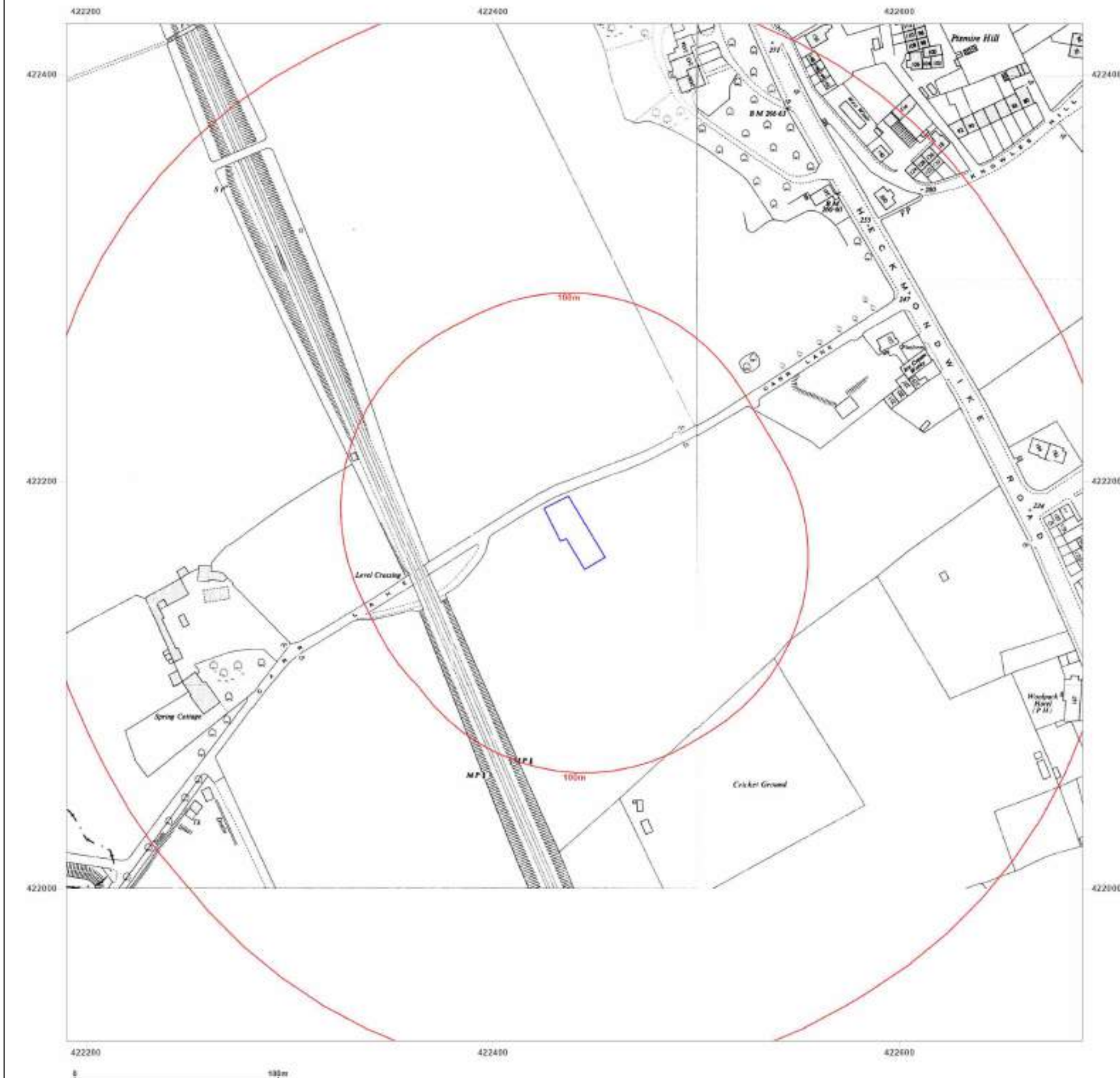


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 1956

Scale: 1:1,250

Printed at: 1:2,000



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

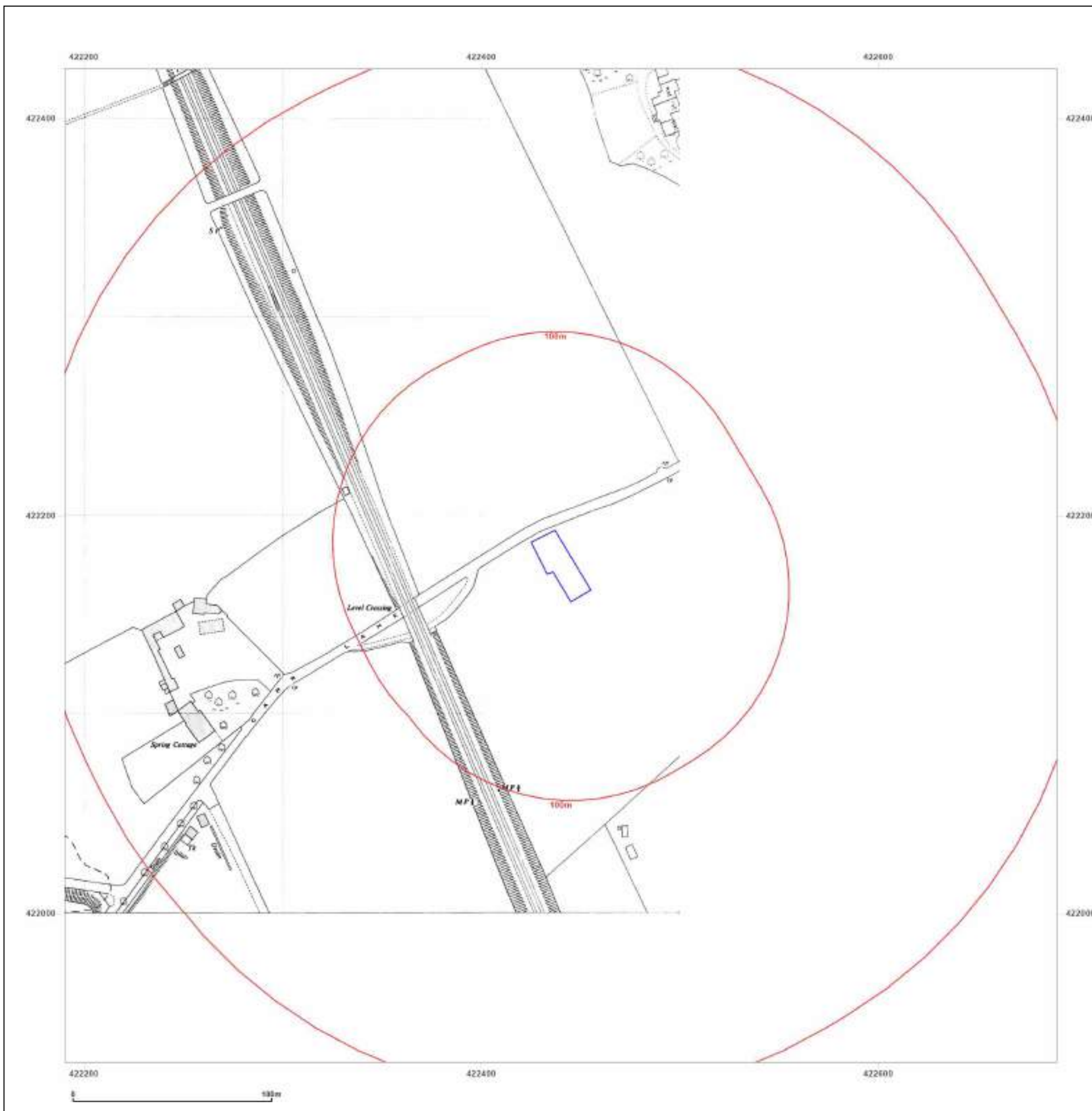


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 1956

Scale: 1:2,500

Printed at: 1:2,500



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

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

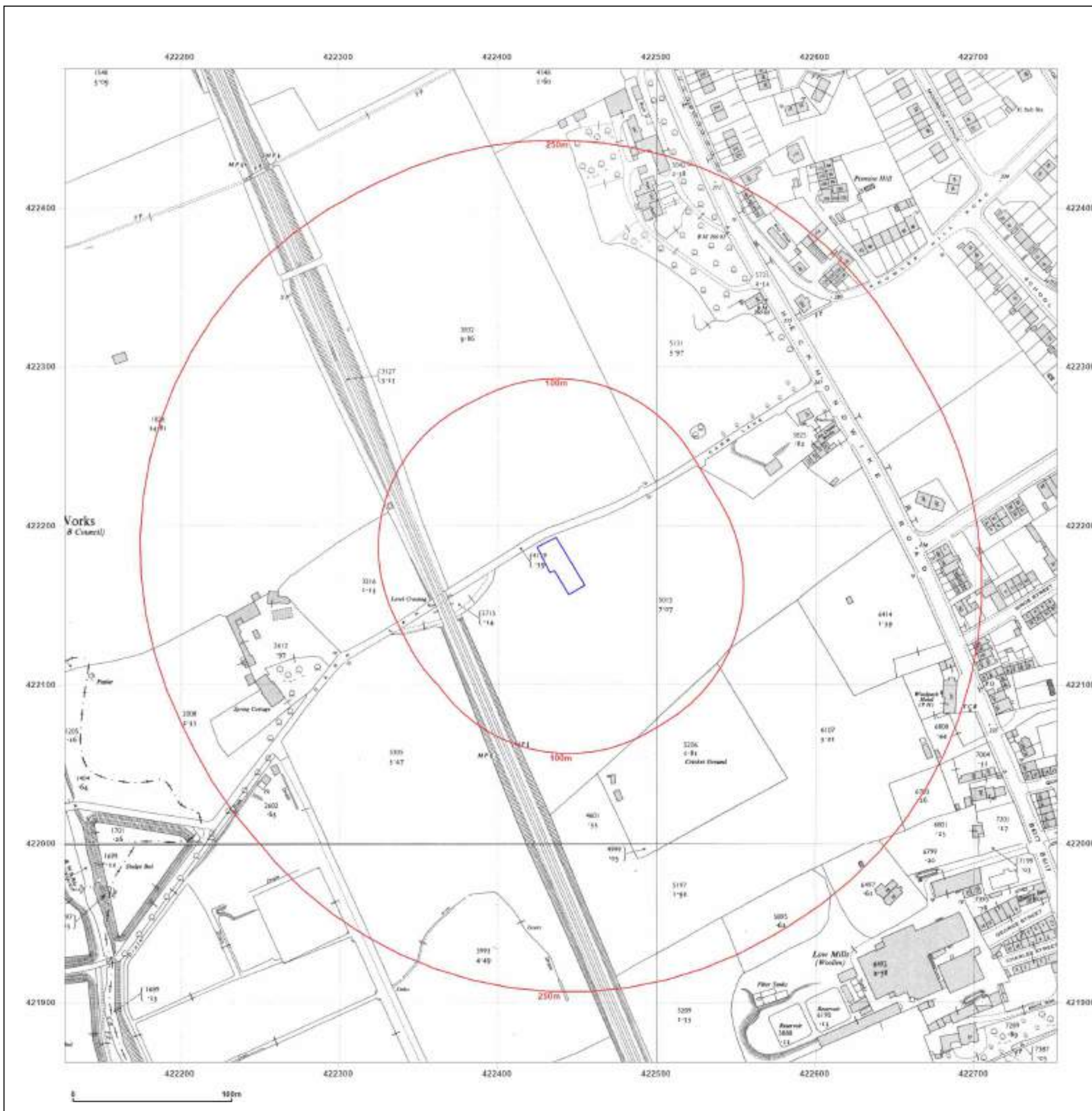


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Site Details:

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MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 1971

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1968
Revised 1968
Edition N/A
Copyright 1971
Levelled 1982

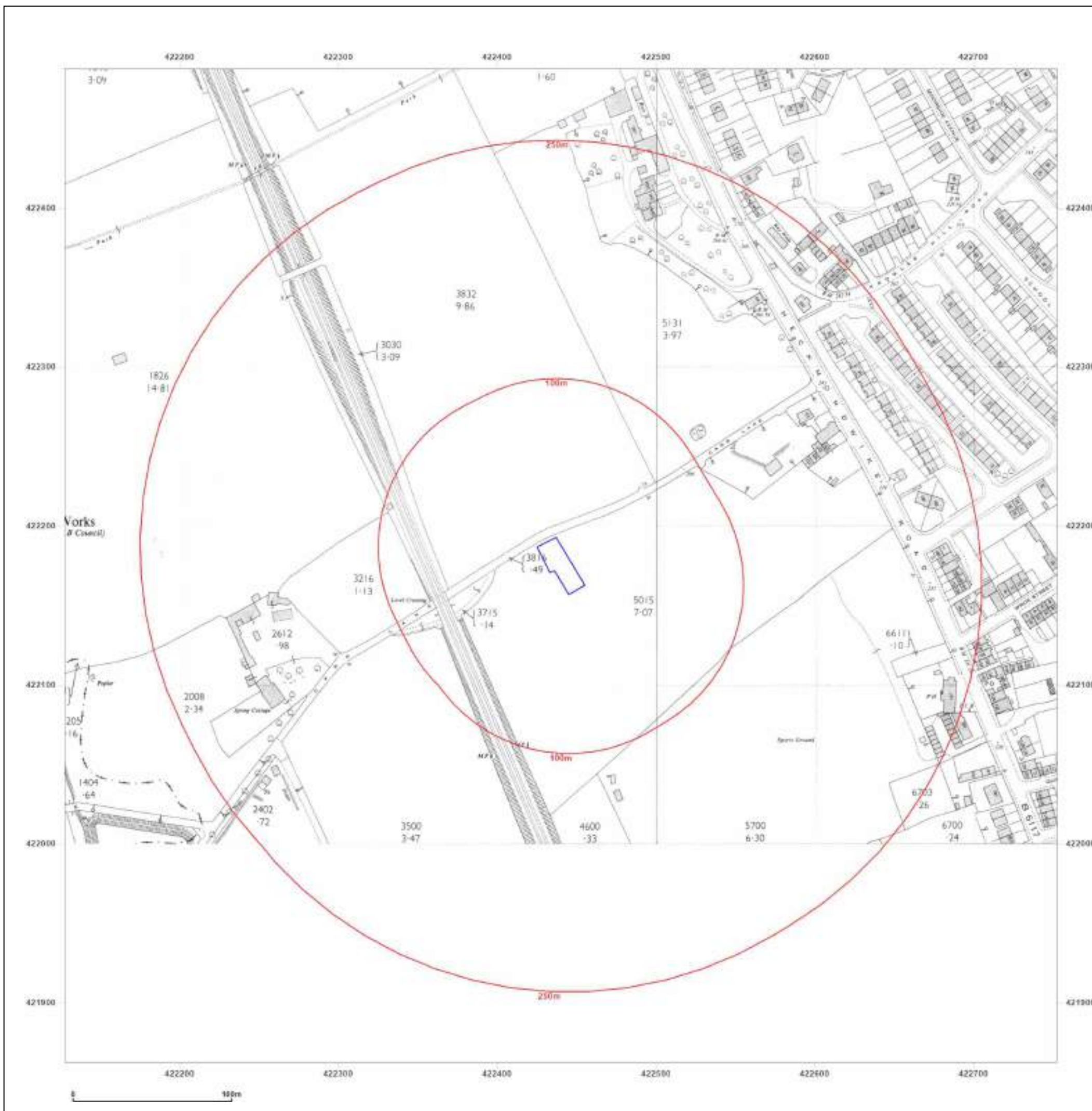


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

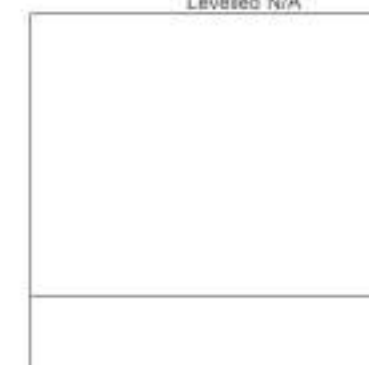
Map date: 1971

Scale: 1:2,500

Printed at: 1:2,500



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

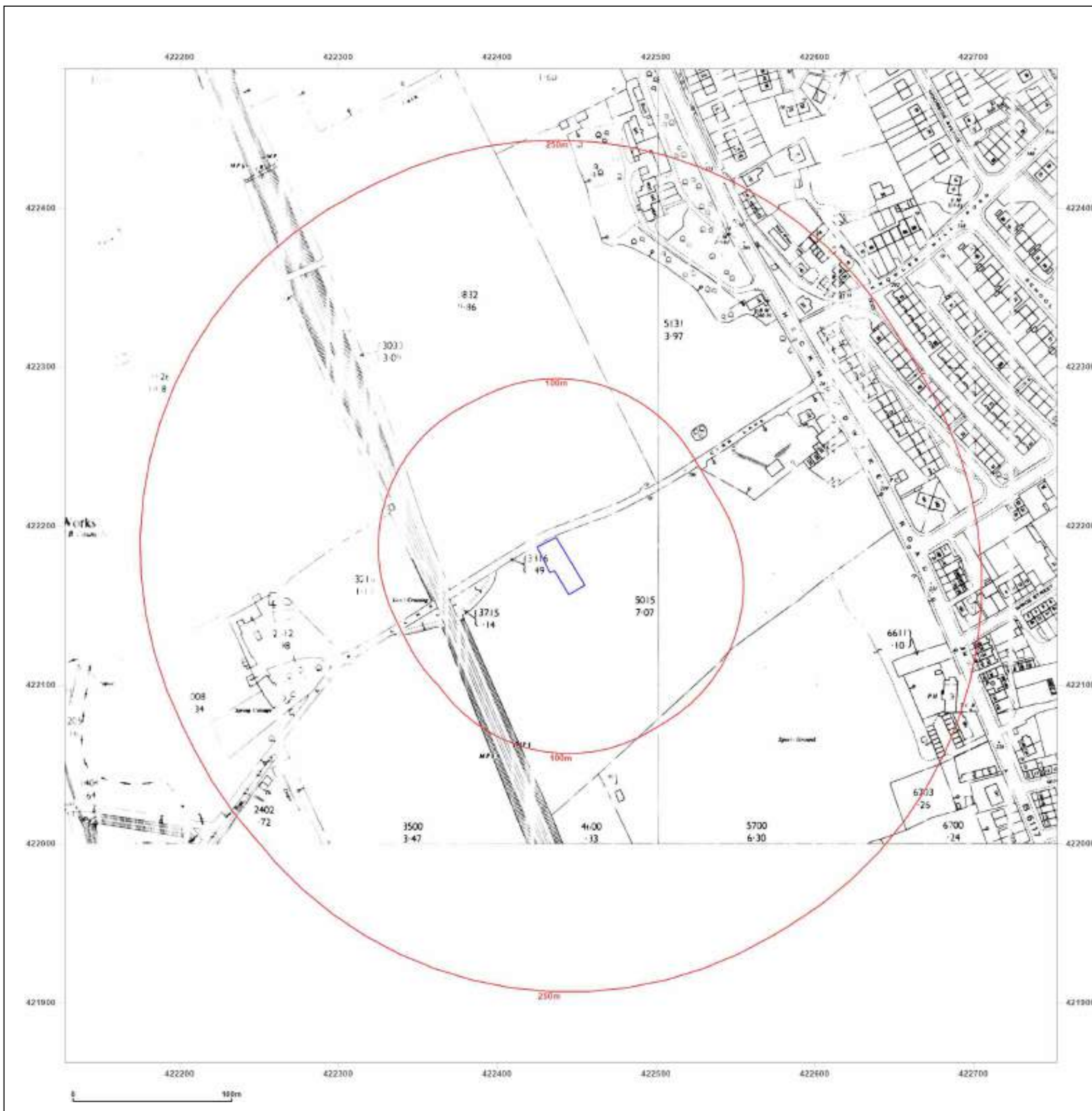


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 1969-1972

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1955
Revised 1969
Edition N/A
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Levelled 1962

Surveyed 1955
Revised 1972
Edition N/A
Copyright 1972
Levelled 1982

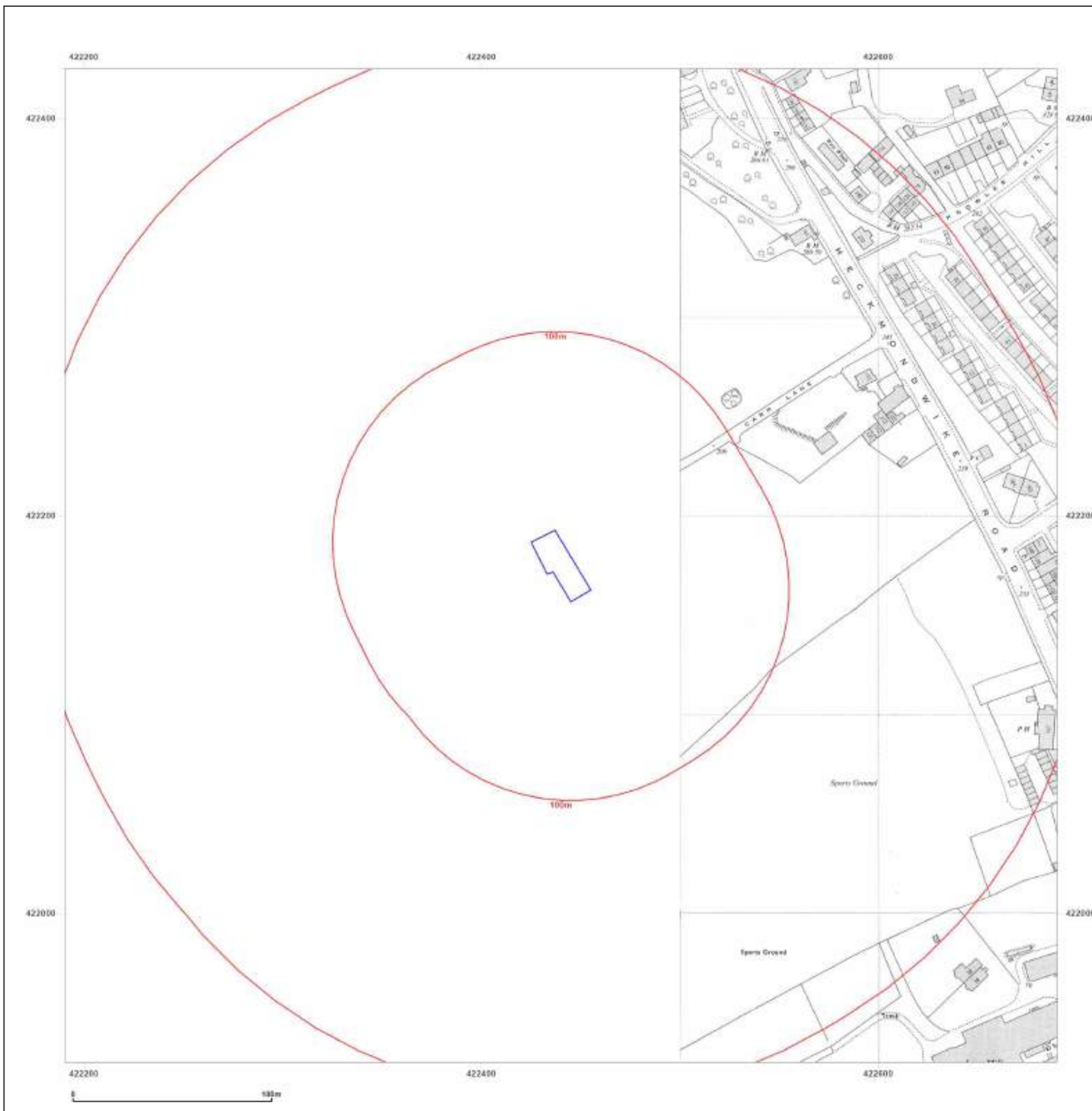


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Site Details:

54, CORNFIELD, DEWSBURY
MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 1982-1986

Scale: 1:1,250

Printed at: 1:2,000



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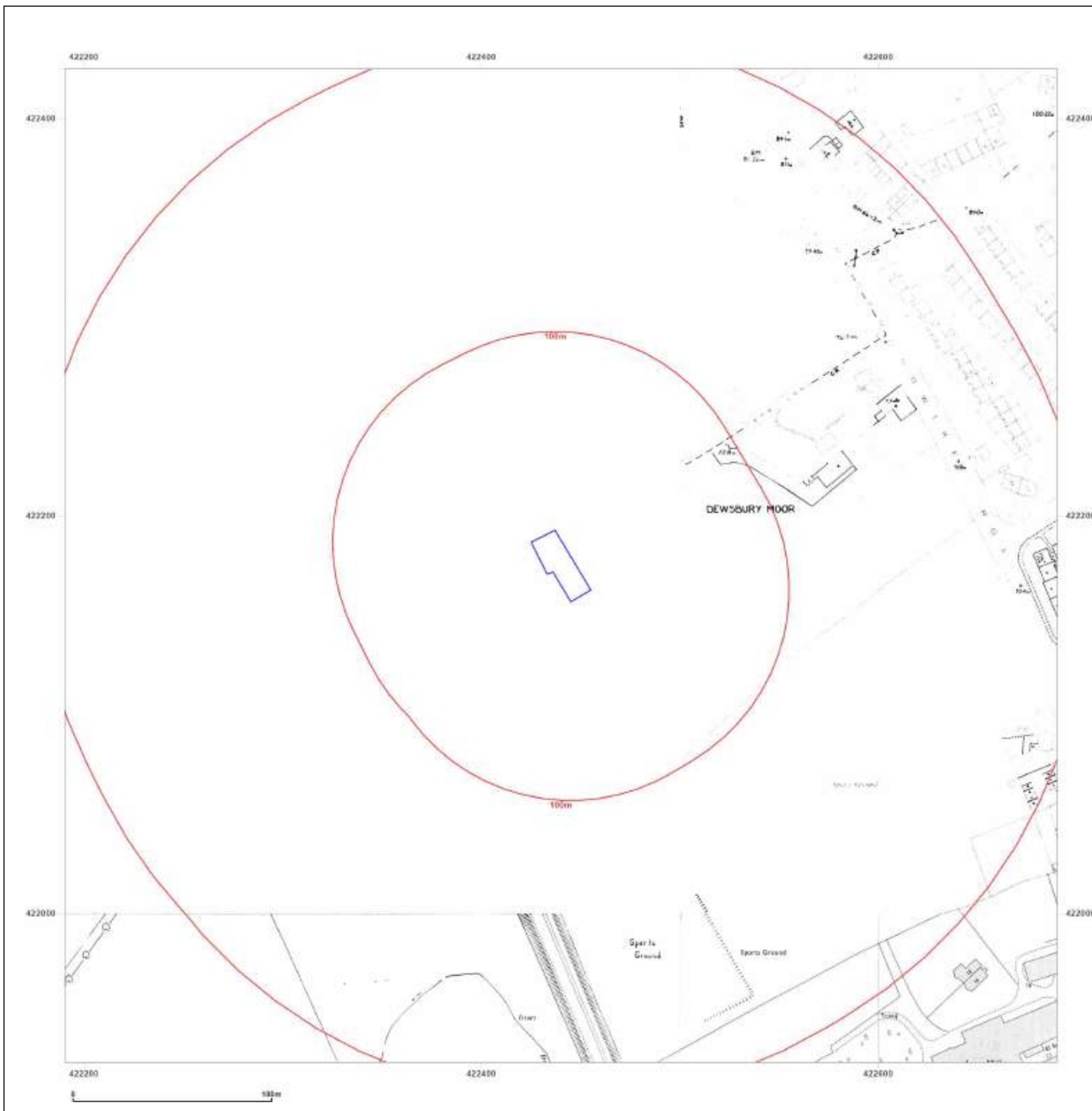


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Site Details:

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MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 1988-1992

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
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Site Details:

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Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

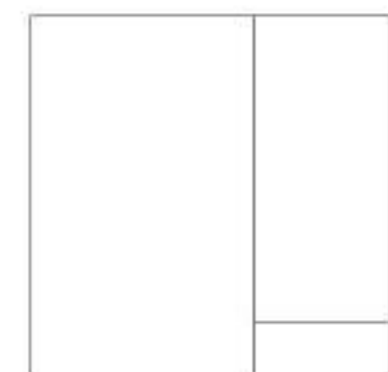
Map Name: National Grid

Map date: 1993

Scale: 1:1,250

Printed at: 1:2,000



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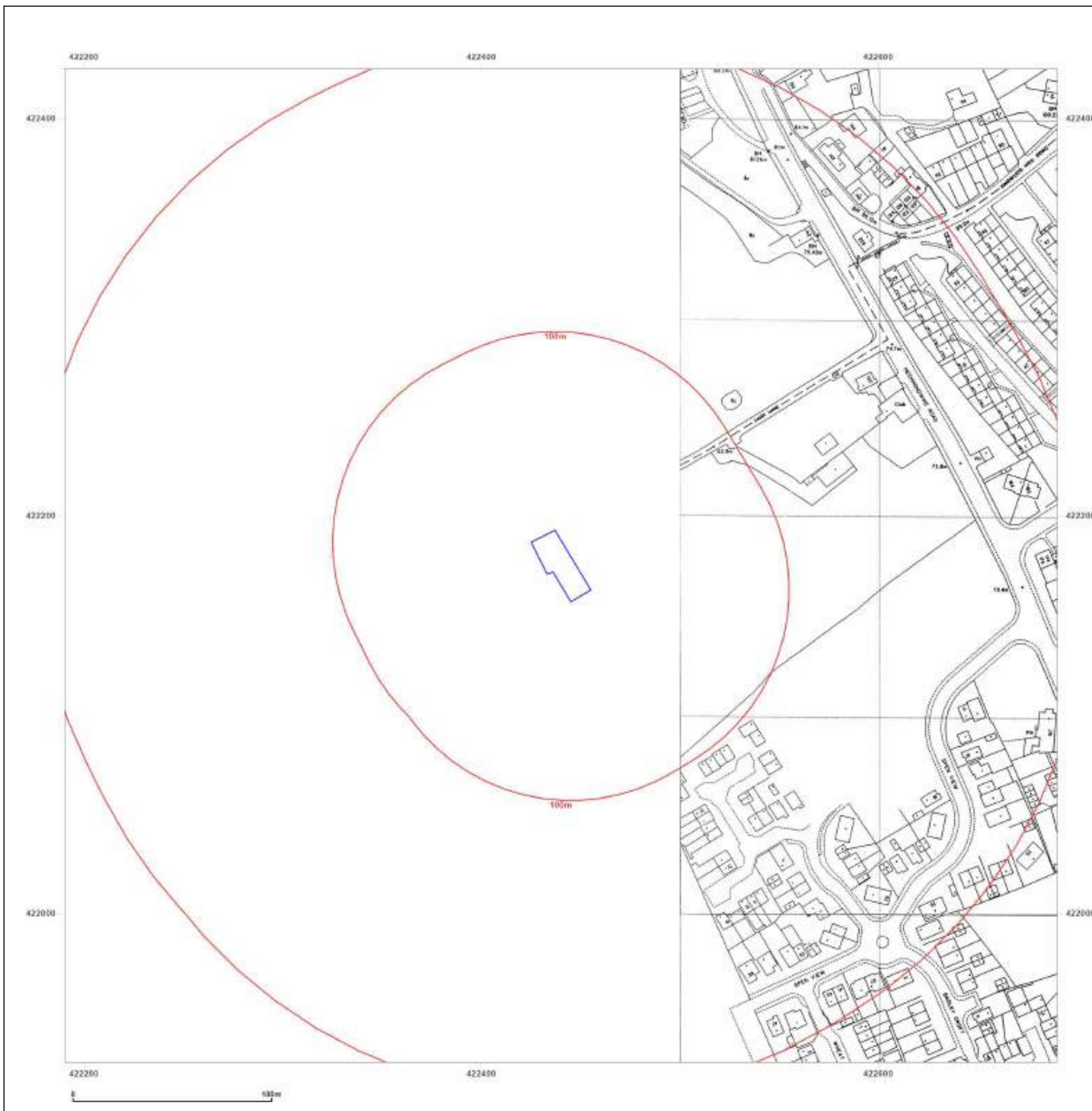


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Site Details:

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Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 1991-1993

Scale: 1:1,250

Printed at: 1:2,000



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

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

Surveyed N/A
Revised 1991
Edition N/A
Copyright N/A
Levelled 1982

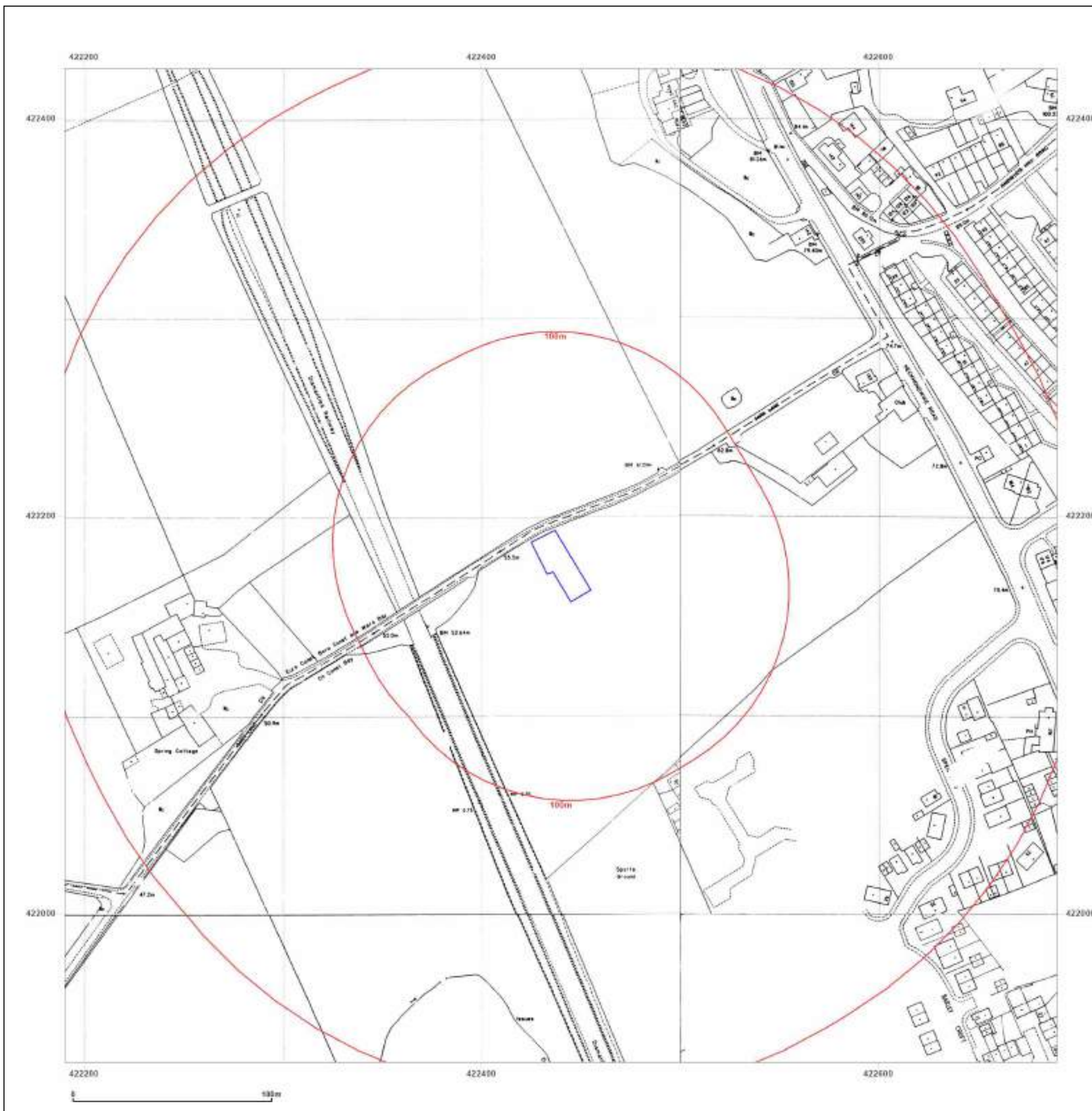


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Site Details:

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MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 1992-1993

Scale: 1:1,250

Printed at: 1:2,000



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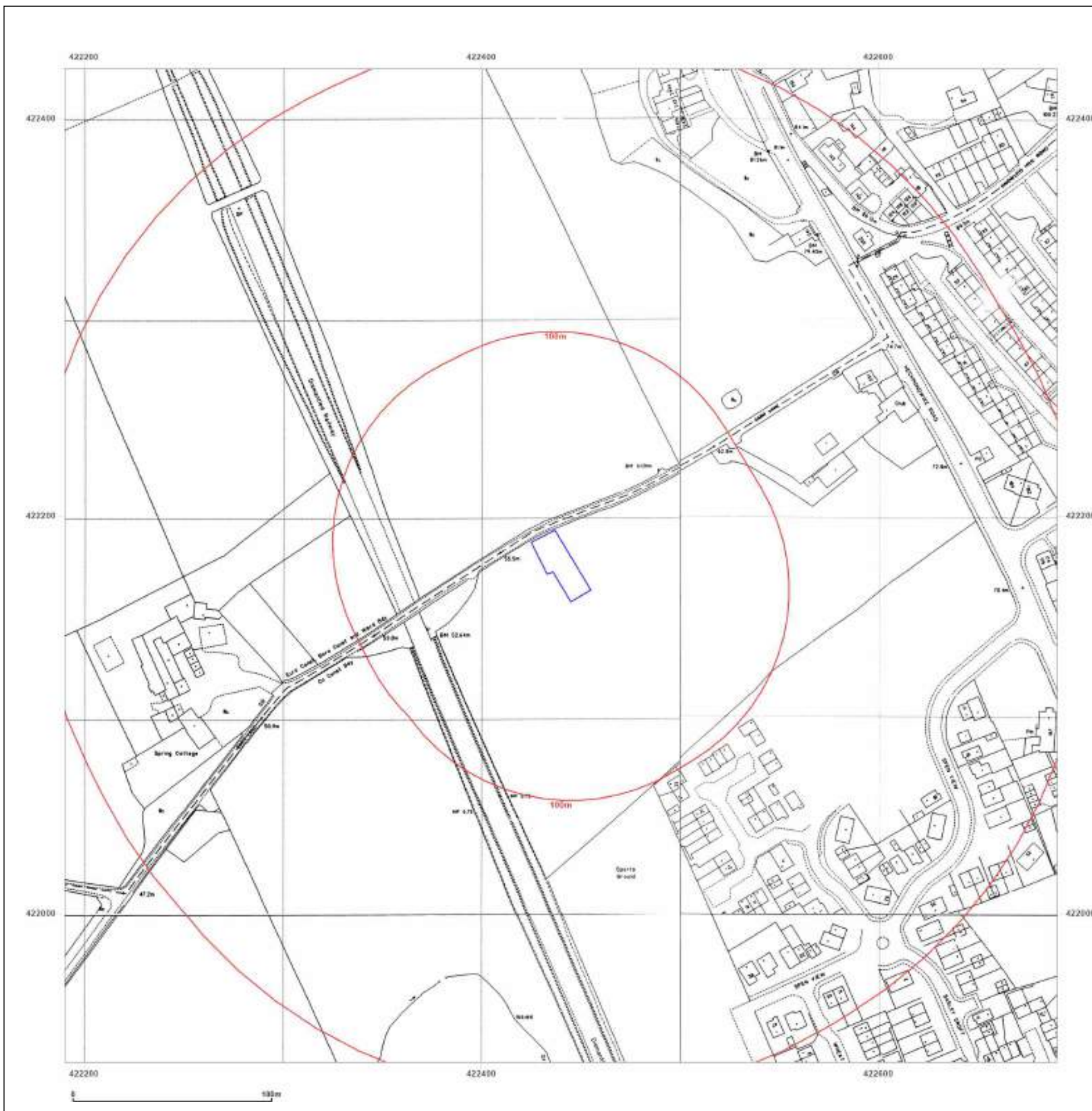


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Site Details:

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MOOR, DEWSBURY, WF13 3UY

Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

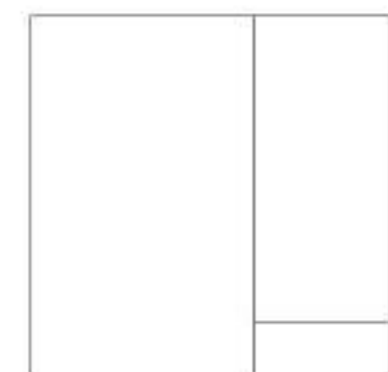
Map Name: National Grid

Map date: 1993-1994

Scale: 1:1,250

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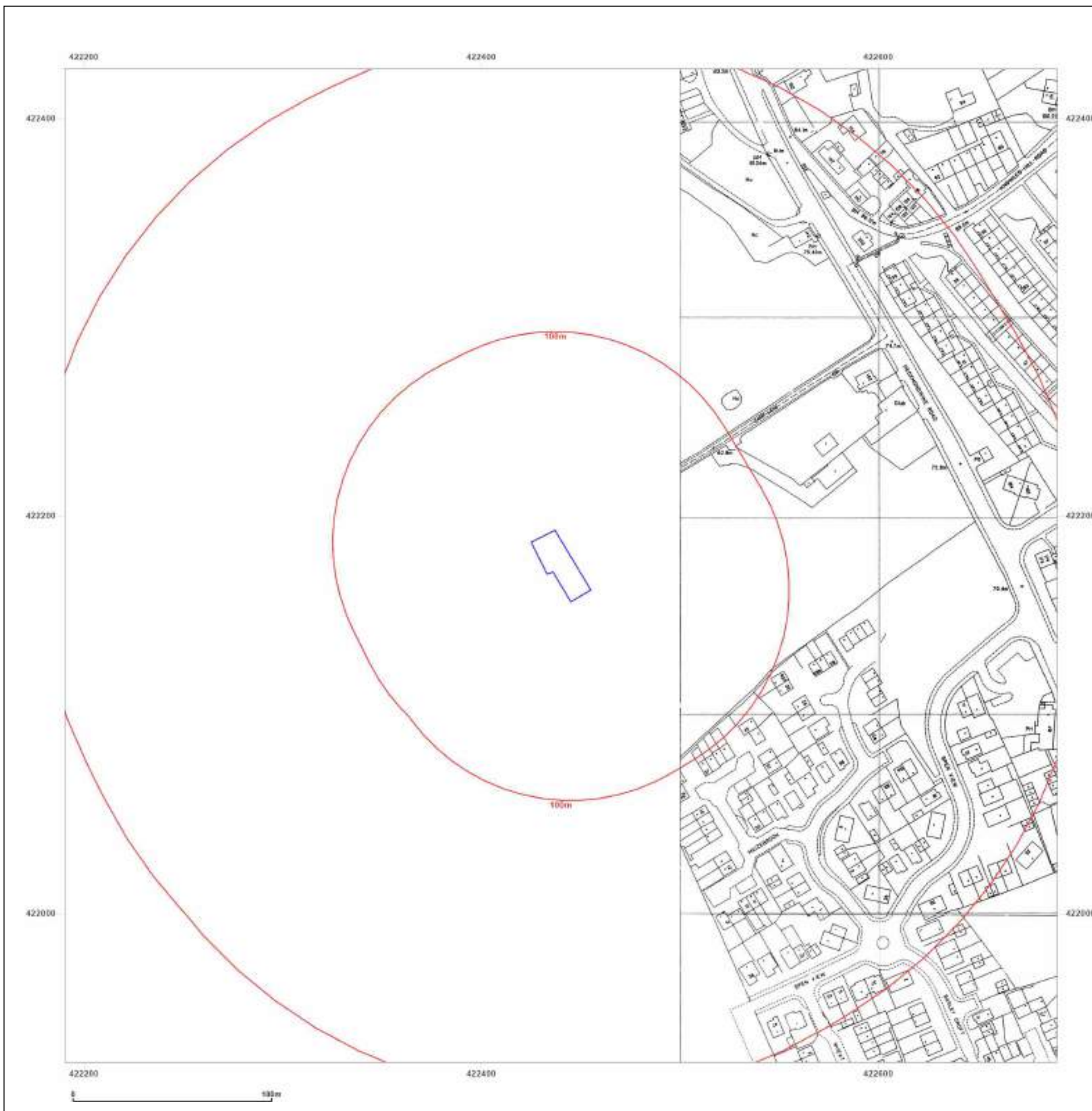


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Site Details:

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Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: National Grid

Map date: 1992-1994

Scale: 1:1,250

Printed at: 1:2,000



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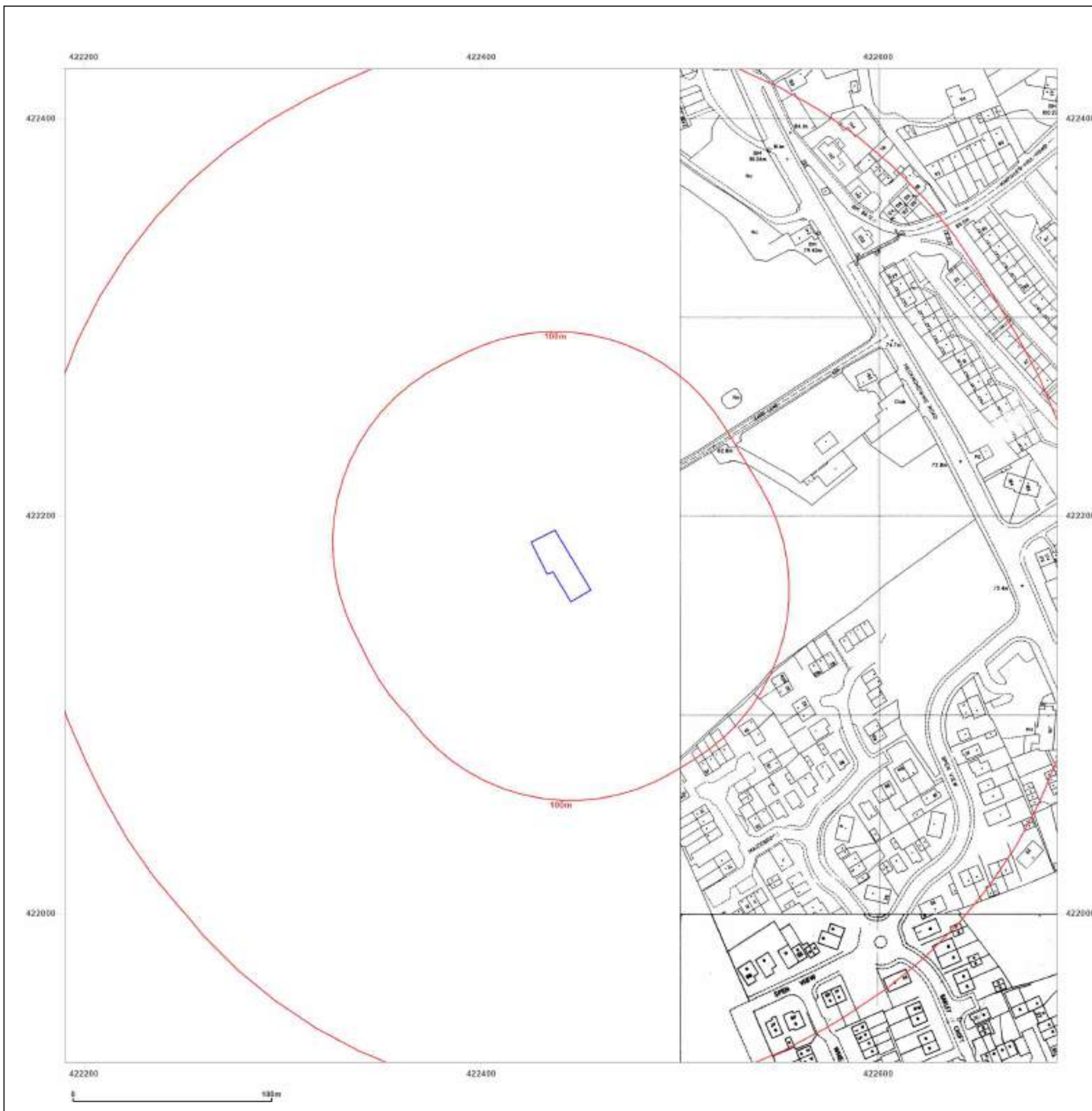


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Site Details:

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Client Ref: DELANEY_8043
Report Ref: GS-9430458
Grid Ref: 422440, 422175

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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