



Kirklees Council

HECKMONDWIKE BUS HUB

Phase 1 Geo-Environmental Assessment





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EXECUTIVE SUMMARY

Aspect	Summary
Authorisation	Kirklees Council instructed WSP UK Ltd to undertake a Phase 1 Geo-Environmental Report Assessment, including a preliminary geotechnical assessment appraisal to support development works at the Heckmondwike Bus Hub, Heckmondwike, WF16 0HR.
Background	<p>The 0.3ha site comprises an operational bus terminal. Current development proposals are to provide increased capacity for bus services and improved interchange opportunities associated with the wider Dewsbury Cleckheaton Sustainable Travel Corridor Road Scheme.</p> <p>The site has previously been occupied by a number of residential and commercial properties. Due to the site history, a number of land quality and ground stability issues require assessing to consider the risks to both sensitive environmental receptors and future structures.</p>
Project Aim	The purpose of this report is to identify any potential environmental and geotechnical constraints that may impact on the proposed development.
Environmental Setting	<p>Geology: Made Ground is expected to be present associated with the former residential and commercial development. BGS mapping indicates superficial deposits to be absent. The solid geology beneath the site comprises Pennine Lower Coal Measures Formation.</p> <p>Hydrogeology: The bedrock is classified as a Secondary A Aquifer.</p> <p>Hydrology: The River Spen is located 230m south.</p>
Land Quality	<p>On-site: Made Ground: Potential for contaminants associated with the former and current development. There is the potential for total petroleum hydrocarbons, polyaromatic hydrocarbons, heavy metals, asbestos and hazardous ground gases (carbon dioxide and methane).</p> <p>Off-site: Multiple potentially contaminative historical land uses have been identified within 250m of the site, including woollen mills and a foundry. Contaminants of potential concern include asbestos, heavy metals, polyaromatic hydrocarbons, oil / fuel hydrocarbons.</p>
Preliminary Geotechnical Appraisal	<p>Pavements and hardstanding: The widespread presence of soils with low design CBR values is currently considered unlikely given the proposed works are mainly within areas of existing hardstanding.</p> <p>Foundations and floor slabs: Shallow spread foundations and standard 'planted' footings are considered likely to be suitable for structures, signage etc.</p> <p>Obstructions: Below ground obstructions may be present associated with previous development of the site.</p> <p>Coal Mining Risk: Based on the information reviewed, the risk of historical shallow coal mining affecting the proposed development is considered to be low.</p>

1 INTRODUCTION

1.1 TERMS OF REFERENCE

Kirklees Council (the Client) instructed WSP UK Ltd (WSP) to undertake a Phase 1 Geo-Environmental Assessment to support development works at the Heckmondwike Bus Hub, Heckmondwike, WF16 0HR (henceforth referred to as 'the site'). A site location plan is included as Figure 1 in Appendix A.

1.2 BACKGROUND

The Heckmondwike Bus Hub forms part of a wider Dewsbury Cleckheaton Sustainable Travel Corridor Road Scheme, which includes improvement works along the A638 corridor. Current development proposals for the Heckmondwike bus station are to provide increased capacity for bus services, improved waiting environment and improved interchange opportunities.

It is understood that there will be limited earthworks during the development. The majority of the proposed works are likely to involve minor cosmetic, shallow excavation and resurfacing works, with the exception of the construction of a retail / waiting pod in the south. A proposed development plan is presented in Appendix A.

1.3 AIMS & OBJECTIVES

WSP understands that Kirklees Council wishes to identify potential contamination and geotechnical constraints that may impact on the proposed development.

The specific objectives are to:

- Collate available information on soil, geology, hydrology and hydrogeology to establish the environmental sensitivity of the site with regards to human health, controlled waters and the built environment;
- Assess potential soil and groundwater contamination¹ related risks associated with the site; and
- Provide commentary on potential ground related engineering constraints.

1.4 PROJECT SCOPE

To assist in meeting the project aims, the following scope of works was undertaken:

- Public record database review (site specific Groundsure Enviro and Geo Insight reports, ref. GS-7771565 presented in Appendix B);
- Completion of a site walkover;
- Review of contemporary and historical Ordnance Survey maps (as presented within the Groundsure Report in Appendix B);
- Review of geological, hydrogeological and hydrological maps;
- Review of the Coal Authority (CA) coal mining data (as presented in Appendix C);

- Preliminary unexploded ordnance (UXO) assessment (as presented in Appendix D);
- Completion of a preliminary environmental risk assessment including derivation of a preliminary Conceptual Site Model (CSM); and,
- Provision of commentary relating to outline potential ground engineering constraints.

1.5 SOURCES OF INFORMATION

The following relevant sources of information were used in the production of this report.

Table 1-1 - Sources of Information

Source	Report
Public Information	<ul style="list-style-type: none"> ■ Groundsure Enviro and Geo Insight report (ref. GS-7771565) dated April 2021 ■ CON29M Coal Mining Report (ref: GS-7771564) dated April 2021 ■ DEFRA Magic Map website accessed on 05 May 2021 (available via: https://magic.defra.gov.uk/MagicMap.aspx); ■ BGS Country series geological maps 1:10560 Yorkshire SE232SW solid and drift (1927); ■ BGS 'GeoIndex Onshore' online viewer accessed 05 May 2021 (available via: http://mapapps2.bgs.ac.uk/geoindex/home.html); ■ Zetica 'Pre-Desk Study Assessment (PDSA) dated 26 November 2019; ■ Environment Agency (EA) Flood Map for Planning (available at https://flood-map-for-planning.service.gov.uk/); and ■ EA Catchment Data Explorer accessed on 05 May 2021 (available at: https://environment.data.gov.uk/catchment-planning/) ■ Aerial imagery accessed on 05 May 2021

1.6 CONFIDENTIALITY STATEMENT AND LIMITATIONS

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

Kirklees Council

This assessment has been prepared for the sole use of the above-named party. This report shall not be relied upon or transferred to any other parties without the express written authorisation of WSP. No responsibility will be accepted where this report is used in its entirety or in part, by any other party.

General limitations of the assessment are included as Appendix E.

2 THE SITE

2.1 SITE DESCRIPTION AND CURRENT USE

A summary of pertinent site details is presented in Table 2-1 below which were obtained during a site walkover in June 2021 and over the course of the project. The current layout plan is presented as Figure 2 in Appendix A.

Table 2-1 – Summary of Site Details

Details	Comments
Site Address	Heckmondwike Bus Hub, Heckmondwike, WF16 0HR
National Grid reference	421501 423537 (approximate site centre)
Site Description and Current Use	The site comprises an operational bus terminal with five bus stands and associated bus lanes with access points onto the roadways, which are named George Street and Royle Fold. The ground cover across the bus station is generally a combination of asphalt (highways) and stone surfacing, which appears to be in good condition. Small areas of landscaping are present in the centre of the bus station area.
Area	Approximately 0.3ha
Site Setting and Surrounding Area	The site is located within the centre of Heckmondwike town within a mixed commercial and residential setting. The site is surrounded by the following land uses: <ul style="list-style-type: none"> ▪ North - George Street with large warehouse style commercial units and residential properties located beyond. ▪ East - Brick built commercial properties including fast food outlets fronting onto Cemetery Road, located 25m east. ▪ South - Westgate (A638) with commercial properties comprising food and drink and retail units. ▪ West - A publicly accessible park (Green Park) with a large car parts manufacturer located approximately 300m northwest.
Topography	The site is relatively flat at approximately 34m above ordnance datum

2.2 SITE WALKOVER

A site walkover was completed by a representative of WSP in June 2021. The site comprised an area of public open space in use as a bus hub. The main central site area was covered in the majority by hardstanding of brick and stone surfacing, with minor grassed areas supported with rubber grass mats. A small number of small landscaped trees were present in the south of the site. The central site area was bordered on all sides by highway infrastructure.

No visual or olfactory evidence of contamination was noted during the walkover.

A photographic record from the site walkover is presented in **Appendix H**.

3 SITE SETTING

3.1 GEOLOGY

Published geological mapping indicates the absence of superficial deposits. Bedrock is indicated to comprise the Pennine Lower Coal Measures Formation (weathered mudstone, siltstone and sandstone).

A number of BGS borehole records are mapped within 100m to the west (SE22SW1609-1614) and 150m southeast (SE22SW272) which generally record Made Ground to depths typically between 0.5m and 1.5m bgl over gravelly clay. Highly weathered mudstone is recorded from 4.30m bgl (SE22SW272). A number of BGS borehole records are present within 100m east, however access to the records is restricted. The available borehole records are presented in Appendix F.

3.1.1 COAL MINING

The site is located within a Coal Mining Reporting Area, as defined by the Coal Authority (CA), but outwith a *Development High Risk Area*. The CA Coal Mining Report (Appendix C) indicates the site lies within the potential zone of influence of recorded workings in one seam of coal. The most recent underground working in the area was in 1908. These workings lie approximately 105m below surface. Any ground movement due to this coal mining activity should have stopped.

3.2 GEOHAZARD SUMMARY INFORMATION

The risk of potential geohazards affecting the site has been determined from the Groundsure report, a summary of the potential geohazards for the site is provided below:

- Collapsible ground – Very low risk.
- Compressible ground – Negligible risk.
- Ground dissolution – Negligible risk.
- Landslides – Very low risk
- Running sands – Negligible risk.
- Shrinking / swelling clay: Very low risk

3.3 HYDROGEOLOGY

3.3.1 HYDROGEOLOGICAL CLASSIFICATION

The Groundsure report contains the following information on hydrogeological features:

Table 3-1 – Hydrogeological Features

Hydrogeological Aspect	Details
Geology	Pennine Lower Coal Measures Formation – designated by the EA as a Secondary A Aquifer
Groundwater Source Protection Zones (SPZ)	The site does not lie within or within close proximity to a SPZ.
Groundwater Abstractions	There are no active groundwater abstraction licenses within 1km of the site.

Hydrogeological Aspect	Details
Groundwater Classification	The site is located within the Humber Groundwater Management Catchment. The Aire and Calder Carb Limestone – Millstone Grit – Coal Measures groundwater body lies beneath the site which was classified under the Water Framework Directive (WFD) as having poor overall status in 2015.

3.4 HYDROLOGY

The Groundsure report contains the following information on hydrological features:

Table 3-2 – Notable Hydrological Features

Surface Water Feature	Approx. Distance from Site (m)	Details
The River Spen	230m to the southwest of the site	n/a
EA River Basin Management Plan	The site is located within the EA defined Calder Lower operational catchment. The nearest stretch of watercourse classified under the WFD is located 240m to the southwest as part of the Spen Beck from Source to River Calder with an overall quality classification of Moderate in 2016.	
Surface Water Abstractions	There are no licensed surface water abstractions within 1km of the site.	

3.5 FLOOD RISK AND DRAINAGE

According to the Environment Agency’s online ‘Flood Map for Planning’ website, the site is located in Flood Zone 1 (less than 1 in 1,000 annual probability of river flooding).

3.6 SENSITIVE LAND USES

The site does not lie within 1km of a Marine Nature Reserve, National Nature Reserve, Marine Conservation Zone Ramsar Site, Site of Special Scientific Interest, Special Area of Conservation, Special Protection Area or World Heritage Site.

The South and West Yorkshire Greenbelt is located 665m to the south.

The site is located within a DEFRA nitrate vulnerable zone.

3.7 SITE HISTORY

A review of the historical maps in the Groundsure Report has been completed with a summary provided below. The historical maps are provided in Appendix B. Historical maps were reviewed for evidence of potential historical sources of contamination and / or changes in landform.

3.7.1 THE SITE AND SURROUNDING LAND USE

Earliest mapping from 1890 shows the site to comprise a number of small buildings assumed to be residential with a larger building in the south comprising a hotel. Surrounding land use at this time is indicated to comprise predominantly residential use with areas of industrial development including woollen mills and foundries located within 150m southwest and northwest. Present day Westgate adjacent in the south is shown at this time which by 1907 is indicated to comprise a tramway.

By 1955, demolition of approximately three buildings in the centre of the site has occurred and the tramway along Westgate is no longer shown. By 1965, an unspecified works is labelled adjacent to



the site in the north. By 1988, much of the surrounding former industry has decreased; buildings are indicated to have either been demolished or labelling no longer shown. At this time, commercial properties in the area have increased to include a superstore, car park and bank within 250m.

Additional demolition occurs at the site by 2003 when the buildings in the north are no longer shown. Historical aerial imagery indicates all onsite structures were demolished by 2011 with the current bus station having been developed by at least 2015.

4 REGULATORY INFORMATION

4.1 REGULATORY DATABASE

Reference was made to the Groundsure Report for regulatory information pertinent to this assessment. The Groundsure Report is provided in Appendix B and Table 4-1 presents a summary of pertinent information.

Table 4-1 – Summary of Regulatory Database Entries

Aspect	On Site	0 – 250m	Details
Contaminated land register entries and notices	0	0	n/a
Historical tank	0	15	Unspecified tanks predominantly located northwest and south, southwest. Closest located 48m northwest.
Authorised industrial processes (integrated pollution control)	0	1	230m southwest – three permits variations relating to coating processes and printing at Flush Mill.
Fuel Station Entries	0	2	The closest is located 150m southwest.
Licensed radioactive substances	0	0	n/a
Discharge Consents	0	8	The closest is located 210m east and relates to sewer storm overflow into a tributary of the River Spen.
Pollution Incidents	0	2	The closest is located 160m southeast relating to a minor impact (Category 3) of chemicals to water. No other pertinent information is supplied.
Consents issued under the planning (Hazardous Substances) act 1990	0	0	n/a
Control of Major Accident Hazard (COMAH) sites	0	0	n/a

4.2 RADON

The site is not within a Radon Affected Area as less than 1% of properties are above the action level. Radon protection measures are not required in new dwellings.

4.3 UNEXPLODED ORDNANCE

An unexploded ordnance (UXO) pre-desk study was obtained for the site (presented in Appendix D) which confirmed that no readily available records were found to indicate the site had been bombed. The report concludes that a detailed desk study, whilst always prudent, is not considered essential.

4.4 LANDFILL AND WASTE MANAGEMENT ACTIVITY

A summary of pertinent landfill / waste information onsite and in close proximity to the site is summarised in Table 4.2 below.

Table 4-2 – Summary of Landfill and Waste Activity

Type of Waste Site	On Site	0 – 250m	Details
Active / Historical Landfill Sites	0	0	n/a
Licensed Waste Sites	0	0	n/a
Waste Exemptions	0	6	All licences relate to a treating waste exemption, described as either for the sorting and de-naturing of controlled drugs for disposal or for preparatory treatments (bailing, sorting, shredding).

5 PRELIMINARY GROUND ENGINEERING ASSESSMENT

5.1 PROPOSED DEVELOPMENT PLANS

The proposed development is presented on the following drawing (Appendix A):

- Reference: 19-265-003 K001, Proposed Site Layout – Option 001, prepared by SGP for Kirkless Council, 30/10/2019.

Based on this drawing, the proposed development is anticipated to include the following geotechnical works:

- New areas of pavement to facilitate the re-designed bus hub, generally within areas of existing road corridor or existing hardstanding;
- New areas of hardstanding as part of the re-designed public/pedestrian realm; and,
- Foundations for lightly loaded structures including a waiting / retail pod, a canopy, signage and street furniture.

The following assessment assumes that the site levels will remain similar to those at present. If this is not the case then the assessment will require review.

5.2 GROUND CONDITIONS SUMMARY

Based on the site history (Section 3.7) and published data, the ground conditions beneath the site are anticipated to comprise:

- Made Ground: - varying in thickness and composition, with the potential for buried obstructions such as backfilled basements, foundations and the like to be present [Note: given the age of the bus station, buried obstructions may have been removed and replaced with engineered fill as part of the construction work].
- Bedrock: - anticipated to comprise interbedded mudstone, siltstone and sandstone of undifferentiated Pennine Lower Coal Measures Formation. It is anticipated that bedrock should be shallow and present directly beneath the existing pavement construction/Made Ground, with an upper distinctly weathered, destructured or residual horizon anticipated (likely a sandy gravelly clay).

5.3 PAVEMENTS AND HARDSTANDING AREAS

As the majority of the site currently comprises hardstanding or pavement, the widespread presence of soils with low design CBR values is considered unlikely. However, the potential presence of below ground obstructions and variable Made Ground should be anticipated.

Modification of pavement formation layers may be required in areas of new pavement / widening. This would likely be through the removal of soft compressible materials (soft spots) or buried obstructions (hard spots) and the placement and compaction of imported granular fill.

Typical design CBR values of circa 3% are anticipated based on the ground conditions, although this may vary from less than 2.5% (soft spots due to soft or loose Made Ground) to 10% or greater in areas of shallow bedrock or engineered granular fill.

5.4 FOUNDATIONS

The proposed waiting / retail pod is anticipated to be a light-weight steel portal framed structure. On this basis it is anticipated that it may be possible to construct it on a shallow raft type foundation bearing on suitably prepared Made Ground (proof rolled and soft/hard-spots removed). Alternatively, shallow spread foundations (pad/strip foundations) and a ground bearing floor slab may be suitable.

Foundations for lightly loaded structures including the proposed canopy, signage and street furniture are anticipated to be standard 'planted' footings (i.e. not bespoke designs) and will likely be founded within Made Ground or extend into the shallow weathered bedrock.

The formation level for foundations and floor slabs should be suitably prepared (proof rolling and removal of soft spots). Deepening of the footings may be required depending on the Made Ground depth/composition/variability. At this stage, deep foundations (e.g. piles) are not anticipated for the proposed structures.

The impact of any trees on foundation design will need to be taken into account where new foundations are to be constructed over or close to existing or proposed trees.

5.5 EXCAVATIONS AND OBSTRUCTIONS

Depending on its weathering state, excavations within shallow bedrock are anticipated to be achievable using standard plant (e.g. excavators with rock toothed buckets).

Groundwater levels are currently unknown and should be investigated and monitored as part of a ground investigation. At this stage it is considered unlikely that excavations would encounter significant bodies of groundwater. However, the risk of perched groundwater within the Made Ground or shallow bedrock cannot be discounted.

Historical development presents the risk of buried obstructions such as backfilled basements or foundations. Buried obstructions, if present, could result in delays to groundworks. The potential for obstructions within the Made Ground should also be considered when assessing suitable ground investigation techniques, as well as construction methods.

5.6 EARTHWORKS AND RETAINING STRUCTURES

No change in levels is currently proposed, as such there is no anticipated requirement for earthworks or retaining structures in this scheme.

5.7 COAL MINING RISK

As the site is not within a CA *Development High Risk Area*, the risk of historical shallow coal mining causing surface instability or impacting the proposed scheme is considered to be low.

6 PRELIMINARY CONCEPTUAL SITE MODEL

6.1 INTRODUCTION

The potential risks from contamination within soil and groundwater are assessed according to the environmental setting / ground model, likely presence of potential sources of contamination and the proposed use of the site.

The source-pathway-receptor model forms the basis of the risk assessment. Potential risks are only considered to exist if there is a credible source (e.g. a chemical substance capable of causing harm); a pathway for migration of the source to a receptor; and a sensitive receptor that could be affected (e.g. nearby river or site user). A source-pathway-receptor contaminant linkage assessment is termed a conceptual site model (CSM). A preliminary CSM is produced prior to intrusive ground investigation and is refined following collection of site specific data (if appropriate).

6.2 PRELIMINARY GROUND MODEL

There is the potential for deposits of Made Ground to be present across the site associated with the demolition of former residential and commercial development in the south (hotel). Made Ground thicknesses are likely to be spatially variable and there is the potential for sub-surface structures associated with former basements. The potential for ground/groundwater contamination at the site is considered to be low given the site's historical and current use however, the surrounding land has a history of industrial development, which may have impacted the site over time.

No superficial deposits are mapped at the site. The underlying Pennine Lower Coal Measures Formation bedrock (weathered mudstone, siltstone and sandstone), is anticipated to be present from 4.30m bgl. It is anticipated that the main groundwater table rests within the underlying Pennine Lower Coal Measures (Secondary A Aquifer) and may be in hydraulic continuity with the River Spenn, which is located 230m southwest. Perched groundwater may also be present within the Made Ground.

The underlying geology is considered unlikely to restrict the lateral or vertical migration of mobile contamination, given the absence of mapped drift deposits overlying bedrock. However it is considered that the presence of existing and continued hardstanding across the majority of the site likely mitigates infiltration and leaching to the saturated zone.

6.3 POTENTIAL SOURCES OF CONTAMINATION

The identified potential sources of contamination are considered to be as follows:

Table 6-1 – Potential Source of Contamination

Source	Potential Contaminants in Soil and/or Groundwater
Made Ground associated with the former development of the site.	Asbestos, asbestos containing material (ACM) heavy metals, total petroleum hydrocarbons (TPH) polyaromatic hydrocarbons (PAHs), oil / fuel hydrocarbons, hazardous ground gases
Current site use as a bus station	TPH, PAH, volatile organic compounds (VOCs)

Source	Potential Contaminants in Soil and/or Groundwater
Areas of industry surrounding the site (including the presence of tanks)	TPH, PAH, metals, asbestos or ACM, hazardous ground gases.

6.4 POTENTIAL RECEPTORS

Based on current site use, the proposed redevelopment works, the intended future use (bus station /hardstanding) and the surrounding environment, the potential receptors are considered to include the following:

Human Health

- Construction workers during re-development
- Future site users
- Future maintenance workers.

Controlled Waters

- The River Spen, located 230m southwest
- Secondary A Aquifer (bedrock – Pennine Lower Coal Measures)

6.5 POTENTIAL PATHWAYS

The following potential pathways may be present:

- Direct contact, ingestion and inhalation of soil bound contaminates (during earthworks and in any landscaped area after redevelopment).
- Inhalation of vapours associated with volatile soil / groundwater contamination
- Migration of leachable / mobile contamination into groundwater followed by migration into the wider environment
- Accumulation of ground gases in service access pits resulting in a potentially explosive atmosphere.

6.6 PRELIMINARY CONCEPTUAL SITE MODEL

Given the above sources, pathways and receptors, the following contaminant linkages are potentially viable. The risk assessment has been completed in general accordance with CIRIA 552 (Contaminated Land Risk Assessment: A Guide to Good Practice), 2001). The risk definitions are provided in Appendix G.



Table 5-2 – Preliminary Conceptual Site Model

Source	Exposure Pathway	Potential Receptor	Probability of Exposure	Consequence of Exposure	Discussion of Pollutant Linkage	Risk
Made Ground associated with historical and current use at the site and surrounding area	Inhalation, Ingestion and Dermal Contact	Future site users	Low	Medium	It is assumed that the site will be predominantly covered in either structures and /or hardstanding, therefore there will be limited pathway between end users and potentially contaminated soils. Potential for future site occupants to encounter contaminated soil in limited areas of landscaping.	Moderate / Low Risk
		Construction / Maintenance workers	Low	Minor	Potential for construction and maintenance workers to encounter contaminated soil. Exposure times likely to be limited and risks should be reduced by wearing appropriate personnel protective equipment (PPE).	Very Low Risk
	Migration into groundwater and the wider groundwater environment	Groundwater -underlying Secondary A aquifer (bedrock).	Likely	Medium	Potential for mobile contaminants to be present on site and there is a potential absence of superficial deposits. Leaching of contaminants may occur during the construction phase should hardstanding be removed.	Moderate Risk

Source	Exposure Pathway	Potential Receptor	Probability of Exposure	Consequence of Exposure	Discussion of Pollutant Linkage	Risk
	Inhalation of ground gas leading to asphyxiation	Future site users	Low	Medium	Based on the proposed development, outdoor vapour inhalation exposure is considered to be negligible. Potential for the presence of Made Ground presenting a potential source of ground gases, potential migration into occupied structures (e.g. proposed waiting / retail pod).	Moderate / Low Risk
		Construction / Maintenance workers	Unlikely	Medium	Potential for construction and maintenance workers to encounter ground gas within confined spaces (e.g. service access pits). Exposure times likely to be limited and risks should be reduced by wearing appropriate personnel protective equipment (PPE).	Low Risk

7 CONCLUSIONS

7.1 ENVIRONMENTAL

The potential for ground/groundwater contamination at the site is considered to be low given the site's historical and current use. However, the surrounding land has a history of industrial development, which may have impacted the site over time.

No superficial deposits are mapped at the site. The underlying Pennine Lower Coal Measures Formation bedrock (weathered mudstone, siltstone and sandstone), is anticipated to be present from 4.30m bgl. It is anticipated that the main groundwater table rests within the underlying Pennine Lower Coal Measures (Secondary A aquifer) and may be in hydraulic continuity with the River Spen. Perched groundwater may also be present within the Made Ground.

The underlying geology is considered unlikely to restrict the lateral or vertical migration of mobile contamination, given the absence of mapped drift deposits overlying bedrock. The presence of existing and continued hardstanding across the majority of the site likely mitigates infiltration and leaching to the saturated zone.

Whilst the proposed end-use of the site has a relatively low sensitivity in relation to human health, a number of potentially complete contaminant linkages have been identified, predominantly in relation to construction workers during redevelopment, along with potential risks to controlled waters, which require further consideration. A ground investigation will be required in order to provide further information about the presence/absence of potentially complete contaminant linkages (see Section 5.6) and other issues that could affect the redevelopment (e.g. waste disposal).

7.2 GROUND ENGINEERING

Based on the data reviewed and the proposed development it is considered likely that:

- The widespread presence of soils with low design CBR values is currently considered unlikely given the proposed works are mainly within areas of existing hardstanding.
- Pavement construction in areas not currently trafficked may require the modification of the formation through placement and compaction of imported granular fill in areas where soft compressible materials (soft spots) are encountered at formation level.
- Historical development on site presents the risk of buried obstructions which, if present, could result in hard spots beneath paved areas if not removed and redesign or delays to below ground construction works.
- It may be feasible to construct the proposed waiting / retail pod (anticipated to be a light-weight steel portal framed structure) on a shallow raft foundation bearing on suitably prepared Made Ground (proof rolled and soft/hard-spots removed), or on shallow pad/strip foundations. Trench fill foundations may be required depending on the Made Ground depth/composition/variability.
- It is anticipated that standard 'planted' footings should be suitable for street furniture/signs, founding within suitably prepared Made Ground or shallow weathered bedrock.
- The site is within the Coal Authority Coal Mining Reporting Area, although the site is not within a *Development High Risk Area*. Based on the information reviewed, the risk of historical shallow coal mining causing surface instability or impacting the proposed scheme is considered to be low.

7.3 DATA GAPS / UNCERTAINTIES

- There is no previous site investigation data available for the site.
- The extent, thickness and composition of any Made Ground is unknown.

7.4 RECOMMENDATIONS

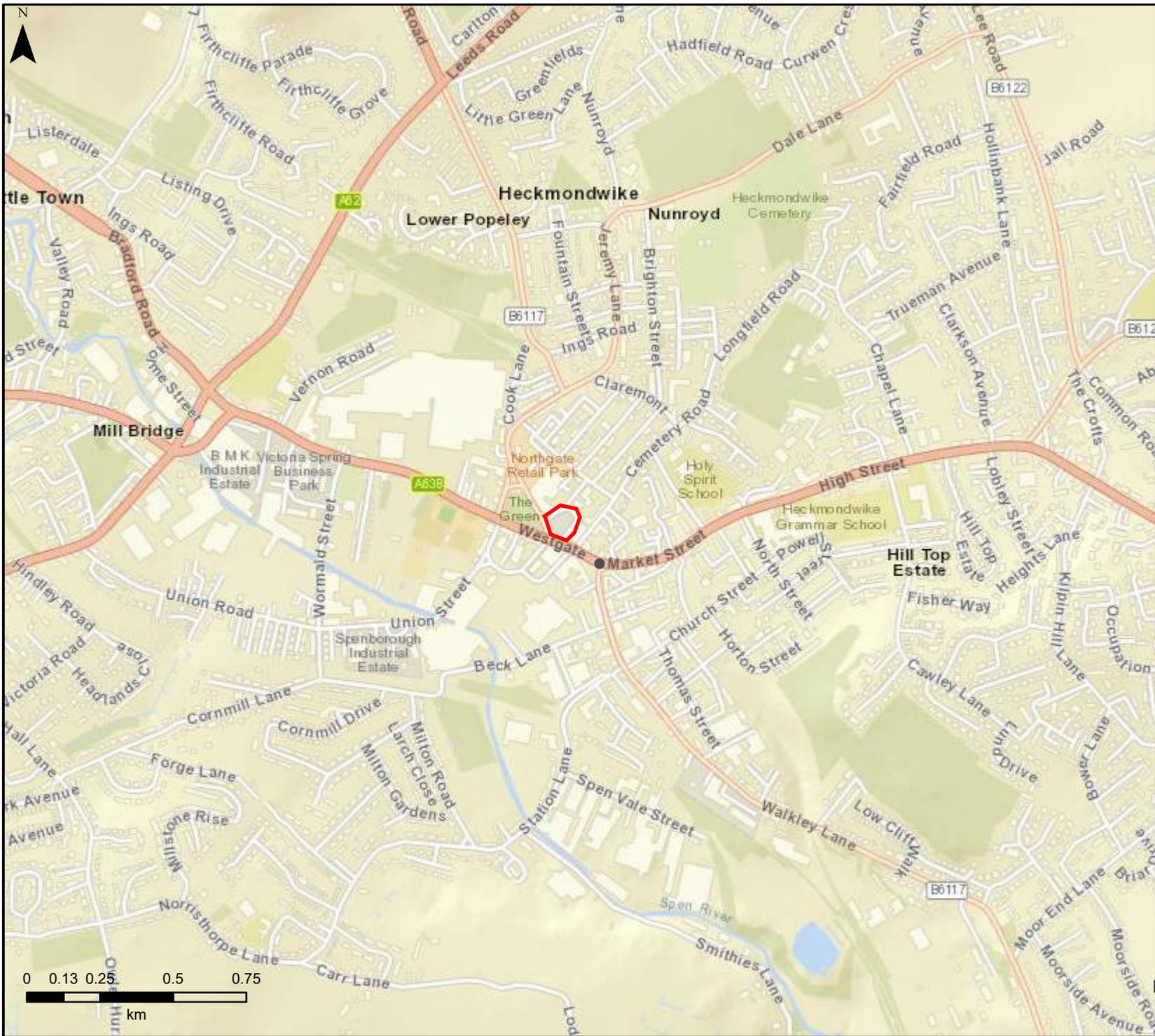
Given the data gaps in site specific data and the potential for contamination to exist, it is recommended that an intrusive ground investigation be undertaken to further support the geo-environmental assessment. The investigation is recommended to concentrate on obtaining further information to assess:

- The presence, extent, variability and composition of the Made Ground, including assessing the likelihood of buried obstructions to exist;
- The potential presence of contaminants associated with identified potential sources of contamination such as Made Ground;
- Gas and groundwater monitoring;
- The nature of the shallow ground conditions across the site and in situ and laboratory testing to determine the engineering properties of the material encountered; and,
- Sulphate levels within material across the site.

Appendix A

FIGURES





DO NOT SCALE

Legend :

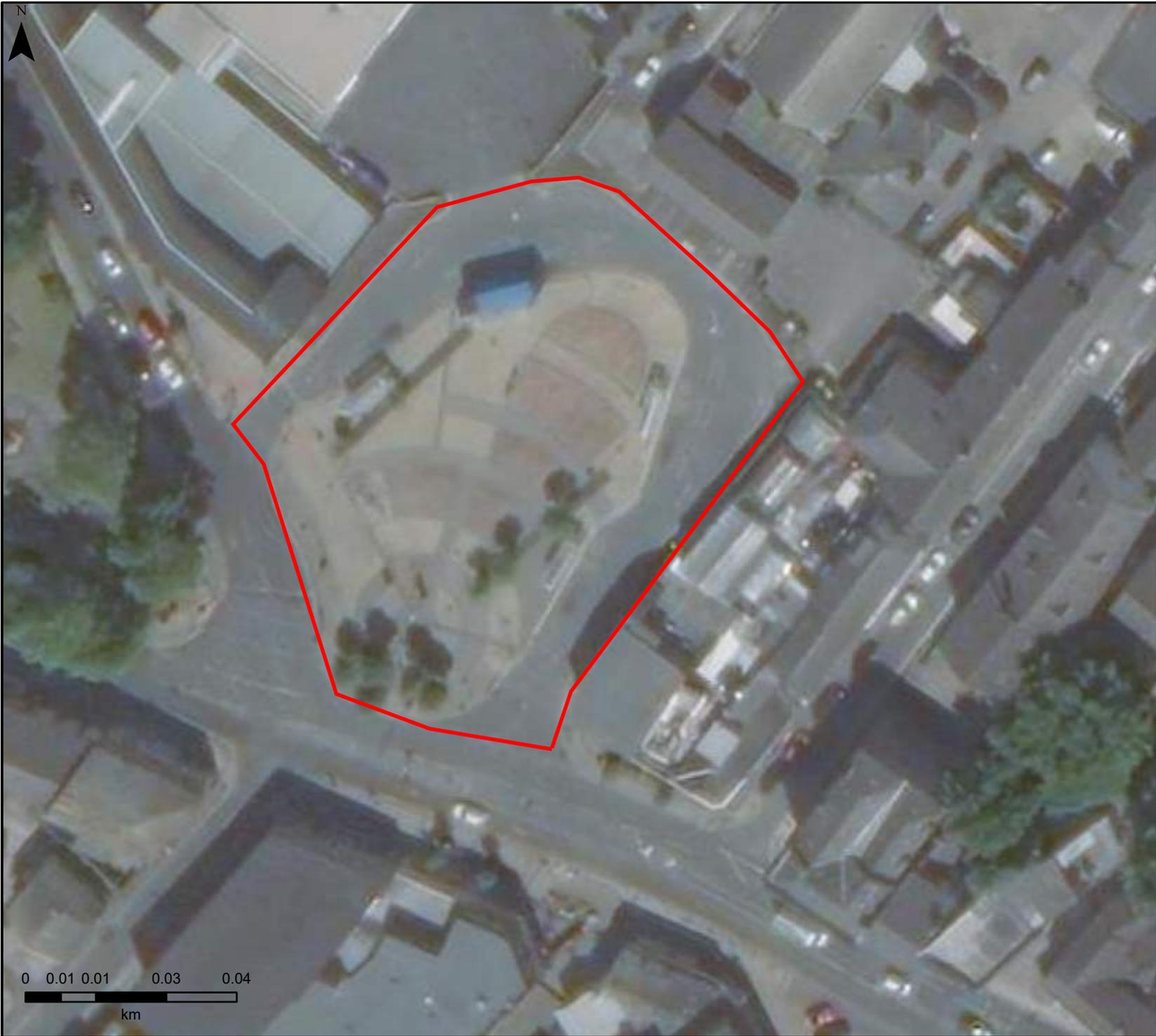
Site Boundary

Title : Heckmondwike Location Plan
Figure 1

Layout : WSP A4 Landscape
Current Time : 05/05/2021 12:35



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DO NOT SCALE

Legend :

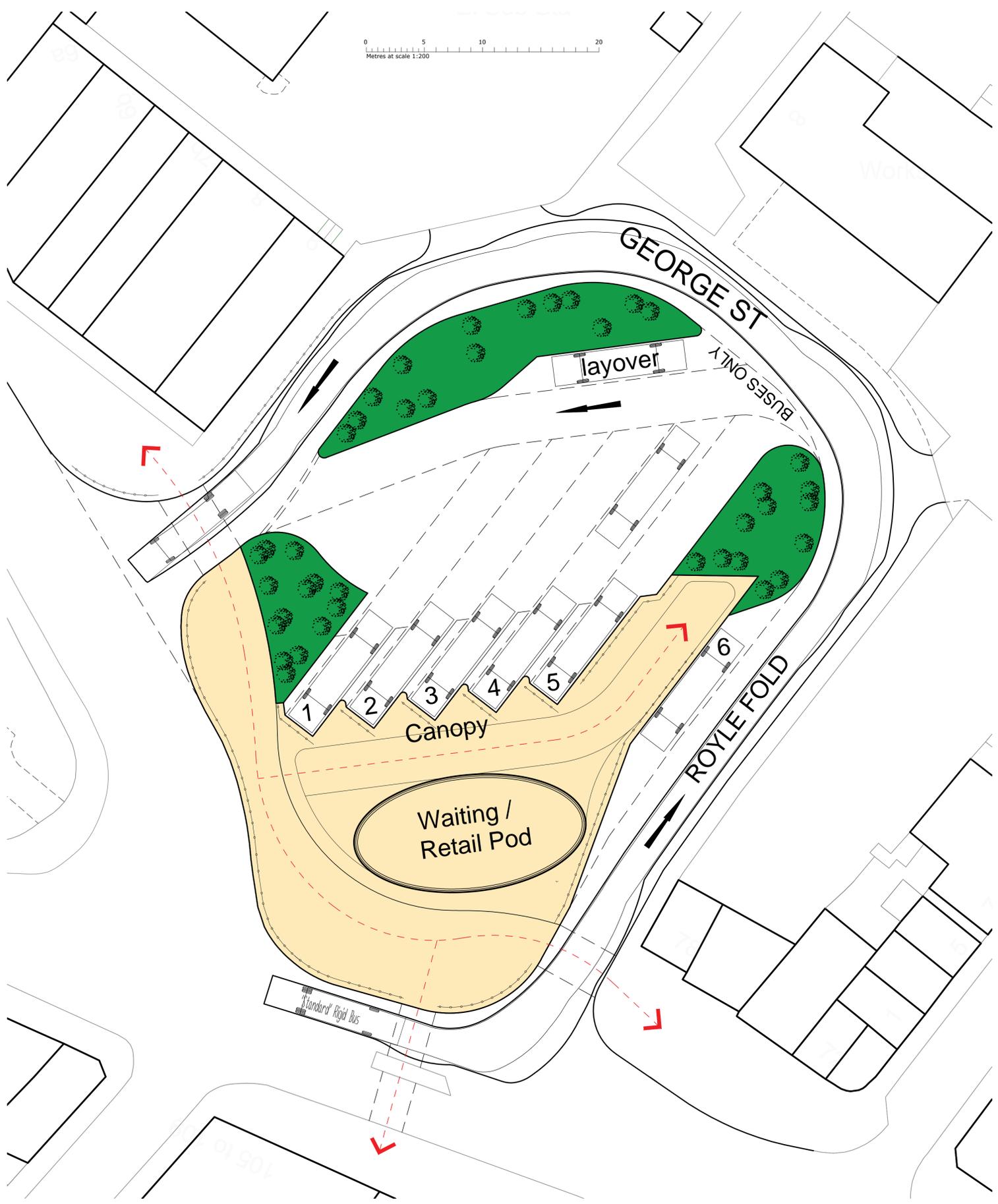
 Site Boundary

0 0.01 0.01 0.03 0.04
km

Title : Heckmondwike Layout Plan
Author : ArcGIS Web AppBuilder
Scale : 1:1,128
Layout : WSP A4 Landscape
Current Time : 05/05/2021 12:37



© WSP UK Ltd



Proposed Site Layout.
Scale: 1:200

Capacity:

DIDO Stands:	1 No.	12 Bus movements per hour
DIRO Stands:	5 No.	40 Bus movements per hour
Total:	6 Stands	52 b.m.h
Layover Bays:	1 No.	



SGP

Architects + Masterplanners

33 Park Place
Leeds
LS1 2RY
t: +44 (0)113 246 7969
www.stephengeorge.co.uk

KIRKLEES TCF
HECKMONDWIKE BUS HUB

Drawing Name:	Proposed Site Layout Option 001					
Drawing Stage:	PRELIMINARY					
Suitability:	S2 - Information					
SGP File Ref:	19-265-003 K001					
19-265-003	30/10/2019	AB	LEEDS 1:200 @A1			
SGP Project No:	Date:	Drawn:	Team:	Scale:	Rev:	
Drawing Number:						
19-265-003 SGP- ?? - ?? - ?? - A - K001						
Project Code	Originator	Zone	Level	Type	Role	Number

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Appendix B

GROUNDSURE REPORT



ADVERTISING RIGHT BUS SHELTER 15023, HIGH STREET, HECKMONDWIKE, WF16 0JD

Order Details

Date: 21/04/2021
Your ref: 20126310____
Our Ref: GS-7771565
Client: WSP UK LTD

Site Details

Location: 421501 423537
Area: 0.3 ha
Authority: [Kirklees Council](#)



Summary of findings

p. 2

Aerial image

p. 8

OS MasterMap site plan

p.11

groundsure.com/insightuserguide

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
12	1.1	<u>Historical industrial land uses</u>	0	0	60	155	-
20	1.2	<u>Historical tanks</u>	0	1	14	47	-
23	1.3	<u>Historical energy features</u>	0	0	8	33	-
25	1.4	Historical petrol stations	0	0	0	0	-
25	1.5	<u>Historical garages</u>	0	0	3	4	-
26	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
27	2.1	<u>Historical industrial land uses</u>	0	0	98	259	-
40	2.2	<u>Historical tanks</u>	0	1	19	89	-
45	2.3	<u>Historical energy features</u>	0	0	25	62	-
48	2.4	Historical petrol stations	0	0	0	0	-
48	2.5	<u>Historical garages</u>	0	0	8	11	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
50	3.1	Active or recent landfill	0	0	0	0	-
50	3.2	Historical landfill (BGS records)	0	0	0	0	-
51	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
51	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
51	3.5	<u>Historical waste sites</u>	0	0	6	10	-
54	3.6	<u>Licensed waste sites</u>	0	0	0	1	-
54	3.7	<u>Waste exemptions</u>	0	0	6	19	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
57	4.1	<u>Recent industrial land uses</u>	1	7	38	-	-
60	4.2	<u>Current or recent petrol stations</u>	0	0	1	0	-
61	4.3	Electricity cables	0	0	0	0	-
61	4.4	Gas pipelines	0	0	0	0	-
61	4.5	Sites determined as Contaminated Land	0	0	0	0	-



61	4.6	<u>Control of Major Accident Hazards (COMAH)</u>	0	0	0	1	-
61	4.7	Regulated explosive sites	0	0	0	0	-
62	4.8	<u>Hazardous substance storage/usage</u>	0	0	0	2	-
62	4.9	<u>Historical licensed industrial activities (IPC)</u>	0	0	3	0	-
63	4.10	<u>Licensed industrial activities (Part A(1))</u>	0	0	1	0	-
63	4.11	<u>Licensed pollutant release (Part A(2)/B)</u>	0	0	6	2	-
65	4.12	Radioactive Substance Authorisations	0	0	0	0	-
65	4.13	<u>Licensed Discharges to controlled waters</u>	0	0	8	6	-
67	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
67	4.15	<u>Pollutant release to public sewer</u>	0	0	1	0	-
68	4.16	<u>List 1 Dangerous Substances</u>	0	0	2	1	-
68	4.17	<u>List 2 Dangerous Substances</u>	0	0	0	2	-
68	4.18	<u>Pollution Incidents (EA/NRW)</u>	0	0	2	5	-
69	4.19	Pollution inventory substances	0	0	0	0	-
70	4.20	Pollution inventory waste transfers	0	0	0	0	-
70	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
71	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
72	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
73	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
74	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
74	5.5	Groundwater vulnerability- local information	None (within 0m)				
75	5.6	<u>Groundwater abstractions</u>	0	0	0	0	7
77	5.7	Surface water abstractions	0	0	0	0	0
78	5.8	Potable abstractions	0	0	0	0	0
78	5.9	Source Protection Zones	0	0	0	0	-
78	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
79	6.1	<u>Water Network (OS MasterMap)</u>	0	0	1	-	-



80	6.2	<u>Surface water features</u>	0	0	1	-	-
80	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
80	6.4	<u>WFD Surface water bodies</u>	0	0	1	-	-
81	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
82	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
83	7.2	<u>Historical Flood Events</u>	0	0	1	-	-
83	7.3	Flood Defences	0	0	0	-	-
83	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
83	7.5	Flood Storage Areas	0	0	0	-	-
84	7.6	Flood Zone 2	None (within 50m)				
84	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
85	8.1	<u>Surface water flooding</u>	1 in 30 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding					
87	9.1	<u>Groundwater flooding</u>	Negligible (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
88	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
89	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
89	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
89	10.4	Special Protection Areas (SPA)	0	0	0	0	0
89	10.5	National Nature Reserves (NNR)	0	0	0	0	0
90	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
90	10.7	Designated Ancient Woodland	0	0	0	0	0
90	10.8	Biosphere Reserves	0	0	0	0	0
90	10.9	Forest Parks	0	0	0	0	0
91	10.10	Marine Conservation Zones	0	0	0	0	0
91	10.11	<u>Green Belt</u>	0	0	0	0	1
91	10.12	Proposed Ramsar sites	0	0	0	0	0

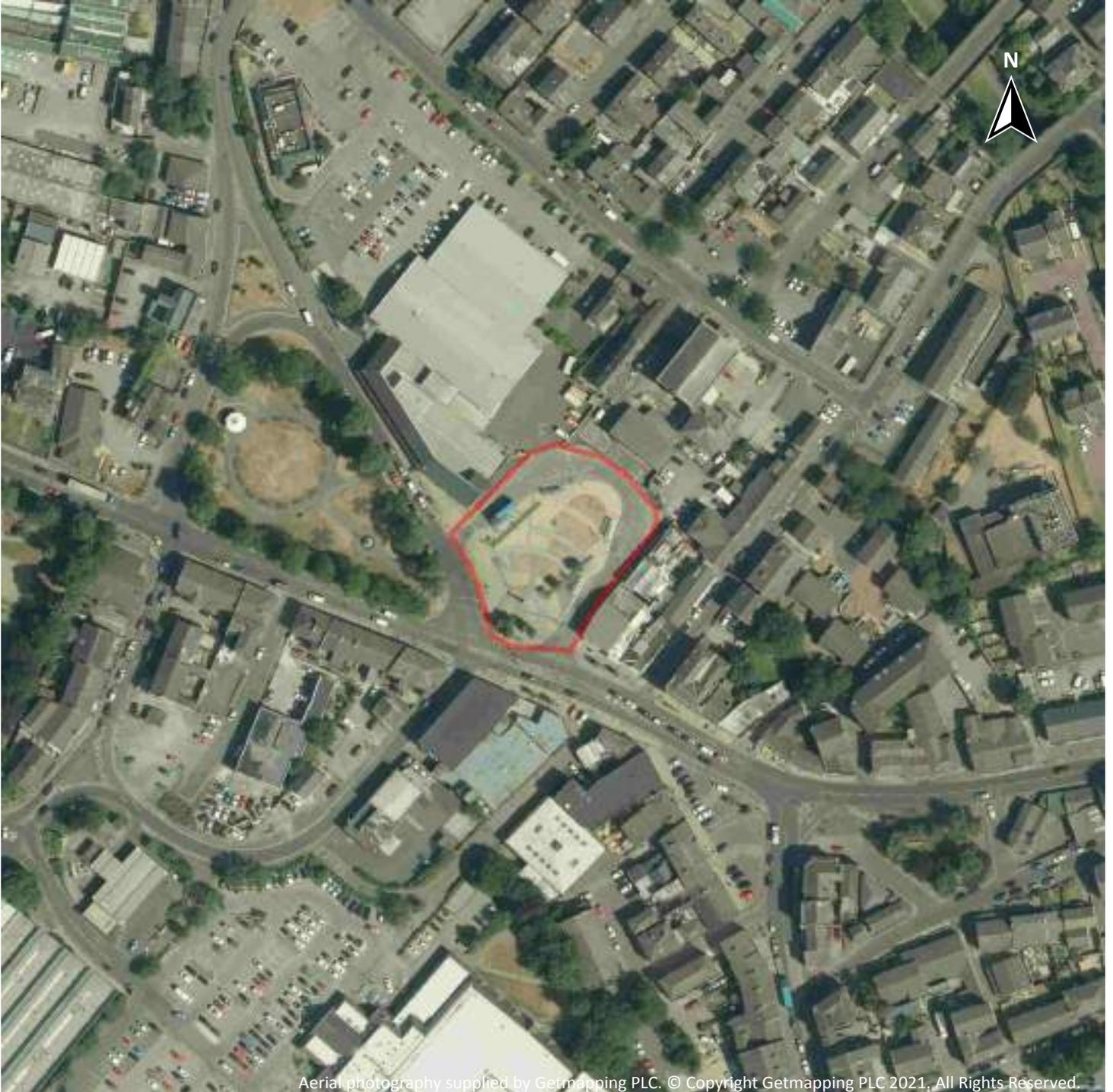
91	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
92	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
92	10.15	Nitrate Sensitive Areas	0	0	0	0	0
92	10.16	<u>Nitrate Vulnerable Zones</u>	1	0	0	0	0
93	10.17	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
94	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
95	11.1	World Heritage Sites	0	0	0	-	-
96	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
96	11.3	National Parks	0	0	0	-	-
96	11.4	<u>Listed Buildings</u>	0	2	4	-	-
97	11.5	Conservation Areas	0	0	0	-	-
97	11.6	Scheduled Ancient Monuments	0	0	0	-	-
97	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
98	12.1	<u>Agricultural Land Classification</u>	Urban (within 250m)				
99	12.2	Open Access Land	0	0	0	-	-
99	12.3	Tree Felling Licences	0	0	0	-	-
99	12.4	Environmental Stewardship Schemes	0	0	0	-	-
99	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
100	13.1	Priority Habitat Inventory	0	0	0	-	-
100	13.2	Habitat Networks	0	0	0	-	-
100	13.3	Open Mosaic Habitat	0	0	0	-	-
100	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
101	14.1	<u>10k Availability</u>	Identified (within 500m)				
102	14.2	<u>Artificial and made ground (10k)</u>	0	0	3	8	-
104	14.3	<u>Superficial geology (10k)</u>	0	0	1	0	-



105	14.4	Landslip (10k)	0	0	0	0	-
106	14.5	<u>Bedrock geology (10k)</u>	1	1	6	14	-
108	14.6	<u>Bedrock faults and other linear features (10k)</u>	0	2	6	8	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
109	15.1	<u>50k Availability</u>	Identified (within 500m)				
110	15.2	<u>Artificial and made ground (50k)</u>	0	0	0	1	-
111	15.3	Artificial ground permeability (50k)	0	0	-	-	-
112	15.4	<u>Superficial geology (50k)</u>	0	0	1	0	-
113	15.5	Superficial permeability (50k)	None (within 50m)				
113	15.6	Landslip (50k)	0	0	0	0	-
113	15.7	Landslip permeability (50k)	None (within 50m)				
114	15.8	<u>Bedrock geology (50k)</u>	1	0	7	14	-
116	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
116	15.10	<u>Bedrock faults and other linear features (50k)</u>	0	1	7	8	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
118	16.1	<u>BGS Boreholes</u>	0	0	23	-	-
Page	Section	Natural ground subsidence					
120	17.1	<u>Shrink swell clays</u>	Very low (within 50m)				
121	17.2	<u>Running sands</u>	Negligible (within 50m)				
122	17.3	<u>Compressible deposits</u>	Negligible (within 50m)				
123	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
124	17.5	<u>Landslides</u>	Very low (within 50m)				
125	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
127	18.1	Natural cavities	0	0	0	0	-
128	18.2	<u>BritPits</u>	0	0	1	4	-
129	18.3	<u>Surface ground workings</u>	0	0	55	-	-
131	18.4	<u>Underground workings</u>	0	0	2	1	0
131	18.5	Historical Mineral Planning Areas	0	0	0	0	-

131	18.6	<u>Non-coal mining</u>	0	0	0	1	2
132	18.7	Mining cavities	0	0	0	0	0
132	18.8	JPB mining areas	None (within 0m)				
132	18.9	<u>Coal mining</u>	Identified (within 0m)				
133	18.10	Brine areas	None (within 0m)				
133	18.11	Gypsum areas	None (within 0m)				
133	18.12	Tin mining	None (within 0m)				
133	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
134	19.1	<u>Radon</u>	Less than 1% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
135	20.1	<u>BGS Estimated Background Soil Chemistry</u>	2	2	-	-	-
135	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
136	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
137	21.1	Underground railways (London)	0	0	0	-	-
137	21.2	Underground railways (Non-London)	0	0	0	-	-
138	21.3	Railway tunnels	0	0	0	-	-
138	21.4	<u>Historical railway and tunnel features</u>	0	0	15	-	-
139	21.5	Royal Mail tunnels	0	0	0	-	-
139	21.6	<u>Historical railways</u>	0	0	4	-	-
139	21.7	Railways	0	0	0	-	-
139	21.8	Crossrail 1	0	0	0	0	-
140	21.9	Crossrail 2	0	0	0	0	-
140	21.10	HS2	0	0	0	0	-

Recent aerial photograph



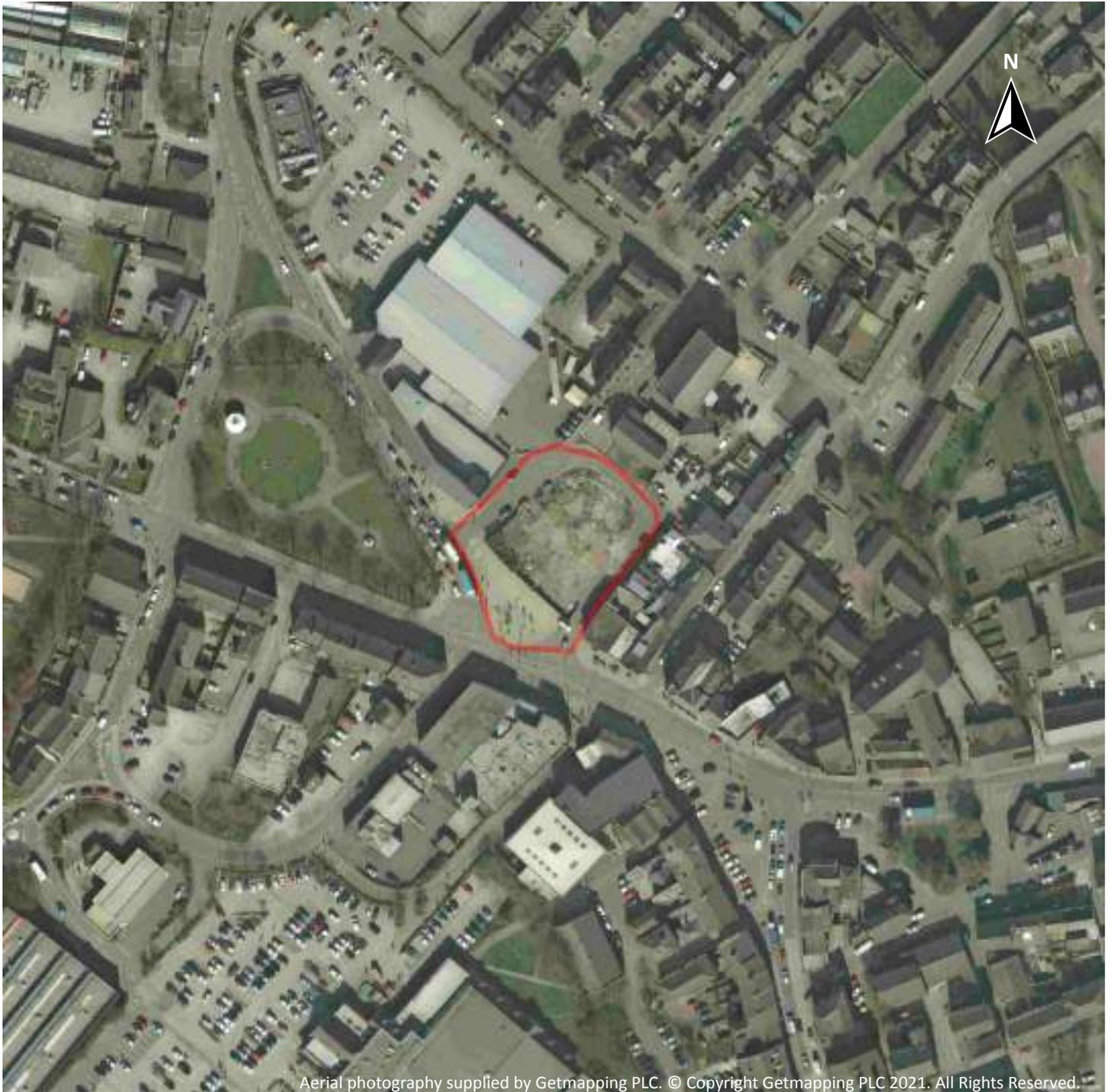
Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2021, All Rights Reserved.

Capture Date: 02/07/2018

Site Area: 0.3ha



Recent site history - 2012 aerial photograph



Capture Date: 26/03/2012

Site Area: 0.3ha



Recent site history - 1999 aerial photograph



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Capture Date: 10/07/1999

Site Area: 0.3ha



OS MasterMap site plan

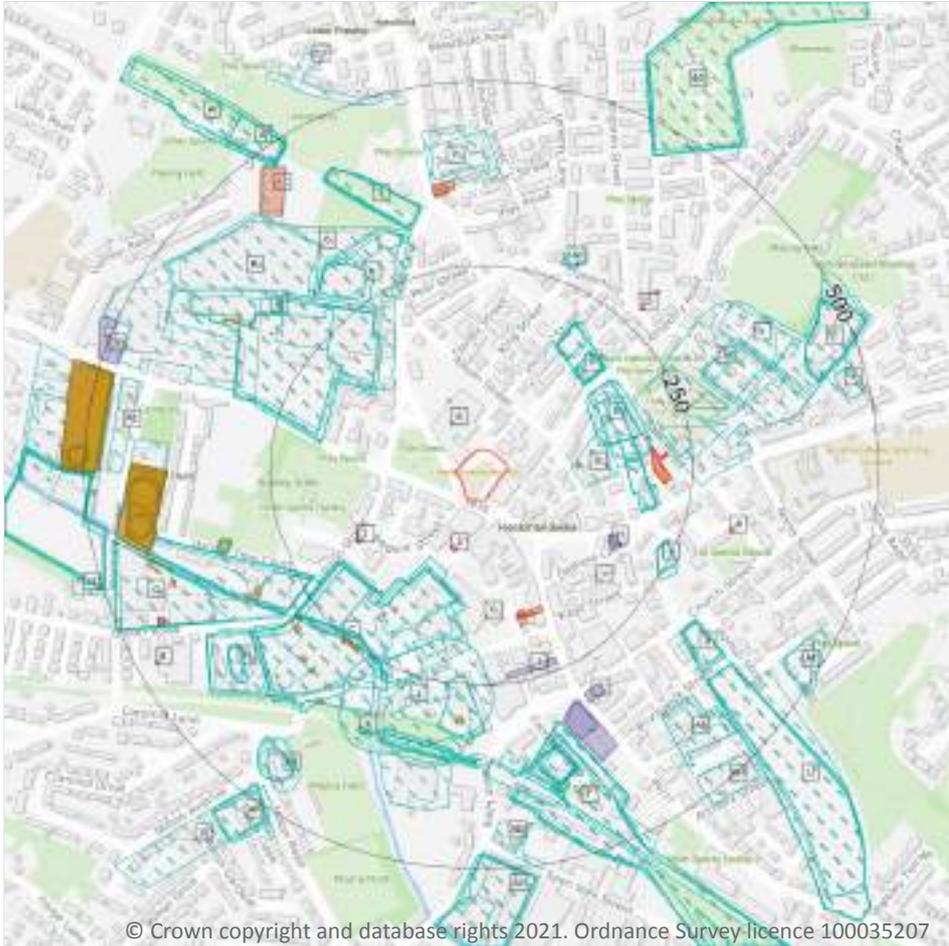


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Site Area: 0.3ha



1 Past land use



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- 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

215

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 12**

ID	Location	Land use	Dates present	Group ID
B	87m E	Telephone Exchange	1981 - 1988	1520633



ID	Location	Land use	Dates present	Group ID
C	94m SW	Unspecified Commercial/Industrial	1892 - 1931	1523847
C	94m SW	Unspecified Commercial/Industrial	1948	1541422
C	106m SW	Unspecified Commercial/Industrial	1931	1549797
C	109m SW	Unspecified Mill	1981	1421637
C	109m SW	Unspecified Mills	1967	1552082
C	112m SW	Unspecified Industrial/Commercial	1938	1443795
D	127m E	Cuttings	1905 - 1931	1484031
D	127m E	Cuttings	1948	1530870
D	130m E	Cuttings	1955	1537881
E	136m NW	Unspecified Mills	1974 - 1988	1542056
D	139m E	Cuttings	1967 - 1981	1508652
D	142m E	Cuttings	1988	1528640
F	150m NE	Cuttings	1931	1470174
F	150m NE	Cuttings	1948	1548129
E	151m NW	Unspecified Commercial/Industrial	1931	1460137
E	151m NW	Unspecified Commercial/Industrial	1948	1499198
F	152m NE	Cuttings	1938	1516964
D	152m E	Railway Sidings	1955	1409376
F	155m NE	Cuttings	1931	1529314
D	156m E	Railway Station	1931	1517615
F	156m NE	Cuttings	1955	1514736
E	158m NW	Tramway Depot	1931	1508883
F	158m NE	Cuttings	1948	1508295
F	158m NE	Cuttings	1931	1521176
D	159m E	Railway Station	1938	1525579
E	159m NW	Unspecified Industrial/Commercial	1938	1443794
D	160m E	Railway Station	1905 - 1931	1469352
D	160m E	Railway Station	1948 - 1955	1520714



ID	Location	Land use	Dates present	Group ID
F	160m NE	Cuttings	1967 - 1988	1472020
F	164m NE	Cuttings	1955 - 1988	1471245
C	169m SW	Unspecified Works	1988	1511911
D	179m E	Railway Buildings	1967	1442126
E	185m W	Unspecified Commercial/Industrial	1892 - 1905	1502096
J	191m S	Refuse Destructor	1948	1506895
J	191m S	Refuse Destructor	1905 - 1931	1553261
D	194m NE	Unspecified Commercial/Industrial	1892	1410534
D	211m E	Unspecified Heap	1974 - 1988	1462635
K	221m NW	Colliery	1892 - 1905	1509322
D	224m E	Mill Pond	1892	1425507
C	227m SW	Unspecified Commercial/Industrial	1905	1506661
C	227m SW	Unspecified Mills	1892	1532213
L	228m SE	Cuttings	1955 - 1988	1483810
L	229m SE	Cuttings	1931 - 1938	1556276
C	231m SW	Unspecified Mills	1948 - 1955	1464037
C	231m SW	Unspecified Works	1967 - 1974	1525593
C	231m SW	Unspecified Commercial/Industrial	1981 - 1988	1554305
K	231m NW	Unspecified Industrial/Commercial	1938	1443796
L	231m SE	Cuttings	1948	1498582
L	231m SE	Cuttings	1905 - 1931	1545112
C	232m SW	Unspecified Commercial/Industrial	1931	1511556
C	237m SW	Unspecified Mills	1931	1492378
M	237m NE	Nursery	1931	1493652
J	238m S	Refuse Destructor	1955	1492998
J	238m S	Refuse Destructor	1931	1478571
J	238m S	Refuse Destructor	1931	1492851
E	239m NW	Mill Ponds	1892 - 1905	1553250



ID	Location	Land use	Dates present	Group ID
K	248m NW	Refuse Heap	1967	1526257
C	249m SW	Union Mills	1931	1522368
J	250m S	Refuse Destructor	1931	1550619
C	250m SW	Unspecified Mills	1955	1419271
C	250m SW	Unspecified Works	1967 - 1981	1473733
C	251m SW	Union Mills	1938	1513164
K	260m NW	Refuse Heap	1931 - 1948	1473345
D	262m E	Unspecified Pit	1974 - 1988	1487541
K	269m NW	Refuse Heap	1955	1545027
N	272m N	Police Station	1967 - 1981	1541525
N	273m N	Police Station	1988	1514773
M	288m NE	Nursery	1967	1550993
M	290m NE	Nursery	1931	1539788
M	291m NE	Nursery	1955	1503278
Q	293m SW	Unspecified Mills	1931	1478232
Q	294m SW	Unspecified Works	1981 - 1988	1524220
K	296m N	Unspecified Warehouse	1948 - 1955	1547293
R	302m NW	Woollen Mills	1967	1411712
R	305m NW	Unspecified Commercial/Industrial	1948	1478346
S	312m N	Cuttings	1938	1470753
C	313m SW	Mill Pond	1892 - 1905	1530533
S	313m N	Cuttings	1905 - 1931	1506251
S	313m N	Cuttings	1948	1520809
T	315m S	Railway Sidings	1967	1491814
T	315m S	Railway Sidings	1955	1544245
C	315m W	Unspecified Tanks	1948 - 1955	1513854
U	316m SE	Cuttings	1938	1557269
C	316m W	Unspecified Tanks	1931	1485081



ID	Location	Land use	Dates present	Group ID
S	316m N	Cuttings	1931	1503575
V	317m SE	Cuttings	1905 - 1931	1489242
V	317m SE	Cuttings	1948	1551525
T	318m S	Unspecified Commercial/Industrial	1931	1460568
C	318m W	Unspecified Tanks	1938	1500198
S	319m N	Cuttings	1955	1496680
C	320m W	Unspecified Tanks	1931	1462284
E	320m NW	Unspecified Depot	1931	1428525
V	320m SE	Cuttings	1931	1512054
V	321m SE	Cuttings	1955 - 1988	1518188
T	325m S	Railway Sidings	1931	1503628
T	330m S	Railway Sidings	1938	1476673
J	330m S	Railway Station	1967	1498448
J	331m S	Railway Station	1948 - 1955	1501292
T	333m S	Railway Sidings	1892 - 1931	1493956
T	333m S	Railway Sidings	1948	1502892
W	335m SW	Unspecified Works	1988	1464953
J	336m S	Railway Station	1931	1544024
J	337m S	Railway Station	1938	1546609
J	338m S	Railway Station	1892 - 1931	1493010
5	340m NE	Nursery	1948	1507489
T	341m S	Railway Buildings	1892 - 1905	1472059
X	341m SW	Railway Building	1955	1506408
T	342m S	Railway Buildings	1974	1517693
T	344m S	Railway Building	1892 - 1905	1522562
T	344m S	Railway Building	1948 - 1955	1502498
W	344m SW	Disused Colliery	1905	1431707
T	345m S	Railway Building	1931	1500538



ID	Location	Land use	Dates present	Group ID
T	345m S	Goods Station	1967	1430916
X	346m SW	Railway Building	1892 - 1905	1546301
T	346m S	Railway Building	1892 - 1931	1544322
T	347m S	Railway Building	1938	1478679
Y	356m N	Unspecified Mill	1892 - 1905	1507812
Q	357m SW	Unspecified Mills	1938	1473981
J	360m S	Unspecified Works	1974 - 1988	1487867
W	363m SW	Refuse Heap	1967	1501868
Z	363m NE	Unspecified Mills	1967 - 1988	1548183
T	366m S	Railway Buildings	1948 - 1955	1478763
W	367m SW	Refuse Heap	1955	1494074
Q	367m W	Unspecified Works	1967	1525598
W	368m SW	Refuse Heap	1938 - 1948	1479748
T	368m S	Railway Building	1967	1537325
W	368m SW	Refuse Heap	1905 - 1931	1475715
Y	368m N	Unspecified Mills	1974 - 1988	1536561
T	375m S	Railway Buildings	1892 - 1931	1516514
AA	376m SE	Unspecified Covered Tank	1905	1450853
AA	376m SE	Unspecified Commercial/Industrial	1931	1533200
AA	376m SE	Unspecified Commercial/Industrial	1948	1533932
AA	381m SE	Unspecified Mills	1892	1419272
Z	383m E	Unspecified Mills	1905	1519809
U	386m SE	Cuttings	1931	1466068
T	387m S	Railway Sidings	1931	1499833
U	387m SE	Cuttings	1967 - 1988	1475539
U	387m SE	Cuttings	1955	1550503
U	387m SE	Cuttings	1905	1494182
U	387m SE	Cuttings	1931	1509843



ID	Location	Land use	Dates present	Group ID
U	387m SE	Cuttings	1948	1524606
Q	389m W	Unspecified Commercial/Industrial	1955 - 1988	1485982
T	393m S	Railway Sidings	1938	1553870
Q	400m W	Unspecified Tanks	1931	1469424
Q	402m W	Unspecified Tank	1955 - 1988	1544748
Q	402m W	Unspecified Tanks	1938	1527649
Q	403m W	Unspecified Tank	1931	1461699
Q	403m W	Unspecified Tank	1948	1503223
AB	410m SW	Unspecified Heap	1967	1415246
Q	411m W	Unspecified Tank	1948	1469445
Q	411m W	Unspecified Tank	1892 - 1931	1550613
AB	412m SW	Refuse Heap	1948 - 1955	1546475
Q	416m W	Unspecified Tank	1955 - 1967	1462636
AC	418m NW	Electricity Transformer Station	1974 - 1988	1467823
AB	423m SW	Refuse Heap	1931	1512649
AB	423m SW	Refuse Heap	1938	1511445
T	424m SE	Railway Building	1955	1429149
Z	425m E	Unspecified Mills	1931	1505871
Z	425m E	Unspecified Mills	1948	1540332
AB	426m SW	Refuse Heap	1931	1510281
Z	427m E	Unspecified Mills	1938	1537929
Z	428m E	Grove Mills	1931	1536606
Z	428m E	Unspecified Mills	1955	1472278
AD	435m S	Unspecified Depot	1988	1428526
AD	441m S	Unspecified Ground Workings	1931	1534864
AE	442m W	Unspecified Depot	1988	1428524
AF	451m SE	Unspecified Heap	1988	1506281
AF	455m SE	Unspecified Heap	1974 - 1981	1516909



ID	Location	Land use	Dates present	Group ID
AG	457m NE	Cemetery	1931	1468622
AG	457m NE	Cemetery	1948	1496026
7	457m E	Mill Pond	1892 - 1905	1485131
AG	457m NE	Cemetery	1892 - 1905	1467871
AG	458m NE	Cemetery	1931 - 1938	1544033
AG	465m NE	Cemetery	1955 - 1988	1501023
AH	471m SE	Unspecified Commercial/Industrial	1948	1492224
AH	471m SE	Unspecified Commercial/Industrial	1931	1521749
AI	471m NW	Cuttings	1948	1467870
AI	471m NW	Cuttings	1931	1482170
AI	471m NW	Cuttings	1905	1499736
AE	472m W	Unspecified Commercial/Industrial	1892 - 1931	1540854
AJ	473m NW	Cuttings	1931	1459989
AJ	473m NW	Cuttings	1931	1484891
AJ	473m NW	Cuttings	1938	1503596
AE	474m W	Unspecified Mills	1931	1517757
AJ	477m NW	Cuttings	1955	1552291
AI	477m NW	Cuttings	1967	1476684
AE	477m W	Unspecified Commercial/Industrial	1967 - 1988	1510453
AK	477m SW	Unspecified Mills	1892 - 1931	1482943
AK	477m SW	Unspecified Mills	1948	1514090
AE	478m W	Unspecified Mills	1938	1499170
AE	478m W	Unspecified Mills	1931	1485495
AE	478m W	Unspecified Mills	1948	1529902
AL	478m S	Dye Works	1892	1442646
AL	479m S	Unspecified Commercial/Industrial	1931	1485211
AE	480m W	Unspecified Commercial/Industrial	1892	1542605
AL	480m S	Unspecified Mills	1892 - 1905	1465215



ID	Location	Land use	Dates present	Group ID
10	481m SW	Unspecified Mills	1955 - 1967	1508093
AK	481m SW	Unspecified Mills	1931	1534742
AL	481m S	Unspecified Commercial/Industrial	1948	1460968
AL	481m S	Unspecified Commercial/Industrial	1931	1540277
AE	481m W	Unspecified Commercial/Industrial	1967	1488353
AE	481m W	Unspecified Commercial/Industrial	1974 - 1988	1508895
AE	481m W	Unspecified Mills	1955	1539278
AE	482m W	Unspecified Commercial/Industrial	1938	1509017
AE	489m W	Unspecified Commercial/Industrial	1905	1476981
AK	489m SW	Unspecified Mills	1938	1517096
11	490m N	Unspecified Ground Workings	1974 - 1981	1518187
AE	492m W	Gasometer	1905	1420677
AE	492m W	Unspecified Tank	1892	1464376
AE	493m W	Unspecified Tank	1955 - 1967	1550185
AI	494m NW	Cuttings	1974 - 1988	1543841
12	496m W	Unspecified Ground Workings	1892	1412351
AE	498m W	Unspecified Tank	1931	1467360
AE	498m W	Unspecified Tank	1938	1460248

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

62

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 12**



ID	Location	Land use	Dates present	Group ID
A	48m NW	Unspecified Tank	1907	223744
A	77m NW	Unspecified Tank	1955 - 1967	249537
G	155m S	Unspecified Tank	1982	244319
G	155m S	Unspecified Tank	1967	246062
C	172m SW	Unspecified Tank	1972 - 1983	245633
G	173m S	Unspecified Tank	1990	223741
C	178m SW	Tanks	1955	245122
G	178m S	Unspecified Tank	1967	246337
G	178m S	Unspecified Tank	1982	236532
C	178m SW	Tanks	1955 - 1965	239794
I	188m SE	Unspecified Tank	1982	238650
I	189m SE	Unspecified Tank	1967	240433
D	189m E	Unspecified Tank	1907	223789
C	191m SW	Unspecified Tank	1972 - 1983	239993
C	250m SW	Tanks	1933	245434
C	251m SW	Tanks	1922	244605
C	252m SW	Tanks	1933	245851
C	253m SW	Tanks	1933	247120
K	278m NW	Unspecified Tank	1894	223745
C	284m SW	Tanks	1922	230689
J	293m S	Tanks	1955 - 1995	234606
C	301m SW	Tanks	1922	230691
K	305m NW	Unspecified Tank	1894	223784
C	306m SW	Tanks	1938	230687
E	308m NW	Unspecified Tank	1993	239108
C	308m SW	Tanks	1922 - 1938	242630
E	310m NW	Unspecified Tank	1967	237353
C	317m W	Tanks	1933 - 1938	236217



ID	Location	Land use	Dates present	Group ID
E	327m NW	Tanks	1907	230688
E	333m NW	Unspecified Tank	1967	223742
C	334m SW	Unspecified Tank	1922	223740
6	346m NW	Unspecified Tank	1967	223783
C	351m SW	Unspecified Tank	1972	223736
E	353m NW	Tanks	1955	235625
Q	388m W	Gas Holder Station	1993	233373
Q	389m W	Gasholder Station	1955 - 1967	250300
Q	389m W	Gasholder Station	1955	249383
Q	392m W	Gas Works	1922	233397
Q	398m W	Gas Holder	1993	233033
Q	398m W	Gasholder	1955 - 1967	238167
Q	399m W	Gasholder	1955	244132
Q	402m W	Unspecified Tank	1933 - 1938	241115
Q	402m W	Gasometers	1922	229916
Q	404m W	Settling Tanks	1972 - 1988	236551
Q	405m W	Tanks	1955 - 1995	233837
Q	406m W	Gas Holder Station	1955 - 1965	248348
Q	413m W	Gasholder	1955 - 1965	245312
Q	413m W	Gasholder	1955	248795
Q	414m W	Settling Tanks	1972 - 1995	237759
Q	414m W	Settling Tanks	1983 - 1988	234144
Q	417m W	Unspecified Tank	1894 - 1938	236916
Q	419m W	Settling Tanks	1972	238711
8	470m SW	Unspecified Tank	1972 - 1995	244039
AE	475m W	Gas Holder Station	1955	233374
AE	475m W	Gasholder Station	1967	241611
AE	475m W	Gasholder Station	1955 - 1956	243400



ID	Location	Land use	Dates present	Group ID
AE	479m W	Gas Works	1907 - 1922	240973
AE	479m W	Gas Works	1894	234403
AE	494m W	Gasholder	1956	245509
AE	497m W	Unspecified Tank	1933 - 1938	248008
AE	497m W	Gasometer	1922	245159
AE	498m W	Gasometer	1894 - 1907	244742

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

41

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 12**

ID	Location	Land use	Dates present	Group ID
1	65m S	Electricity Substation	1972 - 1995	142081
B	93m E	Electricity Substation	1967 - 1996	144485
2	150m SW	Electricity Substation	1972 - 1983	136611
G	158m S	Electricity Substation	1993	132392
G	161m S	Electricity Substation	1955	144137
G	163m S	Electricity Substation	1955 - 1990	137573
D	195m E	Electricity Substation	1955 - 1992	142269
D	196m E	Electricity Substation	1955	134551
C	274m SW	Electricity Substation	1983 - 1988	135973
C	275m SW	Electricity Substation	1955	137686
O	276m NE	Electricity Substation	1988 - 1996	134352
C	277m SW	Electricity Substation	1972	139400



ID	Location	Land use	Dates present	Group ID
C	286m SW	Electricity Substation	1995	129164
O	306m NE	Electricity Substation	1967 - 1979	145722
4	312m E	Electricity Substation	1967 - 1993	142353
Y	348m N	Electricity Substation	1993	134539
Y	351m N	Electricity Substation	1955 - 1967	141464
Q	388m W	Gas Holder Station	1993	132074
Q	389m W	Gasholder Station	1955 - 1967	142021
Q	389m W	Gasholder Station	1955	135163
Q	392m W	Gas Works	1922	132102
Q	398m W	Gas Holder	1993	131995
Q	398m W	Gasholder	1955 - 1967	140966
Q	399m W	Gasholder	1955	138751
Q	402m W	Gasometers	1922	131653
Q	406m W	Gas Holder Station	1955 - 1965	142057
AC	412m NW	Electricity Substation	1993	129162
Q	413m W	Gasholder	1955 - 1965	146512
Q	413m W	Gasholder	1955	135866
Q	437m W	Electricity Substation	1955 - 1995	141862
Q	438m W	Electricity Substation	1955	132380
Q	438m W	Electricity Substation	1983 - 1988	134692
AE	475m W	Gas Holder Station	1955	132075
AE	475m W	Gasholder Station	1967	145396
AE	475m W	Gasholder Station	1955 - 1956	146780
AE	479m W	Gas Works	1907 - 1922	141309
AE	479m W	Gas Works	1894	136126
AE	485m W	Electricity Substation	1956 - 1996	136883
AE	494m W	Gasholder	1956	143257
AE	497m W	Gasometer	1922	142503



ID	Location	Land use	Dates present	Group ID
AE	498m W	Gasometer	1894 - 1907	137436

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	7
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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 12**

ID	Location	Land use	Dates present	Group ID
H	163m SE	Garage	1955 - 1990	45207
H	164m SE	Garage	1993	43704
3	231m S	Garage	1955	45233
P	291m SE	Garage	1967 - 1993	45944
P	297m SE	Garage	1982 - 1990	46435
P	300m SE	Garage	1993	42205
9	477m W	Garage	1955 - 1993	46691

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

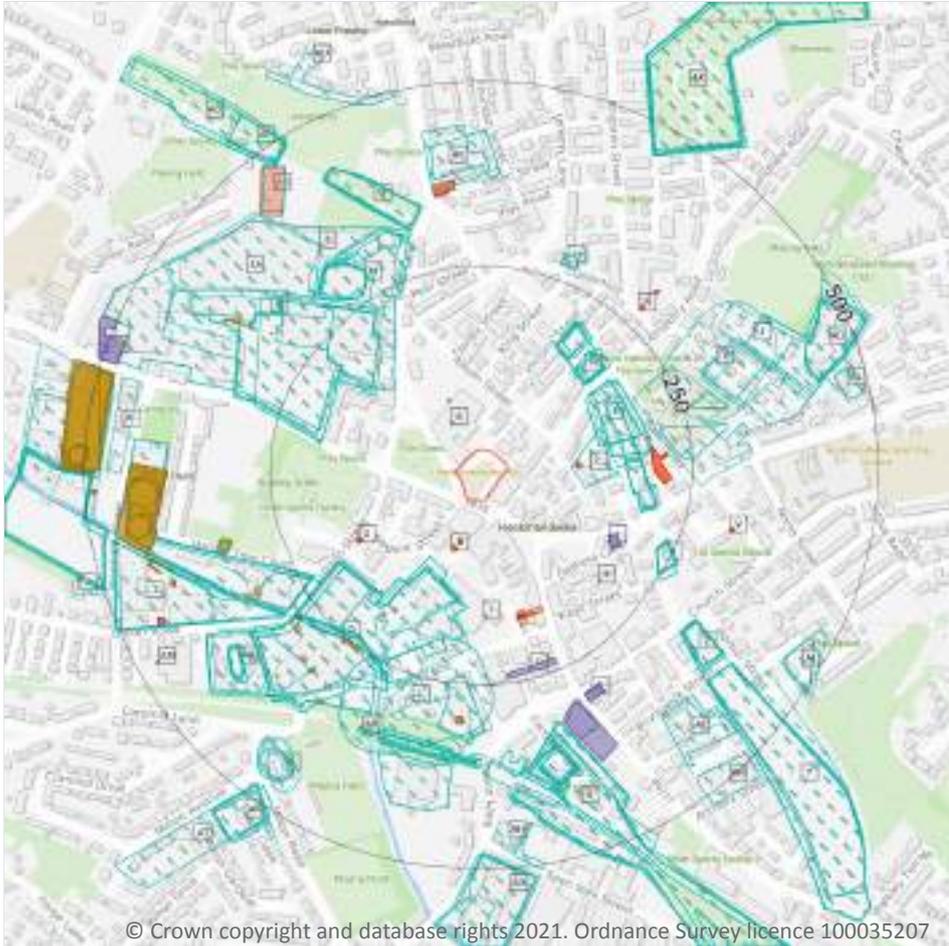
0

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



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- 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

357

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 27**

ID	Location	Land Use	Date	Group ID
C	87m E	Telephone Exchange	1988	1520633
C	87m E	Telephone Exchange	1981	1520633
D	94m SW	Unspecified Commercial/Industrial	1948	1541422

ID	Location	Land Use	Date	Group ID
D	94m SW	Unspecified Commercial/Industrial	1931	1523847
D	94m SW	Unspecified Commercial/Industrial	1905	1523847
D	94m SW	Unspecified Commercial/Industrial	1892	1523847
D	106m SW	Unspecified Commercial/Industrial	1931	1549797
D	106m SW	Unspecified Commercial/Industrial	1931	1549797
D	109m SW	Unspecified Mill	1981	1421637
D	109m SW	Unspecified Mills	1967	1552082
D	112m SW	Unspecified Industrial/Commercial	1938	1443795
E	127m E	Cuttings	1948	1530870
E	127m E	Cuttings	1931	1484031
E	127m E	Cuttings	1905	1484031
E	130m E	Cuttings	1955	1537881
F	136m NW	Unspecified Mills	1988	1542056
F	136m NW	Unspecified Mills	1981	1542056
F	136m NW	Unspecified Mills	1974	1542056
E	139m E	Cuttings	1981	1508652
E	139m E	Cuttings	1974	1508652
E	139m E	Cuttings	1967	1508652
E	142m E	Cuttings	1988	1528640
H	150m NE	Cuttings	1948	1548129
H	150m NE	Cuttings	1931	1470174
F	151m NW	Unspecified Commercial/Industrial	1948	1499198
F	151m NW	Unspecified Commercial/Industrial	1931	1460137
H	152m NE	Cuttings	1938	1516964
E	152m E	Railway Sidings	1955	1409376
H	155m NE	Cuttings	1931	1529314
H	155m NE	Cuttings	1931	1529314
E	156m E	Railway Station	1931	1517615



ID	Location	Land Use	Date	Group ID
E	156m E	Railway Station	1931	1517615
H	156m NE	Cuttings	1955	1514736
F	158m NW	Tramway Depot	1931	1508883
F	158m NW	Tramway Depot	1931	1508883
H	158m NE	Cuttings	1948	1508295
H	158m NE	Cuttings	1931	1521176
E	159m E	Railway Station	1938	1525579
F	159m NW	Unspecified Industrial/Commercial	1938	1443794
E	160m E	Railway Station	1955	1520714
E	160m E	Railway Station	1948	1520714
E	160m E	Railway Station	1931	1469352
E	160m E	Railway Station	1905	1469352
H	160m NE	Cuttings	1988	1472020
H	160m NE	Cuttings	1981	1472020
H	160m NE	Cuttings	1974	1472020
H	160m NE	Cuttings	1967	1472020
H	164m NE	Cuttings	1955	1471245
D	169m SW	Unspecified Works	1988	1511911
H	170m NE	Cuttings	1988	1471245
H	170m NE	Cuttings	1981	1471245
H	170m NE	Cuttings	1974	1471245
H	170m NE	Cuttings	1967	1471245
E	179m E	Railway Buildings	1967	1442126
F	185m W	Unspecified Commercial/Industrial	1905	1502096
F	185m W	Unspecified Commercial/Industrial	1892	1502096
L	191m S	Refuse Destructor	1948	1506895
L	191m S	Refuse Destructor	1931	1553261
L	191m S	Refuse Destructor	1905	1553261



ID	Location	Land Use	Date	Group ID
E	194m NE	Unspecified Commercial/Industrial	1892	1410534
E	211m E	Unspecified Heap	1988	1462635
E	211m E	Unspecified Heap	1981	1462635
E	211m E	Unspecified Heap	1974	1462635
M	221m NW	Colliery	1905	1509322
M	221m NW	Colliery	1892	1509322
E	224m E	Mill Pond	1892	1425507
D	227m SW	Unspecified Commercial/Industrial	1905	1506661
D	227m SW	Unspecified Mills	1892	1532213
N	228m SE	Cuttings	1988	1483810
N	228m SE	Cuttings	1981	1483810
N	228m SE	Cuttings	1974	1483810
N	228m SE	Cuttings	1967	1483810
N	228m SE	Cuttings	1955	1483810
N	229m SE	Cuttings	1931	1556276
N	230m SE	Cuttings	1938	1556276
D	231m SW	Unspecified Commercial/Industrial	1988	1554305
D	231m SW	Unspecified Commercial/Industrial	1981	1554305
D	231m SW	Unspecified Works	1974	1525593
D	231m SW	Unspecified Works	1967	1525593
D	231m SW	Unspecified Mills	1955	1464037
M	231m NW	Unspecified Industrial/Commercial	1938	1443796
N	231m SE	Cuttings	1948	1498582
N	231m SE	Cuttings	1931	1545112
N	231m SE	Cuttings	1905	1545112
D	232m SW	Unspecified Commercial/Industrial	1931	1511556
D	232m SW	Unspecified Commercial/Industrial	1931	1511556
D	237m SW	Unspecified Mills	1948	1464037



ID	Location	Land Use	Date	Group ID
D	237m SW	Unspecified Mills	1931	1492378
P	237m NE	Nursery	1931	1493652
L	238m S	Refuse Destructor	1955	1492998
L	238m S	Refuse Destructor	1931	1478571
L	238m S	Refuse Destructor	1931	1492851
F	239m NW	Mill Ponds	1905	1553250
F	239m NW	Mill Ponds	1892	1553250
M	248m NW	Refuse Heap	1967	1526257
D	249m SW	Union Mills	1931	1522368
D	249m SW	Union Mills	1931	1522368
L	250m S	Refuse Destructor	1931	1550619
D	250m SW	Unspecified Works	1981	1473733
D	250m SW	Unspecified Works	1974	1473733
D	250m SW	Unspecified Works	1967	1473733
D	250m SW	Unspecified Mills	1955	1419271
D	251m SW	Union Mills	1938	1513164
M	260m NW	Refuse Heap	1948	1473345
M	260m NW	Refuse Heap	1931	1473345
M	261m NW	Refuse Heap	1931	1473345
M	261m NW	Refuse Heap	1931	1473345
M	262m NW	Refuse Heap	1938	1473345
E	262m E	Unspecified Pit	1988	1487541
E	262m E	Unspecified Pit	1981	1487541
E	262m E	Unspecified Pit	1974	1487541
M	269m NW	Refuse Heap	1955	1545027
Q	272m N	Police Station	1981	1541525
Q	272m N	Police Station	1974	1541525
Q	272m N	Police Station	1967	1541525



ID	Location	Land Use	Date	Group ID
Q	273m N	Police Station	1988	1514773
P	288m NE	Nursery	1967	1550993
P	290m NE	Nursery	1931	1539788
P	290m NE	Nursery	1931	1539788
P	291m NE	Nursery	1955	1503278
T	293m SW	Unspecified Mills	1931	1478232
T	293m SW	Unspecified Mills	1931	1478232
T	294m SW	Unspecified Works	1988	1524220
T	294m SW	Unspecified Works	1981	1524220
M	296m N	Unspecified Warehouse	1948	1547293
M	300m NW	Unspecified Warehouse	1955	1547293
U	302m NW	Woollen Mills	1967	1411712
U	305m NW	Unspecified Commercial/Industrial	1948	1478346
W	312m N	Cuttings	1938	1470753
D	313m SW	Mill Pond	1905	1530533
D	313m SW	Mill Pond	1892	1530533
W	313m N	Cuttings	1948	1520809
W	313m N	Cuttings	1931	1506251
W	313m N	Cuttings	1905	1506251
X	315m S	Railway Sidings	1967	1491814
X	315m S	Railway Sidings	1955	1544245
D	315m W	Unspecified Tanks	1955	1513854
Y	316m SE	Cuttings	1938	1557269
D	316m W	Unspecified Tanks	1931	1485081
D	316m W	Unspecified Tanks	1931	1485081
W	316m N	Cuttings	1931	1503575
W	316m N	Cuttings	1931	1503575
Z	317m SE	Cuttings	1948	1551525



ID	Location	Land Use	Date	Group ID
Z	317m SE	Cuttings	1931	1489242
Z	317m SE	Cuttings	1905	1489242
X	318m S	Unspecified Commercial/Industrial	1931	1460568
X	318m S	Unspecified Commercial/Industrial	1931	1460568
D	318m W	Unspecified Tanks	1938	1500198
W	319m N	Cuttings	1955	1496680
D	320m W	Unspecified Tanks	1948	1513854
D	320m W	Unspecified Tanks	1931	1462284
F	320m NW	Unspecified Depot	1931	1428525
Z	320m SE	Cuttings	1931	1512054
Z	320m SE	Cuttings	1931	1512054
Z	321m SE	Cuttings	1988	1518188
Z	321m SE	Cuttings	1981	1518188
Z	321m SE	Cuttings	1974	1518188
Z	321m SE	Cuttings	1967	1518188
Z	321m SE	Cuttings	1955	1518188
X	325m S	Railway Sidings	1931	1503628
X	325m S	Railway Sidings	1931	1503628
X	330m S	Railway Sidings	1938	1476673
L	330m S	Railway Station	1967	1498448
L	331m S	Railway Station	1955	1501292
X	333m S	Railway Sidings	1948	1502892
X	333m S	Railway Sidings	1931	1493956
X	333m S	Railway Sidings	1905	1493956
X	333m S	Railway Sidings	1892	1493956
AA	335m SW	Unspecified Works	1988	1464953
L	336m S	Railway Station	1931	1544024
L	336m S	Railway Station	1931	1544024



ID	Location	Land Use	Date	Group ID
L	337m S	Railway Station	1938	1546609
L	338m S	Railway Station	1948	1501292
L	338m S	Railway Station	1931	1493010
L	338m S	Railway Station	1905	1493010
L	338m S	Railway Station	1892	1493010
1	340m NE	Nursery	1948	1507489
X	341m S	Railway Buildings	1905	1472059
X	341m S	Railway Buildings	1892	1472059
AB	341m SW	Railway Building	1955	1506408
X	342m S	Railway Buildings	1974	1517693
X	344m S	Railway Building	1905	1522562
X	344m S	Railway Building	1892	1522562
X	344m S	Railway Building	1955	1502498
AA	344m SW	Disused Colliery	1905	1431707
X	345m S	Railway Building	1931	1500538
X	345m S	Railway Building	1931	1500538
X	345m S	Goods Station	1967	1430916
AB	346m SW	Railway Building	1905	1546301
AB	346m SW	Railway Building	1892	1546301
X	346m S	Railway Building	1948	1502498
X	346m S	Railway Building	1931	1544322
X	346m S	Railway Building	1905	1544322
X	346m S	Railway Building	1892	1544322
X	347m S	Railway Building	1938	1478679
AC	356m N	Unspecified Mill	1905	1507812
AC	356m N	Unspecified Mill	1892	1507812
T	357m SW	Unspecified Mills	1938	1473981
L	360m S	Unspecified Works	1988	1487867



ID	Location	Land Use	Date	Group ID
L	360m S	Unspecified Works	1981	1487867
L	360m S	Unspecified Works	1974	1487867
AA	363m SW	Refuse Heap	1967	1501868
AD	363m NE	Unspecified Mills	1988	1548183
AD	363m NE	Unspecified Mills	1981	1548183
AD	363m NE	Unspecified Mills	1974	1548183
AD	363m NE	Unspecified Mills	1967	1548183
X	366m S	Railway Buildings	1955	1478763
AA	367m SW	Refuse Heap	1955	1494074
T	367m W	Unspecified Works	1967	1525598
AA	368m SW	Refuse Heap	1938	1479748
X	368m S	Railway Building	1967	1537325
AA	368m SW	Refuse Heap	1931	1475715
AA	368m SW	Refuse Heap	1931	1475715
AA	368m SW	Refuse Heap	1948	1479748
AC	368m N	Unspecified Mills	1988	1536561
AC	368m N	Unspecified Mills	1981	1536561
AC	368m N	Unspecified Mills	1974	1536561
AA	370m SW	Refuse Heap	1931	1475715
AA	370m SW	Refuse Heap	1905	1475715
X	375m S	Railway Buildings	1948	1478763
X	375m S	Railway Buildings	1931	1516514
X	375m S	Railway Buildings	1905	1516514
X	375m S	Railway Buildings	1892	1516514
AE	376m SE	Unspecified Commercial/Industrial	1948	1533932
AE	376m SE	Unspecified Commercial/Industrial	1931	1533200
AE	376m SE	Unspecified Covered Tank	1905	1450853
AE	381m SE	Unspecified Mills	1892	1419272



ID	Location	Land Use	Date	Group ID
AD	383m E	Unspecified Mills	1905	1519809
Y	386m SE	Cuttings	1931	1466068
Y	386m SE	Cuttings	1931	1466068
X	387m S	Railway Sidings	1931	1499833
X	387m S	Railway Sidings	1931	1499833
Y	387m SE	Cuttings	1988	1475539
Y	387m SE	Cuttings	1981	1475539
Y	387m SE	Cuttings	1974	1475539
Y	387m SE	Cuttings	1967	1475539
Y	387m SE	Cuttings	1955	1550503
Y	387m SE	Cuttings	1948	1524606
Y	387m SE	Cuttings	1931	1509843
Y	387m SE	Cuttings	1905	1494182
T	389m W	Unspecified Commercial/Industrial	1988	1485982
T	389m W	Unspecified Commercial/Industrial	1981	1485982
T	389m W	Unspecified Commercial/Industrial	1974	1485982
T	389m W	Unspecified Commercial/Industrial	1967	1485982
T	389m W	Unspecified Commercial/Industrial	1955	1485982
X	393m S	Railway Sidings	1938	1553870
T	400m W	Unspecified Tanks	1931	1469424
T	400m W	Unspecified Tanks	1931	1469424
T	402m W	Unspecified Tank	1988	1544748
T	402m W	Unspecified Tank	1981	1544748
T	402m W	Unspecified Tank	1974	1544748
T	402m W	Unspecified Tank	1967	1544748
T	402m W	Unspecified Tank	1955	1544748
T	402m W	Unspecified Tanks	1938	1527649
T	403m W	Unspecified Tank	1948	1503223



ID	Location	Land Use	Date	Group ID
T	403m W	Unspecified Tank	1931	1461699
AF	410m SW	Unspecified Heap	1967	1415246
T	411m W	Unspecified Tank	1948	1469445
T	411m W	Unspecified Tank	1931	1550613
T	411m W	Unspecified Tank	1905	1550613
T	411m W	Unspecified Tank	1892	1550613
AF	412m SW	Refuse Heap	1955	1546475
T	416m W	Unspecified Tank	1967	1462636
T	416m W	Unspecified Tank	1955	1462636
AG	418m NW	Electricity Transformer Station	1988	1467823
AG	418m NW	Electricity Transformer Station	1981	1467823
AG	418m NW	Electricity Transformer Station	1974	1467823
AF	423m SW	Refuse Heap	1948	1546475
AF	423m SW	Refuse Heap	1931	1512649
AF	423m SW	Refuse Heap	1938	1511445
X	424m SE	Railway Building	1955	1429149
AD	425m E	Unspecified Mills	1948	1540332
AD	425m E	Unspecified Mills	1931	1505871
AF	426m SW	Refuse Heap	1931	1510281
AF	426m SW	Refuse Heap	1931	1510281
AD	427m E	Unspecified Mills	1938	1537929
AD	428m E	Grove Mills	1931	1536606
AD	428m E	Grove Mills	1931	1536606
AD	428m E	Unspecified Mills	1955	1472278
AH	435m S	Unspecified Depot	1988	1428526
AH	441m S	Unspecified Ground Workings	1931	1534864
AH	441m S	Unspecified Ground Workings	1931	1534864
AI	442m W	Unspecified Depot	1988	1428524



ID	Location	Land Use	Date	Group ID
AJ	451m SE	Unspecified Heap	1988	1506281
AJ	455m SE	Unspecified Heap	1981	1516909
AJ	455m SE	Unspecified Heap	1974	1516909
AK	457m NE	Cemetery	1948	1496026
AK	457m NE	Cemetery	1931	1468622
AK	457m NE	Cemetery	1905	1467871
AK	457m NE	Cemetery	1892	1467871
AL	457m E	Mill Pond	1905	1485131
AL	457m E	Mill Pond	1892	1485131
AK	458m NE	Cemetery	1938	1544033
AK	462m NE	Cemetery	1931	1544033
AK	462m NE	Cemetery	1931	1544033
AK	465m NE	Cemetery	1988	1501023
AK	465m NE	Cemetery	1981	1501023
AK	465m NE	Cemetery	1974	1501023
AK	465m NE	Cemetery	1967	1501023
AK	465m NE	Cemetery	1955	1501023
AN	471m SE	Unspecified Commercial/Industrial	1948	1492224
AN	471m SE	Unspecified Commercial/Industrial	1931	1521749
AO	471m NW	Cuttings	1948	1467870
AO	471m NW	Cuttings	1931	1482170
AO	471m NW	Cuttings	1905	1499736
AI	472m W	Unspecified Commercial/Industrial	1905	1540854
AI	472m W	Unspecified Commercial/Industrial	1892	1540854
AP	473m NW	Cuttings	1931	1459989
AP	473m NW	Cuttings	1931	1484891
AP	473m NW	Cuttings	1938	1503596
AI	474m W	Unspecified Mills	1931	1517757



ID	Location	Land Use	Date	Group ID
AI	474m W	Unspecified Mills	1931	1517757
AP	477m NW	Cuttings	1955	1552291
AO	477m NW	Cuttings	1967	1476684
AI	477m W	Unspecified Commercial/Industrial	1988	1510453
AI	477m W	Unspecified Commercial/Industrial	1981	1510453
AI	477m W	Unspecified Commercial/Industrial	1974	1510453
AI	477m W	Unspecified Commercial/Industrial	1967	1510453
AR	477m SW	Unspecified Mills	1948	1514090
AR	477m SW	Unspecified Mills	1931	1482943
AR	477m SW	Unspecified Mills	1905	1482943
AR	477m SW	Unspecified Mills	1892	1482943
AI	478m W	Unspecified Mills	1938	1499170
AI	478m W	Unspecified Mills	1948	1529902
AI	478m W	Unspecified Mills	1931	1485495
AS	478m S	Dye Works	1892	1442646
AS	479m S	Unspecified Commercial/Industrial	1931	1485211
AS	479m S	Unspecified Commercial/Industrial	1931	1485211
AI	480m W	Unspecified Commercial/Industrial	1892	1542605
AS	480m S	Unspecified Mills	1905	1465215
AI	481m W	Unspecified Commercial/Industrial	1931	1540854
AI	481m W	Unspecified Commercial/Industrial	1931	1540854
AT	481m SW	Unspecified Mills	1967	1508093
AT	481m SW	Unspecified Mills	1955	1508093
AR	481m SW	Unspecified Mills	1931	1534742
AR	481m SW	Unspecified Mills	1931	1534742
AS	481m S	Unspecified Commercial/Industrial	1948	1460968
AS	481m S	Unspecified Commercial/Industrial	1931	1540277
AI	481m W	Unspecified Commercial/Industrial	1988	1508895



ID	Location	Land Use	Date	Group ID
AI	481m W	Unspecified Commercial/Industrial	1981	1508895
AI	481m W	Unspecified Commercial/Industrial	1974	1508895
AI	481m W	Unspecified Commercial/Industrial	1967	1488353
AI	481m W	Unspecified Mills	1955	1539278
AI	482m W	Unspecified Commercial/Industrial	1938	1509017
AI	489m W	Unspecified Commercial/Industrial	1905	1476981
AR	489m SW	Unspecified Mills	1938	1517096
AU	490m N	Unspecified Ground Workings	1981	1518187
AU	490m N	Unspecified Ground Workings	1974	1518187
AI	492m W	Gasometer	1905	1420677
AI	492m W	Unspecified Tank	1892	1464376
AI	493m W	Unspecified Tank	1967	1550185
AO	494m NW	Cuttings	1974	1543841
3	496m W	Unspecified Ground Workings	1892	1412351
AI	498m W	Unspecified Tank	1931	1467360
AI	498m W	Unspecified Tank	1931	1467360
AI	498m W	Unspecified Tank	1955	1550185
AI	498m W	Unspecified Tank	1938	1460248

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	109
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Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 27**

ID	Location	Land Use	Date	Group ID
A	48m NW	Unspecified Tank	1907	223744
A	77m NW	Unspecified Tank	1955	249537



ID	Location	Land Use	Date	Group ID
A	77m NW	Unspecified Tank	1967	249537
A	77m NW	Unspecified Tank	1955	249537
I	155m S	Unspecified Tank	1982	244319
I	155m S	Unspecified Tank	1967	246062
D	172m SW	Unspecified Tank	1972	245633
D	173m SW	Unspecified Tank	1983	245633
I	173m S	Unspecified Tank	1990	223741
D	178m SW	Tanks	1955	245122
I	178m S	Unspecified Tank	1967	246337
I	178m S	Unspecified Tank	1982	236532
D	178m SW	Tanks	1965	239794
D	178m SW	Tanks	1955	239794
K	188m SE	Unspecified Tank	1982	238650
K	189m SE	Unspecified Tank	1967	240433
E	189m E	Unspecified Tank	1907	223789
D	191m SW	Unspecified Tank	1983	239993
D	192m SW	Unspecified Tank	1972	239993
D	250m SW	Tanks	1933	245434
D	251m SW	Tanks	1922	244605
D	252m SW	Tanks	1933	245851
D	253m SW	Tanks	1933	247120
M	278m NW	Unspecified Tank	1894	223745
D	284m SW	Tanks	1922	230689
L	293m S	Tanks	1995	234606
L	294m S	Tanks	1965	234606
L	294m S	Tanks	1955	234606
L	294m S	Tanks	1972	234606
L	294m S	Tanks	1955	234606



ID	Location	Land Use	Date	Group ID
L	295m S	Tanks	1983	234606
L	295m S	Tanks	1988	234606
L	295m S	Tanks	1988	234606
D	301m SW	Tanks	1922	230691
M	305m NW	Unspecified Tank	1894	223784
D	306m SW	Tanks	1938	230687
F	308m NW	Unspecified Tank	1993	239108
D	308m SW	Tanks	1933	242630
D	308m SW	Tanks	1938	242630
D	309m SW	Tanks	1922	242630
F	310m NW	Unspecified Tank	1967	237353
D	317m W	Tanks	1933	236217
D	317m W	Tanks	1938	236217
F	327m NW	Tanks	1907	230688
F	333m NW	Unspecified Tank	1967	223742
D	334m SW	Unspecified Tank	1922	223740
2	346m NW	Unspecified Tank	1967	223783
D	351m SW	Unspecified Tank	1972	223736
F	353m NW	Tanks	1955	235625
F	353m NW	Tanks	1955	235625
T	388m W	Gas Holder Station	1993	233373
T	389m W	Gasholder Station	1967	250300
T	389m W	Gasholder Station	1955	250300
T	389m W	Gasholder Station	1955	249383
T	392m W	Gas Works	1922	233397
T	398m W	Gas Holder	1993	233033
T	398m W	Gasholder	1967	238167
T	398m W	Gasholder	1955	238167



ID	Location	Land Use	Date	Group ID
T	399m W	Gasholder	1955	244132
T	402m W	Unspecified Tank	1933	241115
T	402m W	Unspecified Tank	1938	241115
T	402m W	Gasometers	1922	229916
T	404m W	Settling Tanks	1972	236551
T	404m W	Settling Tanks	1983	236551
T	404m W	Settling Tanks	1988	236551
T	404m W	Settling Tanks	1988	236551
T	405m W	Tanks	1995	233837
T	406m W	Tanks	1955	233837
T	406m W	Tanks	1965	233837
T	406m W	Tanks	1955	233837
T	406m W	Tanks	1972	233837
T	406m W	Tanks	1983	233837
T	406m W	Tanks	1988	233837
T	406m W	Tanks	1988	233837
T	406m W	Gas Holder Station	1965	248348
T	406m W	Gas Holder Station	1955	248348
T	413m W	Gasholder	1965	245312
T	413m W	Gasholder	1955	245312
T	413m W	Gasholder	1955	248795
T	414m W	Settling Tanks	1995	237759
T	414m W	Settling Tanks	1983	234144
T	414m W	Settling Tanks	1988	234144
T	414m W	Settling Tanks	1988	234144
T	414m W	Settling Tanks	1972	237759
T	417m W	Unspecified Tank	1894	236916
T	417m W	Unspecified Tank	1907	236916



ID	Location	Land Use	Date	Group ID
T	417m W	Unspecified Tank	1933	236916
T	417m W	Unspecified Tank	1938	236916
T	419m W	Settling Tanks	1972	238711
AM	470m SW	Unspecified Tank	1995	244039
AM	471m SW	Unspecified Tank	1983	244039
AM	471m SW	Unspecified Tank	1988	244039
AM	471m SW	Unspecified Tank	1988	244039
AM	471m SW	Unspecified Tank	1972	244039
AI	475m W	Gas Holder Station	1955	233374
AI	475m W	Gasholder Station	1967	241611
AI	475m W	Gasholder Station	1955	243400
AI	479m W	Gas Works	1907	240973
AI	479m W	Gas Works	1922	240973
AI	479m W	Gas Works	1894	234403
AI	480m W	Gasholder Station	1956	243400
AI	480m W	Gasholder Station	1956	243400
AI	494m W	Gasholder	1956	245509
AI	494m W	Gasholder	1956	245509
AI	497m W	Unspecified Tank	1938	248008
AI	497m W	Gasometer	1922	245159
AI	498m W	Gasometer	1894	244742
AI	498m W	Gasometer	1907	244742
AI	498m W	Unspecified Tank	1933	248008

This data is sourced from Ordnance Survey / Groundsure.



2.3 Historical energy features

Records within 500m

87

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 27**

ID	Location	Land Use	Date	Group ID
B	65m S	Electricity Substation	1995	142081
B	65m S	Electricity Substation	1983	142081
B	65m S	Electricity Substation	1988	142081
B	66m S	Electricity Substation	1972	142081
C	93m E	Electricity Substation	1967	144485
C	93m E	Electricity Substation	1996	144485
C	94m E	Electricity Substation	1979	144485
C	94m E	Electricity Substation	1988	144485
C	94m E	Electricity Substation	1988	144485
C	94m E	Electricity Substation	1992	144485
G	150m SW	Electricity Substation	1972	136611
G	151m W	Electricity Substation	1983	136611
I	158m S	Electricity Substation	1993	132392
I	161m S	Electricity Substation	1955	144137
I	163m S	Electricity Substation	1982	137573
I	163m S	Electricity Substation	1990	137573
I	163m S	Electricity Substation	1967	137573
I	164m S	Electricity Substation	1955	137573
E	195m E	Electricity Substation	1967	142269
E	195m E	Electricity Substation	1955	142269
E	196m E	Electricity Substation	1955	134551
E	197m E	Electricity Substation	1979	142269
E	197m E	Electricity Substation	1988	142269



ID	Location	Land Use	Date	Group ID
E	197m E	Electricity Substation	1988	142269
E	197m E	Electricity Substation	1992	142269
D	274m SW	Electricity Substation	1983	135973
D	274m SW	Electricity Substation	1988	135973
D	274m SW	Electricity Substation	1988	135973
D	275m SW	Electricity Substation	1955	137686
D	275m SW	Electricity Substation	1955	137686
R	276m NE	Electricity Substation	1988	134352
R	276m NE	Electricity Substation	1988	134352
D	277m SW	Electricity Substation	1972	139400
R	279m NE	Electricity Substation	1996	134352
D	286m SW	Electricity Substation	1995	129164
R	306m NE	Electricity Substation	1967	145722
R	307m NE	Electricity Substation	1979	145722
V	312m E	Electricity Substation	1982	142353
V	312m E	Electricity Substation	1990	142353
V	312m E	Electricity Substation	1993	142353
V	313m E	Electricity Substation	1967	142353
AC	348m N	Electricity Substation	1993	134539
AC	351m N	Electricity Substation	1955	141464
AC	351m N	Electricity Substation	1967	141464
AC	351m N	Electricity Substation	1955	141464
T	388m W	Gas Holder Station	1993	132074
T	389m W	Gasholder Station	1967	142021
T	389m W	Gasholder Station	1955	142021
T	389m W	Gasholder Station	1955	135163
T	392m W	Gas Works	1922	132102
T	398m W	Gas Holder	1993	131995



ID	Location	Land Use	Date	Group ID
T	398m W	Gasholder	1967	140966
T	398m W	Gasholder	1955	140966
T	399m W	Gasholder	1955	138751
T	402m W	Gasometers	1922	131653
T	406m W	Gas Holder Station	1965	142057
T	406m W	Gas Holder Station	1955	142057
AG	412m NW	Electricity Substation	1993	129162
T	413m W	Gasholder	1965	146512
T	413m W	Gasholder	1955	146512
T	413m W	Gasholder	1955	135866
T	437m W	Electricity Substation	1995	141862
T	437m W	Electricity Substation	1955	141862
T	438m W	Electricity Substation	1972	141862
T	438m W	Electricity Substation	1983	134692
T	438m W	Electricity Substation	1988	134692
T	438m W	Electricity Substation	1988	134692
T	438m W	Electricity Substation	1955	132380
AI	475m W	Gas Holder Station	1955	132075
AI	475m W	Gasholder Station	1967	145396
AI	475m W	Gasholder Station	1955	146780
AI	479m W	Gas Works	1907	141309
AI	479m W	Gas Works	1922	141309
AI	479m W	Gas Works	1894	136126
AI	480m W	Gasholder Station	1956	146780
AI	480m W	Gasholder Station	1956	146780
AI	485m W	Electricity Substation	1956	136883
AI	486m W	Electricity Substation	1970	136883
AI	486m W	Electricity Substation	1956	136883



ID	Location	Land Use	Date	Group ID
AI	486m W	Electricity Substation	1985	136883
AI	486m W	Electricity Substation	1991	136883
AI	486m W	Electricity Substation	1996	136883
AI	494m W	Gasholder	1956	143257
AI	494m W	Gasholder	1956	143257
AI	497m W	Gasometer	1922	142503
AI	498m W	Gasometer	1894	137436
AI	498m W	Gasometer	1907	137436

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

19

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 27**

ID	Location	Land Use	Date	Group ID
J	163m SE	Garage	1982	45207
J	163m SE	Garage	1990	45207
J	163m SE	Garage	1967	45207
J	163m SE	Garage	1955	45207
J	164m SE	Garage	1993	43704

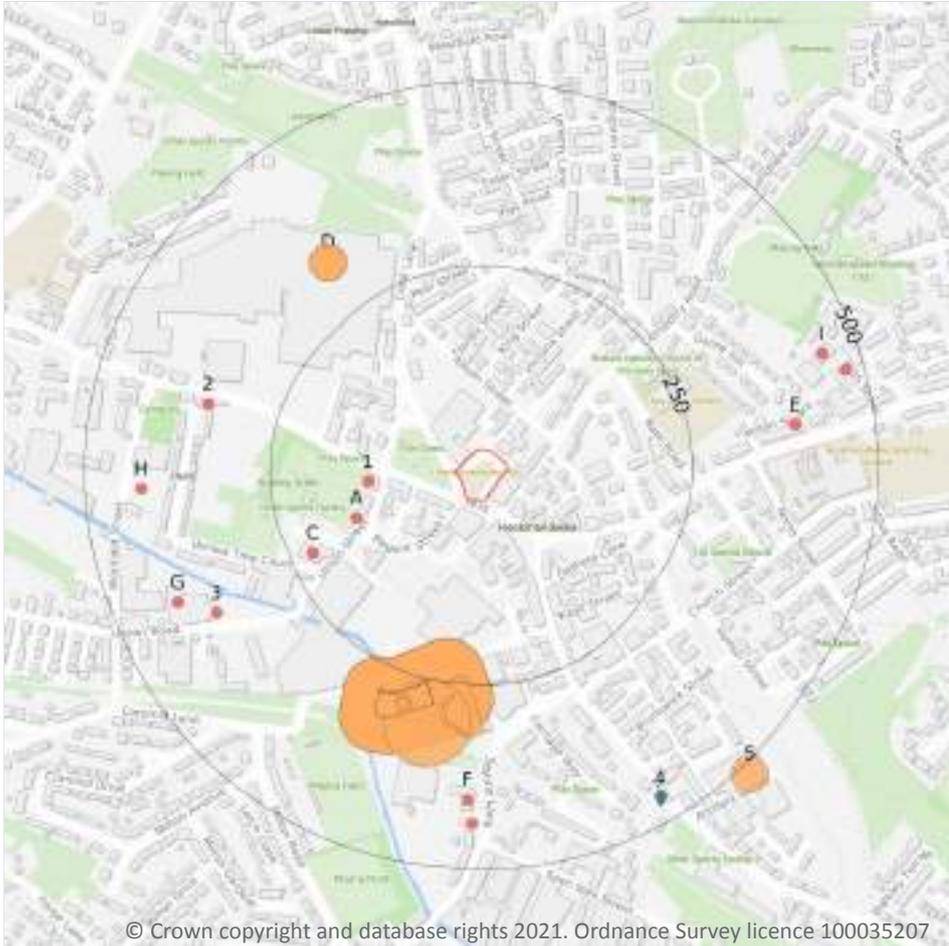


ID	Location	Land Use	Date	Group ID
J	164m SE	Garage	1955	45207
O	231m S	Garage	1955	45233
O	231m S	Garage	1955	45233
S	291m SE	Garage	1967	45944
S	291m SE	Garage	1982	45944
S	291m SE	Garage	1990	45944
S	293m SE	Garage	1993	45944
S	297m SE	Garage	1982	46435
S	297m SE	Garage	1990	46435
S	300m SE	Garage	1993	42205
AQ	477m W	Garage	1993	46691
AQ	478m W	Garage	1967	46691
AQ	478m W	Garage	1955	46691
AQ	496m W	Garage	1955	46691

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



3.1 Active or recent landfill

Records within 500m

0

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

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

3.2 Historical landfill (BGS records)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m

0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m

0

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

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

3.5 Historical waste sites

Records within 500m

16

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 50**

ID	Location	Address	Further Details	Date
B	190m S	Site Address: N/A	Type of Site: Refuse Destructor (B) Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1948
B	190m S	Site Address: N/A	Type of Site: Refuse Destructor (B) Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1931
B	190m S	Site Address: N/A	Type of Site: Refuse Destructor (B) Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1905

ID	Location	Address	Further Details	Date
B	237m S	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1951
B	248m S	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1955
B	249m S	Site Address: N/A	Type of Site: Refuse Destructor (B) Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1931
B	253m S	Site Address: N/A	Type of Site: U.D. Council Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1933
B	253m S	Site Address: N/A	Type of Site: U.D. Council Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1938
B	254m S	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1907
B	254m S	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1922
B	266m S	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	1955
B	277m S	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1955



ID	Location	Address	Further Details	Date
B	281m S	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1938
D	299m NW	Site Address: Flush Mills, 17, Westgate, HECKMONDWIKE, West Yorkshire, WF16 0EN	Type of Site: Waste Transfer Station Planning application reference: 2010/62/93074/E0 Description: Scheme comprises change of use to approved authorised treatment facility for recycling of waste electrical and electronic equipment (waste transfer). An application (ref: 2010/62/93074/E0) for detailed planning permission was granted by Kirklees B.C. A d etailed planning application has been granted. Data source: Historic Planning Application Data Type: Point	24/07/2011
D	299m NW	Site Address: Flush Mills, 113-115, Westgate, HECKMONDWIKE, West Yorkshire, WF16 0EN	Type of Site: Waste Transfer Station Planning application reference: 2011/62/92088/E Description: Scheme comprises change of use to approved authorized treatment facility (aatf) for preparing re-use and recycling of waste electrical and electronic equipment (weee) and waste transfer of plastics and aluminium. An application (ref: 2011/62/92088/E) r detailed planning permission was submitted to Kirklees B.C. A detailed planning application has been submitted. Data source: Historic Planning Application Data Type: Point	05/03/2012
5	489m SE	Site Address: Moorbank Mills, 1 Artillery Street, HECKMONDWIKE, West Yorkshire, WF16 0NT	Type of Site: Recycling Unit Planning application reference: 2008/62/92761/E0 Description: Scheme comprises use of industrial unit for processing & recycling of plastics and cardboard. An application (ref: 2008/62/92761/E0) for detailed planning permission was refused by Kirklees B.C. A detailed planning application has been refused. Data source: Historic Planning Application Data Type: Point	-

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



3.6 Licensed waste sites

Records within 500m

1

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

Features are displayed on the Waste and landfill map on **page 50**

ID	Location	Details		
4	468m SE	Site Name: Heckmondwike Commercial Spares Site Address: 10, Wakley Lane, Heckmondwike, West Yorkshire, WF16 0NL Correspondence Address: -	Type of Site: Metal Recycling Site (Vehicle Dismantler) Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MAN001 EPR reference: EA/EPR/KP3095ZF/A001 Operator: M Andrews Waste Management licence No: 61019 Annual Tonnage: 4500	Issue Date: 19/07/1996 Effective Date: - Modified:: - Surrendered Date: - Expiry Date: 16/05/2011 Cancelled Date: - Status: Revoked

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

3.7 Waste exemptions

Records within 500m

25

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 50**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	120m W	Flush Mills, Westgate, Heckmondwike, WF16 0EN	WEX151749	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
A	148m SW	Bridlington Medical Centre Station Avenue BRIDLINGTON North Humberside YO16 4LZ	EPR/BH0371V Q/A001	Treating waste exemption	Non-Agricultural Waste Only	Sorting and de-naturing of controlled drugs for disposal
A	148m SW	16 Union Street HECKMONDWIKE West Yorkshire WF16 0HH	EPR/PH0371V Z/A001	Treating waste exemption	Non-Agricultural Waste Only	Sorting and de-naturing of controlled drugs for disposal
C	220m W	16, UNION STREET, HECKMONDWIKE, WF16 0HH	WEX201129	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal



ID	Location	Site	Reference	Category	Sub-Category	Description
C	220m W	16, UNION STREET, HECKMONDWIKE, WF16 0HH	WEX066116	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
C	220m W	16, UNION STREET, HECKMONDWIKE, WF16 0HH	WEX044375	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
2	346m W	Autoneum GB Ltd, Flush Mills, Westgate, Heckmondwike, WF16 0EW	WEX079609	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
3	372m SW	UnitD Crystal Works Union Road Liversedge West Yorkshire WF15 7JE	EPR/SF0407VR /A001	Treating waste exemption	Non-Agricultural Waste Only	Preparatory treatments (baling, sorting, shredding etc)
E	392m E	ADC Property Solutions Ltd, Unit B Grove Mills, Off High Street, Heckmondwike, WF16 0AD	WEX124764	Storing waste exemption	Not on a farm	Storage of waste in secure containers
E	392m E	ADC Property Solutions Ltd, Unit B Grove Mills, Off High Street, Heckmondwike, WF16 0AD	WEX124764	Treating waste exemption	Not on a farm	Sorting mixed waste
E	392m E	UNIT 7, Grove Mills, Heckmond Wike, Wakefield, WF16 0AD	WEX127982	Storing waste exemption	Not on a farm	Storage of waste in a secure place
E	392m E	UNIT 7, Grove Mills, Heckmond Wike, Wakefield, WF16 0AD	WEX127982	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
F	408m S	STATION LANE, HECKMONDWIKE, WF16 0NF	WEX089645	Storing waste exemption	Not on a farm	Storage of waste in a secure place
F	408m S	STATION LANE, HECKMONDWIKE, WF16 0NF	WEX089645	Treating waste exemption	Not on a farm	Sorting mixed waste
F	408m S	STATION LANE, HECKMONDWIKE, WF16 0NF	WEX089645	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
G	414m W	CRYSTAL WORKS, UNIT D, UNION ROAD, LIVERSEDGE, WF15 7JE	WEX257653	Storing waste exemption	Not on a farm	Storage of waste in a secure place
G	414m W	CRYSTAL WORKS, UNIT D, UNION ROAD, LIVERSEDGE, WF15 7JE	WEX257653	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)

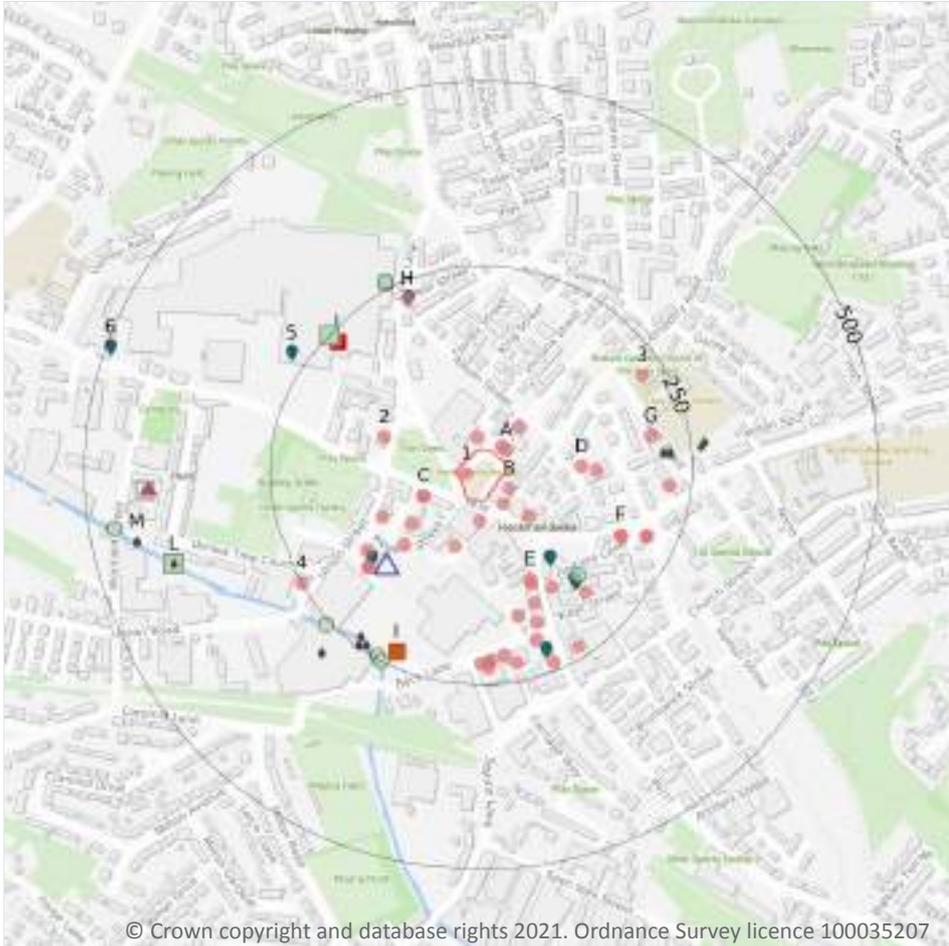


ID	Location	Site	Reference	Category	Sub-Category	Description
G	414m W	CRYSTAL WORKS, UNIT D, UNION ROAD, LIVERSEDGE, WF15 7JE	WEX115360	Storing waste exemption	Not on a farm	Storage of waste in a secure place
G	414m W	CRYSTAL WORKS, UNIT D, UNION ROAD, LIVERSEDGE, WF15 7JE	WEX115360	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
H	424m W	36 Wormald Street LIVERSEDGE West Yorkshire WF15 6BE	EPR/UF0734Q R/A001	Treating waste exemption	Non-Agricultural Waste Only	Screening and blending of waste
H	424m W	36 Wormald Street LIVERSEDGE West Yorkshire WF15 6BE	EPR/UF0734Q R/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction
F	439m S	ADMINISTRATION CENTRE STATION LANE HECKMONDWIKE WF16 0NF	EPR/ME5282Q U/A001	Disposing of waste exemption	Non-Agricultural Waste Only	Burning waste at a port under a Plant Health notice
I	450m E	Unit 7 Grove Mills High Street HECKMONDWIKE West Yorkshire WF16 0AD	EPR/WF0401G D/A001	Storing waste exemption	Both agricultural and non- agricultural waste	Storage of waste in a secure place
I	450m E	Unit 7 Grove Mills High Street HECKMONDWIKE West Yorkshire WF16 0AD	EPR/WF0401G D/A001	Treating waste exemption	Both agricultural and non- agricultural waste	Preparatory treatments (baling, sorting, shredding etc)
I	474m E	Unit B Grove Mills Off High Street Dewsbury WF16 0AD	EPR/UF0103XT /A001	Treating waste exemption	Non-Agricultural Waste Only	Sorting mixed waste

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



4 Current industrial land use



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4.1 Recent industrial land uses

Records within 250m

46

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 57**

ID	Location	Company	Address	Activity	Category
1	On site	Bus Station	West Yorkshire, WF16	Bus and Coach Stations, Depots and Companies	Public Transport, Stations and Infrastructure
A	14m NE	William K McQuinn	8, George Street, Heckmondwike, West Yorkshire, WF16 9QP	Vehicle Repair, Testing and Servicing	Repair and Servicing

ID	Location	Company	Address	Activity	Category
A	14m NE	Works	West Yorkshire, WF16	Unspecified Works Or Factories	Industrial Features
A	17m N	Electricity Sub Station	West Yorkshire, WF16	Electrical Features	Infrastructure and Facilities
B	18m SE	L A Design & Print Ltd	9-11, Cemetery Road, Heckmondwike, West Yorkshire, WF16 9QS	Clothing, Components and Accessories	Consumer Products
B	23m SE	Sound & Vision	70, Market Place, Heckmondwike, West Yorkshire, WF16 OHS	Electrical Equipment Repair and Servicing	Repair and Servicing
B	28m S	N H S Wristbands	95-99, Market Place, Heckmondwike, West Yorkshire, WF16 OHB	Special Purpose Machinery and Equipment	Industrial Products
A	48m NE	Works	West Yorkshire, WF16	Unspecified Works Or Factories	Industrial Features
C	54m SW	Nicola's Sweets & Treats	19, Westgate, Town Centre, Heckmondwike, West Yorkshire, WF16 OHE	Baking and Confectionery	Foodstuffs
C	54m SW	Cakes & Occasions	19, Westgate, Heckmondwike, West Yorkshire, WF16 OHE	Food and Beverage Industry Machinery	Industrial Products
B	61m SE	Fone Zone	64, Market Place, Heckmondwike, West Yorkshire, WF16 OHX	Electrical Equipment Repair and Servicing	Repair and Servicing
B	68m S	Electricity Sub Station	West Yorkshire, WF16	Electrical Features	Infrastructure and Facilities
C	81m SW	P T C Auto Centre	9, Queen Street, Heckmondwike, West Yorkshire, WF16 OHF	Vehicle Repair, Testing and Servicing	Repair and Servicing
D	101m E	Electricity Sub Station	West Yorkshire, WF16	Electrical Features	Infrastructure and Facilities
C	105m SW	Ptc Auto Centre	11, Queen Street, Heckmondwike, West Yorkshire, WF16 OHF	Vehicle Repair, Testing and Servicing	Repair and Servicing
2	107m NW	Greenside Motors	5, Greenside, Town Centre, Heckmondwike, West Yorkshire, WF16 9QD	Vehicle Repair, Testing and Servicing	Repair and Servicing
C	116m W	Electricity Sub Station	West Yorkshire, WF16	Electrical Features	Infrastructure and Facilities
D	121m E	Telephone Exchange	West Yorkshire, WF16	Telecommunications Features	Infrastructure and Facilities
E	122m SE	Mobiles 4 U	49, Market Street, Heckmondwike, West Yorkshire, WF16 OEU	Electrical Equipment Repair and Servicing	Repair and Servicing



ID	Location	Company	Address	Activity	Category
E	127m SE	Road Runner Airport Travel	47, Market Street, Heckmondwike, West Yorkshire, WF16 0EU	Airlines and Airline Services	Transport, Storage and Delivery
E	148m SE	Bed Kingdom	2a, Oldfield Lane, Heckmondwike, West Yorkshire, WF16	Beds and Bedding	Consumer Products
C	151m SW	Morrisons Heckmondwike	17, Union Street, Heckmondwike, West Yorkshire, WF16 0HL	Petrol and Fuel Stations	Road and Rail
E	155m SE	Studio Yooa	35, Market Street, Heckmondwike, West Yorkshire, WF16 0EU	Clothing, Components and Accessories	Consumer Products
C	162m SW	Morrisons Petrol Station	17, Union Street, Heckmondwike, West Yorkshire, WF16 0HL	Petrol and Fuel Stations	Road and Rail
C	162m SW	Morrisons Car Wash	17, Union Street, Heckmondwike, West Yorkshire, WF16 0HD	Vehicle Cleaning Services	Personal, Consumer and Other Services
E	164m S	Electricity Sub Station	West Yorkshire, WF16	Electrical Features	Infrastructure and Facilities
F	177m SE	North Account Book Manufacturing Co	23, Oldfield Lane, Heckmondwike, West Yorkshire, WF16 0JE	Published Goods	Industrial Products
E	179m SE	Prinktoner Ltd	25, Market Street, Heckmondwike, West Yorkshire, WF16 0EU	Electrical Equipment Repair and Servicing	Repair and Servicing
F	181m SE	Works	West Yorkshire, WF16	Unspecified Works Or Factories	Industrial Features
E	183m SE	Warehouse	West Yorkshire, WF16	Container and Storage	Transport, Storage and Delivery
G	199m E	Chimney	West Yorkshire, WF16	Chimneys	Industrial Features
E	200m S	Beck Lane Motors	1, Beck Lane, Heckmondwike, West Yorkshire, WF16 0JZ	Vehicle Repair, Testing and Servicing	Repair and Servicing
F	209m SE	A R Autos	42, Oldfield Lane, Heckmondwike, West Yorkshire, WF16 0JD	Vehicle Repair, Testing and Servicing	Repair and Servicing
F	209m SE	Heckmondwike Tyres	42, Oldfield Lane, Heckmondwike, West Yorkshire, WF16 0JD	Vehicle Parts and Accessories	Motoring
E	211m S	Factory	West Yorkshire, WF16	Unspecified Works Or Factories	Industrial Features



ID	Location	Company	Address	Activity	Category
E	219m S	Saw Mill	West Yorkshire, WF16	Wood Products Including Charcoal, Paper, Card and Board	Industrial Products
E	219m S	Bed Experts Ltd	Beck Lane, Heckmondwike, West Yorkshire, WF16 0JZ	Beds and Bedding	Consumer Products
G	220m E	S A M Graphic Engineers	Bath Court, Bath Road, Heckmondwike, West Yorkshire, WF16 9EA	Printing Related Machinery	Industrial Products
3	220m NE	Electricity Sub Station	West Yorkshire, WF16	Electrical Features	Infrastructure and Facilities
E	221m S	Factory	West Yorkshire, WF16	Unspecified Works Or Factories	Industrial Features
E	224m S	Moby Foods Ltd	Beck Lane, Heckmondwike, West Yorkshire, WF16 0JZ	Catering and Non Specific Food Products	Foodstuffs
H	227m NW	G N Motors	Cook Lane, Heckmondwike, West Yorkshire, WF16 9JG	Vehicle Repair, Testing and Servicing	Repair and Servicing
E	227m S	Seddon Manufacturing Ltd	Swallow Street, Heckmondwike, West Yorkshire, WF16 0LA	Luggage, Bags, Umbrellas and Travel Accessories	Consumer Products
E	235m SE	Depot	West Yorkshire, WF16	Container and Storage	Transport, Storage and Delivery
E	238m SE	Atom Display	13a, Market Street, Heckmondwike, West Yorkshire, WF16 0JY	Signs	Industrial Products
4	250m SW	Warehouse	West Yorkshire, WF16	Container and Storage	Transport, Storage and Delivery

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m

1

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 57**

ID	Location	Company	Address	LPG	Status
C	141m SW	MORRISONS	17, Union Street, Heckmondwike, West Yorkshire, WF16 0HL	No	Open

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 57**

ID	Location	Company	Address	Operational status	Tier
K	395m W	British Gas	British Gas, Wormald Street, Liversedge	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

2

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 57**

ID	Location	Details	
K	415m W	Application reference number: 2000/91097 Application status: Approved Application date: 03/04/2000 Address: Transco PLC, Heckmondwike Holder Station, Wormald Street, Heckmondwike, West Yorkshire, England, WF16 0ER	Details: Continuation of consent for fixed and piped distribution of natural gas. Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
K	415m W	Application reference number: 92/04974 Application status: Historical Consent Application date: 27/10/1992 Address: British Gas Plc, North Eastern, Wormald Street, Heckmondwike, WF16 9FB	Details: Deemed hazardous substances consent for fixed storage and piped distribution of natural gas 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

3

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 57**

ID	Location	Details	
I	230m SW	Operator: Stonehouse Battye Ltd Address: Flush Mills, Heckmondwike, West Yorkshire, WF16 0EP Process: Coating Processes And Printing Permit Number: AU7567	Original Permit Number: IPCAPP Date Approved: 29-8-1996 Effective Date: 1-9-1996 Status: Superseded By Variation
I	230m SW	Operator: Stonehouse Battye Ltd Address: Flush Mills, Heckmondwike, West Yorkshire, WF16 0EP Process: Coating Processes And Printing Permit Number: BD4589	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation



ID	Location	Details	
I	230m SW	Operator: Stonehouse Battye Ltd Address: Flush Mills, Heckmondwike, West Yorkshire, WF16 0EP Process: Coating Processes And Printing Permit Number: BH5331	Original Permit Number: IPCMINVAR Date Approved: 31-3-2000 Effective Date: 1-4-2000 Status: Revoked

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	1
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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 57**

ID	Location	Details	
E	159m SE	Operator: OWENS CORNING VEIL UK LTD Installation Name: OWEN CORNING VEIL (UK) LTD Process: GLASS AND GLASS FIBRE; GLASS FIBRE MANUFACTURE Permit Number: BL1576IT Original Permit Number: BL1576IT	EPR Reference: - Issue Date: 01/04/2003 Effective Date: 04/04/2003 Last date noted as effective: 01/01/2014 Status: EFFECTIVE

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

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

Records within 500m	8
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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 57**

ID	Location	Address	Details	
E	117m SE	600 Lathes, Po Box 20, Union St, Heckmondwyke, WF16 0HN	Process: Coating Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

ID	Location	Address	Details	
C	151m SW	Wm Morrisons, 17 Union Street, Heckmondwike, WF16 0HL	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
E	160m SE	Rieter Automotive Great Britain Ltd, Po Box 22, Flush Mills, Heckmondwike, WF16 0EP	Process: Di-isocyanate Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
E	164m SE	Rieter Automotive Carpets Ltd, Po Box 22, Heckmondwyke, WF16 0EP	Process: Coating Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
E	218m S	C W S Footwear Ltd/Goliath Footwear, Brewery St, Heckmondwike, WF16 0LP	Process: Di-isocyanate Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
H	226m NW	GN Motors, Cook Lane, Heckmondwike, WF16 9JG	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
5	273m NW	Firths Furnishings Ltd, Flush Hills, Flush, Heckmondwike, West Yorkshire, WF16 9PD	Process: Di-isocyanate Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
6	494m W	Flush (Dean) Garage, Wakefield Road, Liversedge, WF15 6AU	Process: Petrol Vapour Recovery Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.



4.12 Radioactive Substance Authorisations

Records within 500m

0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m

14

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 57**

ID	Location	Address	Details	
G	212m E	HECK CEMETERY ROAD NO 2 CSO, CEMETERY ROAD, OPPOSITE NO 47, HECKMONDWIKE, WEST YORKSHIRE, WF16 9EB	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA8229 Permit Version: 1 Receiving Water: TRIB OF RIVER SPEN	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 11/03/2004 Effective Date: 31/03/2004 Revocation Date: 25/10/2017
G	212m E	HIGH STREET HECKMONDWIKE NO 2 CSO, HIGH STREET, OPP WAR MEMORIAL, HECKMONDWIKE, WEST YORKSHIRE, WF16 0DZ	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA8209 Permit Version: 1 Receiving Water: TRIB OF RIVER SPEN	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 10/02/2004 Effective Date: 31/03/2004 Revocation Date: 25/10/2017
G	221m E	HIGH STREET HECKMONDWIKE NO 2 CSO, HIGH STREET, OPP WAR MEMORIAL, HECKMONDWIKE, WEST YORKSHIRE, WF16 0DZ	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA8209 Permit Version: 2 Receiving Water: CULVERTED TRIB OF SPEN RIVER	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 26/10/2017 Effective Date: 26/10/2017 Revocation Date: -
G	221m E	CEMETERY ROAD SSO, HECKMONDWIKE, NR HALIFAX	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: YWUCD2/52 Permit Version: 1 Receiving Water: RIVER CALDER	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 12/11/1997 Effective Date: 12/11/1997 Revocation Date: 20/05/2004



ID	Location	Address	Details	
G	221m E	HECK CEMETERY ROAD NO 2 CSO, CEMETERY ROAD, OPPOSITE NO 47, HECKMONDWIKE, WEST YORKSHIRE, WF16 9EB	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA8229 Permit Version: 2 Receiving Water: UNNA. CUL. TRIB. OF SPEN RIVER	Status: VARIED UNDER EPR 2010 Issue date: 26/10/2017 Effective Date: 26/10/2017 Revocation Date: -
I	236m SW	MORRISONS CAR PARK CSO, OFF UNION STREET, HECKMONDWIKE, WEST YORKSHIRE, WF16 0EQ	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: C5094 Permit Version: 3 Receiving Water: RIVER SPEN	Status: VARIED UNDER EPR 2010 Issue date: 21/02/2018 Effective Date: 31/03/2018 Revocation Date: -
I	241m SW	MORRISONS CAR PARK CSO, OFF UNION STREET, HECKMONDWIKE, WEST YORKSHIRE, WF16 0EQ	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: C5094 Permit Version: 1 Receiving Water: RIVER SPEN	Status: TRANSFERRED FROM COPA 1974 Issue date: 10/05/1988 Effective Date: 10/05/1988 Revocation Date: 29/02/2004
I	246m SW	MORRISONS CAR PARK CSO, OFF UNION STREET, HECKMONDWIKE, WEST YORKSHIRE, WF16 0EQ	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: C5094 Permit Version: 2 Receiving Water: RIVER SPEN	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 01/03/2004 Effective Date: 01/03/2004 Revocation Date: 30/03/2018
G	262m E	BATLEY ROAD NO 2 CSO, BATLEY ROAD, HOLLINBANK LANE JUNCTION, HECKMONDWIKE, WEST YORKSHIRE, WF16 9NA	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA8230 Permit Version: 1 Receiving Water: TRIBUTARY OF RIVER SPEN	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 31/03/2005 Effective Date: 31/03/2005 Revocation Date: 14/11/2017
G	268m E	BATLEY ROAD NO 2 CSO, BATLEY ROAD, HOLLINBANK LANE JUNCTION, HECKMONDWIKE, WEST YORKSHIRE, WF16 9NA	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA8230 Permit Version: 2 Receiving Water: TRIBUTARY OF RIVER SPEN	Status: VARIED UNDER EPR 2010 Issue date: 15/11/2017 Effective Date: 15/11/2017 Revocation Date: -
I	286m SW	EDDISON PLANT LTD, BACK LANE, HECKMONDWIKE, DEWSBURY, WEST YORKSHIRE	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: 3082 Permit Version: 1 Receiving Water: SPEN BECK	Status: REVOKED - UNSPECIFIED Issue date: 05/12/1976 Effective Date: 05/12/1976 Revocation Date: 22/07/1991



ID	Location	Address	Details	
I	286m SW	FLEXITALLIC LTD, OFF UNION STREET, HECKMONDWIKE, DEWSBURY, WEST YORKSHIRE	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: C4671 Permit Version: 1 Receiving Water: RIVER SPEN	Status: CONSENT REVOKED - DISCHARGE CEASED (WRA 91, SCHED 10 & 6) Issue date: 22/06/1987 Effective Date: 22/06/1987 Revocation Date: 31/07/1990
L	399m W	RIGBY MARYLAND (STAINLESS) LTD, CRYSTAL WORKS, UNION ROAD, HECKMONDWIKE	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: 3116 Permit Version: 1 Receiving Water: SPEN BECK	Status: REVOKED - UNSPECIFIED Issue date: 10/11/1975 Effective Date: 10/11/1975 Revocation Date: 23/11/2000
M	440m W	HECKMONDWIKE, WEST YORKS	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - WATER COMPANY (WTW) Permit Number: T/CHEM/53 Permit Version: 1 Receiving Water: TRIB OF SPEN	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 17/05/1963 Effective Date: 17/05/1963 Revocation Date: 09/09/2003

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

1

Discharges of Special Category Effluents to the public sewer.

Features are displayed on the Current industrial land use map on **page 57**

ID	Location	Address	Details	
I	230m SW	STONEHOUSE BATTYE LTD, FLUSH MILLS, FLUSH MILLS, HECKMONDWIKE, WEST YORKSHIRE, WF16 0EP	Permission reference: AN9182 Local Authority: KIRKLEES METROPOLITAN BOROUGH COUNCIL First received date: 01/06/2001	Last received date: 01/01/2018 Status: RECEIVED

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 57**

ID	Location	Name	Status	Receiving Water	Authorised Substances
I	230m SW	Stonehouse Battye Ltd, Heckmondwyke	Not Active	Calder, Spen River, River Ryburn	Hexachlorocyclohexane, Aldrin, Dieldrin, Endrin, Total DDT
J	237m NW	Stonehouse Battye Ltd, Heckmondwyke	Active	Dummy Site	Hexachlorocyclohexane, Dieldrin
L	400m W	Rigby Maryland, Heckmondwyke	Not Active	Calder, Spen, River Ryburn	Mercury (other), Cadmium

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

4.17 List 2 Dangerous Substances

Records within 500m

2

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 57**

ID	Location	Name	Status	Receiving Water	Authorised Substances
J	251m NW	Stonehouse Battye Ltd, Heckmondwyke	Not Active	Unknown	Permethrin
L	400m W	Rigby-maryland(stainless) Ltd	Not Active	Spen Beck	Chromium, Copper, Lead, Nickel, Zinc

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m

7

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 57**



ID	Location	Details	
E	161m SE	Incident Date: 03/02/2003 Incident Identification: 134590 Pollutant: Inorganic Chemicals/Products Pollutant Description: Other Inorganic Chemical or Product	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
I	246m SW	Incident Date: 09/06/2005 Incident Identification: 319087 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)
I	251m SW	Incident Date: 28/06/2006 Incident Identification: 411328 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
I	255m SW	Incident Date: 29/04/2002 Incident Identification: 75450 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Other General Biodegradable Material or Waste	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
H	257m NW	Incident Date: 02/07/2002 Incident Identification: 88817 Pollutant: Inorganic Chemicals/Products Pollutant Description: Acids	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
H	261m NW	Incident Date: 02/07/2002 Incident Identification: 88832 Pollutant: Inorganic Chemicals/Products Pollutant Description: Acids	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
M	466m W	Incident Date: 31/07/2001 Incident Identification: 20816 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: Category 3 (Minor) 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

0

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

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



4.20 Pollution inventory waste transfers

Records within 500m

0

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

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

4.21 Pollution inventory radioactive waste

Records within 500m

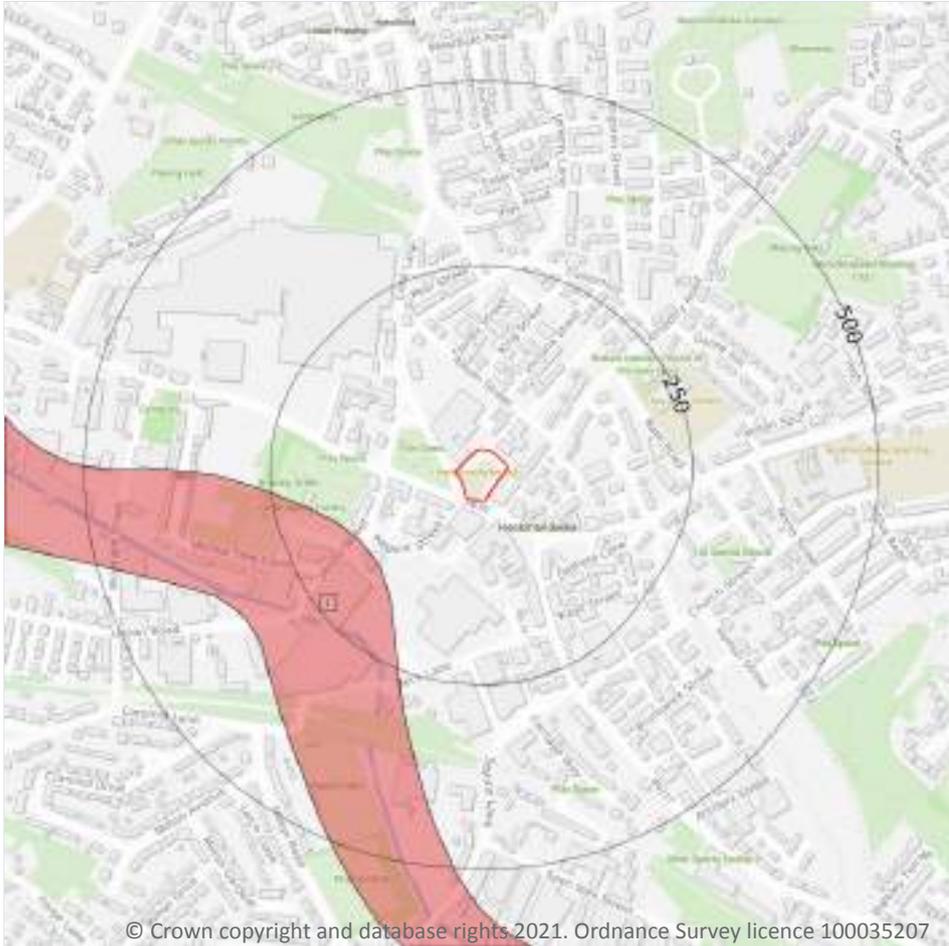
0

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

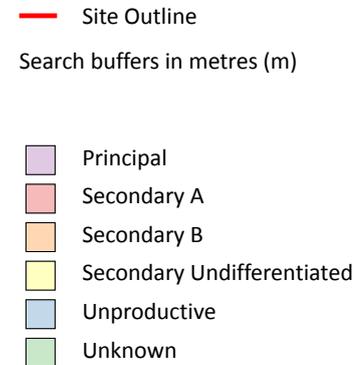
This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.



5 Hydrogeology - Superficial aquifer



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5.1 Superficial aquifer

Records within 500m

1

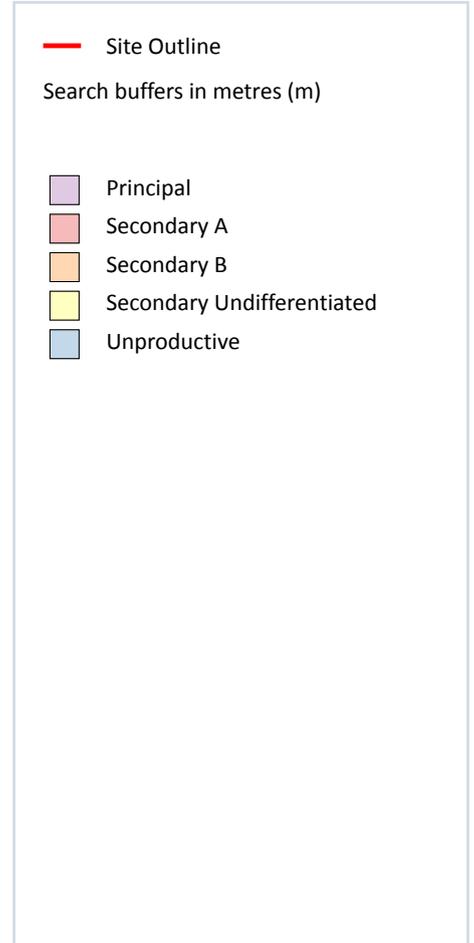
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 71**

ID	Location	Designation	Description
1	149m SW	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



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5.2 Bedrock aquifer

Records within 500m

1

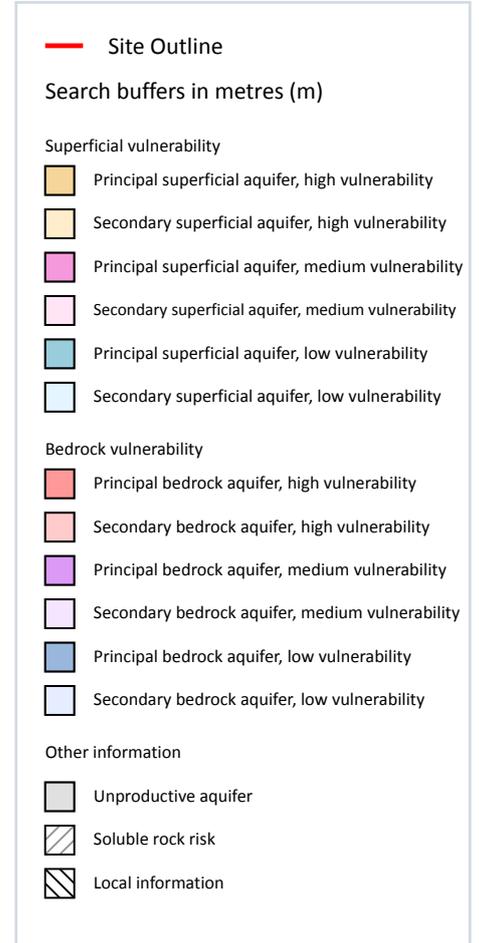
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 72**

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 73**

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
------------------------	----------

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
------------------------	----------

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



5.6 Groundwater abstractions

Records within 2000m

7

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 75**

ID	Location	Details	
-	1111m E	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: -
-	1111m E	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: -
-	1215m SE	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: -
-	1215m SE	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: -



ID	Location	Details	
-	1235m E	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: -
-	1235m E	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: -
-	1993m S	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: -

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

5.7 Surface water abstractions

Records within 2000m

0

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.

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

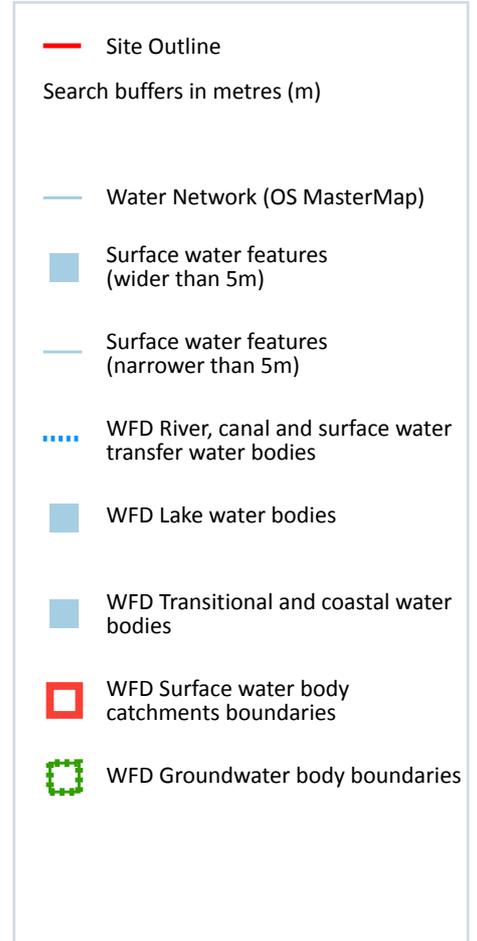
0

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



6.1 Water Network (OS MasterMap)

Records within 250m

1

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 79**

ID	Location	Type of water feature	Ground level	Permanence	Name
C	239m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Spenn River

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

1

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 79**

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 79**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River WB catchment	Spen Beck from Source to River Calder	GB104027062710	Lower Calder	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 79**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
1	239m SW	River	Spen Beck from Source to River Calder	GB104027062710	Moderate	Good	Moderate	2016

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

6.5 WFD Groundwater bodies

Records on site	1
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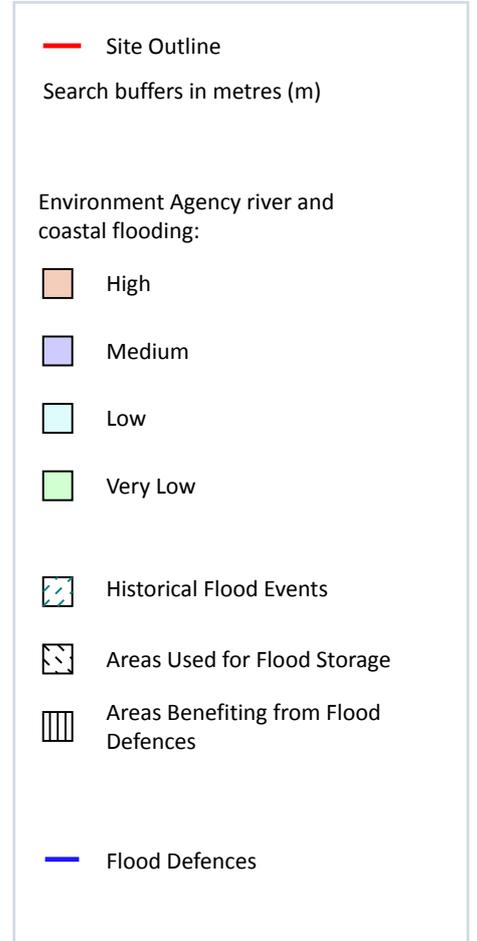
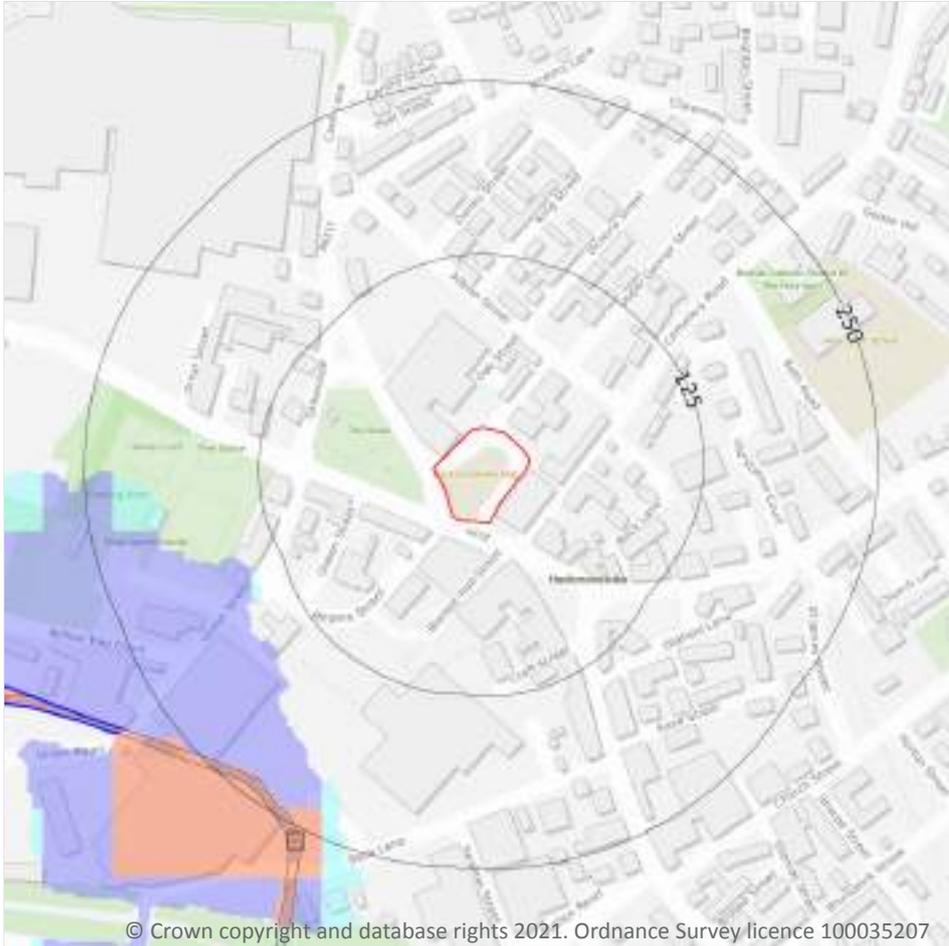
Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 79**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	Aire & Calder Carb Limestone / Millstone Grit / Coal Measures.	GB40402G700400	Poor	Poor	Good	2015

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 Sea (RoFRaS)

Records within 50m

0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; 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).

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

7.2 Historical Flood Events

Records within 250m

1

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.

Features are displayed on the River and coastal flooding map on **page 82**

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
A	235m SW	2020 February Flood Incident - Storm Ciara/dennis	2020-02-08 2020-03-19	Main river	Channel capacity exceeded (no raised defences)	Fluvial

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

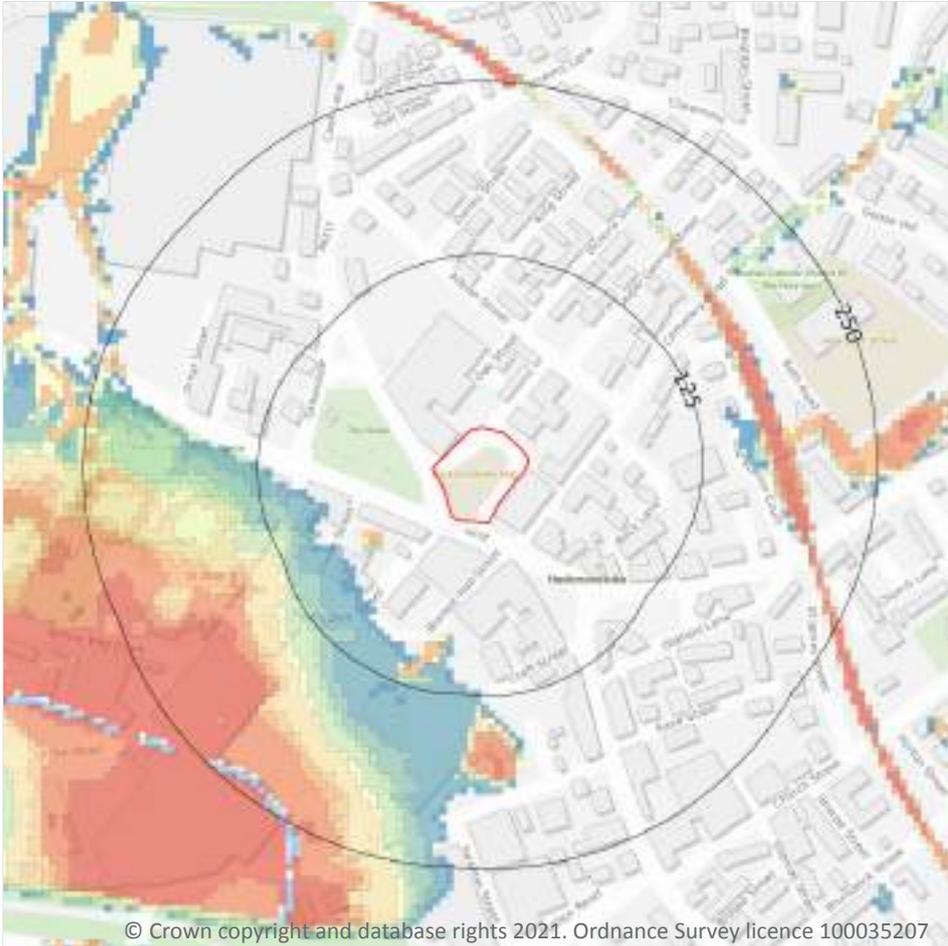
0

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 85**

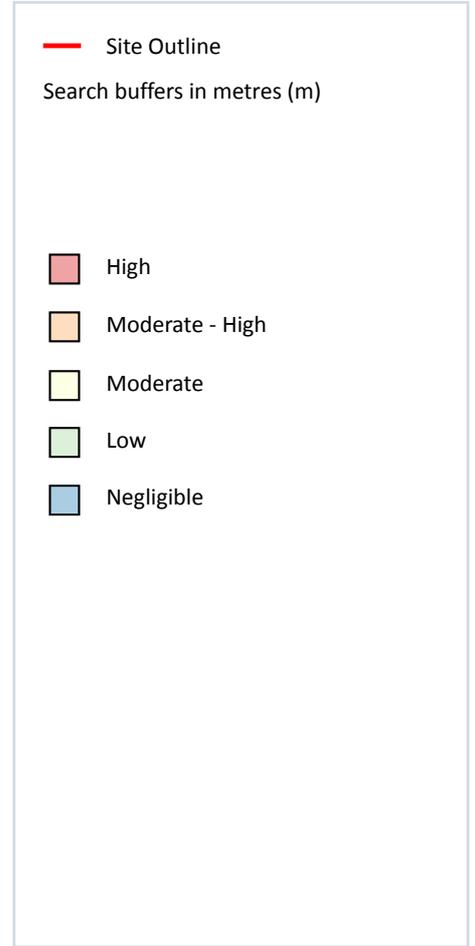
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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 Ambiental 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 87**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- 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

0

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.

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 88**

ID	Location	Name	Local Authority name
1	665m S	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	S271	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 93**

ID	Location	Type of developments requiring consultation
1	On site	Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 4000m². 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

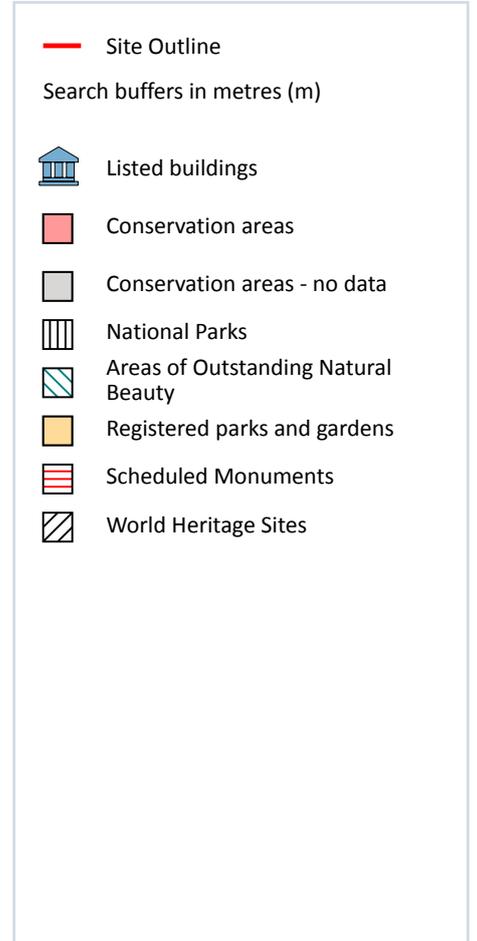
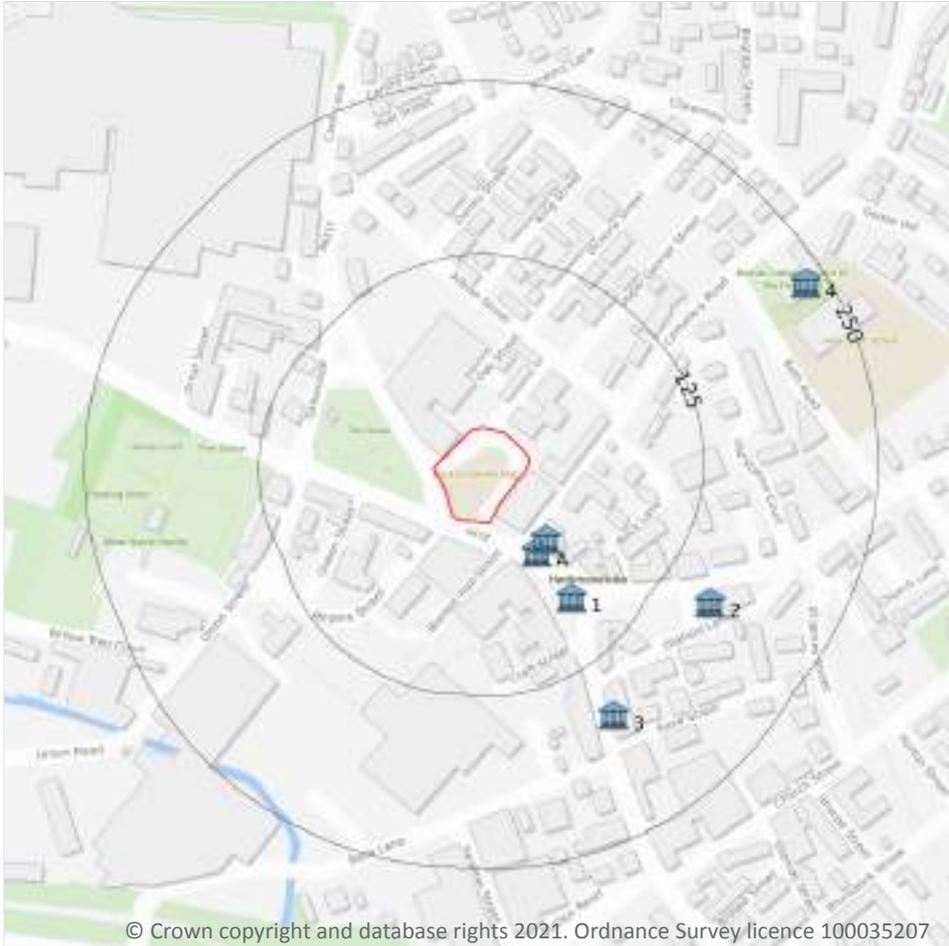
0

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

6

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.

Features are displayed on the Visual and cultural designations map on **page 95**

ID	Location	Name	Grade	Reference Number	Listed date
A	40m SE	Two K6 Telephone Kiosks Outside Midland Bank, Market Place, Heckmondwike, Kirklees, WF16	II	1135382	07/05/1992
A	41m SE	Midland Bank, Heckmondwike, Kirklees, WF16	II	1300271	13/01/1984
1	80m SE	Drinking Fountain, Heckmondwike, Kirklees, WF16	II	1134624	13/01/1984
2	163m SE	2 Cottages Adjoining Number 19, Heckmondwike, Kirklees, WF16	II	1313686	13/01/1984
3	165m SE	20 And 22, Market Street, Heckmondwike, Kirklees, WF16	II	1184181	13/01/1984



ID	Location	Name	Grade	Reference Number	Listed date
4	235m NE	Holy Spirit Roman Catholic Church, Heckmondwike, Kirklees, WF16	II	1379826	19/11/1999

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

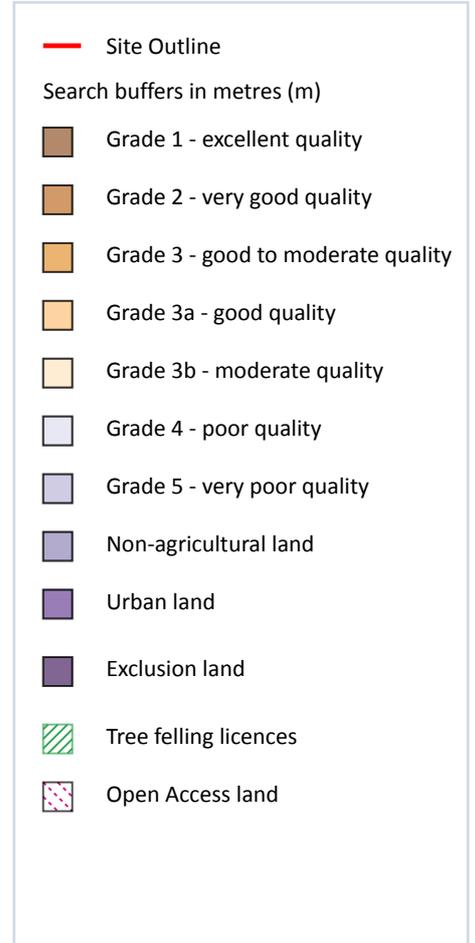
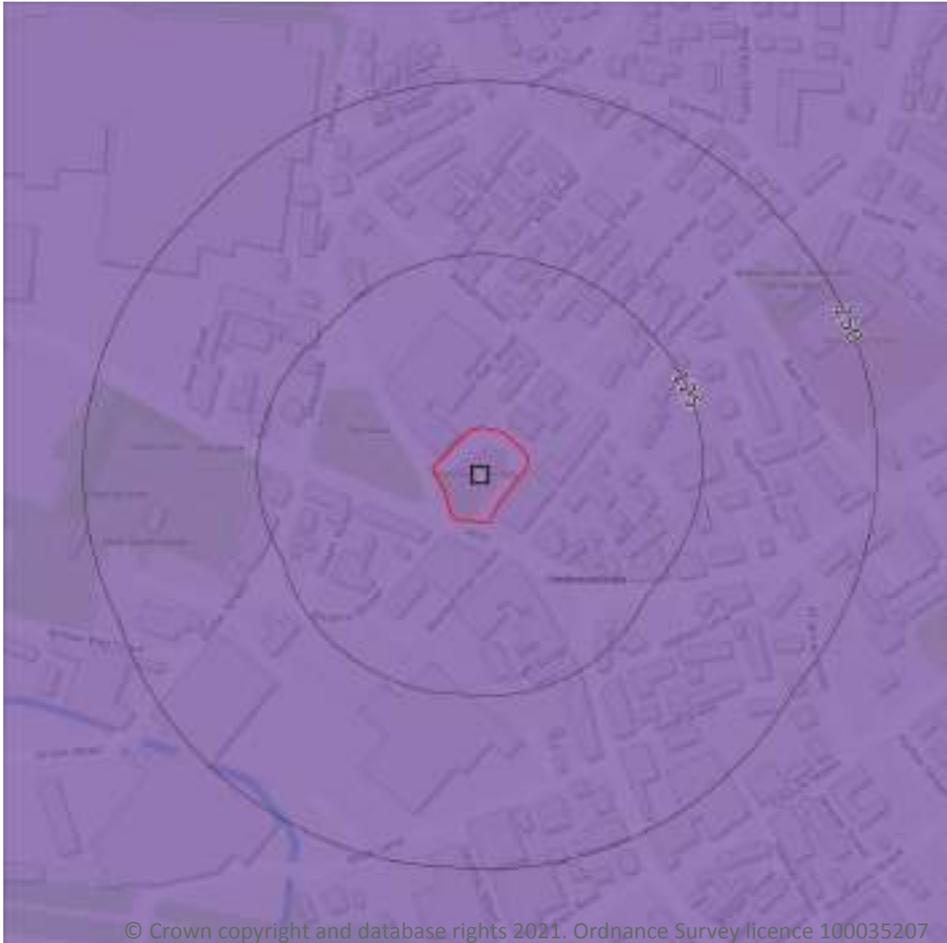
0

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



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12.1 Agricultural Land Classification

Records within 250m

1

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

Features are displayed on the Agricultural designations map on **page 98**

ID	Location	Classification	Description
1	On site	Urban	-

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m

0

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

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

12.3 Tree Felling Licences

Records within 250m

0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.



13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m

0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

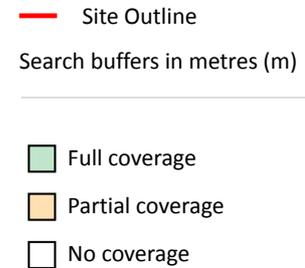
0

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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



14.1 10k Availability

Records within 500m

1

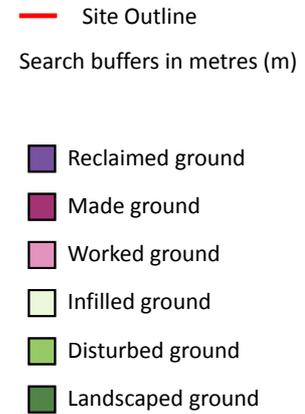
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 101**

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



14.2 Artificial and made ground (10k)

Records within 500m

11

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 102**

ID	Location	LEX Code	Description	Rock description
1	136m NE	WGR-VOID	Worked Ground (Undivided)	Void
A	212m E	WGR-VOID	Worked Ground (Undivided)	Void
2	233m SE	WGR-VOID	Worked Ground (Undivided)	Void
A	251m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

ID	Location	LEX Code	Description	Rock description
3	297m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	322m N	WGR-VOID	Worked Ground (Undivided)	Void
B	456m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
5	468m NW	WGR-VOID	Worked Ground (Undivided)	Void
6	481m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
B	493m SE	WGR-VOID	Worked Ground (Undivided)	Void
C	497m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



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

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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 104**

ID	Location	LEX Code	Description	Rock description
1	151m 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

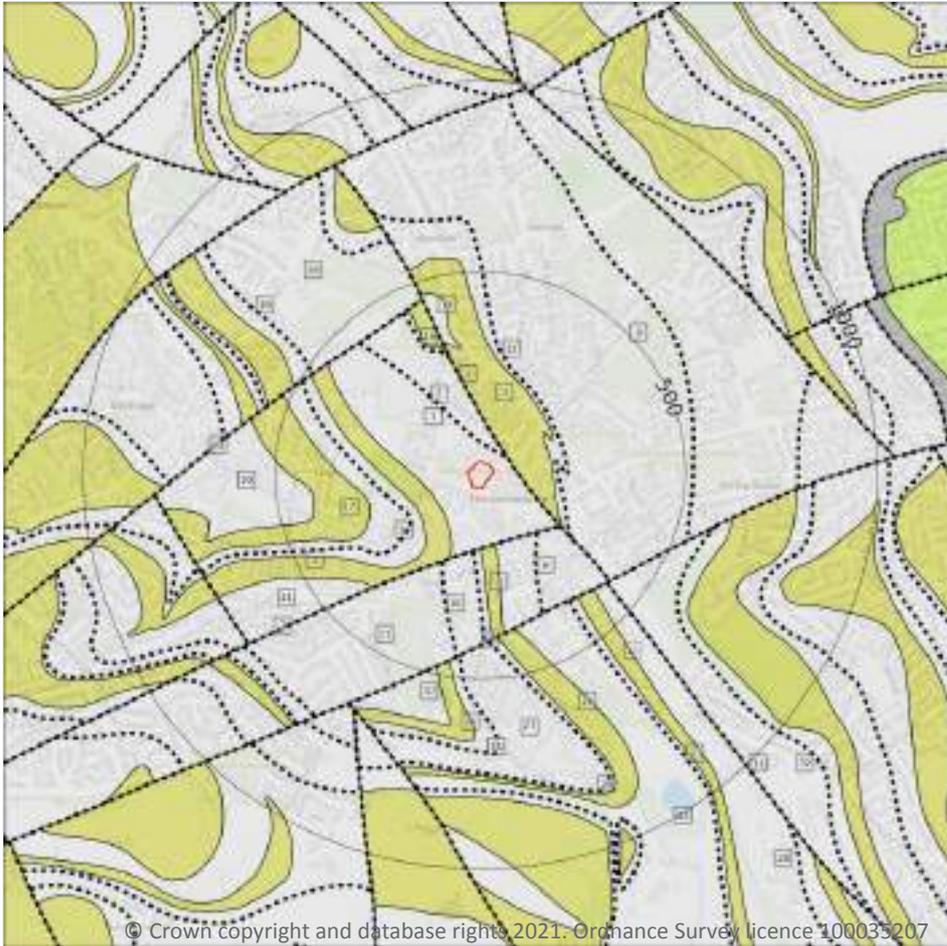
0

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

22

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 106**

ID	Location	LEX Code	Description	Rock age
1	On site	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
3	49m NE	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
5	99m SW	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age

ID	Location	LEX Code	Description	Rock age
6	150m S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
8	150m S	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
9	151m E	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
10	155m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
11	159m S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
17	267m W	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
19	302m N	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
20	308m N	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
22	364m SE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
24	371m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
25	378m SE	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
26	378m S	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
27	393m S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
28	394m SE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
30	407m W	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
32	408m SE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
34	434m NW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
36	457m S	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
37	479m 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

16

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 106**

ID	Location	Category	Description
2	39m NE	ROCK	Coal seam, inferred
4	49m NE	FAULT	Normal fault, inferred; downthrow not specified
7	150m S	FAULT	Normal fault, inferred; downthrow not specified
12	164m E	ROCK	Coal seam, inferred
13	167m S	ROCK	Coal seam, inferred
14	182m SE	ROCK	Coal seam, inferred
15	182m SW	ROCK	Coal seam, inferred
16	211m SW	ROCK	Coal seam, inferred
18	287m N	ROCK	Coal seam, inferred
21	364m SE	FAULT	Normal fault, inferred; downthrow not specified
23	371m SE	ROCK	Coal seam, inferred
29	402m S	ROCK	Coal seam, inferred
31	408m SE	FAULT	Normal fault, inferred; downthrow not specified
33	434m NW	FAULT	Normal fault, inferred; downthrow not specified
35	441m S	ROCK	Coal seam, inferred
38	480m NW	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 109**

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

This data is sourced from the British Geological Survey.



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



— Site Outline
Search buffers in metres (m)

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

15.2 Artificial and made ground (50k)

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 110**

ID	Location	LEX Code	Description	Rock description
1	355m S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



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

15.4 Superficial geology (50k)

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 112**

ID	Location	LEX Code	Description	Rock description
1	149m SW	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

22

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 114**

ID	Location	LEX Code	Description	Rock age
1	On site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
3	52m NE	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
5	98m SW	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
6	151m E	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
7	153m S	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
9	153m S	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
10	155m SW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
11	159m S	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
17	264m W	FHR-SDST	FALHOUSE ROCK - SANDSTONE	WESTPHALIAN
18	284m N	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
20	295m N	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
22	370m SE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
23	372m SW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
25	375m SE	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
26	382m S	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
27	398m SE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
28	403m W	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
30	407m S	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
31	413m SE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
34	428m NW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
36	458m S	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
38	480m S	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	1
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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	High	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	16
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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 114**

ID	Location	Category	Description
2	39m NE	ROCK	Coal seam, inferred
4	52m NE	FAULT	Fault, inferred
8	153m S	FAULT	Fault, inferred
12	168m S	ROCK	Coal seam, inferred
13	168m E	ROCK	Coal seam, inferred
14	182m SW	ROCK	Coal seam, inferred
15	187m SE	ROCK	Coal seam, inferred
16	209m S	ROCK	Coal seam, inferred
19	284m N	ROCK	Coal seam, inferred
21	370m SE	FAULT	Fault, inferred

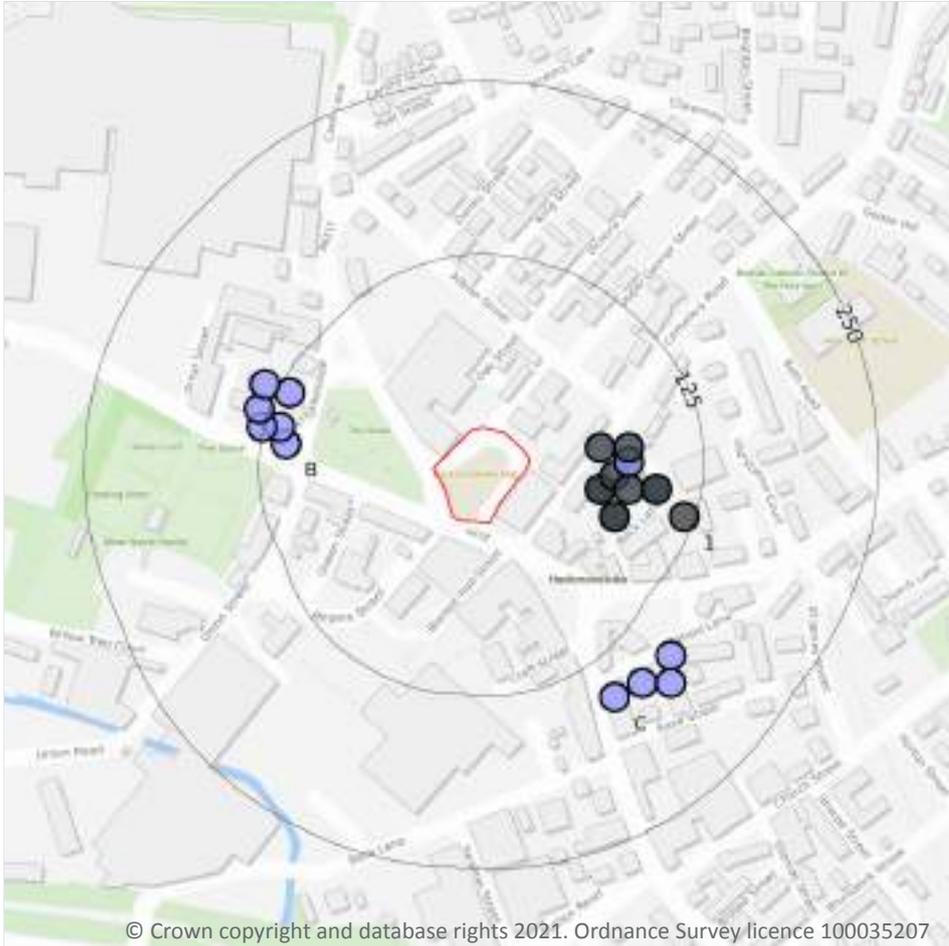


ID	Location	Category	Description
24	375m SE	ROCK	Coal seam, inferred
29	407m S	ROCK	Coal seam, inferred
32	413m SE	FAULT	Fault, inferred
33	428m NW	FAULT	Fault, inferred
35	442m S	ROCK	Coal seam, inferred
37	476m NW	ROCK	Coal seam, inferred

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

23

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 118**

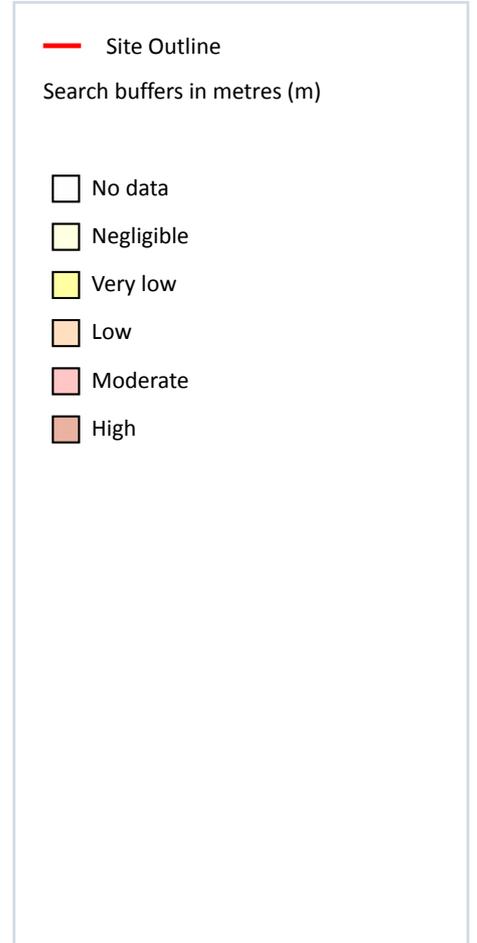
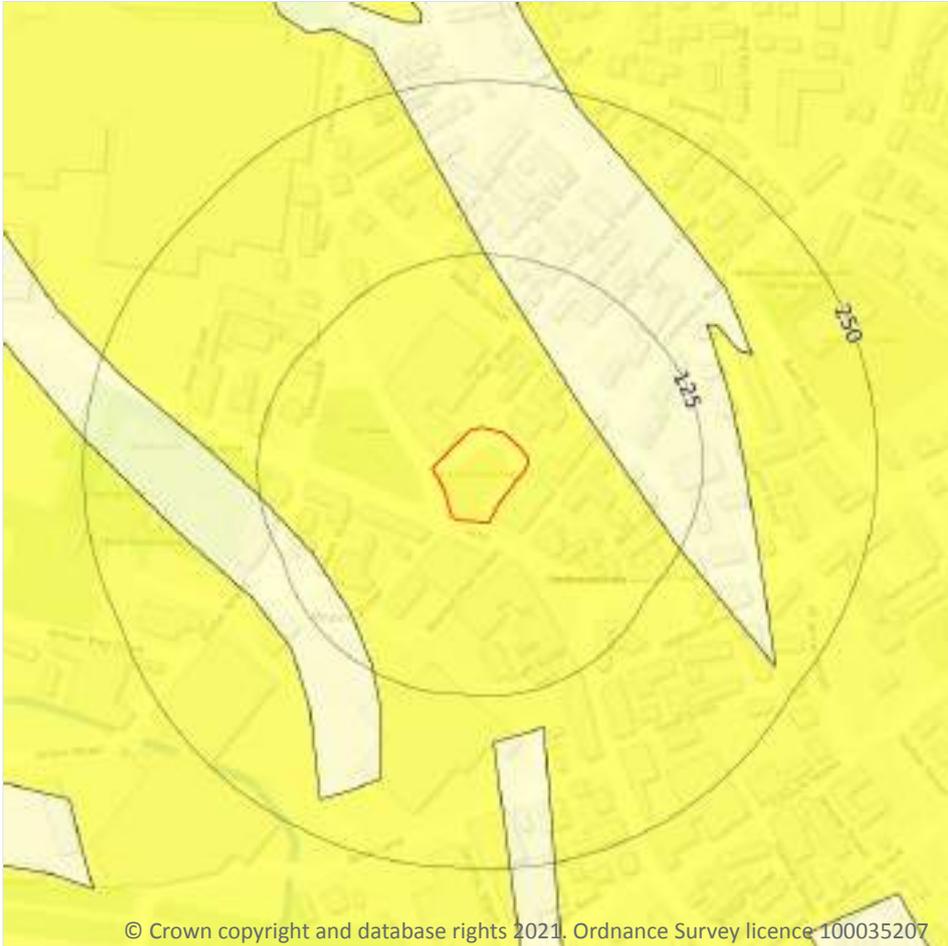
ID	Location	Grid reference	Name	Length	Confidential	Web link
A	52m E	421600 423560	CEMETERY ROAD/BACK LANE HECKMONDWIKE TP1	-	Y	N/A
A	55m E	421600 423530	CEMETERY ROAD/BACK LANE HECKMONDWIKE TP4	-	Y	N/A

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	55m E	421600 423530	CEMETERY ROAD/BACK LANE HECKMONDWIKE 5	-	Y	N/A
A	62m E	421610 423540	CEMETERY ROAD/BACK LANE HECKMONDWIKE 3	-	Y	N/A
A	71m E	421620 423550	CEMETERY ROAD/BACK LANE HECKMONDWIKE TP5	-	Y	N/A
A	71m E	421620 423550	GASWORKS ST HECKMONDWIKE 3	6.0	N	77887
A	72m E	421620 423560	CEMETERY ROAD/BACK LANE HECKMONDWIKE 2	-	Y	N/A
A	72m SE	421610 423510	CEMETERY ROAD/BACK LANE HECKMONDWIKE TP3	-	Y	N/A
A	72m SE	421610 423510	CEMETERY ROAD/BACK LANE HECKMONDWIKE 4	-	Y	N/A
A	74m E	421620 423530	CEMETERY ROAD/BACK LANE HECKMONDWIKE TP2	-	Y	N/A
A	93m E	421640 423530	CEMETERY ROAD/BACK LANE HECKMONDWIKE TP6	-	Y	N/A
A	93m E	421640 423530	CEMETERY ROAD/BACK LANE HECKMONDWIKE 1	-	Y	N/A
B	107m W	421374 423563	YORKSHIRE COOP HECKMONDWIKE TP6	3.0	N	20193203
B	114m W	421370 423575	YORKSHIRE COOP HECKMONDWIKE TP5	2.8	N	20193204
B	117m NW	421377 423600	YORKSHIRE COOP HECKMONDWIKE TP2	3.25	N	20193200
1	118m E	421660 423510	CEMETERY ROAD/BACK LANE HECKMONDWIKE TP7	-	Y	N/A
B	126m W	421357 423575	YORKSHIRE COOP HECKMONDWIKE TP4	3.0	N	20193202
B	132m W	421355 423588	YORKSHIRE COOP HECKMONDWIKE TP3	3.1	N	20193201
B	135m NW	421359 423606	YORKSHIRE COOP HECKMONDWIKE TP1	3.0	N	20193199
C	155m SE	421610 423380	ALFRED ST HECKMONDWYKE 4	7.0	N	77756
C	160m SE	421630 423390	ALFRED ST HECKMONDWYKE 3	6.0	N	77755
C	161m SE	421650 423410	ALFRED ST HECKMONDWYKE 1	5.0	N	77753
C	174m SE	421650 423390	ALFRED ST HECKMONDWYKE 2	7.0	N	77754

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



17.1 Shrink swell clays

Records within 50m

1

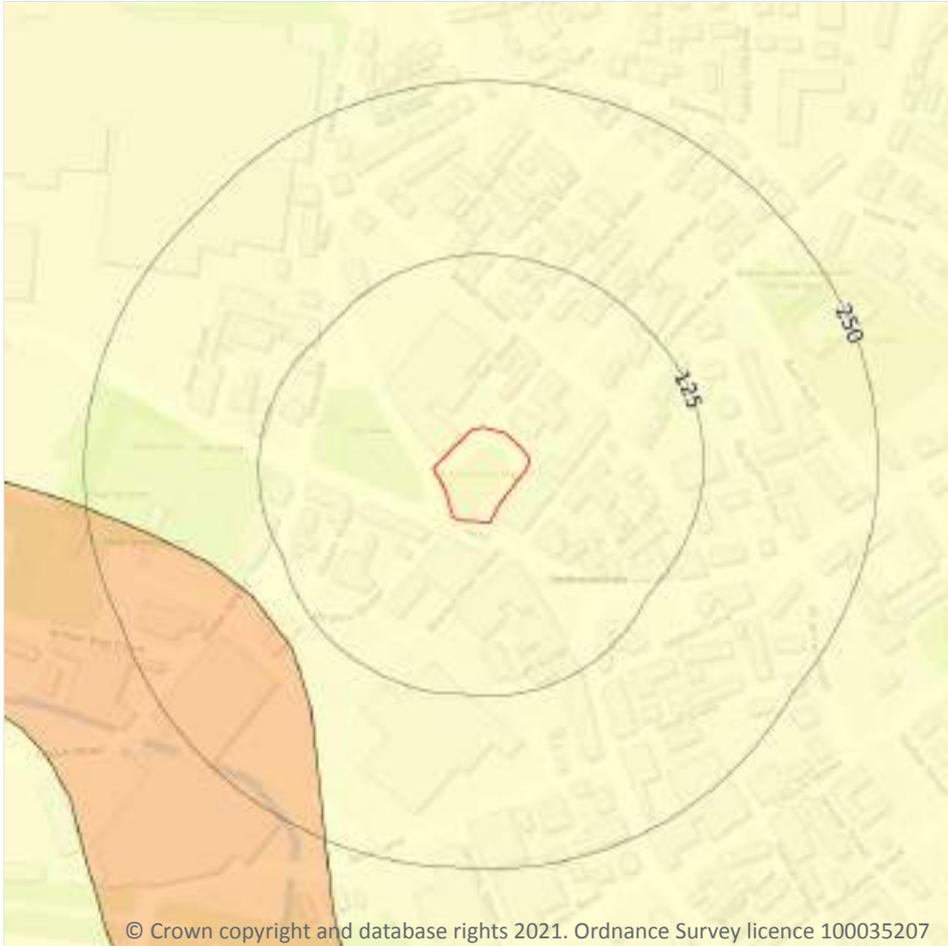
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 120**

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

1

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

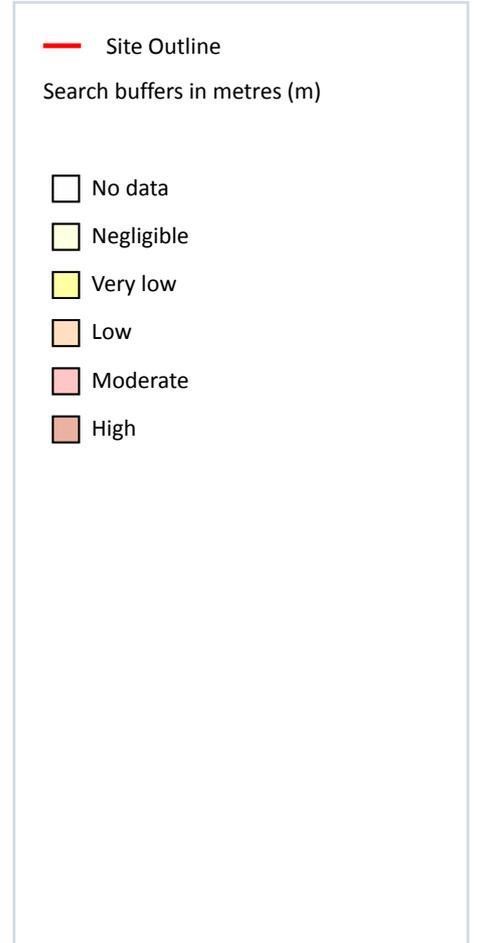
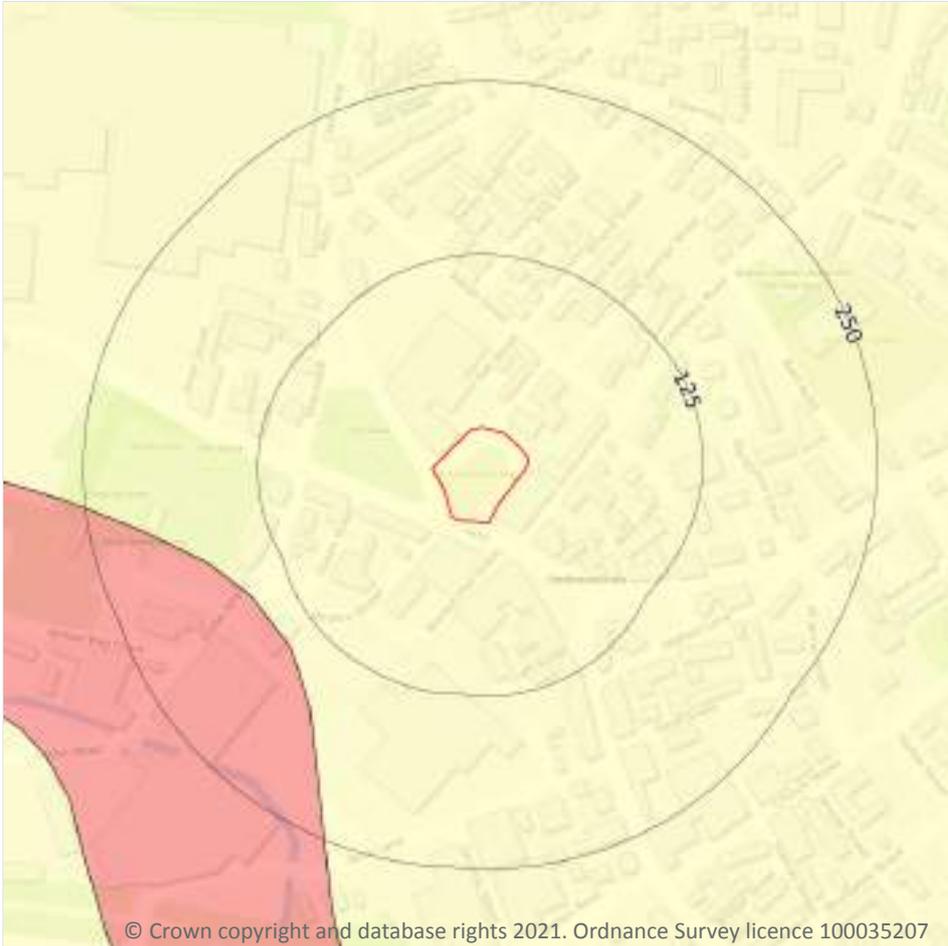
Features are displayed on the Natural ground subsidence - Running sands map on **page 121**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



17.3 Compressible deposits

Records within 50m

1

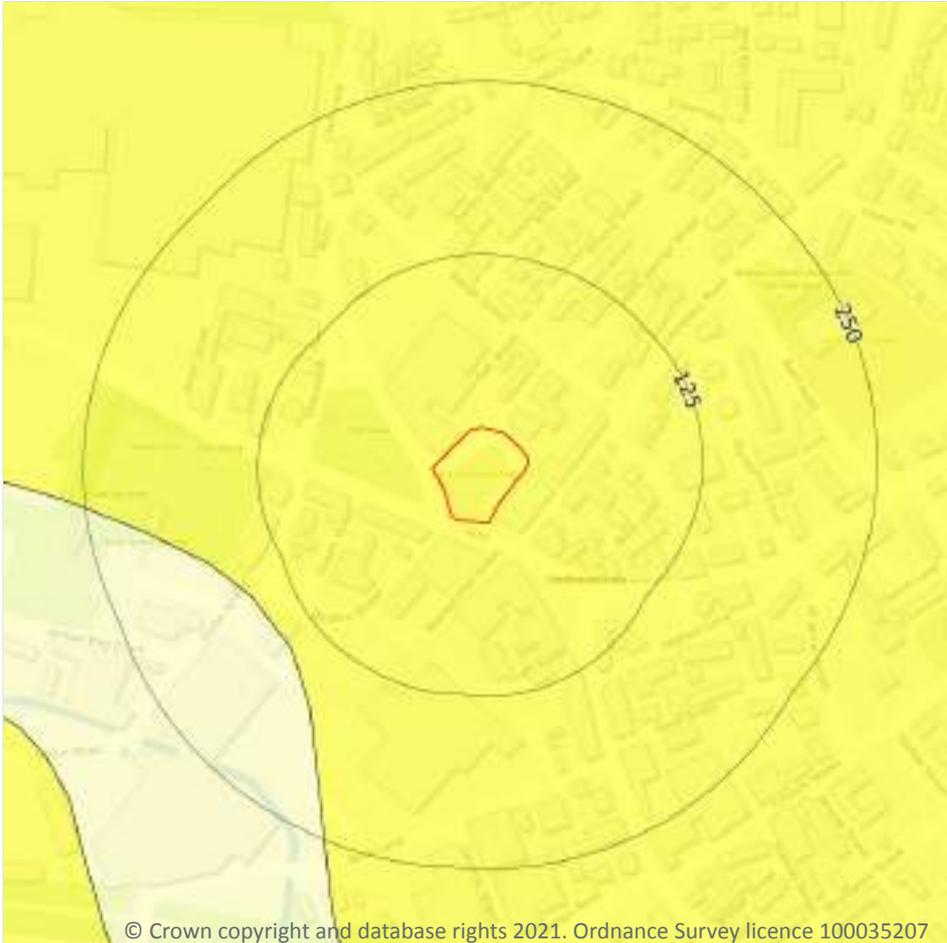
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 122**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



17.4 Collapsible deposits

Records within 50m

1

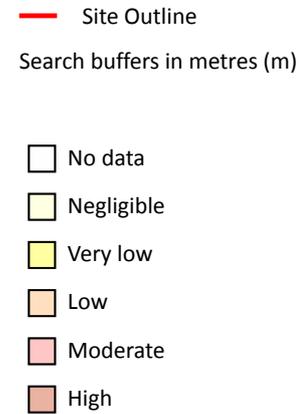
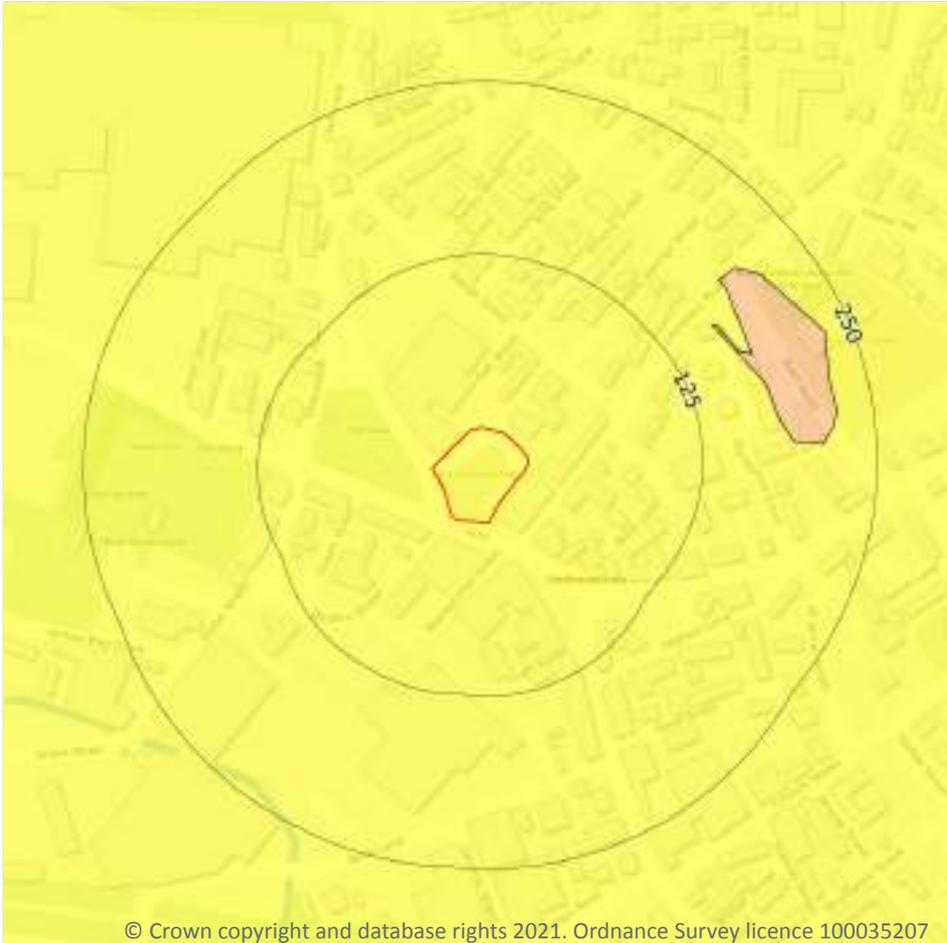
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 123**

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



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.

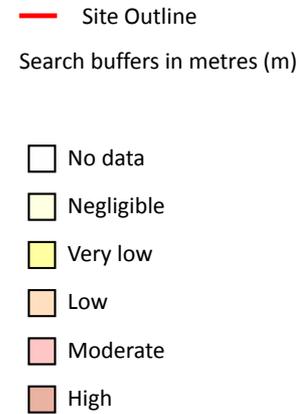
Features are displayed on the Natural ground subsidence - Landslides map on **page 124**

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



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 125**

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



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

5

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 127**

ID	Location	Details	Description
C	213m NE	Name: Goose Hill Address: HECKMONDWIKE, West Yorkshire Commodity: Coal, Deep 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
F	289m NW	Name: Common Side Address: HECKMONDWIKE, West Yorkshire Commodity: Coal, Deep 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
F	289m NW	Name: Common Side Address: HECKMONDWIKE, West Yorkshire Commodity: Coal, Deep 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
F	309m N	Name: Common Side Address: HECKMONDWIKE, West Yorkshire Commodity: Coal, Deep 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
3	447m SW	Name: Berry Hill Address: Liversedge, BATLEY, West Yorkshire Commodity: Coal, Deep 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

55

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 127**

ID	Location	Land Use	Year of mapping	Mapping scale
A	127m E	Cuttings	1948	1:10560
A	127m E	Cuttings	1931	1:10560
A	127m E	Cuttings	1905	1:10560
A	130m E	Cuttings	1955	1:10560
A	139m E	Cuttings	1981	1:10000
A	139m E	Cuttings	1974	1:10000
A	139m E	Cuttings	1967	1:10560
B	140m SW	Ponds	1981	1:10000
B	140m SW	Pond	1892	1:10560
B	141m SW	Ponds	1967	1:10560
A	142m E	Cuttings	1988	1:10000
C	150m NE	Cuttings	1948	1:10560
C	150m NE	Cuttings	1931	1:10560
C	152m NE	Cuttings	1938	1:10560
C	155m NE	Cuttings	1931	1:10560
C	155m NE	Cuttings	1931	1:10560
C	156m NE	Cuttings	1955	1:10560
C	158m NE	Cuttings	1948	1:10560
C	158m NE	Cuttings	1931	1:10560
C	160m NE	Cuttings	1988	1:10000
C	160m NE	Cuttings	1981	1:10000
C	160m NE	Cuttings	1974	1:10000
C	160m NE	Cuttings	1967	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
C	164m NE	Cuttings	1955	1:10560
C	170m NE	Cuttings	1988	1:10000
C	170m NE	Cuttings	1981	1:10000
C	170m NE	Cuttings	1974	1:10000
C	170m NE	Cuttings	1967	1:10560
D	191m S	Refuse Destructor	1948	1:10560
D	191m S	Refuse Destructor	1931	1:10560
D	191m S	Refuse Destructor	1905	1:10560
1	194m SW	Pond	1892	1:10560
E	211m E	Unspecified Heap	1988	1:10000
E	211m E	Unspecified Heap	1981	1:10000
E	211m E	Unspecified Heap	1974	1:10000
F	221m NW	Colliery	1905	1:10560
F	221m NW	Colliery	1892	1:10560
E	224m E	Mill Pond	1892	1:10560
G	228m SE	Cuttings	1988	1:10000
G	228m SE	Cuttings	1981	1:10000
G	228m SE	Cuttings	1974	1:10000
G	228m SE	Cuttings	1967	1:10560
G	228m SE	Cuttings	1955	1:10560
G	229m SE	Cuttings	1931	1:10560
G	230m SE	Cuttings	1938	1:10560
G	231m SE	Cuttings	1948	1:10560
G	231m SE	Cuttings	1931	1:10560
G	231m SE	Cuttings	1905	1:10560
D	238m S	Refuse Destructor	1955	1:10560
D	238m S	Refuse Destructor	1931	1:10560
D	238m S	Refuse Destructor	1931	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
F	239m NW	Mill Ponds	1905	1:10560
F	239m NW	Mill Ponds	1892	1:10560
F	248m NW	Refuse Heap	1967	1:10560
D	250m S	Refuse Destructor	1931	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

3

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 127**

ID	Location	Land Use	Year of mapping	Mapping scale
F	221m NW	Colliery	1905	1:10560
F	221m NW	Colliery	1892	1:10560
J	344m SW	Disused Colliery	1905	1:10560

This is 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

3

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).



Features are displayed on the Mining, ground workings and natural cavities map on **page 127**

ID	Location	Name	Commodity	Class	Likelihood
2	264m W	Leeds/Bradford area	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
-	724m SW	Leeds/Bradford area	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
-	951m NW	Leeds/Bradford area	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

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
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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
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Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0
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Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

18.13 Clay mining

Records on site	0
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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



— Site Outline
Search buffers in metres (m)

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

19.1 Radon

Records on site

1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 134**

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

This data is sourced from the British Geological Survey and Public Health England.



20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

4

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 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg
On site	35 - 45 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg
6m SE	35 - 45 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg
7m SW	35 - 45 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg

This data is sourced from the British Geological Survey.

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

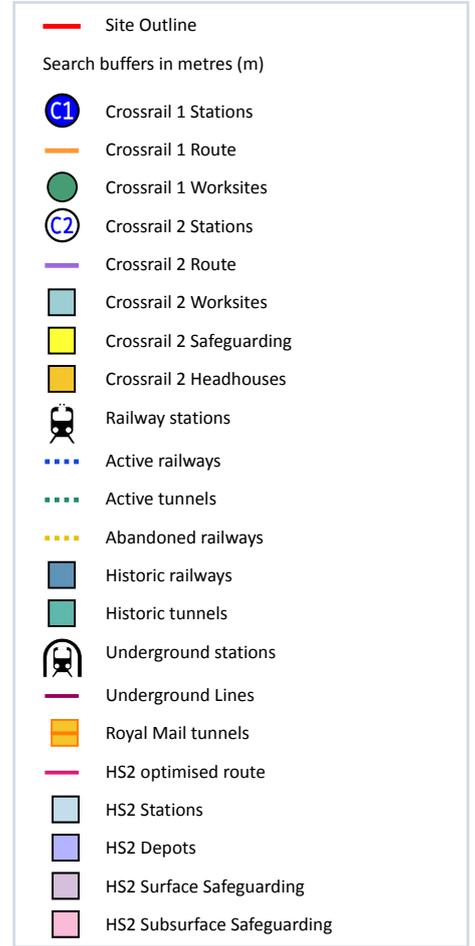
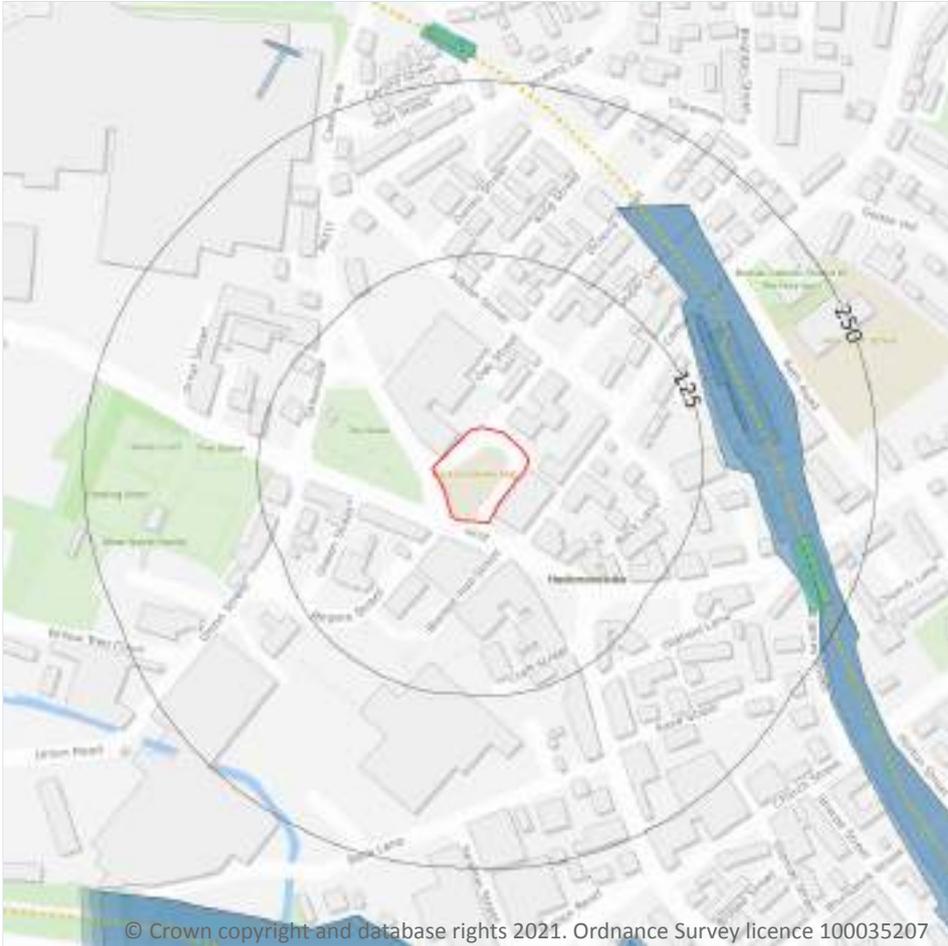
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The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects



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

15

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 137**

Location	Land Use	Year of mapping	Mapping scale
135m E	Railway	1922	-
135m E	Railway	1938	-
139m E	Railway	1907	-
146m E	Railway Sidings	1907	2500
146m E	Railway Sidings	1922	2500
152m E	Railway Sidings	1955	10560
197m E	Tunnel	1922	2500
197m E	Tunnel	1933	2500
197m E	Tunnel	1938	2500
203m E	Tunnel	1993	1250
203m E	Tunnel	1982	1250
203m E	Tunnel	1967	1250
203m E	Tunnel	1990	1250
203m E	Tunnel	1955	1250
204m E	Tunnel	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

4

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 137**

Location	Description
160m NE	Abandoned
160m NE	Historic
205m E	Abandoned
233m SE	Abandoned

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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Map Name: County Series Town Plan

Map date: 1890

Scale: 1:500

Printed at: 1:1,000



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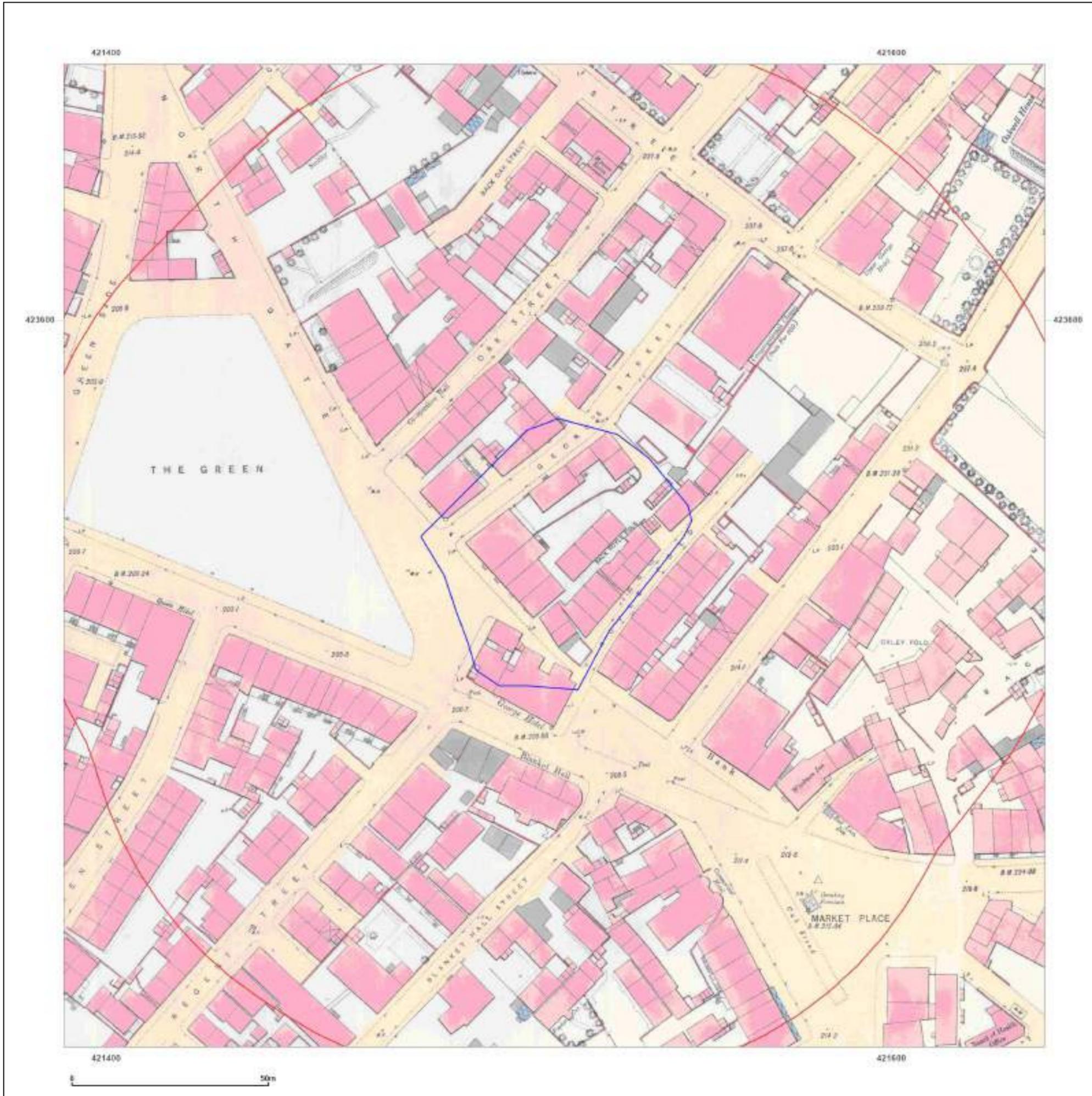


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Map Name: County Series

Map date: 1894

Scale: 1:2,500

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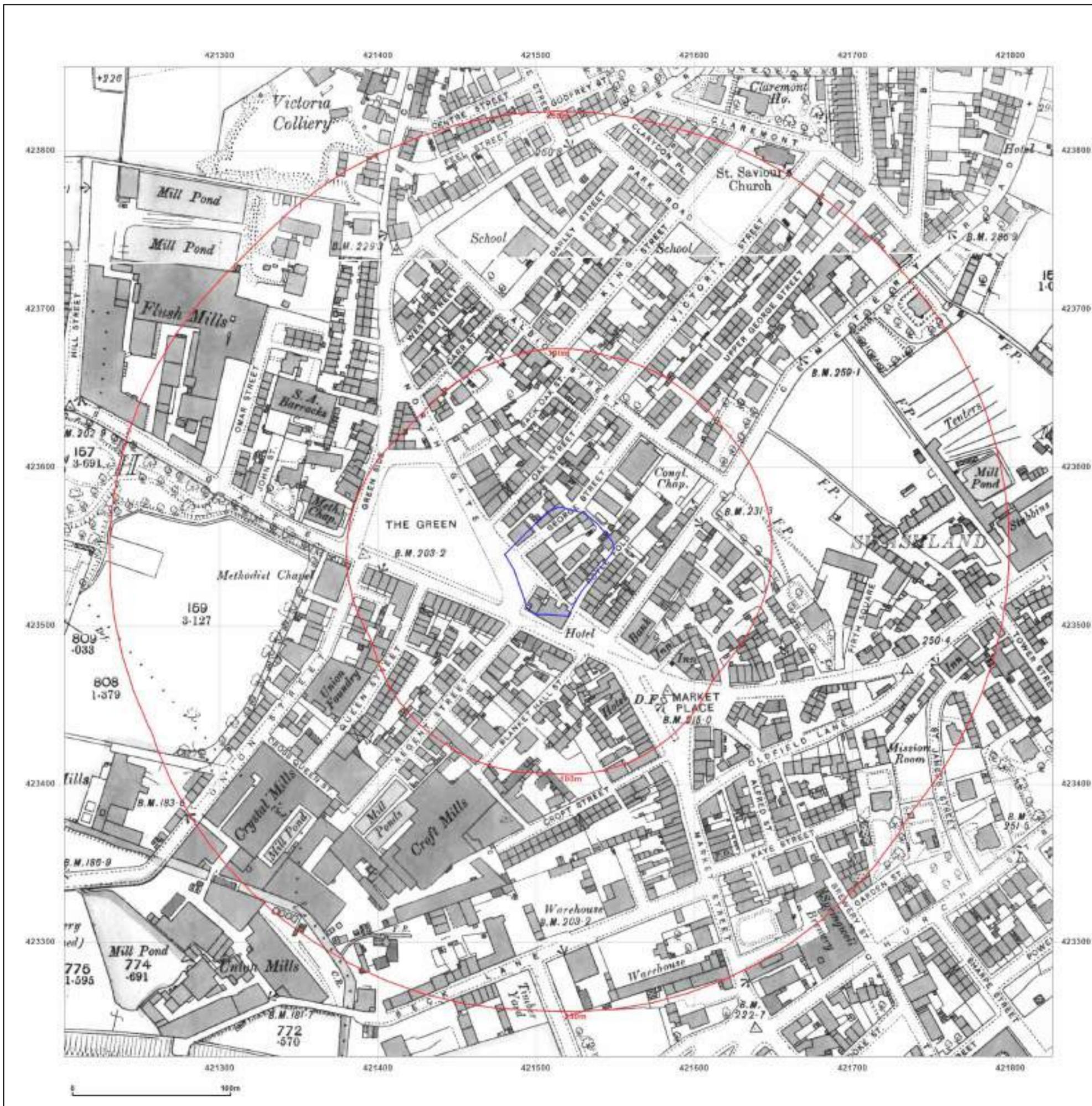


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Map Name: County Series

Map date: 1907

Scale: 1:2,500

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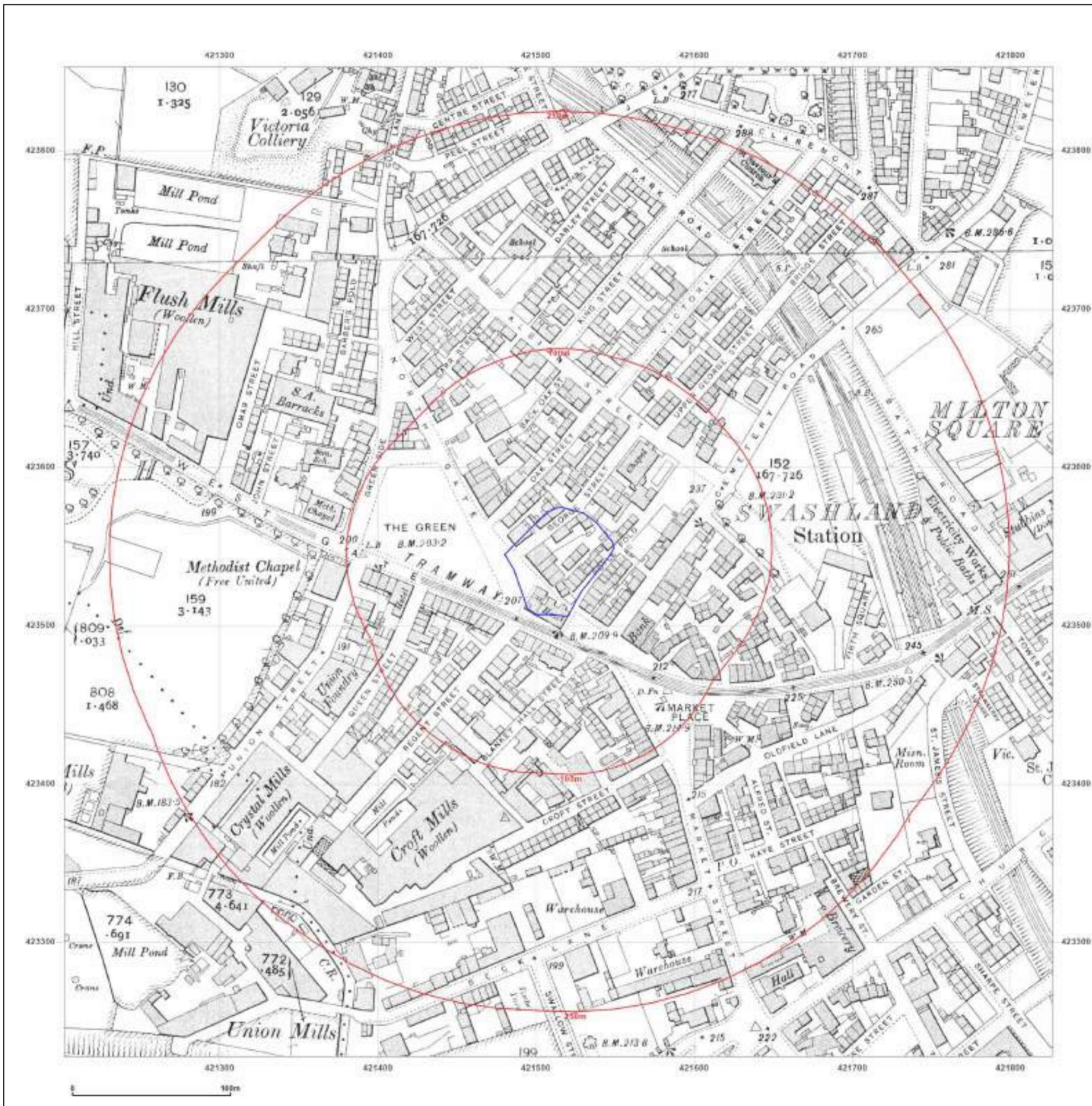


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Map Name: County Series

Map date: 1922

Scale: 1:2,500

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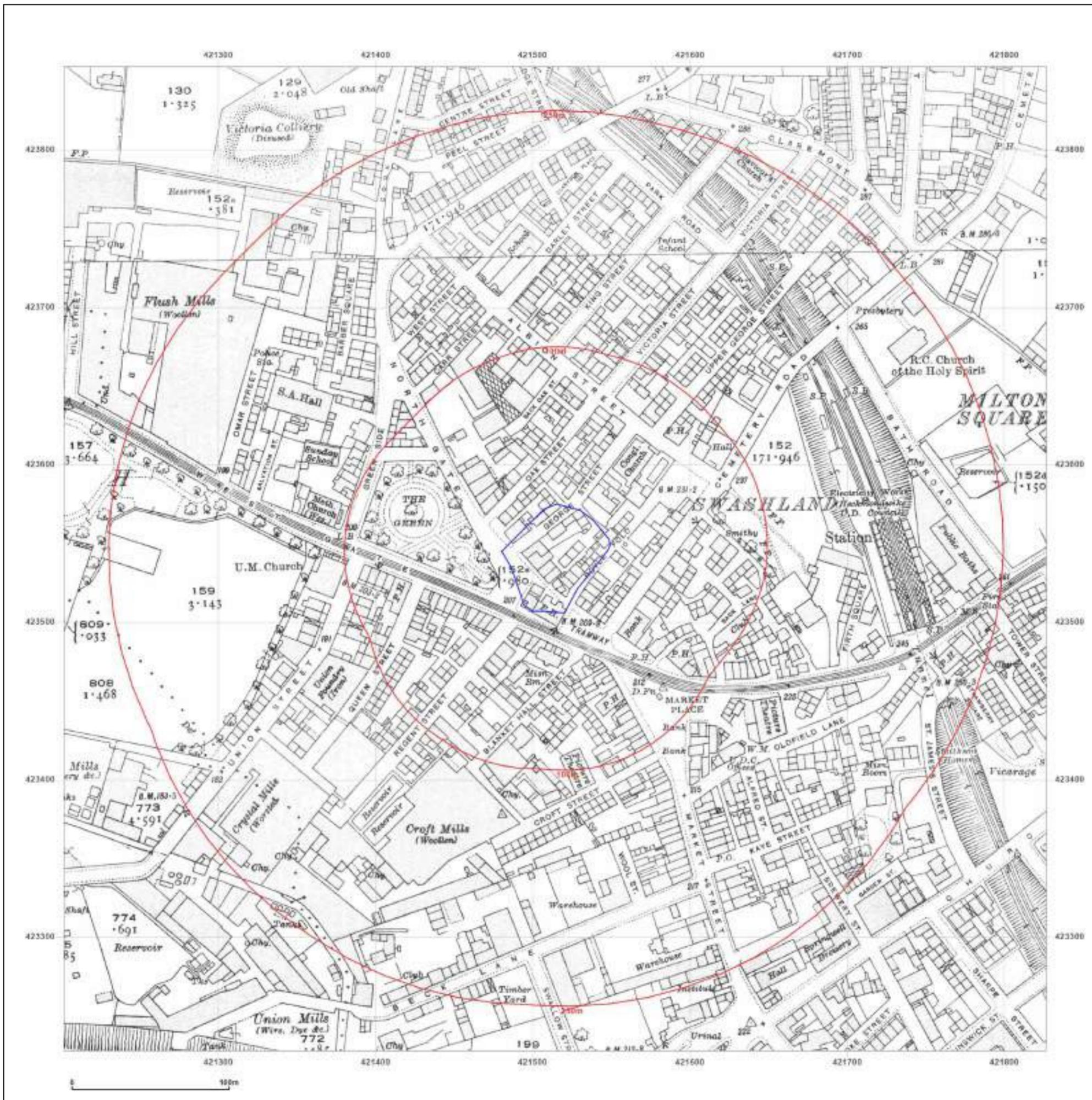


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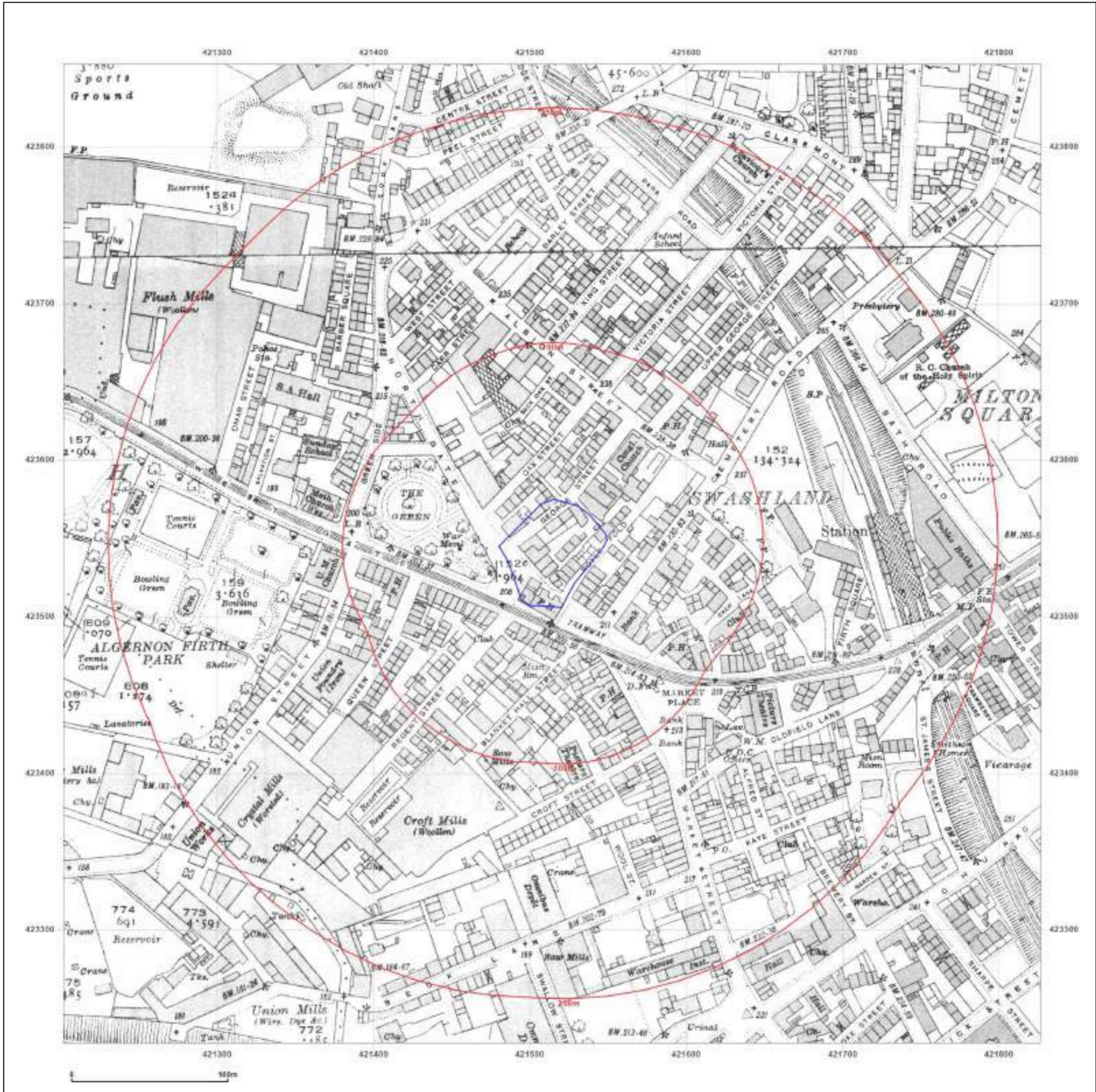


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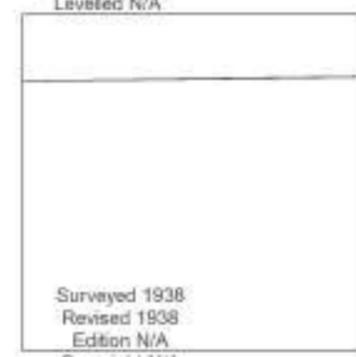
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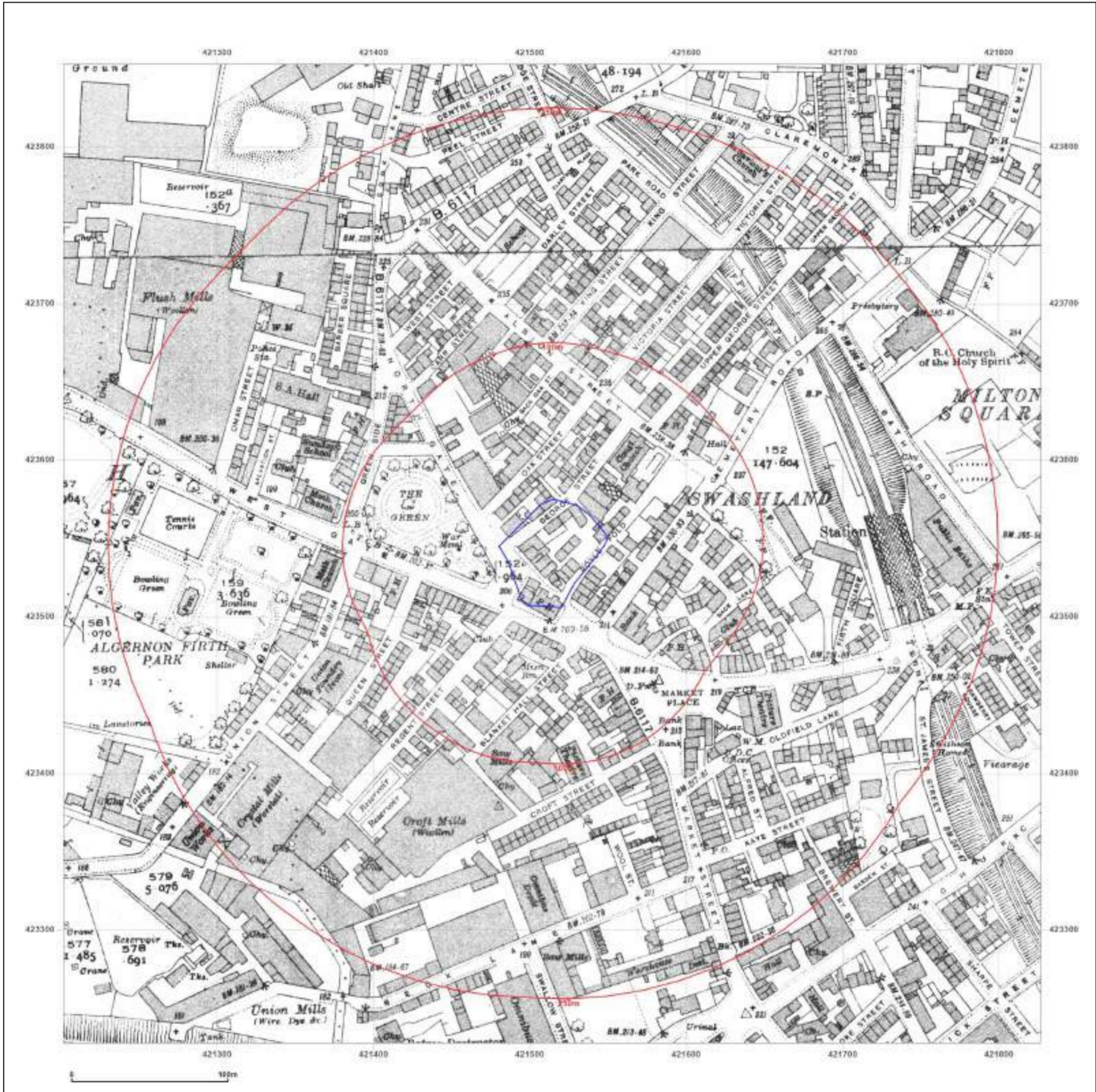


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Map Name: National Grid

Map date: 1955

Scale: 1:1,250

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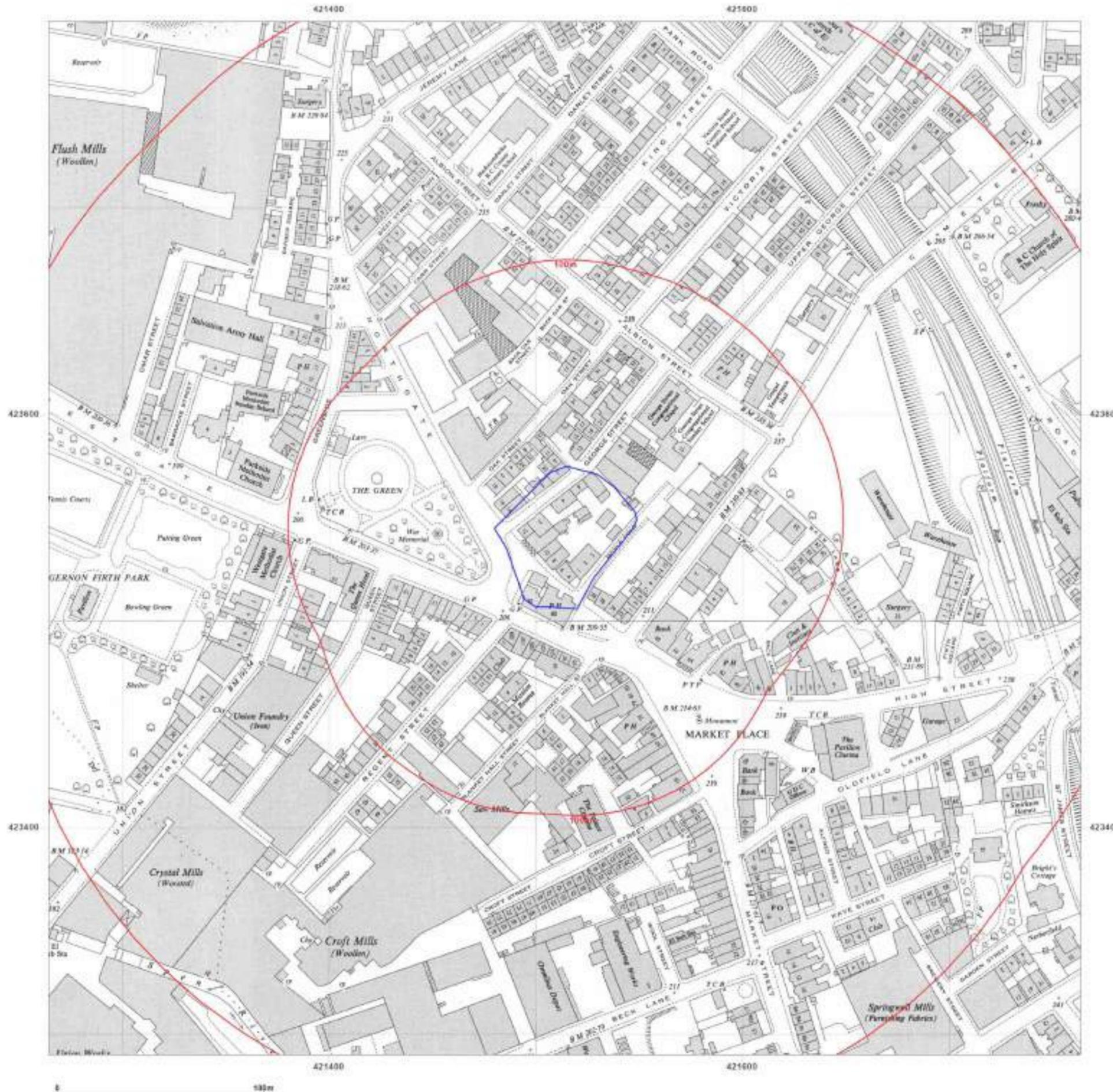


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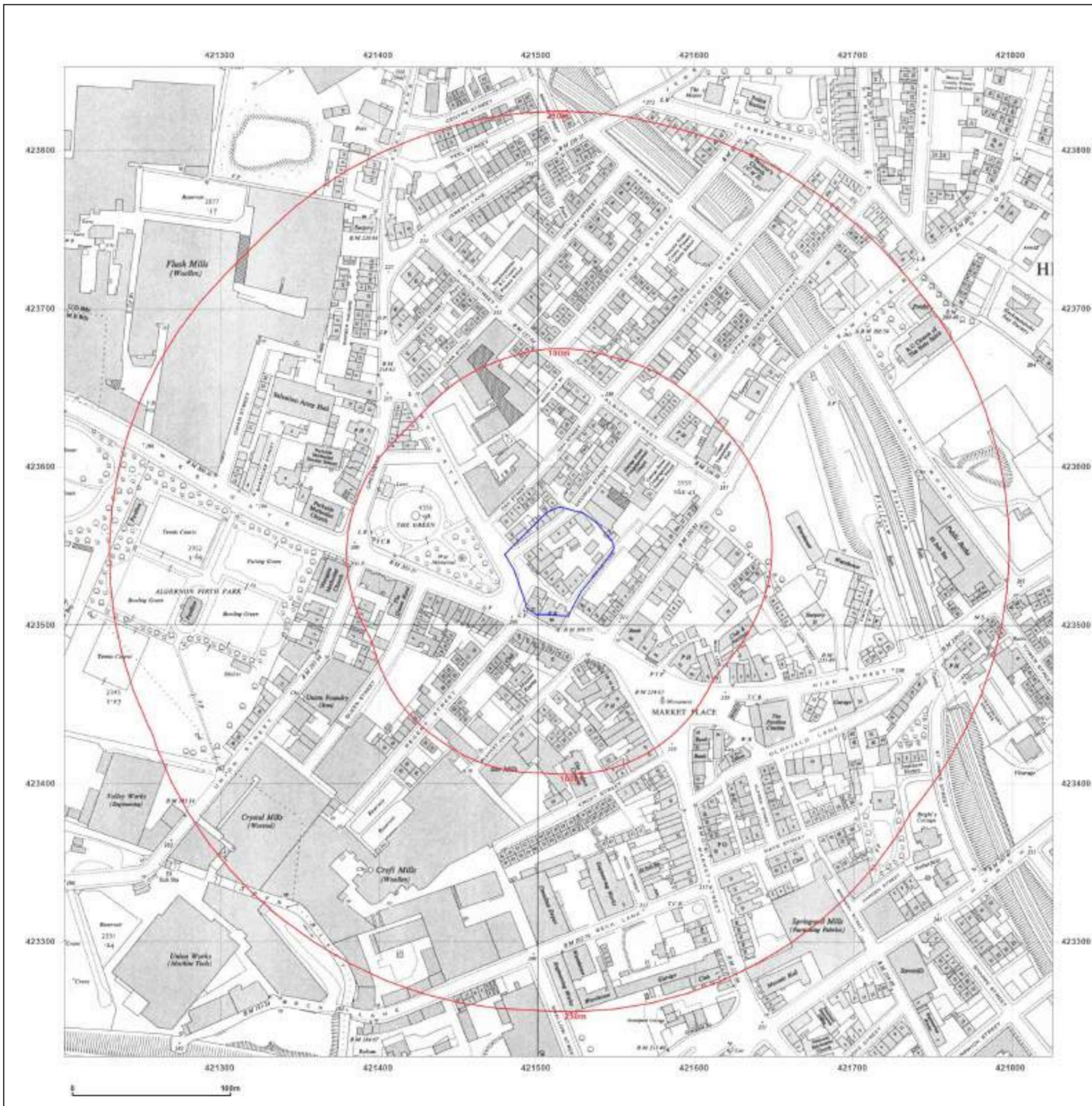


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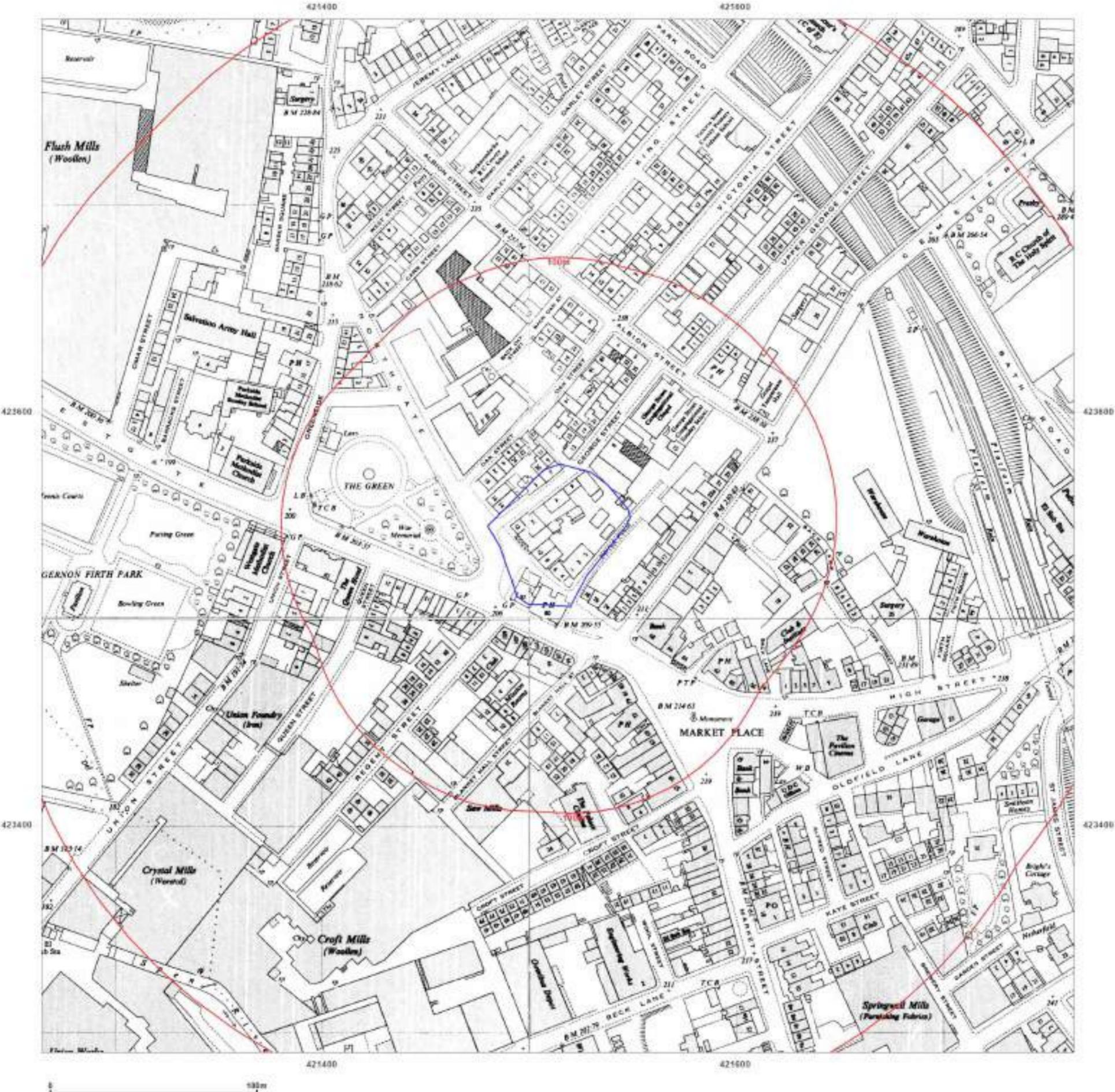
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Map Name: National Grid

Map date: 1956

Scale: 1:1,250

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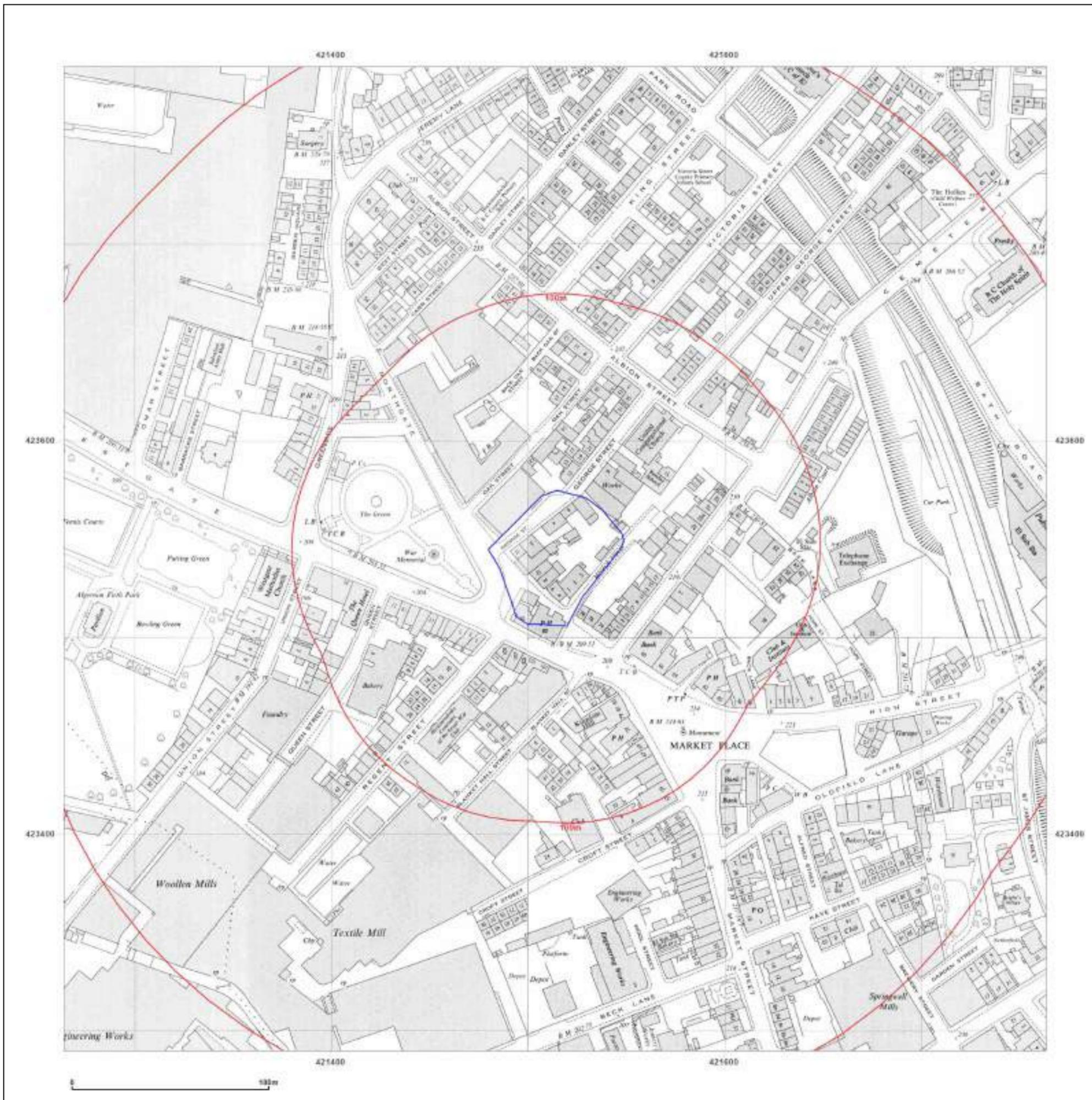


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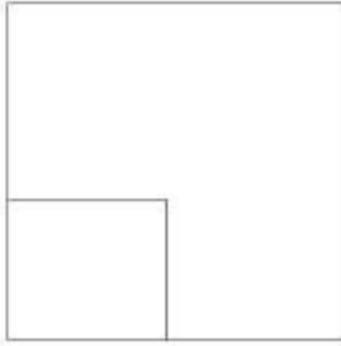
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Grid Ref: 421514, 423540

Map Name: National Grid

Map date: 1972

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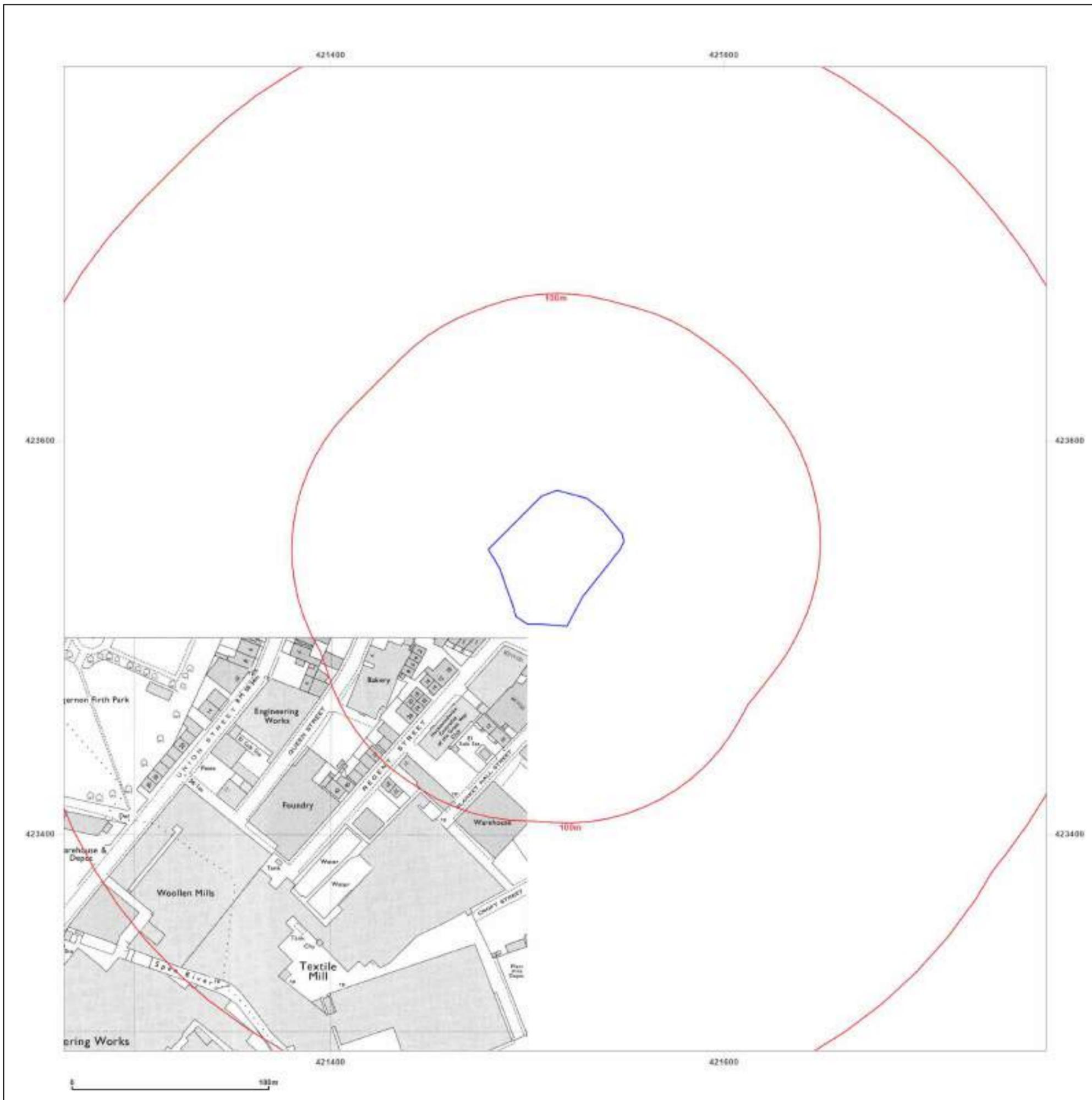


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Map Name: National Grid
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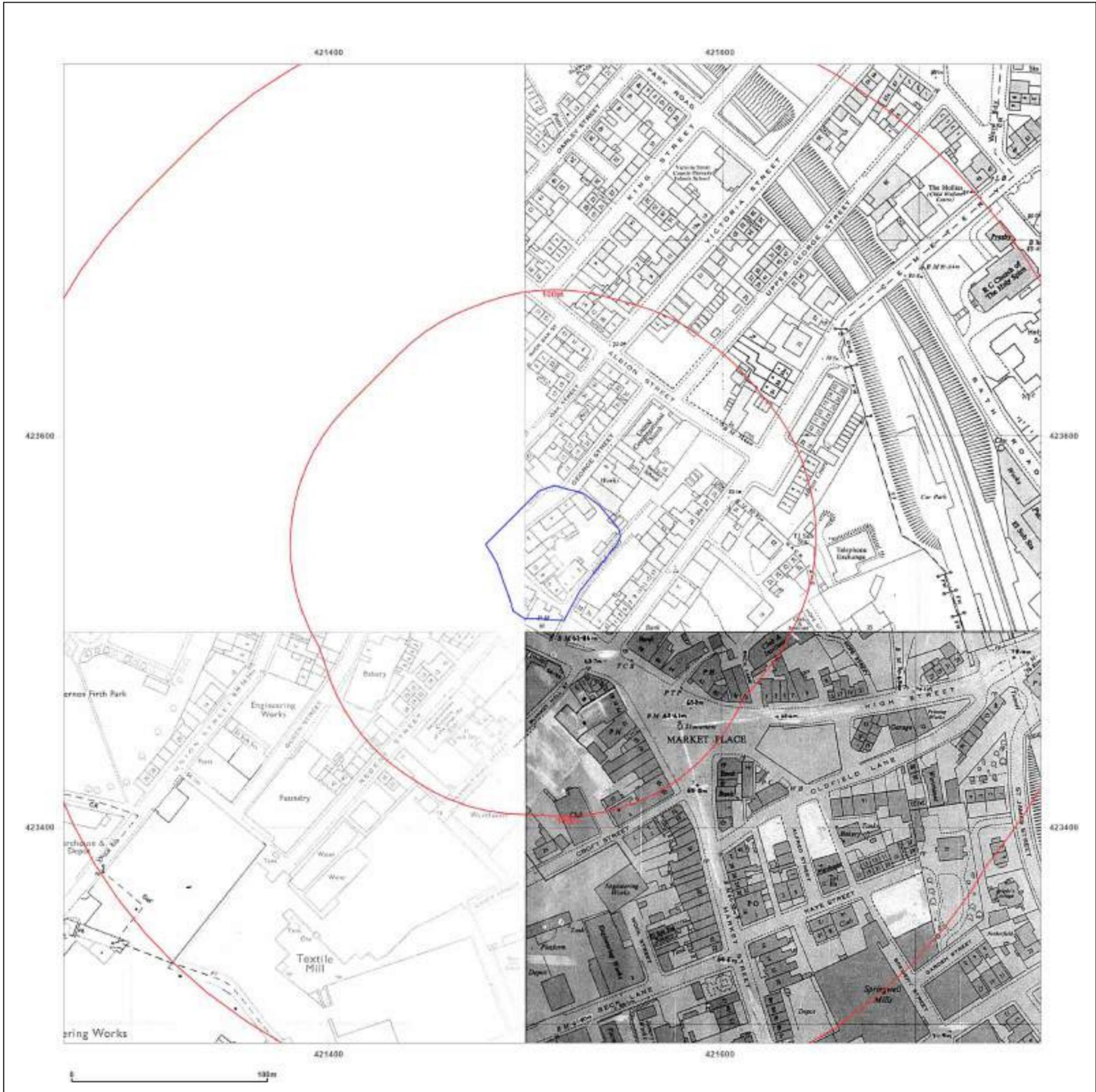
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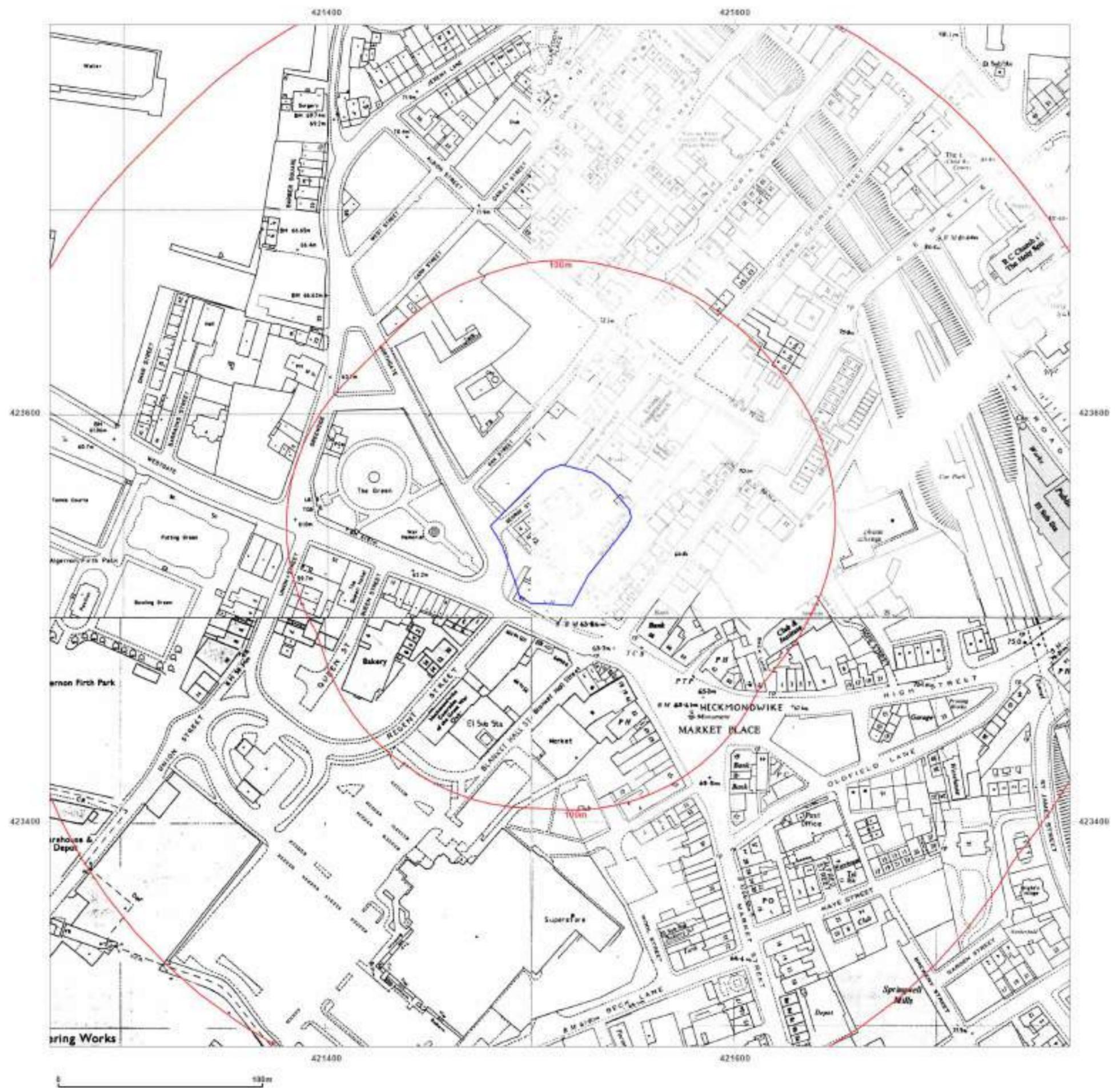


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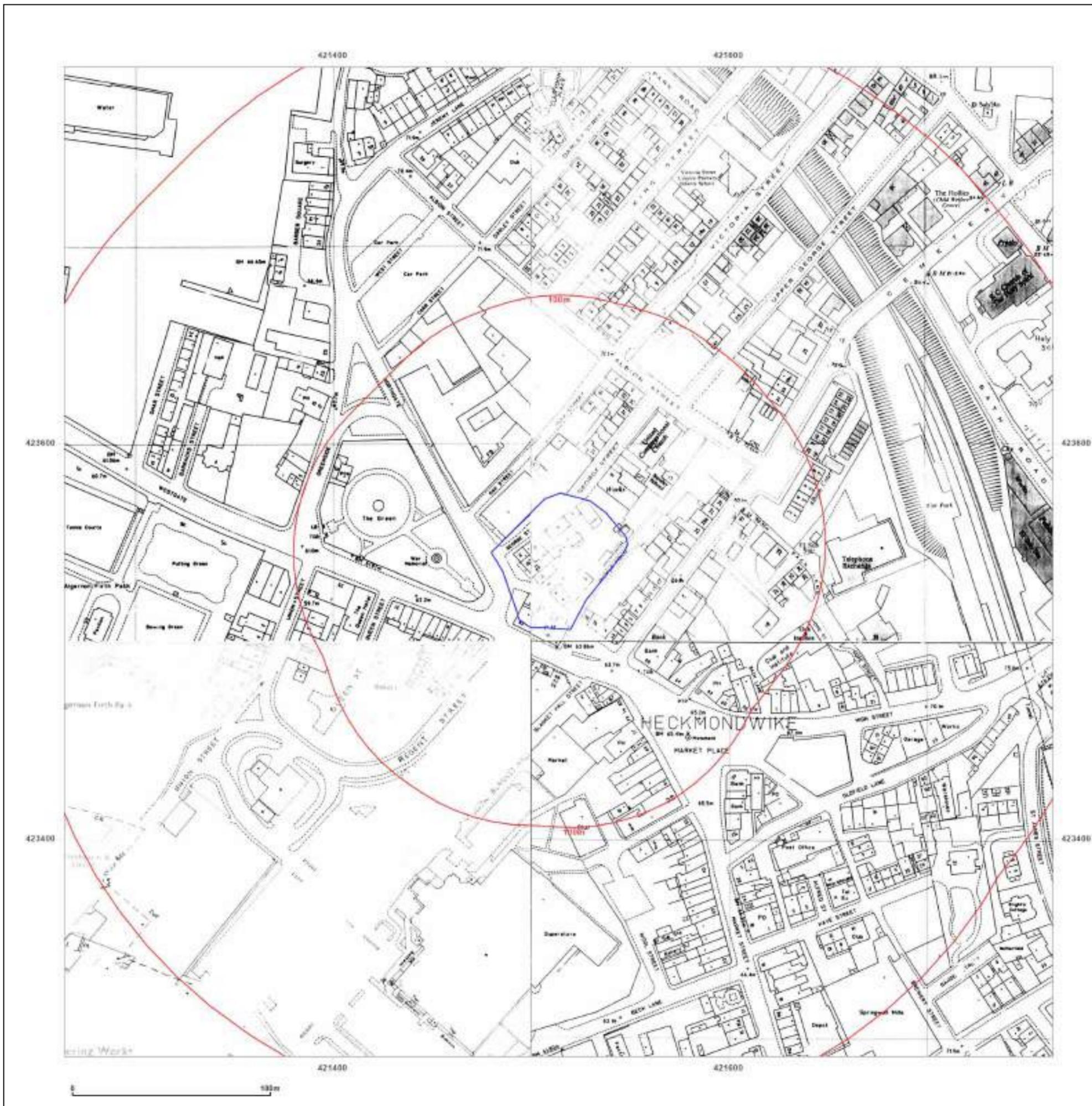


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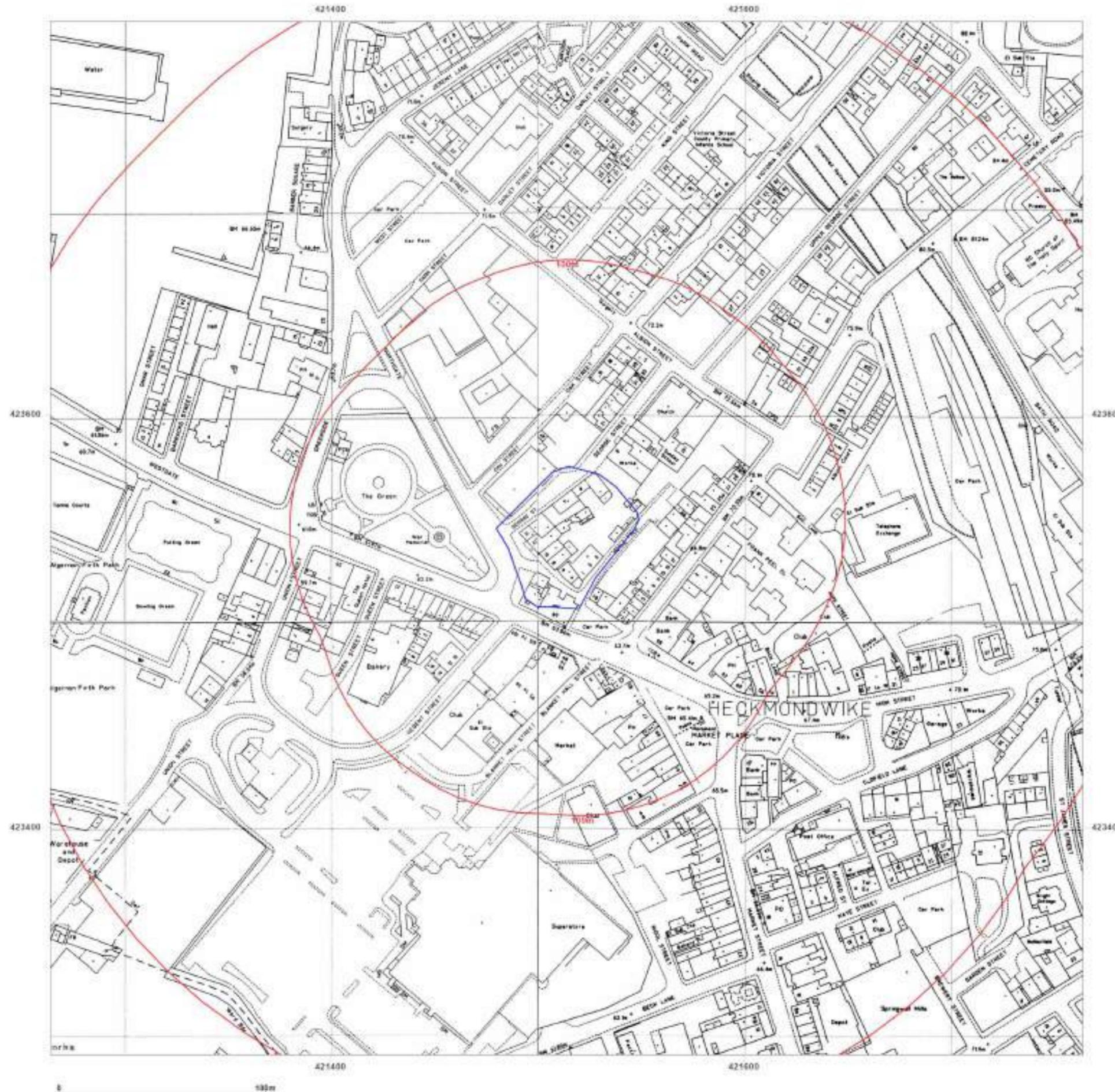


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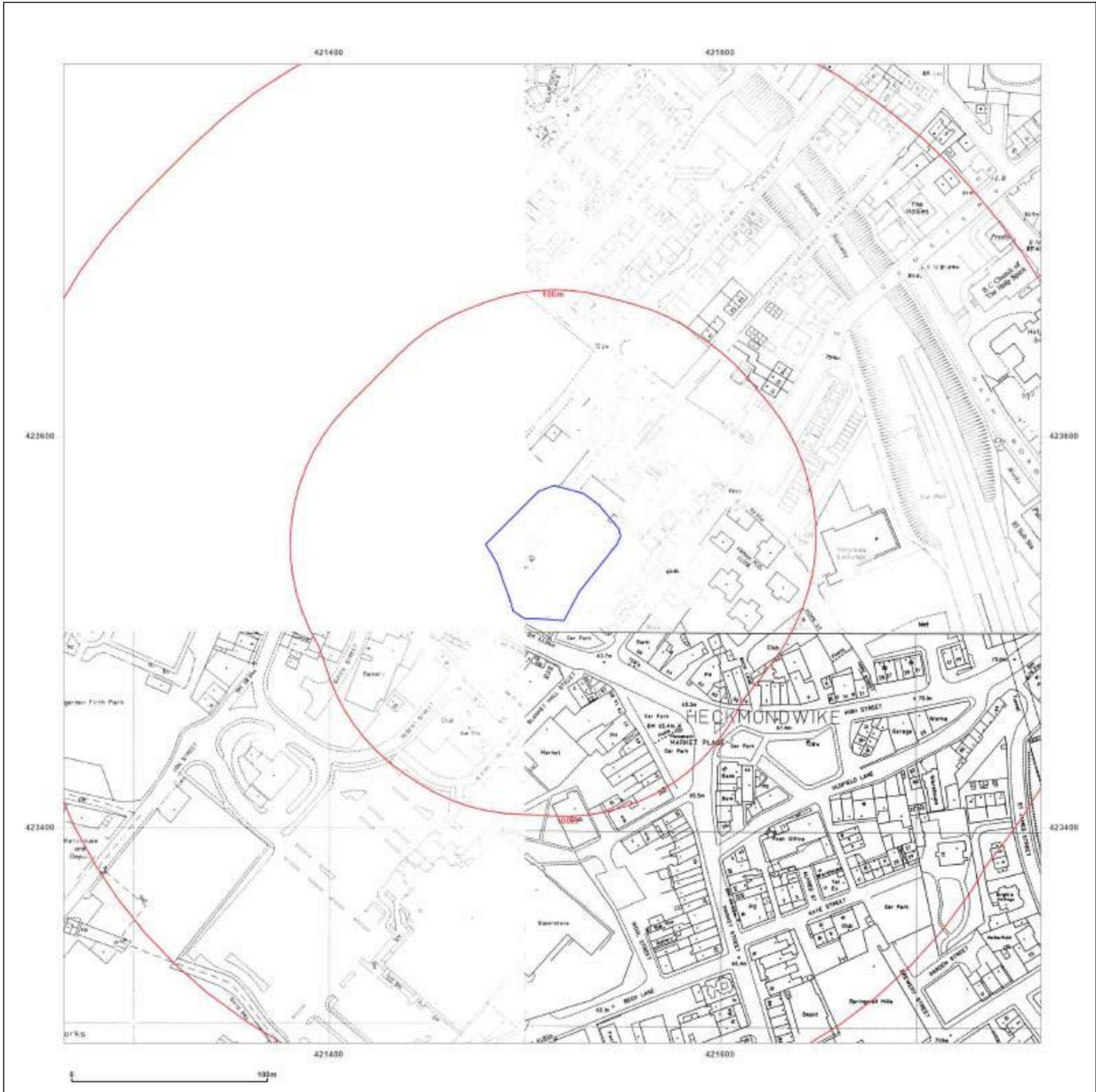


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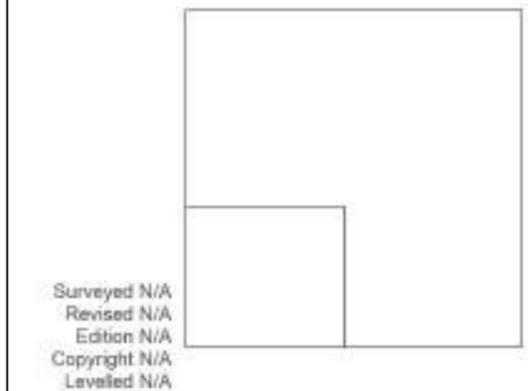
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Grid Ref: 421514, 423540

Map Name: National Grid

Map date: 1995

Scale: 1:1,250

Printed at: 1:2,000

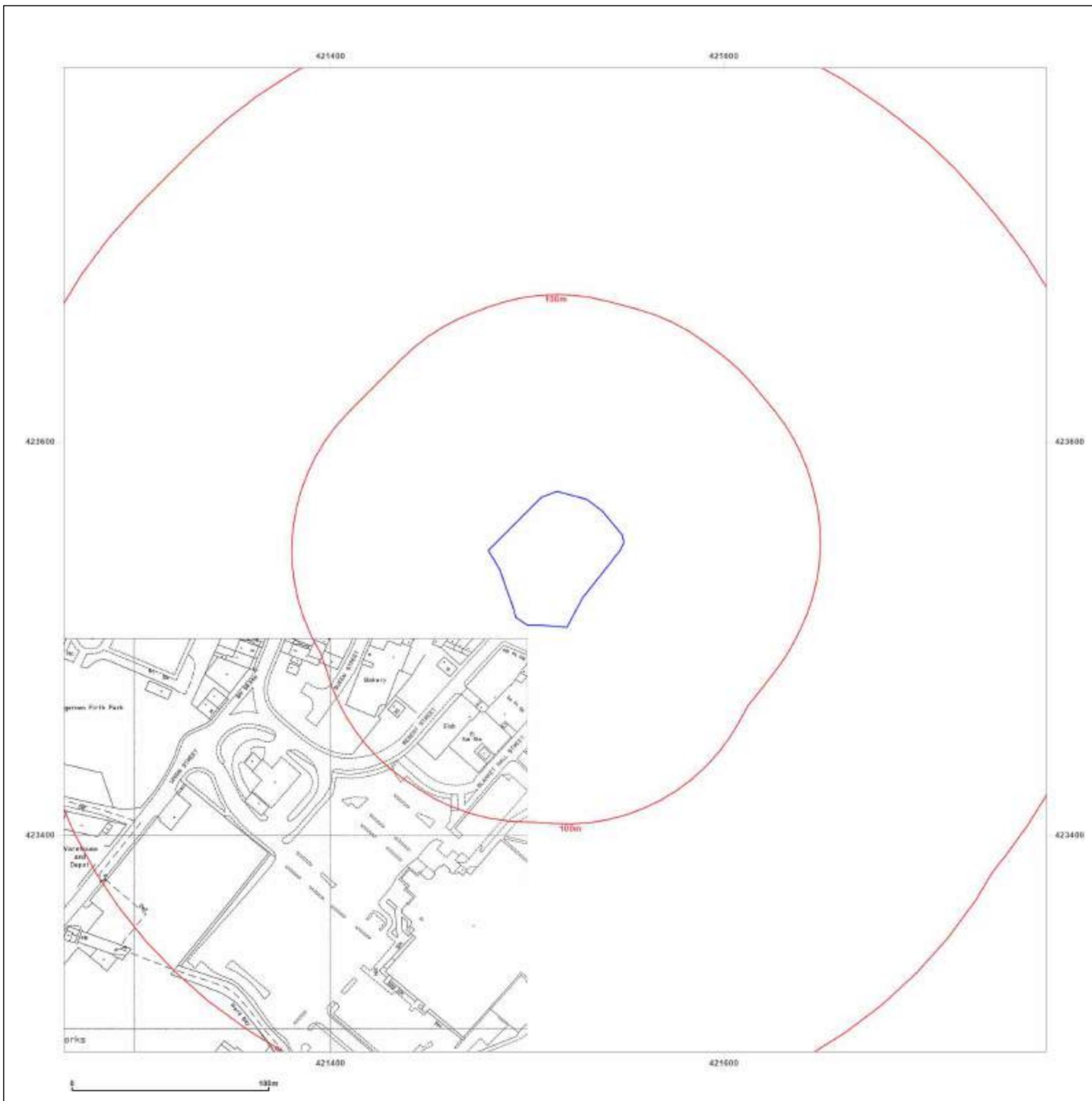


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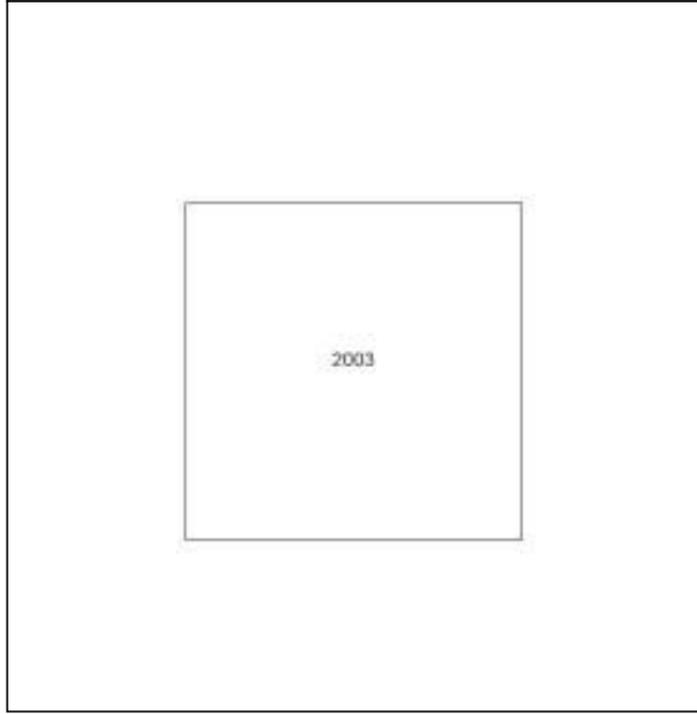
Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:
 ADVERTISING RIGHT BUS
 SHELTER 15023, HIGH STREET,
 HECKMONDWIKE, WF16 0JD

Client Ref: 20126310
Report Ref: GS-7772337
Grid Ref: 421514, 423540

Map Name: LandLine
Map date: 2003
Scale: 1:1,250
Printed at: 1:1,250



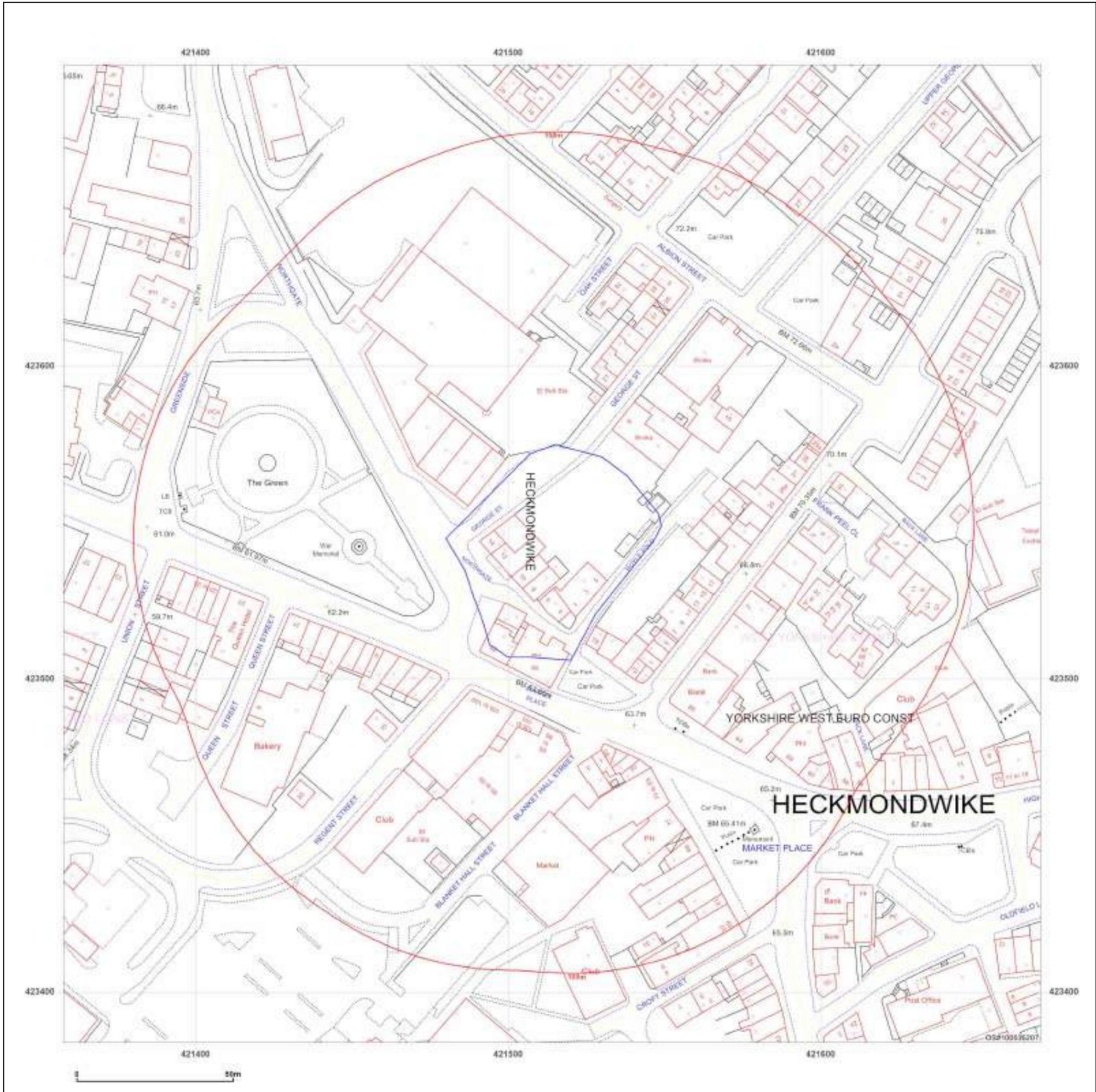
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Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Appendix C

COAL MINING REPORT



ADVERTISING RIGHT BUS SHELTER 15023, HIGH STREET, HECKMONDWIKE, WF16 0JD

Professional opinion

Inc. integrated mine entry interpretive assessment



Site plan



Search results

-  **1. Past underground coal mining**
Identified page 4
-  **2. Present underground coal mining**
Not identified
-  **3. Future underground coal mining**
Not identified
-  **4. Shafts and adits (mine entries)**
Not identified
-  **5. Coal mining geology**
Not identified
-  **6. Past opencast coal mining**
Not identified
-  **7. Present opencast coal mining**
Not identified
-  **8. Future opencast coal mining**
Not identified

-  **9. Coal mining subsidence claims**
Not identified
-  **10. Mine gas emissions**
Not identified
-  **11. Emergency Call Out incidents**
Not identified
-  **12. Withdrawal of support**
Not identified
-  **13. Working facilities orders**
Not identified
-  **14. Payments to copyhold owners**
Not identified
-  **Cheshire Brine**
Not identified

Coal mining (CON29M) assessment

We consider the property to be acceptably free from coal mining related risk. No further action is required with regards to past coal mining.



Coal mining

Coal Mining Subsidence Act 1991

If any coal mining subsidence damage has occurred, as determined by the appropriate persons/bodies, the property will benefit from the protection of the Coal Mining Subsidence Acts of 1991 and as amended 1994.

This Act, however, does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester. In this instance it would be prudent to have the property visually inspected for signs of mining related settlement or subsidence by a suitably qualified and experienced person, who could be sought through <https://www.ricsfirms.com/>.

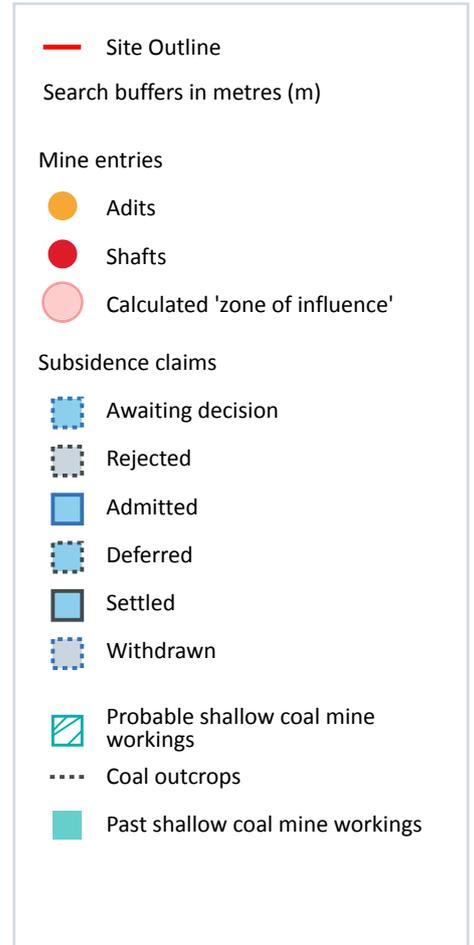
The Coal Authority provide a call out service on 01623 646 333 to take remedial action concerning the movement or collapse of any coal entries or coal mining surface hazards. Further details can be found on www.groundstability.com.

CON29M reports are a requirement for conveyancing and are recommended throughout the official Coal Mining Reporting Area. This is the area within which it is deemed prudent to clarify the risk presented by coal mining, using the questions laid out in the Law Society's CON29M form. The need for a CON29M does not always translate to an identification of risk, and reports will often be assessed as free from risk or 'Passed' even though they are within the official Coal Mining Reporting Area.

This report provides an overall assessment on risk to property from coal mining hazards alongside responses to The Law Society CON29M Coal Mining search enquiries. The CON29M questions and format are used here with permission of The Law Society, and the report is prepared in accordance with The Law Society CON29M (2018) Guidance Notes. The overall assessment and individual question responses have been produced using official Coal Authority data and the expert interpretation of Groundsure and Mining Searches UK.



Coal mining (CON29M)



The map above shows relevant, mappable hazards identified that could constitute a risk to the property. It does not necessarily show all features or potential issues identified in this report.

Please read this report carefully, and in particular any sections flagged with an amber 'i'.

Further details of any features shown indicating the location of Mine Entries or Subsidence Claims can be found in the relevant sections of this report (4 and 9 respectively).

The following are responses to The Law Society CON29M Coal Mining search enquiries, which are used here with their permission. All responses have been produced using official Coal Authority data and the expert interpretation of Groundsure and Mining Searches UK. This report is prepared in accordance with The Law Society CON29M (2018) Guidance Notes. Additional interpretation and calculation of mine entry zones of influence has been carried out by Groundsure and Mining Searches UK using Coal Authority and British Geological Survey data.

1. Past underground coal mining



Is the property within the zone of likely physical influence on the surface of past underground coal workings?

- The property lies within the potential zone of influence of recorded workings in 1 seam(s) of coal. The most recent underground working in the area was in 1908. These workings lie approximately 105 metres below surface. Any ground movement due to this coal mining activity should have stopped.
- The property is indicated to lie in an area where coal deposits have been worked at moderate depth in the past but for which no plan exists.

2. Present underground coal mining



Is the property within the zone of likely physical influence on the surface of present underground coal workings?

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

3. Future underground coal mining



(a) Is the property within any geographical area for which the Coal Authority is determining whether to grant a licence to remove coal by underground methods?

- The property does not lie within the boundary of an underground site for which the Coal Authority is determining whether to grant a licence to remove coal by underground methods.

(b) Is the property within any geographical area for which a licence to remove coal by underground methods has been granted?

- The property does not lie within the boundary of an underground site for which a licence to remove coal by underground methods has been granted.

(c) Is the property within the zone of likely physical influence on the surface of planned future underground coal workings?

- The property does not lie within the zone of likely physical influence on the surface of planned future underground workings.

(d) Has any notice of proposals relating to underground coal mining operations been given under section 46 of the Coal Mining Subsidence Act 1991?

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

4. Shafts and adits (mine entries)



Are there any shafts and adits or other entries to underground coal mine workings within the property or within 20 metres of the boundary of the property?

- **No coal mine entries are recorded to lie within 20 metres of the property.**

5. Coal mining geology



Is there any record of any fault or other line of weakness due to coal mining at the surface within the boundary of the property that has made the property unstable?

- **No damage arising from geological faults or other lines of weakness activated by coal mining are recorded within the property.**

6. Past opencast coal mining



Is the property situated within the geographical boundary of an opencast site from which coal has been removed in the past by opencast methods?

- **The property does not lie within the boundary of an opencast site from which coal was removed by opencast methods.**

7. Present opencast coal mining



Is the property within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods?

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

8. Future opencast coal mining



(a) Is the property within 800 metres of the boundary of an opencast site for which the Coal Authority are determining whether to grant a licence to remove coal by opencast methods?

- **The property does not lie within 800 metres of the boundary of an opencast site for which the Coal Authority are determining whether to grant a licence to remove coal by opencast methods.**

(b) Is the property within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted?

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

9. Coal mining subsidence claims



(a) Has any damage notice or claim for alleged coal mining subsidence damage to the property been given, made or pursued since 31st October 1994?

- We have no evidence of a damage notice or subsidence claim for the property or within 50m of the property since 31st October 1994.

(b) In respect of any such notice or claim has the responsible person given notice agreeing that there is a remedial obligation or otherwise accepted that a claim would lie against them?

- Not applicable.

(c) In respect of any such notice or acceptance has the remedial obligation or claim been discharged?

- Not applicable.

(d) Does any current "Stop Notice" delaying the start of remedial works or repairs affect the property?

- There are no current Stop Notices delaying the start of remedial works or repairs to the property.

(e) Has any request been made under Section 33 of the 1991 Act to execute preventive works before coal is worked, which would prevent the occurrence or reduce the extent of subsidence damage to any buildings, structures or works and, if yes, has any person withheld consent or failed to comply with any such request to execute preventive works?

- There is no record of a request that has been made to carry out preventive works before coal is worked under Section 33 of the Coal Mining Subsidence Act 1991.

NB. Records of damage notices or subsidence claims before 31st October 1994 are excluded from The Coal Authority data from which this search is compiled.

10. Mine gas emissions



Does the Coal Authority have record of any mine gas emission within the boundary of the property being reported that subsequently required action by the Authority to mitigate the effects of the mine gas emission?

- No mine gas emissions are recorded within the boundary of the property.

11. Emergency Surface Hazard Call Out incidents



Have the Coal Authority carried out any work on or within the boundaries of the property following a report of an alleged hazard related to coal mining under the Authority's Emergency Surface Hazard Call Out procedures?

- No Emergency Surface Hazard Call Out procedures are recorded against the property.

12. Withdrawal of support



(a) Does the land lie within a geographical area in respect of which a notice of entitlement to withdraw support has been published?

- The property does not lie in an area where the right to withdraw support has been granted.

(b) Does the land lie within a geographical area in respect of which a revocation notice has been given under section 41 of the Coal Industry Act 1994?

- The property does not lie within a geographical area in which a revocation notice has been given under section 41 of the Coal Industry Act 1994.

13. Working facilities orders



Is the property within a geographical area subject to an order in respect of the working of coal under the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof?

- The property is not in an area where a court order has been issued.

14. Payments to owners of former copyhold land



(a) Has any relevant notice, which may affect the property, been given?

- The property does not lie within former copyholder land.

(b) If yes, has any notice of retained interests in coal and coal mines been given?

- No notices of retained interests in coal and coal mines been given.

(c) If yes, has any acceptance notice or rejection notice been served?

- No acceptance or rejection notices have been served.

(d) If any such acceptance notice has been served, has any compensation been paid to a claimant?

- No compensation has been paid to a claimant.

CON29M notes and guidance

These enquiries are The Law Society CON29M (2018) Coal Mining search enquiries and are used with permission of The Law Society. The Law Society CON29M Coal Mining search enquiries are protected by copyright owned by The Law Society of 113 Chancery Lane, London WC2A 1PL. The Law Society has no responsibility for information provided in response to CON29M (2018) Coal Mining search enquiries within this report or otherwise.

This report is prepared in accordance with [The Law Society Guidance Notes 2018](#); under which all replies to these enquiries are made. Groundsure's Terms and Conditions are applicable at the time the report was produced.

Property owners have the benefit of statutory protection (under the Coal Mining Subsidence Act 1991). This contains provision for the making good, to the reasonable satisfaction of the owner, of physical damage from disused coal mine workings including disused coal mine entries. A leaflet setting out the rights and obligations of either the Coal Authority or other responsible persons under the 1991 Act can be obtained by telephoning 0345 762 6848. Further information can be found on their website: www.groundstability.com.

The Coal Authority, regardless of responsibility and in conjunction with other public bodies, provide an emergency call out facility in coalfield areas to assess the public safety implications of mining features (including disused mine entries).

The Coal Authority emergency telephone number at all times is 01623 646333.

Responses to The Law Society CON29M (2018) Coal Mining Search enquiries and associated findings and recommendations relating to coal mining risk have been provided to Groundsure Ltd by Cornwall Mining Searches Limited T/A Mining Searches UK. Groundsure Ltd have additionally provided information relating to the Cheshire Brine Compensation Area, and have compiled all information into this report.

Queries should be made of Groundsure Ltd on 0844 415 9000, or via email: info@groundsure.com.

CON29M report limitations

This CON29M (2018) Coal Mining Report has been carried out with reference to all available official Coal Authority licensed data, an extensive collection of abandoned mine plans, maps and records. From this material, we have endeavoured to provide as accurate a report as possible. Any and all analysis and interpretation of licensed Coal Authority data in this report is made by Cornwall Mining Services Limited T/A Mining Searches UK.

The information provided in this report by Groundsure Ltd / Cornwall Mining Services Limited T/A Mining Searches UK has been compiled in response to The Law Society CON29M (2018) Coal Mining search enquiries. The scope of the assessment is limited to interpretation of past, present and future extraction of coal, and does not consider the impact from non-coal mining hazards and/or natural ground stability hazards. The Law Society's Guidance Notes 2018 recommends separate enquiries to the appropriate sources are made with regard to other minerals.

The Report is created by a remote investigation and reviews only information provided by the client (address and site location boundaries) and from the databases of publicly available and/or licensable information that

enable a desk-based assessment of the Site. The Report does not include a Site Investigation, nor does Groundsure Ltd / Cornwall Mining Services Limited T/A Mining Searches UK make additional specific information requests of the regulatory authorities for any relevant information they may hold.

This report is concerned solely with the Site searched and should not be used in connection with nearby properties, as only known coal mining features that could potentially have a direct influence upon the Site searched are considered relevant; other features present in the general area may have been omitted for ease of reference.

This report is confidential to the client, the client's legal advisor and the client's Mortgage lender, as defined in the Groundsure terms & conditions, and as such may be used by them for conveyancing or related purposes. Groundsure has no liability toward any person or organisation not party to commissioning this report. This report or any part of it is not permitted to be reproduced, copied, altered or in any other way distributed by any other person or organisation.

Additional mine entry assessment is based on and limited to the data supplied by the Coal Authority at the time of production. In order to determine whether a property is within the likely zone of influence of a disused coal mine entry the following is considered: the actual or plotted position of the mine entry, its known or assumed diameter and the thickness of superficial deposits above rockhead. Where these figures are not known, assumptions based on established estimations have been made.

CON29M report licensing

This report contains Data provided by the Coal Authority. Any and all analysis and interpretation of Coal Authority Data in this report is made by Cornwall Mining Services Limited T/A Mining Searches UK and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure Ltd / Cornwall Mining Services Limited T/A Mining Searches UK prior to any re-use.

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This report may contain public sector information licensed under the Open Government Licence v3.0.

This report may contain plans and records held by the Coal Authority and made publicly available at the time of inspection which may include British Geological Survey and Ordnance Survey data.

Conveyancing Information Executive and our terms & conditions

IMPORTANT CONSUMER PROTECTION INFORMATION

This search has been produced by Groundsure Ltd, Sovereign House, Church Street, Brighton, BN1 1UJ. Tel: 08444 159 000. Email: info@groundsure.com. Groundsure adheres to the Conveyancing Information Executive Standards.

The Standards

- Conveyancing Information Executive Members shall act in a professional and honest manner at all times in line with the Conveyancing Information Executive Standards and carry out the delivery of the Search with integrity and due care and skill.
- Compliance with the Conveyancing Information Executive Standards will be a condition within the Conveyancing Information Executive Member's Terms and Conditions.
- Conveyancing Information Executive Members will promote the benefits of and deliver the Search to the agreed standards and in the best interests of the customer and associated parties.

Complaints Advice

If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure.

If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award up to £5,000 to you if the Ombudsman finds that you have suffered actual financial loss and/or aggravation, distress or inconvenience as a result of your search provider failing to keep to the Standards.

Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPOs.

COMPLAINTS PROCEDURE: If you want to make a complaint, we will:

- acknowledge it within 5 working days of receipt
- normally deal with it fully and provide a final response, in writing, within 20 working days of receipt
- liaise, at your request, with anyone acting formally on your behalf

Complaints should be sent to:

Operations Director, Groundsure Ltd, Sovereign House, Church Street, Brighton, BN1 1UJ. Tel: 08444 159 000. Email:

info@groundsure.com If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs): Tel: 01722 333306, E-mail: admin@tpos.co.uk We will co-operate fully with the Ombudsman during an investigation and comply with their final decision.

Groundsure's Terms and Conditions can be viewed online at this link: <https://www.groundsure.com/terms-and-conditions-jan-2020/>

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

Coal Mining Report Insurance Policy



Coal Mining Report Insurance Policy

The Schedule

Policy Number: The Reference contained in the **Coal Mining Search Report**

Premium: £1.40 inclusive of Insurance Premium Tax at 12%

Property: The property which is the subject of the **Coal Mining Search Report**

Limit of Indemnity: £100,000 increasing by 10% compound per annum on each anniversary of and for the first 10 years following the **Commencement Date**

Commencement Date: The date of the **Coal Mining Search Report**

You/Your:

1. A purchaser of the **Property**
2. A lender providing a **Mortgage** in connection with a purchase of the **Property**
3. A lender providing a **Mortgage** by way of a re-mortgage of the **Property**

Definitions

Where a word is defined below or in the schedule it shall carry the same meaning wherever it appears in bold text in this policy

Insured Use: The continued use of the **Property** as a single house or flat or a single commercial premises

Market Value: The value as determined by a surveyor appointed by agreement between **You** and **Us** or (in default of agreement) the President for the time being of the Royal Institution of Chartered Surveyors

Mortgage: A mortgage or charge secured on the **Property** by an institutional mortgage lender

Coal Mining Search Report: The coal mining search report attached to this policy

Search: An official search comprising a search in form CON29M (2018) being mining searches relating to coal and brine in the area in which the **Property** is situated

We/Our/Us:

Zurich Insurance plc. A public limited company incorporated in Ireland. Registration No. 13460. Registered Office: Zurich House, Ballsbridge Park, Dublin 4, Ireland. UK Branch registered in England and Wales Registration No. BR7985. UK Branch Head Office: The Zurich Centre, 3000 Parkway, Whiteley, Fareham, Hampshire PO15 7JZ.

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Communications may be monitored or recorded to improve our service and for security and regulatory purposes.

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Your Policy

This is a legal document and should be kept in a safe place.

This policy is an agreement between **You** and **Us** and cover is provided subject to the payment of the **Premium**.

You must read this policy and its conditions, exclusions, schedule and any endorsements as one contract. Please read all of them to make sure that they provide the cover **You** require. If they do not, please contact **Us** or **Your** insurance adviser who arranged the policy for **You**.

When **You** take out and make changes to the cover provided by this policy, **You** must take reasonable care to ensure that **You** accurately answer any questions which **We** ask of **You** and that any information **You** give **Us** is accurate. If **You** are taking out this policy for purposes which are mainly related to **Your** trade, business or profession, **You** must also let **Us** know about all facts which are material to **Our** decision to provide **You** with insurance. Failure to meet these obligations could result in this policy being invalidated, a claim not being paid, or an additional premium being charged.

Fair presentation of the risk

a) At inception of this policy and also whenever changes are made to it at **Your** request **You** must:

- i) where **You** have taken out this policy for purposes which are wholly or mainly related to **Your** trade, business or profession, disclose to **Us** all material facts in a clear and accessible manner and not misrepresent any material facts, and
- ii) where **You** have taken out this policy for purposes which are wholly or mainly unrelated to **Your** trade, business or profession, take reasonable care not to misrepresent any material facts.

b) If **You** do not comply with clause a) of this condition **We** may:

- i) avoid this policy which means that **We** will treat it as if it had never existed and refuse all claims where any non-disclosure or misrepresentation by **You** is proven by **Us** to be deliberate or reckless in which case **We** will not return the premium paid by **You**; and
- ii) recover from **You** any amount **We** have already paid for any claims including costs or expenses **We** have incurred.

c) If **You** do not comply with clause a) of this condition and the non-disclosure or misrepresentation is not deliberate or reckless this policy may be affected in one or more of the following ways depending on what **We** would have done if **We** had known about the facts which **You** failed to disclose or misrepresented:

- i) if **We** would not have provided **You** with any cover **We** will have the option to:
 1. avoid the policy which means that **We** will treat it as if it had never existed and repay the premium paid; and
 2. recover from **You** any amount **We** have already paid for any claims including costs or expenses **We** have incurred
- ii) if **We** would have applied different terms to the cover **We** will have the option to treat this policy as if those different terms apply. **We** may recover any payments made by **Us** on claims which have already been paid to the extent that such claims would not have been payable had such additional terms been applied
- iii) if **We** would have charged **You** a higher premium for providing the cover **We** will charge **You** the additional premium which **You** must pay in full.

d) If any insured person, other than **You**, is responsible for a misrepresentation or failure to make a fair presentation of the risk, **We** will invoke the remedies available to **Us** under this condition as against that particular person as if a separate insurance contract had been issued to them leaving the remainder of the policy unaffected.

NB: For the purposes of the duty of disclosure stated in paragraphs a) i) and ii) above the content of the **Coal Mining Search Report** will be deemed to satisfy **Your** disclosure obligations.

Cover

1. **You** are in the process of purchasing the **Property** relying on the **Coal Mining Search Report** and/or
2. **You** (being a lender) have agreed to provide a **Mortgage** in connection with **Your** borrower's purchase or re-mortgage of the **Property** relying on the **Coal Mining Search Report**.

We will pay the following losses sustained by **You** arising out of the **Property** being affected by any matter which would have been revealed by a **Search** had one been carried out on the date of the **Coal Mining Search Report** but which was not revealed by the **Coal Mining Search Report**:

1. any reduction in **Market Value** of the **Property** calculated at the date **You** become aware of the matter(s) and/or loss in connection with a **Mortgage** as a result of such reduction.
2. all other costs and expenses including out of court settlement costs incurred by **Us** or by **You** with **Our** prior written agreement.

Waiver of Breach of Policy Condition

We will not exercise **Our** right to avoid **Our** liability to **You** in respect of loss where **You** have inadvertently breached any term or condition of the policy provided that such breach does not prejudice **Our** rights and remedies under the policy or otherwise directly or indirectly result in or increase the amount of any loss.

Protection for Mortgagees and Successors in Title

We will not avoid **Our** liability to make a payment to **You** solely because another person breaches the terms and conditions of this policy, provided such breach was not committed on **Your** behalf or with **Your** agreement, and **We** will invoke the remedies available to **Us** under the Policy as against that other person as if a separate insurance contract had been issued to them leaving the remainder of the policy unaffected.

Joint Insured

Any party insured under this policy standing in the relation of parent company, subsidiary company, associated company, branch office or joint venture partner to each other will be deemed to be joint insured for the purposes of this policy and jointly liable and responsible for any breach of any terms and conditions of this policy. If there is any inconsistency between this clause and any other term of this policy, this clause shall prevail.

Exclusions

We will not pay for any:

1. amount in excess of the **Limit of Indemnity**.
2. loss which would be recoverable under a household buildings insurance policy.
3. loss arising from any matter that **You** were aware of at the **Commencement Date**.
4. loss if the **Property** is used for any purpose other than the **Insured Use**.

Claims Conditions and How to Claim

1. **You** must:

- i) give **Us** written notice as soon as possible of any potential or actual claim or any circumstances likely to result in a claim. Please provide the policy number, **Your** name, the full address of the **Property** and a brief description of the incident that has occurred. Notifications should be sent to: Speciality Lines Claims Team, Zurich Insurance, 8th Floor, 70 Mark Lane, London, EC3R 7NQ. Email: claims@uk.zurich.com, Enquiry line: telephone 0207 648 3523
- ii) pass all court documents and/or other communications to **Us** as soon as possible after receipt
- iii) not deal with, make any admission of liability or attempt to settle a claim without **Our** prior written agreement.
- iv) agree to and carry out at **Our** expense all things necessary to minimise any loss.
- v) provide all information and assistance that **We** may require to help defend and settle the claim.

2. **We** are entitled to:

- i) decide how to settle or defend a claim and may carry out proceedings in the name of any person insured under this policy, including proceedings for recovering any claim.
- ii) pay to **You** at any time, an amount equal to the **Limit of Indemnity** or any lower amount for which the claim can be settled, after deduction of any sum already paid. **We** may then give up control of and have no further liability in connection with the claim.

3. If **We** admit liability for a claim but there is a dispute as to the amount to be paid the dispute will be referred to an arbitrator. The arbitrator will be appointed jointly by **You** and **Us** in accordance with the law at the time. **You** may not take any legal action against **Us** over the dispute before the arbitrator has reached a decision.

4. If **You** or anyone acting on Your behalf:

- a) makes a fraudulent or exaggerated claim under this policy; or
- b) uses fraudulent means or devices including the submission of false or forged documents in support of a claim whether or not the claim is itself genuine; or
- c) makes a false statement in support of a claim whether or not the claim is itself genuine; or
- d) submits a claim under this policy for loss or damage which **You** or anyone acting on **Your** behalf or in connivance with **You** deliberately caused; or
- e) realises after submitting what **You** reasonably believed was a genuine claim under this policy and then fails to tell **Us** that **You** have not suffered any loss or damage; or
- f) suppresses information which **You** know would otherwise enable **Us** to refuse to pay a claim under this policy

We will be entitled to refuse to pay the whole of the claim and recover any sums that **We** have already paid in respect of the claim.

If any fraud is perpetrated by or on behalf of an insured person and not on behalf of **You** this condition should be read as if it applies only to that insured person's claim and references to this policy should be read as if they were references to the cover effected for that person alone and not to the policy as a whole.

5. If any claim is covered by any other insurance, **We** will not pay for more than **Our** share of that claim.

6. The most **We** will pay for any loss (or all losses in the aggregate), including costs and expenses agreed by **Us** is the **Limit of Indemnity**. Once **We** have paid a loss or losses equal to the amount of the **Limit of Indemnity**, **We** will have no further liability under this policy.

General Conditions

1. Neither **You** (nor anyone acting on **Your** behalf) must disclose the existence of this policy to any other party except **Your** legal and other professional advisers, prospective purchasers, lessees and tenants of the **Property**, their respective mortgagees, legal and other professional advisers.
2. In the UK the law allows both **You** and **Us** to choose the law applicable to the contract. This contract will be subject to the relevant law of England and Wales, Scotland, Northern Ireland, the Isle of Man or the Channel Islands depending upon the Property address stated in the Schedule. If there is any dispute as to which law applies it will be English law. The parties agree to submit to the exclusive jurisdiction of the English courts.
3. Notwithstanding any other terms of this policy **We** will be deemed not to provide cover nor will **We** make any payment or provide any service or benefit to **You** or any other party to the extent that such cover, payment, service, benefit and/or any business or activity of **Yours** would violate any applicable trade or economic sanctions law or regulation.

Cancellation Clause

If **You** have taken out this policy for purposes which are wholly or mainly unrelated to **Your** trade, business or profession, **You** may cancel this policy within 14 days of receiving the policy by writing to **Us** and in such event **We** may, at **Our** discretion, charge **You** for the time that **You** have been on cover. Any refund will be made to the party who paid the premium. If **You** do cancel, **You** may be in breach of the terms of **Your** mortgage or the terms of the contract for the sale of **Your** property. If **You** are in doubt, **You** may wish to seek legal advice prior to cancellation.

Fair Processing and Complaints Procedure Our Complaints Procedure

Our commitment to customer service

We are committed to providing a high level of customer service. If you feel we have not delivered this, we would welcome the opportunity to put things right for you.

Who to contact in the first instance

Many concerns can be resolved straight away. Therefore in the first instance, please get in touch with your usual contact at Zurich or your broker or insurance intermediary, as they will generally be able to provide you with a prompt response to your satisfaction.

Contact details will be provided on correspondence that we or our representatives have sent you.

Many complaints can be resolved within a few days of receipt

If we can resolve your complaint to your satisfaction within the first few days of receipt, we will do so. Otherwise, we will keep you updated with progress and will provide you with our decision as quickly as possible.

Next steps if you are still unhappy

If you are not happy with the outcome of your complaint, you may be able to ask the Financial Ombudsman Service to review your case.

We will let you know if we believe the ombudsman service can consider your complaint when we provide you with our decision. The service they provide is free and impartial, but you would need to contact them within 6 months of the date of our decision.

More information about the ombudsman and the type of complaints they can review is available via their website www.financial-ombudsman.org.uk.

You can also contact them as follows:

Post: Financial Ombudsman Service, Exchange Tower, London, E14 9SR

Telephone: 08000 234567 (free on mobile phones and landlines)

Email: complaint.info@financial-ombudsman.org.uk

If the Financial Ombudsman Service is unable to consider your complaint, you may wish to obtain advice from the Citizens Advice Bureau or seek legal advice.

The Financial Services Compensation Scheme (FSCS)

We are covered by the Financial Services Compensation Scheme (FSCS) which means that you may be entitled to compensation if we are unable to meet our obligations to you. Further information is available on www.fscs.org.uk or by contacting the FSCS directly on 0800 678 1100.

How we use your information**Who controls your personal information**

This notice tells you how Zurich Insurance plc ('Zurich'), as data controller, will deal with your personal information. Where Zurich introduces you to a company outside the group, that company will tell you how your personal information will be used.

You can ask for further information about our use of your personal information or complain about its use in the first instance, by contacting our Data Protection Officer at: Zurich Insurance Group, Tri-centre 1, Newbridge Square, Swindon, SN1 1HN or by emailing the Data Protection Officer at GBZ.General.Data.Protection@uk.zurich.com.

If you have any concerns regarding our processing of your personal information, or are not satisfied with our handling of any request by you in relation to your rights, you also have the right to make a complaint to the Information Commissioner's Office. Their address is: First Contact Team, Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, SK9 5AF.

What personal information we collect about you

We will collect and process the personal information that you give us by phone, e-mail, filling in forms, including on our website, and when you report a problem with our website. We also collect personal information from your appointed agent such as your trustee, broker, intermediary or financial adviser in order to provide you with the services you have requested and from other sources, such as credit reference agencies and other insurance companies, for verification purposes. We will also collect information you have volunteered to be in the public domain and other industry-wide sources. We will only collect personal information that we require to fulfil our contractual or legal requirements unless you consent to provide additional information. The type of personal information we will collect includes; basic personal information (i.e. name, address and date of birth), occupation and financial details, health and family information, claims and convictions information and where you have requested other individuals be included in the arrangement, personal information about those individuals.

If you give us personal information on other individuals, this will be used to provide you with a quotation and/or contract of insurance and/or provision of financial services. You agree you have their permission to do so. Except where you are managing the contract on another's behalf, please ensure that the individual knows how their personal information will be used by Zurich. More information about this can be found in the 'How we use your personal information' section.

How we use your personal information

We and our selected third parties will only collect and use your personal information (i) where the processing is necessary in connection with providing you with a quotation and/or contract of insurance and/or provision of financial services that you have requested; (ii) to meet our legal or regulatory obligations; or (iii) for our 'legitimate interests'. It is in our legitimate interests to collect your personal information as it provides us with the information that we need to provide our services to you more effectively

including providing you with information about our products and services. We will always ensure that we keep the amount of information collected and the extent of any processing to the absolute minimum to meet this legitimate interest. Examples of the purposes for which we will collect and use your personal information are:

1. to provide you with a quotation and/or contract of insurance;
2. to identify you when you contact us;
3. to deal with administration and assess claims;
4. to make and receive payments;
5. to obtain feedback on the service we provide to you;
6. to administer our site and for internal operations including troubleshooting, data analysis, testing, research, statistical and survey purposes;
7. for fraud prevention and detection purposes.

We will contact you to obtain consent prior to processing your personal information for any other purpose, including for the purposes of targeted marketing unless we already have consent to do so.

Who we share your personal information with

Where necessary, we will share the personal information you gave us for the purposes of providing you with the goods and services you requested with the types of organisations described below:

associated companies including reinsurers, suppliers and service providers;
introducers and professional advisers;
regulatory and legal bodies;
survey and research organisations;
credit reference agencies;
healthcare professionals, social and welfare organisations; and
other insurance companies

Or, in order to meet our legal or regulatory requirements, with the types of organisations described below:

regulatory and legal bodies;
central government or local councils;
law enforcement bodies, including investigators;
credit reference agencies; and
other insurance companies

How we use your personal information for websites and email communications

When you visit one of our websites we may collect information from you such as your email address or IP address. This helps us to track unique visits and monitor patterns of customer website traffic, such as who visits and why they visit.

We use cookies and/or pixel tags on some pages of our website. A cookie is a small text file sent to your computer. A pixel tag is an invisible tag placed on certain pages of our website but not on your computer. Pixel tags usually work together with cookies to assist us to provide you with a more tailored service. This allows us to monitor and improve our email communications and website. Useful information about cookies, including how to remove them, can be found on our websites.

How we transfer your personal information to other countries

Where we transfer your personal information to countries that are outside of the UK and the European Union (EU) we will ensure that it is protected and that the transfer is lawful. We will do this by ensuring that the personal information is given adequate safeguards by using 'standard contractual clauses' which have been adopted or approved by the UK and the EU, or other solutions that are in line with the requirements of European data protection laws.

A copy of our security measures for personal information transfers can be obtained from our Data Protection Officer at: Zurich Insurance Group, Tri-centre 1, Newbridge Square, Swindon, SN1 1HN, or by emailing the Data Protection Officer at GBZ.General.Data.Protection@uk.zurich.com.

How long we keep your personal information for

We will retain and process your personal information for as long as necessary to meet the purposes for which it was originally collected. These periods of time are subject to legal, tax and regulatory requirements or to enable us to manage our business.

Your data protection rights

You have a number of rights under the data protection laws, namely:

- to access your data (by way of a subject access request);
 - to have your data rectified if it is inaccurate or incomplete;
 - in certain circumstances, to have your data deleted or removed;
 - in certain circumstances, to restrict the processing of your data;
 - a right of data portability, namely to obtain and reuse your data for your own purposes across different services;
 - to object to direct marketing;
 - not to be subject to automated decision making (including profiling), where it produces a legal effect or a similarly significant effect on you;
 - to claim compensation for damages caused by a breach of the data protection legislation.
- if we are processing your personal information with your consent, you have the right to withdraw your consent at any time.

We will, for the purposes of providing you with a contract of insurance, processing claims, reinsurance and targeted marketing, process your personal information by means of automated decision making and profiling where we have a legitimate interest or you have consented to this.

What happens if you fail to provide your personal information to us

If you do not provide us with your personal information, we will not be able to provide you with a contract or assess future claims for the service you have requested.

Fraud prevention and detection

In order to prevent and detect fraud we may at any time:

- check your personal data against counter fraud systems
- use your information to search against various publicly available and third party resources
- use industry fraud tools including undertaking credit searches and to review your claims history
- share information about you with other organisations including but not limited to the police, the Insurance Fraud Bureau (IFB), other insurers and other interested parties.

If you provide false or inaccurate information and fraud is identified, the matter will be investigated and appropriate action taken. This may result in your case being referred to the Insurance Fraud Enforcement Department (IFED) or other police forces and fraud prevention agencies. You may face fines or criminal prosecution. In addition, Zurich may register your name on the Insurance Fraud Register, an industry-wide fraud database.

Claims history

We may pass information relating to claims or potential claims to any relevant database. We and other insurers may search these databases when you apply for insurance, when claims or potential claims are notified to us or at time of renewal to validate your claims history or that of any other person or property likely to be involved in the policy or claim.

This helps to check information provided and prevent fraudulent claims.

Appendix D

UXO PRE DESK STUDY ASSESSMENT



Kinchington, Jess

From: Eleanor Chaston <Ellie.Chaston@zetica.com>
Sent: 04 May 2021 13:43
To: Kinchington, Jess; Uxo
Cc: Research
Subject: RE: Heckmondwicke Bus Hub, Heckmondwike, WF16 OHR

Good afternoon Jess

We did recently complete this PDSA for your colleague Jack Connor, which was sent out on the 26th April. Please find the PDSA below as requested, with updated details. Any further queries, don't hesitate to contact us.

	
Pre-Desk Study Assessment	
Site:	Heckmondwike Bus Hub, West Yorkshire
Client:	WSP
Contact:	Jess Kinchington
Date:	4 th May 2021
Pre-WWI Military Activity on or Affecting the Site	None identified.
WWI Military Activity on or Affecting the Site	None identified.
WWI Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: ☐ Transport infrastructure and public utilities. ☐ Industries important to the war effort, including chemical works. ☐ Anti-Aircraft (AA) guns.
WWI Bombing	None identified on the Site.
Interwar Military Activity on or Affecting the Site	None identified.
WWII Military Activity on or Affecting the Site	None identified.
WWII Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: ☐ Transport infrastructure and public utilities. ☐ AA and anti-invasion defences.
WWII Bombing Decoys (within 5km of Site)	1No. located approximately 4.8km west of the Site.
WWII Bombing	During WWII the Site was located in the Urban District (UD) of Heckmondwike, which officially recorded 4No. High Explosive (HE) bombs with a bombing density of 5.7 bombs per 405 hectares (ha). No readily available records have been found to indicate that the Site was bombed.
Post-WWII Military Activity on or Affecting the Site	None identified.

Recommendation	A detailed desk study, whilst always prudent, is not considered essential in this instance.
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This summary is based on a cursory review of readily available records. Caution is advised if you plan to action work based on this summary.

It should be noted that where a potentially significant source of UXO hazard has been identified on the Site, the requirement for a detailed desk study and risk assessment has been confirmed and no further research will be undertaken at this stage. It is possible that further in-depth research as part of a detailed UXO desk study and risk assessment may identify other potential sources of UXO hazard on the Site.

Many thanks

Ellie

Ellie Chaston
Risk Assessor
Zetica Limited

T. 01993 886 682 | E. ellie.chaston@zetica.com | W. www.zeticauxo.com | T. [@ZeticaUXO](https://www.instagram.com/zeticauxo)

From: Kinchington, Jess <Jess.Kinchington@wsp.com>
Sent: 04 May 2021 13:23
To: Uxo <Uxo@zetica.com>
Subject: Heckmondwicke Bus Hub, Heckmondwike, WF16 0HR

Hello

I believe a colleague of mine Jack Connor may have ordered a UXO pre-desk study report for the following site, however he has now left the business –are you able to re-send the report onto myself and if not, produce one?

Heckmondwicke Bus Hub, Heckmondwike, WF16 0HR



Many thanks in advance

Jess Kinchington BSc, MSc, CSci, MEnvSc
Senior Consultant | Ground & Water



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Appendix E

LIMITATIONS





REPORT LIMITATIONS - GROUND RISK AND REMEDIATION

GENERAL

1. WSP UK Limited has prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed and outlined in the body of the report.
2. Unless explicitly agreed otherwise, in writing, this report has been prepared under WSP UK Limited standard Terms and Conditions as included within our proposal to the Client.
3. Project specific appointment documents may be agreed at our discretion and a charge may be levied for both the time to review and finalise appointments documents and also for associated changes to the appointment terms. WSP UK Limited reserves the right to amend the fee should any changes to the appointment terms create an increase risk to WSP UK Limited.
4. The report needs to be considered in the light of the WSP UK Limited proposal and associated limitations of scope. The report needs to be read in full and isolated sections cannot be used without full reference to other elements of the report and any previous works referenced within the report.

PHASE 1 GEO ENVIRONMENTAL AND PRELIMINARY RISK ASSESSMENTS

Coverage: *This section covers reports with the following titles or combination of titles: phase 1; desk top study; geo environmental assessment; development appraisal; preliminary environmental risk assessment; constraints report; due diligence report; geotechnical development review; environmental statement; environmental chapter; project scope summary report (PSSR), program environmental impact report (PEIR), geotechnical development risk register; and, baseline environmental assessment.*

5. The works undertaken to prepare this report comprised a study of available and easily documented information from a variety of sources (including the Client), together with (where appropriate) a brief walk over inspection of the Site and correspondence with relevant authorities and other interested parties. Due to the short timescales associated with these projects responses may not have been received from all parties. WSP UK Limited cannot be held responsible for any disclosures that are provided post production of our report and will not automatically update our report.
6. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only for the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, WSP UK Limited reserves the right to review such information and, if warranted, to modify the opinions accordingly.
7. It should be noted that any risks identified in this report are perceived risks based on the information reviewed. Actual risks can only be assessed following intrusive investigations of the site.
8. WSP UK Limited does not warrant work / data undertaken / provided by others.



REPORT LIMITATIONS - GROUND RISK AND REMEDIATION

INTRUSIVE INVESTIGATION REPORTS

Coverage: *The following report titles (or combination) may cover this category of work: geo environmental site investigation; geotechnical assessment; GIR (Ground Investigation reports); preliminary environmental and geotechnical risk assessment; and, geotechnical risk register.*

9. The investigation has been undertaken to provide information concerning either:
 - i. The type and degree of contamination present at the site in order to allow a generic quantitative risk assessment to be undertaken; or
 - ii. Information on the soil properties present at the site to allow for geotechnical development constraints to be considered.
10. The scope of the investigation was selected on the basis of the specific development and land use scenario proposed by the Client and may be inappropriate to another form of development or scheme. If the development layout was not known at the time of the investigation the report findings may need revisiting once the development layout is confirmed.
11. For contamination purposes, the objectives of the investigation are limited to establishing the risks associated with potential contamination sources with the potential to cause harm to human health, building materials, the environment (including adjacent land), or controlled waters.
12. For geotechnical investigations the purpose is to broadly consider potential development constraints associated with the physical property of the soils underlying the site within the context of the proposed future or continued use of the site, as stated within the report.
13. The amount of exploratory work, soil property testing and chemical testing undertaken has necessarily been restricted by various factors which may include accessibility, the presence of services; existing buildings; current site usage or short timescales. The exploratory holes completed assess only a small percentage of the area in relation to the overall size of the Site, and as such can only provide a general indication of conditions.
14. The number of sampling points and the methods of sampling and testing do not preclude the possible existence of contamination where concentrations may be significantly higher than those actually encountered or ground conditions that vary from those identified. In addition, there may be exceptional ground conditions elsewhere on the site which have not been disclosed by this investigation and which have therefore not been taken into account in this report.
15. The inspection, testing and monitoring records relate specifically to the investigation points and the timeframe that the works were undertaken. They will also be limited by the techniques employed. As part of this assessment, WSP UK Limited has used reasonable skill and care to extrapolate conditions between these points based upon assumptions to develop our interpretation and conclusions. The assumption made in forming our conclusions is that the ground and groundwater conditions (both chemically and physically) are the same as have been encountered during the works undertaken at the specific points of investigation. Conditions can change between investigation points and these interpretations should be considered indicative.
16. The risk assessment and opinions provided are based on currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values. Specific assumptions associated



REPORT LIMITATIONS - GROUND RISK AND REMEDIATION

with the WSP UK Limited risk assessment process have been outlined within the body or associated appendix of the report.

17. Additional investigations may be required in order to satisfy relevant planning conditions or to resolve any engineering and environmental issues.
18. Where soil contamination concentrations recorded as part of this investigation are used for commentary on potential waste classification of soils for disposal purposes, these should be classed as indicative only. Due consideration should be given to the variability of contaminant concentrations taken from targeted samples versus bulk excavated soils and the potential variability of contaminant concentrations between sampling locations. Where major waste disposal operations are considered, targeted waste classification investigations should be designed.
19. The results of the asbestos testing are factually reported and interpretation given as to how this relates to the previous use of the site, the types of ground encountered and site conceptualisation. This does not however constitute a formal asbestos assessment. These results should be treated cautiously and should not be relied upon to provide detailed and representative information on the delineation, type and extent of bulk ACMs and / or trace loose asbestos fibres within the soil matrix at the site.
20. If costs have been included in relation to additional site works, and / or site remediation works these must be considered as indicative only and must be confirmed by a qualified quantity surveyor.

EUROCODE 7: GEOTECHNICAL DESIGN

21. On 1st April 2010, BS EN 1997-1:2004 (Eurocode 7: Geotechnical Design – Part 1) became the mandatory baseline standard for geotechnical ground investigations.
22. In terms of geotechnical design for foundations, slopes, retaining walls and earthworks, EC7 sets guidance on design procedures including specific guidance on the numbers and spacings of boreholes for geotechnical design, there are limits to methods of ground investigation and the quality of data obtained and there are also prescriptive methods of assessing soil strengths and methods of design. Unless otherwise explicitly stated, the work has not been undertaken in accordance with EC7. A standard geotechnical interpretative report will not meet the requirements of the Geotechnical Design Report (GDR) under Eurocode 7. The GDR can only be prepared following confirmation of all structural loads and serviceability requirements. The report is likely to represent a Ground Investigation Report (GIR) under the Eurocode 7 guidance.

DETAILED QUANTITATIVE RISK ASSESSMENTS AND REMEDIAL STRATEGY REPORTS

23. These reports build upon previous report versions and associated notes. The scope of the investigation, further testing and monitoring and associated risk assessments were selected on the basis of the specific development and land use scenario proposed by the Client and may not be appropriate to another form of development or scheme layout. The risk assessment and opinions provided are based on currently available approaches in the generation of Site Specific Assessment Criteria relating to contamination concentrations and are not considered to represent a risk in a specific land use scenario to a specific receptor. No liability can be accepted for the retrospective effects of any future changes or amendments to these values, associated models or associated guidance.



REPORT LIMITATIONS - GROUND RISK AND REMEDIATION

24. The outputs of the Detailed Quantitative Risk Assessments are based upon WSP UK Limited manipulation of standard risk assessment models. These are our interpretation of the risk assessment criteria.
25. Prior to adoption on site they will need discussing and agreeing with the Regulatory Authorities prior to adoption on site. The regulatory discussion and engagement process may result in an alternative interpretation being determined and agreed. The process and timescales associated with the Regulatory Authority engagement are not within the control of WSP UK Limited. All costs and programmes presented as a result of this process should be validated by a quantity surveyor and should be presumed to be indicative.

GEOTECHNICAL DESIGN REPORT (GDR)

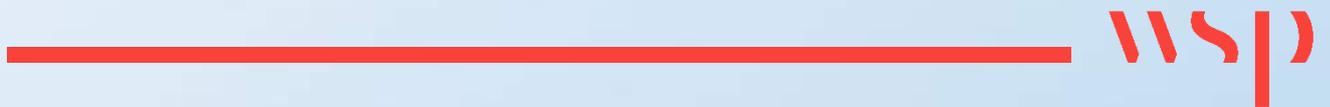
26. The GDR can only be prepared following confirmation of all structural loads and serviceability requirements. All the relevant information needs to be provided to allow for a GDR to be produced.

MONITORING (INCLUDING REMEDIATION MONITORING REPORTS)

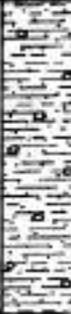
27. These reports are factual in nature and comprise monitoring, normally groundwater and ground gas and data provided by contractors as part of an earthworks or remedial works.
28. The data is presented and will be compared with assessment criteria.

Appendix F

BGS LOGS



Norwest Holst Soil Engineering Ltd.						Borehole No. 4	
Contract No. F508D		BOREHOLE LOG		Sheet 1 of 1			
Location Alfred Street, Hackmondwyke		SE22SW 272		Chainage			
Client J.R.P. Specialist Services		2161 2338		Ground Level 68.50 m.A.O.D.			
Method of Boring Percussion				Date 25/11/81			
Diameter of Borehole 150mm							

Description of Strata	Legend	Depth Below G.L.(m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/ R.C.D.%	Daily Progress
MADE GROUND: Ash and brick rubble.		1.80	64.7		0.80 1.60	5 15	
Stiff dark brown sandy stony CLAY with sandstone fragments.		4.30	62.2		2.40 3.90	26 53	
Highly weathered brown MUDSTONE.		7.00	59.5		5.35 6.50	82 For 215mm 28 For 360mm	

<p style="text-align: center;">Type of Sample</p> <p> <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> Undisturbed <input checked="" type="checkbox"/> C.P.T. <input checked="" type="checkbox"/> Vane <input checked="" type="checkbox"/> Jar <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Bulk <input checked="" type="checkbox"/> Piezometer </p>	<p>Remarks (Observations of Ground Water etc.)</p> <p style="text-align: center;">Borehole dry.</p> <p style="font-size: small; text-align: center;">Water levels are subject to seasonal or tidal variations and should not be taken as constant.</p>
---	--

TRIAL PIT RECORD		CLIENT BSCP	SCALE 1 to 50	JOB NO C10272	TRIAL PIT NO TP2	
Dunelm 0191 376 6808 FAX 0191 378 3782		DATE 24/11/2009	LOCATION YORKSHIRE CD-OP HECKMONDWAKE			
Soil no	A	B	C	D	Depth	
0.00					0.00	
1					0.50	
2					1.00	
3					1.50	
4					2.00	
5	2.50					
	3.00					
	3.50					
	4.00					
STRATA				SAMPLES & TESTS		
Reference	Description			Depth	Type/No	Shear Strength or Moisture
1	MADE GROUND - Grass on black soil and angular stone with occasional brick fragments.			0.00	V	80.0
2	MADE GROUND - Black and dark brown silty clay and rubble fill with some sandstone and brick fragments.					
3	MADE GROUND - Soft to firm grey/black very silty silty clay.					
4	Firm to firm to stiff medium orange/brown and grey/olive mottled slightly sandy to sandy slightly CLAY with some fine to medium gravel and occasional fragments of sandstone and coal.					
5	Generally stiff to very stiff medium brown and olive/grey mottled slightly sandy to sandy CLAY with some fine to medium gravel and sandstone fragments becoming more frequent with depth. Occasional water very sandy lenses.					
Flow	MECHANICAL EXCAVATOR (JOB)		Dimensions	Location Sketch Plan (N/S)		
Shoring	NONE					
Stability	SEE REMARKS					
Ground Water	SEE REMARKS					
Remarks	Trial pit dry.		Excavation stable.			

TRIAL PIT RECORD		CLIENT BSCP	SCALE 1 to 50	JOB NO C10272	TRIAL PIT NO TP6
Dunelm 0191 376 5608 FAX 0191 378 3762		DATE 24/11/1999	LOCATION YORKSHIRE CO-OP HECKMONDWIKE		
Datum	A	B	C		D
					Depth
0.00	1				0.00
	2				0.50
	3				1.00
	4				1.50
	5				2.00
	6				2.50
					3.00
					3.50
					4.00

STRATA		SAMPLES & TESTS		
Reference	Description	Depth	Type/No	Shear Strength or N-value
1	MADE GROUND - Grass and dark brown soil with some angular stone and occasional glass and brick fragments.	140	V	186.0
		3.00	V	178.0
2	MADE GROUND - Beds of bone brown, orange and black slightly clayey soil and cinder with numerous large sandstone fragments.			
3	MADE GROUND - Very stiff light to medium brown and olive grey mottled slightly silty sandy clay. Re-compacted material.			
4	MADE GROUND? - Firm to stiff dark olive and black very silty clay. Disturbed material?			
5	Stiff friable olive/brown and grey mottled slightly sandy silty CLAY with some fine gravel.			
6	Stiff to very stiff medium brown and grey/olive mottled slightly sandy to sandy slightly silty CLAY with some fine to coarse gravel and occasional sandstone fragments.			

Plant	MECHANICAL EXCAVATOR (JCB)	Dimensions	Location Sketch Plan (N/S)
Shoring	NONE	A= 2.00	
Stability	SEE REMARKS	B= 0.60	
Ground Water	SEE REMARKS	C	
Remarks	Trial pit dry.		
			Slight collapse of excavation ground 100m.

TRIAL PIT RECORD		CLIENT BSC.P	SCALE 1 to 50	JOB NO C10272	TRIALPIT NO TP5
Dunelm 0191 375 8808 FAX 0191 378 8782		DATE 24/11/1999	LOCATION YORKSHIRE CO-OP HECKMONDWIKE		
Datum	A	B	C	D	Depth
0.00	1				0.00
	2				0.50
	3				1.00
	4				1.50
	5				2.00
					2.50
					3.00
					3.50
					4.00
STRATA				SAMPLES & TESTS	
Reference	Description	Depth	Type/No	Shear Strength or N-value	
1	MADE GROUND - Gravel on black soil and angular stone with occasional brick fragments.				
2	MADE GROUND - Bands of brown and black slightly silty clayey soil, brick and sandstone fill.				
3	MADE GROUND - Soft dark brown/black very silty clay with some sandstone and brick fragments. Some very large sandstone fragments and possible remains of foundation? at approx. 1.10m. Very hard unable to break out.				
4	Firm to firm to stiff light to medium brown and olive/grey mottled slightly sandy to sandy slightly silty CLAY with some fine to medium gravel and occasional fragments of coal.				
5	Stiff to very stiff medium brown and olive/grey mottled slightly sandy to sandy CLAY with some fine to medium gravel and sandstone fragments becoming more frequent with depth. Becoming very friable with depth.				
Plant	MECHANICAL EXCAVATOR (JCB)	Dimensions A= 2.40 B= 0.60		Location Sketch Plan (MS)	
Shoring	NONE				
Stability	SEE REMARKS				
Ground Water	SEE REMARKS				
Remarks					
Trial pit dry. Trial pit extended slightly in order to excavate beyond possible foundation obstruction.		Some collapse of excavation from 0.40m to 1.20m			

Appendix G

CIRIA RISK DEFINITIONS



CIRIA C552 RISK ASSESSMENT

The identification of potential pollutant linkages is a key aspect of the evaluation of potentially contaminated land. An approach based on the UK CIRIA 552 report C552 (Contaminated Land Risk Assessment: A Guide to Good Practice, 2001) has been adopted within this report. The assessment considers which source – pathway – receptor pollutant linkages are likely to be plausible and potentially complete, and the potential risk they represent. For each of the pollutant linkages, an estimate of:

- the potential severity (consequence) of the risk, and
- the probability (likelihood) of the risk occurring

has been undertaken to assess the potential risk associated with a complete pollutant linkage.

Table 1 – Classification of consequence (CIRIA C552, 2001)

Classification	Category	Definition	Examples
Severe Short term (acute) risks only	Humans	Short term (acute) risk to human health likely to result in “significant harm” as defined by the Environmental Protection Act 1990, Part 2a	High concentrations of cyanide on the surface of an informal recreation area
	Controlled Waters	Short term risk of pollution of sensitive water resource	Major spillage of contaminants from site into controlled waters
	Property	Catastrophic damage to buildings / property	Explosion causing building collapse
	Ecological Systems	Short term risk to a particular ecosystem or organism forming part of such ecosystem	
Medium Chronic (long term) risks; ‘significant harm’	Humans	Chronic damage to human health (“significant harm” as defined in DEFRA, 2006)	Concentrations of a contaminant from a site exceed the generic or site-specific assessment criteria
	Controlled Waters	Pollution of sensitive water resources	Leaching of contaminants from a site into a Principal or Secondary A aquifer
	Ecological Systems	Significant change in a particular ecosystem or organism forming part of such ecosystem	Death of a species within a designated nature reserve
Mild Chronic (long term) risks; less sensitive receptors	Controlled Waters	Pollution of non-sensitive water resources	Pollution of non-classified surface watercourse
	Property	Significant damage to buildings, structures, crops and services (“significant harm” as defined in DEFRA, 2006) and damage to sensitive buildings / structures and services	Foundation damage to a building rendering it unsafe to occupy due to instability
	Ecological Systems	Damage to the environment	
Minor Chronic (long term) risk; mild	Humans	Non-permanent health effects to human health that are easily prevented by the use of PPE	Presence of contaminants at such concentrations that protective equipment is required during site works
	Property	Easily repairable effects of damage to buildings, structures and services	Discoloration of concrete
	Financial / Project	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve	



Table 2 – Classification of probability (CIRIA C552, 2001)

Classification	Definition
High likelihood	There is a pollutant linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	There is a pollutant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low likelihood	There is a pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such an event would take place, and is less likely in the shorter term.
Unlikely	There is a pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Table 3 – Comparison of consequence against probability (CIRIA C552, 2001)

	Severe	Medium	Mild	Minor
High Likelihood	Very High Risk	High Risk	Moderate Risk	Low / Moderate Risk
Likely	High Risk	Moderate Risk	Low to Moderate Risk	Low Risk
Low Likelihood	Moderate Risk	Low / Moderate Risk	Low Risk	Very Low Risk
Unlikely	Low / Moderate Risk	Low Risk	Very Low Risk	Very Low Risk

Table 4 - Risk classification descriptions (CIRIA C552, 2001)

Risk Classification	Definition
Very high risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High risk	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.
Moderate risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not undertaken already) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Appendix H

SITE PHOTOGRAPHS





Photograph 1: Heckmondwike Bus Hub from the south of the site, looking north.



Photograph 2: Heckmondwike Bus Hub from the north of the site, looking south.



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