

**Environmental
Geotechnical
Specialists**



**PHASE 1 ENVIRONMENTAL
DESK STUDY**

job number C864/20/E/1335	date July 2020
site address Vulcan Way Dewsbury WF13 2NA	
written by C. Mason	checked by i. Sakoor
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GEO TECHNICAL
ENVIRONMENTAL



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Report on a Phase One Desk Study

Location: Site off Vulcan Road
Eightlands, Dewsbury, WF13 2NA.

For: HB Food Services Ltd.

Consultants: Martin Walsh Associates Ltd.

Report No. C864/20/E/1335

Report date: July 2020

For and on behalf of **Rogers Geotechnical Services Ltd**

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1. Introduction

The site comprises the premises and yard of HB Food Services Ltd, off Vulcan Road, Eightlands, Dewsbury, WF13 2NA. The site is approximately 0.53 hectares in size and its National Grid reference is centred around 423980 421672.

It is understood that the development proposals currently comprise the construction of a new single storey warehouse. In order to assist with this decision making process, and any planning and construction aspects of the development, a phase one environmental desk study has been commissioned and is the subject of this report.

In accordance with issued guidance, a site walkover was conducted on the 8th July 2020 and the following observations were made:

General site description/current site use

The site forms the premises and yard of HB Food Services Ltd. The existing warehouse occupies the northern portion, with the middle third being used for storing of wooden pallets. The rear of the site is heavily overgrown. An electric sub-station is present at the bottom of the site.

Site boundaries/access

The site is accessible via some large metal gates off Vulcan Road. Along Vulcan Road, the boundary comprises metal palisade fencing. Adjacent to the existing warehouse is a 5-6m (approx.) retaining wall. Along the western boundary, thick vegetation and a number of trees are present.

Topography

The site itself slopes gently towards the south. Along the western edge, the ground rises steeply.

Surface cover of site

The entrance to the site is cobbled and the area close to the existing warehouse is covered by asphalt. The remainder of the site is muddy underfoot.

**Visible evidence of contamination/ contaminative sources**

Much refuse was noted to be strewn along both eastern and western boundaries. This was noted to include old tyres and car body parts. A locked LPG storage container is present for use by forklift trucks within the north-western corner.

Presence of vegetation and wildlife

The site is bordered by trees for along the western boundary. The southern part of the site was noted to be overgrown by vegetation.

Services

The status of underground services is unknown. There were no overhead services present within the site at the time of the walkover.

Site neighbours

Commercial neighbours are present immediately east of the site, whilst residential properties are present to the west.

In order to ensure that the site is fully characterised and to comply with the Environment Act 1995¹, a Phase One Desk Study has been commissioned by Martin Walsh Associates Ltd on behalf of the client. The desk study is intended to assess the environmental impact of historical, current and future factors on the development. This report will present the data obtained and provide a conceptual ground model and preliminary risk assessment as well as discussing the scope of any intrusive investigation that may be required. This report does not consider ecological impacts (e.g. bats) or botanical risks (e.g. Japanese Knotweed).

2. Review and Summary of Published Data

As a part of this desk study the following data has been considered.

- | | |
|-----------------------------|--------------|
| • Groundsure Reports | - Appendix 1 |
| • Historical maps | - Appendix 2 |
| • Site Plan | - Appendix 3 |
| • Photographs | - Appendix 4 |
| • Consultants Mining Report | - Appendix 5 |

The data obtained from the above mentioned sources has been summarised below².

¹S57 of the Environment Act 1995 inserted the contaminated land regime into the Environmental Protection Act 1990 (Part 2A). The regime 'provides a risk based approach to the identification and remediation of land where contamination poses an unacceptable risk to human health or the environment' See <http://www.environment-agency.gov.uk/research/planning/40405.aspx>. This places a duty on local authorities to inspect their areas for contaminated land and require its remediation using the 'suitable for use' approach. Much of this duty is discharged via the planning regime under the Town and Country Planning Act 1990 as historical land contamination is a 'material planning consideration.' The local authorities are required to secure the removal of unacceptable risks via remediation of the land, to therefore ensure the site is suitable for its new use. This is fulfilled via completion of a Phase One Environmental Desk Study, Phase Two Intrusive Investigation, Phase Three Remediation Strategy and Phase Four Validation Report. Therefore, as a minimum, once a site has been developed it should not be capable of being designated as 'contaminated land' under Part 2A of the Environmental Protection Act 1990, as inserted by the Environment Act 1995 (see also PPS 23 Planning and Pollution Control Section 8)

² This report is a summary only and reference must be made in full to the information provided in the Groundsure Report.



2.1 Historical Land Use

Table 1: Historical Land Use³

HISTORICAL MAPPING SUMMARY		
Map Dates	On site	Within 250m
1854 - 1922	At the start of this period, a number of building are present within the central part of the site. By 1890, a number of large buildings cover the majority of the site, and is labelled Vulcan Iron Works.	Vulcan Iron Works & Chimney - onsite Daw Green quarry (sandstone) – 124m W. No longer present by 1890. Boothroyd quarry (sandstone) – 127m W. No longer present by 1890. Quarry (sandstone) – 214m. No longer present by 1890. Yarn mills – 100m SE. Burial ground – 240m E. Globe Mill (woollen) – 10m W. No longer present by 1922. Central Saw mills – 5m E. Webster Hill Mills – 90m SW. Air shaft (disused) – 60m E. Railway line – 100m SE. Tramway – 90m S. Central sanitary depot – 140m E. Mills – various between 200m SE to 240m S.
1933 - 1948	The site appears to remain unchanged.	Vulcan Iron Works – onsite. Tramway – 90m S. No longer present by 1938. Yarn mills – 95m SE. Railway line – 100m SE. Cleaning & transport depot – 130m E. Burial ground – 240m E.
1954 - 2020	At the start of this period no changes were noted. However, by 1983, the buildings present towards the middle of the site have been demolished. An L-shaped building is present at the northern end of the site. The remainder of the site is labelled as a timber yard.	Works – onsite, 25m SE, 125m SE. Electricity sub-station – immediately S. Warehouse – 20m E, 60m E, 140m E, 200m E, 140m SE. Builders yard – 10m E. Engineering works – 40m E. Railway line 100m SE. Joinery works – 40m E, 120m E. Printing works – 200m SE. No longer present by 1992. Cleansing & transport depot – 140m E. Labelled as depot by 1992. Anchor works – 160m SE, 230m SE. No longer present by 1992. Corporation destructor – 190m SW. No longer present by 1983. Slaughter house – 100m E.

NB. All distances given are approximate only.

2.2 Published Geology and Geological Hazards

Table 2: Geological Data for the Site

BGS MAPPING DATA			
Strata Type	Strata Name ⁴	Previous Name ⁴	Description ⁵
Superficial Geology			None recorded.
Solid Geology	Pennine Lower Coal Measures Formation	Lower Coal Measures	<u>Majority of the site</u> Interbedded grey mudstone, siltstone and pale grey sandstone, commonly with mudstones containing marine fossils in the lower part, and more numerous and thicker coal seams in the upper part.
	Birstall Rock	Cropper Gate Rock	<u>South-eastern corner of the site</u> The Birstall Rock is a fine grained, thickly bedded, cross-bedded sandstone with common pebbles of ironstone, coal, sandstone and mudstone, and common streaks of shaly coal.

³ See Appendix 2

⁴ Sources: British Geological Survey (NERC) Map Sheets 77; Huddersfield; Solid and Drift Edition, and Geology of Britain Viewer [online resource from www.bgs.ac.uk]

⁵ Sources: British Geological Survey (NERC) Lexicon of Named Rock Units [online resource from www.bgs.ac.uk]



GEOLOGICAL FEATURES			
Type	Location	Features	Comments
Mining Activity	On site	Coal mining	The study site is located within the specified search distance of an identified mining area.
Faults	Immediately SW	Fault (inferred)	Normal fault, displacement unknown. This fault is not anticipated to affect the site.
Landslip Deposits	No data	No data	No data
Coal Seams	Onsite	Flockton Thin	Coal seam bisecting the site.
BGS BOREHOLE DATA			
Reference ⁶	Location	Depth	Strata Description
SE22SW594	28m NW	0m to 0.15m	TOPSOIL.
		0.15m to 1.4m	Weak thinly laminated MUDSTONE.
SE22SW53	23m W	0m to 0.3m	MADE GROUND.
		0.3m to 1.3m	Stiff very silty CLAY.
		1.3m to 2.8m	Stiff very silty CLAY becoming very weak MUDSTONE/SILTSTONE.
NATURAL GROUND SUBSIDENCE & HAZARDS ⁷			
Type		Risk Rating	
Potential for collapsible ground stability hazards		Very low.	
Potential for compressible ground stability		Negligible.	
Potential for ground dissolution stability		Negligible.	
Potential for landslide ground stability		Very low.	
Potential for running sand ground stability		Negligible.	
Potential for shrinking or swelling clay ground stability		Negligible to very low.	
Radon		The property is in a lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). No radon protective measures are necessary.	

2.3 Construction Issues

2.3.1 Foundation Construction

On the basis of the prevailing geology and considering the historical mapping, it is possible that some made ground may be revealed. Depending upon its thickness, it may be possible to use shallow strip or spread foundations at this site. It should be appreciated that an intrusive investigation will be required to validate this opinion.

⁶ <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>

⁷ See Groundsure report



Notwithstanding the above, it is possible that undifferentiated strata within the Pennine Lower Coal Measures Formation may include very fine grained rocks which are likely to have weathered to cohesive soils at or near the surface. Such soils could be sensitive to soil moisture variations and thus be susceptible to desiccation as result of tree root action. In light of this, it is possible that footings within the zone of influence of trees (existing or previously removed), may need to be founded at extended depths in excess of 1m.

2.3.2 Site Won Materials

It would appear that residual cohesive soil is likely to be encountered at shallow depth over much of the site. This material is likely to be relatively difficult to re-engineer as a construction material. However, depending on the results of laboratory testing, it may possible to modify/stabilise the soil using lime and/or cement to form a suitable sub-base replacement for pavements and hard standings.

2.3.2 Disposal of Site Materials

If made ground is present then contamination/WAC testing will be required to establish the nature of the underlying soil before disposal to a licensed landfill site. However, it is anticipated that the naturally occurring soils would not be significantly contaminated, thus would probably be accepted by a waste disposal site catering for inert material.

2.4. Coal Mining

The Groundsure Report states that the site is within an area that may be affected by coal mining. A Consultant Coal Authority Mining Report has therefore been obtained that is included in appendix 5 of this report and may be summarised as follows:

Table 3: Summary of the Consultant's Coal Mining Report

Section	Mining Feature	Comments
1	Underground Coal Mining	Unnamed colliery. Coal seam: Black Bed. Depth: 239m. Extraction thickness: 0.74m. Last mined 1896.
	Probable Unrecorded Shallow Workings	Yes.
	Spine Roadways at Shallow Depth	No spine roadway recorded at shallow depth.
	Mine Entries	Shaft reference: 423421-001 (grid reference: 423885, 421614), shaft reference 423421-002 (grid reference: 423897, 421598), shaft reference: 424421-003 (grid reference: 424003, 421752). All in excess of 20m from site boundary.
	Abandoned mine plans	Abandoned mine plans are available.
	Outcrops	Low Barnsley Coal seam.
	Geological Faults	Fault under or close to the property recorded.
	Opencast Mines	None recorded within 500 meters of the enquiry boundary.
	Coal Authority Managed Tips	
2	Site Investigations	None recorded within 50 metres of the enquiry boundary.
	Remediated Sites	



3	Coal Mining Subsidence	The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50m of the enquiry boundary since 31 st October 1994.
	Mine Gas	None recorded within 500 metres of the enquiry boundary.
	Mine Water Treatment Schemes	
	Future underground mining	None recorded.
	Coal mining licensing	None recorded within 200 metres of the enquiry boundary.
	Court orders	None recorded.
	Section 46 notices	No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.
	Withdrawal of support notices	The property is not in an area where a notice to withdraw support has been given The property is not in an area where a notice has been given under Section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.
	Payments to owners of former copyhold land	The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

2.5 Waste Management and Gas Monitoring

Table 4: Landfill Data and Artificial Ground, Recorded and Anticipated

ENVIRONMENT AGENCY, LOCAL AUTHORITY, BGS & HISTORIC LANDFILLS			
Waste Type	Location	Comments	Monitoring Requirement
Active or recent landfill	-	None recorded within 250m	N
Historical landfill	-	None recorded within 250m	N
Historical waste sites	242m S	Waste Transfer: Scheme comprises the construction of a new building to contain waste paper transfer operations,	N
Licensed waste sites	196m S	Type of Site: 75kte HCl Waste TS + treatment	N
	202m S	Type of Site: Household, Commercial & Industrial Waste T Stn	N
Waste exemptions	229m E	Storage of waste in a secure Place. Sorting and de-naturing of controlled drugs for disposal.	N
MADE GROUND & INFILLED GROUNDWORKINGS			
Description	Location	Comments	Monitoring Requirement
Records of Potentially Infilled Features	124m W – 214m NE	Sandstone pits	Y



2.6 Hydrogeology, Hydrology

Table 5: Ground/Controlled Water Sensitivity and Flooding

ENVIRONMENT AGENCY AQUIFER DESIGNATION ⁸			
Strata	Designation	Description	
Solid Geology 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.	
GROUNDWATER SENSITIVITY ⁹			
Description	Location	Details	
Source Protection Zone ¹⁰	-	None recorded within 250m.	
Abstraction Licences	-	None recorded within 250m.	
Discharge Consents	-	None recorded within 250m.	
Records of Part A(2) and Part B Activities and Enforcements	216m S	Non-ferrous Metal	
Records of Licensed Discharge Consents	-	None recorded within 250m.	
CONTROLLED WATERS ¹⁰			
Description	Location	Details	
River Network Entries	225m SE	River Calder	
Surface Water Features	225m SE	River Calder	
POLLUTION INCIDENTS ¹¹			
Pollutant	Receptor	Location	Date
Commercial Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)	117m S	22/03/2002
ENVIRONMENT AGENCY FLOOD RISK ¹²			
Description	Location	Details	
Zone 2	-	The site is not situated within a zone 2 flood plain.	
Zone 3	-	The site is not situated within a zone 3 flood plain.	
Flood Defences	-	None recorded within 250m.	
Groundwater Flooding Area	-	Potential for groundwater flooding to occur.	

⁸ See Appendix 1⁹ See Appendix 1¹⁰ See Appendix 1¹¹ See Appendix 1¹² See Appendix 1



2.7 Sensitive Land Use

Table 6: Sensitive Land Uses within 250m

REGISTERED SENSITIVE LAND USES ¹³		
Description	Location	Details
None recorded within 250m.		

2.8 Industrial Land Use and Potential Sources of Contamination

In order for a conceptual site model and preliminary risk assessment to be completed the historical maps and Groundsure data requires analysis to identify any past or present activities on the site and in the area that may have the potential to cause contamination on the site. Guidance has been issued by the Environment Agency, NHBC and Chartered Institute of Environmental Health.¹⁴ Within this document, annex 3 provides examples of important contaminants that are associated with individual uses of land. This data assists in the formulation of any chemical testing regime.

Those that we consider potentially contaminative according to the guidance are given below:

Table 7: Potentially Contaminative Sources

HISTORICAL		
Land Use	Location	Classification
Historical construction	On site	Artificial/made ground
Railway line	100m SE.	
Boothroyd quarry (sandstone)	127m W	
Quarry (sandstone)	214m W	
Burial ground	240m E.	
Daw Green quarry (sandstone)	124m	
Vulcan Iron Works & Chimney - onsite to 240m S.	On Site	Metal manufacturing refining and finising works: Iron and steelworks
Yarn mills	100m SE	Textile works and dye works
Globe Mill (woollen)	10m W	
Webster Hill Mills	90m SW	
Central Saw mills	5m E	Unspecified works factories and features.
CURRENT		
Land Use	Location	Classification
Electricity sub station	On site	Cleaning Services – Domestic
Works	On site	Unspecified works factories and features.
Works Warehouses Depot	Various within 250m	

¹³ See Appendix 1

¹⁴ Guidance for the Safe Development of Housing on Land Affected by Contamination, R&D Publication 66: 2008 Volume 1 and 2.



3. Coal Mining Risk Assessment

3.1 Geological Appraisal

As per Table 2, the majority of the site is anticipated to be underlain by undifferentiated units of the Pennine Lower Coal Measures Formation. A Coal Seam, recorded as the Flockton Thin Seam bisects the central quadrant of the site, trending approximately north-east south-west. The units of stratum conformably grade into the Birstall Rock, moving progressively south-east across the site.

On the geological map, there are no dip indicator relevant to the site (i.e. within 500m of the site or within the same fault block). However, taking into consideration the outcrop patterns of the solid geology, and the topography of the area, it is assumed that the solid geology dips at shallow angles in an east to south easterly direction.

Due to the nature of the faulting within the local area, there are numerous coal seams that outcrop within the vicinity of the site. In light of this, it cannot be determined with a reasonable level of certainty, the projected depth of the coal seams beneath the site from map data alone. As such, reference is made to the generalised vertical section, as presented on Map Sheet 77, in order to determine the Coal Seams that are anticipated beneath the site.

Table 8: Summary of Coal Seams Within the Vicinity of the Site.

Seam Name	Seam thickness ^{5*}	Outcrop distance from site ^{5*}	Anticipated depth below site
Flockton Thin (Aka, Adealton Black Bed, Barnsley Coal)	0.3 – 1.3m	On site	At or close to ground level.
First Brown Metal (Deep softs Coal)	0 – 0.8m	-	Within 10m to 15m.
Second Brown Metal Coal	0 – 1.0m	-	In excess of 30m bgl.

The Flockton Thin (referred to as the Barnsley Coal within the Consultants Coal Mining Report) is anticipated to outcrop on site, thus would be expected at or close to surface level. The seam is usually around 0.5m in thickness and has thin mudstone partings towards the base. Despite this, the seam has been worked extensively within the Huddersfield district, both underground and via opencasting. The seam is commonly utilised as a household coal. Whilst no direct evidence of surface workings were highlighted within the historic site appraisal, as the sites was formally used as an ironworks, it would be reasonable to assume localised small scale surface working could have taken place at the site to power industry, should the seam be present.

The Flockton Thin Seam is split from the next seam within the sequence by a cyclothem of units anticipated to be within the region of 10m to 15m in thickness. It is anticipated that the upper leaves of the Birstall rock would also be intersected prior to reaching the First Brown Metal Coal.

The Birstall Rock is a fine-grained, thickly bedded, cross bedded sandstone with common pebbles of ironstone, mudstone, and common streaks of shaly coal. The name Birstall Rock has been used to define any sandstone overlying any or all of the Brown Metals Coals. Up to three phases of sandstone are present, with a total thickness of up to 30 m.

In light of the above, the First Brown Metal Coal is anticipated at a depth of within 10m to 15m bgl. This seam is usually a distinctive seam, but it unites to the north with the underlying Second Brown



Metal. It is commonly used as a household coal within the district. It should be appreciated that this seam is not shown to outcrop within the local area and is known to be discontinuous in nature.

The second Brown Metal Coal is shown to outcrop ~340m SE of the development area. The seam is usually up to 1m in thickness, and has been worked extensively. However, it is locally overlain by sandstone and accompanied by washouts. This seam would be expected at a depth in excess of 30m bgl

3.2 Risk Assessment

The risk to the stability of the proposed development has been evaluated with respect to the above and with reference to the following ratings and definitions:

- Low -** The possibility of instability is unlikely therefore no further action is necessary.
- Moderate -** The possibility of instability is likely and further investigation or remedial action may be required.
- High -** The possibility of instability is highly likely and further investigation or remedial action will be necessary.

Table 9: Development specific coal mining risk assessment

Item	Risk of Instability	Coal Seam(s) Considered	Risk Rating
3.2.1	Shallow coal seams	Flockton Thin	Low
		First Brown Metal Coal	Moderate
		Second Brown Metal Coal	Low
3.2.2	Coal workings at depth	None anticipated directly beneath the site	Low
3.2.3	Localised Surface Workings	Flockton Thin	Low to moderate
3.2.4	Mine Shafts	Shaft reference: 423421-001 (grid reference: 423885, 421614)	Low
		shaft reference 423421-002 (grid reference: 423897, 421598),	Low
		shaft reference: 424421-003 (grid reference: 424003, 421752)	Low
3.2.5	Mine Gas	Shallow Coal Workings	Moderate

3.2.1 Shallow Mine Workings

Guidance available from both the NHBC and the CIRIA publication, SP32 - *construction over abandoned mine workings*, suggests that if the thickness of competent overburden above a coal seam is greater than 10 times the thickness of a seam plus seam thickness, the risk of a collapse within the workings would pose a low risk to surface structures.

Given that the Flockton Thin Seam is anticipated at or close to surface level, it would be reasonable to suggest that it is unlikely to have been removed via underground shallow mine workings. Therefore, the risk posed can be considered low. However, there may remain some residual risks of localised surface workings; consideration should be directed to section 3.2.3.



With respect to the Brown Metal Coals assuming a maximum thickness of the coal seams, the table below suggests the thickness of competent overburden required above each seam to mitigate instability at the surface.

Table 10: Required Thickness of Competent Overburden

Seam Name	Seam thickness	Anticipated depth below site	Required thickness of competent overburden.
First Brown Metal Coal	0.8m	Between 10m and 15m	8.8m
Second Brown Metal Coal	1m	In excess of 30m	11m

Assuming at ~3m of residual soils could be present at the site (based on professional judgement and local BGS borehole records) it is reasoned that a marginally insufficient thickness of competent cover would exist above the seam, should evidence of workings be present. Therefore, a moderate risk rating has been placed on these seams, and further investigation is recommended to prove or disprove the presence of illicit mining

However, based on its anticipated depth below ground level, there may be a sufficient thickness of competent overburden above the Second Brown Metal Coal Seam, such that the risk from the collapse of workings is low.

3.2.2 Risks Posed by Coal Workings at Depth

In regard to deeper mining which could affect the site, the property is not within a surface area that could be affected by past underground mining. Therefore, this risk can be considered Low.

3.3.3 Risks Posed by Surface Workings

Due to the shallow nature of the Flockton Thin Coal Seam beneath the site, it is unlikely that it would have been removed via underground mining methods. That is not to say however, that such a seam might not have been extracted from small scale open-cast workings, bell pits or day-holes. On the basis that the site has a formally been occupied by an Iron Works, the presence of such features would not be unreasonable. However no features associated with small scale surface workings were recorded on the historical map or observed during the walkover. That being said, it is suggested that there may remain some residual risk that such features could be present.

On this basis, it is recommended that careful inspections take place during the development. Should any evidence for day-holes, bell pits or open-cast workings become apparent, works should be halted and the advice of geotechnical specialists sought.

3.2.4 Risks Posed by Mine Shafts

The Consultants Mining Report makes reference to three shafts in excess of 20m away from the site.

In the context of the guidance given by CIRIA SP32 – *Construction over abandoned mine workings* it should be appreciated that the minimum distance for siting structures from open or poorly filled shafts depends primarily on the nature and thickness of the surface deposits. This would presumably be on the basis that a significant ground collapse within intact rock would be



improbable, therefore the crater associated with a collapsed shaft would be limited to the soils above the rock.

Assuming that ~3m of residual soils are present within the local area, it is reasoned that there is sufficient standoff distance between the development and the shafts, such that the risks posed by shaft collapse can be considered low.

3.2.5 Risks Posed by Mine Gas

This assessment has identified that there is potential for shallow mine workings to be present beneath the proposed development. Whilst the Consultants Coal Mining Report has not reported any incidents of mine gas within the vicinity of the development, shallow mining activity represents a credible source of ground gas. As such, a moderate risk rating has been assigned, and further assessment may be required.

4. Preliminary Qualitative Risk Assessment

The potential of contamination hazards on the land has been identified and the risks associated with them are assessed in the following preliminary risk assessment in accordance with industry practice and the 'suitable for use' approach. This has been conducted using the source-pathway-receptor approach. This method dictates that there must be a risk contaminant produced at a 'source' in sufficient concentration to cause harm and there must be a 'pathway' for the contaminant to reach an identifiable 'receptor' for the linkage to be proved and a contamination hazard to be considered present. Not all substances are contaminants and not all contaminants are considered to be a risk. Indeed DEFRA and The Environment Agency state that **'a contaminant is a substance which has the potential to cause harm, while a risk itself is considered to exist if such a substance is present in sufficient concentration to cause harm and a pathway exists for a receptor to be exposed to the substance.'**

R&D Publication 66: 2008 states that the groups at risk of harm (receptors) can be identified by the following categorisation:

1. Humans: site personnel, end users, visitors and adjacent land users.
2. The water environment – receptors: groundwater, surface water, coastal waters and artificial drainage.
3. Ecosystems: plants and animals.
4. Construction/building materials/services

In order to complete a conceptual site model and therefore a preliminary risk assessment, an appraisal of the sources of contamination, potential and actual, on and in the area of the site has therefore been completed with reference to this pollution linkage.¹⁵

¹⁷This assessment has been based on the information as to the proposed development that has been provided by the client. If the plans should change, the assessment should be re-evaluated.



4.1 Conceptual Ground Model & Preliminary Qualitative Risk Assessment

It is understood that the development proposals currently comprise the construction of a new single storey warehouse. In view of the sensitivity of the end users it is considered that the soil screening values (SSVs) for a commercial end use should be employed.

The preliminary risk assessment has been evaluated with reference to the following ratings and definitions:

- | | |
|-------------------|---|
| N/A - | A source-pathway-receptor linkage is not considered to exist and therefore a risk assessment is not required. |
| Low - | A pollution linkage is unlikely and/or the likelihood of harm occurring is low and of minor consequence. |
| Moderate - | The linkage exists but further field or laboratory data is required to confirm that the contaminant has reached the receptor and the levels of contaminant are harmful. |
| High - | The linkage exists and the available data indicates that significant harm may be caused and remedial action could be necessary. |

**Table 11: Conceptual Site Model and Preliminary Qualitative Risk Assessment**

CONCEPTUAL SITE MODEL			PRELIMINARY RISK ASSESSMENT	
Pathways	Receptor	Linkage Present?	Risk Rating	Notes
Direct contact/dermal absorption/soil ingestion	Operative	Yes – there is a potential for made ground related to historical construction to be present on-site.	Moderate	There are no known sources of on site contamination, however there is a potential for made ground related to historical construction to be present on-site. Any made ground found on site may be a potential source of contamination.
	End User		Moderate	
	Neighbours	Yes – immediate neighbours are present. There is no identified on site contamination source, however there is a potential for made ground related to historical construction to be present on-site.	Moderate	There is a one potential off-site source within 250m of the site. However due to the nature of this source; its potential is considered negligible. Further testing required to reach a firm conclusion.
Inhalation of Dust/Vapours	Operative	Yes – there is a potential for made ground related to historical construction to be present on-site. Contact with soil likely during works and vapours may accumulate in enclosed spaces.	Moderate	There are no known sources of on site contamination, however there is a potential for made ground related to historical construction to be present on-site.
	End User	Yes – there is a potential for made ground related to historical construction to be present on-site. Vapours may accumulate in enclosed spaces.	Moderate	Construction activities may create dust on and off site, which, if contaminated, could adversely affect operatives, end users and neighbours.
	Neighbours	Yes – neighbouring properties present and possible inhalation of dust during the works.	Moderate	In the event that harmful vapours are present they may accumulate in enclosed spaces, affecting operatives, end users and neighbours Further testing required to reach a firm conclusion.
Ingestion of fruit/vegetables and/or waters	Operative	No – not observed during the time of the walkover	N/A	There are no known sources of on site contamination, however there is a potential for made ground related to historical construction to be present on-site.
	End User	No – none proposed as part of the development	N/A	
	Neighbours	Yes – residential dwellings present within 250m of the proposed development.	Moderate	Any made ground found on site may also be a potential source of contamination Further testing required to reach a firm conclusion.

Migration of hazardous gases via permeable strata	Operative		Moderate	A programme of monitoring is recommended but is suggested to be limited to four readings over one month in the first instance. If significant made ground considered capable of producing harmful gases is revealed during the investigation works, the monitoring regime may require reconsideration to take into account a higher potential risk. .
		Yes – on and on site sources of ground gas identified.		
	End User		Moderate	
	Neighbours	Yes – immediate neighbours are present, However, there are no know contamination sources found on site.	Moderate	
Spillage/loss/run off direct to receiving water	Controlled Waters	Yes – controlled waters within 250m.	Moderate	There are potential on site sources of contamination that may have caused contamination of the site.
Migration via permeable unsaturated strata	Controlled Waters	Yes – possible source on site and Secondary A aquifer beneath the site.	Moderate	Secondary A aquifer underlies the site. Permeability of underlying geology should be assessed.
Run off via drainage/sewers etc	Controlled Waters	Yes – possible source on site.	Moderate	Further testing required to reach a firm conclusion.
Direct contact with contaminated soils	Plants	Yes – some soft landscaping areas may be present as part of the proposed development.	Moderate	There are limited potential on and off site sources of contamination that may have caused contamination of the site.
Uptake via root system			Moderate	Any on site sources of contamination could migrate to neighbouring properties. Further testing required to reach a firm conclusion.
Direct contact with contaminated soils	Building Materials	Yes – possible source on and off site and foundation and service installation materials may be affected by the site soil.	Moderate	There are potential on and off site sources of contamination that may have caused contamination of the site. Further testing required to reach a firm conclusion.
Direct contact with contaminated groundwater				
Migration of mine gas via permeable strata	Operative	Yes – in an area affected by coal mining activity and where shallow worked seams may be present.	Moderate	Further knowledge required to reach a firm conclusion
	End User			

Exposure to Radon	Operative End User	Yes – the property is not in a radon affected area.	Low	The property is in a lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level).
Mining Instability	End User	Yes – in an area that could be affected by shallow mining activity and surface workings	Moderate	Further knowledge required to reach a firm conclusion
Unexploded Ordnance (UXO) Risk	Operative	Yes – the Zetica ¹⁶ online maps indicate that the site is at low risk from UXO.	Low	No further action required.

Notes:

1. The above data and table is a qualitative assessment of the probable risks identified at this site, based on the information made available to us from the client, third party professional data and walkover survey.
2. Should any additional or new data come to light, the risk assessment should be revisited and any necessary changes made to any recommendations resulting from this study.
3. Where further testing is recommended as part of the risk assessment, this is in order to provide a quantitative assessment of any contamination issues. It should at all times be considered that uncertainties may remain, and therefore any testing regime and ground investigation philosophy should be ready to accommodate any necessary alterations should any data come to light or it become evident that it has not been previously considered.

¹⁶ Pre-desk study assessment [online resource from www.zeticauxo.com].



5. Intrusive Investigation

5.1 Site Investigation Philosophy

The information from the Phase 1 Desk Study shows there are potential sources of contamination on the site and in the surrounding area. In view of the above, any intrusive investigation should be undertaken in accordance with the sampling strategies given in BS10175: 2011 +A1:2013 and CLR4:1994. These two sampling strategies may be classified as:

- Non Targeted – using a defined sampling pattern (BS10175)
- Targeted – based on prior knowledge and professional judgement (CLR4)

These sampling strategies are considered in more detail below. However, it is emphasised that they can be used individually or in combination depending on the depth of site knowledge.

Non Targeted Sampling.

If no obvious 'hot spots' of contamination have been identified on a site, it would be recommended that a stratified random pattern of sampling points be considered. This work should be undertaken with reference to BS10175: 2011 +A1: 2013 *Investigation of potentially contaminated sites – Code of practice: 7.6*, and BS 5930: 2015 +A1: 2020, *Code of practice for ground investigations*.

Targeted Sampling.

If a possible 'hot spot' of contamination has been identified on a site, it is recommended that a herringbone pattern of sampling points be considered in the immediate vicinity. If strong evidence of contamination has then been identified, it is recommended that sampling be highly focused to reflect that evidence and the investigator's experience. This work should be undertaken with reference to CLR4, *Sampling Strategies for Contaminated Land, 1994*.

The density of sampling required is defined in BS10175: 2011: +A1: 2013: 7.7.2.2.3, which indicates that an *exploratory* investigation usually requires a lower density sample spacing than does a *main* investigation. The BS goes on to state that *the actual density should depend upon the confidence and robustness required of decisions that will be based on the information obtained. Thus the area and depth of interest will be related to the contaminants present, the pathways and the receptors. Typical densities of sampling grids can vary from 25m to 50m centres for exploratory investigations, and 10m to 25m centres for main investigations.*

5.2 Site Specific Investigation

In view of the information provided above it is considered that an investigation of the site should include the following main elements.



5.2.1 Contamination Assessment

It may be appreciated that BS 10175 clause 7.7.2.2.3 suggests that the number of sampling points at the site should be based on a minimum of three testing locations or the size of the site with respect to the appropriate grid spacing, whichever the greater. On the basis of the site area being 0.53ha, the number of sampling points at the site should be considered with respect to the table below.

Table 12: Summary of Sampling Strategy					
NUMBER OF SAMPLING POINTS					
	Soil	Water	Asbestos	Standpipes	Standpipe Readings
Exploratory Investigation 50m x 50m grid	3	-	3	3	A minimum of 4 readings over 1 month would be required as per risk assessment, however any regime must take into account the guidance detailed below.
Target Areas	Should be assessed during any investigation.				

Chemical testing should be undertaken on the above grid spacing and the following standard testing regime should be undertaken

- **Metals** – Cd, Cr, Cu, Hg, Ni, Pb, Zn, V.
- **Semi Metals and Non Metals** – As, Se, Free Cyanide and Phenols.
- **Hydrocarbons** – Polycyclic aromatic hydrocarbons (PAH EPA16), Total petroleum hydrocarbons (TPH CWG).
- **Others** – pH, Organic Content.
- **Asbestos**
- **PCB's**

Sampling Method

Investigation should include the installation of three gas monitoring standpipes for subsequent monitoring. Furthermore, soils should be obtained for chemical sampling. The sampling strategy should employ the non-targeted strategy given above in the first instance, i.e. at least three sampling points, if it is anticipated that made ground is significant across the site. However, if the made ground at the site is thought to be localised to specific areas, then the targeted strategy should be used. It should be possible to carry out the above work with a windowless sampling drilling rig.

Gas Monitoring

The final gas monitoring regime should be undertaken in accordance with Table 4.2 of CIRIA C665: 2007: *Assessing risks posed by hazardous ground gasses to buildings*. In that document guidance for the frequency of monitoring is provided on tables 5.5a and 5.5b *Typical/idealised frequency and period of monitoring* on page 60. For convenience, these tables have been combined and reproduced below.

**Table 13: Typical/idealised Frequency and Period of Monitoring.**

Sensitivity of development	Generation potential of source				
	Very low	Low	Moderate	High	Very High
Low (commercial)	4/1	6/2	6/3	12/6	12/12
Moderate (flats)	6/2	6/3	9/6	12/12	24/24
High (residential + gardens)	6/3	9/6	12/6	24/12	24/24

Notes:

- a) The first number is the minimum number of readings and the second number is the minimum period in months, for example 4/1 – Four sets of readings over 1 month.
- b) At least two sets of readings must be at low and falling atmospheric pressure (but not restricted to periods below 1000mb) known as worst case conditions.
- c) The frequency and period stated are considered to represent typical minimum requirements. Depending on specific circumstances fewer or additional readings may be required (e.g. any such variation subject to site specific justification). The NHBC guidance is also recommending these periods/frequencies of monitoring.
- d) Historical data can be used as part of the data set.
- e) Not all sites will require gas monitoring. However this would need to be confirmed with demonstrable evidence.
- f) Placing high sensitivity end use on a high hazard site is not normally acceptable unless the source is removed or treated to reduce its gassing potential. Under such circumstances long-term monitoring may not be appropriate or required.
- g) This guidance should be read in conjunction with BS 8576:2013 figure 6 which may justify fewer readings in the first instance, where the generation potential is considered to be very low to low. However, this should be undertaken pragmatically, and further readings obtained according to the above table, where a potentially significant source is identified and initial readings suggest that remedial measures are not necessary.

5.2.2 Geotechnical Assessment

In addition to the above contamination assessment which is likely to be required by planning authorities and insurance providers, the following investigation strategy could be considered:

Sampling Method

It is anticipated that a windowless sampling drilling rig will be able to gain sufficient data in regard to the near surface soils. Moreover, such equipment should be able to undertake Standard Penetration Testing (SPT) and/or Dynamic Probing.



Soakaway Design

Should soakaway data be required for drainage design, trial pits could be excavated and infiltration tests conducted. Alternatively these tests could be undertaken within boreholes.

Geotechnical Testing

An allowance for geotechnical testing of the soils should be included in any ground investigation.

Coal Mining Risk Assessment

In light of the potential risks of instability at the site from the working of shallow coal, it cannot be recommended that development takes place without further investigation to conclusively determine the presence of such workings. This work should include physical drilling methods to explore the ground conditions.

General practice is to undertake rotary openhole boreholes at three locations across the site to mitigate against the potential for drilling through intact columns associated with pillar and stall workings. Furthermore, it is normal to investigate the ground to 30m below ground level; any workings below this depth are unlikely to result in significant instability. However, in this case, the risk of instability is due to shallow workings, therefore, drilling to these depths may not be necessary and the objective should be to ensure that the shallow seams are un-worked or have sufficient competent cover. It may therefore be possible, in the first instance, to undertake one borehole to 30m below the top of the rockhead, with the remaining boreholes proving the depth and continuity of the coal seam(s). In any event, it is considered that approval should be sought with the Local Authority as to the efficacy of this approach.

5.2.3 Reporting

The above data will need to be formulated into a formal assessment that should include the following:

- Geotechnical recommendations, particularly if existing loads are to increase.
- Contamination assessment.
- Contamination remediation strategy.
- Any recommendations for further work, if required and including validation reports where site remediation is necessary.

As soon as is practicable, and prior to the above, this Phase 1 report should be forwarded to the relevant authorities, in order to ensure they have sufficient time to review and discuss any issues.



6. References

- British Standards Institution (2015 + A1: 2020), BS 5930: *Code of practice for ground investigations*, B.S.I., London.
- British Standards Institution (2011) +A1:2013, BS 10175: *Investigation of potentially contaminated sites – Code of Practice*, British Standards Institute.
- British Standards Institution (2013), BS 8576 *Guidance on Investigations for Ground Gas – Permanent Gases and Volatile Organic Compounds*.
- Department for Environment, Food and Rural Affairs and the Environment Agency, DEFRA R&D Publications, Environment Agency, Bristol.
- CLR 2, 1994, *Guidance on preliminary site inspection of contaminated land*, Volume 1.
- CLR 4, 1994, *Sampling Strategies for contaminated land*.
- R&D Publication 66: 2008 *Guidance for the Safe Development of Housing on Land Affected by Contamination*.
- CIRIA Report C665 (2007), *Assessing risks posed by ground gasses in buildings*.
- The Environment Agency: *Groundwater source protection*.



Appendix 1

Envirocheck Reports

SITE OFF VULCAN ROAD, EIGHTLANDS, DEWSBURY, WF13 2NA

Order Details

Date: 03/07/2020
Your ref: C864_20_E_1335_PO-0778
Our Ref: GS-6831800
Client: Rogers Geotechnical Services

Site Details

Location: 423980 421672
Area: 0.53 ha
Authority: [Kirklees Council](#)



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Summary of findings

p. 2 **Aerial image**

p. 8

OS MasterMap site plan

p.11 groundsure.com/insightuserguide

Contact us with any questions at:

info@groundsure.com

08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
<u>12</u>	<u>1.1</u>	<u>Historical industrial land uses</u>	0	0	17	88	-
<u>16</u>	<u>1.2</u>	<u>Historical tanks</u>	1	0	3	12	-
<u>17</u>	<u>1.3</u>	<u>Historical energy features</u>	1	1	6	14	-
18	1.4	Historical petrol stations	0	0	0	0	-
<u>19</u>	<u>1.5</u>	<u>Historical garages</u>	0	0	3	14	-
20	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
<u>21</u>	<u>2.1</u>	<u>Historical industrial land uses</u>	0	0	19	125	-
<u>27</u>	<u>2.2</u>	<u>Historical tanks</u>	8	0	5	19	-
<u>28</u>	<u>2.3</u>	<u>Historical energy features</u>	3	4	14	42	-
31	2.4	Historical petrol stations	0	0	0	0	-
<u>31</u>	<u>2.5</u>	<u>Historical garages</u>	0	0	7	25	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
33	3.1	Active or recent landfill	0	0	0	0	-
33	3.2	Historical landfill (BGS records)	0	0	0	0	-
34	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
34	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
<u>34</u>	<u>3.5</u>	<u>Historical waste sites</u>	0	0	1	1	-
<u>35</u>	<u>3.6</u>	<u>Licensed waste sites</u>	0	0	3	1	-
<u>36</u>	<u>3.7</u>	<u>Waste exemptions</u>	0	0	7	11	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
<u>39</u>	<u>4.1</u>	<u>Recent industrial land uses</u>	4	4	15	-	-
<u>41</u>	<u>4.2</u>	<u>Current or recent petrol stations</u>	0	0	0	1	-
41	4.3	Electricity cables	0	0	0	0	-
41	4.4	Gas pipelines	0	0	0	0	-
42	4.5	Sites determined as Contaminated Land	0	0	0	0	-



42	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
42	4.7	Regulated explosive sites	0	0	0	0	-
42	4.8	Hazardous substance storage/usage	0	0	0	0	-
42	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
43	4.10	<u>Licensed industrial activities (Part A(1))</u>	0	0	0	6	-
44	4.11	<u>Licensed pollutant release (Part A(2)/B)</u>	0	0	1	3	-
45	4.12	Radioactive Substance Authorisations	0	0	0	0	-
45	4.13	<u>Licensed Discharges to controlled waters</u>	0	0	0	1	-
45	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
45	4.15	Pollutant release to public sewer	0	0	0	0	-
46	4.16	<u>List 1 Dangerous Substances</u>	0	0	0	1	-
46	4.17	<u>List 2 Dangerous Substances</u>	0	0	0	2	-
46	4.18	<u>Pollution Incidents (EA/NRW)</u>	0	0	1	6	-
47	4.19	<u>Pollution inventory substances</u>	0	0	0	3	-
48	4.20	<u>Pollution inventory waste transfers</u>	0	0	0	1	-
49	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
50	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
51	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
52	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
53	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
53	5.5	Groundwater vulnerability- local information	None (within 0m)				
54	5.6	<u>Groundwater abstractions</u>	0	0	0	0	22
60	5.7	<u>Surface water abstractions</u>	0	0	0	0	12
63	5.8	Potable abstractions	0	0	0	0	0
63	5.9	Source Protection Zones	0	0	0	0	-
64	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
65	6.1	<u>Water Network (OS MasterMap)</u>	0	0	1	-	-



66	6.2	<u>Surface water features</u>	0	0	1	-	-
66	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
66	6.4	<u>WFD Surface water bodies</u>	0	0	1	-	-
67	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
68	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
69	7.2	<u>Historical Flood Events</u>	0	0	1	-	-
69	7.3	<u>Flood Defences</u>	0	0	1	-	-
69	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
70	7.5	<u>Flood Storage Areas</u>	0	0	1	-	-
71	7.6	Flood Zone 2	None (within 50m)				
71	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
72	8.1	Surface water flooding	Negligible (within 50m)				
Page	Section	Groundwater flooding					
73	9.1	<u>Groundwater flooding</u>	Negligible (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
74	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
75	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
75	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
75	10.4	Special Protection Areas (SPA)	0	0	0	0	0
75	10.5	National Nature Reserves (NNR)	0	0	0	0	0
76	10.6	<u>Local Nature Reserves (LNR)</u>	0	0	0	0	2
76	10.7	Designated Ancient Woodland	0	0	0	0	0
76	10.8	Biosphere Reserves	0	0	0	0	0
76	10.9	Forest Parks	0	0	0	0	0
77	10.10	Marine Conservation Zones	0	0	0	0	0
77	10.11	<u>Green Belt</u>	0	0	0	0	4
77	10.12	Proposed Ramsar sites	0	0	0	0	0

77	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
78	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
78	10.15	Nitrate Sensitive Areas	0	0	0	0	0
78	10.16	<u>Nitrate Vulnerable Zones</u>	0	0	0	0	1
79	10.17	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
80	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
81	11.1	World Heritage Sites	0	0	0	-	-
82	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
82	11.3	National Parks	0	0	0	-	-
82	11.4	<u>Listed Buildings</u>	0	0	2	-	-
83	11.5	Conservation Areas	0	0	0	-	-
83	11.6	Scheduled Ancient Monuments	0	0	0	-	-
83	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
84	12.1	<u>Agricultural Land Classification</u>	Urban (within 250m)				
85	12.2	Open Access Land	0	0	0	-	-
85	12.3	Tree Felling Licences	0	0	0	-	-
85	12.4	Environmental Stewardship Schemes	0	0	0	-	-
85	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
86	13.1	Priority Habitat Inventory	0	0	0	-	-
86	13.2	Habitat Networks	0	0	0	-	-
86	13.3	Open Mosaic Habitat	0	0	0	-	-
86	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
87	14.1	<u>10k Availability</u>	Identified (within 500m)				
88	14.2	<u>Artificial and made ground (10k)</u>	1	0	7	6	-
90	14.3	<u>Superficial geology (10k)</u>	0	0	1	0	-



91	14.4	Landslip (10k)	0	0	0	0	-
92	14.5	<u>Bedrock geology (10k)</u>	2	5	2	7	-
93	14.6	<u>Bedrock faults and other linear features (10k)</u>	1	2	4	4	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
95	15.1	<u>50k Availability</u>	Identified (within 500m)				
96	15.2	<u>Artificial and made ground (50k)</u>	0	0	1	0	-
97	15.3	Artificial ground permeability (50k)	0	0	-	-	-
98	15.4	<u>Superficial geology (50k)</u>	0	0	1	0	-
99	15.5	Superficial permeability (50k)	None (within 50m)				
99	15.6	Landslip (50k)	0	0	0	0	-
99	15.7	Landslip permeability (50k)	None (within 50m)				
100	15.8	<u>Bedrock geology (50k)</u>	3	3	3	7	-
101	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
102	15.10	<u>Bedrock faults and other linear features (50k)</u>	2	1	4	4	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
103	16.1	<u>BGS Boreholes</u>	0	8	42	-	-
Page	Section	Natural ground subsidence					
106	17.1	<u>Shrink swell clays</u>	Very low (within 50m)				
108	17.2	<u>Running sands</u>	Negligible (within 50m)				
109	17.3	<u>Compressible deposits</u>	Negligible (within 50m)				
110	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
111	17.5	<u>Landslides</u>	Low (within 50m)				
113	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
115	18.1	Natural cavities	0	0	0	0	-
116	18.2	<u>BritPits</u>	0	0	4	3	-
117	18.3	Surface ground workings	0	0	0	-	-
117	18.4	<u>Underground workings</u>	0	0	1	0	16
118	18.5	Historical Mineral Planning Areas	0	0	0	0	-



118	18.6	Non-coal mining	0	0	0	0	0
118	18.7	Mining cavities	0	0	0	0	0
119	18.8	JPB mining areas	None (within 0m)				
119	18.9	<u>Coal mining</u>	Identified (within 0m)				
119	18.10	Brine areas	None (within 0m)				
119	18.11	Gypsum areas	None (within 0m)				
119	18.12	Tin mining	None (within 0m)				
120	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
121	19.1	<u>Radon</u>	Less than 1% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
122	20.1	<u>BGS Estimated Background Soil Chemistry</u>	5	6	-	-	-
123	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
123	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
124	21.1	Underground railways (London)	0	0	0	-	-
124	21.2	Underground railways (Non-London)	0	0	0	-	-
125	21.3	Railway tunnels	0	0	0	-	-
125	21.4	<u>Historical railway and tunnel features</u>	0	0	17	-	-
126	21.5	Royal Mail tunnels	0	0	0	-	-
126	21.6	Historical railways	0	0	0	-	-
126	21.7	<u>Railways</u>	0	0	22	-	-
127	21.8	Crossrail 1	0	0	0	0	-
127	21.9	Crossrail 2	0	0	0	0	-
128	21.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 01/07/2018

Site Area: 0.53ha



Recent site history - 2012 aerial photograph



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Capture Date: 26/03/2012

Site Area: 0.53ha



Recent site history - 1999 aerial photograph



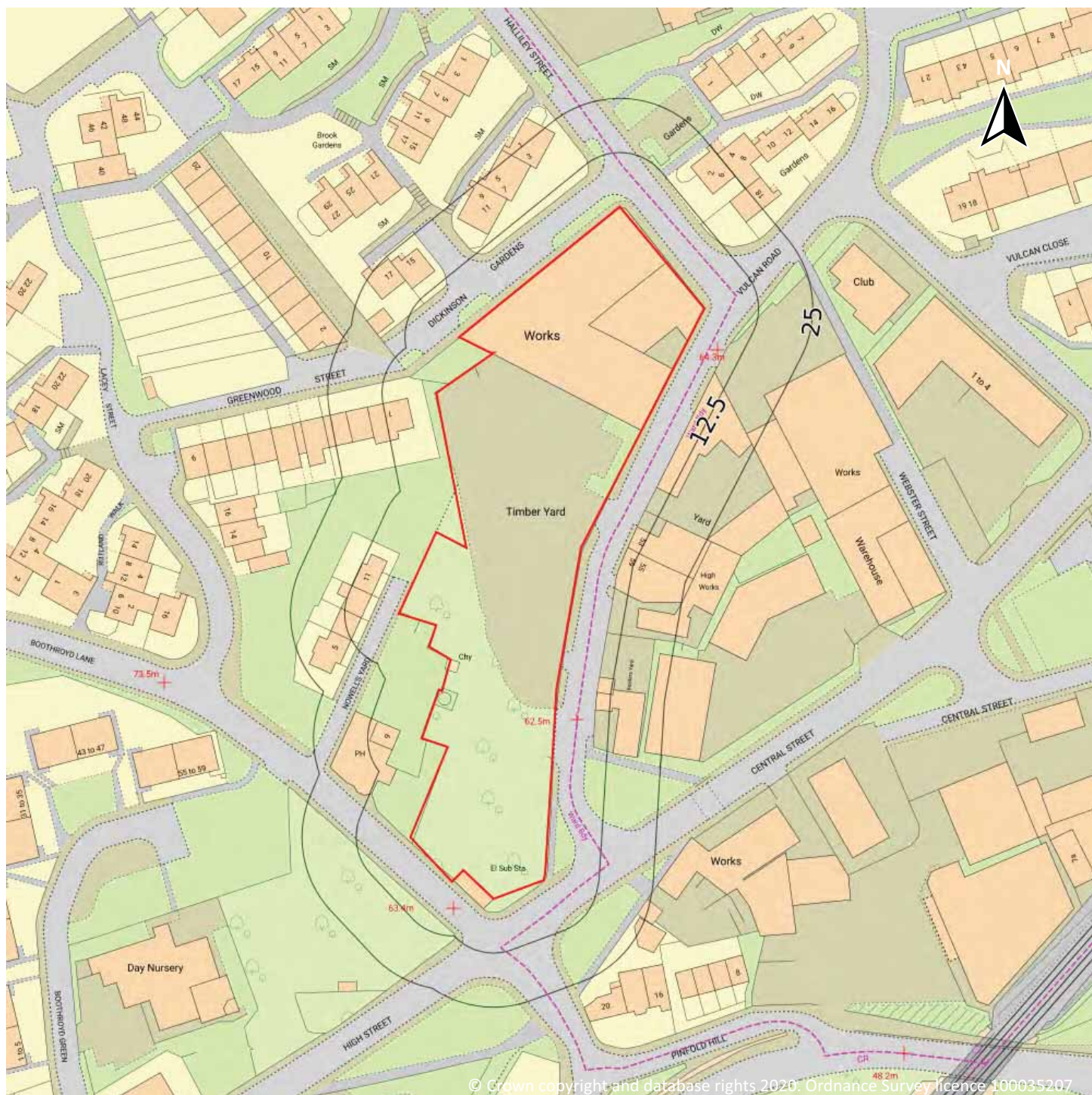
Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2020. All Rights Reserved.

Capture Date: 10/07/1999

Site Area: 0.53ha



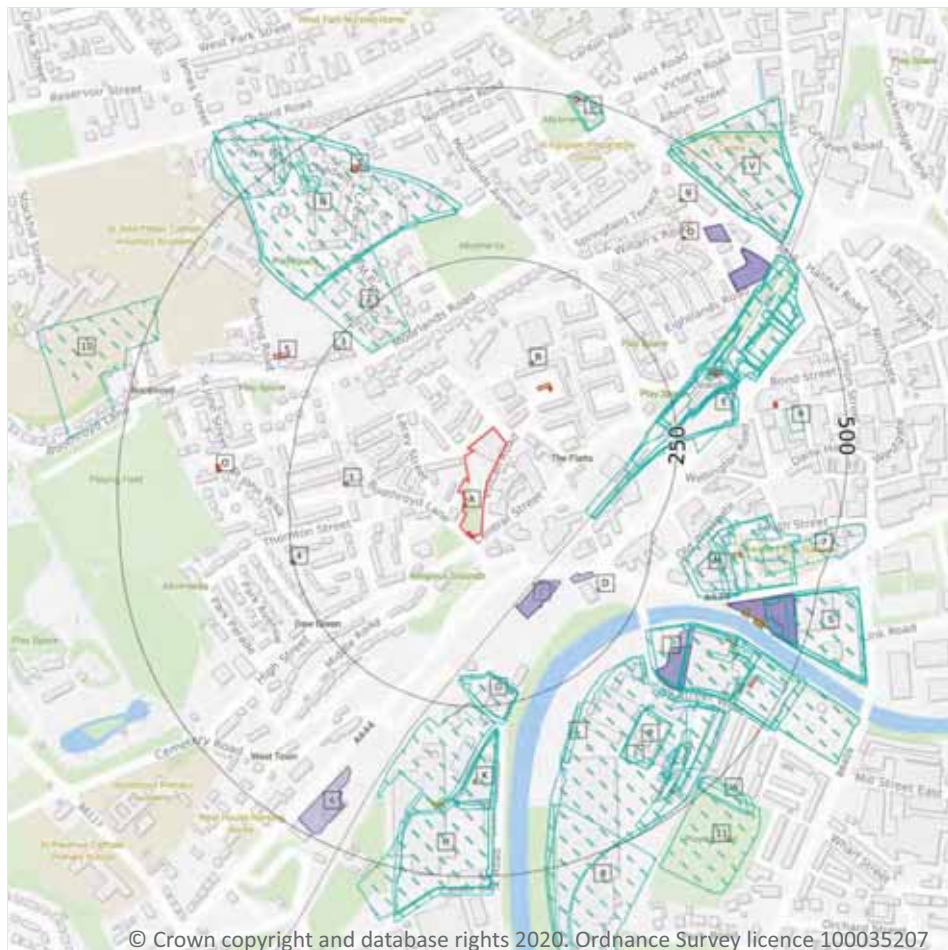
OS MasterMap site plan



Site Area: 0.53ha



1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

105

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
E	147m SE	Railway Sidings	1938	1524877



ID	Location	Land use	Dates present	Group ID
F	159m SE	Railway Sidings	1905	1490967
F	159m SE	Railway Sidings	1948	1525215
E	178m E	Railway Sidings	1892	1475885
E	184m E	Railway Sidings	1955	1522878
E	184m E	Railway Sidings	1967	1557807
2	189m NW	Hospital	1988	1443186
G	199m S	Unspecified Works	1938	1541496
G	203m S	Unspecified Works	1905	1490061
G	203m S	Unspecified Foundry	1892	1421017
E	223m E	Railway Station	1938 - 1948	1462254
E	223m E	Railway Station	1905	1516422
E	225m E	Railway Station	1892	1534148
E	228m E	Railway Station	1955 - 1967	1528192
E	231m E	Railway Station	1974	1513458
3	239m NW	Old Air Shaft	1938	1418354
H	246m S	Unspecified Mills	1905	1543047
E	270m E	Railway Station	1981 - 1988	1476394
I	272m SE	Railway Sidings	1938 - 1948	1519259
J	280m SE	Unspecified Mills	1938	1523625
I	280m SE	Railway Sidings	1955 - 1967	1496411
H	283m S	Unspecified Mills	1948 - 1988	1537301
K	284m S	Unspecified Mills	1938	1472965
J	284m SE	Unspecified Commercial/Industrial	1981	1495344
J	284m SE	Unspecified Mills	1955 - 1988	1501415
K	289m S	Unspecified Mill	1905	1421607
K	289m S	Unspecified Mills	1892	1496319
L	291m SE	Railway Building	1967	1493650
M	295m E	Unspecified Mill	1905	1462902



ID	Location	Land use	Dates present	Group ID
M	295m E	Unspecified Mill	1948	1534875
J	296m SE	Railway Building	1955 - 1967	1517726
M	315m E	Police Station	1981 - 1988	1512790
N	317m N	Infirmary	1948 - 1955	1547157
N	319m NW	General Infirmary	1938	1440157
N	321m NW	Hospital	1967 - 1988	1482672
M	328m SE	Unspecified Mill	1938	1470985
M	332m SE	Unspecified Commercial/Industrial	1967	1410972
M	332m SE	Unspecified Mill	1955	1507648
J	335m SE	Unspecified Mills	1938	1536940
J	335m SE	Unspecified Mills	1938 - 1948	1540636
J	336m SE	Unspecified Mills	1905	1466745
J	337m SE	Unspecified Mills	1892	1486414
L	342m S	Railway Building	1955	1477385
E	347m E	Railway Sidings	1948	1504401
E	347m E	Railway Sidings	1905	1539303
J	349m SE	Railway Building	1955	1429131
P	350m SE	Goods Station	1938	1461686
P	352m SE	Disused Goods Station	1967	1425382
P	352m SE	Goods Station	1948 - 1955	1472472
E	359m E	Unspecified Tank	1905	1506514
E	359m E	Unspecified Tank	1948	1547633
J	363m SE	Railway Building	1955	1429108
E	369m E	Railway Building	1948	1486055
E	369m E	Railway Building	1905	1512896
E	369m E	Railway Building	1938	1523650
E	376m E	Railway Building	1955 - 1967	1470102
E	377m E	Unspecified Tank	1905	1496258



ID	Location	Land use	Dates present	Group ID
E	377m E	Unspecified Tank	1948	1548092
H	385m S	Unspecified Mills	1938	1461742
H	385m S	Unspecified Mills	1892	1462631
P	394m SE	Unspecified Foundry	1892	1421018
P	401m SE	Railway Building	1938	1429107
J	404m SE	Unspecified Mills	1948 - 1955	1460284
7	404m E	Bus Station	1981 - 1988	1536675
J	406m E	Unspecified Commercial/Industrial	1967 - 1988	1463689
8	411m S	Industrial Estate	1981 - 1988	1516657
R	412m E	Police Station	1981	1440515
P	415m SE	Unspecified Pit	1905	1452043
J	416m SE	Unspecified Mills	1905	1527108
E	419m NE	Unspecified Tanks	1948	1490132
E	419m NE	Unspecified Tanks	1905	1554534
P	424m SE	Railway Building	1967	1472094
P	424m SE	Cuttings	1938	1485036
P	425m SE	Railway Building	1948 - 1955	1463388
S	425m E	Unspecified Mills	1938	1466998
S	426m E	Unspecified Mills	1948	1549273
P	426m SE	Cuttings	1948 - 1955	1466666
E	431m NE	Railway Building	1938 - 1948	1472188
E	431m NE	Railway Building	1905	1482298
S	432m E	Unspecified Mill	1955	1421605
N	433m NW	Mortuary	1938	1552802
E	434m NE	Railway Building	1948	1493168
E	434m NE	Railway Building	1905	1511934
N	435m NW	Mortuary	1955	1525977
P	438m SE	Railway Building	1938 - 1948	1507348



ID	Location	Land use	Dates present	Group ID
P	439m SE	Railway Building	1955	1503518
E	441m NE	Railway Building	1955	1492754
P	442m SE	Railway Building	1967	1467286
E	443m NE	Railway Building	1955 - 1967	1514949
S	456m E	Unspecified Mills	1905	1508445
U	456m N	Dispensary	1948	1464429
U	458m N	Dispensary	1931	1530652
S	468m E	Unspecified Mills	1967	1471293
V	470m NE	Unspecified Mills	1948	1475403
V	471m NE	Unspecified Mills	1938	1552568
N	471m NW	Mortuary	1948	1439875
N	474m NW	Unspecified Ground Workings	1955	1412335
V	479m NE	Unspecified Commercial/Industrial	1988	1410973
V	479m NE	Woollen Mills	1967	1411711
V	479m NE	Unspecified Mill	1974 - 1981	1472243
V	479m NE	Unspecified Mills	1955	1482578
10	481m W	Chemical Works	1938 - 1948	1545147
W	483m SE	Unspecified Heap	1955	1488720
W	484m SE	Unspecified Heap	1938	1497761
11	488m SE	Unspecified Pit	1967 - 1988	1488605

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

16

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	On site	Unspecified Tank	1955 - 1999	242109
B	109m NE	Unspecified Tank	1975 - 1983	243675
B	109m NE	Unspecified Tank	1993	238780
D	189m SE	Unspecified Tank	1954	223634
K	357m S	Tanks	1907	230641
M	369m SE	Unspecified Tank	1907 - 1938	238627
M	376m SE	Unspecified Tank	1955	236237
J	391m SE	Tanks	1907	230643
H	394m S	Tanks	1933 - 1938	248635
J	400m E	Unspecified Tank	1922	223636
J	402m E	Tanks	1933 - 1938	247899
J	402m SE	Tanks	1922	230640
J	414m SE	Unspecified Tank	1893	223635
J	420m E	Tanks	1938	247900
J	421m E	Tanks	1922 - 1933	236660
9	434m NE	Unspecified Tank	1956	223821

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

22

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
A	On site	Electricity Substation	1955 - 1968	136466
A	1m SW	Electricity Substation	1994 - 1999	144715



ID	Location	Land use	Dates present	Group ID
B	86m NE	Electricity Substation	1983	133673
B	99m NE	Electricity Substation	1993	132803
B	99m NE	Electricity Substation	1975	132512
B	99m NE	Electricity Substation	1983	133984
1	163m W	Electricity Substation	1968 - 1999	142887
4	248m W	Electricity Substation	1968 - 1999	134946
5	294m NW	Electricity Substation	1968 - 1999	144667
O	349m W	Electricity Substation	1994 - 1999	144566
O	350m W	Electricity Substation	1968	134989
Q	393m NE	Electricity Substation	1987 - 1990	138503
Q	394m NE	Electricity Substation	1993	138807
R	396m E	Electricity Substation	1975 - 1983	138324
R	397m E	Electricity Substation	1993	143681
T	426m NW	Electricity Substation	1996	146713
T	427m NW	Electricity Substation	1955 - 1993	141025
J	441m SE	Electricity Substation	1954 - 1973	143042
J	441m SE	Electricity Substation	1995	129125
J	451m SE	Electricity Substation	1983 - 1992	141141
P	468m SE	Electricity Substation	1983 - 1995	142112
U	492m N	Electricity Substation	1955 - 1993	134647

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.



1.5 Historical garages

Records within 500m

17

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
C	109m SE	Garage	1983 - 1992	45467
C	110m SE	Garage	1973 - 1995	45815
D	146m SE	Garage	1955	44569
J	324m SE	Garage	1995	42498
J	324m SE	Garage	1973	42213
J	325m SE	Garage	1983 - 1992	45697
J	375m E	Garage	1955	43907
J	376m E	Garage	1954	42421
J	379m E	Garage	1995	43360
J	379m E	Garage	1983 - 1992	45523
6	384m SW	Garage	1984 - 1992	45848
E	405m NE	Garage	1955 - 1983	46688
E	406m NE	Garage	1993	43665
E	407m NE	Garage	1955 - 1983	44349
Q	420m NE	Garage	1987 - 1990	44510
Q	420m NE	Garage	1971 - 1993	45587
J	428m E	Garage	1973	43123

This data is sourced from Ordnance Survey / Groundsure.



1.6 Historical military land

Records within 500m

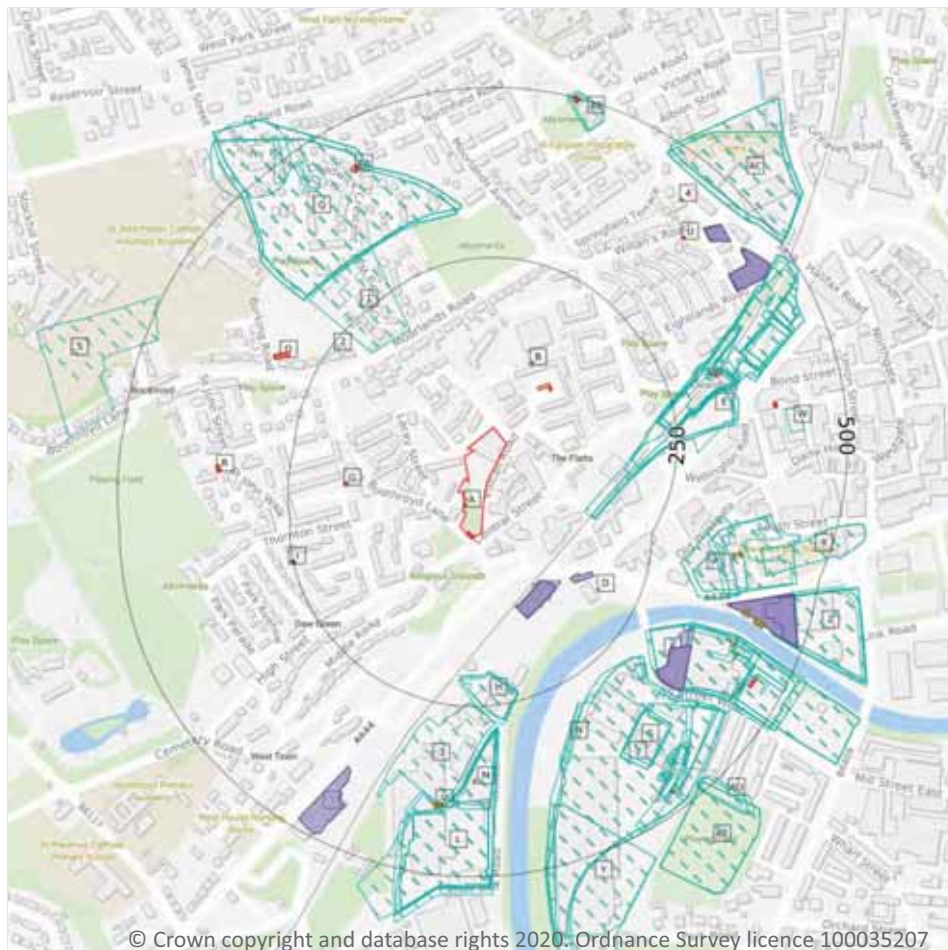
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Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

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



2 Past land use - un-grouped



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

2.1 Historical industrial land uses

Records within 500m

144

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 21**

ID	Location	Land Use	Date	Group ID
E	147m SE	Railway Sidings	1938	1524877
F	159m SE	Railway Sidings	1948	1525215
F	159m SE	Railway Sidings	1905	1490967

ID	Location	Land Use	Date	Group ID
E	178m E	Railway Sidings	1892	1475885
E	184m E	Railway Sidings	1967	1557807
E	184m E	Railway Sidings	1955	1522878
1	189m NW	Hospital	1988	1443186
H	199m S	Unspecified Works	1938	1541496
H	203m S	Unspecified Works	1905	1490061
H	203m S	Unspecified Foundry	1892	1421017
E	223m E	Railway Station	1948	1462254
E	223m E	Railway Station	1905	1516422
E	223m E	Railway Station	1938	1462254
E	225m E	Railway Station	1892	1534148
E	228m E	Railway Station	1967	1528192
E	228m E	Railway Station	1955	1528192
E	231m E	Railway Station	1974	1513458
2	239m NW	Old Air Shaft	1938	1418354
3	246m S	Unspecified Mills	1905	1543047
E	270m E	Railway Station	1988	1476394
E	270m E	Railway Station	1981	1476394
J	272m SE	Railway Sidings	1938	1519259
K	280m SE	Unspecified Mills	1938	1523625
J	280m SE	Railway Sidings	1967	1496411
J	280m SE	Railway Sidings	1955	1496411
J	282m SE	Railway Sidings	1948	1519259
L	283m S	Unspecified Mills	1988	1537301
L	283m S	Unspecified Mills	1981	1537301
L	283m S	Unspecified Mills	1974	1537301
L	283m S	Unspecified Mills	1967	1537301
L	283m S	Unspecified Mills	1955	1537301



ID	Location	Land Use	Date	Group ID
M	284m S	Unspecified Mills	1938	1472965
K	284m SE	Unspecified Mills	1988	1501415
K	284m SE	Unspecified Commercial/Industrial	1981	1495344
K	284m SE	Unspecified Mills	1974	1501415
K	284m SE	Unspecified Mills	1967	1501415
K	284m SE	Unspecified Mills	1955	1501415
L	288m S	Unspecified Mills	1948	1537301
M	289m S	Unspecified Mill	1905	1421607
M	289m S	Unspecified Mills	1892	1496319
N	291m SE	Railway Building	1967	1493650
P	295m E	Unspecified Mill	1948	1534875
P	295m E	Unspecified Mill	1905	1462902
K	296m SE	Railway Building	1955	1517726
K	298m SE	Railway Building	1967	1517726
P	315m E	Police Station	1988	1512790
P	315m E	Police Station	1981	1512790
Q	317m N	Infirmary	1948	1547157
Q	319m NW	General Infirmary	1938	1440157
Q	321m NW	Hospital	1988	1482672
Q	321m NW	Hospital	1981	1482672
Q	321m NW	Hospital	1974	1482672
Q	321m NW	Hospital	1967	1482672
Q	321m NW	Infirmary	1955	1547157
P	328m SE	Unspecified Mill	1938	1470985
P	332m SE	Unspecified Commercial/Industrial	1967	1410972
P	332m SE	Unspecified Mill	1955	1507648
K	335m SE	Unspecified Mills	1948	1540636
K	335m SE	Unspecified Mills	1938	1536940



ID	Location	Land Use	Date	Group ID
K	336m SE	Unspecified Mills	1905	1466745
K	337m SE	Unspecified Mills	1892	1486414
N	342m S	Railway Building	1955	1477385
E	347m E	Railway Sidings	1948	1504401
E	347m E	Railway Sidings	1905	1539303
K	349m SE	Railway Building	1955	1429131
S	350m SE	Goods Station	1938	1461686
S	352m SE	Disused Goods Station	1967	1425382
S	352m SE	Goods Station	1955	1472472
S	354m SE	Goods Station	1948	1472472
E	359m E	Unspecified Tank	1948	1547633
E	359m E	Unspecified Tank	1905	1506514
K	363m SE	Railway Building	1955	1429108
E	369m E	Railway Building	1948	1486055
E	369m E	Railway Building	1905	1512896
E	369m E	Railway Building	1938	1523650
E	376m E	Railway Building	1967	1470102
E	376m E	Railway Building	1955	1470102
E	377m E	Unspecified Tank	1948	1548092
E	377m E	Unspecified Tank	1905	1496258
L	381m S	Unspecified Mills	1905	1543047
L	385m S	Unspecified Mills	1892	1462631
L	385m S	Unspecified Mills	1938	1461742
S	394m SE	Unspecified Foundry	1892	1421018
S	401m SE	Railway Building	1938	1429107
K	404m SE	Unspecified Mills	1948	1460284
X	404m E	Bus Station	1988	1536675
X	404m E	Bus Station	1981	1536675



ID	Location	Land Use	Date	Group ID
K	406m E	Unspecified Commercial/Industrial	1988	1463689
K	406m E	Unspecified Commercial/Industrial	1981	1463689
K	406m E	Unspecified Commercial/Industrial	1974	1463689
K	406m E	Unspecified Commercial/Industrial	1967	1463689
K	406m E	Unspecified Mills	1955	1460284
Y	411m S	Industrial Estate	1988	1516657
W	412m E	Police Station	1981	1440515
Y	414m S	Industrial Estate	1981	1516657
S	415m SE	Unspecified Pit	1905	1452043
K	416m SE	Unspecified Mills	1905	1527108
E	419m NE	Unspecified Tanks	1948	1490132
E	419m NE	Unspecified Tanks	1905	1554534
S	424m SE	Railway Building	1967	1472094
S	424m SE	Cuttings	1938	1485036
S	425m SE	Railway Building	1948	1463388
Z	425m E	Unspecified Mills	1938	1466998
S	425m SE	Railway Building	1955	1463388
Z	426m E	Unspecified Mills	1948	1549273
S	426m SE	Cuttings	1955	1466666
S	426m SE	Cuttings	1948	1466666
E	431m NE	Railway Building	1948	1472188
E	431m NE	Railway Building	1905	1482298
Z	432m E	Unspecified Mill	1955	1421605
E	433m NE	Railway Building	1938	1472188
Q	433m NW	Mortuary	1938	1552802
E	434m NE	Railway Building	1948	1493168
E	434m NE	Railway Building	1905	1511934
Q	435m NW	Mortuary	1955	1525977



ID	Location	Land Use	Date	Group ID
S	438m SE	Railway Building	1938	1507348
S	439m SE	Railway Building	1955	1503518
K	439m SE	Unspecified Mills	1938	1540636
S	441m SE	Railway Building	1948	1507348
E	441m NE	Railway Building	1955	1492754
S	442m SE	Railway Building	1967	1467286
E	443m NE	Railway Building	1967	1514949
E	443m NE	Railway Building	1955	1514949
Z	456m E	Unspecified Mills	1905	1508445
AB	456m N	Dispensary	1948	1464429
AB	458m N	Dispensary	1931	1530652
Z	468m E	Unspecified Mills	1967	1471293
AC	470m NE	Unspecified Mills	1948	1475403
AC	471m NE	Unspecified Mills	1938	1552568
Q	471m NW	Mortuary	1948	1439875
Q	474m NW	Unspecified Ground Workings	1955	1412335
AC	479m NE	Unspecified Commercial/Industrial	1988	1410973
AC	479m NE	Unspecified Mill	1981	1472243
AC	479m NE	Unspecified Mill	1974	1472243
AC	479m NE	Woollen Mills	1967	1411711
AC	479m NE	Unspecified Mills	1955	1482578
5	481m W	Chemical Works	1938	1545147
AD	483m SE	Unspecified Heap	1955	1488720
AD	484m SE	Unspecified Heap	1938	1497761
AD	484m SE	Unspecified Heap	1938	1497761
AE	488m SE	Unspecified Pit	1988	1488605
AE	488m SE	Unspecified Pit	1981	1488605
AE	488m SE	Unspecified Pit	1974	1488605



ID	Location	Land Use	Date	Group ID
AE	488m SE	Unspecified Pit	1967	1488605

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	32
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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 21**

ID	Location	Land Use	Date	Group ID
A	On site	Unspecified Tank	1997	242109
A	On site	Unspecified Tank	1994	242109
A	On site	Unspecified Tank	1996	242109
A	On site	Unspecified Tank	1968	242109
A	On site	Unspecified Tank	1955	242109
A	On site	Unspecified Tank	1964	242109
A	On site	Unspecified Tank	1999	242109
A	On site	Unspecified Tank	1955	242109
B	109m NE	Unspecified Tank	1983	243675
B	109m NE	Unspecified Tank	1993	238780
B	110m NE	Unspecified Tank	1983	243675
B	110m NE	Unspecified Tank	1975	243675
D	189m SE	Unspecified Tank	1954	223634
M	357m S	Tanks	1907	230641
P	369m SE	Unspecified Tank	1907	238627
P	369m SE	Unspecified Tank	1922	238627
P	369m SE	Unspecified Tank	1933	238627
P	369m SE	Unspecified Tank	1938	238627
P	376m SE	Unspecified Tank	1955	236237



ID	Location	Land Use	Date	Group ID
P	376m SE	Unspecified Tank	1955	236237
K	391m SE	Tanks	1907	230643
V	394m S	Tanks	1933	248635
V	394m S	Tanks	1938	248635
K	400m E	Unspecified Tank	1922	223636
K	402m E	Tanks	1938	247899
K	402m SE	Tanks	1922	230640
K	404m E	Tanks	1933	247899
K	414m SE	Unspecified Tank	1893	223635
K	420m E	Tanks	1938	247900
K	421m E	Tanks	1922	236660
K	421m E	Tanks	1933	236660
4	434m NE	Unspecified Tank	1956	223821

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

63

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 21**

ID	Location	Land Use	Date	Group ID
A	On site	Electricity Substation	1968	136466
A	On site	Electricity Substation	1955	136466
A	On site	Electricity Substation	1955	136466
A	1m SW	Electricity Substation	1997	144715
A	1m SW	Electricity Substation	1994	144715
A	1m SW	Electricity Substation	1996	144715
A	1m SW	Electricity Substation	1999	144715



ID	Location	Land Use	Date	Group ID
B	86m NE	Electricity Substation	1983	133673
B	99m NE	Electricity Substation	1993	132803
B	99m NE	Electricity Substation	1983	133984
B	99m NE	Electricity Substation	1975	132512
G	163m W	Electricity Substation	1997	142887
G	163m W	Electricity Substation	1994	142887
G	163m W	Electricity Substation	1996	142887
G	163m W	Electricity Substation	1999	142887
G	163m W	Electricity Substation	1968	142887
I	248m W	Electricity Substation	1997	134946
I	248m W	Electricity Substation	1994	134946
I	248m W	Electricity Substation	1996	134946
I	248m W	Electricity Substation	1999	134946
I	248m W	Electricity Substation	1968	134946
O	294m NW	Electricity Substation	1968	144667
O	295m NW	Electricity Substation	1997	144667
O	295m NW	Electricity Substation	1994	144667
O	295m NW	Electricity Substation	1996	144667
O	295m NW	Electricity Substation	1999	144667
R	349m W	Electricity Substation	1997	144566
R	349m W	Electricity Substation	1994	144566
R	349m W	Electricity Substation	1996	144566
R	349m W	Electricity Substation	1999	144566
R	350m W	Electricity Substation	1968	134989
U	393m NE	Electricity Substation	1987	138503
U	393m NE	Electricity Substation	1990	138503
U	393m NE	Electricity Substation	1990	138503
U	394m NE	Electricity Substation	1993	138807



ID	Location	Land Use	Date	Group ID
W	396m E	Electricity Substation	1983	138324
W	397m E	Electricity Substation	1993	143681
W	397m E	Electricity Substation	1983	138324
W	397m E	Electricity Substation	1975	138324
AA	426m NW	Electricity Substation	1996	146713
AA	427m NW	Electricity Substation	1968	141025
AA	427m NW	Electricity Substation	1955	141025
AA	427m NW	Electricity Substation	1955	141025
AA	427m NW	Electricity Substation	1972	141025
AA	427m NW	Electricity Substation	1993	141025
K	441m SE	Electricity Substation	1955	143042
K	441m SE	Electricity Substation	1954	143042
K	441m SE	Electricity Substation	1973	143042
K	441m SE	Electricity Substation	1995	129125
K	451m SE	Electricity Substation	1983	141141
K	451m SE	Electricity Substation	1992	141141
K	451m SE	Electricity Substation	1992	141141
S	468m SE	Electricity Substation	1995	142112
S	468m SE	Electricity Substation	1983	142112
S	468m SE	Electricity Substation	1992	142112
S	468m SE	Electricity Substation	1992	142112
AB	492m N	Electricity Substation	1993	134647
AB	493m N	Electricity Substation	1987	134647
AB	493m N	Electricity Substation	1990	134647
AB	493m N	Electricity Substation	1990	134647
AB	494m N	Electricity Substation	1955	134647
AB	494m N	Electricity Substation	1971	134647
AB	494m N	Electricity Substation	1956	134647

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

32

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 21**

ID	Location	Land Use	Date	Group ID
C	109m SE	Garage	1983	45467
C	109m SE	Garage	1992	45467
C	109m SE	Garage	1992	45467
C	110m SE	Garage	1995	45815
C	111m SE	Garage	1973	45815
D	146m SE	Garage	1955	44569
D	147m SE	Garage	1955	44569
K	324m SE	Garage	1995	42498
K	324m SE	Garage	1973	42213
K	325m SE	Garage	1983	45697
K	325m SE	Garage	1992	45697
K	325m SE	Garage	1992	45697
K	375m E	Garage	1955	43907
K	376m E	Garage	1954	42421
K	379m E	Garage	1995	43360
K	379m E	Garage	1983	45523

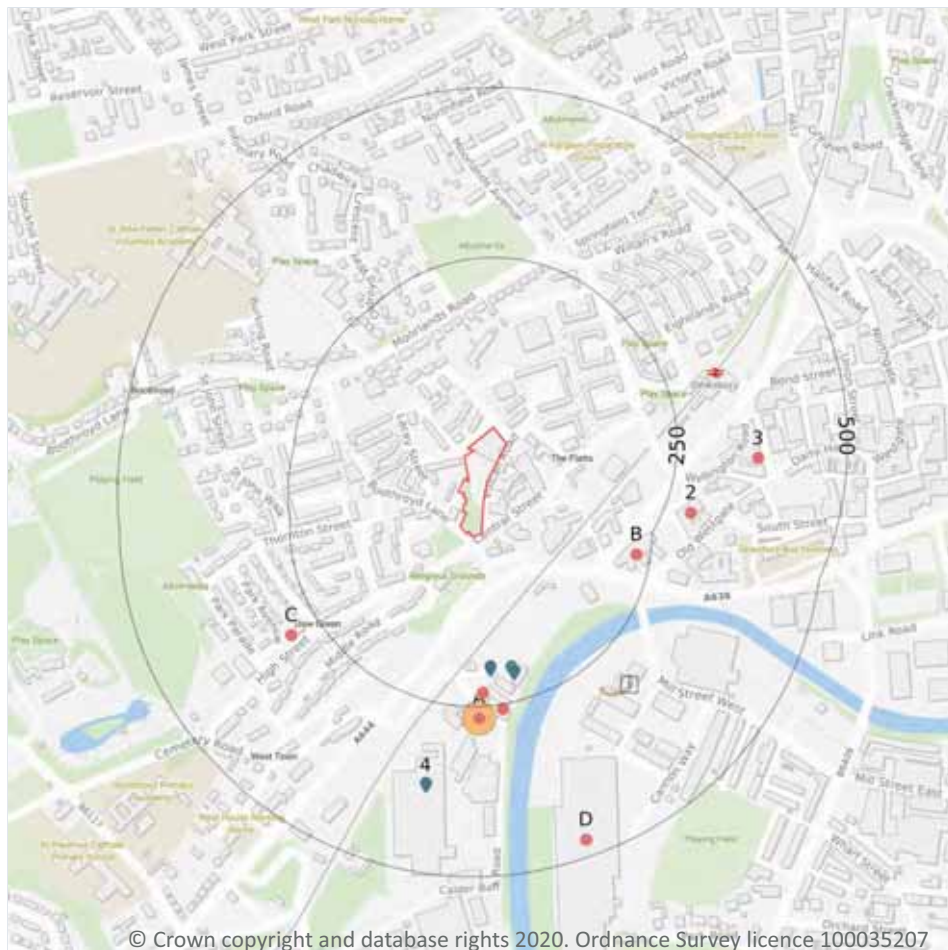


ID	Location	Land Use	Date	Group ID
K	379m E	Garage	1992	45523
K	379m E	Garage	1992	45523
T	384m SW	Garage	1984	45848
T	384m SW	Garage	1992	45848
E	405m NE	Garage	1983	46688
E	406m NE	Garage	1993	43665
E	407m NE	Garage	1955	44349
E	407m NE	Garage	1983	44349
E	407m NE	Garage	1975	44349
E	408m NE	Garage	1955	46688
U	420m NE	Garage	1987	44510
U	420m NE	Garage	1990	44510
U	420m NE	Garage	1990	44510
U	420m NE	Garage	1993	45587
U	421m NE	Garage	1971	45587
K	428m E	Garage	1973	43123

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical waste sites
- Licensed waste sites
- Waste exemptions

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

2

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 33**

ID	Location	Address	Further Details	Date
A	242m S	Site Address: C & J Blackburn, West End Mills, Watergate Road, DEWSBURY, West Yorkshire, WF12 9QB	Type of Site: Waste Transfer Planning application reference: 00/90019 Description: Scheme comprises the construction of a new building to contain waste paper transfer operations, the building is open fronted with one industrial door and the project also includes some demolition. The total floor area for the project is 990 sqm. Construction - block, steel cladding walls; insitu concrete floor; steel cladding roof; fire, industrial doors (unspecified) doors; pad foundations; steel frame; fire alarm system fittings. Detailed plans have been submitted. We have been unable to determine a building programme for the project at this stage. A committee date has not been confirmed for the application at this stage. (21/03/2000) Data source: Historic Planning Application Data Type: Point	-

ID	Location	Address	Further Details	Date
1	286m SE	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

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

3.6 Licensed waste sites

Records within 500m	4
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Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on **page 33**

ID	Location	Details		
A	196m S	Site Name: Cartwright Mill Site Address: Cartwright Mill, Watergate Road, Dewsbury, West Yorkshire, WF12 9QB Correspondence Address: -	Type of Site: 75kte HCl Waste TS + treatment Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PWS001 EPR reference: EA/EPR/AB3402FA/A001 Operator: Price Waste Services Limited Waste Management licence No: 400585 Annual Tonnage: 74999	Issue Date: 23/09/2013 Effective Date: - Modified:: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
A	202m S	Site Name: Ingham Works Site Address: Ing Mills, Watergate Road, Dewsbury, West Yorkshire, WF12 9QB Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MGS001 EPR reference: EA/EPR/XP3192ZD/A001 Operator: M & G Skips Ltd Waste Management licence No: 65284 Annual Tonnage: 24999	Issue Date: 31/03/2004 Effective Date: - Modified:: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired



ID	Location	Details		
A	208m S	Site Name: M G Skip Hire Ltd Site Address: Cartwright Mills, Watergate Road, Dewsbury, West Yorkshire, WF12 9QB Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MGS002 EPR reference: EA/EPR/QP3392ZW/V002 Operator: M G Skip Hire Ltd Waste Management licence No: 65499 Annual Tonnage: 9130	Issue Date: 04/09/2006 Effective Date: - Modified:: 31/05/2008 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired
4	372m S	Site Name: C & J Blackburn Site Address: West End Mills, Watergate Road, Dewsbury, West Yorkshire, WF12 9QB Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CJB001 EPR reference: EA/EPR/KP3695ZQ/A001 Operator: C & J Blackburn Waste Management licence No: 61026 Annual Tonnage: 24999	Issue Date: 06/06/1996 Effective Date: - Modified:: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued

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

3.7 Waste exemptions

Records within 500m	18
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Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 33**

ID	Location	Site	Reference	Category	Sub-Category	Description
B	229m E	VICTORIA CENTRE, WELLINGTON ROAD, DEWSBURY, WF13 1HN	WEX135099	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	229m E	VICTORIA CENTRE, WELLINGTON ROAD, DEWSBURY, WF13 1HN	WEX135099	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal



ID	Location	Site	Reference	Category	Sub-Category	Description
B	229m E	VICTORIA CENTRE - PharmacyD , WELLINGTON ROAD, DEWSBURY, WF13 1HN	WEX147643	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
B	229m E	VICTORIA CENTRE, WELLINGTON ROAD, DEWSBURY, WF13 1HN	WEX135099	Storing waste exemption	Not on a farm	Storage of waste in secure containers
B	229m E	VICTORIA CENTRE, WELLINGTON ROAD, DEWSBURY, WF13 1HN	WEX135099	Storing waste exemption	Not on a farm	Storage of sludge
A	231m S	West End Mills Watergate Road Dewsbury West Yorkshire WF12 9QB	EPR/FF0606LJ/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place
A	231m S	West End Mills Watergate Road Dewsbury West Yorkshire WF12 9QB	EPR/FF0606LJ/A001	Treating waste exemption	Non-Agricultural Waste Only	Preparatory treatments (baling, sorting, shredding etc)
A	257m S	VICTORIA MILLS, WATERGATE ROAD, DEWSBURY, WF12 9QB	WEX104763	Treating waste exemption	Not on a farm	Recovery of textiles
A	257m S	VICTORIA MILLS, WATERGATE ROAD, DEWSBURY, WF12 9QB	WEX104763	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
A	268m S	WEST END MILLS, WATERGATE ROAD, DEWSBURY, WF12 9QB	WEX116764	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
2	289m E	Eightlands Surgery Wellington Road DEWSBURY West Yorkshire WF13 1HN	EPR/WF0939N K/A001	Treating waste exemption	Non-Agricultural Waste Only	Sorting and de-naturing of controlled drugs for disposal
C	295m SW	78, HIGH STREET, WESTTOWN, DEWSBURY, WF13 2QQ	WEX135101	Storing waste exemption	Not on a farm	Storage of sludge
C	295m SW	78, HIGH STREET, WESTTOWN, DEWSBURY, WF13 2QQ	WEX135101	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
C	295m SW	78, HIGH STREET, WESTTOWN, DEWSBURY, WF13 2QQ	WEX135101	Storing waste exemption	Not on a farm	Storage of waste in secure containers
C	295m SW	78, HIGH STREET, WESTTOWN, DEWSBURY, WF13 2QQ	WEX135101	Storing waste exemption	Not on a farm	Storage of waste in a secure place

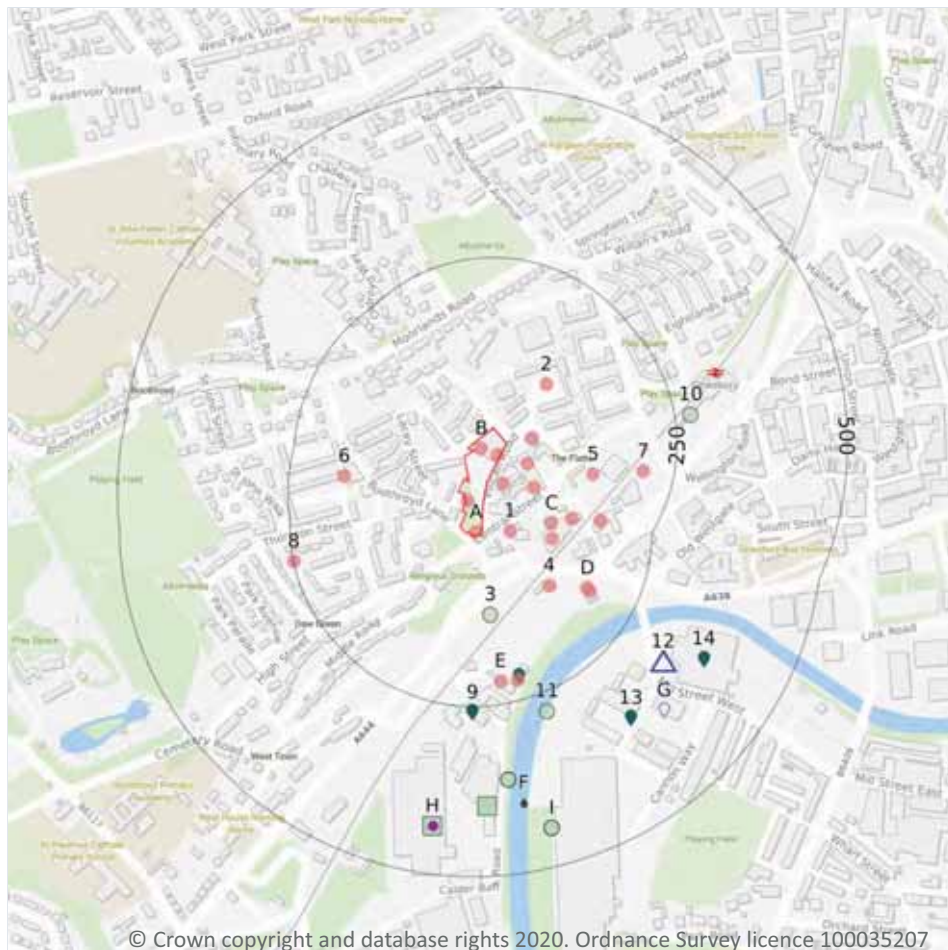


ID	Location	Site	Reference	Category	Sub-Category	Description
3	369m E	3, WELLINGTON STREET, DEWSBURY, WF13 1LY	WEX196242	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
D	475m S	UK Greetings Ltd Cannon Way DEWSBURY West Yorkshire WF13 1XH	EPR/BF0800TA /A001	Treating waste exemption	Non- Agricultural Waste Only	Preparatory treatments (baling, sorting, shredding etc)
D	475m S	UK Greetings Ltd Cannon Way DEWSBURY West Yorkshire WF13 1XH	EPR/QF0706F U/A001	Disposing of waste exemption	Non- Agricultural Waste Only	Deposit of waste from dredging of inland waters

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



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- △ Current or recent petrol stations
- Part A(1) industrial activities
- ◆ Licensed pollutant release (Part A(2)/B)
- ◆ Licensed Discharges to controlled waters
- List 1 Dangerous Substances
- List 2 Dangerous Substances
- Pollution Incidents (EA/NRW)
- Pollution inventory substances
- Pollution inventory waste transfers

4.1 Recent industrial land uses

Records within 250m

23

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 39**

ID	Location	Company	Address	Activity	Category
A	On site	Electricity Sub Station	West Yorkshire, WF13	Electrical Features	Infrastructure and Facilities
A	On site	Chimney	West Yorkshire, WF13	Chimneys	Industrial Features
B	On site	Works	West Yorkshire, WF13	Unspecified Works Or Factories	Industrial Features



ID	Location	Company	Address	Activity	Category
B	On site	H B Food Services Ltd	Vulcan Road, Dewsbury, West Yorkshire, WF13 2NA	Catering and Non Specific Food Products	Foodstuffs
B	22m SE	High Works	West Yorkshire, WF13	Unspecified Works Or Factories	Industrial Features
B	39m E	No 96 Dewsbury Squadron Air Training Corps	Vulcan Road, Dewsbury, West Yorkshire, WF13 2PW	Armed Services	Central and Local Government
B	41m SE	Works	West Yorkshire, WF13	Unspecified Works Or Factories	Industrial Features
1	42m E	Works	West Yorkshire, WF13	Unspecified Works Or Factories	Industrial Features
B	66m SE	Warehouse	West Yorkshire, WF13	Container and Storage	Transport, Storage and Delivery
2	100m NE	Electricity Sub Station	West Yorkshire, WF13	Electrical Features	Infrastructure and Facilities
C	102m E	Diespeker	Units 1 2 Central Street, Dewsbury, West Yorkshire, WF13 2LZ	Glass Fibre Services	Industrial Products
C	104m E	Warehouse	West Yorkshire, WF13	Container and Storage	Transport, Storage and Delivery
4	125m SE	Mr Sparkles Car Wash	Webster Hill, Dewsbury, West Yorkshire, WF12 9QA	Vehicle Cleaning Services	Personal, Consumer and Other Services
C	131m E	Works	West Yorkshire, WF13	Unspecified Works Or Factories	Industrial Features
5	135m E	Depot	West Yorkshire, WF13	Container and Storage	Transport, Storage and Delivery
6	169m W	Electricity Sub Station	West Yorkshire, WF13	Electrical Features	Infrastructure and Facilities
C	174m E	Craigs Motorcycles	Wellington Road, Dewsbury, West Yorkshire, WF13 1HX	New Vehicles	Motoring
D	175m SE	Kwik-Fit (GB) Limited	Webster Hill, Dewsbury, West Yorkshire, WF12 9QA	Vehicle Repair, Testing and Servicing	Repair and Servicing
D	180m SE	Warehouse	West Yorkshire, WF12	Container and Storage	Transport, Storage and Delivery
7	204m E	Mast (Telecommunication)	West Yorkshire, WF13	Telecommunications Features	Infrastructure and Facilities



ID	Location	Company	Address	Activity	Category
E	216m S	Warehouse	West Yorkshire, WF12	Container and Storage	Transport, Storage and Delivery
E	220m S	Price Waste Services Ltd	Cartwright Mills, Watergate Road, Dewsbury, West Yorkshire, WF12 9QB	Recycling, Reclamation and Disposal	Recycling Services
8	249m W	Electricity Sub Station	West Yorkshire, WF13	Electrical Features	Infrastructure and Facilities

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 39**

ID	Location	Company	Address	LPG	Status
12	326m SE	OBSOLETE	Mill Street West, Dewsbury, West Yorkshire, WF12 9PP	Not Applicable	Obsolete

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.



4.5 Sites determined as Contaminated Land

Records within 500m**0**

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m**0**

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m**0**

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m**0**

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m**0**

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m

6

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 39**

ID	Location	Details	
G	373m SE	Operator: HALTERMANN LTD Installation Name: MIRFIELD PHARMACUETICAL PLANT Process: PHARMACEUTICALS; PRODUCING PHARMACEUTICALS USING CHEMICAL/BIOLOGICAL PROCESSES Permit Number: WP3338LE Original Permit Number: WP3338LE	EPR Reference: EA/EPR/WP3338LE/T004 Issue Date: 13/12/2006 Effective Date: 13/12/2006 Last date noted as effective: 15/05/2020 Status: SUPERCEDED
G	373m SE	Operator: HALTERMANN LTD Installation Name: MIRFIELD PHARMACUETICAL PLANT Process: PLANT HEALTH AND BIOCIDES; PRODUCING PLANT HEALTH PRODUCTS/BIOCIDES Permit Number: WP3338LE Original Permit Number: WP3338LE	EPR Reference: EA/EPR/WP3338LE/T004 Issue Date: 13/12/2006 Effective Date: 13/12/2006 Last date noted as effective: 15/05/2020 Status: SUPERCEDED
G	373m SE	Operator: HALTERMANN LTD Installation Name: MIRFIELD PHARMACUETICAL PLANT Process: PHARMACEUTICALS; PRODUCING PHARMACEUTICALS USING CHEMICAL/BIOLOGICAL PROCESSES Permit Number: ZP3036MT Original Permit Number: WP3338LE	EPR Reference: - Issue Date: 22/01/2007 Effective Date: 22/01/2007 Last date noted as effective: 15/05/2020 Status: SUPERCEDED
G	373m SE	Operator: HALTERMANN LTD Installation Name: MIRFIELD PHARMACUETICAL PLANT Process: PLANT HEALTH AND BIOCIDES; PRODUCING PLANT HEALTH PRODUCTS/BIOCIDES Permit Number: ZP3036MT Original Permit Number: WP3338LE	EPR Reference: - Issue Date: 22/01/2007 Effective Date: 22/01/2007 Last date noted as effective: 15/05/2020 Status: SUPERCEDED
H	429m S	Operator: S. LYLES, SONS & CO LTD Installation Name: CALDER BANK TEXTILE MILL Process: COATING, PRINTING AND TEXTILES; PRE-TREATING BY WASHING ETC >10T/DAY Permit Number: QP3739LR Original Permit Number: QP3739LR	EPR Reference: - Issue Date: 23/08/2006 Effective Date: 23/08/2006 Last date noted as effective: 15/05/2020 Status: SUPERCEDED



ID	Location	Details	
H	429m S	Operator: WESTEX (CARPETS) LIMITED Installation Name: CALDER BANK TEXTILE MILL - EPR/GP3134HG Process: COATING, PRINTING AND TEXTILES; PRE-TREATING BY WASHING ETC >10T/DAY Permit Number: GP3134HG Original Permit Number: GP3134HG	EPR Reference: - Issue Date: 13/04/2011 Effective Date: 13/04/2011 Last date noted as effective: 15/05/2020 Status: TRANSFER 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

4

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 39**

ID	Location	Address	Details	
E	216m S	Swiftparts Ltd, Anchor Mills, Watergate, Dewsbury, WF12 9QS	Process: Non-ferrous Metal Foundry Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
9	258m S	Swiftparts Ltd (t/a Fred Smithson), Anchor Mills, Watergate, Dewsbury, WF12 9QB	Process: Non-ferrous Metal Foundry Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
13	348m SE	Dewsbury & West, Riding Motor Co, Mill St West, Dewsbury, WF12 9AB	Process: Respraying of Road Vehicles Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
14	374m SE	Perry Motor Sales, Aldams Rd, Dewsbury, WF12 8AD	Process: Respraying of Road Vehicles 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

1

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 39**

ID	Location	Address	Details	
F	398m S	SOUTH STREET CSO, SOUTH STREET, DEWSBURY	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WADC1348 Permit Version: 3 Receiving Water: RIVER CALDER	Status: VARIED UNDER EPR 2010 Issue date: 22/01/2018 Effective Date: 22/01/2018 Revocation Date: -

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

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

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

4.15 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m

1

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 39**

ID	Location	Name	Status	Receiving Water	Authorised Substances
H	430m S	S Lyles And Sons And Co Ltd	Active	Dummy Site	Dieldrin

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 39**

ID	Location	Name	Status	Receiving Water	Authorised Substances
F	396m S	S. Lyles & Sons, Watergate, Dewsbury	Not Active	Unknown	Permethrin, Sulcofuron
H	430m S	S Lyles And Sons And Co Ltd	Not Active	Unknown	Permethrin

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 39**

ID	Location	Details	
3	117m S	Incident Date: 22/03/2002 Incident Identification: 65781 Pollutant: Specific Waste Materials Pollutant Description: Commercial Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)

ID	Location	Details	
10	273m E	Incident Date: 26/06/2002 Incident Identification: 87475 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
11	278m S	Incident Date: 29/08/2001 Incident Identification: 27594 Pollutant: Sewage Materials Pollutant Description: Grey Water	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	361m S	Incident Date: 18/09/2002 Incident Identification: 108600 Pollutant: Specific Waste Materials Pollutant Description: Asbestos	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)
F	361m S	Incident Date: 18/09/2002 Incident Identification: 108600 Pollutant: Specific Waste Materials Pollutant Description: Asbestos	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)
I	443m S	Incident Date: 19/07/2002 Incident Identification: 92844 Pollutant: Specific Waste Materials Pollutant Description: Household Waste	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
I	443m S	Incident Date: 19/07/2002 Incident Identification: 92844 Pollutant: Specific Waste Materials Pollutant Description: Household Waste	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) 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

3

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

Features are displayed on the Current industrial land use map on **page 39**

ID: H, Location: 430m S, Permit: GP3134HG
 Operator: Westex (Carpets) Limited
 Activity: COATING, PRINTING AND TEXTILES; PRE-TREATING BY WASHING ETC >10T/DAY
 Address: Calder Bank Mills Calder Bank Road Dewsbury West Yorkshire WF12 9QW
 Sector: Paper and textiles, Sub-sector: Textiles
 Releases:



Route	Substance	Reporting threshold (kg)	Quantity (kg)
Wastewater	Cypermethrin	0.005kg	0.022kg

ID: H, Location: 430m S, Permit: GP3134HG
 Operator: Westex (Carpets) Limited
 Activity: COATING, PRINTING AND TEXTILES; PRE-TREATING BY WASHING ETC >10T/DAY
 Address: Calder Bank Mills Calder Bank Road Dewsbury West Yorkshire WF12 9QW
 Sector: Paper and textiles, Sub-sector: Textiles
 Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Carbon monoxide	100000kg	Below Reporting Threshold
Air	Nitrogen oxides (NO and NO2) as NO2	100000kg	Below Reporting Threshold
Air	Sulphur oxides (SO2 and SO3) as SO2	100000kg	Below Reporting Threshold
Wastewater	Total organic carbon (TOC)	50000kg	Below Reporting Threshold
Air	Carbon dioxide	10000000kg	Below Reporting Threshold

ID: H, Location: 430m S, Permit: GP3134HG
 Operator: Westex (Carpets) Limited
 Activity: COATING, PRINTING AND TEXTILES; PRE-TREATING BY WASHING ETC >10T/DAY
 Address: Calder Bank Mills Calder Bank Road Dewsbury West Yorkshire WF12 9QW
 Sector: Paper and textiles, Sub-sector: Textiles
 Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Wastewater	Dieldrin	0.0005kg	0.004kg

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

4.20 Pollution inventory waste transfers

Records within 500m

1

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

Features are displayed on the Current industrial land use map on **page 39**



ID: H, Location: 430m S, Permit: GP3134HG
 Operator: Westex (Carpets) Limited
 Activity: COATING, PRINTING AND TEXTILES; PRE-TREATING BY WASHING ETC >10T/DAY
 Address: Calder Bank Mills Calder Bank Road Dewsbury West Yorkshire WF12 9QW
 Sector: Paper and textiles, Sub-sector: Textiles
 Releases:

Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
D1	Deposit into or onto land (eg landfill, etc.)	20	Absolute Value	20 03 01	mixed municipal waste	No
R4	Recycling/reclamation of metals and metal compounds	Below Reporting Threshold	Below Reporting Threshold	15 01 04	metallic packaging	No

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

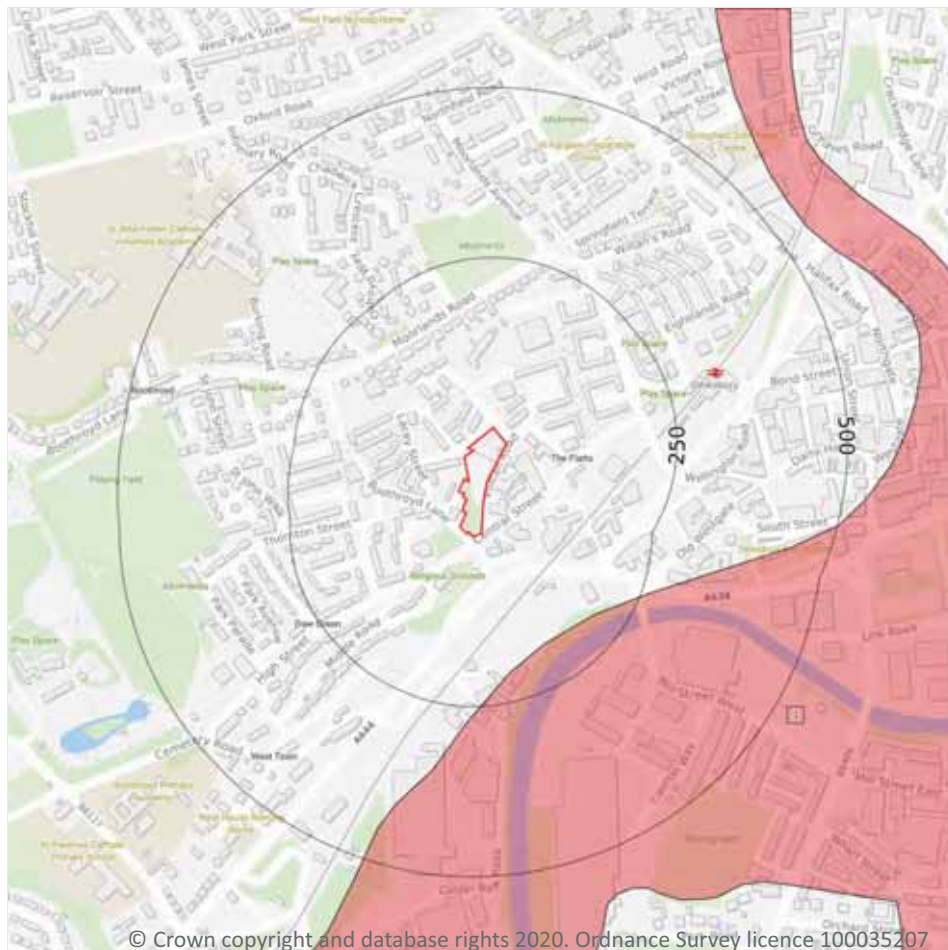
4.21 Pollution inventory radioactive waste

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



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

5.1 Superficial aquifer

Records within 500m

1

Aquifer status of groundwater held within superficial geology.

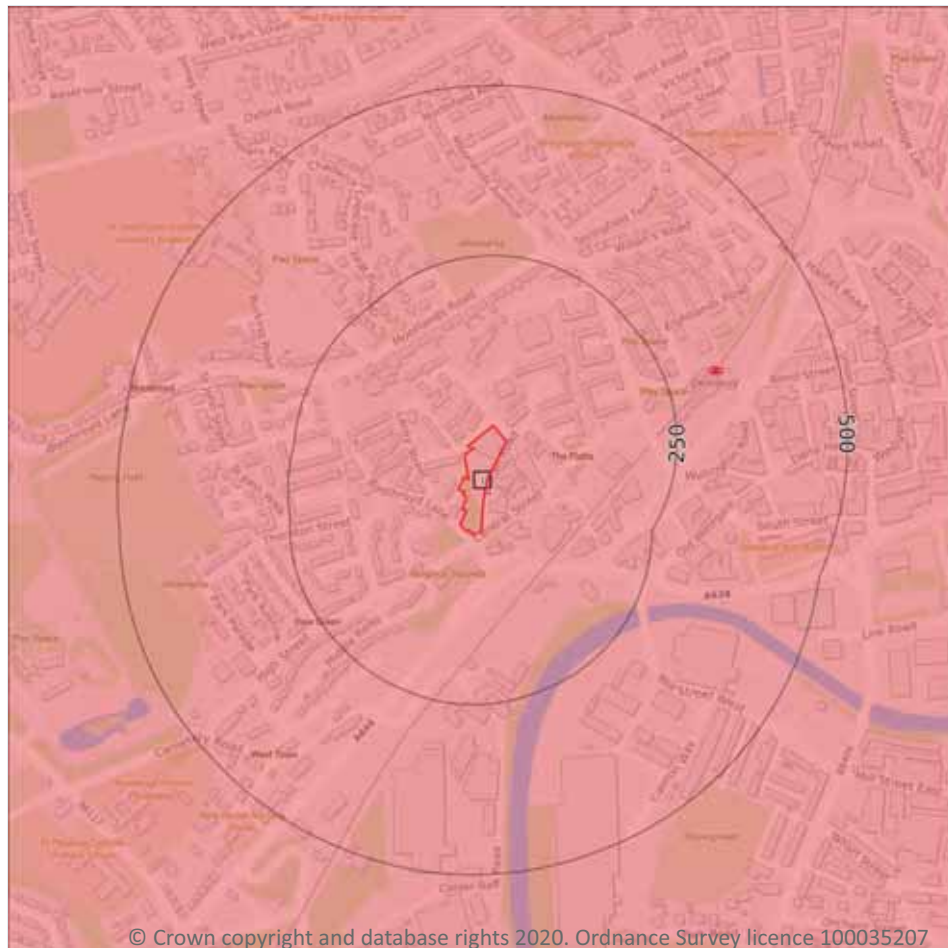
Features are displayed on the Hydrogeology map on **page 50**

ID	Location	Designation	Description
1	187m SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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



Bedrock aquifer



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

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5.2 Bedrock aquifer

Records within 500m

1

Aquifer status of groundwater held within bedrock geology.

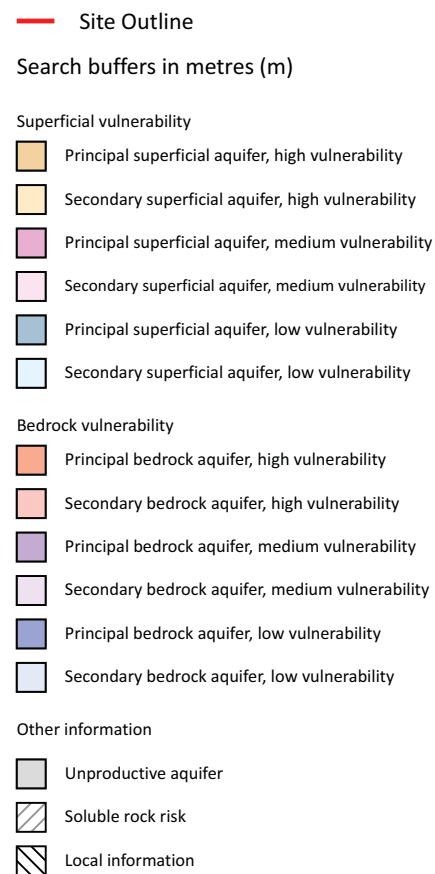
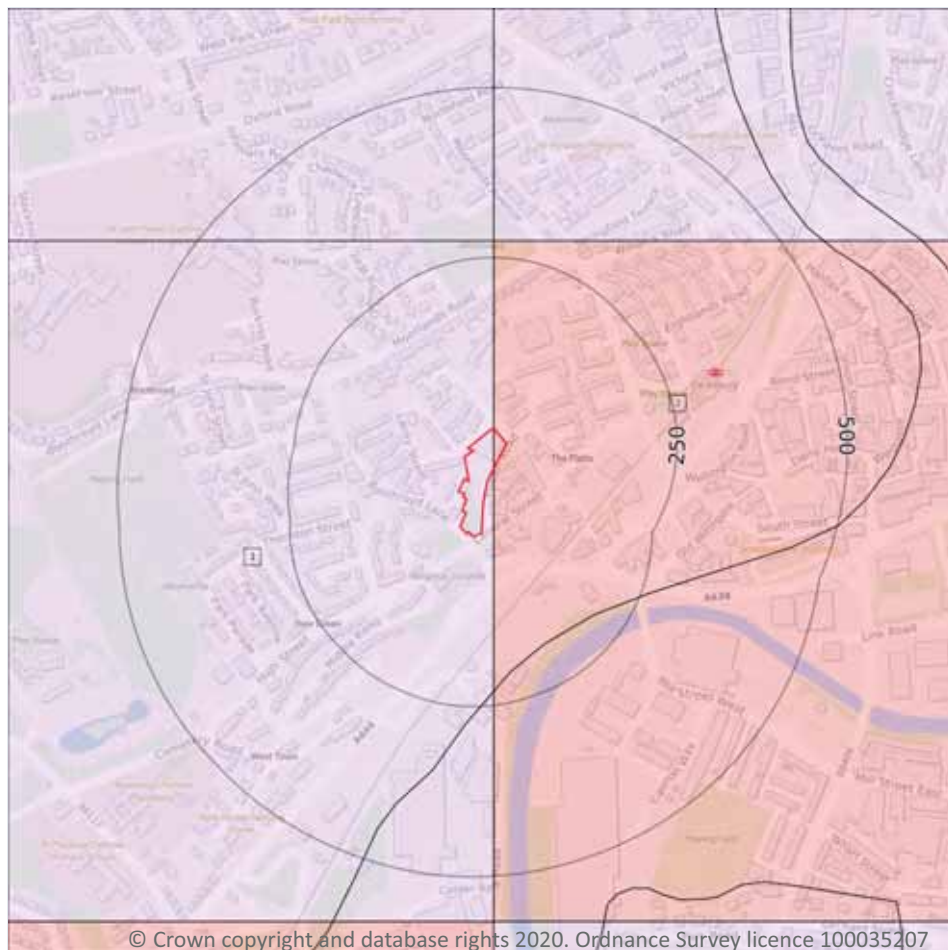
Features are displayed on the Bedrock aquifer map on **page 51**

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

2

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 52**

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

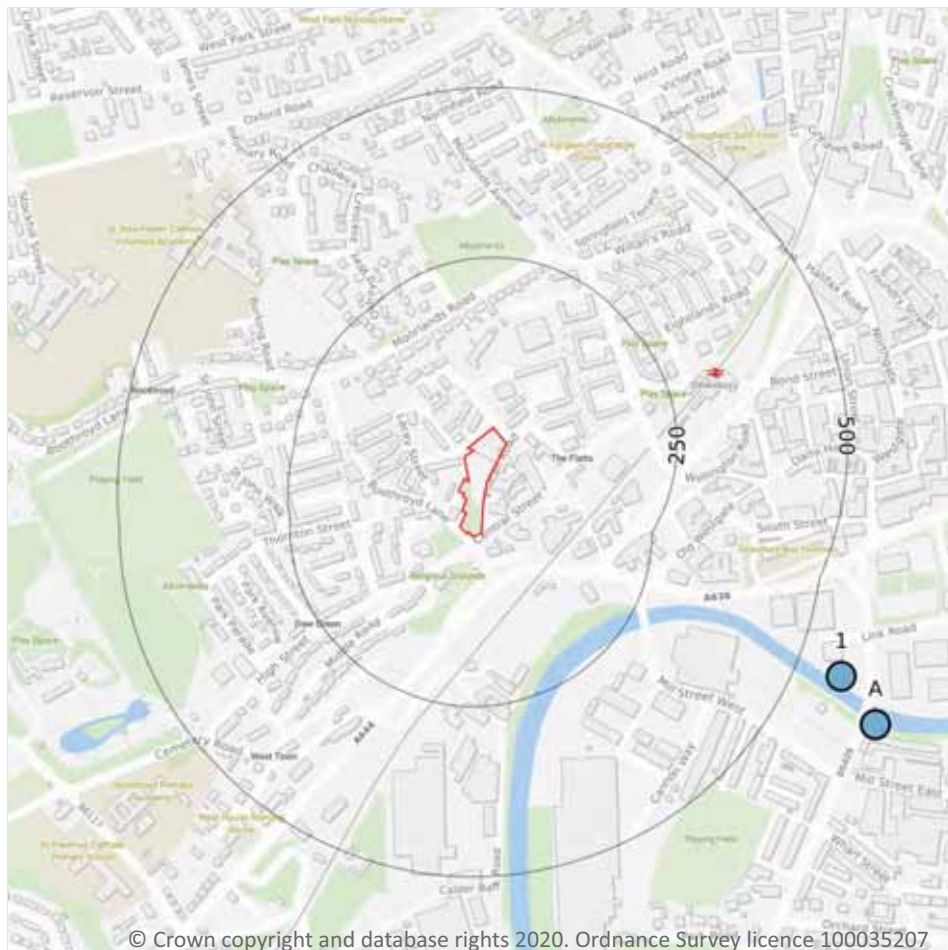
0

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



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

5.6 Groundwater abstractions

Records within 2000m

22

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 54**

ID	Location	Details	
-	924m N	Status: Historical Licence No: 2/27/13/046 Details: General use relating to Secondary Category (High Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: JOSHUA ELLIS & COMPANY LIMITED Easting: 424300 Northing: 422600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -
-	924m N	Status: Historical Licence No: 2/27/13/046 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: JOSHUA ELLIS & COMPANY LIMITED Easting: 424300 Northing: 422600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -
-	924m N	Status: Historical Licence No: 2/27/13/046 Details: Process water Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: JOSHUA ELLIS & COMPANY LIMITED Easting: 424300 Northing: 422600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -
-	924m N	Status: Historical Licence No: 2/27/13/046 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: JOSHUA ELLIS & COMPANY LIMITED Easting: 424300 Northing: 422600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -

ID	Location	Details	
-	924m N	Status: Historical Licence No: 2/27/13/046 Details: General use relating to Secondary Category (High Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: JOSHUA ELLIS & COMPANY LIMITED Easting: 424300 Northing: 422600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -
-	924m N	Status: Historical Licence No: 2/27/13/046 Details: Process water Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: JOSHUA ELLIS & COMPANY LIMITED Easting: 424300 Northing: 422600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/10/1997 Version End Date: -
-	989m E	Status: Historical Licence No: 2/27/13/169 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: THOMAS CHADWICK & SONS LIMITED Easting: 424900 Northing: 421200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 26/01/1993 Expiry Date: - Issue No: 100 Version Start Date: 25/04/1997 Version End Date: -
-	989m E	Status: Active Licence No: 2/27/13/169 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: THOMAS CHADWICK & SONS LTD Easting: 424900 Northing: 421200	Annual Volume (m ³): 140,000 Max Daily Volume (m ³): 576 Original Application No: - Original Start Date: 26/01/1993 Expiry Date: - Issue No: 100 Version Start Date: 25/04/1997 Version End Date: -

ID	Location	Details	
-	1053m E	Status: Historical Licence No: 2/27/13/169 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: THOMAS CHADWICK & SONS LIMITED Easting: 425000 Northing: 421300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 26/01/1993 Expiry Date: - Issue No: 100 Version Start Date: 25/04/1997 Version End Date: -
-	1053m E	Status: Active Licence No: 2/27/13/169 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: THOMAS CHADWICK & SONS LTD Easting: 425000 Northing: 421300	Annual Volume (m ³): 140,000 Max Daily Volume (m ³): 576 Original Application No: - Original Start Date: 26/01/1993 Expiry Date: - Issue No: 100 Version Start Date: 25/04/1997 Version End Date: -
-	1112m S	Status: Historical Licence No: 2/27/13/226 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: CALDER DYEING LTD Easting: 424090 Northing: 420460	Annual Volume (m ³): 75000 Max Daily Volume (m ³): 330 Original Application No: - Original Start Date: 19/10/2007 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 19/10/2007 Version End Date: -
-	1112m S	Status: Active Licence No: 2/27/13/226/R01 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DEWSBURY Data Type: Point Name: CALDER DYEING LTD Easting: 424090 Northing: 420460	Annual Volume (m ³): 75,000 Max Daily Volume (m ³): 330 Original Application No: - Original Start Date: 01/04/2015 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/04/2015 Version End Date: -



ID	Location	Details	
-	1408m SW	Status: Historical Licence No: 2/27/13/200 Details: General Washing/Process Washing Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: WILLIAM S GRAHAM LIMITED Easting: 423080 Northing: 420470	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/06/1999 Expiry Date: - Issue No: 100 Version Start Date: 23/06/1999 Version End Date: -
-	1408m SW	Status: Active Licence No: 2/27/13/200 Details: General Washing/Process Washing Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - RAVENSTHORPE - DEWSBURY Data Type: Point Name: Lawton Yarns Ltd Easting: 423080 Northing: 420470	Annual Volume (m ³): 28,800 Max Daily Volume (m ³): 960 Original Application No: - Original Start Date: 23/06/1999 Expiry Date: - Issue No: 102 Version Start Date: 06/08/2014 Version End Date: -
-	1832m NW	Status: Historical Licence No: 2/27/13/189 Details: Evaporative Cooling Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: MORTON INTERNATIONAL Easting: 422430 Northing: 422700	Annual Volume (m 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: -
-	1832m NW	Status: Historical Licence No: 2/27/13/189 Details: Evaporative Cooling Direct Source: GROUNDWATERS Point: BOREHOLE-COAL MEASURES-DEWSBURY Data Type: Point Name: RHOM & HAAS (UK) LTD Easting: 422430 Northing: 422700	Annual Volume (m 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: -
-	1959m SW	Status: Historical Licence No: 2/27/13/202 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - DEWSBURY - COAL MEASURES Data Type: Point Name: RIVERSTONE SPINNING LTD Easting: 422620 Northing: 420140	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 24/04/2000 Expiry Date: 31/12/2005 Issue No: 2 Version Start Date: 23/04/2002 Version End Date: -



ID	Location	Details	
-	1959m SW	Status: Historical Licence No: 2/27/13/218 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - DEWSBURY - COAL MEASURES Data Type: Point Name: ULSTER YARNS LTD Easting: 422620 Northing: 420140	Annual Volume (m ³): 100000 Max Daily Volume (m ³): 500 Original Application No: - Original Start Date: 01/01/2006 Expiry Date: 31/12/2010 Issue No: 2 Version Start Date: 23/03/2007 Version End Date: -
-	1959m SW	Status: Historical Licence No: NE/027/0013/005 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE AT RAVENSTHORPE MILLS, DEWSBURY Data Type: Point Name: ULSTER YARNS LTD Easting: 422620 Northing: 420140	Annual Volume (m ³): 50000 Max Daily Volume (m ³): 250 Original Application No: - Original Start Date: 01/01/2011 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/01/2011 Version End Date: -
-	1959m SW	Status: Historical Licence No: NE/027/0013/005 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - RAVENSTHORPE MILLS, DEWSBURY Data Type: Point Name: ULSTER YARNS LTD Easting: 422620 Northing: 420140	Annual Volume (m ³): 50000 Max Daily Volume (m ³): 250 Original Application No: - Original Start Date: 01/01/2011 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/01/2011 Version End Date: -
-	1978m NW	Status: Historical Licence No: 2/27/13/193 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: THOMAS CARR LIMITED C/O BERNARD KAYE Easting: 422750 Northing: 423260	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 04/03/1998 Expiry Date: 31/12/2008 Issue No: 100 Version Start Date: 04/03/1998 Version End Date: -

ID	Location	Details	
-	1978m NW	Status: Historical Licence No: 2/27/13/193 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - STAINCLIFFE DEWSBURY Data Type: Point Name: THOMAS CARR LTD Easting: 422750 Northing: 423260	Annual Volume (m 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: -

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

5.7 Surface water abstractions

Records within 2000m	12
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Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 54**

ID	Location	Details	
1	568m E	Status: Historical Licence No: 2/27/13/129 Details: Boiler Feed Direct Source: SURFACE WATER Point: RIVER CALDER Data Type: Point Name: ARONSTEAD LIMITED Easting: 424510 Northing: 421360	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 24/02/1971 Expiry Date: - Issue No: 100 Version Start Date: 16/03/1978 Version End Date: -
A	642m SE	Status: Historical Licence No: 2/27/13/163 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER CALDER Data Type: Point Name: HENRY DAY & SONS LTD Easting: 424560 Northing: 421290	Annual Volume (m ³): 15000 Max Daily Volume (m ³): 90.92 Original Application No: - Original Start Date: 01/06/1989 Expiry Date: - Issue No: 100 Version Start Date: 01/06/1989 Version End Date: -

ID	Location	Details	
A	642m SE	Status: Active Licence No: 2/27/13/163 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER CALDER - DEWSBURY Data Type: Point Name: HENRY DAY & SONS LTD Easting: 424560 Northing: 421290	Annual Volume (m ³): 15,000 Max Daily Volume (m ³): 90.92 Original Application No: - Original Start Date: 01/06/1989 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	807m SE	Status: Historical Licence No: 2/27/13/191 Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER CALDER Data Type: Point Name: CALDER MASONARY Easting: 424700 Northing: 421200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/05/1997 Expiry Date: - Issue No: 100 Version Start Date: 23/05/1997 Version End Date: -
-	807m SE	Status: Active Licence No: 2/27/13/191 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER CALDER - DEWSBURY X 2 ABSTRACTION POINTS Data Type: Point Name: CALDER MASONARY Easting: 424700 Northing: 421200	Annual Volume (m ³): 9,720 Max Daily Volume (m ³): 36 Original Application No: - Original Start Date: 23/05/1997 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2008 Version End Date: -
-	1328m S	Status: Historical Licence No: 2/27/13/230 Details: Mineral Washing Direct Source: SURFACE WATER Point: RIVER CALDER - DEWSBURY Data Type: Point Name: LAFARGE AGGREGATES LTD Easting: 423890 Northing: 420240	Annual Volume (m ³): 680000 Max Daily Volume (m ³): 2520 Original Application No: - Original Start Date: 07/07/2008 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 26/09/2013 Version End Date: -



ID	Location	Details	
-	1328m S	Status: Historical Licence No: 2/27/13/230 Details: Dust Suppression Direct Source: SURFACE WATER Point: RIVER CALDER - DEWSBURY Data Type: Point Name: LAFARGE AGGREGATES LTD Easting: 423890 Northing: 420240	Annual Volume (m ³): 680000 Max Daily Volume (m ³): 2520 Original Application No: - Original Start Date: 07/07/2008 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 26/09/2013 Version End Date: -
-	1353m SW	Status: Active Licence No: 2/27/13/211/R01 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER CALDER-RAVENSING MILLS-RAVENSTHORPE Data Type: Point Name: Lawton Yarns Ltd Easting: 423140 Northing: 420493	Annual Volume (m ³): 350,000 Max Daily Volume (m ³): 960 Original Application No: - Original Start Date: 01/04/2015 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/04/2015 Version End Date: -
-	1356m SW	Status: Historical Licence No: 2/27/13/211 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER CALDER-RAVENSING MILLS-RAVENSTHORPE Data Type: Point Name: Lawton Yarns Ltd Easting: 423140 Northing: 420490	Annual Volume (m ³): 350000 Max Daily Volume (m ³): 960 Original Application No: - Original Start Date: 21/11/2002 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 06/08/2014 Version End Date: -
-	1822m SW	Status: Historical Licence No: 2/27/13/179 Details: Non-Evaporative Cooling Direct Source: SURFACE WATER Point: RIVER CALDER Data Type: Point Name: BRITISH WATERWAYS Easting: 422830 Northing: 420140	Annual Volume (m ³): 25842000 Max Daily Volume (m ³): 70800 Original Application No: - Original Start Date: 22/04/1996 Expiry Date: - Issue No: 100 Version Start Date: 28/08/1996 Version End Date: -



ID	Location	Details	
-	1822m SW	Status: Active Licence No: 2/27/13/179 Details: Non-Evaporative Cooling Direct Source: SURFACE WATER Point: RIVER CALDER - THORNHILL POWER STATION - DEWSBURY Data Type: Point Name: Canal and River Trust Easting: 422830 Northing: 420140	Annual Volume (m ³): 25,842,000 Max Daily Volume (m ³): 70,800 Original Application No: - Original Start Date: 22/04/1996 Expiry Date: - Issue No: 101 Version Start Date: 21/01/2008 Version End Date: -
-	1941m NE	Status: Historical Licence No: 2/27/13/206 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: BATLEY BECK Data Type: Point Name: CULLINGWORTH SUMMERS & CO LTD Easting: 424810 Northing: 423490	Annual Volume (m ³): 11500 Max Daily Volume (m ³): 60 Original Application No: - Original Start Date: 21/08/2001 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 23/05/2005 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	0
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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
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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

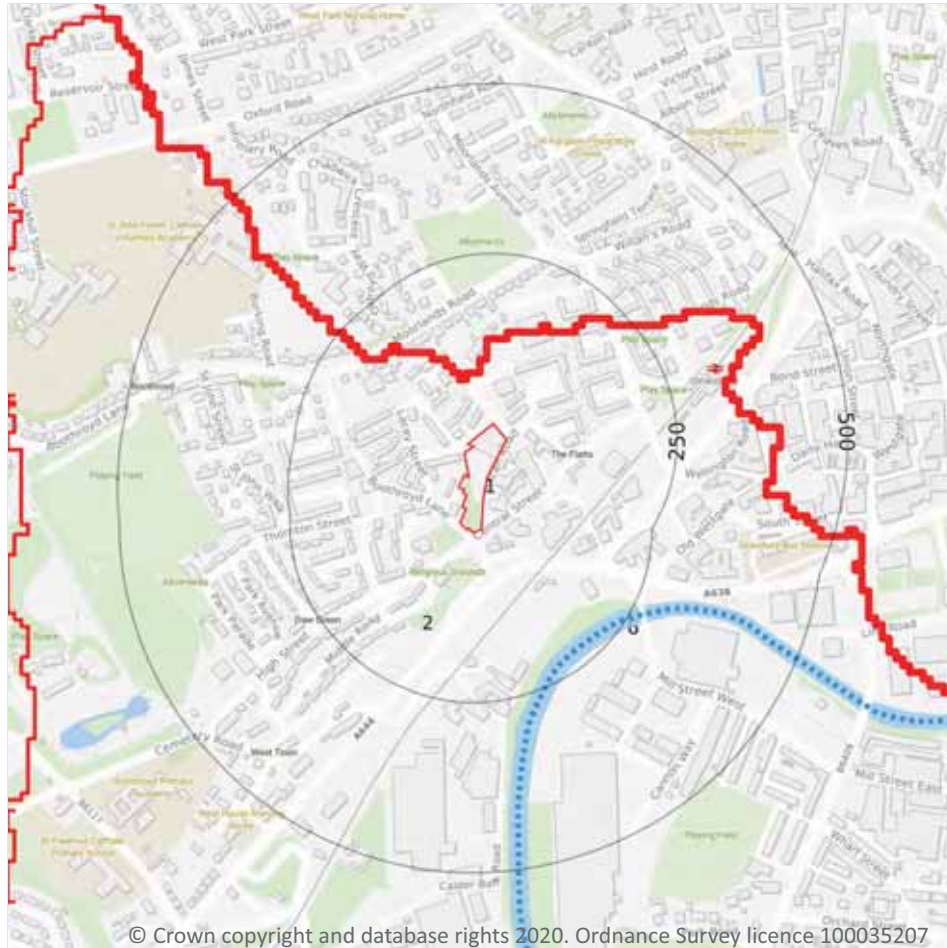
0

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



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

6.1 Water Network (OS MasterMap)

Records within 250m

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 65**

ID	Location	Type of water feature	Ground level	Permanence	Name
6	225m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Calder

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 65**

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 65**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	On site	River WB catchment	Calder from River Colne to River Chald	GB104027062631	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 65**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
5	224m SE	River	Calder from River Colne to River Chald	GB104027062631	Moderate	Fail	Moderate	2016

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

6.5 WFD Groundwater bodies

Records on site

1

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

Features are displayed on the Hydrology map on **page 65**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	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



- Site Outline
- Search buffers in metres (m)
- Environment Agency river and coastal flooding:
 - High
 - Medium
 - Low
 - Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

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 68**

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
A	185m SE	December 2015 Flood Event	2015-12-25 2015-12-29	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

1

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.

Features are displayed on the River and coastal flooding map on **page 68**

ID	Location	Update
5	248m SE	16/06/2020

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

1

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.

Features are displayed on the River and coastal flooding map on **page 68**

ID	Location	Update
4	240m SE	Flood Storage Area

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
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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
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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

Negligible

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.

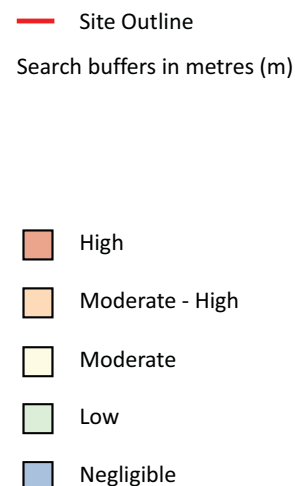
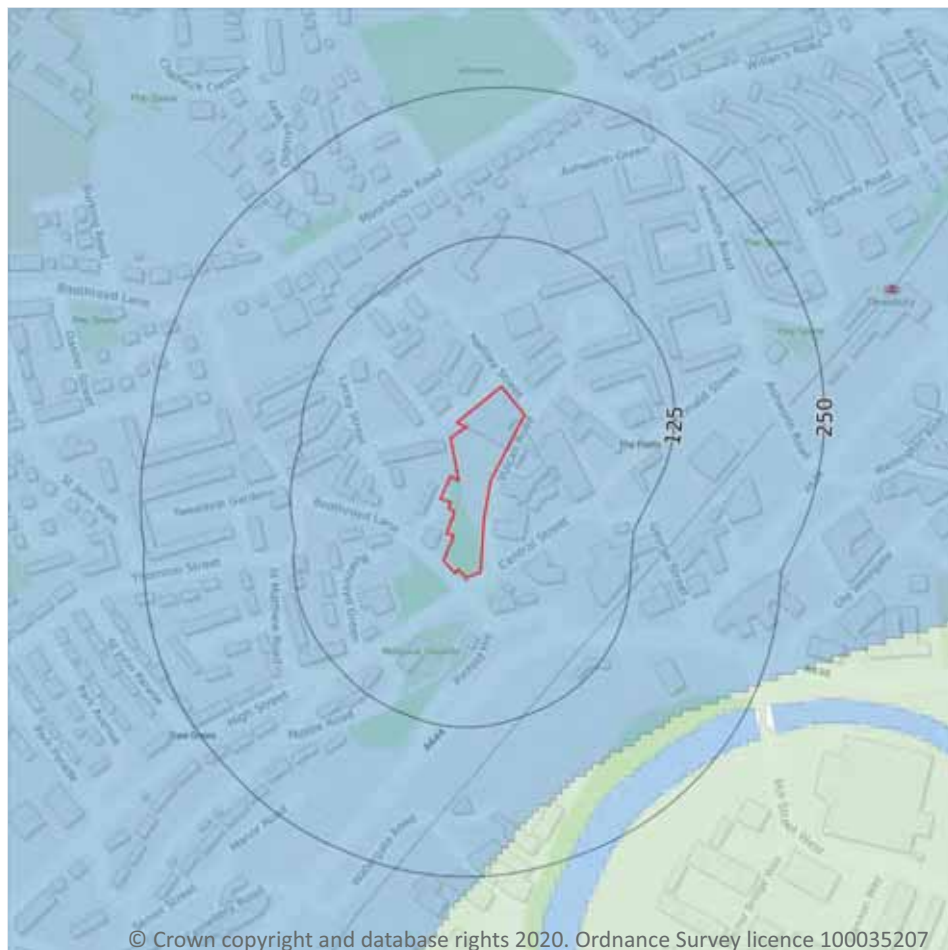
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site. The table below shows the maximum flood depths for a range of return periods for the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

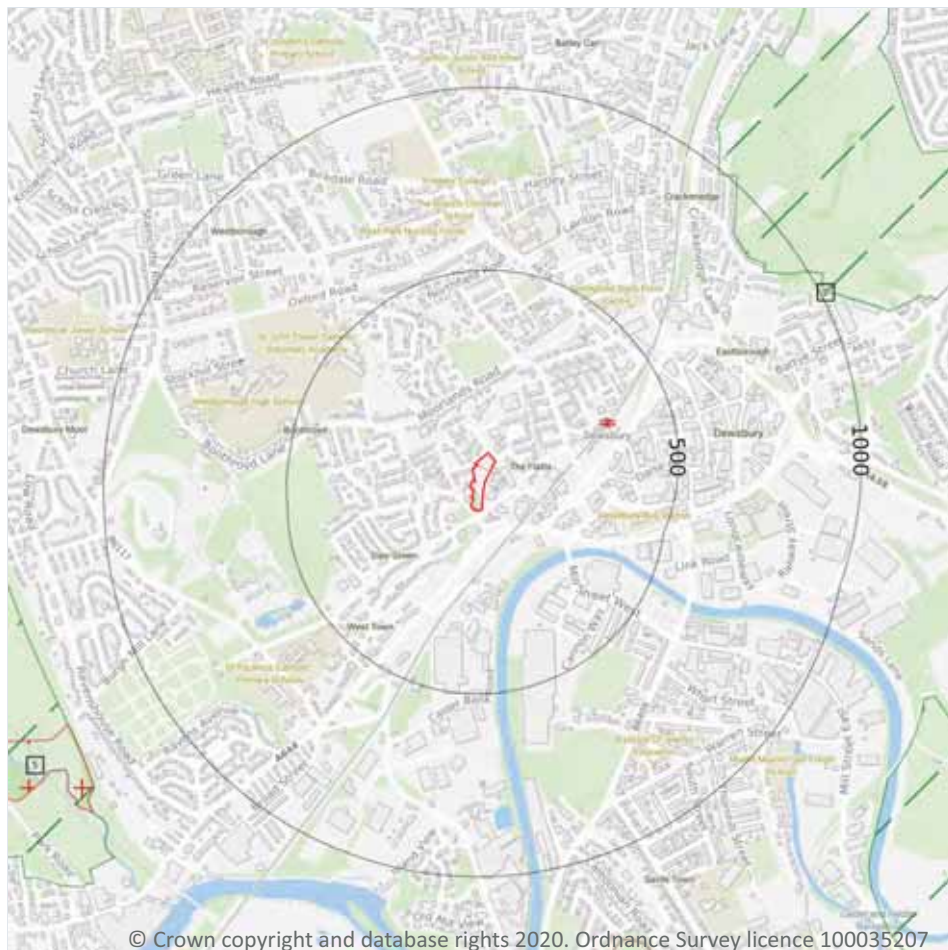
Negligible

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 73**

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



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

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m**0**

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m**0**

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m**0**

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m**0**

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m**2**

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

Features are displayed on the Environmental designations map on **page 74**

ID	Location	Name	Data source
3	1237m S	Sparrow Wood	Natural England
5	1250m SW	Lower Spen Wildlife Area	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m**0**

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

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

10.8 Biosphere Reserves

Records within 2000m**0**

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

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

10.9 Forest Parks

Records within 2000m**0**

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

This data is sourced from the Forestry Commission.



10.10 Marine Conservation Zones

Records within 2000m

0

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

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

10.11 Green Belt

Records within 2000m

4

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

Features are displayed on the Environmental designations map on **page 74**

ID	Location	Name	Local Authority name
1	890m NE	South and West Yorkshire	Kirklees
2	1014m NE	South and West Yorkshire	Kirklees
4	1249m SW	South and West Yorkshire	Kirklees
6	1314m SE	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**

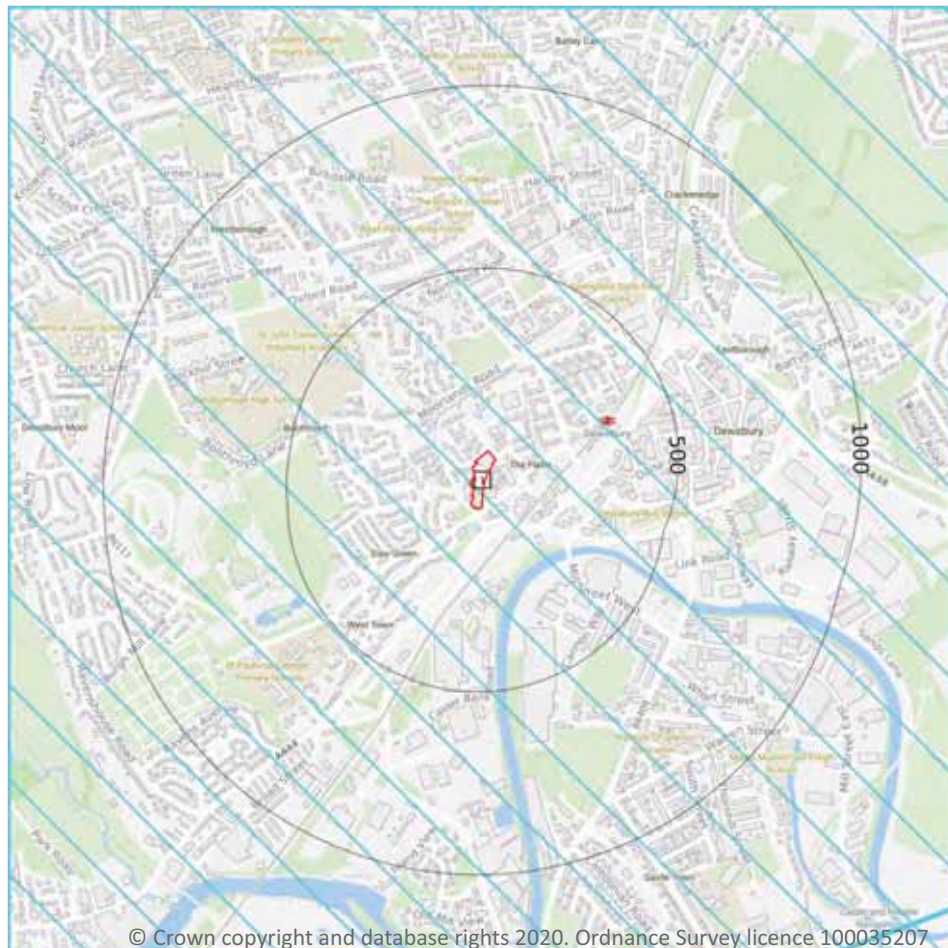
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
597m NW	Spen 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 79**

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



- Site Outline
- Search buffers in metres (m)
- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

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

2

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 81**

ID	Location	Name	Grade	Reference Number	Listed date
1	124m S	Railway Underbridge Mdl1/14, Ming Hill, Kirklees, WF12	II	1451887	23/03/2018
2	153m E	Railway Underbridge Mdl1/16, George Street, Kirklees, WF13	II	1451888	23/03/2018

This data is sourced from English Heritage, 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 English Heritage, 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 English Heritage, 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 English Heritage, Cadw and Historic Environment Scotland.

12 Agricultural designations



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

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 84**

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.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.

13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m

0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

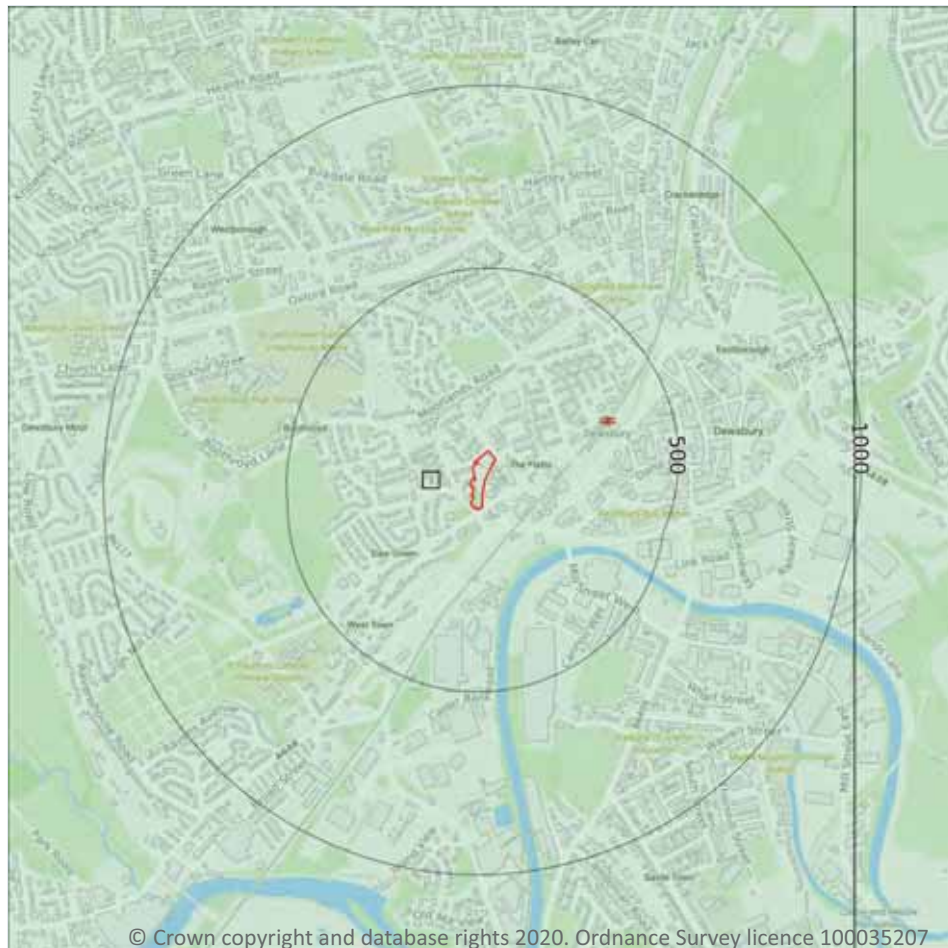
0

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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



- Site Outline
- Search buffers in metres (m)
- Full coverage
 - Partial coverage
 - No coverage

14.1 10k Availability

Records within 500m

1

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

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 87**

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

This data is sourced from the British Geological Survey.



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



- Site Outline
- Search buffers in metres (m)
- Reclaimed ground
 - Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m

14

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 88**

ID	Location	LEX Code	Description	Rock description
1	On site	WGR-VOID	Worked Ground (Undivided)	Void
A	65m SE	WGR-VOID	Worked Ground (Undivided)	Void
A	95m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	99m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

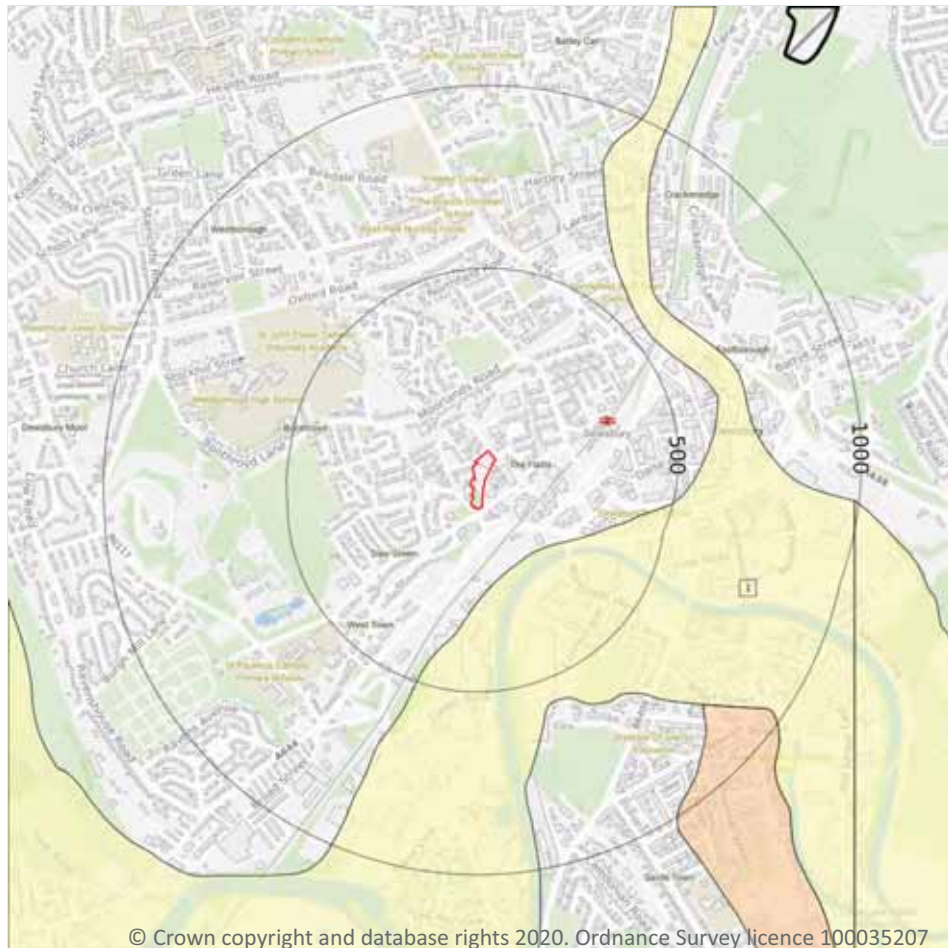


ID	Location	LEX Code	Description	Rock description
3	178m S	WGR-VOID	Worked Ground (Undivided)	Void
4	181m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
5	244m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	248m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
7	335m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
8	336m NE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
9	390m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
10	399m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
11	411m NW	WGR-VOID	Worked Ground (Undivided)	Void
B	489m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



— Site Outline

Search buffers in metres (m)

▨ Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m

1

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 90**

ID	Location	LEX Code	Description	Rock description
1	181m SE	ALV-XCSV	Alluvium - Clay, Sand And Gravel	Clay, Sand And Gravel

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

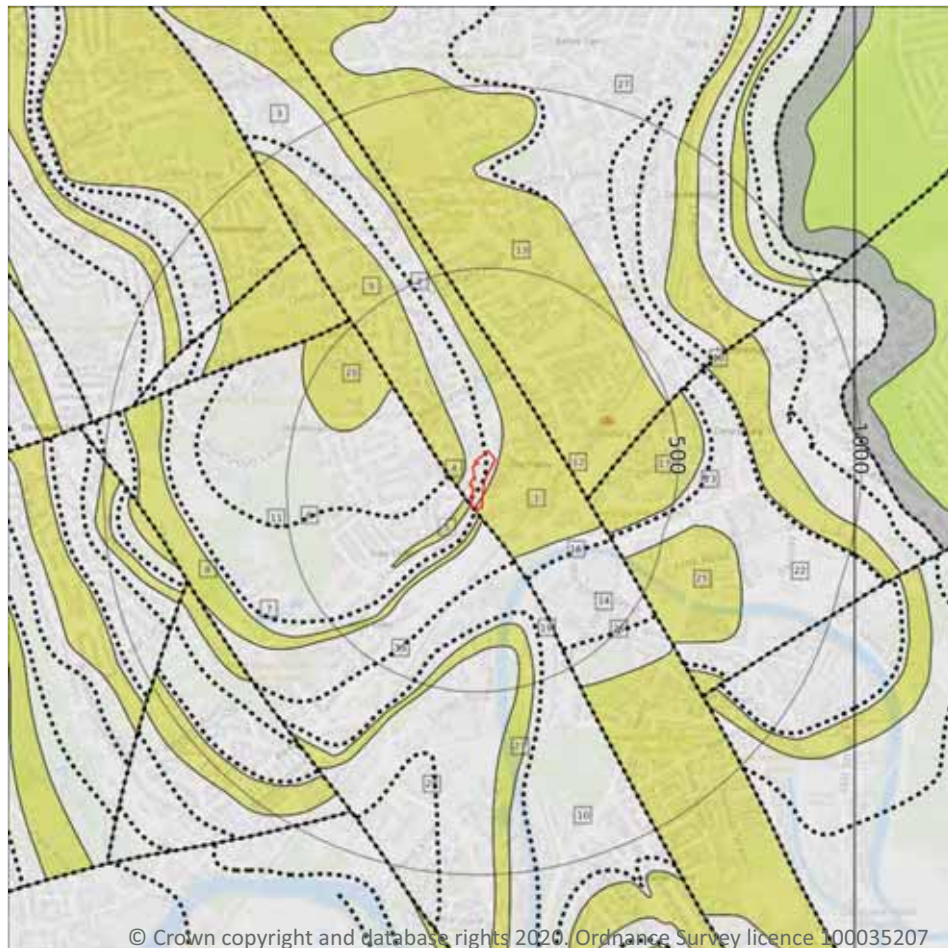
0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

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

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

14.5 Bedrock geology (10k)

Records within 500m

16

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 92**

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

ID	Location	LEX Code	Description	Rock age
6	1m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
8	18m S	BRSR-SDST	Birstall Rock - Sandstone	Langsettian Sub-age
9	20m W	ER-SDST	Emley Rock - Sandstone	Langsettian Sub-age
10	32m S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
13	160m NE	BRSR-SDST	Birstall Rock - Sandstone	Langsettian Sub-age
14	162m SE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
17	273m SE	ER-SDST	Emley Rock - Sandstone	Langsettian Sub-age
20	299m NW	ER-SDST	Emley Rock - Sandstone	Langsettian Sub-age
21	322m S	LPE-SDST	Lepton Edge Rock - Sandstone	Langsettian Sub-age
22	352m E	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
24	379m S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
25	411m E	BRSR-SDST	Birstall Rock - Sandstone	Langsettian Sub-age
27	480m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

11

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 92**

ID	Location	Category	Description
2	On site	ROCK	Coal seam, inferred
4	1m SW	FAULT	Normal fault, inferred; downthrow not specified
7	7m SW	ROCK	Coal seam, inferred

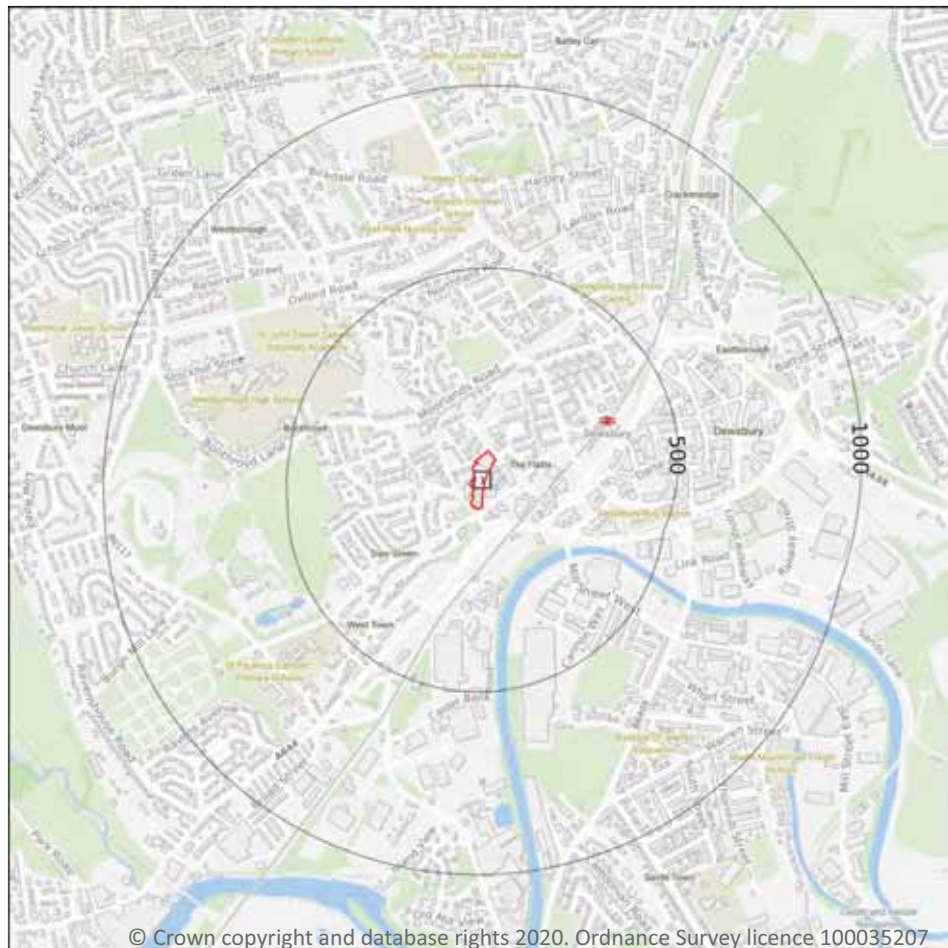


ID	Location	Category	Description
11	62m NW	ROCK	Coal seam, inferred
12	160m NE	FAULT	Normal fault, inferred; downthrow not specified
15	173m SE	ROCK	Coal seam, inferred
16	230m SE	ROCK	Coal seam, inferred
18	273m SE	FAULT	Normal fault, inferred; downthrow not specified
19	298m S	ROCK	Coal seam, inferred
23	359m E	ROCK	Coal seam, inferred
26	446m SE	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline

Search buffers in metres (m)

□ Geological map tile

15.1 50k Availability

Records within 500m

1

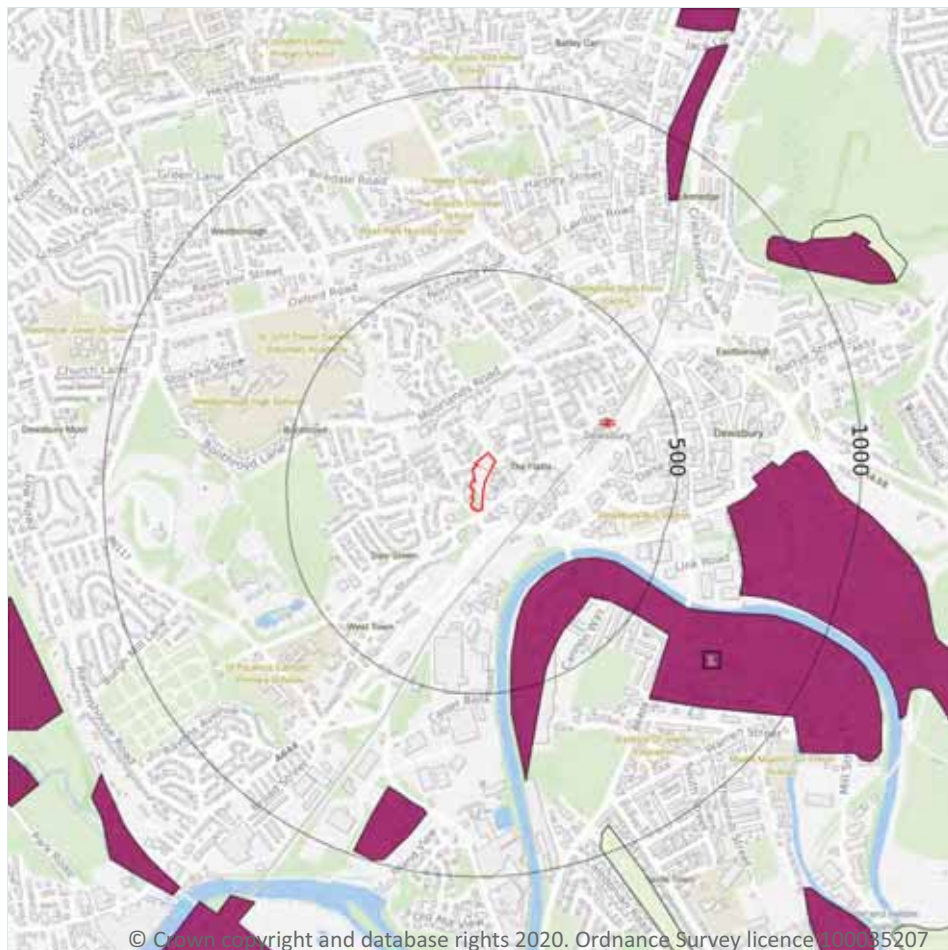
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 95**

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 96**

ID	Location	LEX Code	Description	Rock description
1	248m SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

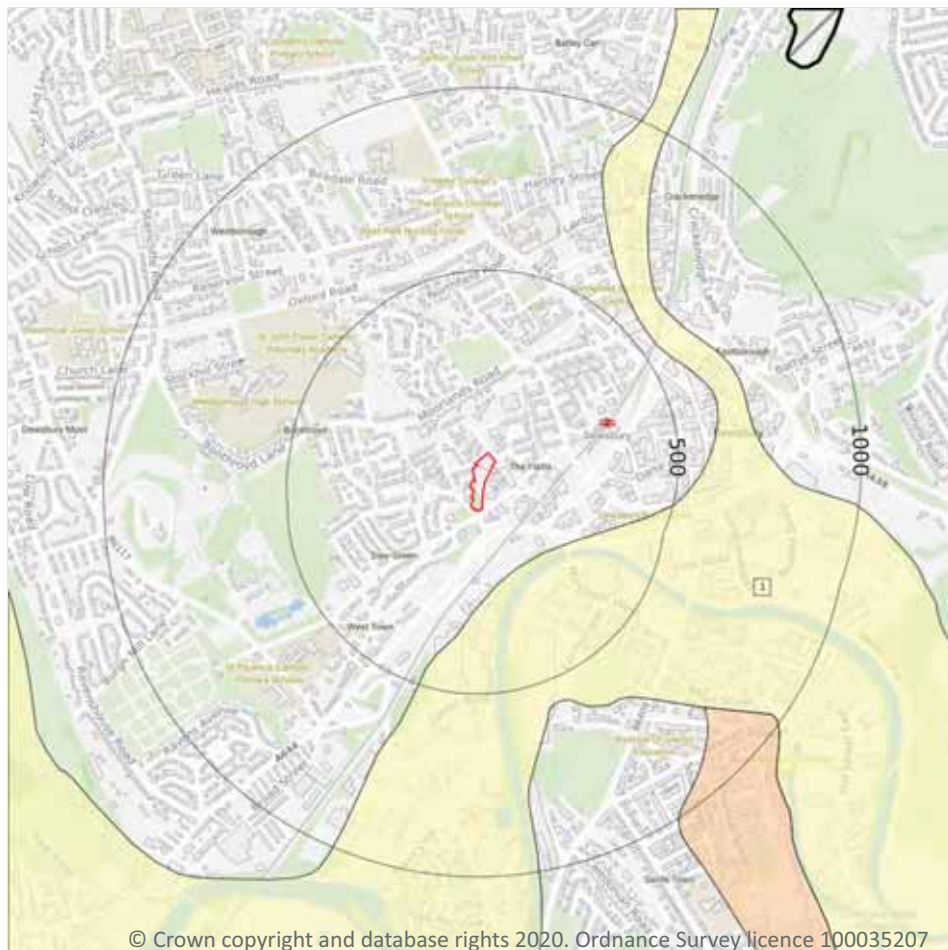
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



— Site Outline

Search buffers in metres (m)

▣ Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 98**

ID	Location	LEX Code	Description	Rock description
1	187m SE	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m

0

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m

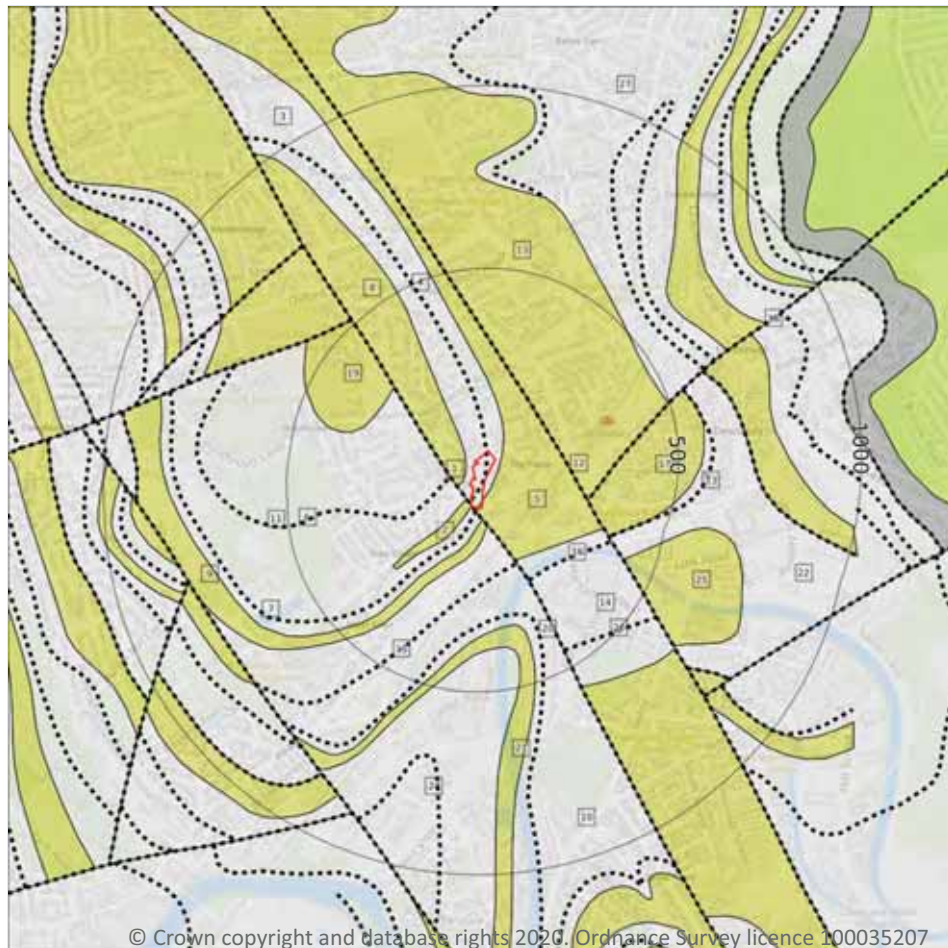
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- Bedrock faults and other linear features (50k)
- Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m

16

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 100**

ID	Location	LEX Code	Description	Rock age
2	On site	BRSR-SDST	BIRSTALL ROCK - SANDSTONE	WESTPHALIAN
3	On site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
5	On site	BRSR-SDST	BIRSTALL ROCK - SANDSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
6	1m SW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
8	18m W	ER-SDST	EMLEY ROCK - SANDSTONE	WESTPHALIAN
9	30m S	BRSR-SDST	BIRSTALL ROCK - SANDSTONE	WESTPHALIAN
10	50m S	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
13	162m NE	BRSR-SDST	BIRSTALL ROCK - SANDSTONE	WESTPHALIAN
14	170m SE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
17	276m SE	ER-SDST	EMLEY ROCK - SANDSTONE	WESTPHALIAN
19	294m NW	ER-SDST	EMLEY ROCK - SANDSTONE	WESTPHALIAN
21	330m S	LPE-SDST	LEPTON EDGE ROCK - SANDSTONE	WESTPHALIAN
22	356m E	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
24	383m S	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
25	411m E	BRSR-SDST	BIRSTALL ROCK - SANDSTONE	WESTPHALIAN
27	480m NE	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

4

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	Moderate
On site	Fracture	High	Moderate
On site	Fracture	High	Low
18m NW	Fracture	High	Moderate

This data is sourced from the British Geological Survey.



15.10 Bedrock faults and other linear features (50k)

Records within 500m

11

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

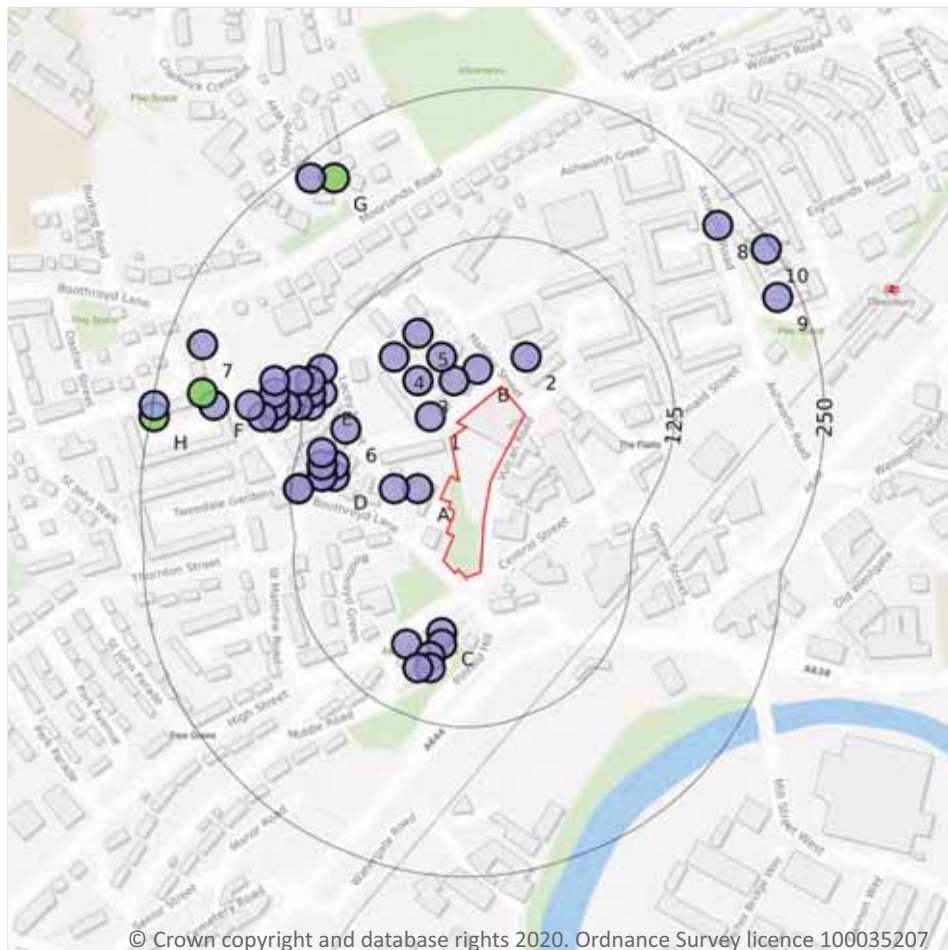
Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 100**

ID	Location	Category	Description
1	On site	FAULT	Fault, inferred
4	On site	ROCK	Coal seam, inferred
7	6m SW	ROCK	Coal seam, inferred
11	58m NW	ROCK	Coal seam, inferred
12	162m NE	FAULT	Fault, inferred
15	180m SE	ROCK	Coal seam, inferred
16	237m SE	ROCK	Coal seam, inferred
18	276m SE	FAULT	Fault, inferred
20	300m S	ROCK	Coal seam, inferred
23	356m E	ROCK	Coal seam, inferred
26	450m SE	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



16 Boreholes



- Site Outline
- Search buffers in metres (m)
- Confidential
 - 0 - 10m
 - 10 - 30m
 - 30m+
 - Unknown

16.1 BGS Boreholes

Records within 250m

50

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 103**

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	20m NW	423930 421640	DEWSBURY FLATTS PHASE 2 TP 26	2.0	N	78074
1	23m W	423940 421700	DEWSBURY FLATTS PHASE 2 TP 29	2.0	N	78077
B	24m NW	423980 421740	DEWSBURY FLATTS PHASE 2 TP 31	2.0	N	78079



ID	Location	Grid reference	Name	Length	Confidential	Web link
B	28m NW	423960 421730	DEWSBURY FLATTS PHASE 2 TP 30	1.0	N	78078
2	32m NE	424020 421750	DEWSBURY FLATTS PHASE 2 TP 32	3.0	N	78080
A	39m W	423910 421640	DEWSBURY FLATTS PHASE 2 TP 25	3.0	N	78073
3	47m NW	423930 421730	DEWSBURY FLATTS PHASE 2 TP 28	1.0	N	78076
C	50m SW	423950 421520	MIDDLE ROAD DEWSBURY TP 4	2.0	N	78126
B	50m NW	423950 421750	DEWSBURY FLATTS PHASE 2 TP 33	1.0	N	78081
C	59m S	423950 421510	MIDDLE ROAD DEWSBURY TP 3	3.0	N	78125
C	72m SW	423920 421510	MIDDLE ROAD DEWSBURY TP 6	2.0	N	78127
C	72m SW	423940 421500	MIDDLE ROAD DEWSBURY TP 7	2.0	N	78128
4	76m NW	423910 421750	DEWSBURY FLATTS PHASE 2 TP 27	2.0	N	78075
5	78m NW	423930 421770	DEWSBURY FLATTS PHASE 2 TP 34	2.0	N	78082
C	82m S	423940 421490	MIDDLE ROAD DEWSBURY TP 2	2.0	N	78124
C	85m S	423930 421490	MIDDLE ROAD DEWSBURY TP 1	2.0	N	78123
6	87m W	423870 421690	DEWSBURY FLATTS PHASE 2 TP 14	1.0	N	78062
D	90m W	423860 421650	DEWSBURY FLATTS PHASE 2 TP 17	3.0	N	78065
D	93m W	423860 421660	DEWSBURY FLATTS PHASE 2 TP 18	3.0	N	78066
D	100m W	423850 421650	DEWSBURY FLATTS PHASE 2 TP 12	2.0	N	78060
D	100m W	423850 421650	DEWSBURY FLATTS PHASE 2 TP 10	2.0	N	78058
D	103m W	423850 421660	DEWSBURY FLATTS PHASE 2 TP 11	3.0	N	78059
D	106m W	423850 421670	DEWSBURY FLATTS PHASE 2 TP 13	3.0	N	78061
E	113m W	423850 421720	DEWSBURY FLATTS PHASE 2 TP 9	3.0	N	78057
D	119m W	423830 421640	DEWSBURY FLATTS PHASE 2 TP 15	1.0	N	78063
D	119m W	423830 421640	DEWSBURY FLATTS PHASE 2 TP 16	3.0	N	78064
E	120m W	423840 421710	DEWSBURY FLATTS PHASE 2 TP 8	3.0	N	78056
E	121m W	423850 421740	DEWSBURY FLATTS PHASE 2 TP 24	3.0	N	78072
E	123m W	423840 421720	DEWSBURY FLATTS PHASE 2 TP 7	3.0	N	78055
E	126m W	423840 421730	DEWSBURY FLATTS PHASE 2 TP 22	3.0	N	78070
E	130m W	423830 421710	DEWSBURY FLATTS PHASE 2 TP 6	3.0	N	78054

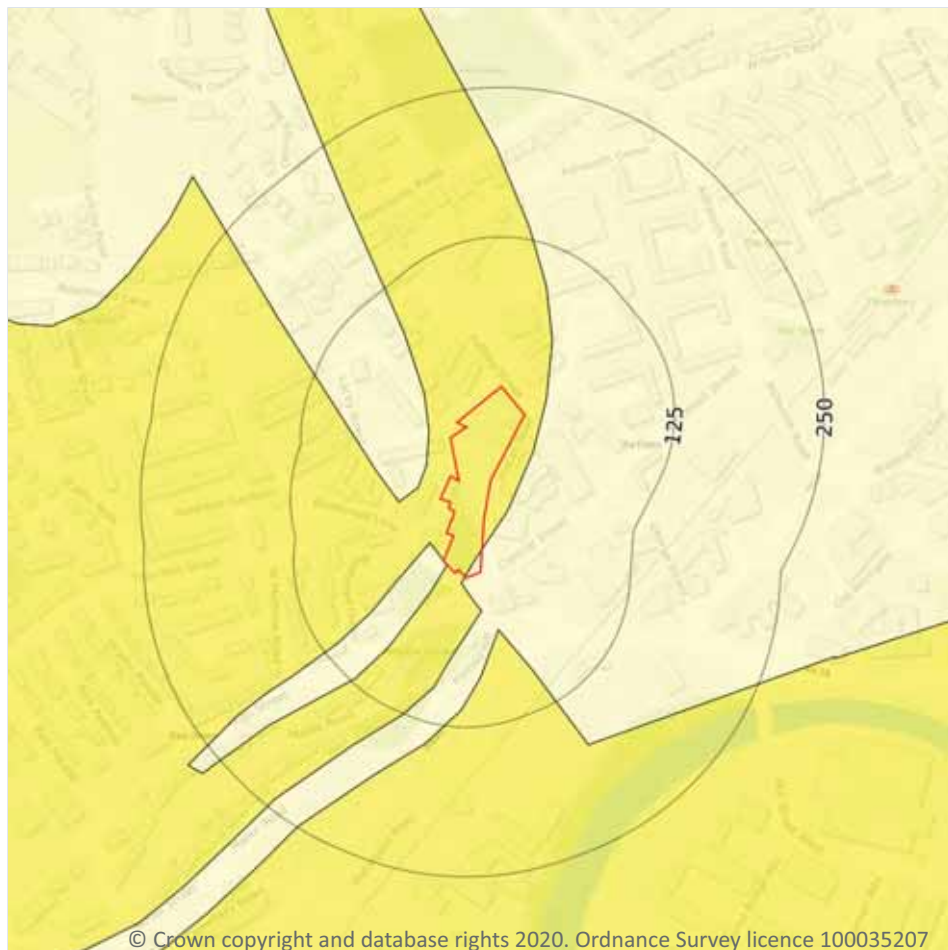


ID	Location	Grid reference	Name	Length	Confidential	Web link
E	136m W	423830 421730	DEWSBURY FLATTS PHASE 2 TP 23	2.0	N	78071
E	140m W	423820 421710	DEWSBURY FLATTS PHASE 2 TP 4	3.0	N	78052
E	148m W	423810 421700	DEWSBURY FLATTS PHASE 2 TP 3	2.0	N	78051
E	148m W	423810 421700	DEWSBURY FLATTS PHASE 2 TP 2	2.0	N	78050
E	150m W	423810 421710	DEWSBURY FLATTS PHASE 2 TP 5	3.0	N	78053
E	152m W	423810 421720	DEWSBURY FLATTS PHASE 2 TP 20	2.0	N	78068
E	155m W	423810 421730	DEWSBURY FLATTS PHASE 2 TP 21	2.0	N	78069
E	158m W	423800 421700	DEWSBURY FLATTS PHASE 2 TP 1	2.0	N	78049
E	169m W	423790 421710	DEWSBURY FLATTS PHASE 2 TP 19	2.0	N	78067
F	199m W	423760 421710	BOTHROYD LANE DEWSBURY TP 1	3.0	N	78292
F	210m W	423750 421720	BOTHROYD LANE DEWSBURY 1	12.0	N	78288
7	221m W	423750 421760	BOTHROYD LANE DEWSBURY TP 9	2.0	N	78297
G	223m NW	423860 421900	DEWSBURY HOSPITAL 7	30.0	N	78247
8	225m NE	424180 421860	EIGHTLANDS DEWSBURY TP 25	1.0	N	78107
9	233m NE	424230 421800	EIGHTLANDS DEWSBURY TP 23	1.0	N	78105
G	236m NW	423840 421900	DEWSBURY HOSPITAL TP 11	2.0	N	78259
10	244m NE	424220 421840	EIGHTLANDS DEWSBURY TP 24	1.0	N	78106
H	248m W	423710 421700	BOTHROYD LANE DEWSBURY R1	30.0	N	78290
H	249m W	423710 421710	BOTHROYD LANE DEWSBURY TP 3	3.0	N	78293

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.1 Shrink swell clays

Records within 50m

3

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).

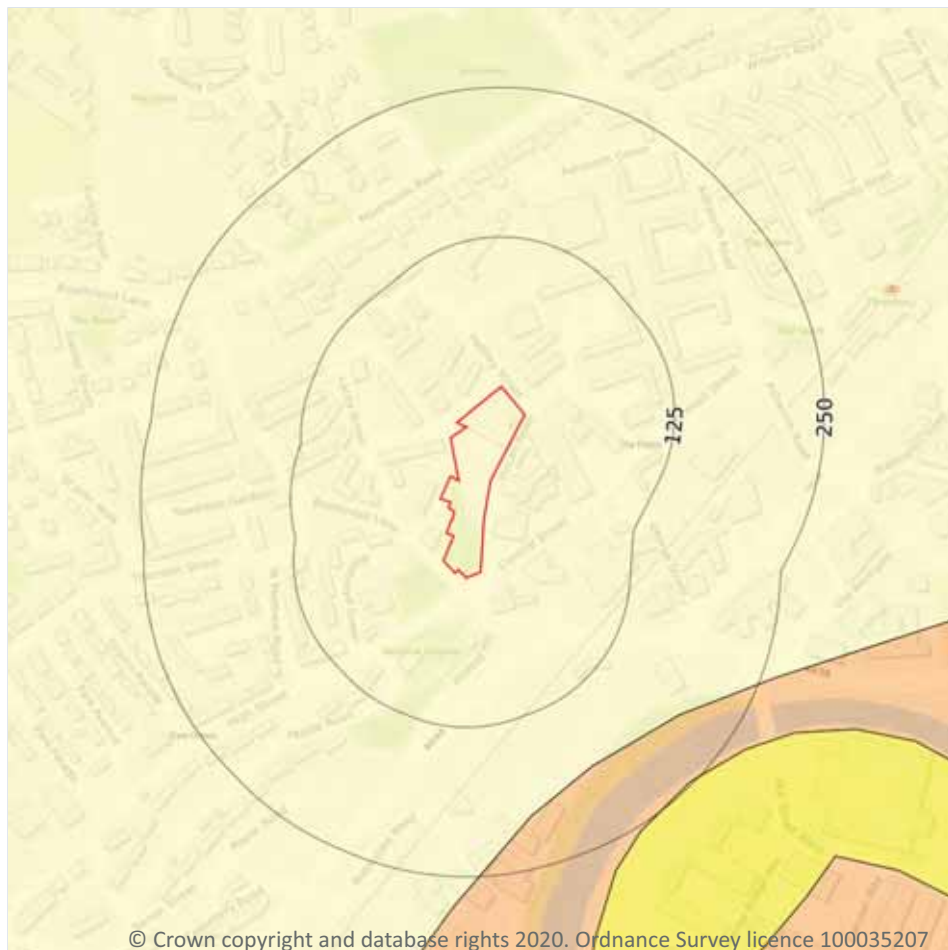
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 106**

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
On site	Very low	Ground conditions predominantly low plasticity.
18m W	Negligible	Ground conditions predominantly non-plastic.

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 108**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

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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.

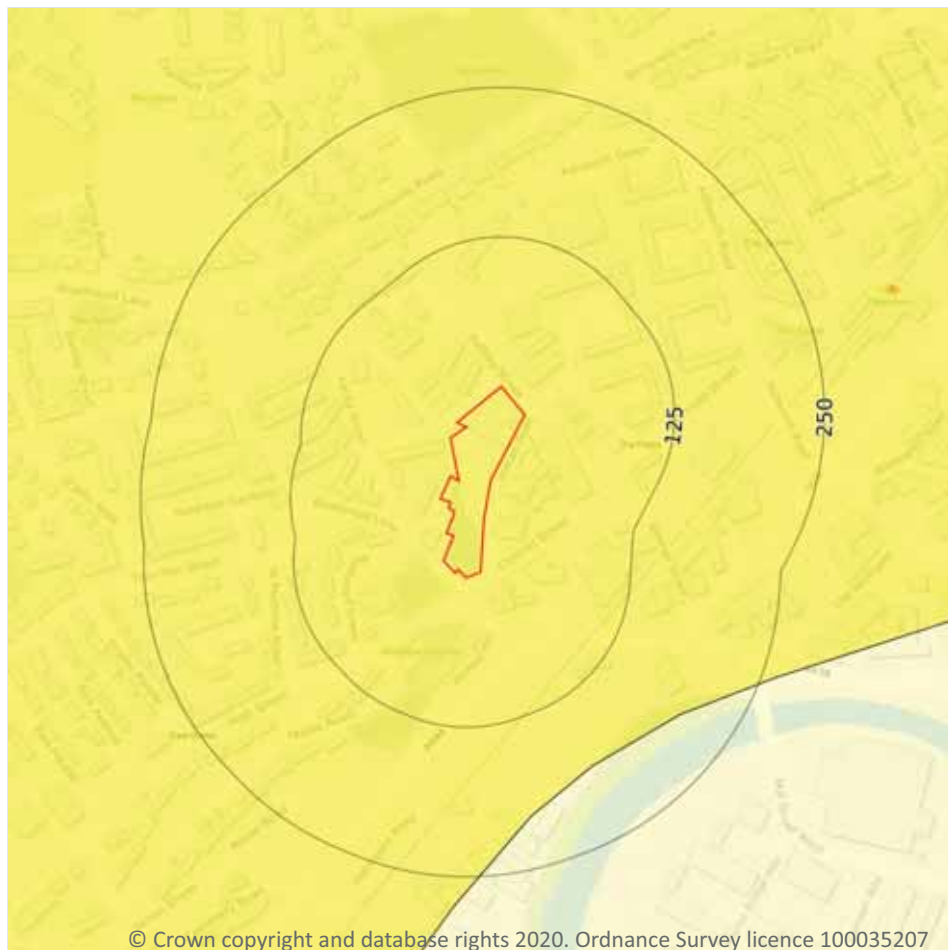
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 109**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.4 Collapsible deposits

Records within 50m

1

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

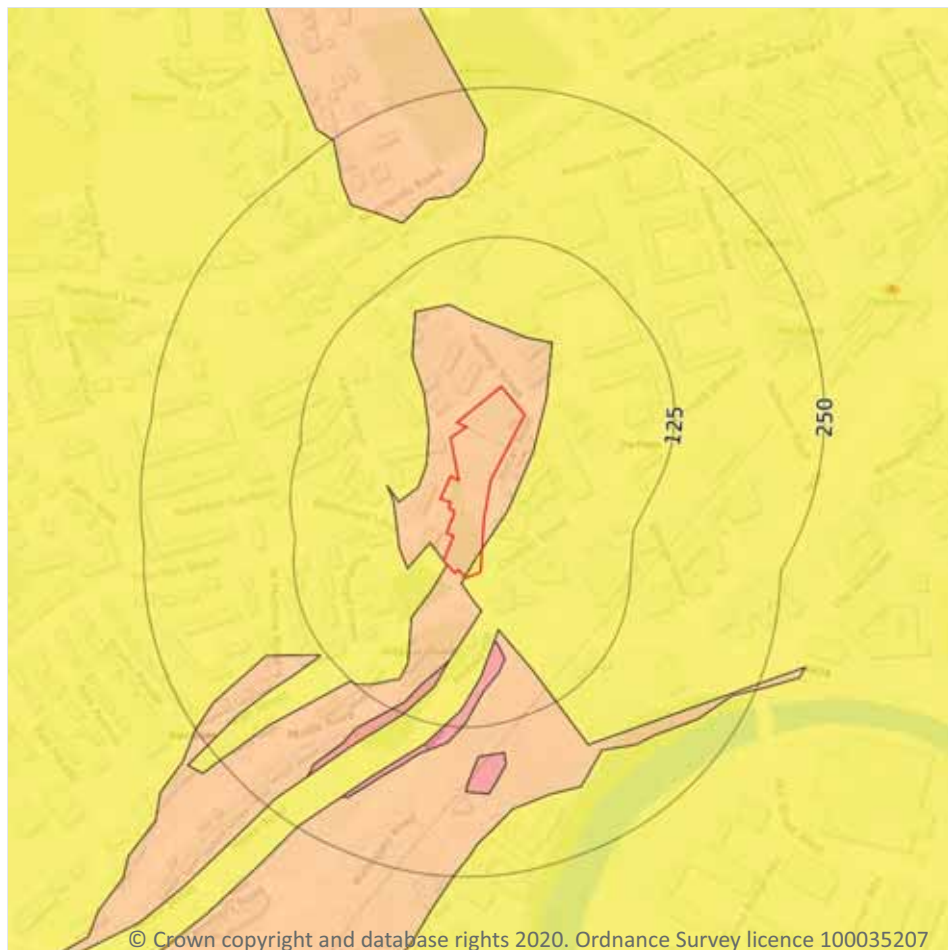
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 110**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.5 Landslides

Records within 50m

2

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 111**

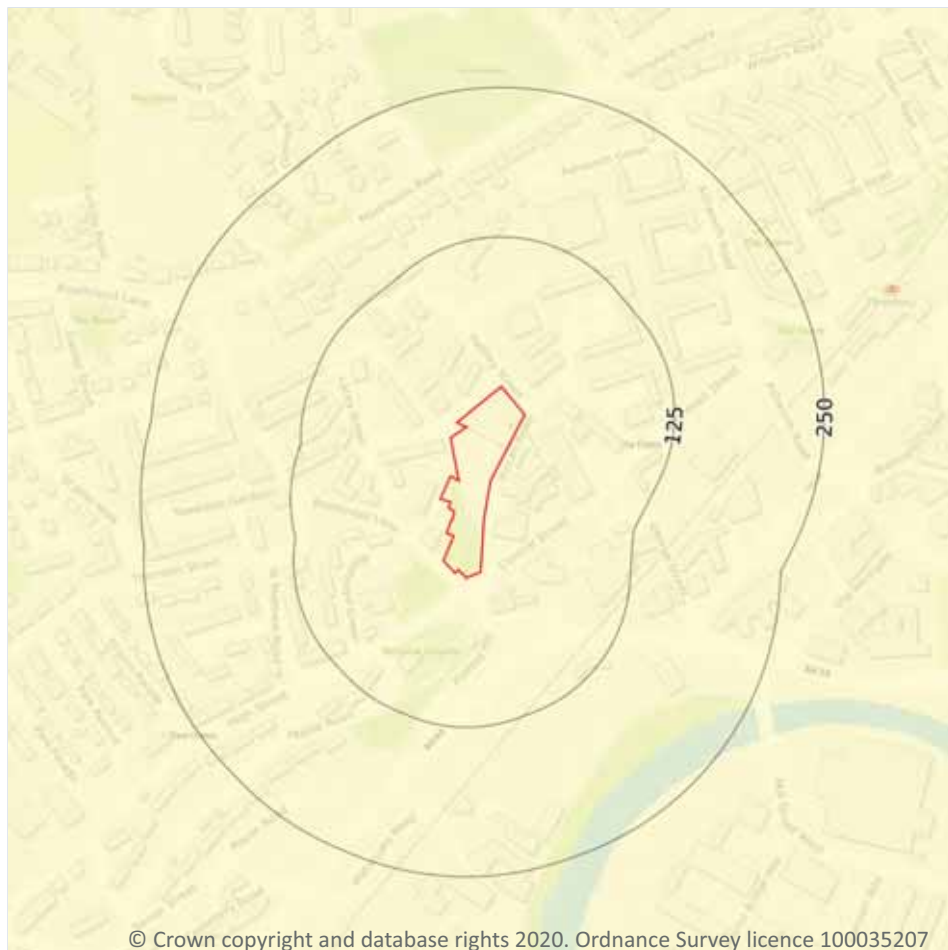
Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

Location	Hazard rating	Details
On site	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

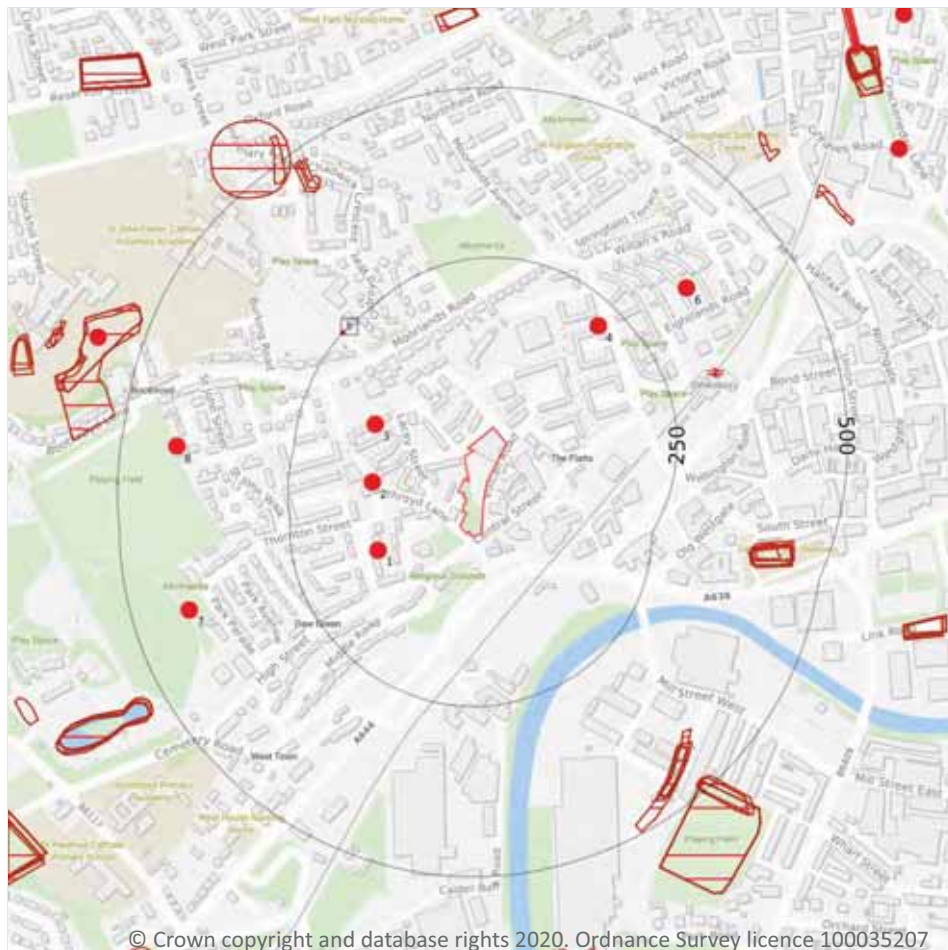
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 113**

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

This data is sourced from the British Geological Survey.



18 Mining, ground workings and natural cavities



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

18.1 Natural cavities

Records within 500m

0

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

This data is sourced from Peter Brett Associates (PBA).

18.2 BritPits

Records within 500m

7

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 115**

ID	Location	Details	Description
1	124m W	Name: Daw Green Address: Boothroyd, DEWSBURY, West Yorkshire Commodity: Sandstone Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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
2	127m W	Name: Boothroyd Quarry Address: Boothroyd, DEWSBURY, West Yorkshire Commodity: Sandstone Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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	139m W	Name: Daw Green Quarry Address: Boothroyd, DEWSBURY, West Yorkshire Commodity: Sandstone Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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
4	214m NE	Name: Dewsbury Address: DEWSBURY, West Yorkshire Commodity: Sandstone Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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
6	349m NE	Name: Dewsbury Address: DEWSBURY, West Yorkshire Commodity: Sandstone Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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
7	415m W	Name: Daw Green Address: Boothroyd, DEWSBURY, West Yorkshire Commodity: Sandstone Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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



ID	Location	Details	Description
8	418m W	Name: Boothroyd Address: Boothroyd, DEWSBURY, West Yorkshire Commodity: Sandstone Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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	0
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Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	17
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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 115**

ID	Location	Land Use	Year of mapping	Mapping scale
5	247m NW	Air Shaft	1905	1:10560
O	763m NE	Tunnel	1905	1:10560
O	770m NE	Tunnel	1988	1:10000
O	770m NE	Tunnel	1981	1:10000
O	770m NE	Tunnel	1974	1:10000
O	770m NE	Tunnel	1967	1:10560
O	770m NE	Tunnel	1951	1:10560
-	799m E	Tunnel	1905	1:10560
-	810m S	Tunnel	1967	1:10560
-	813m S	Tunnel	1951	1:10560
-	830m E	Tunnel	1974	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
-	830m E	Tunnel	1967	1:10560
-	830m E	Tunnel	1951	1:10560
-	892m NW	Unspecified Shaft	1892	1:10560
-	922m W	Colliery	1892	1:10560
-	955m W	Colliery	1905	1:10560
-	986m SW	Colliery	1892	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

0

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

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m

0

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

This data is sourced from Peter Brett Associates (PBA).



18.8 JPB mining areas

Records on site	0
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Areas which could be affected by former coal 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
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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

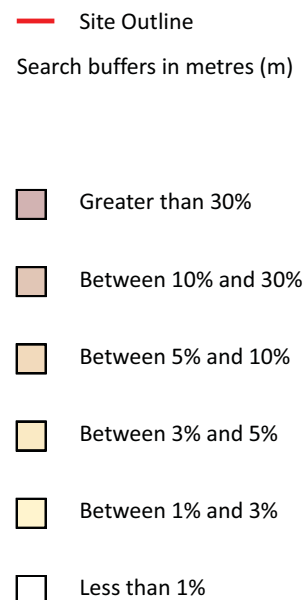
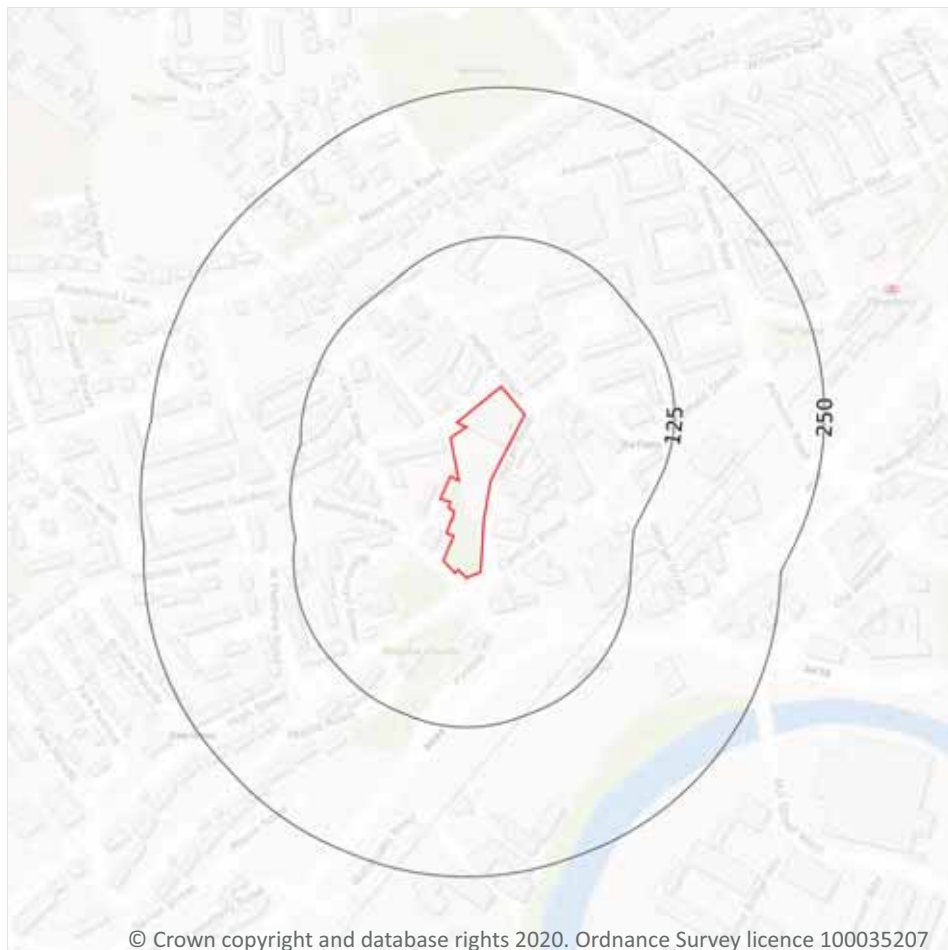
Records on site	0
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Generalised areas that may be affected by kaolin and ball clay extraction.

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



19 Radon



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 121**

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

11

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	25 - 35 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg
On site	25 - 35 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
1m S	25 - 35 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
14m E	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
15m S	25 - 35 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
16m W	25 - 35 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
18m NW	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
30m S	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**0**

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

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects



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

21.1 Underground railways (London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m

0

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



This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m

17

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 124**

Location	Land Use	Year of mapping	Mapping scale
99m SE	Railway	1907	-
103m SE	Railway	1894	-
147m SE	Railway Sidings	1938	10560
150m SE	Railway Sidings	1907	2500
150m SE	Railway Sidings	1922	2500
150m SE	Railway Sidings	1933	2500
150m SE	Railway Sidings	1938	2500
150m SE	Railway Sidings	1893	2500
159m SE	Railway Sidings	1948	10560
159m SE	Railway Sidings	1905	10560
163m SE	Railway Sidings	1955	1250
163m SE	Railway Sidings	1955	2500
171m S	Railway	1894	-
178m E	Railway Sidings	1892	10560
184m E	Railway Sidings	1967	10560
184m E	Railway Sidings	1955	10560
195m S	Railway	1907	-



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

0

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

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m

22

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways. Features are displayed on the Railway infrastructure and projects map on **page 124**

Location	Name	Type
103m SE	Huddersfield Line	rail
105m SE	Not given	Multi Track
105m SE	Not given	Multi Track
105m SE	Huddersfield Line	rail
106m SE	Huddersfield Line	rail
108m SE	Huddersfield Line	rail
114m E	Not given	Multi Track
125m E	Huddersfield Line	rail
128m E	Huddersfield Line	rail
145m E	Huddersfield Line	rail



Location	Name	Type
148m E	Huddersfield Line	rail
150m E	Not given	Multi Track
159m SE	Huddersfield Line	rail
162m SE	Huddersfield Line	rail
169m SE	Huddersfield Line	rail
169m SE	Huddersfield Line	rail
174m E	Not given	Multi Track
196m S	Huddersfield Line	rail
197m S	Huddersfield Line	rail
208m S	Huddersfield Line	rail
210m S	Huddersfield Line	rail
220m E	Not given	Multi Track

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>.

Terms and conditions

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



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

Key

- Approximate position of the enquiry boundary shown 
- Disused mine shaft 
- Outcrop (Conjectured) 
- Geological faults 

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