



RHONDDA
GEOTECHNICAL
SERVICES

PHASE 1
CONTAMINATED LAND RISK ASSESSMENT
M.T.C.B.C. PLANNING APP. P/25/0247
NEW STORAGE UNIT WITH OFFICE
J.L.C. GROUNDWORKS CONTRACTORS LTD.
WILLOW WORKS
ABERCANAID INDUSTRIAL ESTATE
MERTHYR TYDFIL
CF48 1YF
29/01/2026

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INTRODUCTION-PURPOSES AND AIMS

Full planning permission P/25/0247 has been granted by Merthyr Tydfil L.P.A. for the construction of a small storage unit with an integral office at the premises of J.L.C. Groundworks Contractors at the Willow Works Abercanaid. Condition 4 of the planning is as follows:-

No development shall commence until the following components of a scheme to deal with the risks associated with contamination at the site has been submitted to and approved in writing by the Local Planning Authority: -

i) a preliminary risk assessment that has identified,

- all previous uses

- potential contaminants associated with those uses

- a conceptual model of the site indicating sources, pathways and receptors;

- potentially unacceptable risks arising from contamination at the site.

ii) a site investigation scheme based on i) to provide information for a detailed assessment of the risk to all receptors that may be affected including those off site.

iii) the results of the investigation and the detailed risk assessment referred to in ii) and based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.

iv) a verification report providing details of the data that will be collected to demonstrate that the works set out in the remediation strategy in iii) are complete and identifying any requirements for longer term monitoring of pollutant linkages, maintenance and arrangements for contingency action. N1V Page 3 of 5 P/25/0247

the remediation strategy and its relevant components shall be conducted in accordance with the approved details.

Reason - To ensure that the risks associated with contamination have been fully considered prior to the commencement of works as controlled waters are of high environmental sensitivity; and where necessary remediation measures and long term monitoring are implemented to prevent unacceptable risks from contamination and to accord with the requirements of Policy EnW4 of the Merthyr Tydfil County Borough Council Replacement Local Development Plan.

Conditions 5 and 6 requires the implementation, validation and long term monitoring of any remedial scheme proposed in Condition 4iii and 4iv above. Condition 7 is a standard unexpected contamination condition.

Rhondda Geotechnical Services have been commissioned by the planning agent 3DCad Wales to initially produce the desk study and site investigation to satisfy 4i, 4ii and 4iii above. Conditions 5,6 and 7 are pre-occupation and are outside the scope of this report.

This report will follow the guidelines set out in the document Development of Land Affected by Contamination: A Guide for Developers (Version 4). This was produced by the Welsh Land Contamination Working Group in 2023. The methodology set out in Appendix A with the check list for Phase 1 on Page 19 will be followed. The contaminated land exposure assessment (henceforth CLEA) produced by The Environment Agency will be used in the conceptual model, particularly regarding the source-pathway-receptor concept for pollutant linkages. The entire project will be guided by the 2021 C.L.R.M which has now superseded the withdrawn 2004 Defra/E.A. document CLR11 (Model Procedures for the Management of Land Contamination).

The current definition of contaminated land is “any land which appears to the local authority in whose area it is situated in to be in such a condition, by reason of substances in or under the ground that:-

- a. “Significant harm is being caused, or there is a significant possibility of such harm being caused OR
- b. Pollution of controlled waters is being, or is likely to be caused”

(Section 78A Part 2A Environmental Protection Act)

This act also requires that a risk-based approach should be used for assessing the contamination status of a site. For a site to be designated as contaminated it must be shown that the site is not fit for its current or intended use. Statutory guidance states that a two-stage approach should be adopted for the assessment of contaminated land.

- 1. Identification of potential pollution linkages
- 2. Assessment of the risk to receptors

The first stage (The Phase 1 report) is a qualitative assessment of the plausible pollution linkages that exist or may exist on site. This involves the development of a site conceptual model. This may then be refined in Phase 2 after an intrusive investigation, followed by laboratory testing of samples obtained, but only if the Phase 1 deems it necessary.

1. AUTHOR CREDENTIALS

The author of this report is Richard Davies. He graduated with a Bachelor of Science honours degree in Geology from Liverpool University in 1979. After starting his career as an engineer in the coal industry, he moved into site investigation in the 1980's and has many years experience working on contaminated land. He is a Fellow of The Geological Society and holds a Masters Degree in Applied Environmental Geology from Cardiff University. He is also a Supporter Member of CL: AIRE (Contaminated Land: Applications in Real Environments)

2. SITE DESCRIPTION

The site is centered on grid reference 305280, 205050 and is at an elevation of approximately 160m A.O.D. The site location is shown in Figure 1 overleaf. The site boundary for planning is shown in Figure 2. The site is currently a fenced compound containing a portacabin and shipping container. An area of the site ownership is outside the fenced area and is the intended site of the proposed unit. The site is within the Abercanaid Industrial Estate and is surrounded on three sides by light industrial units and contractor's compounds. To the east the site adjoins a narrow strip of undeveloped land on the riverbank of the River Taff.

3. SITE WALKOVER

The purpose of a site walkover in a Phase 1 assessment is to identify possible areas of likely contamination. This is more useful on larger sites with past industrial or contaminative uses where specific areas of interest can be identified. From previous work in the area carried out by the author it was known that the site and surrounding area have a long history of potentially contaminative industrial use. Most of the site area is an open yard covered with reinforced concrete. The current function of this will remain unchanged. The only area not currently covered in reinforced concrete is a narrow area of hardstanding outside the current site compound.

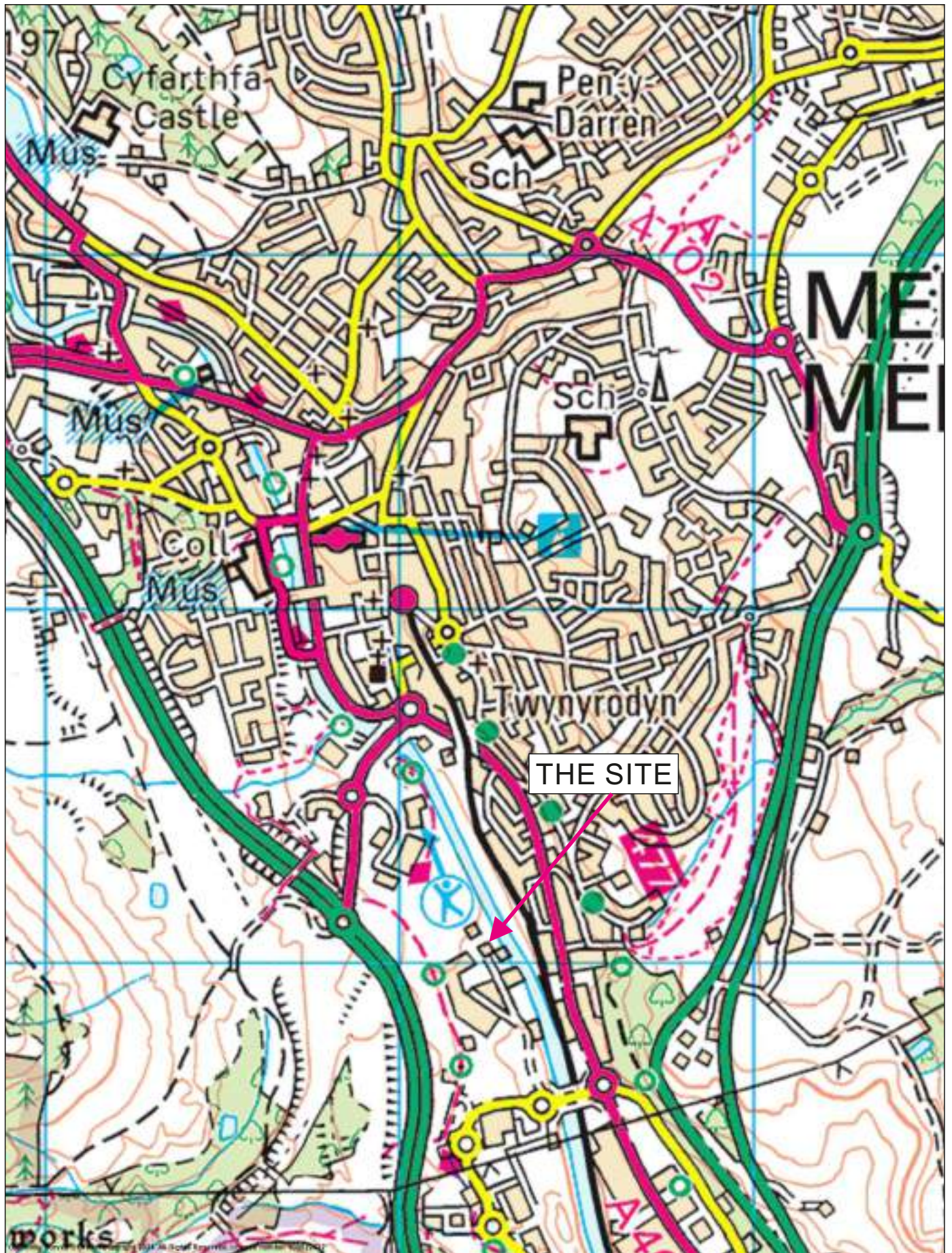


FIGURE 1
SITE LOCATION

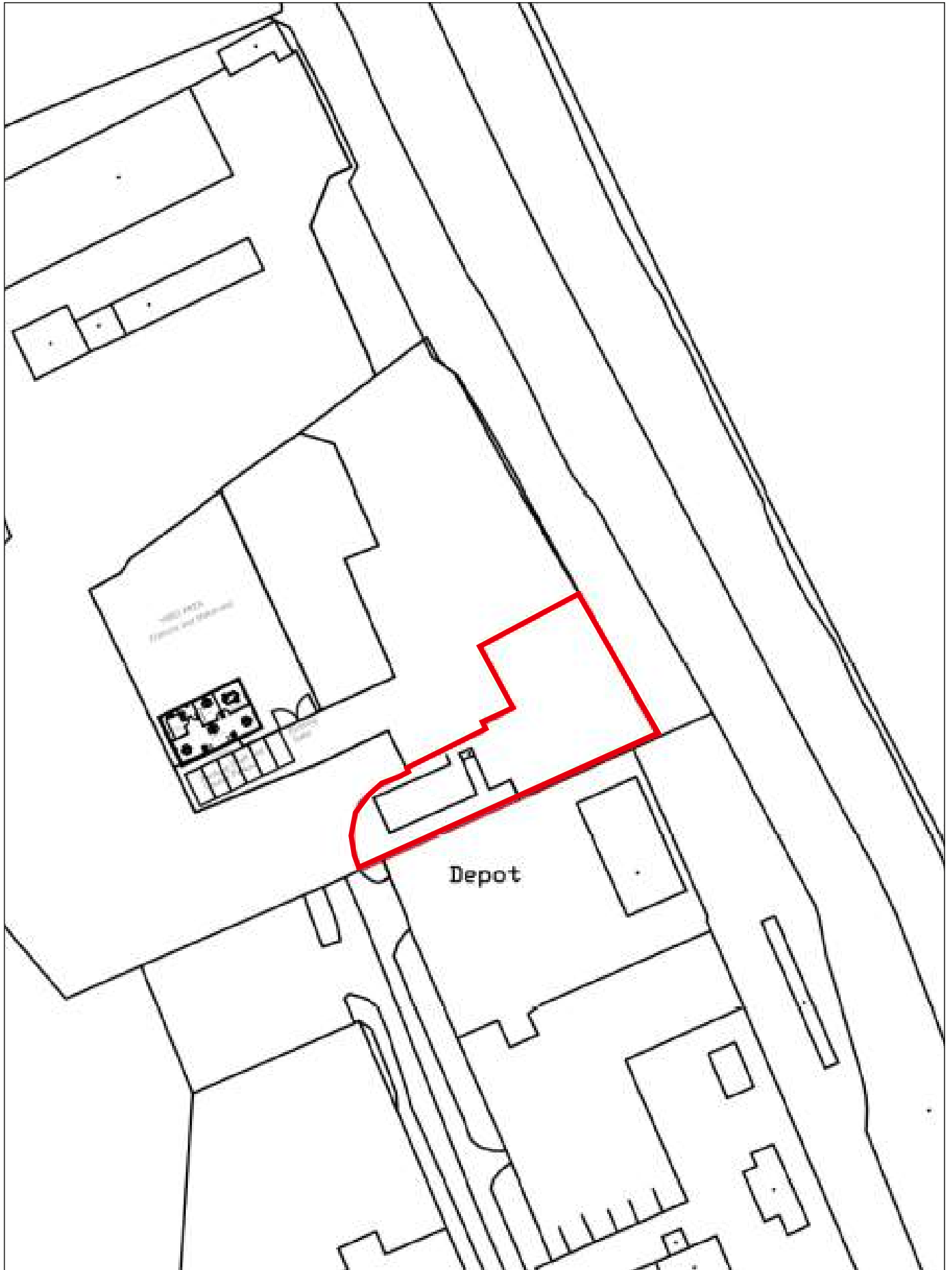


FIGURE 2
RED LINE BOUNDARY FOR PLANNING.

4. SITE HISTORY

To gain a thorough understanding of the history of the site a study of historical Ordnance Survey maps already in the possession of the author was carried out. These were at 1:1250 and 1:2500 scales for detail, although an extensive collection of 1:10,560 maps was also consulted to check on things outside the narrow boundaries of the available large scale mapping.

Extracts from the original maps are presented overleaf as Figures 4-10. The built environment has changed dramatically since the earliest (1875) map. This meant that the present site boundary was unrecognisable on the historic O.S. To overcome this, the 1900 O.S. map was georeferenced onto a modern aerial photo. This can be seen in Figure 3 with the site boundary defined. In the subsequent maps in Figures 4-10 the site is represented by a green circle containing the entire site, as to reproduce the exact site outline would be very difficult.

1875 (Figures 4) SITE- The site sits on undeveloped farmland.

SURROUNDING AREA- Across the other side of the Taff there is intensive industrial activity with railways, mining, extensive spoil tipping and residential development. The western bank of the Taff is relatively undeveloped, although there is extensive spoil tipping northwest of the site which almost encroaches to the site boundary. The spoil is likely to be the product of coal mining, ironstone mining or both. It is being brought in on tramlines from the north. On the 1:10,560 maps a complex network of tramlines runs all the way from the tip back to the Ynysfach Ironworks with its associated coal and ironstone mines. Three cottages from which the site takes the name The Willows are 80m southwest of the site.

1900 (Figure 5) SITE- There is no development within the site boundary.

SURROUNDING AREA- East of the Taff the unplanned chaotic industrial landscape has been replaced by a more regulated system of rail lines, with rows of terraced housing filling the available land between. There is now no sign of mining activity. Immediately west of the site is a complex of buildings labelled Wire Works (disused). This is connected to the main lines by tramlines crossing the Taff on a narrow, angled bridge. The Willows cottages are adjacent to the side of the Wire Works. Evidently, tipping is still being carried out north of the site. Additional tramlines are connected to new tipping raising the level of the tip, but the limit of tipping does not encroach any further forward toward the

site. A formal boundary, probably a wall separates the tip from the curtilage of the Wire Works. Some waste, probably produced by the wire works, is marked south of the boundary wall.

1919 (Figure 6) SITE- There is no development within the site boundary.

SURROUNDING AREA- East of the Taff the residential layout is almost identical to that seen today. Adjacent to the site, the Wire Works building has gone and has been replaced by the Gas Works of the Merthyr Tydfil Gas Co. Construction of the works had commenced in 1909. The works consisted of a series of large buildings west and south of the site. Some small ancillary buildings are close to the site boundary. The gasometers are 150m southeast of the site. Some smaller tanks are marked 80m south of the site. These are likely to be for the storage of coal tar and ammoniacal liquor. Both were valuable by-products of gas production from coal. The tipping to the north of the site appears to have ceased, although the tramlines are still in place. The Willows cottages are still present, adjacent to the Gas Works boundary wall.

1962 (Figure 7) SITE- A small building is very close to, or within the site boundary.

SURROUNDING AREA- - Figure 7 is stitched together from two separate map sheets. The buildings surrounding the site are now only labelled Works. The tramlines bringing coal in and coke out have been lifted. The buildings still have the same footprints, and the gasometers are still present. In fact, the Gasworks closed in 1951 and were subsequently demolished in 1957. Typically, there is a five-year gap between the O.S. carrying out a resurvey and publication of a map and this explains the discrepancy in dates.

1969 (Figure 8) SITE-The small building on the site is gone.

SURROUNDING AREA- Across the river all four railway lines have been lifted and the former “Merthyr Curve” has become the main line. The area around the site has been transformed. The Wales Gas Board gifted the land to the Council for new development, and a series of new buildings are seen. These are labelled Dairy.

1984 (Figure 9) SITE- Nothing stands on the site

SURROUNDING AREA- The buildings surrounding the site are unchanged and still labelled Dairy.

2003 (Figure 10) SITE- the last published large-scale map is from 2003 at 1:1250 scale. The site remains unchanged from the earlier revisions with no permanent building on it.

SURROUNDING AREA- There is nothing shown of relevance to a contamination study. The buildings are now labelled Depot.

More recent small-scale maps (2001, 2010 and 2025) have been checked, but add little of relevance to the contamination desk study. For this reason, they have not been reproduced here. Figure 11 is a recent (2024) aerial view of the site taken from Google Earth Pro. The building adjacent to the west of the site dating back to the 1960s has been demolished and the site stands in an area of new light units and shipping containers.

In summary, the history of the site itself and its immediate surroundings as illustrated by the historical O.S. maps show it as being undeveloped until the late nineteenth century. In common with most of Merthyr at a time of intensive mining there is extensive spoil tipping just to the north of the site. A short-lived metal processing factory then occupied the land immediately adjacent to the west of the site. There is some evidence of the tipping of waste material within the curtilage of the works. After the Wire Works became disused the area became the site of a Gas Works. From other historical records the operational period can be precisely dated to 1911-1951, a period of 40 years. The Gas Works was modern and advanced for its time. It used mechanised horizontal retorts, with the coke and by-products being sold off. During the lifetime of the Gas Works a small building was constructed, possibly within the site boundary. After the demolition of the works in 1957 the spiral gasometers to the south of the site were retained as pressure regulators for the North Sea Gas system until being replaced by the current National Grid apparatus now situated 65m south of the site. The area surrounding the site was developed for light industry in the 1960s. As manufacturing has dramatically declined since the 1980s, the area surrounding the site has been mainly occupied by contractor's yards and storage facilities.



FIGURE 3

THE 1901 1:10,560 MAP GEOREFERENCED ONTO A MODERN AERIAL PHOTO. THE SITE BOUNDARY IS HIGHLIGHTED

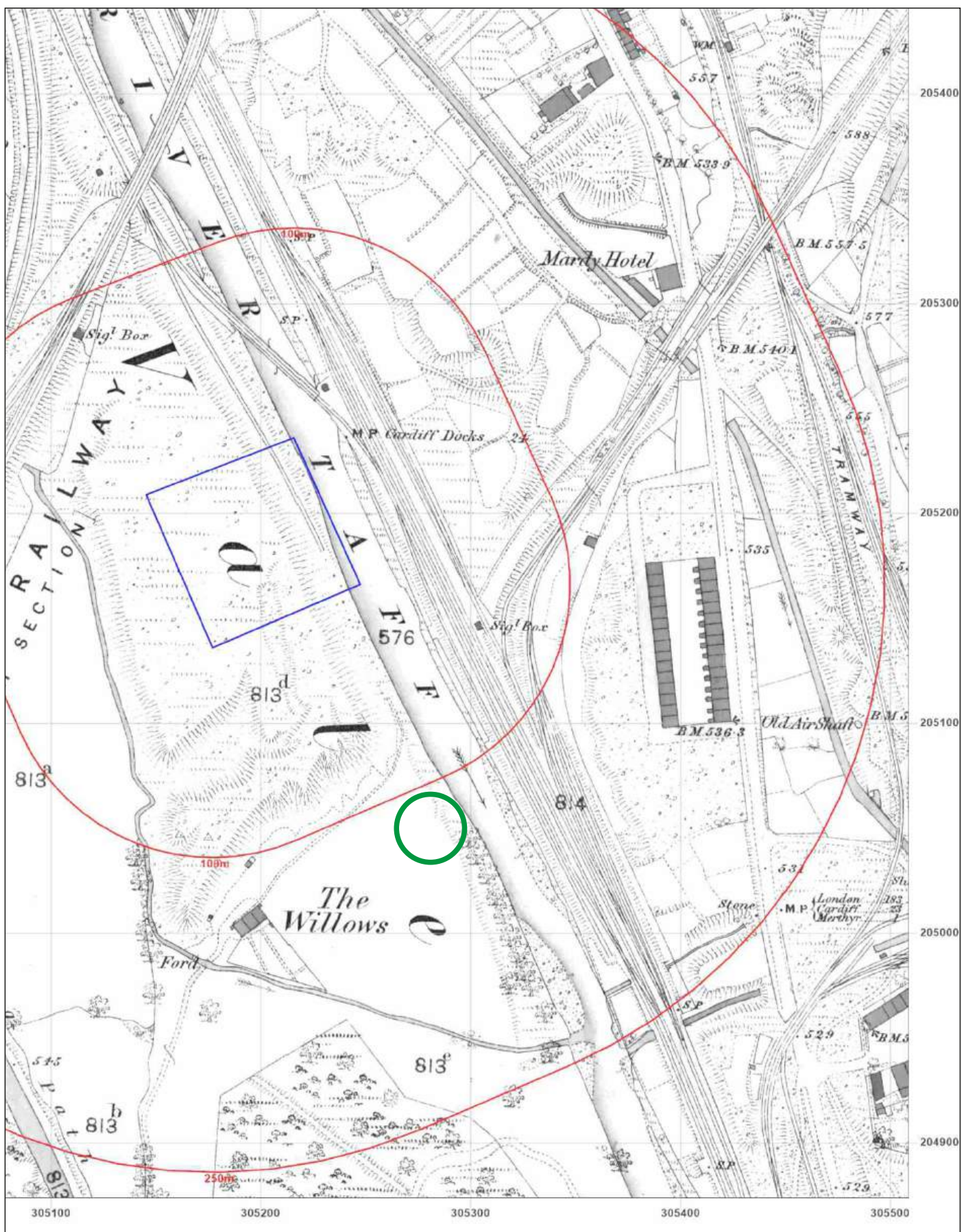


FIGURE 4
THE SITE (CIRCLED IN GREEN) IN 1875.

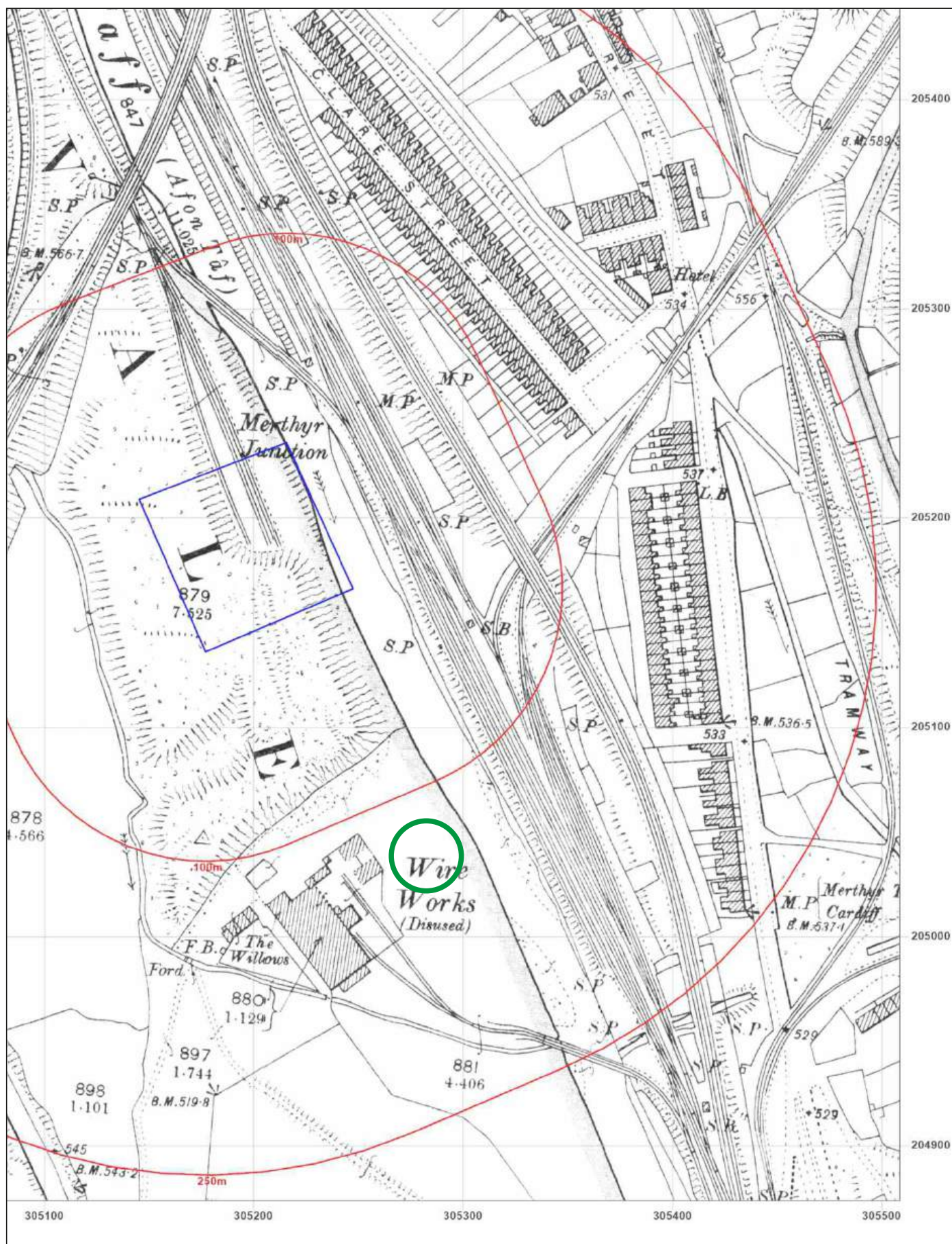


FIGURE 5
THE SITE (CIRCLED) IN 1900

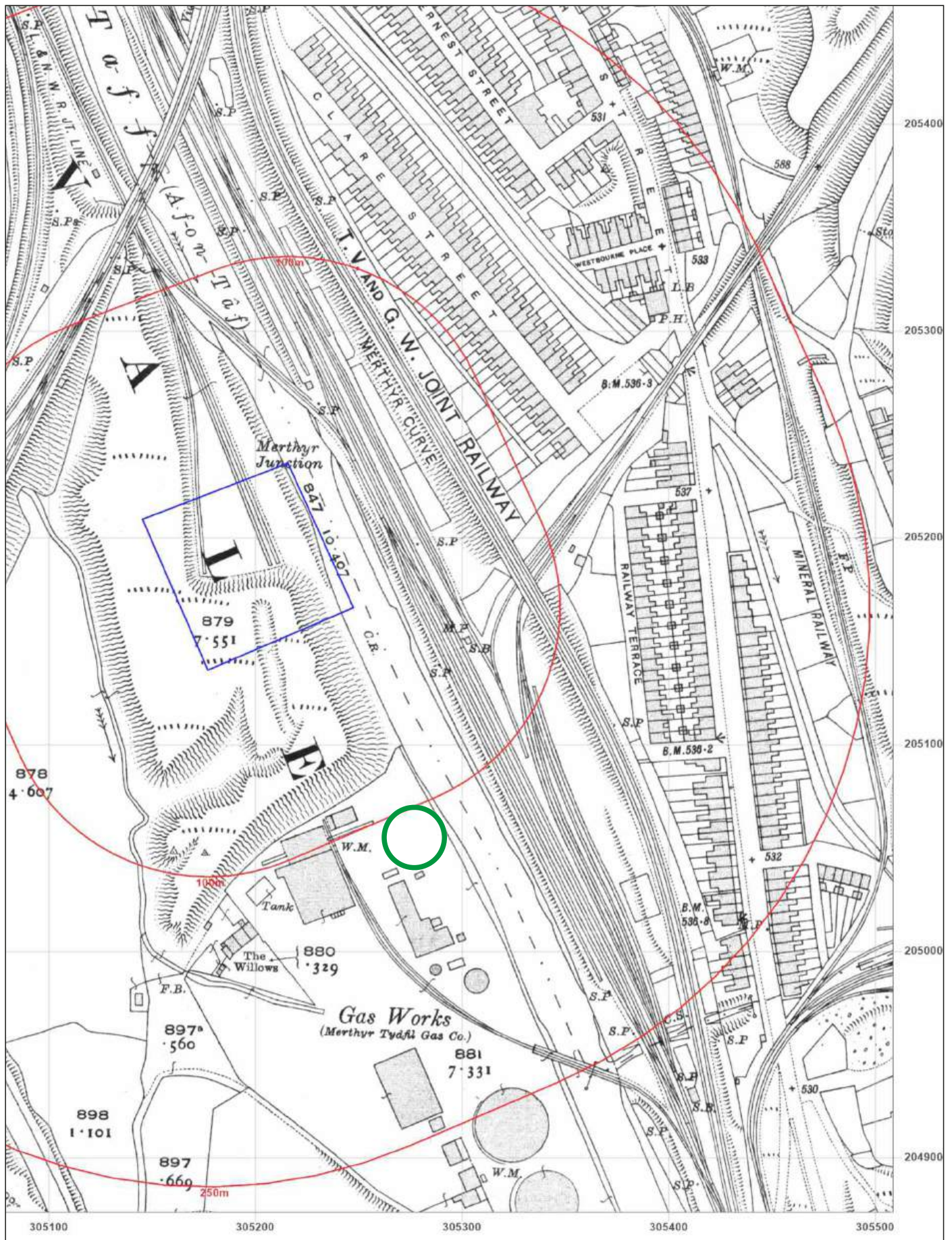


FIGURE 6
THE SITE IN 1919.

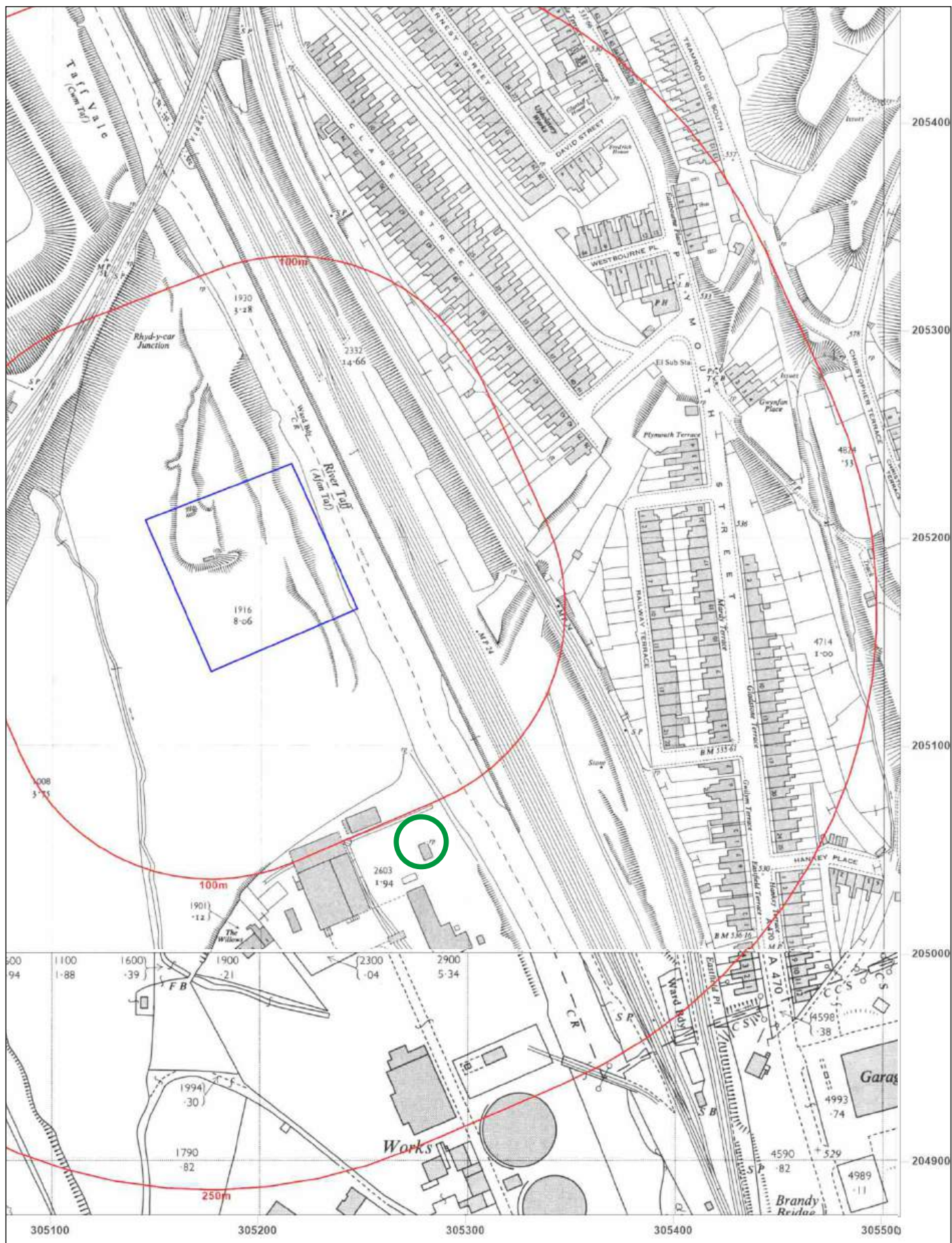


FIGURE 7
THE SITE IN 1962

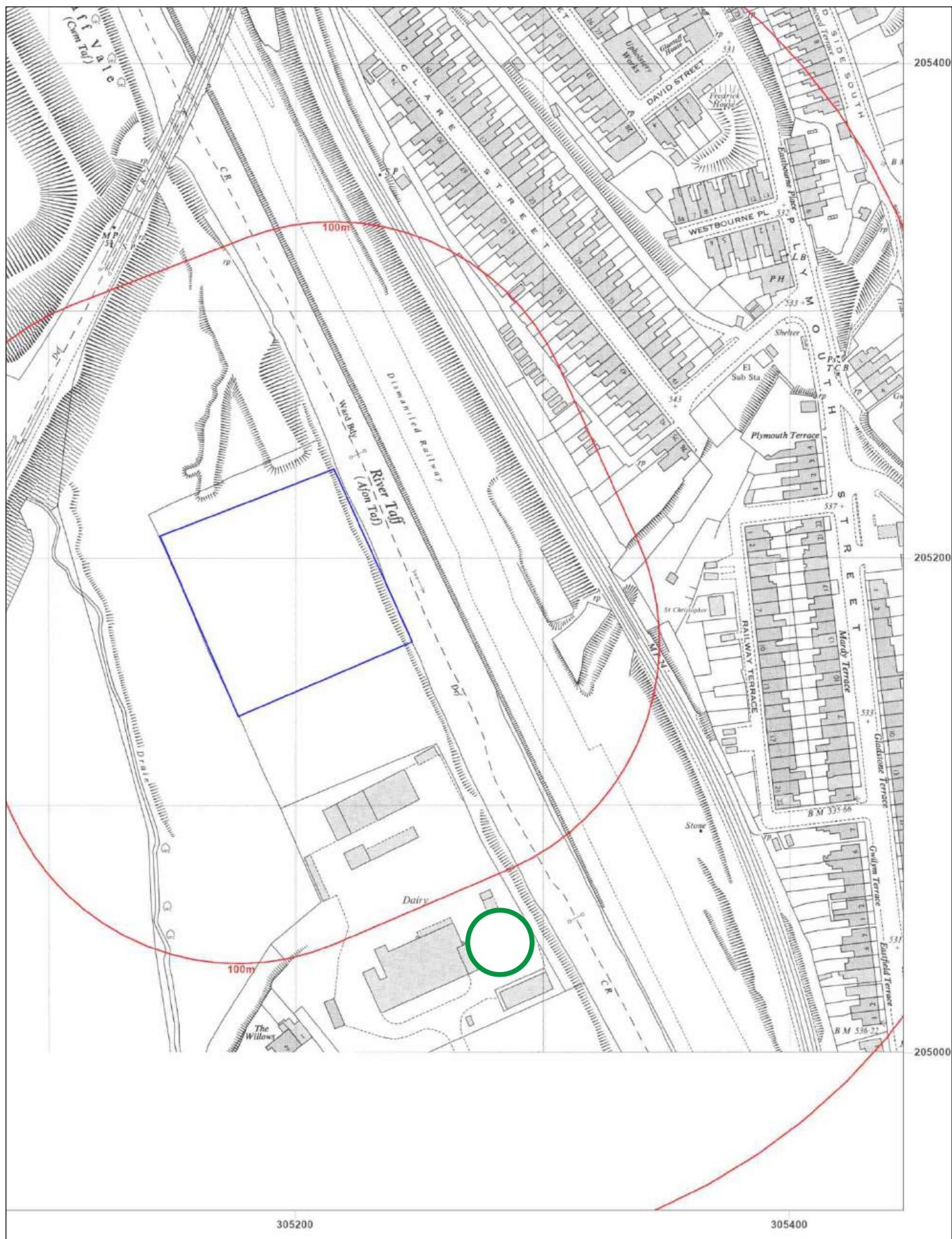


FIGURE 8
THE SITE IN 1969 (1:1250 SCALE)



FIGURE 10
THE SITE IN 2003 (1:1250)



FIGURE 11
THE SITE IN 2024.

5. GEOLOGY

The geology under this (or any other) site can usually be divided into two components. The bedrock, and the superficial deposits (including Made Ground) overlying the bedrock. For a contaminated land study, the superficial deposits are usually the more important of the two as they are the shallowest. This means they are the most likely to be impacted by contamination. Indeed, with Made Ground, the soil can itself be a source of contamination depending on its origin. The shallowest soils are also more likely to have a pathway to above-ground receptors. The deeper underlying geology will influence the hydrogeology, controlled waters and mining history.

Made Ground

Figure 12 is taken from a nearby Groundsure report which covers the site location. The purple areas are recorded Made Ground. The site is just south of the nearest recorded area, but the limitations of a 1:50,000 scale map must be taken into consideration. The defined area corresponds to the tipping seen on the historical O.S. In the author's previous experience of Abercanaid Industrial Estate, it is likely that there is a thin (<2m) veneer of Made Ground at the site.

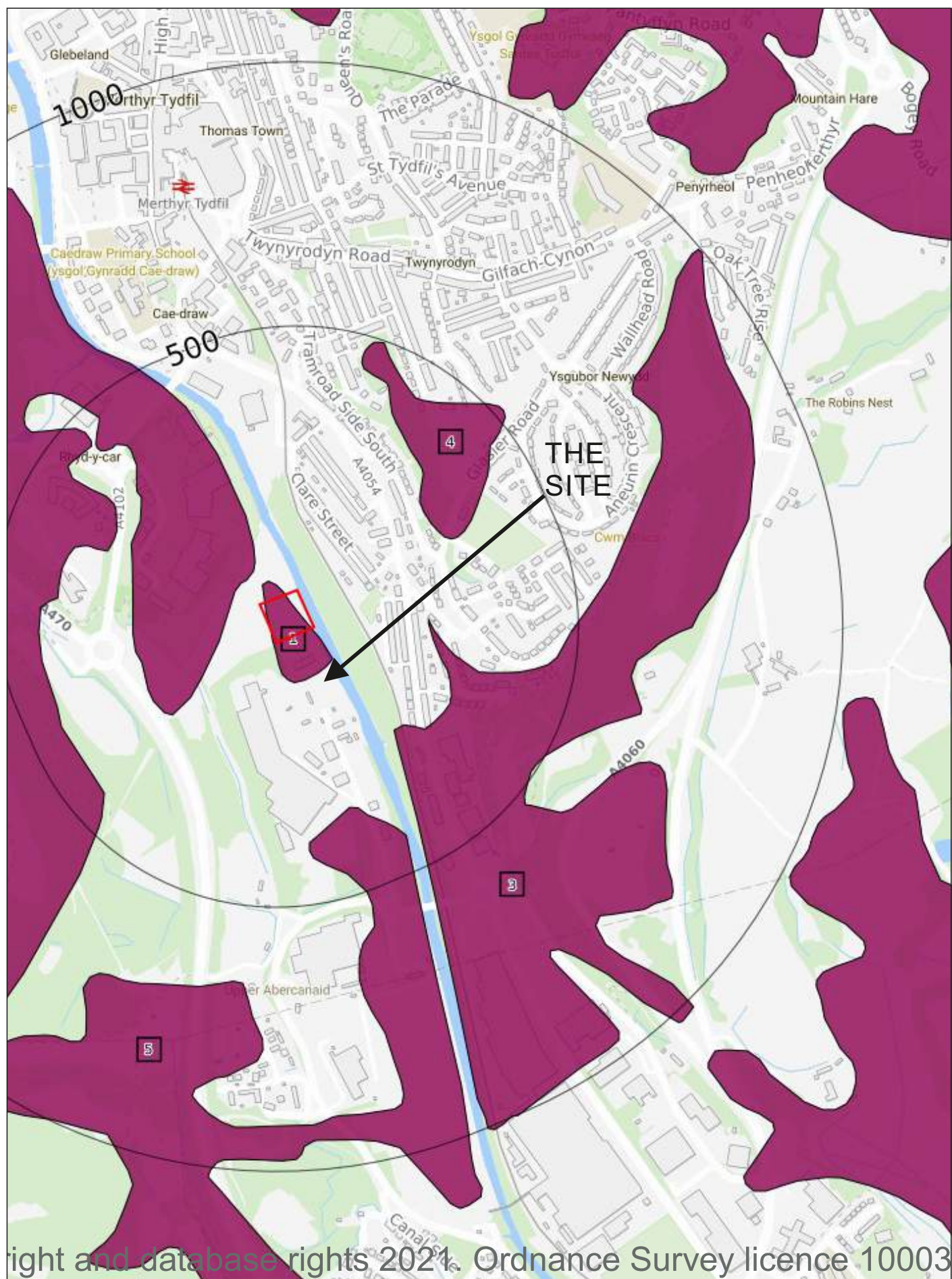
Superficial Deposits (Natural Ground only)

Figure 13 is the 1:50,000 Superficial Deposits map taken from the B.G.S. Geoindex. The site lies within a broad ribbon of Alluvium. To the east and west are large areas of Devensian Diamicton. Formerly known as Boulder Clay or Glacial Till, Diamicton is characteristically a poorly sorted mixture of gravel, cobbles and boulders with a sandy silty clay matrix. The composition can be highly variable both laterally and vertically. Diamicton is usually relatively impermeable although this may vary along fissures and coarser lenses. The Alluvium is a product of the River Taff reworking these glacial deposits. Although it is a considerable sized river by the time it passes through Merthyr, the Taff is geologically a misfit stream. This means it cannot possibly have cut the valley it sits in, which is of glacial origin. The Alluvium beneath the site will reflect this fact. The post-glacial River Taff will have removed most of the fine sand/silt/clay components of the Diamicton leaving a highly permeable deposit of gravel and cobbles. Again, this opinion is based on previous observations in the immediate area.

Solid Geology

The bedrock geology beneath the site will have no impact on the risk assessment for above ground receptors. However, it needs to be understood to inform both the Hydrogeology and the Coal Mine Gas Risk Assessment. An assessment of both is required to be part of a comprehensive Phase 1 desk study. In the northern area of the

South Wales Coalfield where the site is located, the average depth of the superficial deposits following glacial erosion during the Devensian is much shallower than further south. Two borehole records held by the B.G.S. are available. One is a waterwell in the former Triumph Factory which is relatively close to the site. The Coal Measure bedrock was encountered at a shallow level of approximately 5m. Further to the south, but nearer the river axis bedrock was at 33.5m. Probably, the bedrock depth beneath the site is somewhere between these two levels. It should be noted that the Triumph waterwell was drilled to 93m. The strata were only roughly logged as shale with coal. The poor description is not surprising as the purpose of the borehole was not exploratory, but to produce a viable waterwell. The water table information is scant. Figure 14 is taken from the B.G.S. Geoindex. This is small scale and generalised. The bedrock beneath the site is shown as Lower Coal Measures. Unfortunately, as previously mentioned, the site sits very close to the sheet margin of the current Geological Survey 1:10,000 map. Figure 15 is from the 1:10,000 map. Just north of the site the dashed line is the Merthyr Church Fault. West of the site the outcrop of the Gellideg. Figure 16 is from the older (1922) County Series map which gives a better view of the area surrounding the site in relation to coal seam outcrops. The thick blue dashed lines are seam outcrops. These are all truncated west of the site. The two thin blue lines either side of the site mark the limits of the alluvium on the valley floor (the gullwing symbol very close to the site). These seams have not been projected beneath the alluvium as they have in Figure 15. Figure 17 gives a good overall picture of the seam geometry. The Gellideg and Seven Foot Seams are shown outcropping well south of the site. From their relationship to each other, and the Garw Seam to the north it can be deduced that the seams are all dipping to the southwest. This means neither the Gellideg, Five Foot or Seven Foot can underlie the site. The Garw is the lowest workable coal seam in South Wales. In Merthyr it was worked extensively from outcrop levels from Ynysfach northwest through Heolgerrig right around the hillside to the slopes of the Cynon Valley. South of Ynysfach there is no record of the Garw Seam from any source. This is the reason the Garw outcrop is truncated in Figure 17 and shown to end well north of the site. The probable reason is it has been removed by glacial erosion. There is no record of it anywhere near the site and it is safe to conclude there is no workable coal beneath the site.



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FIGURE 12
MADE GROUND (PURPLE) BASED ON THE B.G.S. GEOINDEX.



FIGURE 13
B.G.S. 1:50,000 MAP OF SUPERFICIAL DEPOSITS.

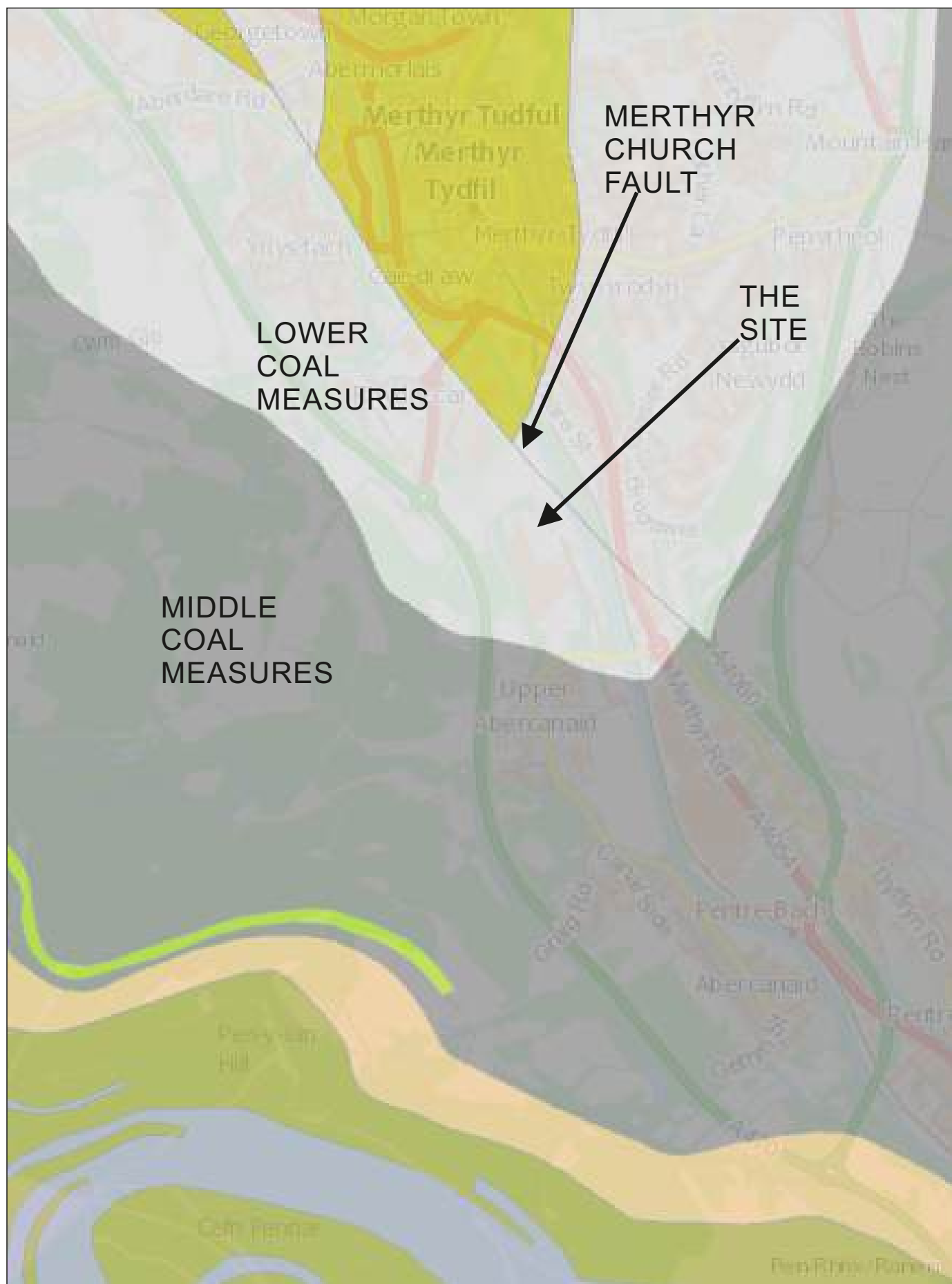


FIGURE 14
B.G.S. GEOINDEX 1:50,000 MAP OF BEDROCK GEOLOGY.

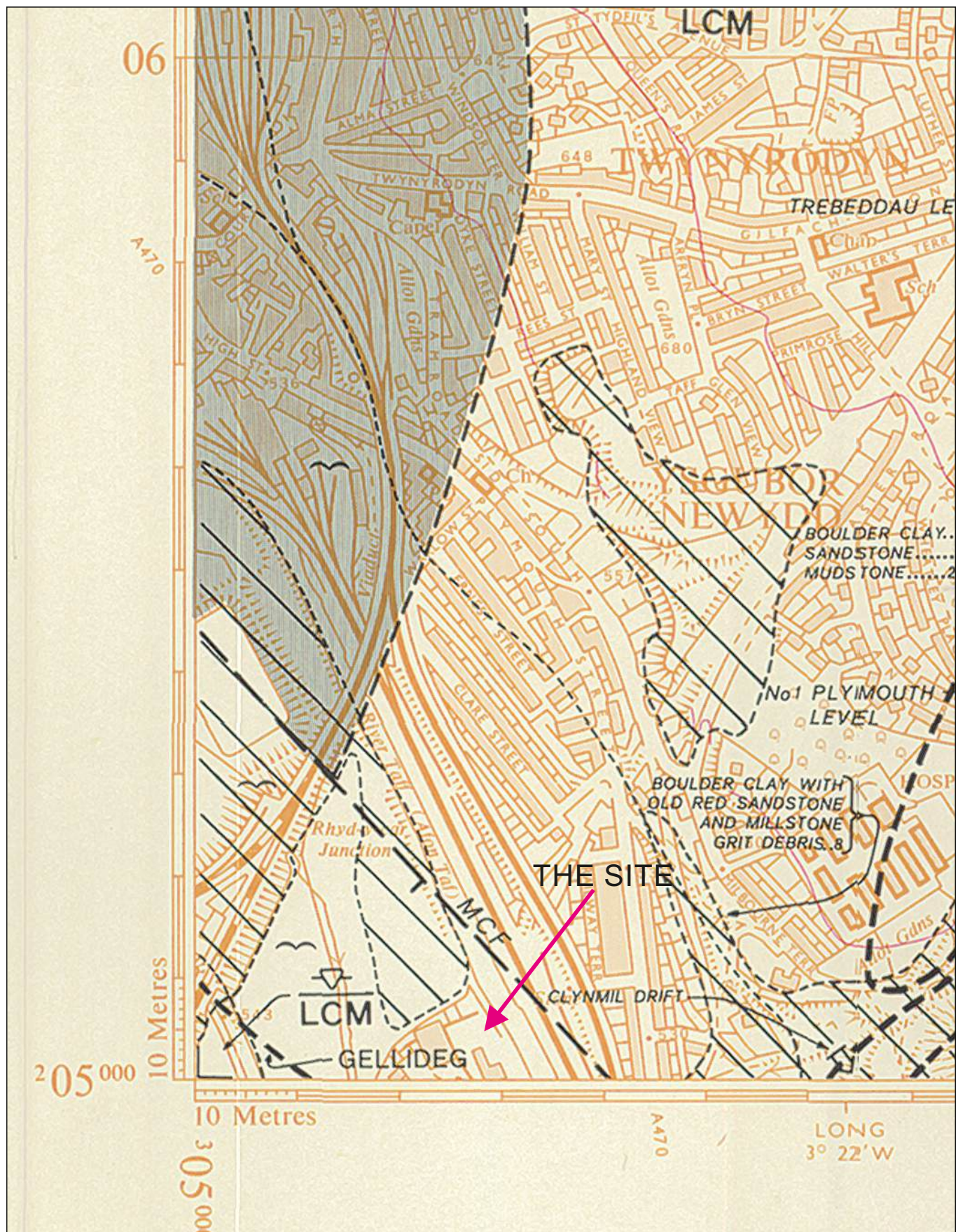


FIGURE 15
EXTRACT OF GEOLOGICAL SURVEY SHEET SO 00NE.
THE SITE IS HIGHLIGHTED.

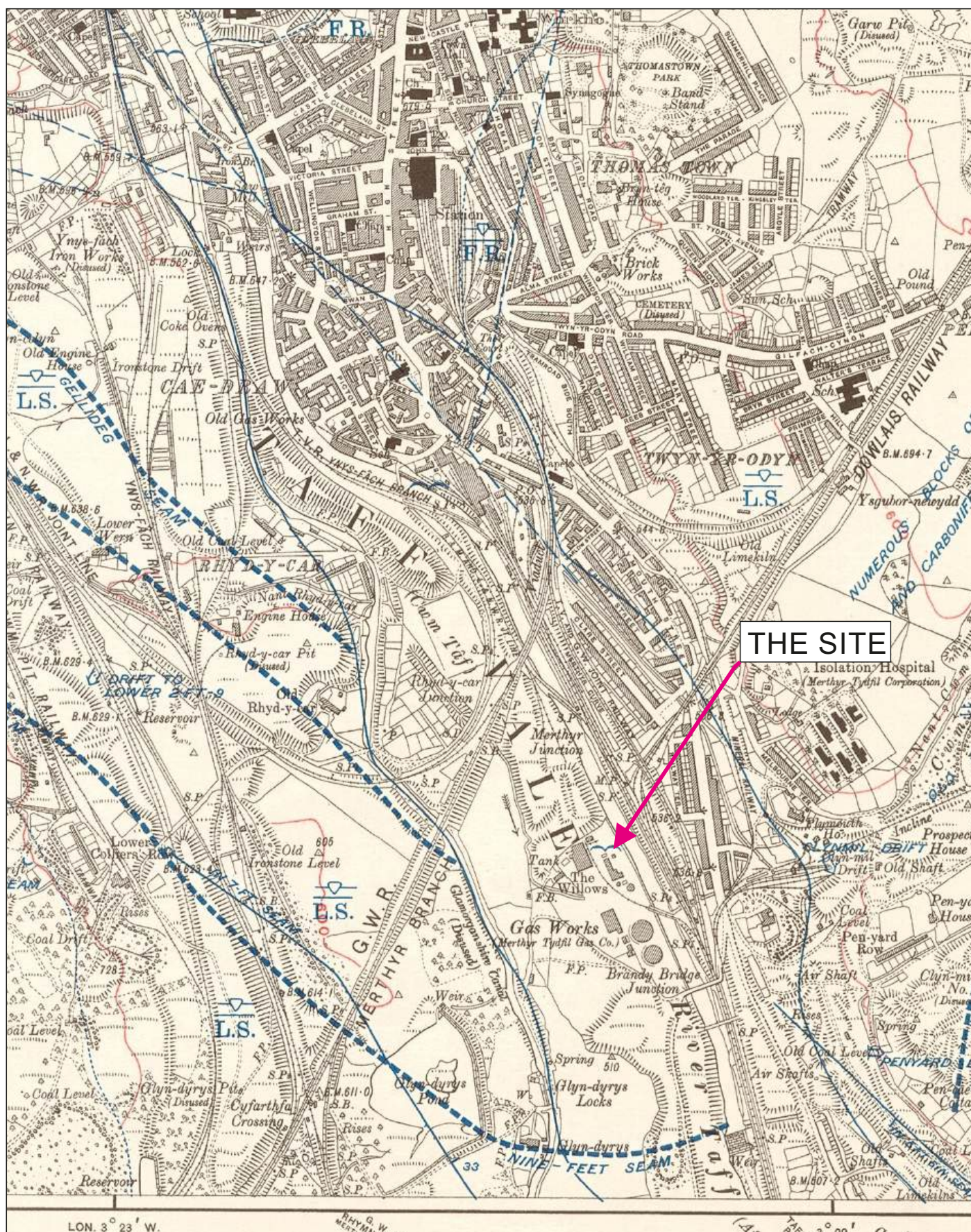


FIGURE 16

1922 GEOLOGICAL SURVEY SHEET GLAM 12NW.

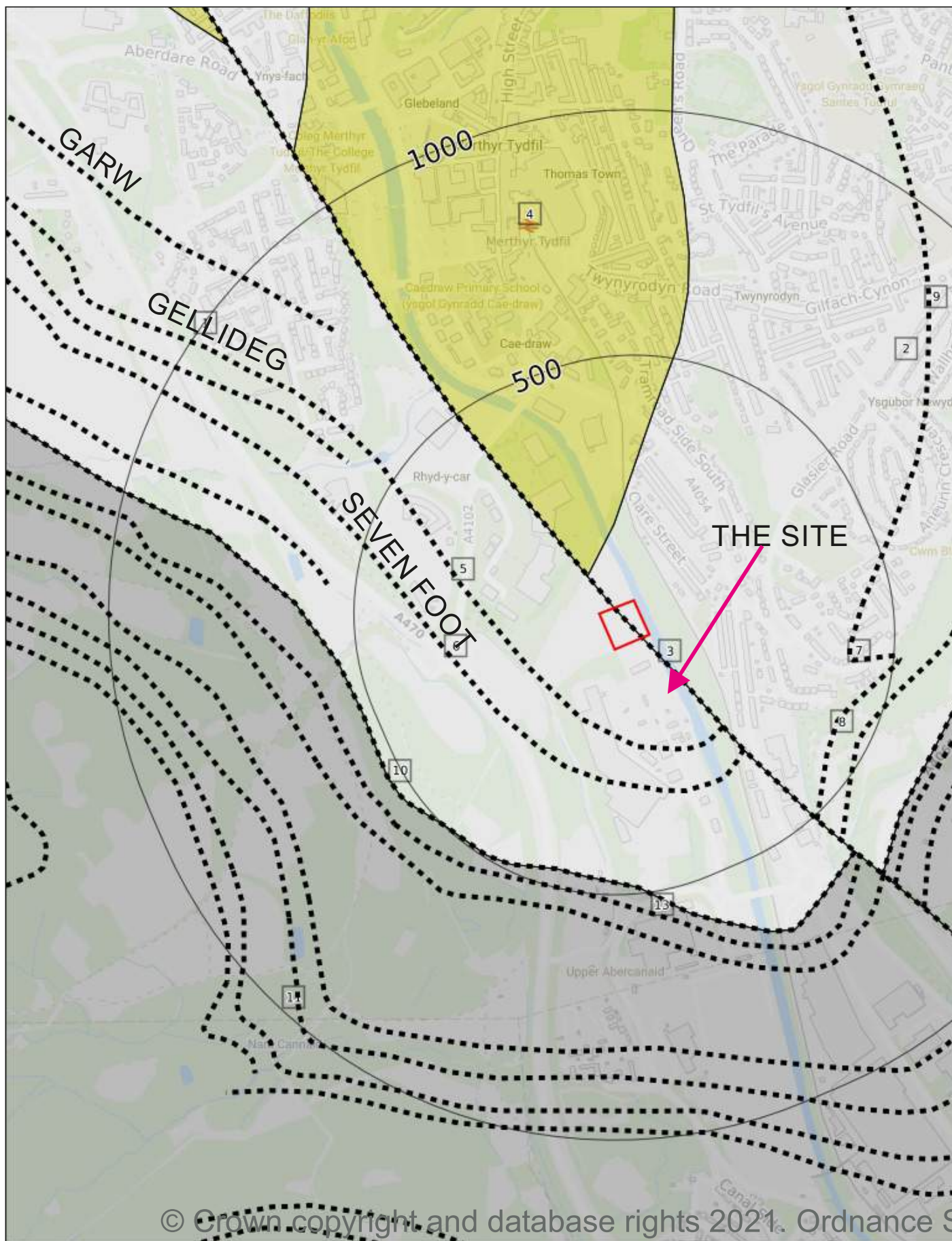


FIGURE 17

1:50,000 GEOLOGY MAP FROM A NEARBY GROUNDSURE REPORT.

6. HYDROGEOLOGY

In the past when compiling a Part 1 Desk Study the necessary information about Hydrogeology could be obtained from the Environment Agency. In Wales this is no longer the case due to the N.R.W. (to whom the responsibilities of the E.A. have been devolved) failing to publish this information to date. It is now necessary to purchase the information from a private organisation such as Groundsure. This has been done previously for a nearby site. Although the previous site was centred to the north of the present site under review, it is close enough for the general information in the following sections to be relied on. The full Enviroinsight report is attached in Appendix A. All the information in the following sections 6-12 has been taken directly from the report with minor distance adjustments where necessary.

The Superficial Aquifer map for the site is on page 67 of the Enviroinsight Report. Figure 18 is taken directly from the report. The aquifer map mimics the superficial deposits map in Figure 13, with Secondary Undifferentiated classification assigned to the Diamicton in Figure 13. This classification is used when it is not possible to assign A or B classification to a site. Formerly these would have been either Minor or Non-Aquifers. The classification is due to the nature of the underlying Devensian Till/ Diamicton. Formerly known as Boulder Clay, the material is a chaotic, poorly sorted jumble of coarse sediments ranging from sand to boulder size. There is a variable, but high proportion of silt and clay grade material. This makes it generally impermeable, although water does travel through fissures and coarser layers. A broad ribbon of Secondary (A) Aquifer surrounds the site encompassing the areas of Alluvium either side of the River Taff. Formerly known as Minor Aquifers the official definition of Secondary (A) is:- 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 in rivers. Previous deep excavations nearby showed the water table in hydraulic continuity with river level.

Page 69 of the Enviroinsight Report shows the bedrock aquifer classification. The entire area of the map is Secondary (A). For this reason, the map is not reproduced here. Formerly known as minor aquifers the official definition is:- 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 in rivers. This reflects the nature of the Lower Coal Measures. Although predominantly argillaceous bedrock, there are various Sandstone horizons. The

Sandstones have a well-developed, closely spaced bedding/jointing fracture pattern. Groundwater wells can be productive but are generally confined to areas far from mains supply.

7. HYDROLOGY AND WATER QUALITY

The Ordnance Survey Water Network Mastermap is on page 76 of the Enviroinsight report. The nearest surface water body is the Afon Taf (River Taff) which of course abuts the site. There are some minor streams approximately 200m west of the site. The site is within the Taff (conf Taf Fechan-conf R Cynon) River Water Body Catchment Area. The Operational Catchment is Taff upstream Cynon, and the Management Catchment is South East Valleys.

The 2016 classification of the River Catchment is Ecological-Moderate, Chemical Rating-Good and Overall Rating-moderate. The nearest monitoring point is unknown.

The SE Valleys Carboniferous Coal Measures 2016 groundwater rating is Overall- Poor, Chemical rating- Poor and Quantitative rating-Good.

8. ABSTRACTIONS

The Enviroinsight report states that there is one groundwater abstraction licence within 2000m of the site. This is the waterwell mentioned in Section 5 situated in the former Triumph Factory. There is a single Surface Water Abstraction Licence within 2000m of the site. This was on the Nant Canaid, a culverted stream, and held by Hoover. Since both factories have both been closed for many years, these will have lapsed. The map showing these is on page 73 of the Enviroinsight Report. There are no potable abstraction licenses within 2000m of the site. There are no Source Protection Zones, or Source Protection Zones within Confined Aquifer within a 500m radius of the site.

9. POLLUTION INCIDENTS

There has been only one Environment Agency/Natural Resources Wales Recorded Pollution Incidents within 500m of the site. This was a discharge of raw sewage 205m southeast (i.e. downstream) of the site in 2016. The incident will have no bearing on the site.

There are no sites designated as Part 2A contaminated land within 500m of the site. There are no COMAH sites within 500m. There are no regulated

explosive sites within 500m. There are no Hazardous Substance Consents. There are no historical I.P.C. authorisations, Part A (1) or I.P.P.C. Authorised activities. There are three Part A (2)/B licenses within 500m. The nearest was the Triumph factory. This has obviously lapsed since the factory is closed. The other two are across the other side of the river. They are a car respray centre and a petrol station. There have been no enforcements of either of them. There are three current licensed Discharge consents within 500m. Two are Welsh Water C.S.O. licenses with a third private plant at Rhydycar. All involve the Taff as the receiving water. There are no Red List discharge consents or within 500m. There are no Dangerous/Radioactive Authorisations or List 1 or List 2 Dangerous Substance Inventory Sites within 500m of the site. The Triumph factory did formerly hold a permit for various toxic metals. There are several Waste Exemptions within 500m. One is on the Willows Industrial Estate, but it is unclear if it is current.

10. LANDFILL

There are no active or recent landfills within 500m. There are no records of historical landfill within 500m of the site in the B.G.S. database recording the DoE 1973 survey. There are no Local Authority records, or landfills marked on large scale O.S. There are no E.A./N.R.W. records of any landfills within 500m. There are no licenced waste sites. Figure 19 is an extract of the Welsh Government Historic Landfill database. This shows the nearest landfill to be Pencoedcae Farm, 1200m away and approximately 100m higher.

11. FLOOD RISK

Flood risk for the site should be dealt with as a separate matter for the planning application. For a Contaminated Land Assessment, the risk of flooding should be initially assessed in the Phase 1. The Phase 2 results will then determine if the flood risk (if any) presents a broader risk to controlled waters and the wider environment. The RoFRaS data is in the Enviroinsight report on pages 80-83. This shows the site is assessed as having a medium flood risk and is in Flood Zone 3 with an annual flood risk of 1%. The surface water flooding risk for a depth of 0.3m-1.0m varies from a 1 in 100 year return to 1 in 1000 years. The groundwater flooding risk is low. The surface water and groundwater flooding maps are on pages 84 and 86 of the Enviroinsight Report.

12. ECOLOGICAL AND ARCHAEOLOGICAL CONSIDERATIONS

There are no known archaeological considerations.

There is a solitary S.S.S.I site 300m west of the site (Cwm Glo y Glyndyrys). There is one of ancient woodland within 500m. that is 220 m south of the site.

13. PREVIOUS CONTAMINATION STUDIES

There are no known previous contamination studies of the site.

14. LPA AND BUILDING CONTROL RECORDS

It can be assumed M.T.C.B.C. will have no previous building control as there are no permanent buildings on the site.

15. CONTAMINANTS OF CONCERN AND SOURCE AREAS

There is nothing in the desk study that indicates any specific areas where the risk of contamination would be anticipated within the site boundary. The site history contains evidence of multiple possible sources of contamination. There are historic contaminative industries north and south of the site. It is also possible there is contaminated Made Ground on the site. Table 1 is a qualitative initial risk assessment of the site.

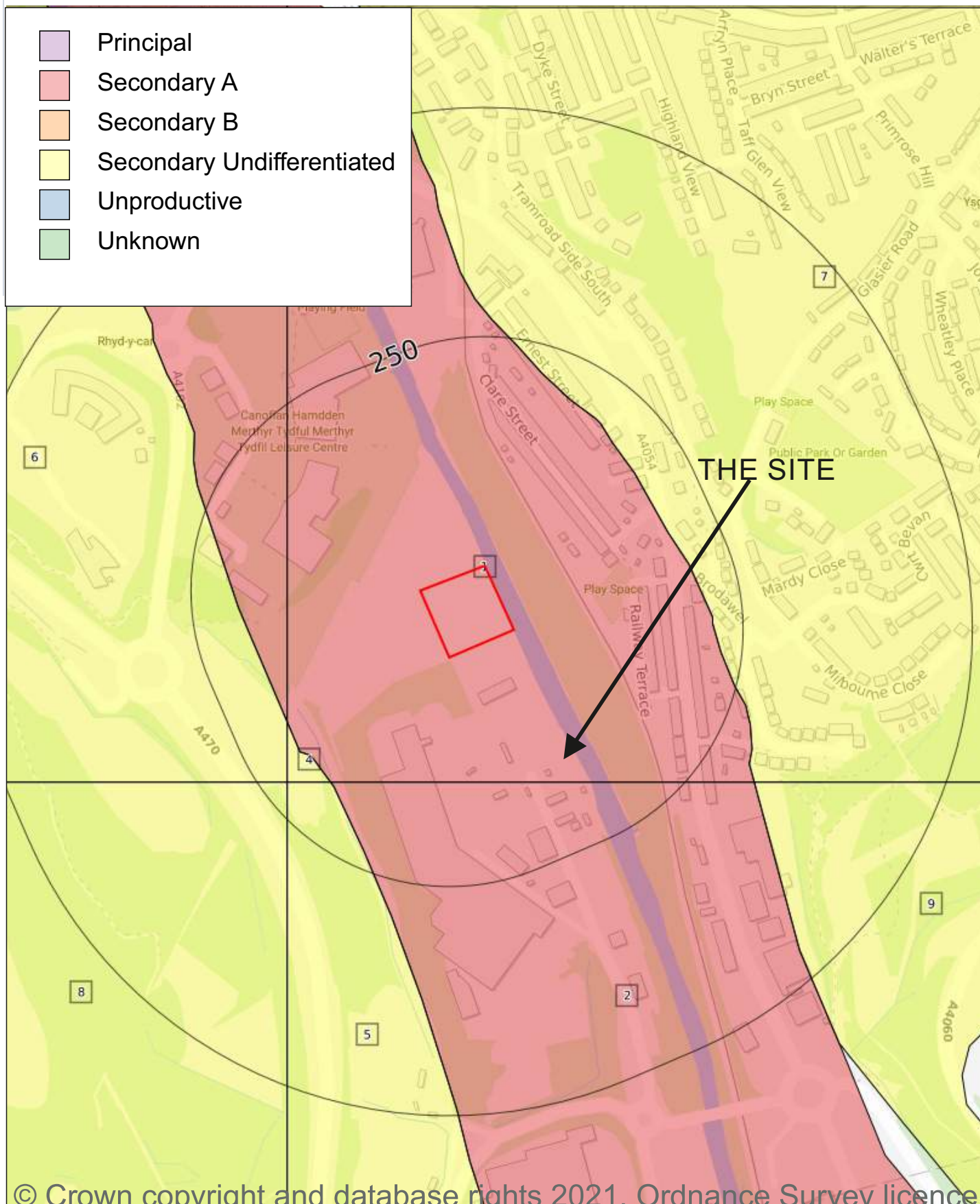


FIGURE 18

1:50,000 MAP OF SUPERFICIAL AQUIFERS FROM GROUNDSURE

TABLE 1						
INITIAL QUALITATIVE HUMAN HEALTH RISK ASSESSMENT AND ENVIRONMENTAL RISK ASSESSMENT AT THE WILLOWS, ABERCANAID						
CONTAMINANT SOURCE	PATHWAYS	RECEPTORS	POTENTIAL SEVERITY	PROBABILITY OF RISK	LEVEL OF RISK	FURTHER ACTION REQUIRED
ON SITE: POTENTIAL CONTAMINATION IN SOILS/MADE GROUND. POSSIBLY ELEVATED LEVELS OF METALS, CYANIDE, PHENOLS, HYDROCARBONS AND PAH	INGESTION, DERMAL CONTACT, INHALATION	FUTURE END USERS, VISITORS	MEDIUM	MEDIUM	MEDIUM	LIKELY PRESENCE OF MADE GROUND ON THE SITE SUGGESTS A POSSIBLE SOURCE OF CONTAMINATION. FURTHER QUANTIFICATION IS REQUIRED VIA AN INTRUSIVE INVESTIGATION
	CONTACT WITH CONTAMINATED GROUNDWATER	FUTURE END USERS, VISITORS AND CONSTRUCTION WORKERS	MEDIUM			
	PERMEATION OF WATER PIPES	FUTURE END USERS AND SITE VISITORS	MEDIUM			
	INGESTION OF HOME GROWN PRODUCE	FUTURE END USERS	MEDIUM			
ON SITE: ASBESTOS AT OR NEAR GROUND SURFACE IN SOILS/MADE GROUND	INHALATION OF FIBRES IN AIRBORNE DUST	FUTURE END USERS AND SITE VISITORS	HIGH	MEDIUM	MEDIUM	THERE IS NO REASON TO SUSPECT THE PRESENCE OF ASBESTOS AT THE SITE. HOWEVER, THE SOIL SAMPLES TAKEN WILL BE TESTED FOR ASBESTOS.
		CONSTRUCTION WORKERS	HIGH	MEDIUM	MEDIUM	
ON SITE: POTENTIAL CONTAMINATION IN SOILS/MADE GROUND. POSSIBLY ELEVATED LEVELS OF CONTAMINANTS	RUN OFF	SURFACE DRAINAGE	MEDIUM	MEDIUM	MEDIUM	THE PRESENCE OF CONTAMINATION AT THE SITE AND THE POSSIBLE ONWARD PATHWAY TO CONTROLLED WATERS IS CONSIDERED A POSSIBILITY. THE RISK WILL BE FURTHER QUANTIFIED FOLLOWING SOIL TESTING.
	MIGRATION THROUGH SOIL VIA LEACHING	SHALLOW GROUNDWATER				
	ONWARD MIGRATION OF GROUNDWATER	BEDROCK AQUIFER				

16. GROUND GAS POTENTIAL

In section 3 of the updated (2023) WLGA & NRW guidelines on the Development of Land Affected by Contamination it states that “Ground gas is a contaminant and should be considered as a potential contaminant source in the preliminary risk assessment on sites where gas generation and /or migration is suspected”. This requires all possible sources of ground gas to be examined.

Small scale mapping suggests no Made Ground will be present on site. However, previous nearby investigations have shown a limited thickness of Made Ground has been deposited over much of the surrounding area during multiple phases of redevelopment over the last 120 years. On-site generation of ground gas cannot be completely discounted at this stage without the benefit of an intrusive site investigation.

Moving on to the risk of migration from elsewhere, the two most common sources for ground gas migrating onto a site from elsewhere are landfill sites and mines, particularly coal mines. Landfill sites have been found to be sources of gases, particularly Methane, caused by the breakdown of organic material contained within them. There have been instances where migration of these gases has caused explosions or asphyxiation at receptors off site. These occurrences are rare and usually outside Britain in completely unregulated circumstances. In contrast, landfills in Britain have been tightly regulated and managed for many years, and a sense of perspective is necessary when assessing the threat from a landfill close to a site. At the present time “close” is generally taken to mean 250m, although there are no specific studies that have arrived at this figure. The figure dates to a 2003 E.A. publication “Building on or within 250m of a Landfill”. The document and 250m figure were subsequently adopted in L.P.A. planning guidance. The original document itself stresses that conditions can vary enormously. In particular, the document acknowledges that there must be viable pathways from any potential source of Landfill gases to a receptor, for there to be any risk. As stated in Section 10, there are no landfills within 500m of the site. The risk of migration of Landfill Gas to site can be completely discounted.

17. DETAILED COAL MINING GAS RISK ASSESSMENT

This leaves the gas risk from Coal Mining. Gas production was a constant problem during the coal mining heyday of the South Wales Coalfield. The loss of life through

explosion or asphyxiation was huge. There were vast differences in the potential for gas production between different areas, and in different seams. As a generalisation, the deep steam coals of the Middle and Lower Coal Measures were the most problematic in the Coalfield. Gas production in coal mines takes two forms. Methane trapped under pressure in the coal is released during mining operations. The production of Methane stops very shortly after the end of mining activity. The production of Carbon Dioxide and Carbon Monoxide is due to oxidation of the coal. If conditions are suitable, this gas production can carry on long after mining ceases. The site lies within a Coal Mining Reporting Area. This means a Coal Mine Gas Risk Assessment will be required under current legislation. Recently, local authorities have been requesting specific mine gas risk assessments conducted in accordance with 'CL:AIRE - Good Practice for Risk Assessment for Coal Mine Gas Emissions, October 2021' and having regard to current guidance - 'Land Contamination: Risk Management (LCRM; 2020)'. There is usually a demand to follow the decision tree in Figure 13.1 of the Decision Support Tool for mine gas risk assessment on page 35 of the CL:AIRE document. Section 5 established there are no workable coal seams beneath the site beneath the site.

Figures 20 and 21 are taken from the Coal Authority interactive viewer. Use of this is required by the CL:AIRE guidance as one of the questions in the flow chart specifically refers to it.

The Decision Support Tool, Figure 13.1 on Page 35 of the CL:AIRE publication Good Practise for Risk Assessment for Coal Mine Gas Emissions can now to be used. Within this rigid framework there is no room for geological knowledge, or practical experience of coal mining. In this instance the flow chart can be followed to reach the decision below:-

IS THE SITE WITHIN A C.A. DEFINED COAL MINING REPORTING AREA

>YES>

ARE ALL THESE STATEMENTS TRUE.

ALL MINE ENTRIES >50m FROM SITE BOUNDARY.>YES>

ALL WORKINGS >150m DEPTH >YES> (NO WORKINGS BENEATH SITE AT ANY DEPTH-
FIGURE 21)

NO FAULTS OR POTENTIAL PATHWAYS CONNECTING THE SURFACE TO DEEPER UNFLOODED WORKINGS. >YES>

OUTSIDE AREA OF PAST OR PROBABLE SHALLOW WORKINGS ON THE COAL AUTHORITY INTERACTIVE VIEWER >YES> (SEE FIGURE 20)

NEGLIBLE RISK ZONE? >YES>

MITIGATION NOT REQUIRED.

REVIEW ASSESSMENT WHEN DEVELOPMENT DESIGN IS FINALISED.

It can now be concluded that there is no risk from mine gases at the site. The last statement above relates to piling or deep drainage excavations creating a possible pathway to above ground. This happened in the well-documented Gorebridge Incident. The development will probably be built on a shallow raft foundation. The foul drainage will be at depths of less than 2m. However, as there is no mining whatsoever beneath the site there will be no need for a further review.

Finally, the site is within an area where 1%-3% of properties are affected by Radon. No Radon protective measures will be required. (the data source is Page 136 of the Geosight Report).

A summary of the Ground Gas Risk Assessment of the site is contained in Table 2 overleaf.

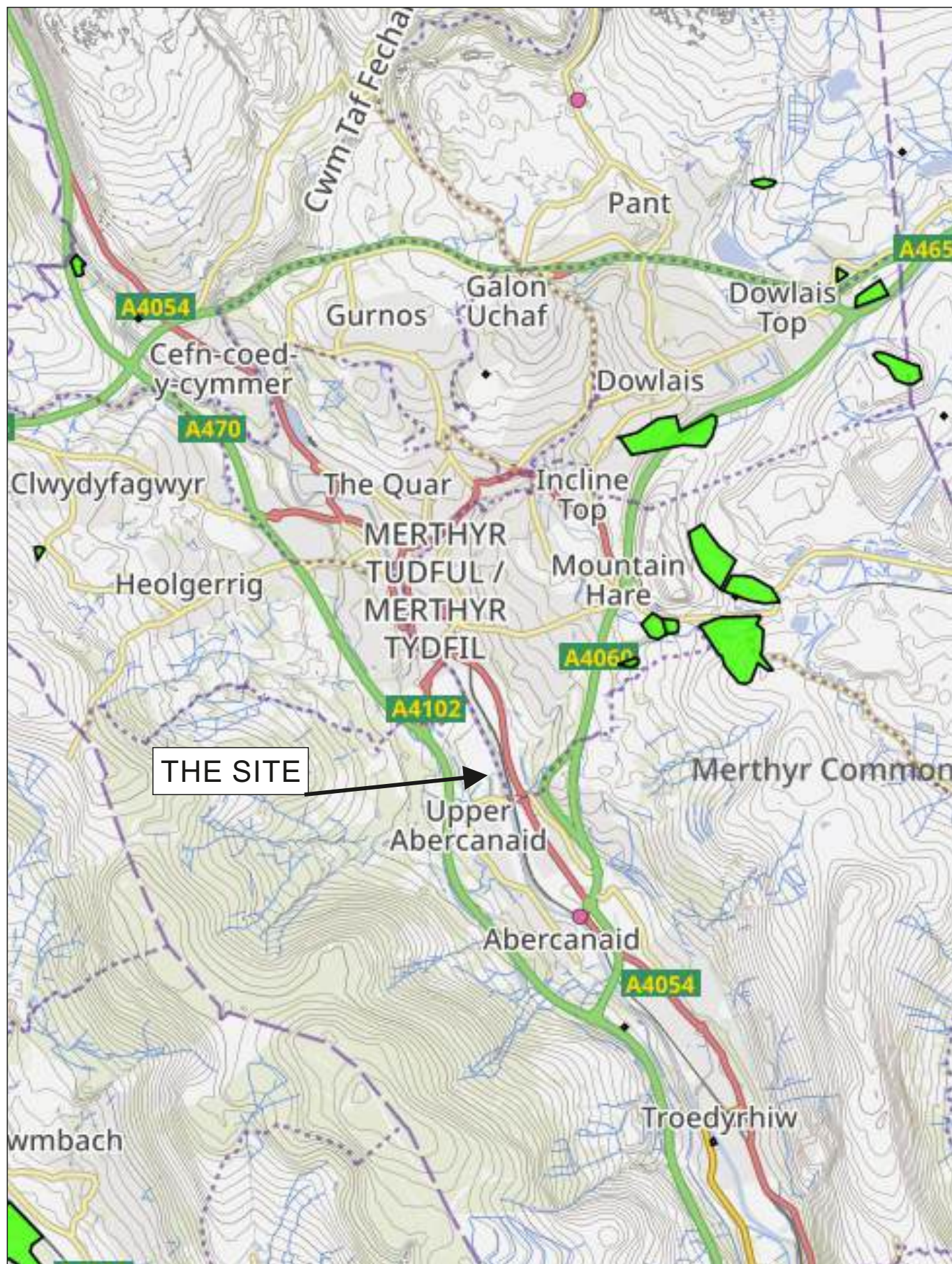


FIGURE 19
HISTORIC LANDFILL MAP

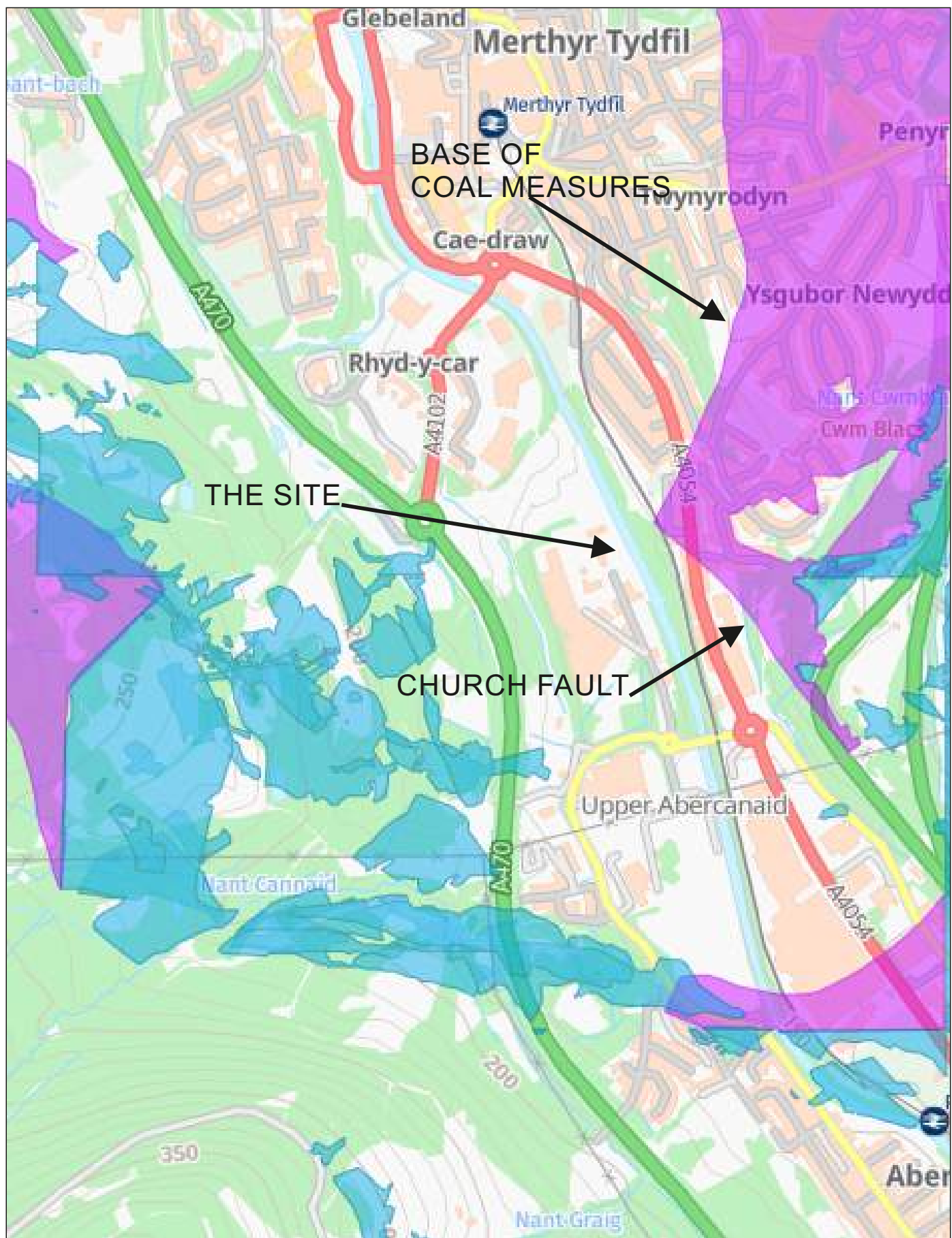


FIGURE 20
COAL AUTHORITY INTERACTIVE MAP. RECORDED SHALLOW WORKINGS ARE IN BLUE, SUSPECTED WORKINGS IN PURPLE.

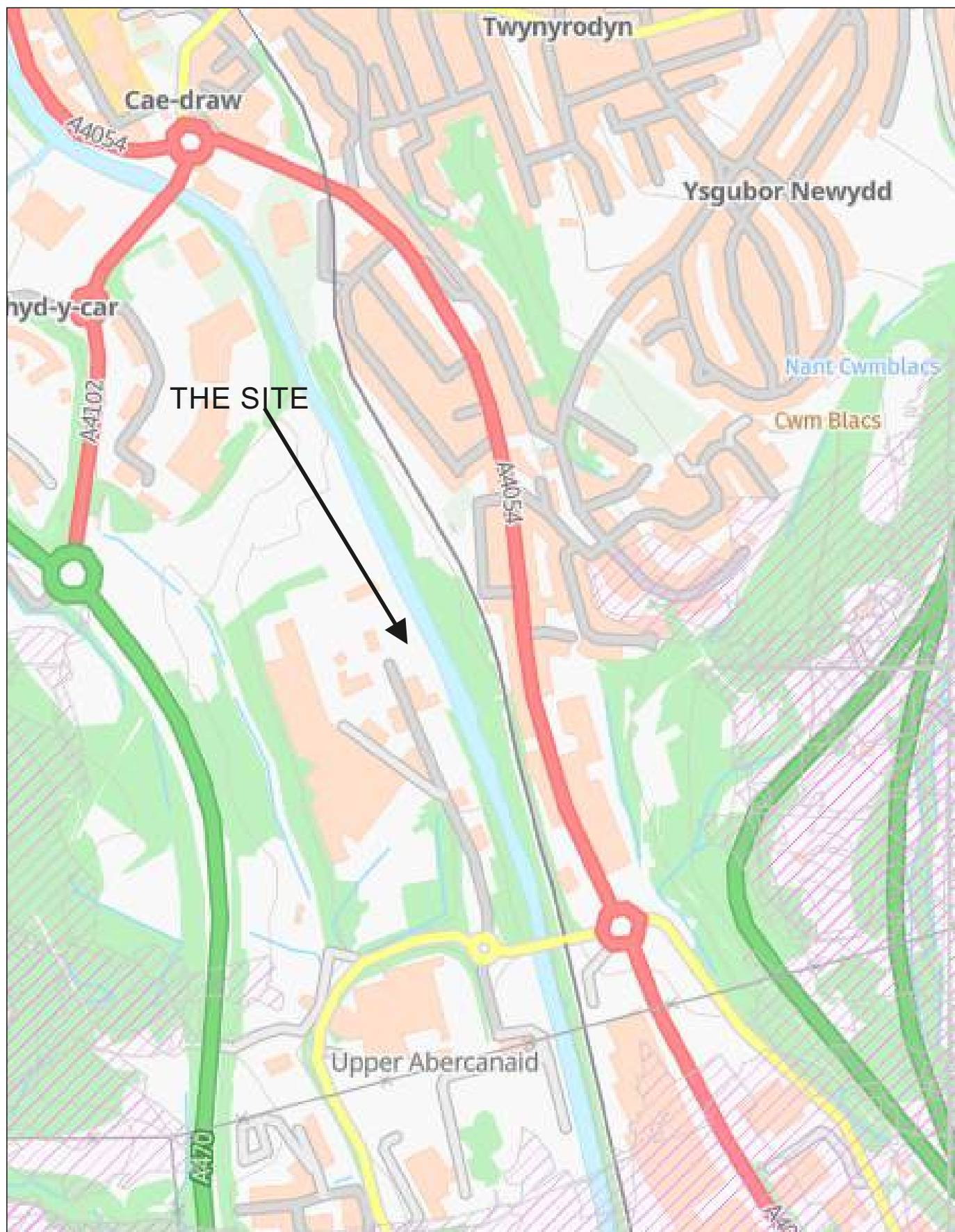


FIGURE 21

C.A. VIEWER SHOWING ALL RECORDED MINING AS HATCHING.

TABLE 2 INITIAL GROUND GAS RISK ASSESSMENT AT THE WILLOWS, ABERCANAID.					
SOURCE	PATHWAY	RECEPTOR	CONSEQUENCE CLASSIFICATION	RISK	FURTHER ACTION
HAZARDOUS GROUND GAS FROM OFF SITE SOURCE	INHALATION, INJURY FROM EXPLOSION	SITE USERS, VISITORS, CONSTRUCTION WORKERS	SEVERE	LOW. NO POSSIBILITY OF OFF SITE GENERATION OF LANDFILL GASES MIGRATING ONTO SITE. NO RISK FROM MINE GAS MIGRATION. .	NO FURTHER ACTION REQUIRED
HAZARDOUS GROUND GAS FROM OFF SITE SOURCE	DAMAGE FROM EXPLOSION	BUILDINGS	SEVERE		
HAZARDOUS GROUND GAS FROM ON SITE SOURCE	INHALATION, INJURY FROM EXPLOSION	SITE USERS, VISITORS, CONSTRUCTION WORKERS	SEVERE	MEDIUM. SLIGHT POSSIBILITY OF ON SITE GAS GENERATION FROM MADE GROUND.	ON SITE QUANTIFICATION VIA AN INTRUSIVE INVESTIGATION REQUIRED
HAZARDOUS GROUND GAS FROM ON SITE SOURCE	DAMAGE FROM EXPLOSION	BUILDINGS	SEVERE		
RADON GAS	LONG TERM HAZARD FROM INHALATION	SITE USERS	SEVERE	LOW. 1%-3% LOCAL PROPERTIES ABOVE RADON ACTION LEVEL.	NO RADON PROTECTION MEASURES REQUIRED

18. POTENTIAL POLLUTANT LINKAGES IN THE C.S.M. (TABLES 1 AND 2)

POTENTIAL CONTAMINANT-PATHWAY-RECEPTOR LINKAGES FOR A COMMERCIAL DEVELOPMENT ADJACENT TO, OR BUILT ON CONTAMINATED LAND

PATHWAYS:-

VAPOUR/GROUND GAS-AIR-INHALATION OR ABSORPTION THROUGH OTHER MEMBRANES (THIS RISK HAS NOT BEEN REMOVED FROM TABLE 2)

SOIL- INHALATION, INGESTION OR DERMAL CONTACT

GROUNDWATER-INHALATION, INGESTION OR DERMAL CONTACT

SURFACE WATER-INHALATION, INGESTION OR DERMAL CONTACT

ALL THE ABOVE ARE CONSIDERED POSSIBLE PATHWAYS TO HUMAN OR ANIMAL RECEPTORS.

GROUNDWATER AND SURFACE WATER ARE RECEPTORS IN THEIR OWN RIGHT (CONTROLLED WATERS) AS ARE PLANTS, ANIMALS AND THE ENVIRONMENT.

HUMAN RECEPTORS ON THE SITE WOULD INCLUDE:-

CONSTRUCTION WORKERS

USERS/ OCCUPIERS OF THE COMMERCIAL PREMISES

NEIGHBOURS

PASSING PEDESTRIANS/ WALKERS

TRESSPASSERS

Surface water and groundwater make up the controlled waters considered as possible receptors in Table 1. The reason for this is the possible leaching of contaminants from any Made Ground by rainwater then making its way downward through the underlying Secondary (A) Aquifer, or even into the Secondary (A) Bedrock Aquifer. Previous work in the area by the author, including BRE365 testing, has demonstrated high permeability rates and a moderately high water table. Onward migration could possibly occur and reach controlled surface or groundwaters off site. Surface run-off could also be considered as a possible pathway either directly into surface waters or via existing surface water drainage systems. Ground gas from on-site sources is not being considered a possibility in Table 2. The risk from landfill gas and mine gas has been negated and removed from Table 2.

19. CONCLUSIONS

The author considers this Phase 1 desk study is sufficient to discharge Condition 4i of the planning conditions. The desk study used extensive research to conclude there was a moderate risk of soil contamination at the site. The risk from on-site gas production from Made Ground is still considered a possibility. This will require further quantification by an intrusive investigation. Since there are no nearby landfills, mine gas was considered as the only remaining gas risk to the site. This risk has now been removed in accordance with CL:AIRE guidance.

This now means a proportionate, targeted intrusive site investigation will be required as per Condition 4ii. The results of this will determine the response to Condition 4iii. Conditions 4iv and 5 are the same and are presumably a cut and paste error. Verification of a remediation scheme does not normally require pre-commencement discharge as this is virtually impossible to achieve prior to the construction phase. Therefore, it must be assumed that as in Condition 5, the verification report will be pre-occupation.

Richard Davies BSc. (Hons), MSc., F.G.S.

27/01/2026

APPENDIX A
GROUNDSURE
ENVIROINSIGHT AND GEOINSIGHT REPORTS
THE WILLOWS
ABERCANAID

305205, 205130

Order Details

Date: 07/09/2021
Your ref: ABERCANAI
Our Ref: GS-8174379
Client: Rhondda Geotechnical Services

Site Details

Location: 305186 205180
Area: 0.59 ha
Authority: [Merthyr Tudful - Merthyr Tydfil County Borough Council](#)

**Summary of findings**

p. 2

Aerial image

p. 8

OS MasterMap site plan

p.13

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
14	1.1	<u>Historical industrial land uses</u>	15	11	82	236	-
27	1.2	<u>Historical tanks</u>	0	0	17	13	-
28	1.3	<u>Historical energy features</u>	0	0	19	13	-
30	1.4	Historical petrol stations	0	0	0	0	-
30	1.5	<u>Historical garages</u>	0	0	0	14	-
31	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
32	2.1	<u>Historical industrial land uses</u>	18	11	108	307	-
48	2.2	<u>Historical tanks</u>	0	0	25	17	-
50	2.3	<u>Historical energy features</u>	0	0	41	24	-
53	2.4	Historical petrol stations	0	0	0	0	-
53	2.5	<u>Historical garages</u>	0	0	0	29	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
55	3.1	Active or recent landfill	0	0	0	0	-
55	3.2	Historical landfill (BGS records)	0	0	0	0	-
56	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
56	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
56	3.5	Historical waste sites	0	0	0	0	-
56	3.6	Licensed waste sites	0	0	0	0	-
56	3.7	<u>Waste exemptions</u>	0	0	9	9	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
59	4.1	<u>Recent industrial land uses</u>	0	0	10	-	-
60	4.2	<u>Current or recent petrol stations</u>	0	0	0	2	-
61	4.3	Electricity cables	0	0	0	0	-
61	4.4	Gas pipelines	0	0	0	0	-
61	4.5	Sites determined as Contaminated Land	0	0	0	0	-



61	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
61	4.7	Regulated explosive sites	0	0	0	0	-
62	4.8	Hazardous substance storage/usage	0	0	0	0	-
62	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
62	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
62	4.11	<u>Licensed pollutant release (Part A(2)/B)</u>	0	0	0	3	-
63	4.12	Radioactive Substance Authorisations	0	0	0	0	-
63	4.13	<u>Licensed Discharges to controlled waters</u>	0	0	6	1	-
64	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
65	4.15	Pollutant release to public sewer	0	0	0	0	-
65	4.16	List 1 Dangerous Substances	0	0	0	0	-
65	4.17	<u>List 2 Dangerous Substances</u>	0	0	0	1	-
65	4.18	<u>Pollution Incidents (EA/NRW)</u>	0	0	0	2	-
66	4.19	Pollution inventory substances	0	0	0	0	-
66	4.20	Pollution inventory waste transfers	0	0	0	0	-
66	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
67	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
69	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
71	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
72	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
72	5.5	Groundwater vulnerability- local information	None (within 0m)				
73	5.6	<u>Groundwater abstractions</u>	0	0	0	1	0
74	5.7	<u>Surface water abstractions</u>	0	0	0	0	2
75	5.8	Potable abstractions	0	0	0	0	0
75	5.9	Source Protection Zones	0	0	0	0	-
75	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
76	6.1	<u>Water Network (OS MasterMap)</u>	0	3	14	-	-



78	6.2	<u>Surface water features</u>	1	0	4	-	-
78	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
79	6.4	<u>WFD Surface water bodies</u>	0	1	0	-	-
79	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
80	7.1	<u>Risk of Flooding from Rivers and Sea (RoFRaS)</u>	High (within 50m)				
81	7.2	Historical Flood Events	0	0	0	-	-
81	7.3	Flood Defences	0	0	0	-	-
81	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
81	7.5	Flood Storage Areas	0	0	0	-	-
82	7.6	<u>Flood Zone 2</u>	Identified (within 50m)				
83	7.7	<u>Flood Zone 3</u>	Identified (within 50m)				
Page	Section	Surface water flooding					
84	8.1	<u>Surface water flooding</u>	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding					
86	9.1	<u>Groundwater flooding</u>	Low (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
87	10.1	<u>Sites of Special Scientific Interest (SSSI)</u>	0	0	0	1	0
88	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
88	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
88	10.4	Special Protection Areas (SPA)	0	0	0	0	0
88	10.5	National Nature Reserves (NNR)	0	0	0	0	0
89	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
89	10.7	<u>Designated Ancient Woodland</u>	0	0	0	1	40
91	10.8	Biosphere Reserves	0	0	0	0	0
91	10.9	Forest Parks	0	0	0	0	0
91	10.10	Marine Conservation Zones	0	0	0	0	0
91	10.11	Green Belt	0	0	0	0	0
91	10.12	Proposed Ramsar sites	0	0	0	0	0



92	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
92	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
92	10.15	Nitrate Sensitive Areas	0	0	0	0	0
92	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
93	10.17	SSSI Impact Risk Zones	0	-	-	-	-
93	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
94	11.1	World Heritage Sites	0	0	0	-	-
95	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
95	11.3	National Parks	0	0	0	-	-
95	11.4	Listed Buildings	0	0	1	-	-
96	11.5	Conservation Areas	0	0	0	-	-
96	11.6	Scheduled Ancient Monuments	0	0	0	-	-
96	11.7	Registered Parks and Gardens	0	0	0	-	-

Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
97	12.1	Agricultural Land Classification	Grade 3b (within 250m)				
98	12.2	Open Access Land	0	0	0	-	-
98	12.3	Tree Felling Licences	0	0	0	-	-
98	12.4	Environmental Stewardship Schemes	0	0	0	-	-
98	12.5	Countryside Stewardship Schemes	0	0	0	-	-

Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
100	13.1	Priority Habitat Inventory	0	0	0	-	-
100	13.2	Habitat Networks	0	0	0	-	-
100	13.3	Open Mosaic Habitat	0	0	0	-	-
100	13.4	Limestone Pavement Orders	0	0	0	-	-

Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
101	14.1	10k Availability	Identified (within 500m)				
102	14.2	Artificial and made ground (10k)	0	0	0	0	-
103	14.3	Superficial geology (10k)	0	0	0	0	-



103	14.4	Landslip (10k)	0	0	0	0	-
104	14.5	Bedrock geology (10k)	0	0	0	0	-
104	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
<u>105</u>	<u>15.1</u>	<u>50k Availability</u>	Identified (within 500m)				
<u>106</u>	<u>15.2</u>	<u>Artificial and made ground (50k)</u>	1	0	2	2	-
<u>107</u>	<u>15.3</u>	<u>Artificial ground permeability (50k)</u>	1	0	-	-	-
<u>108</u>	<u>15.4</u>	<u>Superficial geology (50k)</u>	1	0	2	0	-
<u>109</u>	<u>15.5</u>	<u>Superficial permeability (50k)</u>	Identified (within 50m)				
109	15.6	Landslip (50k)	0	0	0	0	-
109	15.7	Landslip permeability (50k)	None (within 50m)				
<u>110</u>	<u>15.8</u>	<u>Bedrock geology (50k)</u>	2	0	1	1	-
<u>111</u>	<u>15.9</u>	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
<u>111</u>	<u>15.10</u>	<u>Bedrock faults and other linear features (50k)</u>	1	0	1	7	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
<u>113</u>	<u>16.1</u>	<u>BGS Boreholes</u>	0	0	13	-	-
Page	Section	Natural ground subsidence					
<u>115</u>	<u>17.1</u>	<u>Shrink swell clays</u>	Very low (within 50m)				
<u>116</u>	<u>17.2</u>	<u>Running sands</u>	Low (within 50m)				
<u>118</u>	<u>17.3</u>	<u>Compressible deposits</u>	Moderate (within 50m)				
<u>120</u>	<u>17.4</u>	<u>Collapsible deposits</u>	Negligible (within 50m)				
<u>121</u>	<u>17.5</u>	<u>Landslides</u>	Low (within 50m)				
<u>123</u>	<u>17.6</u>	<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
125	18.1	Natural cavities	0	0	0	0	-
<u>126</u>	<u>18.2</u>	<u>BritPits</u>	0	0	0	5	-
<u>127</u>	<u>18.3</u>	<u>Surface ground workings</u>	10	0	36	-	-
<u>129</u>	<u>18.4</u>	<u>Underground workings</u>	0	0	0	17	76
132	18.5	Historical Mineral Planning Areas	0	0	0	0	-



<u>133</u>	<u>18.6</u>	<u>Non-coal mining</u>	1	0	3	0	1
133	18.7	Mining cavities	0	0	0	0	0
134	18.8	JPB mining areas	None (within 0m)				
<u>134</u>	<u>18.9</u>	<u>Coal mining</u>	Identified (within 0m)				
134	18.10	Brine areas	None (within 0m)				
134	18.11	Gypsum areas	None (within 0m)				
135	18.12	Tin mining	None (within 0m)				
135	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
<u>136</u>	<u>19.1</u>	<u>Radon</u>	Between 1% and 3% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
<u>137</u>	<u>20.1</u>	<u>BGS Estimated Background Soil Chemistry</u>	2	0	-	-	-
137	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
137	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
138	21.1	Underground railways (London)	0	0	0	-	-
138	21.2	Underground railways (Non-London)	0	0	0	-	-
139	21.3	Railway tunnels	0	0	0	-	-
<u>139</u>	<u>21.4</u>	<u>Historical railway and tunnel features</u>	10	9	37	-	-
141	21.5	Royal Mail tunnels	0	0	0	-	-
<u>141</u>	<u>21.6</u>	<u>Historical railways</u>	0	1	4	-	-
<u>142</u>	<u>21.7</u>	<u>Railways</u>	0	0	5	-	-
142	21.8	Crossrail 1	0	0	0	0	-
142	21.9	Crossrail 2	0	0	0	0	-
143	21.10	HS2	0	0	0	0	-

Recent aerial photograph



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Capture Date: 14/04/2020

Site Area: 0.59ha



Recent site history - 2017 aerial photograph



Capture Date: 17/06/2017

Site Area: 0.59ha



Recent site history - 2010 aerial photograph



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Capture Date: 22/05/2010

Site Area: 0.59ha



Recent site history - 2008 aerial photograph



Capture Date: 12/05/2008

Site Area: 0.59ha



Recent site history - 2000 aerial photograph

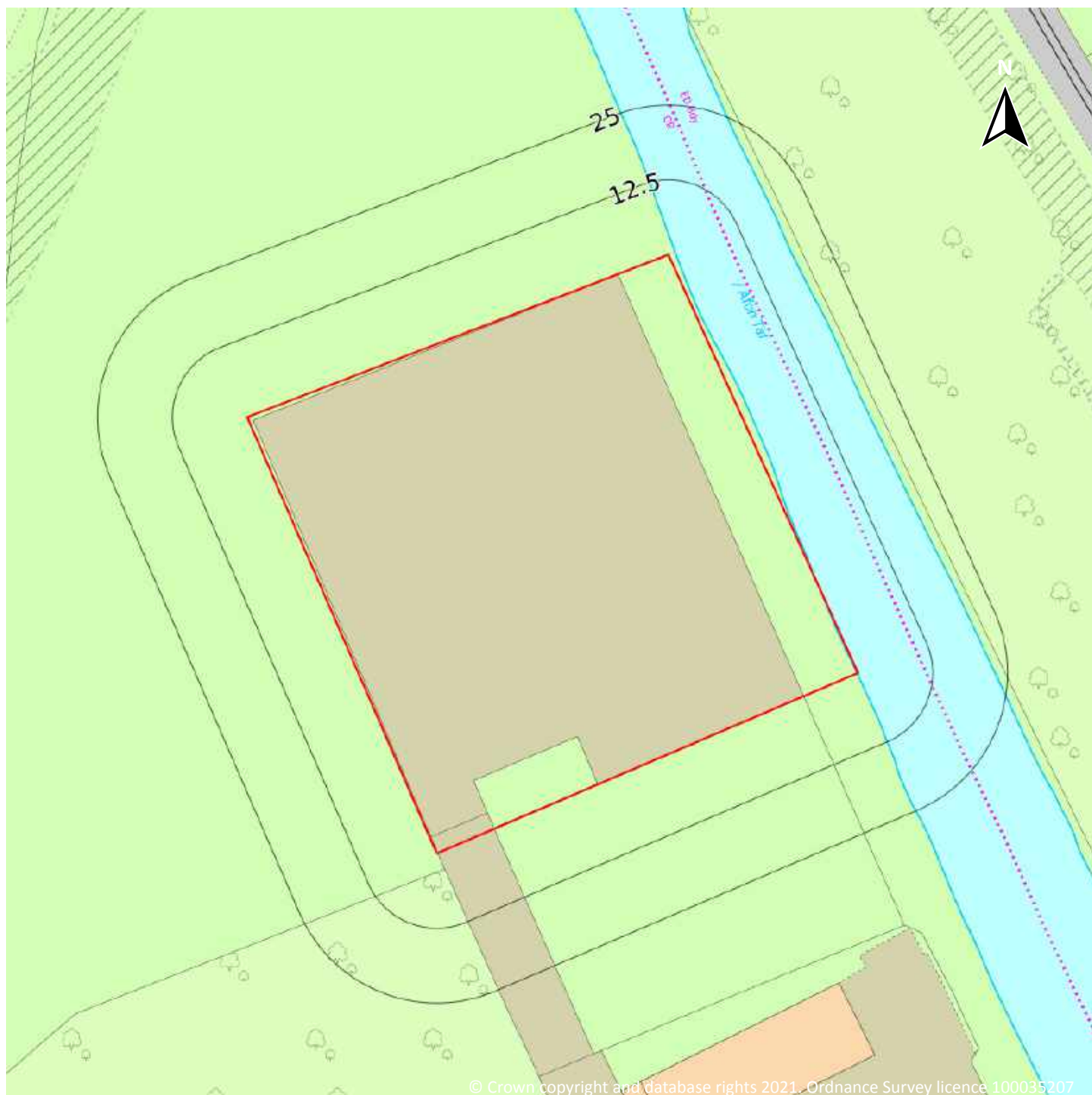


Capture Date: 18/06/2000

Site Area: 0.59ha



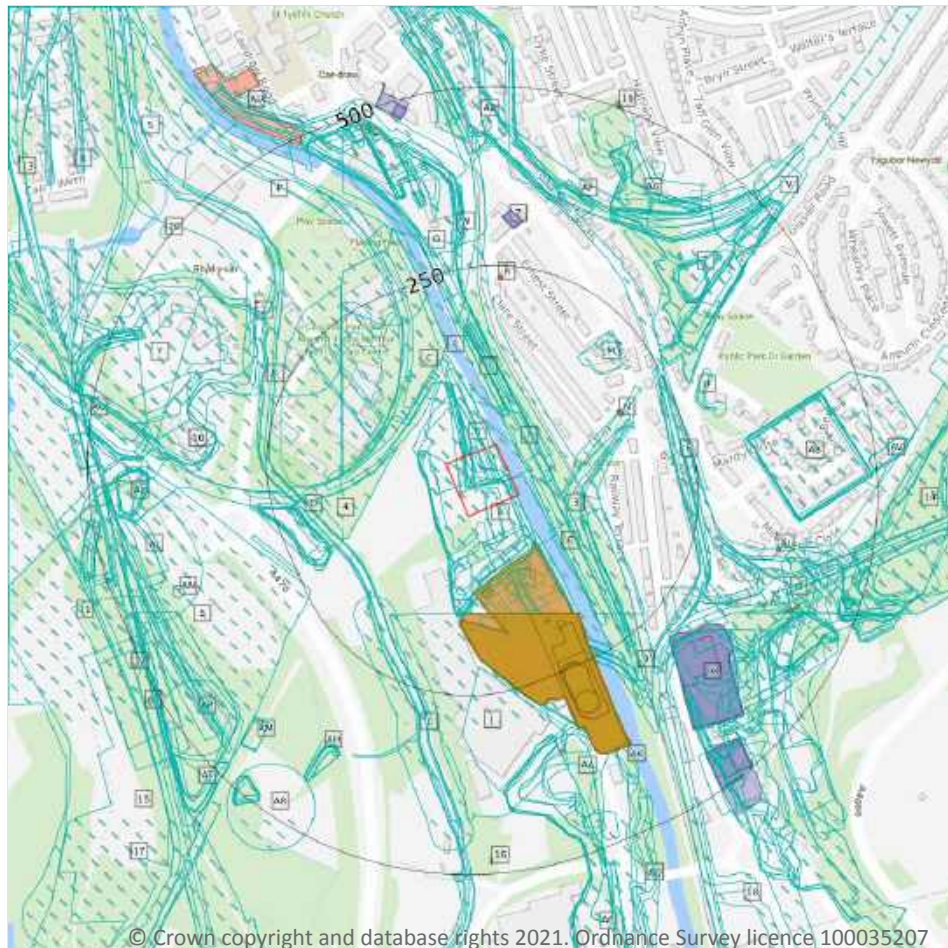
OS MasterMap site plan



Site Area: 0.59ha



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

344

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

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
1	On site	Railway Sidings	1938	1043509



ID	Location	Land use	Dates present	Group ID
2	On site	Railway Sidings	1901 - 1903	1099240
A	On site	Unspecified Pit	1948	1028168
A	On site	Unspecified Ground Workings	1922	1041286
A	On site	Unspecified Ground Workings	1875	1095216
A	On site	Unspecified Ground Workings	1938	1112327
A	On site	Unspecified Ground Workings	1915 - 1921	1132624
A	On site	Unspecified Heap	1901	1146659
A	On site	Unspecified Heap	1903	1153316
B	On site	Railway Sidings	1922	1035040
B	On site	Railway Sidings	1901	1041212
B	On site	Railway Sidings	1915	1109620
B	On site	Railway Sidings	1922	1128475
C	On site	Railway Sidings	1875	1048921
D	On site	Railway Sidings	1948	1124869
E	22m E	Railway Sidings	1901	1077181
F	22m NE	Railway Sidings	1901	1072885
3	38m NE	Railway Sidings	1921	1058827
G	39m N	Railway Sidings	1915	1149378
F	41m NE	Railway Sidings	1922	1089749
F	41m NE	Railway Sidings	1922	1090053
H	41m SE	Dairy	1982	1131358
I	42m N	Railway Sidings	1922	1072560
I	42m N	Railway Sidings	1922	1122715
H	45m SE	Unspecified Depot	1992	1012586
I	45m N	Railway Sidings	1901	1138033
H	56m SE	Disused Wire Works	1903	1022160
H	56m S	Unspecified Ground Workings	1921	1101754
E	64m E	Railway Sidings	1901	1118353



ID	Location	Land use	Dates present	Group ID
H	65m SE	Wire Works	1901	993624
E	66m SE	Railway Sidings	1965	1033994
E	68m E	Railway Sidings	1915	1108636
H	68m SE	Gas Works	1921 - 1922	1088206
4	72m W	Unspecified Heap	1875	1000221
H	75m SE	Gas Works	1915	1078041
H	76m SE	Gas Works	1938	1148777
D	76m NW	Railway Sidings	1921	1058826
H	83m SE	Railway Sidings	1921	1112415
D	84m NW	Unspecified Ground Workings	1975	1119321
D	84m NW	Unspecified Ground Workings	1982 - 1992	1139042
H	89m SE	Railway Sidings	1922	1077814
H	89m SE	Railway Sidings	1922	1118808
H	92m SE	Railway Sidings	1915	1051677
E	96m SE	Railway Sidings	1922	1041997
E	96m SE	Railway Sidings	1922	1107072
H	99m S	Unspecified Tank	1921	1045928
D	100m NW	Unspecified Pit	1875	1139609
H	105m SE	Railway Sidings	1901	1111455
H	105m S	Unspecified Tank	1922 - 1948	1139757
H	107m S	Unspecified Tank	1915	1057447
D	109m NW	Unspecified Pit	1901	1067163
H	110m SE	Dairy	1975	1124568
H	116m S	Unspecified Heap	1922	1063078
H	116m S	Unspecified Heap	1922	1115001
H	123m SE	Unspecified Tank	1921	1016568
C	125m NW	Railway Station	1903	1016056
D	126m NW	Junction Station	1901	1008289



ID	Location	Land use	Dates present	Group ID
G	136m N	Railway Sidings	1965	1035791
J	137m S	Unspecified Factory	1988	1078765
D	145m W	Unspecified Pit	1976 - 1992	1094811
D	146m NW	Unspecified Heap	1948	1000218
H	151m S	Unspecified Works	1964 - 1968	1119117
K	161m SW	Disused Canal	1915 - 1921	1054695
5	162m SW	Disused Canal	1938 - 1948	1106578
L	163m SW	Disused Canal	1922	1052971
K	163m SW	Old Canal	1901	1004655
L	163m SW	Disused Canal	1988	1063494
M	165m NE	Unspecified Heap	1875	1000219
H	166m SE	Unspecified Tank	1921	1016566
H	173m SE	Gasometer	1922	1141690
H	175m SE	Unspecified Tanks	1948	1009924
H	176m SE	Unspecified Tank	1915	1118158
H	176m SE	Unspecified Tank	1921	1128118
H	177m SE	Unspecified Tank	1938	1121910
G	179m N	Unspecified Commercial/Industrial	1903 - 1915	1059225
O	181m W	Cuttings	1901	994293
H	184m SE	Gasometer	1922	1074178
H	187m SE	Gasometer	1915	1057691
H	187m SE	Unspecified Tank	1938	1102073
O	192m SW	Unspecified Heap	1948	1045692
O	194m SW	Unspecified Disused Tip	1976 - 1992	1040689
O	195m SW	Unspecified Heap	1922	1055353
M	195m NE	Unspecified Ground Workings	1922	1133198
P	195m NW	Unspecified Tip	1875	1018882
O	196m SW	Unspecified Heap	1915	1130160



ID	Location	Land use	Dates present	Group ID
O	196m SW	Unspecified Heap	1921	1122578
O	197m SW	Unspecified Heap	1965	1115229
D	199m NW	Unspecified Ground Workings	1948	1151511
O	204m SW	Railway Sidings	1875	1065269
G	204m N	Railway Sidings	1921 - 1922	1058825
J	211m S	Unspecified Factory	1964 - 1968	1140854
G	214m N	Unspecified Commercial/Industrial	1938	1148530
Q	220m E	Tramway Sidings	1901	1139064
Q	222m E	Tramway Sidings	1903	1037417
6	222m E	Disused Mineral Railway Sidings	1948	1012579
Q	222m E	Mineral Railway Sidings	1921 - 1922	1100180
Q	228m E	Mineral Railway Sidings	1915	1087857
H	236m SE	Gasometers	1915 - 1921	1073226
Q	236m SE	Railway Sidings	1875	1104858
H	240m SE	Gas Holder Station	1988	1006107
H	242m SE	Gasometer	1922	1120778
S	242m SW	Railway Land	1922	1034338
G	244m N	Railway Sidings	1901	1153434
H	245m SE	Unspecified Tanks	1964 - 1988	1148631
7	245m E	Unspecified Ground Workings	1901	996781
H	245m SE	Unspecified Tanks	1948	1091755
H	246m SE	Gasometers	1938	1142083
O	247m SW	Unspecified Pit	1875	1028169
G	251m N	Railway Sidings	1875	1137826
T	260m NE	Unspecified Disused Tips	1992	1152969
T	262m NE	Unspecified Disused Tips	1982	1035352
T	262m NE	Unspecified Disused Tips	1975	1119189
T	267m NE	Unspecified Heap	1875	1146603



ID	Location	Land use	Dates present	Group ID
8	273m W	Railway Land	1922	1119885
G	277m N	Unspecified Commercial/Industrial	1922	1069815
U	279m NE	Unspecified Ground Workings	1921	1045734
U	282m NE	Unspecified Ground Workings	1901	1086016
G	285m N	Unspecified Commercial/Industrial	1948	1045433
V	286m NE	Cuttings	1875	1038997
W	286m N	Railway Building	1901	1058943
9	286m SE	Railway Building	1948	1013039
H	288m SE	Gasometer	1922	1137843
Y	290m NW	Ironstone Pit	1875	1000019
T	290m NE	Cuttings	1921 - 1948	1078717
Q	290m SE	Unspecified Commercial/Industrial	1915	995693
T	293m NE	Cuttings	1915	1067333
T	294m NE	Cuttings	1938	1079124
Y	297m W	Unspecified Disused Pit	1901	1087565
X	297m SE	Garage	1988	1033771
Y	303m NW	Unspecified Disused Pit	1903	1125751
T	304m NE	Cuttings	1901 - 1903	1114981
Y	305m NW	Unspecified Disused Pit	1948	1085717
X	309m SE	Unspecified Ground Workings	1938	1114717
X	309m SE	Unspecified Ground Workings	1938	1125123
W	310m N	Railway Building	1965	1041133
AA	320m SE	Unspecified Heap	1903	1060640
Q	321m SE	Smithy	1875	1032867
AB	321m E	Isolation Hospital	1921	1118597
10	324m W	Unspecified Heap	1922 - 1938	1076026
AC	325m S	Ground Workings and Refuse Heap	1915 - 1921	1115187
AB	327m E	Hospital	1965	1150447



ID	Location	Land use	Dates present	Group ID
AB	327m E	Isolation Hospital	1922	1103133
AA	327m SE	Unspecified Heap	1901	1113406
AC	328m S	Unspecified Ground Workings	1922	1035343
AC	328m S	Unspecified Ground Workings	1922	1097065
AB	328m E	Hospital	1975	1047975
AB	328m E	Hospital	1982 - 1992	1079164
AC	329m S	Unspecified Ground Workings	1938	1056607
AC	329m S	Unspecified Ground Workings	1938	1147908
AB	330m E	Isolation Hospital	1938	1055285
T	330m NE	Unspecified Heap	1921 - 1922	1060949
AB	330m E	Isolation Hospital	1948	1036929
Q	331m E	Unspecified Ground Workings	1965	1048751
T	333m NE	Unspecified Heap	1965	1062866
AC	333m SE	Unspecified Heap	1968	1118423
AC	333m SE	Unspecified Heap	1964	1147021
AC	333m SE	Unspecified Ground Workings	1875	1118814
T	334m NE	Unspecified Heap	1938	1080492
T	335m NE	Unspecified Heaps	1948	1021411
T	335m NE	Unspecified Heap	1915	1094589
AB	337m E	Corporation Isolation Hospital	1915	1016531
Y	342m NW	Railway Sidings	1875	1033887
AD	345m N	Railway Sidings	1915	1121110
AE	345m N	Railway Sidings	1921	1086396
G	346m N	Railway Building	1921	1144279
AD	347m N	Railway Sidings	1922	1107469
AD	349m NE	Railway Sidings	1875	1126938
G	349m N	Railway Building	1965	1118439
AD	349m N	Railway Sidings	1901	1142547



ID	Location	Land use	Dates present	Group ID
T	351m NE	Cuttings	1921	1033896
T	352m NE	Cuttings	1938 - 1948	1143701
X	354m SE	Unspecified Heap	1903	1000275
G	354m N	Railway Station	1901 - 1903	1050143
T	354m NE	Cuttings	1915	1109266
Q	355m SE	Unspecified Disused Tip	1975	1058080
Q	355m SE	Unspecified Disused Tip	1982	1074829
T	356m NE	Cuttings	1922	1035299
AF	357m N	Railway Sidings	1922	1081683
AF	357m N	Railway Sidings	1922	1107460
T	359m NE	Old Lime Kiln	1921	1115185
X	360m SE	Unspecified Ground Workings	1901	1144145
AE	361m N	Railway Sidings	1903	1040381
T	363m NE	Old Lime Kiln	1938	1127489
X	363m SE	Unspecified Ground Workings	1921 - 1968	1053771
P	363m N	Railway Sidings	1901	1125503
AG	364m NE	Unspecified Heaps	1875	1021410
T	364m NE	Lime Kiln	1922	1058356
T	364m NE	Old Lime Kiln	1915	1079512
AH	365m SW	Unspecified Ground Workings	1921	1043796
X	366m SE	Unspecified Ground Workings	1901	1108350
AA	366m S	Unspecified Ground Workings	1901	1110573
X	367m SE	Unspecified Ground Workings	1921 - 1922	1043806
G	368m N	Railway Station	1921	1068383
AJ	368m W	Old Ironstone Level	1948	1130693
T	369m NE	Cuttings	1901 - 1903	1142892
Y	369m W	Unspecified Ground Workings	1965	996768
AK	370m SE	Unspecified Ground Workings	1903	1121315

ID	Location	Land use	Dates present	Group ID
AH	370m SW	Unspecified Ground Workings	1922	1115558
AH	370m SW	Unspecified Pit	1948	1142608
G	371m N	Railway Building	1965	1094293
AH	371m SW	Unspecified Ground Workings	1915	1135175
X	371m SE	Unspecified Ground Workings	1915	1120275
AH	372m SW	Unspecified Pit	1938	1080102
AG	375m NE	Unspecified Ground Workings	1922 - 1938	1155431
AG	376m NE	Unspecified Ground Workings	1915	1143483
AG	379m NE	Unspecified Ground Workings	1948	1067496
AK	381m SE	Unspecified Heap	1901	1000277
AL	383m W	Unspecified Disused Tip	1976 - 1992	1048476
G	386m N	Railway Building	1965	1013434
G	387m N	Railway Station	1875	1126913
Q	395m SE	Unspecified Heap	1915 - 1921	1118831
T	396m NE	Lime Kiln	1875	1032641
Q	400m E	Drift	1921	1012106
G	400m N	Railway Building	1901	1128512
Q	401m SE	Unspecified Heap	1964 - 1968	1109238
T	401m NE	Old Lime Kiln	1948	1014941
AM	402m SW	Cuttings	1948	1128482
Q	402m E	Coal Level	1901 - 1903	1038934
AM	402m SW	Cuttings	1915	1082902
Q	404m SE	Old Coal Level	1948	1032268
AN	404m SW	Old Ironstone Level	1922	1096717
AN	404m SW	Old Ironstone Level	1922	1154402
AO	405m W	Cuttings	1938	1076223
Q	406m SE	Coal Level	1938	1076230
Q	406m SE	Coal Level	1938	1085532



ID	Location	Land use	Dates present	Group ID
Q	406m E	Unspecified Drift	1915	1009875
AG	406m NE	Unspecified Ground Workings	1901	1073741
Q	407m E	Unspecified Ground Workings	1922	1080871
Q	407m E	Unspecified Ground Workings	1922	1127433
AM	407m SW	Cuttings	1922	1125692
AO	407m W	Cuttings	1915 - 1922	1139704
AD	408m N	Railway Sidings	1965	1073498
Q	412m E	Unspecified Ground Workings	1875	1056543
AL	414m W	Unspecified Heap	1948	1060988
S	414m W	Old Ironstone Level	1903	1086239
AL	415m W	Unspecified Heap	1922	1072959
AO	415m W	Cuttings	1976 - 1992	1043912
AO	415m W	Cuttings	1965	1150367
AP	415m SW	Unspecified Heap	1969	1054370
AP	415m SW	Unspecified Heap	1964	1084558
S	416m W	Refuse Heap	1938	1068317
AQ	416m SE	Unspecified Heaps	1964 - 1968	1122836
AL	417m W	Unspecified Heap	1915	1150461
AP	418m SW	Unspecified Disused Tip	1979	1005164
AL	419m W	Unspecified Heap	1921	1130093
AO	420m W	Cuttings	1901 - 1903	1143978
S	422m W	Old Ironstone Level	1901	1092266
AO	423m W	Cuttings	1948	1039592
AD	423m N	Railway Sidings	1915	1075877
Q	424m E	Cuttings	1938	994292
AR	430m SW	Unspecified Disused Workings	1988	1032165
Q	433m E	Drift Mill	1922	1143059
AG	435m NE	Unspecified Pits	1875	1007934



ID	Location	Land use	Dates present	Group ID
V	436m NE	Cuttings	1922	1135408
V	436m NE	Cuttings	1948	1103374
AD	437m N	Railway Building	1965	1013433
Q	441m SE	Coal Level	1921	1066829
AL	441m W	Cuttings	1965	994294
X	442m SE	Cuttings	1903	994291
11	442m SW	Railway Sidings	1921 - 1938	1070413
Q	443m E	Unspecified Ground Workings	1875	1048809
AO	443m SW	Railway Sidings	1921	1148132
AQ	444m SE	Unspecified Ground Workings	1903	1126850
X	445m SE	Air Shafts	1903	1027667
Q	447m SE	Coal Level	1922	1061405
Q	447m SE	Coal Level	1922	1139314
S	447m W	Railway Sidings	1922	1114667
AC	449m SE	Cuttings	1938 - 1948	1156503
AC	449m SE	Unspecified Heap	1901	1065056
AD	450m N	Unspecified Tank	1965 - 1975	1043525
AJ	451m SW	Railway Sidings	1915	1059781
Q	451m SE	Coal Level	1915	1146762
X	451m SE	Garage	1988	1033772
AO	452m NW	Unspecified Heap	1938	1108220
AO	452m NW	Unspecified Ground Workings	1915	996769
AQ	454m SE	Unspecified Ground Workings	1901	1077068
X	456m SE	Unspecified Heaps	1948	1021415
X	456m SE	Unspecified Disused Shaft	1964 - 1988	1115610
AD	456m N	Railway Sidings	1922	1052078
AD	456m N	Railway Sidings	1922	1078707
V	457m NE	Cuttings	1901	1056096



ID	Location	Land use	Dates present	Group ID
AO	460m NW	Railway Sidings	1922	1042019
AO	460m NW	Railway Sidings	1922	1134725
X	461m SE	Unspecified Heap	1948	1000276
12	462m SW	Cuttings	1922	1077917
V	463m NE	Cuttings	1901 - 1903	1145151
13	463m NW	Railway Sidings	1915	1040352
Q	465m E	Unspecified Disused Tips	1982	1078804
Q	465m E	Unspecified Disused Tips	1975	1155672
14	467m E	Refuse Heap	1922	1096163
Q	467m E	Unspecified Ground Workings	1922	1084321
G	471m N	Railway Building	1965	1132315
Q	471m E	Unspecified Ground Workings	1938	1148416
Q	472m E	Disused Drift	1948	1000056
Q	472m E	Ground Workings and Refuse Heap	1915	1007282
Q	472m E	Drift	1938	1075832
Q	472m E	Old Shaft	1921	1016163
AS	473m SW	Cuttings	1915	1087226
AS	473m W	Railway Sidings	1903	1033891
15	474m W	Ironstone Pit	1875	1000020
Q	474m E	Unspecified Old Shaft	1903	1003255
AR	475m SW	Unspecified Disused Tip	1979	1005161
Q	476m E	Unspecified Old Shaft	1901	1154189
Q	476m E	Unspecified Ground Workings	1968	1078757
Q	476m E	Unspecified Ground Workings	1964	1108497
AR	477m SW	Unspecified Heap	1948	1070667
AR	477m SW	Unspecified Heap	1921	1101253
G	477m N	Railway Building	1901	1085354
AR	477m SW	Unspecified Heap	1922 - 1938	1134220



ID	Location	Land use	Dates present	Group ID
Q	477m E	Unspecified Old Shaft	1922	1061251
Q	477m E	Unspecified Old Shaft	1922	1128861
AR	478m SW	Unspecified Heap	1915	1072318
Q	480m E	Unspecified Heap	1921	1105200
AO	480m W	Railway Sidings	1901	1107057
Q	480m E	Coal Level	1875	1007519
AT	480m SW	Unspecified Heap	1915	1056034
AT	481m SW	Unspecified Ground Workings	1921	996784
AU	481m NW	Gas Works	1938	1105116
X	481m SE	Unspecified Ground Workings	1903	1147955
Q	481m E	Unspecified Old Shaft	1915	1146321
Q	482m E	Unspecified Old Shaft	1948	1090515
AJ	482m W	Unspecified Ground Workings	1948	996782
AO	483m W	Cuttings	1976	1142556
17	486m SW	Railway Sidings	1875	1033899
AO	486m W	Cuttings	1965	1101162
AO	487m W	Engine House	1938	1019155
Q	488m E	Unspecified Old Shaft	1938	1073820
Q	488m E	Unspecified Old Shaft	1938	1154819
18	488m SE	Unspecified Ground Workings	1922	1100547
AJ	488m W	Cuttings	1938	1066852
AJ	489m W	Unspecified Pit	1965 - 1992	1065060
AO	489m W	Cuttings	1992	1034286
AJ	489m W	Old Ironstone Level	1915	1102750
AJ	490m W	Old Ironstone Level	1921	1134202
AV	490m E	Refuse Heap	1975	1094069
AV	490m E	Refuse Heap	1982	1036749
AJ	491m W	Cuttings	1915	1147521



ID	Location	Land use	Dates present	Group ID
AJ	491m W	Cuttings	1922	1149662
Q	492m E	Unspecified Heap	1948	1050053
AJ	492m W	Old Ironstone Level	1938	1055971
Q	495m E	Engine House	1875	1019124
Q	497m E	Unspecified Pit	1921	1149892
AD	497m N	Railway Building	1938 - 1948	1153659
20	500m NW	Unspecified Pit	1938	1126058

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

30

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 un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
H	69m SE	Gas Works	1919	158867
H	103m S	Unspecified Tank	1919	149694
H	136m S	Gas Holder Station	1984	167846
H	141m S	Gas Works	1971	162383
H	160m SE	Gas Works	1979	158805
H	174m SE	Unspecified Tank	1919	149674
H	184m SE	Gasometer	1919	155800
H	192m SE	Gas Works	1984	166108
H	192m SE	Gas Holder Station	1988 - 1992	167258
H	236m SE	Gas Holder Station	1998	158552
H	242m SE	Gasometers	1919	168337



ID	Location	Land use	Dates present	Group ID
H	245m SE	Unspecified Tank	1962	149675
H	245m SE	Gasometer	1971	155801
H	245m SE	Gas Holder	1984 - 1998	160835
H	246m SE	Gasholders	1988 - 1992	158129
H	246m SE	Tanks	1979	156234
H	246m SE	Gasometers	1979 - 1984	166420
H	288m SE	Unspecified Tank	1962	149676
H	288m SE	Gasometer	1971	155799
H	288m SE	Gas Holder	1984 - 1998	168061
AA	350m S	Unspecified Tank	1988 - 1992	165740
Q	374m SE	Unspecified Tank	1875	149680
Q	381m E	Unspecified Tank	1875	149679
Q	385m E	Unspecified Tank	1875	149687
Q	386m SE	Unspecified Tank	1875	149677
Q	405m SE	Tanks	1875	156256
Q	412m SE	Unspecified Tank	1875	149678
G	445m N	Unspecified Tank	1956	167540
G	462m N	Unspecified Tank	1875	149697
16	477m S	Unspecified Tank	1998	149666

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

32

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

Features are displayed on the Past land use map on **page 14**



ID	Location	Land use	Dates present	Group ID
H	69m SE	Gas Works	1919	93005
H	136m S	Gas Holder Station	1984	89850
H	141m S	Gas Works	1971 - 1979	96102
H	150m S	Electricity Substation	1979 - 1984	94037
H	150m S	Electricity Transformer	1971	87769
N	173m NE	Electricity Substation	1956 - 1989	90985
N	173m NE	Electricity Substation	1996	91155
H	184m SE	Gasometer	1919	87295
H	192m SE	Gas Holder Station	1988 - 1998	91307
H	192m SE	Gas Works	1984	95338
H	213m S	Electricity Substation	1984	85723
H	224m S	Electricity Substation	1979 - 1984	91168
R	231m N	Electricity Substation	1996	85724
R	231m N	Electricity Transformer	1969 - 1989	94411
H	242m SE	Gasometers	1919	91846
H	245m SE	Gasometer	1971	87296
H	245m SE	Gas Holder	1984 - 1998	89492
H	246m SE	Gasholders	1988 - 1992	90201
H	246m SE	Gasometers	1979 - 1984	94333
H	288m SE	Gasometer	1971	87294
H	288m SE	Gas Holder	1984 - 1998	95078
X	312m SE	Electricity Substation	1979 - 1992	91551
X	312m SE	Electricity Substation	1998	88999
X	314m SE	Electricity Transformer	1971	87767
X	326m SE	Electricity Substation	1984	85721
AI	367m E	Electricity Substation	1981 - 1992	94595
AI	368m E	Electricity Transformer	1969	87766
G	461m N	Electricity Substation	1984 - 1989	90337



ID	Location	Land use	Dates present	Group ID
G	470m N	Electricity Transformer	1969	87771
G	471m N	Electricity Substation	1995	85726
AU	488m NW	Old Gas Works	1919	87504
19	499m N	Electricity Substation	1984 - 1996	91887

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0
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Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped 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	14
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Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
X	290m SE	Garage	1971 - 1998	31099
X	291m SE	Garage	1979	31588
X	295m SE	Garage	1984	29053
X	296m SE	Garage	1984 - 1992	30576
X	300m SE	Garage	1962	29697
Z	302m N	Garage	1956 - 1989	30965
Z	302m N	Garage	1956 - 1996	30700



ID	Location	Land use	Dates present	Group ID
X	438m SE	Garage	1971	29666
X	444m SE	Garage	1962	28598
X	445m SE	Garage	1984	28543
X	453m SE	Garage	1979 - 1984	31824
G	473m N	Garage	1984	29060
G	473m N	Garage	1956	31308
G	473m N	Garage	1969	29689

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

0

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

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



2 Past land use - un-grouped



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

2.1 Historical industrial land uses

Records within 500m

444

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 32**

ID	Location	Land Use	Date	Group ID
1	On site	Railway Sidings	1903	1099240
2	On site	Railway Sidings	1938	1043509
A	On site	Unspecified Heap	1901	1146659



ID	Location	Land Use	Date	Group ID
A	On site	Unspecified Ground Workings	1921	1132624
A	On site	Unspecified Ground Workings	1915	1132624
A	On site	Unspecified Ground Workings	1922	1041286
A	On site	Unspecified Ground Workings	1922	1041286
A	On site	Unspecified Pit	1948	1028168
A	On site	Unspecified Heap	1903	1153316
A	On site	Unspecified Ground Workings	1875	1095216
A	On site	Unspecified Ground Workings	1938	1112327
A	On site	Unspecified Ground Workings	1938	1112327
B	On site	Railway Sidings	1901	1041212
B	On site	Railway Sidings	1915	1109620
B	On site	Railway Sidings	1922	1035040
B	On site	Railway Sidings	1922	1128475
C	On site	Railway Sidings	1948	1124869
D	On site	Railway Sidings	1875	1048921
E	22m E	Railway Sidings	1901	1077181
F	22m NE	Railway Sidings	1901	1072885
3	38m NE	Railway Sidings	1921	1058827
G	39m N	Railway Sidings	1915	1149378
F	41m NE	Railway Sidings	1922	1090053
F	41m NE	Railway Sidings	1922	1089749
H	41m SE	Dairy	1982	1131358
I	42m N	Railway Sidings	1922	1122715
I	42m N	Railway Sidings	1922	1072560
H	45m SE	Unspecified Depot	1992	1012586
I	45m N	Railway Sidings	1901	1138033
H	56m SE	Disused Wire Works	1903	1022160
H	56m S	Unspecified Ground Workings	1921	1101754



ID	Location	Land Use	Date	Group ID
E	64m E	Railway Sidings	1901	1118353
H	65m SE	Wire Works	1901	993624
E	66m SE	Railway Sidings	1965	1033994
E	68m E	Railway Sidings	1915	1108636
H	68m SE	Gas Works	1921	1088206
H	71m SE	Gas Works	1922	1088206
H	71m SE	Gas Works	1922	1088206
J	72m W	Unspecified Heap	1875	1000221
H	75m SE	Gas Works	1915	1078041
H	76m SE	Gas Works	1938	1148777
C	76m NW	Railway Sidings	1921	1058826
H	83m SE	Railway Sidings	1921	1112415
C	84m NW	Unspecified Ground Workings	1975	1119321
C	84m NW	Unspecified Ground Workings	1982	1139042
C	84m NW	Unspecified Ground Workings	1992	1139042
H	89m SE	Railway Sidings	1922	1077814
H	89m SE	Railway Sidings	1922	1118808
H	92m SE	Railway Sidings	1915	1051677
E	96m SE	Railway Sidings	1922	1041997
E	96m SE	Railway Sidings	1922	1107072
H	99m S	Unspecified Tank	1921	1045928
C	100m NW	Unspecified Pit	1875	1139609
H	105m SE	Railway Sidings	1901	1111455
H	105m S	Unspecified Tank	1922	1139757
H	105m S	Unspecified Tank	1922	1139757
H	106m S	Unspecified Tank	1948	1139757
H	107m S	Unspecified Tank	1915	1057447
C	109m NW	Unspecified Pit	1901	1067163



ID	Location	Land Use	Date	Group ID
H	109m S	Unspecified Tank	1938	1139757
H	110m SE	Dairy	1975	1124568
H	116m S	Unspecified Heap	1922	1115001
H	116m S	Unspecified Heap	1922	1063078
H	123m SE	Unspecified Tank	1921	1016568
D	125m NW	Railway Station	1903	1016056
C	126m NW	Junction Station	1901	1008289
G	136m N	Railway Sidings	1965	1035791
K	137m S	Unspecified Factory	1988	1078765
C	145m W	Unspecified Pit	1992	1094811
C	145m W	Unspecified Pit	1976	1094811
C	146m NW	Unspecified Heap	1948	1000218
H	151m S	Unspecified Works	1968	1119117
H	151m S	Unspecified Works	1964	1119117
J	161m SW	Disused Canal	1921	1054695
4	162m SW	Disused Canal	1948	1106578
L	163m SW	Disused Canal	1922	1052971
L	163m SW	Disused Canal	1922	1052971
J	163m SW	Disused Canal	1915	1054695
J	163m SW	Old Canal	1901	1004655
L	163m SW	Disused Canal	1988	1063494
M	165m NE	Unspecified Heap	1875	1000219
5	165m SW	Disused Canal	1938	1106578
H	166m SE	Unspecified Tank	1921	1016566
H	173m SE	Gasometer	1922	1141690
H	173m SE	Gasometer	1922	1141690
H	175m SE	Unspecified Tanks	1948	1009924
H	176m SE	Unspecified Tank	1915	1118158



ID	Location	Land Use	Date	Group ID
H	176m SE	Unspecified Tank	1921	1128118
H	177m SE	Unspecified Tank	1938	1121910
G	179m N	Unspecified Commercial/Industrial	1915	1059225
J	181m W	Cuttings	1901	994293
H	184m SE	Gasometer	1922	1074178
H	184m SE	Gasometer	1922	1074178
H	187m SE	Gasometer	1915	1057691
H	187m SE	Unspecified Tank	1938	1102073
J	192m SW	Unspecified Heap	1948	1045692
J	194m SW	Unspecified Disused Tip	1992	1040689
J	194m SW	Unspecified Disused Tip	1976	1040689
J	195m SW	Unspecified Heap	1922	1055353
J	195m SW	Unspecified Heap	1922	1055353
M	195m NE	Unspecified Ground Workings	1922	1133198
M	195m NE	Unspecified Ground Workings	1922	1133198
O	195m NW	Unspecified Tip	1875	1018882
J	196m SW	Unspecified Heap	1915	1130160
J	196m SW	Unspecified Heap	1921	1122578
J	197m SW	Unspecified Heap	1965	1115229
C	199m NW	Unspecified Ground Workings	1948	1151511
J	204m SW	Railway Sidings	1875	1065269
G	204m N	Railway Sidings	1922	1058825
G	204m N	Railway Sidings	1922	1058825
K	211m S	Unspecified Factory	1968	1140854
K	211m S	Unspecified Factory	1964	1140854
G	214m N	Unspecified Commercial/Industrial	1938	1148530
P	220m E	Tramway Sidings	1901	1139064
P	222m E	Tramway Sidings	1903	1037417



ID	Location	Land Use	Date	Group ID
6	222m E	Disused Mineral Railway Sidings	1948	1012579
P	222m E	Mineral Railway Sidings	1921	1100180
P	226m E	Mineral Railway Sidings	1922	1100180
P	226m E	Mineral Railway Sidings	1922	1100180
P	228m E	Mineral Railway Sidings	1915	1087857
P	235m E	Tramway Sidings	1901	1139064
H	236m SE	Gasometers	1921	1073226
P	236m SE	Railway Sidings	1875	1104858
H	240m SE	Gas Holder Station	1988	1006107
H	242m SE	Gasometer	1922	1120778
H	242m SE	Gasometer	1922	1120778
R	242m SW	Railway Land	1922	1034338
R	242m SW	Railway Land	1922	1034338
G	244m N	Railway Sidings	1901	1153434
H	245m SE	Unspecified Tanks	1988	1148631
H	245m SE	Unspecified Tanks	1968	1148631
H	245m SE	Unspecified Tanks	1964	1148631
7	245m E	Unspecified Ground Workings	1901	996781
H	245m SE	Unspecified Tanks	1948	1091755
H	246m SE	Gasometers	1915	1073226
H	246m SE	Gasometers	1938	1142083
J	247m SW	Unspecified Pit	1875	1028169
G	251m N	Railway Sidings	1875	1137826
S	260m NE	Unspecified Disused Tips	1992	1152969
S	262m NE	Unspecified Disused Tips	1975	1119189
S	262m NE	Unspecified Disused Tips	1982	1035352
S	267m NE	Unspecified Heap	1875	1146603
T	273m W	Railway Land	1922	1119885



ID	Location	Land Use	Date	Group ID
T	273m W	Railway Land	1922	1119885
G	277m N	Unspecified Commercial/Industrial	1922	1069815
G	277m N	Unspecified Commercial/Industrial	1922	1069815
U	279m NE	Unspecified Ground Workings	1921	1045734
U	282m NE	Unspecified Ground Workings	1901	1086016
G	285m N	Unspecified Commercial/Industrial	1948	1045433
V	286m NE	Cuttings	1875	1038997
W	286m N	Railway Building	1901	1058943
8	286m SE	Railway Building	1948	1013039
G	288m N	Railway Sidings	1921	1058825
H	288m SE	Gasometer	1922	1137843
H	288m SE	Gasometer	1922	1137843
Y	290m NW	Ironstone Pit	1875	1000019
S	290m NE	Cuttings	1921	1078717
P	290m SE	Unspecified Commercial/Industrial	1915	995693
S	293m NE	Cuttings	1915	1067333
S	294m NE	Cuttings	1938	1079124
S	296m NE	Cuttings	1948	1078717
Y	297m W	Unspecified Disused Pit	1901	1087565
X	297m SE	Garage	1988	1033771
S	300m NE	Cuttings	1922	1078717
S	300m NE	Cuttings	1922	1078717
G	302m N	Unspecified Commercial/Industrial	1903	1059225
Y	303m NW	Unspecified Disused Pit	1903	1125751
S	304m NE	Cuttings	1901	1114981
Y	305m NW	Unspecified Disused Pit	1948	1085717
X	309m SE	Unspecified Ground Workings	1938	1125123
X	309m SE	Unspecified Ground Workings	1938	1114717



ID	Location	Land Use	Date	Group ID
W	310m N	Railway Building	1965	1041133
S	311m NE	Cuttings	1903	1114981
AA	320m SE	Unspecified Heap	1903	1060640
P	321m SE	Smithy	1875	1032867
AB	321m E	Isolation Hospital	1921	1118597
AC	324m W	Unspecified Heap	1922	1076026
AC	324m W	Unspecified Heap	1922	1076026
AD	325m S	Ground Workings and Refuse Heap	1921	1115187
AC	326m W	Unspecified Heap	1938	1076026
AC	326m W	Unspecified Heap	1938	1076026
AB	327m E	Hospital	1965	1150447
AB	327m E	Isolation Hospital	1922	1103133
AB	327m E	Isolation Hospital	1922	1103133
AA	327m SE	Unspecified Heap	1901	1113406
AD	328m S	Unspecified Ground Workings	1922	1097065
AD	328m S	Unspecified Ground Workings	1922	1035343
AB	328m E	Hospital	1975	1047975
AB	328m E	Hospital	1982	1079164
AB	328m E	Hospital	1992	1079164
AD	329m S	Unspecified Ground Workings	1938	1056607
AD	329m S	Unspecified Ground Workings	1938	1147908
AB	330m E	Isolation Hospital	1938	1055285
S	330m NE	Unspecified Heap	1921	1060949
AB	330m E	Isolation Hospital	1948	1036929
P	331m E	Unspecified Ground Workings	1965	1048751
AD	332m S	Ground Workings and Refuse Heap	1915	1115187
S	333m NE	Unspecified Heap	1965	1062866
AD	333m SE	Unspecified Heap	1968	1118423



ID	Location	Land Use	Date	Group ID
AD	333m SE	Unspecified Heap	1964	1147021
AD	333m SE	Unspecified Ground Workings	1875	1118814
S	334m NE	Unspecified Heap	1938	1080492
S	334m NE	Unspecified Heap	1938	1080492
S	334m NE	Unspecified Heap	1922	1060949
S	334m NE	Unspecified Heap	1922	1060949
S	335m NE	Unspecified Heaps	1948	1021411
S	335m NE	Unspecified Heap	1915	1094589
AB	337m E	Corporation Isolation Hospital	1915	1016531
Y	342m NW	Railway Sidings	1875	1033887
AE	345m N	Railway Sidings	1915	1121110
AF	345m N	Railway Sidings	1921	1086396
G	346m N	Railway Building	1921	1144279
AE	347m N	Railway Sidings	1922	1107469
AE	347m N	Railway Sidings	1922	1107469
AE	349m NE	Railway Sidings	1875	1126938
G	349m N	Railway Building	1965	1118439
AE	349m N	Railway Sidings	1901	1142547
S	351m NE	Cuttings	1921	1033896
S	352m NE	Cuttings	1938	1143701
X	354m SE	Unspecified Heap	1903	1000275
G	354m N	Railway Station	1901	1050143
S	354m NE	Cuttings	1915	1109266
S	355m NE	Cuttings	1948	1143701
P	355m SE	Unspecified Disused Tip	1975	1058080
P	355m SE	Unspecified Disused Tip	1982	1074829
S	356m NE	Cuttings	1922	1035299
S	356m NE	Cuttings	1922	1035299



ID	Location	Land Use	Date	Group ID
AG	357m N	Railway Sidings	1922	1081683
AG	357m N	Railway Sidings	1922	1107460
S	359m NE	Old Lime Kiln	1921	1115185
X	360m SE	Unspecified Ground Workings	1901	1144145
AF	361m N	Railway Sidings	1903	1040381
S	363m NE	Old Lime Kiln	1938	1127489
X	363m SE	Unspecified Ground Workings	1921	1053771
O	363m N	Railway Sidings	1901	1125503
AH	364m NE	Unspecified Heaps	1875	1021410
S	364m NE	Lime Kiln	1922	1058356
S	364m NE	Lime Kiln	1922	1058356
S	364m NE	Old Lime Kiln	1915	1079512
AI	365m SW	Unspecified Ground Workings	1921	1043796
G	366m N	Railway Station	1903	1050143
X	366m SE	Unspecified Ground Workings	1901	1108350
AA	366m S	Unspecified Ground Workings	1901	1110573
X	367m SE	Unspecified Ground Workings	1922	1043806
X	367m SE	Unspecified Ground Workings	1922	1043806
G	368m N	Railway Station	1921	1068383
AK	368m W	Old Ironstone Level	1948	1130693
S	369m NE	Cuttings	1901	1142892
Y	369m W	Unspecified Ground Workings	1965	996768
AL	370m SE	Unspecified Ground Workings	1903	1121315
AI	370m SW	Unspecified Ground Workings	1922	1115558
AI	370m SW	Unspecified Ground Workings	1922	1115558
AI	370m SW	Unspecified Pit	1948	1142608
G	371m N	Railway Building	1965	1094293
AI	371m SW	Unspecified Ground Workings	1915	1135175



ID	Location	Land Use	Date	Group ID
X	371m SE	Unspecified Ground Workings	1915	1120275
AI	372m SW	Unspecified Pit	1938	1080102
AI	372m SW	Unspecified Pit	1938	1080102
AH	375m NE	Unspecified Ground Workings	1938	1155431
AH	375m NE	Unspecified Ground Workings	1938	1155431
AH	376m NE	Unspecified Ground Workings	1915	1143483
AH	376m NE	Unspecified Ground Workings	1922	1155431
AH	376m NE	Unspecified Ground Workings	1922	1155431
S	378m NE	Cuttings	1903	1142892
X	378m SE	Unspecified Ground Workings	1968	1053771
X	378m SE	Unspecified Ground Workings	1964	1053771
AH	379m NE	Unspecified Ground Workings	1948	1067496
AL	381m SE	Unspecified Heap	1901	1000277
AM	383m W	Unspecified Disused Tip	1992	1048476
AM	383m W	Unspecified Disused Tip	1976	1048476
G	386m N	Railway Building	1965	1013434
G	387m N	Railway Station	1875	1126913
P	395m SE	Unspecified Heap	1921	1118831
S	396m NE	Lime Kiln	1875	1032641
P	397m SE	Unspecified Ground Workings	1922	1053771
P	397m SE	Unspecified Ground Workings	1922	1053771
P	400m E	Drift	1921	1012106
G	400m N	Railway Building	1901	1128512
P	401m SE	Unspecified Heap	1968	1109238
S	401m NE	Old Lime Kiln	1948	1014941
AN	402m SW	Cuttings	1948	1128482
P	402m E	Coal Level	1903	1038934
AN	402m SW	Cuttings	1915	1082902

ID	Location	Land Use	Date	Group ID
P	403m SE	Unspecified Heap	1915	1118831
P	403m SE	Unspecified Heap	1964	1109238
P	404m SE	Old Coal Level	1948	1032268
AO	404m SW	Old Ironstone Level	1922	1096717
AO	404m SW	Old Ironstone Level	1922	1154402
P	405m E	Coal Level	1901	1038934
AP	405m W	Cuttings	1938	1076223
P	406m SE	Coal Level	1938	1076230
P	406m SE	Coal Level	1938	1085532
P	406m E	Unspecified Drift	1915	1009875
AH	406m NE	Unspecified Ground Workings	1901	1073741
P	407m E	Unspecified Ground Workings	1922	1080871
P	407m E	Unspecified Ground Workings	1922	1127433
AN	407m SW	Cuttings	1922	1125692
AN	407m SW	Cuttings	1922	1125692
AP	407m W	Cuttings	1915	1139704
AE	408m N	Railway Sidings	1965	1073498
AP	409m W	Cuttings	1922	1139704
AP	409m W	Cuttings	1922	1139704
AP	409m W	Cuttings	1921	1139704
P	412m E	Unspecified Ground Workings	1875	1056543
AM	414m W	Unspecified Heap	1948	1060988
R	414m W	Old Ironstone Level	1903	1086239
AM	415m W	Unspecified Heap	1922	1072959
AM	415m W	Unspecified Heap	1922	1072959
AP	415m W	Cuttings	1992	1043912
AP	415m W	Cuttings	1976	1043912
AP	415m W	Cuttings	1965	1150367



ID	Location	Land Use	Date	Group ID
AQ	415m SW	Unspecified Heap	1969	1054370
AQ	415m SW	Unspecified Heap	1964	1084558
R	416m W	Refuse Heap	1938	1068317
R	416m W	Refuse Heap	1938	1068317
AR	416m SE	Unspecified Heaps	1968	1122836
AR	416m SE	Unspecified Heaps	1964	1122836
AM	417m W	Unspecified Heap	1915	1150461
AQ	418m SW	Unspecified Disused Tip	1979	1005164
AM	419m W	Unspecified Heap	1921	1130093
AP	420m W	Cuttings	1901	1143978
R	422m W	Old Ironstone Level	1901	1092266
AP	423m W	Cuttings	1948	1039592
AP	423m W	Cuttings	1903	1143978
AE	423m N	Railway Sidings	1915	1075877
P	424m E	Cuttings	1938	994292
AS	430m SW	Unspecified Disused Workings	1988	1032165
P	433m E	Drift Mill	1922	1143059
P	433m E	Drift Mill	1922	1143059
AH	435m NE	Unspecified Pits	1875	1007934
V	436m NE	Cuttings	1948	1103374
V	436m NE	Cuttings	1922	1135408
V	436m NE	Cuttings	1922	1135408
AE	437m N	Railway Building	1965	1013433
P	441m SE	Coal Level	1921	1066829
AM	441m W	Cuttings	1965	994294
X	442m SE	Cuttings	1903	994291
9	442m SW	Railway Sidings	1938	1070413
P	443m E	Unspecified Ground Workings	1875	1048809

ID	Location	Land Use	Date	Group ID
AP	443m SW	Railway Sidings	1921	1148132
AR	444m SE	Unspecified Ground Workings	1903	1126850
X	445m SE	Air Shafts	1903	1027667
P	447m SE	Coal Level	1922	1139314
P	447m SE	Coal Level	1922	1061405
R	447m W	Railway Sidings	1922	1114667
R	447m W	Railway Sidings	1922	1114667
AD	449m SE	Cuttings	1938	1156503
AD	449m SE	Unspecified Heap	1901	1065056
AE	450m N	Unspecified Tank	1975	1043525
AE	450m N	Unspecified Tank	1965	1043525
AK	451m SW	Railway Sidings	1915	1059781
P	451m SE	Coal Level	1915	1146762
X	451m SE	Garage	1988	1033772
AP	452m NW	Unspecified Heap	1938	1108220
AP	452m NW	Unspecified Heap	1938	1108220
AP	452m NW	Unspecified Ground Workings	1915	996769
AR	454m SE	Unspecified Ground Workings	1901	1077068
AD	455m SE	Cuttings	1948	1156503
X	456m SE	Unspecified Heaps	1948	1021415
X	456m SE	Unspecified Disused Shaft	1988	1115610
X	456m SE	Unspecified Disused Shaft	1968	1115610
X	456m SE	Unspecified Disused Shaft	1964	1115610
AE	456m N	Railway Sidings	1922	1078707
AE	456m N	Railway Sidings	1922	1052078
V	457m NE	Cuttings	1901	1056096
AP	460m NW	Railway Sidings	1922	1042019
AP	460m NW	Railway Sidings	1922	1134725



ID	Location	Land Use	Date	Group ID
X	461m SE	Unspecified Heap	1948	1000276
AT	462m SW	Cuttings	1922	1077917
AT	462m SW	Cuttings	1922	1077917
V	463m NE	Cuttings	1903	1145151
10	463m NW	Railway Sidings	1915	1040352
P	465m E	Unspecified Disused Tips	1975	1155672
P	465m E	Unspecified Disused Tips	1982	1078804
AU	467m E	Refuse Heap	1922	1096163
AU	467m E	Refuse Heap	1922	1096163
P	467m E	Unspecified Ground Workings	1922	1084321
P	467m E	Unspecified Ground Workings	1922	1084321
G	471m N	Railway Building	1965	1132315
P	471m E	Unspecified Ground Workings	1938	1148416
P	471m E	Unspecified Ground Workings	1938	1148416
P	472m E	Ground Workings and Refuse Heap	1915	1007282
P	472m E	Disused Drift	1948	1000056
P	472m E	Drift	1938	1075832
P	472m E	Drift	1938	1075832
P	472m E	Old Shaft	1921	1016163
AV	473m SW	Cuttings	1915	1087226
AV	473m W	Railway Sidings	1903	1033891
11	474m W	Ironstone Pit	1875	1000020
P	474m E	Unspecified Old Shaft	1903	1003255
AS	475m SW	Unspecified Disused Tip	1979	1005161
P	476m E	Unspecified Old Shaft	1901	1154189
P	476m E	Unspecified Ground Workings	1968	1078757
P	476m E	Unspecified Ground Workings	1964	1108497
AS	477m SW	Unspecified Heap	1948	1070667



ID	Location	Land Use	Date	Group ID
AS	477m SW	Unspecified Heap	1921	1101253
G	477m N	Railway Building	1901	1085354
AS	477m SW	Unspecified Heap	1938	1134220
AS	477m SW	Unspecified Heap	1938	1134220
P	477m E	Unspecified Old Shaft	1922	1061251
P	477m E	Unspecified Old Shaft	1922	1128861
AS	478m SW	Unspecified Heap	1922	1134220
AS	478m SW	Unspecified Heap	1922	1134220
AS	478m SW	Unspecified Heap	1915	1072318
P	480m E	Unspecified Heap	1921	1105200
AP	480m W	Railway Sidings	1901	1107057
P	480m E	Coal Level	1875	1007519
AW	480m SW	Unspecified Heap	1915	1056034
AW	481m SW	Unspecified Ground Workings	1921	996784
AX	481m NW	Gas Works	1938	1105116
X	481m SE	Unspecified Ground Workings	1903	1147955
P	481m E	Unspecified Old Shaft	1915	1146321
P	482m E	Unspecified Old Shaft	1948	1090515
AK	482m W	Unspecified Ground Workings	1948	996782
AP	483m W	Cuttings	1976	1142556
AY	484m SE	Unspecified Ground Workings	1968	1053771
AY	484m SE	Unspecified Ground Workings	1964	1053771
13	486m SW	Railway Sidings	1875	1033899
AP	486m W	Cuttings	1965	1101162
AP	487m W	Engine House	1938	1019155
P	488m E	Unspecified Old Shaft	1938	1154819
P	488m E	Unspecified Old Shaft	1938	1073820
AZ	488m SE	Unspecified Ground Workings	1922	1100547



ID	Location	Land Use	Date	Group ID
AZ	488m SE	Unspecified Ground Workings	1922	1100547
AK	488m W	Cuttings	1938	1066852
AK	489m W	Unspecified Pit	1992	1065060
AK	489m W	Unspecified Pit	1976	1065060
AK	489m W	Unspecified Pit	1965	1065060
AP	489m W	Cuttings	1992	1034286
AK	489m W	Old Ironstone Level	1915	1102750
AK	490m W	Old Ironstone Level	1921	1134202
BA	490m E	Refuse Heap	1975	1094069
BA	490m E	Refuse Heap	1982	1036749
AK	491m W	Cuttings	1915	1147521
AK	491m W	Cuttings	1922	1149662
AK	491m W	Cuttings	1922	1149662
P	492m E	Unspecified Heap	1948	1050053
AK	492m W	Old Ironstone Level	1938	1055971
P	495m E	Engine House	1875	1019124
P	497m E	Unspecified Pit	1921	1149892
AE	497m N	Railway Building	1938	1153659
AE	499m N	Railway Building	1948	1153659
BC	500m NW	Unspecified Pit	1938	1126058
BC	500m NW	Unspecified Pit	1938	1126058

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

42

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 32**



ID	Location	Land Use	Date	Group ID
H	69m SE	Gas Works	1919	158867
H	103m S	Unspecified Tank	1919	149694
H	136m S	Gas Holder Station	1984	167846
H	141m S	Gas Works	1971	162383
H	160m SE	Gas Works	1979	158805
H	160m SE	Gas Works	1979	158805
H	174m SE	Unspecified Tank	1919	149674
H	184m SE	Gasometer	1919	155800
H	192m SE	Gas Works	1984	166108
H	192m SE	Gas Holder Station	1988	167258
H	192m SE	Gas Holder Station	1988	167258
H	192m SE	Gas Holder Station	1992	167258
H	236m SE	Gas Holder Station	1998	158552
H	242m SE	Gasometers	1919	168337
H	245m SE	Gas Holder	1984	160835
H	245m SE	Gasometer	1971	155801
H	245m SE	Unspecified Tank	1962	149675
H	246m SE	Gasometers	1979	166420
H	246m SE	Gasometers	1979	166420
H	246m SE	Tanks	1979	156234
H	246m SE	Gasometers	1984	166420
H	246m SE	Gasholders	1988	158129
H	246m SE	Gasholders	1988	158129
H	246m SE	Gasholders	1992	158129
H	247m SE	Gas Holder	1998	160835
H	288m SE	Gas Holder	1984	168061
H	288m SE	Gasometer	1971	155799
H	288m SE	Unspecified Tank	1962	149676

ID	Location	Land Use	Date	Group ID
H	290m SE	Gas Holder	1998	168061
AA	350m S	Unspecified Tank	1988	165740
AA	350m S	Unspecified Tank	1988	165740
AA	350m S	Unspecified Tank	1992	165740
P	374m SE	Unspecified Tank	1875	149680
P	381m E	Unspecified Tank	1875	149679
P	385m E	Unspecified Tank	1875	149687
P	386m SE	Unspecified Tank	1875	149677
P	405m SE	Tanks	1875	156256
P	412m SE	Unspecified Tank	1875	149678
G	445m N	Unspecified Tank	1956	167540
G	446m N	Unspecified Tank	1956	167540
G	462m N	Unspecified Tank	1875	149697
12	477m S	Unspecified Tank	1998	149666

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

65

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 32**

ID	Location	Land Use	Date	Group ID
H	69m SE	Gas Works	1919	93005
H	136m S	Gas Holder Station	1984	89850
H	141m S	Gas Works	1971	96102
H	150m S	Electricity Substation	1979	94037
H	150m S	Electricity Substation	1979	94037
H	150m S	Electricity Substation	1979	94037



ID	Location	Land Use	Date	Group ID
H	150m S	Electricity Substation	1984	94037
H	150m S	Electricity Transformer	1971	87769
H	160m SE	Gas Works	1979	96102
H	160m SE	Gas Works	1979	96102
N	173m NE	Electricity Substation	1996	91155
N	173m NE	Electricity Substation	1984	90985
N	173m NE	Electricity Substation	1989	90985
N	173m NE	Electricity Substation	1956	90985
N	173m NE	Electricity Substation	1969	90985
N	174m NE	Electricity Substation	1956	90985
H	184m SE	Gasometer	1919	87295
H	192m SE	Gas Works	1984	95338
H	192m SE	Gas Holder Station	1988	91307
H	192m SE	Gas Holder Station	1988	91307
H	192m SE	Gas Holder Station	1992	91307
H	213m S	Electricity Substation	1984	85723
H	224m S	Electricity Substation	1979	91168
H	224m S	Electricity Substation	1979	91168
H	224m S	Electricity Substation	1979	91168
H	224m S	Electricity Substation	1984	91168
Q	231m N	Electricity Substation	1996	85724
Q	231m N	Electricity Transformer	1969	94411
Q	231m N	Electricity Transformer	1984	94411
Q	231m N	Electricity Transformer	1989	94411
H	236m SE	Gas Holder Station	1998	91307
H	242m SE	Gasometers	1919	91846
H	245m SE	Gas Holder	1984	89492
H	245m SE	Gasometer	1971	87296



ID	Location	Land Use	Date	Group ID
H	246m SE	Gasometers	1979	94333
H	246m SE	Gasometers	1979	94333
H	246m SE	Gasometers	1984	94333
H	246m SE	Gasholders	1988	90201
H	246m SE	Gasholders	1988	90201
H	246m SE	Gasholders	1992	90201
H	247m SE	Gas Holder	1998	89492
H	288m SE	Gas Holder	1984	95078
H	288m SE	Gasometer	1971	87294
H	290m SE	Gas Holder	1998	95078
X	312m SE	Electricity Substation	1988	91551
X	312m SE	Electricity Substation	1988	91551
X	312m SE	Electricity Substation	1992	91551
X	312m SE	Electricity Substation	1998	88999
X	312m SE	Electricity Substation	1998	88999
X	313m SE	Electricity Substation	1979	91551
X	313m SE	Electricity Substation	1979	91551
X	313m SE	Electricity Substation	1979	91551
X	313m SE	Electricity Substation	1984	91551
X	314m SE	Electricity Transformer	1971	87767
X	326m SE	Electricity Substation	1984	85721
AJ	367m E	Electricity Substation	1981	94595
AJ	367m E	Electricity Substation	1992	94595
AJ	368m E	Electricity Transformer	1969	87766
G	461m N	Electricity Substation	1984	90337
G	461m N	Electricity Substation	1989	90337
G	470m N	Electricity Transformer	1969	87771
G	471m N	Electricity Substation	1995	85726

ID	Location	Land Use	Date	Group ID
AX	488m NW	Old Gas Works	1919	87504
BB	499m N	Electricity Substation	1984	91887
BB	499m N	Electricity Substation	1989	91887

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

29

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 32**

ID	Location	Land Use	Date	Group ID
X	290m SE	Garage	1971	31099
X	291m SE	Garage	1979	31588
X	291m SE	Garage	1979	31588
X	291m SE	Garage	1979	31588
X	295m SE	Garage	1984	29053
X	296m SE	Garage	1984	30576
X	296m SE	Garage	1988	30576
X	296m SE	Garage	1988	30576
X	296m SE	Garage	1992	30576
X	300m SE	Garage	1962	29697

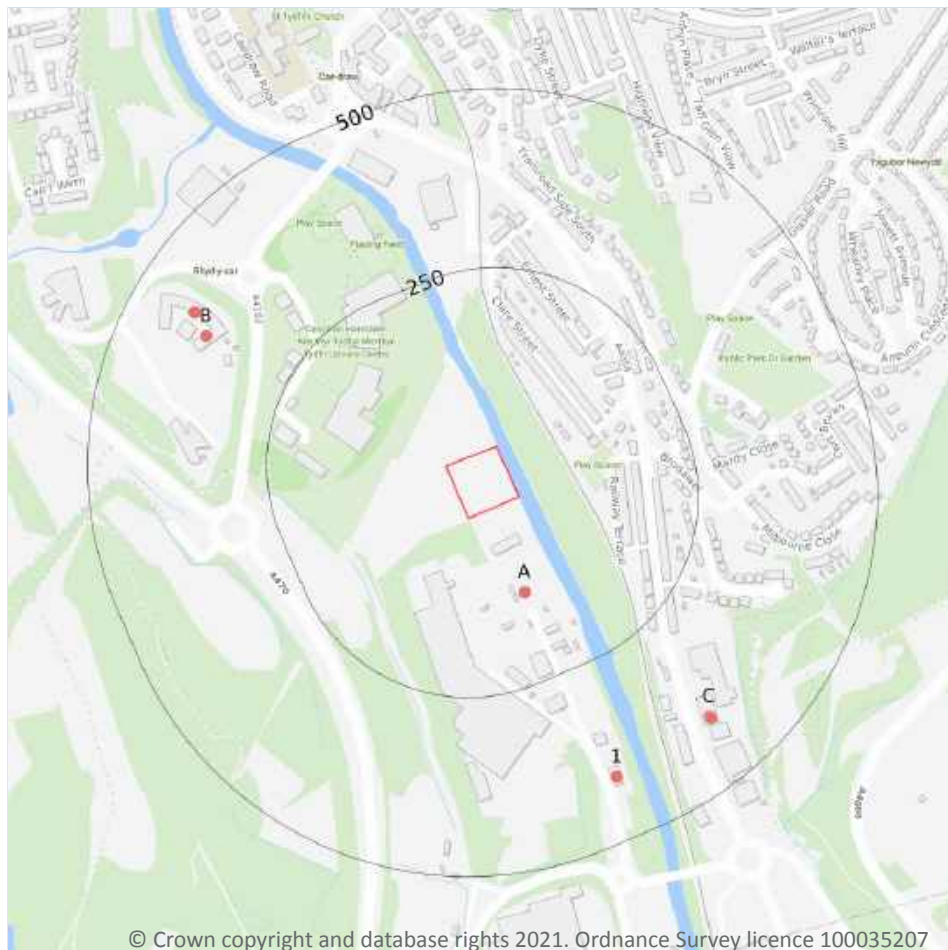


ID	Location	Land Use	Date	Group ID
Z	302m N	Garage	1984	30965
Z	302m N	Garage	1989	30965
Z	302m N	Garage	1956	30965
Z	302m N	Garage	1996	30700
Z	302m N	Garage	1995	30700
Z	303m N	Garage	1956	30700
Z	303m N	Garage	1969	30700
X	314m SE	Garage	1998	31099
X	438m SE	Garage	1971	29666
X	444m SE	Garage	1962	28598
X	445m SE	Garage	1984	28543
X	453m SE	Garage	1979	31824
X	453m SE	Garage	1979	31824
X	453m SE	Garage	1979	31824
X	453m SE	Garage	1984	31824
G	473m N	Garage	1984	29060
G	473m N	Garage	1956	31308
G	473m N	Garage	1969	29689
G	474m N	Garage	1956	31308

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



— Site Outline
Search buffers in metres (m)
● 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**0**

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

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

3.6 Licensed waste sites

Records within 500m**0**

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

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

3.7 Waste exemptions

Records within 500m**18**

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 55**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	125m SE	THE WILLOWS, ABERCANAID INDUSTRIAL ESTATE, MERTHYR TYDFIL, CF48 1YF	WEX089880	Storing waste exemption	Not on a farm	Storage of waste in a secure place
A	125m SE	THE WILLOWS, ABERCANAID INDUSTRIAL ESTATE, MERTHYR TYDFIL, CF48 1YF	WEX089880	Treating waste exemption	Not on a farm	Sorting mixed waste
A	125m SE	THE WILLOWS, ABERCANAID INDUSTRIAL ESTATE, MERTHYR TYDFIL, CF48 1YF	WEX089880	Treating waste exemption	Not on a farm	Manual treatment of waste
A	125m SE	THE WILLOWS, ABERCANAID INDUSTRIAL ESTATE, MERTHYR TYDFIL, CF48 1YF	WEX089880	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
A	125m SE	THE WILLOWS, ABERCANAID INDUSTRIAL ESTATE, MERTHYR TYDFIL, CF48 1YF	WEX089880	Treating waste exemption	Not on a farm	Screening and blending of waste
A	125m SE	THE WILLOWS, ABERCANAID INDUSTRIAL ESTATE, MERTHYR TYDFIL, CF48 1YF	WEX089880	Treating waste exemption	Not on a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	125m SE	THE WILLOWS, ABERCANAID INDUSTRIAL ESTATE, MERTHYR TYDFIL, CF48 1YF	WEX089880	Treating waste exemption	Not on a farm	Recovery of scrap metal
A	125m SE	THE WILLOWS, ABERCANAID INDUSTRIAL ESTATE, MERTHYR TYDFIL, CF48 1YF	WEX089880	Using waste exemption	Not on a farm	Use of waste in construction
A	125m SE	THE WILLOWS, ABERCANAID INDUSTRIAL ESTATE, MERTHYR TYDFIL, CF48 1YF	WEX089880	Using waste exemption	Not on a farm	Use of waste to manufacture finished goods
B	381m NW	Mitie Technical Facilities Management Ltd, Welsh Government, Rhyd-y-Car, Merthyr Tydfil, Merthyr Tydfil, CF481UZ	NRW- WME025207	Storing waste exemption	Not on a farm	Storage of waste in secure containers

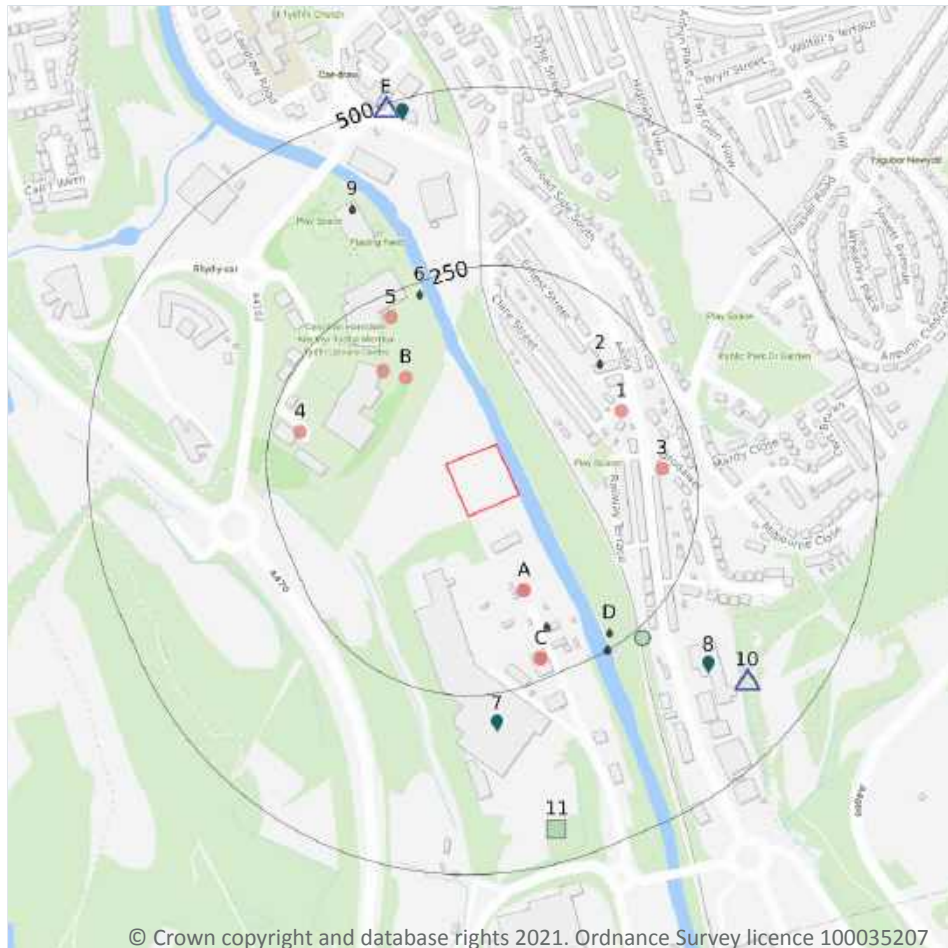


ID	Location	Site	Reference	Category	Sub-Category	Description
B	381m NW	Mitie Technical Facilities Management Ltd, Welsh Government, Rhyd-y-Car, Merthyr Tydfil, Merthyr Tydfil, CF481UZ	NRW-WME025207	Storing waste exemption	Not on a farm	Storage of waste in a secure place
C	405m SE	Speedy Asset Services Limited, Speedy Hire, Pentrebach Road, Merthyr Tydfil, Merthyr Tydfil, CF481YA	NRW-WME026901	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
C	405m SE	Speedy Asset Services Limited, Speedy Hire, Pentrebach Road, Merthyr Tydfil, Merthyr Tydfil, CF481YA	NRW-WME026901	Treating waste exemption	Not on a farm	Sorting mixed waste
C	409m SE	SPEEDY ASSET SERVICES LIMITED, Speedy Hire, Pentrebach Road, Merthyr Tydfil, Merthyr Tydfil, CF481YA	NRW-WME042623	Storing waste exemption	Not on a farm	Storage of waste in secure containers
C	409m SE	SPEEDY ASSET SERVICES LIMITED, Speedy Hire, Pentrebach Road, Merthyr Tydfil, Merthyr Tydfil, CF481YA	NRW-WME042623	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	411m NW	Mitie Technical Facilities Management Ltd, Welsh Government, Rhyd-y-Car, Merthyr Tydfil, Merthyr Tydfil, CF48 1UZ	NRW-WME054341	Storing waste exemption	Not on a farm	Storage of waste in secure containers
B	411m NW	Mitie Technical Facilities Management Ltd, Welsh Government, Rhyd-y-Car, Merthyr Tydfil, Merthyr Tydfil, CF48 1UZ	NRW-WME054341	Storing waste exemption	Not on a farm	Storage of waste in a secure place
1	413m SE	SW plastic solutions LTD, The Willows, Abercanaid Industrial Estate, Merthyr Tydfil, Merthyr Tydfil, CF481YF	NRW-WME032102	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)

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



4 Current industrial land use



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

4.1 Recent industrial land uses

Records within 250m

10

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 59**

ID	Location	Company	Address	Activity	Category
A	125m SE	A-klass Freight Services	The Willows, Abercanaid Industrial Estate, Merthyr Tydfil, Mid Glamorgan, CF48 1YF	Distribution and Haulage	Transport, Storage and Delivery
A	125m SE	Davies European Service Ltd	Abercanaid Industrial Estate, Merthyr Tydfil, Mid Glamorgan, CF48 1YF	Distribution and Haulage	Transport, Storage and Delivery



ID	Location	Company	Address	Activity	Category
B	134m NW	Gas Governor Station	Mid Glamorgan, CF48	Gas Features	Infrastructure and Facilities
B	157m NW	Electricity Sub Station	Mid Glamorgan, CF48	Electrical Features	Infrastructure and Facilities
1	178m NE	Electricity Sub Station	Mid Glamorgan, CF47	Electrical Features	Infrastructure and Facilities
3	202m E	Motofix	Plymouth Street, Merthyr Tydfil, Mid Glamorgan, CF47 OTT	Vehicle Repair, Testing and Servicing	Repair and Servicing
4	208m W	Electricity Sub Station	Mid Glamorgan, CF48	Electrical Features	Infrastructure and Facilities
5	219m N	Electricity Sub Station	Mid Glamorgan, CF48	Electrical Features	Infrastructure and Facilities
C	222m SE	N P V Recovery Ltd	Unit 2 Willows House, Merthyr Tydfil, Mid Glamorgan, CF48 1YF	Vehicle Breakdown and Recovery Services	Personal, Consumer and Other Services
C	222m SE	Powell Scaffolding Services Ltd	Abercanaid, Merthyr Tydfil, Mid Glamorgan, CF48 1YF	Construction and Tool Hire	Hire Services

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	2
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Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 59**

ID	Location	Company	Address	LPG	Status
10	409m SE	OBSOLETE	Pentrebach Road, Ysgubor Newydd, Merthyr Tydfil, Merthyr Tydfil, CF48 1YA	Not Applicable	Obsolete
E	496m N	APPLEGREE N	3-3A, Lower High Street, Merthyr Tydfil, Merthyr Tydfil, CF47 8EB	No	Open

This data is sourced from Experian.



4.3 Electricity cables

Records within 500m**0**

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m**0**

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m**0**

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m**0**

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m**0**

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m

0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m

0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

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

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

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

Records within 500m

3

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 59**

ID	Location	Address	Details	
7	291m S	Triumph Business Systems, TBS (South Wales) Ltd., The Willows, Abercanaid, Merthyr Tydfil, Mid Glamorgan, CF47 0YD	Process: Coating Processes Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified



ID	Location	Address	Details	
8	354m SE	Evans Halshaw, Pentrebach Road, Merthyr Tydfil, Mid Glamorgan, CF48 1YA	Process: Respraying of Road Vehicles Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
E	482m N	Petrogas Group UK Ltd, 3-3a Lower High Street, Merthyr Tydfil, Mid Glamorgan, CF47 8EB	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	0
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Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

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

4.13 Licensed Discharges to controlled waters

Records within 500m	7
----------------------------	----------

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 59**

ID	Location	Address	Details	
2	184m NE	MERTHYR TYDFIL - WILLOWS GAS W	Effluent Type: UNSPECIFIED Permit Number: AN0091001 Permit Version: 1 Receiving Water: TAFF	Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 20/10/1989 Effective Date: 20/10/1989 Revocation Date: 20/12/2001
C	184m SE	GROUNDWATER REMEDIATION TREATMENT @, FORMER WILLOWS GASWORKS, THE WILLOWS, ABERCAN Aid INDUSTRIAL ESTATE, MERTHYR TYDFIL, CF48 1YH	Effluent Type: GROUNDWATER - BOREHOLE Permit Number: EPRNB3735AW Permit Version: 1 Receiving Water: GROUNDWATER	Status: SURRENDERED UNDER EPR 2010 Issue date: 15/04/2013 Effective Date: 15/04/2013 Revocation Date: 23/12/2013



ID	Location	Address	Details	
C	184m SE	GROUNDWATER REMEDIATION TREATMENT @, FORMER WILLOWS GASWORKS, THE WILLOWS, ABERCANAID INDUSTRIAL ESTATE, MERTHYR TYDFIL, CF48 1YH	Effluent Type: GROUNDWATER - BOREHOLE Permit Number: EPRNB3735AW Permit Version: 1 Receiving Water: GROUNDWATER	Status: SURRENDERED UNDER EPR 2010 Issue date: 15/04/2013 Effective Date: 15/04/2013 Revocation Date: 23/12/2013
D	229m SE	CSO WILLOW GAS WORKS MERTHYR TYDFIL, Nr 4 Eastfield Place, Twynrodyn, Merthyr Tydfil, CF47 OUP	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AN0091001 Permit Version: 3 Receiving Water: RIVER TAFF	Status: Effective Issue date: 07/10/2019 Effective Date: 07/10/2019 Revocation Date: -
6	234m N	RHYD-Y-CAR LEISURE CENTRE MT, RHYD-Y-CAR LEISURE CENTRE, RHYD-Y-CAR, Merthyr Tydfil, CF48 1UT	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - NOT WATER COMPANY Permit Number: AN0413101 Permit Version: 2 Receiving Water: RIVER TAFF	Status: Effective Issue date: 28/11/2016 Effective Date: 12/12/2016 Revocation Date: -
D	248m SE	CSO WILLOW GAS WORKS MERTHYR TYDFIL, CSO WILLOW GAS WORKS, MERTHYR TYDFIL	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AN0091001 Permit Version: 2 Receiving Water: TAFF	Status: Effective Issue date: 20/12/2001 Effective Date: 21/12/2001 Revocation Date: -
9	379m N	RHYDYCAR SPORTS COMPLEX MERTHYR T, RHYDYCAR SPORTS COMPLEX MERTHY, MERTHYR TYDFIL	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: AF3031901 Permit Version: 1 Receiving Water: TAFF	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV Issue date: 02/10/1972 Effective Date: 02/10/1972 Revocation Date: 06/05/2004

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

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

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



4.15 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m

0

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

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

4.17 List 2 Dangerous Substances

Records within 500m

1

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 59**

ID	Location	Name	Status	Receiving Water	Authorised Substances
11	453m S	Triumph Business Systems, The Willows, Abercanaid, Merthyr	Not Active	River Taff	Chromium, Copper, Lead, Nickel, Zinc

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m

2

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

Features are displayed on the Current industrial land use map on **page 59**

ID	Location	Details	
D	263m SE	Incident Date: 20/04/2016 Incident Identification: 1601874 Pollutant: Sewage Material Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: No Details Air Impact: No Details

ID	Location	Details	
D	263m SE	Incident Date: 20/04/2016 Incident Identification: 1601874 Pollutant: - Pollutant Description: -	Water Impact: Category 3 (Minor) Land Impact: No Details Air Impact: No Details

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

4.19 Pollution inventory substances

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

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

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

4.20 Pollution inventory waste transfers

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

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

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

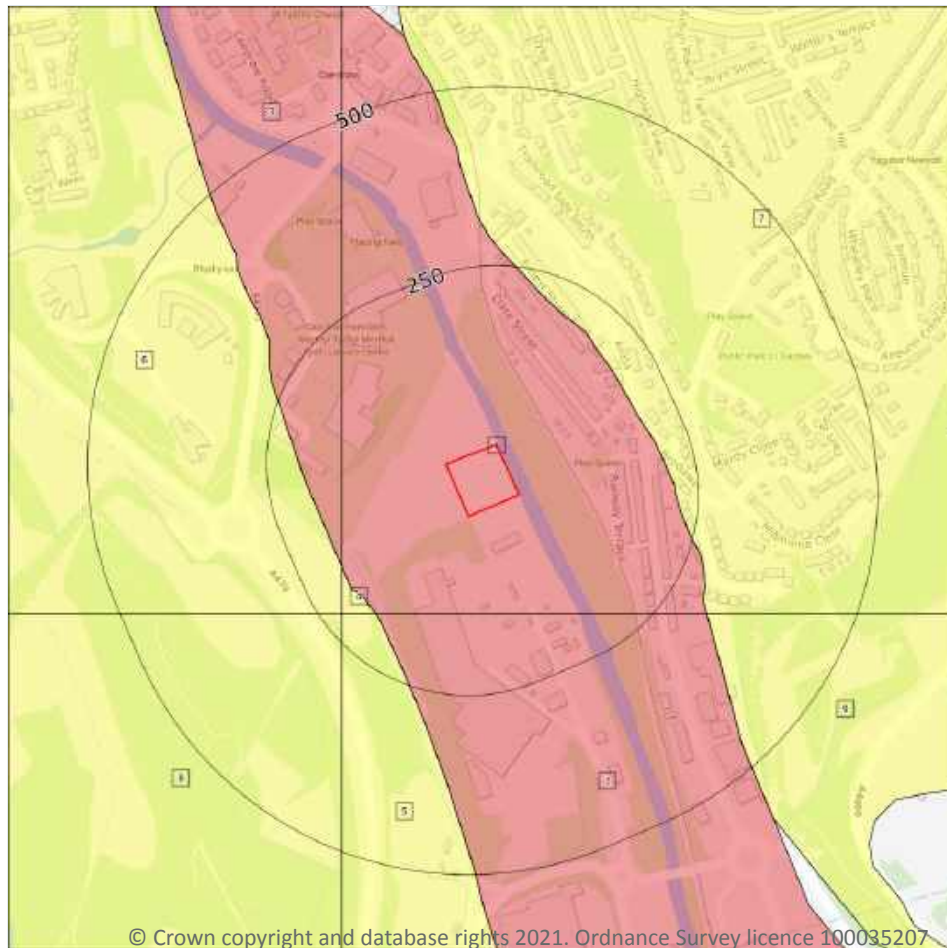
4.21 Pollution inventory radioactive waste

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

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

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

5 Hydrogeology - Superficial aquifer



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

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5.1 Superficial aquifer

Records within 500m

9

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 67**

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
2	136m S	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

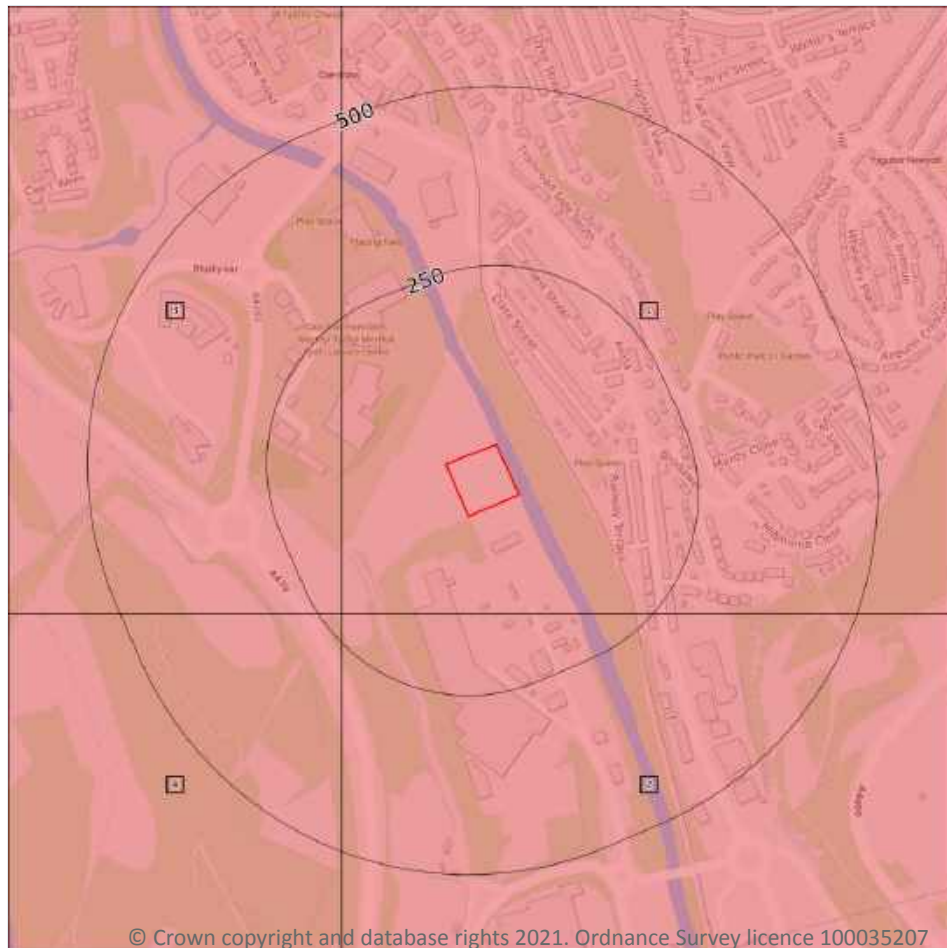


ID	Location	Designation	Description
3	145m W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	185m SW	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
5	188m SW	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
6	190m SW	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
7	192m NE	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
8	223m SW	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
9	310m SE	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

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



Bedrock aquifer



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

5.2 Bedrock aquifer

Records within 500m

4

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 69**

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
2	136m S	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

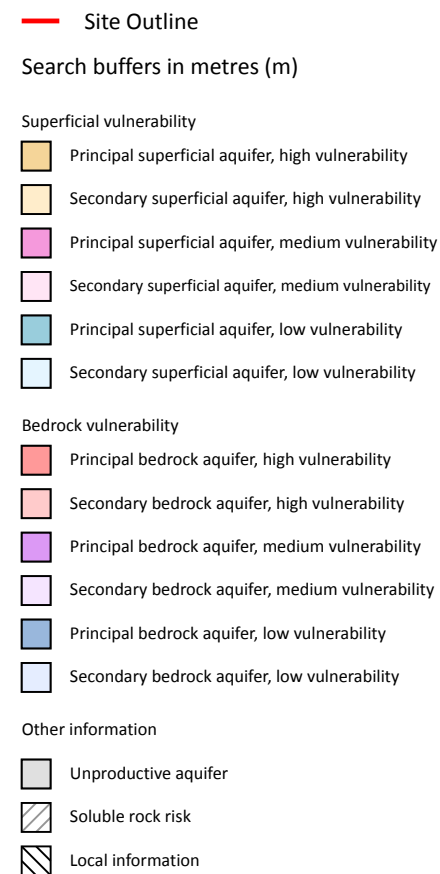
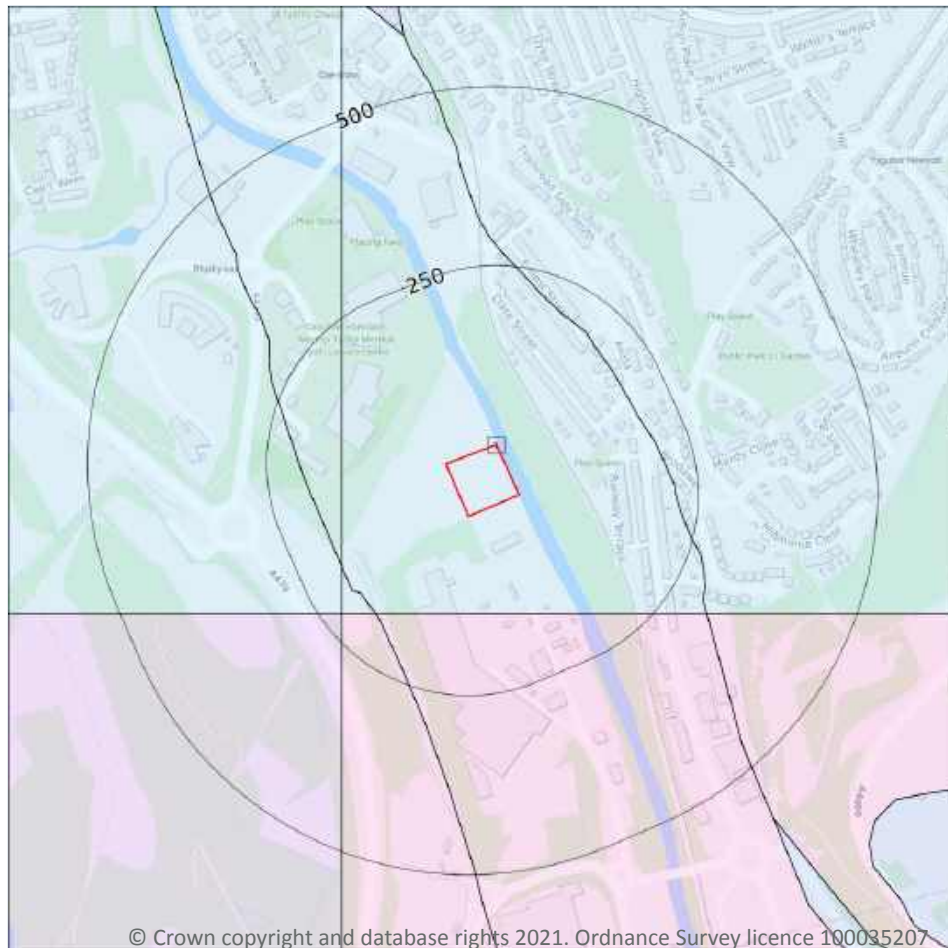


ID	Location	Designation	Description
3	145m W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	223m SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

1

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid.

Groundwater vulnerability is described as High, Medium or Low as follows:

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

Features are displayed on the Groundwater vulnerability map on **page 71**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low 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.

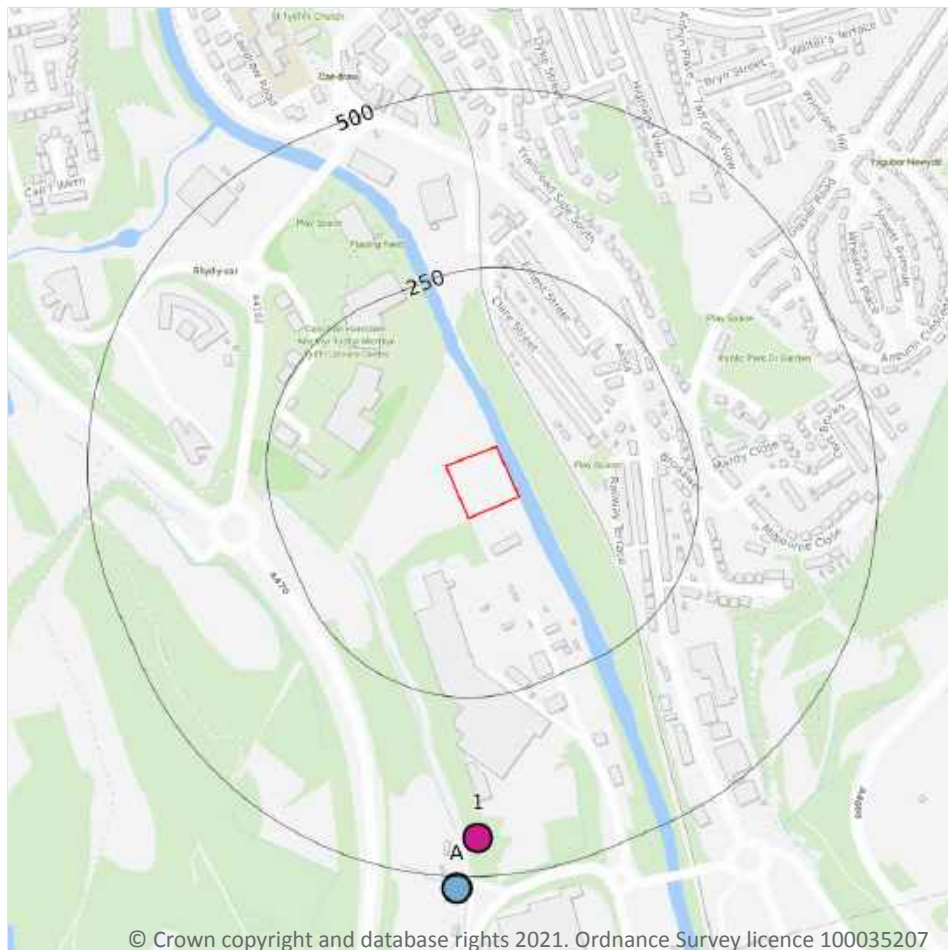
5.5 Groundwater vulnerability- local information

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

1

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 73**

ID	Location	Details	
1	446m S	Status: Historical Licence No: 21/57/22/0035 Details: General Washing/Process Washing Direct Source: EAW Groundwater Point: BOREHOLE AT TBS (SOUTH WALES) LTD Data Type: Point Name: TBS (South Wales) Ltd Easting: 305190 Northing: 204690	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 08/06/1994 Expiry Date: - Issue No: 100 Version Start Date: 14/10/1999 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

2

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 73**

ID	Location	Details	
A	516m S	Status: Historical Licence No: 21/57/22/0025 Details: General Use Relating To Secondary Category (Low Loss) Direct Source: EAW Surface Water Point: NANT CANAID AT GLYN-DYRYS Data Type: Point Name: Hoover Plc Easting: 305160 Northing: 204620	Annual Volume (m ³): 509152 Max Daily Volume (m ³): 1818.4 Original Application No: - Original Start Date: 25/07/1979 Expiry Date: - Issue No: 100 Version Start Date: 30/10/2003 Version End Date: -
A	516m S	Status: Historical Licence No: 21/57/22/0025 Details: Non-Evaporative Cooling Direct Source: EAW Surface Water Point: NANT CANAID AT GLYN-DYRYS Data Type: Point Name: Hoover Plc Easting: 305160 Northing: 204620	Annual Volume (m ³): 509152 Max Daily Volume (m ³): 1818.4 Original Application No: - Original Start Date: 25/07/1979 Expiry Date: - Issue No: 100 Version Start Date: 30/10/2003 Version End Date: -

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



5.8 Potable abstractions

Records within 2000m

0

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

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

5.9 Source Protection Zones

Records within 500m

0

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m

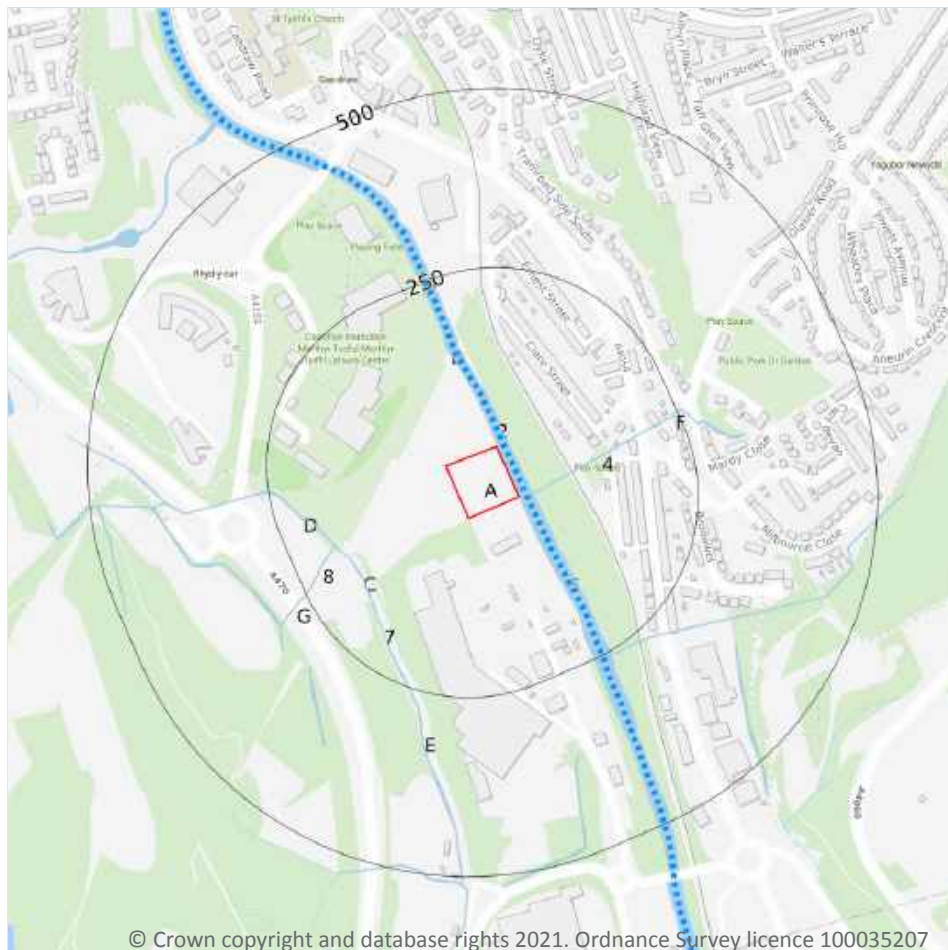
0

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

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



6 Hydrology



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

6.1 Water Network (OS MasterMap)

Records within 250m

17

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 76**

ID	Location	Type of water feature	Ground level	Permanence	Name
2	9m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Taf



ID	Location	Type of water feature	Ground level	Permanence	Name
4	11m E	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
5	11m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Taf
B	142m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Taf
B	142m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Taf
B	155m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Taf
B	155m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Taf
B	160m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Taf
C	169m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
6	171m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Taf
7	184m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
8	185m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	185m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	209m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
F	242m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
F	245m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	246m SW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

5

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 76**

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 76**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River WB catchment	Taff - conf Taf Fechan to conf R Cynon	GB109057033100	Taff u s Cynon	South East Valleys

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.

Features are displayed on the Hydrology map on **page 76**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
3	10m NE	River	Taff - conf Taf Fechan to conf R Cynon	GB109057033100	Moderate	Good	Moderate	2016

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

6.5 WFD Groundwater bodies

Records on site

1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place.

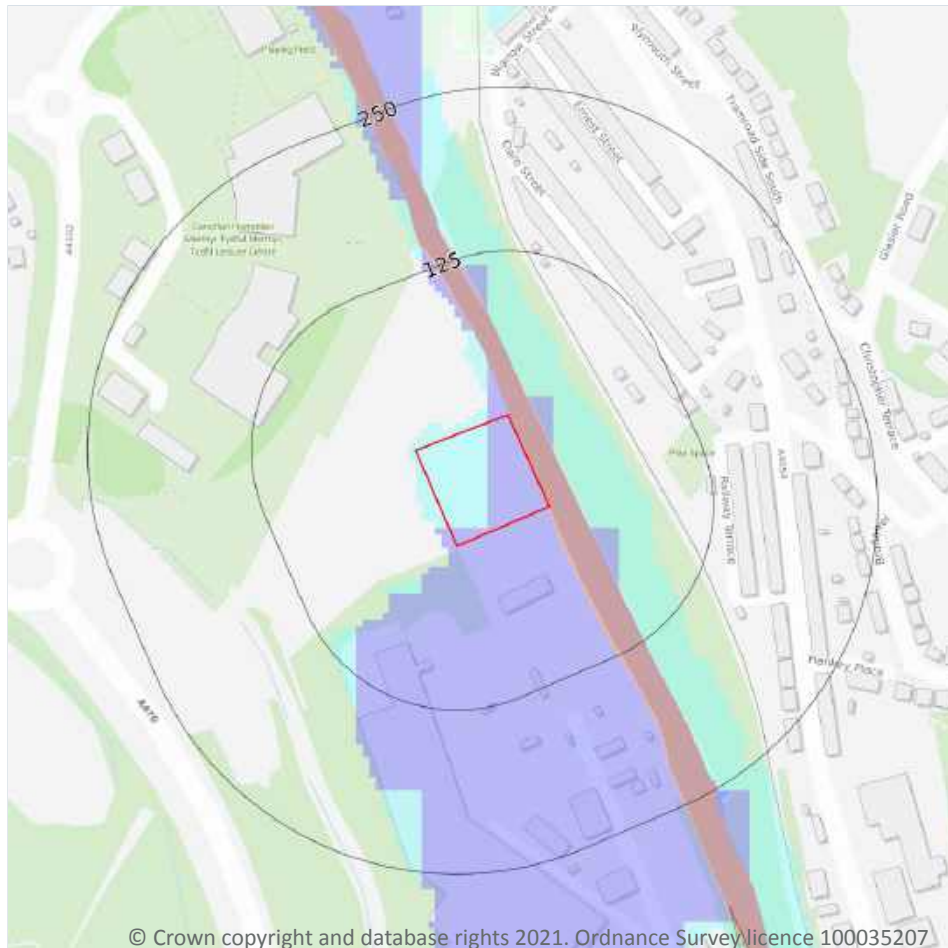
Features are displayed on the Hydrology map on **page 76**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	SE Valleys Carboniferous Coal Measures	GB40902G201900	Poor	Poor	Good	2016

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

10

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).

Features are displayed on the River and coastal flooding map on **page 80**

Distance	RoFRaS flood risk
On site	High
0 - 50m	High



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

7.2 Historical Flood Events

Records within 250m

0

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

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

7.3 Flood Defences

Records within 250m

0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m

0

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

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

7.5 Flood Storage Areas

Records within 250m

0

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

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



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 Flood zone 2

 Flood zone 3

Records within 50m	1
--------------------	---

Features are displayed on the River and coastal flooding map on **page 80**

Location	Type
On site	Zone 2 - (Fluvial /Tidal Models)

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

7.7 Flood Zone 3

Records within 50m

1

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.

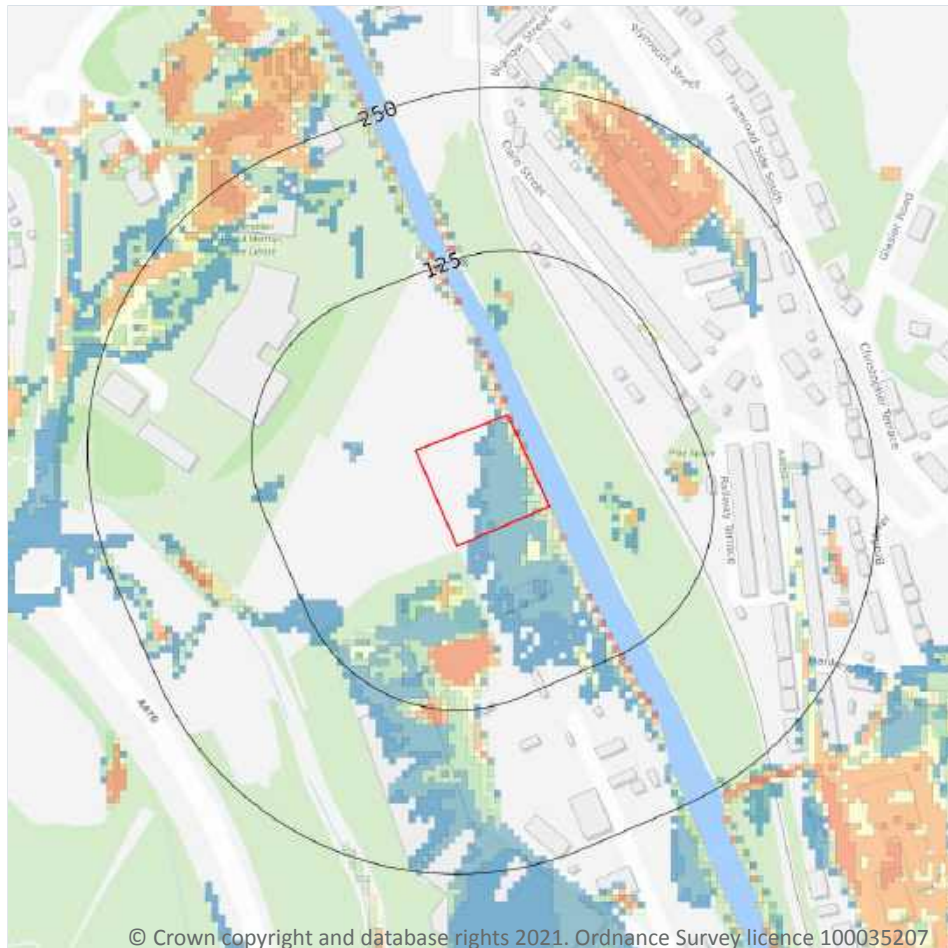
Features are displayed on the River and coastal flooding map on **page 80**

Location	Type
On site	Zone 3 - (Fluvial Models)

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



8 Surface water flooding



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site

1 in 30 year, Greater than 1.0m

Highest risk within 50m

1 in 30 year, Greater than 1.0m

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

Features are displayed on the Surface water flooding map on **page 84**

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

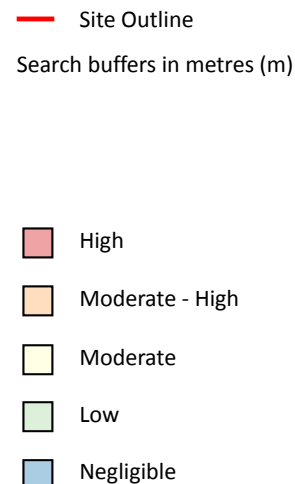
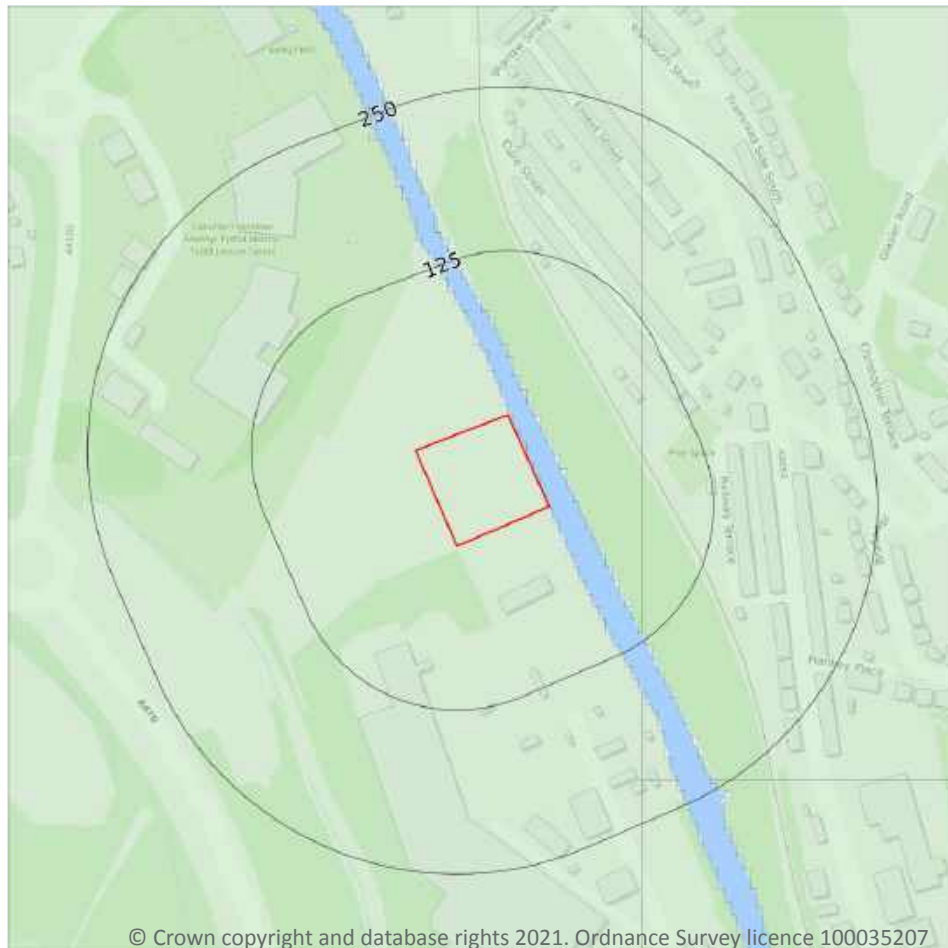
a site. The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Greater than 1.0m
1 in 250 year	Greater than 1.0m
1 in 100 year	Greater than 1.0m
1 in 30 year	Greater than 1.0m

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Low

Highest risk within 50m

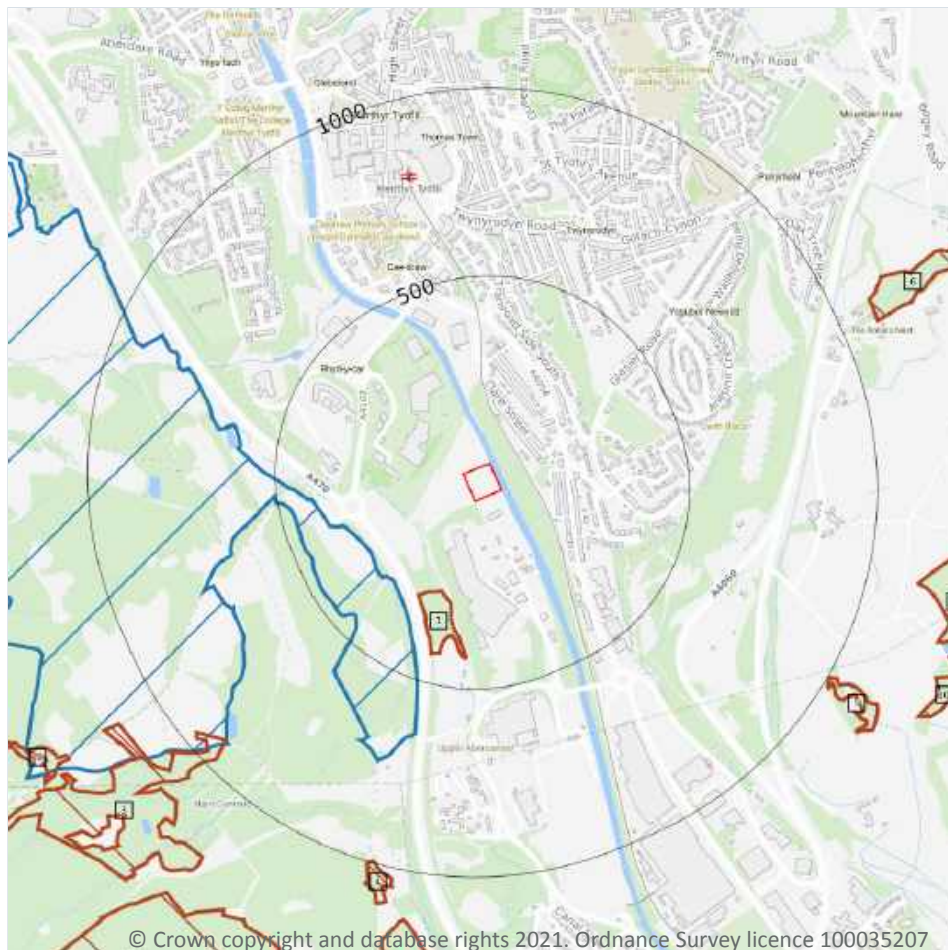
Low

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 86**

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

1

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.

Features are displayed on the Environmental designations map on **page 87**

ID	Location	Name	Data source
2	303m SW	Cwm Glo A Glydyrys	Natural Resources Wales



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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m

0

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m

0

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m

0

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

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



10.6 Local Nature Reserves (LNR)

Records within 2000m

0

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

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

10.7 Designated Ancient Woodland

Records within 2000m

41

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.

Features are displayed on the Environmental designations map on **page 87**

ID	Location	Name	Woodland Type
1	255m S	Unknown	Ancient Semi Natural Woodland
3	920m SW	Unknown	Ancient Semi Natural Woodland
4	996m S	Unknown	Ancient Semi Natural Woodland
5	1005m SE	Unknown	Ancient Semi Natural Woodland
6	1097m NE	Unknown	Restored Ancient Woodland Site
7	1130m S	Unknown	Ancient Semi Natural Woodland
8	1137m E	Unknown	Ancient Semi Natural Woodland
9	1253m E	Unknown	Ancient Semi Natural Woodland
10	1260m SE	Unknown	Ancient Semi Natural Woodland
11	1273m SW	Unknown	Ancient Semi Natural Woodland
12	1280m SW	Unknown	Ancient Semi Natural Woodland
-	1292m S	Unknown	Ancient Semi Natural Woodland
-	1353m S	Unknown	Ancient Semi Natural Woodland
-	1356m NE	Unknown	Ancient Semi Natural Woodland
-	1386m E	Unknown	Ancient Semi Natural Woodland



ID	Location	Name	Woodland Type
-	1405m S	Unknown	Ancient Semi Natural Woodland
-	1407m E	Unknown	Ancient Semi Natural Woodland
-	1452m SE	Unknown	Ancient Semi Natural Woodland
-	1462m S	Unknown	Ancient Semi Natural Woodland
-	1475m SW	Unknown	Ancient Semi Natural Woodland
-	1504m SW	Unknown	Ancient Semi Natural Woodland
-	1590m SW	Unknown	Plantation on Ancient Woodland Site
-	1642m E	Unknown	Ancient Semi Natural Woodland
-	1677m S	Unknown	Restored Ancient Woodland Site
-	1678m SW	Unknown	Plantation on Ancient Woodland Site
-	1681m W	Unknown	Ancient Semi Natural Woodland
-	1691m SW	Unknown	Plantation on Ancient Woodland Site
-	1695m SW	Unknown	Ancient Woodland Site of Unknown Category
-	1706m SW	Unknown	Ancient Semi Natural Woodland
-	1724m S	Unknown	Plantation on Ancient Woodland Site
-	1728m S	Unknown	Restored Ancient Woodland Site
-	1732m SW	Unknown	Ancient Semi Natural Woodland
-	1779m S	Unknown	Plantation on Ancient Woodland Site
-	1800m S	Unknown	Ancient Woodland Site of Unknown Category
-	1803m S	Unknown	Ancient Semi Natural Woodland
-	1845m SW	Unknown	Plantation on Ancient Woodland Site
-	1846m SW	Unknown	Plantation on Ancient Woodland Site
-	1848m S	Unknown	Ancient Woodland Site of Unknown Category
-	1963m S	Unknown	Ancient Woodland Site of Unknown Category
-	1971m S	Unknown	Plantation on Ancient Woodland Site
-	1999m S	Unknown	Ancient Semi Natural Woodland

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

0

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

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**0**

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.

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



SSSI Impact Zones and Units

10.17 SSSI Impact Risk Zones

Records on site

0

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.

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

1

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 94**

ID	Location	Name	Grade	Reference Number	Listed date
1	176m SW	Rhydycar Skew Bridge, Located S Of Rhydycar Leisure Centre And Crossing The Line Of The Former Glamorganshire Canal Beneath A Tall Embankment	II	15676	14/02/1995

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



11.5 Conservation Areas

Records within 250m

0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

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

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

11.7 Registered Parks and Gardens

Records within 250m

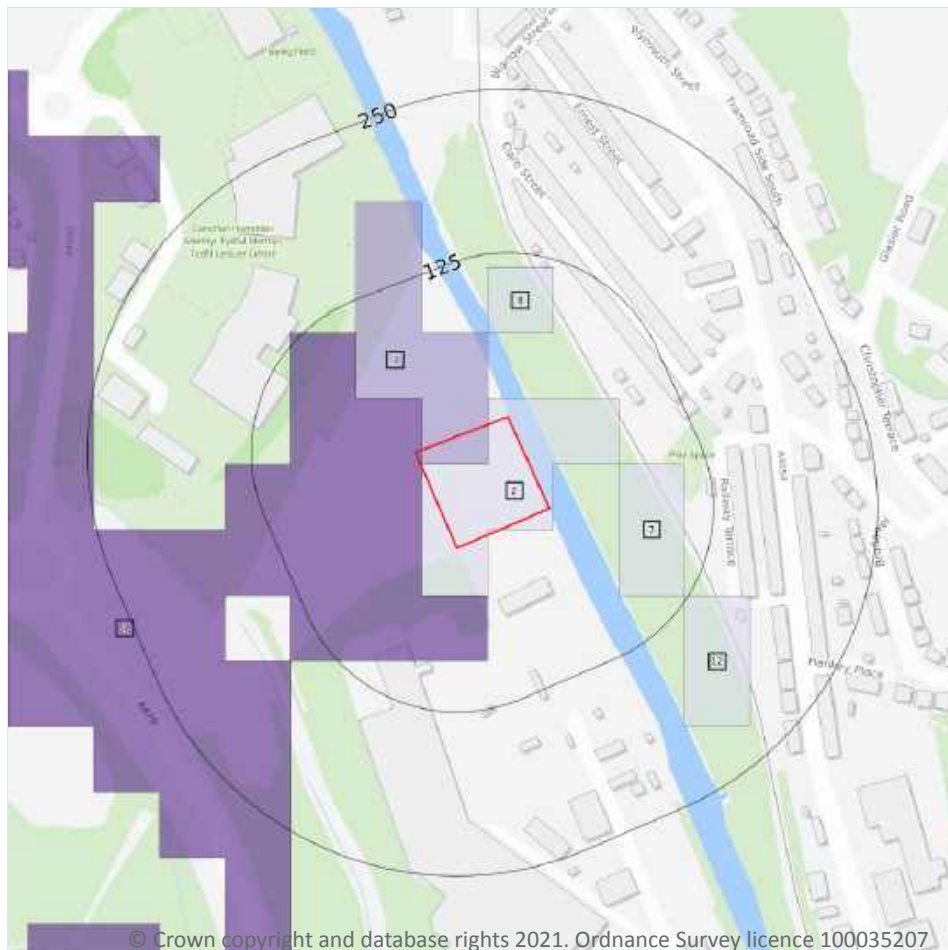
0

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

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



12 Agricultural designations



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

12.1 Agricultural Land Classification

Records within 250m

6

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 97**

ID	Location	Classification	Description
2	On site	Grade 3b	Moderate quality agricultural land
3	On site	Grade 4	Poor quality agricultural land
4	On site	Grade 5	Very poor quality agricultural land

ID	Location	Classification	Description
7	53m E	Grade 3b	Moderate quality agricultural land
8	64m N	Grade 3b	Moderate quality agricultural land
12	122m SE	Grade 3b	Moderate quality agricultural land

This data is sourced from Natural Resources Wales.

12.2 Open Access Land

Records within 250m

0

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

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

12.3 Tree Felling Licences

Records within 250m

0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

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



This data is sourced from Natural England.



13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m**0**

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m**0**

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m**0**

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m**0**

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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme. Features are displayed on the Geology 1:10,000 scale - Availability map on **page 101**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	No coverage	No coverage	No coverage	NoCov

This data is sourced from the British Geological Survey.



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

14.2 Artificial and made ground (10k)

Records within 500m

0

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.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m

0

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.

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

14.5 Bedrock geology (10k)

Records within 500m

0

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.

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

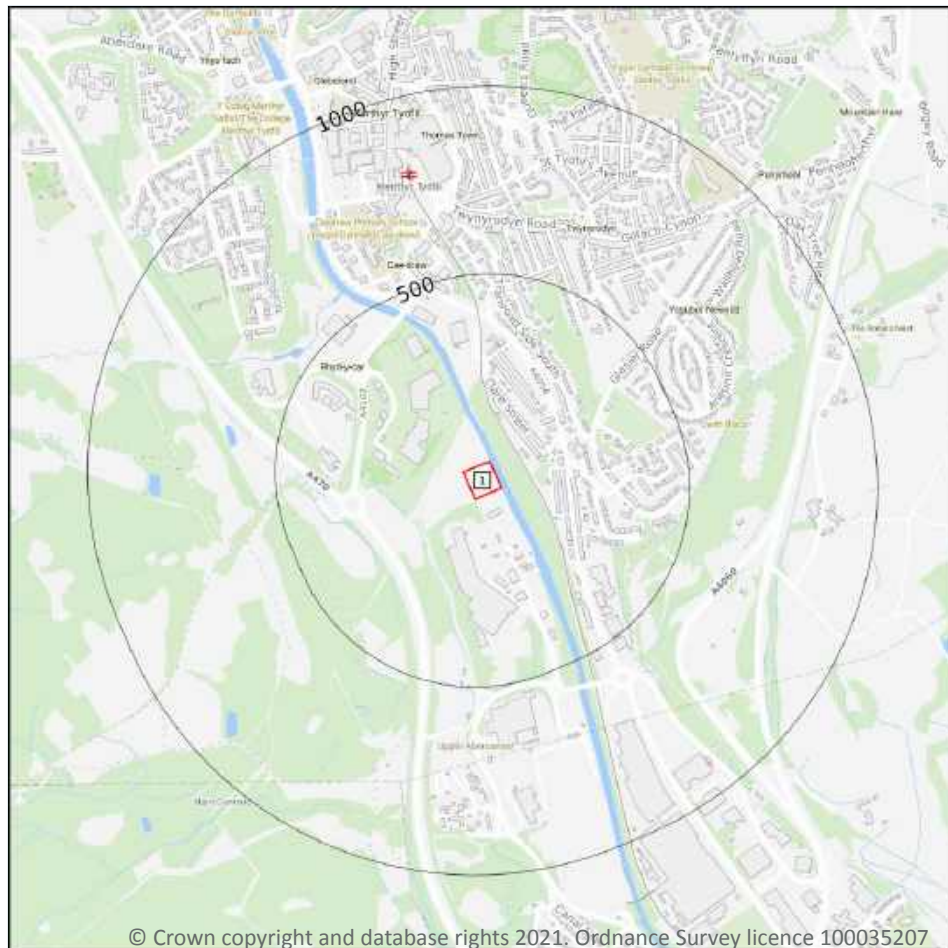
0

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.

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

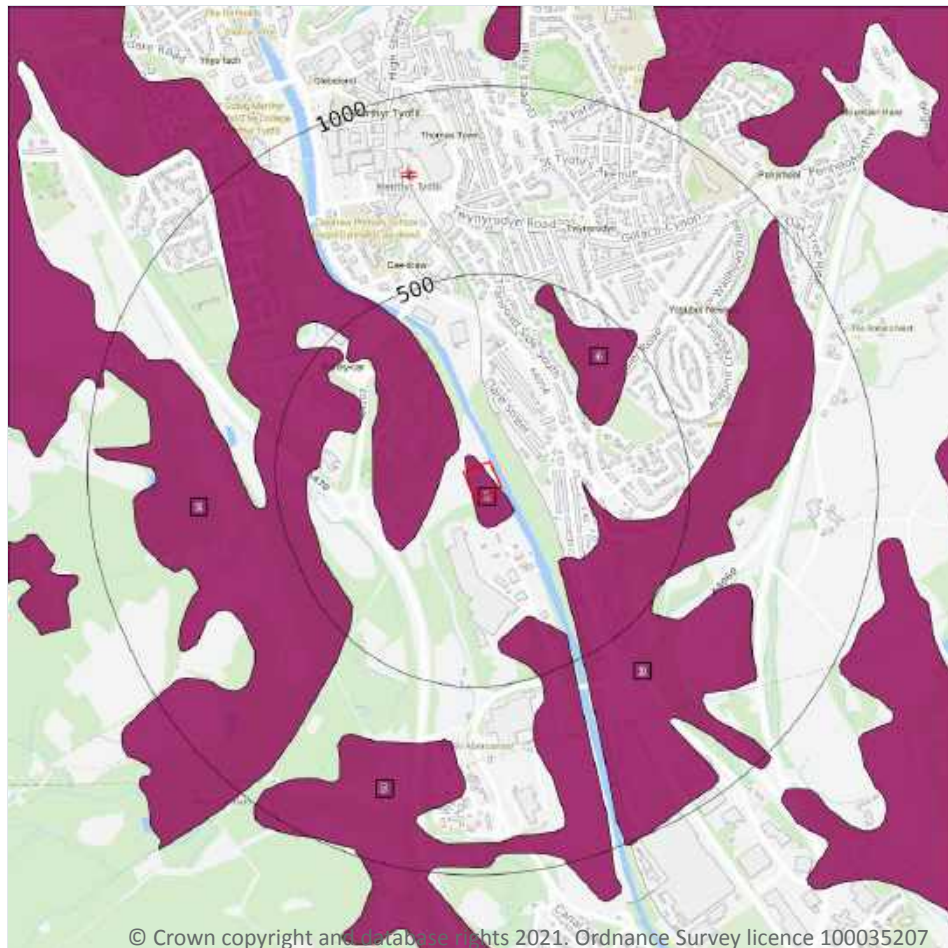
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme. Where 50k data is not available, this area has been filled in with 625k scale data.

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

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW231_merthyr_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

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15.2 Artificial and made ground (50k)

Records within 500m

5

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

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 106**

ID	Location	LEX Code	Description	Rock description
1	On site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	53m NW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	217m E	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	282m NE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT



ID	Location	LEX Code	Description	Rock description
5	340m 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	1
---------------------------	----------

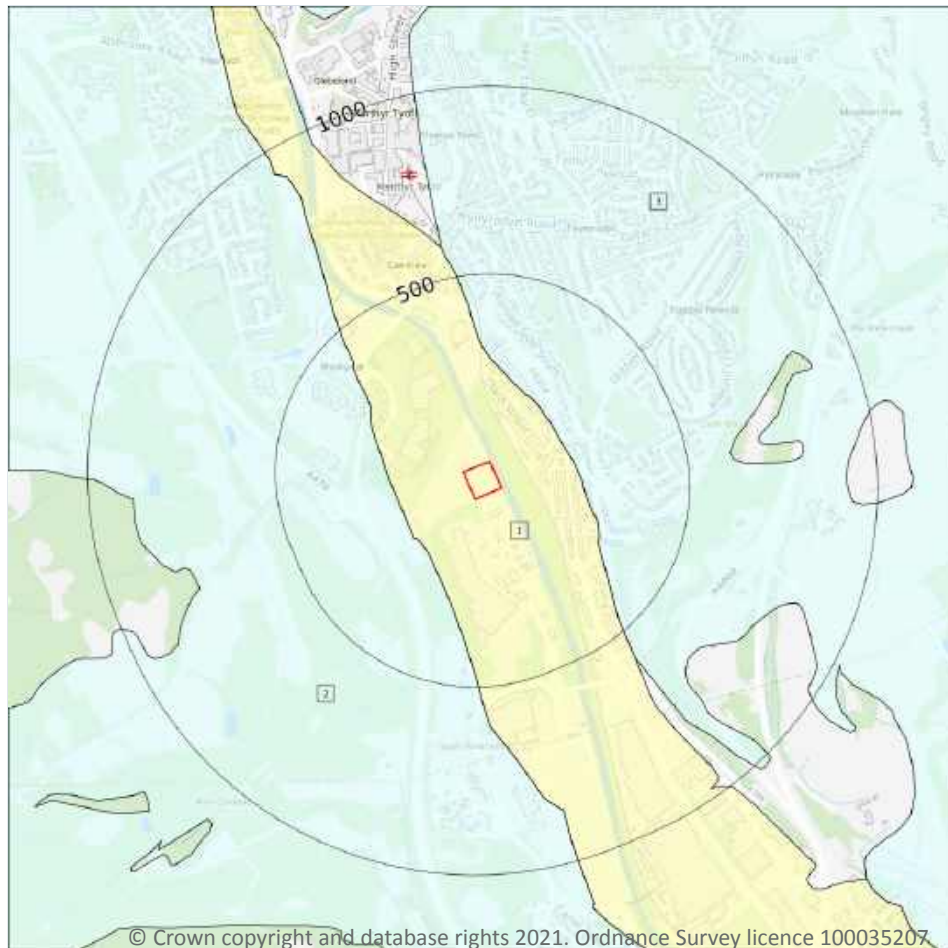
A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Very High	Low

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m

3

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 108**

ID	Location	LEX Code	Description	Rock description
1	On site	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
2	185m SW	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON
3	192m NE	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON

This data is sourced from the British Geological Survey.



15.5 Superficial permeability (50k)

Records within 50m**1**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	High	Very Low

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)

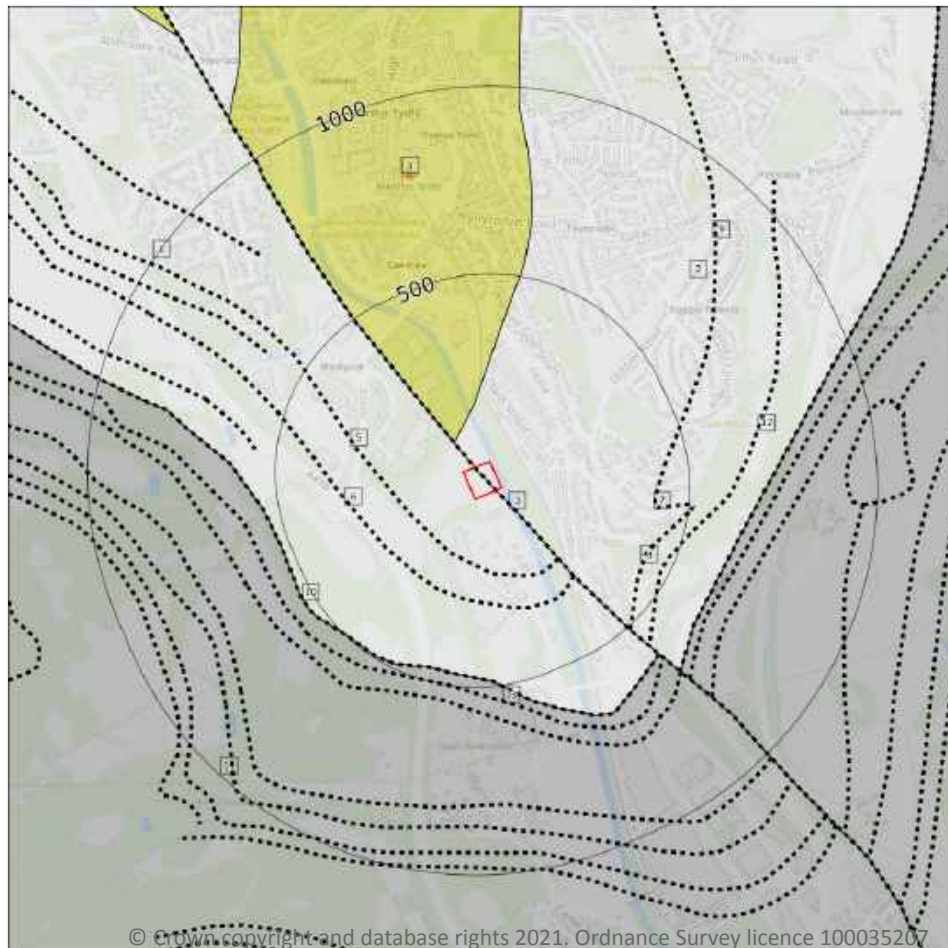
Records within 50m**0**

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

4

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 110**

ID	Location	LEX Code	Description	Rock age
1	On site	SWLCM-MDSS	SOUTH WALES LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
2	On site	SWLCM-MDSS	SOUTH WALES LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
4	80m N	SWLCM-SDST	SOUTH WALES LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
11	463m S	SWMCM-MDSS	SOUTH WALES MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m

1

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

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

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

9

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 110**

ID	Location	Category	Description
3	On site	FAULT	Fault, inferred, displacement unknown
5	149m SW	ROCK	Coal seam, inferred
6	253m SW	ROCK	Coal seam, inferred
7	410m E	ROCK	Coal seam, observed
8	422m SE	ROCK	Coal seam, inferred
9	438m E	ROCK	Coal seam, inferred
10	463m S	FOSSIL_HORIZON	Marine band
12	477m SE	ROCK	Coal seam, inferred



ID	Location	Category	Description
13	499m S	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

13

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

Features are displayed on the Boreholes map on **page 113**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	204m SW	304970 205100	TAFF VALLEY T.K. 182	18.4	N	259984
2	211m SW	305060 204960	TAFF VALE TRUNK ROAD, ABERFAN. 181	16.7	N	260690



ID	Location	Grid reference	Name	Length	Confidential	Web link
3	215m SW	304990 205030	TAFF VALLEY T.K. TP.630	5.12	N	259983
A	228m SW	305025 204966	A470 PENTREBACH PB 131	42.0	N	261028
4	229m SW	304991 205003	A470 PENTREBACH PB 136	42.0	N	260338
5	237m S	305200 204900	PLYMOUTH IRONWORKS. (MINE PLAN)	602.71	N	260764
B	237m W	304924 205123	A470 PENTREBACH PB 166	33.0	N	260363
B	239m W	304920 205130	TAFF VALLEY T.K. TP.631, BH'S.183,183A,183B	31.7	N	259985
6	239m SW	304958 205039	A470 PENTREBACH PB 144	42.35	N	260342
7	242m SW	305050 204930	TAFF VALE TRUNK ROAD, ABERFAN. TP.629	3.2	N	260689
A	243m SW	305000 204970	A470 PENTREBACH-CEFNCOED P30	4.5	N	260854
A	245m SW	305003 204963	A470 PENTREBACH PB 132	42.0	N	261029
8	249m SW	305024 204939	A470 PENTREBACH PB 133	42.0	N	261030

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

1

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

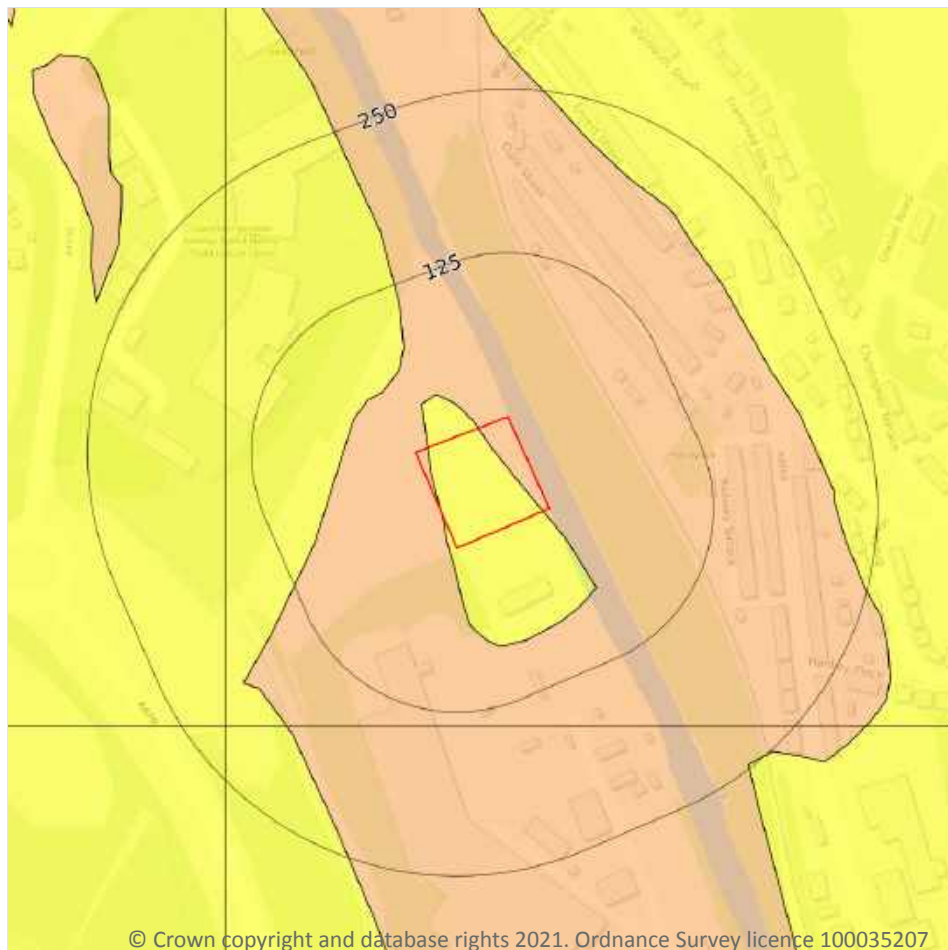
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 115**

Location	Hazard rating	Details
On site	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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

17.2 Running sands

Records within 50m

2

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

Features are displayed on the Natural ground subsidence - Running sands map on **page 116**

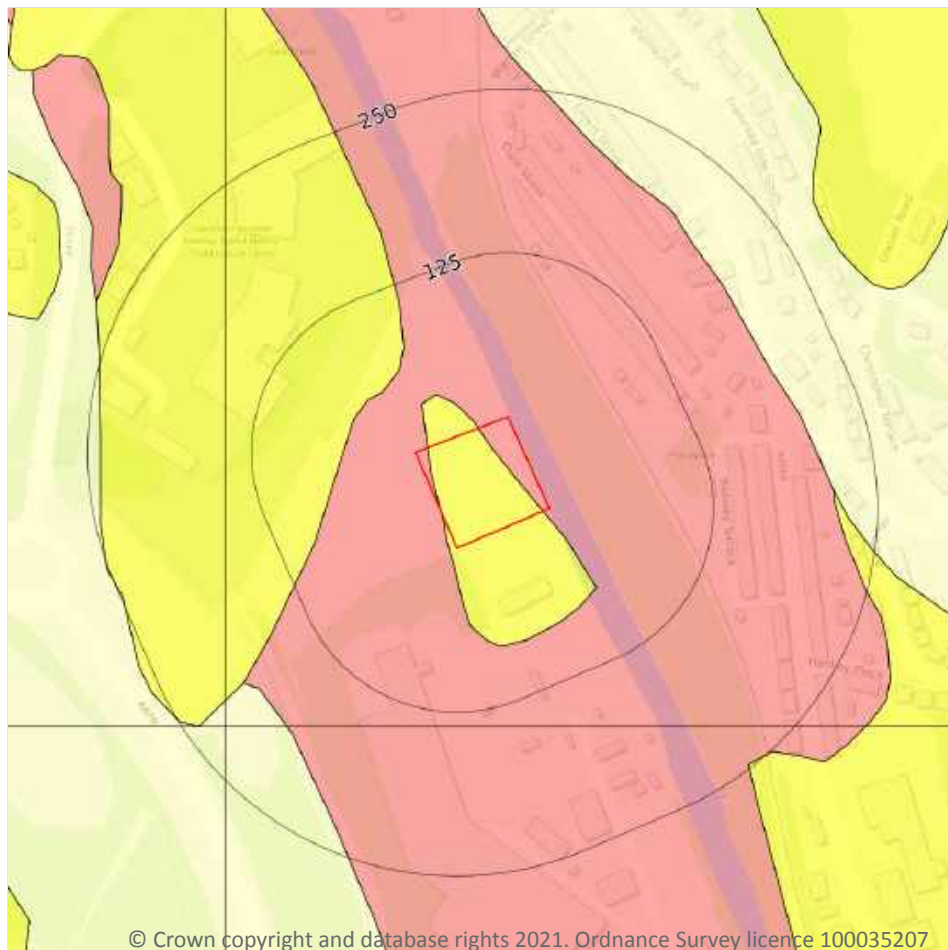
Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

Location	Hazard rating	Details
On site	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

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

2

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

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 118**

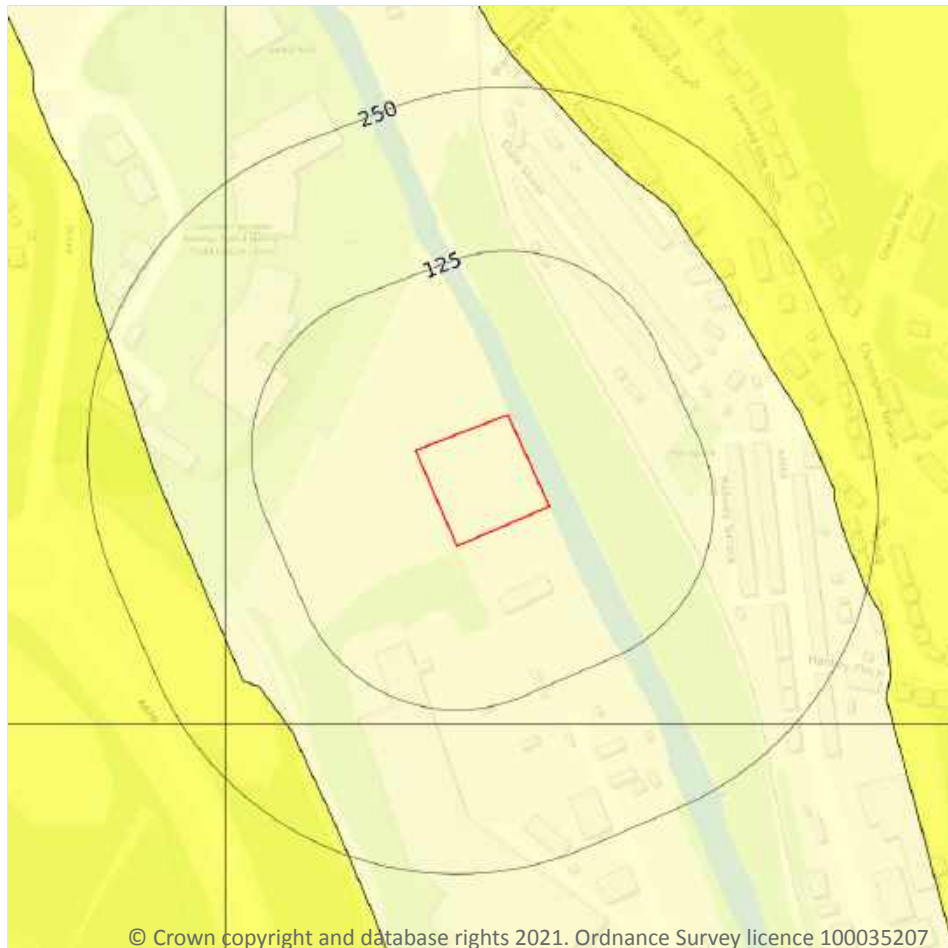
Location	Hazard rating	Details
On site	Very low	Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.

Location	Hazard rating	Details
On site	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.

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 120**

Location	Hazard rating	Details
On site	Negligible	Deposits with potential to collapse when loaded and saturated are believed not 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 121**

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.

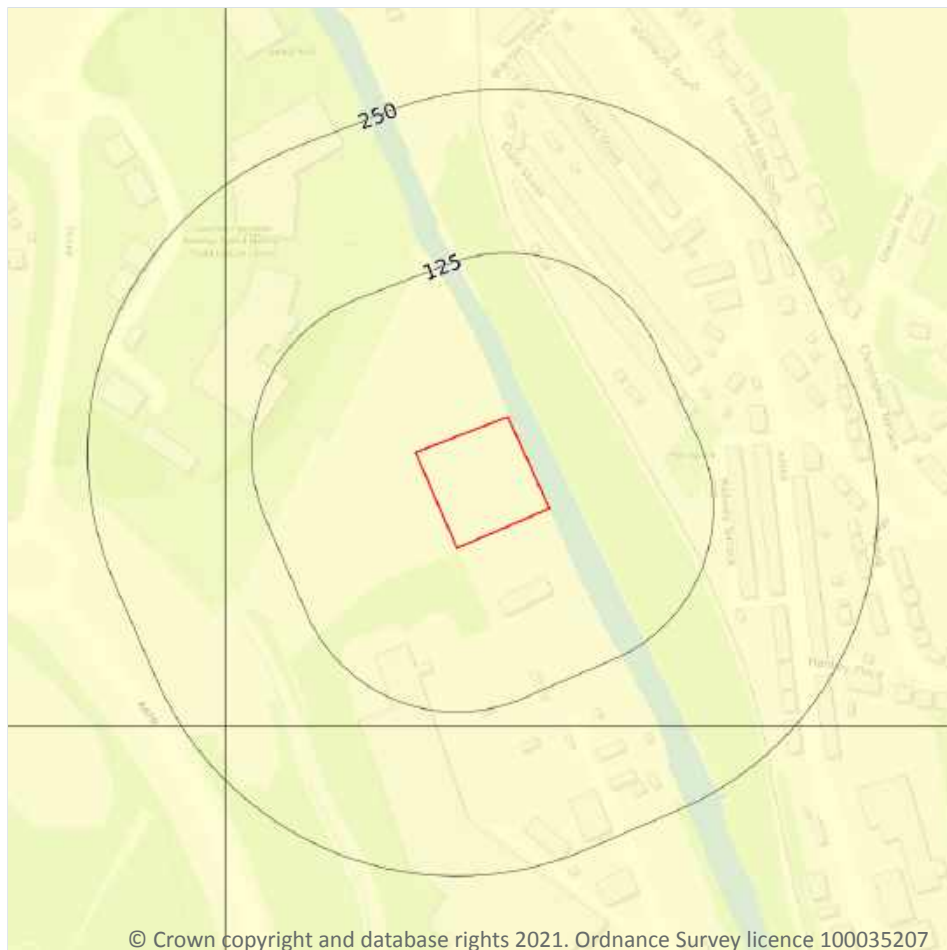


Location	Hazard rating	Details
On site	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

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.

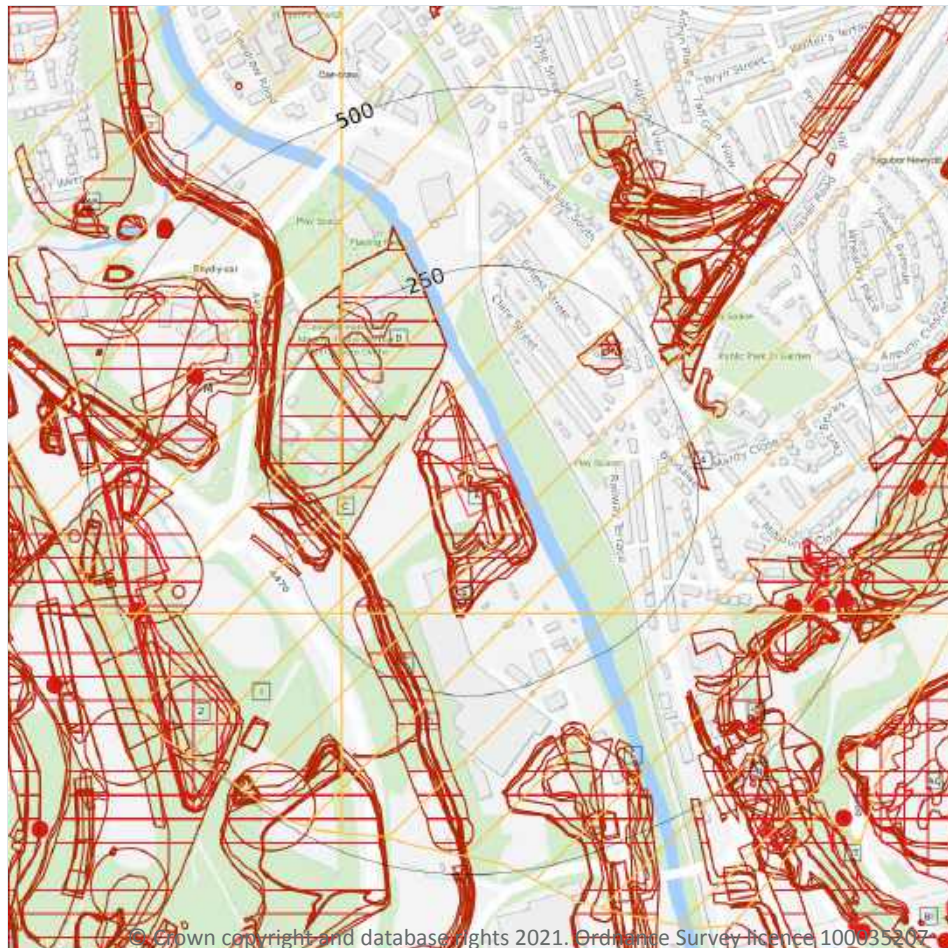
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 123**

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

This data is sourced from the British Geological Survey.



18 Mining, ground workings and natural cavities



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

18.1 Natural cavities

Records within 500m

0

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

This data is sourced from Stantec UK Ltd.

18.2 BritPits

Records within 500m

5

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 125**

ID	Location	Details	Description
M	369m W	Name: Rhyd-y-car Pit Address: MERTHYR TYDFIL, Mid Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) 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
R	413m E	Name: Clyn-mil Drift Address: Pentrebach, MERTHYR TYDFIL, Mid Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) 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
R	450m E	Name: Clyn-mil Drift Address: Pentrebach, MERTHYR TYDFIL, Mid Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) 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
8	476m SW	Name: The Willows Address: MERTHYR TYDFIL, Mid Glamorgan Commodity: Ironstone Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) 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
R	477m E	Name: Prospect House Pit Address: MERTHYR TYDFIL, Mid Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) 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	46
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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.

Features are displayed on the Mining, ground workings and natural cavities map on **page 125**

ID	Location	Land Use	Year of mapping	Mapping scale
A	On site	Unspecified Ground Workings	1875	1:10560
A	On site	Unspecified Heap	1901	1:10560
A	On site	Unspecified Ground Workings	1938	1:10560
A	On site	Unspecified Ground Workings	1938	1:10560
A	On site	Unspecified Pit	1948	1:10560
A	On site	Unspecified Heap	1903	1:10560
A	On site	Unspecified Ground Workings	1921	1:10560
A	On site	Unspecified Ground Workings	1915	1:10560
A	On site	Unspecified Ground Workings	1922	1:10560
A	On site	Unspecified Ground Workings	1922	1:10560
B	56m S	Unspecified Ground Workings	1921	1:10560
C	72m W	Unspecified Heap	1875	1:10560
D	84m NW	Unspecified Ground Workings	1992	1:10000
D	84m NW	Unspecified Ground Workings	1975	1:10000
D	84m NW	Unspecified Ground Workings	1982	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
D	100m NW	Unspecified Pit	1875	1:10560
D	109m NW	Unspecified Pit	1901	1:10560
B	116m S	Unspecified Heap	1922	1:10560
B	116m S	Unspecified Heap	1922	1:10560
D	145m W	Unspecified Pit	1992	1:10000
D	145m W	Unspecified Pit	1976	1:10000
D	146m NW	Unspecified Heap	1948	1:10560
C	158m SW	Canal	1903	1:10560
C	161m SW	Disused Canal	1921	1:10560
2	162m SW	Disused Canal	1948	1:10560
G	163m SW	Disused Canal	1922	1:10560
G	163m SW	Disused Canal	1922	1:10560
C	163m SW	Old Canal	1901	1:10560
C	163m SW	Disused Canal	1915	1:10560
G	163m SW	Disused Canal	1988	1:10000
H	165m NE	Unspecified Heap	1875	1:10560
3	165m SW	Disused Canal	1938	1:10560
C	181m W	Cuttings	1901	1:10560
C	192m SW	Unspecified Heap	1948	1:10560
C	194m SW	Unspecified Disused Tip	1992	1:10000
C	194m SW	Unspecified Disused Tip	1976	1:10000
C	195m SW	Unspecified Heap	1922	1:10560
C	195m SW	Unspecified Heap	1922	1:10560
H	195m NE	Unspecified Ground Workings	1922	1:10560
H	195m NE	Unspecified Ground Workings	1922	1:10560
C	196m SW	Unspecified Heap	1915	1:10560
C	196m SW	Unspecified Heap	1921	1:10560
C	197m SW	Unspecified Heap	1965	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
D	199m NW	Unspecified Ground Workings	1948	1:10560
4	245m E	Unspecified Ground Workings	1901	1:10560
C	247m SW	Unspecified Pit	1875	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

93

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 125**

ID	Location	Land Use	Year of mapping	Mapping scale
R	402m E	Coal Level	1903	1:10560
R	404m SE	Old Coal Level	1948	1:10560
R	405m E	Coal Level	1901	1:10560
Z	414m W	Old Ironstone Level	1903	1:10560
Z	422m W	Old Ironstone Level	1901	1:10560
S	445m SE	Air Shafts	1903	1:10560
S	452m SE	Air Shaft	1901	1:10560
S	456m SE	Unspecified Disused Shaft	1988	1:10000
S	456m SE	Unspecified Disused Shaft	1968	1:10560
S	456m SE	Unspecified Disused Shaft	1964	1:10560
S	459m SE	Air Shaft	1948	1:10560
S	462m SE	Air Shaft	1875	1:10560
R	472m E	Disused Drift	1948	1:10560
R	474m E	Unspecified Old Shaft	1903	1:10560
R	476m E	Unspecified Old Shaft	1901	1:10560
R	480m E	Coal Level	1875	1:10560
R	482m E	Unspecified Old Shaft	1948	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
N	509m SE	Air Shafts	1903	1:10560
N	516m SE	Air Shaft	1901	1:10560
N	534m SE	Air Shaft	1875	1:10560
N	570m SE	Air Shafts	1903	1:10560
N	576m SE	Air Shaft	1901	1:10560
AQ	578m SE	Coal and Ironstone Pit	1875	1:10560
N	578m SE	Unspecified Disused Shafts	1968	1:10560
N	578m SE	Unspecified Disused Shafts	1964	1:10560
N	583m SE	Air Shafts	1948	1:10560
N	584m SE	Air Shaft	1875	1:10560
N	592m SE	Air Shafts	1903	1:10560
N	598m SE	Air Shaft	1901	1:10560
N	601m SE	Unspecified Disused Shafts	1968	1:10560
N	601m SE	Unspecified Disused Shafts	1964	1:10560
12	601m S	Ironstone Level	1875	1:10560
N	604m SE	Air Shafts	1948	1:10560
AP	606m NW	Old Coal Level	1948	1:10560
AT	624m SE	Coal Level	1901	1:10560
AQ	666m SE	Coal Level	1903	1:10560
-	685m W	Coal Shaft	1875	1:10560
-	693m E	Old Coal Level	1901	1:10560
-	711m E	Old Coal Level	1903	1:10560
-	742m W	Air Shaft	1875	1:10560
-	753m W	Old Coal Drift	1948	1:10560
-	753m W	Coal Level	1901	1:10560
BG	753m SE	Unspecified Old Shafts	1903	1:10560
BG	756m SE	Unspecified Old Shafts	1948	1:10560
BG	759m SE	Unspecified Old Shafts	1901	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
BG	767m SE	Unspecified Old Shafts	1901	1:10560
-	778m S	Air Shaft	1875	1:10560
-	782m SE	Air Shaft	1948	1:10560
-	782m SE	Air Shaft	1903	1:10560
-	784m SE	Air Shaft	1901	1:10560
-	787m SE	Unspecified Disused Shaft	1988	1:10000
-	787m SE	Unspecified Disused Shaft	1968	1:10560
-	787m SE	Unspecified Disused Shaft	1964	1:10560
-	793m W	Coal Level	1901	1:10560
-	808m W	Coal Level	1903	1:10560
BI	816m SE	Coal Level	1948	1:10560
-	817m E	Old Coal Level	1903	1:10560
-	820m W	Old Coal Drift	1948	1:10560
25	824m SW	Coal Pit	1875	1:10560
BI	825m SE	Air Shaft	1903	1:10560
BI	828m SE	Air Shaft	1901	1:10560
BI	832m SE	Unspecified Disused Shaft	1988	1:10000
BI	832m SE	Unspecified Disused Shaft	1968	1:10560
BI	832m SE	Unspecified Disused Shaft	1964	1:10560
BI	838m SE	Air Shaft	1875	1:10560
BI	839m SE	Air Shaft	1948	1:10560
-	845m SW	Old Coal Level	1948	1:10560
-	846m E	Coal Pit	1948	1:10560
-	846m W	Disused Coal Drift	1948	1:10560
BK	847m NE	Coal Level	1903	1:10560
-	856m W	Unspecified Disused Drift	1992	1:10000
-	856m W	Unspecified Disused Drift	1976	1:10000
-	866m SW	Old Coal Level	1948	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	874m S	Unspecified Old Shaft	1915	1:10560
-	874m SE	Air Shaft	1875	1:10560
-	886m W	Old Coal Drift	1948	1:10560
-	887m W	Air Shaft	1875	1:10560
-	905m W	Old Coal Level	1948	1:10560
-	908m SW	Air Shaft	1915	1:10560
-	912m SW	Air Shaft	1901	1:10560
-	916m SW	Air Shaft	1875	1:10560
-	922m W	Old Coal Level	1948	1:10560
-	932m NE	Unspecified Old Shaft	1948	1:10560
-	934m NE	Air Shaft	1875	1:10560
-	935m E	Ironstone Level	1875	1:10560
-	953m S	Old Coal Shaft	1901	1:10560
-	981m W	Old Coal Level	1948	1:10560
-	983m W	Disused Air Shaft	1992	1:10000
-	983m W	Disused Air Shaft	1976	1:10000
-	987m W	Air Shaft	1948	1:10560
-	989m W	Old Coal Level	1901	1:10560
-	991m NE	Coal Level	1875	1:10560
-	993m W	Old Coal Level	1903	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.



18.6 Non-coal mining

Records within 1000m

5

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 125**

ID	Location	Name	Commodity	Class	Likelihood
1	On site	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
E	136m S	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
F	145m W	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
I	223m SW	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
-	786m E	Not available	Ironstone (bedded)	D	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m

0

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

This data is sourced from Stantec UK Ltd.



18.8 JPB mining areas

Records on site	0
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Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	1
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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.

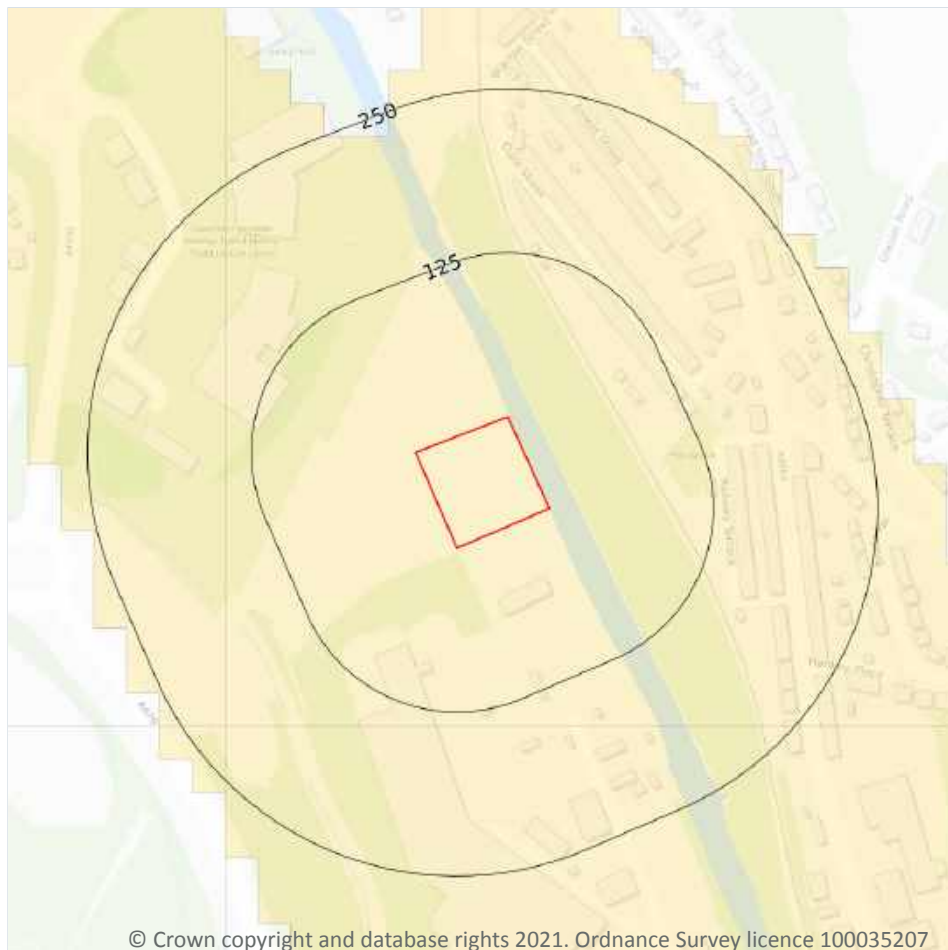
18.13 Clay mining

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



- Site Outline**
- Search buffers in metres (m)**
- Greater than 30%
 - Between 10% and 30%
 - Between 5% and 10%
 - Between 3% and 5%
 - Between 1% and 3%
 - Less than 1%

19.1 Radon

Records on site

1

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

Features are displayed on the Radon map on **page 136**

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 1% and 3%	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

2

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

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

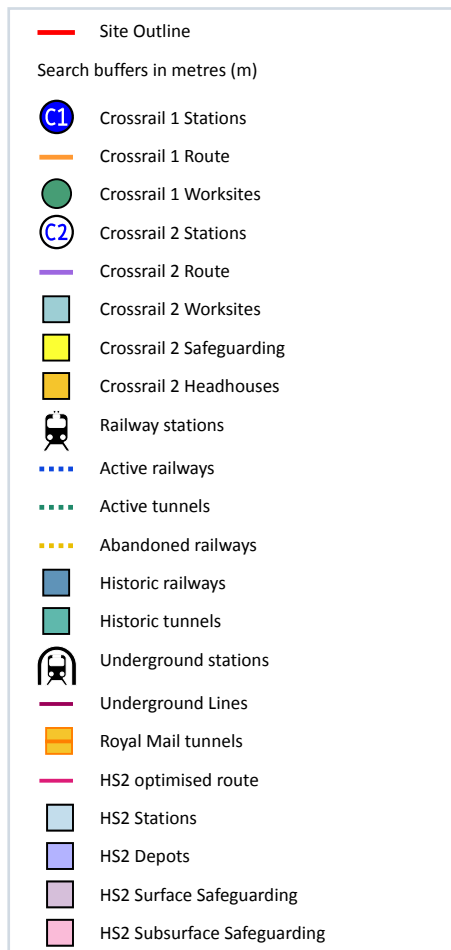
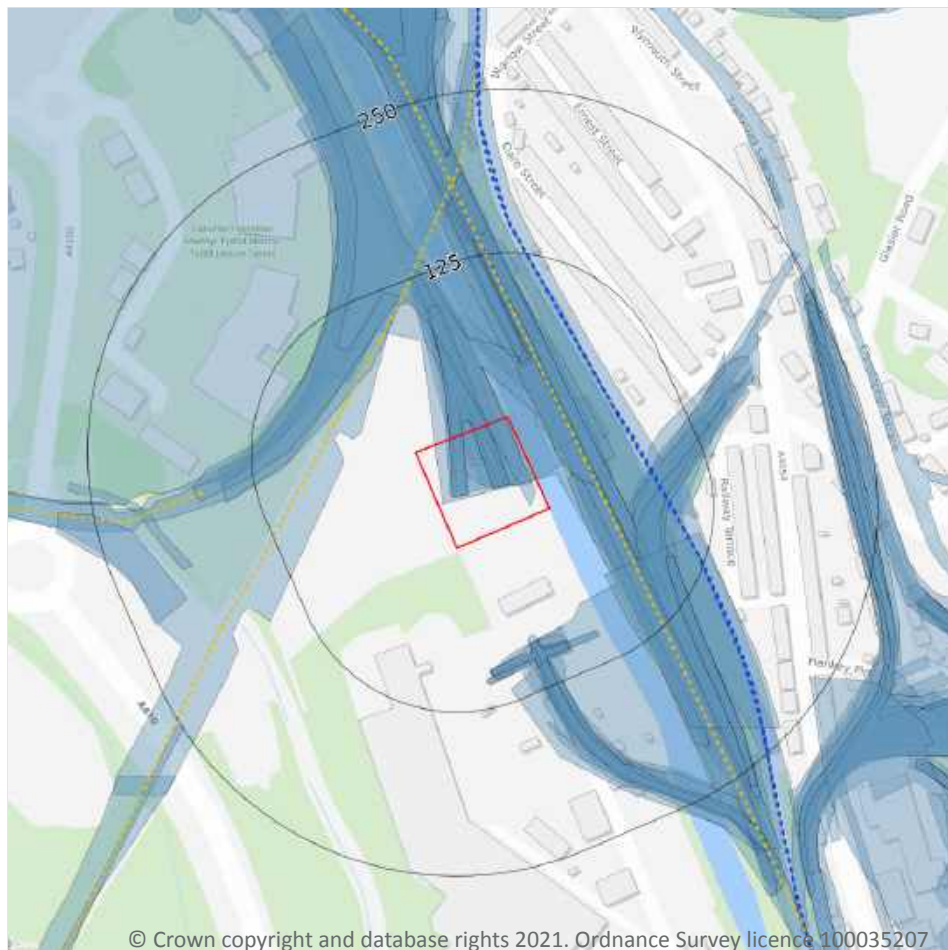
0

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



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

56

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 138**

Location	Land Use	Year of mapping	Mapping scale
On site	Railway Sidings	1900	2500
On site	Railway Sidings	1919	2500
On site	Railway	1873	-
On site	Railway Sidings	1948	10560
On site	Railway Sidings	1903	10560
On site	Railway Sidings	1901	10560
On site	Railway Sidings	1938	10560
On site	Railway Sidings	1915	10560
On site	Railway Sidings	1922	10560
On site	Railway Sidings	1875	10560
22m E	Railway Sidings	1901	10560
22m NE	Railway Sidings	1901	10560
38m NE	Railway Sidings	1921	10560
39m N	Railway Sidings	1915	10560
41m NE	Railway Sidings	1922	10560
41m N	Railway Sidings	1956	2500
41m N	Railway Sidings	1956	1250



Location	Land Use	Year of mapping	Mapping scale
42m N	Railway Sidings	1922	10560
45m N	Railway Sidings	1901	10560
53m NE	Railway Sidings	1875	2500
62m NE	Railway Sidings	1956	1250
64m E	Railway Sidings	1901	10560
66m SE	Railway Sidings	1965	10560
68m E	Railway Sidings	1915	10560
76m NW	Railway Sidings	1921	10560
83m SE	Railway Sidings	1921	10560
88m NW	Railway Sidings	1956	1250
89m SE	Railway Sidings	1922	10560
89m NW	Railway Sidings	1956	2500
92m SE	Railway Sidings	1915	10560
95m SE	Railway Sidings	1956	2500
96m SE	Railway Sidings	1922	10560
96m SE	Railway Sidings	1956	1250
98m SE	Railway Sidings	1956	2500
98m SE	Railway Sidings	1956	1250
105m SE	Railway Sidings	1901	10560
136m N	Railway Sidings	1965	10560
190m SW	Railway Sidings	1875	2500
201m SE	Railway Sidings	1962	2500
204m SW	Railway Sidings	1875	10560
204m N	Railway Sidings	1875	2500
204m N	Railway Sidings	1922	10560
220m E	Tramway Sidings	1901	10560
222m E	Tramway Sidings	1903	10560
222m E	Disused Mineral Railway Sidings	1948	10560



Location	Land Use	Year of mapping	Mapping scale
222m E	Mineral Railway Sidings	1921	10560
224m SE	Railway Sidings	1962	2500
226m E	Tramway Sidings	1900	2500
226m E	Mineral Railway Sidings	1922	10560
228m E	Mineral Railway Sidings	1915	10560
235m E	Tramway Sidings	1901	10560
236m SE	Railway Sidings	1875	10560
237m E	Railway Sidings	1900	2500
244m N	Railway Sidings	1901	10560
248m SW	Railway Sidings	1962	2500
249m SE	Railway	1875	-

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

5

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

Features are displayed on the Railway infrastructure and projects map on **page 138**

Location	Description
39m NE	Abandoned
65m NW	Abandoned



Location	Description
157m SW	Abandoned
164m W	Dismantled
192m SW	Abandoned

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	5
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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 138**

Location	Name	Type
74m NE		rail
74m NE	Not given	Single Track
187m SE	Not given	Single Track
225m N	Not given	Single Track
229m SE	Not given	Single Track

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0
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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
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Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.



21.10 HS2

Records within 500m

0

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

This data is sourced from HS2 Ltd.



Data providers

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

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