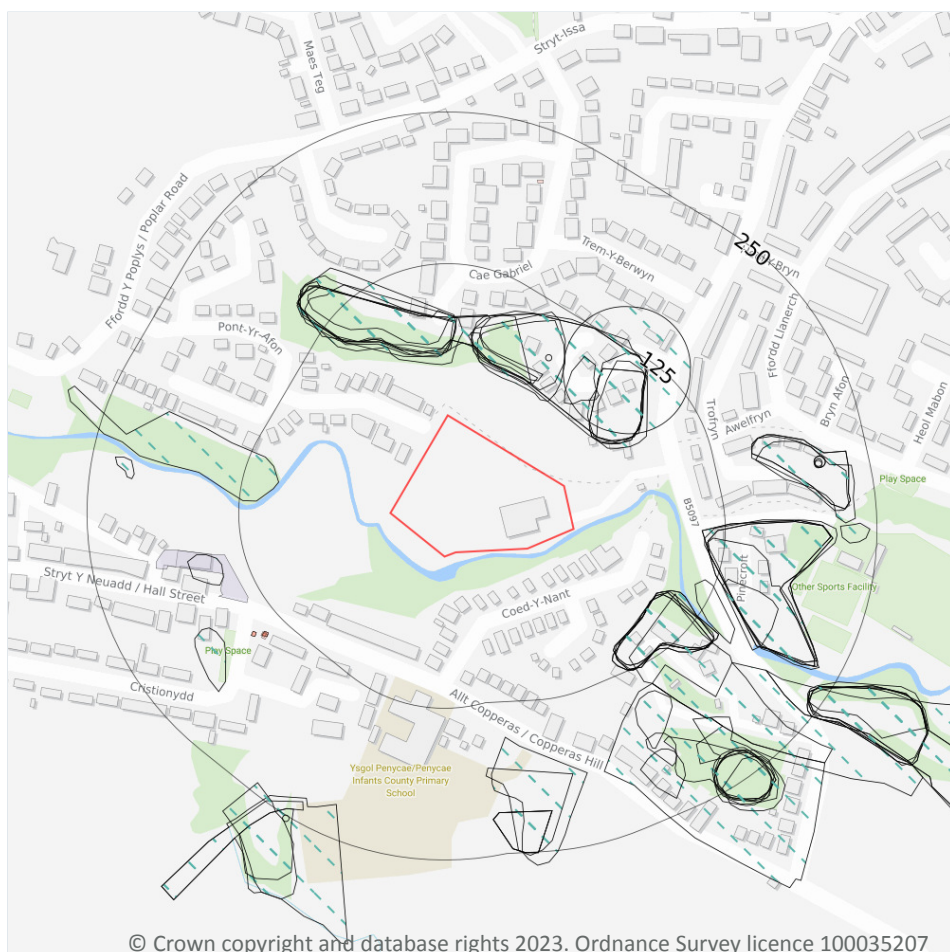


Contaminated land / Past land use



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

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Former industrial land use (1:10,560 and 1:10,000 scale)

These historical land uses have been identified from 1:10,560 and 1:10,000 scale Ordnance Survey maps dated from the mid to late 1800s to recent times. They have the potential to have caused ground contamination. Please see the Environmental Summary to find out how these could impact the site.

Please see [page 4 >](#) for further advice.

Distance	Direction	Use	Date
42 m	N	Unspecified Heap	1873
46 m	NE	Unspecified Heap	1960
46 m	NE	Unspecified Heap	1974
46 m	NE	Unspecified Heap	1949
47 m	NE	Unspecified Heap	1873



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Distance	Direction	Use	Date
48 m	NE	Unspecified Heap	1909
49 m	NE	Unspecified Heaps	1938
49 m	NE	Unspecified Heaps	1938
49 m	N	Unspecified Heaps	1960
49 m	N	Unspecified Heap	1873
50 m	N	Unspecified Heap	1949
52 m	N	Unspecified Heap	1898
53 m	N	Unspecified Ground Workings	1909
53 m	N	Unspecified Heap	1960
55 m	N	Unspecified Heap	1974
55 m	N	Unspecified Heap	1898
56 m	NE	Coal Shaft	1873
56 m	N	Unspecified Ground Workings	1974
59 m	NE	Unspecified Heap	1873
81 m	NE	Coal Shaft	1873
86 m	SE	Unspecified Heap	1898
86 m	SE	Unspecified Heap	1949
87 m	SE	Unspecified Heap	1960
87 m	SE	Unspecified Heap	1974
87 m	SE	Unspecified Heap	1909
87 m	SE	Unspecified Heap	1938
87 m	SE	Unspecified Heap	1938
96 m	W	Unspecified Heap	1974
99 m	SE	Spelter Works	1873
106 m	E	Unspecified Heap	1898
106 m	E	Unspecified Heap	1949
108 m	E	Unspecified Heap	1909
110 m	E	Unspecified Heap	1873



Distance	Direction	Use	Date
110 m	E	Unspecified Heap	1960
111 m	E	Unspecified Heap	1938
111 m	E	Unspecified Heap	1938
131 m	E	Unspecified Heap	1873
135 m	SE	Railway Sidings	1873
143 m	SE	Colliery	1873
145 m	W	Unspecified Heap	1873
148 m	SE	Unspecified Heap	1873
154 m	S	Unspecified Heap	1873
156 m	E	Unspecified Heap	1949
157 m	E	Unspecified Heap	1938
157 m	E	Unspecified Heap	1938
159 m	E	Unspecified Heap	1873
173 m	SW	Unspecified Heap	1873
178 m	S	Unspecified Ground Workings	1898
181 m	SE	Unspecified Heap	1898
185 m	SE	Unspecified Heaps	1898
188 m	SE	Unspecified Ground Workings	1974
195 m	SE	Unspecified Heap	1873
197 m	SE	Colliery	1873
205 m	E	Unspecified Old Shaft	1898
205 m	E	Old Coal Shaft	1949
205 m	E	Old Coal Shaft	1938
206 m	E	Old Coal Shaft	1909
214 m	W	Unspecified Ground Workings	1873
216 m	S	Unspecified Heap	1974
216 m	S	Unspecified Heap	1985
216 m	S	Unspecified Heap	1994



Distance	Direction	Use	Date
220 m	E	Unspecified Heap	1873
222 m	SE	Unspecified Heap	1909
223 m	SW	Unspecified Commercial/Industrial	1873
224 m	SE	Unspecified Heap	1949
225 m	SE	Unspecified Heap	1938
225 m	SE	Unspecified Heap	1938
227 m	SE	Unspecified Heap	1960
233 m	SW	Railway Sidings	1873
235 m	SE	Unspecified Heap	1873
235 m	SE	Unspecified Heap	1909
236 m	SE	Unspecified Heap	1898
236 m	SE	Unspecified Heap	1960
236 m	SE	Unspecified Heap	1974
238 m	SE	Unspecified Heaps	1938
238 m	SE	Unspecified Heaps	1938
239 m	SE	Unspecified Heap	1949
242 m	SW	Unspecified Heap	1898
243 m	SW	Unspecified Heap	1873
250 m	SW	Coal Shaft	1873

This data is sourced from Ordnance Survey/Groundsure.

Former energy features

Energy features such as substations, transformers or power stations have been identified from high detailed historical Ordnance Survey maps dating from the mid to late 1800s to recent times. Structures like this can sometimes cause soil or groundwater contamination.

Please see [page 4](#) > for further advice.

Distance	Direction	Use	Date
141 m	SW	Electricity Substation	1990
141 m	SW	Electricity Substation	1990
141 m	SW	Electricity Substation	1990



Distance	Direction	Use	Date
142 m	SW	Electricity Substation	1990
142 m	SW	Electricity Substation	1994
148 m	SW	Electricity Substation	1990
148 m	SW	Electricity Substation	1990
148 m	SW	Electricity Substation	1990
206 m	N	Electricity Substation	1975

This data is sourced from Ordnance Survey/Groundsure.

Former garages

These garages have been identified from high detailed historical Ordnance Survey maps dating from the mid to late 1800s to recent times. They have the potential to cause ground contamination. This can be because spills can occur when fuel, oil or solvents are used causing ongoing pollution. Older and obsolete garages are considered a greater risk than newer ones, as tanks can remain underground and deteriorate, sometimes causing significant leaks.

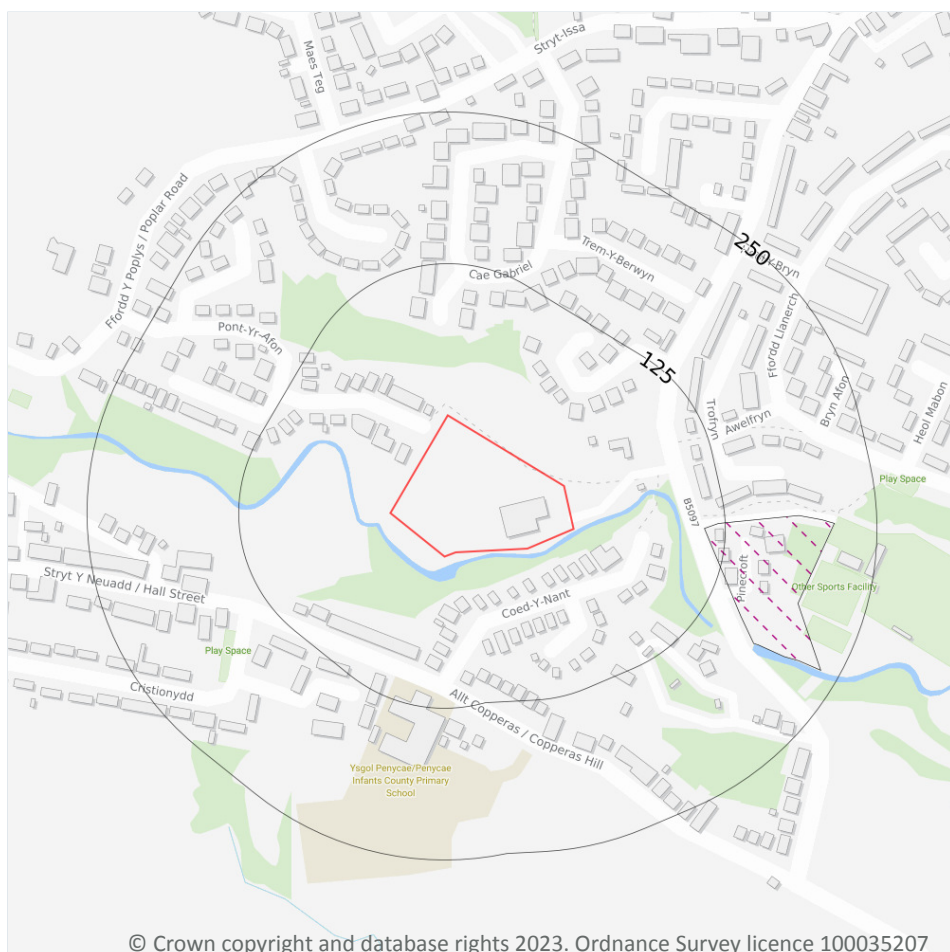
Please see [page 4](#) > for further advice.

Distance	Direction	Use	Date
136 m	W	Garage	1994

This data is sourced from Ordnance Survey/Groundsure.



Contaminated land / Waste and landfill



- Site Outline
- Search buffers in metres (m)
-  Landfill sites (Groundsure records)

Former landfill (from Local Authority and historical mapping records)

These are records of former areas of landfill. These areas of land may have been redeveloped for other uses since the landfill closed. Depending on the nature of the waste these landfill sites accepted, they may still pose a risk of contamination (including from landfill gases). Former landfill sites can also cause issues with ground instability.

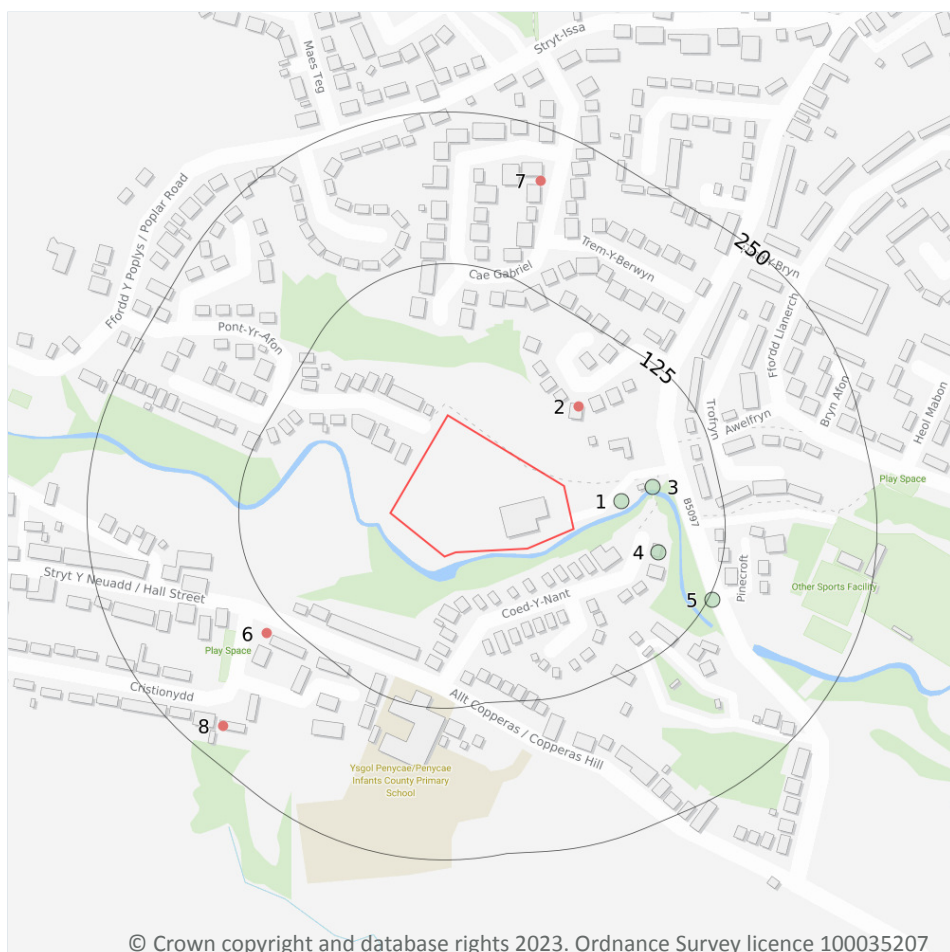
Please see [page 4](#) > for further advice.

Distance	Direction	Site Address	Source	Data Type
108 m	E	Refuse Tip	1975 mapping	Polygon

This data is sourced from Ordnance Survey/Groundsure/Local Authorities.



Contaminated land / Current and recent industrial



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- Pollution incidents

Recent industrial land uses

These records show details of businesses that have recently operated, or are currently operating in the area. Depending on the type of activities taking place, some of these businesses could present a risk of contamination.

Please see [page 4](#) > for further advice.

ID	Distance	Direction	Company / Address	Activity	Category
2	62 m	NE	M & H Mobile Valeting Ltd - Oakleigh, Penycae, Wrexham, Clwyd, LL14 2PJ	Vehicle Cleaning Services	Personal, Consumer and Other Services
6	142 m	SW	Electricity Sub Station - Clwyd, LL14	Electrical Features	Infrastructure and Facilities
7	207 m	N	Electricity Sub Station - Clwyd, LL14	Electrical Features	Infrastructure and Facilities
8	223 m	SW	Wrexham Minibus Co - 50, Cristionydd, Penycae, Wrexham, Clwyd, LL14 2RS	Vehicle Hire and Rental	Hire Services



This data is sourced from Ordnance Survey.

Pollution incidents

Environment Agency keep records of all major or significant pollution incidents that are known to have impacted the land, water or air. The location provided for these records may relate to the location of the incidents but may sometimes be recorded where the effects of the incident was reported.

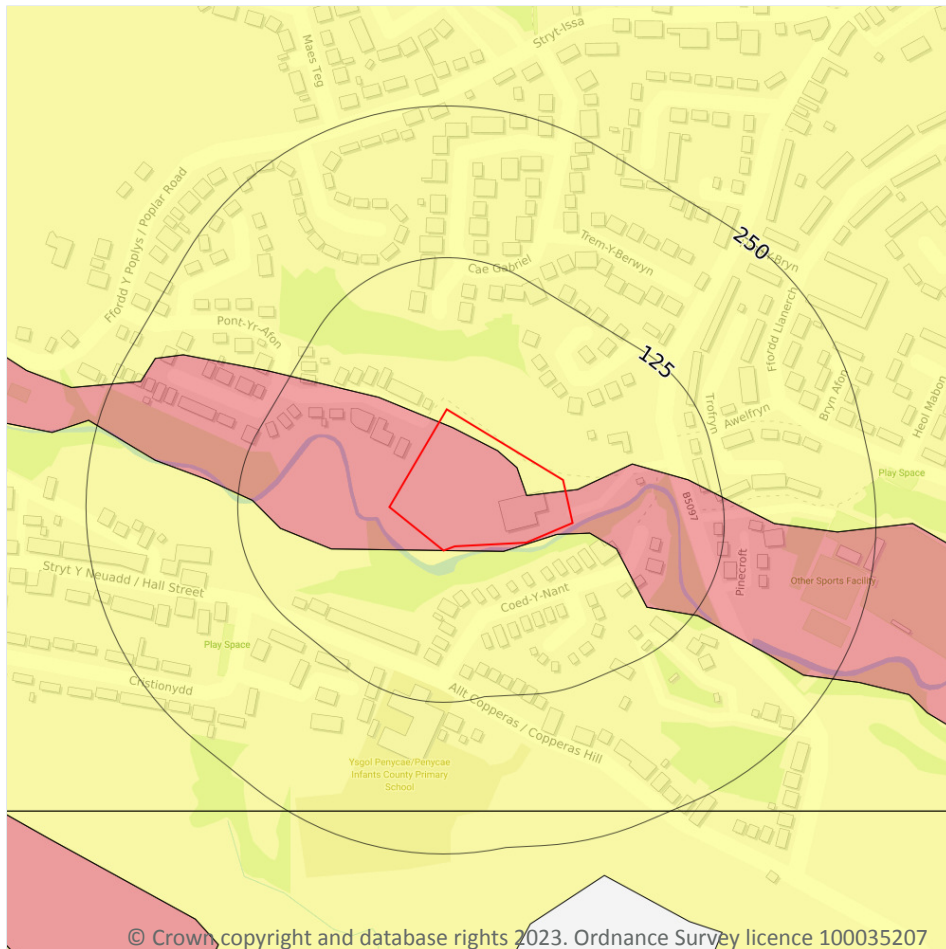
Please see [page 4](#) > for further advice.

ID	Distance	Direction	Incident Date	Land Impact	Water Impact	Pollutant
1	43 m	E	24/09/2001	Category 4 (No Impact)	Category 3 (Minor)	Crude Sewage
3	71 m	E	15/12/2005	Category 4 (No Impact)	Category 2 (Significant)	Not Identified
4	73 m	E	21/08/2001	Category 4 (No Impact)	Category 3 (Minor)	Crude Sewage
5	128 m	SE	11/06/2014	Category 3 (Minor)	-	Construction and Demolition Materials and Wastes

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



Superficial hydrogeology



— Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive
- Unknown

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Aquifers within superficial geology

The Environment Agency/Natural Resources Wales and the British Geological Survey have assigned designations or types to the aquifers that exist within superficial geology. These designations reflect the importance of aquifers in terms of groundwater as a resource (eg drinking water supply) but also their role in supporting surface water flows and wetland ecosystems.

Principal - These are layers of rock or superficial deposits that usually provide a high level of water storage.

Secondary A - Permeable layers capable of supporting water supplies at a local rather than strategic scale.

Secondary B - Predominantly lower permeability layers which may store and yield limited amounts of groundwater.

Secondary Undifferentiated - Has been assigned in cases where it has not been possible to attribute either category A or B to a rock type.

Unproductive - These are rock layers with low permeability that have negligible significance for water supply.

Unknown - These are rock layers where it has not been possible to classify the water storage potential.



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Distance	Direction	Designation
0	on site	Secondary A
0	on site	Secondary Undifferentiated
215 m	S	Secondary Undifferentiated

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

Superficial geology

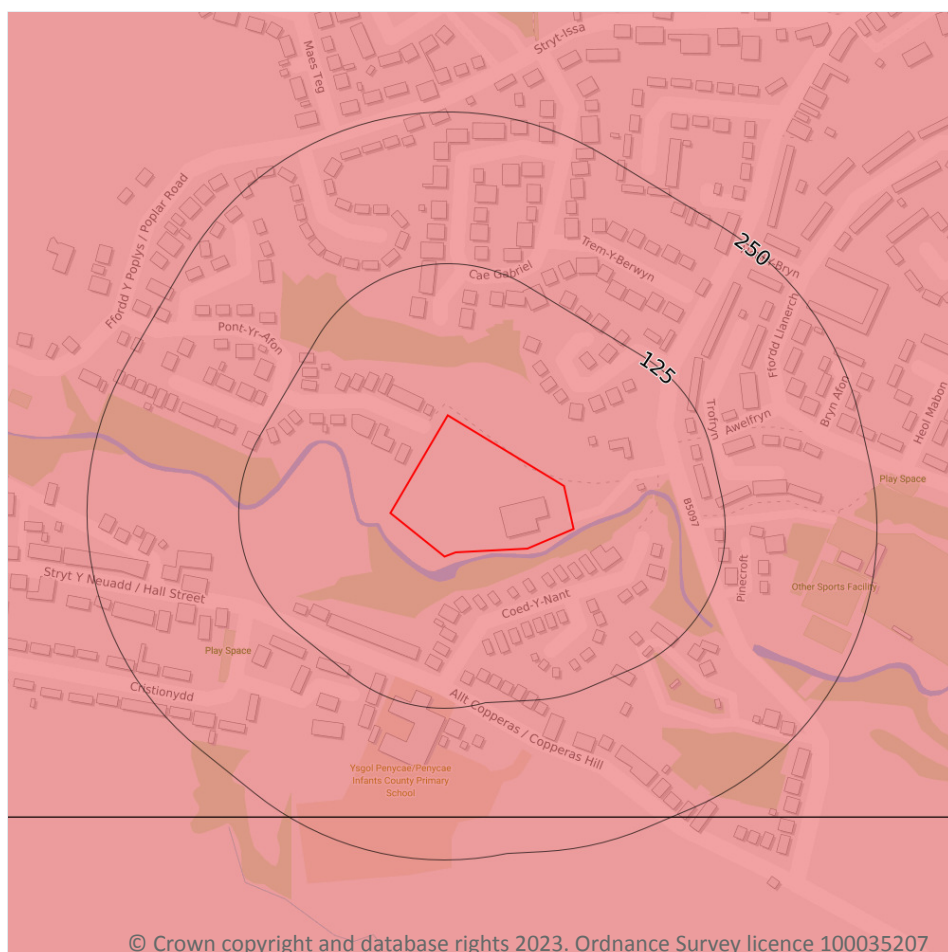
Superficial deposits are the youngest natural geological deposits formed during the most recent period of geological time. They rest on older deposits or rocks referred to as bedrock. This information comes from the BGS 1:50,000 Digital Geological Map of Great Britain, where available.

Description	BGS LEX Code	Rock Type
ALLUVIUM	ALV-XCZSV	CLAY, SILT, SAND AND GRAVEL
GLACIOFLUVIAL DEPOSITS, DEVENSIAN	GFDUD-XSV	SAND AND GRAVEL
TILL, DEVENSIAN	TILLD-DMTN	DIAMICTON

This data is sourced from British Geological Survey.



Bedrock hydrogeology



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- Site Outline
- Search buffers in metres (m)
- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)

Aquifers within bedrock geology

The Environment Agency/Natural Resources Wales and the British Geological Survey have assigned designations or types to the aquifers that exist within bedrock geology. These designations reflect the importance of aquifers in terms of groundwater as a resource (eg drinking water supply) but also their role in supporting surface water flows and wetland ecosystems.

Principal - These are layers of rock or superficial deposits that usually provide a high level of water storage.

Secondary A - Permeable layers capable of supporting water supplies at a local rather than strategic scale.

Secondary B - Predominantly lower permeability layers which may store and yield limited amounts of groundwater.

Secondary Undifferentiated - Has been assigned in cases where it has not been possible to attribute either category A or B to a rock type.

Unproductive - These are rock layers with low permeability that have negligible significance for water supply.



Distance	Direction	Designation
0	on site	Secondary A
215 m	S	Secondary A

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

Bedrock geology

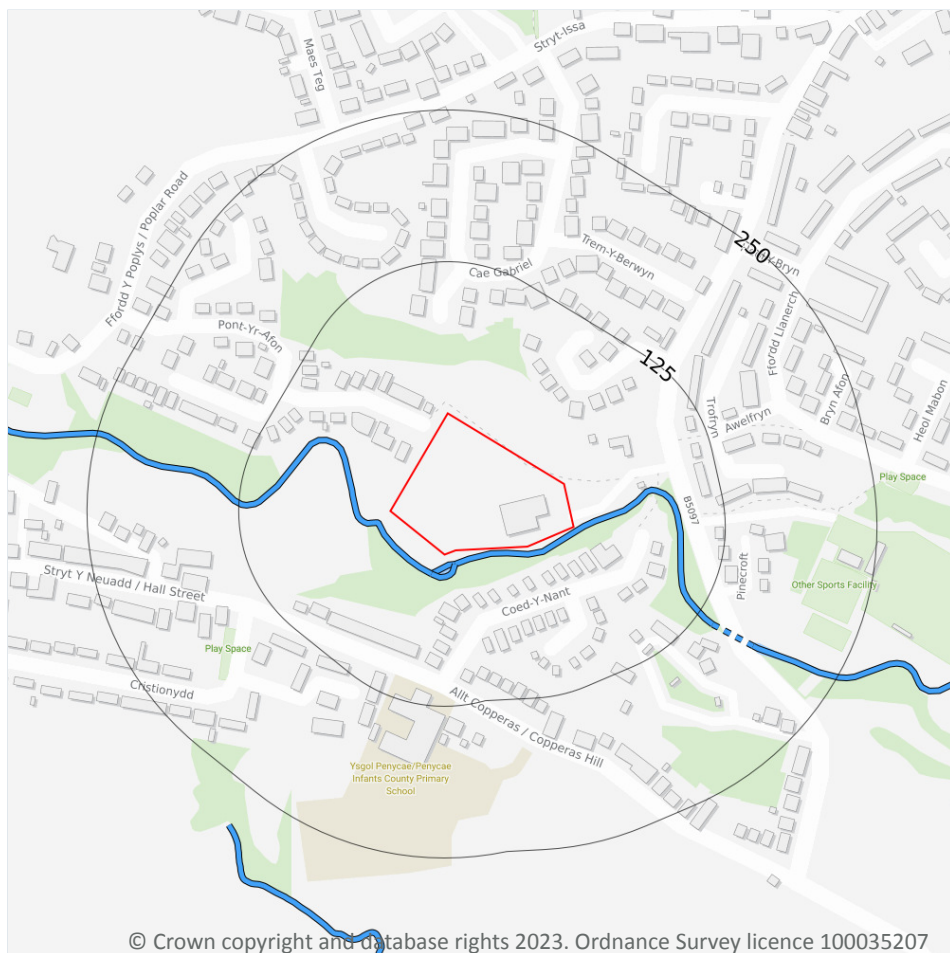
Bedrock geology is a term used for the main mass of rocks forming the Earth and is present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water. This information comes from the BGS 1:50,000 Digital Geological Map of Great Britain, where available.

Description	BGS LEX Code	Rock Type
PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED)	PLMC-MDSS	MUDSTONE, SILTSTONE AND SANDSTONE

This data is sourced from British Geological Survey.



Hydrology



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- Site Outline
- Search buffers in metres (m)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (line)
- Tidal River
- Inland River
- Foreshore
- Canal
- Lock or Flight of Locks
- Lake, Reservoir or Marsh
- Drain or Transfer
- Type of watercourse:
- At ground level - - - - - Elevated
- - - - - Underground — Unspecified

Water courses from Ordnance Survey

These are water features such as ponds, lakes, rivers and streams that have been identified by Ordnance Survey. These features may be sensitive to contamination.

Distance	Direction	Details
4 m	E	Name: Afon Eitha Type of water feature: Inland river not influenced by normal tidal action. Ground level: On ground surface Permanence: Watercourse contains water year round (in normal circumstances)
9 m	SW	Name: Afon Eitha Type of water feature: Inland river not influenced by normal tidal action. Ground level: On ground surface Permanence: Watercourse contains water year round (in normal circumstances)



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Distance	Direction	Details
11 m	S	Name: Afon Eitha Type of water feature: Inland river not influenced by normal tidal action. Ground level: On ground surface Permanence: Watercourse contains water year round (in normal circumstances)
14 m	W	Name: Afon Eitha Type of water feature: Inland river not influenced by normal tidal action. Ground level: On ground surface Permanence: Watercourse contains water year round (in normal circumstances)
140 m	SE	Name: Afon Eitha Type of water feature: Inland river not influenced by normal tidal action. Ground level: Underground Permanence: Watercourse contains water year round (in normal circumstances)
178 m	SE	Name: Afon Eitha Type of water feature: Inland river not influenced by normal tidal action. Ground level: On ground surface Permanence: Watercourse contains water year round (in normal circumstances)

This data is sourced from Ordnance Survey.





Flooding

High risk

Summary

The property and area within the site outline is at risk from one or more kinds of flooding. Property's overall risk assessment for past flooding and river, coastal, surface water and groundwater flooding is high.

Please see [page 29](#) > for details of the identified issues.

River and Coastal Flooding	High
Groundwater Flooding	Low
Surface Water Flooding	Highly Significant
FloodScore™ insurance rating	High
Past Flooding	Not identified
Flood Storage Areas	Not identified
NPPF Flood Risk Assessment required if site redeveloped?	Yes

Next steps

An elevated level of flood risk has been identified at the property.

- investigate the insurance on offer for the property to ensure any implications on premiums are fully understood before completion
- the assessment in this report is based on the highest flood risk found within the site boundary. The maps within the flood risk section clearly highlight which parts have a higher probability of flood risk, allowing you to visualise whether flood risk affects the buildings or the associated land. If required, we can provide an assessment that provides separate flood risk ratings for the main building and for the land/gardens around it. This assessment is carried out manually by one of our in house experts and can only be ordered by contacting our customer support team at info@groundsure.com ↗
- if the property has recently been constructed, the flood risk assessment contained within this report will not take into account any measures put in place by the developer to deal with flooding. You should seek further information from the developer on flood risk mitigation for the site
- investigate the various forms of flood resistance and resilience measures that will help protect your property in the event of a flood

National Planning Policy Framework (NPPF)

A full flood risk assessment will be required at the site in the event that it will be developed/redeveloped. The NPPF states that the flood risk assessment should identify and assess the risks of all forms of flooding to and from the development and demonstrate how these flood risks will be managed so that the development remains safe throughout its lifetime, taking climate change into account. Those proposing developments should take advice from the emergency services when producing an evacuation plan for the development as part of the flood risk assessment.

Jump to

[Risk of flooding from rivers and the sea](#) >

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[Surface water flooding >](#)

[Ambiental FloodScore™ insurance rating >](#)

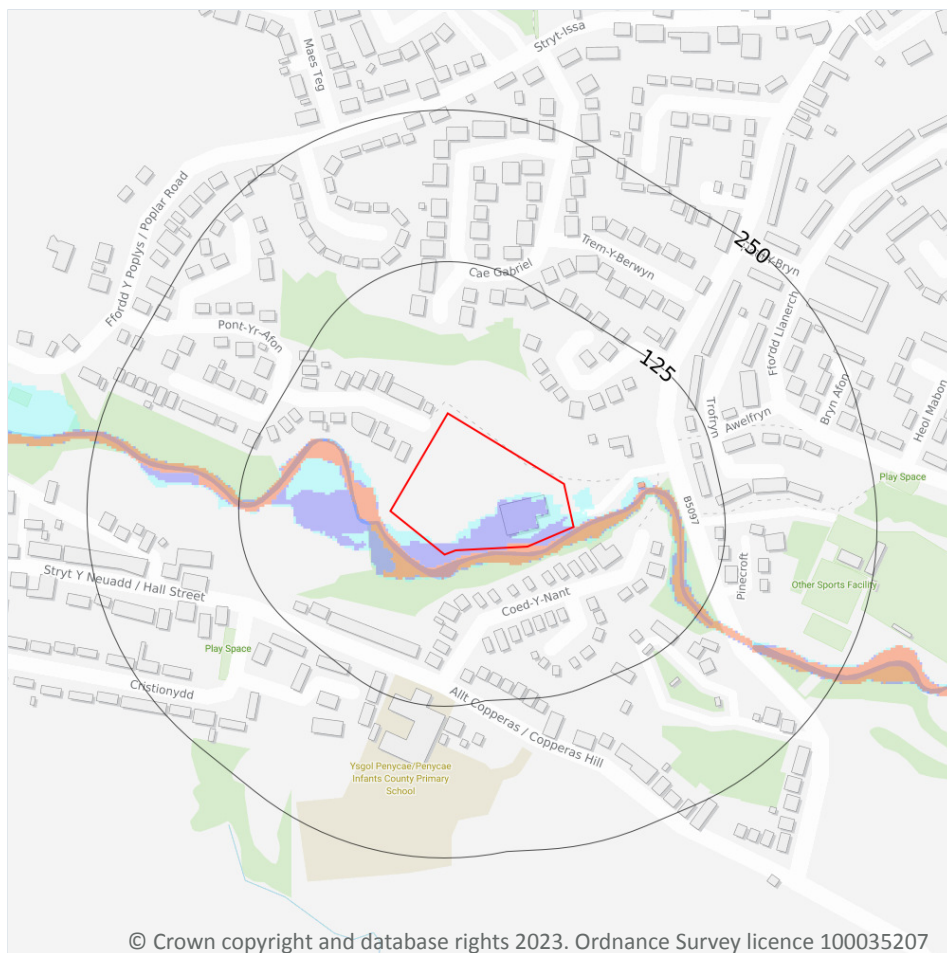
[Flood map for planning >](#)

[Flood risk \(5 and 30 years\) >](#)

[Skip to next section: Environmental >](#)

You can find our methodology and list of limitations on [page 56 >](#)

Flooding / Risk of flooding from rivers and the sea



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



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Risk of flooding from rivers and the sea

The property has a High chance of flooding in any given year, according to Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) data. This could cause problems with insuring the property against flood risk.

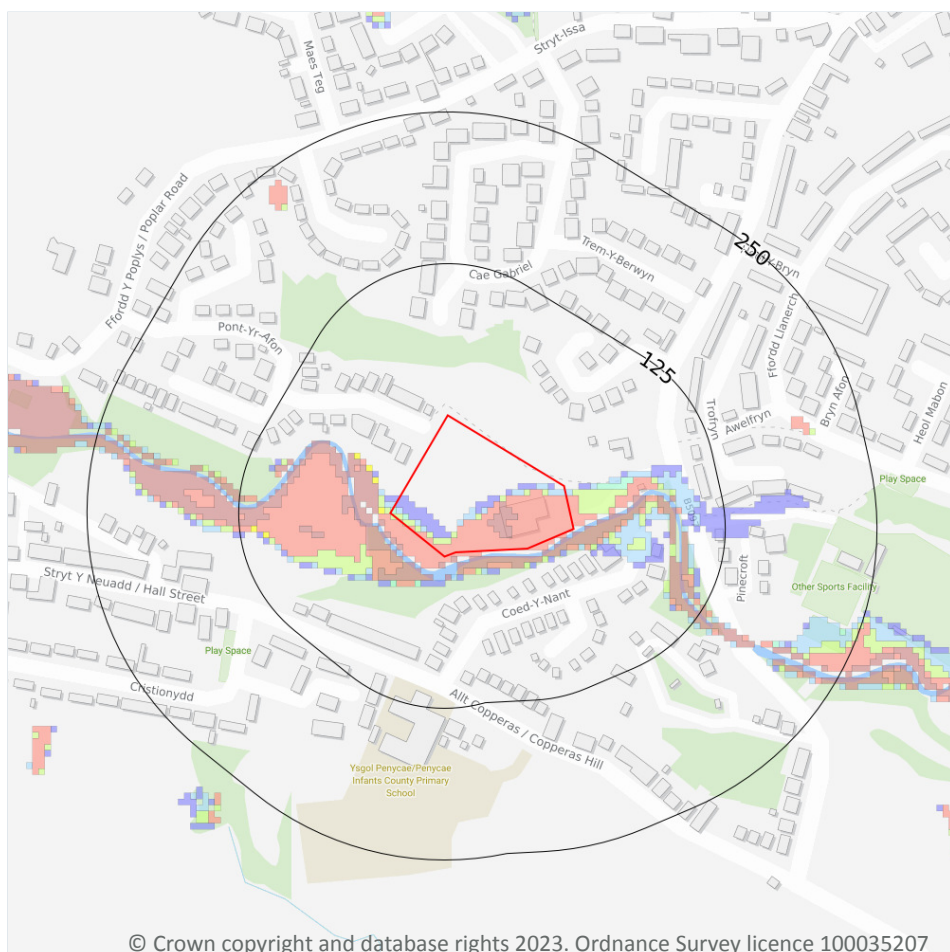
RoFRaS/FRAW assesses flood risk from rivers and the sea in England and Wales, using local data and expertise. It shows the chance of flooding from rivers or the sea, taking account of flood defences and the condition those defences are in. The model uses local water level and flood defence data to model flood risk. See page [page 56 >](#) for explanation of the levels of flood risk.

Please see [page 4 >](#) for further advice.

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Flooding / Surface water flood risk



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— Site Outline
Search buffers in metres (m)

Surface water flood risk

- Highly significant
- Significant
- High
- Moderate to high
- Moderate
- Low to moderate
- Low

Surface water flood risk

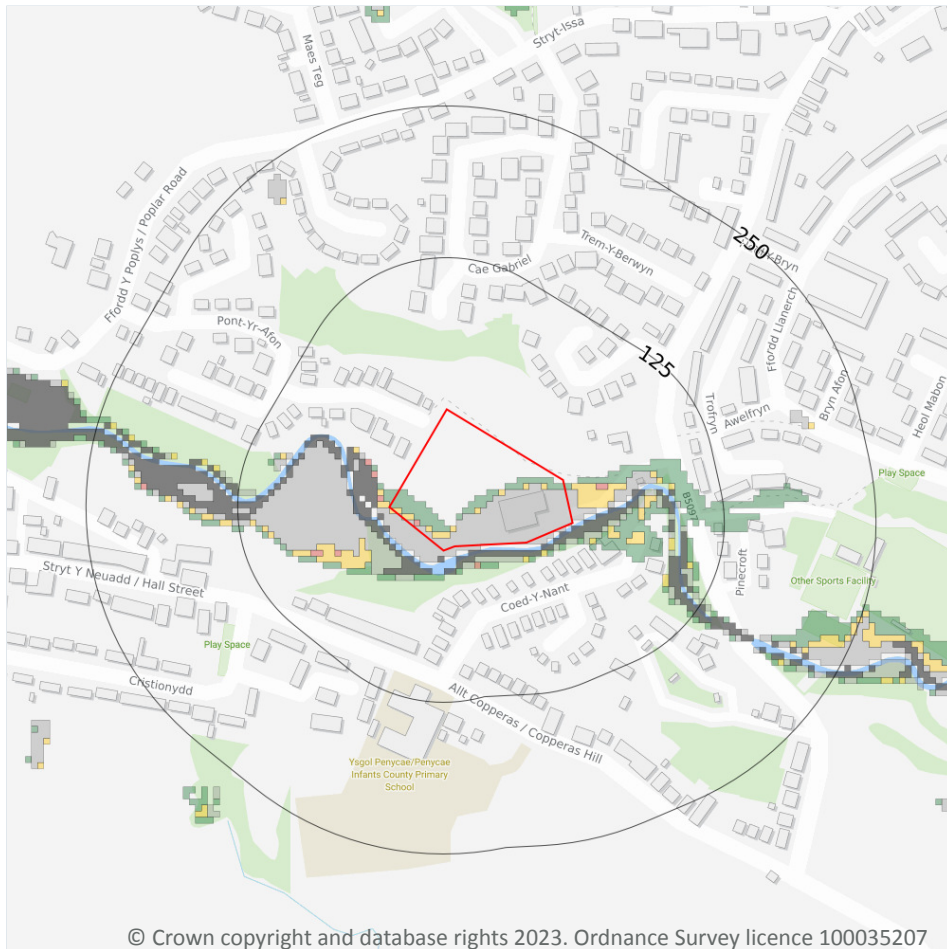
The property is likely to be prone to flooding following extreme rainfall, which may have an impact on insuring the property against flood risk.

The area in which the property is located has been assessed to be at a Highly Significant risk of surface water flooding. This area is considered to have a 1 in 30 probability of surface water flooding due to rainfall in a given year to a depth of greater than 1m. However, as is the case with probability statistics and predictions, this information should be used as a guideline only. The area may flood several years in a row, or not at all for many years. 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.

These risk calculations are based on Ambiantal Risk Analytics maps.



Flooding / Ambient FloodScore™ insurance rating



— Site Outline
Search buffers in metres (m)

- Very High
- High
- Moderate-High
- Moderate
- Low

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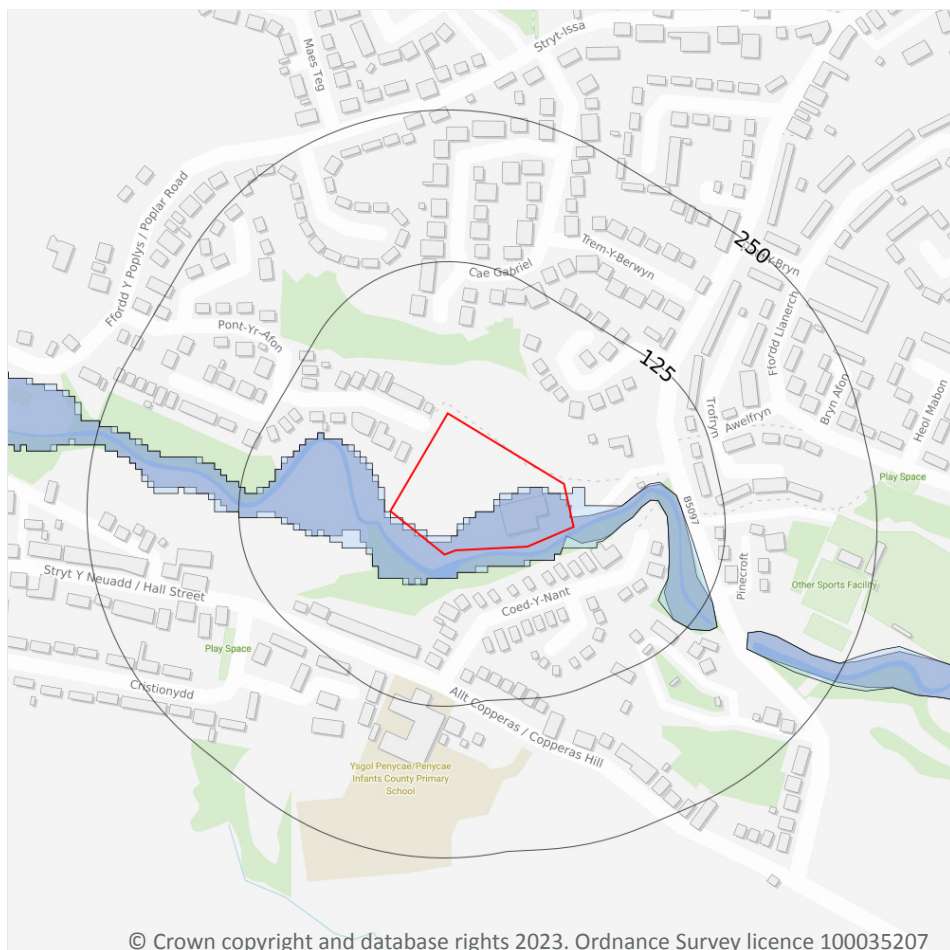
The property has been rated as having a High level of flood hazard.

Ambient's FloodScore™ insurance rating provides an indication of the likelihood of a property being flooded from river, coastal, groundwater and/or surface water flood. The FloodScore™ insurance rating information is based on a model and should not be relied upon as fact. It is only one of the many considerations reviewed as part of a commercial insurance policy.

Other underwriting considerations may include whether the building has been raised, are the contents raised off the floor, the construction type, business type, whereabouts the flooding impacts the property and the likelihood of business interruption such as access restrictions due to flood waters. As a property owner, understanding the risk to your property is valuable and adding flood resilience measures to the property, where known to be at risk, may help getting insurance or reducing the premium or excess charged by an insurer.



Flooding / Flood map for planning



- Site Outline
- Search buffers in metres (m)
- Flood zone 2
- Flood zone 3

The Environment Agency Flood Zone information is used within the planning system to help determine whether flood risk assessments are required for development. This guidance forms part of the National Planning Policy Framework (NPPF). The different Flood Zones are classified as follows (note that the risk values stated below do not take into account any flood defences -see the RoFRaS data for a rating that takes flood defences into account):

Zone 1 – little or no risk with an annual probability of flooding from rivers and the sea of less than 0.1%.

Zone 2 – low to medium risk with an annual probability of flooding of 0.1-1.0% from rivers and 0.1-0.5% from the sea.

Zone 3 (or Zone 3a) – high risk with an annual probability of flooding of 1.0% or greater from rivers, and 0.5% or greater from the sea.

Zone 3b – very high risk with the site being used as part of the functional flood plain or as a Flood Storage Area.

Owners of properties within Zone 2 and Zone 3 are advised to sign up to the Environment Agency's Flood Warning scheme. The Flood Zone(s) found at the property are shown in the table below.

