

6.2 TOPOGRAPHY & USE

The brownfield site is currently vacant, following the demolition of the former factory and completion of the flood mitigation works.

Elevations across the site generally decrease from north (157mAOD) to south (153mAOD) and from west (160mAOD) to east (157mAOD) across the site. A steep bank is present on the southwest boundary, sloping from approximately 160mAOD to 157mAOD into the site. On the eastern site boundary, there is a significant (~6m) drop down to the River Taff.

Appendix A of the FCA contains a topographical survey of the site, completed following construction of the flood alleviation works.

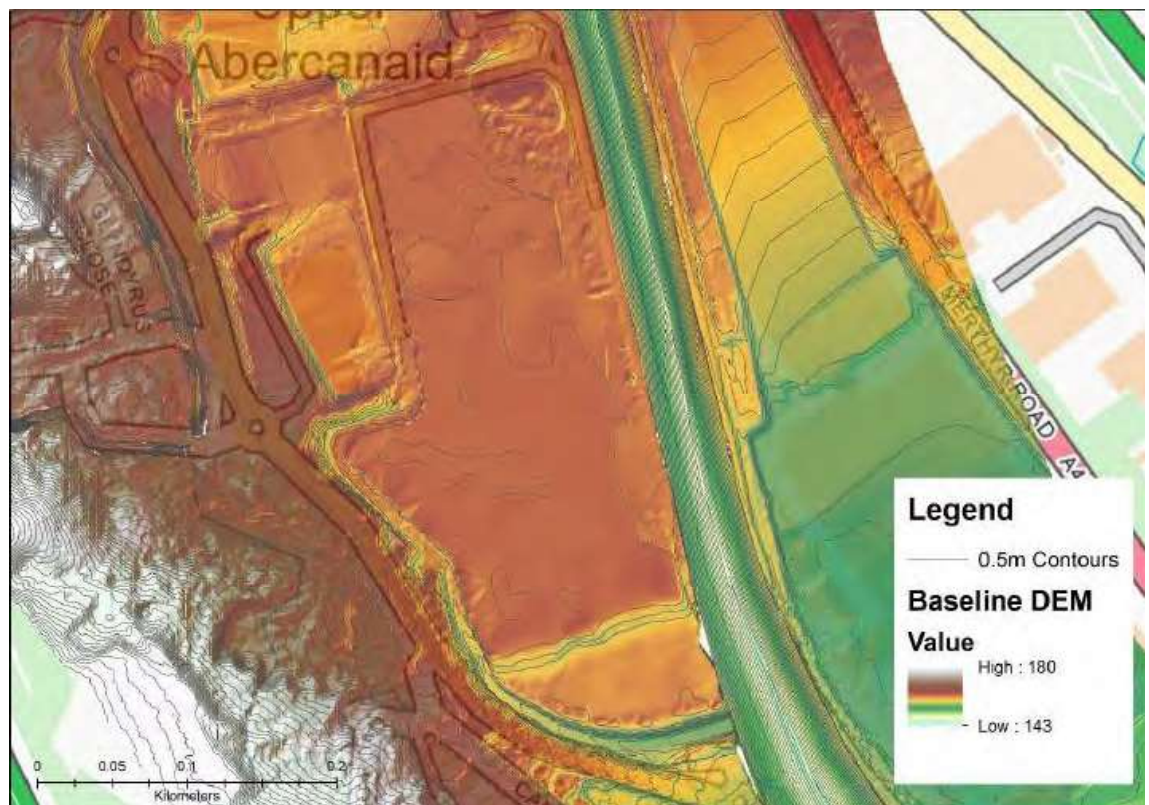
Further to this, Figure 2-2 within the FCA show an illustration of the site topography generated from Natural Resources Wales (NRW) LiDAR data modified on site with the latest site-specific ground model. See extract below.

6.3 GEOLOGY & SOIL

The existing site is largely surface with rubble and made ground. The British Geological Survey (BGS) Geology of Britain viewer was consulted to identify local underlying geological conditions. The site is part of the South Wales Middle Coal Measures Formation, which consists of mudstone, siltstone, and sandstone. The majority of the site is underlain by superficial deposits of Alluvium, consisting of clay, silt, sand, and gravel – the western part of the site is underlain by Till.

The soils of the site were determined from the Cranfield University Soilscape viewer. The site soils are described as slowly permeable wet very acid upland soils with a wet peaty surface.

Site topography (Lidar)



6.4 FLOODING

JBA Consulting were commissioned by Davies Homes to prepare a Flood Consequences Assessment (FCA).

This FCA follows a previously successful planning application and FCA for development enabling flood mitigation works at the site. These engineering works have now been completed. The Merthyr Tydfil County Borough Council (RMTCBC) planning reference for these previous works is P/20/0025.

Watercourse & drainage

The site is bounded to the east by the Afon Taff which flows in a southerly direction before flowing into the Seven Estuary approximately 60km downstream.

To the west of the site flows a small Ordinary Watercourse, the Nant Canaid. This watercourse enters a culverted system which approximately follows the southwestern site boundary to discharge into the Afon Taff at the site's southern boundary as shown in Figure 2-4. Photos of the culvert inlet and outlet are shown in Figure 2-5.

Development Advice Map

NRW's Development Advice Map (DAM) for the site is shown right. The DAM is used to trigger different planning actions based on the precautionary assessment of flood risk. Generally, the northern area of the site mostly falls within Zone B of the DAM, whilst the southern section of the site falls within Zone C2.

Flood Map Challenge

JBA Consulting prepared and submitted a Flood Map Challenge (FMC) for the Dragon Parc site based upon as-built information on the implementation of the Dragon Parc Flood Mitigation Scheme.

This FMC was accepted by NRW in May 2022 and is due to be implemented in the next publication of the FMfP (late November 2022). The NRW accepted FMC report is contained in Appendix C of the FCA.

6.5 SURFACE WATER

The site generally falls North to South at approximately 1 in 150 and has the river Taff running down the Eastern boundary.

An existing DC/WW combined sewer has been proven to run down the Western boundary and subsequently travel down Stanfield Close with records showing an onsite network which was unable to be traced having been abandoned or demolished.

Investigation on site has discovered 2 existing headwalls indicating historical surface water discharging into the river Taff and is likely most, if not all, suitable surface water runoff from the positively drainage site would have ended up at the same destination.

Refer to Drainage Strategy for further details on flooding and surface water.

View south along River Taff



6.6 FLOOD MITIGATION

A Dragon Parc Flood Mitigation Scheme was developed to reduce the risk of flooding on the site, enabling future residential redevelopment of site.

Development enabling flood mitigation works have been completed in early 2022 and a successful Flood Map Challenge was agreed with NRW in May 2022.

The Merthyr Tydfil County Borough Council (RMTCBC) planning reference for the scheme was P/20/0025.

The Dragon Parc Flood Mitigation Scheme consists of the following elements:

1. General site re-profiling to 157mAOD, with the southern area being raised to 155mAOD. The re-profiling was designed to raise ground elevations across the site to be above the 0.1% AEP fluvial flood level.
2. A proposed 6m wide dry swale along the western boundary of the site with depth ranging between 0.19m in the north to 2m in the south. This feature works to convey floodwater around the site and into the Afon Taff and is also designed to prevent an increase in flood risk to third-party areas caused by site re-profiling.
3. A pair pre-cast box culverts at the southern end of the site that will convey water from the swale into a new outfall structure that will discharge into the Afon Taff. Note: these structures have not been constructed at this time and shall be superseded by a new crossing design that better aligns with the site masterplan.

Figure 2-3 provides an illustration of the Dragon Parc Flood Mitigation Scheme. Full plans can be found on the MTCBC planning portal. See extract below.



6.7 NOISE & VIBRATION

An assessment of noise impact was carried out in 2019 by Anglia Consultants. Refer to Proposed Residential Redevelopment Noise Assessment Report, May 2019. The assessment was requested due to the proximity of B2 development on the north-western boundary of the site, currently occupied by Loadlock Ltd.

The report notes the location of the site relative to the Loadlock building to the north west boundary is shown in the figure below. The daytime noise monitoring position is shown as well as positions 1 and 2 where night time background noise levels were measured.

Noise arising from the B2 premises to the north-west boundary of the proposed development has been measured and consists mainly of vehicle movements with occasional loading operations. The daytime site boundary noise level was comparatively low at 52dB(A).

Appropriate glazing and ventilation measures have been suggested to meet the internal noise standards at the dwellings nearest to the site boundary. The external noise guidelines would be met due to the low boundary noise levels.

The report concludes that there is a low potential noise impact and permission should be granted subject to detailed design of mitigation measures to meet the noise standard requirements through planning conditions.

*Extract of Figure 1 from Noise Assessment Report:
Site Location plan and noise measurement position*

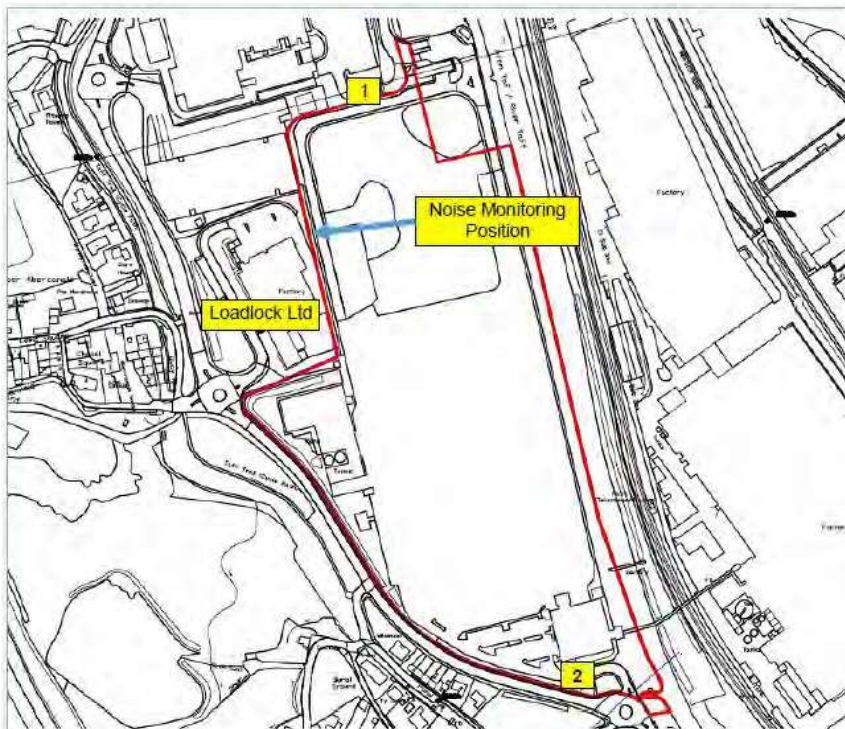


Figure 1 shows the location of the site relative to the Loadlock building to the north west boundary. The daytime noise monitoring position is shown as well as positions 1 and 2 where night time background noise levels were measured.

6.8 LANDSCAPE & VIEWS

The site is regarded as brownfield land with sparse scrub vegetation within the site.

The site is generally screened by existing vegetation from the west.

Close views of the site are experienced from the south.

From the east, the site is more visible from upper valley areas.

Pylons and overhead cables cross the northern section of the site.



6.9 ECOLOGY

The site has been subject to a number of ecological surveys over the past seven years during different stages of the site evolution. The site has continued to remain ecologically poor in terms of habitats and species composition.

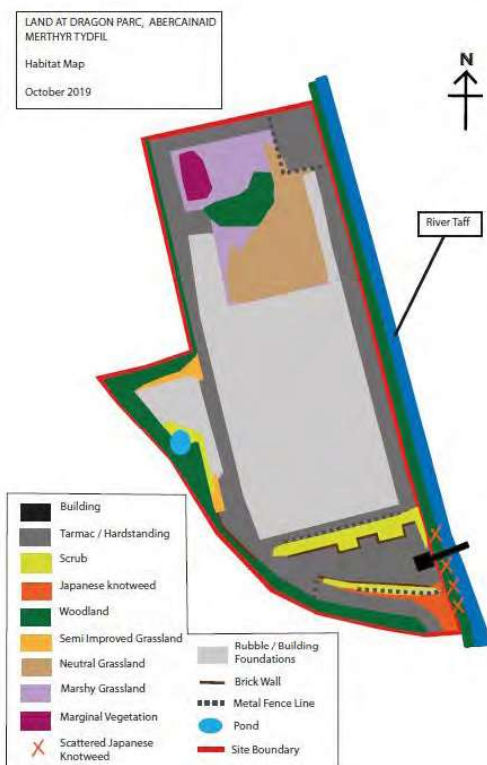
A Preliminary Ecological Appraisal (PEA), was previously undertaken for the site by Ecological Services Ltd in August 2020 in relation to a previous planning application for drainage swale and discharge point into the River Taff.

This survey followed a suite of surveys by RPS in 2016 which included: Phase 1 habitat survey, HSI survey for newts/amphibians, Botanical survey and a bat survey concluding in September 2016.

More recent surveys in relation to this application are summarised in the Ecological Site Summary November 2022. Please refer to specific documents for full details of survey, survey methods, results and recommendations.

The site as it stands ecologically:

- The site contains no bat roosts but is used by 5/6 species of foraging bats
- The site recorded reptiles to be absent from the site
- The site recorded Great Crested Newts to be absent from the site
- The site has records of Otters using the River Taff in close proximity to the site
- The site has no records of bird species nesting on areas of the site to be impacted by the proposed scheme although evidence of nesting birds has been observed in the boundary vegetation
- The site has no records of protected or notable vascular plant species or species as of principle importance for nature conservation listed under section 7 list of The Environment (Wales) act 2016
- The site inside the redline boundary contains no habitats as of principle importance for nature conservation listed under section 7 list of The Environment (Wales) act 2016
- The site has a recorded minimum baseline lux level of 0.23 lux and a maximum recorded level of 21.8 lux
- There are records of two alien invasive species recorded on site Japanese Knotweed and *Cotoneaster bulatus* both need to be removed from site.



Northern fence line with Russian Vine along it



Neutral grassland looking west



Tarmac road along north east looking south



View of south east corner of site

6.10 ARBORICULTURE

Extract of Tree Constraints Plan

ArbTS - Arboricultural Technician Services Ltd (Tree Consultancy) were commissioned to assess the arboricultural impact of the proposed development design and provide details regarding the protection of retained trees during construction work.

The report notes that trees that have been identified to be retained should be treated as constraints to the design of future development.

An extract of the Tree Constraints Plans contained within Appendix 2 of the report is shown right, along with an extract of the Tree Survey summary table. The Category B trees are identified.

Adhering to the tree protection details as found within the report, the proposed development can be constructed without any significant long-term adverse impact onto the retained trees or the amenity of the area.



Tree Survey Summary Table (See Appendix 3 for BS5837 category definitions).
(A more detailed Tree Survey Data Summary can be found in Appendix 1B)

BS5837:2012 Quality Category	Total Number of Individual Trees Surveyed	Total Number of Tree Groups Surveyed	Total Number of Tree Areas Surveyed	Total Number of Woodland Areas Surveyed	Total Number of Hedgerows Surveyed	Total
A (High - Most desirable for retention)	0	0	0	0	0	0
B (Moderate - Desirable for retention)	1	3	0	0	0	4
C (Low - Optional for retention)	1	2	0	0	0	3
U (Poor - Unsuitable for retention)	0	0	0	0	0	0
Total A,B,C,U	2	5	0	0	0	7

6.11 MOVEMENT

Access Points

Two access points currently exist to site, one to the north via the Abercanaid Industrial Estate roundabout and one from the south onto the junction of Wildwood Road and Stanfield Close.

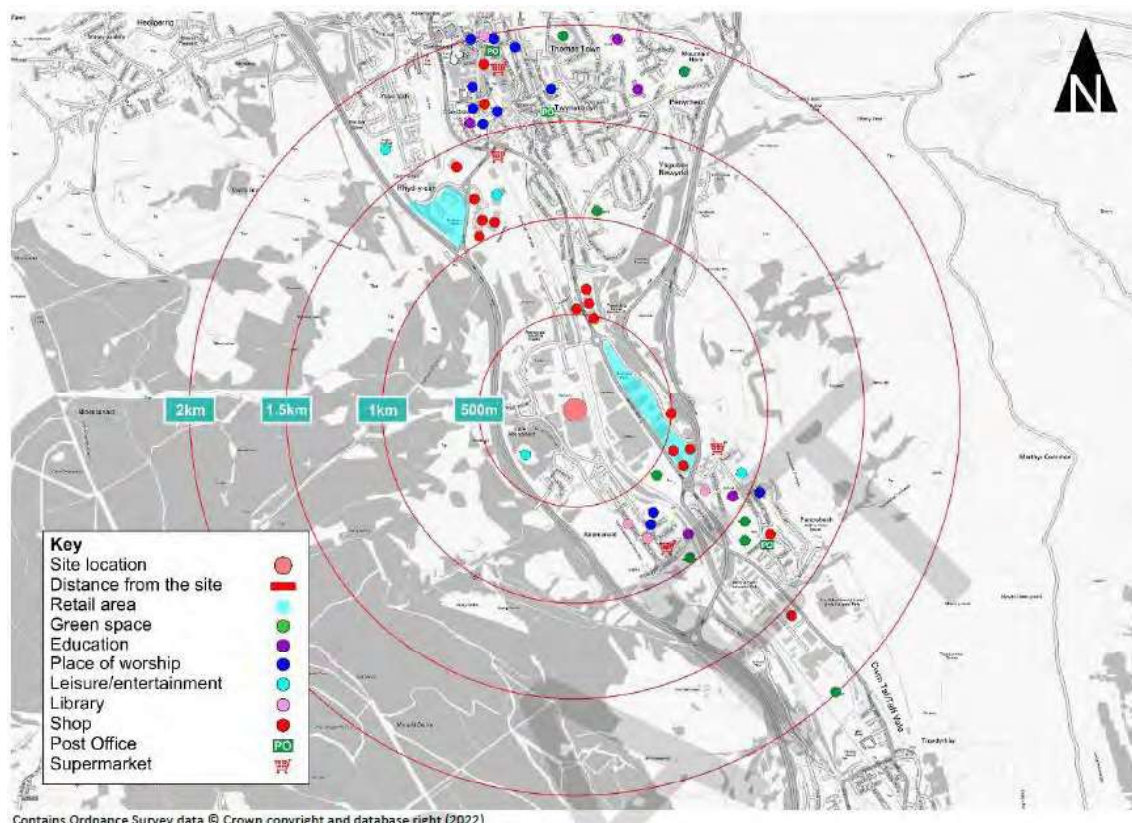
Pedestrian routes

The majority of roads within the vicinity of the site have footways on one or both sides of the carriageway that provide a continuous link between the site and the surrounding areas and facilities.

Within the Transport Assessment (TA) Figure 3.2 shows the 1km isochrones (divided into 200m bands) from the centre of the proposed site, together with local amenities within walking distance. The local amenities within walking distance of the site include:

- Leisure facilities;
- Retail facilities;
- Recreational ground;
- Places of worship
- Public Transport infrastructure;
- Supermarket;
- Education facilities;
- Post Office;
- Police station; and Library.

Extract of Figure 3.2 from Transport Assessment: Local amenities within walking distance



Cycle routes

There are a number of cycle routes within the vicinity of the site, including National Cycle Network Routes 8 (to the west) and 477 (to the east), with additional local routes, also east of the site.

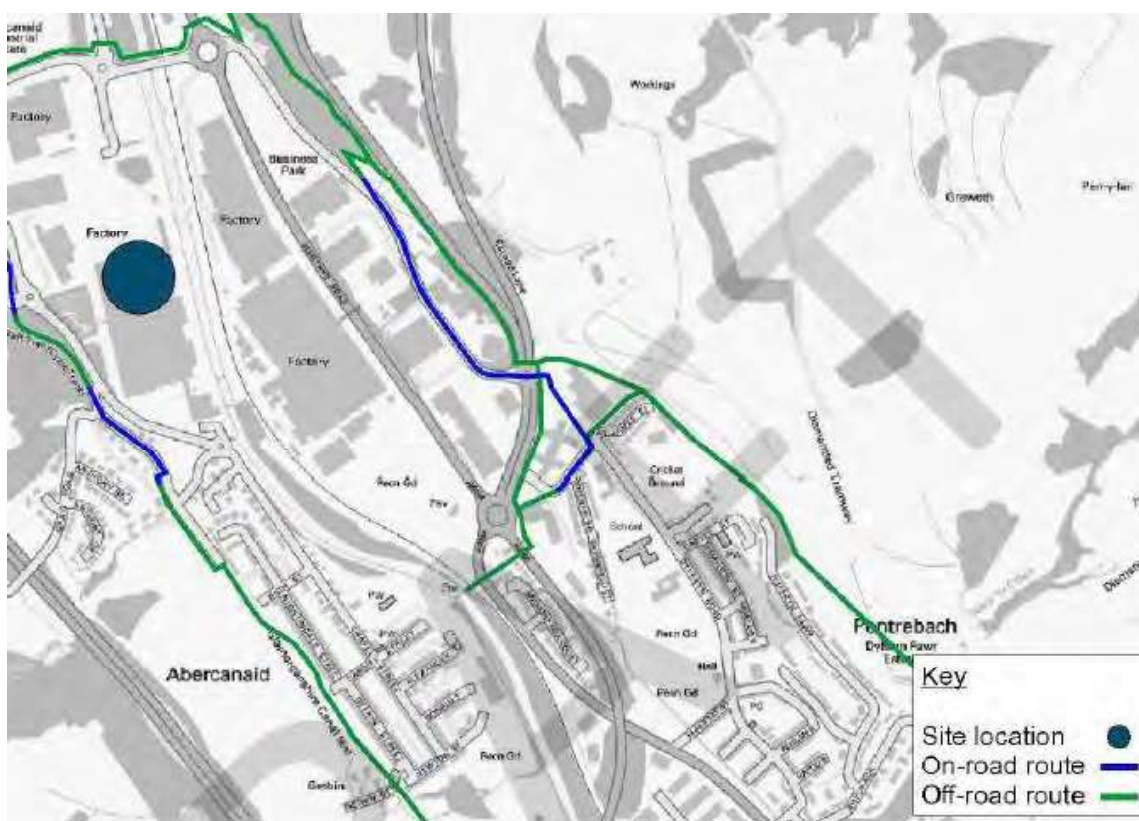
The existing cycle routes provide a largely traffic route between the site and:

- Merthyr Tydfil Town Centre (to the north);
- Local employment areas to the north, south and east of the site; and,
- Local facilities within Abercanaid, Troedyrhiw and Aberfan to the south.

All the cycle routes in the vicinity of the site are outlined in Figure 3.3 over the page.



Extract of Figure 3.3 from Transport Assessment: Local cycle routes



Public transport services

There is a bus stop situated immediately to the south of the site along Wildwood. This stop is only served by route 24, which runs just four services per day in each direction between 9.30am and 5.30pm.

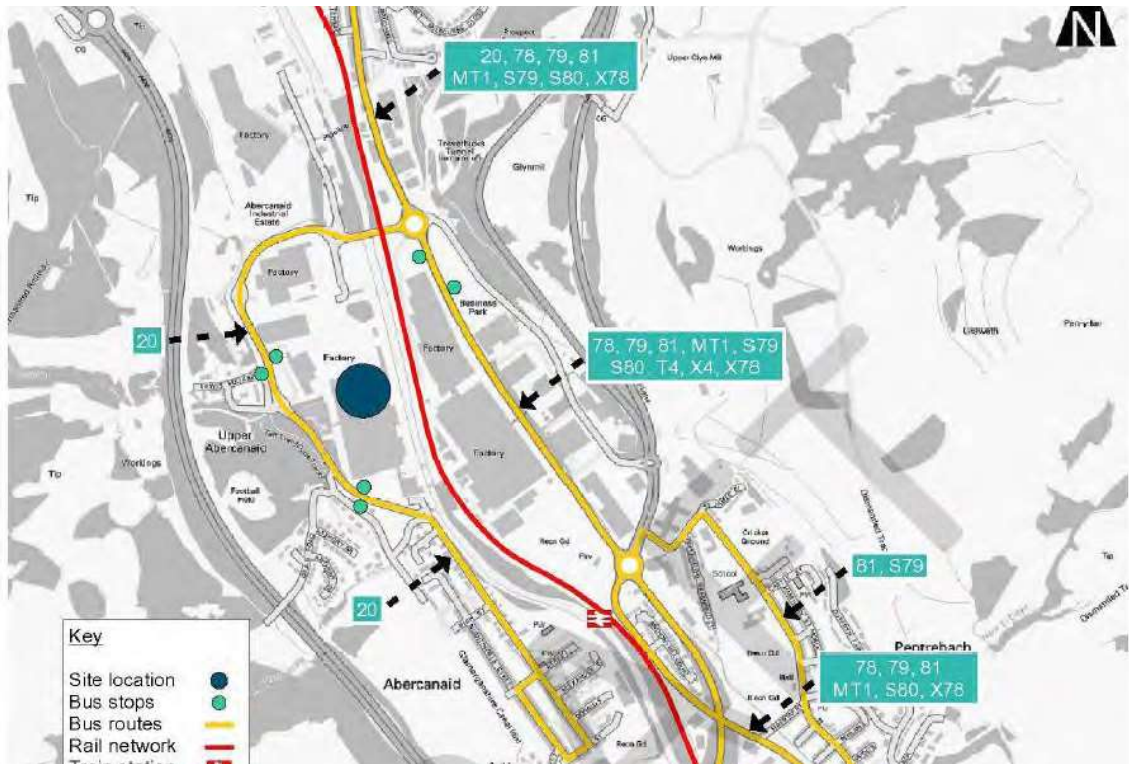
The nearest bus stop to the site with frequent services (accessed via the northern access) is located approximately 480m north-east on Merthyr Road and provides access to Treharris, Merthyr Vale, Pentrebach and Bedlinog.

The location of the bus stops, together with bus routes that call at these stops is outlined in Table 3.2 and shown in Figure 3.4.

The closest train station to the site is Pentre-Bach, which is located approximately 950m south east of the proposed development site. The station is located on the Merthyr Line, with services to Merthyr Tydfil (to the north) and Cardiff and Barry Island (to the south).



Extract of Figure 3.4 from Transport Assessment: Local public transport infrastructure



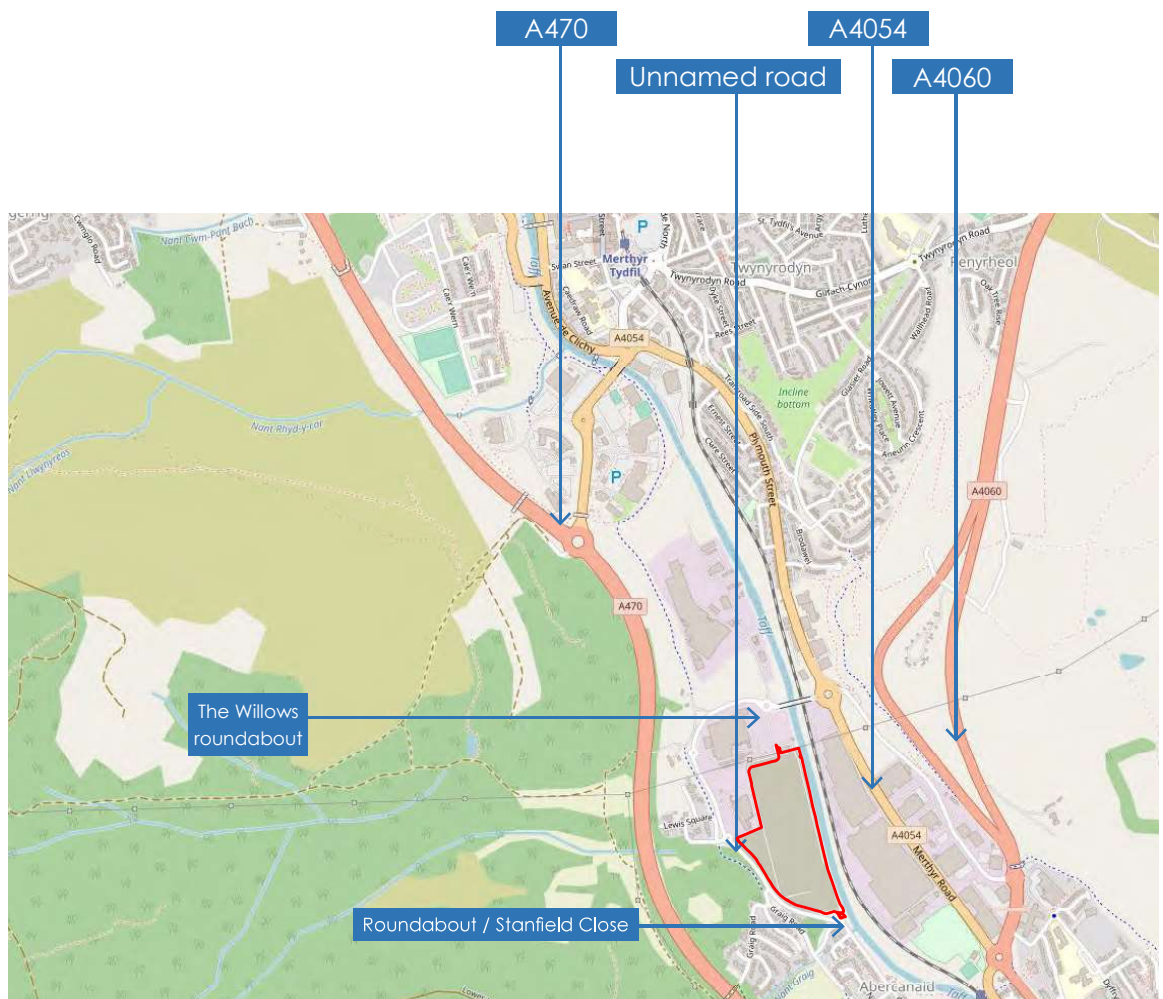
Extract of table 3.1 from Transport Assessment: Pentrebach rail service

Line	Distance (m)	Route	Weekday frequency
Merthyr Line	1500	Pentre-Bach – Merthyr Tydfil	Every 30 minutes
Merthyr Line	1500	Pentre-Bach – Barry Island	Every 30 minutes
Merthyr Line	1500	Pentre-Bach – Bridgend (via Rhose Cardiff Int Airport)	Every 30 minutes

Road Hierarchy & Access

The local highway network within the vicinity of the site comprises:

- An unnamed road leading to Abercanaid: Single carriageway, local access road, with footways along both sides of the carriageway. At the eastern end of the road is the roundabout junction with Merthyr Road/Pentrebach Road and at the southern end of the road is the roundabout junction with Stanfield Close/Catherine Square. The road is lit and is subject to a 30mph speed limit.
- A4054: Single carriageway, district distributor road, with footways along both sides of the carriageway. At the southern end of the road is the junction with the A4060, and the northern end of the road is the junction with Triangle Business Park and un-named road leading to Abercanaid.



6.12 UTILITIES & INFRASTRUCTURE

The current site is served by an existing surface water system which outfalls into the public combined sewer which crosses the site.

A diversion of the combined sewer will require a 5 metre easement across the site meaning that SuDS features cannot be placed in these areas. Where the 5 metre easement crosses areas of public open space and SuDS features cannot be located, these should remain as green areas to further assist the climatic resilience and biodiversity of the development.



It is considered that the proposed Dragon Park scheme of 200 dwellings complies with the relevant national, regional and local planning policies and embraces good design and placemaking.

This DAS summaries how the proposed Dragon Park development of complies with the relevant national, regional and local planning policies.

The scheme is following a design led process, led by a vision and a thorough understanding of the site and its context.

The proposed development:

- will deliver 200 new homes, offering mix of open market and affordable housing.
- is highly accessible by sustainable modes of transport including walking, cycling, bus and rail which provide future residents with a genuine
- is proposed in a sustainable location, with several facilities and amenities located close by. This will encourage journeys to be made by active travel

modes, contributing towards a more vibrant, cohesive and healthier Wales.

- incorporates a multifunctional GI network with a mix of soft and hard landscape that will sustainably manage water; promote biodiversity and encourage healthy lifestyles.
- considers the relationship between people and their setting, creating a high quality legible neighbourhood with a strong sense of place and identity.

In summary, the scheme embraces the concept of Placemaking introduced in PPW10 and Tan 12; and meets the requirements of the Well Being of Future Generations Act.

We strongly feel the placemaking qualities of the scheme will result in the creation of a higher quality environment with a distinct sense of place that will supports the wider regeneration of the Abercanaid and Pentre-Bach communities.



Accommodation Schedule					
House/Flat Name	Code	Bed	(N/A) ft ²	No of Units	Total Area
Open Market Units					
1 Bed Apartment	APT1	1	545	9	4905
Warwick	WAR	2	681	13	8853
Flat Over Garage	FOG	2	774	2	1548
Baglan	RAG	3	818	15	12270
Ascot	ASC	3	1018	18	18324
Hereford	HER	3	1055	4	4220
Chepstow	CHE	3	1057	28	29596
Rockfield	RDC	3	1024	17	17408
Cottage	COT	3	1040	7	7280
Canterbury	CAN	3	1274	14	17836
Harrowgate	HAR	4	1360	4	5440
Radleigh	RAD	4	1534	14	21476
Lynton	LYN	4	1520	15	22800
Windermere	WIN	4	1517	14	21238
Knightsbridge	KNI	5	2043	6	12258
Sub Total				180	205487
Affordable Units					
House/Flat Name	Code	Bed	(N/A) ft ²	No of Units	Total Area
Social Rented Units					
1 Bed Apartment	APT2	1	545	9	4905
2.1.1 GF	2.1.1	1	557	2	1114
2.1.1 F	2.1.1	1	624	2	1248
Houses					
4.2.1	4.2.1	2	861	7	6027
Sub Total				20	13294
Total				200	218781

ILLUSTRATIVE MASTERPLAN





DRAGON PARK

ABERCANAID,
MERTHYR TYDFIL