



# Barry Waterfront Campus, Vale of Glamorgan

## Transport Assessment

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## Basis of Report

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## 1.0 Introduction

- 1.1 SLR Consulting Ltd is retained by WEPCo Limited to provide transport and highways advice in relation to a proposed CAVC campus building known as Barry Waterfront Campus (BWC), in Barry.
- 1.2 The proposed campus at Barry Waterfront is for a new general learning campus intended to replace the existing College campus at Colcot Road and play a pivotal role in continuing the regeneration of the area.
- 1.3 The site is located approximately 1.3km southwest of Barry town centre and a similar distance from the new transport interchange adjacent to Barry Docks Railway Station. The site is bounded by commercial buildings to the north, Ysgol Gymraeg Sant Baruc Primary School to the west, and is connected to the wider Barry Waterfront via Ffordd Y Mileniwm and Hood Road at its southern and eastern boundaries. The strategic site location for the BWC site is shown in **Figure 1.1**.

**Figure 1.1 – Site Location (Strategic)**



- 1.4 The site is an approximately 0.88 hectares and comprises hardstanding and rough grassed land that appears to be a soil heap/deposited material that, over time, has become vegetated and overgrown. The site is enclosed by metal fencing and is currently not publicly accessible.
- 1.5 The proposal seeks to develop the site by providing Gross Internal Floor Area (GIFA) of 5,960sqm. The main entrance to the site for all modes will be from Ffordd Y Mileniwm via the existing access road that serves Ysgol Gymraeg Sant Baruc Primary School.



- 1.6 An additional through route will be provided to the north of the building to allow refuse, delivery, fire, and maintenance vehicles to enter the site from Hood Road.

## Pre-Application Response

- 1.7 A Transport Assessment (TA) scoping note was submitted to Vale of Glamorgan Council (VoGC) as part of the formal pre-application submission on 27/10/2023 (ref: 2023/00129/PRE). The TA scoping note is included at **Appendix A**.
- 1.8 A formal pre-app meeting was had between the client team and VoGC officers on 7/12/2023 where a number of key points were discussed including the principle of development, the design of the proposal and its link with CAVC's ICAT campus near Cardiff Airport. The officers were comfortable with the principle of development and welcomed the formal submission of the major planning application.
- 1.9 A pre-app response (dated 2<sup>nd</sup> February 2024) was received from VoGC on 20<sup>th</sup> February 2024 and the response is included at **Appendix A**. In summary, the highways comments related to the following:
- Car parking provision;
  - Maintenance/delivery access on Hood Road;
  - Requirement for a separate commercial vehicle space/area within the site;
  - Suitable turning area to be provided for 15m coach within the site;
  - Upgrade to bus stops on Ffordd Y Mileniwm;
  - Provision for E-bike charging;
  - Location of cycle parking
  - TROs required on existing access road;
  - Swept path analysis of existing turning head fronting the CAVC site gates.
- 1.10 The following information was also requested in the TA:
- Further information with regards to the CAVC rider bus service;
  - Safe routes plan for walking and cycling routes to the site;
  - TA should count the junctions highlighted below:
    - Ffordd Y Mileniwm/Site Access
    - Hood Road/Broad Street/Island Road
    - Ffordd Y Mileniwm/Neptune Road/Hood Road;
    - Ffordd Y Mileniwm/Gladstone Bridge Roundabout;
    - Ffordd Y Mileniwm (Morrisons) roundabout; and
    - Gladstone Bridge/Broad Street/Gladstone Road A4055 Roundabout.
- 1.11 A meeting was held with a VoGC highway officer on 6<sup>th</sup> March to discuss the pre-app comments. During the meeting, the following was discussed and agreed in principle (further to VoGC reviewing the TA):



- The servicing and delivery access on Hood Road would be investigated as an access only, with vehicles accessing from Hood Road and exiting through the main site access;
  - Upgrades to existing bus stops on Ffordd Y Mileniwm would not be required if it can be demonstrated that there is sufficient space within the site to accommodate a 15m coach and an appropriate area to pick up and drop off students; and
  - The TA should include an assessment the following junctions as previously agreed with VoGC:
    - Ffordd Y Mileniwm/Site Access; and
    - Ffordd Y Mileniwm/Neptune Road/Hood Road.
- 1.12 VoGC has subsequently advised that an access from Hood Road would not be acceptable as a servicing access as it has always been in the intention for the access to be removed upon completion of Goodsheds and the school. However, for reasons explained in Section 4, it is proposed to retain the access from Hood Road for servicing and refuse vehicles.
- 1.13 The pre-app comments have been addressed in this TA and further information/clarification has been provided where necessary.
- 1.14 A number of public comments were also received in response to the Pre-Application Consultation (PAC). The comments received were mainly in relation to parking provision, overspill parking on neighbouring housing estates and traffic impact on the local highway network. A response to these comments has been included within the PAC report, and the comments have also been addressed throughout this updated TA.

## Report Structure

- 1.15 This Transport Assessment (TA) sets out the transport matters relating to the development, including the provision for pedestrians, cyclists, and public transport users. This report also considers the effects of the development on the local highway network.
- 1.16 The TA is structured as follows:
- **Section 2 - Existing Conditions** – this section describes the site and details the current accessibility of the site by all modes of travel, and the proximity to public transport services and facilities.
  - **Section 3 - Policy Review** – this section provides a review of the national and local policies applicable to the site.
  - **Section 4 - Development Proposals** – this section details the proposed scheme and access arrangements.
  - **Section 5 - Traffic Impact** – this section analyses the forecasted trip generation associated with the development proposals.
  - **Section 6 - Distribution and Assignment** – this section provides a forecast of the distribution of development trips through the local highway network.
  - **Section 7 - Highway Network Assessment** – this section assesses the impact of the development on the local highway network.
  - **Section 8 - Transport Implementation Strategy** – this section sets out objectives and targets relating to managing travel demand and appropriate mitigation.



- **Section 9 - Summary and Conclusions** – this section provides a summary and conclusion.





## 2.0 Existing Conditions

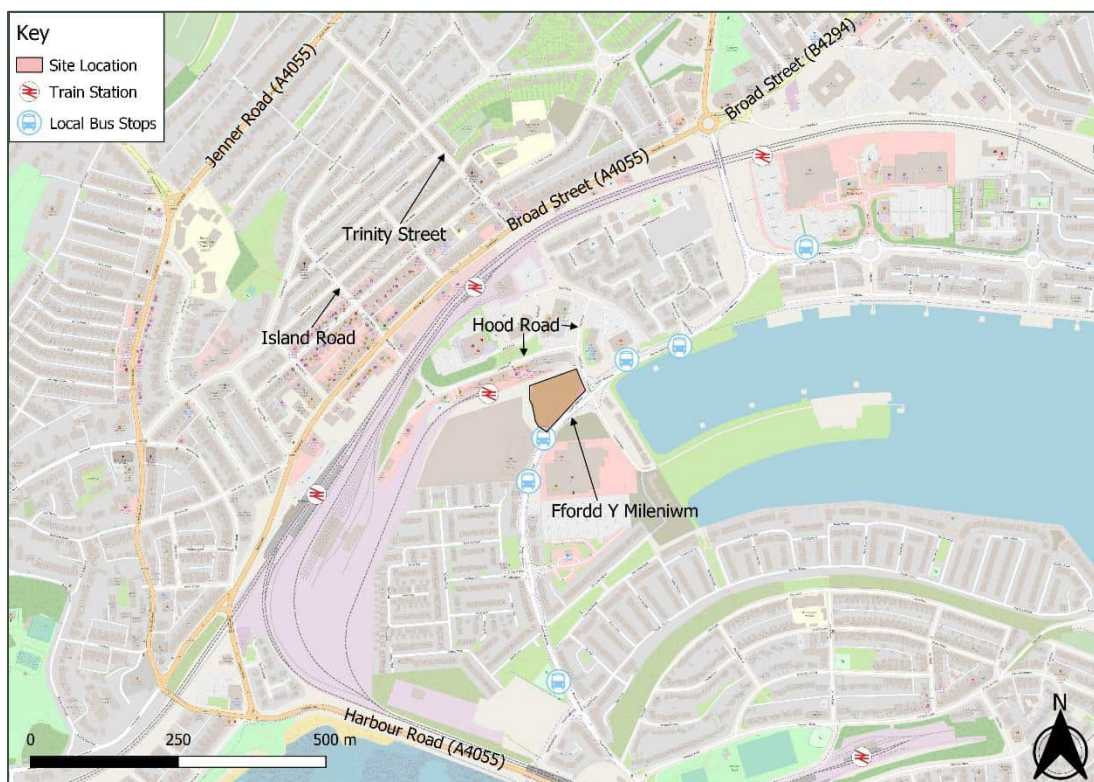
### Introduction

- 2.1 The existing situation, transport conditions and accessibility within the vicinity of the site are set out in this section, with a specific focus on the quality and extent of provision of the sustainable travel options, including public transport links and suitable infrastructure.

### Site Location

- 2.2 The development is located on a brownfield site at Barry Waterfront in Barry, located approximately 1.3km south-west of the town centre and a similar distance from the new transport interchange adjacent to Barry Docks Railway Station.
- 2.3 The site is bounded by commercial buildings to the north, Ysgol Gymraeg Sant Baruc Primary School to the west, and is connected to the wider Barry Waterfront via Ffordd Y Mileniwm and Hood Road at its southern and eastern boundaries. The site location for the BWC site in its local context is shown in **Figure 2.1**.

**Figure 2.1 – Site Location (Local Context)**



### Accessibility by Sustainable Travel

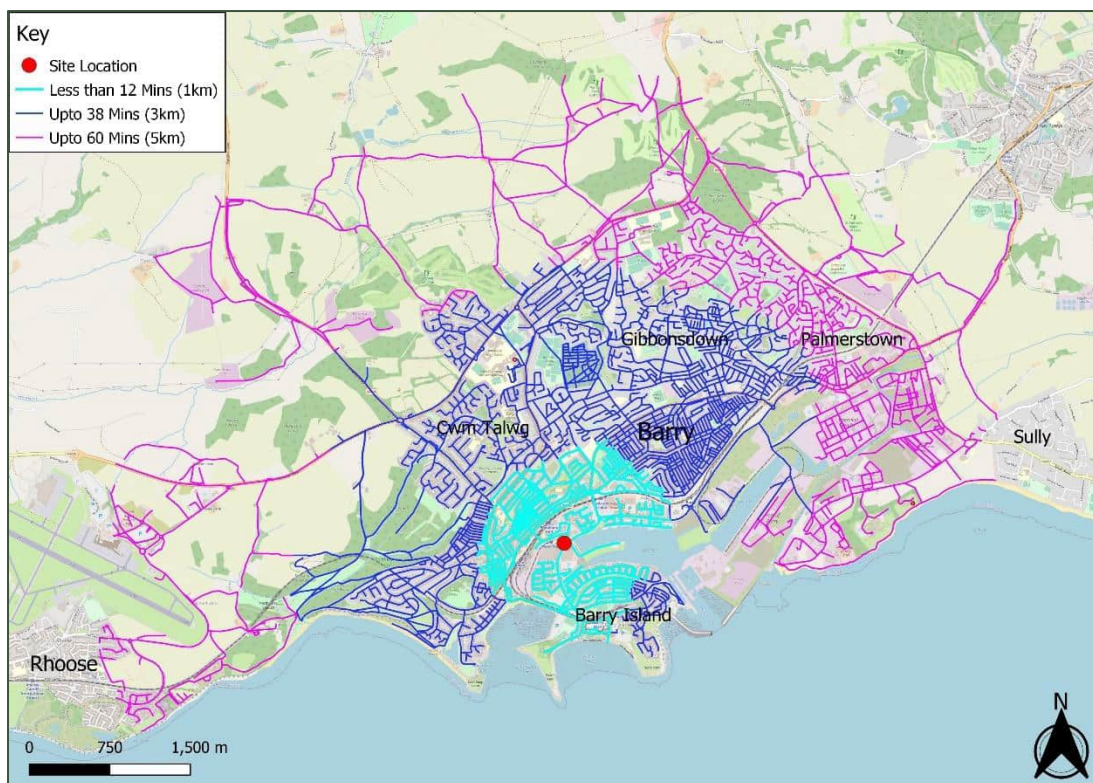
#### Walking

- 2.4 **Figure 2.2** below shows the 'less than 1km', 'up to 3km' and 'up to 5km' walking isochrones from the site, in line with Table 4.1 of the Active Travel Act. These relate to 12-, 38- and 60-minutes walking time.





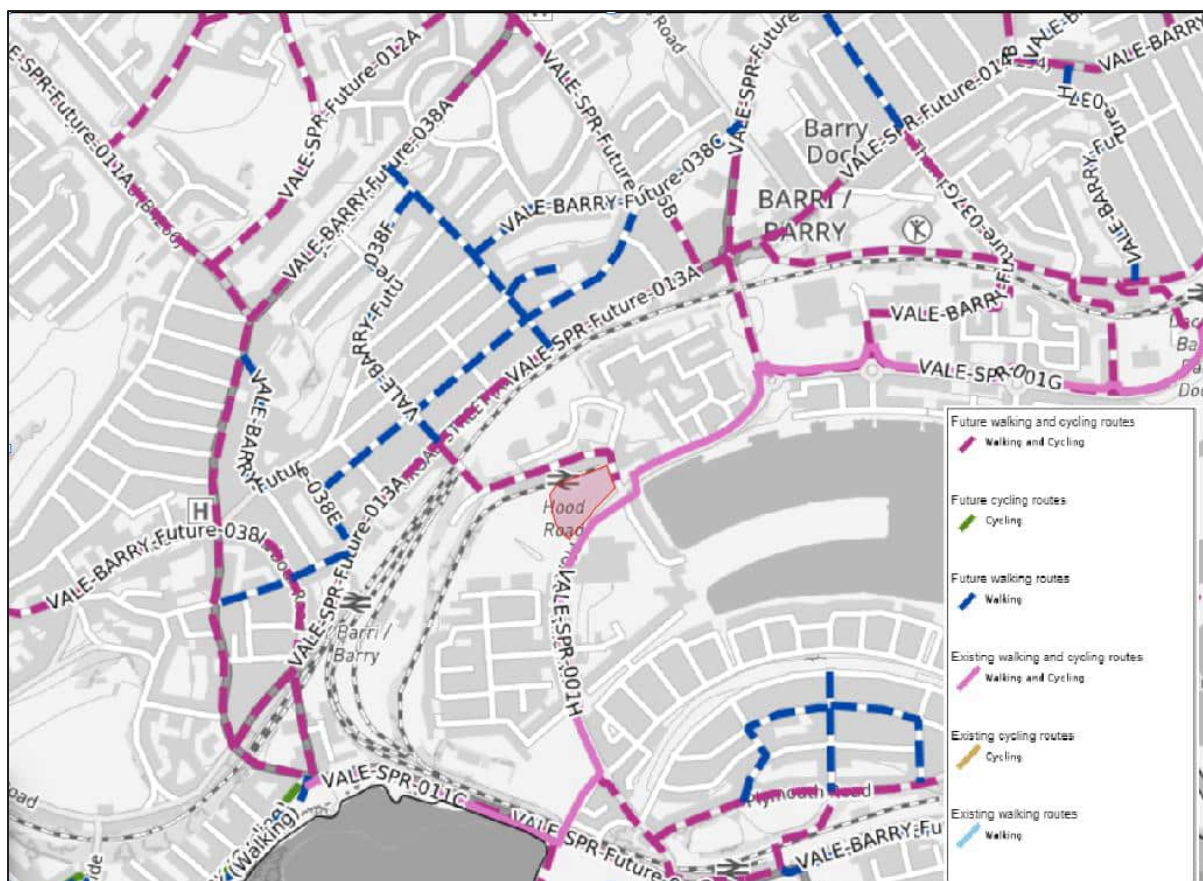
**Figure 2.2 – Walking Isochrone (Welsh Active Travel Standards)**



- 2.5 **Figure 2.2** shows that many areas within Barry are located within a 12-minute walk of the site.
- 2.6 The pedestrian environment surrounding the site is well-connected, with a network of good quality footways. There are existing continuous shared-use paths on either side of the carriageway along Ffordd Y Mileniwm, including into the proposed site access. There is a signalised crossing at the junction with Hood Road directly east of the site, equipped with dropped kerbs and tactile paving, as well as refuge islands and street lighting. To the north and northeast of the site, Hood Road benefits from continuous footways.
- 2.7 Controlled pedestrian crossing points with pedestrian refuge islands, dropped kerbs and tactile paving are provided along Hood Road and Ffordd Y Mileniwm. Street lighting is available along all pavements within close vicinity of the site.
- 2.8 There are no Public Rights of Way (PRoW) routes within the immediate site vicinity, however there is good pedestrian infrastructure provision to facilitate walking journeys.
- 2.9 The Welsh Government's Active Travel Network Map (ATNM) is a live map showing the current and future active travel routes planned in the area. These are submitted to the Welsh Government by Local Authorities every three years. **Figure 2.3** illustrates these routes in the location of the site.



**Figure 2.3 – Active Travel Network Map**



2.10 There are some ATNM proposals that include the inclusion of a shared use route along Hood Road, connecting the site to the existing shared-use path along the waterfront at Ffordd Y Mileniwm. In addition, a shared use ATNM route is planned on the A4055 and north-south walking routes along Island Road and Trinity Street, as shown in **Figure 2.3**. Hood Road connects to the A4055 where Barry railway station is located, in which the footway reduces to a narrow width through the railway bridge on Hood Road.

2.11 Overall, the level of pedestrian facility is of good quality, with recent pedestrian upgrades to the footways and crossings in the vicinity of the site. Additionally, the site’s proximity to Goodsheds creates a sense of community within the local area, of which users of the proposed site will benefit from. Goodsheds offers shops, food and drink, and social space.

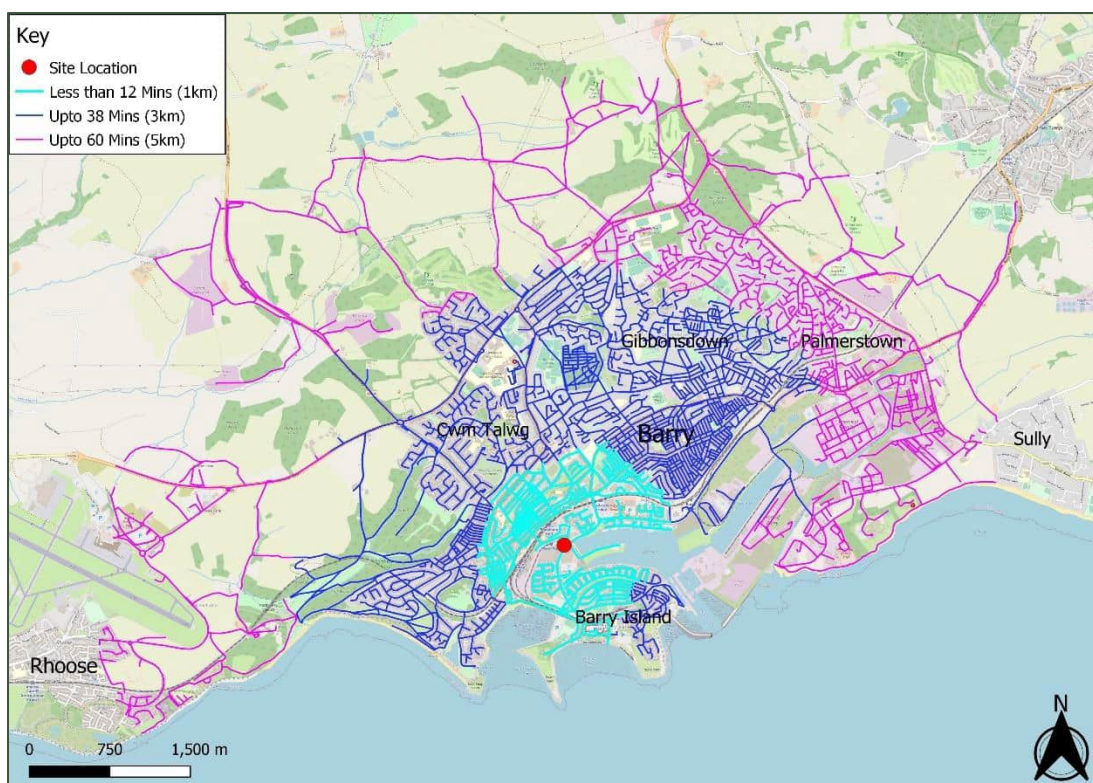
### Cycle Network

2.12 **Figure 2.4** above shows the ‘less than 1 kilometre’, ‘up to 3 kilometres’, ‘up to 5 kilometres’, ‘up to 8 kilometres’ and ‘up to 12 kilometres’ cycling isochrones from the centre of the site, in line with Table 4.1 of the Active Travel Act.





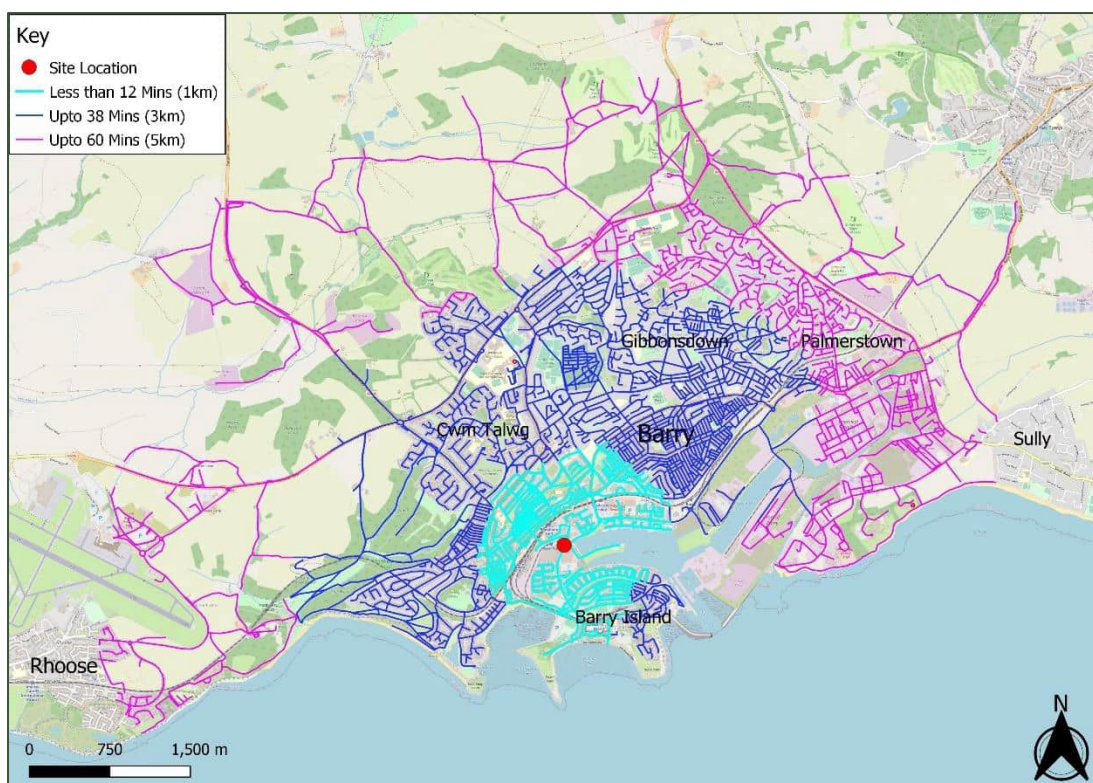
**Figure 2.4 – Cycling Isochrone (Welsh Active Travel Standard)**



- 2.13 Sully is 5-6km from the site, approximately an 18–22-minute cycle. Penarth is approximately 11km from the site, or a 40-minute cycle. The B4267 running between Sully and Penarth is subject to 40mph speed limits has shared footway/cycleways on the southern edge of the carriageway, with dropped kerbs at crossing points.
- 2.14 The site is well connected by bicycle, with a number of shared-use paths in vicinity of the site, including along the waterfront, connecting Barry Island to Barry Docks via Ffordd Y Mileniwm.
- 2.15 The nearest national cycling route is National Cycle Network (NCN) route 88 which starts in Porthkerry Park. This route is a proposed coastal route between Newport, Cardiff and Bridgend, and only short sections of this route are currently open.
- 2.16 At the Ffordd Y Mileniwm and Hood Road four-arm signalised junction there are advanced stop lines for cyclists in advance of the vehicle stop lines, which helps to give cyclists more priority on carriageway on this link the site. Along the northern edge of Ffordd Y Mileniwm grade separated cycleway running adjacent to the footway. There are dropped kerbs and refuge islands and crossing points. The forward visibility and street lighting along Ffordd Y Mileniwm make it suitable for cycling, the carriageway provides access to Sully and Penarth to the east via the A4055.
- 2.17 Local cycling accessibility and the NCN is detailed in **Figure 2.5**.



**Figure 2.5 – Local Cycling Connectivity**

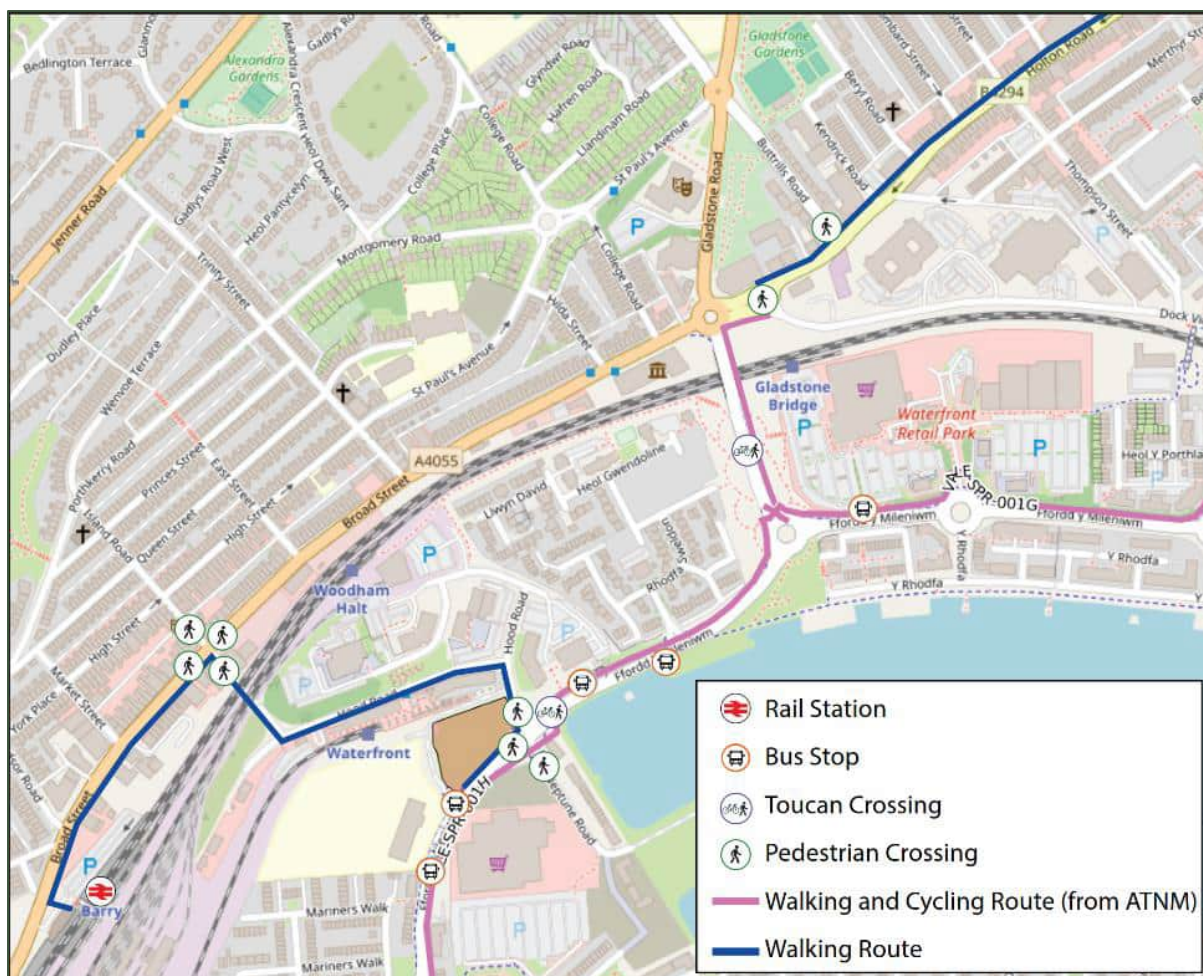


- 2.18 The ATNM shows the location of all current and future walking and cycling routes, the map is provided at **Figure 2.3**. Ffordd Y Mileniwm is shown as an existing cycle and walking route, providing access into the wider Barry area, including Barry Island to the south and retail spaces to the north of the site. There are several future walking and cycling routes available within a close proximity to the site including Hood Road.
- 2.19 The ATNM indicates that existing provisions along Hood Road will be improved for pedestrian and cycle use, providing an attractive route choice for active travel users. Provisions along Hood Road will link with the wider network of future walking and cycling routes north of the site.
- 2.20 Moreover, current provisions along Harbour Road, located south of the site, are also set to be upgraded, providing attractive route options from Barry Island and the wider residential areas west of the site.
- 2.21 **Figure 2.6** demonstrates the continuous walking and cycling routes between the site and key destinations such as Barry rail station and bus stops on Ffordd Y Mileniwm (to south of the site near Asda and to the north west of the site near Morrisons).





**Figure 2.6 – Walking and Cycling Routes from Site to Key Destinations**



## Access to Local Facilities

- 2.22 In the context of the BREEAM assessment, one of the primary factors to be considered when determining the suitability of a new development is its proximity, accessibility, and connectivity in relation to key local community facilities by sustainable travel modes.
- 2.23 Given the excellent location of the site there are a plethora of local facilities and amenities within a comfortable walking and cycling distance of the site.
- 2.24 In considering the accessibility of the site with regard to local amenities, reference has been made to the BREEAM New Construction (2018) document, in particular the Tra01 Transport Assessment and Travel Plan chapter which categorises key amenities as follows:
- Appropriate food outlets;
  - Access to cash;
  - Access to outdoor open space;
  - Access to recreation facilities for fitness or sport;
  - Publicly available postal facility;
  - Community facilities;



- Over the counter pharmaceutical facilities;
- GP or medical centres; and,
- Childcare facilities.

2.25 The guidance states that amenities should be located, where possible, within 500 metres of a development. A summary of the local facilities within the vicinity of the proposed development is set out in **Table 2.1** whilst the location of the amenities in relation to the site is illustrated in **Figure 2.7**.

**Table 2.1 – Local Amenities**

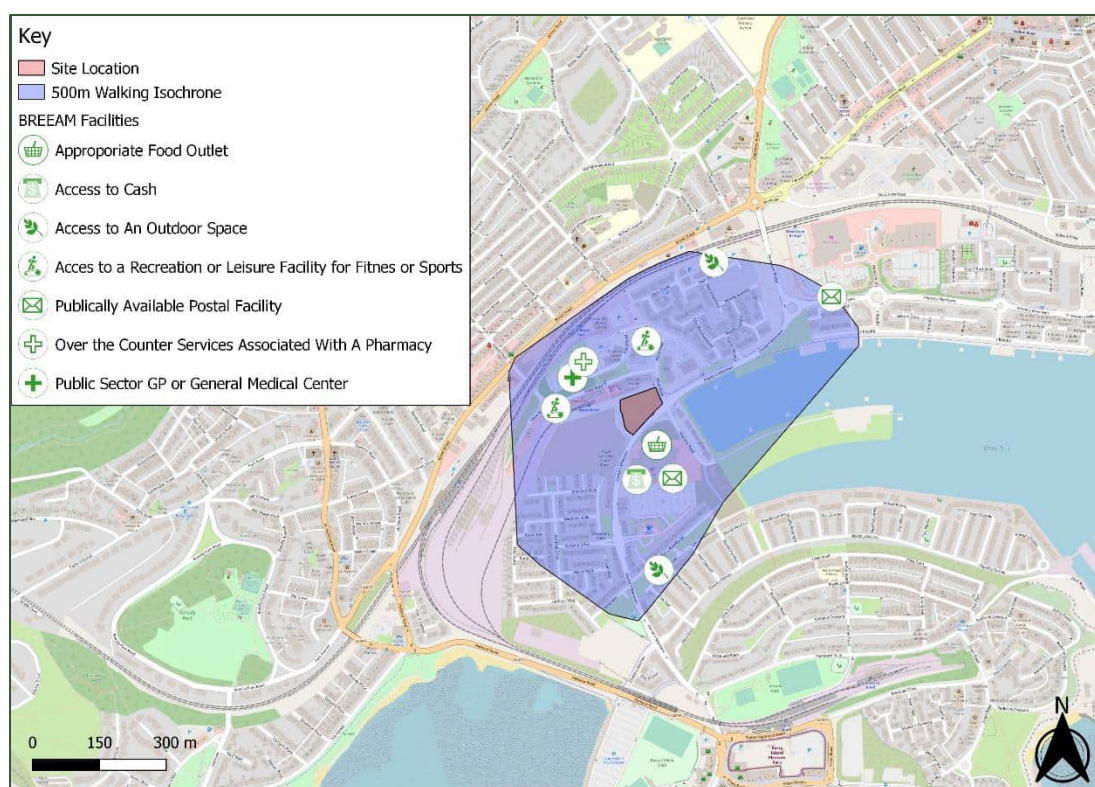
Foodstore	Distance from Ffordd Y Mileniwm Access	Walk Time (5km/hr)	Cycle Time (15km/hr)
ASDA Supermarket	200	2	1
Premier Convenience Store	650	8	3
Waterfront Retail Park including Morrisons	750	9	3
Bank or ATM	Distance	Walk Time	Cycle Time
Barclays ATM	180	2	1
Recreation and Leisure (inc. open space)	Distance	Walk Time	Cycle Time
On site multi-games area	Onsite	<5 minutes	n/a
Snap Fitness	300	4	1
Barry Community Water Activity Centre	600	7	2
Maslin Park	800	10	3
Barry Island Pleasure Park	950	11	4
Post Office	Distance	Walk Time	Cycle Time
Barry Road Post Office	2400	29	10
Community Facilities	Distance	Walk Time	Cycle Time
Barry Island Community Centre	1300	16	5
St Nicholas Hall Community Centre	1300	16	5





Barry Island Sports & Social Club	1400	17	6
Healthcare (incl. pharmacies)	Distance	Walk Time	Cycle Time
West Quay Medical Centre	500	6	2
West Quay Pharmacy	500	6	2
Childcare Facilities	Distance	Walk Time	Cycle Time
N/A	-	-	-

**Figure 2.7 – Local Amenities (BREEAM)**



2.26 **Figure 2.7** demonstrates some of the local facilities that are located in proximity to the site. There is a plethora of facilities in this area including bus stops, rail stations, retail centres, restaurants and more.

2.27 A summary of the BREEAM requirements for the site and the development’s compliance with these requirements is included at **Appendix B**.

## Bus

2.28 The closest bus stop to the site is the ‘Barry ASDA’ stop, located approximately 130m south of the site, along Ffordd Y Mileniwm, accessible via footways on either side of the carriageway. A bus timetable is available at the stop. There is also another bus stop



approximately 500m east of the site, near Barry Morrisons. The services available are summarised in the **Table 2.2**.

- 2.29 The CAVC Rider bus service was launched in September 2022 and currently operates between CAVC sites as a result of specific funding from Welsh Government. The bus service is free of charge for students and staff and provides routes between CAVC sites Mondays to Fridays between 08:00 and 18:00. It is anticipated that this will serve the majority of students and staff who wish to connect to this site from other CAVC sites, subject to Welsh Government funding continuing.

**Table 2.2 – Local Bus Services**

Number	Route	From	Until	Frequency			Provider	Bus Stop
				M-F	Sat	Sun		
93/94	Cardiff - Barry	06:52	19:50	20	30	60	Cardiff Bus	Barry Morrisons Bus Stop
95	Cardiff City Centre - Barry	06:15	21:00	30	30	60	Cardiff Bus	Barry Morrisons Bus Stop
96	Cardiff - Barry	07:20	19:10	30	30	60	Cardiff Bus	Barry Morrisons Bus Stop
B1	Highlight Park – Barry	08:35	16:53	60	60	N/A	Cardiff Bus	Barry Asda Bus Stop
B2	Cwm Talog - Barry	09:44	16:55	60	60	N/A	Cardiff Bus	Barry Asda Morrisons

- 2.30 As shown in **Table 2.2**, there are several services from bus stops surrounding the site which link to local facilities as well as destinations further afield such as Cardiff. There are also onward connections from bus stops in Barry town centre to Cardiff via Penarth and to Cardiff via Wenvoe from the 94 and 96 routes respectively. The site is served by a minimum of one bus every 20 minutes.

## Rail

- 2.31 The site is located approximately 850m walking distance of Barry Railway Station, equating to an approximate 12-minute walk or 3-minute cycle. The station offers Category A Step Free Access to all platforms, 110 free car parking spaces (including 3 accessible parking spaces), and 10 cycle parking spaces.
- 2.32 The station provides access to locations including Llantwit Major and Bridgend to the west, Dinas Powys and Cardiff to the east, and stations further afield on the Transport for Wales Valley Lines network. Typically, there are 3-4 services per hour during the weekdays and 2-3 services per hour on Sundays. Locations also available along this line include Merthyr Tydfil, Bridgend, Pontypridd, and Aberdare. The services available from Barry railway station are shown in **Table 2.3**.



**Table 2.3 – Rail Services from Barry Railway Station**

Destination	Journey Time (minutes)	Frequency (minutes)
Aberdare	90	15
Cardiff Central	25	15
Merthyr Tydfil	90	30
Bridgend	34	60

2.33 The service to Merthyr Tydfil via Cardiff also calls at Dinas Powys, Cogan, and Pontypridd as well as other stops along the Vale of Glamorgan line. The proximity of this station to the proposed development is beneficial in that it provides a regular service to a variety of destinations. The availability of car parking and cycle parking spaces also encourage multi-modal travel.

### Barry Docks Transport Interchange

2.34 In August 2022, the VoGC approved plans for a transport interchange at Barry Docks railway station and construction on Phase 1 of the development started in January 2023. From Monday 8<sup>th</sup> January, the B3 bus service will begin running from the Barry Transport Interchange, on its route to Cadoxton from Barry.

2.35 The interchange will establish a bus and taxi interchange to the south of the station platforms. It will also lay the foundations to provide an additional Park & Ride car park, accessed from Dock View Road to the north of the station platforms and residential and possibly commercial uses to the north west of the station, as future development phases.

2.36 The Transport Interchange will include:

- Capacity to accommodate a small number of business, retail and/or community hubs in its central area.
- Electric vehicle charging infrastructure will be provided in car park areas that can be used by both station users or local residents.
- Improvements to existing pedestrian and cycle route to the Station from Dock View Road
- Designated cycle and pedestrian route (and crossings) provided north/south across the site.
- Existing pedestrian subway leading to the station platforms will be refurbished.
- Additional cycle parking (Sheffield stands and cycle lockers) will be provided.
- Signage, lighting, and seating in the station vicinity will be improved.

2.37 The approved layout is included at **Figure 2.8**.



**Figure 2.8 – Barry Docks Transport Interchange**



## South Wales Metro

2.38 As a part of the South Wales Metro plans, Transport for Wales (TfW) have committed to retaining the link from Penarth, Barry, and Bridgend to destinations north of Cardiff Central using new tri-mode trains (overhead electric, battery and diesel) from December 2023.

## Public Transport Accessibility Index (AI)

2.39 Consideration has been made with regards to the accessibility of the site by public transport with reference to the BREEAM accessibility index. The BREEAM accessibility index provides an indication of the bus accessibility and density of the public transport network in the vicinity of the site accounting for bus services located within 650 metres and rail services within 1,000 metres.

2.40 The index attributes a number to a development reflecting its level of accessibility, the index scores are summarised in **Table 2.4**.

**Table 2.4 – Accessibility Index Scores**

AI Score	Description
0	Poor or no public transport provision
1	A single BREEAM public transport node/service available





AI Score	Description
2	Some BREEAM public transport nodes/services available
4	Several BREEAM public transport nodes/services available
8	A good provision of BREEAM public transport nodes e.g., small urban centre
10	A very good provision of BREEAM public transport nodes e.g., medium urban centre
12	An excellent provision of BREEAM public transport nodes e.g., medium urban centre
18	An excellent provision of BREEAM public transport nodes e.g., metropolitan city centre

- 2.41 The site achieves a score of 7.09, reflecting the public transport provision at local bus stops and the rail station as could be expected in an edge of town centre location. The full assessment is contained within **Appendix B**.

## Local Highway Network

### Ffordd Y Mileniwm

- 2.42 Ffordd Y Mileniwm bounds the site to the south and is subject to a 20mph speed limit. The road benefits from street lighting and has footways on either side of the carriageway.
- 2.43 To the east Ffordd Y Mileniwm continues over the Gladstone Bridge roundabout and towards the A4055. To the west the carriageway continues to a signalised junction between Harbour Road, Station Approach Road, and Paget Road, heading towards Barry Island.
- 2.44 It is understood from VoGC that the current S278 works on Ffordd Y Mileniwm are currently being completed. The remedial works have been completed and the telematics are in the process of being upgraded.

### Hood Road

- 2.45 Hood Road is accessed off Ffordd Y Mileniwm to the south east of the site, and is subject to a 20mph speed limit. Hood Road provides access to a wide range of amenities such as a café and a medical centre.

## Traffic Surveys

- 2.46 Baseline traffic data has been obtained for the study area surrounding the site and is summarised in the following section. The study area has been developed in accordance with the TA scoping note attached as **Appendix A** and has been agreed with highway officers at VoGC. The traffic data is contained in **Appendix C**.



2.47 The baseline traffic data includes Manual Classified Count (MCC) surveys at the following junctions on Tuesday 24<sup>th</sup> October, for a twelve-hour period, between the hours of 07:00 and 19:00:

- Ffordd Y Mileniwm/Hood Road/Neptune Road signalised junction; and
- Ffordd Y Mileniwm/Site Access priority junction.

2.48 Automatic Traffic Count (ATC) surveys were also undertaken at the following locations over a 24-hour period between Tuesday 24<sup>th</sup> and Saturday 28<sup>th</sup> October:

- Ffordd Y Mileniwm (east); and
- Ffordd Y Mileniwm (west).

2.49 The ATC survey did not cover Sunday 29<sup>th</sup> or Monday 30<sup>th</sup> of October due to the school half term falling on these dates.

2.50 **Table 2.5** and **Table 2.6** show the recorded traffic flows recorded on Ffordd Y Mileniwm (east) and Ffordd Y Mileniwm (west) respectively.

**Table 2.5 – Existing Traffic Flows (Average neutral weekday) on Ffordd Y Mileniwm (east)**

Time Period	E-bound traffic flow (vehicles)	W-bound traffic flow (vehicles)	Two-way vehicle flow
0700-0800	433	208	641
0800-0900	573	441	1,014
0900-1000	480	486	966
1600-1700	602	709	1,311
1700-1800	581	745	1,325
1800-1900	479	545	1,024
Average 24-hour (weekday)	7,584	7,717	15,301

2.51 Two-way traffic flows on Ffordd Y Mileniwm (east) were recorded as 15,301 vehicles per day, with peak hour flows recorded as 1,014 two-way flows in the AM peak hour (08:00-09:00) and 1,325 in the PM peak hour (17:00-18:00).

**Table 2.6 – Existing Traffic Flows (Average Neutral Weekday) on Ffordd Y Mileniwm (west)**

Time Period	E-bound traffic flow (vehicles)	W-bound traffic flow (vehicles)	Two-way vehicle flow
0700-0800	404	231	635
0800-0900	562	446	1,107
0900-1000	436	478	914
1600-1700	540	667	1,207
1700-1800	547	683	1,231





Time Period	E-bound traffic flow (vehicles)	W-bound traffic flow (vehicles)	Two-way vehicle flow
1800-1900	455	547	1,002
Average 24-hour (weekday)	6,890	7,479	14,369

- 2.52 Two-way traffic flows on Ffordd Y Mileniwm (west) were recorded as 14,369 per day, with peak hour flows recorded as 1,107 two-way flows in the AM peak hour (08:00-09:00) and 1,231 two-way flows in the PM peak hour (17:00-18:00).
- 2.53 Speeds were also recorded by the ATCs under free flow conditions, with no exceptional weather conditions reported. These are summarised in **Table 2.7** and **Table 2.8**.

**Table 2.7 – Existing Traffic Speeds on Ffordd Y Mileniwm (east)**

Time Period	Average (mph)		85 <sup>th</sup> ile	
	E-bound	W-bound	E-bound	W-bound
5-day average	25.7	23.6	29.1	28.9

**Table 2.8 – Existing Traffic Speeds on Ffordd Y Mileniwm (west)**

Time Period	Average (mph)		85 <sup>th</sup> ile	
	E-bound	W-bound	E-bound	W-bound
5-day average	18.5	22.8	23.9	28.5

## Personal Injury Collision (PIC) Data

- 2.54 A review of Personal Injury Collision (PIC) data for the site has been undertaken using the most recent data available from, an online government database of PIC records. The records relate to PICs on public roads that are reported to the police and subsequently recorded, using the STATS19 collision reporting form. The most recently available five-year period has been analysed between 01/01/2017 and 31/03/2023.
- 2.55 A summary of collisions by year is provided in **Table 2.9**.

**Table 2.9: PIC Collision Summary**

Year	Slight	Serious	Fatal	Total
2018	4	0	0	4
2019	5	4	0	9
2020	1	0	0	1
2021	6	0	0	6
2022	2	1	0	3
2023	1	0	0	1
<b>Total</b>	<b>19</b>	<b>5</b>	<b>0</b>	<b>24</b>

- 2.56 The locations of these collisions are shown in **Figure 2.9**.



Figure 2.9 – PIC Map



- 2.57 A total of 24 collisions have been recorded in the area over the last 5-years. The 24 recorded collisions resulted in 19 slight injuries and 5 serious injuries. There were 0 fatal collisions associated with the area over the last 5-years.
- 2.58 A single collision occurred within 50m of the site access, this collision involved a motorcyclist falling in wet conditions along Ffordd Y Mileniwm and resulted in a serious injury. This incident was isolated and does not form a part of a cluster of collisions which would suggest there is not a highway design-based safety concern in the vicinity of the site.
- 2.59 Breaking down collisions within the study area:
- There were 7 collisions along Broad Street;
  - There were 3 collisions on Gladstone Bridge; and
  - There were 7 collisions associated with Ffordd Y Mileniwm.
- 2.60 Of the collisions, 5 involved vulnerable road users with a single incident involving a pedestrian, 4 incidents involving cyclists, and three incidents involving a motorcycle.



- 2.61 At the roundabout between Gladstone Bridge, Ffordd Y Mileniwm and Broad Street, there have been two cyclists hit by vehicles when approaching the junction from the south via Gladstone Bridge. One of which was serious in severity. Additionally, there have been two motorcycle collisions in the latest five-year period at the signalised junction between Ffordd Y Glannau and Ffordd Y Mileniwm, with right-turning movements causing the collisions. Both of these collisions were serious in severity.
- 2.62 A cluster of incidents would be classified as 4 incidents within 3 years and all within 100m of each other in accordance with Statistic for Wales and Welsh Government Guidance. When this is considered, there are two 'clusters' of incidents that could be identified; along Gladstone Bridge and at the Gladstone Bridge/Broad Street roundabout.
- 2.63 However, it is worth noting that the overall number of collisions in the vicinity of the site is considered low, and on the basis of the above, the likely causation factors do not indicate that there are any inherent safety issues or concerns on the existing highway network in the vicinity of the site.

## Summary

- 2.64 In summary, the above review demonstrates the level of accessibility of the site, and evidently the site is well located with regard to the public transport links and local facilities available to reach in short walking or cycling journeys.
- 2.65 The closest pair of bus stops are within 130m of the site with further stops approximately 500m to the east of the site. These are served frequently providing connections to several areas in Cardiff and to Cardiff city centre, as well as providing further connections out of the city. Additionally, the CAVC Rider provides a free bus service for students between CAVC sites Mondays to Fridays between 08:00 and 18:00.
- 2.66 The site is located within 850m of Barry railway station which can be reached via a 12-minute journey on foot or a 3-minute journey by cycle. Barry railway station can provide connections to Cardiff Central, Bridgend and Rhoose. Barry station is currently undergoing improvements by the South Wales Metro Project, improving access, facilities, and providing more frequent services.
- 2.67 The overall number of collisions in the vicinity of the site is considered low, and based on the likely causation factors, it is considered that there are no inherent safety issues associated with the existing highway network.



## 3.0 Policy Review

### Overview

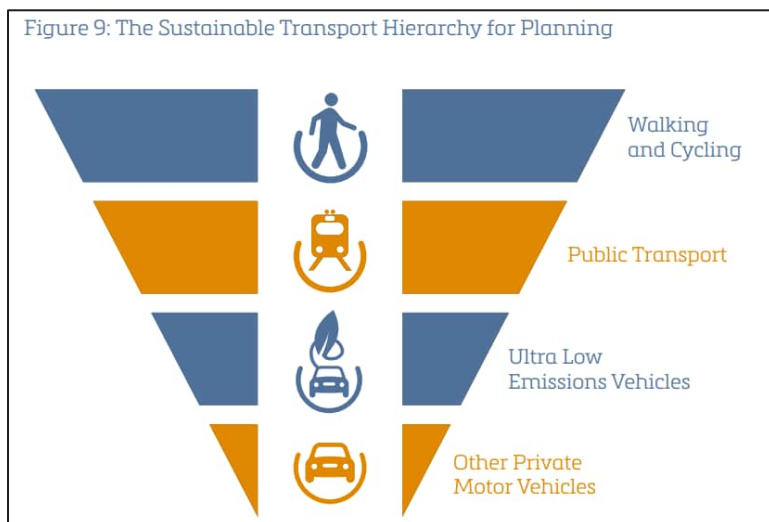
- 3.1 This section reviews relevant national and local policies in the context of the proposed development for the BWC site, in the Vale of Glamorgan.

### National Policy

#### Planning Policy Wales (Edition 12, February 2024)

- 3.2 Planning Policy Wales Edition 12 (PPW) sets out the land use planning policies of the Welsh Government.
- 3.3 With regards to sustainable transport, PPW advises that, in the context of active and social places, developments should encourage modal shift and be easily accessible by walking, cycling and public transport, by virtue of their location, design and provision of on and off-site sustainable transport infrastructure.
- 3.4 Furthermore, the 'active and social' theme within PPW aims to ensure new development is located and designed in a way which minimises the need to travel, reduces dependency on the private car and enables sustainable access to employment, local services, and community facilities.
- 3.5 A key theme throughout PPW is the aim of reducing reliance on travel by private car, and the adverse impacts of motorised transport on the environment and people's health, by prioritising and increasing active travel and public transport. Additionally, it states that development proposals must seek to maximise accessibility by walking, cycling and public transport, by prioritising the provision of appropriate on-site infrastructure and, where necessary, mitigating transport impacts through the provision of off-site measures, such as the development of active travel routes, bus priority infrastructure and financial support for public transport services.
- 3.6 These themes of emphasis on sustainable transport and active travel are supported by the 'Sustainable Transport Hierarchy for Planning' included within PPW.





### Technical Advice Note:18 - Transport

3.7 TAN18: Transport describes how to integrate land use and transport planning and explains how transport impacts should be assessed and mitigated. The document states that a sustainable development approach includes:

- Integration of transport and land use planning;
- Integration between different types of transport; and
- Integration of transport policy with policies for the environment, education, social justice, health, economic development, and wealth creation.

3.8 In relation to parking, TAN states that:

*“Maximum car parking should be used at regional and local level as a form of demand management and that for new development, regard should be given to alternative transport modes, economic objectives, public and shared parking arrangements”.*

3.9 TAN 18 states that the integration of land use planning and development of transport infrastructure can help Welsh Government achieve its wider sustainable development policy objectives through managing parking provision and ensuring that new developments include appropriate provision for pedestrians (including the users with special access and mobility requirements), cycling, public transport, and traffic management and parking/servicing.

### Placemaking Wales – Placemaking Guide 2020

3.10 The Placemaking Guide outlines the importance of the following principles in placemaking:

- **People and Community** - The local community are involved in the development of proposals. The needs, aspirations, health, and well-being of all people are considered at the outset. Proposals are shaped to help to meet these needs as well as create, integrate, protect and/or enhance a sense of community and promote equality.
- **Location** - Places grow and develop in a way that uses land efficiently, supports and enhances existing places and is well connected. The location of housing, employment, leisure, and other facilities are planned to help reduce the need to travel.





- Movement - Walking, cycling and public transport are prioritised to provide a choice of transport modes and avoid dependence on private vehicles. Well designed and safe active travel routes connect to the wider active travel and public transport network, and public transport stations and stops are positively integrated.
- Mix of Uses - Places have a range of purposes which provide opportunities for community development, local business growth and access to jobs, services, and facilities via walking, cycling or public transport. Development density and a mix of uses and tenures helps to support a diverse community and vibrant public realm.
- Public Realm – streets and public spaces are well defined, welcoming, safe, and inclusive with a distinct identity. They are designed to be robust and adaptable with landscape, green infrastructure, and sustainable drainage well integrated. They are well connected to existing places and promote opportunities for social interaction and a range of activities for all people.
- Identity - the positive, distinctive qualities of existing places are valued and respected. The unique features and opportunities of a location, including heritage, culture, language, built and natural physical attributes, are identified and responded to.

### **Future Wales: The National Plan 2040 (February 2021)**

- 3.11 This document is a National Development Framework for Wales. It influences all levels of the planning system in Wales and will help to shape Strategic and Local Development Plans prepared by councils and national park authorities.
- 3.12 The document highlights the importance of reducing emissions to protect well-being and to demonstrate global responsibility. The planning system needs to focus on delivering a decarbonised and resilient Wales through the places that are created, the energy generated and the natural resources and materials that are used and how people live and travel.
- 3.13 The document recognises that there has been a significant change in the way people live and travel as a result of the COVID-19 pandemic. The pandemic has highlighted the quality and accessibility of people's local areas as being important for people's health and well-being during the pandemic.
- 3.14 There has been a collective appreciation in Wales for the value of parks and green spaces, walking and cycling routes, local shops and amenities and cleaner air as a result of reduced vehicle movements on the network. Due to a change in people's working patterns, good broadband and telecommunication connections are now essential to enable people to work from home, access services and to stay in touch with each other virtually.
- 3.15 Welsh Government have produced a document called 'COVID-19 Reconstructions: Challenges and Priorities'. This document sets out how people are using places differently, travelling less and spending more time working from home. Welsh Government is encouraging an increase in remote working and has set a long-term ambition for 30% of the Welsh workforce to work away from a traditional office. This is intended to help town centres, reduce congestion, and cut carbon emissions. The planning system must therefore respond to these changes and contribute to a sustainable recovery, shaping places around a vision for healthy and resilient places.
- 3.16 The Welsh Government will work with Transport for Wales, local authorities, operators, and partners to deliver the following:





- Active Travel – Prioritising walking and cycling for all local travel;
- Bus – improve the legislative framework for how local bus services are planned and delivered. Invest in the development of integrated regional and local bus networks to increase modal share of bus travel and improve access by bus to a wider range of trip destinations;
- Metro – Develop the Southeast Metro, South West Metro and North Wales Metro and create new integrated transport systems that provide faster, more frequent and joined up services using trains, buses, and light rail; and
- Ultra-low Emission Vehicles – Support the roll-out of suitable fuelling infrastructure to facilitate the adoption of ultra-low emission vehicles, particularly in rural areas.

### **Wales Transport Strategy (Connecting the Nation)**

- 3.17 The wider agenda of this document is to ensure that transport features strongly in the Welsh Assembly Government’s policy spectrum:
- ‘Getting the most out of our existing transport system;
  - Making greater use of more sustainable modes of travel; and
  - Reducing demands on the transport system’.

- 3.18 This is a sustainable, permeable, well-connected site and hence it is compliant with the Wales Transport Strategy.

### **Active Travel Wales Act 2013**

- 3.19 The Welsh Government seeks to enable more people to walk, cycle and generally travel by more active methods, so that:
- More people can experience the health benefits of active travel;
  - We reduce our greenhouse gas emissions;
  - We help address poverty and disadvantage; and
  - We help our economy to grow by unlocking sustainable economic growth.

## **Local Planning Policy**

### **Vale of Glamorgan Local Development Plan 2011-2026 (February 2012)**

- 3.20 The Deposit LDP contains the Vision and Objectives for the Plan, Strategy, Strategic Policies, Development Management Policies and Policies for Managing Growth for the Vale of Glamorgan, covering the period up to 2026. It outlines the requirements for the delivery and implementation of the sites allocated for development.
- 3.21 Barry Waterfront is recognised in policy MG 3 as a strategic site, which outlines the council’s vision as:

*“The creation of a sustainable new urban quarter with distinctive neighbourhoods, attractive places and community facilities that complement, integrate and link with Barry Town and Barry Island, whilst taking full advantage of the maritime setting of the No. 1 Dock.”*



- 3.22 SP7 places goals around the Barry and Rhoose area including improved rail, and cycle connections such as a new direct rail link to the airport and:

*“The LDP will encourage the development of sustainable transport choices and improve accessibility. The National Cycle Network (NCN) route in the Vale of Glamorgan will form part of a longer Route 88 linking with Route 4 to the east at Newport and to the west at Margam Park via Bridgend and Porthcawl.”*

- 3.23 One of the area objectives for Barry is to:

*“Improve walking and cycling links between the town centre, the Waterfront and Barry Island.”*

### **Vale of Glamorgan Local Transport Plan 2015-2030**

- 3.24 The Vale of Glamorgan Local Transport Plan (LTP) seeks to identify the sustainable transport measures required to ensure the Vale of Glamorgan Council adheres to current requirements and good practices to allow for a sustainable transport environment for the period 2015 to 2020, as well as looking forward to 2030.

- 3.25 Similar to the LDP, the VoGC LTP identifies NCN route 88 as a location for improvement including an eastward expansion through Barry and towards Penarth.

- 3.26 Other schemes include providing:

- *“cycle infrastructure to enable a cycling network as identified by Sustrans and other Plans, including School Travel Plans (STPs). This route also links Cardiff Airport to Barry and the rural villages, with possible links to St Athan and the Enterprise Zone. Segments of the corridor”; and*
- *“Improvements to the A4226 between Waycock Cross, Barry and Sycamore Cross, A48 (Five Mile Lane) To provide off line improvements to this very busy corridor to assist with access to the strategic highway network and to the airport Enterprise Zone.”*

### **Vale of Glamorgan Parking Standards SPG (January 2019)**

- 3.27 VoGC is separated into separate parking zones identified in Plan 1 of the SPG, Barry Waterfront and the surrounding area is classified as Zone B – Urban.

- 3.28 Car parking standards are provided within **Table 3.1**.



**Table 3.1 – Car and Cycle Parking Standards (Zones A-C)**

Car (Maximum Standards)		
Type of Development	Operational	Non-operational
Colleges of Higher/Further Education	1 Commercial Vehicle Space	1 space per each member of teaching staff, 1 space per 2 ancillary staff, 1 space per 8 students and 5 visitor spaces. Coach parking as required
Cycle (Minimum Standards)		
Type of Development	Long stay	Short Stay
Education	1 stand per 5 staff and 1 stand per 6 students of age 17	1 stand per 100 children

3.30 Notes in the guidance on acceptable parking include:

- *“Where there is a high level of part-time (day release) students, the standard for Colleges of Higher Education/Universities is increased to 1 per 3 students.”*

## Summary

3.31 The site is shown to comply with the relevant national and local policies including aiding in reducing carbon emissions. It is a well-located site with a variety of opportunities to integrate itself with the existing surrounding area, forming a part of the strategic employment and transport site in which it is located.



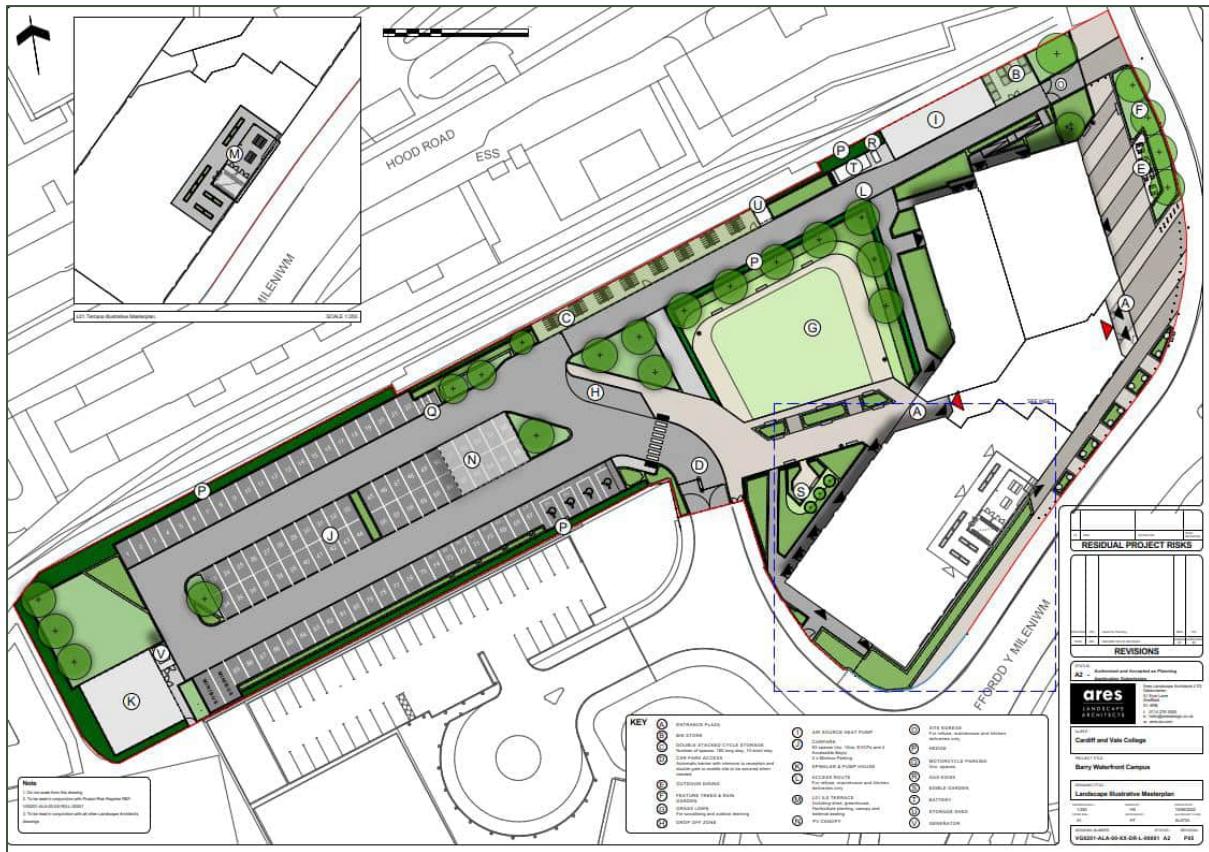
## 4.0 Development Proposals

### Overview of Development

- 4.1 The development proposals are for a CAVC campus building known as Barry Waterfront Campus (BWC), located in Barry.
- 4.2 The proposed campus at Barry Waterfront is for a new general learning campus intended to replace the existing College campus at Colcot Road and play a pivotal role in continuing the regeneration of the area.
- 4.3 The facility will take the form of an L shaped building with a central atrium which allows for distinct entry points – the main pedestrian entrance and car parking entrance both offering arrival into the atrium via the entrance plaza and the college courtyard respectively.
- 4.4 The proposal is for a multi-storey building of with a Gross Internal Floor Area (GIFA) of circa 5,960sqm. The facility would accommodate up to 855 students and 79 Full Time Equivalent (FTE) staff. There are likely to be 34 non-teaching FTE staff and 45 teaching FTE staff. It should be noted that the previous figure of 212 staff reflected the total staff (not FTEs) between both the BWC and the proposed Advanced Technology Centre (ATC) site in Rhoose.
- 4.5 It should also be noted that the number of students is the total number of students who may attend at some point during the academic year. Not all students will be full time students and will not all be in attendance on site at one time. Also, ‘full time’ students are typically only on site three days a week.
- 4.6 The illustrative landscape masterplan is shown in **Figure 4.1**, and at **Appendix D**.



Figure 4.1 – Illustrative Landscape Masterplan



4.7 As a result of the comments received during PAC, and the pre-application response from VoGC highways officers, the following changes have been made to the Illustrative Landscape Masterplan as reflected in **Figure 4.1**:

- MUGA has been removed;
- Car park layout update with increased car parking numbers and 2 minibus parking spaces, accommodating areas for attenuation;
- Latest canopy to front entrance aligned with landscape;
- Bollards and boulders added to entrance plaza as part of vehicle mitigation strategy (indicative);
- Battery added; and
- Additional gate and path added to boundary alongside sprinkler tank.

## Access

### Non-Vehicular Access

4.8 Pedestrian access to the site will be from Ffordd Y Mileniwm and Hood Road, as shown in **Figure 4.1**.

4.9 Cycle access to the site will be via the main vehicular access from Ffordd Y Mileniwm via an existing access road which serves the site and the existing primary school, along with the vehicular access, marked D in **Figure 4.1**.





- 4.10 Cyclists will dismount on the approach to the access gate and enter the site via the pedestrian gate to access the cycle parking located on the northern boundary of the site.

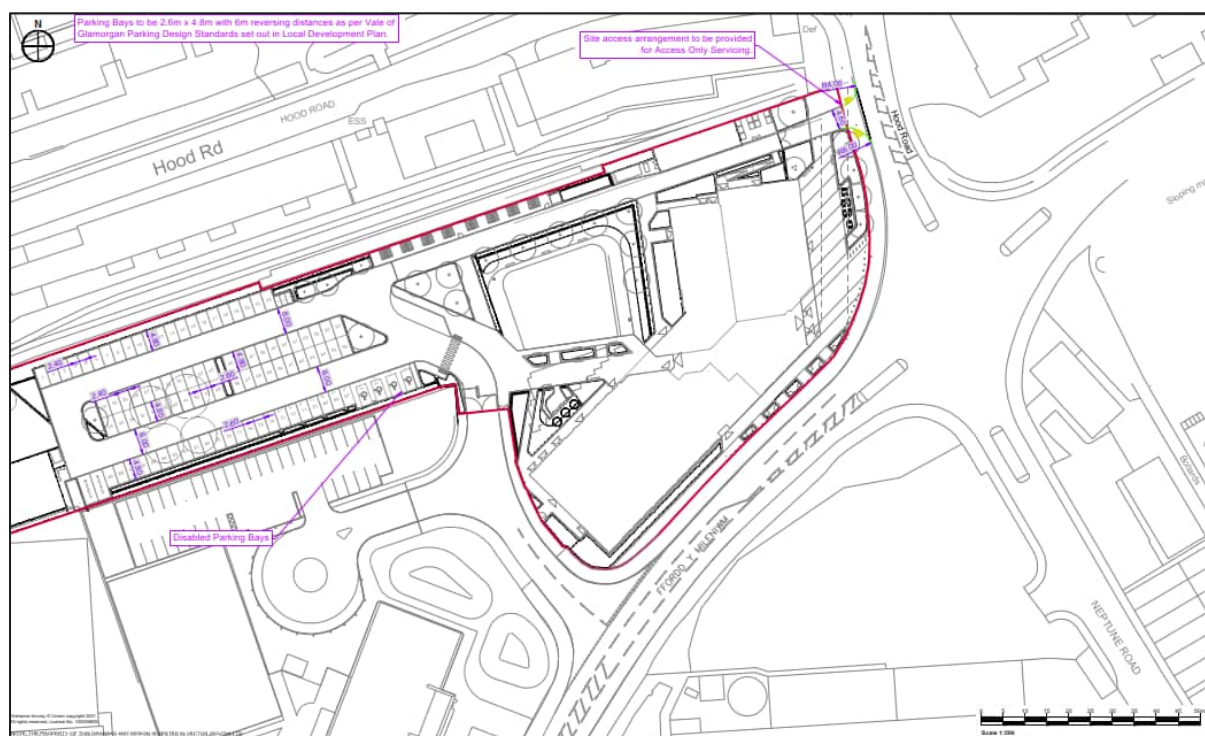
### Public Transport Access

- 4.11 A drop off/pick up bay will be included within the internal layout for minibus access as well as taxis, as shown in **Figure 4.1** (marked H). There is not sufficient room within the internal layout to accommodate the movement of a 15m coach. However, it is understood that the use of coaches is infrequent for the college and limited to minimal times during the academic year i.e. for trips, and would not be a weekly occurrence as the college would not be hosting weekly inter-school/college sporting events. Minibus and taxi trips are more likely to the site either for college hired minibuses, visitors in minibuses or Independent Living Skills (ILS) students.
- 4.12 When access to the site by coach is required, it is expected that coaches and the CAVC Rider service (subject to Welsh Government funding continuing) will utilise the existing bus stops on Ffordd Y Mileniwm, to the south of the site. It may also be possible for CAVC to have discussions with ASDA for occasional use of the car park for a coach parking.

### Vehicular Access

- 4.13 It is proposed that the vehicular access to the site will be provided using the existing access road from Ffordd Y Mileniwm which also serves a Ysgol Gymraeg Sant Baruc. The access is therefore a continuation of this spur, and no new junction is proposed onto the public highway on Ffordd Y Mileniwm. The vehicular site access is shown in **Figure 4.2**.

**Figure 4.2 – Vehicular Site Access**





- 4.14 The existing access which serves Ysgol Gymraeg Sant Baruc is not currently adopted. It is understood that further discussions will be undertaken between CAVC, VoGC and the Consortium with regards to bringing the access road up to an adoptable standard.
- 4.15 Access into the car park will be controlled via an automatic rising arm barrier that will have an intercom connected to reception.
- 4.16 An additional through route is proposed to the north of the building which will provide an entrance for refuse, delivery, fire, and maintenance vehicles from Hood Road, with these vehicles exiting the site via the main vehicular access. The servicing access from Hood Road will be a gated entrance, with sufficient space between the gate and the back of the footway for a vehicle to wait, without encroaching on the footway or carriageway.
- 4.17 The existing vehicle crossover arrangement will be formalised with dropped kerbs and tactile paving provided. The access will be widened slightly to accommodate the servicing and delivery vehicle movements. The proposed access from Hood Road is shown in **Appendix E**.
- 4.18 There is an existing gate in the location of the proposed servicing access which has been used by VoGC and other developers in the area for a number of years with construction vehicles accessing and egressing from Hood Road, therefore the precedent has been set for this location as a servicing access. Also, there are no safety reasons why a servicing access from Hood Road would not be acceptable.
- 4.19 CAVC has advised that a separate access road for delivery and servicing vehicles is critical to the safe operation of the campus and this measure has been adopted at other CAVC sites with success, to alleviate health and safety issues.
- 4.20 There is an ILS department proposed at BWC and students attending will be 'vulnerable young people' and nearly all will be dropped off/picked up by taxis, carers/parents. There will also be a number of 14-16 junior apprentices on site and therefore minimising the conflict between servicing vehicles and pedestrians/car park users is essential.
- 4.21 Swept path analysis of the vehicular access on Ffordd Y Mileniwm has been undertaken using a standard design vehicle (SDV), servicing vehicles and a fire tender with the full-scale drawings contained within **Appendix E**. The swept path analysis demonstrates that the existing junction can accommodate all movements undertaken by these vehicles.
- 4.22 Also, as requested by VoGC, swept path analysis has been undertaken of the existing turning head fronting the CAVC site gates and the Ysgol Sant Baruc gates to ensure that any vehicles inadvertently driving into the access road would be able to turn and leave in forward gear if both sets of gates were closed.
- 4.23 Swept path analysis of the access from Hood Road has also been undertaken and demonstrates that a refuse vehicle and fire tender can turn into the site from Hood Road in both directions.
- 4.24 It is noted that this access is already operating as a construction access to the nearby Ysgol Gymraeg Sant Baruc primary school. This indicates that any operation of the junction in relation to construction activities should be considered acceptable.



- 4.25 As a result of the PAC public comments, the car parking provision on site has been increased to provide 93 car parking spaces, including 4 accessible spaces and 8 electric vehicle charging points (2 of which are accessible spaces). It is also proposed to provide 160 long stay cycle parking spaces and 10 short stay spaces, located along the northern boundary of the site and short stay cycle parking is located near the main entrance from Hood Road. Three motorcycle parking spaces are also proposed and located within the car park.

## Internal Layout

- 4.26 The internal layout and car parking area has been reviewed by Arup and their swept path analysis drawings are contained within **Appendix E**.

## Parking

### Car Parking

- 4.27 The BWC site will accommodate 93 car parking spaces, including 4 disabled bays and 8 electric vehicle charging points (2 of which are in accessible bays). 3 dedicated motorcycle spaces are also proposed and located within the car park.
- 4.28 Applying the maximum car parking standards contained within the VoGC parking SPG to the number of staff, visitors and students results in the following maximum car parking provision:
- Teaching Staff (45 FTE) – 45 spaces
  - Ancillary Staff (34 FTE) – 17 spaces
  - Visitors – 5 spaces
  - Students – 107 spaces
  - Total - 174 spaces.
- 4.29 This results in a shortfall of 81 car parking spaces; however it should be noted that the VoGC car parking standards are maximum standards.
- 4.30 Paragraph 5.1 of the SPG states that new developments should provide lower levels of parking than have generally been achieved in the past. Paragraph 5.2 also states that using maximum standards which limit the amount of parking provided on developments can help focus attention on the overall travel context of a development including the availability of more sustainable modes of transport such as public transport, walking, or cycling.
- 4.31 Due to the location of the site in a highly accessible area, the proposed level of car parking is considered to be appropriate. The site is well connected to public transport services nearby offering frequent and convenient services, as well as to Barry rail station.
- 4.32 The surrounding active travel network offers connections to a range of residential areas within Barry and the site sits adjacent to popular retail and social areas such as Barry Goodsheds. Importantly also, it is possible that the existing CAVC Rider service will serve the BWC site, subject to Welsh Government funding continuing, meaning many students or staff living further afield and/or studying at a different campus building will be able to use this free service to travel to the site.



- 4.33 There are residential streets nearby that are suitable for on-street parking. These are off Ffordd Y Mileniwm to the northeast of the site, between 300-600m away. Additionally, there is Harbour Road pay and display car park which is located approximately 800m from the site.
- 4.34 A car parking accumulation assessment is provided in Section 7 to demonstrate that the proposed provision can accommodate the future parking demand at the site.
- 4.35 There is a TRO currently in place on the site access road to prevent indiscriminate parking on the access road.

### **Cycle Parking**

- 4.36 A total of 160 long stay cycle parking spaces and 10 short stay spaces will be provided within the site. Long stay cycle parking will be located along the northern boundary of the site and will be covered and secure. Short stay cycle parking spaces will be located near the main entrance to the site from Hood Road.
- 4.37 There will be showers and changing facilities provided within the BWC building which could be used for cyclists travelling to the site.
- 4.38 Applying the minimum cycle parking standards to the number of staff and students at the BWC site results in a requirement to provide 159 long stay cycle parking spaces and 9 short stay cycle parking spaces. The proposed cycle parking provision is therefore in line with the minimum cycle parking standards as set out in the SPG.
- 4.39 As part of the Travel Plan, the use of cycle parking spaces will be monitored, and additional spaces will be provided if required.

### **Travel Plan**

- 4.40 The proposed development will be supported by an Interim Travel Plan which will accompany this Transport Assessment and will be submitted as part of the planning application submission. Further details of the content of the Travel Plan are provided as part of the Transport Implementation Strategy at Section 8.



## 5.0 Trip Generation

### Overview

- 5.1 This section provides the trip generation associated with the proposed development to understand the potential expected trips that the development could generate on a daily basis and during peak travel hours.
- 5.2 Information has been provided from CAVC to inform a ‘first principles’ assessment. An assessment using the industry standard trip rate database TRICS has also been undertaken as a comparison.

### Trip Generation

#### TRICS Total People Trip Generation

- 5.3 TRICS trip rate data has been derived from the TRICS database and is based on surveys conducted between 01/01/2015 and 06/04/2022, with surveys undertaken during the Covid-19 pandemic being excluded. The following parameters have been applied:
- Main land use 04 – Educational.
  - Sub land use C – College/University.
  - Trip rate type – Multi-Modal.
  - Regions – All Wales and England (Excluding Greater London).
  - Location type: Suburban Area, Edge of Town, Town Centre.
  - Number of Students: 360 – 16000.
  - Weekday Surveys only.
- 5.4 A full copy of the TRICS output report is provide in **Appendix F**.
- 5.5 The Total People trips are calculated and demonstrated in **Table 5.1**. The total trip rates for the typical network AM and PM peak hours for arrivals and departures have been summarised, alongside the AM and PM peak trip rate (based on the TRICS data), to calculate total people trip figures. This has been based on an occupancy of 100%, therefore 855 students (and all staff and visitors).

**Table 5.1 – Total Trips (855 Students)**

Time Period	Person Trip Rate (Per student)			Trips (People)		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
08:00 – 09:00	0.175	0.018	0.193	150	15	165
17:00 – 18:00	0.021	0.057	0.078	18	49	67





5.6 Calculating the total number of trips using these TRICS trip rates, results in a total of 165 two-way person trips in the AM peak hour. Likewise, for the PM peak hour there is forecast to be up to 67 two-way person trips in this hour.

### First Principles Trip Generation

5.7 Given that the precise student and staff numbers for the proposed college are known, it is reasonable to undertake a first principles approach to trip generation. In order to do this some information has been obtained from the TRICS trip rates as presented in this section.

5.8 The daily profile of movement has been derived on this basis, split between arrivals and departures and across the day to provide a daily profile of movement. It is assumed that all trips will arrive and leave the site in a day.

5.9 It is reasonable to assume that on any given day up to 80% of students would visit this site, accounting for illness and study on other campuses. It is also worth noting that ‘full time’ students are typically on site three days a week. As such the number of students has been reduced to 684 students. Staff and visitor numbers remain at 100% (79 staff and 100 visitors) for the purposes of assessment.

5.10 The surveyed sites within TRICS provide information on utilisation of their sites, and as such these utilisations have been interrogated to understand the typical proportion of students on site on any given day. This has been done by taking the maximum AM or PM peak people trips and comparing this to the number of students. **Table 5.2** shows the percentage utilisation of these other sites.

**Table 5.2 – TRICS Site Utilisation**

TRICS Site	Number of Staff and Students	Percentage Utilisation
ES-04-C-06	2493	119%
NF-04-C-02	11566	63%
PB-04-C-02	3066	47%
SF-04-C-01	13210	35%

5.11 As can be seen from **Table 5.2**, the median utilisation is around 55%. The only exceptions are sites SF-03-C-01 which has a below median utilisation of 35%, and ES-04-C-06 which has a 119% utilisation rate.

5.12 TRICS also does not account for students/staff leaving the site and coming back (for example, getting lunch), where this would reduce the utilisation further. Utilisation is considered as the proportion of total students that come in each day.

5.13 Based on the site utilisations derived from the TRICS assessment, a site occupancy of 80% is considered to be robust.

5.14 However, a sensitivity test has also been undertaken based on 100% site occupancy of students, staff, and visitors. This is set out further in this section.

5.15 Based on the level of utilisation derived above, the TRICS trip generation profile has been assessed based on 80% occupancy of students (684) and 100% occupancy of staff and



visitors (79 staff and 100 visitors). . The TRICS profile has been used to provide the percentage of all people arriving and departing during that one-hour period across the day. These are shown below **Table 5.3**.

**Table 5.3 – Total People Trip Generation Based on Profiles (80% Utilisation for Students and 100% Utilisation for Staff and Visitors)**

Time Period	TRICS Profile		Number of Trips (684 Students, 79 Staff and 100 Visitors)		
	Arrivals	Departures	Arrivals	Departures	Total
07:00-08:00	3%	1%	25	4	29
08:00-09:00	30%	3%	257	27	283
09:00-10:00	15%	3%	128	28	156
10:00-11:00	6%	4%	56	35	91
11:00-12:00	5%	6%	45	53	99
12:00-13:00	10%	14%	87	120	206
13:00-14:00	10%	7%	84	59	143
14:00-15:00	5%	11%	43	92	134
15:00-16:00	4%	14%	37	120	156
16:00-17:00	3%	18%	29	155	185
17:00-18:00	4%	10%	31	84	115
18:00-19:00	3%	3%	29	24	53
19:00-20:00	2%	4%	9	19	28
20:00-21:00	1%	4%	3	24	27
21:00-22:00	1%	3%	1	19	21

- 5.16 **Table 5.3** demonstrates that on a typical weekday the development is forecast to generate 283 two-way total people movements in the AM peak hour and 115 two-way total people movements in the PM peak hour.

## Vehicle Trip Generation

### Mode Split

- 5.17 Based on the above trip generation, a modal split is required to determine the number of vehicles entering and leaving the site. This has been applied separately to staff/visitors and students.
- 5.18 Staff are represented by Nomis WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level) and placing MSOA The Vale of Glamorgan 015 as the commuting destination. This is shown in **Table 5.4**.



**Table 5.4 – Staff/Visitor Modal Split**

Mode of Transport	Modal Share
Underground, metro, light rail, or tram	0%
Train	2%
Bus, Minibus or Coach	3%
Taxi	0%
Motorcycle	1%
Driving Car or Van	74%
Passenger in Car or Van	7%
Pedestrian	10%
Cyclist	2%
Other	1%

- 5.19 National Travel Survey (NTS) data has also been reviewed to determine an appropriate mode split for students at the BWC site. It is felt that as the student postcodes are known, and this in combination with NTS data will provide a more accurate modal share of students.
- 5.20 The NTS provides “*Trip distance – including short walk – by miles – in banded distance – 12 categories*”.
- 5.21 The NTS provides data on commuting to education under two categories: “education” and “escort education” for four different classifications of settlements. These are:
- Urban Conurbation;
  - Urban City and Town;
  - Rural Town and Fringe; and
  - Rural Village and Isolated.
- 5.22 For each settlement type, this distance travelled is broken down into categories to obtain the mode split for each settlement type, per distance to the college. This includes:
- Under 1 mile;
  - 1 to under 2 miles;
  - 2 to under 5 miles;
  - 5 to under 10 miles;
  - 10 to under 25 miles;
  - 25 to under 50 miles;
  - 50 to under 100 miles; and
  - 100 miles +



- 5.23 With these results a 100% mode split for distance band per settlement type can be established and used as an index.
- 5.24 Using the index, a mode split was assigned to each postcode provided for CAVC. This included investigating each postcode and determining the settlement type and distance band to travel to the site.
- 5.25 The mode split assigned to each student was then divided by the number of postcodes to make the count proportional to the number of students. The sum of these proportional mode splits creates a mode split which could be expected to be generated by the site.
- 5.26 The student mode split for the BWC site is shown in **Table 5.5**.

**Table 5.5 – Student Mode Split**

Mode	Modal Split (%)
Bus	11%
Rail	3
Driving a car or van	37%
Passenger in a car or van	31%
Bicycle	2%
On foot	15%
Other	2%
Total	100%

### Trip Generation

- 5.27 The vehicle trip generation, based on the above mode splits is provided in **Table 5.6**.

**Table 5.6 Staff/Student/Visitor Vehicle Trip Generation**

Time Period	Trips (Vehicles)		
	Arrivals	Departures	2-way
08:00 – 09:00	115	12	127
17:00 – 18:00	14	38	52

- 5.28 **Table 5.6** demonstrates that on a typical weekday, the development is forecast to produce 127 two-way vehicle movements in the AM peak and 52 two-way vehicle movements in the PM peak, based on a student occupancy figure of 80% and a staff and visitor occupancy figure of 100%.





### Sensitivity Assessment

- 5.29 For the purpose of providing a robust modelling assessment, an assessment has been undertaken based on a 100% utilisation i.e. all 855 students, 79 staff and 100 visitors are on site during the day.
- 5.30 **Table 5.7** below shows the number of people trips for the AM and PM peak period based 100% utilisation.

**Table 5.7 Staff/Student/Visitor Vehicle Trips (Sensitivity)**

Time Period	Trips (Vehicles)		
	Arrivals	Departures	2-way
08:00 – 09:00	134	14	148
17:00 – 18:00	16	44	60

- 5.31 **Table 5.7** demonstrates that in the sensitivity scenario, the development is forecast to produce 148 two-way vehicle movements in the AM peak and 60 two-way vehicle movements in the PM peak, based on an occupancy figure of 100%.



## 6.0 Trip Distribution and Assignment

6.1 This section sets out the approach to distribution and assignment of vehicle trips across the local highway network.

### Vehicle Distribution

6.2 Distribution of students has been based on a list of postcodes, provided by CAVC, from surveyed students at the nearby CAVC Colcot Road campus in Barry.

6.3 Similarly, staff/visitors have also been distributed based on a list of postcodes, provided by CAVC, from surveyed staff at the Colcot Road campus.

6.4 This exercise has been undertaken in order to determine routes that vehicle trips generated will take, allowing for the consideration of surrounding junctions.

6.5 Using the student postcodes and Google Maps Directions' tool, and professional judgement has been applied to routing closer to the site. If the journey was less than 2km, the journey has been discounted, as it assumed that any student who lives within 2km of the site is likely to walk, cycle, or use public transport to travel to and from the site.

6.6 A summary of routes is detailed in **Table 6.1** and **Table 6.2**.

**Table 6.1 – Distribution of Traffic (Students)**

Route ID	Route	Total	Percentage
A	Ffordd Y Mileniwm Northeast-bound	924	100%
B	Ffordd Y Mileniwm Southwest-bound	1	0%
C	Hood Road	2	0%

**Table 6.2 – Distribution of Traffic (Staff & Visitors)**

Route ID	Route	Total	Percentage
A	Ffordd Y Mileniwm Northeast-bound	1593	79%
B	Ffordd Y Mileniwm Southwest-bound	171	8%
C	Hood Road	251	12%

6.7 The distribution of development traffic as described above has been used as a basis for the highway network assessment in the following section.



## 7.0 Highway Network Assessment

### Overview

- 7.1 In order to consider the effect of the traffic generated by the site on the local highway network, discussions have taken place with VoGC to determine a scope of assessment.
- 7.2 Following these discussions, the following junctions have been assessed:
- Ffordd Y Mileniwm / Hood Road / Neptune Road Signals;
  - Ffordd Y Mileniwm / Site Access Junction.
- 7.3 Turning count survey data has been used in order to determine the existing flows at these junctions in order to provide a baseline traffic flow. The vehicle trips associated with the proposed development have been distributed through these junctions.
- 7.4 These junction assessments have been undertaken using PICADY and LinSig as appropriate. Full junction modelling output reports are provided in **Appendix G**.
- 7.5 The assessment has been undertaken for the following peak hours:
- AM weekday peak hour (08:00 – 09:00); and
  - PM weekday peak hour (17:00 – 18:00).

### Assessment Scenarios

- 7.6 Assessment scenarios have been considered as follows:
- **Scenario 1** – Baseline (2023 Traffic Surveys)
  - **Scenario 2** – 2033 Future Year (Baseline + Committed Development)
  - **Scenario 3** – 2033 Future Year + Development
  - **Scenario 4** – 2033 Future Year + Development (Sensitivity)

### Future Year Scenario

- 7.7 It is not proposed to apply a blanket TEMPro growth factor to the baseline survey data to obtain the 2033 Future Year traffic flows.
- 7.8 A list of committed developments has been requested from VoGC and will be used to derive the 2033 Future Year scenario. Confirmation of the committed developments has not yet been provided by VoGC at this stage. In the absence of this information, the following development, whilst not yet consented, has been considered as part of the 2033 Future Year scenario:



*Creation of a new 400-berth marina alongside a mixed-use development comprising leisure, business space and residential development at The Mole, Barry (planning application ref: 2023/00051/HYB).*

- 7.9 Vehicular access to ‘The Mole’ development will be via Neptune Road to the west of the site. The traffic flows associated with this development have been obtained from the Transport Assessment submitted in support of the application.

## Highway Network Modelling

### Junction 1 – Ffordd Y Mileniwm / Hood Road / Neptune Road – LinSig

- 7.10 The LinSig modelling results for the Ffordd Y Mileniwm/Hood Road/Neptune Road junction are summarised in **Table 7.1**. It is understood that the junction telematic system currently in place at the junction is to be revised by the Consortium. The revised scheme appears to reduce traffic capacity at the junction, but to the benefit of the safety and convenience for pedestrians using the junction, by removing the priority give way movements.

- 7.11 The junction modelling assessment in **Table 7.1** is based on the revised design.

**Table 7.1 – Ffordd Y Mileniwm/Hood Road/Neptune Road**

Arm	AM				PM			
	DoS (%)	MMQ (PCU)	Delay (S/PCU)	PRC (%)	DoS (%)	MMQ (PCU)	Delay (S/PCU)	PRC (%)
<b>Scenario 1 – Baseline</b>								
Hood Road	64.9	5	58	31.4	82.5	9	66	9.1
Ffordd Y Mileniwm (E)	53.9	7	21		64.7	11	25	
Neptune Road	1.0	0	45		3.4	1	46	
Ffordd Y Mileniwm (W)	68.5	12	30		81.1	15	40	
<b>Scenario 2 – 2033 Future Year</b>								
Hood Road	66.5	5	59	31.4	83.0	9	66	8.4
Ffordd Y Mileniwm (E)	54.1	8	21		68.2	12	26	
Neptune Road	14.7	1	47		35.7	2	51	
Ffordd Y Mileniwm (W)	68.5	12	30		81.1	15	40	
<b>Scenario 3 – 2033 Future Year + Development</b>								
Hood Road	68.5	5	60	28.7	83.4	9	67	4.0
Ffordd Y Mileniwm (E)	64.6	11	23		69.6	12	26	
Neptune Road	14.7	1	47		35.7	2	51	
Ffordd Y Mileniwm (W)	69.9	13	31		86.6	17	46	



Scenario 4 – 2033 Future Year + Development (Sensitivity)								
Hood Road	68.5	5	60	28.2	83.4	9	67	2.9
Ffordd Y Mileniwm (E)	66.5	12	23		69.9	12	26	
Neptune Road	14.7	1	47		35.7	2	51	
Ffordd Y Mileniwm (W)	70.2	13	31		87.5	18	47	

- 7.12 The results contained within **Table 7.1** demonstrate that the junction is approaching capacity in the 2033 Future Year + Development (Sensitivity) scenario for the PM peak, however this is based on the worst-case scenario that the site will be 100% occupied by staff, students, and visitors.
- 7.13 A comparison of the results for the 2033 Future Year and 2033 Future Year + Development scenarios in the demonstrates that the development will have a minimal impact on the overall performance of the junction in the PM peak period.

### Junction 2 – Ffordd Y Mileniwm / Site Access - PICADY

- 7.14 The junction modelling results for the Ffordd Y Mileniwm/Site Access junction are provided in **Table 7.2** for all assessment scenarios.

**Table 7.2 – Ffordd Y Mileniwm/Site Access Junction**

MOVEMENT	AM (08:00 – 09:00)			PM (17:00 – 18:00)		
	Q (PCUs)	Delay (s)	RFC	Q (PCUs)	Delay (s)	RFC
	Scenario 1 - Baseline					
Stream B-C	0	6.42	0.02	0	6.66	0.01
Stream B-A	0	0	0	0	13.28	0.
Stream C-AB	0	7.83	0.03	0	6.78	0.03
Scenario 2 – 2033 Future Year						
Stream B-C	0	6.42	0.02	0	6.66	0.01
Stream B-A	0	0	0	0	13.29	0.01
Stream C-AB	0	7.83	0.03	0	6.78	0.03
Scenario 3 – 2033 Future Year + Development						
Stream B-C	0	6.58	0.04	0	7.11	0.09
Stream B-A	0	0	0.00	0	13.95	0.01
Stream C-AB	0	10.15	0.25	0	6.97	0.05





Scenario 4 – 2033 Future Year + Development (Sensitivity)						
Stream B-C	0	6.61	0.04	0	7.20	0.10
Stream B-A	0	0	0.00	0	14.03	0.01
Stream C-AB	1	10.68	0.29	0	7.01	0.06

A = Ffordd Y Mileniwm South, B = Site Access, C = Ffordd Y Mileniwm North

- 7.15 The junction is forecast to operate within capacity even when the college is operating at 100% capacity, with a maximum RFC of 0.29 and maximum delay of 14.03 seconds.

### Car Parking Utilisation Assessment

- 7.16 A car parking utilisation assessment has been undertaken to determine how the car park will be utilised throughout the day. This has been determined from the first principles trip generation based on the TRICS arrival and departure profile. The parking accumulation is shown below in **Table 7.3** and is based on an 80% occupancy for students and 100% occupancy for staff and visitors.

**Table 7.3 – Parking Utilisation Assessment**

Time Period	Trips (Vehicles)		
	Arrivals	Departures	Accumulation
07:00 – 08:00	11	2	9
08:00 – 09:00	115	12	113
09:00 – 10:00	57	13	157
10:00 – 11:00	25	16	166
11:00 – 12:00	20	24	163
12:00 – 13:00	39	54	148
13:00 – 14:00	38	27	159
14:00 – 15:00	19	41	137
15:00 – 16:00	16	54	100
16:00 – 17:00	13	70	43
17:00 – 18:00	14	38	19
18:00 – 19:00	13	11	22
19:00 – 20:00	4	9	17
20:00 – 21:00	1	11	8
21:00 – 22:00	1	9	0

- 7.17 **Table 7.3** demonstrates that the maximum car parking accumulation would be 166 spaces between 10:00 and 11:00. This figure is substantially greater than the number of car parking spaces proposed at the site (93).



- 7.18 It should be noted that this based on a car driver mode split for students of the existing Colcot Road campus which is located in a far less sustainable location than the BWC site and has more car parking spaces available.
- 7.19 A car driver mode split of 15% would be required for all staff, students, and visitors for the proposed number of car parking spaces to be sufficient for the parking demand for the site.
- 7.20 Due to the highly sustainable and accessible location of the site and the proximity to existing walking, cycling and public transport networks, the car driver mode split for students is expected to be less than shown in **Table 5.5**. Furthermore, the BWC site will cater for students from the age of 16 and therefore a large proportion of students will not yet be able to drive.
- 7.1 There are residential streets nearby that are suitable for on-street parking. These are off Ffordd Y Mileniwm to the northeast of the site, between 300-600m away from BWC. Additionally, there is Harbour Road pay and display car park which is located approximately 800m from the site.
- 7.2 With appropriate Travel Plan measures and the nearby access to frequent public transport (including exploring a diverted CAVC Rider service), the level of parking provision is deemed appropriate and will be reviewed and managed as part of the Travel Plan.
- 7.3 The proposed car parking provision on site is appropriate considering the realistic number of staff members on site during the day and the location of the site in a highly sustainable area.

## Summary

- 7.4 The junction modelling assessment for the proposed site access junction demonstrates that the junction will operate within its theoretical capacity for all scenarios in the AM and PM peak periods.
- 7.5 The junction modelling assessment for the Ffordd Y Mileniwm/Hood Road/Neptune Road junction demonstrates that the junction is approaching capacity in the 2033 Future Year + Development (Sensitivity) however this is based on the worst-case scenario that the site is 100% occupied by staff, students, and visitors. The results demonstrate that the proposed development will have a minimal impact on the overall performance of the junction during the AM and PM peak periods.
- 7.6 A car parking accumulation assessment has been undertaken and demonstrates that the proposed parking provision will not be sufficient to accommodate the car parking demand based on the staff and student car driver mode splits included at **Table 5.4** and **Table 5.5**. However, as set out above, the site is located in a sustainable location and the car driver mode split for students is expected to be less than shown in **Table 5.5**.
- 7.7 Due to the sustainable location of the site and the proposed Travel Plan measures, the level of parking provision is considered to be appropriate to meet the car parking demand for the site.



## 8.0 Transport Implementation Strategy

### Overview

- 8.1 The Welsh Government's Planning Policy Wales Technical Advice Note 18: Transport States that:

*“The transport assessment process should include the production of a ‘Transport Implementation Strategy’ (TIS) for the development. This should set objectives and targets relating to managing travel demand for the development and set out the infrastructure, demand management measures and financial contributions necessary to achieve them. The TIS should set a framework for monitoring the objectives and targets, including the future modal split of transport to development sites”.*

- 8.2 This section considers how future residents will travel to and from the site and what measures will be put in place to monitor mode split targets.

### Access Arrangements

- 8.3 Pedestrian access to the site will be from Ffordd Y Mileniwm and Hood Road. Cycle access to the site will be via the main vehicular access from Ffordd Y Mileniwm via an existing section of road that serves the site and Ysgol Gymraeg Sant Baruc.
- 8.4 A drop off/pick up bay will be provided within the site to provide minibus access and a drop off facility for cars and taxis. The existing CAVC Rider bus service which currently provides a route to the Colcot Road campus, could be diverted to provide a route for students and staff to the BWC site, however this is subject to Welsh Government funding continuing.
- 8.5 It is unlikely that the site will be served by coaches on a regular basis, and therefore there is no provision within the site to accommodate coaches. It is likely that coaches and the CAVC Rider bus service (subject to Welsh Government funding) will serve the existing bus stops on Ffordd Y Mileniwm, located to the south of the site access.
- 8.6 The main vehicular access into the site will be via the existing junction on Ffordd Y Mileniwm which currently serves Ysgol Gymraeg Sant Baruc. Access to the car park will be controlled via an automatic rising arm barrier that will have an intercom connected to reception.
- 8.7 A through route will be provided within the northern part of the site to accommodate refuse, delivery, fire, and maintenance vehicles. The route will be entry-only from Hood Road. Servicing and delivery vehicles will exit the site via the main access on Ffordd Y Mileniwm.

### Mode Share Target

- 8.8 The existing (based on census method of travel to work) and proposed mode split are shown below in **Table 8.1**. The implementation of the transport strategy including Travel Plan is designed to reduce the mode share for car driver and increase the mode share for public transport and walking.



**Table 8.1 – Mode Share Target**

Target	Indicator
<b>Students</b>	
Reduce car vehicle trips by 2.5% from the baseline travel survey	Student modal split monitoring survey
Increase the number of public transport trips by 2.5% from the baseline travel survey	Student modal split monitoring survey
<b>Staff and Employees</b>	
Reduce single occupancy vehicle trips	Staff modal split monitoring survey
Increase the proportion of car sharing trips	Staff modal split monitoring survey

8.9 The actual staff modal share target will be set following the completion of the development and completion of the travel survey within 3 months of occupation.

## Public Transport

8.10 There may be an opportunity to divert the existing CAVC Rider bus service which currently serves the Barry Campus (Colcot Road), to the BWC site, to provide a service for students and staff to the site.

8.11 If demand for this service exceeds the current service provision, additional services will be investigated.

8.12 Currently the CAVC rider service operates between CAVC sites as a result of specific funding from Welsh Government. The intention is to continue this to be new campuses, subject to Welsh Government funding continuing.

8.13 As per the BREEAM guidance, public transport information will be provided in public accessible locations including on communal noticeboards. This information will include timetables and any potential discounts for users including young person’s travel offers such as the ‘Welsh Young Persons Discounted Travel Scheme Card’ where young people aged 16 to 21 can register to receive discounted fares on all local bus and TrawsCymru throughout Wales, and 16-25 railcards.

## Travel Plan

8.14 An Interim Travel Plan will be prepared and submitted as part of the planning application submission for the proposed development. The Plan will include a summary of the local



pedestrian, cycle and public transport facilities as well as outlining the expected travel patterns of future users of the site.

- 8.15 The Travel Plan will include a range of measures to be explored by the Travel Plan Coordinator (TPC), once appointed. A summary of the measures which will be included in the Plan is provided below.

## Package of Measures

### Measures to Reduce the Need to Travel

- 8.16 CAVC currently has a flexible working policy whereby non student facing staff are able to work up to 50% of their time from home. Additionally, the standard lecturing staff contract allows lecturers to work from home one day a week to undertake 'marking and teaching preparation' activity.
- 8.17 Full time Further Education (FE) students typically attend college for face to face lectures on three days a week, with the remaining two days being a combination of, work placement, self-study or 'online' engagement.
- 8.18 These measures, which are currently employed by CAVC at their other campuses, significantly reduce the attendance on site of full time students and members of both teaching and ancillary staff.

### Measures to Reduce Car Usage

- 8.19 The TPC will promote alternatives such as car sharing to reduce car travel to the site. Employees and students aged over 18 will be encouraged to car share where possible, including encouragement to sign up to schemes such as Liftshare. Information on the benefits of joining such schemes will be included, as well as how to sign up to such scheme will be included as part of the Travel Plan Welcome Pack.
- 8.20 To encourage the take up of car sharing schemes, measures could be introduced to support those taking part and to overcome some of the perceived disadvantages to car sharing. These could include:
- **Guaranteed Ride Home:** The College will guarantee that members of the car sharing scheme will have a ride home in the event of an unforeseen problem arising e.g. picking up a sick child from school. It is interesting to note that where such schemes have been put in place, the actual take up of this safety net is very low.
  - **Preferential Parking:** Car sharers would be designated the most attractive parking spaces, with the exception of disabled spaces, closest to the buildings and marked accordingly. Cars involved in the scheme will display an approved permit and parking will be monitored to ensure that abuse of the system does not occur. Staff and students who participate in the car sharing scheme will increase their likelihood of obtaining a parking permit.

### Measures to Promote Cycling and Walking

- 8.21 Walking and cycling are an economical, environmentally friendly, and healthy means of travelling. Whilst walking is not considered a viable option to travel to the site, the TPC will





communicate with CAVC to ensure that pedestrian routes in and out of the site are appropriately maintained.

8.22 Cycling provides a more realistic alternative to the car for many short trips, especially those that do not require significant baggage to be transported. In light of this, a pack of measures and initiatives are proposed to encourage the uptake of cycling:

- **Safe and Secure Cycle Parking:** CAVC already provides cycle parking racks at locations throughout other sites. Cycle parking at BWC will be provided along the northern boundary of the site. Short stay cycle parking will be located by the main entrance off Hood Road.
- **Shower and Changing Facilities:** BWC will have a full range of showers and lockers available within the facilities to be provided on site. These are available to all allowing the opportunity for cyclists and walkers to change and store equipment.
- **Promote Personal Travel Planning:** Specialised cycling maps highlighting suitable routes and possible travel times to day-to-day destinations will be distributed to all the students and staff onsite. This will assist in changing people's perception of the travel distance and time walking and cycling can take.

### **Measures to Promote Public Transport**

8.23 The CAVC Rider bus service was launched in September 2022 and currently operates between CAVC sites as a result of specific funding from Welsh Government. The intention is to continue this to new campuses, subject to Welsh Government funding continuing.

8.24 The CAVC Rider provides free bus travel for CAVC students and staff between Cardiff city centre and CAVC sites Monday – Friday between 08:00 and 18:00. Services are currently provided to Barry Campus (Colcot Road) and CAVC International Centre for Aerospace (ICAT) at Cardiff Airport.

8.25 As per the BREEAM guidance, public transport information will be provided in public accessible locations including on communal noticeboards. This information will include timetables and any potential discounts for users including young person's travel offers such as the 'Welsh Young Persons Discounted Travel Scheme Card' where young people aged 16 to 21 can register to receive discounted fares on all local bus and TrawsCymru throughout Wales, and 16-25 railcards.

### **Business Travel and Parking**

8.26 The Travel Plan will address the business travel needs of BWC staff during the day and the usage of BWC service vehicles. CAVC will review the necessary business use of private cars and will consider providing in its place a hire or pool car.

8.27 Pool cars provide a number of advantages over the reimbursement of staff members for the use of their own cars:

- It removes the obstacle to staff using non-car modes of travel in the peak hour.
- All hired vehicles will be selected on the basis of their green credentials.
- By using hired vehicles as pool cars, the College can ensure that they are maintained properly keeping emissions to a minimum.



- The hire of vehicles will ensure that advances in vehicle technology related to greater fuel efficiency will be kept up to date.
- The College can ensure that the correct insurance is in place.
- Greater control over travel expenditure can be exercised.

## Summary

- 8.28 This section has set out the Transport Implementation Strategy for the site. It has detailed the access arrangements and the multimodal trip generation for peak periods. The existing and target mode share has been identified and the package of measures to support this has been outlined at this stage.



## 9.0 Summary and Conclusion

### Summary

- 9.1 SLR Consulting Limited has been appointed by WEPCo Limited to provide traffic and transportation advice in support of development proposals for Barry Waterfront Campus off Ffordd Y Mileniwm, Barry. The site lies within the administrative boundary of The Vale of Glamorgan (VoG).
- 9.2 The proposed campus at Barry Waterfront is for a new general learning campus intended to replace the existing College campus at Colcot Road and play a pivotal role in continuing the regeneration of the area.
- 9.3 The site is located approximately 1.3km southwest of Barry town centre and a similar distance from the new transport interchange adjacent to Barry Docks Railway Station.
- 9.4 A review of the existing accessibility of the site demonstrates that it is well located with regard its proximity to existing walking and cycling networks and excellent public transport connections, including bus and rail services.
- 9.5 Vehicular access to the site will be provided from the existing access from Ffordd Y Mileniwm which currently serves Ysgol Gymraeg Sant Baruc. An additional access will be provided from Hood Road to be used by servicing and delivery vehicles only. These vehicles will exit the site via the main site access on Ffordd Y Mileniwm.
- 9.6 The highway assessment for the proposed site access on Ffordd Y Mileniwm demonstrates that the junction will operate within its theoretical capacity for all scenarios during the AM and PM peak periods. The junction modelling assessment for the Ffordd Y Mileniwm/Hood Road/Neptune Road signalised junction demonstrates that the junction is approaching capacity in the 2033 Future Year + Development (Sensitivity) scenario with is based on the worst-case assumption of 100% staff and students on site. The results demonstrate that the proposed development will have a minimal impact on the overall performance of the junction during the AM and PM peak periods.
- 9.7 It should be noted that the highway assessment is based on a worst case scenario and the maximum number of students enrolled at the college and are not all full time or in attendance on site at any one time. CAVC currently employs measures to reduce the need to travel, therefore it is also worth noting that actual number of staff on site at any one time will be lower than assessed as part of this TA.

### Conclusion

- 9.8 The site is well located for an educational development as part of CAVC with a plethora of opportunities to connect to the existing walking, cycling and public transport networks located in the vicinity of the site. There will also be potential for future public transport routes to reach the site via the CAVC Rider bus service, for staff and students, subject to Welsh Government funding continuing.
- 9.9 The conclusion of the highway network assessment is that the effect of the development on the highway network is not significant in terms of highway capacity and does not give rise to



any severe residual impacts. The proposal to develop the BWC site at this location should therefore be encouraged.

