

Baglan Way, Baglan

Transport Assessment

CJ Construction (Wales) Ltd

10 May 2022

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1. INTRODUCTION

1.1 Background

- 1.1.1 Apex Transport Planning Ltd ('Apex TP') has been commissioned by CJ Construction (Wales) Ltd to provide transport support for a planning application for Glass Systems Ltd for the construction of an Industrial Building on a site at Baglan Way, Baglan.
- 1.1.2 The proposals are for a full application for a B2 factory development for the production of insulated glass units with a floorspace of approximately 25,545 sqm. The proposals would relocate and consolidate the existing Glass Systems operations in Swansea, Pontyclun and Port Talbot into one single new location.
- 1.1.3 The site would be accessed via Baglan Way and Moor Road on its northeast and northwest boundaries via two new priority junctions.
- 1.1.4 This TA provides an assessment of the sustainable connectivity and transport impacts of the proposed development and sets out details of the proposed parking and access arrangements. This TA has been produced to inform the local highway authority, NPTCBC, of the highways and transport implications of the proposals.

1.2 Scope of Report

- 1.2.1 The scope of the report and extent of junction assessments has been discussed with the highway authority, NPTCBC, initially via email followed with a formal pre-application advice process for which a detailed transport note was submitted. This set out the proposed scope of the TA and the NPTCBC highways pre-application advice response and preceding emails are included in Appendix A.
- 1.2.2 The TA broadly includes the following:
 - Description of the existing site use and location
 - Review of the existing conditions, including a review of relevant planning applications / committed developments, highway network characteristics, highway safety and existing travel behaviour
 - Review of the sustainable connectivity of the site including walking and cycling routes and public transport connections
 - Description of the development proposals, demonstrating safe and appropriate access by all modes, car and cycle parking and servicing and delivery arrangements
 - Forecast of vehicle trip generation in the peak hours
 - Consideration of the impact of the proposals on the local highway network including junction assessments at the locations agreed with the highway authority

1.3 Relevant Planning Policies

- 1.3.1 Key policy and guidance documents in relation to transport at a national and local level have been considered when assessing the impact of the development proposals which include:
 - Future Wales: The National Plan 2040 (February 2021)
 - Planning Policy Wales 11 (PPW11) (February 2021)
 - NPTCBC Local Development Plan 2011-2026 (Adopted 2016)
 - NPTCBC Supplementary Planning Guidance – SP20 Parking Standards
 - Manual for Streets (2007)

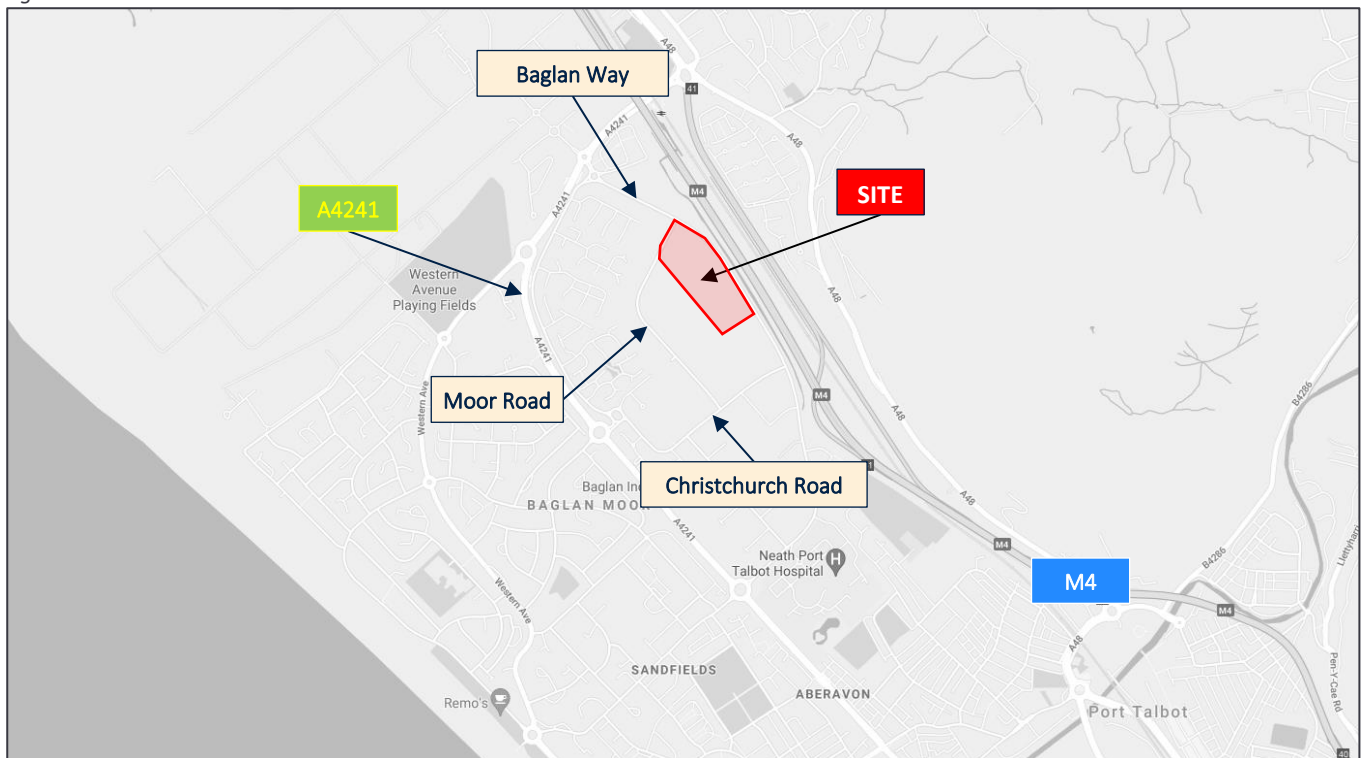
- 1.3.2 The key policy documents promote development where there is a choice of sustainable transport modes such as walking, cycling, public transport and electric vehicles.

2. EXISTING CONDITIONS

2.1 Site Location, Use and Access

- 2.1.1 The site is located in Baglan Industrial Park, Port Talbot as shown indicatively in Figure 2-1. Baglan Way forms the north-eastern boundary of the site and Moor Road forms the northwestern boundary to the site. The site is bounded to the south by industrial uses and further to the northwest and southwest by residential uses.
- 2.1.2 The site is currently undeveloped and has a gated field access onto Baglan Way.
- 2.1.3 The indicative location of the site is shown in Figure 2-1.

Figure 2-1: Indicative Site Location



Source: Google Maps

2.2 Local Highway Network

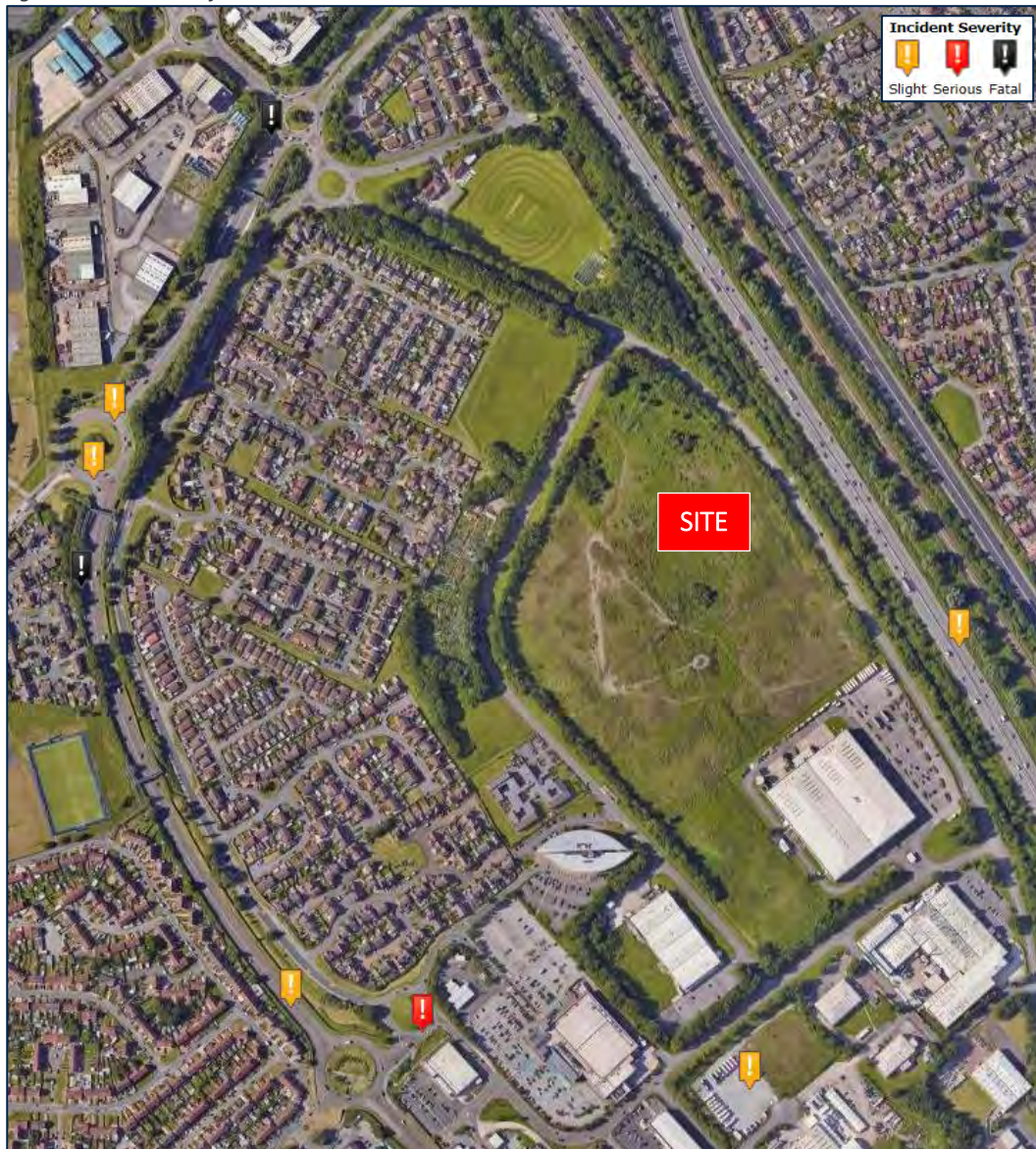
- 2.2.1 The site is bordered to the northeast by Baglan Way which is single carriageway road approximately 7.3m in width with a shared footway / cycleway on its southern side. Baglan Way has streetlighting along its length, central hatching along the site frontage and is subject to 30mph speed restrictions. At its western end it connects to Village Road and the A4241 at two roundabouts. At its south-eastern end it connects to the A4241 at a four armed roundabout with Dalton Road. It accommodates movements associated with heavy goods vehicles (HGVs) related to the surrounding industrial uses.
- 2.2.2 The site also fronts onto Moor Road on its northwestern side, which is a single carriageway road approximately 7.3m in width benefitting from footways on both sides. Streetlighting is provided along its length. Baglan Way forms the minor arm of two priority junctions at either end, connecting to Baglan Way to the north and Christchurch Road to the south. This accommodates movements associated with HGVs from the surrounding industrial uses.

- 2.2.3 The A4241 provides a key route through Baglan and Port Talbot and connects to the A48 and the M4. Within the vicinity of the site, the Central Road / Baglan Way / A4241 roundabout is blocked for circulatory movements, as such all northbound traffic to the A48 / M4 J41 from Baglan Way routes south to the Seaway Parade roundabout and does a U-turn back to the north.
- 2.2.4 The A48 provides a strategic link to the wider network and more regional destinations.
- 2.2.5 The existing surrounding highway network, being within and around an established industrial estate, is well suited to support all vehicle types associated with the proposed site use (and surrounding similar, employment and industrial uses). Movements of an industrial nature have been established over an extended period of time. As such, the site is considered to be appropriately located for access to the local and strategic highway network.

2.3 Road Safety

- 2.3.1 Personal Injury Accident (PIA) data has been obtained from road safety data published annually by the Department for Transport (DfT). The statistics provide PIA data which has been recorded using the STATS19 accident reporting form. The annual dataset is typically released in June each year. As such, the most recently available five-year dataset covers between 1st January 2016 and 31st December 2020.
- 2.3.2 The study area considered within the analysis covers the local highway network within the vicinity of the site and the M4 Junction 38 and slip roads, with the entire study area shown in Figure 2-2.

Figure 2-2: Location of Recorded PIA's



Source: Crashmap

- 2.3.3 Over the five-year period there were a total of 6 PIA's within the entire study area. One of these was fatal, one was classified as serious and four were classified as slight injury accidents.
- 2.3.4 No PIA's occurred adjacent to the site boundary or along Baglan Way (within the study area) or Moor Road.
- 2.3.5 One PIA related to a pedestrian which resulted in slight injuries and occurred to the south of Christchurch Road away from the site. Two of the PIA's related to HGVs, both of which resulted in slight injuries and neither of which occurred within the vicinity of the site. None of the PIA's involved a cyclist. As such, there is no evidence to suggest there is a specific safety issue relating to vulnerable road users, at pedestrian crossings within the vicinity of the site or in relation to HGVs.
- 2.3.6 There were no clusters of four or more PIA's occurring in the same location, therefore no evidence to suggest a re-occurring road safety issue.

2.3.7 Although all incidents are regrettable, the PIAs that occurred do not indicate a specific pattern of issue with the geometry of the highway, particularly for vulnerable road users, that would be exacerbated by the proposals.

2.4 Traffic Flows

2.4.1 To establish a baseline traffic position on the network against which the development proposals can be assessed, surveys were undertaken at the key junctions, as agreed with NPTCBC during scoping discussions.

2.4.2 The four junctions which were considered to require assessment, and for which data has been obtained, were as follows:

- Moor Road / Baglan Way Priority Junction
- Village Road / Baglan Way / Fenbrook Close Roundabout
- Central Road / A4241 / Baglan Way Roundabout
- A4241 / Afan Way / Seaway Parade Roundabout

2.4.3 Turning count and queue length surveys were commissioned to be undertaken at these four junctions by independent traffic survey specialists (PCC Traffic Information Consultancy).

2.4.4 To establish a baseline traffic position the surveys were carried out at the junctions on Thursday 9th September 2021 between the hours of 0700 – 1000 and 1600 – 1900. This identified that the peak hourly flows occurred between 0800 and 0900 in the morning and between 1630 and 1730 in the evening.

2.4.5 The full base traffic and queue length data is included within Appendix B, with the 2021 base peak hour traffic flows included in a traffic flow diagram within Appendix C.

2.5 Modal Share

2.5.1 The site is located within the Neath Port Talbot 016 middle layer super output area (MSOA). Census 2011 data has been analysed for the Neath Port Talbot 016 MSOA to establish the journey to work modal split for the workplace population. This has been compared with the data for the entire of NPTCBC. The analysis is shown Table 2-1.

Table 2-1: Journey to Work Mode Split (Census 2011)

Mode	Neath Port Talbot 016 %	Neath Port Talbot %
Public Transport	4.8%	4.0%
Car Driver	71.4%	75.3%
Car Passenger	8.6%	8.4%
Motorcycle	0.8%	0.8%
Bicycle	2.4%	1.5%
On Foot	11.0%	9.1%
Other	1.0%	1.0%
Total	100%	100%

2.5.2 Table 2-1 shows that 72% of existing employees travel to work to the Neath Port Talbot 016 MSOA as a car or motorcycle driver and an additional 9% travel to work as a car passenger. A total of 18% travel by sustainable modes of transport, of which 11% travel on foot, 5% travel by public transport and 2% by bicycle.

2.5.3 The data shows that the sustainable travel is higher in Neath Port Talbot 016 MSOA than across the wider NPTCBC area.

- 2.5.4 The data shows that employees in this area travel by sustainable modes, with a high level of walking, which is reflective of the sustainable location of the site. As such, this demonstrates that there is potential for walking, cycling, and public transport trips to be made to and from the site and that these movements already occur in this area.

3. PLANNING POLICY

3.1 Planning Policy

Future Wales: The National Plan 2040

- 3.1.1 This is the national development framework, setting the direction for development in Wales to 2040. It provides an overarching development plan with a strategy for addressing key national priorities through the planning system. Planning decisions at every level of the planning system in Wales must be taken in accordance with the development plan as a whole.
- 3.1.2 In relation to transport, it states on page 51 that *“Growth should be shaped around sustainable forms of transport and places that make us and the environment healthier”*. Page 55 continues on to state that *“Development will focus on active travel and public transport, allied with a reduced reliance on private vehicles”*.
- 3.1.3 On page 174, supporting Policy 36, it is stated that *“Welsh Government wishes to see development built in sustainable locations that are supported by the active travel and public transport infrastructure and services needed to enable people to live active and healthy lives.”*
- 3.1.4 As such, the key themes are that development should be sited where it can benefit from active travel and public transport connections and reduce the need to travel by car.

Planning Policy Wales 11th Edition (PPW11)

- 3.1.5 PPW11 provides overarching Welsh Government policies with transport policies set out in Section 4.1. This states in paragraph 4.1.10 *“The planning system has a key role to play in reducing the need to travel, particularly by private car, and supporting sustainable transport, by facilitating developments which:*
 - * are sited in the right locations, where they can be easily accessed by sustainable modes of travel and without the need for a car*
 - * make it possible for all short journeys within and beyond the development to be easily made by walking and cycling.”*
- 3.1.6 PPW11 sets out a *“Sustainable Transport Hierarchy for Planning”* in Figure 9. This states in paragraph 4.1.12 *“It is Welsh Government policy to require the use of a sustainable transport hierarchy in relation to new development, which prioritises walking, cycling and public transport ahead of the private motor vehicles. The transport hierarchy recognises that Ultra Low Emission Vehicles also have an important role to play in the decarbonisation of transport, particularly in rural areas with limited public transport services.”*
- 3.1.7 It continues to state that *“The sustainable transport hierarchy should be used to reduce the need to travel [and] prevent car-dependent developments in unsustainable locations.”*
- 3.1.8 PPW11 also states in paragraph 3.39 that development should *“where possible, offer good active travel connections to the centres of settlements to reduce the need to travel by car for local journeys.”*
- 3.1.9 The site is situated in a location which is accessible by walking, cycling and public transport, with good active travel links and the proposals are fully compliant with PPW11 as demonstrated in Section 4.

Technical Advice Note 18: Transport (TAN18)

- 3.1.10 The importance of walking and cycling in contributing towards sustainable travel patterns is detailed in the guidance contained within TAN18: Transport (March 2007). The guidance emphasises not only the role walking and cycling can have as main modes of transport for local journeys but also the considerable contribution they play in forming parts of longer journeys by public transport.
- 3.1.11 Paragraph 3.8 states that *“Locations that are highly accessible by a variety of travel modes offer significant opportunities to make travel patterns more sustainable.”* As such it is recognised by TAN18 that the sustainable location of a site can assist in facilitating sustainable travel habits.

4. SUSTAINABLE CONNECTIVITY

4.1 Introduction

- 4.1.1 This section describes the opportunities to make trips to and from the site by non-car modes. It considers the likelihood of trips being made on foot, by cycle, bus and rail.
- 4.1.2 There are alternative modes to the car available to potential employees of the site which will assist in minimising the level of vehicle trips to and from the site. Public transport services can be accessed by continuous walking and cycling routes.
- 4.1.3 The site location is demonstrated to be consistent with the aims of TAN18 and Future Wales and in accordance with sustainable transport policies in PPW11.

4.2 Walking and Cycling

- 4.2.1 At the top of the PPW11 hierarchy is the consideration of active travel (walking and cycling). Walking is the most important mode of travel at a local level and offers the greatest potential to replace short car journeys.

Infrastructure

- 4.2.2 The site is connected to footways which run adjacent to the site boundary on Moor Road and Baglan Way. The route on Baglan Way is a shared footway / cycleway which links to the A4241 to the west and provides access to the industrial estates along Central Road to the west of the A4241, as well as to the industrial areas to the southeast of the site.
- 4.2.3 In addition, there is a footway link between Moor Road and the residential areas to the west (Brooklyn Gardens and Westlands) which reduces the walking distance to these areas and to the closest bus stops.
- 4.2.4 These routes provide continuous connections from the site to the surrounding footway network within Baglan and Port Talbot.
- 4.2.5 There are suitable dropped kerb crossings provided on the routes surrounding the site and as shown in Section 2, there is no evidence of a specific existing road safety issue within the vicinity in relation to walking and cycling movements.
- 4.2.6 Suitable footways and crossings are provided throughout the local area and already accommodate a high level of pedestrian movements, as they are within an existing and established urban area. The routes are appropriate and acceptable for the surrounding employment site uses and would also be appropriate for the proposals.

Routes

- 4.2.7 The NPTCBC cycle routes map shows the shared footway / cycleway adjacent to the site on Baglan Way connects to further routes to the east and southwest including National Cycle Network Route 4 which runs adjacent to the A4241 within the vicinity of the site. These routes provide a connection to Baglan and Port Talbot Parkway Rail Stations, as well as to Baglan and Port Talbot centres and onwards to Swansea.
- 4.2.8 The site is therefore well connected by cycle routes and as such cycling would be an attractive form of travel for employees and visitors.

4.2.9 The cycle routes within the vicinity of the site, taken from the NPTCBC cycle routes map, are shown in Figure 4-1.

Figure 4-1: Cycle Routes within vicinity of the site



Source: NPTCBC Cycling Map

4.2.10 NPTCBC have produced active travel maps to identify existing suitable routes for walkers and cyclists. The NPTCBC active travel online map shows the active travel routes within the vicinity of the site, as well as cycle routes. This shows the shared footway / cycleway route past the site on Baglan Way, which links to other cycle routes and active travel routes to the north and south within Baglan and Port Talbot. The mapping shows that the site has continuous active travel routes connecting to the key local residential areas.

4.2.11 A snapshot of the active travel routes within the vicinity of the site are shown in Figure 4-2.

Figure 4-2: NPTCBC Active Travel Routes



Source: NPTCBC Active Travel Routes Map

4.2.12 The active travel routes have been considered appropriate by NPTCBC for walking and cycling. The site is therefore well positioned to benefit from existing and proposed good quality links, which connect to further routes, as well as key local areas. This will encourage potential future employees to walk and cycle to and from the site and reduce the reliance on travelling by car.

4.3 Distances

Overview

4.3.1 To enable an assessment of the viability of walking between the site and residential areas, it is appropriate to establish the maximum distance that people are generally prepared to walk or cycle for work purposes.

4.3.2 There are a number of publications which suggest guidance for appropriate and acceptable walking and cycling distances. For reference, these have been summarised as follows.

- Welsh Government - Active Travel (Wales) Act 2013: Within the ATADG it is stated within paragraph 4.1.4 that “walking as a mode of travel predominates for journeys of less than two miles whilst cycling is more convenient for longer journeys, typically of up to five miles for regular journeys”. This equates to distances for walking of up to 3.2km and cycling of up to 8km.
- Department for Transport (DfT) – Manual for Streets (2007): MfS states that ‘walkable neighbourhoods’ are typically characterised by having a range of facilities within 10 minutes walking distance (c. 800 metres) – i.e. this would include employment uses. MfS also acknowledges that this is not an upper limit and references previous planning policy guidance in

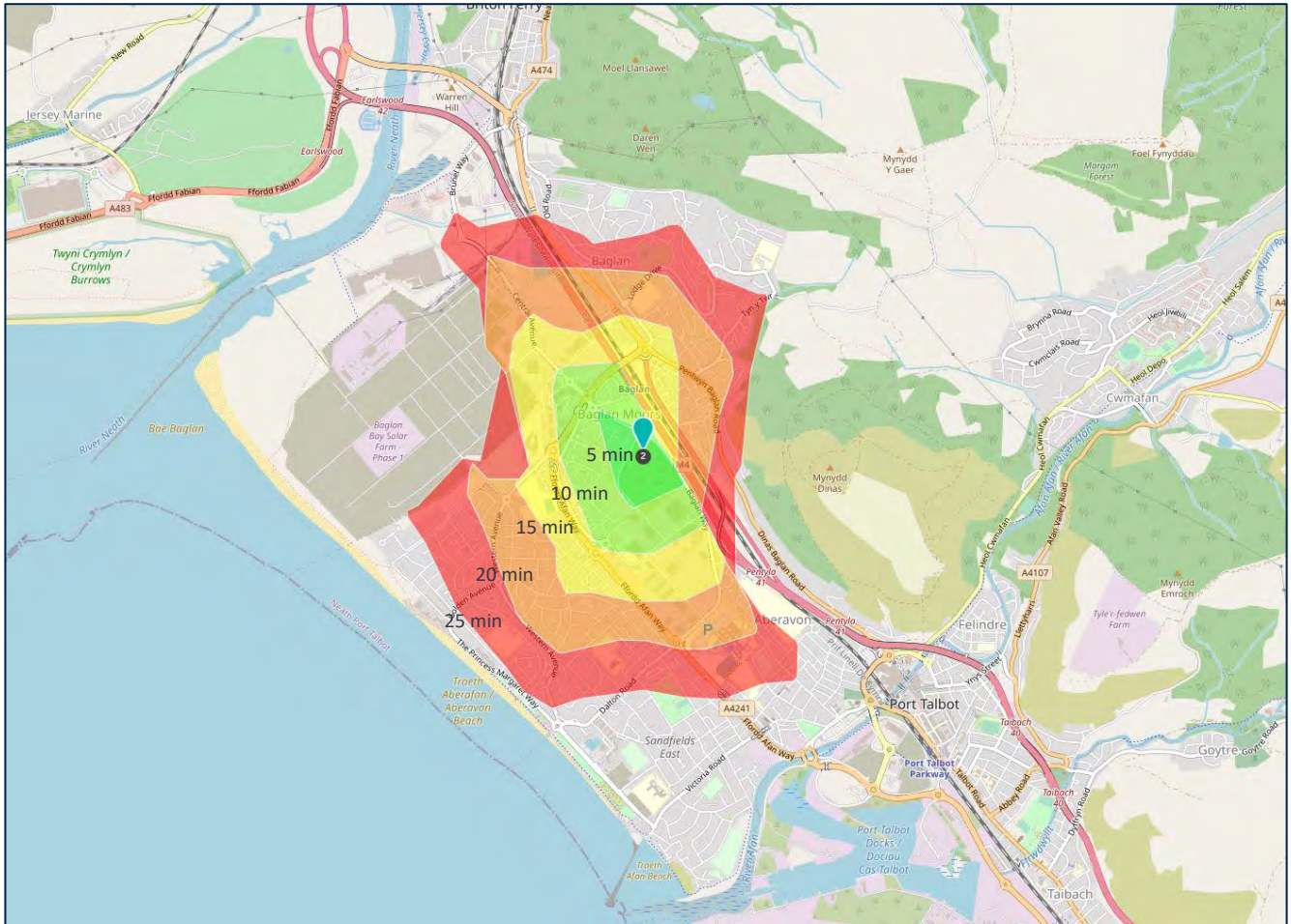
that it is generally acknowledged that walking offers the greatest potential to replace short car trips, particularly under 2km.

- CIHT (2015) – Planning for Walking: In relation to shorter trips in particular, (section 2.1) states that across Britain about *‘80% of journeys shorter than 1 mile (1.6km) are made wholly on foot’*.
- CIHT - Guidelines for Providing for Journeys on Foot (2000): suggests preferred maximum distances for commuting journeys are up to 2km.
- DfT – LTN1/20 Cycle Infrastructure Design (paragraph 2.2.2) – states that *“Two out of every three personal trips are less than five miles in length, an achievable distance to cycle for most people”* (c.8km).

Walking

- 4.3.3 Based on guidance, it is considered that suitable walking distances could be up to 3.2km. This equates to around a 40-minute walk travelling at 3mph. However, distances of 2km are considered more likely for walking journeys and residential areas within 800 metres are considered to be within ‘walkable neighbourhood’ distances.
- 4.3.4 Openroute Service has been used to generate pedestrian isochrones at five minute (c.400m) intervals from the main site access as shown in Figure 4-3. This is based on walking speeds of 5km per hour (c. 3mph) via the road network.
- 4.3.5 It demonstrates a significant proportion of Baglan and Port Talbot is accessible within a 25 minute walk from the site (c. 2km). This shows that there is a potential for employees to be situated within potential walking distance of the site. As such, a significant proportion of employees (and visitors) could travel to the site on foot.

Figure 4-3: Pedestrian Isochrones (25 minutes at five minute intervals)



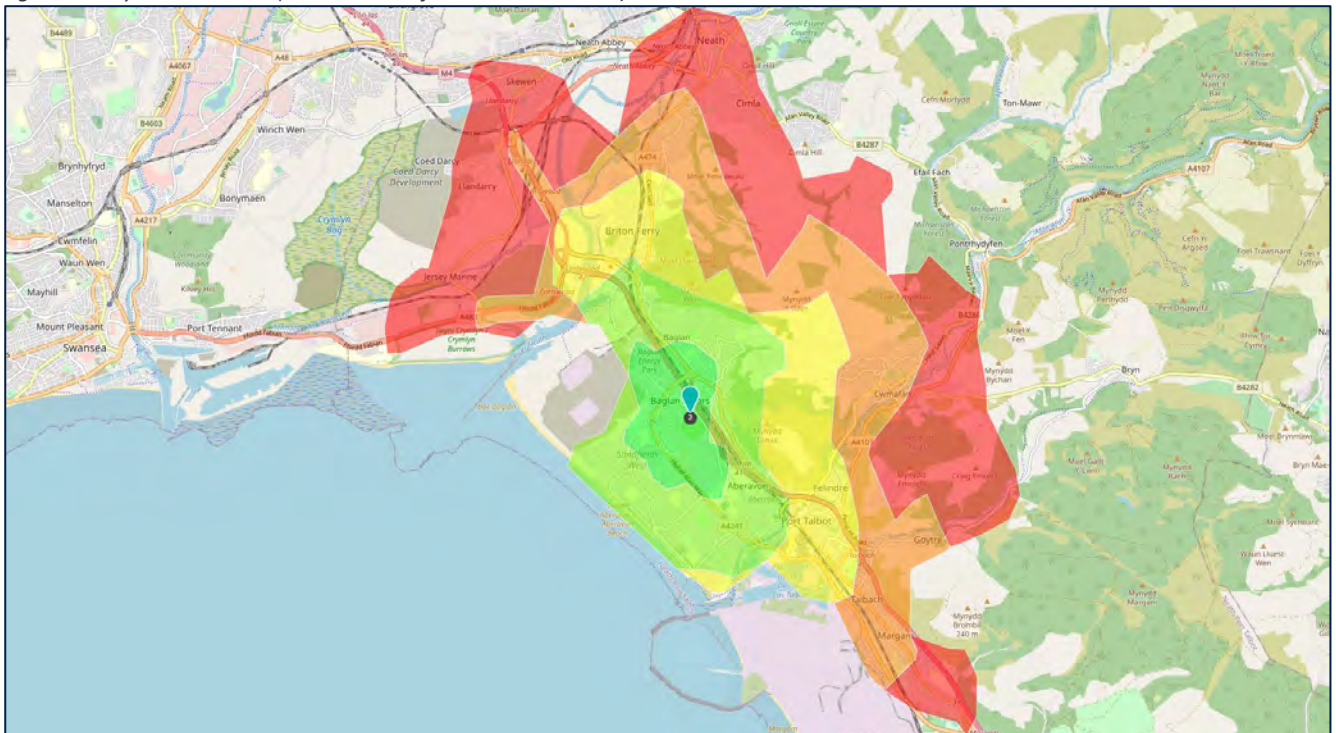
Source: Openroute Service

- 4.3.6 As such, travelling to the site by walking is considered a feasible and realistic option for employees of the site and visitors. As shown in Section 2, there are already journeys made by walking for work purposes in this area.

Cycling

- 4.3.7 It has been assumed that journeys of up to 8km are within an acceptable cycling distance. A cycling journey of 8km would equate to approximately a 25 minute trip.
- 4.3.8 The Openroute Service has been used to generate cycle isochrones at five minute intervals up to a total of 25 minutes (c.8km) using roads and cycle routes (i.e. not straight line distances) from the main site access. This has been shown in Figure 4-4.
- 4.3.9 The isochrones are generated based on speeds dependent on the surface and highway type. The majority (if not all) of the routes used would be paved and as such would be subject to an 18kph speed based on the parameters in the software. A five minute isochrone would therefore cover a distance of c. 1.5km, with a 25 minute isochrone covering a distance of c.7.5km. As such, this is broadly in accordance with the relevant design guidance (indeed, cycle journeys to the site could originate from slightly greater distances, up to 8km from the site, in accordance with the guidance).
- 4.3.10 The isochrones show that Baglan, Port Talbot, Briton Ferry, Skewen, Cwmafan and Margam are accessible within an appropriate cycling distance. Most of the areas around the site can be accessed by suitable and recommended cycling routes, as shown within Figure 4-1.

Figure 4-4: Cycle Isochrones (25 minutes at five minute intervals)



Source: Openroute Service

4.3.11 As such, travelling to the site by cycle is considered a feasible and realistic option for employees of the site. As shown in Section 2, there are already journeys made by cycle for work purposes in this area.

4.4 Public Transport

- 4.4.1 The closest bus stops to the site are situated within approximately a 625 metre walk from the site access on Village Road or on the A4241.
- 4.4.2 The stops on the A4241 provide a bus shelter and timetable information and are served by services 66, 84 and 87. These provide services to Margam, Port Talbot, Neath, Swansea and Aberavon.
- 4.4.3 The stops on Village Road also provide a bus shelter and timetable information and are served by bus services 9, 66 and 202. These provide services to Sandfields, Margam, Port Talbot, Neath and Baglan.
- 4.4.4 A summary of the services in provided within the vicinity of the site are provided in Table 4-1. These are shown in a single direction, with the other direction providing the same frequency of service.

Table 4-1: Local Bus Services

No.	Route Summary	Frequency and First / Last Services		
		Monday-Friday	Saturday	Sunday
9	Port Talbot – Aberavon - Baglan	Hourly First Bus 08:51 Last Bus: 16:51	No Service	No Service
66	Goytre to Baglan Moors via Port Talbot and hospital	Hourly First Bus: 08:13 Last Bus: 17:38	Hourly First Bus: 09:17 Last Bus: 16:17	Hourly First Bus: 09:17 Last Bus: 16:17
84	Swansea – Port Talbot Via Baglan Estate & Sandfields Estate	Every 2 Hours First Bus: 06:30 Last Bus: 18:05	Every 2 Hours First Bus: 07:15 Last Bus: 18:15	No Service
87	Neath - Port Talbot – Margam Via Briton Ferry, Neath/Port Talbot General Hospital	Every 20 minutes First Bus: 06:15 Last Bus: 18:39	Every 20 minutes First Bus: 07:20 Last Bus: 18:39	Hourly First Bus: 08:25 Last Bus: 17:25
202	Port Talbot – Baglan – Briton Ferry - Neath	Hourly First Bus 09:17 Last Bus: 17:57	Hourly First Bus 09:17 Last Bus: 17:57	No Service

4.4.5 The site is served by buses which connect to Port Talbot, Neath and Swansea throughout the day, which provide start and finish times suitable for commuting. As such, travelling by bus would be a suitable option for some commuting journeys to and from the site as well as for journeys by visitors.

4.4.6 The majority of the services also connect to Port Talbot bus station as well as Port Talbot Parkway Rail Station, both of which offer interchange opportunities to a significant number of other services to wider destinations.

Rail

4.4.7 Baglan Railway Station is located approximately a 900m walk (an 11-minute walk or 3-minute cycle) from the site. The station provides services every two hours to a range of destinations including Cardiff and Swansea.

4.4.8 In addition, Port Talbot Parkway Rail Station is situated approximately 3.1km to the southeast of the site and provides more frequent rail services. It can be accessed via the cycle routes connecting to the site, as well as by bus services 66, 87 and 202. The station provides cycle parking which enables access to and from the station by cycle for employees who wish to leave a cycle at the station.

4.4.9 Port Talbot Rail Station provides services to local and regional destinations. These services include trains routing to/from London Paddington, Manchester Piccadilly, Carmarthen, Milford Haven, Cardiff Central and Swansea. It is a c. 30 minute journey to Cardiff Central from Port Talbot Parkway Rail Station.

4.4.10 There are four rail services per hour throughout the day provided within two in each direction from the station.

4.4.11 As such, travelling by rail (connected by walking, cycling or a bus journey) to the site provides a reasonable alternative for some employees, particularly those travelling longer journeys to the site.

4.5 Summary

4.5.1 The site is situated in a sustainable location, it is well suited to accommodate the proposals, being located in an area surrounded by existing industrial uses. It is connected by existing pedestrian, cycle and public transport networks.

- 4.5.2 There is a choice of modes of travel for all journey purposes, which will assist in constraining the level of vehicle generation from the site and minimise the impact of the development.
- 4.5.3 The site location will encourage sustainable travel behaviour, attract employees who choose to travel by sustainable modes and is fully in accordance with transport policies in Future Wales, PPW11, TAN18 and the Active Travel Act.

5. DEVELOPMENT PROPOSALS

5.1 Overview

- 5.1.1 The proposals are for a full application for the construction of an Industrial Building (B2 use) for the production of insulated glass units, with a floorspace of approximately 25,545 sqm. The proposals would relocate and consolidate the existing Glass Systems operations in Swansea, Pontyclun and Port Talbot into one single new location.
- 5.1.2 The majority of the building would be occupied by a processing plant which would be one floor and the administration and staff accommodation would be situated over two floors on the Baglan Way frontage. The administration area would include meeting rooms and training rooms, reception areas, canteen and staff changing rooms / lockers.
- 5.1.3 There would be two separate car parking areas, one located adjacent to the building on the eastern side, which would accommodate office staff and visitors. The other would be in the northern part of the site and would accommodate shift workers and drivers. These would be accessed from two separate locations onto Baglan Way and Moor Road.
- 5.1.4 The site layout is included within Appendix D.

5.2 Staff

- 5.2.1 The operator has stated that the site would have approximately 65 office based staff who would work 'typical' office hours. In addition, there would be three shifts between 0600-1400, 1400-2200 and 2200-0600 where there would be 140 employees per shift, with 180 employees on the 0600-1400 shift. Finally, there would be approximately 40 drivers, who would cover the hours between 0300-2000.

5.3 Site Layout

- 5.3.1 The site layout has been designed to accommodate HGV traffic appropriately and separate pedestrians from vehicle movements, particularly HGVs. The access onto Moor Road would accommodate HGV movements which would travel on the internal service road along the western boundary of the site to the service yards to the north and south of the building. Goods in would be delivered to the southern end of the site and goods out would be taken from the northern end of the site.
- 5.3.2 The northern car parking area would be accessed from this internal service road prior to the service yard which would separate the light vehicles and HGV movements appropriately. The northern car park (car park B) would have a separated pedestrian access route along its eastern side which links to the building entrance.
- 5.3.3 The eastern car park (car park A) has a linear alignment with parking on both sides. It has an aisle width of 7m, which enables cars to turn within the aisle and enter and exit the site in forward gear. A separate pedestrian route is provided along the western side of the car park, adjacent to the building, which provides a link to the building entrance. A separate pedestrian access gate is also provided adjacent to the vehicular access.
- 5.3.4 Swept path analysis has been undertaken to demonstrate that all vehicles (HGVs and cars) can manoeuvre within the site appropriately. This has been provided in Appendix E.

5.4 Access

- 5.4.1 There will be two new access points into the site, both from priority junctions which connect to Baglan Way and Moor Road.
- 5.4.2 The access onto Baglan Way will accommodate light vehicle movements into car park A. The access road has a width of 7.3m and there are radii of 12m on each side. There is a gated access into the site which is set back 20m from the carriageway edge. Visibility in each direction is in excess of 90m from an x-distance of 2.4m and 4.5m which is appropriate for a 30mph speed limit based on guidance in TAN18 and is acceptable in this location. The 4.5m x-distance has been considered on the basis of the pre-application comments from NPTCBC and shown as a worst case. Dropped kerbs and tactile paving will be provided for the cycle route crossing the site access.
- 5.4.3 The Baglan Way access will provide a footway of 2m width on the southern side which accesses into the site via separate pedestrian gate. This links to the car park and pedestrians can then route through the car park or via the footway on the west side of the parking spaces which runs adjacent to the building.
- 5.4.4 The Baglan Way access arrangements and visibility splays are shown in Appendix F.
- 5.4.5 The access onto Moor Road will accommodate all vehicle movements to the operational service yards and into car park B. The access road has a width of 7.3m with some localised widening and there are radii of 12m on the southern side and 15m (with a taper) on the northern side. Articulated movements can therefore be accommodated appropriately and without conflict into and out of the site access.
- 5.4.6 Visibility in each direction is in excess of 90m from an x-distance of 4.5m which is appropriate for a 30mph speed limit based on guidance in TAN18 and is acceptable in this location. Dropped kerbs and tactile paving will be provided for the footway crossing the site access.
- 5.4.7 The access will provide a footway on the eastern side which connects to the car park B entrance and then to the building via the southern side of the car park and enables secure pedestrian access to the building from Moor Road.
- 5.4.8 The Moor Road site access arrangements and swept paths of an articulated vehicle are provided within Appendix G.
- 5.4.9 There is also a separate pedestrian / cyclist access which will be gated and link directly from the footway / cycleway on Baglan Way to the cycle parking area, which ensures that cyclists can be fully separated from vehicles within the site when accessing the cycle parking.
- 5.4.10 The access arrangements are considered safe and suitable for accommodating all movements to and from the proposed development.

5.5 Parking

Car Parking Provision

- 5.5.1 A total of 180 car parking spaces are proposed on the site, comprising the following:

Car Park A (Baglan Way) – 51 Spaces including;

- 18 electric vehicle charging spaces (10% of overall total)
- 9 accessible parking bays (5% of overall total)

Car Park B (Moor Road) – 129 spaces

- 5.5.2 Car Park A also provides space to accommodate delivery vehicles such as large panel vans.

Car Parking Standards

- 5.5.3 The parking standards within NPTCBC are provided within Supplementary Planning Guidance – SP20 Parking Standards. The site is within a Zone 4 location based on the maps shown in the SPG. The standards for industry use in a Zone 4 location state 1 space per 120sqm for non-operational use.
- 5.5.4 Applying the standards to the proposed development would equate to a maximum requirement for 213 spaces considering a total floorspace of 25,545 sqm.
- 5.5.5 The SPG states that *“Interpretation and application of the standards rests with the Local Authority, but flexibility in the standards allows local circumstances to be taken into account.”*
- 5.5.6 The proposed level of parking is within the maximum standards, which reflects the operator’s commitment to encouraging sustainable travel.
- 5.5.7 Car park A would accommodate drivers, office based staff, visitors and ad-hoc deliveries (such as office supplies, post and maintenance vehicles). Car Park B would accommodate shift workers.
- 5.5.8 The disabled parking has been provided in Car Park A as this provides the closest spaces to the building entrance and as such the most appropriate location for this parking to be located. Shift workers using the disabled parking can park in this location and access the factory through the main building entrance.
- 5.5.9 All electric vehicle charging points are located within Car Park A as this is significantly more cost-effective for laying the ducting and electric cabling required.
- 5.5.10 The provision of parking is within the standards set out in the SPG. The provision also enables the promotion of sustainable travel and is therefore in accordance with local and national policies in this regard. The Travel Plan produced separately as part of the application will further reinforce sustainable travel behaviour for employees travelling to and from the site.
- 5.5.11 All spaces on the site have dimensions of 2.6m x 4.8m which is in accordance with the SPG to ensure vehicles can turn in and out appropriately of all spaces, including those at the end of aisles. Swept path analysis has been undertaken to ensure a large car can turn into and out of spaces appropriately. This is shown in Appendix E.

Disabled Parking

- 5.5.12 The SPG states that 5% of the total allocation of car parking spaces should be provided as disabled parking. A total of 9 disabled parking spaces are provided on the site, which equates to 5% of the total provision in accordance with the SPG.
- 5.5.13 The disabled spaces allow for an additional 1.2m hatched area around the side and rear of the space to enable safe access to vehicles for people with mobility impairments. The spaces are situated closest to the building entrance and will have step free access from the spaces to the building entrance via suitable dropped kerbs.

Electric Vehicle Charging

- 5.5.14 The Parking Standards SPG does not provide standards for the provision of electric vehicle charging spaces. However, Future Wales states that *“Where car parking is provided for new non-residential development, planning authorities should seek a minimum of 10% of car parking spaces to have*

electric vehicle charging points.” As such, infrastructure will be provided on the site for electric vehicle charging for 18 spaces (10% of the overall provision).

- 5.5.15 This is considered appropriate and further encourages more sustainable modes of travel to and from the site.

Operational Parking

- 5.5.16 The operational parking standards are provided in the SPG with the provision stated as a minimum of 10% of the GFA. A large area for operational parking is provided on the north and south sides of the building, in excess of this 10% level which will appropriately accommodate operational vehicles in accordance with the SPG.

Cycle Parking

- 5.5.17 The cycle parking standards are provided in the SPG which states for industrial use that 1 stand per 500 sqm for long stay parking and 1 stand per 1000 sqm for short stay parking should be provided. Applying the standards to the site floorspace of 25,545 sqm would equate to a requirement for 51 long stay stands and 26 short stay stands (77 stands total).
- 5.5.18 The site is providing secure and covered cycle shelters which can accommodate 154 cycles near to the building entrance. This will meet the required level of provision based on the SPG. This is consistent with the requirements set out by NPTCBC within its pre-application response.
- 5.5.19 The cycle parking has appropriate space around it to manoeuvre bikes in and out and would all be covered, as required by NPTCBC. The cycle parking can be accessed by cyclists directly from the cycle route that runs along Baglan Way, which ensures that cyclists can be fully separated from vehicular movements.
- 5.5.20 The cycle parking will be monitored as part of the travel plan and, if demand dictates, additional provision will be considered.

5.6 Deliveries and Servicing

- 5.6.1 The operator has provided information on existing operational vehicle movements which are accommodated at the three existing sites in Wales, which are being relocated to the application site. This shows that there are 30 operational vehicles which currently travel in and out in a single day from the site (as a worst case as not all are always operational). These vehicles typically leave in the morning between 0300 and 1100 (usually with a break between 0700-0900) and then start returning from early afternoon.
- 5.6.2 In addition, there are deliveries of materials and goods from suppliers into the site. As a robust estimate it is assumed there would be around 15 supplier vehicle arrivals on a daily basis.
- 5.6.3 All deliveries and servicing movements have been assumed to be HGVs for the purposes of this assessment for robustness.
- 5.6.4 The access onto Moor Road and the route into the site and service yards allows for HGVs to turn appropriately and enter and exit in forward gear. Vehicles are able to reverse against each proposed service bay throughout the site and turn in the areas provided without conflict.
- 5.6.5 Swept path analysis has been undertaken to ensure that service and delivery movements can be accommodated appropriately and this is shown in Appendix E.

- 5.6.6 In addition, there is space provided in the Car Park A for accommodating some delivery vehicles, for example postal deliveries, which can park and turn within the service bay.

6. TRIP GENERATION AND DISTRIBUTION

6.1 Introduction

- 6.1.1 This section has considered the trip generation for the proposed site use. This has been undertaken using first principles analysis based on the information provided by the operator.
- 6.1.2 In addition, to ensure this assessment is robust, this has then compared the trip generation with surveys of similar industrial units in the Trip Rate Information Computer System (TRICS). The TRICS database has been analysed for sites with similar characteristics in terms of scale and location.
- 6.1.3 The analysis considers the trip generation during network and development peak hours on a weekday as well as over a daily period.

6.2 Proposed Trip Generation – First Principles

- 6.2.1 The first principles analysis has been undertaken based on the operator provided information on staff numbers, operational vehicle movements, visitors and other ad-hoc deliveries. This has been summarised as follows.

Employees

- 6.2.2 The likely arrival and departures for employees have then been forecast assuming that all employees arrive in the hour before their shift starts and depart in the hour after their shift finishes. For office based workers, for the purposes of this assessment it has been assumed that all staff work a 0900-1700 shift.
- 6.2.3 For staff drivers, it has been assumed that there is an even distribution of arrivals throughout the likely hours in which HGV's will leave the site (assumed as 0300-1200). Drivers have all been assumed to leave in the hour 11 hours after their arrival hour (i.e. those arriving between 0300-0400 will depart between 1300-1400).
- 6.2.4 The modal split for car driver has been based on the census information in Table 2-1, with an assumption that 72.1% of staff travel by car or motorcycle (for a robust worst case assessment of vehicle movements) with the remainder by other modes. For staff drivers it has been assumed that those arriving before 0700 and departing after 1900 would all travel by single occupancy vehicle due to the lower potential for alternative modes and car sharing. For shift workers there is good potential for car sharing and as such the modal share is considered appropriate.

Operational Vehicles

- 6.2.5 For goods leaving the site from the operators' vehicles, these have been assumed to be equally distributed throughout the day, with departure times between 0300-1200 and arrival times between 1200-2200. It has been assumed for robustness, that all 30 HGVs are in operation.
- 6.2.6 For supplier based vehicles, it has been assumed that these are equally distributed with arrivals between 0700-1400 and departures between 0800-1500. Vehicle departures have been assumed to be generated in the hour following arrival. One additional vehicle has been assumed to arrive late at night and depart in the morning, as this can occur with deliveries from the EU.

Visitors / Ad-Doc Deliveries

- 6.2.7 For the purposes of this assessment, it has been assumed that there are 10 visitor arrivals per day and 6 deliveries per day for example for office stationery, postage and small maintenance vehicles. These

have been distributed evenly each hour between 0900-1700 with arrivals and departures occurring in the same hour.

Overall

- 6.2.8 Full details of the total person movements and the resultant vehicle movements for each hour of the day have been set out in Appendix H. A summary of the total and HGV arrivals and departures resulting from this analysis have been summarised in Table 6-1.

Table 6-1: Proposed Trip Generation – First Principles

Time Period	Total			HGVs		
	Arrival	Departure	Two-Way	Arrival	Departure	Two-Way
00:00-01:00	0	0	0	0	0	0
01:00-02:00	0	0	0	0	0	0
02:00-03:00	0	0	0	0	0	0
03:00-04:00	3	3	6	0	3	3
04:00-05:00	4	4	8	0	4	4
05:00-06:00	134	4	138	0	4	4
06:00-07:00	4	106	110	0	5	5
07:00-08:00	4	3	7	2	3	5
08:00-09:00	51	5	56	2	5	7
09:00-10:00	6	7	13	2	5	7
10:00-11:00	7	7	14	2	5	7
11:00-12:00	7	7	14	2	5	7
12:00-13:00	7	7	14	5	2	7
13:00-14:00	109	8	117	6	2	8
14:00-15:00	6	138	144	4	2	6
15:00-16:00	6	6	12	4	0	4
16:00-17:00	5	4	9	3	0	3
17:00-18:00	3	49	52	3	0	3
18:00-19:00	3	2	5	3	0	3
19:00-20:00	3	3	6	3	0	3
20:00-21:00	3	3	6	3	0	3
21:00-22:00	101	0	101	0	0	0
22:00-23:00	1	101	102	1	0	1
23:00-24:00	0	0	0	0	0	0
Total	467	467	934	45	45	90

- 6.2.9 The proposed use is forecast to generate 56 two-way vehicle movements in the development AM network peak hour (0800-0900) and 52 two-way vehicle movements in the development PM network peak hour (1700-1800). In the overall development peak hour it is forecast to generate 144 vehicle movements (1400-1500).
- 6.2.10 Over a daily period, the development is forecast to generate 934 two-way vehicle movements, including 90 HGVs.

6.3 Proposed Trip Generation - TRICS

- 6.3.1 To verify the first principles analysis, a comparison using suitable sites in TRICS has been undertaken. This has considered the trip generation of the proposed development during network peak hours on a weekday and over a daily period.
- 6.3.2 The following search criteria have been applied in TRICS to obtain surveys of similar uses:
- 02 – Employment/C – Industrial Unit
 - Located in England and Wales (excluding London)
 - Surveys from Monday to Friday

- Sites with a GFA of between 10,000sqm and 50,000 sqm
- Suburban Area / Edge of Town locations
- Removal of out of town locations
- Vehicle surveys carried out since 2003

6.3.3 The above search criteria resulted in the identification of 10 similar sites. The forecast vehicle trip rates per 100sqm GFA and trip generation based on the total floorspace of 25,545 sqm are set out in Table 6-2. The full TRICS reports are included within Appendix I.

Table 6-2: Proposed Industrial Use development – Vehicle Trip Generation

Time Period	Trip Rates (per 100m2 GFA)			Trip Generation (25,545 sqm)		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
AM Peak (07:00-08:00)	0.232	0.082	0.314	59	21	80
AM Peak (08:00-09:00)	0.192	0.054	0.246	49	14	63
Dev Peak (14:00-15:00)	0.131	0.27	0.401	33	69	102
PM Peak (16:00-17:00)	0.06	0.236	0.296	15	60	75
PM Peak (17:00-18:00)	0.047	0.141	0.188	12	36	48
12 Hours	1.371	1.459	2.83	350	373	723

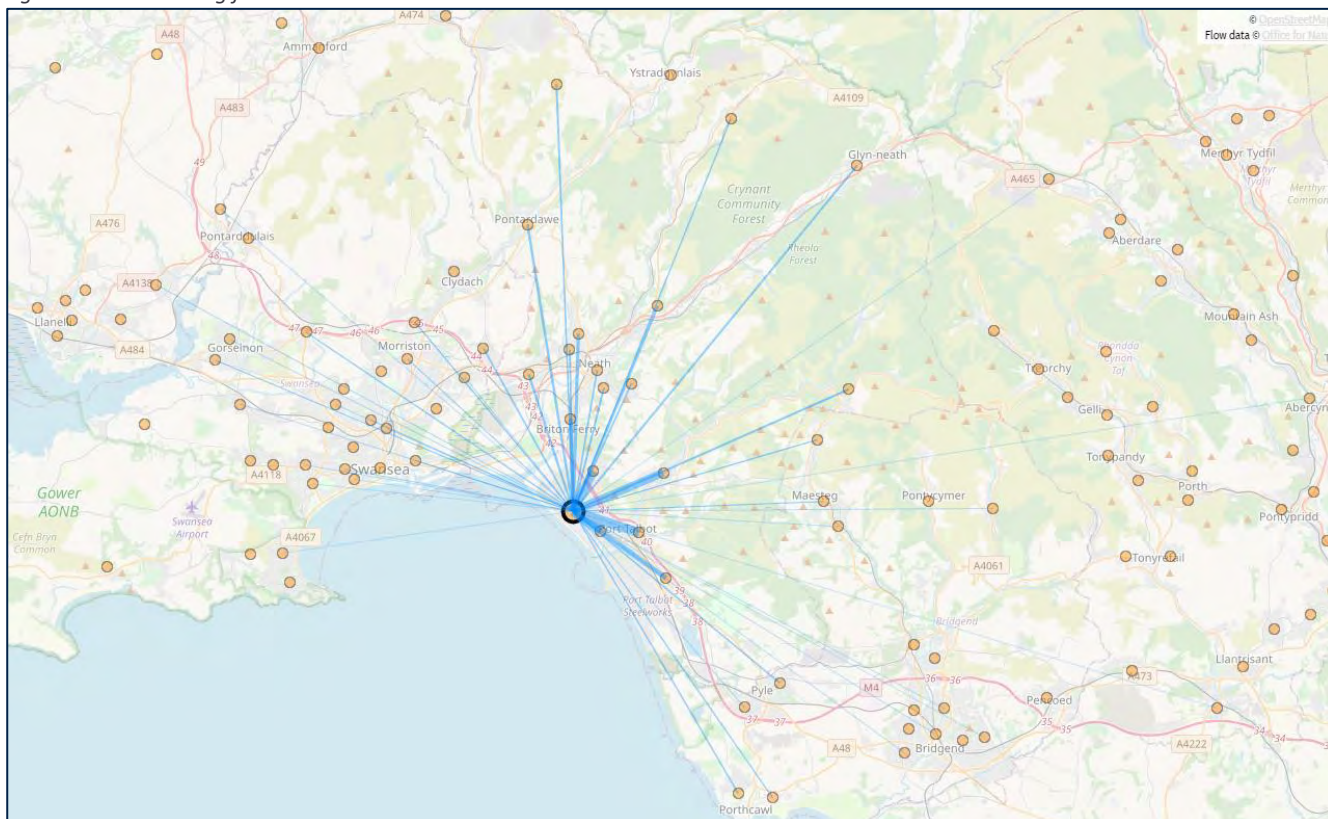
- 6.3.4 Based on the TRICS analysis, the proposed use is forecast to generate 80 two-way vehicle movements in the AM network peak hour (0700-0800) and 75 two-way vehicle movements in the PM network peak hour (1600-1700). This is a slightly higher generation than shown in the first principles analysis and is not considered to fully reflect the shift working patterns of the operator.
- 6.3.5 The development peak hour occurs in the same period (1400-1500) with 102 two-way movements, which is 42 movements lower than forecast in the first principles analysis. Again, the TRICS rates are not considered to fully reflect the shift working nature of the operations.
- 6.3.6 The TRICS sites only provide suitable data over 12 hours rather than a daily period and shows a slightly higher level of vehicle movements over a 12 hour period (723 movements against 457 for the first principles analysis). Again, the TRICS sites are not fully reflective of the shift working nature of the proposals.
- 6.3.7 However, the vehicle movements in total are broadly similar across the two methods and the movements in the peak AM and PM hour are not significantly different between the two methods.
- 6.3.8 The TRICS data forecasts a total of 93 HGV movements over a daily period which is broadly similar to that forecast for the first principles analysis.
- 6.3.9 As such, the first principles analysis is considered robust and appropriate to assess the likely impacts of the proposals and has been used within this assessment.

6.4 Trip Distribution and Assignment

- 6.4.1 Trip distribution and assignment analysis has been undertaken to demonstrate the number of vehicle movements on the network at the key local junctions.
- 6.4.2 For light vehicle distribution, the Census origin-destination data has been analysed for all journeys to work by car into Middle Layer Super Output Area (MSOA) Neath Port Talbot 016 (in which the site is situated). The directions of travel for commuting journeys are shown in Figure 6-1 obtained from the Datashine website. The thickness of the line indicates the number of people travelling from the MSOA in which they live to where they work, in Neath Port Talbot 016. This shows that there are journeys in

all directions from the site as such, vehicles are likely to disperse across the network, minimising the impacts of the development generated traffic.

Figure 6-1: Commuting flows to Neath Port Talbot 016



Source: <https://commute.datashine.org.uk>

6.4.3 The Datashine website provides a table of the number of journeys into Neath Port Talbot 0169 from each MSOA using the 2011 Census data. This has been utilised to determine the percentage of journeys on each route to the site. Journeys have been distributed based on the most likely routes from the home origin MSOA's to the site. The route choices and calculation of the distribution on the local highway network is provided in Appendix J.

6.4.4 A summary of the distribution is set out as follows:

Route	Arrivals	Departures
Seaway Parade	5.1%	5.1%
Village Road	2.6%	2.6%
A4241 Afan Way (southeast of Baglan Way)	10.6%	28.9%
A48 W (towards Swansea)	30.1%	30.1%
A474 N (towards Neath)	8.4%	8.4%
Sunny Mount	7.0%	7.0%
A48 E (towards Port Talbot)	0.8%	0.8%
M48 E	28.5%	10.2%
Dalton Road	6.8%	6.8%

6.4.5 The distribution has been shown as percentage turning movements on the network at the key local junctions, with the network distribution percentages shown within the traffic flow diagrams in Appendix C. Vehicle movements into and out of the Moor Road and Baglan Way accesses have been distributed separately.

6.4.6 In addition, 80% of vehicle arrivals from the M4 have been assumed to travel via the A4241/A48 roundabout (J41) and turn left onto the A4241 then Baglan Way. 20% of vehicle arrivals are assumed

to travel via other junctions to the east of this (J38-J40) and travel via the A4241 Afan Way to Baglan Way. For departures, the 80:20 split has been assumed the other way round.

- 6.4.7 For ease, all light vehicle movements have been assumed to have this distribution, including employees, visitors and operational vehicles (i.e. panel vans).
- 6.4.8 The HGV traffic flows have been based on an assumed routing considering the strategic road network and likely destinations. All vehicles are assumed to travel to and from the Moor Road access and travel west on Baglan Way. It has been assumed that HGVs are split 50:50 on the M4 at J41 and the A48 west towards Swansea. The resultant HGV turning movement distribution percentages from the Moor Road access on the network are also shown within the traffic flow diagrams in Appendix C.
- 6.4.9 The development peak hour generation has been assignment onto the network based on these turning movements, with the resultant vehicle assignment shown for the AM and PM peak hours within the traffic flow diagrams in Appendix C. This has been based on the worst case AM or PM peak hourly flow from the first principles analysis, as obtained from Table 6-1.
- 6.4.10 The analysis shows the total number of movements through each junction on the network as follows:

Junction	Two-Way Vehicle Movements	
	AM Peak	PM Peak
2. Village Road / Fenbrook Close / Baglan Way Roundabout	49	35
3. Baglan Way / A4241 / Central Avenue Roundabout	52	62
4. A4241 / Seaway Parade Roundabout	8	30
5. A4241 / Dalton Road / Baglan Way Roundabout	10	18
6. A4241 / Southdown Road / Christchurch Road Roundabout	4	8
7. A4241 / A48 / M4 J41 / Sunny Mount Roundabout	44	31
8. A48 / A474 / Brunel Way / Old Road	23	21

** Junctions have been numbered in accordance with the traffic flow diagrams in Appendix C*

- 6.4.11 The distribution analysis demonstrates that there is a minimal level of vehicle movements across these junctions which are unlikely to lead to a material impact on the capacity or operation.
- 6.4.12 The highway authority has agreed that an assessment of the surveyed junctions shown in Section 2 is appropriate, namely:
- Moor Road / Baglan Way Priority Junction
 - Village Road / Baglan Way / Fenbrook Close Roundabout
 - Central Road / A4241 / Baglan Way Roundabout
 - A4241 / Afan Way / Seaway Parade Roundabout
- 6.4.13 In particular, an increase of between one vehicle every two minutes and one vehicle every 1 minute 22 seconds through the M4 J41 roundabout and an increase of one vehicle movement less than every 2.5 minutes through the A48/A474 roundabout would not have a material impact at these junctions and no assessment is required.

6.5 Multi-modal trips

- 6.5.1 The trip generation by each mode of travel has been considered based on the Census analysis for the MSOA in which the site is situated, Neath Port Talbot 016. The vehicle trips have been based on the first principles trip generation, considering employee movements only, and the remaining trips by other modes have been estimated accordingly. For ease, all employee movements have been assumed to have the same modal split. The resultant modal split is set out within Table 6-3.

Table 6-3: Modal Split

Mode of Travel	Modal Split	No. of Movements		
	Neath Port Talbot 016 %	AM Peak	PM Peak	Daily
Public Transport	4.8%	3	3	55
Car Driver	71.4%	49	49	812
Car Passenger	8.6%	6	6	98
Motorcycle	0.8%	1	1	9
Bicycle	2.4%	2	2	27
On Foot	11.0%	8	8	126
Other	1.0%	1	1	12
Total	100.0%	69	69	1,138

- 6.5.2 As shown within Table 6-3 the site would generate a number of sustainable travel movements in the peak hours and across a daily period. In addition, due to the location within close proximity of a key cycle route and the high level of cycle parking on the site, it is considered likely that the cycle movements would also be higher than shown. The level of car sharing would also be likely to be higher due to the shift working for the majority of employees. Sustainable modes of travel will be encouraged through measures in the Travel Plan which also contains targets for reducing the level of vehicle use against this baseline level.

7. FUTURE YEAR TRAFFIC FLOWS

7.1 Overview

- 7.1.1 This section outlines the future year traffic flows against which the impact of the development has been considered. This includes consideration of committed developments and TEMPRO growth factors.

7.2 Future Year Baseline Traffic Flows

- 7.2.1 In addition to a base year assessment (2021 for validation purposes), a future year of 2023 (year of opening), 2028 (five years beyond year of opening) and 2033 (10 years beyond year of opening) have been assessed. These assessment years have been agreed through scoping discussions with NPTCBC.
- 7.2.2 To take account of background traffic growth on the local highway network within the vicinity of the site between 2021 and 2023 / 2028 / 2033, growth factors have been applied to the obtained 2021 base flow data. These growth factors have been calculated using the TEMPRO computer programme which consider growth in population, employment, and car ownership based on information derived from the National Trip Ends Model (NTEM).
- 7.2.3 Growth rates within Neath Port Talbot 016 have been considered based on all road types. The growth rates which have been used in the AM and PM peak hours are summarised as follows:
- 2021-2023 – AM Peak: 1.0192
 - 2021-2023 – PM Peak: 1.0190

 - 2021-2028 – AM Peak: 1.0645
 - 2021-2028 – PM Peak: 1.0644

 - 2021-2033 – AM Peak: 1.1105
 - 2021-2033 – PM Peak: 1.1108
- 7.2.4 TEMPRO guidance specifies that the growth factors for individual areas are derived from forecasts at a local authority level which are informed by allocated housing and employment sites within the associated local development plans.
- 7.2.5 The long term effects of the pandemic on travel behaviour, particularly for commuting are not yet known. There is likely to be an increase in homeworking and reduction in peak hour vehicle movements into the future, particularly with technological and infrastructure improvements and efficiencies. A significant increase in homeworking would also be in accordance with the aspirations of Welsh Government.
- 7.2.6 As such, the application of unfettered growth rates based on traffic projections, is considered a robust method of obtaining future year traffic flows.
- ### 7.3 Committed Developments
- 7.3.1 NPTCBC have stated that they *“can’t think of any proposals or permissions that have not been implemented that would effect this route – at the moment.”* In addition, they provide overview information on some other applications which are in the planning system but not yet approved (i.e. committed developments). Based on the sites provided, it is not considered that specific flows from

individual developments would be appropriate to apply to junction modelling, particularly considering the high growth rates which have been applied to obtained traffic survey data.

- 7.3.2 The application of growth rates to the base data is considered appropriate to allow for background increases in vehicle movements in a future year and to consider movements which would be generated by strategic and committed developments.

7.4 Future Year Traffic Flows and Assessment Scenarios

- 7.4.1 The 2021 base traffic flows have been factored by the calculated growth rates. For further robustness, the worst case development peak hour flows (0800-0900 and 1700-1800) have been added to the worst case background flow peak hours (0800-0900 and 1630-1730).

- 7.4.2 The resultant future year baseline and baseline plus development traffic flow diagrams in the AM and PM peak hours are set out within the traffic flow diagrams in Appendix C:

- 2023 Forecast Baseline – AM Peak Hour (0800-0900)
- 2023 Forecast Baseline – PM Peak Hour (1630-1730)
- 2028 Forecast Baseline – AM Peak Hour (0800-0900)
- 2028 Forecast Baseline – PM Peak Hour (1630-1730)
- 2033 Forecast Baseline – AM Peak Hour (0800-0900)
- 2033 Forecast Baseline – PM Peak Hour (1630-1730)
- 2023 Forecast Baseline plus development – AM Peak Hour (0800-0900)
- 2023 Forecast Baseline plus development – PM Peak Hour (1630-1730)
- 2028 Forecast Baseline plus development – AM Peak Hour (0800-0900)
- 2028 Forecast Baseline plus development – PM Peak Hour (1630-1730)
- 2033 Forecast Baseline plus development – AM Peak Hour (0800-0900)
- 2033 Forecast Baseline plus development – PM Peak Hour (1630-1730)

8. OPERATIONAL ASSESSMENTS

8.1 Overview

- 8.1.1 This section sets out the extent of the highway network over which the impact of the proposed development has been assessed, the assessment scenarios and details of the operational assessments of key junctions.

8.2 Extent of Assessment

- 8.2.1 The study area has been agreed with NPTCBC and considers the impact of the development at the following junctions:

- 1. Moor Road / Baglan Way Priority Junction
- 2. Village Road / Baglan Way / Fenbrook Close Roundabout
- 3. Central Road / A4241 / Baglan Way Roundabout
- 4. A4241 / Afan Way / Seaway Parade Roundabout

- 8.2.2 The development would not have a material impact at any other junction on the network and any changes would be well within daily fluctuations in traffic flows.

8.3 Assessment Scenarios

- 8.3.1 Assessments have been undertaken during the AM (0800 - 0900) and PM (1630 - 1730) peak hours. The resultant scenarios which have been assessed within this TA are summarised as follows:

- 2021 Base
- 2023 Baseline
- 2023 Baseline + Development
- 2028 Baseline
- 2028 Baseline + Development
- 2033 Baseline
- 2033 Baseline + Development

8.4 Model Inputs

- 8.4.1 Assessment of both of the junctions has been undertaken using the TRL software Junctions 9. Modelling has been undertaken using total traffic flows and HGV percentages.
- 8.4.2 A comparison of the 2021 base modelled queue lengths against the surveyed queue lengths has been made to assist with model validation and to ensure that the models robustly represent existing conditions. It is noted that the queue lengths in both the model and from the surveys represent average conditions on one day and that there are typical daily fluctuations in queues and flows. However, it is considered that this is an appropriate and accepted method to validate the model in order to determine the impact of the development at junctions and identify potential mitigation, if needed.
- 8.4.3 The modelling has been based on geometric measurements using OS Mapping supplemented with aerial imagery, where required. All geometric measurements of the junctions used as the starting point for setting up the models have been included in Appendix K.
- 8.4.4 All models have been run with a 'one-hour' synthesised peak for robustness.

8.5 Model Reporting Outputs

- 8.5.1 The outputs of Junctions 9 provide a number of measurements to ascertain information of a junction's operation. The key measurements which are considered in this assessment are:
- 'Ratio of Flow to Capacity' (RFC)
 - Maximum queue length in PCUs
 - Delay in seconds per vehicle
 - Level of service indicated by a letter between A (well within capacity) and F (at or over capacity)
- 8.5.2 The main indication of the performance of a junction is given by the RFC for each lane. The peak capacity is realised when the demand flow at the entry is great enough to cause a continuous queue of vehicles to wait on approach to the stop line. This is reached when the RFC attains a value of 1, although a value of 0.85 to 0.9 is typically considered the upper level of capacity at priority junctions.
- 8.5.3 Queue lengths provide an indication of how the overall junction performance may affect adjacent junctions on the highway network. The queue lengths are presented as the maximum over an hourly period. Changes in queue lengths provide a useful indicator as to a development's impact on the operation of a junction and the wider network.
- 8.5.4 When considering the change in the operation of junctions across the network all of these factors have been considered to form a view as to whether the impact of development generated traffic would be material and require mitigation.

8.6 Operational Assessment Results Overview

- 8.6.1 The junction modelling has been set out and summarised by junction as follows. The queue survey data is shown as part of the traffic survey data in Appendix B.
- 8.6.2 Prior to undertaking future year models, the advice contained within TRL's Junctions 9 user guide has been followed, which states that *"In general, for any use of the program, you should check wherever possible that the results approximately match observed behaviour at the junction before modelling other scenarios"*.
- 8.6.3 All base models have been reviewed to ensure, as far as possible, they reasonably represent the observed operation of the junction. This process has been informed by junction video surveys recorded during the traffic surveys. Queue length surveys are a snapshot of one specific day and as such have not been relied upon for validation purposes and have been treated with caution. The queue length surveys have been used as a reference point alongside the video observations.
- 8.6.4 Where changes have been made to the base model, these are to ensure a robust base model is provided for future year assessments, and changes have been stated and justified.

8.7 Junction 1. Moor Road / Baglan Way Priority Junction

Base Model and Queue Comparison

- 8.7.1 This junction was assessed using the PICADY module with Moor Road as the minor arm as a single lane with no flare for robustness.
- 8.7.2 The results of the 2021 Base assessment are summarised in Table 8-1. The full outputs of all scenarios for this model are included in Appendix L.

Table 8-1: 2021 Base Junction Analysis – Moor Road / Baglan Way

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm B – Moor Road	0.0	6.83	0.02	A	0.1	6.60	0.05	A
Arm C – Baglan Way Right Turn	0.1	5.69	0.08	A	0.0	5.44	0.03	A

8.7.3 Table 8-1 demonstrates that the Moor Road / Baglan Way junction currently operates well within its maximum theoretical capacity (RFC of 1) with a maximum RFC of 0.08 reported in the AM peak on Arm C – Baglan Way right turn lane. There is minimal queueing shown in the model.

8.7.4 Table 8-2 provides a comparison between the modelled queue length outputs shown in Table 8-1 and the queue survey data.

Table 8-2: Maximum average queue length comparison – Moor Road / Baglan Way

Arm	AM Peak (0800 – 0900)			PM Peak (1630 – 1730)		
	Observed (vehicles)	Model (vehicles)	+ / -	Observed (vehicles)	Model (vehicles)	+ / -
Arm B – Moor Road	0	0	0	0	0	0
Arm C – Baglan Way Right Turn	0	0	0	0	0	0

Note: Vehicle queues reported from the model have been rounded for ease of comparison purposes

8.7.5 Table 8-2 demonstrates that the modelled and observed queues are consistent with no queuing in any period. The base model reflects the existing operation of the junction and is therefore valid and acceptable to assess future year conditions.

2023 Year of Opening Assessment

8.7.6 The results of the operational assessments for the 2023 year of opening are summarised in Table 8-3 for the 2023 baseline scenario (without development) and in Table 8-4 for the 2023 baseline plus development scenario.

Table 8-3: 2023 Baseline Junction Analysis – Moor Road / Baglan Way

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm B – Moor Road	0.0	6.83	0.02	A	0.1	6.60	0.05	A
Arm C – Baglan Way Right Turn	0.1	5.70	0.08	A	0.0	5.45	0.03	A

Table 8-4: 2023 Baseline plus Development Junction Analysis – Moor Road / Baglan Way

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm B – Moor Road	0.0	8.82	0.05	A	0.1	6.69	0.05	A
Arm C – Baglan Way Right Turn	0.1	5.95	0.09	A	0.0	6.74	0.04	A

8.7.7 Table 8-4 demonstrates that the Moor Road / Baglan Way roundabout is forecast to operate well within its maximum theoretical capacity in all scenarios in the year of opening, inclusive of development traffic, with a maximum RFC of 0.09 reported in the AM peak on Arm C – Baglan Way right turn lane.

8.7.8 Minimal increases in delay and RFC are experienced as a result of the proposed development and there are no increases in queue lengths.

Future Year Assessments

8.7.9 The results of the operational assessments for the 2028 and 2033 future years are summarised in Table 8-5 to Table 8-8.

Table 8-5: 2028 Baseline Junction Analysis – Moor Road / Baglan Way

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A48 North	0.0	6.70	0.02	A	0.1	6.59	0.05	A
Arm B – A48 South	0.1	5.72	0.09	A	0.0	5.47	0.03	A

Table 8-6: 2028 Baseline plus Development Junction Analysis – Moor Road / Baglan Way

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A48 North	0.1	8.69	0.05	A	0.1	6.68	0.06	A
Arm B – A48 South	0.1	5.97	0.10	A	0.0	6.72	0.04	A

Table 8-7: 2033 Baseline Junction Analysis – Moor Road / Baglan Way

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A48 North	0.0	6.70	0.02	A	0.1	6.59	0.06	A
Arm B – A48 South	0.1	5.75	0.09	A	0.0	5.49	0.03	A

Table 8-8: 2033 Baseline plus Development Junction Analysis – Moor Road / Baglan Way

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A48 North	0.1	8.72	0.05	A	0.1	6.69	0.06	A
Arm B – A48 South	0.1	5.99	0.10	A	0.0	6.70	0.04	A

8.7.10 These tables demonstrate that the Moor Road / Baglan Way junction is forecast to operate well within its maximum theoretical capacity in all scenarios, with a maximum RFC of 0.10 reported in the AM peak hour.

8.7.11 Minimal increases in delay and RFC are experienced as a result of the proposed development and there are no increases in queue lengths, with no queuing on any arms.

Summary

8.7.12 The results of the junction modelling show that the proposed development will not have a material impact on the operation of the Moor Road / Baglan Way junction in the peak hours and no mitigation is required.

8.8 Junction 2. Village Road / Baglan Way / Fenbrook Close Roundabout

Base Model and Queue Comparison

8.8.1 This junction was assessed using the ARCADY module. The junction measurements and flare lengths reflect the useable geometry and turning movements from the traffic survey. The flare length on Fenbrook Close has been minimised as this is not well used.

8.8.2 The results of the 2021 Base assessment are summarised in Table 8-9. The full outputs for all scenarios are included in Appendix M.

Table 8-9: 2021 Base Junction Analysis – Village Road / Baglan Way / Fenbrook Close Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – Fenbrook Close	0.0	4.44	0.02	A	0.0	4.06	0.03	A
Arm B – Baglan Way	0.0	3.08	0.04	A	0.1	3.30	0.12	A
Arm C – Village Road	0.1	2.22	0.05	A	0.0	2.27	0.03	A
Arm D – A4241 Link	0.4	2.16	0.28	A	0.3	2.04	0.22	A

8.8.3 Table 8-9 demonstrates that the Village Road / Baglan Way / Fenbrook Close roundabout currently operates well within its maximum theoretical capacity (RFC of 1) with a maximum RFC of 0.28 reported in the AM peak on Arm D – A4241 Link. There is minimal queueing shown in the model.

8.8.4 Table 8-10 provides a comparison between the modelled queue length outputs shown in Table 8-9 and the queue survey data.

Table 8-10: Maximum average queue length comparison – Village Road / Baglan Way / Fenbrook Close Roundabout

Arm	AM Peak (0800 – 0900)			PM Peak (1630 – 1730)		
	Observed (vehicles)	Model (vehicles)	+ / -	Observed (vehicles)	Model (vehicles)	+ / -
Arm A – Fenbrook Close	0	0	0	0	0	0
Arm B – Baglan Way	0	0	0	0	0	0
Arm C – Village Road	0	0	0	0	0	0
Arm D – A4241 Link	0	0	0	0	0	0

Note: Vehicle queues reported from the model have been rounded for ease of comparison purposes

8.8.5 Table 8-10 demonstrates that the modelled and observed queues are consistent with no queueing in any period. The base model reflects the existing operation of the junction and is therefore valid and acceptable to assess future year conditions.

2023 Year of Opening Assessment

8.8.6 The results of the operational assessments for the 2023 year of opening are summarised in Table 8-11 for the 2023 baseline scenario (without development) and in Table 8-12 for the 2023 baseline plus development scenario.

Table 8-11: 2023 Baseline Junction Analysis – Village Road / Baglan Way / Fenbrook Close Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – Fenbrook Close	0.0	4.47	0.02	A	0.0	4.08	0.03	A
Arm B – Baglan Way	0.0	3.08	0.05	A	0.1	3.31	0.12	A
Arm C – Village Road	0.1	2.22	0.05	A	0.0	2.28	0.03	A
Arm D – A4241 Link	0.4	2.18	0.29	A	0.3	2.05	0.22	A

Table 8-12: 2023 Baseline plus Development Junction Analysis – Village Road / Baglan Way / Fenbrook Close Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – Fenbrook Close	0.0	4.62	0.02	A	0.0	4.10	0.03	A
Arm B – Baglan Way	0.1	3.38	0.06	A	0.2	3.38	0.15	A
Arm C – Village Road	0.1	2.24	0.05	A	0.0	2.31	0.04	A
Arm D – A4241 Link	0.4	2.25	0.31	A	0.3	2.07	0.22	A

- 8.8.7 The Village Road / Baglan Way / Fenbrook Close roundabout is forecast to operate well within its maximum theoretical capacity in all scenarios in the year of opening, with a maximum RFC of 0.31 reported in the AM peak hour on Arm D – A4241 Link. There is minimal queueing shown in the model.
- 8.8.8 Minimal increases in delay and RFC are experienced as a result of the proposed development and there are no increases in queue lengths.

Future Year Assessments

- 8.8.9 The results of the operational assessments for the 2023 year of opening are summarised in Table 8-13 to Table 8-16.

Table 8-13: 2028 Baseline Junction Analysis – Village Road / Baglan Way / Fenbrook Close Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – Fenbrook Close	0.0	4.56	0.02	A	0.0	4.14	0.03	A
Arm B – Baglan Way	0.0	3.09	0.05	A	0.1	3.35	0.13	A
Arm C – Village Road	0.1	2.23	0.06	A	0.0	2.29	0.04	A
Arm D – A4241 Link	0.4	2.22	0.30	A	0.3	2.07	0.23	A

Table 8-14: 2028 Baseline plus Development Junction Analysis – Village Road / Baglan Way / Fenbrook Close Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – Fenbrook Close	0.0	4.71	0.02	A	0.0	4.16	0.03	A
Arm B – Baglan Way	0.1	3.38	0.06	A	0.2	3.43	0.16	A
Arm C – Village Road	0.1	2.24	0.06	A	0.0	2.32	0.04	A
Arm D – A4241 Link	0.5	2.29	0.32	A	0.3	2.10	0.23	A

Table 8-15: 2033 Baseline Junction Analysis – Village Road / Baglan Way / Fenbrook Close Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – Fenbrook Close	0.0	4.66	0.02	A	0.0	4.20	0.03	A
Arm B – Baglan Way	0.1	3.09	0.05	A	0.2	3.39	0.14	A
Arm C – Village Road	0.1	2.24	0.06	A	0.0	2.29	0.04	A
Arm D – A4241 Link	0.5	2.26	0.31	A	0.3	2.10	0.24	A

Table 8-16: 2033 Baseline plus Development Junction Analysis – Village Road / Baglan Way / Fenbrook Close Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – Fenbrook Close	0.0	4.81	0.02	A	0.0	4.22	0.03	A
Arm B – Baglan Way	0.1	3.38	0.06	A	0.2	3.47	0.16	A
Arm C – Village Road	0.1	2.25	0.06	A	0.0	2.32	0.04	A
Arm D – A4241 Link	0.5	2.34	0.33	A	0.3	2.13	0.24	A

- 8.8.10 The tables demonstrate that the Village Road / Baglan Way / Fenbrook Close roundabout is forecast to operate well within its maximum theoretical capacity in all scenarios, with a maximum RFC of 0.33 reported in the AM peak hour on Arm D – A4241 Link.
- 8.8.11 Minimal increases in delay and RFC are experienced as a result of the proposed development and there is an increase in queue length of just one vehicle in the AM peak in 2028 on the Arm D – A4241 Link. The queue lengths can be comfortably accommodated on the links without blocking back to the upstream junction, including the A4241.

Summary

8.8.12 The results of the junction modelling show that the proposed development will not have a material impact on the operation of the Village Road / Baglan Way / Fenbrook Close roundabout in the peak hours and no mitigation is required.

8.9 Junction 3. Central Road / A4241 / Baglan Way Roundabout

Base Model and Queue Comparison

8.9.1 This junction was assessed using the ARCADY module. The junction measurements and flare lengths reflect the useable geometry and turning movements from the traffic survey.

8.9.2 To ensure robustness in the model, the western arm on Central Avenue has a two lane approach which has been assumed to have no calculated flare length and the approach road half-width (m) and entry width (m) have been set as the same value. This reflects how the junction operates as there is no usable flare length for vehicles on this arm and the traffic survey data shows a broadly even split in usage between the left lane and right lane.

8.9.3 The northern arm has been modelled with a short flare, as there is a left turn flare lane on this arm. A review of the traffic survey turning movements showed that the flows were broadly consistent between the left turn and the ahead movements (allowing for the two ahead lanes) and as such, no adjustment was considered to be required to the geometric measurements.

8.9.4 The link connection from this roundabout to the Village Road roundabout has been modelled without a flare, as this is a single lane and all vehicles are required to turn left as the roundabout is the circulatory movements are restricted on the southern arm. All vehicles are required to turn at the Seaway Parade roundabout to the south, if travelling to the north from the link connection.

8.9.5 The southern arm does not have a stop line as there is no circulation past this arm. There is a temporary signal control to the south of the roundabout, however this has not been considered within this model. The use of Junctions 9 to model the junction has been agreed with the highway authority.

8.9.6 The results of the 2021 Base assessment are summarised in Table 8-17. The full outputs for all scenarios are included in Appendix N.

Table 8-17: 2021 Base Junction Analysis – Central Road / A4241 / Baglan Way Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A4241 Seaway Parade North	1.4	3.45	0.59	A	0.7	2.50	0.42	A
Arm B – Link to Village Road Rbt	0.3	9.19	0.24	A	0.4	7.96	0.29	A
Arm C – A4241 Seaway Parade South	0.8	2.21	0.45	A	1.2	2.60	0.54	A
Arm D – Central Avenue	0.2	2.83	0.20	A	0.4	3.75	0.29	A

8.9.7 Table 8-17 demonstrates that the Central Road / A4241 / Baglan Way roundabout currently operates within its maximum theoretical capacity (RFC of 1) with a maximum RFC of 0.59 reported in the AM peak on Arm A – A4241 Seaway Parade North. There is minimal queueing shown in the model, with some arms showing queues of 1 vehicle.

8.9.8 Table 8-18 provides a comparison between the modelled queue length outputs shown in Table 8-17 and the queue survey data.

Table 8-18: Maximum average queue length comparison – Central Road / A4241 / Baglan Way Roundabout

Arm	AM Peak (0800 – 0900)			PM Peak (1630 – 1730)		
	Observed (vehicles)	Model (vehicles)	+ / -	Observed (vehicles)	Model (vehicles)	+ / -
Arm A – A4241 Seaway Parade North	6	1	-5	6	1	-5
Arm B – Link to Village Road Rbt	1	0	-1	1	0	-1
Arm C – A4241 Seaway Parade South	0	1	1	0	1	1
Arm D – Central Avenue	4	0	-4	5	0	-5

Note: Vehicle queues reported from the model have been rounded for ease of comparison purposes

8.9.9 Table 8-18 demonstrates that the model shows a slightly lower level of queuing that observed at the junction, although the queue lengths are reported on a lane by lane basis and no lane had more than a maximum average queue of two vehicles, so on a lane by lane basis, there was minimal queuing at the roundabout. The base model has already provided robust geometry which reflects the lane usage and turning movements. As such, it is considered it reflects the existing operation of the junction and is therefore valid and acceptable to assess future year conditions.

2023 Year of Opening Assessment

8.9.10 The results of the operational assessments for the 2023 year of opening are summarised in Table 8-19 for the 2023 baseline scenario (without development) and in Table 8-20 for the 2023 baseline plus development scenario.

Table 8-19: 2023 Baseline Junction Analysis – Central Road / A4241 / Baglan Way Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A4241 Seaway Parade North	1.5	3.56	0.60	A	0.8	2.54	0.43	A
Arm B – Link to Village Road Rbt	0.3	9.46	0.25	A	0.4	8.15	0.30	A
Arm C – A4241 Seaway Parade South	0.8	2.24	0.46	A	1.2	2.65	0.55	A
Arm D – Central Avenue	0.3	2.86	0.21	A	0.4	3.85	0.30	A

Table 8-20: 2023 Baseline plus Development Junction Analysis – Central Road / A4241 / Baglan Way Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A4241 Seaway Parade North	1.6	3.73	0.62	A	0.8	2.57	0.43	A
Arm B – Link to Village Road Rbt	0.4	10.24	0.27	B	0.5	8.76	0.35	A
Arm C – A4241 Seaway Parade South	0.9	2.27	0.46	A	1.3	2.72	0.56	A
Arm D – Central Avenue	0.3	2.89	0.21	A	0.4	3.94	0.30	A

8.9.11 The tables demonstrate that the Central Road / A4241 / Baglan Way roundabout is forecast to operate well within its maximum theoretical capacity in all scenarios in the year of opening, with a maximum RFC of 0.62 reported in the AM peak hour on Arm A – A4241 Seaway Parade North. There is minimal queuing shown in the model, with arms showing queues of 1-2 vehicles.

8.9.12 Minimal increases in delay and RFC are experienced as a result of the proposed development and there are no increases in queue lengths.

Future Year Assessments

8.9.13 The results of the operational assessments for the 2028 and 2033 future years are summarised in Table 8-21 to Table 8-24.

Table 8-21: 2028 Baseline Junction Analysis – Central Road / A4241 / Baglan Way Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A4241 Seaway Parade North	1.7	3.85	0.63	A	0.8	2.66	0.45	A
Arm B – Link to Village Road Rbt	0.4	10.20	0.27	B	0.5	8.66	0.33	A
Arm C – A4241 Seaway Parade South	0.9	2.33	0.48	A	1.3	2.80	0.57	A
Arm D – Central Avenue	0.3	2.97	0.22	A	0.5	4.10	0.32	A

Table 8-22: 2028 Baseline plus Development Junction Analysis – Central Road / A4241 / Baglan Way Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A4241 Seaway Parade North	1.8	4.05	0.65	A	0.8	2.68	0.46	A
Arm B – Link to Village Road Rbt	0.4	11.05	0.30	B	0.6	9.35	0.38	A
Arm C – A4241 Seaway Parade South	0.9	2.36	0.48	A	1.4	2.87	0.58	A
Arm D – Central Avenue	0.3	3.00	0.22	A	0.5	4.21	0.33	A

Table 8-23: 2033 Baseline Junction Analysis – Central Road / A4241 / Baglan Way Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A4241 Seaway Parade North	1.9	4.21	0.66	A	0.9	2.78	0.47	A
Arm B – Link to Village Road Rbt	0.4	11.22	0.30	B	0.5	9.32	0.35	A
Arm C – A4241 Seaway Parade South	1.0	2.42	0.50	A	1.5	2.99	0.60	A
Arm D – Central Avenue	0.3	3.09	0.23	A	0.5	4.43	0.35	A

Table 8-24: 2033 Baseline plus Development Junction Analysis – Central Road / A4241 / Baglan Way Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A4241 Seaway Parade North	2.1	4.45	0.68	A	0.9	2.80	0.48	A
Arm B – Link to Village Road Rbt	0.5	12.17	0.32	B	0.7	10.12	0.41	B
Arm C – A4241 Seaway Parade South	1.0	2.46	0.50	A	1.6	3.06	0.61	A
Arm D – Central Avenue	0.3	3.12	0.23	A	0.5	4.55	0.35	A

8.9.14 The tables demonstrate that the Central Road / A4241 / Baglan Way roundabout is forecast to operate within its maximum theoretical capacity in all scenarios, with a maximum RFC of 0.68 reported in the PM peak hour on Arm A – A4241 Seaway Parade North. There is minimal queueing shown in the model, with arms showing queues of 1-2 vehicles.

8.9.15 Minimal increases in delay and RFC are experienced as a result of the proposed development and there is an increase in queue length of just 1 vehicle on the link road to Village Road in 2033 from no vehicles to one vehicle (although the model shows this from 0.4 to 0.5 vehicles). This would not lead to blocking back to the Village Road roundabout.

Summary

8.9.16 The results of the junction modelling show that the proposed development will not have a material impact on the operation of the Central Road / A4241 / Baglan Way roundabout in the peak hours and no mitigation is required.

8.10 Junction 4. A4241 / Afan Way / Seaway Parade Roundabout

Base Model and Queue Comparison

- 8.10.1 This junction was assessed using the ARCADY module. The junction measurements and flare lengths reflect the useable geometry and turning movements from the traffic survey.
- 8.10.2 To ensure robustness in the model, all arms with two lane approaches have been assumed to have no calculated flare length and the approach road half-width (m) and entry width (m) have been set as the same value. This reflects how the junction operates as there is no usable flare length for vehicles on these arms. A review of the traffic survey turning movements showed that the flows were broadly consistent between the movements which would occur in each lane, therefore unequal lane usage has not been considered.
- 8.10.3 The results of the 2021 Base assessment are summarised in Table 8-25. The full outputs for all scenarios are included in Appendix O.

Table 8-25: 2021 Base Junction Analysis – A4241 / Afan Way / Seaway Parade Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A4241 North	1.4	4.31	0.59	A	0.9	3.30	0.48	A
Arm B – A4241 South	0.8	3.56	0.43	A	1.2	4.22	0.55	A
Arm C – Seaway Parade	1.5	8.06	0.61	A	1.4	8.25	0.58	A

- 8.10.4 Table 8-25 demonstrates that the A4241 / Afan Way / Seaway Parade roundabout currently operates within its maximum theoretical capacity (RFC of 1) with a maximum RFC of 0.61 reported in the AM peak on Arm C – Seaway Parade. There is a small level of queuing shown in the model of 1-2 vehicles.
- 8.10.5 Table 8-26 provides a comparison between the modelled queue length outputs shown in Table 8-25 and the queue survey data.

Table 8-26: Maximum average queue length comparison – A4241 / Afan Way / Seaway Parade Roundabout

Arm	AM Peak (0800 – 0900)			PM Peak (1630 – 1730)		
	Observed (vehicles)	Model (vehicles)	+ / -	Observed (vehicles)	Model (vehicles)	+ / -
Arm A – A4241 North	7	1	-6	3	1	-2
Arm B – A4241 South	14	1	-13	5	1	-4
Arm C – Seaway Parade	4	2	-2	4	1	-3

Note: Vehicle queues reported from the model have been rounded for ease of comparison purposes

- 8.10.6 Table 8-26 demonstrates that the modelled and observed queues are similar in the PM peak model, but the model appears to underestimate the queue length on the B4241 south in the AM peak. A review of the queue length survey shows that there is a peak 15 minute queueing period at this roundabout between 0830 and 0845, which relates to movements associated with the schools on Seaway Parade during this time. A review of the video data shows that the queuing is caused by blocking back through the junction from vehicles queuing at the pedestrian crossing which is called frequently during this 15 minute period. This disproportionately impacts the overall average queue lengths across the AM peak hour and this short peak demand and blocking back is not reflected in the AM peak hour model based on the hourly flows and geometry. The queueing dissipates quickly from 0845 with no queue length of greater than 8 vehicles in any lane outside of this 15 minute period.
- 8.10.7 As shown in the PM peak and for the majority of the remaining peak periods, the queue lengths are significantly lower than the AM peak average and more closely reflected in the model. Amending the

model to reflect this 15 minute school peak time and the calling of the pedestrian crossing would not appropriately reflect the general operation across the peak hours and would overestimate the impact of the development on queuing and capacity.

- 8.10.8 The site is also only forecast to generate 8 vehicle movements through this junction in the AM peak hour and as such would not have a material impact on its operation during this hour. Adjusting the model to reflect the crossing being called, which does not occur within the PM peak to the same level, is not considered to be appropriate. The queue length comparisons between the model and the observed queues in the PM peak are considered acceptable to consider the impact of the proposals, which are forecast to generate 30 movements through the junction.
- 8.10.9 As such, given that the geometry has been entered into the model robustly and already considers the minimal flare on Seaway Parade and no flare on the other two arms, it is considered that the base model is valid and acceptable to assess future year conditions and the impact of the development generated traffic, particularly during the key development generation hour at this junction in the PM peak.

2023 Year of Opening Assessment

- 8.10.10 The results of the operational assessments for the 2023 year of opening are summarised in Table 8-27 for the 2023 baseline scenario (without development) and in Table 8-28 for the 2023 baseline plus development scenario.

Table 8-27: 2023 Baseline Junction Analysis – A4241 / Afan Way / Seaway Parade Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A4241 North	1.5	4.44	0.60	A	1.0	3.36	0.49	A
Arm B – A4241 South	0.8	3.64	0.44	A	1.3	4.35	0.56	A
Arm C – Seaway Parade	1.6	8.44	0.62	A	1.5	8.68	0.60	A

Table 8-28: 2023 Baseline plus Development Junction Analysis – A4241 / Afan Way / Seaway Parade Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A4241 North	1.5	4.53	0.61	A	1.0	3.46	0.51	A
Arm B – A4241 South	0.8	3.67	0.44	A	1.3	4.45	0.56	A
Arm C – Seaway Parade	1.7	8.61	0.63	A	1.5	8.98	0.61	A

- 8.10.11 The tables demonstrate that the A4241 / Afan Way / Seaway Parade roundabout is forecast to operate within its maximum theoretical capacity in all scenarios in the year of opening, with a maximum RFC of 0.61 reported in the AM peak hour on Arm A – A4241 North and in the PM peak hour on Arm C – Seaway Parade.

- 8.10.12 Minimal increases in delay and RFC are experienced as a result of the proposed development and there are no increases in queue lengths.

Future Year Assessments

- 8.10.13 The results of the operational assessments for the 2028 and 2033 future years are summarised in Table 8-29 to Table 8-32.

Table 8-29: 2028 Baseline Junction Analysis – A4241 / Afan Way / Seaway Parade Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A4241 North	1.7	4.78	0.63	A	1.1	3.52	0.51	A
Arm B – A4241 South	0.9	3.85	0.47	A	1.4	4.70	0.59	A
Arm C – Seaway Parade	1.9	9.53	0.66	A	1.7	9.84	0.64	A

Table 8-30: 2028 Baseline plus Development Junction Analysis – A4241 / Afan Way / Seaway Parade Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A4241 North	1.7	4.88	0.63	A	1.1	3.63	0.53	A
Arm B – A4241 South	0.9	3.88	0.47	A	1.4	4.81	0.59	A
Arm C – Seaway Parade	2.0	9.74	0.67	A	1.8	10.23	0.65	B

Table 8-31: 2033 Baseline Junction Analysis – A4241 / Afan Way / Seaway Parade Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A4241 North	1.9	5.21	0.66	A	1.2	3.70	0.54	A
Arm B – A4241 South	1.0	4.08	0.49	A	1.6	5.12	0.62	A
Arm C – Seaway Parade	2.3	11.00	0.70	B	2.1	11.47	0.68	B

Table 8-32: 2033 Baseline plus Development Junction Analysis – A4241 / Afan Way / Seaway Parade Roundabout

Arm	AM Peak (0800 – 0900)				PM Peak (1630 – 1730)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm A – A4241 North	2.0	5.33	0.66	A	1.2	3.83	0.55	A
Arm B – A4241 South	1.0	4.11	0.49	A	1.6	5.26	0.62	A
Arm C – Seaway Parade	2.4	11.27	0.71	B	2.2	12.01	0.69	B

8.10.14 The tables demonstrate that the A4241 / Afan Way / Seaway Parade roundabout is forecast to operate within its maximum theoretical capacity in all future year scenarios, with a maximum RFC of 0.71 reported in the AM peak hour on Arm C – Seaway Parade.

8.10.15 Minimal increases in delay and RFC are experienced as a result of the proposed development and there are no increases in queue lengths.

Summary

8.10.16 The results of the junction modelling show that the proposed development will not have a material impact on the operation of the A4241 / Afan Way / Seaway Parade roundabout in the peak hours and no mitigation is required.

9. TRANSPORT IMPLEMENTATION STRATEGY

9.1 Overview

- 9.1.1 The objective of the Transport Implementation Strategy (TIS) is to promote sustainable modes including walking, cycling and public transport and set out mitigation required to accommodate the development on the highway network. This has been considered against the transport hierarchy and sustainable transport policies in PPW11 to reflect the WG commitment to reduce reliance on the private car.

9.2 Active Travel

Walking

- 9.2.1 Walking has the potential of providing an alternative mode of transport to undertake shorter journeys typically under 2km in distance, although the Active Travel Act suggests journeys of up to 3.2km are acceptable.
- 9.2.2 The benefits of walking include that it is free, convenient, good for health and environmentally friendly.
- 9.2.3 The proposed development will facilitate journeys on foot through the footways running within the site which connect to the existing active travel network on the shared footway / cycleway running along Baglan Way, as well as to the footways on Moor Road. This connects the site to the surrounding residential areas in Baglan and Port Talbot.
- 9.2.4 Footways will also be provided within the site to encourage walking. This reflects the user hierarchy as set out in PPW11 and Manual for Streets guidance.

Cycling

- 9.2.5 Secure and covered cycle parking will be provided on the site in accordance with the NPTCBC guidance.
- 9.2.6 The cycle parking has appropriate space around it to manoeuvre bikes in and out and would all be covered, as required by NPTCBC. The cycle parking can be accessed by cyclists from either entrance, although it is anticipated that cyclists would utilise the Moor Lane access, travelling through the secure entrance and then through the main staff car park. Cyclists would then dismount within the site and walk bikes along the footway to the parking location.
- 9.2.7 Cycling has the potential of providing an alternative mode of transport to undertaken journeys up to a distance of approximately 8km. The site benefits from being situated within close proximity to a good quality cycle route which links to the site access.
- 9.2.8 A Travel Plan will provide measures to encourage cycling, such as information on cycling routes and cycling clubs. In addition, a Travel Plan Coordinator will seek to obtain discounts for employees for the purchase of cycling equipment from local cycling shops.

Consideration of PPW11

- 9.2.9 The development is in a location which is not car dependent as it is possible to walk or cycle to residential areas via suitable routes within appropriate distances in accordance with the transport hierarchy in PPW11.

9.3 Public Transport

- 9.3.1 Public Transport provides an opportunity to replace car trips with it being possible to access existing bus stops and routes. The development is accessed by a footway network which link to the closest bus stops. The closest stops are situated within 625m walking distance of the site.
- 9.3.2 The stops are served by a number of routes with a good frequency of service, which also link to the Port Talbot bus station and the Port Talbot Parkway Rail Station. Potential future employees of the site could therefore use bus (and rail) services as an alternative to travelling by car.
- 9.3.3 A public transport journey should be considered in the context of the entire journey. The walk to the stops will be via direct and high quality routes and be well lit, real time information websites will be promoted to employees and the services provide a fast and direct journey into Port Talbot (where further services can be accessed). As such, employees are more likely to be walk the 625m distance from the site to use the bus services.
- 9.3.4 The Travel Plan will ensure that the services are fully promoted to employees, including any discounts or travel passes obtained. Any websites or mobile applications at the time of occupation which provide real time information will be promoted. This will ensure that the wait time at the stop will be minimised as employees can leave the site at the correct time to meet their preferred service, which reduces dwell time at stops. This will reduce the overall travel time from the origin to the end destination.
- 9.3.5 Based on the three strands of a journey (walking, waiting and on-bus travel) and allowing for the promotion of public transport and real-time information, bus travel is considered to be a realistic alternative mode of travel to and from the site. The site location is appropriate for public transport use which is in accordance with the sustainable transport policies in PPW11.

9.4 Vehicular Access

- 9.4.1 The vehicular accesses into the site will be provided from Baglan Way and Moor Road and will separate employee / visitor and operational traffic movements. The access arrangements are safe and suitable and can accommodate the vehicle movements generated by the site appropriately.

9.5 Travel Plan

- 9.5.1 A Travel Plan has been produced and submitted separately with the application to encourage travel by sustainable modes and further minimise the impact of the development on the network.

10. SUMMARY AND CONCLUSIONS

10.1 Summary

- 10.1.1 Apex Transport Planning has been commissioned to produce a Transport Assessment (TA) to accompany a planning application for Glass Systems Ltd for the construction of an Industrial Building on a site at Baglan Way, Baglan.
- 10.1.2 The proposals are for a full application for a B2 factory development for the production of insulated glass units with a floorspace of approximately 25,545 sqm. The proposals would relocate and consolidate the existing Glass Systems operations in Swansea, Pontyclun and Port Talbot into one single new location.
- 10.1.3 The site would be accessed via Baglan Way and Moor Road on its northeast and northwest boundaries via two new priority junctions. Both accesses provide appropriate geometry and visibility and are considered safe and suitable to accommodate the development proposals. A separate gated cyclist access would also be provided directly onto the cycle route on Baglan Way.
- 10.1.4 This TA has been produced to inform the local highway authority, Neath Port Talbot County Borough Council (NPTCBC), of the highways and transport implications of the proposals.
- 10.1.5 A total of 180 car parking spaces are proposed on the site which is within the guidance levels in the Parking Standards SPG. This includes a provision of 9 disabled parking bays and 10% of spaces accommodating electric vehicle charging.
- 10.1.6 The proposals can accommodate service and delivery vehicles appropriately and these vehicles can enter and exit the site in forward gear.
- 10.1.7 The site is well connected to existing walking and cycling routes. Bus stops are also located within walking distance and these provide a good frequency of service to residential areas, suitable for some commuting journeys. The surrounding area has a good level of sustainable travel, as would be expected in an area with existing employment uses and walking, cycling and public transport journeys are already accommodated on the network.
- 10.1.8 The site is well situated to accommodate the proposals, being located adjacent to established industrial uses and close to residential areas. The location will encourage and promote sustainable travel behaviour and attract employees who choose to travel by sustainable modes. This will assist in constraining the level of vehicle generation from the site and minimise the impact of the site on the highway network.
- 10.1.9 Road safety data has been analysed and there is no evidence of a highway safety issue within the vicinity of the site which would be exacerbated by the proposals.
- 10.1.10 Operational assessments have been undertaken on the key junctions on the local highway network, as requested by NPTCBC. The assessments are robust and have been undertaken in a 2023, 2028 and 2033 future year considering unfettered traffic growth (which may not occur). The assessments demonstrated that the development would not have a material impact on the capacity at any junction and no mitigation is required to accommodate the proposals.

10.2 Conclusions

- 10.2.1 The proposals are appropriately located for access by sustainable modes, with the site adjacent to existing employment units and close to residential areas, and existing movements are accommodated

safely. In this regard the proposals are in accordance with transport policies in Future Wales, TAN18, PPW11 and the NPTCBC LDP.

- 10.2.2 Data does not indicate a road safety issue which would be exacerbated by the proposals. The development would not have a material impact on road safety and the access arrangements are appropriate and safe.
- 10.2.3 The proposed parking provision is appropriate and acceptable across the site and is in accordance with the NPTCBC Parking Standards as well as the objectives for encouraging sustainable travel and reducing car use as set out in PPW11 and Future Wales.
- 10.2.4 The proposals will not have a material impact on the operational capacity of the highway network and no highway mitigation is required.
- 10.2.5 As such, the analysis presented within this TA allows the highway authority to provide a positive recommendation on the planning application.

Appendix A Pre-Application Correspondence

Date Dyddiad
Telephone Ffôn
Email Ebost
Contact Cyswllt
Your ref Eich cyf
Our ref Ein cyf

14th January 2021
01639 685954
c.morris1@npt.gov.uk
Ceri Morris
RJ/SH/21.177
Q2021/0232

Steffan Harries
LRM Planning
22 Cathedral Road
Cardiff
CF11 9LJ

BY EMAIL ONLY

Dear Mr Harries

Town and Country Planning Act 1990

Pre-App. Ref.:	Q2021/0232
PROPOSAL:	Non-Statutory Pre-application Enquiry for the construction of an Industrial Building (22,507sq.m) with landscaping, car parking, access, and associated works.
LOCATION:	Land At Baglan Way Port Talbot

I refer to your correspondence received on 11 November 2021, concerning the above and your request for pre-application advice. Having considered the nature of submission, I respond as follows.

The development seeks to construct a 22,507sq.m. new industrial unit, which includes a mezzanine office measuring 1,219sq.m, for the purposes of processing glass that is manufactured off-site and would constitute Major development.

The proposed scheme will agglomerate the existing three Glass Systems Ltd units situated across South Wales into one location. The proposed development is of significance as it will be located within the Panasonic Site of Importance for Nature Conservation (SINC), which measures 14.5 hectares. Circa 4.5 hectares of this site will be lost or damaged to the proposed development.

Local Context and Constraints

The site is broadly rectangular in shape and measures 12.4 hectares, representing a considerable area of industrial land to the south-east of the M4 at Baglan. It was formerly used as a landfill site and is located in the north-west corner of Baglan Industrial Estate.

The site supports a mosaic of various habitats, including scrub communities, neutral grassland, fen reedbed and ponds, which is the reason for its designation as a SINC. The combination of habitats situated within a relatively well built-up area is an important local habitat resource, providing a stepping stone for invertebrates and other species.

The site is predicted to be flood free in all TAN 15 design events and is located in flood zone C1 in the Development Advice Map (DAM).

Sustainable Drainage – Statutory Requirements w.e.f January 2019

Please note that all new developments of more than 1 house or where the construction area is of 100m² or more will require sustainable drainage - built in accordance with mandatory standards for sustainable drainage published by Welsh Ministers - to manage on-site surface water. More information is available in [Schedule 3 of the Flood & Water Management Act 2010](#).

These systems must be approved by the Council's Engineering Service acting in its SuDS Approving Body (SAB) role **before construction work begins**. In this respect it is essential that a developer of any such project gain SAB approval of its surface water drainage alongside any relevant planning permission. **You will not be allowed to start construction until both permissions have been approved.**

If you have not done so already, and your development would not fall into any of the relevant exceptions, you are therefore strongly encouraged to request further advice from the SAB. Involving the SAB Officers in pre-application discussions will allow for SuDS drainage matters (to ensure suitability of proposed SuDs design in line with national standards and adequate site layout) to be considered alongside the assessment of planning merits. **There is an additional charge of £250 for this service.** This can be as part of any agreed further pre-application submissions with the Planning Authority (recommended) or independently/ direct with the SAB. You are advised, however, that failing to engage in joint pre-application discussions has the potential to lead to delays and, most notably, the potential need to obtain further planning permission should any agreed SuDS design not be compliant with any relevant planning permission. Further details are available at www.npt.gov.uk/planning.

Highways

Following consultation, the Council's Highway Officer confirmed that, in principle, the content of the Transport Information Note is acceptable, albeit full comments will be issued once in receipt of the full Transport Assessment (TA) document. With regard to the proposed TA, the officer is satisfied with the proposed extent of operational assessments to cover Village Road, Fernbrook Close, Bagaln Way Roundabout, A4241/Seaway Parade Roundabout.

With regard to the proposed operational access from Moor Road, the visibility setback should be 4.5 meters from the edge of carriageway in line with NPTCBC Guide to the layout of development roads (internal estate junction) as this represents a reasonable distance between the front of an HGV and the driver's eye. The minimum junction kerb radius should be 12 meters.

Car Parking Spaces

The proposed development is located within parking zone 4. In line with Parking Standards SPG (October 2016), the proposed industrial unit (22,507sq.m) should

provide a maximum of 188 car parking spaces (non-operational). As present, there is a provision of 285 spaces over both car park A and B. At the moment there is an over provision of 97 spaces. However, this may alter with the final submission dependent on other factors, such as the provision of SuDS attenuation.

Accessible Car Parking Spaces

If the car park locations remain as per the preliminary submission tabled at our meeting, we would treat these as two separate car parks as they do not communicate with each other and have separate access/egress points from the highway. Therefore, 5% of the number of spaces proposed for **each** car park area should be provided as accessible parking.

Electrical Vehicle Parking Spaces

As above, we will require 10% of the total number of spaces in **each** car park location to be made available as EV spaces as per Planning Policy Wales (11).

Cycle Parking

Staff should be encouraged to cycle to work and provided with additional facilities i.e., lockers, changing rooms and showers. In addition, covered stands should be provided for **all** spaces, regardless of short or long stay status.

The development should provide a minimum of 45 **long stay stands** and 22 **short stay stands**. Sheffield Stands are the preferred standard to provide this provision. Therefore, in line with the above figures, there would be 90 long stay spaces and 44 short stay spaces would be created.

Operational Assessment

Junction 9 Picardy/Arcady is the preferred option for the assessment. There is a requirement for the site to be modelled pre-development and post-development, forecasting the development up to 15 years in accordance with TAN 18. Consideration should be given to committed development within the area that may affect the county roads.

It has been the Neath Port Talbot Highways Authority's preference to require 15 years forecast to gain a substantive view of future development in areas which effects county strategic roads.

However, it is acknowledged that the proposed access, which is to facilitate the sizeable industrial use, is a primary route to local Neath Port Talbot Hospital, as well as various other Industrial & Commercial Units and Residential estates. Therefore, taking a pragmatic view on this particular development, and further to discussions with the transport consultant, the following details **will** be required within the TIA submission:

- An assessment in 2022 (base, without development)
- An assessment within the year of opening

- An assessment 5 years beyond the year of opening, and
- An assessment 10 years beyond the year of opening.

The Planning Department has provided feedback separately on the committed developments in the locality.

Noise and Environmental Health

Following consultation, the Council's Environmental Health Team provided the following comments:

Noise

The EH officer generally agrees with the methodology utilized in the Noise Impact Assessment provided. The assessment outlines the potential for significant impact at nearby receptors without mitigation. Further modelling demonstrates the potential for the site to operate at levels below the existing baseline through mitigation at source. Therefore, as the proposed development has the potential to cause a significant adverse impact at nearby sensitive receptors, stringent planning conditions are appropriate to ensure mitigation is effective.

The author of the Noise Impact Assessment has recognised this and proposed the following condition

"Noise arising from the Development shall not exceed the typical background sound level during the day or night at the closest residential receptors to the site, existing at the time of the approval of this planning permission, when assessed in accordance with the methodology and principles set out in BS4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound."

The EH officer suggests altering the wording to include all nearby residential receptors and require the site operators to conduct further noise assessment following complaints. This should be included in the Noise Impact Assessment.

As the proposed development will operate during night time hours, there are concerns regarding noise from ventilation ductwork being audible at receptors to the north-east across the M4. Similar issues have been experienced at one of the neighbouring facilities and required direct intervention, though the matter was resolved through routine maintenance. This is not a factor that would reasonably require further assessment. However, receptors to the north should be considered when determining appropriate planning conditions.

Air Quality

Based on the documents provided and the preplanning meeting on the 14th of December 2021, no waste products are to be received on site and the factory will not meet the criteria requiring a Part A2 permit as a glass manufacturer, as outlined below:

"1.11 This note covers installations described in Section 3.3 Part A (2) (a) of Schedule 1 to the PPC Regulations (Ref 1) as follows: f Manufacturing glass, unless falling within Part A (1) of this Section,*

Appendix B Traffic Surveys

Junction: 1 (RED)

Approach: Baglan Way East

TIME	To Moor Road								To Baglan Way (W)							
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
07:15 - 07:30	0	0	0	0	0	0	0	0	0	0	5	0	1	0	0	6
07:30 - 07:45	0	0	1	0	0	0	0	1	1	0	6	2	0	2	0	11
07:45 - 08:00	0	0	0	0	0	0	0	0	0	0	6	1	0	1	0	8
Hourly Total	0	0	1	0	0	0	0	1	1	0	20	3	1	3	0	28
08:00 - 08:15	0	0	0	0	0	0	0	0	0	0	12	0	1	0	0	13
08:15 - 08:30	0	0	0	0	0	0	0	0	0	0	12	2	1	1	0	16
08:30 - 08:45	0	0	0	0	0	0	0	0	0	0	6	3	0	0	0	9
08:45 - 09:00	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	4
Hourly Total	0	0	0	0	0	0	0	0	0	0	33	5	3	1	0	42
09:00 - 09:15	0	0	1	0	0	0	0	1	0	1	4	2	0	0	0	7
09:15 - 09:30	0	0	0	0	0	0	0	0	0	0	9	1	1	2	0	13
09:30 - 09:45	0	0	0	0	0	0	0	0	0	0	8	3	3	2	0	16
09:45 - 10:00	0	0	0	0	0	0	0	0	0	0	6	2	2	0	0	10
Hourly Total	0	0	1	0	0	0	0	1	0	1	27	8	6	4	0	46
TOTAL	0	0	2	0	0	0	0	2	1	1	80	16	10	8	0	116
16:00 - 16:15	0	0	2	0	0	0	0	2	0	0	25	1	0	0	0	26
16:15 - 16:30	0	0	3	0	0	0	0	3	0	0	20	2	0	0	0	22
16:30 - 16:45	0	0	2	0	0	0	0	2	0	1	24	1	1	0	0	27
16:45 - 17:00	0	0	4	0	0	0	0	4	1	0	20	4	0	0	0	25
Hourly Total	0	0	11	0	0	0	0	11	1	1	89	8	1	0	0	100
17:00 - 17:15	0	0	2	0	0	0	0	2	0	0	36	0	1	1	0	38
17:15 - 17:30	0	0	0	0	0	0	0	0	0	0	20	0	0	0	1	21
17:30 - 17:45	0	0	3	0	0	0	0	3	2	0	14	1	0	0	0	17
17:45 - 18:00	0	0	0	0	0	0	0	0	0	0	17	2	0	0	0	19
Hourly Total	0	0	5	0	0	0	0	5	2	0	87	3	1	1	1	95
18:00 - 18:15	0	0	2	0	0	0	0	2	3	0	12	1	0	2	0	18
18:15 - 18:30	0	0	7	0	0	0	0	7	0	0	13	0	0	0	0	13
18:30 - 18:45	0	0	3	0	0	0	0	3	0	0	4	0	0	0	0	4
18:45 - 19:00	0	0	2	0	0	0	0	2	0	0	9	2	0	1	0	12
Hourly Total	0	0	14	0	0	0	0	14	3	0	38	3	0	3	0	47
TOTAL	0	0	30	0	0	0	0	30	6	1	214	14	2	4	1	242

Junction: 1 (RED)

Approach: Moor Road

TIME	To Baglan Way (W)								To Baglan Way (E)							
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 - 07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 - 07:45	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
07:45 - 08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
08:00 - 08:15	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0
08:15 - 08:30	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
08:30 - 08:45	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0
08:45 - 09:00	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0
Hourly Total	0	0	6	0	0	2	2	8	0	0	0	0	0	0	0	0
09:00 - 09:15	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	1
09:15 - 09:30	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
09:30 - 09:45	0	0	3	0	0	0	1	4	0	0	1	0	0	0	0	1
09:45 - 10:00	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0
Hourly Total	0	0	6	0	0	0	2	8	0	0	1	1	0	0	0	2
TOTAL	0	0	12	1	0	0	4	17	0	0	1	1	0	0	0	2
16:00 - 16:15	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0
16:15 - 16:30	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0
16:30 - 16:45	0	0	8	2	0	0	1	11	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	3	0	0	0	1	4	0	0	0	0	0	0	0	0
Hourly Total	0	0	15	2	0	0	2	19	0	0	0	0	0	0	0	0
17:00 - 17:15	0	0	7	0	0	0	1	8	0	0	0	0	0	0	0	0
17:15 - 17:30	0	0	2	0	0	0	0	2	0	0	1	0	0	0	0	1
17:30 - 17:45	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0
17:45 - 18:00	1	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0
Hourly Total	1	0	14	0	0	0	1	16	0	0	1	0	0	0	0	1
18:00 - 18:15	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
18:15 - 18:30	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
18:30 - 18:45	0	0	1	0	0	0	0	1	0	0	4	0	0	0	0	4
18:45 - 19:00	0	0	1	0	0	0	0	1	0	0	3	0	0	0	0	3
Hourly Total	0	0	4	0	0	0	0	4	0	0	7	0	0	0	0	7
TOTAL	1	0	33	2	0	0	3	39	0	0	8	0	0	0	0	8

Junction: 1 (RED)

Approach: Baglan Way West

	To Baglan Way (E)							To Moor Road							U-Turn									
TIME	CYCLE	M/CYCLE	CAR	LGW	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGW	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGW	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	20	3	1	0	0	24	2	0	3	0	0	0	0	5	0	0	0	0	0	0	0	0
07:15 - 07:30	1	1	43	8	2	1	0	56	0	0	11	1	1	0	0	13	0	0	0	0	0	0	0	0
07:30 - 07:45	0	0	64	7	2	0	0	73	0	0	6	3	0	0	0	9	0	0	0	0	0	0	0	0
07:45 - 08:00	1	1	86	12	0	0	0	100	0	0	15	1	0	0	0	16	0	0	0	0	0	0	0	0
Hourly Total	2	2	213	30	5	1	0	253	2	0	35	5	1	0	0	43	0	0	0	0	0	0	0	0
08:00 - 08:15	0	0	81	11	0	3	0	95	0	0	9	3	0	0	0	12	0	0	0	0	0	0	0	0
08:15 - 08:30	0	0	107	6	1	0	0	114	0	0	11	0	0	0	0	11	0	0	1	0	0	0	0	1
08:30 - 08:45	0	0	72	6	1	0	0	79	0	0	12	3	0	0	0	15	0	0	0	0	0	0	0	0
08:45 - 09:00	0	0	75	8	0	0	0	83	0	0	12	0	0	0	1	13	0	0	0	0	0	0	0	0
Hourly Total	0	0	336	31	2	3	0	371	0	0	44	6	0	0	1	51	0	0	1	0	0	0	0	1
09:00 - 09:15	0	0	60	13	2	1	2	78	0	0	7	1	0	0	0	8	0	0	0	0	0	0	0	0
09:15 - 09:30	0	0	55	7	1	0	0	63	0	0	8	0	0	0	2	10	0	0	0	0	0	0	0	0
09:30 - 09:45	0	0	37	3	4	0	0	44	0	0	4	1	0	0	0	5	0	0	0	0	0	0	0	0
09:45 - 10:00	0	0	36	10	2	0	0	48	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0
Hourly Total	0	0	188	33	9	1	2	233	0	0	23	2	0	0	2	27	0	0	0	0	0	0	0	0
TOTAL	2	2	736	94	16	5	2	857	2	0	102	13	1	0	3	121	0	0	1	0	0	0	0	1
16:00 - 16:15	0	0	23	3	2	0	2	30	0	0	3	1	0	0	0	4	0	0	0	0	0	0	0	0
16:15 - 16:30	0	0	33	5	1	1	0	40	0	0	3	2	0	0	1	6	0	0	0	0	0	0	0	0
16:30 - 16:45	0	0	32	8	3	0	1	44	0	0	2	1	0	0	0	3	0	0	0	0	0	0	0	0
16:45 - 17:00	1	1	40	4	2	3	0	51	0	0	5	1	0	0	0	6	0	0	0	0	0	0	0	0
Hourly Total	1	1	128	20	8	4	3	165	0	0	13	5	0	0	1	19	0	0	0	0	0	0	0	0
17:00 - 17:15	2	1	34	7	3	3	0	50	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0
17:15 - 17:30	2	1	29	4	1	2	0	39	0	0	4	0	0	0	0	4	0	0	0	1	0	0	0	1
17:30 - 17:45	0	0	37	1	1	1	0	40	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0
17:45 - 18:00	0	1	31	2	0	0	0	34	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0
Hourly Total	4	3	131	14	5	6	0	163	0	0	11	0	0	0	0	11	0	0	0	1	0	0	0	1
18:00 - 18:15	0	0	18	3	0	0	0	21	0	0	3	1	0	0	0	4	0	0	0	0	0	0	0	0
18:15 - 18:30	0	1	32	1	0	0	0	34	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0
18:30 - 18:45	0	0	42	1	0	1	0	44	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0
18:45 - 19:00	0	0	23	3	0	0	0	26	0	0	3	1	0	0	0	4	0	0	0	0	0	0	0	0
Hourly Total	0	1	115	8	0	1	0	125	0	0	12	2	0	0	0	14	0	0	0	0	0	0	0	0
TOTAL	5	5	374	42	13	11	3	453	0	0	36	7	0	0	1	44	0	0	0	1	0	0	0	0



Port Talbot, Thursday 9th September 2021

Junction: 1 (RED)

U-Turn

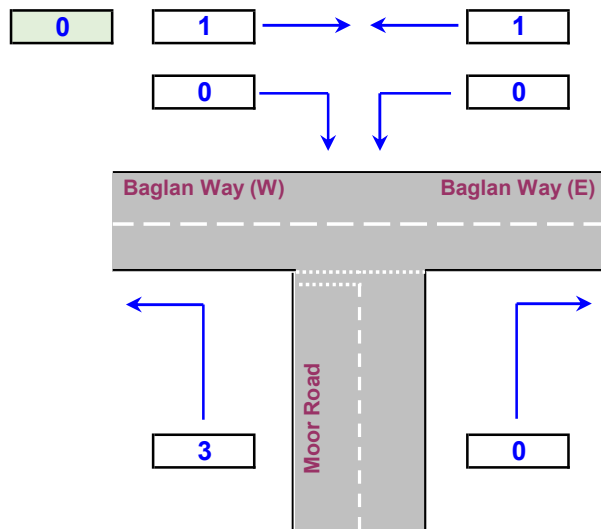
Vehicle Class: BUS

Show Peak Hour: ☐

Start Time: 2) 16:30

End Time: 2) 17:30

Show Session 2



NORTH





Port Talbot, Thursday 9th September 2021

Junction: 2 (RED)
Approach: Unnamed Road

TIME	To Fernbrook Close								To Bagin Way								To Village Road								Up Turn							
	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL
07:00 - 07:15	0	0	2	1	0	0	0	3	0	0	22	5	1	0	0	27	0	1	12	1	2	0	0	15	0	0	0	0	0	0	0	0
07:15 - 07:30	0	0	0	0	0	0	0	0	0	1	30	8	3	1	0	41	0	0	12	3	3	0	0	18	0	0	1	0	0	0	0	1
07:30 - 07:45	0	0	3	0	0	0	0	3	0	0	76	10	2	0	0	88	0	0	10	1	0	0	0	11	0	0	0	0	0	0	0	0
07:45 - 08:00	0	0	0	0	0	0	0	0	1	1	36	12	0	0	0	49	0	0	10	1	1	0	0	12	0	0	0	0	0	0	0	0
Hourly Total	0	0	4	1	0	0	0	5	1	2	244	35	6	1	0	292	0	1	44	6	6	0	0	57	0	0	1	0	0	0	0	1
08:00 - 08:15	0	0	4	2	0	0	0	6	0	0	86	11	0	1	0	100	0	0	36	1	0	0	0	39	0	0	0	0	0	0	0	0
08:15 - 08:30	0	0	2	0	0	0	0	2	0	0	110	6	1	0	0	117	0	0	50	1	0	0	0	51	0	0	0	0	0	0	0	0
08:30 - 08:45	0	0	1	0	0	0	0	1	0	0	96	10	1	0	0	98	0	0	42	3	0	0	0	45	0	0	0	0	0	0	0	0
08:45 - 09:00	0	0	0	1	0	0	0	1	0	0	78	9	0	0	1	88	0	0	35	4	0	0	0	39	0	0	1	0	0	0	0	1
Hourly Total	0	0	8	3	0	0	0	13	0	0	388	36	2	1	1	400	0	0	163	11	0	0	0	174	0	0	2	0	0	0	0	2
09:00 - 09:15	0	0	2	1	0	0	0	3	0	0	67	10	2	1	2	82	0	0	27	4	0	0	0	31	0	0	0	0	0	0	0	1
09:15 - 09:30	0	0	5	2	0	0	0	7	0	0	61	7	1	0	2	71	0	0	32	3	0	0	0	36	0	0	0	0	0	0	0	3
09:30 - 09:45	0	0	1	0	0	0	0	1	0	0	40	4	4	0	0	48	0	0	22	6	0	0	0	28	0	0	2	0	0	0	0	2
09:45 - 10:00	0	0	4	0	0	0	0	4	0	0	41	10	2	0	0	53	0	0	30	1	0	0	0	31	0	0	2	0	0	0	0	2
Hourly Total	0	0	12	3	0	0	0	15	0	0	209	31	9	1	4	244	0	0	111	16	0	0	1	129	0	0	8	6	0	0	0	8
TOTAL	0	0	24	7	1	0	1	33	4	2	811	102	17	5	5	946	0	1	318	33	6	0	1	389	0	0	10	1	0	0	0	11
16:00 - 16:15	0	1	2	1	0	0	0	4	0	0	26	6	2	0	2	34	0	0	53	2	0	0	0	55	0	0	0	0	0	0	0	0
16:15 - 16:30	0	0	3	0	0	0	0	3	0	0	29	8	1	1	1	40	0	1	42	5	0	0	0	49	0	0	0	0	0	0	0	0
16:30 - 16:45	0	0	2	0	0	0	0	2	0	0	28	8	3	0	1	40	0	2	57	4	0	0	0	63	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	4	0	0	0	0	4	1	1	44	4	2	3	0	55	0	0	46	5	0	0	0	51	0	0	0	0	0	0	0	1
Hourly Total	0	1	11	1	0	0	0	13	1	1	127	26	6	4	4	171	0	3	198	16	0	0	1	218	0	0	1	0	0	0	0	1
17:00 - 17:15	0	0	4	1	0	0	0	5	2	1	17	8	3	3	0	28	0	0	49	2	0	0	0	51	0	0	0	0	0	0	0	0
17:15 - 17:30	0	0	3	0	0	0	0	3	3	1	34	4	1	2	0	45	0	0	58	10	0	0	0	68	0	0	1	0	0	0	0	1
17:30 - 17:45	0	0	4	2	0	0	0	6	0	0	36	1	1	1	1	39	0	0	42	2	0	0	0	44	0	0	1	0	0	0	0	1
17:45 - 18:00	0	0	14	0	0	0	0	14	0	1	28	4	0	0	0	33	0	1	43	5	0	0	0	49	0	0	0	0	0	0	0	0
Hourly Total	0	0	25	3	0	0	0	28	5	3	135	17	5	6	0	171	0	1	192	19	0	0	1	213	0	0	2	0	0	0	0	2
18:00 - 18:15	0	0	13	0	0	0	0	13	0	0	21	3	0	0	0	24	0	0	29	5	0	0	0	34	0	0	0	0	0	0	0	0
18:15 - 18:30	0	0	4	0	0	0	0	4	0	1	32	1	0	0	0	34	0	0	38	2	0	0	0	40	0	0	0	0	0	0	0	0
18:30 - 18:45	0	0	1	0	0	0	0	1	1	0	43	1	0	1	0	45	0	0	31	2	0	0	0	33	0	0	0	0	0	0	0	0
18:45 - 19:00	0	0	1	0	0	0	0	1	0	0	35	2	0	0	0	37	0	0	22	3	0	0	0	25	0	0	1	0	0	0	0	1
Hourly Total	0	0	19	0	0	0	0	19	1	1	121	7	0	1	0	131	0	0	120	12	0	0	0	132	0	0	2	0	0	0	0	2
TOTAL	0	1	55	4	0	0	0	60	7	5	383	60	13	11	4	473	0	4	510	47	0	0	2	563	0	0	5	6	0	0	0	5



Port Talbot, Thursday 9th September 2021

Junction: 2 (RED)
Approach: Fernbrook Close

TIME	To Bagin Way							To Village Road							To Unnamed Road									
	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL
07:00-07:15	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0	0	0	1	0	0	0	1
07:15-07:30	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
07:30-07:45	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3	0	0	3	0	0	0	0	3
07:45-08:00	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3
Hourly Total	0	0	1	1	0	0	0	2	1	0	2	1	0	0	0	4	0	1	5	2	0	0	0	8
08:00-08:15	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	4	0	0	0	0	4
08:15-08:30	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
08:30-08:45	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1
08:45-09:00	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
Hourly Total	0	0	4	0	0	0	0	4	0	0	3	0	0	0	0	3	0	0	7	0	0	0	0	7
09:00-09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	2
09:15-09:30	0	0	1	1	0	0	0	2	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0
09:30-09:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	3	0	0	0	0	3
09:45-10:00	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	4	0	0	2	0	0	0	0	2
Hourly Total	0	0	1	1	0	0	0	2	0	0	5	2	0	0	1	8	0	0	5	1	1	0	0	7
TOTAL	0	0	6	2	0	0	0	8	1	0	10	3	0	0	1	18	0	1	17	3	1	0	0	22
16:00-16:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	1	0	0	0	2
16:15-16:30	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:30-16:45	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4
Hourly Total	0	0	5	0	0	0	0	5	0	0	1	1	0	0	0	2	0	0	6	4	0	0	0	10
17:00-17:15	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	1	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	3	1	0	0	0	4
17:30-17:45	0	0	3	0	0	0	0	3	0	0	1	0	0	0	0	1	0	0	2	0	0	0	0	2
17:45-18:00	0	0	2	0	0	0	0	2	0	0	1	0	0	0	0	1	0	0	4	2	0	0	0	6
Hourly Total	0	0	5	0	0	0	0	5	0	0	4	2	0	0	0	6	0	0	9	4	0	0	0	13
18:00-18:15	0	0	1	0	0	0	0	1	0	0	1	1	0	0	0	2	0	0	1	0	0	0	0	1
18:15-18:30	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30-18:45	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
18:45-19:00	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0	0	4
Hourly Total	0	0	4	0	0	0	0	4	0	0	6	1	0	0	0	7	0	0	2	0	0	0	0	2
TOTAL	0	0	14	0	0	0	0	14	0	0	11	4	0	0	0	18	0	0	17	8	0	0	0	26



Port Talbot, Thursday 9th September 2021

Junction: 2 (RED)
Approach: Baglan Way

TIME	To Village Road							To Unnamed Road							To Fernbrook Close							Up Turn										
	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL
07:00 - 07:15	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 - 07:30	0	0	1	0	0	0	1	0	0	0	4	0	1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 - 07:45	0	0	1	0	0	0	1	0	0	4	3	0	2	0	0	9	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 - 08:00	0	0	2	0	0	0	2	0	0	4	1	0	1	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	4	0	0	0	4	0	0	15	4	1	3	0	0	23	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
08:00 - 08:15	0	0	0	0	0	0	0	0	0	12	4	1	3	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 - 08:30	0	0	0	0	0	2	0	0	0	13	2	1	1	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 - 08:45	0	0	0	0	0	1	0	0	0	7	3	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 - 09:00	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Hourly Total	0	0	4	0	0	3	2	6	0	0	34	5	2	1	0	42	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
09:00 - 09:15	0	0	0	0	0	0	0	0	1	1	4	0	0	0	0	7	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 - 09:30	0	0	0	0	0	0	3	0	0	5	0	1	1	1	0	7	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 - 09:45	0	0	0	0	0	0	0	0	0	11	4	3	3	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 - 10:00	0	0	0	0	0	1	1	0	0	5	2	2	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	3	1	0	0	2	6	0	1	25	7	7	4	0	44	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0
TOTAL	0	0	11	1	0	0	4	16	0	1	74	16	10	8	0	109	0	0	7	0	0	0	0	7	0	0	1	0	0	0	0	1
16:00 - 16:15	0	0	3	1	0	0	0	4	1	0	24	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15 - 16:30	0	0	2	0	0	0	0	2	0	0	18	2	0	0	0	20	1	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0
16:30 - 16:45	0	0	2	0	0	0	1	3	0	1	29	2	1	0	0	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	0	0	0	1	3	0	0	0	21	5	0	0	0	26	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0
Hourly Total	0	0	9	1	0	0	2	12	1	1	92	9	1	0	0	104	1	0	3	0	0	0	0	4	0	0	0	0	0	0	0	0
17:00 - 17:15	0	0	0	0	0	1	2	3	0	0	40	0	1	1	0	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15 - 17:30	0	0	0	0	0	0	0	0	0	16	0	0	0	0	1	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30 - 17:45	0	0	0	0	0	0	0	0	0	2	2	0	14	0	0	16	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0
17:45 - 18:00	0	0	0	0	0	0	0	0	1	0	10	3	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	9	0	0	0	0	10	1	0	60	3	1	1	0	66	0	0	3	1	0	0	0	11	0	0	0	0	0	0	0	0
18:00 - 18:15	0	0	0	0	0	0	0	0	3	0	11	1	0	0	2	17	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0
18:15 - 18:30	0	0	3	0	0	0	0	3	0	0	10	0	0	0	0	10	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30 - 18:45	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45 - 19:00	0	0	1	0	0	0	0	1	0	0	7	2	0	1	0	10	1	0	1	0	0	0	0	2	0	0	1	0	0	0	0	1
Hourly Total	0	0	4	0	0	0	0	4	3	0	33	3	0	3	0	42	2	0	3	0	0	0	0	4	0	0	1	0	0	0	0	1
TOTAL	0	0	22	1	0	0	3	26	8	1	205	15	2	4	1	236	3	0	18	1	0	0	0	22	0	0	1	0	0	0	0	0



Port Talbot, Thursday 9th September 2021

Junction: 2 (RED)
Approach: Village Road

TIME	To Unnamed Road							To Ferndown Close							To Bagin Wall							Up Turn										
	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LEV	OVV1	OVV2	BUS	TOTAL
07:00-07:15	0	0	2	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15-07:30	0	0	2	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	
07:30-07:45	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	
07:45-08:00	0	1	10	1	0	0	0	12	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	
Hourly Total	0	1	20	5	0	0	0	24	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	0	
08:00-08:15	0	0	11	1	0	0	0	12	0	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	7	0	0	0	0	0	0	
08:15-08:30	0	0	14	1	0	0	0	15	0	0	1	0	0	0	0	1	0	0	2	0	0	0	0	0	2	0	1	0	0	0	0	
08:30-08:45	0	0	19	0	1	0	0	20	0	0	1	0	0	0	0	1	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	
08:45-09:00	0	0	12	1	0	0	0	13	0	0	1	0	0	0	0	1	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0	
Hourly Total	0	0	56	3	1	0	0	60	0	0	3	0	0	0	0	3	0	0	15	1	0	0	0	0	16	0	1	1	0	0	0	
09:00-09:15	0	0	9	4	0	0	0	13	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	
09:15-09:30	0	0	10	1	0	0	0	11	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	
09:30-09:45	0	0	8	0	0	0	0	8	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:45-10:00	0	1	11	1	0	0	1	14	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	
Hourly Total	0	1	40	6	0	0	1	48	0	0	1	0	0	0	0	1	0	0	2	1	0	0	0	0	3	0	0	0	0	0	0	0
TOTAL	0	2	124	14	1	0	1	142	0	0	4	0	0	0	0	4	0	0	22	2	0	0	0	0	24	0	0	1	1	0	0	0
16:00-16:15	0	0	4	4	0	0	0	8	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:15-16:30	0	0	12	1	0	0	0	13	0	0	1	0	0	0	0	1	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0	
16:30-16:45	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	
16:45-17:00	0	0	12	1	0	0	0	14	0	0	2	0	0	0	0	2	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	
Hourly Total	0	0	31	6	0	0	1	38	0	0	4	1	0	0	0	5	0	0	7	1	0	0	0	0	8	0	0	0	0	0	0	
17:00-17:15	0	0	8	0	0	0	0	8	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:15-17:30	0	0	14	1	0	0	0	15	1	0	1	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:30-17:45	0	0	11	1	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:45-18:00	0	0	10	2	0	0	1	13	0	0	3	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	43	4	0	0	1	48	1	0	5	2	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:00-18:15	1	0	12	0	0	0	0	13	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:15-18:30	0	0	6	2	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:30-18:45	1	3	3	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	
18:45-19:00	0	0	18	0	0	0	0	18	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
Hourly Total	2	3	39	2	0	0	0	48	0	0	5	0	0	0	0	5	0	0	3	0	0	0	0	0	3	0	0	1	0	0	0	0
TOTAL	2	3	113	12	0	0	2	132	1	0	14	3	0	0	0	18	0	0	10	1	0	0	0	0	11	0	0	1	0	0	0	0



Port Talbot, Thursday 9th September 2021

2 (RED)

Vehicle Class:

All Vehicles

Show Peak Hour: ☐

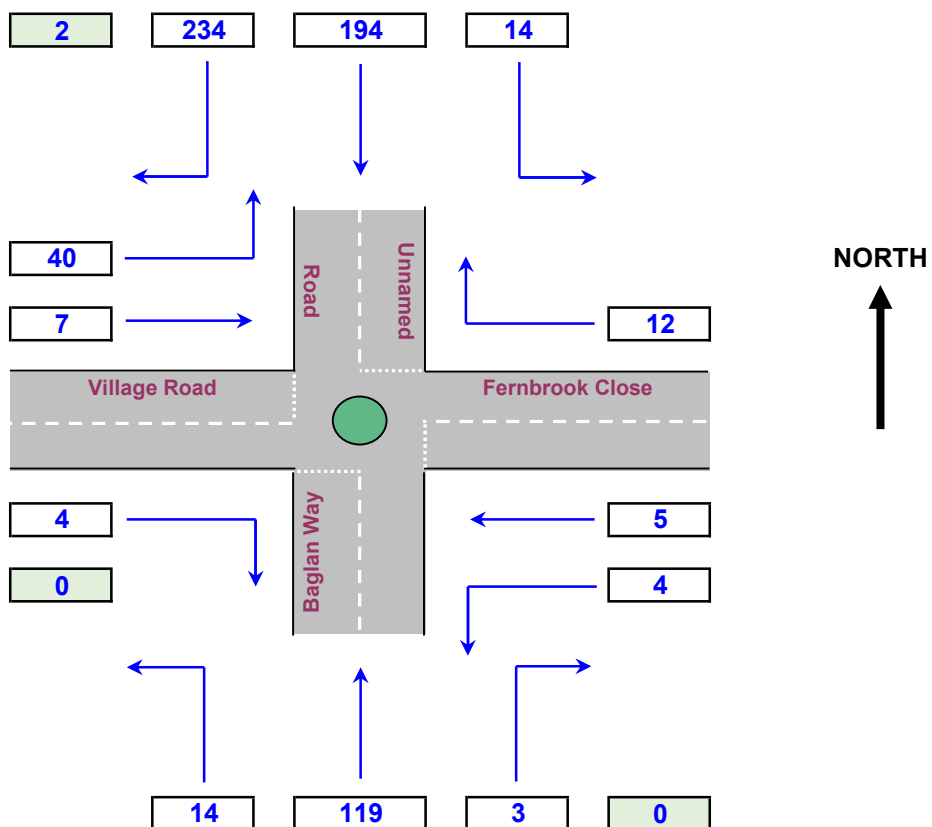
Start Time:

2) 16:30

End Time:

2) 17:30

Show Session 2





Approach: A4241 Seaway Parade North

	To Unnamed Road (E)								To A4241 Seaway Parade (S)								To Unnamed Road (W)							
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	1	32	4	1	0	0	38	0	0	61	13	3	1	0	78	0	0	0	0	0	0	0	0
07:15 - 07:30	0	0	59	7	3	1	0	70	0	1	81	12	1	2	1	98	0	0	0	0	0	0	0	0
07:30 - 07:45	0	0	80	8	2	0	0	90	1	1	109	19	0	0	1	131	0	0	0	0	0	0	0	0
07:45 - 08:00	1	0	100	10	0	0	0	111	0	1	155	35	1	1	1	194	0	0	0	0	0	0	0	0
Hourly Total	1	1	271	29	6	1	0	309	1	3	406	79	5	4	3	501	0	0	0	0	0	0	0	0
08:00 - 08:15	0	0	116	11	0	3	0	130	0	0	183	30	2	0	1	216	0	0	0	0	0	0	0	0
08:15 - 08:30	0	0	139	6	1	0	0	146	0	1	211	21	4	2	1	240	0	0	0	0	0	0	0	0
08:30 - 08:45	0	0	111	11	2	0	1	125	0	0	164	32	0	1	5	202	0	0	0	0	0	0	0	0
08:45 - 09:00	0	0	105	10	0	0	1	116	0	0	150	26	0	0	4	180	0	0	0	0	0	0	0	0
Hourly Total	0	0	471	38	3	3	2	517	0	1	708	109	6	3	11	838	0	0	0	0	0	0	0	0
09:00 - 09:15	0	0	80	12	1	1	2	96	0	0	123	20	3	1	0	147	0	0	0	0	0	0	0	0
09:15 - 09:30	0	0	88	9	0	0	3	100	0	0	104	23	2	1	2	132	0	0	0	0	0	0	0	0
09:30 - 09:45	1	0	52	9	2	0	0	64	0	0	89	20	2	1	0	112	0	0	0	0	0	0	0	0
09:45 - 10:00	0	0	62	11	2	0	0	75	0	0	112	18	3	0	1	134	0	0	0	0	0	0	0	0
Hourly Total	1	0	282	41	5	1	5	335	0	0	428	81	10	3	3	525	0	0	0	0	0	0	0	0
TOTAL	2	1	1024	108	14	5	7	1161	1	4	1542	269	21	10	17	1864	0	0	0	0	0	0	0	0
16:00 - 16:15	0	0	56	6	1	0	2	65	0	1	121	17	2	0	1	142	0	0	0	0	0	0	0	0
16:15 - 16:30	0	1	54	9	1	1	2	68	0	0	136	15	1	4	0	156	0	0	0	0	0	0	0	0
16:30 - 16:45	0	1	66	10	3	0	1	81	0	1	149	11	2	5	0	168	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	76	7	2	2	0	87	0	1	130	11	3	0	1	146	0	0	0	0	0	0	0	0
Hourly Total	0	2	252	32	7	3	5	301	0	3	536	54	8	9	2	612	0	0	0	0	0	0	0	0
17:00 - 17:15	0	0	67	8	2	2	0	79	0	0	128	6	0	1	0	135	0	0	0	0	0	0	0	0
17:15 - 17:30	1	1	77	12	1	2	1	95	0	0	148	18	0	0	0	166	0	0	0	0	0	0	0	0
17:30 - 17:45	0	0	71	4	1	1	0	77	1	2	137	5	0	1	0	146	0	0	0	0	0	0	0	0
17:45 - 18:00	0	1	70	8	0	0	0	79	0	1	150	8	1	0	4	164	0	0	0	0	0	0	0	0
Hourly Total	1	2	285	32	4	5	1	330	1	3	563	37	1	2	4	611	0	0	0	0	0	0	0	0
18:00 - 18:15	0	0	53	6	0	0	0	59	0	0	140	9	0	0	3	152	0	0	0	0	0	0	0	0
18:15 - 18:30	0	1	49	3	0	0	0	53	0	0	141	5	0	0	1	147	0	0	0	0	0	0	0	0
18:30 - 18:45	0	0	53	2	0	1	0	56	0	4	131	8	0	1	2	146	0	0	0	0	0	0	0	0
18:45 - 19:00	0	0	45	6	0	0	0	51	0	0	110	6	0	0	4	120	0	0	0	0	0	0	0	0
Hourly Total	0	1	200	17	0	1	0	219	0	4	522	28	0	1	10	565	0	0	0	0	0	0	0	0
TOTAL	1	5	737	81	11	9	6	850	1	10	1621	119	9	12	16	1788	0	0	0	0	0	0	0	0