

Proposed truckstop on land at Tyn-y-Caeau,  
Margam Road, Margam, Port Talbot

# Transport Assessment

12 October 2021

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For and on behalf of  
**Recycling Plant and Machinery Ltd.**



**Project Ref: 2020-547**

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## 1 INTRODUCTION

- 1.1 LVW Highways Ltd has been appointed by Recycling Plant and Machinery Ltd. to produce a Transport Assessment (TA) for a Proposed truckstop on land at Tyn-y-Caeau, Margam Road, Margam, Port Talbot.
- 1.2 The site is located immediately west of the A48 Margam Road between the M4 Junction 38 at Margam and the A4241 Harbour Way roundabout. Port Talbot town is situated within 5km to the north-north west of the site and is access along the A4241 Harbour Way or the A48 Margam Road (but not directly from the M4 motorway).
- 1.3 The proposal comprises the formation of a truck stop, with change of use of the existing guest house & annexe to guest room accommodation, with café and erection of rear single-storey extension to accommodate spa facilities, together with formation of a HGV Parking Area, internal access road & associated infrastructure on land at Tyn-y-Caeau, Margam Road, Margam, Port Talbot. The site location and the surrounding area can be seen in **Figure 1**.

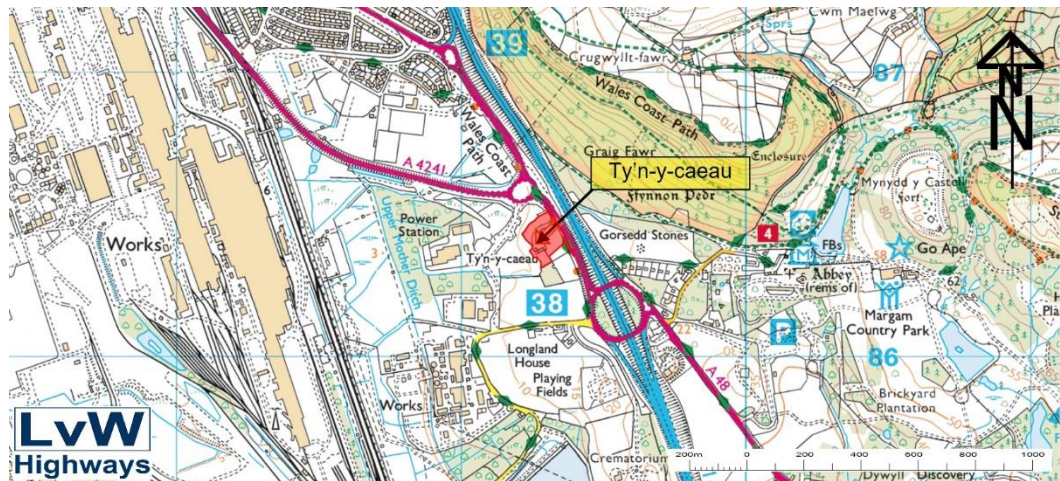


Figure 1: Site Locations OS25k

- 1.4 The existing vehicle bell mouth junction is currently providing access and egress to and from the existing site and buildings. It is proposed that access to the site will be gained from an improved access at the same location.

### Background

- 1.5 The existing buildings on the site have planning consent as a guest house consisting of 5 on-suite bedrooms and 7no. Self-contained studio/apartments under permission P2005/0449. These were designed and built for the comfort of customers wishing short and long term stays. Planning permission P2006/1396 approved an extension to the existing buildings.
- 1.6 Access to the site under these permissions was not changed and uses the existing access with no improvements. There are no limitations within the planning permissions of the size of volume of vehicles allowed to use the facilities.
- 1.7 A planning application for the truck stop was submitted to Neath Port Talbot County Borough Council (NPTCBC) (P2020/0601) and received on 7<sup>th</sup> July 2020, it was validated on 14<sup>th</sup> August 2020. The planning application was refused and the decision was issued on 15<sup>th</sup> October 2020.

- 1.8 A planning appeal was lodged with The Planning Inspectorate and as part of this process, the Inspectorate has requested a Transport Assessment and an Environment Assessment to be prepared and submitted.

#### **Purpose of the report**

- 1.9 The purpose of this report is to assess the implications of the proposals and identify the potential impact of the proposals on the surrounding transport network.
- 1.10 This Transport Assessment sets out the transport issues relating to the proposed development site. The structure of the Transport Assessment has been informed by best practice advice contained within 'Guidance for Transport Assessment (DfT 2007).
- 1.11 This document considers the accessibility of the site by all forms of transport, the likely trip generation of the development and other transport related issues associated with the development.
- 1.12 This TA comprises the following sections:
- Introduction
  - Planning Policy and HGV drivers' rules
  - Existing Conditions
  - Need for a truckstop
  - Proposed Development
  - Transport Accessibility and Sustainability
  - Trip Generation and Distribution
  - Future Year Assessment
  - Impact on the Transport Network
  - Construction Traffic
  - Mitigation Measures
  - Concluding Comments
- 1.13 This TA has been prepared to satisfy the requirements of Planning Policy Wales, to inform the assessment of transport impacts and to assist Welsh Government in its role as the highway authority responsible for the strategic road network, and NPTCBC as Local Highway Authority. Its contents have been used by other members of the applicant's team to assist in the design of the scheme and to help bring forward the proposals.

## **2 PLANNING POLICY AND HGV DRIVERS' RULES**

2.1 This section of the TA considers the current transport planning policy framework against which the development proposals need to be assessed. Relevant existing and emerging transport policies and guidance have been examined and reviewed. These include the following:

- Planning Policy Wales (PPW), Edition 11, February 2021.
- Technical Advice Note (TAN) 18: Transport (2007),
- Future Wales – the National Plan 2040 (Feb 2021),
- Active Travel (Wales) Act 2013 and
- Wellbeing of Future Generations (Wales) Act 2015.
- NPTCBC Local Development Plan: (2011 to 2026), Adopted January 2016.
- DfT Circular 02/2013 'The Strategic Road Network and the Delivery of Sustainable Development', September 2013.

### **Planning Policy Wales**

2.2 Trunk roads and motorways have a national and international role, providing a network of high quality roads carrying long distance traffic between major centres.

2.3 Paragraph 5.310 provides information to Local authorities in that they should utilise available powers to reduce the need to use trunk roads and other through routes for short, local journeys. Direct access to a motorway or motorway slip road would not be acceptable other than to a motorway service area approved by the Welsh Ministers.

2.4 Direct access from new development on to a primary road should be avoided where possible. Where feasible, access should be on to a secondary road. At any location, traffic flow and safety can be assisted by good junction design. The number of accesses permitted will depend upon the type and nature of the road. Similarly, the type of access provided should reflect the type of road and the volume and character of traffic likely to use the access and the road.

2.5 Walking, cycling and public transport are prioritised to provide a choice of transport modes and avoid dependence on private vehicles. Well designed and safe active travel routes connect to the wider active travel and public transport network and public transport stations and stops are positively integrated.

### **Technical Advice Note (TAN) 18: Transport (2007)**

2.6 TAN18 promotes housing development at locations with good access by walking and cycling to primary and secondary schools and public transport stops, and by all modes to employment, further and higher education, services, shopping and leisure, or where such access will be provided as part of the scheme.

### **Future Wales: The National Plan 2040**

2.7 A Wales where people live in places where travel is sustainable. All methods of travel will have low environmental impact and low emissions, with increased use of public transport and ultra-low emission vehicles replacing today's petrol and diesel vehicles. Sustainable transport infrastructure will be embedded within development to enable easy and convenient access from one place to another for commuting, business, tourism and leisure purposes. Development will focus on active travel and public transport, allied with a reduced reliance on private vehicles.

### The Active Travel (Wales) Act 2013

- 2.8 The Active Travel (Wales) Act 2013 is Welsh Government legislation aimed to support an increase in the level of walking and cycling in Wales, to encourage a shift in travel behaviour to active travel modes, and to facilitate the building of walking and cycling infrastructure.
- 2.9 Active travel is a term used to describe walking and cycling for purposeful journeys to a destination, or in combination with public transport. Whilst walking and cycling are in themselves healthy activities that are to be encouraged, it is when they displace car journeys that they deliver significant benefits for the health and well-being of Wales. Achieving modal shift by displacing private car journeys with walking and cycling and public transport is at the heart of Llwybr Newydd, the Wales Transport Strategy.
- 2.10 The provisions of the act therefore put in place the conditions that will allow many more people whose current mode of travel is the car to switch to more sustainable modes for shorter journeys and facilitate access to public transport as part of longer distance journeys.
- 2.11 The active travel network is designed to serve everyday journeys. These are also known as utility journeys – trips with a purpose rather than purely for leisure. Examples of destinations which can be considered to form an everyday or utility journey include; school or other educational establishments, local shops, employment sites, healthcare facilities, and other destinations people travel to for a purpose.
- 2.12 In the Welsh Government publication “Active Travel Act Guidance July 2021” Table 4.1 provides a guide for network development in relation to reasonable distances that would be travelled by each respective mode. Table 4.1 is not descriptive of all active users and travel distances may be dependent upon a number of factors such as journey purpose, topography or suitability of route. We have presented Table 4.1 in **Figure 2** below.

| Mode                                                                                | Less than 1 mile                                                                    | Up to 2 miles                                                                       | Up to 3 miles                                                                       | Up to 4 miles                                                                         | Up to 5 miles                                                                         | Up to 7.5 miles                                                                       | Up to 15 miles                                                                        |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

| Colour                                                                              | Average active user likelihood                                      |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------|
|  | Many users likely to travel this distance for utility journeys      |
|  | Some users likely to travel this distance for utility journeys      |
|  | Few or no users likely to travel this distance for utility journeys |

**Figure 2: Typical distance range for each mode of active travel**

- 2.13 In summary the Welsh Government consider walking a suitable alternative to car journeys for up to 2 miles and cycling up to 5 miles.

**Well-being of Future Generations (Wales) Act**

2.14 The Well-being of Future Generations (Wales) Act is about improving the social, economic, environmental and cultural well-being of Wales.

2.15 To make sure we are all working towards the same vision, the act puts in place 7 well-being goals, these are:-

**A prosperous Wales**

- An innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately (including acting on climate change); and which develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities, allowing people to take advantage of the wealth generated through securing decent work.

**A resilient Wales**

- A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example, climate change).

**A healthier Wales**

- A society in which people's physical and mental well-being is maximised and in which choices and behaviours that benefit future health are understood.

**A more equal Wales**

- A society that enables people to fulfil their potential no matter what their background or circumstances (including their socio-economic background and circumstances).

**A Wales of cohesive communities**

- Attractive, viable, safe and well-connected communities.

**A Wales of vibrant culture and thriving Welsh language**

- A society that promotes and protects culture, heritage and the Welsh language, and which encourages people to participate in the arts, and sports and recreation.

**A globally responsible Wales**

- A nation which, when doing anything to improve the economic, social, environmental and cultural well-being of Wales, takes account of whether doing such a thing may make a positive contribution to global well-being.

**NPTCBC Local Plan**

2.16 The Primary network comprises the M4 motorway, the A465(T) and the A483. These are routes that are fundamental in allowing Neath Port Talbot to function regionally and provide the key network for the movement of people and goods, carrying a substantial amount of traffic. The Core network comprises the A48, A4109, A4107, A474, A4067, A4221 and A4069. These routes are identified in the Joint Transport Plan as the Regional Strategic Highway Network and consist of major roads that provide key routes through the County Borough.

### Committed Development

- 2.17 We are aware of the fields surrounding Ty'n-y-caeau are included as committed development within the NPTCBC LDP. The site reference is EC1/2, it is allocated as an employment site under LDP Policy EC 1 Employment Allocations. The allocation site is described as Junction 38 (M4), Margam with a site area of 6 ha and the permitted use class is B1, B2 and B8.
- 2.18 The allocated site and its relation to the proposed truckstop site at Ty'n-y-caeau is shown in **Figure 3**.

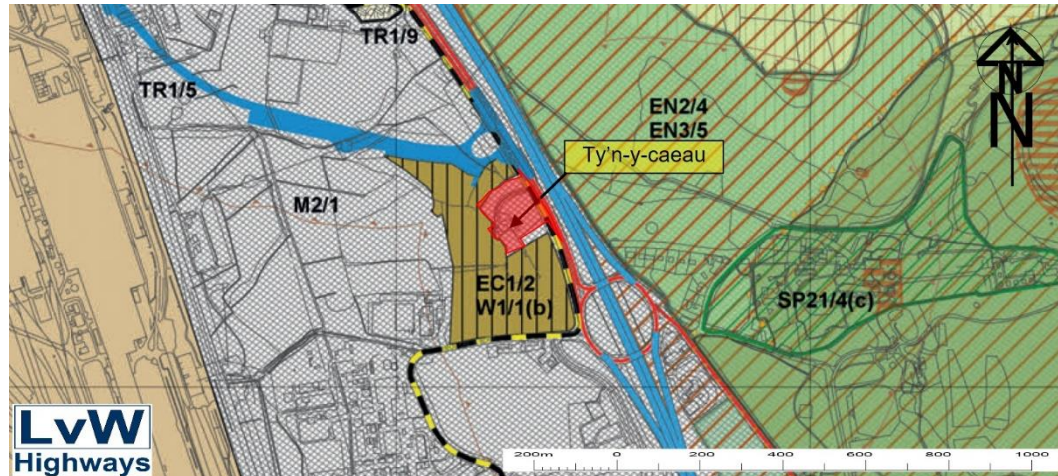


Figure 3: LDP Site Allocation EC1/2

### DfT Circular 02/2013

- 2.19 Circular 02/2013 published by the Department for Transport in September 2013 sets out the Government's policy on the strategic road network and the delivery of sustainable development, and how the then Highways Agency would undertake its role of operating, maintaining and improving the SRN on behalf of the Secretary of State for Transport.
- 2.20 Paragraph 25 of the Circular sets out the requirement that the overall forecast demand of the development should be compared to the ability of the existing network to accommodate traffic over a period up to ten years after the date of registration of a planning application or the end of the relevant Local Plan period, whichever is the greater.
- 2.21 The application is being made in 2021 therefore the forecast year of ten years after the date of registration is 2031. The adopted plan period ends in 2026, so it is the 2031 date that is applicable.
- 2.22 Circular 02/2013 sets out the policy for the provision, standards and eligibility for signing of roadside facilities on the strategic road network. Annex B deals with spacing, location and the minimum requirements including the mandatory parking provision.
- 2.23 In respect to spacing, paragraph B4 makes the point that motorway service areas and other roadside facilities perform an important road safety function by providing opportunities for the travelling public to stop and take a break in the course of their journey. This is very important as driver fatigue is thought to be a contributory factor in up to 20% of road accidents and up to a quarter of fatal and serious accidents<sup>1</sup>. Government advice is to plan your journey to take sufficient breaks; a

<sup>1</sup> RoSPA Policy Statement 'Driver Fatigue and Road Accidents June 2011

minimum break of at least 15 minutes after every two hours of driving is recommended<sup>2</sup>.

- 2.24 Paragraph B5 points out the network of service areas on the strategic road network has been developed on the premise that opportunities to stop are provided at intervals of approximately half an hour, but goes on to state the timing is not prescriptive as at peak hours, on congested parts of the network, travel between service areas may take longer.
- 2.25 Paragraph B6 recommends that the maximum distance between motorway service areas should be no more than 28 miles; the distance can be shorter but to protect the safety and operation of the network, the access/egress arrangements of facilities must comply with the requirements of the Design Manual for Roads and Bridges including its provisions in respect of junction separation.
- 2.26 Paragraph B7 deals with services on trunk roads. It states the maximum distance between signed services should be the equivalent of 30 minutes driving time.
- 2.27 Paragraph B8 states the distances set out in the Annex are considered appropriate for all parts of the strategic road network regardless of traffic flows or route choice. It goes on to state:

*"In determining applications for new or improved sites, local planning authorities should not need to consider the merits of spacing of sites beyond conformity with the maximum and minimum spacing criteria established for safety reasons."*

- 2.28 In respect to location, paragraph B13 makes the point that on-line (between junctions) service areas are considered to be more accessible to road users and as a result are more attractive and conducive to encouraging drivers to stop and take a break.
- 2.29 Paragraph B14 states in circumstances where competing sites are under consideration, on the assumption that all other factors are equal, the Department for Transport has a preference for new facilities at on-line locations.
- 2.30 Paragraph B15 addresses the circumstances where an on-line service area cannot be delivered. In these circumstances, a site sharing a common boundary with the highway at a junction with the strategic road network is to be preferred to the continued absence of facilities.
- 2.31 In respect to the minimum requirements including the mandatory parking provision, Table B1 at paragraph B17 sets out the minimum requirements for various types of roadside facility and Schedule 1 sets out the parking requirements which are based on the traffic flows using the most recent complete year data to identify the peak month flow and averaging that to find the daily flow and then applying the appropriate formulae.

#### **Drivers Rules**

- 2.32 This section provides a very brief summary of HGV drivers' rules and the hours they can drive.

#### **Overview**

- 2.33 If you drive a goods vehicle or a passenger-carrying vehicle you must follow the rules on how many hours you can drive and the breaks that you need to take.

---

<sup>2</sup> The Highway Code: Rule 91

- 2.34 There are 3 sets of rules that could apply to your journey:
- GB domestic rules
  - EU rules
  - The European Agreement Concerning the Work of Crews of Vehicles Engaged in International Road Transport (AETR) rules (these are now the same as the EU rules on drivers' hours).
- 2.35 The rules that apply depend on:
- the type of vehicle you're driving
  - which country you're driving in
- 2.36 If you drive under the EU or GB domestic drivers' hours rules, you also need to follow the working time rules.
- 2.37 If you're an employer of drivers or mobile workers there are more rules to follow.
- 2.38 If drivers' break the drivers' hours rules, the Driver and Vehicle Standards Agency (DVSA) can issue:
- a verbal warning, for minor offences made by accident or because of inexperience;
  - an offence rectification notice, for offences which are not a risk to road safety - you'll have 21 days to fix the issue;
  - a prohibition notice, for serious or dangerous offences - you must stop a dangerous activity or start following the regulations;
  - a fine or points on your licence (a 'fixed penalty') – the amount depends on how serious the offence is;
- 2.39 Drivers' can be prosecuted for very serious or multiple offences.
- 2.40 DVSA can give drivers' further penalties (such as an improvement or prohibition notice) if they also break the working time rules.
- 2.41 In summary:-
- GB domestic rules**
- 2.42 Drivers' must not drive for more than 10 hours in a day on a public road.
- Breaks and continuous driving***
- 2.43 After 5 hours 30 minutes of driving you must take a break of at least 30 minutes for rest and refreshment.
- 2.44 Or, within any period of 8 hours 30 minutes, you must take at least 45 minutes in breaks. You must also have a break of at least 30 minutes at the end of this period, unless it's the end of the working day.
- Length of working day ('spreadover')***
- 2.45 You must not work more than 16 hours between the times of starting and finishing work - including non-driving work and any times when you're off.
- Daily rest periods***
- 2.46 You must take a rest of 10 hours before the first duty and immediately after the last duty in a working week.

- 2.47 You must take a rest of at least 10 hours between 2 working days (or spreadovers) - this can be reduced to 8.5 hours up to 3 times a week.

***Fortnightly rest periods***

- 2.48 Every 2 weeks you must take at least one period of 24 hours off duty.

- 2.49 A fixed week is from 00:00 hours on Monday to 24:00 hours the next Sunday.

**EU rules**

- 2.50 The main EU rules on driving hours are that drivers' must not drive more than:

- 9 hours in a day - this can be extended to 10 hours twice a week;
- 56 hours in a week;
- 90 hours in any 2 consecutive weeks.

- 2.51 All driving you do under EU rules must be recorded on a tachograph.

***Breaks and rest***

- 2.52 The main points of EU rules on breaks and rest are that drivers' must take:

- at least 11 hours rest every day – drivers' can reduce this to 9 hours rest 3 times between any 2 weekly rest periods
- an unbroken rest period of 45 hours every week - drivers' can reduce this to 24 hours every other week
- a break or breaks totalling at least 45 minutes after no more than 4 hours 30 minutes driving
- drivers' weekly rest after 6 consecutive 24-hour periods of working, starting from the end of the last weekly rest period taken

- 2.53 Coach drivers on an international trip can take their weekly rest after 12 consecutive 24-hour periods, starting from the end of the last weekly rest period taken.

- 2.54 More detailed information for lorry, bus and coach drivers' can be found on the can be found on the GOV.UK web site<sup>3</sup>.

- 2.55 Summary sheets for drivers' hours are contained within **Appendix A**.

**Summary and Conclusion**

- 2.56 It is evident from the above summary of policy that there is considerable overlap between the sources that have been reviewed. In view of this fact it is possible to distil the main initiatives of policy into a more abbreviated form. This is summarised as follows:

- The promotion of sustainable settlement pattern which minimise the need for unnecessary travel by car.
- The promotion of development which facilitate good linkages with existing public transport services.
- The provision of good linkages to and within the development site for walking and cycling.

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<sup>3</sup> [Drivers' hours - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

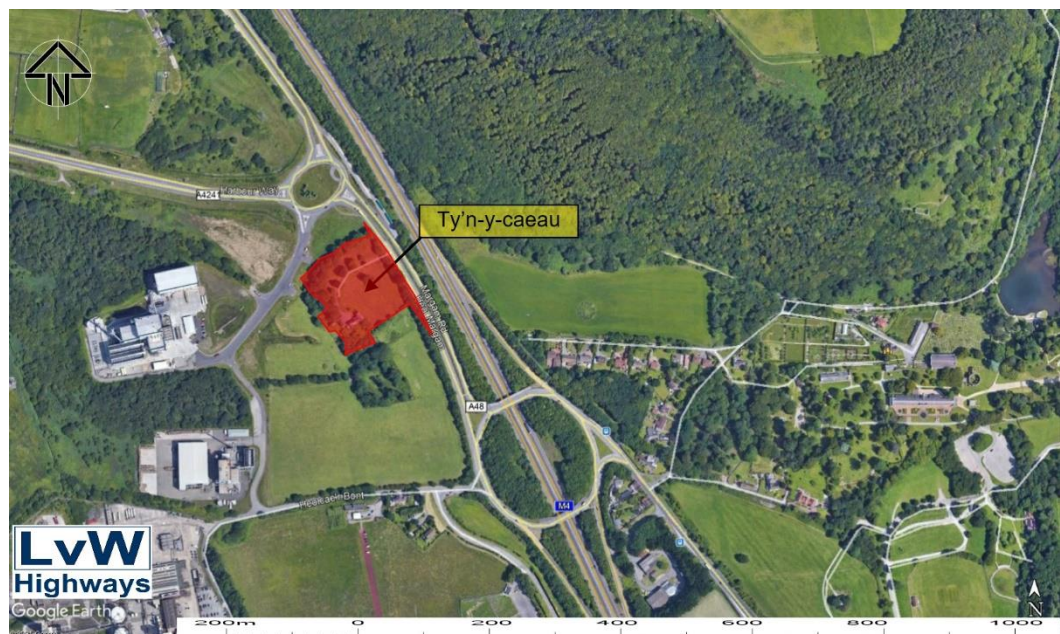
- The promotion of travel plans as part of the development process.
- The promotion of transport infrastructure that seek to minimise the adverse effects on transport on the environment.

2.57 This summary of current policy will be used as input to the transport implementation strategy to assess the extent to which intended improvements in transport infrastructure meet these objectives.

### 3 EXISTING CONDITIONS

#### The Site

- 3.1 The site of the proposed truckstop is located to the west of the A48 Margam Road north of the M4 Junction 38 and south of the roundabout linking the A48 with the A4241 Harbour Way.
- 3.2 For the purposes of this report the carriageway nearest to the site is described as the A48 Margam Road northbound carriageway as, in the context of the A48 as it runs past the site, traffic is travelling northbound.
- 3.3 The National Grid Reference of the approximate centre point of the proposed development site is SS 79260 86392, Easting 279260, Northing 186392. The site comprises an area of approximately 1.3 to 1.4 hectares. The location of the site is shown edged and highlighted in red in **Figure 4**. (taken from Google Earth).



**Figure 4: Site Location and the local area**

- 3.4 The ground profile of the land is such that the centre of site is domed where the land falls away in all direction. However, there is a constant crossfall from South to North where the land generally slopes downwards in a North Easterly direction. The site survey, to Ordnance Survey Datum, shows a maximum level difference of (16.3-11.5) = 4.8 m over an approximate distance of 127 m.

#### Existing Planning Consent

- 3.5 The site has a lawful use as a 14 room's guest house with no highway access improvements (P/2005/0049 and P/2006/1396). The works on the house and out buildings has been completed and signed off by building control, so this is the fall-back position to be considered. With some minor redecoration works, the house and outbuildings could be opened for use as a guest house.

#### Sustainable Modes of Transport

- 3.6 The proposed development is primarily directed at serving HGV drivers and some travelling public using motor vehicles. The scope for sustainable modes of transport is limited to some travel by employees.

### Active Travel Network

- 3.7 NPTCBC Integrated Network Map shows that the Active Travel shared route that runs along the A48 adjacent to Ty'n-y-Caeau will link with the cycling route INM-PT-C005 that connects to the town centre (shown as an orange line) on **Figure 5**.

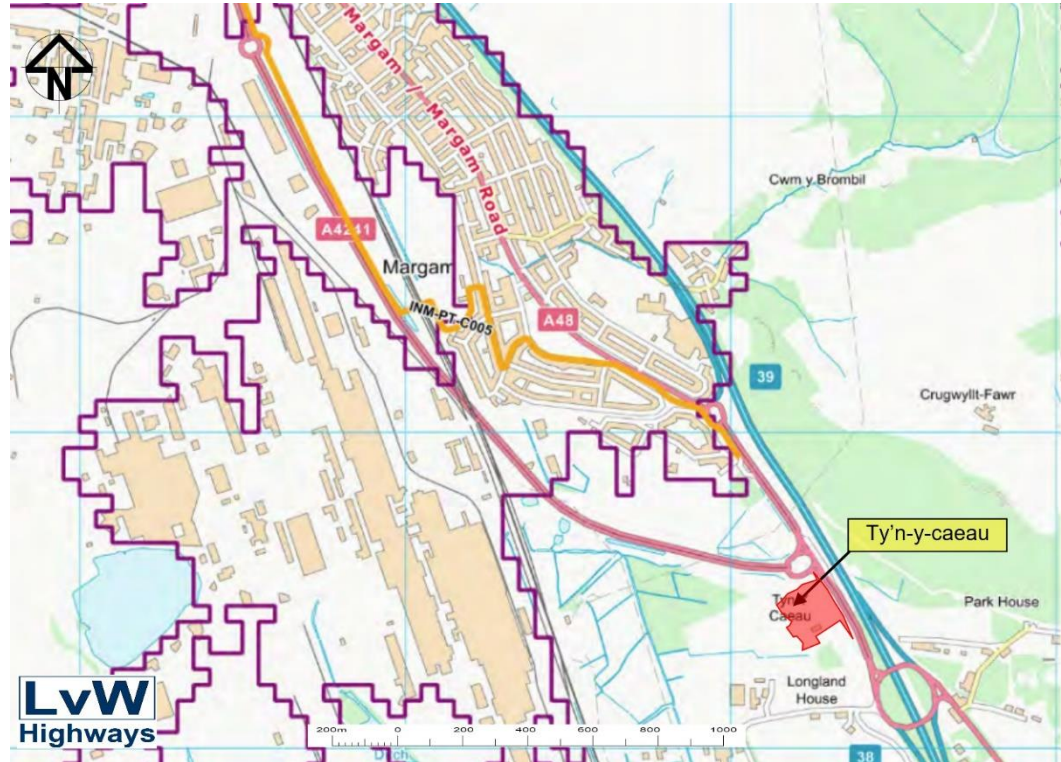


Figure 5: Margam Integrated Network Map

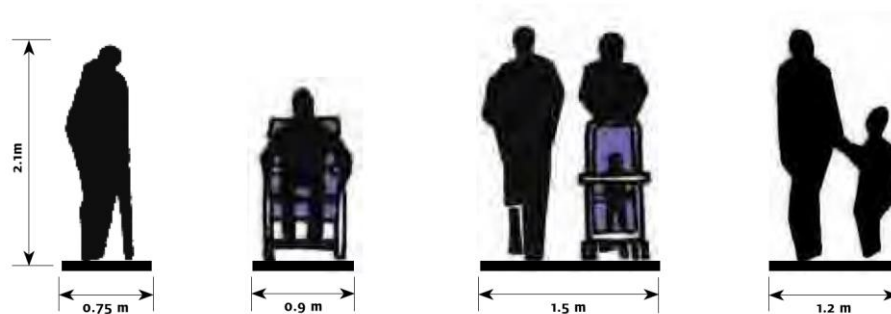
### *Learner Travel Statutory Provision and Operational Guidance (June 2014) - Walking Distances Eligibility*

- 3.8 Local Authorities are required to provide free transport for all pupils of compulsory school age (5-16) if their nearest suitable school is:
- Beyond 2 miles / 3.22 kilometres (if below the age of 8); or
  - Beyond 3 miles / 4.83 kilometres (if aged between 8 and 16).
- 3.9 A 400m walking distance to a bus stop and an 800m walking distance to a railway station has been widely adopted by many Highway Authorities. However, the reason why these distances have been selected is not clear. The most recent publication from CIHT (2015) acknowledges that the research is old and more work is required.

### *Pedestrian Facilities*

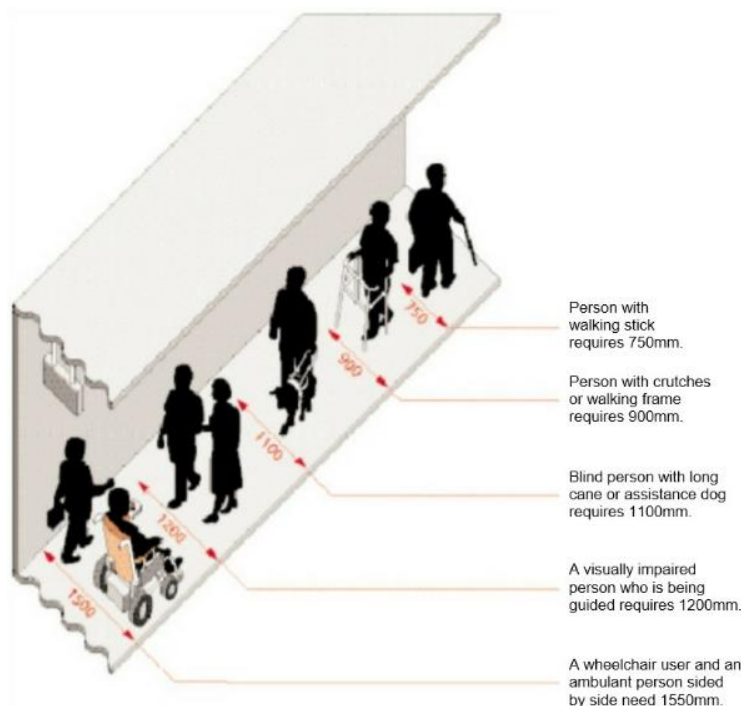
- 3.10 There is a continuous shared active travel route on the western side of the A48 from its junction with the M4 J38 interchange past the site access to the A4241 Harbour Way roundabout. They also benefits from an appropriate system of street lighting.
- 3.11 The pedestrian footway along the A48 Margam Road is provided with a width of 1.5m.

- 3.12 The Welsh Government publication “Active Travel Act Guidance July 2021”, refers to Manual for Streets that considers the width of footways required for pedestrian activity and **Figure 6** shows the width of typical pedestrian users.



**Figure 6: Manual for Street minimum footway widths**

- 3.13 As shown in **Figure 7**, an extract from DfT’s ‘Inclusive Mobility’ document (2002), a footway width of 1.5m is suitable for a wheelchair user and ambulant person side by side.



**Figure 7: Footway widths (DfT ‘Inclusive Mobility’ 2002)**

- 3.14 Pedestrian access to bus stops located on the A48 near the entrance to Margam Park are available via the existing footway links.
- 3.15 Footways are also present on both sides of the majority of the highways throughout Margam and Port Talbot.
- 3.16 **Figure 8** shows the pedestrian isochrones for 400m (mauve), 1.61km (1 mile dark blue), and 3.22km (2 miles light blue) from the centre of the proposed development site within walking distance of this notional point.

- 3.17 The isochrones for walking shows that Hendy and Pontarddulais are within the statutory walking distances and therefore not eligible for free school transport.

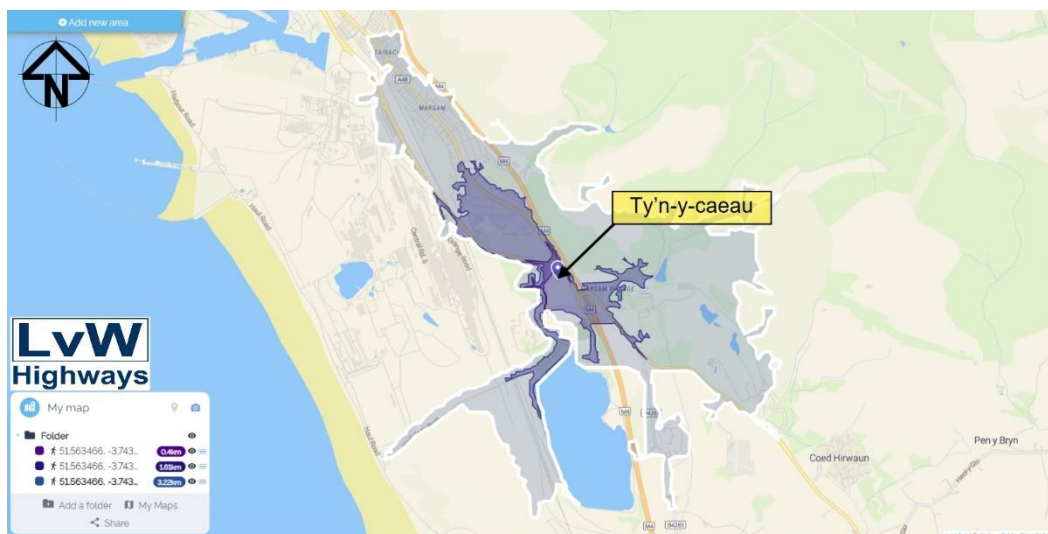


Figure 8: Walking isochrones for 400m, 1610m (1mile) and 3220m (2miles)

- 3.18 People will choose their mode based on their journey purpose, and it is reasonable to conclude that a proportion of journeys undertaken to and from the site will be on foot, particularly given the proximity of key facilities and services.

#### Public Rights of Way

- 3.19 There are a number of public footpaths and byways in the vicinity of the site all used predominantly for recreational use. These are located predominantly in Margam Park as can be seen in **Figure 9**. The public footpaths are indicated by the fine orange lines.

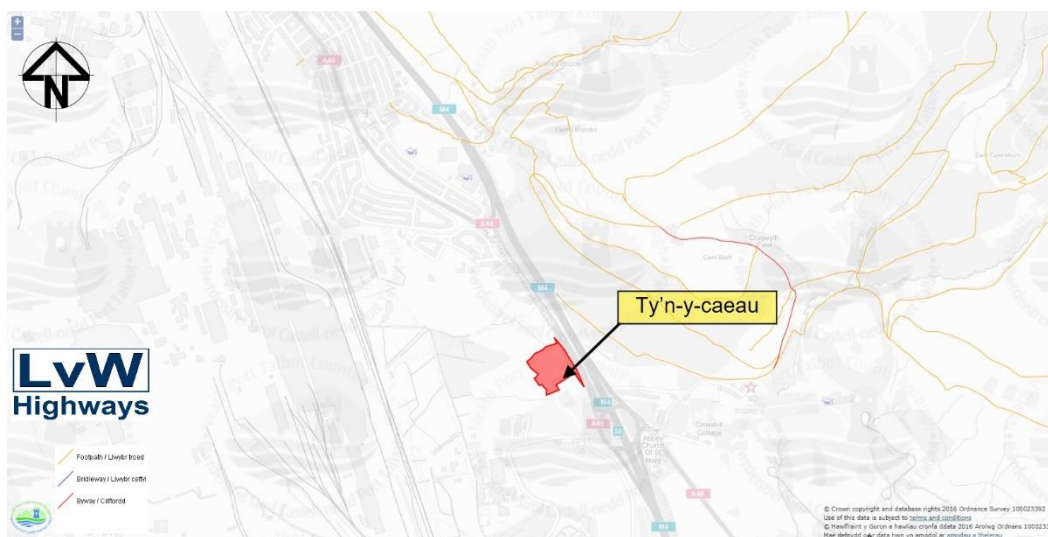


Figure 9: Public Right of Way footpaths in relation to the site

- 3.20 This is an extract of the mapping on the NPTCBC website and does not shown the A4241 Harbour Way.
- 3.21 On the basis that there is an acceptable level of provision for pedestrians it is reasonable to expect that typical able bodied people are capable of walking at least 3.22km (2 miles) for day to day activities as identified by the Welsh Government in the publication "Active Travel Act Guidance July 2021".

- 3.22 The thrust of sustainability policy is that there will be an increasing propensity for people to use non single car occupancy modes, of which walking is one.

#### ***Cycle Facilities***

- 3.23 The Institution of Highways and Transportation advises that the mean average length for cycling journeys is approximately 4 km although states that journeys of up to three times these distances are not uncommon for regular commuters.
- 3.24 The Welsh Government suggest that cycling for utility journeys could be undertaken for lengths of up to 8km (5 miles) in the publication “Active Travel Act Guidance July 2021”.
- 3.25 **Figure 10** shows the cycling isochrones for 4 kilometres from the centre of the proposed development site.

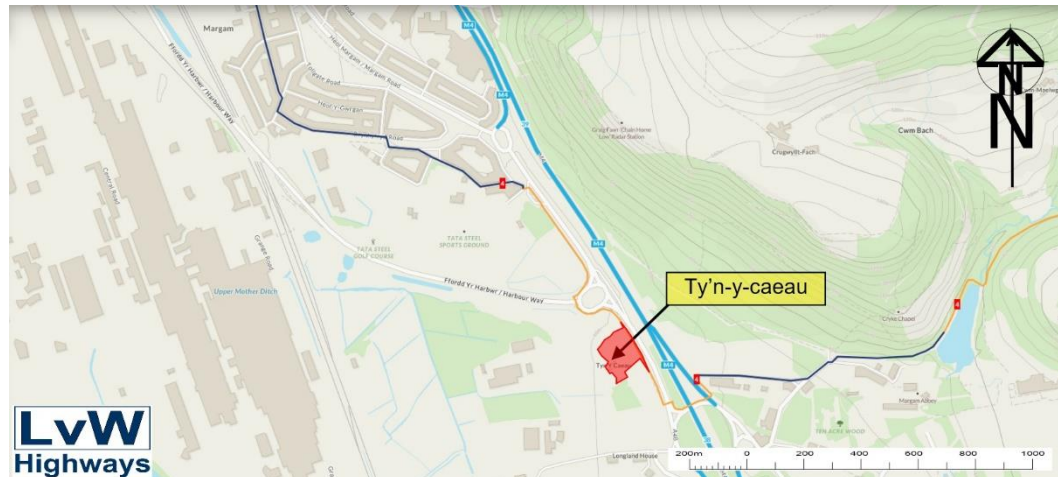


**Figure 10: Cycling isochrones 4000m (4km)**

- 3.26 In the vicinity of the development site, cyclists are accommodated on the shared active travel link that runs past the site in line with the guidance contained in The Active Travel Act Guidance, Manual for Streets and Manual for Streets 2 and The Highway Code.

#### ***Sustrans Route 4***

- 3.27 The active travel route that runs along the A48 Margam Road is designated as the Sustrans Route 4; A long distance route between London and Fishguard via Reading, Bath, Bristol, Newport, Margam, Swansea, Tenby, Haverfordwest and St. Davids. This route can be seen in **Figure 11**.



**Figure 11: Sustrans Route 4**

### ***Wales Coast Path***

- 3.28 The Wales Coast Path is a continuous coastal path covering the entire shoreline of Wales, improving access for local people and visitors to the area. Within Neath Port Talbot, the route has been divided into two sections with the upland path, approximately 26km long, taking a more inland, high level route and the lowland path, approximately 25km long staying nearer to the coast and the seafront. This choice of routes offers a range of walks with striking views and opportunities to experience nature, and reflects the varying character and features of interest in Neath Port Talbot.
- 3.29 The the Wales Coast Path follow the A48 Margam Road however, the Sustrans Route 4 turns east at the M4 J38 Margam interchange and the Wales Cost Path turns west.

### **Public Transport**

#### ***Bus Services***

- 3.30 In reviewing the public transport provision in the vicinity of and directly serving the area, it is evident that the site benefits from bus provision.
- 3.31 The nearest bus stops to the site are located on the A48 Margam Road on the southern arm of the M4 J38 Interchange. They are identified as the Crematorium stops. The eastbound stop is approximately 650m walk from the Ty'n-y-Caeau buildings and the westbound stop is approximately 850m walk.
- 3.32 These stops are serviced by route X1 (circa half hourly Mon-Sat and hourly on Sundays) which link the site with Swansea and Bridgend. The journey time via bus between Margam and Port Talbot town centre is currently just 14 minutes.
- 3.33 All the timetables are available online at <https://www.traveline.cymru/>.
- 3.34 It is therefore concluded that the existing bus routes provide opportunities for residents of the development to make both commuting and leisure trips via sustainable modes of travel.

#### ***Rail Services***

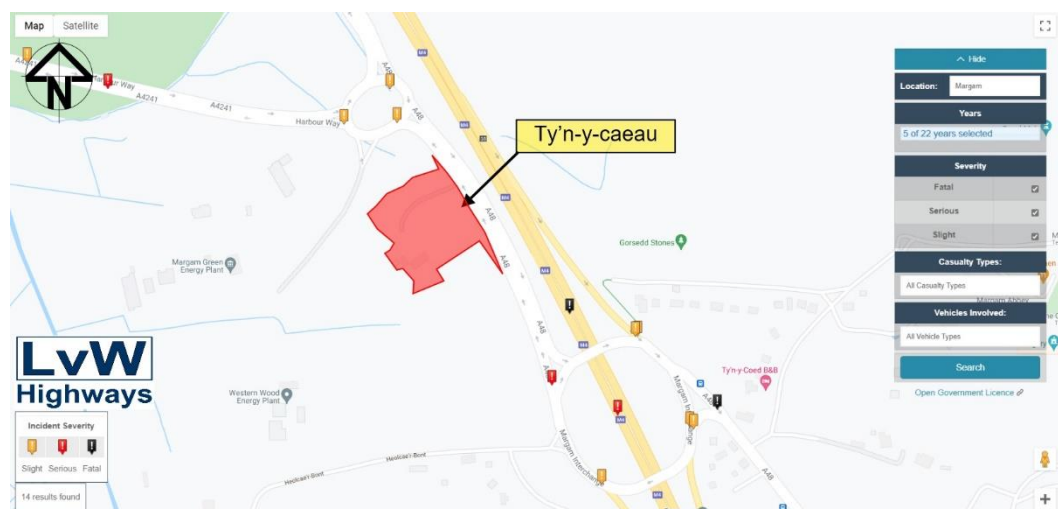
- 3.35 The nearest railway station to the proposed development site is at Port Talbot, 4.4 kilometres from the site which provides further sustainable transport opportunities, particularly for trips further afield.
- 3.36 The station is of the island type and has 2 platforms:

- Platform 1, for westbound trains towards Swansea and West Wales Line.
- Platform 2, for eastbound trains towards Cardiff Central, Newport, London Paddington and Manchester Piccadilly

- 3.37 The ticket office is open seven days per week, with a self-service ticket machine provided for use and collecting advance purchase tickets. A waiting room and toilets are located on the platform, with the platform and ticket hall linked by a fully accessible footbridge with lifts (installed in 2016). Train running information is offered via CIS displays, automatic announcements and timetable posters.
- 3.38 The station is served by both Great Western Railway main line services between London Paddington and Swansea (hourly each way with peak extras) and Transport for Wales regional trains between Milford Haven/Carmarthen and Manchester Piccadilly via Cardiff Central, Newport and Shrewsbury (also hourly), plus the two-hourly Swansea to Cardiff stopping trains.
- 3.39 On Sundays the London - Swansea Great Western Railway service runs hourly with a two hourly service extended to Carmarthen. Transport for Wales Milford Haven/Carmarthen - Manchester Piccadilly services are hourly.
- 3.40 Therefore, rail journeys are only considered suitable for long distance travel in connection with bus transport for the majority of commuters and visitors to Hendy.

### Personal Injury Collision/Accident Data

- 3.41 A review has been undertaken on local highway network safety in order to establish whether there are any current accident clusters or blackspots in the vicinity of the site that may be exasperated by the development proposals. Personal Injury Collision (PIC) data has been reviewed from online resources for the road network within the vicinity of the site for the latest five year period.
- 3.42 This data has been sourced from the National statistics authority and reported on by the Department for transport each year. The information uses data obtained directly from official sources and compiled in an easy-to-use format showing each collisions on a map.
- 3.43 An examination of the PIC data indicated that there have been no PICs recorded over the 5-year period review along the A48 Margam Road in the vicinity of the site access as can be seen in **Figure 12**.



**Figure 12: Personal Injury Collisions 2016 to 2020**

- 3.44 A summary of the collisions data is set out in **Table 1** below:-

| Link                                  | Severity |          |          |           |
|---------------------------------------|----------|----------|----------|-----------|
|                                       | Slight   | Serious  | Fatal    | Total     |
| M4 Motorway Junction 38 – Interchange | 5        | 1        | 1        | 7         |
| M4 Motorway Junction 38 – Slip Roads  | 0        | 0        | 0        | 0         |
| M4 Motorway Junction 38 – Mainline    | 2        | 1        | 1        | 4         |
| A4241 Harbour Way roundabout          | 2        | 0        | 0        | 2         |
| A48 Margam Road – between roundabouts | 0        | 0        | 0        | 0         |
| <b>Total</b>                          | <b>9</b> | <b>2</b> | <b>2</b> | <b>13</b> |

Table 1: Summary of Historic Collision Data

3.45 As can be seen, a total of 13 collisions occurred in the highlighted area during the five-year period, 9 of these were reported as slight, 2 serious and 2 fatal. No accidents were reported on the A48 Margam Road as it passes the site access.

3.46 Accident statistics confirm that numerous accidents have occurred at the two roundabout junctions in the vicinity of the development site. The truckstop is not predicted to generate any additional traffic, rather its purpose is to provide safety and welfare opportunities for those travelling on the highway network. As such, the provision of the proposed truckstop will assist in reducing accidents on the highway network.

#### Highway Safety Summary

3.47 Based on the above, it can be concluded that the local highway network does not have an unduly poor safety record, and that there are no reasons to assume that this situation should be significantly worsened as a consequence of the development proposals

#### The Highway Network

3.48 The highway network in the vicinity of the site comprises the M4 motorway, the A48 Margam Road and the A4241 Harbour Way.

3.49 The A48 passes through Margam from Pyle, with its castle and country park, before meeting the M4 at junction 38. The A48 runs parallel to the M4, down the hill on a dual carriageway to Junction 39. Between the two motorway junctions there is a roundabout, where the A4241 heads down to Port Talbot harbour and the Port Talbot steel works.

3.50 As the A48 enters the town, it passes through the long suburb of Taibach before reaching the centre of Port Talbot itself. It passes Port Talbot Parkway railway station, and meets the A4241 again as it returns from the harbour. There is then a short section of dual carriageway, after which it meets the M4 again at Junction 41. Here there is a roundabout with a spur road offering motorway access to and from the motorway to the east, as well as to the other end of the A4241 which heads down to the beach in Baglan Bay.

3.51 The M4 Junction 38 allows traffic to leave the motorway in both the northbound and southbound directions. However, it only provides access onto the motorway for vehicles travelling in the south/eastbound direction. For traffic wanting to access the M4 motorway in the north/westbound direction, it has to continue along the A48 Margam Road, passing through the A4241 Harbour Way roundabout and then at the next roundabout (Groes Interchange) it can enter onto the M4 motorway J39.

### Annual Average Daily Flows Traffic volumes

- 3.52 Network Journey Time and Traffic Flow data is available from the Government's Road traffic statistics website. This website provides the link to GB Road Traffic Data which is the database used to produce the DfT Matrix traffic flows. Access through the Road traffic statistics website enables the data from each traffic count point to be interrogated and from that the data for both directions of flow can be obtained. This is important when considering the approach flows to the truckstop as it can only be arrived at from one direction and therefore one direction of flow is required.
- 3.53 Using this source, eight count points were selected from the interactive map available. These are listed below and shown on **Figure 13**, three on the M4 motorway, one at the M4 J39 northbound on slip, three on the A48 Margam Road and one on the A4241 harbour Way:
- CP84065 between J39 and J40 on the M4;
  - CP84064 between J38 and J39 on the M4;
  - CP73149 between J37 and J38 on the M4;
  - CP84066 on the J39 on slip to the M4.
  - CP40524 between The A4107 and the Groes Interchange J39 on the A48 Margam Road;
  - CP84068 between The Harbour Way roundabout and the Groes Interchange J39 on the A48 Margam Road;
  - CP84067 between J39 and The Harbour Way roundabout on the A48 Margam Road;
  - CP84071 on the A4241 Harbour Way

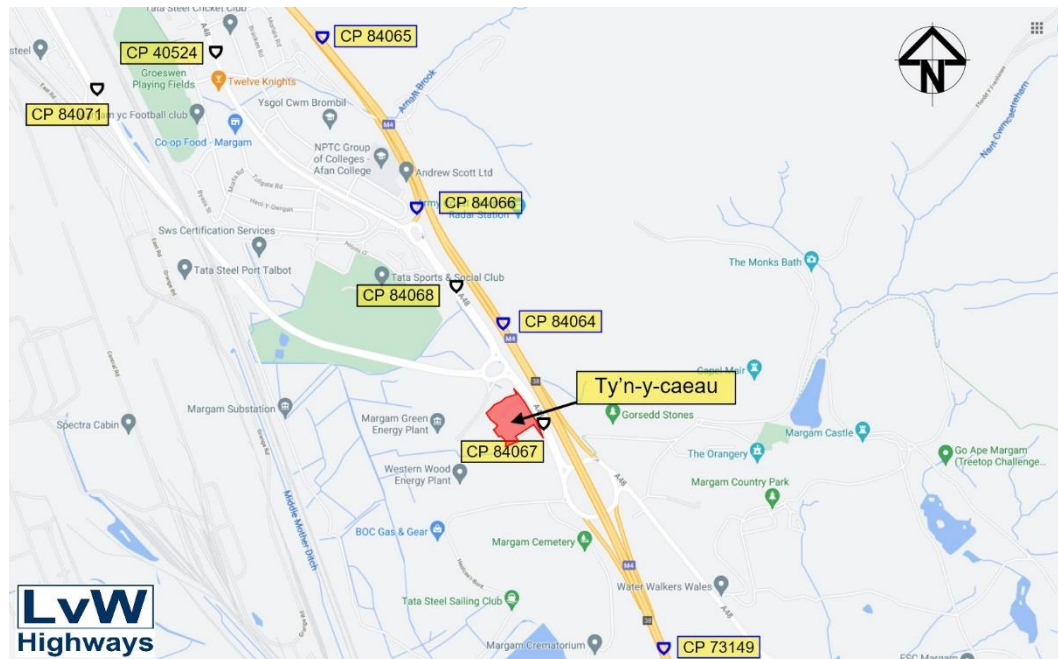


Figure 13: DfT Count Points

- 3.54 The data provided includes the total of 'all vehicles' for the year as a whole and averaged as an AADF (Annual Average Daily Flow); and the total number of HGVs, which are defined as all goods vehicles over 3.5 tonnes gross vehicle weight.

- 3.55 In addition it is possible to obtain a subdivision of the types of HGV by number of axles, the number of 'Cars and Taxis', 'Buses and Coaches' including all public service vehicles and works buses which have a gross weight greater than 3.5 tonnes, Light Goods Vehicles (LGV) defined as goods vehicles not exceeding 3.5 tonnes gross vehicle weight and two wheeled motor vehicles (e.g. motorcycles).
- 3.56 For assessment purposes two components of the daily traffic flow are required; the number of 'light vehicles' and the number of 'HGVs and Coaches'. Therefore by obtaining the 'HGVs' and 'Buses' totals, then adding these together and subtracting the sum from the 'all vehicles' gives the 'Light' vehicles total.
- 3.57 **Table 2** sets out the two-way flows for the past five years at each of the count points on the M4 motorway.

| CP84065 | Northbound |      |       |       | Southbound |      |       |       |
|---------|------------|------|-------|-------|------------|------|-------|-------|
| Year    | All vehs   | HGVs | Buses | LGVs  | All vehs   | HGVs | Buses | LGVs  |
| 2016    | 34558      | 2552 | 101   | 31905 | 36719      | 2672 | 98    | 33949 |
| 2017    | 35113      | 2673 | 99    | 32341 | 37257      | 2794 | 96    | 34367 |
| 2018    | 34186      | 2322 | 101   | 31763 | 34204      | 2367 | 96    | 31741 |
| 2019    | 34595      | 2335 | 101   | 32159 | 34610      | 2378 | 96    | 32136 |
| 2020    | 25951      | 2009 | 52    | 23890 | 25712      | 2181 | 44    | 23487 |
| CP84064 | Northbound |      |       |       | Southbound |      |       |       |
| Year    | All vehs   | HGVs | Buses | LGVs  | All vehs   | HGVs | Buses | LGVs  |
| 2016    | 30828      | 2163 | 81    | 28584 | 34742      | 2426 | 93    | 32223 |
| 2017    | 31307      | 2260 | 79    | 28968 | 35228      | 2532 | 91    | 32605 |
| 2018    | 31310      | 2295 | 79    | 28936 | 35208      | 2569 | 91    | 32548 |
| 2019    | 31680      | 2314 | 79    | 29287 | 35627      | 2587 | 91    | 32949 |
| 2020    | 22974      | 2191 | 12    | 20771 | 27378      | 2442 | 14    | 24922 |
| CP73149 | Northbound |      |       |       | Southbound |      |       |       |
| Year    | All vehs   | HGVs | Buses | LGVs  | All vehs   | HGVs | Buses | LGVs  |
| 2016    | 35223      | 2497 | 80    | 32646 | 35181      | 2649 | 89    | 32443 |
| 2017    | 35742      | 2610 | 78    | 33054 | 35701      | 2766 | 87    | 32848 |
| 2018    | 35730      | 2650 | 79    | 33001 | 35690      | 2808 | 88    | 32794 |
| 2019    | 36161      | 2673 | 79    | 33409 | 36117      | 2829 | 88    | 33200 |
| 2020    | 24035      | 2359 | 40    | 21636 | 26216      | 2316 | 38    | 23862 |

**Table 2: AADF Traffic flows by direction on M4 motorway**

- 3.58 **Table 3** sets out the flows for the past five years at the count point on the M4 motorway on slip at J39.

| CP84066 | Northbound |      |       |      |
|---------|------------|------|-------|------|
| Year    | All vehs   | HGVs | Buses | LGVs |
| 2016    | 3818       | 128  | 13    | 3677 |
| 2017    | 3861       | 134  | 12    | 3715 |
| 2018    | 3854       | 136  | 12    | 3706 |
| 2019    | 3901       | 136  | 12    | 3753 |
| 2020    | 2657       | 123  | 7     | 2527 |

**Table 3: AADF Traffic flows by direction M4 J39 on slip to motorway**

3.59 **Table 4** sets out the two-way flows for the past five years at each of the count points on the A48 Margam Road.

| CP40524 | Northbound |      |       |      | Southbound |      |       |      |
|---------|------------|------|-------|------|------------|------|-------|------|
| Year    | All vehs   | HGVs | Buses | LGVs | All vehs   | HGVs | Buses | LGVs |
| 2016    | 4791       | 25   | 69    | 4697 | 4005       | 28   | 76    | 3901 |
| 2017    | 4788       | 25   | 64    | 4699 | 4000       | 28   | 71    | 3901 |
| 2018    | 4749       | 26   | 58    | 4665 | 3965       | 28   | 64    | 3873 |
| 2019    | 4792       | 26   | 59    | 4707 | 4001       | 28   | 65    | 3908 |
| 2020    | 3712       | 23   | 37    | 3652 | 3094       | 25   | 41    | 3028 |
| CP84068 | Northbound |      |       |      | Southbound |      |       |      |
| Year    | All vehs   | HGVs | Buses | LGVs | All vehs   | HGVs | Buses | LGVs |
| 2016    | 5892       | 180  | 52    | 5660 | 2355       | 57   | 42    | 2256 |
| 2017    | 5941       | 184  | 50    | 5707 | 2371       | 58   | 41    | 2272 |
| 2018    | 5962       | 186  | 48    | 5728 | 2376       | 59   | 39    | 2278 |
| 2019    | 5971       | 186  | 47    | 5738 | 2381       | 59   | 39    | 2283 |
| 2020    | 4513       | 167  | 30    | 4316 | 1790       | 53   | 25    | 1712 |
| CP84067 | Northbound |      |       |      | Southbound |      |       |      |
| Year    | All vehs   | HGVs | Buses | LGVs | All vehs   | HGVs | Buses | LGVs |
| 2016    | 10208      | 552  | 43    | 9613 | 5884       | 335  | 36    | 5513 |
| 2017    | 10300      | 566  | 42    | 9692 | 5932       | 343  | 35    | 5554 |
| 2018    | 10348      | 577  | 40    | 9731 | 5956       | 349  | 34    | 5573 |
| 2019    | 10369      | 580  | 39    | 9750 | 5968       | 350  | 33    | 5585 |
| 2020    | 7884       | 519  | 25    | 7340 | 4532       | 314  | 21    | 4197 |

**Table 4: AADF Traffic flows by direction on A48 Margam Road**

3.60 **Table 5** sets out the two-way flows for the past five years at the count point on the A4241 Harbour Way.

| CP84071 | Northbound |      |       |      | Southbound |      |       |      |
|---------|------------|------|-------|------|------------|------|-------|------|
| Year    | All vehs   | HGVs | Buses | LGVs | All vehs   | HGVs | Buses | LGVs |
| 2016    | 4703       | 344  | 7     | 4352 | 4987       | 298  | 5     | 4684 |
| 2017    | 4737       | 352  | 7     | 4378 | 5029       | 307  | 5     | 4717 |
| 2018    | 4753       | 360  | 6     | 4387 | 5052       | 315  | 5     | 4732 |
| 2019    | 4765       | 364  | 6     | 4395 | 5064       | 319  | 4     | 4741 |
| 2020    | 3615       | 325  | 4     | 3286 | 3845       | 284  | 3     | 3558 |

**Table 5: AADF Traffic flows by direction on A4241 Harbour Way**

3.61 The grey highlighted cells identify movements that are compared with the traffic survey data identified by the orange highlighted cells in Table 6.

#### **Traffic Turning Movements Survey**

3.62 In addition to the traffic data obtained from the DfT Road Traffic Statistics Count Point databases, the promoter has commissioned comprehensive traffic turning counts at the M4 Junction 38 Margam Interchange (Junction 1) and the A4241 Harbour Way roundabout (Junction 2).

3.63 The traffic turning movements' surveys comprised full turning counts conducted over a 24 hour period on Tuesday 13<sup>th</sup> July 2021. The traffic surveys were undertaken by Severnside Transportation Data Collection. There were no

incidents on the highway network that had an impact on vehicles using the highway network. Copies of the traffic survey results can be supplied on request.

- 3.64 **Table 6** provides a summary of the 24 hours total vehicle movements at the M4 Junction 38 Margam Interchange. Arm A is the M4 southbound off slip; Arm B is the A48 Margam Road (South of the junction); Arm C is the M4 southbound on-slip and northbound off-slip; Arm D is Heol Cae'r-Bont; and Arm E is the A48 Margam Road (north of the junction).

| Junction 1               | Total vehicles |      |      |     |               |       |
|--------------------------|----------------|------|------|-----|---------------|-------|
| Traffic Survey July 2021 |                |      |      |     | 00:00 - 24:00 |       |
|                          | A              | B    | C    | D   | E             | TOT   |
| A                        | 0              | 3117 | 6    | 230 | 395           | 3748  |
| B                        | 0              | 0    | 258  | 87  | 4965          | 5310  |
| C                        | 0              | 243  | 48   | 141 | 3842          | 4274  |
| D                        | 0              | 75   | 133  | 0   | 399           | 607   |
| E                        | 0              | 2446 | 3395 | 124 | 11            | 5976  |
| TOT                      | 0              | 5881 | 3840 | 582 | 9612          | 19915 |

**Table 6: AADF Traffic turning movements at the M4 J38 Margam Interchange**

- 3.65 **Table 7** provides a summary of the 24 hours total vehicle movements at the A48 Margam Road roundabout junction with the A4241 Harbour Way. Arm A is the A48 Margam Road (north of the junction); Arm B is the A48 Margam Road (south of the junction); Arm C is the access road to Margam Enery Plant and Western Wood Energy Plant; and Arm D is the A4241 Harbour Way.

| Junction 2               | Total vehicles |      |     |      |               |
|--------------------------|----------------|------|-----|------|---------------|
| Traffic Survey July 2021 |                |      |     |      | 00:00 - 24:00 |
|                          | A              | B    | C   | D    | TOT           |
| A                        | 9              | 1921 | 5   | 464  | 2399          |
| B                        | 5034           | 31   | 100 | 4459 | 9624          |
| C                        | 38             | 70   | 0   | 21   | 129           |
| D                        | 763            | 3985 | 17  | 42   | 4807          |
| TOT                      | 5844           | 6007 | 122 | 4986 | 16959         |

**Table 7: AADF Traffic turning movements at the A48/A4241 Harbour Way roundabout**

- 3.66 The orange highlighted cells identify movements that are compared with the DfT Count Point data identified by the grey highlighted cells in Table 3 and Table 4.

### COVID19

- 3.67 We are all aware that the country was in lockdown for most of 2020 so we have considered the 2019 data and being the most representative of the Annual Average Daily Traffic.
- 3.68 A comparison has been made between the Count Point data and the traffic counts undertaken in July 2021. The comparison confirms that the DfT count point traffic data from 2019 were lower than that recorded by the traffic counts in July 2021. Overall from a review of the July 2021 survey data and the 2019 count point data it was found that the average daily flow was reasonably representative of the AADT for the year as a whole. On this basis it is proposed to use the traffic turning flows from July 2021 traffic survey and the 2019 AADF Count Point data as the representative month in line with the guidance in the Planning Practice Guidance

in the section dealing with Travel Plans, Transport Assessments and Statements in decision-taking (ID: 42-015-20140306) which recommends assessments should be based on normal traffic flow and usage conditions.

- 3.69 The traffic movements from the July 2021 traffic survey and 2019 Count Point Data were uploaded into a spreadsheet model to provide the base year data for assessment.
- 3.70 **Figure 14** shows a summary of the two sets of figures used to justify this assessment. The highlighted cells correspond with those highlighted above in Tables 3, 4 and 6.

|                                              |                          |       |      |                        |      |
|----------------------------------------------|--------------------------|-------|------|------------------------|------|
| N/B                                          | A4241<br>2019<br>CP84071 | S/B   | N/B  | A48<br>2019<br>CP84068 | S/B  |
|                                              | 4765                     | 5064  | 5971 |                        | 2381 |
|                                              | Survey<br>Jul-21         |       |      | Survey<br>Jul-21       |      |
|                                              | 4986                     | 4807  | 5844 |                        | 2399 |
| A48/A4241<br>Roundabout<br>All Vehicles AADF |                          |       |      |                        |      |
| Margam Energy Park                           |                          |       |      | Survey<br>Jul-21       | S/B  |
|                                              |                          | N/B   |      |                        |      |
|                                              |                          | 9624  |      |                        | 6007 |
|                                              | Ty'n-y-caeau             |       |      |                        |      |
|                                              |                          | 10369 |      |                        | 5968 |
|                                              | Count Point Data         | 5971  |      | CP84067                |      |
|                                              | Surveyed Data            | 5925  |      | 2019<br>A48            |      |

**Figure 14: Comparison of 2019 Count Point data and 2021 survey data**

- 3.71 Diagrams showing the existing traffic flows on an average weekday are reproduced in **Appendix B**.
- Junction 38 (M4) Margam Strategic Employment Site**
- 3.72 The strategic employment allocation at J38 lies to the south of Harbour Way and adjacent to the A48 and M4 and thus benefits from excellent road transport links. The site is near to a number of existing employment and industrial operations.
- 3.73 Harbour Way passes to the north of the allocation improving the transport linkages to the site. It is anticipated that the site will be delivered over the short term.

- 3.74 Both Baglan Bay and Junction 38 (M4) have been assessed and are identified as the preferred locations for in-building waste treatment facilities (refer to Policy W1).
- 3.75 Committed developments in the vicinity of the site have been considered and are addressed in Section 7 of this TA.

## **4 THE NEED FOR A TRUCKSTOP**

4.1 The DfT's policies and aims are set out in Circular 02/2013. Paragraph 8 states:

*"a well-functioning strategic road network enables growth by providing for safe and reliable journeys."*

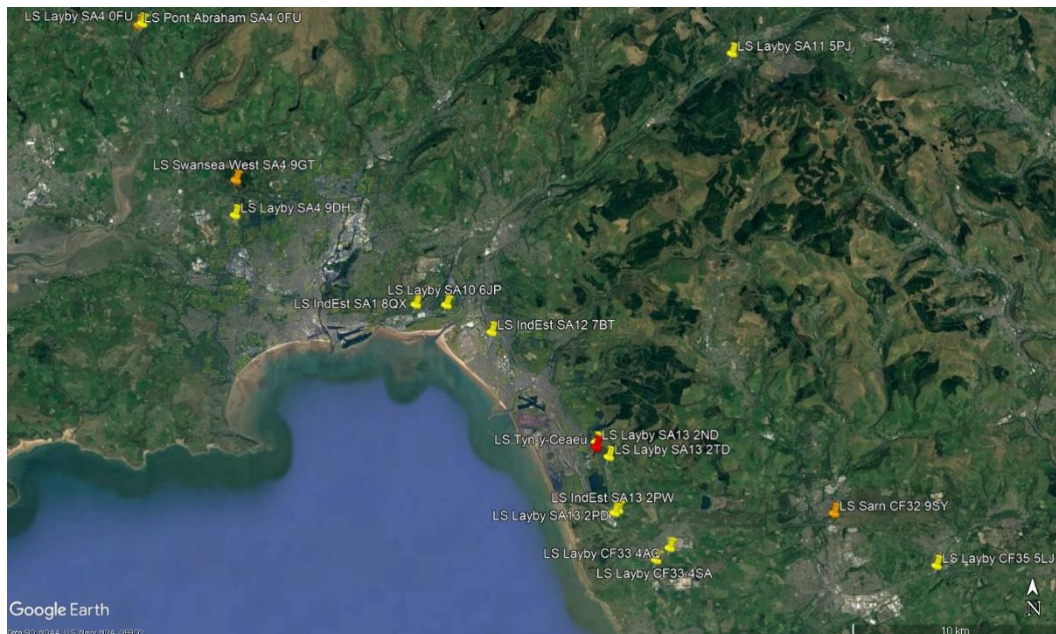
4.2 As part of the remit to provide for safe and reliable journeys, paragraph B4 of Annex B of the Circular highlights that motorway service areas and other roadside facilities perform an important road safety function by providing opportunities for the travelling public to stop and take a break in the course of their journey.

4.3 The Circular goes on to reiterate Government advice that motorists should stop and take a break of at least 15 minutes every two hours. It also recognises that

*"Drivers of many commercial and public service vehicles are subject to a regime of statutory breaks and other working time restrictions and these facilities assist in compliance with such requirements."*

4.4 The information makes it clear that in view of the safety benefit, there is a need for roadside facilities at intervals of no more than 28 miles; that distance can be shorter however to protect the safety and operation of the network.

4.5 A plan showing the locations of existing places used by lorry drivers' in the wider area has been prepared, and is reproduced as **Figure 15**.



**Figure 15: Existing locations used as truckstops**

4.6 Figure 15 shows locations that drivers' use to stop for a rest or overnight stay. There are three MSA (orange markers) at Sarn, Swansea West and Pont Abraham. All the others (yellow markers) are roadside laybys or industrial estate roads with no welfare facilities, contrary to the Well-being of Future Generations (Wales) Act 2015. Lorry drivers are people as well!

4.7 The Road Haulage Association (RHA) have been lobbying for better driver facilities for years. **Appendix C** includes some news articles that highlights this fact. This has also become more apparent during the recent lorry drivers shortage.

- 4.8 Currently lorries are parking in the lay-by at the A48 / A4241 roundabout that is situated between the M4 corridor and the A48. This lay-by has a simple left-in, left-out arrangement. The left-in has no deceleration just a simple kerbed radii access directly off the A48 some 45 metres from the roundabout give way. The lay-by egress has a slight taper of approximately 30 metres and is located some 100 metres from the A48 Margam Road roundabout exit.
- 4.9 There are not toilet facilities available at this lay-by as is evident on the ground within the verge between the lay-by and the M4 corridor.
- 4.10 A further factor supporting a truckstop at Ty'n-y-caeau is the high-level analysis of freight crimes for HGVs. The Department of Transport's Lorry Parking Study<sup>4</sup> published in November 2011 highlights the issue. Chapter 4 dealing with the Crime Data identifies the ten worst regions by number of reported incidents, with Wales being 7<sup>th</sup> on the list.
- 4.11 The report also identifies that:
- “Almost three quarters of crimes reported took place at laybys or industrial estates. In terms of value, crimes at laybys/industrial estates account for over three quarters (77%) of the total stolen value during the year.*
- It is also notable that over one quarter (26%) of these crimes took place at MSAs. This is concerning as these facilities are seen as ‘secure parking’ by many in the industry and cost between £20-30 per night to park.*
- Some stakeholders suggested that security at MSAs is insufficient. Further to this, there is a belief that CCTV is not used for crime prevention but for ensuring parking fees are levied to those staying over the free parking period (typically 2-3 hours) and the data appears to support this.”*
- 4.12 The proposed secure development at Ty'n-y-caeau can address all these issues by providing a safe and secure facility approximately mid-way between the MSA's of Sarn and Swansea West.
- 4.13 The recent fuel shortage and HGV driver shortage has highlighted the requirement for better truck stops for drivers and mentioned in very recent both party political speeches.

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<sup>4</sup> The Department of Transport's 'Lorry Parking Study' published in November 2011

## 5 PROPOSED DEVELOPMENT

- 5.1 The proposed development is for a truckstop to serve the travelling public. It will comprise:
- a direct access off the A48 Margam Road which will be modified to accommodate the increase in HGV and other vehicle movements;
  - formation of a truckstop, with
  - change of use of the existing dwelling house & annex to guest room accommodation, (approved)
  - with Café,
  - erection of rear single storey extension to accommodate spa facilities,
  - formation of a HGV Parking Area,
  - Internal access road & associated infrastructure.
- 5.2 The site layout of the proposed development is shown on the plan reproduced at reduced scale in **Appendix D**.
- 5.3 Appropriate parking provision will be provided on site, in accordance with the relevant parking requirements set out in Circular 02/2013 and typical demand based on operator experience.
- 5.4 For signing purposes the minimum level of parking is based on the average daily traffic (ADT) flows for the last available full year of data.
- 5.5 The ADT for CP84067 2019 was 16,337. The number of HGVs was 1,002 and the number of 'Light' vehicles was 15,335 (refer to the highlighted row in Table 3).
- 5.6 The minimum parking requirements based on the DfT Circular's Schedule 1 formula for peak month ADT traffic flows for 2021 are as follows in **Table 8**.

| Parking requirements at trunk road service areas |                                       | Assessment<br>Year | 2021   |
|--------------------------------------------------|---------------------------------------|--------------------|--------|
| Calculation                                      |                                       | Variable           | Number |
| Traffic flow (vehicles per day)                  |                                       |                    | 16,337 |
| Light vehicle                                    |                                       | A                  | 15,335 |
| HGV and Coach                                    |                                       | B                  | 1,002  |
| No. of parking spaces required                   |                                       |                    |        |
| Cars                                             | 0.1% of A (min of 10)                 | C                  | 15     |
| HGV                                              | Minimum of 2                          | D                  | 2      |
| Abnormal load                                    | Minimum of 1                          |                    | 1      |
| Coach                                            | Minimum of 1                          | E                  | 1      |
| Caravan/motorhome/vehicle and trailer            | Minimum of 2                          | F                  | 2      |
| Motorcycle                                       | 0.015% of A (min of 10)               | G                  | 10     |
| Additional spaces for lodges                     | One space per 2 bedrooms <sup>1</sup> |                    | 6      |
|                                                  |                                       | Total              | 37     |
| Spaces for disabled users - cars                 | Minimum of 3 spaces                   |                    | 3      |

|                                      |                     |   |
|--------------------------------------|---------------------|---|
| Spaces for disabled users – caravans | Minimum of 1 spaces | 1 |
| Spaces for disabled lodge users      | Minimum of 2 spaces | 2 |

<sup>1</sup>Note: Assumes 12 bedrooms

**Table 8: Parking requirements to Circular 02/2013 Schedule 1**

- 5.7 Based on the above table for the peak month ADT in 2021 the minimum number of parking spaces for cars and other light vehicles is  $15 + 6 = 21$  spaces; for HGVs the minimum number of spaces is 2; for coaches the minimum number of spaces is 2; and for caravans and trailers the minimum number of spaces is 2 of which 1 spaces are to be for disabled users. In addition there is a requirement for 10 motorcycle spaces and one abnormal load space. The total number of spaces required under Circular 02/2013 is 37.
- 5.8 The planning application being submitted allows for an increase in the number of spaces over and above the minimum requirement to allow for future traffic growth.
- 5.9 The proposed provision is set out in **Table 9**.

| No. of parking spaces provided        | Actual    |
|---------------------------------------|-----------|
| Cars                                  | 17        |
| HGV                                   | 12        |
| Abnormal load                         | 5         |
| Coach                                 | 2         |
| Caravan/motorhome/vehicle and trailer | 1         |
| Motorcycle                            | 10        |
| Additional spaces for lodges          | 6         |
| <b>Total</b>                          | <b>51</b> |
| Spaces for disabled users - cars      | 3         |
| Spaces for disabled users – caravans  | 1         |
| Spaces for disabled lodge users       | 2         |
| <b>Total</b>                          | <b>57</b> |

**Table 9: Proposed parking provision**

- 5.10 The site will provide 10 motorcycle parking spaces, 26 car parking spaces, 2 car and caravan/motorhome/vehicle and trailer spaces and 19 HGV parking spaces of which 5 can be for abnormal loads.

### Site Access Highway design guidance

- 5.11 The following comments on the site access highway design are based on correspondence received from the LHA officers as part of the planning application process, before it was refused.
- 5.12 The appellant's highway engineers concur with the Highway Authority in that the Design Manual for Roads and Bridges (DMRB) CD123 Rev 2 is an appropriate design document to be considered for access to the A48.
- 5.13 A major concern expressed by highway authorities when considering designs that are at variance with established practice, is whether they would incur a liability in the event of damage or injury. This leads to an over-cautious approach, where designers strictly comply with guidance regardless of its suitability, and to the detriment of development.

- 5.14 Most claims against highway authorities relate to alleged deficiencies in maintenance. The duty of the highway authority to maintain the highway is set out in section 41 of the Highways Act 1980, and case law has clarified the law in this area.
- 5.15 It must be remembered that the A48 at this location is not a trunk road so an interpretation of the DMRB guidance is appropriate and not a strict adherence to the guidance.
- 5.16 The LHA considered Tyn-y-Caeau as a single residential dwelling, and therefore, they suggested that the access requirements set out in CD123 Rev 2 would conform to a 'Direct Access' as shown in its Figure 3.3 p21.
- 5.17 However, from the above we have established that Tyn-y-Caeau has planning permission as a guest house. However, considering the date of the guest house planning approval, CD123 Rev2 post-dates the planning permission and therefore the existing access as approved is allowed to serve the guest house with no improvements.

#### ***Diverge taper***

- 5.18 The A48 between the M4 junction 38 and the A48 roundabout with the A4241 is a dual carriageway with a very gradual sweeping bend. The access to Tyn-y-Caeau is located on the inside of this bend. It is acknowledged that paragraph 5.17 (p32) indicates that nearside diverging tapers and auxiliary lanes shall not be provided on the inside of curves. The original access design included a nearside diverge taper.
- 5.19 This is a design consideration that can be resolved by the removal of the diverge taper and the junction will still comply with the requirement of CD123 Rev 2. CD123 Rev 2 does not say that a junction cannot be located on the inside of a curve, it just advises that nearside diverging tapers and auxiliary lanes shall not be provided on the inside of curves because the diverging lane can adversely affect visibility for drivers emerging from the minor road.
- 5.20 To comply with the DMRB CD 123 Rev 2, as mentioned above, the solution is to remove the nearside diverging taper from the junction design and provide the corner radii and corner radii tapers as set out in paragraph 5.6.2 point 2, i.e. 15 metres in rural areas followed by a corner taper of 1:10 over a distance of 25 metres.
- 5.21 It must be noted that vehicles using the A48 Margam Road as they approach the Tyn-y-Caeau access, will already be reducing speed and slowing down as they approach to the A48/A4241 Harbour Way roundabout.

#### ***Merging tapers***

- 5.22 The request for a merging taper, this is a design consideration that can be accommodated. CD123 Rev 2 shows at Figure 5.6.2N2 (p29) the required junction arrangements. At paragraph 5.6.6 it says that the merge corner radii should be either;
- 1) 20 metres where no merge taper/auxiliary lane is provided; or
  - 2) 25 metres where the major road design speed is 85 kph (53mph) and a merge taper is provided.
- 5.23 The requirements for a merge taper are set out in CD123 Rev2 (page 34, 35 and 36). Taking each point in turn:

*5.23 Merging tapers shall only be used where the major road is a dual carriageway.*

- 5.24 The A48 is a dual carriageway so a merge taper can be provided. It does not state that it should be provided. The criteria for the requirement of a merge taper is set out in paragraphs 2.24 and 5.24.1.

*5.24 Where the major road is a dual carriageway with a design speed of 85 kph or above, merging tapers shall be provided where:*

*1) the volume of left turning traffic in the design year exceeds 600 vehicles AADT;*

*2) the volume of left turning traffic in the design year exceeds 450 vehicles AADT and the percentage of HGVs exceeds 20%; or*

*3) the volume of left turning traffic in the design year exceeds 450 vehicles AADT and the merging taper is for an up-gradient of greater than 4%.*

- 5.25 The A48 has a speed limit of 50mph (80kph) and therefore a design speed of 85 kph so the 2nd part of 5.24 also applies.

- 5.26 Considering points 1), 2) and 3); the Annual Average Daily Traffic (AADT), the proposed truckstop has 21 lorry parking spaces and 26 car parking spaces. Lorries typically arrive in the early evening and depart in the early morning with very little lorry movements during the day. So it is very unlikely that the volume of left turning traffic in the design year will exceed 450 vehicles AADT or 600 AADT. Therefore, it could be argued that the truckstop does not require a merge taper when considering the requirements of paragraph 5.24.

*5.24.1 Merge tapers may be provided at dual carriageway priority junctions with lesser flows and/or lesser HGV percentages.*

- 5.27 If the LHA therefore request that a merge taper should be provided, it is this statement at paragraph 5.24.1 that would apply. It is not expected that there will be a high seasonal use by large or slow moving vehicles.

- 5.28 As the LHA mention Table 5.26 provides the details of the merge taper lengths (on dual carriageways) and as stated it recommends that the merging length is 70m formed by a decrease in width from 3.5 metres at the end of the corner radii out of the minor road.

- 5.29 If the LHA insist that a merge taper be provided then this can be designed and delivered.

#### ***Junction turning movements***

- 5.30 Concerning the LHA comments about the junction turning movements, slow moving vehicles and vehicles changing lanes, we consider that the operation of the junction will not have a detrimental impact on highway safety. Taking each movement in turn,

- left turn in – vehicles will exit from the M4Junction 38 roundabout, if their destination is the truckstop they will use the inside lane. The vehicle will indicate that it is going to turn left, then start to slow down with its brake lights showing and then perform the left turn into the truckstop. Vehicles following behind will either stay behind the turning vehicle or check their mirrors and if clear, overtake the turning vehicle.

- Left turn out – if the destination is the A4241 Harbour Way (or the Power Stations off Longlands Lane) vehicles will wait at the exit looking to their right, and when a sufficient gap appears in the traffic, it will pull out into the taper to merge into the inside lane, before making the appropriate manoeuvres at the A48/A4241 Harbour Way roundabout. If a vehicle in front of the emerging vehicle wishes to use the 'service bay' the emerging vehicle has sufficient time and vision to slow down and wait for the vehicle to turn in to the service bay.
- Left turn out – if the destination is the M4 or A48 vehicles will wait at the exit looking to their right, and when a sufficient gap appears in the traffic, it will pull out into the outside lane, before making the appropriate manoeuvres at the A48/A4241 Harbour Way roundabout.

5.31 These are typical movements that happen at many junction along dual carriageways but this junction has the advantage of not allowing right turning movements. To make a right turn movement the vehicles have to turn left out of the access, move into the outside lane and then negotiate the A4241 roundabout.

#### ***Visibility Splays and impact on highway verge***

5.32 TAN18 mentions at paragraph 9.16 "Whatever the access, good visibility is essential for drivers and non-drivers alike." As previously mentioned a visibility splay of 4.5 metres by 160 metres can be achieved towards oncoming traffic. Therefore, drivers will be able to see oncoming traffic in the inside lane and beyond for the outside lane over the required distance for the 50mph speed limit of the road.

5.33 A visibility splay of 4.5 metres by 160 metres to the south can be provided with some minor works to trim the verge side vegetation on the development side of the A48 Margam Road and relocation of road signs.

5.34 With the removal of the diverge lane from the junction design to accord with the requirements of CD 123 Rev 2, the impact on the overgrown verge is significantly reduced. There will be a requirement to relocate the signage and cut back some of the overhanging branches and clear the verge of brambles to improve the visibility splay to the south, but the ecology report has not identified any issues that would prevent this from happening. By clearing the verge side vegetation this will also provide a significant highway safety benefit by improving the forward visibility for other vehicles using the A48 Margam Road so they will be able to see what is happening ahead of themselves.

5.35 On departure to the left from Tyn-y-Caeau, drivers will be able to see the A48/A4241 Harbour Way roundabout junction arrangement and give way line so appropriate driving behaviour and speed can be achieved. There may be a requirement for some hedge trimming in the spring and summer months when the leaves are on the trees to ensure the view to the full roundabout give way line is maintained.

#### ***Highway Safety***

5.36 It is disputed that the proposals will greatly increase risk to highway safety and the free flow of traffic on this section of the A48. It is envisaged that many of the vehicles that will use the truckstop are already using the local highways to find places to park up. The proposal is for 21 parking spaces for HGVs to provide proper facilities to cater for drivers needs to rest and recuperate with a hot shower, toilet facilities and refreshments.

- 5.37 The access/egress from Tyn-y-Caeau is some 110 metres from the A48/A4241 Harbour Way roundabout give way line. The design vehicle for at-grade priority and signal controlled junctions is a 16.5m long articulated Heavy Goods Vehicle. Therefore, there is more than sufficient room for these vehicles to manoeuvre into the correct lane on their departure from the truckstop.

### **Summary**

- 5.38 In summary, a junction conforming to the requirements of trunk road design standards can be achieved at Tyn-y-Caeau.
- 5.39 Full visibility requirements set out in the DMRB and TAN18 can be achieved from and towards Tyn-y-Caeau giving driver's excellent views of approaching traffic. A full view of the approach to the A48/A4241 Harbour Way roundabout give way line can be seen from the Tyn-y-Caeau junction as vehicles exit.
- 5.40 If the LHA require that a merge taper be provided then this can be designed and delivered.
- 5.41 There is sufficient distance between the A48/A4241 Harbour Way roundabout give way line and the Tyn-y-Caeau junction for vehicles to manoeuvre safely into the correct lane without impacting on the flow of traffic on the A48 Margam Road approaching the A48/A4241 Harbour Way roundabout.
- 5.42 The alternative is that these lorries continue to use the lay-by on the A48 / A4241 roundabout or even the lay-by on the A48 further along near the roundabout providing the on-slip to the M4 motorway near the residential dwellings at Abbotts Close. Neither of these lay-bys have access to toilet facilities, washing facilities nor provide refreshments.

## **6 TRANSPORT ACCESSIBILITY AND SUSTAINABILITY**

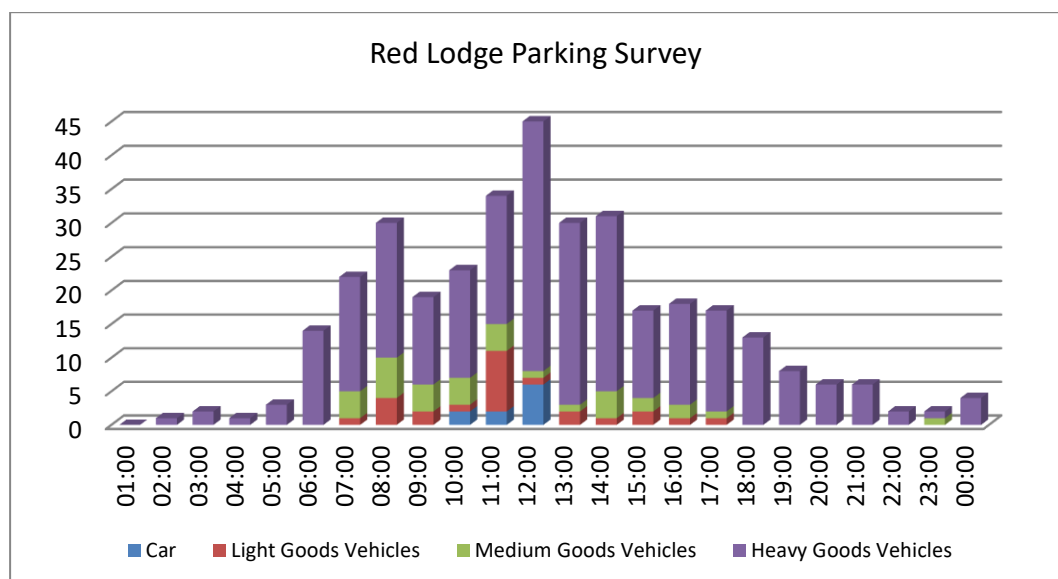
- 6.1 Planning Policy Wales requires new development to be sustainable, with the emphasis placed on encouraging alternative, more sustainable, modes of transport to the car such as walking, cycling and public transport.
- 6.2 The accessibility of the site has been assessed in relation to the potential for travel by alternative, more sustainable, modes of transport to the motor vehicle as part of the TA, recognising that the primary purpose of an truckstop is to serve the travelling public who are using the strategic road network.

## 7 TRIP GENERATION AND DISTRIBUTION

- 7.1 It is widely accepted that a truckstop is unlikely to generate additional traffic on the motorway and highway network, however where located at or off a junction, there will be additional vehicular movements at the junctions.

### Trip Generation

- 7.2 The number of traffic movements associated with the proposed development has been predicted using a truck stop parking beat survey undertaken at the Red Lodge Transport Café near the intersection of the A11 and A14 on the Suffolk and Cambridgeshire borders. This parking beat survey was undertaken for another project, but does provide observed data for a long-established transport café and truckstop.
- 7.3 The existing lorry park on the eastern side of Turnpike Road can accommodate 35 HGV's wholly within the parking area. This figure is based on the ad-hoc way in which vehicles utilise the space available due to the lack of any formal parking arrangements.
- 7.4 The total volume of vehicles movements using the lorry park in 24 hours is shown below in Chart 2. This shows that as expected, the majority of movements are by heavy and medium goods vehicles however, there are some car and light goods vehicle movements taking place at the lorry park to use the café.



**Chart 1: Red Lodge lorry park vehicle movements in 24 hours**

- 7.5 HGV vehicle movements take place throughout the 24 hour period and rise to a peak at midday. After midday, the number of vehicles using the truckstop starts to decrease but continues through the night. There is a significant increase between 5.00 and 6.00 reflecting the fact that lorries begin to travel early in the morning.
- 7.6 The survey counted that at the beginning of the day there were 33-parked vehicles in the Red Lodge lorry park for overnight stops, this also balances the survey data so that the number of vehicles arriving equals the number of vehicles departing.
- 7.7 To determine the parking accumulation, the numbers of vehicles arriving at the development are added to the number of vehicles in the car park and then the departing vehicles deducted from this number per hour. The resultant figure is the

number of vehicles in the car park for that hour. This calculation is undertaken for the daily profile shown in **Table 10**.

**Table 10: Parking Accumulation Calculations for Red Lodge lorry park**

| Hour Beginning | Parking Capacity | Arrive Vehicles | Depart Vehicles | Two-Way trips | Parking Accumulation | Accumulation %age |
|----------------|------------------|-----------------|-----------------|---------------|----------------------|-------------------|
| 0000           | 35               | 0               | 0               | 0             | 33                   | 20.00             |
| 0100           | 35               | 0               | 1               | 1             | 32                   | 19.45             |
| 0200           | 35               | 1               | 1               | 2             | 32                   | 19.51             |
| 0300           | 35               | 0               | 1               | 1             | 31                   | 18.97             |
| 0400           | 35               | 1               | 2               | 3             | 30                   | 18.48             |
| 0500           | 35               | 1               | 13              | 14            | 18                   | 11.98             |
| 0600           | 35               | 7               | 15              | 22            | 10                   | 8.03              |
| 0700           | 35               | 13              | 17              | 30            | 6                    | 6.62              |
| 0800           | 35               | 8               | 11              | 19            | 3                    | 5.45              |
| 0900           | 35               | 13              | 10              | 23            | 6                    | 7.87              |
| 1000           | 35               | 16              | 18              | 34            | 4                    | 7.73              |
| 1100           | 35               | 24              | 21              | 45            | 7                    | 10.80             |
| 1200           | 35               | 18              | 13              | 31            | 12                   | 14.61             |
| 1300           | 35               | 13              | 18              | 31            | 7                    | 12.65             |
| 1400           | 35               | 5               | 12              | 17            | 0                    | 9.12              |
| 1500           | 35               | 12              | 6               | 18            | 6                    | 13.11             |
| 1600           | 35               | 8               | 9               | 17            | 5                    | 13.05             |
| 1700           | 35               | 7               | 6               | 13            | 6                    | 14.01             |
| 1800           | 35               | 5               | 3               | 8             | 8                    | 15.40             |
| 1900           | 35               | 4               | 2               | 6             | 10                   | 16.73             |
| 2000           | 35               | 4               | 2               | 6             | 12                   | 18.06             |
| 2100           | 35               | 1               | 1               | 2             | 12                   | 18.12             |
| 2200           | 35               | 1               | 0               | 1             | 13                   | 18.73             |
| 2300           | 35               | 3               | 1               | 4             | 15                   | 20.00             |
|                |                  |                 |                 |               |                      | 20.00             |
| TOTAL          |                  | 165             | 183             | 348           | 318                  | 338.48            |

7.8

Based on the above assessment it can be seen that the estimated maximum number of parking spaces occupied are 33 during the hour beginning 00:00. This is at the capacity of the lorry park and therefore it is considered that the lorry park was operating at the limit of its capacity during the survey for the existing development. The results in Table 9 are represented graphically in **Chart 2**.

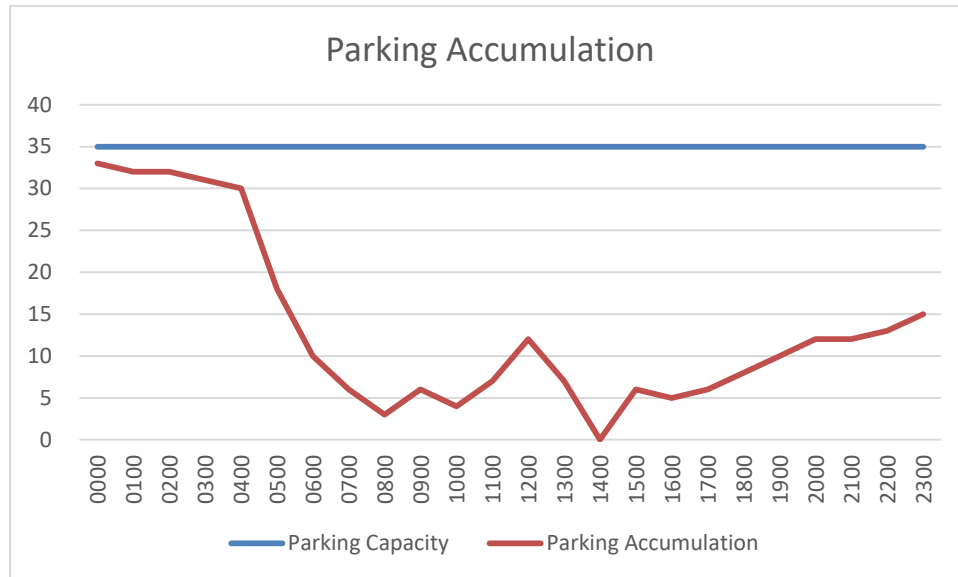


Chart 2: Red Lodge parking Accumulation

- 7.9 The parking beat survey outputs are reproduced in **Appendix E**.
- 7.10 Within this assessment, we have used the observed hourly arrivals and departures rates from the Red Lodge HGV parking beat survey and used this profile for the proposed truckstop at Ty'n-y-caeau.
- 7.11 The resultant traffic movements considered for the proposed truckstop with its limited parking are shown in **Table 11**.

| Hour Beginning | Cars & LGV |     |     |           | OGV1, OGV2 & Coaches |     |     |           |
|----------------|------------|-----|-----|-----------|----------------------|-----|-----|-----------|
|                | Arr        | Dep | Tot | Park Acc. | Arr                  | Dep | Tot | Park Acc. |
| 00:00          | 0          | 0   | 0   | 1         | 0                    | 0   | 0   | 21        |
| 01:00          | 0          | 0   | 0   | 1         | 0                    | 1   | 1   | 20        |
| 02:00          | 0          | 0   | 0   | 1         | 1                    | 1   | 2   | 20        |
| 03:00          | 0          | 0   | 0   | 1         | 0                    | 1   | 1   | 19        |
| 04:00          | 0          | 0   | 0   | 1         | 1                    | 2   | 3   | 18        |
| 05:00          | 0          | 0   | 0   | 1         | 1                    | 13  | 14  | 6         |
| 06:00          | 0          | 0   | 0   | 1         | 5                    | 11  | 16  | 0         |
| 07:00          | 1          | 0   | 1   | 2         | 8                    | 8   | 16  | 0         |
| 08:00          | 6          | 5   | 11  | 3         | 6                    | 6   | 12  | 0         |
| 09:00          | 6          | 5   | 11  | 4         | 8                    | 8   | 16  | 0         |
| 10:00          | 6          | 5   | 11  | 5         | 9                    | 9   | 18  | 0         |
| 11:00          | 6          | 0   | 6   | 11        | 21                   | 16  | 37  | 5         |
| 12:00          | 5          | 7   | 12  | 9         | 15                   | 12  | 27  | 8         |
| 13:00          | 10         | 4   | 14  | 15        | 9                    | 17  | 26  | 0         |
| 14:00          | 11         | 13  | 24  | 13        | 5                    | 5   | 10  | 0         |
| 15:00          | 4          | 10  | 14  | 7         | 10                   | 5   | 15  | 5         |
| 16:00          | 9          | 6   | 15  | 10        | 7                    | 8   | 15  | 4         |
| 17:00          | 6          | 7   | 13  | 9         | 7                    | 6   | 13  | 5         |
| 18:00          | 8          | 10  | 18  | 7         | 5                    | 3   | 8   | 7         |
| 19:00          | 5          | 8   | 13  | 4         | 4                    | 2   | 6   | 9         |
| 20:00          | 2          | 4   | 6   | 2         | 4                    | 2   | 6   | 11        |

|               |    |    |     |   |     |     |     |    |
|---------------|----|----|-----|---|-----|-----|-----|----|
| <b>21:00</b>  | 1  | 1  | 2   | 2 | 1   | 1   | 2   | 11 |
| <b>22:00</b>  | 1  | 0  | 1   | 3 | 1   | 0   | 1   | 12 |
| <b>23:00</b>  | 1  | 0  | 1   | 4 | 3   | 1   | 4   | 14 |
| <b>24hrs.</b> | 88 | 85 | 173 |   | 131 | 138 | 269 |    |

Table 11: Proposed Traffic using the truckstop

### Trip Distribution

- 7.12 The Ty'n-y-caeau site can only be arrived at from the M4 J38 Margam Interchange on the A48 Margam Road northbound carriageway and vehicles have to depart northbound towards the A4241 Harbour Way Roundabout.
- 7.13 If vehicles are travelling southbound on the M4 and wish to use the truckstop, they would come off at J38 Margam Interchange and perform a 'U-Turn', use the A48 Margam Road northbound carriageway and turn left into the site. To continue on the M4 southbound journey after using the truckstop, they will turn left out of the site, enter the outside lane of the A48 Margam Road northbound carriageway and at the A4241 Harbour Way roundabout perform a 'U-Turn', travel along the A48 Margam Road southbound carriageway and continue onto the M4 southbound at the J38 Margam Interchange.
- 7.14 If vehicles are travelling northbound on the M4 and wish to use the truckstop, they have to come off at J38 Margam Interchange, use the A48 Margam Road northbound carriageway and turn left into the site. To continue on the M4 northbound journey after using the truckstop, they will turn left out of the site, enter the outside lane of the A48 Margam Road northbound carriageway and take the 2<sup>nd</sup> exit at the A4241 Harbour Way roundabout and enter the M4 at J39 off the Groes Interchange.
- 7.15 If vehicles are travelling southbound on the A48 Margam Road or the A4241 Harbour Way and wish to use the truckstop, they have to use the A48 Margam Road southbound carriageway, make a 'U-Turn' at the J38 Margam Interchange on to the A48 Margam Road northbound carriageway and turn left into the site. To continue on the A48 southbound journey after using the truckstop, they will turn left out of the site, enter the outside lane of the A48 Margam Road northbound carriageway and at the A4241 Harbour Way roundabout perform a 'U-Turn', travel along the A48 Margam Road southbound carriageway and continue onto the the J38 Margam Interchange.
- 7.16 If vehicles are travelling northbound on the A48 Margam Road or the A4241 Harbour Way and wish to use the truckstop, they have to come off at J38 Margam Interchange and use the A48 Margam Road northbound carriageway and turn left into the site. To continue on the northbound journey after using the truckstop, they will turn left out of the site and take the 1<sup>st</sup> or 2<sup>nd</sup> exit at the A4241 Harbour Way roundabout.
- 7.17 From the traffic turning movement surveys we know that HGVs are already making 'U-Turns' at both of the roundabout junctions. There are seven routes that HGVs could arrive from and depart to within the vicinity of the site.
- 7.18 Within this assessment, we have used the observed turning movements at the two roundabout junctions for the traffic distribution for the proposed truckstop at Ty'n-y-caeau.

## **8 FUTURE YEAR ASSESSMENT**

8.1 The truckstop proposals in their own right are unlikely to generate additional traffic on the motorway and local highway network, however where located at a junction, there will be additional vehicular movements at the junction.

8.2 In addition there will be background traffic growth in and around the area as a result of committed and planned development.

### **Assessment Years**

8.3 Committed development in the vicinity of the M4 Junction 38 has been considered. The NPTCBC Local Development Plan 2011-2026 has been reviewed for committed development sites.

8.4 The committed development and traffic growth need to be considered in the context of the assessment years, these are as follows:

- the development and construction phase;
- the opening year, assuming full build out and occupation, and
- either a date ten years after the date of registration of the associated planning application or the end of the Local Plan period (whichever is the greater).

8.5 Importantly the assessment at opening will be used for the determination of impact mitigation needs whilst the latter is necessary to determine the risk which will transfer to the Local Highway Authority (NPTCBC).

8.6 The planning application was refused in late 2020, planning permission and approvals could be obtained during 2022, allowing a start of construction in 2022; it is anticipated the earliest opening date could be late 2022 however for the assessment of highway impacts an 'opening year' of 2023 has been assumed which provides a robust assessment. Reference has already been made to the date ten years after the date of registration, that is to say 2030, which in this instance is relevant as the end of the Local Plan period is 2026. However, for a robust assessment we will consider a date ten years after the opening year i.e. 2033.

8.7 So the assessment years will be as follows:

- 2021 Base Year without development
- 2023 Opening Year with development
- 2033 Future Year with development

### **Committed Development**

8.8 For the purposes of assessment the committed development in the area need to be taken into account. Committed development is defined as land with planning permission or land allocated in an adopted Development Plan that is likely to come forward in the next three years.

8.9 In the vicinity of the site the fields surrounding Ty'n-y-caeau are included as committed development within the NPTCBC LDP. The site reference is EC1/2, it is allocated as an employment site under LDP Policy EC 1 Employment Allocations. The allocation site is described as Junction 38 (M4), Margam with a site area of 6 ha and the permitted use class is B1, B2 and B8.

- 8.10 The Town and Country Planning (Use Classes) Order 1987 (as amended) was updated in 1<sup>st</sup> September 2020. Uses B2 and B8 remain valid. B2 General industrial - Use for industrial process other than one falling within class E (g) (previously class B1) (excluding incineration purposes, chemical treatment or landfill or hazardous waste) B8 Storage or distribution - This class includes open air storage. Class B1 is now Class E(g) with Class E(g)(iii) Industrial processes.

### **Traffic Calculations**

- 8.11 Traffic growth is addressed by application of the National Trip End Model (NTEM) forecasts and the TEMPro<sup>5</sup> software. TEMPro separates out the UK by region, planning authority and zone. TEMPro bases traffic growth calculations on the level of background traffic growth, that is to say growth of traffic without any development, and traffic growth as a result of housing and employment development. The housing and employment development assumptions are based on indicators such as proposed development levels for an area.
- 8.12 Where other relevant local developments are known and are to be directly inputted to any assessment traffic flows, these need to be taken into account with the assumptions in TEMPro 7.2, and adjustments made accordingly to avoid double counting.
- 8.13 TEMPRO version 7.2 is the current version of the industry standard tool for calculating traffic growth. TEMPro, through the National Trip Ends Model (NTEM) uses planning data in the form of household and employment numbers to establish traffic growth by area, which is then adjusted for road type using the latest release of the National Transport Model (NTM). The household and employment numbers are taken from extant planning documents, i.e. Local Plans.
- 8.14 Therefore as an initial check it is appropriate to compare the planning assumptions for growth in housing numbers in the Local Plan period of 2011-2026 with the values set out in the Local Plan. Policy SP 7 Housing Requirement of the LDP identifies a total provision of 8,760 additional dwellings between 2011 and 2026.
- 8.15 The Economic Assessment and Employment Land Provision Study by Peter Brett Associates (PBA) on behalf of the City and County of Swansea and Neath Port Talbot County Borough Council (2012) identified an anticipated increase of 3,850 jobs over the LDP period with a resultant requirement of 20 hectares of land for B uses, this includes an anticipated net need of 34,000 sqm of B use floorspace. In order to meet this requirement the LDP has identified two strategic employment sites at Baglan Bay and Junction 38 (M4) Margam. These sites are located in the coastal corridor which is the area of highest market demand with easy access to the strategic road and freight networks. The comparison is set out in **Table 12**.

**Table 12: Comparison of Job Numbers – Neath Port Talbot**

| Job Numbers |                         |                         |                               |                         |
|-------------|-------------------------|-------------------------|-------------------------------|-------------------------|
|             | TEMPro v7.2<br>for 2011 | TEMPro v7.2<br>for 2026 | Change<br>TEMPro<br>2011-2026 | Local Plan<br>2011-2026 |
| <b>Jobs</b> | 52,315                  | 56,212                  | 3,897                         | 3,850                   |

- 8.16 Therefore, the planning assumptions sets out in TEMPro v7.2 which suggest 3,897 jobs in the period 2011 to 2026 are robust when compared to the numbers set out in the Local Plan of 3,850.

<sup>5</sup> TEMPRO (Trip End Model Presentation Program) software version 7.2

8.17 It is therefore considered appropriate to use TEMPRO growth factors directly without discount, to growth existing traffic to future year assessments that is to say with no traffic data adjustments for specific developments.

8.18 **Table 13** sets out growth factors from 2021 to 2023 and from 2021 to 2033 for the Neath Port Talbot zone for the 'Principal' road type, for each time period. The calculations for the assessment periods are reproduced at **Appendix F**.

**Table 13: TEMPro Growth factors – Neath Port Talbot**

| Period           | AM Peak Hour<br>08:00-09:00 | Truckstop<br>Peak Hour<br>11:00-12:00 | PM Peak Hour<br>16:00-17:00 |
|------------------|-----------------------------|---------------------------------------|-----------------------------|
| <b>2021-2023</b> | 1.014247365                 | 1.016104409                           | 1.013896032                 |
| <b>2021-2033</b> | 1.081167269                 | 1.089647814                           | 1.07943029                  |

### Forecast Traffic Flows

8.19 Peak hour turning movements in 2023 and 2033 have been derived based on the existing traffic flows as observed taking into account predicted growth and the proposed development. A spreadsheet has been built and the relevant traffic flow diagrams are set out in **Appendix G**.

8.20 The forecast flows have been used to test the impact of development under different scenarios. These are described in Section 9.

## 9 IMPACT ON THE TRANSPORT NETWORK

9.1 In accordance with paragraph 25 of DfT Circular 02/2013 and paragraph 101 of Highways England's guidance, three assessment years have been tested. They are:

- the 2021 base year - no development,
- the 2023 opening year with development and
- the 2033 future year 'a date ten years after opening year' with development.

9.2 The impact of the proposed development on the M4 J38 Margam Interchange motorway junction and the A4241 Harbour Way roundabout has been tested using the industry standard calculations used within the capacity analysis program ARCADY (Assessment of Roundabout Capacity and Delay) to assess the operation of the two roundabout junctions.

9.3 The results generated by the spreadsheet traffic models consist of a Ratio of Flow to Capacity (RFC). RFC values up to 0.85 and 1.00 represent a variable operation and considered to indicate a constrained junction.

### Junction Operational Assessments

9.4 The existing M4 J38 junction which features a Grade Separated roundabout has been assessed using the spreadsheet model. The A4241 Harbour Way roundabout has also been tested using the same methodology.

9.5 Three time periods have been tested - the AM peak hour, and the PM peak hour as these are the times when most traffic is present on the highway network, the third time period is the truckstop peak hour (where the truckstop generates the most movements). For each time period, the three assessment years outlined above have been tested making a total of 9 scenarios.

### Junction capacity assessment results

9.6 A summary of the results from the junction capacity assessments undertaken is provided in **Table 14**, with the full modelling outputs provided in **Appendix H**. The figures below the tick/crosses are the ratio to flow capacity for the highest quarter hour period.

**Table 14: Junction Operational Assessment Summary**

| Time Period                   | Scenario          |     | J1: M4<br>Junction 38<br>Interchange; |       | J2: A4241<br>Harbour Way<br>roundabout; |       |
|-------------------------------|-------------------|-----|---------------------------------------|-------|-----------------------------------------|-------|
| AM Peak<br>08:00-09:00        | 2021 Base Year    | DoN | ✓                                     | 0.114 | ✓                                       | 0.289 |
|                               | 2023 Opening Year | DoM | ✓                                     | 0.100 | ✓                                       | 0.205 |
|                               | 2033 Future Year  | DoS | ✓                                     | 0.204 | ✓                                       | 0.346 |
| Truckstop Peak<br>11:00-12:00 | 2021 Base Year    | DoN | ✓                                     | 0.116 | ✓                                       | 0.295 |
|                               | 2023 Opening Year | DoM | ✓                                     | 0.105 | ✓                                       | 0.216 |
|                               | 2033 Future Year  | DoS | ✓                                     | 0.208 | ✓                                       | 0.354 |
| PM Peak<br>16:00-17:00        | 2021 Base Year    | DoN | ✓                                     | 0.124 | ✓                                       | 0.315 |
|                               | 2023 Opening Year | DoM | ✓                                     | 0.113 | ✓                                       | 0.232 |
|                               | 2033 Future Year  | DoS | ✓                                     | 0.221 | ✓                                       | 0.377 |

DoN – 'Do-Nothing' - Base/Survey Year  
DoM - 'Do-Minimum' Scenario - With truckstop  
DoS - 'Do-Something' Scenario - With Committed Developments and truckstop  
Not Applicable - -  
Within Design Capacity - ✓  
Within Theoretical Capacity - ✓ x  
Over Capacity - x

9.7 In Table 14, a 'tick' is shown where a junction is forecast to operate within design capacity for a specific scenario, both a 'tick' and 'cross' is shown when the junction is forecast to exceed design capacity but to operate within theoretical capacity and a 'cross' is shown when the junction is forecast to exceed its theoretical capacity.

9.8 The results summary provided indicates that the junctions have been suitably designed and have sufficient capacity to accommodate forecast future year traffic flows.

### **Operational Assessment Summary**

9.9 It is therefore concluded that the proposed junction arrangements are suitable to cater for the predicted changes in traffic movements as a result of this site being developed with a truckstop.

## **10 CONSTRUCTION TRAFFIC**

- 10.1 Construction activities will include the internal works required to provide the facilities within the existing buildings as well as civil engineering works to provide the new access, the on-site roads and parking areas, together with landscaping involving earthmoving and ground re-profiling.
- 10.2 Construction of the proposed truckstop will give rise to deliveries of materials and products that will be transported by heavy goods vehicles (HGVs). In addition there will be on-site operation of construction equipment and plant. The design of the site infrastructure will minimise earthworks, and it is not expected that there will be substantial quantities of soil to be removed from the site.
- 10.3 In view of the fact the site is to be served off the A48 Margam Road, it is intended to construct the access as the first stage. Initial site preparation work will be carried out on the site to minimise the need to affect the free flow of traffic using the A48. Once the access from the A48 Margam Road has been formed, all access for construction will be via this junction.
- 10.4 The likely numbers of construction vehicles is dependent on the rate of construction. As a worst case, assuming no car sharing or non-car trips, the site staff and operatives would generate around 25 vehicle movements to the site in the morning, and 25 vehicle movements away from the site in the evening.
- 10.5 It is estimated that on a typical day there may be in the order of 5 HGV trips per day into and out of the site. The access arrangements and the routing of HGV movements will be the subject of a Construction Environmental Management Plan.
- 10.6 The effects of construction traffic, particularly HGVs, could be perceived by other road users to be **moderate adverse**; however the construction period is relatively short-term and only temporary in its effects.

## **11 TRANSPORT IMPLEMENTATION STRATEGY**

### **Introduction**

- 11.1 TAN 18 identifies three things that a transport implementation strategy (TIS) should seek to achieve.
- Identify what policy objectives and requirements are set by the development plan in terms of access to the development and movement in and around the site.
  - Identifying what access arrangements are required for a successful development (meeting the needs of the developer, end user, addressing impacts on neighbours and existing movements surrounding the site).
  - Specify the package of physical, management and promotional measures needed to accommodate the requirements identified above, such as physical infrastructure, the design and location of buildings, parking management, financial incentives and dedicated travel plan coordinators.
- 11.2 Chapter 2 of the TA summarises the main policy initiatives which need to be addressed as part of the former Emlyn brickworks site. These have been drawn from various current source documents and are reproduced here.
- The promotion of sustainable settlement pattern which minimise the need for unnecessary travel by car. The promotion of development which facilitate good linkages with existing public transport services.
  - The provision of good linkages to and within the development site for walking and cycling.
  - The promotion of travel plans as part of the development process.
  - The promotion of transport infrastructure that seek to minimise the adverse effects on transport on the environment.
- 11.3 Circular 02/2013 highlights that motorway service areas (including off line truckstops) perform an important road safety function by providing opportunities for the travelling public to stop and take a break in the course of their journey. As such the primary purpose of the development is to serve HGV drivers and then the travelling public therefore, there is limited scope to minimise the travel demand and resultant impacts arising as a result of the proposed development.
- 11.4 The site at Ty'n-y-Caeau is 'off-line' in the sense that it will serve the motorway traffic, however it is located off the A48 Margam Road via the M4 J38 interchange.
- 11.5 Within the limited scope to minimise the travel demand, opportunities do exist to mitigate the proposed development. Mitigation is in two parts: first to take advantage of the site location to minimise the need for journeys on the motorway mainline by staff and secondly in the form of a staff Travel Plan.
- 11.6 In respect to the first the truckstop is located off the A48 Margam Road, so avoids the need for staff-related traffic to travel along the motorway as would be the case with a traditional motorway service areas on-line sites.
- 11.7 In respect to the second, a staff Travel Plan will be prepared in accordance with the guidance set out in the Planning Practice Guidance 'Travel plans, transport assessments and statements in decision-making', published by the Department for Communities and Local Government in March 2014 and taking into account the travel plan advice published by the Welsh Government.

- 11.8 This will provide a framework for the developer working in conjunction with the local highway authority to promote sustainable travel patterns and behaviour without reducing mobility or accessibility.
- 11.9 Due to the type of development the Travel Plan will be geared to employees rather than to the travelling public.

## **12 CONCLUDING COMMENTS**

### **Introduction**

- 12.1 Recycling Plant and Machinery Ltd. have submitted a planning application for a Proposed truckstop on land at Tyn-y-Caeau, Margam Road, Margam, Port Talbot.

### **Existing Development**

- 12.2 The existing site comprises of a guest house with 14 rooms in large open grounds with direct access of the A48 Margam Road northbound carriageway.

### **Proposed Development**

- 12.3 The proposed development will comprise:
- a direct access off the A48 Margam Road, which will be modified to accommodate HGV movements;
  - an amenities building incorporating a food court, toilets and related facilities (already existing on site);
  - electricity charging points;
  - parking spaces for various categories of vehicles; and
  - accommodation with 14 bedrooms (already existing on site).

### **Committed Developments**

- 12.4 Proposals associated with committed developments that are likely to have a traffic impact on the study area road network, have also been addressed as part of this transport assessment. They include:
- The Margam Strategic Employment Site.

### **Considerations for a Truckstop**

- 12.5 The Transport Assessment (TA) examines the transport impact of the development proposal and proposes mitigation measures where appropriate. It has been prepared in accordance with the Planning Policy Wales, the section of the Planning Practice Guidance dealing with 'Travel plans, transport assessments and statements in decision-making' published in March 2014, the Department for Transport's (DfT) Circular 02/2013 'The Strategic Road Network and the Delivery of Sustainable Development' published in September 2013 and is in line with 'The Strategic Road Network: Planning for the future' published by Highways England in September 2015.
- 12.6 The need for a truckstop has been examined in the light of extant policy and taking into account the predicted increases in traffic on the SRN, the reduction nationally in the number of fuel filling stations, the current shortfall in HGV parking in the area and the knowledge which indicates the need for additional truckstops.
- 12.7 Fundamental to the promotion of the truckstop proposal is the means of access. A feasibility exercise has been carried out. Consideration has been given to the requirements of DfT Circular 02/2013. It is acknowledged that Paragraph B16 of Annex B addresses the circumstances where a truckstops should be located. In these circumstances, the truckstop will be located within 2 miles of the strategic road network and HGVs will not be required to pass through residential areas.
- 12.8 The site at Ty'n-y-Caeau is an 'off-line' provision in that it is accessible from the motorway via J38 of the M4 and can be served directly from the A48 Margam Road.

**Traffic forecasting**

- 12.9 In accordance with Circular 02/2013 and in line with Highways England's document 'The Strategic Road Network: Planning for the Future' the following assessment years have been tested:
- 2021 base year;
  - 2023, the opening year, assuming full build out and occupation, and
  - 2033, future year 'a date ten years after opening year' with development.
- 12.10 It is recognised that some movements to and or from the truckstop will be trips already from or to the motorway at Junction 38. The assignment and distribution of trips has been estimated using results obtained from junction turning movement traffic surveys, the parking beat survey from an existing truckstop at Red Lodge, and based on professional judgment.

**Trip generation**

- 12.11 The existing M4 J38 is catering for a daily throughput of around 20,000 vehicles. The traffic flows recorded in 2021 were 1,489 in the morning peak hour and 1,940 in the evening peak hour. These are shown in the diagrams at **Appendix B**. These existing flows are predicted to increase by 2023 to 1,519 and 1,979 respectively with the truckstop, and due to growth generally and by 2033 to 1,618 and 2,106 respectively with committed development, and due to growth generally.
- 12.12 The proposed development is predicted to attract 23 vehicle movements in the AM. The proposed development will attract 30 vehicle movements in the PM peak hour. The busiest time of day for truckstop movements is 11:00 to 12:00 when 43 vehicle movements occur at the new access junction.
- 12.13 The existing A4241 Harbour Way roundabout is catering for a daily throughput of around 17,000 vehicles. The traffic flows recorded in 2021 were 1,229 in the morning peak hour and 1,732 in the evening peak hour. These are shown in the diagrams at **Appendix B**. These existing flows are predicted to increase by 2023 to 1,253 and 1,764 respectively with the truckstop, and due to growth generally and by 2033 to 1,333 and 1,877 respectively with committed development, and due to growth generally.
- 12.14 The proposed development is predicted to attract 23 vehicle movements in the AM of which 11 will be cars and LGVs and 12 will be HGVs. The proposed development will attract 30 vehicle movements in the PM peak hour of which 15 will be cars and LGVs and 15 will be HGVs. The busiest time of day for truckstop movements is 11:00 to 12:00 when 43 vehicle movements occur at the new access junction of which 6 will be cars and LGVs and 37 will be HGVs.
- 12.15 Throughout the 24 hours of day and night when the truckstop is operating at capacity, it is anticipated that the truckstop could attract approximately 220 vehicle movements turning left-in and then generate 220 vehicle movements turning left-out.
- 12.16 The traffic movements to and from the proposed development require access arrangements to accommodate the number of movements and the different types of vehicles. Various options were tested at the feasibility stage.
- 12.17 The proposed layout of the access is shown on the drawing which is reproduced in **Appendix D**, which in turn has been used to prepare the preliminary access layout to be submitted as part of the planning application. The proposed layout

includes widening the access and providing large junction radii to accommodate the swept paths of articulated lorries.

- 12.18 An important component of the truckstop is the parking for HGVs and the associated facilities for the drivers. There is evidence of a lack of secure overnight parking facilities in the South Wales. The 'National Survey of Lorry Parking 2017' identifies that South Wales is 7<sup>th</sup> within the worst ten regions by police force for crimes reported at laybys or industrial estates. The truckstop is proposing 21 secure spaces for HGVs (5 of which can accommodate abnormal loads), 10 motorcycle spaces and 26 car spaces.

### **Traffic Impact Results**

- 12.19 The existing roundabout junctions due to the very limited number of additional vehicle movements were tested using a spreadsheet model based on the ARCADY calculations. The results indicate in every scenario the junctions will be operating within capacity.

### **Conclusion**

- 12.20 The applicant would have liked to work with Neath Port Talbot County Borough Council to achieve a mutually satisfactory conclusion to this planning application.
- 12.21 Taking into account all of the above, it is considered that there are no highways reasons why the proposals for the Margam Truckstop should not be approved, from a highways point of view, by Neath Port Talbot County Borough Council.

### **Closure**

- 12.22 LvW Highways Ltd has prepared this report with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on interpretation of data collected has been accepted in good faith as being accurate and fair.
- 12.23 This report is for the exclusive use of Recycling Plant and Machinery Ltd. no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from LvW Highways Ltd.
- 12.24 LvW Highways Ltd disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of work.