LIDL GREAT BRITAIN LIMITED

PROPOSED FOOD STORE

MUMBLES ROAD, SWANSEA

TRANSPORT ASSESSMENT

20-00668/TA/01

September 2021

CORUN
Transport and Highway Engineering

DOCUMENT SIGNATURE AND MODIFICATION SHEET

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Issued By:

Corun Associates Limited
Swansea

T 01792 229155
E swansea@corun.uk.com

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1 INTRODUCTION

1.1 Background

1.1.1 This Transport Assessment (TA) has been produced by Corun Associates Ltd (Corun) on behalf of Lidl Great Britain Limited, the applicants, to examine the highway and transportation issues associated with the proposed development of a new Lidl food store (Class A1) along Mumbles Road, Swansea.

1.1.2 The proposal involves the construction of a new 2,029m^2 (GFA) Lidl food store unit together with associated parking (50 spaces in total) at a vacant site formerly occupied by a Shell filling station (now demolished). A layout plan of the proposed development is contained at **Appendix A**.

1.1.3 A pre-application discussion has been had with Swansea Council for the proposed development. A copy of the Swansea Council response letter for this pre-application discussion (received on 28th August 2021) is contained at **Appendix B**.

1.1.4 The aim of this report is to demonstrate that there are no reasons, in highway and transportation terms, why the proposed re-development site should not be allocated planning permission.

1.2 Scope

1.2.1 This report will discuss the following key transportation issues arising from the proposals:

(i) the existing site location and transport infrastructure;

(ii) analysis of personal injury traffic accident data;

(iii) the site's compliance with applicable transport policy;

(iv) the development proposal in detail;

(v) development-generated vehicular traffic; and

(vi) development impact on the surrounding highway network.

1.3 Covid Note

1.3.1 It is important to note that this report has been produced during the Covid-19 pandemic period which has imposed restrictions on the collection of traffic survey data. However, surveys were undertaken when schools were operational and there were no local lockdowns in place.

1.3.2 Data released by the DfT, as well as the survey data obtained by Corun, indicate that traffic during the survey period was near enough in line with pre-Covid levels, which enabled a robust assessment.

1.3.3 On this basis, no Covid-19 adjustment factor was deemed necessary, and the data obtained from the surveys undertaken is considered representative and robust for assessment purposes.

1.3.4 All traffic survey data can be provided on request.

2 EXISTING CONDITIONS

2.1 Site Description and Location

2.1.1 The proposed development site (hereon referred to as the 'site') is located along the A4067 Mumbles Road in the Blackpill area of Swansea. The site was formerly occupied by a Shell filling station, now demolished, cleared, and remediated in readiness for re-development. The site has a total area of 4,134m^2.

2.1.2 The site is bordered by the A4067 Mumbles Road along its eastern edge, with neighbouring residential developments to the north and south, and an area of un-developed land to the north-west.

2.1.3 The site is shown in a local context in **Figure 2.1**.

Figure 2.1: Site in Local Context

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2.2 Local Highway Network

2.2.1 The site is accessed directly off the A4067 Mumbles Road via a priority junction with a ghost island right-turn layout (which also provides access for the residential development to the south of the site).

2.2.2 In the vicinity of the site, the A4067 Mumbles Road has four traffic lanes (2 for southbound traffic and 2 for northbound traffic).

2.2.3 The site is located approximately 20m south of a speed limit change along the A4067 Mumbles Road. South from this point the road is subject to a 30mph speed limit, and north from this point the road is subject to a 40mph speed limit.

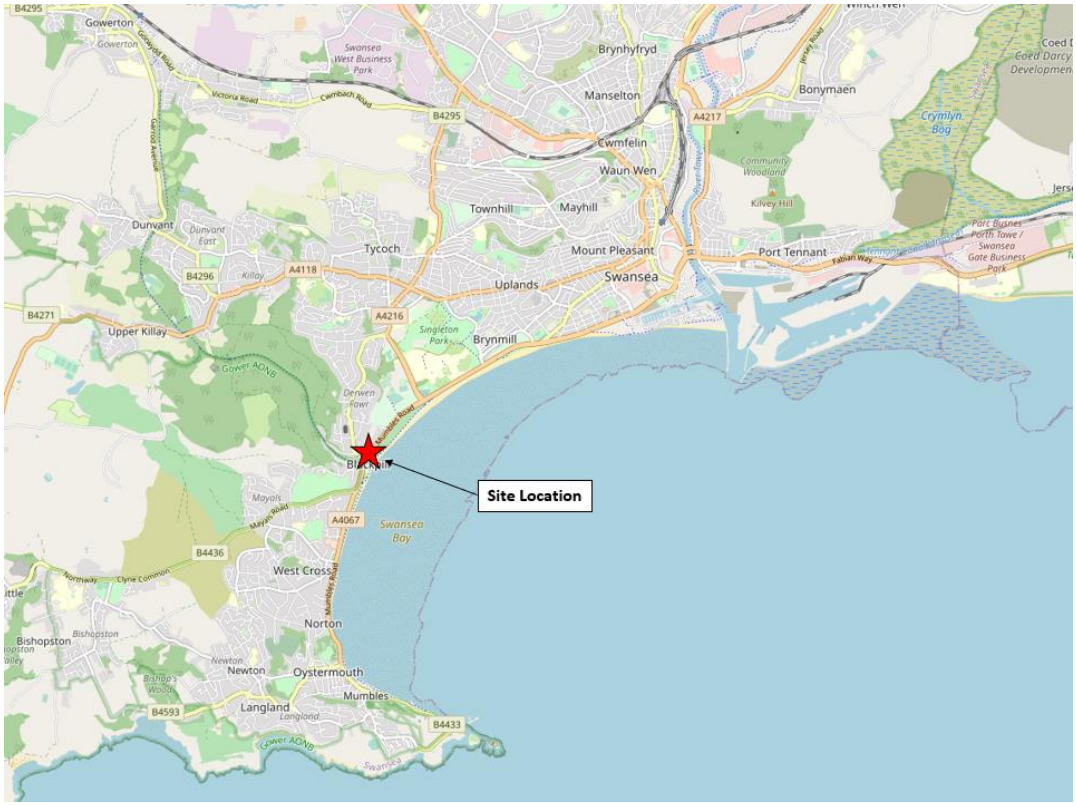
2.2.4 To the south of the site, the A4067 continues for approximately 2.8km, terminating in Mumbles. This route provides a key link route into the residential areas within this part of South Gower.

2.2.5 North of the site, the A4067 continues along the coast for approximately 5km, providing direct connections into south Swansea and Swansea City centre areas, before terminating at the River Tawe gyratory arrangement. The road also provides onward connections to M4 junctions to the north and east of Swansea.

2.2.6 Approximately 850m north from the site, the A4067 also connects to the A4216, which provides a key route north through west Swansea.

2.2.7 The site is shown in a wider strategic context in **Figure 2.2**.

Figure 2.2: Site in Strategic Context



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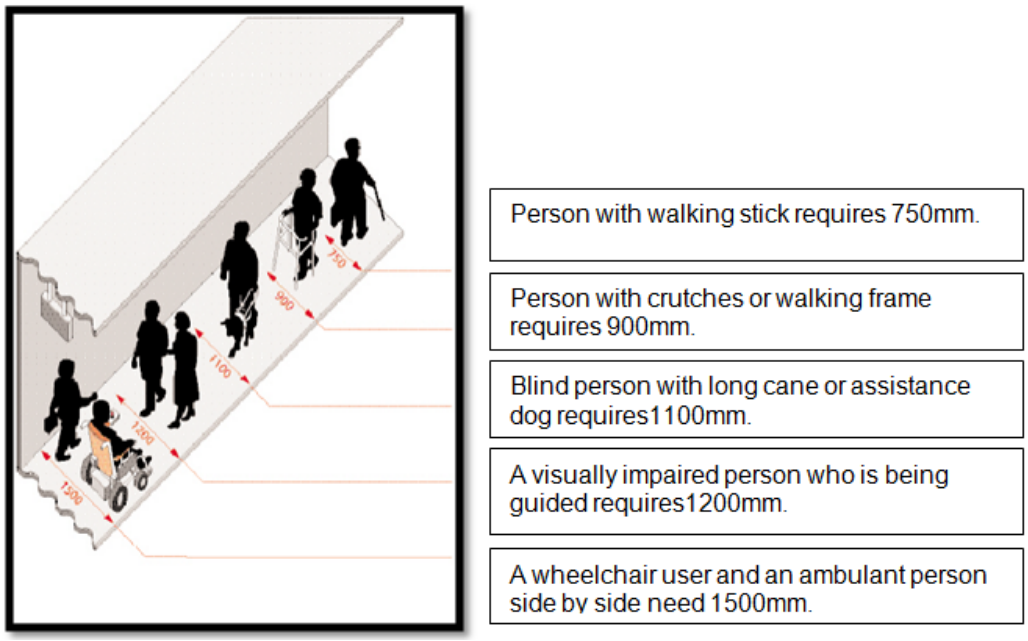
2.3 Pedestrian Facilities

2.3.1 The site will connect directly into an existing street-lit footpath running along the northern / western side of the A4067 Mumbles Road carriageway. Directly north from the site, this footpath is approximately 4m in width and provides a continuous route into Swansea City centre. Directly south from the site, this footpath narrows to approximately 2.3m in width and provides a continuous route into Mumbles.

2.3.2 A Toucan crossing is located approximately 200m to the south of the site, providing a safe crossing point across the A4067 Mumbles Road, which provides a direct connection into the Swansea Bay shared-use pedestrian and cycle path. This route follows the coast along the old Mumbles tramway, providing a traffic-free pedestrian/cycle route between Swansea Marina and Mumbles.

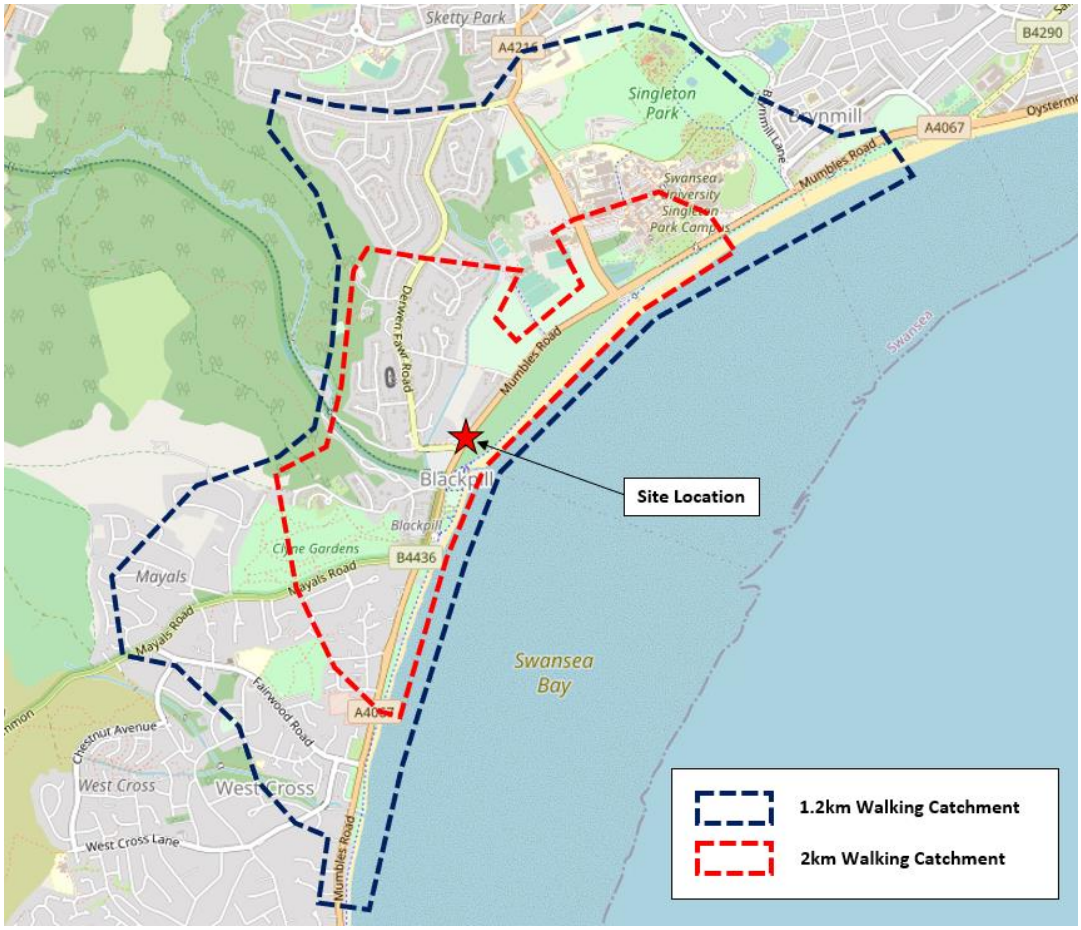
2.3.3 As shown in **Extract 2.1** from DfT's 'Inclusive Mobility' document (2002), the existing footway widths are more than suitable for a variety of users, including a wheelchair user and an ambulant person side by side.

Extract 2.1: Footway widths (DfT 'Inclusive Mobility' 2002)



2.3.4 Table 3.3 in The Chartered Institution of Highways and Transportation document 'Providing for Journeys on Foot' identifies suggested acceptable walking distances for pedestrians to a range of local facilities. For retail stores (under the elsewhere category) the preferred maximum walking distance specified is 1.2km, and for commuting trips (for staff to the site) the preferred maximum walking distance specified is 2km. **Figure 2.3** identifies the walking catchments to the site based on these suggested walking distances.

Figure 2.3: 1.2km and 2km indicative walking catchments from the site



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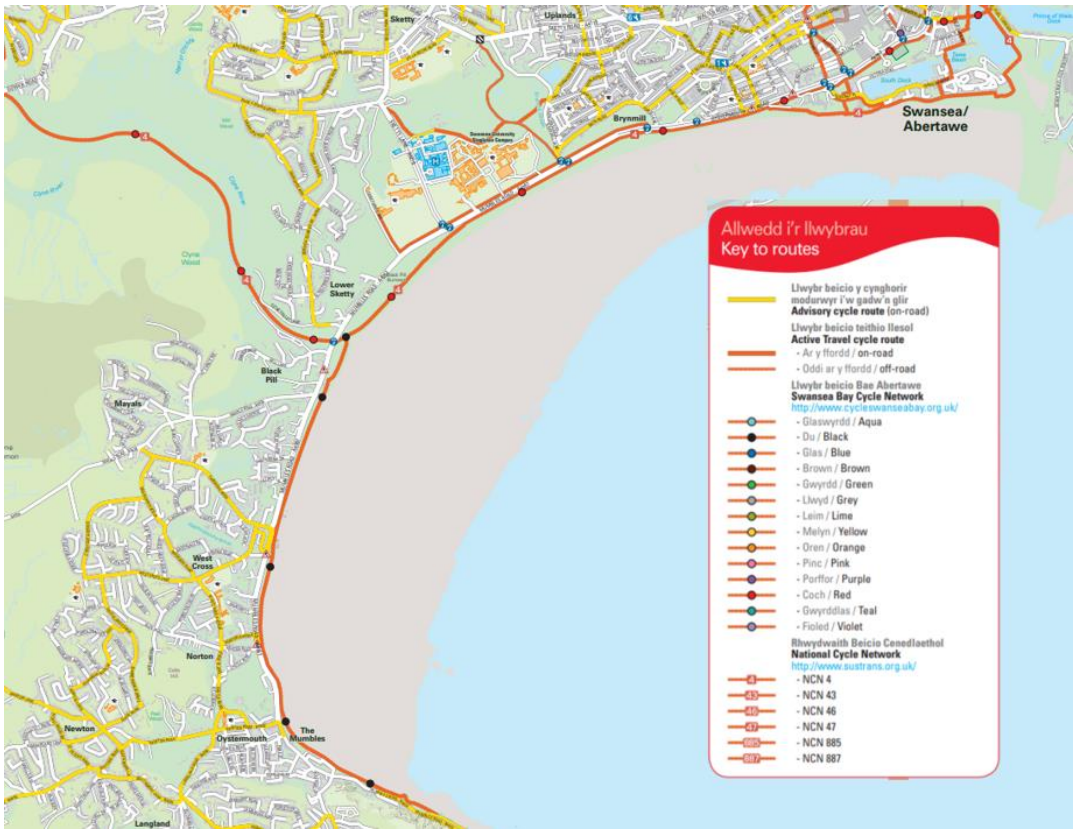
2.3.5 **Figure 2.3** demonstrates that much of the Blackpill residential area is located within a 1.2km walking distance from the site, with parts of the wider residential areas of Mayals, West Cross, Brynmill, and Tycoch within a 2km walking distance of the site. Both walking catchments also extend into the Swansea University Singleton Park Campus which has student accommodation on site. This identifies that the site is well located for a good proportion of residents in the local area to access the site by foot as a customer or staff member.

2.3.6 It should also be noted that these maximum acceptable walking distances specified are not definitive, and 'acceptable' walking distances will vary between individuals and circumstances. As such, with the walking connections available to the site, there is no reason that residents from further afield could not also access the site by foot, if they desired to do so.

2.4 Cycle Facilities

2.4.1 Cycling facilities within the vicinity of the site are outlined on an extract from the Swansea Bay cycle map published by Swansea Council, shown in **Figure 2.4**.

Figure 2.4: Swansea Bay Cycle Map Extract



Source: www.swansea.gov.uk

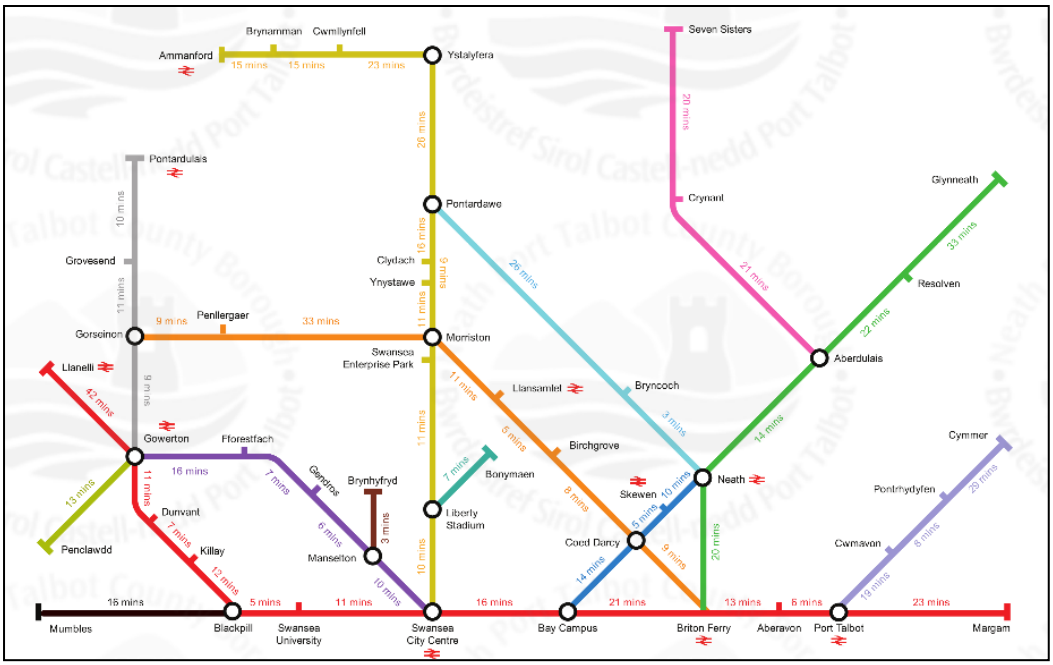
2.4.2 As identified on the Swansea Bay Cycle Map extract, the site is located within close proximity to both the Red and Black off-road routes of the Swansea Bay Cycle Network. Both routes can be accessed from the Toucan crossing on the A4067 Mumbles Road carriageway, approximately 200m to the south of the site.

2.4.3 The Swansea Bay Cycle Network is a scheme developed by both Swansea Council and Neath Port Talbot Council to encourage people in the area to travel by bike instead of car as part of their journey to work, school or the shops. There are fourteen different routes in the Swansea Bay Cycle Network, with each assigned a different colour. The network was developed with routes which take the most direct and flattest journey, suitable for all kinds of bike. The routes are a combination of both on-road and off-road sections, with route colours replicated on signs across the network. **Figure 2.5** shows a tube style map of the entire Swansea Bay Cycle Network, along with approximate cycle times between key points on the network.

2.4.4 South from the site, the Black Route (also known as the Mumbles Mile route) continues towards Mumbles, which the Tube Map in **Figure 2.5** identifies as approximately a 16-minute cycle time.

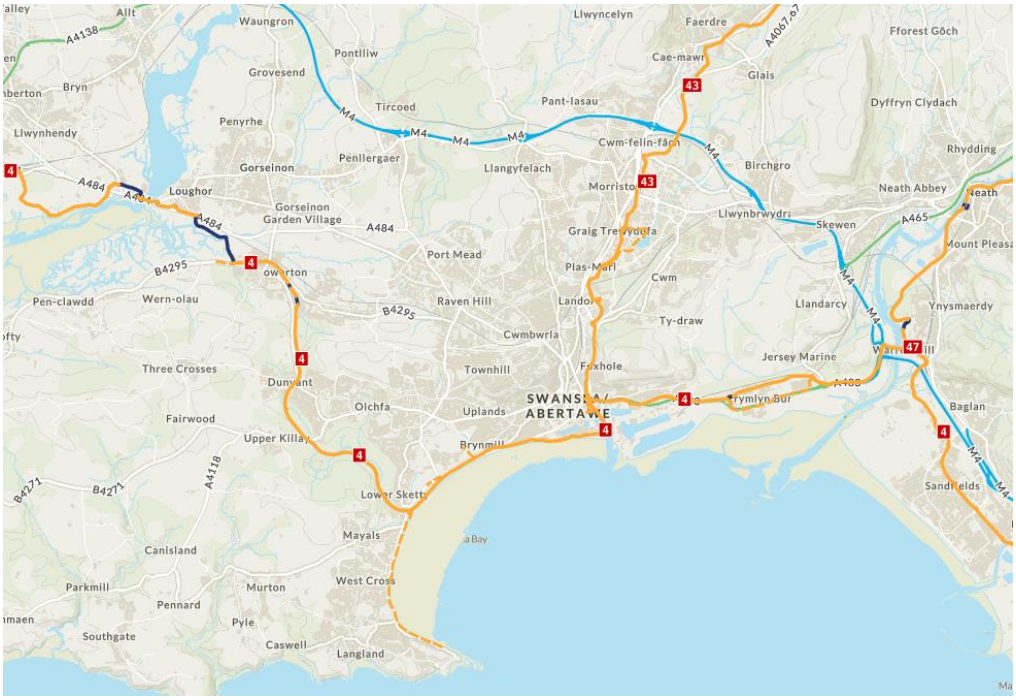
2.4.5 From the site, the Red Route (also known as the Central Line) continues north into Swansea City centre (approximately a 16-minute cycle time), and west towards Gowerton (approximately a 30-minute cycle time). This route also forms part of National Cycle Route 4 as shown on **Figure 2.6**.

Figure 2.5: Swansea Bay Cycle Network 'Tube Map'



Source: www.cycleswanseabay.org.uk

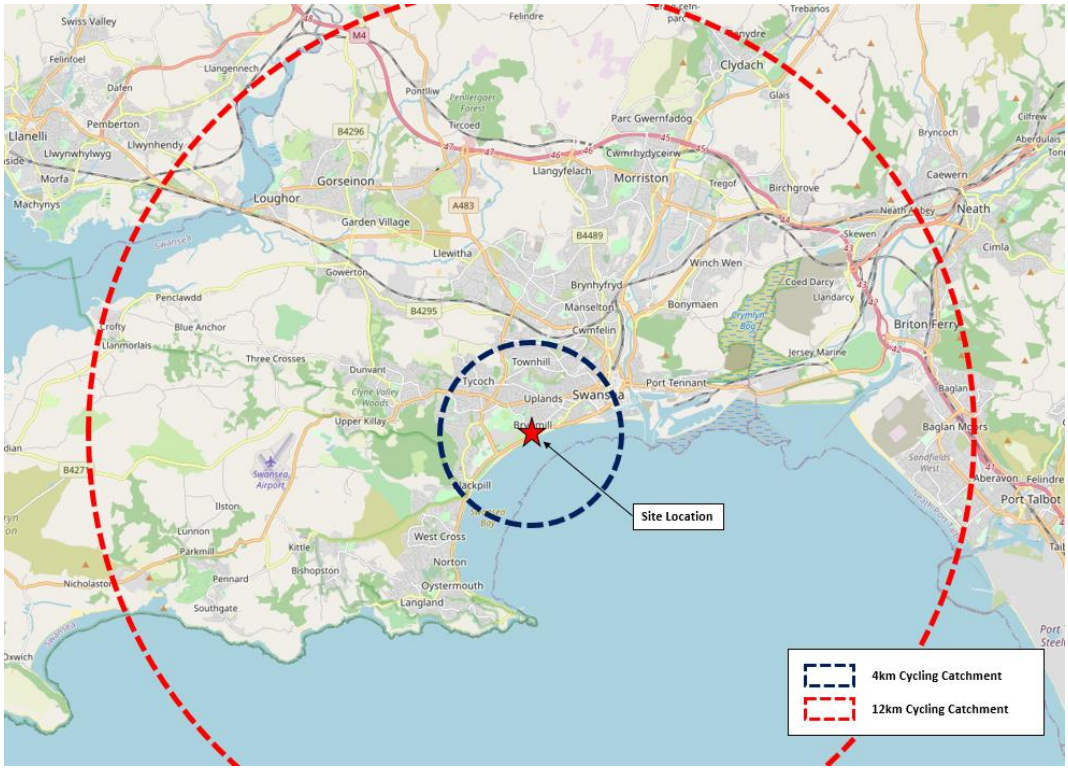
Figure 2.6: National Cycle Route Network Extract



Source: www.sustrans.org.uk

2.4.6 LTN1/04 identifies that the mean average length for cycling is 4km (2.4 miles), although journeys of up to three times this distance is not uncommon for regular commuters. As such, a 12km (7.4 mile) cycle commuter distance normally applies. A 4km cycle distance covers the Swansea City centre area including areas of Tycoch, Uplands, and Townhill. A 12km cycle distance covers the whole of the wider Swansea area, including parts of Gorseinon, Clydach, and Britton Ferry. **Figure 2.7** illustrates these indicative cycle catchments.

Figure 2.7: 4km and 12km indicative cycle catchments from the site



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2.4.7 With its location along the Swansea Bay Cycle Network, and the number of residential settlements within the 4km and 12km cycle catchment areas, the site is well located to attract staff and visitor cycle trips.

2.5 Public Transport Facilities

Bus

2.5.1 Guidance relating to the accessibility of development proposals to public transport is provided in the Institution of Highways and Transportation (IHT) document 'Planning for Public Transport in Development' (March 1999). The IHT guidance recommends that:

> *"'new developments should be located so that public transport trips involve a walking distance of less than 400m from the nearest bus stop …".*

2.5.2 **Figure 2.8** identifies the bus stops in the vicinity of the site.

2.5.3 The nearest bus stop to the site is the Ashleigh Road stop, located on the western side of the A4067 Mumbles Road carriageway, approximately 330m north of the site. This stop operates via a bus bay, with a sheltered waiting area provided, and provides access to northbound services along the road. Southbound services can be accessed from the stop on the opposite side of the road, which is approximately a further 100m walk away. A signalised pedestrian crossing point provides a safe crossing point across the A4067 Mumbles Road to access the southbound stop from the site.

2.5.4 Further bus stops providing access to northbound and southbound services along the A4067 Mumbles Road can be accessed from the Lido Bus stop and Post Office bus stop respectively, approximately a 330m and 420m walk south from the site respectively.

Figure 2.8: Bus stops in the vicinity of the site

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2.5.5 These bus stops provided access to regular First Bus services 2A, 2B, 2C, 3, 3A, and 14. A summary of each of these bus services is provided in **Table 2.1**.

Table 2.1 – Local bus service summary

Service	Route	Approximate daytime service frequency		
		Mon-Fri	Saturday	Sunday
2, 2A, 2B, 2C	Swansea City Bus Station to Newton (via Mumbles)	1 service every 15 minutes	1 service every 15 minutes	1 service every 60 minutes
3, 3A	Swansea City Bus Station to Mumbles (via West Cross Estate)	1 service every 30 minutes	1 service every 30 minutes	1 service every 60 minutes
14	Swansea City Bus Station to Pennard (via Blackpill, Mayals, Murton and Bishopston)	1 service every 90 minutes	1 service every 90 minutes	No Service

*Note: Data obtained from **www.firstgroup.com**, as per timetable updates posted on 12/09/21. Times stated are approximations only.*

2.5.6 **Table 2.1** identifies that regular bus services are available from the bus stops in proximity to the site, offering convenient bus travel options between Swansea City centre and Mumbles.

2.5.7 The site is therefore considered to be in a very good location to offer staff and visitors to the site opportunities to travel via bus modes.

Rail

2.5.8 The nearest train station to the site is Swansea station, approximately 5km away. Although outside a reasonable walking distance to the site, the station can be accessed via a multi-modal cycle or bus journey.

2.5.9 Swansea is a key station in Wales, providing access to Transport for Wales services running across South Wales, and onward to Manchester Piccadilly and Shrewsbury. The station also provides access to First Great Western services operating between Carmarthen and London Paddington.

2.5.10 Potential commuter stations within a short rail journey time to Swansea include Gowerton (11-minutes) and Llanelli (18-minutes) to the west, and Neath (11-minutes), Port Talbot (18-minutes) and Bridgend (31-minutes) to the east.

2.5.11 With the opportunity for a multi-modal cycle trip (and possibly bus trip), access to Swansea train station is an option from the site if required, especially for staff commuting trips.

2.6 Local Highway Safety

2.6.1 A review has been carried out 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 exacerbated by the development proposal. In this instance, a cluster is identified as a closely defined area of five or more accidents.

2.6.2 The website www.crashmap.co.uk has been interrogated to provide a review of accidents in the surrounding area.

2.6.3 CrashMap uses data collected by the police about road traffic crashes occurring on British roads where someone has been injured. This data is approved by the National Statistics Authority and reported on by the Department for Transport each year. The website uses data obtained directly from official sources and compiled in an easy-to-use format showing each incident on a map. Incidents are plotted to within 10 metres of their location and the data includes all incidents up to the end of 2019.

2.6.4 **Figure 2.9** provides an extract of all PIAs identified on CrashMap along the A4067 Mumbles Road in the vicinity of the site over the 5-year period between 2016 and 2020.

2.6.5 A total of 8 PIAs are identified along the A4067 study area, with 5 being classed as slight, and 3 being classed as serious. This equates to an average of 1.6 PIAs per year, which would not seem unreasonable for an A-Road of this type.

Figure 2.9: PIA plot extract and location of DfT count site

Source: www.crashmap.co.uk - data extracted April 2021

2.6.6 The accident data does not therefore appear to identify any significant highway safety issue within the immediate area of the development site, and the minor increase in traffic generated by the proposed development (as discussed later on in this report) is highly unlikely to exacerbate the existing safety record to a significant enough level to warrant concern.

3 LOCAL AND NATIONAL PLANNING GUIDANCE

3.1 Overview

3.1.1 In transport terms the relevant policy guidance that applies to this site are contained in the following documents:

- Planning Policy Wales (Edition 11, February 2021);
- Technical Advice Note (Wales) (2007) 18 - Transport;
- Wales Transport Strategy (2008);
- Joint Transport Plan for South West Wales (2015 – 2020); and
- Swansea Local Development Plan 2010 - 2025, adopted February 2019

3.1.2 Consideration is also given to the following legislation, which has an emphasis on sustainable transport provision:

- Active Travel Wales Act 2013;
- Well-being of Future Generations (Wales) Act 2015.

3.2 Overall Policy Objective

3.2.1 The overarching desire at all tiers of planning policy guidance is to influence a modal shift from single occupancy car travel towards more sustainable modes such as walking, cycling, and public transport.

3.2.2 In order to achieve this, it is recognised that development should be located such that the need to travel by private car is reduced, by locating development where there is good access to high quality public transport, walking and cycling provision.

3.3 Conclusion

3.3.1 As identified in **Section 2** of this report, the site is well located to encourage travel by sustainable modes for both staff and visitors of the proposed development.

3.3.2 The site is therefore concluded to comply with transport planning policy at local and national level.

4 DEVELOPMENT PROPOSAL

4.1 Proposed Re-Development

4.1.1 The proposed development involves the construction of a new 2,029m^2 (GFA) Lidl food store (Class A1), and associated parking.

4.1.2 Indicative site layout plans of these proposals are contained at **Appendix A**.

4.2 Vehicular Access

4.2.1 Vehicular access to the site is proposed to be upgraded to a new T-junction arrangement along the A4067 Mumbles Road, with a DMRB compliant extended right turn lane (providing stacking distance for at least 6 vehicles). The existing traffic island along the site frontage on the A4067 Mumbles Road is to be removed as part of this new access arrangement, with carriageway widening into the adopted highway / verge proposed to facilitate this extension. The layout plan at **Appendix A** shows the location and preliminary design of this proposed new access junction.

4.2.2 The new access will be designed to allow sufficient space for a max legal 16.5m articulated vehicle to safely manoeuvre in and out of the site as shown on the layout plans at **Appendix A**. The internal layout will also allow a vehicle of this size to safely manoeuvre within the site, to both enter and exit within a forward gear.

4.2.3 Visibility splays well in excess of 200m would be achievable in both directions from the proposed new access junction. These distances are comfortably above the minimum required distances for a road of this type, as set out in DMRB guidance.

4.2.4 The existing access junction to Glyn Crescent will be unaffected by these works. The removal of the existing traffic island along the A4067 Mumbles Road however, will extend the right turn lane of this junction, allowing vehicles easier and safer entry into this lane.

4.3 Parking Provision

4.3.1 The development proposal includes 50 parking spaces, made up of 37 (74%) standard parking spaces, 4 (8%) for disabled customers, 7 (14%) parent and child spaces, and 2 (4%) electric vehicle charging spaces.

4.3.2 The supplementary planning document ‘City and County of Swansea Parking Standards’ adopted in March 2012 sets out detailed parking requirements according to land use and type of development across the county. These parking standards differ across six distinct zones identified within the document. These zone descriptions are slightly vague within the SPG, with the proposed development potentially falling within either ‘Zone 3’ or ‘Zone 4’.

4.3.3 The proposed development has a GEA of 2,194m^2. The Zone 3 parking standards for the ‘Shops (including shops, supermarkets, and superstores)’ category state significantly different parking requirements for developments of this type with a GFA above and below a threshold of 2,000m^2. As the proposed development is only slightly over this threshold (by 194m^2), it would not seem unreasonable to apply the parking standards for developments in the 1,000m^2 to 2,000m^2 category. Based on this, the parking standards state that a maximum of 1 space per 40m^2 (GFA) should be provided. For the proposed development this equates to a maximum of 55 car parking spaces.

4.3.4 The Zone 4 parking standards for the 'Shops (including shops, supermarkets, and superstores)' with a GFA between 1,000m^2 to 2,000m^2 category however state that a maximum of 1 space per 20m^2 (GFA) should be provided. For the proposed development this equates to a maximum of 110 car parking spaces. This is a significant difference from the Zone 3 standards, and identifies how a site-specific approach is required in applying these standards.

4.3.5 Section 6.1 of the SPG also outlines the following:

> *"The scale of parking provision varies throughout Wales and local priorities will dictate the manner in which the standards are used. Interpretation and application of the standards will rest with the Local Authority, but flexibility in the standards allows local circumstances to be taken into account.*
>
> *(a) In assessing the parking requirements for a particular development, the planning authority will need to take into account a number of factors in relation to the development and its location. These are listed below:*
>
> *• Access requirements of disabled people*
>
> *• Accessibility to and the service provided by the public transport system,*
>
> *• The availability of private buses or the extent of car pooling,*
>
> *• The relative proportions of full time / part time / local catchment of labour,*
>
> *• Accessibility by walking and cycling,*
>
> *• The existing and possible future congestion in streets adjacent to the development,*
>
> *• Accessibility to and the availability of public and / or private car parking space in the vicinity."*

4.3.6 As identified in **Section 2** of this report, the development is well located to encourage non-car modes of travel, and as such the lower Zone 3 standards would seem more appropriate to apply at the site.

4.3.7 As outlined in Section 4.3 of the SPG, the parking standards also aim to set a maximum level of parking to be provided at developments, in line with national and regional policies to encourage a move to more sustainable modes of transport. The SPG was also published before the more recent 'Future Wales – The National Plan 2040 (February 2021)' and 'Planning Policy Wales (Edition 11, February 2021)' documents which identify the following with regards parking provision at non-residential developments:

> *<u>Planning Policy Wales - Edition 11</u>*
>
> *"Car parking provision is a major influence on how people choose to travel and the pattern of development. Where and how cars are parked can in turn be a major factor in the quality of a place."*
>
> *"A design-led approach to the provision of car parking should be taken, which ensures an appropriate level of car parking is integrated in a way which does not dominate the development. Parking provision should be informed by the local context, including public transport accessibility, urban design principles and the objective of reducing reliance on the private car and supporting a modal shift to walking, cycling and public transport.*

Planning authorities must support schemes which keep parking levels down, especially off-street parking, when well designed."

"Parking standards should be applied flexibly and allow for the provision of lower levels of parking and the creation of high quality places"

4.3.8 The proposed provision of 50 parking spaces is within the SPG maximum provision suggested, and In line with national policy to reduce reliance on car provision at developments, the good accessibility of the site to non-car modes of travel, and the operator's extensive experience of demand at stores throughout the UK, this parking level is considered appropriate for the intended food store use.

4.3.9 The Swansea parking standards provide recommended dimensions of car park space of 4.8m x 2.6m, with 6.0m provided between opposing bays. The proposed layout includes car parking spaces of dimensions 4.7m x 2.5m, with a minimum of 6.5m provided between each opposing bay. Although slightly below the recommended space sizes identified in the parking standards, these are similar to spaces provided in the operator's other stores throughout the country, which provide adequate space for vehicles to safely enter and exit spaces and manoeuvre through the car park.

4.3.10 The Swansea parking standards identify that 3 parking spaces should be provided for commercial vehicles. The proposals include 1 loading bay space for vehicles at the south west corner of the store. Based on the operator's extensive experience throughout the UK, this is deemed sufficient for the site's needs, and this loading bay will be managed to ensure that no more than one articulated vehicle is scheduled to arrive and park within the site at any one time.

4.3.11 As shown on the swept path analysis contained at **Appendix A**, there is sufficient room within the site for a max legal 16.5m articulated vehicle to manoeuvre in and out of the loading bay safely.

Enhanced Access Parking Bays

4.3.12 Swansea parking standards require retail sites to provide a minimum of 6% of the total car park capacity for disabled motorists, plus an additional space for each disabled employee. These spaces are preferably to be located within 50m of the facility served by the car park, and designed to recommendations set out in the DfT document 'Inclusive Mobility, A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure (2002)'.

4.3.13 In addition to the disabled parking allocation, a further 5% of spaces need to be of the larger dimensions in order to cater for users who would benefit from more room to access and egress vehicles.

4.3.14 A total of 4 (8%) disabled and 7 (14%) parent and child spaces are proposed at the development, which together represent 22% of the total provision, and meet both enhanced bay parking requirements.

4.3.15 The disabled bays will be marked and reserved for vulnerable and impaired users and will include an additional buffer strip at the side and rear of each space to assist with access especially for wheelchair users.

4.3.16 All enhanced bays are conveniently located near the proposed entrance and within the Swansea parking guidelines recommended 50m distance.

Bicycle Parking

4.3.17 Swansea parking standards require 1 short stay and 1 long stay cycle spaces per 500m^2 (GFA) at supermarket developments. This equates to a total of 8 cycle parking spaces at the proposed site.

4.3.18 A minimum of 4 Sheffield cycle stands will be provided at the development, which will allow parking for a minimum of 8 bicycles. This provision will help encourage this mode of travel.

4.4 Sustainable Transport Enhancements

4.4.1 As identified in **Section 2** of this report, it is considered that the site well located to encourage pedestrian travel from the nearby residential areas of the Blackpill area, and even students at the Swansea University Singleton Campus.

4.4.2 To further promote this mode of travel, the existing vehicular access junction will be improved to include tactile paving and dropped kerb crossings to assist mobility impaired users. Direct access from the internal pedestrian footway onto the existing pedestrian footway along the western edge of the A4067 Mumbles Road will also be included at the vehicular access point.

4.4.3 To promote the use of electric vehicles to the site, 2 electric vehicles charging parking spaces are also included within the proposals.

4.4.4 A Travel Plan will also be created as part of the proposals. This is a document that will be produced with the intention of promoting and increasing sustainable modes of travel to the site. This Travel Plan will be primarily targeted at trips made by staff of the proposed development.

5 DEVELOPMENT TRAFFIC GENERATION AND IMPACT

5.1 Introduction

5.1.1 Predicted site traffic flows have been forecast using the TRICS database. TRICS is a nationally accepted database providing information relating to the total number of trips generated by various land uses, based on existing trips observed at similar sites throughout the United Kingdom.

5.1.2 From the TRICS database, a Trip Rate is derived which provides the number of expected trips per unit of measurement (e.g. unit, bay or area). The TRICS good practice guide promotes an 'inclusive' rather than 'exclusive' approach to site selection.

5.2 Proposed Lidl development trip generation

5.2.1 The category '01-Retail/C – Discount Food Store' was used in TRICS to represent the proposed Lidl store. An initial filtering step was applied to remove all sites in Greater London Scotland and Ireland, before a further filter was applied to remove both 'town centre' and 'edge of town centre' located sites from the selection.

5.2.2 Sites were extracted from TRICS to develop both a weekday and Saturday trip rate separately.

5.2.3 A copy of the TRICS selection criteria used, and trip rates calculated are included at **Appendix C.**

5.2.4 **Table 5.1** and **Table 5.2** show the total predicted vehicular trip generation for the proposed new Lidl food store, over both the weekday and Saturday 12-hour period (0700 to 1900) respectively.

Table 5.1: Proposed Lidl food store, predicted weekday vehicular trip generation (based on 2,029m² GFA)

Time Period	Trip Rates (per 100m² GFA)			Total Trips (all vehicles)		
	Arr.	Dep.	Total	Arr.	Dep.	Total
07:00 - 08:00	0.454	0.155	0.609	9	3	12
08:00 - 09:00	2.476	1.656	4.132	50	34	84
09:00 - 10:00	3.112	2.651	5.763	63	54	117
10:00 - 11:00	3.499	3.216	6.715	71	65	136
11:00 - 12:00	3.904	3.713	7.617	79	75	155
12:00 - 13:00	4.068	3.885	7.953	83	79	161
13:00 - 14:00	3.908	4.227	8.135	79	86	165
14:00 - 15:00	4.088	4.127	8.215	83	84	167
15:00 - 16:00	3.849	4.048	7.897	78	82	160
16:00 - 17:00	3.721	3.813	7.534	75	77	153
17:00 - 18:00	3.439	3.694	7.133	70	75	145
18:00 - 19:00	3.085	3.403	6.488	63	69	132
12-Hour Trip Rate	**39.603**	**38.588**	**78.191**	**803**	**783**	**1,587**

Note: yellow highlight identifies peak hour in two-way vehicle trips

Table 5.2: Proposed Lidl food store, predicted Saturday vehicular trip generation (based on 2,092m² GFA)

Time Period	Trip Rates (per 100m² GFA)			Total Trips (all vehicles)		
	Arr.	Dep.	Total	Arr.	Dep.	Total
07:00 - 08:00	0.582	0.105	0.687	12	2	14
08:00 - 09:00	2.728	1.956	4.684	55	40	95
09:00 - 10:00	3.967	3.281	7.248	80	67	147
10:00 - 11:00	5.331	4.732	10.063	108	96	204
11:00 - 12:00	6.374	5.892	12.266	129	120	249
12:00 - 13:00	6.002	6.731	12.733	122	137	258
13:00 - 14:00	5.88	5.716	11.596	119	116	235
14:00 - 15:00	5.382	5.457	10.839	109	111	220
15:00 - 16:00	5.484	5.747	11.231	111	117	228
16:00 - 17:00	5.128	5.284	10.412	104	107	211
17:00 - 18:00	4.375	4.461	8.836	89	91	179
18:00 - 19:00	3.14	3.646	6.786	64	74	138
12-Hour Trip Rate	**54.373**	**53.008**	**107.381**	**1102**	**1,078**	**2,178**

Note: yellow highlight identifies peak hour in two-way vehicle trips

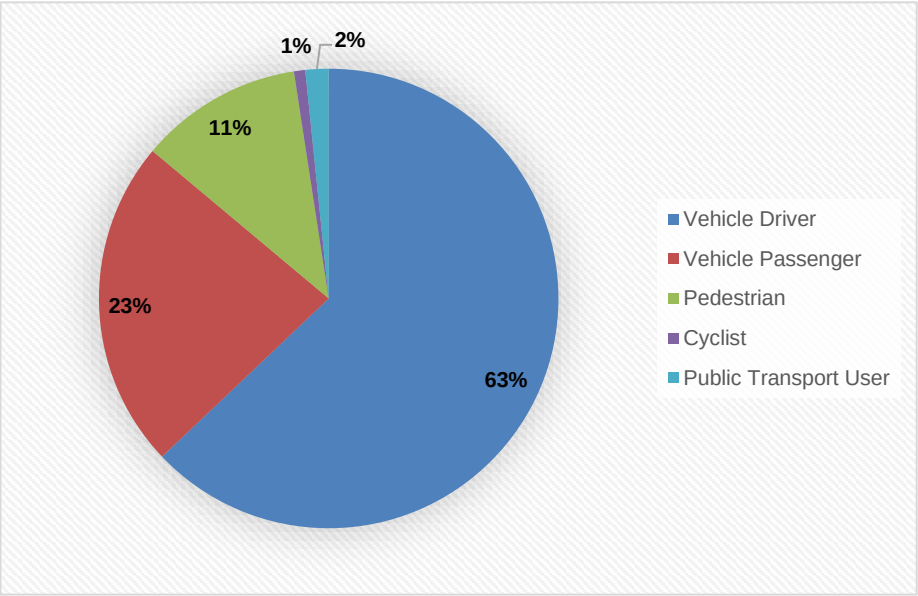
5.2.5 **Table 5.1** shows that the proposed Lidl store is predicted to generate 1,587 two-way vehicular trips over the 12-hour weekday period between 0700 to 1900. The weekday peak hour in total two-way trips is predicted between 1400 to 1500, with 167 trips.

5.2.6 **Table 5.2** shows that the proposed Lidl store is predicted to generate 2,178 two-way vehicular trips over the 12-hour Saturday period between 0700 to 1900. The Saturday peak hour in total two-way trips is predicted between 1200 to 1300, with 258 trips.

5.3 Development Modal Split

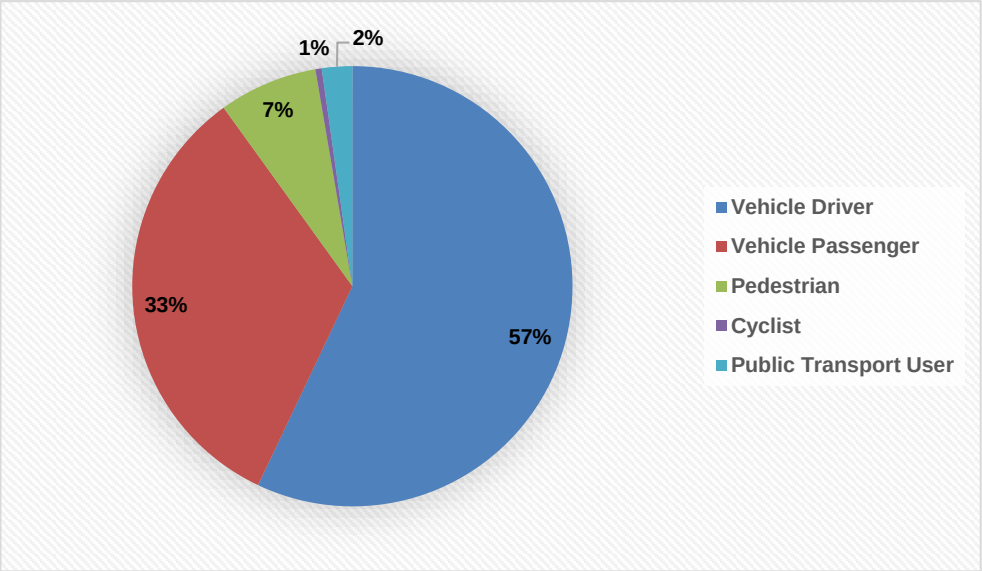
5.3.1 The TRICS database has been interrogated for multi-modal split data, as shown in **Chart 5.1 & 5.2** for a weekday and a Saturday respectively. These values are based on the selected TRICS sites which included multi-modal surveys only.

Chart 5.1: TRICS selected '01-Retail/C – Discount Food Store' sites – Daily weekday modal split of trips



5.3.2 **Chart 5.1** identifies that the primary mode of travel for food retail trips such as this on a typical weekday is as a vehicle driver (63%) followed by vehicle passenger (23%), pedestrian (11%), public transport user (2%) and cyclist (1%).

Chart 5.2: TRICS selected '01-Retail/C – Discount Food Store' sites – Daily Saturday modal split of trips



5.3.3 **Chart 5.2** again shows the primary mode of travel for food retail trips such as this on a typical Saturday is as a vehicle driver (57%) followed by vehicle passenger (33%), pedestrian (7%), public transport user (2%) and cyclist (1%).

5.4 Permitted Site Use Trip Generation

5.4.1 The site was formerly occupied by a Shell filling station. Although this unit has since been demolished and cleared, the site still has permission for a development of this type, with the associated traffic technically already 'permitted' on the local highway network. The following section identifies the expected trip generation of this permitted use on the site.

5.4.2 The category '13-Petrol Filling Stations/A – Petrol Filling Stations' was used in TRICS to represent the permitted use on the site. An initial filtering step was applied to remove all sites in Greater London Scotland and Ireland, before a further filter was applied to remove both 'town centre' and 'edge of town centre' located sites from the selection.

5.4.3 Sites were extracted from TRICS to develop both a weekday and Saturday trip rate separately, and have been output on a 'per bay' basis.

5.4.4 A copy of the TRICS selection criteria used, and trip rates calculated are included at **Appendix C.**

5.4.5 **Table 5.3** and **Table 5.4** show the total predicted vehicular trip generation of the permitted use on the site, over both the weekday and Saturday 12-hour period (0700 to 1900) respectively. Trips have been generated based on a development with 9 filling bays, which the previous Shell filling station was operating with prior to demolition.

Table 5.3: Permitted petrol filling station use, predicted weekday vehicular trip generation (based on 9 filling bays)

Time Period	Trip Rates (per filling bay)			Total Trips (all vehicles)		
	Arr.	Dep.	Total	Arr.	Dep.	Total
07:00 - 08:00	6.786	6.714	13.500	61	60	122
08:00 - 09:00	7.643	7.143	14.786	69	64	133
09:00 - 10:00	5.786	6.000	11.786	52	54	106
10:00 - 11:00	6.143	6.000	12.143	55	54	109
11:00 - 12:00	7.000	6.857	13.857	63	62	125
12:00 - 13:00	6.357	6.714	13.071	57	60	118
13:00 - 14:00	6.643	7.071	13.714	60	64	123
14:00 - 15:00	5.929	5.643	11.572	53	51	104
15:00 - 16:00	7.214	7.929	15.143	65	71	136
16:00 - 17:00	6.929	6.357	13.286	62	57	120
17:00 - 18:00	7.000	7.000	14.000	63	63	126
18:00 - 19:00	5.214	5.286	10.500	47	48	95
12-Hour Trip Rate	**78.644**	**78.714**	**157.358**	**707**	**708**	**1,417**

Note: yellow highlight identifies peak hour in two-way vehicle trips

Table 5.4: Permitted petrol filling station use, predicted Saturday vehicular trip generation (based on 9 filling bays)

Time Period	Trip Rates (per filling bay)			Total Trips (all vehicles)		
	Arr.	Dep.	Total	Arr.	Dep.	Total
07:00 - 08:00	3.767	3.633	7.400	34	33	67
08:00 - 09:00	5.100	5.000	10.100	46	45	91
09:00 - 10:00	5.367	5.333	10.700	48	48	96
10:00 - 11:00	6.867	6.700	13.567	62	60	122
11:00 - 12:00	6.033	6.067	12.100	54	55	109
12:00 - 13:00	6.333	6.033	12.366	57	54	111
13:00 - 14:00	5.933	6.433	12.366	53	58	111
14:00 - 15:00	4.900	4.933	9.833	44	44	88
15:00 - 16:00	4.467	4.600	9.067	40	41	82
16:00 - 17:00	4.633	4.633	9.266	42	42	83
17:00 - 18:00	4.733	4.733	9.466	43	43	85
18:00 - 19:00	4.233	4.200	8.433	38	38	76
12-Hour Trip Rate	**62.366**	**62.298**	**124.664**	**561**	**561**	**1,121**

Note: yellow highlight identifies peak hour in two-way vehicle trips

5.4.6 **Table 5.3** shows that the permitted petrol filling station use is predicted to generate 1,417 two-way vehicular trips over the 12-hour weekday period between 0700 to 1900. The weekday peak hour in total two-way trips is predicted between 1500 to 1600, with 136 trips.

5.4.7 **Table 5.4** shows that the permitted petrol filling station use is predicted to generate 1,121 two-way vehicular trips over the 12-hour Saturday period between 0700 to 1900. The Saturday peak hour in total two-way trips is predicted between 1000 to 1100, with 122 trips.

5.5 Proposed Change of Use Trip Generation Difference

5.5.1 **Table 5.5** and **Table 5.6** identify the difference in the total two-way trip generation predicted at the site as a result of the proposed change of use (from petrol filling station to Lidl store).

Table 5.5: Proposed site change of use, weekday trip generation difference

Time Period	Permitted Petrol Filling Station Use Total Two-Way Trips	Proposed Lidl Store Total Two-Way Trips	Difference
07:00 - 08:00	122	12	-109
08:00 - 09:00	133	84	-49
09:00 - 10:00	106	117	+11
10:00 - 11:00	109	136	+27
11:00 - 12:00	125	155	+30
12:00 - 13:00	118	161	+44
13:00 - 14:00	123	165	+42
14:00 - 15:00	104	167	+63
15:00 - 16:00	136	160	+24
16:00 - 17:00	120	153	+33
17:00 - 18:00	126	145	+19
18:00 - 19:00	95	132	+37
12-Hour Total	**1,417**	**1,587**	**+172**

Note: yellow highlight identifies peak hour in two-way trip generation increase

Table 5.6: Proposed site change of use, Saturday trip generation difference

Time Period	Permitted Petrol Filling Station Use Total Two-Way Trips	Proposed Lidl Store Total Two-Way Trips	Difference
07:00 - 08:00	67	14	-53
08:00 - 09:00	91	95	+4
09:00 - 10:00	96	147	+51
10:00 - 11:00	122	204	+82
11:00 - 12:00	109	249	+140
12:00 - 13:00	111	258	+147
13:00 - 14:00	111	235	+124
14:00 - 15:00	88	220	+131
15:00 - 16:00	82	228	+146
16:00 - 17:00	83	211	+128
17:00 - 18:00	85	179	+94
18:00 - 19:00	76	138	+62
12-Hour Total	**1,121**	**2,178**	**+1,056**

Note: yellow highlight identifies peak hour in two-way trip generation increase

5.5.2 **Table 5.5** shows that the proposed change of use on the site is predicted to generate an extra +172 two-way vehicular trips from the site over the 12-hour weekday period between 0700 to 1900. The hour between 1400 to 1500 is expected to see the greatest increase, with +63 additional trips generated from the site. During the typical highway AM peak hour between 0800 and 0900, the change of use on the site would be expected to generate a reduction of -49 trips at the site.

5.5.3 **Table 5.6** shows that the proposed re-development is predicted to generate an extra +1,056 two-way vehicular trips from the site over the 12-hour Saturday period between 0700 to 1900. The hour between 1200 to 1300 is expected to see the greatest increase, with +147 additional trips generated from the site.

5.6 Proposed Development Highway Impact

5.6.1 To understand the impact that the predicted increase in trips generated as a result of the proposed re-development will have on the surrounding highway network, traffic flows along the A4067 Mumbles Road were used.

5.6.2 To determine the current flows along the A4067 Mumbles Road, an ATC survey was undertaken by PCC Traffic Information Company covering the 7-day period between Friday June 11th 2021 and Thursday June 17th 2021. The ATC was placed at a point directly outside the site. A summary of the ATC survey results is included at **Appendix D**.

5.6.3 **Table 5.7** and **Table 5.8** identify the 5-day average hourly flows, and Saturday hourly flows respectively, recorded by the ATC (covering the 12-hour period between 0700 to 1900). The tables also identify the percentage impact that the proposed change of use on the site will have on the A4067 Mumbles Road in the vicinity of the site.

Table 5.7: Predicted weekday impact of the proposed development on the A4067 Mumbles Road in the vicinity of the site.

Time Period	5-day average total two-way ATC flow	Proposed Lidl development increase in trips	Combined Flow	% Impact of development on Observed Flow
07:00 - 08:00	1,563	-109	1,454	-7.0%
08:00 - 09:00	2,246	-49	2,197	-2.2%
09:00 - 10:00	1,936	+11	1,947	+0.6%
10:00 - 11:00	2,056	+27	2,083	+1.3%
11:00 - 12:00	2,184	+30	2,214	+1.4%
12:00 - 13:00	2,218	+44	2,262	+2.0%
13:00 - 14:00	2,150	+42	2,192	+2.0%
14:00 - 15:00	2,237	+63	2,300	+2.8%
15:00 - 16:00	2,355	+24	2,379	+1.0%
16:00 - 17:00	2,367	+33	2,400	+1.4%
17:00 - 18:00	2,256	+19	2,275	+0.8%
18:00 - 19:00	2,023	+37	2,060	+1.8%
12-Hour Total	**25,592**	**+172**	**25,764**	+0.7%

Note: yellow highlight identifies the hour period with greatest % impact on the observed flow along the A4067 Mumbles Road.
Green highlight identifies weekday AM highway peak hour (08:00 to 09:00)
Red highlight identifies weekday PM highway peak hour (15:00 to 16:00)

5.6.4 **Table 5.7** identifies that the total 5-day average two-way 12-hour (0700 to 1900) flow along the A4067 Mumbles Road was 25,592 vehicles, with the peak in AM and PM traffic observed between 0800 to 0900 (2,246 vehicles), and 1600 to 1700 (2,367 vehicles) respectively.

5.6.5 **Table 5.7** also identifies that the proposed change of use on the site is predicted to increase weekday trips along the A4067 Mumbles Road in the vicinity of the site by approximately just 0.7% over the total 12-hour weekday period between 0700 and 1900.

5.6.6 The greatest weekday impact would be seen between 1400 to 1500 with a predicted traffic increase of just +2.8% along the A4067 Mumbles Road. This increase however occurs outside the highway weekday AM and PM peak hours identified between 0800 to 0900, and 15:00 to 16:00 respectively. During these highway peak hours, the proposed development is predicted to decrease traffic by -2.2% during the AM peak hour, and increase traffic by just +1.4% during the PM peak hour.

5.6.7 This level of impact identified for the weekday period is not of a significant level to raise any congestion concerns on the surrounding highway network.

Table 5.8: Predicted Saturday impact of the proposed development on the A4067 Mumbles Road in the vicinity of the site.

Time Period	Saturday total two-way ATC flow	Proposed Lidl development increase in trips	Combined Flow	% Impact of development on Observed Flow
07:00 - 08:00	676	-53	623	-7.8%
08:00 - 09:00	1,245	+4	1,249	+0.3%
09:00 - 10:00	1,822	+51	1,873	+2.8%
10:00 - 11:00	2,196	+82	2,278	+3.7%
11:00 - 12:00	2,294	+140	2,434	+6.1%
12:00 - 13:00	2,403	+147	2,550	+6.1%
13:00 - 14:00	2,272	+124	2,396	+5.5%
14:00 - 15:00	2,152	+131	2,283	+6.1%
15:00 - 16:00	2,049	+146	2,195	+7.1%
16:00 - 17:00	2,137	+128	2,265	+6.0%
17:00 - 18:00	2,215	+94	2,309	+4.2%
18:00 - 19:00	2,211	+62	2,273	+2.8%
12-Hour Total	**23,672**	**+1,056**	**24,728**	**+4.5%**

Note: yellow highlight identifies the hour period with greatest % impact on the observed flow along the A4067 Mumbles Road.
Green highlight identifies Saturday highway peak hour (12:00 to 13:00)

5.6.8 **Table 5.8** identifies that the total Saturday two-way 12-hour (0700 to 1900) flow along the A4067 Mumbles Road was 23,672 vehicles, with the period peak in traffic observed between 1200 to 1300 (2,403 vehicles).

5.6.9 **Table 5.8** also identifies that the proposed change of use on the site is predicted to increase Saturday trips along the A4067 Mumbles Road in the vicinity of the site by approximately 4.5% over the total 12-hour period between 0700 and 1900.

5.6.10 The greatest Saturday impact would be seen between 1500 to 1600 with a predicted traffic increase of +7.1% along the A4067 Mumbles Road. This increase however occurs outside the Saturday highway peak hour identified between 1200 to 1300. During this peak traffic hour, the proposed development is predicted to increase traffic by just 6.1%.

5.6.11 These predicted increases in trips identified in **Table 5.7** and **Table 5.8** assume all trips generated by the site are 'primary' trips, with no reductions applied for 'secondary' trips.

5.6.12 Primary trips are those which are new to the road network and occur only as a result of the new development. Secondary trips however are those which already exist on the road network but would include a visit to the new development as part of the existing trip (whether as part of a pass-by, diverted, or transferred trip). Although part of the total trip generation, these secondary trips therefore do not generate additional vehicles on the road network and can be excluded when identifying the total vehicular impact of a development.

5.6.13 Although there is not currently any definitive guidance available providing levels of secondary trip reductions to be applied at certain developments, the 'TRICS Research Report 14/1 (2014)' provides a review on the subject. The report identifies that levels of secondary trips at any development will be dependent on variables such as its location, range of services offered, and size, and that a site-by-site approach should be taken in calculating these trip levels. The report also includes summaries of previous commercial and academic research on the subject, with one study identifying convenience stores experiencing secondary trip proportions up to 85%, with rates showing a positive relationship to adjacent street volumes.

5.6.14 As a retail store situated along an A-Road carrying a significant volume of traffic, it is not considered unreasonable to expect a large proportion (at least 50%) of trips from the proposed development to be secondary trips, and already exist on the road network.

5.6.15 As such, if only considering primary trip attractions to the development (i.e. completely new trips on the network) the actual impact on the local highway network would likely be significantly lower than identified in **Table 5.7** and **Table 5.8**, and these increases represent a very robust 'worst case' scenario highway impact for the proposed re-development of the site.

5.6.16 On this basis, it is concluded that the proposed development will have a minor impact on traffic flows on the local highway network, and raises no major congestion or highway safety concerns. The change of use on the site from a petrol filling station to a Lidl store would also be anticipated to result in a decrease in trips generated during the critical weekday highway AM peak hour period.

6 CAPACITY ASSESSMENT

6.1 Junction Modelling Methodology

6.1.1 To further assess the impact of the proposed development on the surrounding highway network, capacity analysis of both the proposed site access junction, and the neighbouring A4067 / Derwen Fawr Road priority junction have been undertaken using the PICADY computer modelling tool within Junctions 9. These assessments have been undertaken to identify the operation of the junctions under current traffic conditions.

6.1.2 The output from the PICADY programs provides a number of measurements to provide information of a junction's operation. These relate to the 'Ratio of Flow to Capacity' (RFC), maximum queue length in PCUs, and delay in minutes per vehicle. The main indication of the performance of a junction is given by the RFC for each arm of the junction. The peak capacity is realised when the demand flow at the entry is great enough to cause a continuous queue of vehicles to wait in the approach. This is reached when the RFC attains a value of 1. An RFC value of 0.85 is normally accepted as being within capacity as this reduces the risk of delays due to traffic count inaccuracies and analytical and modelling assumptions.

6.1.3 Traffic flow data for the junction assessments has been taken from a 12-hour (0700 to 1900) turning count survey undertaken at the A4067 / Derwen Fawr Road junction by PCCTIC over both Friday 11th June 2021, and Saturday 12th June 2021. A summary of the traffic survey results is included at **Appendix E**.

6.1.4 Based on the traffic survey data, the weekday AM and PM peak hour periods in total traffic through the junction were identified from 0800 to 0900, and 1530 to 1630 respectively, with the Saturday peak hour period in total traffic through the junction identified from 1200 to 1300. Each of these peak hour periods have been modlled at each assessment junction.

6.1.5 Traffic flows for the A4067 / Derwen Fawr Road junction were taken directly from the traffic surveys. For the proposed site access junction, the A4067 flows were calculated from the traffic survey, with the site entry and exit flows identified from the TRICS analysis data (as previously identified in **Section 5)**.

6.1.6 For the A4067 / Derwen Fawr Road junction assessment, scenarios were modelled to represent both a 'Without Development' and a 'With Development' scenario. The 'Without Development' scenario included site trips for the extant permission (as per **Table 5.3** and **Table 5.4**), whereas the 'With Development' scenario included site trips for the proposed use (as per **Table 5.1** and **Table 5.2)**.

6.1.7 For the 'With Development' scenarios, development trips have been distributed based on the observed turning movement proportions identified in the 2021 MCC surveys.

6.1.8 As identified in **Section 4** of this report, the proposed new site access is currently only in outline design stage. For calculating the proposed access model geometry, measurements of the existing site access arrangements (which include a ghost island right turn lane arrangement) have been taken.

6.1.9 A summary of the capacity assessments at each assessment junction is summarised in the following sections.

6.2 Proposed Site Access Junction Capacity Assessment Summary

6.2.1 **Table 7.1** provides the results of the proposed site access capacity assessments for each of the identified weekday and Saturday highway peak hours. Full PICADY outputs are provided in **Appendix F**.

Table 7.1: Proposed Site Access Capacity Analysis

Approach Arm Movement	Without Development		
	Max Q	Delay (s)	Max RFC
Weekday AM Highway Peak Hour (08:00 to 09:00)			
B - C	0.0	6.66	0.04
B - A	0.1	13.76	0.06
C - AB	0.0	6.84	0.04
Weekday PM Highway Peak Hour (15:30 to 16:30)			
B - C	0.1	7.30	0.08
B – A	0.2	16.07	0.17
C – AB	0.1	6.79	0.08
Saturday Highway Peak Hour (12:00 to 13:00)			
B - C	0.1	7.67	0.11
B – A	0.5	18.04	0.31
C – AB	0.2	6.58	0.14

Note: Arm A = A4067 Mumbles Road (south arm)
Arm B = A4067 Mumbles Road (north arm)
Arm C = Proposed Development Site Access

6.2.2 **Table 7.1** identifies that the proposed site access junction would be expected to operate well within theoretical capacity in all three modelled highway peak hour periods, with a maximum RFC on any approach arm of just 0.31 was observed during the Saturday peak hour.

6.3 A4067 / Derwen Fawr Road Junction Capacity Assessment Summary

6.3.1 **Table 7.2** provides the results of capacity assessments for each of the identified weekday and Saturday highway peak hours at the A4067 / Derwen Fawr Road junction. Full PICADY outputs for the assessments are provided in **Appendix F**.

6.3.2 **Table 7.2** identifies that the A4067 / Derwen Fawr Road junction would be expected to operate well within theoretical capacity in all three modelled peaks for both the 'Without Development' and 'With Development' scenarios.

6.3.3 During the 'Without Development' scenario a maximum RFC on any approach arm of 0.57 was observed during the Weekday AM peak hour, on the Derwen Fawr right turn approach lane. During the 'With Development' scenario the RFC on this approach lane reduced slightly to 0.56.

6.3.4 During the 'With Development' scenario a maximum RFC on any approach arm of 0.61 was observed during the Saturday peak hour. This is an increase in RFC from the 'Without Development' scenario of just 0.05.

Table 7.2: A4067 / Derwen Fawr Road Capacity Analysis

Approach Arm Movement	'Without Development' Scenario			'With Development' Scenario		
	Max Q	Delay (s)	Max RFC	Max Q	Delay (s)	Max RFC
Weekday AM Highway Peak Hour (08:00 to 09:00)						
B - C	0.1	8.35	0.05	0.1	8.25	0.05
B - A	1.3	32.67	0.57	1.2	30.83	0.56
C - AB	0.0	7.41	0.03	0.0	7.34	0.03
Weekday PM Highway Peak Hour (15:30 to 16:30)						
B - C	0.1	7.87	0.05	0.1	7.93	0.06
B - A	1.0	30.36	0.50	1.0	31.40	0.51
C - AB	0.1	7.40	0.08	0.1	7.43	0.08
Saturday Highway Peak Hour (12:00 to 13:00)						
B - C	0.1	8.05	0.12	0.1	8.44	0.13
B - A	1.2	31.90	0.56	1.5	38.78	0.61
C - AB	0.1	7.28	0.12	0.2	7.50	0.13

Note: Arm A = A4067 Mumbles Road (south arm)
Arm B = A4067 Mumbles Road (north arm)
Arm C = Proposed Development Site Access

6.3.5 Overall, the difference in maximum RFC on any approach arm between the 'Without Development' and 'With Development' scenarios is just +0.04. This identifies that the proposed change of use on the site would have minimal impact on overall operation of the A4067 / Derwen Fawr Road junction.

6.4 Capacity Assessment Summary

6.4.1 The junction capacity assessments have identified that both the proposed site access junction, and the neighbouring A4067 / Derwen Fawr Road junction to the site would both be expected to operate well within theoretical capacity with the proposed development in place. The assessment at the A4067 / Derwen Fawr Road junction assessment has also identified that the change in use on the site will have a minimal effect on the operation of this junction.

7 SUMMARY AND CONCLUSION

7.1 Summary

7.1.1 This Transport Assessment (TA) has been produced by Corun Associates Ltd (Corun) on behalf of Lidl Great Britain Limited, the applicants, to examine the highway and transportation issues associated with the proposed development of a new Lidl food store (Class A1) along Mumbles Road, Swansea.

7.1.2 The proposal involves the construction of a new 2,029m^2 (GFA) Lidl food store unit together with associated parking (50 spaces in total) at a vacant site formerly occupied by a Shell filling station. Although the petrol filling station has since been demolished, the site still has permission for a development of this type.

7.1.3 The site is well located to encourage sustainable modes of travel for staff and visitors living in the surrounding residential areas of Blackpill, and on the Swansea University Singleton Campus. The extended cycling and bus networks through the wider Swansea area will also allow opportunities for sustainable travel for longer, or multi-modal trips.

7.1.4 Vehicular access to the site is proposed to be upgraded to a new T-junction arrangement along the A4067 Mumbles Road, with a DMRB compliant extended right turn lane (providing stacking distance for at least 6 vehicles). The existing traffic island along the site frontage on the A4067 Mumbles Road is to be removed as part of this new access arrangement, with carriageway widening into the adopted highway / verge proposed to facilitate this extension. The new access will be designed to allow sufficient space for a max legal 16.5m articulated vehicle to safely manoeuvre in and out of the site. Visibility splays well in excess of 200m would also be achievable in both directions.

7.1.5 Pedestrian access to the proposed development will also be provided at this existing access point. The proposals include improvements to the existing layout, with inclusion of tactile paving and a dropped kerb crossing, and provision of direct access into the existing footway network along the A4067 Mumbles Road.

7.1.6 The development proposal includes 50 parking spaces on the site, made up of 37 (74%) standard parking spaces, 4 (8%) for disabled customers, 7 (14%) parent and child spaces, and 2 (4%) electric vehicle charging spaces. This level of provision is within the Swansea Council maximum parking requirement for a development of this type, and conforms with national policy aims to target a reduction in car occupancy levels at new developments.

7.1.7 A minimum of 4 Sheffield cycle stands will be provided at the development, which will allow parking for a minimum of 8 bicycles. This provision will help encourage this mode of travel.

7.1.8 The proposed development (and change of use from petrol filling station to Lidl store) is predicted to generate an additional +172 and +1,056 two-way vehicular trips to the site over the 12-hour period (0700 to 1900) on a weekday and Saturday respectively. The greatest increase in trips on a weekday is seen between 1400 to 1500 (+63 trips), and between 1200 to 1300 on a Saturday (+147 trips).

7.1.9 A robust highway impact assessment has been undertaken identifying that over the 12-hour weekday period between 0700 to 1900, the proposed development would lead to an increase in traffic of just +0.7% along the A4067 Mumbles Road (in the vicinity of the site), with a -2.2% decrease in trips generated during the AM highway peak hour (0800 to 0900), and a just a +1.4% increase in trips during the PM highway peak hour (1500 to 1600).

7.1.10 Over the 12-hour Saturday period, the proposed development would lead to an increase in traffic of +4.5% along the A4067 Mumbles Road, with a +6.1% increase in trips during the Saturday highway peak hour (1200 to 1300). These values represent a 'worst case' scenario, and do not include any reductions expected as a result of pass-by trip considerations. It is therefore concluded that the re-development of the site will have a minor impact on weekday traffic flows on the local highway network, and raises no major congestion concerns.

7.1.11 A review of the accident record along the A4067 Mumbles Road in the vicinity of the site does not identify any significant highway safety issue within the immediate area of the development site, and the minor increase in traffic generated by the proposed development is highly unlikely to exacerbate the existing safety record to a significant enough level to warrant concern.

7.1.12 The junction capacity assessments have identified that both the proposed site access junction, and the neighbouring A4067 / Derwen Fawr Road junction to the site would both be expected to operate well within theoretical capacity with the proposed development in place. The assessment at the A4067 / Derwen Fawr Road junction assessment has also identified that the change in use on the site will have a minimal effect on the operation of this junction.

7.1.13 A Travel Plan will also be developed as part of the proposals, which aims to maximise active modes of travel and public transport use associated with the site.

7.2 Conclusion

7.2.1 This Transport Assessment has demonstrated that the development should be considered acceptable in terms of highways and transportation.

7.2.2 There are no reasons in highway and transportation terms why the proposed development should not be granted consent.

APPENDIX A

Proposed Site Layout Plans

A1
ORIGINAL PLOT SIZE

Carriageway Widening into Adopted Highway/Verge to Facilitate Right Turn Lane Extension

Right Turn lane Extension to DMRB Standards (See Notes)

Carriageway Widening into Adopted Highway/Verge to Facilitate Right Turn Lane Extension

Existing Traffic Island to be Removed

Existing Access to be Upgraded

Existing Access to Glyn Crescent to Remain

MUMBLES ROAD

GLYN CRESCENT

TOTAL PARKING SPACES: 50

DELIVERY AT GRADE

CYCLE PARKING

EXISTING BOUNDARY WALL

PLEASE REFER TO LANDSCAPE ARCHITECTS DESIGN & DRAWINGS FOR LANDSCAPE STRATEGY

LEVELS STRATEGY TO BE CONFIRMED

FLAG POLE

64m

6.1m

7.0m

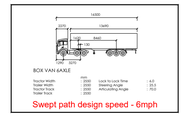
INDICATIVE

NOTES:

1. All dimensions are in millimeters unless otherwise stated.

DMRB TD42/95 Design Criteria

Design Speed - 70kph (43mph)
a (turning length) - 10m
+40m (6 car lengths) = 50m
b (deceleration length) - 40m
e (taper length) - 15m inc. within deceleration length (b)



Swept path design speed - 6mph

This drawing is based on [Company's Name] Drawing No:

Rev	Date	Details	Drawn by	Checked by

CORUN
Transport and Highway Engineering
Corun Associates Ltd
Swansea
E swansea@corun.uk.com
W www.corun.uk.com

CLIENT:
LIDL GREAT BRITAIN LTD

PROJECT:
PROPOSED LIDL STORE
52 MUMBLES ROAD
SWANSEA

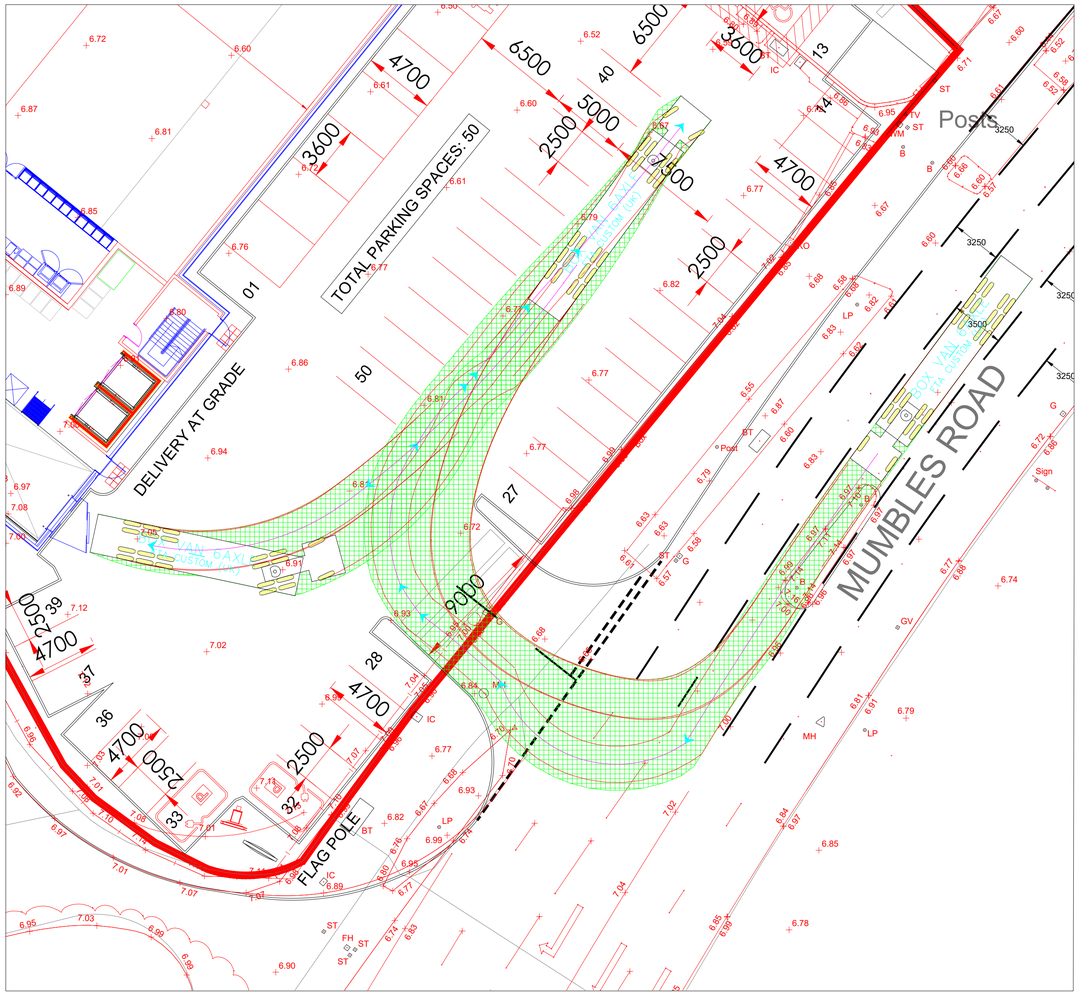
TITLE:
PROPOSED HIGHWAY IMPROVEMENT WORKS
PROPOSED STORE LAYOUT
ON TOPOGRAPHICAL SURVEY

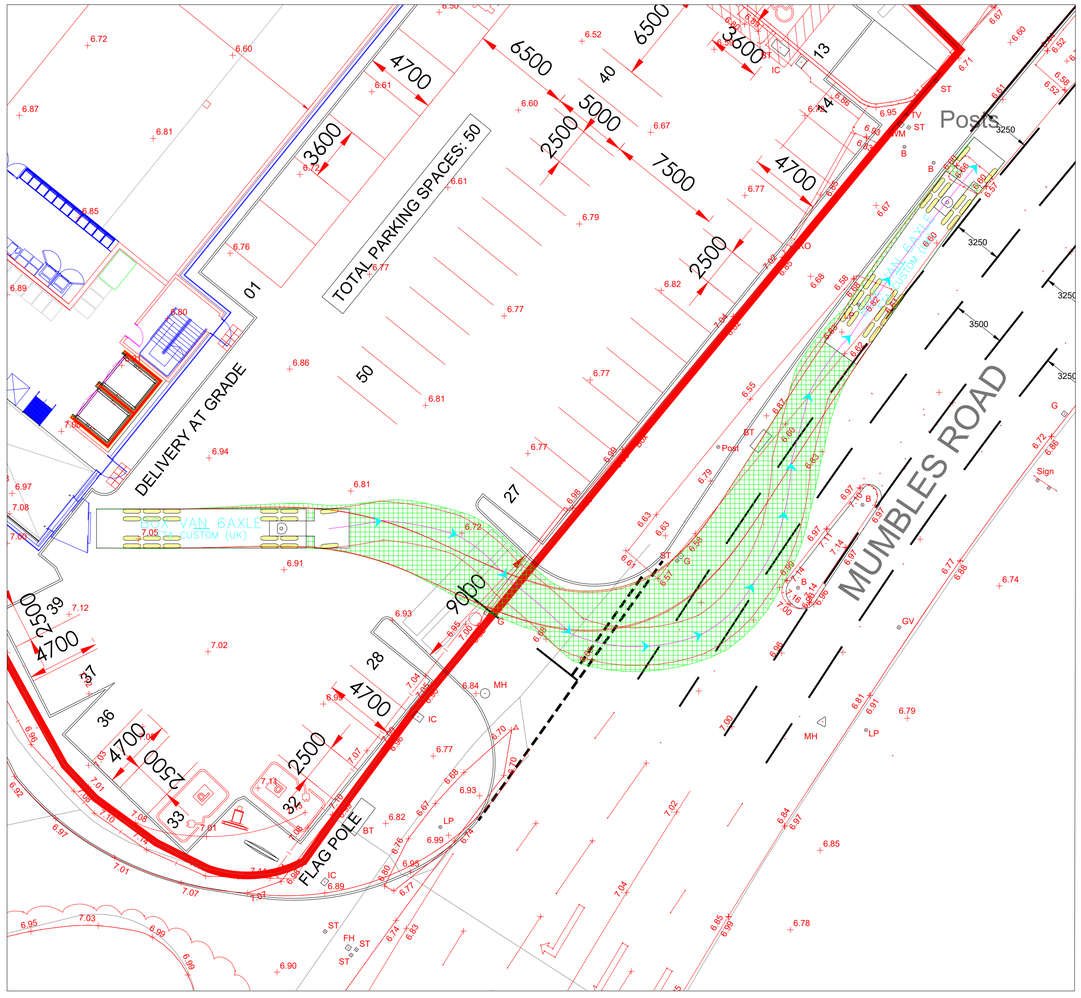
STATUS:
PRELIMINARY

SCALE:	DATE:	DRAWN:	CHECKED:
1:500/1:200	SEPT'21	MA	MA

JOB NO:	DRAWING NO:	REVISION:
20-00668	PL05	

A1
ORIGINAL
PLOT SIZE

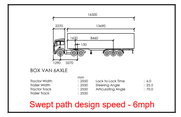




INDICATIVE

NOTES:

1. All dimensions are in millimeters unless otherwise stated.



Swept path design speed - 6mph

Rev	Date	Details	Drawn by	Checked by

CORUN
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Corun Associates Ltd
Swansea
E swansea@corun.uk.com
W www.corun.uk.com

CLIENT:
LIDL GREAT BRITAIN LTD

PROJECT:
PROPOSED LIDL STORE
52 MUMBLES ROAD
SWANSEA

TITLE:
PROPOSED HIGHWAY IMPROVEMENT WORKS
SWEPT PATH ANALYSIS
ON TOPOGRAPHICAL SURVEY

STATUS:
PRELIMINARY

SCALE:	DATE:	DRAWN:	CHECKED:
1:200	SEPT'21	MA	MA

JOB NO:	DRAWING NO:	REVISION:
20-00668	SP08	

APPENDIX B

Swansea Council Pre-Application Discussion Response

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CIVIC CENTRE, OYSTERMOUTH ROAD, SWANSEA, SA1 3SN
Y GANOLFAN DDINESIG, HEOL YSTUMLLWYNARTH, ABERTAWE, SA1 3SN
☎ (01792) 635701 🖷 (01792) 635719 🖷 (01792) 635708
✉ planning@swansea.gov.uk / http://www.swansea.gov.uk

Mr. Ross Bowen
Tetra Tech Planning
Director
Tetra Tech Cardiff
5th Floor
Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Please ask for: David Owen
Direct Line: 07970680587
E-mail: david.owen@swansea.gov.uk

Date: 25/08/2021

Dear Ross

The Town and Country Planning Act 1990 (As amended)
The Town and Country Planning (Pre-Application Services)(Wales) Regulations 2016

Application No:	2021/1753/PRE
Site Location:	The Former Halfway Garage Blackpill Swansea SA3 5AU
Proposal:	PRE-APP - Development of a Lidl foodstore, car parking, landscaping and all associated works

I refer to the above pre-application received on 29 June 2021 seeking advice under the statutory pre-application services provided for under the above Regulations.

The Proposal
Your supporting covering letter states *that the proposed development comprises the erection of a foodstore extending to 2,194 sqm GEA, parking, access arrangements, soft landscaping and all associated works at the Former Halfway Garage, Mumbles Road, Swansea. It is proposed to develop a foodstore measuring c. 2,029 sqm GIA with a proposed net sales area of 1,102 sqm net. It is anticipated 80% of the net sales area will be laid out for food sales (c.881 sqm net), with the remainder for non-food sales (c.220 sqm net).*

The proposed foodstore will be positioned to address Mumbles Road, with the store frontage set back from the road, in the western half of the site. The dedicated customer car park will immediately adjoin Mumbles Road with vehicular access from the site's south eastern boundary. The car park will provide 50 parking bays including: 37 standards spaces; 4 disabled spaces; 7 parent & child spaces; and 2 electric vehicle spaces. Soft landscaping will be utilised at the store's rear elevation and in areas adjoining the site's south eastern and southern boundary along Mumbles Road and Glyn Crescent.

Additionally, it is noted that the pre-application is accompanied by a supporting Retail Impact Assessment Scoping Note (received post-submission) which states the foodstore would have a Gross Internal floorspace of 2,029sqm with a proposed net sales area of 1,102sqm. It is anticipated 80% of the net sales area would be laid out for food sales (881sqm net) with the remainder for non-food sales (220sqm net).

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Site Description & Surroundings
The covering letter also provides a site context as follows: *The application site is located within the settlement of Blackpill, a suburban area of west Swansea, which sits beside Swansea Bay and is situated approximately 3.7km southwest of the city centre. The application site is a broadly square parcel of land which extends to approximately 0.4 Ha and occupies a prominent position, fronting Mumbles Road (A4067). The site currently comprises vacated, cleared land following the demolition of a Shell petrol filling station and associated buildings in 2017, which historically occupied the site. The site was remediated of its former use and now lies clear and unused. Vehicular access to the site is currently achieved via two points on the site's south eastern border, from Mumbles Road.*

In respect of surroundings, Mumbles Road runs parallel to the sites south eastern border. A 'pitch & putt' golf course is found immediately beyond Mumbles Road to the east. Residential dwellings adjoin the site to the north east and west, whilst an area of greenspace adjoins the site to the north west. In terms of floodrisk the Development Advice Map indicates the site comprises areas of both Flood Zone A – Considered to be at little or no risk of fluvial or coastal/tidal flooding and Flood Zone C2 – Without significant flood defence infrastructure. In terms of heritage, the Cadw Designated Historic Assets map indicates there are no heritage assets, including listed buildings and scheduled ancient monuments within or in the immediate vicinity of the application site.

Relevant planning history
The covering letter also outlines a planning history of the site, notably:

- 2017/0105/PND Demolition and removal of all associated fuel infrastructure, including tanks and pipework (application for the Prior Notification of Proposed Demolition). Below Ground: Removal of all associated fuel infrastructure, including tanks and pipework.
  Prior approval not required February 2017

You will also be aware of a previous proposal on the adjacent land to the rear for the construction of a Asda retail superstore with 433-space car park provision, service area, internal access layout, stream diversion, bat roost and associated improvements to Derwen Fawr Road, new/improved footpaths on Derwen Fawr Road and Mumbles Road, new traffic light junction to Derwen Fawr Road, new store traffic light access off Mumbles Road plus 9 detached dwelling houses and associated access arrangements. (Outline) – 2002/1267 – which was subsequently withdrawn.

Reference is also made to previous pre-application enquiries on or partly on the site for a retail food store under refs: 2018/2017/PRE & 2019/0695/PRE.

Development Plan and Relevant Policies
The Development Plan for the area is the Swansea Local Development Plan (Adopted February 2019) and within which the following policies are considered to be relevant to your proposal:

PS1; PS2; PS4, IO1, SI8, RC2, RC5; RC6; ER1, ER2, ER8, ER9, ER11; T1, T2, T5, T6, T7, EU4; RP1, RP2, RP3, RP4, RP5; RP6; RP9, RP10

Supplementary Planning Guidance (SPG):

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SPG relevant to the proposed development, which are available to download in full from our website at www.swansea.gov.uk are as follows:[INSERT SPG].

- Parking Standards (Adopted March 2012)
- Planning Obligations (Adopted March 2010)
- Planning for Community Safety (Adopted December 2012)
- Development and Biodiversity (Feb. 2021).

Consultation Responses
Natural Resources Wales - *As the above proposal will involve the provision of a building or buildings where the floor space to be created by the development is 1,000 square metres or more' - this constitutes 'major development' as specified in the Town and Country Planning (Development Management Procedure) (Wales) Order 2012.*

Therefore, we would advise that you notify the applicant to inform them that Natural Resources Wales are a specialist consultee as part of the process as defined in article 2(1) of the Order and are required to be notified and provided with an opportunity to review the draft planning application.

We will therefore comment on the proposed development when consulted by the applicant.

Dwr Cymru Welsh Water – *I refer to your request for our comments in response to the Applicant's submission of a Pre-Application enquiry. Whilst I appreciate the engagement with us and the opportunity to comment, there is no statutory obligation on 'Specialist Consultees' to respond formally and contribute to your Pre-Application response to the Applicant.*

I trust you will appreciate our position however we do very much recognise our duty to engage with the planning process and contribute positively to the pre-application process and discussions. To assist Applicants I recommend that you include reference to our own pre-app procedures within any written response and I can offer the following paragraph which you may want to include within your standard responses.

Welsh Water has a key role to play in the development and planning process as the services provided are at the forefront of public health and protection of the environment. Welsh Water encourages all developers to engage with them as early as possible in order to address any issues that may arise during the planning/construction process.

Upon receipt of a pre-application enquiry, Welsh Water will provide a written response advising whether the local network(s) can support the proposal, whether off-site water mains and/or sewers will need to be provided, and whether there are any apparatus located within the land you wish to develop and the requirements for these apparatus.

CCS Drainage Engineer - *We have reviewed the submitted information and based on the details comment as follows.*

As correctly identified the site is mostly covered by Flood Zone C2 and any application will need to accompanied by a Flood Consequences Assessment appropriate to the scale and nature of the development, it is likely that floodplain compensation on a level for level, volume for volume basis

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within the red line will be necessary to pursue any development proposals on this site. Natural Resources Wales will be able to advise further on the scope and information available to undertake such an assessment.

On the drainage strategy proposed we would highlight very strongly that the site has no right to connect to DCWW assets in Mumbles Road as indicated by dwg SK-500 Rev P01, Standard 1 of the WG SuDS Standards must be followed. Given that the Cwm Stream is not far from the rear of the site it would be expected that the site connect to that directly or use infiltration in accordance with the hierarchy this may require a radical rethink of the SuDS Strategy.

We note the use of a green/blue roof however in our experience these are rarely achieved on such developments as the steel frame of building will require upgrading beyond the standard used to take the weight of the roof. However biodiversity and amenity standards would still need to be met which may require a reduction in the size of the development to achieve this that has knock on effects on site viability.

Schedule 3, Flood and Water Management Act 2010.
Your development proposal has been identified as requiring SuDS Approval Body consent irrespective of any other permissions given.

CCS Planning Ecologist -
Preliminary Ecological Assessment (PEA)
The site is adjacent to semi-natural habitats and there are records of protected species, including bats, badger, otter, hedgehog and birds of conservation concern close to the site. Any submission must be accompanied by a Preliminary Ecological Appraisal (PEA). This should include an assessment of the potential of the site to support protected species and habitats and determine the need for any further surveys. The PEA should also contain an assessment of the presence of Invasive Non-Native plant Species (INNS). The PEA must be carried out by a suitably qualified and experienced ecologist. The submission must be accompanied by the results of any further surveys that are identified as necessary within the PEA. It should also include recommendations for mitigation and enhancements.

Lighting Strategy
A sensitive lighting strategy should be adopted to protect bats, badgers and other nocturnal species, and to protect nearby habitats. A plan showing location, light spill and specification for any proposed lights on the site must be submitted for approval. The lighting plan should reflect the Bat Conservation Trust's Bats and Artificial Lighting in the U.K. (2018) guidance.

Construction Environmental Management Plan (CEMP)
A Construction Environmental Management Plan (CEMP) will be required to inform the development. The document will need to include sufficient detail to demonstrate how construction will be managed to ensure pollution prevention and protection of habitats and species on and adjacent to the site.

Green Infrastructure
LDP Policy ER 2 requires that in order to be acceptable, development must not compromise the integrity of the green infrastructure system. This means that where a development proposal will

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result in loss in green infrastructure and consequently a loss in ecosystem service provision, mitigation and compensation measures will be required. The LDP policy now requires that compensatory measures should maintain and enhance the green infrastructure network. The policy criteria set out the type of measures that could be incorporated into a development scheme to achieve this.

Sustainable Drainage (SuDS)
From 7th January 2019, all new developments of more than 1 house or where the construction area is of 100m2 or more require sustainable drainage to manage on-site surface water. It is advised that reference is made to the Swansea Council LDP.

SuDS work by making use of landscape and natural vegetation to control the flow of surface water and reduce the risk of flooding. Designs can include ponds, permeable paving and swales, which slow down the discharge of surface water more than conventional piped drainage.

Standard S5 addresses the design of SuDS to ensure, where possible, they create ecologically rich green and blue corridors in developments and enrich biodiversity value by linking networks of habitats and ecosystems together. Biodiversity should be considered at the early design stage of a development to ensure the potential benefits are maximised

Ecological Enhancements:
A scheme to demonstrate that the development will conserve and enhance biodiversity and resilient ecosystems will need to be approved by the LPA. This is in line with the Section 6 Duty of the Environment (Wales) Act 2016, the Resilient Wales Goal of the Well-being of Future Generations Act 2015, Planning Policy Wales Edition 11 and Technical Advice Note 5. The Biodiversity Supplementary Planning Guidance (SPG) should be referred to for further information: https://www.swansea.gov.uk/biodiversityspg

CCS Pollution Control Team - *Whilst I am not in a position to object to the application I will want the following conditions to be either attached to any application or addressed as part of an application:*

- *Land Contamination;*
- *Imported Soils;*
- *Unforeseen Contamination;*
- *Building Services Plant Noise:*
- *Ventilation and fume extraction;*
- *Condensing units relating to refrigeration and freezing of products;*
- *Control hours use of the car park and requiring a delivery management plan to ensure that the process does not have a detrimental effect upon local residential land uses;*
- *Lighting scheme for the proposed site.*

CCS Highways - *The supporting documents which have been submitted with this pre-application enquiry have been reviewed and our observations are set out below.*

The site has been the subject of a previous pre-application enquiries, for background the advice which was given in the past has been reviewed to ensure consistency.

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Y GANOLFAN DDINESIG, HEOL YSTUMLLWYNARTH, ABERTAWE, SA1 3SN
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The proposals seek to redevelop a site which was previously used by Shell for a petrol station serving Mumbles Road and includes two neighbouring residential properties, one within and one without the site. The layout it is noted as indicatively shown for access, although the Highway Authority has provided comments which it considers would be useful to the prospective applicant. The enquiry details suggest that the supermarket will be of a Lidl format and have an area of 2,194 sqm Gross External area shown on the plan The net retail sales area has been presented as 1,102 sqm.

This size of food retail would trigger the thresholds for a Transport Assessment (TA) and we would strongly advise the applicant that the content of the TA should be fully scoped and agreed with the Highway Authority. The purpose of the scoping discussions would be to ensure that the form of access, internal layout and extent of assessment area are appropriate. A TA submitted without prior formal scoping may incur delays and additional assessment work and redesign.

The existing land uses would have previously had a traffic generating capability, this is still the case for the residential dwellings although the petrol station has been demolished for some time and all permitted uses have now been extinguished.

The proposed site location is within a predominantly residential area but adjacent a principal route in Swansea, the A4067 Mumbles Road. To the north the residential site is bound by open area that has seen previous development interest and then Ashleigh Road. To the south and west of the proposed access Glyn Crescent connects with Mumbles Road and serves a small number of properties. Midway along the length of Glyn Crescent a lane, which bounds the application side, provides access to the larger site behind.

Access
The form of access into the Lidl car park and access to the store is shown via a new priority junction on Mumbles Road. There is no further detail on how this will integrate with the existing highway network or how it may impact upon Glyn Crescent or the existing arrangements for Derwen Fawr Road. For information purposes, we would not support any additional traffic movements utilising Glyn Crescent with its existing substandard priority junction and would be concerned over any proposals which detriment the current level of access provision.

General advice can be provided for consideration, in the interests of informing the progression of a more detailed masterplan. Glyn Crescent must be retained and provision made within any wider junction design to ensure it is safe and adequate for use. The access to the development site must be set out in sufficient detail to understand how the access will work and appropriate capacity assessments undertaken. Where necessary the design, assessment and mitigation process should be undertaken in an iterative way until the proposed access is appropriate.

It would be expected that any junction designs are supported by capacity analysis and a traffic assessment which considers the effect of the proposals on local routes including Derwen Fawr Road. The capacity analysis would need to take into account the effects of introducing a development of this scale at this location and the interaction with all other junctions.

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As advised, this assessment and analysis work should be presented within a Transport Assessment, the scope of which should be agreed with the Highway Authority prior to completing the assessment.

Internal Access
The internal car park access route appears to be a logical layout and the proposed separation of service area to the car park is welcomed. This will of course require swept path analysis to ensure that the any proposed access and internal layout can accommodate the operational vehicle requirements, being easily accessed and egressed without encroaching into lanes for travelling in the opposite direction.

The access road into the Lidl car park is short in length and widens considerably upon arrival to the car park, care should be taken to ensure that indecision and delay does not happen to drivers on entry. Signage and road markings should be used to set out the main access route, distinguishing it from the minor arms of parking aisles. There would be a requirement for a clear and safe access route for pedestrians from Mumbles Road to the store entrance, the indicative layout is useful. Internally within the car park, currently none are indicated â this should also be addressed with crossings provided where needed.

The layout plan does include swept path assessment of a HGV, this is a useful addition for our views. The note on the plan confirms that tracking will be attended to in the future and we would offer advice on this matter. The swept paths should include the vehicle specification date and vehicle travelling speed used. The manoeuvres should be set out separately and include other vehicle types as appropriate. It is difficult to determine the appropriateness of the swept paths overlaid as shown all in black markings. We would advise the layout appears constrained and HGV vehicle manoeuvres requiring such an extent of car park use at the immediate entry at junction mouth would not be supported as a matter of highway safety. The manoeuvres could lead to a HGV not able to fully enter the site and / or cars blocking the highway or internal layout. Further thought and new strategy for servicing will be required, one that is safe and efficient and fully accommodated on site.

A Stage 1 Road Safety Audit should be provided as part of the planning submission package, covering access for all modes within the access and layout this should include changes to the highway and any impact on the operation of nearby junctions.

Parking
Parking will be required to be set out and implanted in accordance with the City and County of Swansea Parking Standards March 2012 Supplementary Parking Guidance. For this location, the standards could be considered as potentially zone 3 to 4. The parking standards of floor area per parking space relates to Gross Floor Area, as set out above this will be required for consideration, not least to review proposed parking provision which appears very low.

Food Retail
The requirement for operational vehicles would be 3 commercial vehicle spaces, whilst this is not explicitly shown within the layout submitted, there does appear to be sufficient room in the service area.

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The general parking area provision could be between 1 car parking space per 40 sqm using zone 3 or 1 per 20 sqm in zone 4 for a foodstore which is between 1,001 sqm and 2,000 sqm in GFA. A foodstore above 2,000 sqm GFA would require a parking provision of 1 space per 14 sqm, in both zones. It is noted that the store layout includes only 50 total car parking spaces.

The proposed gross external area of 2,194 sqm would require a maximum parking provision of 157 car parking spaces. This is considerably distant from that proposed, and not in sight of policy compliance. The effect of under providing parking could detriment a key highway network corridor and would not be supported. In general, it is considered that the site appears too small to accommodate the store proposed, the servicing arrangements and the required level of parking. Parking space dimensions will be required to be provided at minimum of 2.6 metres in width and 4.8 metres in length where not against a solid boundary, such as a wall, in which case further spaces will be required. It is noted that the general use parking is proposed as 2.5 metres by 4.7 metres, which is not SPG compliant. There is additional area provided for some elements of non-general parking, such as parent and child and disabled parking spaces.

For disabled parking provision, a minimum of one space per disabled employees plus 6% of the total parking provision, following correct Gross Floor Area assessment. The required dimensions for disabled parking provision are 4.8 metres by 2.4 metres with a 1.2 metre margin around three sides to allow transfer from vehicle to wheelchair. The margins do appear to full cover three sides on all spaces.

Car parking management will be required with limiting parking durations in place and enforcement methods to ensure that there are adhered to.

Motorcycle parking provision is at 5% of the total car parking provision. Motorcycle parking should be secure and can vary in dimensions, Swansea recommends a size of 2.8 metres by 1.3 metres is provided. Cycle parking guidance suggests one stand per 500 sqm GFA long stay plus one stand per 500 sqm GFA short stay.

Potential Contribution to Local Improvements
Should the scheme be successfully promoted through planning in some form, there will be financial contributions sought for local improvement schemes. The final details can only be confirmed upon the timing of any formal application and final agreement of the masterplan content. For informative purposes, there are currently issues around traffic congestion and safety in the local area, and it may be that improvements in these areas helps to mitigate the intensification of use proposed. This would be in addition to any improvements that are required as part of the findings of the TA.

Any advice contained within this pre-application consultation is given as early and at a high level and will of course be subject to the findings of a Transport Assessment, the final scheme proposals, suitable and appropriate access, satisfactory internal circulation and highway safety.

Summary
In general there is no objection in principal of development for retail. However this is subject to the above recommendations and to the findings of a full Transport Assessment together with safe and suitable access and internal layout.

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The level of development proposed is such that a Pre-application Consultation (PAC) will be required, advice will be provided by Highways as a consultee.

Comments made only relate to the area within the red line shown in the enclosed plan, no comments are provided on wider areas seen as part of other applications. This would have to be the subject of a separate consultation, it is considered that access of the remaining area is likely to prove extremely difficult should these proposals come forward.

Initial assessment of the proposed development and consideration of planning merits
As set out in the meeting the key considerations in a future application are likely to relate to the principle of development in terms of an assessment of retail need in the area, placemaking principles, impacts upon residential amenity, highway safety and flooding / drainage.

Principle of Development / Retail Need
CCS Placemaking and Strategic Planning have assessed the proposal and have provided detailed comments. The national and local policy framework in regard to retail planning is key to determining the acceptability or otherwise of the principle of a foodstore at the proposed location. Future Wales Policy 6 and Planning Policy Wales (PPW) set out the 'town centres first' national planning policy requirement which the Welsh Government operates in relation to retail developments. This approach is also central to the Swansea LDP policies on retail planning. Fundamentally the site is located a significant distance outside any defined retail centre as set out in the LDP and accordingly it is clear the site is an out of centre location in line with national and local planning policy.

Strategic Policy PS 1 sets out the LDP's approach to sustainable development. In order to deliver sustainable places and strategically manage the spatial growth of the County, the delivery of new homes, jobs, infrastructure and community facilities must comply with the Plan's sustainable settlement strategy that requires development to be directed to the most sustainable locations within the defined settlement boundaries of the urban area. Key to this consideration in respect of this proposal is whether the proposals comply with the retail policy RC2.

LDP Policy RC2 promotes the Plan's defined Centres as the most appropriate and sustainable locations for locating new retail, leisure and supporting commercial development in-line with National Guidance. The term 'Centre' as used in this policy and throughout the Plan, refers specifically to only the Swansea Central Area Retail Centre and the defined network of District and Local Centres. The policy states that Retail proposals must in the first instance assess the suitability of sites and premises within appropriate Centres that would serve the population concerned. Where proposals demonstrate there are no suitable available sites or premises then edge of centre sites can be considered in preference to out of centre sites. Appropriate assessments of need and retail impact must be submitted by the developer in support of proposals in out of centre sites. Policy RC2 also states that where evidence clearly demonstrates that no sites within centres or at edge of centre sites can be made available for the proposed development, out of centre sites will be considered. In such circumstances developers should consider available sites and premises within defined Retail Park boundaries which are the preferred location for out of centre retail developments.

Policy RC 2 further states that retail proposals will only be permitted at out of centre locations outside Retail Parks in exceptional circumstances, and where a specific need is identified for: small scale development intended to serve an identified local need (in accordance with Policy RC6),

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development that is part of a planned new Centre or to serve a substantial new neighbourhood or development that requires a particular type of unit that is not normally available within centres or retail parks in order to accommodate the proposed range of goods sold.

Paragraph 2.8.7 of the Policy Justification states that in line with national planning policy and guidance, developers should exhaust all appropriate options within town centres in the first instance, before edge of centre and out of centre sites are considered. This exercise must involve a comprehensive review of all potentially suitable sites, including possible buildings for conversion and/or reasonable opportunities to remodel existing units to accommodate a proposed development. Proposals must demonstrate flexibility in this regard and consider how the business could reasonably trade within those sites and units that are available, or likely to become available within centres. This flexible approach may require a modification to the proposed operator's typical trading approach.

Paragraph 2.8.8 states that the onus of proof that sites within Centres have been thoroughly assessed rests with the developer. For the avoidance of doubt the sequential order of priority requires developers to consider edge of centre (if no suitable 'in centre' sites can be found) before any out of centre site is considered. The sequential assessment should include evidence relating to the likely distribution of demand and the size of the catchment area that the development would serve.

Paragraph 2.8.9 states that for proposals outside centres, the policy emphasises that as a starting point, the developer must demonstrate by means of suitable evidence whether there is a need for the proposed scheme. Establishing quantitative need is the first requirement and takes precedence over qualitative factors such as the impact on travel patterns.

Paragraph 2.8.10 indicates that the Swansea Retail and Leisure Study (2015) concludes that there is not any quantitative need for additional convenience goods floorspace during the plan period, which is a conclusion based on the overall scale of existing provision across the County. The study recognises however that this represents a global capacity figure, and it is feasible that, during the course of the Plan period a developer may be able to demonstrate a degree of quantitative need for new convenience provision having regard to changing circumstances such as commitments for housing growth within a given catchment. Developers will need to use appropriate methodologies and up to date evidence and survey data in order to identify any such need**.**

As highlighted above, fundamentally the application site is out of centre - located approximately 1.6km away from the nearest defined local centre at West Cross (Alderwood Road) – and it is significant that LDP policy RC2 makes clear retail and leisure proposals will only be permitted at such locations in exceptional circumstances. One of these circumstances is where a specific need is identified for small scale development intended only to serve an identified local need (Policy RC2 refers). 'Small scale' is defined in policy RC6 as less than 1000sqm GFA. The proposals are clearly outside the scope of this exception and as such the developer is required to submit a convincing case to the LPA that there are particular material circumstances in this case, related to addressing an unmet need, to justify the Council departing from that policy position. This evidence will need to justify that the store to be provided should reasonably be permitted to contain retail floorspace that is over and above the 'allowance' highlighted in the policy for small scale local provision outside centres.

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As outlined in para 2.8.10 of Policy RC2, the results of the County wide retail capacity assessment (2015) that underpins the policies of the LDP concluded there is no quantitative need for additional convenience goods floorspace over the LDP period. However, that assessment did also recognise that this represents a global capacity figure, and that a developer may be able to demonstrate a degree of quantitative need for new convenience provision having regard to changing circumstances within a given catchment. The LPA is required to consider specific proposals intended to address a local deficiency within certain areas of Swansea, based on the circumstances that apply at the time of any application. It is incumbent on the applicant therefore to ensure that the Retail Assessment in support of the application takes account of any changes in retail provision relevant to the site since the 2015 study was conducted.

Retail Impact Assessment Scoping Note

Following a review of the submitted Retail Impact Assessment Scoping Note the following observations are made:

- Para 1.4.5 – it is emphasised that in line with RC2 para 2.8.7 that in the sequential review of sites the developer must demonstrate flexibility in terms of a review of potentially suitable opportunities, including possible buildings for conversion and or reasonable opportunities to remodel existing units to accommodate a proposed development. In addition, in line with para 2.8.8 the onus of proof that sites have been assessed rests with the developer.
- Para 1.5.1/1.5.2 (Proposed Retail methodology) - An assessment of both need (quantitative and qualitative) and impact is required for the proposal. Establishing quantitative need is the first requirement and takes precedence over qualitative factors. The proposals must demonstrate why this proposal meets a particular local need, notwithstanding the global figure of a lack of quantitative need for additional convenience goods floorspace across the county. Qualitative need is an important matter however and it is recognised that a discount food retailer within the West of Swansea would add to the range/ type of foodstores to serve surrounding residents. Whilst this area is served by a number of convenience retailers (for example, Cooperative Sketty/West Cross/Mumbles/Bishopston, Marks and Spencer's Mumbles, Nisa Sketty Park) the concentration of larger format stores are toward the other side of the city which generates trips along Mumbles Road.
- The developer will need to be satisfied that the data to inform the quantitative analysis as suggested is robust and based upon the most up to date evidence.
- Paras 1.5.4-1.58 - Since the Retail Study was published planning permission has been granted for other new convenience retail floorspace – including for example a new Marks and Spencer's foodstore within Mumbles District Centre in January 2020 (2016/1472) (as amended) and also a coop store in West Cross. These will likely impact on the level of outflow of shoppers to Zone 1. In addition, whilst currently there is a low market penetration of Zone 4 based stores/centres for Zone 1 based residents, a discount food operator may likely draw trade from the west of Zone 1 and the centres there. These, and any other relevant planning approvals and developments for new retail provision, will need to be considered as part of any submitted Retail Assessment.
- Para 1.5.9-1.5.11 - The developer will need to be satisfied the data used is robust and up to date to enable the assessment.
- Para 1.5.13 - 14 Request – The applicant has requested the LPA confirms the relevant Centres for the healthcheck assessment. Given the proximity to the site the healthcheck

assessments should be extended to include the local centre at Brynymor (Brynymor Road), together with the identified District Centres of Killay, Mumbles, Sketty and Uplands and the Local Centres of Kittle, Murton, Sketty Park Drive, Tycoch (Tycoch Cross), West Cross (Alderwood Road) and West Cross (West Cross Lane).

- Para 1.5.16 - Consideration of sites 'on the edge of centres' should reasonably encompass sites that are a very short and easy walking route from existing retail units.
- Para 1.5.18 Request – The applicant has requested the LPA to confirm agreement of the centres to be assessed for sequential purposes. Additional local centres of West Cross Alderwood Road, Brynymor Road, Sketty Park should be included in the sequential test for completeness alongside the identified District Centres of Killay, Mumbles, Sketty and Uplands and the Local Centres of Tycoch (Tycoch Cross) and West Cross (West Cross Lane).
- The applicant has requested that the LPA point to any sites that could potentially be available in sequential preferable locations within, or adjacent to, Centres. The responsibility lies with developer, there are no allocated sites or stipulations within the adopted plan. However, it is known that the former Army Reserve training facility (4.7acre site) off Mumbles Road was marketed in February 2021 by Avison Young. This site also accessed off Mumbles Road would be considered a more sequentially favourable site in an edge of centre location given the distance (approximately 240m) from West Cross (Alderwood Road) Local Centre.
- Para 1.5.19-21, 1.5.22-23, 1.5.32, 1.5.33-34 Request – The applicant has requested the LPA advise of any particular retail commitments which it requires to be included in the RIA quantitative analysis. It is incumbent on the applicant to undertake a complete review of retail applications permitted via the Council's online planning application search software since the 2015 base date of the retail study and any schemes pending. However, aside from this the applicant will need to consider the COU of the former Linden Tree Public House to a Cooperative on Linden Ave/Fairwood Road in West Cross. (No planning application for this scheme).
- Para 1.5.30 - A trade diversion assessment will be undertaken informed by Shopping patterns identified in the Retail and Leisure Study 2015 based on up to date population and expenditure data. The applicant will need to consider whether there are foodstores that have been permitted/implemented since this study together with any potential change to shopping patterns as a result of the COVID pandemic that would alter these patterns. The applicant will need to consider if it would be reasonable to repeat shopping patterns for the purposes of this assessment or whether the trade diversion assessment should be based on up to date convenience shopping patterns.
- We are not convinced with the argument set out in the retail impact section (para.1.5.33) to exclude the non-food (comparison) floor space from the assessment. The turnover of stock and the WIGIG model does not provide reasonable justification to exclude an RIA on the comparison element as this would generate trips to Lidl for specific products on offer. Accordingly I don't think that the model attracts solely impulse buys. Thus the non-food offer, whilst a smaller element of the floorspace could draw comparison trade away from existing stores. Accordingly the assessment should cover the whole of the proposal (both food and non food) for completeness.

<u>Other Retail Matters</u>

Beyond the designated boundaries of the district centres, and the local centres identified, the LDP does not have any specific in-centre allocations/investment proposals other than the city centre

proposals. Furthermore, there are no non-central retail allocations identified in the LDP that are of relevance to the proposal.

Any retail assessment to be submitted in support of an application should include consideration of schemes consented planning permission but that may not yet have been built out.

Test of Retail Need (Quantitative and Qualitative) should follow guidance within TAN 4 (Section 6). Sequential test should follow the guidance in TAN 4 (Section 7). The proposal should also be assessed against the impact criteria in para 8.3 of TAN4.

Placemaking Principles
The Development Plan places significant emphasis on the importance of placemaking, and defines key principles in this regard for all proposals to seek to incorporate:

Future Wales Policy 2 sets out that:

- development should adhere to key placemaking principles in order that it positively contributes towards building sustainable places that support well-being objectives,
- opportunities should be taken to ensure that multifunctional GI is fully integrated into development schemes wherever possible.

Swansea LDP Policies PS 2 and ER 2 highlight that:

- all proposals should adhere to key placemaking principles and development criteria, to ensure that proposals make a positive contribution to the experience and enjoyment of places.
- development should enhance the quality of places and spaces and respond positively to aspects of local context and character.
- the design, layout and orientation of proposed buildings, and the spaces between them, should provide for an attractive, legible, healthy, accessible and safe environment, and must not cause unacceptable impacts on people's amenity.
- development must take opportunities to maintain and enhance the County's GI network, having regard to the extent, quality, and connectivity of the GI resource.

Having regard to the importance of proposals addressing key placemaking and GI principles, the following highlights specific comments from the Placemaking and Heritage Team:

The application site is located on the western side of Mumbles Road and is currently vacant having been cleared following the demolition of a petrol station. The surrounding area is predominately characterised by residential use, with existing residential use fronting onto Mumbles Road to the immediate north of the site and further residential use abutting the site to the southwest (Glyn Terrace). To the rear (northwest) of the site is an area of open space and on the opposite side of Mumbles Road is further open space currently used for 'footgolf' and is covered by a SINC and SSSI.

Clyne Castle historic park and garden is located approx. 180m to the southwest of the site on the opposite side of Derwen Fawr Road. It is acknowledged that recent changes along Derwen Fawr

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Road have already altered views from this boundary of the historic park and the proposed development is therefore unlikely to have any significant impact on the setting of the registered Clyne Castle historic park and garden. CADW should however be consulted.

The proposal seeks to redevelop the site and includes two neighbouring residential properties (no's 50 & 52 Mumbles Road), one located within and one outside the site, to comprise a new Lidl foodstore with associated car parking and landscaping works.

Vehicular access is achieved from the site's southeast boundary from Mumbles Road, as was the case with the previous petrol station use. Pedestrian access is shown to run along the northern boundary, adjacent to no. 48 Mumbles Road. This narrow and rather contrived pedestrian link is not acceptable as an active travel route and further consideration is required to ensure this is integral to the design to encourage walking and cycling to the site. To further assist improved connectivity, the site would benefit from an additional pedestrian link into the site from the southern corner however given the car park and servicing arrangements this would not appear safe or legible.

The new supermarket will be sited to the western (rear) section of the site with the servicing area located to the southern side of the building and car parking to the site frontage (east). The proposed arrangement therefore offers limited active frontage with Mumbles Road due to the set back and separation by car parking although given the nature of the development and adjoining uses/established building lines this would appear most logical.

In terms of scale, the building footprint encroaches within close proximity of neighbouring residential uses resulting in limited separation distances, with only approx. 1m between the store entrance (NE corner) and the boundary of no. 48 Mumbles Road. In this regard the site appears cramped, and concern is raised insofar as to how the development will impact upon adjoining residential use. It is likely that any redevelopment of the site will need to be scaled down to fully consider and integrate its surrounding context.

Two concept elevation options have been submitted for the proposed single storey retail store; the first comprises a curved roof edge and the second with a slight 'V' shaped roof profile. Both include full height glazing to the entrance to provide a legible entrance lobby to the store. However, the main expanse of glazing forms the north facing (side elevation) which appears illogical as this should form the east facing frontage to the Mumbles Road. In addition, the large expanse of glazing would be in close proximity to the boundary with adjoining residential use and will undoubtedly result in significant lightspill which will be unacceptable from a residential amenity perspective.

The front elevation facing Mumbles Road comprises an element of timber cladding and local stone, which is acceptable, however as addressed above, this elevation should provide the expansive glazing to provide active frontage and can be combined with timber cladding/stone detailing.

The inclusion of a green/blue roof is welcomed on the basis that this it is an extensive green has sufficient depth to achieve the relevant scoring for substrate of 60-80mm.

Fundamentally, placemaking considers the context, function and relationships between a development site and its wider surroundings. In terms of making most efficient use of the site and considering the surrounding context and inherently sustainable location, question is raised as to

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whether the proposal should be for a mixed-use development, comprising ground floor retail unit and residential above, as per the recent British Legion conversion on Newton Road, Mumbles. Has this option been explored? The flood risk designation will of course impact on the potential for any vulnerable use such as residential.

Residential Amenity
In regard to residential amenity the key considerations will be the impact of the nature of the use on neighbouring residential properties in regard to increased noise and disturbance. It is noted that the proposed access would be in close proximity to No.1 Glyn Crescent. The overall use of the site will generate a level of noise for deliveries in addition to general customer use by car. It is noted that the proximity of the dual carriageway already generates a significant noise disturbance in the area. However it is recommended that both the opening and delivery operations are set at a reasonable time to reduce the noise and disturbance at unsociable hours. It is noted however, that the scale of the proposed development does result in both the store entrance, extensive glazed north elevation and service area being in very close proximity to adjoining residential dwellings, which would create significant residential amenity issues and as noted above, the site layout should be reconsidered and possibly scaled down to fully consider and integrate its surrounding context.

Flood Risk
The site lies in a Flood Risk area partly within a C2 floodplain (without significant flood defence infrastructure as defined by TAN15) as shown on the Development Advice Maps. However, the applicant should be aware that the whole of the site is shown to be within floodzone 3 on the new draft flood maps part of the proposed revised TAN15. Decision making will be made on the basis of the floodmaps/TAN15 guidance that is in force at the time of determination of any future planning application. Policy RP1 states that development will not be permitted that would result in significant risk to life particularly in respect of flood risk.

Policy RP5 further advises that in order to avoid the risk of flooding, development will not be permitted in areas of coastal flooding, unless it can be demonstrated that the development can be justified in-line with national guidance and is supported by a technical assessment that verifies that the new development is designed to alleviate the threat and consequences of flooding.

TAN 15 provides technical guidance to supplement the policy set out in PPW. The TAN outlines a precautionary methodology for the assessment of development proposals and flood risk. Where development is proposed in a flood zone, the TAN sets out guidance on the assessment of justification and flooding consequences required by PPW. The circumstances in which development in a flood zone can be justified is outlined in section 6 and relate to economic regeneration and achieving economic objectives to serve existing settlements whilst concurring with PPW and falling within PPW's definition of previously developed land (PDL). Guidance on undertaking a flood consequence assessment (FCA) is provided in section 7 and appendix 1. In essence a comprehensive study of the consequences of flooding that examines the likely mechanisms that cause the flooding, the consequence on and off site of those floods and appropriate mitigation measures to manage those consequences must be provided. As the proposed retail store would fall within the 'Less Vulnerable' category by TAN 15, in line with paragraph 6.2 of the TAN15 any future proposal would only be acceptable in terms of flood risk if it meets the justification tests set out in Paragraph 6.2.

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In order to fully assess this proposal, within a high risk flood zone, the policy framework requires the developer to provide justification for its location and a detailed flood consequence assessment (as outlined above). To satisfy the specific requirements of the LDP policies RP1, RP4, RP5, the FCA must not only address the flooding consequences for the new development but also on existing flood defences, including access for maintenance; demonstrate that the development would not lead to increased flooding either on the site or elsewhere and provide environmentally sympathetic mitigation measures, such as SuDS. In addition, a satisfactory drainage strategy must be provided to deal with flood risk from the local sources such as Cwm stream that runs adjacent to the site and surface water run-off. The Council's drainage engineers can provide specific guidance on FCA and local drainage strategy requirements.

None of the required technical flood risk assessments have been submitted with this pre-application query and therefore no further policy comments relating to flood risk can be provided at this stage.

Surface Water Drainage / SuDs
In terms of SuDS, the site is covered by flood zone C2 and as highlighted by the Council's Drainage officer, the proposal to connect the DCWW assets in Mumbles Road would not be permitted. On the basis that the Cwm stream runs in close proximity to the rear of the site, it would be expected that the site connects to that directly or use infiltration methods. The SuDS Strategy therefore requires further consideration. Any requirement to use above ground SuDS elements may change the layout of the site due to potential reductions in the size of the developable area. The SuDS approach must be positively integrated and designed in parallel with the planning layout and should link to the multi-functional GI approach. A SAB application should be pursued to address all design issues.

The submission fails to include a Landscape Plan and the site is devoid of any meaningful new landscaping/greening to the site's periphery, i.e. grassed banks and new planting to provide an element of visual softening. The current arrangement is unacceptable and requires further consideration.

In addition, no GI Strategy has been prepared for the site. The purpose of the GI Strategy is to review the extent to which any existing GI assets are functioning well (in this instance the site is lacking although it is noted that there are existing trees to the southwest boundaries which have not been included on the proposed layout plans), to identify where there are existing and anticipated future gaps and to set out what actions and interventions could enhance the current provision. The GI Strategy should fit around the SuDS at the site. For example, the proposal fails to incorporate any planting within the car parking area, including necessary root pits. In terms of wider GI connectivity opportunities, there is a SINC on the opposite side of Mumbles Road and there is an area of green space to the rear of the site. Is there scope to link into any existing green corridors?

Biodiversity Enhancement
Complementary to the need to align with placemaking requirements, the Development Plan also places significant emphasis on the importance of development integrating nature-based solutions to the design of the built environment wherever possible, which reflects the Council's duty under Section 6 of the Environment (Wales) Act 2016 ("the S6 duty').

FW Policy 9 and PPW require that:

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- all applications demonstrate the actions that have been taken where possible to maintain and enhance and biodiversity and ecosystem resilience, as well as relevant GI assets.
- a clear and proportionate approach is taken to considering biodiversity and securing overall enhancement.

The Council's Adopted SPG - Biodiversity and Development provides:

- guidance on how the requirement for biodiversity can be addressed and assessed.
- details of specific measures that could be provided to enhance biodiversity and ecosystem resilience depending on the nature of the proposals

Transportation
The traffic / parking / highway safety implications of the development are considered in detail in the comments from CCS Comments from Transportation and Highways officers above. As indicated, given the size of the proposed retail store any potential future proposal would require a Transport Impact Assessment to accompany any potential future planning application. Accordingly, the issues relating to the impact on the network, provision of parking, measures to improve walking and cycling and public transport access and measures to reduce levels of air and noise pollution would need to be assessed. Ultimately, the scheme would need to satisfy the requirements set out in Policies T1, T2, T5 and T6 of the LDP.

Site Contamination
Due to the previous use of the site as a petrol filling station, there is potential for the site to be contaminated notwithstanding the removal of all associated fuel infrastructure, including tanks and pipework. CCS Environmental Heath Officers have highlighted the need to investigate this issue, together with several other issues. Consequently, any scheme would need to satisfy the requirements of Policies RP1 and RP6 in respect of land contamination. RP6 states that development proposals on land where there is a risk from actual or potential contamination or landfill gas will not be permitted unless it can be demonstrated that measures can be taken to satisfactorily overcome any significant risk to life, human health, property, controlled waters, or the natural and historic environment.

Infrastructure
In-line with Policy EU 4, the proposal will need to demonstrate that the utility infrastructure is adequate to meet the needs of the development, and if it requires new or improved utility infrastructure, it can be satisfactorily demonstrated that the developer will make an appropriate contribution to secure the provision of the infrastructure. Policy RP 4 requires that sustainable drainage systems (SuDS) must be implemented wherever they would be effective and practicable. Additionally, RP10 requires development will be required to incorporate, as appropriate, adequate and effective provision for the storage, recycling and other sustainable management of waste, and allow for appropriate access arrangements for recycling and refuse collection vehicles and personnel.

Details of any documents required for a subsequent application

- Design and Access Statement;
- Planning Statement

CIVIC CENTRE, OYSTERMOUTH ROAD, SWANSEA, SA1 3SN
Y GANOLFAN DDINESIG, HEOL YSTUMLLWYNARTH, ABERTAWE, SA1 3SN
☎ (01792) 635701 🖷 (01792) 635719 🖷 (01792) 635708
✉ planning@swansea.gov.uk / http://www.swansea.gov.uk

- PAC Report;
- Retail Need and Impact Assessment;
- Transport Assessment;
- Flood Consequences Assessment;
- Drainage Strategy (SuDs requirements);
- Preliminary Ecological Assessment (PEA);
- Tree Survey;
- Green Infrastructure Assessment;
- Noise Assessment;
- Air Quality Assessment;
- Site Investigation / Geo Environmental Study – contaminated land;

Pre-application Consultation (PAC)
You will be aware, the Wales Planning Act 2015 introduced the requirement for pre-application consultation in respect of applications for major developments which came into force in March, 2016 and the requirement for applicants to submit the pre-application consultation report (PAC) as a validation requirement for applications made after 1 August 2016.

The guidance on Pre-application Consultation is set out in Article 1 of the Town and Country Planning (Development Management Procedure) (Wales) Amendment Order 2016. Equally, in response to Coronavirus, you will be aware of the guidance issued by the Welsh Government on 15 May, 2020 (subsequently updated) – Amendments to Pre-Application Consultation relating to Applications for Major Development and Developments of National Significance which outlines the changes to the Town and Country Planning (Development Management Procedure) (Wales) Order 2012 ("DMPWO") in response to the challenges presented by COVID-19.

Conclusion
The proposal constitutes a significant retail development on a site well outside any designated district or local centre. Future Wales, PPW and the adopted LDP are all consistent in emphasising the town centres first policy for retail development. Policy is clear that such development in an out of centre location such as the proposed site should only be permitted if clear evidence is submitted to satisfy the 'tests' set out in PPW and LDP Policy RC2 relating to need, impact and sequential analysis, in order to potentially justify the proposal as an acceptable exception. This proposal will require a detailed need and impact assessment. Also, a sufficiently comprehensive sequential analysis is required to demonstrate that there are no preferable alternative sites to serve the relevant population (taking a flexible approach to development opportunities) and that the location is compatible with the plan's sustainable settlement strategy.

In terms of placemaking requirements, concerns are highlighted that the site appears cramped, and that the development could adversely impact upon adjoining residential uses, including noise/disturbance and lightspill. Notwithstanding it is a brownfield site and its previous use as a PFS, it is likely that any redevelopment of the site will need to be scaled down to fully consider and integrate its surrounding context. Two concept elevation options have been submitted. Both include full height glazing to the entrance to provide a legible entrance lobby to the store. However, the main expanse of glazing forms the north facing (side elevation) which appears illogical as this should form the east facing frontage to Mumbles Road. The submission fails to include a Landscape Plan which is unacceptable, and landscaping requires further consideration.

CITY & COUNTY OF SWANSEA / DINAS A SIR ABERTAWE
DIRECTORATE OF PLACE / CYFARWYDDIAETH LLEOEDD
PLANNING AND CITY REGENERATION / CYNLLUNIO AC ADFYWIO'R DDINAS
CIVIC CENTRE, OYSTERMOUTH ROAD, SWANSEA, SA1 3SN
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A proposed pedestrian access is shown to run along the northern boundary, adjacent to no. 48 Mumbles Road, however this is narrow and rather contrived and not acceptable as an active travel route. Further consideration is required to ensure Active Travel requirements are integral to the design to encourage walking and cycling to the site.

The SuDS Strategy requires further consideration and must be positively integrated and designed in parallel with the planning layout and link to a multi-functional GI approach. A key constraint is the location of the site within a C2 floodplain and the consequential flood risk to the proposed development. At this stage insufficient evidence has been presented that floodrisk constraints can be overcome and that the development can be justified in accordance with the exception tests within TAN15. Further information is required in the form of a Flood Consequence Assessment.

Any future proposal would also need to overcome any transport, parking, and contamination issues. So in conclusion on the basis of the information submitted it is not possible to give a positive recommendation on the likelihood of approval of the proposed retail food store development on this site.

Please note that this guidance is given on the basis of the information submitted, and that full consultation with Statutory Undertakers or interested parties, such as neighbours has not been undertaken, and that it is only through the submission of a planning application that full consideration can be given to a proposal.

Additionally, the views expressed are those of an officer of the Authority, which cannot prejudice any final decision the Council may make if an application for planning permission is submitted.

I trust that the above advice is satisfactory for your current purposes. However should you require clarification of any of the above matters, please do not hesitate to contact David Owen on the above number.

Should you wish to obtain further discussion and advice in relation to this pre-application, as part of our pre-application services the Council offers follow-up meetings to pre-application letters. In accordance with our Fee Schedule a meeting on this particular scheme would amount to a total of £600.00.

Yours sincerely

Liam Jones

LIAM JONES
TEAM LEADER – BAY AREA

APPENDIX C

TRICS Outputs

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 13 - PETROL FILLING STATIONS
Category : A - PETROL FILLING STATIONS
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	WS	WEST SUSSEX	1 days
03	SOUTH WEST		
	DV	DEVON	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Filling bays
Actual Range: 4 to 6 (units:)
Range Selected by User: 4 to 16 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 15/10/20

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Thursday	1 days
Friday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	3

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

Sui Generis	3 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	1 days
25,001 to 50,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

25,001 to 50,000	1 days
75,001 to 100,000	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

1.1 to 1.5	3 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	3 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	3 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	DV-13-A-03 MAIN ROAD EXETER PINHOE Edge of Town Residential Zone Total Filling bays:	GULF	4	DEVON
	Survey date: THURSDAY	*28/11/13*		*Survey Type: MANUAL*
2	SH-13-A-01 THE MOUNT SHREWSBURY FRANKWELL Edge of Town Residential Zone Total Filling bays:	LOCAL	4	SHROPSHIRE
	Survey date: FRIDAY	*30/05/14*		*Survey Type: MANUAL*
3	WS-13-A-02 SOMPTING AVENUE WORTHING Suburban Area (PPS6 Out of Centre) Residential Zone Total Filling bays:	MURCO	6	WEST SUSSEX
	Survey date: FRIDAY	*17/10/14*		*Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
BD-13-A-02	Undertaken During Covid Pandemic

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
TOTAL VEHICLES
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	5	3.800	2	5	3.500	2	5	7.300
07:00 - 08:00	3	5	6.786	3	5	6.714	3	5	13.500
08:00 - 09:00	3	5	7.643	3	5	7.143	3	5	14.786
09:00 - 10:00	3	5	5.786	3	5	6.000	3	5	11.786
10:00 - 11:00	3	5	6.143	3	5	6.000	3	5	12.143
11:00 - 12:00	3	5	7.000	3	5	6.857	3	5	13.857
12:00 - 13:00	3	5	6.357	3	5	6.714	3	5	13.071
13:00 - 14:00	3	5	6.643	3	5	7.071	3	5	13.714
14:00 - 15:00	3	5	5.929	3	5	5.643	3	5	11.572
15:00 - 16:00	3	5	7.214	3	5	7.929	3	5	15.143
16:00 - 17:00	3	5	6.929	3	5	6.357	3	5	13.286
17:00 - 18:00	3	5	7.000	3	5	7.000	3	5	14.000
18:00 - 19:00	3	5	5.214	3	5	5.286	3	5	10.500
19:00 - 20:00	2	5	3.700	2	5	3.400	2	5	7.100
20:00 - 21:00	2	5	3.100	2	5	3.600	2	5	6.700
21:00 - 22:00	2	5	1.900	2	5	1.900	2	5	3.800
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			91.144			91.114			182.258

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	4 - 6 (units:)
Survey date date range:	01/01/13 - 15/10/20
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
TAXIS
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	5	0.200	2	5	0.100	2	5	0.300
07:00 - 08:00	3	5	0.000	3	5	0.071	3	5	0.071
08:00 - 09:00	3	5	0.071	3	5	0.071	3	5	0.142
09:00 - 10:00	3	5	0.071	3	5	0.071	3	5	0.142
10:00 - 11:00	3	5	0.214	3	5	0.143	3	5	0.357
11:00 - 12:00	3	5	0.000	3	5	0.071	3	5	0.071
12:00 - 13:00	3	5	0.000	3	5	0.000	3	5	0.000
13:00 - 14:00	3	5	0.143	3	5	0.143	3	5	0.286
14:00 - 15:00	3	5	0.071	3	5	0.071	3	5	0.142
15:00 - 16:00	3	5	0.071	3	5	0.071	3	5	0.142
16:00 - 17:00	3	5	0.143	3	5	0.143	3	5	0.286
17:00 - 18:00	3	5	0.000	3	5	0.000	3	5	0.000
18:00 - 19:00	3	5	0.000	3	5	0.000	3	5	0.000
19:00 - 20:00	2	5	0.000	2	5	0.000	2	5	0.000
20:00 - 21:00	2	5	0.200	2	5	0.200	2	5	0.400
21:00 - 22:00	2	5	0.000	2	5	0.000	2	5	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.184			1.155			2.339

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
OGVS
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	5	0.100	2	5	0.100	2	5	0.200
07:00 - 08:00	3	5	0.143	3	5	0.143	3	5	0.286
08:00 - 09:00	3	5	0.071	3	5	0.071	3	5	0.142
09:00 - 10:00	3	5	0.000	3	5	0.000	3	5	0.000
10:00 - 11:00	3	5	0.000	3	5	0.000	3	5	0.000
11:00 - 12:00	3	5	0.071	3	5	0.071	3	5	0.142
12:00 - 13:00	3	5	0.071	3	5	0.071	3	5	0.142
13:00 - 14:00	3	5	0.071	3	5	0.000	3	5	0.071
14:00 - 15:00	3	5	0.000	3	5	0.071	3	5	0.071
15:00 - 16:00	3	5	0.071	3	5	0.000	3	5	0.071
16:00 - 17:00	3	5	0.000	3	5	0.071	3	5	0.071
17:00 - 18:00	3	5	0.000	3	5	0.000	3	5	0.000
18:00 - 19:00	3	5	0.000	3	5	0.000	3	5	0.000
19:00 - 20:00	2	5	0.000	2	5	0.000	2	5	0.000
20:00 - 21:00	2	5	0.000	2	5	0.000	2	5	0.000
21:00 - 22:00	2	5	0.000	2	5	0.000	2	5	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.598			0.598			1.196

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
CYCLISTS
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	5	0.000	2	5	0.000	2	5	0.000
07:00 - 08:00	3	5	0.000	3	5	0.000	3	5	0.000
08:00 - 09:00	3	5	0.000	3	5	0.000	3	5	0.000
09:00 - 10:00	3	5	0.000	3	5	0.000	3	5	0.000
10:00 - 11:00	3	5	0.000	3	5	0.000	3	5	0.000
11:00 - 12:00	3	5	0.000	3	5	0.000	3	5	0.000
12:00 - 13:00	3	5	0.000	3	5	0.000	3	5	0.000
13:00 - 14:00	3	5	0.000	3	5	0.000	3	5	0.000
14:00 - 15:00	3	5	0.000	3	5	0.000	3	5	0.000
15:00 - 16:00	3	5	0.000	3	5	0.000	3	5	0.000
16:00 - 17:00	3	5	0.071	3	5	0.071	3	5	0.142
17:00 - 18:00	3	5	0.000	3	5	0.000	3	5	0.000
18:00 - 19:00	3	5	0.000	3	5	0.000	3	5	0.000
19:00 - 20:00	2	5	0.000	2	5	0.000	2	5	0.000
20:00 - 21:00	2	5	0.000	2	5	0.000	2	5	0.000
21:00 - 22:00	2	5	0.000	2	5	0.000	2	5	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.071			0.071			0.142

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
CARS
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	5	2.400	2	5	2.200	2	5	4.600
07:00 - 08:00	3	5	3.286	3	5	3.357	3	5	6.643
08:00 - 09:00	3	5	4.286	3	5	4.214	3	5	8.500
09:00 - 10:00	3	5	3.286	3	5	3.286	3	5	6.572
10:00 - 11:00	3	5	2.857	3	5	2.714	3	5	5.571
11:00 - 12:00	3	5	3.357	3	5	3.286	3	5	6.643
12:00 - 13:00	3	5	2.857	3	5	2.929	3	5	5.786
13:00 - 14:00	3	5	3.214	3	5	3.286	3	5	6.500
14:00 - 15:00	3	5	2.286	3	5	1.929	3	5	4.215
15:00 - 16:00	3	5	3.857	3	5	4.286	3	5	8.143
16:00 - 17:00	3	5	2.857	3	5	2.643	3	5	5.500
17:00 - 18:00	3	5	4.357	3	5	4.429	3	5	8.786
18:00 - 19:00	3	5	3.500	3	5	3.643	3	5	7.143
19:00 - 20:00	2	5	3.200	2	5	3.000	2	5	6.200
20:00 - 21:00	2	5	2.700	2	5	3.100	2	5	5.800
21:00 - 22:00	2	5	1.500	2	5	1.500	2	5	3.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			49.800			49.802			99.602

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
LGVS
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	5	0.800	2	5	0.800	2	5	1.600
07:00 - 08:00	3	5	1.857	3	5	1.714	3	5	3.571
08:00 - 09:00	3	5	1.286	3	5	1.143	3	5	2.429
09:00 - 10:00	3	5	1.000	3	5	1.071	3	5	2.071
10:00 - 11:00	3	5	0.571	3	5	0.643	3	5	1.214
11:00 - 12:00	3	5	0.786	3	5	0.786	3	5	1.572
12:00 - 13:00	3	5	1.071	3	5	1.214	3	5	2.285
13:00 - 14:00	3	5	1.143	3	5	1.143	3	5	2.286
14:00 - 15:00	3	5	0.929	3	5	0.857	3	5	1.786
15:00 - 16:00	3	5	1.286	3	5	1.357	3	5	2.643
16:00 - 17:00	3	5	0.929	3	5	1.000	3	5	1.929
17:00 - 18:00	3	5	0.429	3	5	0.429	3	5	0.858
18:00 - 19:00	3	5	0.357	3	5	0.357	3	5	0.714
19:00 - 20:00	2	5	0.400	2	5	0.300	2	5	0.700
20:00 - 21:00	2	5	0.200	2	5	0.300	2	5	0.500
21:00 - 22:00	2	5	0.400	2	5	0.400	2	5	0.800
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			13.444			13.514			26.958

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
MOTOR CYCLES
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	5	0.000	2	5	0.000	2	5	0.000
07:00 - 08:00	3	5	0.143	3	5	0.143	3	5	0.286
08:00 - 09:00	3	5	0.143	3	5	0.143	3	5	0.286
09:00 - 10:00	3	5	0.071	3	5	0.071	3	5	0.142
10:00 - 11:00	3	5	0.000	3	5	0.000	3	5	0.000
11:00 - 12:00	3	5	0.071	3	5	0.071	3	5	0.142
12:00 - 13:00	3	5	0.143	3	5	0.143	3	5	0.286
13:00 - 14:00	3	5	0.071	3	5	0.071	3	5	0.142
14:00 - 15:00	3	5	0.000	3	5	0.000	3	5	0.000
15:00 - 16:00	3	5	0.000	3	5	0.000	3	5	0.000
16:00 - 17:00	3	5	0.143	3	5	0.143	3	5	0.286
17:00 - 18:00	3	5	0.214	3	5	0.214	3	5	0.428
18:00 - 19:00	3	5	0.071	3	5	0.071	3	5	0.142
19:00 - 20:00	2	5	0.000	2	5	0.000	2	5	0.000
20:00 - 21:00	2	5	0.000	2	5	0.000	2	5	0.000
21:00 - 22:00	2	5	0.000	2	5	0.000	2	5	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.070			1.070			2.140

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Calculation Reference: AUDIT-751101-210505-0520

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 13 - PETROL FILLING STATIONS
Category : A - PETROL FILLING STATIONS
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	WS	WEST SUSSEX	1 days
05	EAST MIDLANDS		
	NT	NOTTINGHAMSHIRE	1 days
09	NORTH		
	CB	CUMBRIA	1 days
10	WALES		
	NW	NEWPORT	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Filling bays
Actual Range: 4 to 12 (units:)
Range Selected by User: 4 to 16 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 15/10/20

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Saturday	4 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	2
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	3
Village	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

Sui Generis	4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
75,001 to 100,000	1 days
125,001 to 250,000	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	3 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	4 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	4 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 CB-13-A-03 ESSO CUMBRIA
SCOTLAND ROAD
PENRITH

Edge of Town
Residential Zone
Total Filling bays: 12
Survey date: SATURDAY *07/06/14* *Survey Type: MANUAL*

2 NT-13-A-02 GULF NOTTINGHAMSHIRE
LONGMOOR ROAD
NOTTINGHAM

Edge of Town
Residential Zone
Total Filling bays: 4
Survey date: SATURDAY *14/07/18* *Survey Type: MANUAL*

3 NW-13-A-01 ESSO NEWPORT
CORPORATION ROAD
NEWPORT

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Filling bays: 6
Survey date: SATURDAY *26/10/13* *Survey Type: MANUAL*

4 WS-13-A-01 ESSO WEST SUSSEX
ARUNDEL ROAD
NEAR CHICHESTER
TANGMERE
Neighbourhood Centre (PPS6 Local Centre)
Village
Total Filling bays: 8
Survey date: SATURDAY *04/10/14* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
TOTAL VEHICLES
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	4	8	2.033	4	8	1.833	4	8	3.866
07:00 - 08:00	4	8	3.767	4	8	3.633	4	8	7.400
08:00 - 09:00	4	8	5.100	4	8	5.000	4	8	10.100
09:00 - 10:00	4	8	5.367	4	8	5.333	4	8	10.700
10:00 - 11:00	4	8	6.867	4	8	6.700	4	8	13.567
11:00 - 12:00	4	8	6.033	4	8	6.067	4	8	12.100
12:00 - 13:00	4	8	6.333	4	8	6.033	4	8	12.366
13:00 - 14:00	4	8	5.933	4	8	6.433	4	8	12.366
14:00 - 15:00	4	8	4.900	4	8	4.933	4	8	9.833
15:00 - 16:00	4	8	4.467	4	8	4.600	4	8	9.067
16:00 - 17:00	4	8	4.633	4	8	4.633	4	8	9.266
17:00 - 18:00	4	8	4.733	4	8	4.733	4	8	9.466
18:00 - 19:00	4	8	4.233	4	8	4.200	4	8	8.433
19:00 - 20:00	4	8	2.900	4	8	3.133	4	8	6.033
20:00 - 21:00	4	8	2.400	4	8	2.300	4	8	4.700
21:00 - 22:00	4	8	1.667	4	8	1.700	4	8	3.367
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			71.366			71.264			142.630

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	4 - 12 (units:)
Survey date date range:	01/01/13 - 15/10/20
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	4
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
TAXIS
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	4	8	0.033	4	8	0.033	4	8	0.066
07:00 - 08:00	4	8	0.000	4	8	0.000	4	8	0.000
08:00 - 09:00	4	8	0.033	4	8	0.033	4	8	0.066
09:00 - 10:00	4	8	0.033	4	8	0.033	4	8	0.066
10:00 - 11:00	4	8	0.100	4	8	0.100	4	8	0.200
11:00 - 12:00	4	8	0.033	4	8	0.033	4	8	0.066
12:00 - 13:00	4	8	0.033	4	8	0.033	4	8	0.066
13:00 - 14:00	4	8	0.000	4	8	0.000	4	8	0.000
14:00 - 15:00	4	8	0.000	4	8	0.000	4	8	0.000
15:00 - 16:00	4	8	0.100	4	8	0.100	4	8	0.200
16:00 - 17:00	4	8	0.100	4	8	0.100	4	8	0.200
17:00 - 18:00	4	8	0.033	4	8	0.033	4	8	0.066
18:00 - 19:00	4	8	0.100	4	8	0.100	4	8	0.200
19:00 - 20:00	4	8	0.033	4	8	0.033	4	8	0.066
20:00 - 21:00	4	8	0.000	4	8	0.000	4	8	0.000
21:00 - 22:00	4	8	0.033	4	8	0.033	4	8	0.066
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.664			0.664			1.328

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
OGVS
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	4	8	0.033	4	8	0.000	4	8	0.033
07:00 - 08:00	4	8	0.033	4	8	0.033	4	8	0.066
08:00 - 09:00	4	8	0.133	4	8	0.133	4	8	0.266
09:00 - 10:00	4	8	0.067	4	8	0.067	4	8	0.134
10:00 - 11:00	4	8	0.100	4	8	0.133	4	8	0.233
11:00 - 12:00	4	8	0.033	4	8	0.033	4	8	0.066
12:00 - 13:00	4	8	0.067	4	8	0.067	4	8	0.134
13:00 - 14:00	4	8	0.000	4	8	0.000	4	8	0.000
14:00 - 15:00	4	8	0.000	4	8	0.000	4	8	0.000
15:00 - 16:00	4	8	0.000	4	8	0.000	4	8	0.000
16:00 - 17:00	4	8	0.033	4	8	0.033	4	8	0.066
17:00 - 18:00	4	8	0.067	4	8	0.067	4	8	0.134
18:00 - 19:00	4	8	0.000	4	8	0.000	4	8	0.000
19:00 - 20:00	4	8	0.000	4	8	0.000	4	8	0.000
20:00 - 21:00	4	8	0.033	4	8	0.033	4	8	0.066
21:00 - 22:00	4	8	0.033	4	8	0.033	4	8	0.066
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.632			0.632			1.264

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
PSVS
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	4	8	0.000	4	8	0.000	4	8	0.000
07:00 - 08:00	4	8	0.000	4	8	0.000	4	8	0.000
08:00 - 09:00	4	8	0.000	4	8	0.000	4	8	0.000
09:00 - 10:00	4	8	0.000	4	8	0.000	4	8	0.000
10:00 - 11:00	4	8	0.000	4	8	0.000	4	8	0.000
11:00 - 12:00	4	8	0.000	4	8	0.000	4	8	0.000
12:00 - 13:00	4	8	0.000	4	8	0.000	4	8	0.000
13:00 - 14:00	4	8	0.033	4	8	0.033	4	8	0.066
14:00 - 15:00	4	8	0.000	4	8	0.000	4	8	0.000
15:00 - 16:00	4	8	0.000	4	8	0.000	4	8	0.000
16:00 - 17:00	4	8	0.000	4	8	0.000	4	8	0.000
17:00 - 18:00	4	8	0.000	4	8	0.000	4	8	0.000
18:00 - 19:00	4	8	0.000	4	8	0.000	4	8	0.000
19:00 - 20:00	4	8	0.000	4	8	0.000	4	8	0.000
20:00 - 21:00	4	8	0.000	4	8	0.000	4	8	0.000
21:00 - 22:00	4	8	0.000	4	8	0.000	4	8	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.033			0.033			0.066

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
CYCLISTS
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	4	8	0.000	4	8	0.000	4	8	0.000
07:00 - 08:00	4	8	0.033	4	8	0.033	4	8	0.066
08:00 - 09:00	4	8	0.000	4	8	0.000	4	8	0.000
09:00 - 10:00	4	8	0.067	4	8	0.067	4	8	0.134
10:00 - 11:00	4	8	0.033	4	8	0.033	4	8	0.066
11:00 - 12:00	4	8	0.033	4	8	0.033	4	8	0.066
12:00 - 13:00	4	8	0.033	4	8	0.033	4	8	0.066
13:00 - 14:00	4	8	0.100	4	8	0.067	4	8	0.167
14:00 - 15:00	4	8	0.067	4	8	0.100	4	8	0.167
15:00 - 16:00	4	8	0.200	4	8	0.200	4	8	0.400
16:00 - 17:00	4	8	0.067	4	8	0.067	4	8	0.134
17:00 - 18:00	4	8	0.033	4	8	0.033	4	8	0.066
18:00 - 19:00	4	8	0.067	4	8	0.033	4	8	0.100
19:00 - 20:00	4	8	0.033	4	8	0.067	4	8	0.100
20:00 - 21:00	4	8	0.000	4	8	0.000	4	8	0.000
21:00 - 22:00	4	8	0.033	4	8	0.033	4	8	0.066
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.799			0.799			1.598

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
CARS
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	4	8	0.933	4	8	0.833	4	8	1.766
07:00 - 08:00	4	8	1.400	4	8	1.233	4	8	2.633
08:00 - 09:00	4	8	2.167	4	8	2.133	4	8	4.300
09:00 - 10:00	4	8	2.400	4	8	2.467	4	8	4.867
10:00 - 11:00	4	8	3.133	4	8	3.100	4	8	6.233
11:00 - 12:00	4	8	3.067	4	8	3.000	4	8	6.067
12:00 - 13:00	4	8	3.033	4	8	2.933	4	8	5.966
13:00 - 14:00	4	8	3.233	4	8	3.367	4	8	6.600
14:00 - 15:00	4	8	2.533	4	8	2.600	4	8	5.133
15:00 - 16:00	4	8	2.133	4	8	2.133	4	8	4.266
16:00 - 17:00	4	8	2.067	4	8	2.100	4	8	4.167
17:00 - 18:00	4	8	2.833	4	8	2.767	4	8	5.600
18:00 - 19:00	4	8	2.167	4	8	2.267	4	8	4.434
19:00 - 20:00	4	8	1.367	4	8	1.467	4	8	2.834
20:00 - 21:00	4	8	0.967	4	8	0.933	4	8	1.900
21:00 - 22:00	4	8	0.600	4	8	0.600	4	8	1.200
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			34.033			33.933			67.966

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
LGVS
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	4	8	0.467	4	8	0.467	4	8	0.934
07:00 - 08:00	4	8	1.100	4	8	1.067	4	8	2.167
08:00 - 09:00	4	8	1.133	4	8	1.100	4	8	2.233
09:00 - 10:00	4	8	0.633	4	8	0.600	4	8	1.233
10:00 - 11:00	4	8	1.267	4	8	1.133	4	8	2.400
11:00 - 12:00	4	8	0.400	4	8	0.500	4	8	0.900
12:00 - 13:00	4	8	0.500	4	8	0.500	4	8	1.000
13:00 - 14:00	4	8	0.267	4	8	0.300	4	8	0.567
14:00 - 15:00	4	8	0.767	4	8	0.767	4	8	1.534
15:00 - 16:00	4	8	0.533	4	8	0.633	4	8	1.166
16:00 - 17:00	4	8	0.167	4	8	0.167	4	8	0.334
17:00 - 18:00	4	8	0.200	4	8	0.267	4	8	0.467
18:00 - 19:00	4	8	0.333	4	8	0.333	4	8	0.666
19:00 - 20:00	4	8	0.267	4	8	0.267	4	8	0.534
20:00 - 21:00	4	8	0.333	4	8	0.300	4	8	0.633
21:00 - 22:00	4	8	0.067	4	8	0.067	4	8	0.134
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			8.434			8.468			16.902

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/A - PETROL FILLING STATIONS
MOTOR CYCLES
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate	No. Days	Ave. BAYS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	4	8	0.000	4	8	0.000	4	8	0.000
07:00 - 08:00	4	8	0.000	4	8	0.000	4	8	0.000
08:00 - 09:00	4	8	0.000	4	8	0.000	4	8	0.000
09:00 - 10:00	4	8	0.067	4	8	0.067	4	8	0.134
10:00 - 11:00	4	8	0.200	4	8	0.200	4	8	0.400
11:00 - 12:00	4	8	0.000	4	8	0.000	4	8	0.000
12:00 - 13:00	4	8	0.167	4	8	0.167	4	8	0.334
13:00 - 14:00	4	8	0.200	4	8	0.200	4	8	0.400
14:00 - 15:00	4	8	0.033	4	8	0.033	4	8	0.066
15:00 - 16:00	4	8	0.033	4	8	0.033	4	8	0.066
16:00 - 17:00	4	8	0.033	4	8	0.033	4	8	0.066
17:00 - 18:00	4	8	0.033	4	8	0.033	4	8	0.066
18:00 - 19:00	4	8	0.000	4	8	0.000	4	8	0.000
19:00 - 20:00	4	8	0.133	4	8	0.133	4	8	0.266
20:00 - 21:00	4	8	0.000	4	8	0.000	4	8	0.000
21:00 - 22:00	4	8	0.000	4	8	0.000	4	8	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.899			0.899			1.798

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Calculation Reference: AUDIT-751101-210504-0545

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : C - DISCOUNT FOOD STORES
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	WS	WEST SUSSEX	2 days
03	SOUTH WEST		
	SM	SOMERSET	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	1 days
05	EAST MIDLANDS		
	NT	NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS		
	WM	WEST MIDLANDS	2 days
	WO	WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	WY	WEST YORKSHIRE	1 days
09	NORTH		
	DH	DURHAM	1 days
	TW	TYNE & WEAR	1 days
10	WALES		
	CF	CARDIFF	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 700 to 2568 (units: sqm)
Range Selected by User: 700 to 2635 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 28/11/20

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	4 days
Wednesday	2 days
Thursday	3 days
Friday	3 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	13 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	6
Neighbourhood Centre (PPS6 Local Centre)	5

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	2
Development Zone	1
Retail Zone	5
High Street	1
No Sub Category	4

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

E(a)	13 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	3 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
25,001 to 50,000	6 days
50,001 to 100,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	1 days
75,001 to 100,000	2 days
125,001 to 250,000	2 days
250,001 to 500,000	3 days
500,001 or More	3 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	7 days
1.1 to 1.5	5 days
2.1 to 2.5	1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	13 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

Not Known	1 days
Yes	3 days
No	9 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	13 days

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters

1 CA-01-C-01 LIDL CAMBRIDGESHIRE
CROMWELL ROAD
WISBECH

Edge of Town
Retail Zone
Total Gross floor area: 1466 sqm
Survey date: FRIDAY *21/10/16* *Survey Type: MANUAL*

2 CF-01-C-01 LIDL CARDIFF
EAST TYNDALL STREET
CARDIFF

Suburban Area (PPS6 Out of Centre)
Development Zone
Total Gross floor area: 2568 sqm
Survey date: THURSDAY *29/06/17* *Survey Type: MANUAL*

3 DH-01-C-01 ALDI DURHAM
WATLING ROAD
BISHOP AUCKLAND

Edge of Town
Retail Zone
Total Gross floor area: 1023 sqm
Survey date: THURSDAY *06/04/17* *Survey Type: MANUAL*

4 NF-01-C-01 LIDL NORFOLK
AYLSHAM ROAD
NORWICH

Neighbourhood Centre (PPS6 Local Centre)
No Sub Category
Total Gross floor area: 2555 sqm
Survey date: FRIDAY *29/11/19* *Survey Type: MANUAL*

5 NT-01-C-01 LIDL NOTTINGHAMSHIRE
CHAPEL LANE
BINGHAM

Edge of Town
Industrial Zone
Total Gross floor area: 2440 sqm
Survey date: FRIDAY *15/07/16* *Survey Type: MANUAL*

6 SM-01-C-01 LIDL SOMERSET
SEAWARD WAY
MINEHEAD

Edge of Town
No Sub Category
Total Gross floor area: 2247 sqm
Survey date: THURSDAY *22/06/17* *Survey Type: MANUAL*

7 TW-01-C-01 ALDI TYNE & WEAR
EDGEFIELD AVENUE
NEWCASTLE
FAWDON
Neighbourhood Centre (PPS6 Local Centre)
No Sub Category
Total Gross floor area: 1798 sqm
Survey date: TUESDAY *30/04/19* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

8	WM-01-C-01	LIDL		WEST MIDLANDS
	MACKADOWN LANE			
	BIRMINGHAM			
	KITT'S GREEN			
	Neighbourhood Centre (PPS6 Local Centre)			
	No Sub Category			
	Total Gross floor area:		2085 sqm	
	Survey date: TUESDAY		*12/07/16*	*Survey Type: MANUAL*
9	WM-01-C-02	LIDL		WEST MIDLANDS
	HIGH STREET			
	WEST BROMWICH			
	GUNS VILLAGE			
	Neighbourhood Centre (PPS6 Local Centre)			
	High Street			
	Total Gross floor area:		2085 sqm	
	Survey date: TUESDAY		*12/07/16*	*Survey Type: MANUAL*
10	WO-01-C-01	LIDL		WORCESTERSHIRE
	BLACKPOLE ROAD			
	WORCESTER			
	BRICKFIELDS			
	Edge of Town			
	Retail Zone			
	Total Gross floor area:		2417 sqm	
	Survey date: WEDNESDAY		*13/07/16*	*Survey Type: MANUAL*
11	WS-01-C-01	LIDL		WEST SUSSEX
	WESTHAMPNETT ROAD			
	CHICHESTER			
	Edge of Town			
	Retail Zone			
	Total Gross floor area:		2125 sqm	
	Survey date: TUESDAY		*20/10/20*	*Survey Type: MANUAL*
12	WS-01-C-02	LIDL		WEST SUSSEX
	FOUNDRY LANE			
	HORSHAM			
	Suburban Area (PPS6 Out of Centre)			
	Industrial Zone			
	Total Gross floor area:		1616 sqm	
	Survey date: WEDNESDAY		*21/10/20*	*Survey Type: MANUAL*
13	WY-01-C-01	FARMFOODS		WEST YORKSHIRE
	WATERLOO TERRACE			
	LEEDS			
	BRAMLEY			
	Neighbourhood Centre (PPS6 Local Centre)			
	Retail Zone			
	Total Gross floor area:		700 sqm	
	Survey date: MONDAY		*19/10/15*	*Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1871	0.481	2	1871	0.000	2	1871	0.481
07:00 - 08:00	13	1933	0.454	13	1933	0.155	13	1933	0.609
08:00 - 09:00	13	1933	2.476	13	1933	1.656	13	1933	4.132
09:00 - 10:00	13	1933	3.112	13	1933	2.651	13	1933	5.763
10:00 - 11:00	13	1933	3.499	13	1933	3.216	13	1933	6.715
11:00 - 12:00	13	1933	3.904	13	1933	3.713	13	1933	7.617
12:00 - 13:00	13	1933	4.068	13	1933	3.885	13	1933	7.953
13:00 - 14:00	13	1933	3.908	13	1933	4.227	13	1933	8.135
14:00 - 15:00	13	1933	4.088	13	1933	4.127	13	1933	8.215
15:00 - 16:00	13	1933	3.849	13	1933	4.048	13	1933	7.897
16:00 - 17:00	13	1933	3.721	13	1933	3.813	13	1933	7.534
17:00 - 18:00	13	1933	3.439	13	1933	3.694	13	1933	7.133
18:00 - 19:00	13	1933	3.085	13	1933	3.403	13	1933	6.488
19:00 - 20:00	13	1933	2.348	13	1933	2.615	13	1933	4.963
20:00 - 21:00	13	1933	1.389	13	1933	1.759	13	1933	3.148
21:00 - 22:00	13	1933	0.525	13	1933	0.868	13	1933	1.393
22:00 - 23:00	12	2035	0.020	12	2035	0.192	12	2035	0.212
23:00 - 24:00									
Total Rates:			44.366			44.022			88.388

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	700 - 2568 (units: sqm)
Survey date date range:	01/01/13 - 28/11/20
Number of weekdays (Monday-Friday):	13
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1871	0.000	2	1871	0.000	2	1871	0.000
07:00 - 08:00	13	1933	0.000	13	1933	0.000	13	1933	0.000
08:00 - 09:00	13	1933	0.016	13	1933	0.008	13	1933	0.024
09:00 - 10:00	13	1933	0.048	13	1933	0.048	13	1933	0.096
10:00 - 11:00	13	1933	0.044	13	1933	0.040	13	1933	0.084
11:00 - 12:00	13	1933	0.020	13	1933	0.028	13	1933	0.048
12:00 - 13:00	13	1933	0.028	13	1933	0.032	13	1933	0.060
13:00 - 14:00	13	1933	0.048	13	1933	0.044	13	1933	0.092
14:00 - 15:00	13	1933	0.040	13	1933	0.036	13	1933	0.076
15:00 - 16:00	13	1933	0.032	13	1933	0.032	13	1933	0.064
16:00 - 17:00	13	1933	0.032	13	1933	0.024	13	1933	0.056
17:00 - 18:00	13	1933	0.040	13	1933	0.040	13	1933	0.080
18:00 - 19:00	13	1933	0.040	13	1933	0.052	13	1933	0.092
19:00 - 20:00	13	1933	0.012	13	1933	0.016	13	1933	0.028
20:00 - 21:00	13	1933	0.028	13	1933	0.020	13	1933	0.048
21:00 - 22:00	13	1933	0.016	13	1933	0.024	13	1933	0.040
22:00 - 23:00	12	2035	0.000	12	2035	0.000	12	2035	0.000
23:00 - 24:00									
Total Rates:			0.444			0.444			0.888

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1871	0.000	2	1871	0.000	2	1871	0.000
07:00 - 08:00	13	1933	0.016	13	1933	0.008	13	1933	0.024
08:00 - 09:00	13	1933	0.012	13	1933	0.012	13	1933	0.024
09:00 - 10:00	13	1933	0.016	13	1933	0.024	13	1933	0.040
10:00 - 11:00	13	1933	0.012	13	1933	0.012	13	1933	0.024
11:00 - 12:00	13	1933	0.016	13	1933	0.012	13	1933	0.028
12:00 - 13:00	13	1933	0.012	13	1933	0.008	13	1933	0.020
13:00 - 14:00	13	1933	0.020	13	1933	0.028	13	1933	0.048
14:00 - 15:00	13	1933	0.000	13	1933	0.008	13	1933	0.008
15:00 - 16:00	13	1933	0.004	13	1933	0.004	13	1933	0.008
16:00 - 17:00	13	1933	0.008	13	1933	0.004	13	1933	0.012
17:00 - 18:00	13	1933	0.004	13	1933	0.004	13	1933	0.008
18:00 - 19:00	13	1933	0.020	13	1933	0.016	13	1933	0.036
19:00 - 20:00	13	1933	0.020	13	1933	0.020	13	1933	0.040
20:00 - 21:00	13	1933	0.004	13	1933	0.012	13	1933	0.016
21:00 - 22:00	13	1933	0.000	13	1933	0.000	13	1933	0.000
22:00 - 23:00	12	2035	0.000	12	2035	0.000	12	2035	0.000
23:00 - 24:00									
Total Rates:			0.164			0.172			0.336

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1871	0.027	2	1871	0.000	2	1871	0.027
07:00 - 08:00	13	1933	0.028	13	1933	0.000	13	1933	0.028
08:00 - 09:00	13	1933	0.072	13	1933	0.068	13	1933	0.140
09:00 - 10:00	13	1933	0.084	13	1933	0.052	13	1933	0.136
10:00 - 11:00	13	1933	0.100	13	1933	0.084	13	1933	0.184
11:00 - 12:00	13	1933	0.072	13	1933	0.084	13	1933	0.156
12:00 - 13:00	13	1933	0.068	13	1933	0.092	13	1933	0.160
13:00 - 14:00	13	1933	0.088	13	1933	0.084	13	1933	0.172
14:00 - 15:00	13	1933	0.072	13	1933	0.076	13	1933	0.148
15:00 - 16:00	13	1933	0.084	13	1933	0.076	13	1933	0.160
16:00 - 17:00	13	1933	0.084	13	1933	0.064	13	1933	0.148
17:00 - 18:00	13	1933	0.119	13	1933	0.139	13	1933	0.258
18:00 - 19:00	13	1933	0.100	13	1933	0.092	13	1933	0.192
19:00 - 20:00	13	1933	0.040	13	1933	0.052	13	1933	0.092
20:00 - 21:00	13	1933	0.056	13	1933	0.068	13	1933	0.124
21:00 - 22:00	13	1933	0.004	13	1933	0.032	13	1933	0.036
22:00 - 23:00	12	2035	0.004	12	2035	0.016	12	2035	0.020
23:00 - 24:00									
Total Rates:			1.102			1.079			2.181

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
CARS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1871	0.401	2	1871	0.000	2	1871	0.401
07:00 - 08:00	13	1933	0.398	13	1933	0.123	13	1933	0.521
08:00 - 09:00	13	1933	2.297	13	1933	1.520	13	1933	3.817
09:00 - 10:00	13	1933	2.838	13	1933	2.408	13	1933	5.246
10:00 - 11:00	13	1933	3.272	13	1933	2.997	13	1933	6.269
11:00 - 12:00	13	1933	3.705	13	1933	3.495	13	1933	7.200
12:00 - 13:00	13	1933	3.849	13	1933	3.698	13	1933	7.547
13:00 - 14:00	13	1933	3.674	13	1933	3.980	13	1933	7.654
14:00 - 15:00	13	1933	3.904	13	1933	3.912	13	1933	7.816
15:00 - 16:00	13	1933	3.630	13	1933	3.813	13	1933	7.443
16:00 - 17:00	13	1933	3.487	13	1933	3.606	13	1933	7.093
17:00 - 18:00	13	1933	3.248	13	1933	3.487	13	1933	6.735
18:00 - 19:00	13	1933	2.882	13	1933	3.164	13	1933	6.046
19:00 - 20:00	13	1933	2.189	13	1933	2.460	13	1933	4.649
20:00 - 21:00	13	1933	1.313	13	1933	1.644	13	1933	2.957
21:00 - 22:00	13	1933	0.482	13	1933	0.808	13	1933	1.290
22:00 - 23:00	12	2035	0.020	12	2035	0.188	12	2035	0.208
23:00 - 24:00									
Total Rates:			41.589			41.303			82.892

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
LGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1871	0.080	2	1871	0.000	2	1871	0.080
07:00 - 08:00	13	1933	0.036	13	1933	0.024	13	1933	0.060
08:00 - 09:00	13	1933	0.139	13	1933	0.107	13	1933	0.246
09:00 - 10:00	13	1933	0.207	13	1933	0.167	13	1933	0.374
10:00 - 11:00	13	1933	0.155	13	1933	0.151	13	1933	0.306
11:00 - 12:00	13	1933	0.143	13	1933	0.167	13	1933	0.310
12:00 - 13:00	13	1933	0.163	13	1933	0.131	13	1933	0.294
13:00 - 14:00	13	1933	0.155	13	1933	0.159	13	1933	0.314
14:00 - 15:00	13	1933	0.135	13	1933	0.163	13	1933	0.298
15:00 - 16:00	13	1933	0.167	13	1933	0.179	13	1933	0.346
16:00 - 17:00	13	1933	0.183	13	1933	0.167	13	1933	0.350
17:00 - 18:00	13	1933	0.131	13	1933	0.143	13	1933	0.274
18:00 - 19:00	13	1933	0.127	13	1933	0.155	13	1933	0.282
19:00 - 20:00	13	1933	0.123	13	1933	0.111	13	1933	0.234
20:00 - 21:00	13	1933	0.040	13	1933	0.076	13	1933	0.116
21:00 - 22:00	13	1933	0.028	13	1933	0.036	13	1933	0.064
22:00 - 23:00	12	2035	0.000	12	2035	0.004	12	2035	0.004
23:00 - 24:00									
Total Rates:			2.012			1.940			3.952

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
MOTOR CYCLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1871	0.000	2	1871	0.000	2	1871	0.000
07:00 - 08:00	13	1933	0.004	13	1933	0.000	13	1933	0.004
08:00 - 09:00	13	1933	0.012	13	1933	0.008	13	1933	0.020
09:00 - 10:00	13	1933	0.004	13	1933	0.004	13	1933	0.008
10:00 - 11:00	13	1933	0.016	13	1933	0.016	13	1933	0.032
11:00 - 12:00	13	1933	0.020	13	1933	0.012	13	1933	0.032
12:00 - 13:00	13	1933	0.016	13	1933	0.016	13	1933	0.032
13:00 - 14:00	13	1933	0.012	13	1933	0.016	13	1933	0.028
14:00 - 15:00	13	1933	0.012	13	1933	0.008	13	1933	0.020
15:00 - 16:00	13	1933	0.016	13	1933	0.020	13	1933	0.036
16:00 - 17:00	13	1933	0.012	13	1933	0.012	13	1933	0.024
17:00 - 18:00	13	1933	0.016	13	1933	0.020	13	1933	0.036
18:00 - 19:00	13	1933	0.016	13	1933	0.016	13	1933	0.032
19:00 - 20:00	13	1933	0.004	13	1933	0.008	13	1933	0.012
20:00 - 21:00	13	1933	0.004	13	1933	0.008	13	1933	0.012
21:00 - 22:00	13	1933	0.000	13	1933	0.000	13	1933	0.000
22:00 - 23:00	12	2035	0.000	12	2035	0.000	12	2035	0.000
23:00 - 24:00									
Total Rates:			0.164			0.164			0.328

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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Calculation Reference: AUDIT-751101-210504-0544

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : C - DISCOUNT FOOD STORES
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	BD	BEDFORDSHIRE	1 days
03	SOUTH WEST		
	SM	SOMERSET	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	2 days
	NR	NORTHAMPTONSHIRE	1 days
	NT	NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS		
	WM	WEST MIDLANDS	2 days
	WO	WORCESTERSHIRE	1 days
09	NORTH		
	TV	TEES VALLEY	1 days
10	WALES		
	CF	CARDIFF	1 days
	MM	MONMOUTHSHIRE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 1485 to 2568 (units: sqm)
Range Selected by User: 700 to 2635 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 28/11/20

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Saturday	12 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	12 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	5
Edge of Town	5
Neighbourhood Centre (PPS6 Local Centre)	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	1
Development Zone	1
Residential Zone	2
Retail Zone	1
High Street	2
No Sub Category	5

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

E(a)	12 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000	5 days
10,001 to 15,000	1 days
15,001 to 20,000	2 days
25,001 to 50,000	3 days
50,001 to 100,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	1 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	3 days
250,001 to 500,000	2 days
500,001 or More	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.5 or Less	2 days
0.6 to 1.0	4 days
1.1 to 1.5	6 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	12 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

Not Known	1 days
Yes	1 days
No	10 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	12 days

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters

1 BD-01-C-01 LIDL BEDFORDSHIRE
RIDGE ROAD
BEDFORD
KEMPSTON
Edge of Town
Residential Zone
Total Gross floor area: 2544 sqm
Survey date: SATURDAY *17/10/20* *Survey Type: MANUAL*

2 CF-01-C-01 LIDL CARDIFF
EAST TYNDALL STREET
CARDIFF

Suburban Area (PPS6 Out of Centre)
Development Zone
Total Gross floor area: 2568 sqm
Survey date: SATURDAY *01/07/17* *Survey Type: MANUAL*

3 LN-01-C-02 LIDL LINCOLNSHIRE
DIXON STREET
LINCOLN
NEW BOULTHAM
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Gross floor area: 2233 sqm
Survey date: SATURDAY *28/10/17* *Survey Type: MANUAL*

4 LN-01-C-03 ALDI LINCOLNSHIRE
NEWARK ROAD
LINCOLN
BRACEBRIDGE
Suburban Area (PPS6 Out of Centre)
High Street
Total Gross floor area: 1485 sqm
Survey date: SATURDAY *28/10/17* *Survey Type: MANUAL*

5 MM-01-C-01 LIDL MONMOUTHSHIRE
A466
MONMOUTH
MAYHILL
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Gross floor area: 1640 sqm
Survey date: SATURDAY *28/11/20* *Survey Type: MANUAL*

6 NR-01-C-03 ALDI NORTHAMPTONSHIRE
SAXON WAY WEST
CORBY

Edge of Town
No Sub Category
Total Gross floor area: 2000 sqm
Survey date: SATURDAY *24/10/20* *Survey Type: MANUAL*

7 NT-01-C-01 LIDL NOTTINGHAMSHIRE
CHAPEL LANE
BINGHAM

Edge of Town
Industrial Zone
Total Gross floor area: 2440 sqm
Survey date: SATURDAY *16/07/16* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

8	SM-01-C-01 SEAWARD WAY MINEHEAD	LIDL		SOMERSET
	Edge of Town No Sub Category Total Gross floor area:		2247 sqm	
	Survey date: SATURDAY		*24/06/17*	*Survey Type: MANUAL*
9	TV-01-C-01 JESMOND GARDENS HARTLEPOOL	LIDL		TEES VALLEY
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area:		1765 sqm	
	Survey date: SATURDAY		*05/09/20*	*Survey Type: MANUAL*
10	WM-01-C-01 MACKADOWN LANE BIRMINGHAM KITT'S GREEN	LIDL		WEST MIDLANDS
	Neighbourhood Centre (PPS6 Local Centre) No Sub Category Total Gross floor area:		2085 sqm	
	Survey date: SATURDAY		*09/07/16*	*Survey Type: MANUAL*
11	WM-01-C-02 HIGH STREET WEST BROMWICH GUNS VILLAGE	LIDL		WEST MIDLANDS
	Neighbourhood Centre (PPS6 Local Centre) High Street Total Gross floor area:		2085 sqm	
	Survey date: SATURDAY		*09/07/16*	*Survey Type: MANUAL*
12	WO-01-C-01 BLACKPOLE ROAD WORCESTER BRICKFIELDS	LIDL		WORCESTERSHIRE
	Edge of Town Retail Zone Total Gross floor area:		2417 sqm	
	Survey date: SATURDAY		*16/07/16*	*Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	2170	0.582	11	2170	0.105	11	2170	0.687
08:00 - 09:00	12	2126	2.728	12	2126	1.956	12	2126	4.684
09:00 - 10:00	12	2126	3.967	12	2126	3.281	12	2126	7.248
10:00 - 11:00	12	2126	5.331	12	2126	4.732	12	2126	10.063
11:00 - 12:00	12	2126	6.374	12	2126	5.892	12	2126	12.266
12:00 - 13:00	12	2126	6.002	12	2126	6.731	12	2126	12.733
13:00 - 14:00	12	2126	5.880	12	2126	5.716	12	2126	11.596
14:00 - 15:00	12	2126	5.382	12	2126	5.457	12	2126	10.839
15:00 - 16:00	12	2126	5.484	12	2126	5.747	12	2126	11.231
16:00 - 17:00	12	2126	5.128	12	2126	5.284	12	2126	10.412
17:00 - 18:00	12	2126	4.375	12	2126	4.461	12	2126	8.836
18:00 - 19:00	12	2126	3.140	12	2126	3.646	12	2126	6.786
19:00 - 20:00	12	2126	2.219	12	2126	2.689	12	2126	4.908
20:00 - 21:00	12	2126	1.294	12	2126	1.650	12	2126	2.944
21:00 - 22:00	12	2126	0.702	12	2126	1.090	12	2126	1.792
22:00 - 23:00	9	2173	0.056	9	2173	0.189	9	2173	0.245
23:00 - 24:00									
Total Rates:			58.644			58.626			117.270

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	1485 - 2568 (units: sqm)
Survey date date range:	01/01/13 - 28/11/20
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	12
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	2170	0.000	11	2170	0.000	11	2170	0.000
08:00 - 09:00	12	2126	0.004	12	2126	0.004	12	2126	0.008
09:00 - 10:00	12	2126	0.008	12	2126	0.004	12	2126	0.012
10:00 - 11:00	12	2126	0.043	12	2126	0.031	12	2126	0.074
11:00 - 12:00	12	2126	0.078	12	2126	0.067	12	2126	0.145
12:00 - 13:00	12	2126	0.078	12	2126	0.090	12	2126	0.168
13:00 - 14:00	12	2126	0.067	12	2126	0.055	12	2126	0.122
14:00 - 15:00	12	2126	0.071	12	2126	0.063	12	2126	0.134
15:00 - 16:00	12	2126	0.078	12	2126	0.086	12	2126	0.164
16:00 - 17:00	12	2126	0.059	12	2126	0.063	12	2126	0.122
17:00 - 18:00	12	2126	0.055	12	2126	0.063	12	2126	0.118
18:00 - 19:00	12	2126	0.043	12	2126	0.043	12	2126	0.086
19:00 - 20:00	12	2126	0.035	12	2126	0.047	12	2126	0.082
20:00 - 21:00	12	2126	0.035	12	2126	0.035	12	2126	0.070
21:00 - 22:00	12	2126	0.020	12	2126	0.024	12	2126	0.044
22:00 - 23:00	9	2173	0.000	9	2173	0.000	9	2173	0.000
23:00 - 24:00									
Total Rates:			0.674			0.675			1.349

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	2170	0.021	11	2170	0.008	11	2170	0.029
08:00 - 09:00	12	2126	0.012	12	2126	0.024	12	2126	0.036
09:00 - 10:00	12	2126	0.012	12	2126	0.008	12	2126	0.020
10:00 - 11:00	12	2126	0.008	12	2126	0.008	12	2126	0.016
11:00 - 12:00	12	2126	0.000	12	2126	0.004	12	2126	0.004
12:00 - 13:00	12	2126	0.004	12	2126	0.008	12	2126	0.012
13:00 - 14:00	12	2126	0.012	12	2126	0.000	12	2126	0.012
14:00 - 15:00	12	2126	0.004	12	2126	0.008	12	2126	0.012
15:00 - 16:00	12	2126	0.016	12	2126	0.020	12	2126	0.036
16:00 - 17:00	12	2126	0.004	12	2126	0.004	12	2126	0.008
17:00 - 18:00	12	2126	0.000	12	2126	0.004	12	2126	0.004
18:00 - 19:00	12	2126	0.004	12	2126	0.000	12	2126	0.004
19:00 - 20:00	12	2126	0.016	12	2126	0.012	12	2126	0.028
20:00 - 21:00	12	2126	0.016	12	2126	0.012	12	2126	0.028
21:00 - 22:00	12	2126	0.000	12	2126	0.012	12	2126	0.012
22:00 - 23:00	9	2173	0.000	9	2173	0.000	9	2173	0.000
23:00 - 24:00									
Total Rates:			0.129			0.132			0.261

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	2170	0.000	11	2170	0.000	11	2170	0.000
08:00 - 09:00	12	2126	0.000	12	2126	0.000	12	2126	0.000
09:00 - 10:00	12	2126	0.000	12	2126	0.000	12	2126	0.000
10:00 - 11:00	12	2126	0.004	12	2126	0.000	12	2126	0.004
11:00 - 12:00	12	2126	0.000	12	2126	0.004	12	2126	0.004
12:00 - 13:00	12	2126	0.004	12	2126	0.000	12	2126	0.004
13:00 - 14:00	12	2126	0.000	12	2126	0.004	12	2126	0.004
14:00 - 15:00	12	2126	0.000	12	2126	0.000	12	2126	0.000
15:00 - 16:00	12	2126	0.004	12	2126	0.000	12	2126	0.004
16:00 - 17:00	12	2126	0.000	12	2126	0.004	12	2126	0.004
17:00 - 18:00	12	2126	0.000	12	2126	0.000	12	2126	0.000
18:00 - 19:00	12	2126	0.004	12	2126	0.004	12	2126	0.008
19:00 - 20:00	12	2126	0.000	12	2126	0.000	12	2126	0.000
20:00 - 21:00	12	2126	0.000	12	2126	0.000	12	2126	0.000
21:00 - 22:00	12	2126	0.000	12	2126	0.000	12	2126	0.000
22:00 - 23:00	9	2173	0.000	9	2173	0.000	9	2173	0.000
23:00 - 24:00									
Total Rates:			0.016			0.016			0.032

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	2170	0.025	11	2170	0.000	11	2170	0.025
08:00 - 09:00	12	2126	0.027	12	2126	0.039	12	2126	0.066
09:00 - 10:00	12	2126	0.055	12	2126	0.055	12	2126	0.110
10:00 - 11:00	12	2126	0.078	12	2126	0.051	12	2126	0.129
11:00 - 12:00	12	2126	0.090	12	2126	0.078	12	2126	0.168
12:00 - 13:00	12	2126	0.082	12	2126	0.055	12	2126	0.137
13:00 - 14:00	12	2126	0.110	12	2126	0.098	12	2126	0.208
14:00 - 15:00	12	2126	0.086	12	2126	0.106	12	2126	0.192
15:00 - 16:00	12	2126	0.074	12	2126	0.067	12	2126	0.141
16:00 - 17:00	12	2126	0.067	12	2126	0.086	12	2126	0.153
17:00 - 18:00	12	2126	0.074	12	2126	0.102	12	2126	0.176
18:00 - 19:00	12	2126	0.082	12	2126	0.071	12	2126	0.153
19:00 - 20:00	12	2126	0.078	12	2126	0.067	12	2126	0.145
20:00 - 21:00	12	2126	0.063	12	2126	0.071	12	2126	0.134
21:00 - 22:00	12	2126	0.020	12	2126	0.047	12	2126	0.067
22:00 - 23:00	9	2173	0.000	9	2173	0.010	9	2173	0.010
23:00 - 24:00									
Total Rates:			1.011			1.003			2.014

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
CARS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	2170	0.499	11	2170	0.071	11	2170	0.570
08:00 - 09:00	12	2126	2.548	12	2126	1.815	12	2126	4.363
09:00 - 10:00	12	2126	3.787	12	2126	3.144	12	2126	6.931
10:00 - 11:00	12	2126	5.100	12	2126	4.524	12	2126	9.624
11:00 - 12:00	12	2126	6.088	12	2126	5.582	12	2126	11.670
12:00 - 13:00	12	2126	5.771	12	2126	6.468	12	2126	12.239
13:00 - 14:00	12	2126	5.586	12	2126	5.480	12	2126	11.066
14:00 - 15:00	12	2126	5.088	12	2126	5.186	12	2126	10.274
15:00 - 16:00	12	2126	5.202	12	2126	5.429	12	2126	10.631
16:00 - 17:00	12	2126	4.936	12	2126	5.088	12	2126	10.024
17:00 - 18:00	12	2126	4.132	12	2126	4.222	12	2126	8.354
18:00 - 19:00	12	2126	2.972	12	2126	3.462	12	2126	6.434
19:00 - 20:00	12	2126	2.097	12	2126	2.517	12	2126	4.614
20:00 - 21:00	12	2126	1.196	12	2126	1.521	12	2126	2.717
21:00 - 22:00	12	2126	0.635	12	2126	1.000	12	2126	1.635
22:00 - 23:00	9	2173	0.056	9	2173	0.184	9	2173	0.240
23:00 - 24:00									
Total Rates:			55.693			55.693			111.386

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
LGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	2170	0.059	11	2170	0.025	11	2170	0.084
08:00 - 09:00	12	2126	0.157	12	2126	0.110	12	2126	0.267
09:00 - 10:00	12	2126	0.157	12	2126	0.122	12	2126	0.279
10:00 - 11:00	12	2126	0.172	12	2126	0.161	12	2126	0.333
11:00 - 12:00	12	2126	0.184	12	2126	0.216	12	2126	0.400
12:00 - 13:00	12	2126	0.129	12	2126	0.153	12	2126	0.282
13:00 - 14:00	12	2126	0.204	12	2126	0.161	12	2126	0.365
14:00 - 15:00	12	2126	0.204	12	2126	0.192	12	2126	0.396
15:00 - 16:00	12	2126	0.169	12	2126	0.188	12	2126	0.357
16:00 - 17:00	12	2126	0.125	12	2126	0.122	12	2126	0.247
17:00 - 18:00	12	2126	0.180	12	2126	0.157	12	2126	0.337
18:00 - 19:00	12	2126	0.114	12	2126	0.133	12	2126	0.247
19:00 - 20:00	12	2126	0.071	12	2126	0.114	12	2126	0.185
20:00 - 21:00	12	2126	0.039	12	2126	0.078	12	2126	0.117
21:00 - 22:00	12	2126	0.043	12	2126	0.047	12	2126	0.090
22:00 - 23:00	9	2173	0.000	9	2173	0.005	9	2173	0.005
23:00 - 24:00									
Total Rates:			2.007			1.984			3.991

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
MOTOR CYCLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	2170	0.004	11	2170	0.000	11	2170	0.004
08:00 - 09:00	12	2126	0.008	12	2126	0.004	12	2126	0.012
09:00 - 10:00	12	2126	0.004	12	2126	0.004	12	2126	0.008
10:00 - 11:00	12	2126	0.004	12	2126	0.008	12	2126	0.012
11:00 - 12:00	12	2126	0.024	12	2126	0.020	12	2126	0.044
12:00 - 13:00	12	2126	0.016	12	2126	0.012	12	2126	0.028
13:00 - 14:00	12	2126	0.012	12	2126	0.016	12	2126	0.028
14:00 - 15:00	12	2126	0.016	12	2126	0.008	12	2126	0.024
15:00 - 16:00	12	2126	0.016	12	2126	0.024	12	2126	0.040
16:00 - 17:00	12	2126	0.004	12	2126	0.004	12	2126	0.008
17:00 - 18:00	12	2126	0.008	12	2126	0.016	12	2126	0.024
18:00 - 19:00	12	2126	0.004	12	2126	0.004	12	2126	0.008
19:00 - 20:00	12	2126	0.000	12	2126	0.000	12	2126	0.000
20:00 - 21:00	12	2126	0.008	12	2126	0.004	12	2126	0.012
21:00 - 22:00	12	2126	0.004	12	2126	0.008	12	2126	0.012
22:00 - 23:00	9	2173	0.000	9	2173	0.000	9	2173	0.000
23:00 - 24:00									
Total Rates:			0.132			0.132			0.264

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

APPENDIX D

A4067 ATC Survey Summary

A4067, Mumbles Road, Swansea (ATC)

Site No. 547001 **Site Ref.** 547001

A4067

Vehicle Count Report **Week Begin: 11 June 2021** **Channel:** Northbound

	Fri Jun 11	Sat Jun 12	Sun Jun 13	Mon Jun 14	Tue Jun 15	Wed Jun 16	Thu Jun 17	5-Day Ave.	7-Day Ave.
00:00	72	176	189	84	83	107	76	84	112
01:00	24	72	112	30	38	34	37	33	50
02:00	16	41	69	34	25	30	23	26	34
03:00	17	33	54	27	17	30	14	21	27
04:00	30	41	32	37	41	32	29	34	35
05:00	135	77	59	138	132	162	135	140	120
06:00	319	157	86	336	333	376	311	335	274
07:00	805	358	207	933	955	957	922	914	734
08:00	1222	647	394	1188	1288	1324	1292	1263	1051
09:00	1061	814	612	1007	997	968	973	1001	919
10:00	1047	939	971	872	921	967	934	948	950
11:00	1003	983	917	991	905	964	940	961	958
12:00	1037	980	970	983	939	973	994	985	982
13:00	1058	963	1022	1070	986	1012	976	1020	1012
14:00	1017	906	1077	1038	1038	1004	1020	1023	1014
15:00	1101	954	1170	1086	1149	1117	1077	1106	1093
16:00	989	1059	1251	1100	1171	1088	1085	1087	1106
17:00	815	1080	1329	965	970	852	1019	924	1004
18:00	731	1119	1435	837	1023	717	890	840	965
19:00	629	1032	1349	717	901	736	842	765	887
20:00	472	987	1179	655	787	580	710	641	767
21:00	494	795	837	577	682	573	610	587	653
22:00	442	635	518	395	472	364	438	422	466
23:00	294	308	218	158	213	177	200	208	224
Total									
12H(7-19)	11886	10802	11355	12070	12342	11943	12122	12073	11789
16H(6-22)	13800	13773	14806	14355	15045	14208	14595	14401	14369
18H(6-24)	14536	14716	15542	14908	15730	14749	15233	15031	15059
24H(0-24)	14830	15156	16057	15258	16066	15144	15547	15369	15437
AM Peak	08:00	11:00	10:00	08:00	08:00	08:00	08:00	08:00	08:00
	1222	983	971	1188	1288	1324	1292	1263	1051
PM Peak	15:00	18:00	18:00	16:00	16:00	15:00	16:00	15:00	16:00
	1101	1119	1435	1100	1171	1117	1085	1106	1106

Site No. 547001 **Site Ref.** 547001
A4067
Vehicle Count Report **Week Begin: 11 June 2021** **Channel:** Southbound

	Fri Jun 11	Sat Jun 12	Sun Jun 13	Mon Jun 14	Tue Jun 15	Wed Jun 16	Thu Jun 17	5-Day Ave.	7-Day Ave.
00:00	55	131	151	67	64	77	68	66	88
01:00	30	76	86	30	40	30	34	33	47
02:00	9	41	56	25	18	22	25	20	28
03:00	13	22	26	10	13	18	11	13	16
04:00	25	41	39	30	30	34	31	30	33
05:00	70	73	54	53	65	66	72	65	65
06:00	162	169	109	180	181	190	203	183	171
07:00	614	318	235	643	657	687	642	649	542
08:00	993	598	639	925	1003	1000	997	984	879
09:00	898	1008	1210	942	955	903	975	935	984
10:00	1078	1257	1377	1164	1193	1112	994	1108	1168
11:00	1142	1311	1311	1253	1362	1183	1177	1223	1248
12:00	1207	1423	1111	1297	1312	1258	1091	1233	1243
13:00	1141	1309	1099	1124	1167	1081	1136	1130	1151
14:00	1257	1246	1101	1200	1242	1213	1157	1214	1202
15:00	1256	1095	1109	1228	1298	1213	1248	1249	1207
16:00	1221	1078	1057	1293	1292	1249	1348	1281	1220
17:00	1274	1135	966	1356	1304	1304	1421	1332	1251
18:00	1163	1092	975	1175	1243	996	1342	1184	1141
19:00	1072	951	847	816	939	896	1010	947	933
20:00	690	658	621	622	740	662	690	681	669
21:00	479	464	438	419	463	401	469	446	448
22:00	368	357	263	253	292	257	276	289	295
23:00	277	253	146	123	152	149	160	172	180
Total									
12H(7-19)	13244	12870	12190	13600	14028	13199	13528	13520	13237
16H(6-22)	15647	15112	14205	15637	16351	15348	15900	15777	15457
18H(6-24)	16292	15722	14614	16013	16795	15754	16336	16238	15932
24H(0-24)	16494	16106	15026	16228	17025	16001	16577	16465	16208
AM Peak	11:00	11:00	10:00	11:00	11:00	11:00	11:00	11:00	11:00
	1142	1311	1377	1253	1362	1183	1177	1223	1248
PM Peak	17:00	12:00	12:00	17:00	12:00	17:00	17:00	17:00	17:00
	1274	1423	1111	1356	1312	1304	1421	1332	1251

PCC Traffic Information Consultancy Ltd.

Site No. 547001 **Site Ref.** 547001
A4067
Vehicle Count Report **Week Begin: 11 June 2021** **Channel:** Total Flow

	Fri Jun 11	Sat Jun 12	Sun Jun 13	Mon Jun 14	Tue Jun 15	Wed Jun 16	Thu Jun 17	5-Day Ave.	7-Day Ave.
00:00	127	307	340	151	147	184	144	151	200
01:00	54	148	198	60	78	64	71	65	96
02:00	25	82	125	59	43	52	48	45	62
03:00	30	55	80	37	30	48	25	34	44
04:00	55	82	71	67	71	66	60	64	67
05:00	205	150	113	191	197	228	207	206	184
06:00	481	326	195	516	514	566	514	518	445
07:00	1419	676	442	1576	1612	1644	1564	1563	1276
08:00	2215	1245	1033	2113	2291	2324	2289	2246	1930
09:00	1959	1822	1822	1949	1952	1871	1948	1936	1903
10:00	2125	2196	2348	2036	2114	2079	1928	2056	2118
11:00	2145	2294	2228	2244	2267	2147	2117	2184	2206
12:00	2244	2403	2081	2280	2251	2231	2085	2218	2225
13:00	2199	2272	2121	2194	2153	2093	2112	2150	2163
14:00	2274	2152	2178	2238	2280	2217	2177	2237	2217
15:00	2357	2049	2279	2314	2447	2330	2325	2355	2300
16:00	2210	2137	2308	2393	2463	2337	2433	2367	2326
17:00	2089	2215	2295	2321	2274	2156	2440	2256	2256
18:00	1894	2211	2410	2012	2266	1713	2232	2023	2105
19:00	1701	1983	2196	1533	1840	1632	1852	1712	1820
20:00	1162	1645	1800	1277	1527	1242	1400	1322	1436
21:00	973	1259	1275	996	1145	974	1079	1033	1100
22:00	810	992	781	648	764	621	714	711	761
23:00	571	561	364	281	365	326	360	381	404
Total									
12H(7-19)	25130	23672	23545	25670	26370	25142	25650	25592	25026
16H(6-22)	29447	28885	29011	29992	31396	29556	30495	30177	29826
18H(6-24)	30828	30438	30156	30921	32525	30503	31569	31269	30991
24H(0-24)	31324	31262	31083	31486	33091	31145	32124	31834	31645
AM Peak	08:00	11:00	10:00	11:00	08:00	08:00	08:00	08:00	11:00
	2215	2294	2348	2244	2291	2324	2289	2246	2206
PM Peak	15:00	12:00	18:00	16:00	16:00	16:00	17:00	16:00	16:00
	2357	2403	2410	2393	2463	2337	2440	2367	2326

PCC Traffic Information Consultancy Ltd.

APPENDIX E

A4067 / Derwen Fawr Road Turning Count Summary

Traffic Information Consultancy

Swansea, Friday 11th June 2021

Junction: 1
Approach: A4067 Mumbles Road North

	To A4067 Mumbles Road (S)								To Derwen Fawr Road								U-Turn							
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	62	22	3	0	2	**89**	0	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**
07:15 - 07:30	0	1	81	34	5	0	7	**128**	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**
07:30 - 07:45	0	0	103	56	5	2	4	**170**	0	0	4	2	0	0	0	**6**	0	0	0	0	0	0	0	**0**
07:45 - 08:00	0	1	141	70	6	0	6	**224**	0	0	0	2	0	0	0	**2**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**2**	**387**	**182**	**19**	**2**	**19**	**611**	**0**	**0**	**7**	**4**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
08:00 - 08:15	0	0	153	76	8	0	3	**240**	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**
08:15 - 08:30	0	0	187	69	4	1	4	**265**	0	0	5	2	0	0	0	**7**	0	0	0	0	0	0	0	**0**
08:30 - 08:45	0	0	201	61	8	1	3	**274**	0	0	1	1	0	0	0	**2**	0	0	0	0	0	0	0	**0**
08:45 - 09:00	0	1	173	64	6	0	3	**247**	0	0	1	2	0	0	0	**3**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**1**	**714**	**270**	**26**	**2**	**13**	**1026**	**0**	**0**	**8**	**5**	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
09:00 - 09:15	0	1	173	63	5	3	2	**247**	0	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**
09:15 - 09:30	0	0	186	39	5	0	3	**233**	0	0	4	0	0	0	0	**4**	0	0	0	0	0	0	0	**0**
09:30 - 09:45	0	1	187	45	8	0	2	**243**	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**
09:45 - 10:00	0	0	186	42	3	0	2	**233**	0	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**2**	**732**	**189**	**21**	**3**	**9**	**956**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
10:00 - 10:15	0	1	206	47	4	2	2	**262**	0	0	5	0	0	0	0	**5**	0	0	0	0	0	0	0	**0**
10:15 - 10:30	0	1	221	36	3	0	3	**264**	0	0	4	1	0	0	0	**5**	0	0	0	0	0	0	0	**0**
10:30 - 10:45	0	1	273	46	3	2	2	**327**	0	0	6	1	0	0	0	**7**	0	0	1	0	0	0	0	**1**
10:45 - 11:00	3	1	229	49	1	0	2	**285**	0	0	4	2	0	0	0	**6**	0	0	0	0	0	0	0	**0**
Hourly Total	**3**	**4**	**929**	**178**	**11**	**4**	**9**	**1138**	**0**	**0**	**19**	**4**	**0**	**0**	**0**	**23**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
11:00 - 11:15	0	0	249	37	5	0	4	**295**	0	0	7	0	0	0	0	**7**	0	0	0	0	0	0	0	**0**
11:15 - 11:30	2	1	259	24	2	0	3	**291**	0	0	3	0	0	0	0	**3**	0	0	0	0	0	0	0	**0**
11:30 - 11:45	0	1	249	28	4	0	0	**282**	0	0	9	2	0	0	0	**11**	0	0	0	0	0	0	0	**0**
11:45 - 12:00	0	1	254	44	3	0	3	**305**	0	0	3	1	0	0	0	**4**	0	0	0	0	0	0	0	**0**
Hourly Total	**2**	**3**	**1011**	**133**	**14**	**0**	**10**	**1173**	**0**	**0**	**22**	**3**	**0**	**0**	**0**	**25**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
12:00 - 12:15	0	0	275	42	3	0	4	**324**	0	0	5	0	0	0	0	**5**	0	0	0	0	0	0	0	**0**
12:15 - 12:30	0	0	271	29	0	0	2	**302**	0	1	4	0	0	0	0	**5**	0	0	0	0	0	0	0	**0**
12:30 - 12:45	0	1	277	36	2	0	0	**316**	0	0	4	0	0	0	0	**4**	0	0	0	0	0	0	0	**0**
12:45 - 13:00	0	2	286	26	5	0	2	**321**	0	0	1	1	0	0	0	**2**	0	0	1	0	0	0	0	**1**
Hourly Total	**0**	**3**	**1109**	**133**	**10**	**0**	**8**	**1263**	**0**	**1**	**14**	**1**	**0**	**0**	**0**	**16**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
13:00 - 13:15	1	0	269	32	3	0	1	**306**	0	0	3	0	0	0	0	**3**	0	0	0	0	0	0	0	**0**
13:15 - 13:30	0	0	244	32	0	0	8	**284**	0	0	3	0	0	0	0	**3**	0	0	0	0	0	0	0	**0**
13:30 - 13:45	0	0	276	27	2	0	2	**307**	0	0	9	0	0	0	0	**9**	0	0	0	0	0	0	0	**0**
13:45 - 14:00	0	0	272	27	0	1	3	**303**	0	0	8	1	0	0	0	**9**	0	0	0	0	0	0	0	**0**
Hourly Total	**1**	**0**	**1061**	**118**	**5**	**1**	**14**	**1200**	**0**	**0**	**23**	**1**	**0**	**0**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
14:00 - 14:15	0	2	274	22	3	0	3	**304**	0	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**
14:15 - 14:30	0	1	284	37	4	0	5	**331**	0	0	8	0	0	0	0	**8**	0	0	1	0	0	0	0	**1**
14:30 - 14:45	5	1	326	25	2	0	3	**362**	0	0	2	1	0	0	0	**3**	0	0	0	0	0	0	0	**0**
14:45 - 15:00	3	0	283	36	2	0	4	**328**	0	0	5	0	0	1	0	**6**	0	0	0	0	0	0	0	**0**
Hourly Total	**8**	**4**	**1167**	**120**	**11**	**0**	**15**	**1325**	**0**	**0**	**17**	**1**	**0**	**1**	**0**	**19**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
15:00 - 15:15	0	0	252	24	3	1	7	**287**	0	0	4	0	0	0	0	**4**	0	0	0	0	0	0	0	**0**
15:15 - 15:30	1	1	261	31	2	0	2	**298**	0	0	4	0	0	0	0	**4**	0	0	0	0	0	0	0	**0**
15:30 - 15:45	0	2	316	27	2	0	1	**348**	0	0	11	0	0	0	0	**11**	0	0	0	0	0	0	0	**0**
15:45 - 16:00	1	0	335	21	1	0	2	**360**	0	0	8	0	0	0	0	**8**	0	0	0	0	0	0	0	**0**
Hourly Total	**2**	**3**	**1164**	**103**	**8**	**1**	**12**	**1293**	**0**	**0**	**27**	**0**	**0**	**0**	**0**	**27**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
16:00 - 16:15	0	0	276	22	0	0	3	**301**	0	0	7	0	0	0	0	**7**	0	0	0	0	0	0	0	**0**
16:15 - 16:30	1	1	332	31	1	0	3	**369**	0	0	6	2	0	0	0	**8**	0	0	0	0	0	0	0	**0**
16:30 - 16:45	0	0	294	30	0	0	3	**327**	0	0	9	0	0	0	0	**9**	0	0	0	0	0	0	0	**0**
16:45 - 17:00	0	0	261	15	0	0	2	**278**	0	0	5	0	0	0	0	**5**	0	0	1	0	0	0	0	**1**
Hourly Total	**1**	**1**	**1163**	**98**	**1**	**0**	**11**	**1275**	**0**	**0**	**27**	**2**	**0**	**0**	**0**	**29**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
17:00 - 17:15	1	1	259	26	0	0	4	**291**	0	0	4	1	0	0	0	**5**	0	0	0	0	0	0	0	**0**
17:15 - 17:30	0	1	349	37	1	0	2	**390**	0	0	14	0	0	0	0	**14**	0	0	0	0	0	0	0	**0**
17:30 - 17:45	0	2	302	24	1	0	1	**330**	0	0	4	0	0	0	0	**4**	0	0	0	0	0	0	0	**0**
17:45 - 18:00	0	1	275	32	0	0	2	**310**	0	0	11	1	0	0	0	**12**	0	0	0	1	0	0	0	**1**
Hourly Total	**1**	**5**	**1185**	**119**	**2**	**0**	**9**	**1321**	**0**	**0**	**33**	**2**	**0**	**0**	**0**	**35**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**
18:00 - 18:15	0	2	280	15	1	0	2	**300**	0	0	3	1	0	0	0	**4**	0	0	0	0	0	0	0	**0**
18:15 - 18:30	1	0	285	25	1	0	2	**314**	0	0	5	0	0	0	0	**5**	0	0	0	0	0	0	0	**0**
18:30 - 18:45	0	3	286	26	0	0	0	**315**	0	0	4	0	0	0	0	**4**	0	0	0	0	0	0	0	**0**
18:45 - 19:00	1	0	271	23	0	0	1	**296**	0	0	6	0	0	0	0	**6**	0	0	0	0	0	0	0	**0**
Hourly Total	**2**	**5**	**1122**	**89**	**2**	**0**	**5**	**1225**	**0**	**0**	**18**	**1**	**0**	**0**	**0**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOTAL	**20**	**33**	**11744**	**1732**	**130**	**13**	**134**	**13806**	**0**	**1**	**224**	**24**	**0**	**1**	**0**	**250**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**5**

Traffic Information Consultancy

Swansea, Friday 11th June 2021

Junction: 1
Approach: A4067 Mumbles Road South

	To Derwen Fawr Road								To A4067 Mumbles Road (N)								U-Turn							
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	1	0	5	1	0	0	0	**7**	1	0	117	14	14	3	0	**149**	0	0	0	0	0	0	0	**0**
07:15 - 07:30	0	0	13	2	0	0	0	**15**	0	0	151	16	16	3	0	**186**	0	0	0	0	0	0	0	**0**
07:30 - 07:45	0	0	20	2	0	0	0	**22**	0	0	220	32	32	1	2	**287**	0	0	0	0	0	0	0	**0**
07:45 - 08:00	1	0	29	4	0	0	0	**34**	0	2	233	33	33	2	1	**304**	0	0	1	0	0	0	0	**1**
Hourly Total	**2**	**0**	**67**	**9**	**0**	**0**	**0**	**78**	**1**	**2**	**721**	**95**	**95**	**9**	**3**	**926**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
08:00 - 08:15	0	0	39	1	1	0	1	**42**	0	0	279	36	1	0	4	**320**	0	0	0	0	0	0	0	**0**
08:15 - 08:30	0	0	61	3	1	0	1	**66**	0	0	292	22	4	0	5	**323**	0	0	0	0	0	0	0	**0**
08:30 - 08:45	0	0	43	1	0	0	0	**44**	0	0	271	31	6	1	8	**317**	0	0	0	0	0	0	0	**0**
08:45 - 09:00	0	0	36	1	0	0	0	**37**	0	1	269	32	7	0	3	**312**	0	0	1	0	0	0	0	**1**
Hourly Total	**0**	**0**	**179**	**6**	**2**	**0**	**2**	**189**	**0**	**1**	**1111**	**121**	**18**	**1**	**20**	**1272**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
09:00 - 09:15	0	0	20	4	1	0	0	**25**	0	1	267	32	5	1	2	**308**	0	0	0	0	0	0	0	**0**
09:15 - 09:30	0	0	25	1	0	0	0	**26**	0	2	232	34	2	2	2	**274**	0	0	0	0	0	0	0	**0**
09:30 - 09:45	0	0	29	2	0	0	0	**31**	0	0	229	36	3	0	2	**270**	0	0	0	0	0	0	0	**0**
09:45 - 10:00	0	0	21	3	0	0	0	**24**	0	0	213	27	6	0	4	**250**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**95**	**10**	**1**	**0**	**0**	**106**	**0**	**3**	**941**	**129**	**16**	**3**	**10**	**1102**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
10:00 - 10:15	0	0	22	4	1	0	0	**27**	0	1	219	28	4	0	3	**255**	0	0	0	0	0	0	0	**0**
10:15 - 10:30	0	0	30	3	0	0	0	**33**	1	0	233	35	8	1	2	**280**	0	0	0	0	0	0	0	**0**
10:30 - 10:45	0	0	31	2	1	0	0	**34**	0	1	219	33	8	0	1	**262**	0	0	0	0	0	0	0	**0**
10:45 - 11:00	0	0	26	0	0	0	0	**26**	0	0	245	28	4	0	3	**280**	0	0	2	0	0	0	0	**2**
Hourly Total	**0**	**0**	**109**	**9**	**2**	**0**	**0**	**120**	**1**	**2**	**916**	**124**	**24**	**1**	**9**	**1077**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**
11:00 - 11:15	1	0	24	4	0	0	0	**29**	0	0	190	47	2	0	1	**240**	0	0	0	0	0	0	0	**0**
11:15 - 11:30	0	0	19	2	1	0	0	**22**	0	2	213	35	4	0	2	**256**	0	0	0	0	0	0	0	**0**
11:30 - 11:45	0	1	38	0	2	0	0	**41**	0	1	256	40	6	1	2	**306**	0	0	1	0	0	0	0	**1**
11:45 - 12:00	0	0	34	1	0	0	0	**35**	0	2	232	38	7	0	4	**283**	0	0	1	0	0	0	0	**1**
Hourly Total	**1**	**1**	**115**	**7**	**3**	**0**	**0**	**127**	**0**	**5**	**891**	**160**	**19**	**1**	**9**	**1085**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**
12:00 - 12:15	0	0	39	1	0	0	0	**40**	1	1	216	31	4	0	2	**255**	0	0	2	0	0	0	0	**2**
12:15 - 12:30	0	0	34	2	0	0	0	**36**	0	0	222	36	7	2	1	**268**	0	0	0	0	0	0	0	**0**
12:30 - 12:45	0	0	29	4	0	0	0	**33**	0	1	230	37	7	0	2	**277**	0	0	1	0	0	0	1	**2**
12:45 - 13:00	0	1	34	3	0	0	0	**38**	0	0	224	36	3	0	2	**265**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**1**	**136**	**10**	**0**	**0**	**0**	**147**	**1**	**2**	**892**	**140**	**21**	**2**	**7**	**1065**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**4**
13:00 - 13:15	0	0	33	1	0	0	0	**34**	0	1	238	48	4	0	4	**295**	0	0	0	0	0	0	0	**0**
13:15 - 13:30	0	0	39	3	0	0	0	**42**	1	1	213	46	1	0	2	**264**	0	0	0	0	0	0	0	**0**
13:30 - 13:45	0	0	29	1	0	0	0	**30**	1	2	248	31	3	0	1	**286**	0	0	0	0	0	0	0	**0**
13:45 - 14:00	0	0	40	3	0	0	0	**43**	0	0	215	31	1	0	2	**249**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**141**	**8**	**0**	**0**	**0**	**149**	**2**	**4**	**914**	**156**	**9**	**0**	**9**	**1094**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
14:00 - 14:15	0	0	34	2	1	0	0	**37**	0	1	247	28	5	1	4	**286**	0	0	0	0	0	0	0	**0**
14:15 - 14:30	0	0	35	7	0	0	0	**42**	0	1	221	29	3	1	2	**257**	0	0	1	0	0	0	0	**1**
14:30 - 14:45	0	0	38	3	1	0	0	**42**	0	1	204	30	6	0	1	**242**	0	1	0	0	0	0	0	**1**
14:45 - 15:00	0	0	55	4	0	1	0	**60**	0	2	211	24	1	0	2	**240**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**162**	**16**	**2**	**1**	**0**	**181**	**0**	**5**	**883**	**111**	**15**	**2**	**9**	**1025**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**2**
15:00 - 15:15	0	0	41	3	1	0	0	**45**	0	0	239	44	4	0	2	**289**	0	0	1	0	0	0	0	**1**
15:15 - 15:30	0	0	42	1	0	0	0	**43**	0	1	261	23	1	0	5	**291**	0	0	0	0	0	0	0	**0**
15:30 - 15:45	0	0	45	4	0	0	0	**49**	0	0	260	44	6	0	8	**318**	0	0	0	0	0	0	0	**0**
15:45 - 16:00	0	0	44	2	0	0	0	**46**	0	0	227	48	4	0	8	**287**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**172**	**10**	**1**	**0**	**0**	**183**	**0**	**1**	**987**	**159**	**15**	**0**	**23**	**1185**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
16:00 - 16:15	0	0	28	5	1	0	0	**34**	0	0	212	41	4	0	3	**260**	0	0	0	0	0	0	0	**0**
16:15 - 16:30	0	1	34	2	0	0	0	**37**	0	0	254	34	4	0	3	**295**	0	0	0	0	0	0	0	**0**
16:30 - 16:45	0	0	26	7	0	0	0	**33**	0	0	171	42	2	0	1	**216**	0	0	0	0	0	0	0	**0**
16:45 - 17:00	0	0	25	5	0	0	0	**30**	0	1	219	23	3	0	2	**248**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**1**	**113**	**19**	**1**	**0**	**0**	**134**	**0**	**1**	**856**	**140**	**13**	**0**	**9**	**1019**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
17:00 - 17:15	0	1	35	2	0	0	0	**38**	1	0	188	16	0	0	6	**211**	0	0	0	0	0	0	0	**0**
17:15 - 17:30	0	1	28	0	0	0	0	**29**	0	0	187	28	1	0	3	**219**	0	0	0	0	0	0	0	**0**
17:30 - 17:45	0	0	28	3	0	0	0	**31**	0	1	186	19	0	0	2	**208**	0	0	0	0	0	0	0	**0**
17:45 - 18:00	0	0	17	1	0	0	0	**18**	0	1	190	8	0	0	2	**201**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**2**	**108**	**6**	**0**	**0**	**0**	**116**	**1**	**2**	**751**	**71**	**1**	**0**	**13**	**839**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
18:00 - 18:15	0	0	42	1	0	0	0	**43**	0	0	178	20	2	0	3	**203**	0	0	0	0	0	0	0	**0**
18:15 - 18:30	0	0	16	1	0	0	0	**17**	1	0	172	10	2	0	2	**187**	0	0	0	0	0	0	0	**0**
18:30 - 18:45	2	1	22	0	0	0	0	**25**	1	0	159	16	0	0	2	**178**	0	0	1	0	0	0	0	**1**
18:45 - 19:00	0	0	21	1	0	0	0	**22**	0	0	158	12	1	0	3	**174**	0	0	1	0	0	0	0	**1**
Hourly Total	**2**	**1**	**101**	**3**	**0**	**0**	**0**	**107**	**2**	**0**	**667**	**58**	**5**	**0**	**10**	**742**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**

TOTAL	**5**	**6**	**1498**	**113**	**12**	**1**	**2**	**1637**	**8**	**28**	**10530**	**1464**	**251**	**19**	**131**	**12431**	**0**	**1**	**13**	**0**	**0**	**0**	**1**	**15**

Swansea, Friday 11th June 2021

Traffic Information Consultancy

Junction: 1
Approach: Derwen Fawr Road

	To A4067 Mumbles Road (N)								To A4067 Mumbles Road (S)							
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	2	1	0	0	0	3	0	0	5	0	0	0	0	5
07:15 - 07:30	0	0	3	0	0	0	0	3	0	0	2	2	0	0	0	4
07:30 - 07:45	0	0	5	1	0	0	0	6	0	0	15	1	0	0	0	16
07:45 - 08:00	0	0	7	0	0	0	0	7	0	0	15	6	0	0	0	21
Hourly Total	**0**	**0**	**17**	**2**	**0**	**0**	**0**	**19**	**0**	**0**	**37**	**9**	**0**	**0**	**0**	**46**
08:00 - 08:15	0	0	9	0	0	0	0	9	0	1	23	7	0	0	0	31
08:15 - 08:30	0	0	5	0	0	0	0	5	0	0	29	4	2	0	0	35
08:30 - 08:45	0	0	2	0	0	0	0	2	0	0	29	8	0	0	0	37
08:45 - 09:00	0	0	3	0	0	0	0	3	0	0	26	5	0	0	0	31
Hourly Total	**0**	**0**	**19**	**0**	**0**	**0**	**0**	**19**	**0**	**1**	**107**	**24**	**2**	**0**	**0**	**134**
09:00 - 09:15	0	0	4	1	0	0	0	5	0	0	27	3	1	0	0	31
09:15 - 09:30	0	0	5	1	0	0	0	6	0	0	18	8	0	0	0	26
09:30 - 09:45	0	0	4	0	0	0	0	4	0	0	15	0	0	0	0	15
09:45 - 10:00	0	0	4	1	0	0	0	5	0	0	24	2	0	0	0	26
Hourly Total	**0**	**0**	**17**	**3**	**0**	**0**	**0**	**20**	**0**	**0**	**84**	**13**	**1**	**0**	**0**	**98**
10:00 - 10:15	0	0	6	1	0	0	0	7	0	0	14	2	0	0	0	16
10:15 - 10:30	0	0	3	0	0	0	0	3	0	0	20	2	0	0	0	22
10:30 - 10:45	0	0	9	0	0	0	0	9	0	0	19	0	0	0	0	19
10:45 - 11:00	0	0	10	1	0	0	0	11	0	0	12	7	0	0	0	19
Hourly Total	**0**	**0**	**28**	**2**	**0**	**0**	**0**	**30**	**0**	**0**	**65**	**11**	**0**	**0**	**0**	**76**
11:00 - 11:15	0	0	10	0	0	0	0	10	0	1	18	4	1	0	0	24
11:15 - 11:30	0	0	8	0	0	0	0	8	0	0	23	4	1	0	0	28
11:30 - 11:45	0	0	4	2	0	0	0	6	0	1	21	2	0	0	0	24
11:45 - 12:00	0	0	7	0	0	0	0	7	0	0	26	3	1	0	0	30
Hourly Total	**0**	**0**	**29**	**2**	**0**	**0**	**0**	**31**	**0**	**2**	**88**	**13**	**3**	**0**	**0**	**106**
12:00 - 12:15	0	0	6	0	0	0	0	6	0	0	25	4	0	0	0	29
12:15 - 12:30	0	0	8	3	0	0	0	11	0	0	27	2	0	0	0	29
12:30 - 12:45	0	0	5	1	0	0	0	6	0	0	25	0	0	0	1	26
12:45 - 13:00	0	0	3	0	0	0	0	3	0	0	18	7	0	0	0	25
Hourly Total	**0**	**0**	**22**	**4**	**0**	**0**	**0**	**26**	**0**	**0**	**95**	**13**	**0**	**0**	**1**	**109**
13:00 - 13:15	0	0	8	2	0	0	0	10	0	0	19	5	0	0	0	24
13:15 - 13:30	0	0	3	0	0	0	0	3	1	0	17	2	0	0	0	20
13:30 - 13:45	0	0	6	0	0	0	0	6	0	0	13	2	0	0	0	15
13:45 - 14:00	0	0	6	0	0	0	0	6	0	0	23	4	0	0	0	27
Hourly Total	**0**	**0**	**23**	**2**	**0**	**0**	**0**	**25**	**1**	**0**	**72**	**13**	**0**	**0**	**0**	**86**
14:00 - 14:15	0	0	6	1	0	0	0	7	0	0	18	3	0	0	0	21
14:15 - 14:30	0	0	6	2	0	0	0	8	0	0	22	4	1	0	0	27
14:30 - 14:45	0	0	6	1	1	0	0	8	2	1	23	7	0	0	0	33
14:45 - 15:00	0	0	5	0	0	1	0	6	0	1	34	3	1	0	0	39
Hourly Total	**0**	**0**	**23**	**4**	**1**	**1**	**0**	**29**	**2**	**2**	**97**	**17**	**2**	**0**	**0**	**120**
15:00 - 15:15	0	0	8	1	0	0	0	9	0	0	19	5	2	0	0	26
15:15 - 15:30	0	0	4	3	0	0	0	7	0	0	19	3	0	0	0	22
15:30 - 15:45	0	0	4	1	0	0	0	5	1	1	27	1	0	0	1	31
15:45 - 16:00	0	0	4	1	0	0	0	5	0	0	20	6	1	0	0	27
Hourly Total	**0**	**0**	**20**	**6**	**0**	**0**	**0**	**26**	**1**	**1**	**85**	**15**	**3**	**0**	**1**	**106**
16:00 - 16:15	0	0	6	0	0	0	0	6	0	0	25	2	0	0	0	27
16:15 - 16:30	0	0	6	1	0	0	0	7	0	0	22	1	0	0	0	23
16:30 - 16:45	0	0	6	1	0	0	0	7	0	0	23	5	0	0	1	29
16:45 - 17:00	0	0	4	0	0	0	0	4	0	0	27	0	0	0	0	27
Hourly Total	**0**	**0**	**22**	**2**	**0**	**0**	**0**	**24**	**0**	**0**	**97**	**8**	**0**	**0**	**1**	**106**
17:00 - 17:15	0	0	3	0	0	0	0	3	0	0	29	5	0	0	0	34
17:15 - 17:30	0	0	10	2	0	0	0	12	0	0	21	0	0	0	0	21
17:30 - 17:45	0	0	3	1	0	0	0	4	0	0	23	4	0	0	0	27
17:45 - 18:00	0	0	1	0	0	0	0	1	0	0	31	1	0	0	0	32
Hourly Total	**0**	**0**	**17**	**3**	**0**	**0**	**0**	**20**	**0**	**0**	**104**	**10**	**0**	**0**	**0**	**114**
18:00 - 18:15	2	0	5	0	0	0	0	7	0	0	21	2	0	0	0	23
18:15 - 18:30	0	0	4	0	0	0	0	4	0	1	23	1	0	0	0	25
18:30 - 18:45	0	0	1	1	0	0	0	2	0	0	19	1	0	0	0	20
18:45 - 19:00	0	0	3	0	0	0	0	3	0	0	19	2	0	0	0	21
Hourly Total	**2**	**0**	**13**	**1**	**0**	**0**	**0**	**16**	**0**	**1**	**82**	**6**	**0**	**0**	**0**	**89**

TOTAL	**2**	**0**	**250**	**31**	**1**	**1**	**0**	**285**	**4**	**7**	**1013**	**152**	**11**	**0**	**3**	**1190**

Traffic Information Consultancy

Swansea, Saturday 12th June 2021

Junction: 1
Approach: A4067 Mumbles Road North

	To A4067 Mumbles Road (S)								To Derwen Fawr Road								U-Turn							
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	39	14	0	0	0	53	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
07:15 - 07:30	0	0	43	13	0	0	2	58	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
07:30 - 07:45	1	0	67	21	1	0	1	91	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
07:45 - 08:00	0	0	87	20	2	0	3	112	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Hourly Total	**1**	**0**	**236**	**68**	**3**	**0**	**6**	**314**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
08:00 - 08:15	1	1	81	23	4	1	0	111	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0
08:15 - 08:30	0	2	117	20	1	0	2	142	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0
08:30 - 08:45	0	0	144	22	3	0	2	171	0	0	1	1	0	0	0	2	0	0	1	0	0	0	0	1
08:45 - 09:00	7	0	147	18	3	0	3	178	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0
Hourly Total	**8**	**3**	**489**	**83**	**11**	**1**	**7**	**602**	**0**	**0**	**9**	**1**	**0**	**0**	**0**	**10**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
09:00 - 09:15	0	0	195	25	2	2	2	226	0	0	6	0	0	0	0	6	0	0	0	0	0	0	0	0
09:15 - 09:30	1	1	207	20	0	0	3	232	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0
09:30 - 09:45	0	2	225	34	2	0	1	264	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0
09:45 - 10:00	1	4	282	25	1	0	2	315	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0
Hourly Total	**2**	**7**	**909**	**104**	**5**	**2**	**8**	**1037**	**0**	**0**	**16**	**0**	**0**	**0**	**0**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
10:00 - 10:15	5	2	232	22	2	0	1	264	0	0	5	1	0	0	0	6	0	0	2	0	0	0	0	2
10:15 - 10:30	1	2	276	30	0	1	3	313	0	0	9	2	0	0	0	11	0	0	1	0	0	0	0	1
10:30 - 10:45	0	1	323	23	4	0	2	353	0	0	10	0	0	0	0	10	0	0	4	0	0	0	0	4
10:45 - 11:00	0	3	325	23	0	0	2	353	0	0	16	0	0	0	0	16	0	0	0	0	0	0	0	0
Hourly Total	**6**	**8**	**1156**	**98**	**6**	**1**	**8**	**1283**	**0**	**0**	**40**	**3**	**0**	**0**	**0**	**43**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**7**
11:00 - 11:15	1	1	338	15	1	0	1	357	0	0	9	1	0	0	0	10	0	0	0	0	0	0	0	0
11:15 - 11:30	1	7	319	17	0	0	6	350	1	0	11	1	0	0	0	13	0	0	1	0	0	0	0	1
11:30 - 11:45	0	1	311	7	1	0	1	321	0	1	9	1	0	0	0	11	0	0	2	0	0	0	0	2
11:45 - 12:00	1	4	302	16	1	0	1	325	0	0	9	0	0	0	0	9	0	0	1	0	0	0	0	1
Hourly Total	**3**	**13**	**1270**	**55**	**3**	**0**	**9**	**1353**	**1**	**1**	**38**	**3**	**0**	**0**	**0**	**43**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**4**
12:00 - 12:15	1	8	347	23	2	0	3	384	0	0	17	0	0	0	0	17	0	0	1	0	0	0	0	1
12:15 - 12:30	0	2	372	26	0	0	2	402	0	0	16	0	0	0	0	16	0	0	1	0	0	0	0	1
12:30 - 12:45	0	8	336	22	0	0	2	368	0	0	15	0	0	0	0	15	0	0	0	0	0	0	0	0
12:45 - 13:00	0	4	341	12	0	0	1	358	1	0	13	0	0	0	0	14	0	0	0	0	0	0	0	0
Hourly Total	**1**	**22**	**1396**	**83**	**2**	**0**	**8**	**1512**	**1**	**0**	**61**	**0**	**0**	**0**	**0**	**62**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**
13:00 - 13:15	0	12	330	18	0	0	4	364	0	0	15	0	0	0	0	15	0	0	0	0	0	0	0	0
13:15 - 13:30	0	4	331	18	1	0	3	357	0	0	9	0	0	0	0	9	0	0	0	0	0	0	0	0
13:30 - 13:45	0	7	310	10	0	0	2	329	0	0	12	0	0	0	0	12	0	0	0	0	0	0	0	0
13:45 - 14:00	2	5	333	13	0	0	2	355	0	0	8	0	0	0	0	8	0	0	0	0	0	0	0	0
Hourly Total	**2**	**28**	**1304**	**59**	**1**	**0**	**11**	**1405**	**0**	**0**	**44**	**0**	**0**	**0**	**0**	**44**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
14:00 - 14:15	1	2	329	24	0	0	0	356	0	0	6	0	0	0	0	6	0	0	0	0	0	0	0	0
14:15 - 14:30	2	5	274	12	0	0	4	297	0	0	9	1	0	0	0	10	0	0	0	0	0	0	0	0
14:30 - 14:45	1	3	298	12	0	0	0	314	0	0	6	0	0	0	0	6	0	0	0	0	0	0	0	0
14:45 - 15:00	4	6	285	10	0	0	2	307	4	0	12	0	0	0	0	16	0	0	0	0	0	0	0	0
Hourly Total	**8**	**16**	**1186**	**58**	**0**	**0**	**6**	**1274**	**4**	**0**	**33**	**1**	**0**	**0**	**0**	**38**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
15:00 - 15:15	1	8	296	8	0	0	1	314	11	0	8	3	0	0	0	22	0	0	1	1	0	0	0	2
15:15 - 15:30	0	11	248	11	0	0	3	273	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0
15:30 - 15:45	2	6	246	17	0	0	2	273	4	0	9	1	0	0	0	14	0	0	0	0	0	0	0	0
15:45 - 16:00	0	5	256	8	0	0	1	270	0	0	9	0	0	0	0	9	0	0	0	0	0	0	0	0
Hourly Total	**3**	**30**	**1046**	**44**	**0**	**0**	**7**	**1130**	**15**	**0**	**31**	**4**	**0**	**0**	**0**	**50**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**
16:00 - 16:15	0	2	235	10	0	0	4	251	0	0	6	0	0	0	0	6	0	0	0	0	0	0	0	0
16:15 - 16:30	4	4	263	11	0	0	2	284	0	0	9	0	0	0	0	9	0	0	0	0	0	0	0	0
16:30 - 16:45	1	7	288	23	0	0	2	321	0	0	10	0	0	0	0	10	0	0	0	0	0	0	0	0
16:45 - 17:00	1	6	241	18	0	0	2	268	0	0	12	0	0	0	0	12	0	0	0	0	0	0	0	0
Hourly Total	**6**	**19**	**1027**	**62**	**0**	**0**	**10**	**1124**	**0**	**0**	**37**	**0**	**0**	**0**	**0**	**37**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
17:00 - 17:15	0	8	266	13	0	0	2	289	0	0	12	0	0	0	0	12	0	0	0	0	0	0	0	0
17:15 - 17:30	0	15	275	13	0	0	2	305	0	0	7	0	0	0	0	7	0	0	1	0	0	0	0	1
17:30 - 17:45	0	3	285	9	0	0	1	298	0	0	8	0	0	0	0	8	0	0	0	0	0	0	0	0
17:45 - 18:00	0	6	263	7	0	0	2	278	0	0	7	0	0	0	0	7	0	0	0	0	0	0	0	0
Hourly Total	**0**	**32**	**1089**	**42**	**0**	**0**	**7**	**1170**	**0**	**0**	**34**	**0**	**0**	**0**	**0**	**34**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
18:00 - 18:15	0	14	211	4	0	0	1	230	0	0	8	0	0	0	0	8	0	0	0	0	0	0	0	0
18:15 - 18:30	0	6	279	10	1	0	3	299	0	0	6	0	0	0	0	6	0	0	0	0	0	0	0	0
18:30 - 18:45	0	4	257	9	1	0	0	271	0	0	10	1	0	0	0	11	0	0	0	0	0	0	0	0
18:45 - 19:00	0	9	289	12	0	0	1	311	0	0	4	0	0	0	0	4	0	0	2	0	0	0	0	2
Hourly Total	**0**	**33**	**1036**	**35**	**2**	**0**	**5**	**1111**	**0**	**0**	**28**	**1**	**0**	**0**	**0**	**29**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**
TOTAL	**40**	**211**	**12144**	**791**	**33**	**4**	**92**	**13315**	**21**	**1**	**374**	**14**	**0**	**0**	**0**	**410**	**0**	**0**	**18**	**1**	**0**	**0**	**0**	**19**

Swansea, Saturday 12th June 2021

Traffic Information Consultancy

Junction: 1
Approach: A4067 Mumbles Road South

	To Derwen Fawr Road								To A4067 Mumbles Road (N)								U-Turn							
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	3	0	0	0	0	3	1	2	51	6	4	0	0	64	0	0	0	0	0	0	0	0
07:15 - 07:30	0	1	3	0	0	0	0	4	0	2	55	5	1	0	0	63	0	0	0	0	0	0	0	0
07:30 - 07:45	0	0	5	1	0	0	0	6	1	0	77	12	3	0	0	93	0	0	0	0	0	0	0	0
07:45 - 08:00	0	0	6	1	0	0	0	7	1	2	130	6	2	0	1	142	0	0	0	0	0	0	0	0
Hourly Total	**0**	**1**	**17**	**2**	**0**	**0**	**0**	**20**	**3**	**6**	**313**	**29**	**10**	**0**	**1**	**362**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
08:00 - 08:15	0	0	2	0	0	0	0	2	0	1	100	12	0	1	1	115	0	0	0	0	0	0	0	0
08:15 - 08:30	0	0	11	0	0	0	0	11	3	0	137	13	4	1	1	159	0	0	0	0	0	0	0	0
08:30 - 08:45	0	0	12	0	0	0	0	12	1	0	151	15	3	1	1	172	0	0	0	0	0	0	0	0
08:45 - 09:00	0	0	20	1	0	0	0	21	1	0	187	13	2	0	2	205	0	0	0	0	0	0	0	0
Hourly Total	**0**	**0**	**45**	**1**	**0**	**0**	**0**	**46**	**5**	**1**	**575**	**53**	**9**	**3**	**5**	**651**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
09:00 - 09:15	0	0	25	0	0	0	0	25	9	1	149	15	5	0	1	180	0	0	0	0	0	0	0	0
09:15 - 09:30	0	0	21	1	0	0	0	22	0	1	192	15	2	0	2	212	0	0	0	0	0	0	0	0
09:30 - 09:45	0	0	20	1	1	0	0	22	1	0	196	14	1	1	2	215	0	0	0	0	0	0	0	0
09:45 - 10:00	0	0	27	2	0	0	0	29	0	3	191	21	2	0	3	220	0	0	0	0	0	0	0	0
Hourly Total	**0**	**0**	**93**	**4**	**1**	**0**	**0**	**98**	**10**	**5**	**728**	**65**	**10**	**1**	**8**	**827**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
10:00 - 10:15	1	0	23	1	1	0	0	26	2	1	202	19	1	0	2	227	0	0	1	0	0	0	0	1
10:15 - 10:30	1	0	27	0	0	0	0	28	0	3	218	27	4	0	4	256	0	0	0	0	0	0	0	0
10:30 - 10:45	2	0	32	1	0	0	0	35	1	1	198	22	2	0	0	224	0	0	1	1	0	0	0	2
10:45 - 11:00	0	0	37	3	0	0	0	40	4	0	217	27	4	0	3	255	0	0	0	0	0	0	0	0
Hourly Total	**4**	**0**	**119**	**5**	**1**	**0**	**0**	**129**	**7**	**5**	**835**	**95**	**11**	**0**	**9**	**962**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**3**
11:00 - 11:15	1	0	35	4	1	0	0	41	0	3	214	28	4	1	3	253	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	28	1	0	0	1	30	2	2	219	27	2	1	2	255	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	35	3	1	0	0	39	2	0	225	23	0	0	2	252	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	20	3	1	0	0	24	0	5	227	19	3	1	2	257	0	0	0	0	0	0	0	0
Hourly Total	**1**	**0**	**118**	**11**	**3**	**0**	**1**	**134**	**4**	**10**	**885**	**97**	**9**	**3**	**9**	**1017**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
12:00 - 12:15	0	0	40	3	0	0	0	43	0	1	216	27	1	0	1	246	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	36	2	0	0	0	38	2	1	198	23	3	0	3	230	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	50	1	0	0	0	51	3	4	241	12	3	0	2	265	0	0	0	0	0	0	0	0
12:45 - 13:00	1	0	31	0	0	0	0	32	1	2	223	22	3	0	1	252	0	0	0	0	0	0	0	0
Hourly Total	**1**	**0**	**157**	**6**	**0**	**0**	**0**	**164**	**6**	**8**	**878**	**84**	**10**	**0**	**7**	**993**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
13:00 - 13:15	0	0	47	2	0	0	0	49	0	3	225	11	1	0	3	243	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	43	4	0	0	0	47	0	2	256	14	0	0	2	274	0	0	0	0	0	0	0	0
13:30 - 13:45	1	0	35	1	0	0	0	37	2	3	222	7	0	0	0	234	0	0	0	0	0	0	0	0
13:45 - 14:00	1	1	44	3	0	0	0	49	2	5	225	14	0	0	2	248	0	0	0	0	0	0	0	0
Hourly Total	**2**	**1**	**169**	**10**	**0**	**0**	**0**	**182**	**4**	**13**	**928**	**46**	**1**	**0**	**7**	**999**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
14:00 - 14:15	0	0	33	0	0	0	0	33	1	10	238	20	0	0	5	274	0	0	1	0	0	0	0	1
14:15 - 14:30	0	0	37	1	0	0	0	38	0	1	211	4	0	1	4	221	0	0	1	0	0	0	0	1
14:30 - 14:45	1	0	29	1	0	0	0	31	0	6	207	10	0	0	1	224	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	28	1	0	0	0	29	0	5	190	4	0	0	2	201	0	0	0	0	0	0	0	0
Hourly Total	**1**	**0**	**127**	**3**	**0**	**0**	**0**	**131**	**1**	**22**	**846**	**38**	**0**	**1**	**12**	**920**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**
15:00 - 15:15	0	0	26	4	0	0	0	30	3	2	228	16	0	0	2	251	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	19	1	0	0	0	20	0	7	256	15	0	0	2	280	0	0	0	0	0	0	0	0
15:30 - 15:45	0	2	24	2	0	0	0	28	1	4	239	10	0	0	2	256	0	0	1	0	0	0	0	1
15:45 - 16:00	1	0	24	1	0	0	0	26	0	4	180	7	0	0	1	192	0	0	0	0	0	0	0	0
Hourly Total	**1**	**2**	**93**	**8**	**0**	**0**	**0**	**104**	**4**	**17**	**903**	**48**	**0**	**0**	**7**	**979**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
16:00 - 16:15	1	0	41	3	0	0	0	45	0	6	233	15	0	0	2	256	0	0	1	0	0	0	0	1
16:15 - 16:30	0	0	36	1	0	0	0	37	0	13	255	18	0	0	2	288	0	0	0	0	0	0	0	0
16:30 - 16:45	2	0	39	0	0	0	0	41	0	7	256	9	0	0	1	273	0	0	1	0	0	0	0	1
16:45 - 17:00	0	2	29	2	0	0	0	33	0	1	267	10	0	0	2	280	0	0	0	0	0	0	0	0
Hourly Total	**3**	**2**	**145**	**6**	**0**	**0**	**0**	**156**	**0**	**27**	**1011**	**52**	**0**	**0**	**7**	**1097**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**
17:00 - 17:15	0	0	31	1	0	0	0	32	0	6	253	7	0	0	3	269	0	0	0	0	0	0	0	0
17:15 - 17:30	0	0	22	1	0	0	0	23	0	9	244	5	0	0	3	261	0	0	0	0	0	0	0	0
17:30 - 17:45	0	0	33	0	0	0	0	33	1	10	249	14	0	0	1	275	0	0	3	0	0	0	0	3
17:45 - 18:00	1	0	26	1	0	0	0	28	1	3	281	13	0	0	3	301	0	0	0	0	0	0	0	0
Hourly Total	**1**	**0**	**112**	**3**	**0**	**0**	**0**	**116**	**2**	**28**	**1027**	**39**	**0**	**0**	**10**	**1106**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**
18:00 - 18:15	1	0	19	0	0	0	0	20	0	8	285	6	0	0	2	301	0	0	0	0	0	0	0	0
18:15 - 18:30	0	0	21	0	0	0	0	21	0	7	268	10	1	0	1	287	0	0	1	0	0	0	0	1
18:30 - 18:45	0	0	27	4	0	0	0	31	0	20	296	11	0	0	2	329	0	0	0	0	0	0	0	0
18:45 - 19:00	1	0	24	1	0	0	0	26	0	3	259	3	0	0	2	267	0	0	1	0	0	0	0	1
Hourly Total	**2**	**0**	**91**	**5**	**0**	**0**	**0**	**98**	**0**	**38**	**1108**	**30**	**1**	**0**	**7**	**1184**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**

TOTAL	**16**	**6**	**1286**	**64**	**5**	**0**	**1**	**1378**	**46**	**180**	**10037**	**676**	**61**	**8**	**89**	**11097**	**0**	**0**	**12**	**1**	**0**	**0**	**0**	**13**

Swansea, Saturday 12th June 2021

Traffic Information Consultancy

Junction: 1
Approach: Derwen Fawr Road

	To A4067 Mumbles Road (N)								To A4067 Mumbles Road (S)							
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	1	0	1	0	0	0	0	2	0	0	5	0	0	0	0	5
07:15 - 07:30	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5
07:30 - 07:45	0	0	2	0	0	0	0	2	0	0	6	1	0	0	0	7
07:45 - 08:00	0	0	3	0	0	0	0	3	0	0	13	2	0	0	0	15
Hourly Total	**1**	**0**	**6**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**28**	**4**	**0**	**0**	**0**	**32**
08:00 - 08:15	0	0	5	0	0	0	0	5	1	1	13	2	0	0	0	17
08:15 - 08:30	0	0	1	0	0	0	0	1	2	0	14	2	0	0	0	18
08:30 - 08:45	0	0	7	0	1	0	0	8	0	0	21	3	0	0	0	24
08:45 - 09:00	0	0	10	1	0	0	0	11	1	0	26	2	0	0	0	29
Hourly Total	**0**	**0**	**23**	**1**	**1**	**0**	**0**	**25**	**4**	**1**	**74**	**9**	**0**	**0**	**0**	**88**
09:00 - 09:15	1	0	5	1	0	0	0	7	2	0	13	0	0	0	0	15
09:15 - 09:30	0	0	8	0	0	0	0	8	0	0	19	2	1	0	0	22
09:30 - 09:45	0	0	5	1	0	0	0	6	1	0	21	2	0	0	0	24
09:45 - 10:00	0	0	8	1	0	0	0	9	0	0	23	0	0	0	0	23
Hourly Total	**1**	**0**	**26**	**3**	**0**	**0**	**0**	**30**	**3**	**0**	**76**	**4**	**1**	**0**	**0**	**84**
10:00 - 10:15	0	0	5	1	0	0	0	6	0	0	17	3	0	0	0	20
10:15 - 10:30	0	0	4	1	0	0	0	5	0	1	20	6	0	0	0	27
10:30 - 10:45	0	0	12	0	0	0	0	12	0	0	32	3	0	0	0	35
10:45 - 11:00	0	0	4	0	0	0	0	4	0	0	25	3	0	0	0	28
Hourly Total	**0**	**0**	**25**	**2**	**0**	**0**	**0**	**27**	**0**	**1**	**94**	**15**	**0**	**0**	**0**	**110**
11:00 - 11:15	0	0	11	0	0	0	0	11	0	0	25	1	0	0	0	26
11:15 - 11:30	0	0	7	2	0	0	0	9	0	2	18	2	0	0	0	22
11:30 - 11:45	0	0	5	0	0	0	1	6	0	0	19	1	0	0	0	20
11:45 - 12:00	0	0	6	1	0	0	0	7	0	0	27	1	0	0	0	28
Hourly Total	**0**	**0**	**29**	**3**	**0**	**0**	**1**	**33**	**0**	**2**	**89**	**5**	**0**	**0**	**0**	**96**
12:00 - 12:15	0	1	8	1	0	0	0	10	0	0	28	1	0	0	0	29
12:15 - 12:30	0	0	14	1	0	0	0	15	0	0	34	2	0	0	0	36
12:30 - 12:45	0	0	9	3	0	0	0	12	1	0	25	2	0	0	0	28
12:45 - 13:00	0	0	12	2	0	0	0	14	1	1	36	2	0	0	0	40
Hourly Total	**0**	**1**	**43**	**7**	**0**	**0**	**0**	**51**	**2**	**1**	**123**	**7**	**0**	**0**	**0**	**133**
13:00 - 13:15	0	0	10	2	0	0	0	12	0	3	27	1	0	0	0	31
13:15 - 13:30	0	0	7	0	0	0	0	7	0	0	25	2	0	0	0	27
13:30 - 13:45	0	0	7	0	0	0	0	7	0	0	24	1	0	0	0	25
13:45 - 14:00	0	0	13	0	0	0	0	13	0	0	19	3	0	0	0	22
Hourly Total	**0**	**0**	**37**	**2**	**0**	**0**	**0**	**39**	**0**	**3**	**95**	**7**	**0**	**0**	**0**	**105**
14:00 - 14:15	0	0	11	0	0	0	0	11	0	0	31	0	0	0	0	31
14:15 - 14:30	0	0	10	0	0	0	0	10	0	0	21	1	1	0	0	23
14:30 - 14:45	0	1	6	0	0	0	0	7	0	0	21	1	0	0	0	22
14:45 - 15:00	0	0	14	0	0	0	0	14	0	2	24	2	0	0	0	28
Hourly Total	**0**	**1**	**41**	**0**	**0**	**0**	**0**	**42**	**0**	**2**	**97**	**4**	**1**	**0**	**0**	**104**
15:00 - 15:15	0	0	5	1	0	0	0	6	0	0	22	2	0	0	0	24
15:15 - 15:30	0	0	8	0	0	0	0	8	0	2	18	2	0	0	0	22
15:30 - 15:45	0	0	12	0	0	0	0	12	0	0	21	0	0	0	0	21
15:45 - 16:00	0	0	14	0	0	0	0	14	0	0	22	2	0	0	0	24
Hourly Total	**0**	**0**	**39**	**1**	**0**	**0**	**0**	**40**	**0**	**2**	**83**	**6**	**0**	**0**	**0**	**91**
16:00 - 16:15	0	0	15	0	0	0	0	15	0	0	24	0	0	0	0	24
16:15 - 16:30	0	0	11	0	0	0	0	11	0	0	44	1	0	0	0	45
16:30 - 16:45	0	0	21	1	0	0	0	22	0	0	24	1	0	0	0	25
16:45 - 17:00	0	0	14	0	0	0	0	14	0	0	32	0	0	0	0	32
Hourly Total	**0**	**0**	**61**	**1**	**0**	**0**	**0**	**62**	**0**	**0**	**124**	**2**	**0**	**0**	**0**	**126**
17:00 - 17:15	0	0	14	0	0	0	0	14	0	1	17	3	0	0	0	21
17:15 - 17:30	0	0	19	0	0	0	0	19	0	1	13	0	0	0	0	14
17:30 - 17:45	0	0	16	0	0	0	0	16	0	0	27	0	0	0	0	27
17:45 - 18:00	0	0	12	0	0	0	0	12	0	0	23	1	0	0	0	24
Hourly Total	**0**	**0**	**61**	**0**	**0**	**0**	**0**	**61**	**0**	**2**	**80**	**4**	**0**	**0**	**0**	**86**
18:00 - 18:15	0	0	10	0	0	0	0	10	0	0	19	0	0	0	0	19
18:15 - 18:30	1	0	5	0	0	0	0	6	0	0	19	1	0	0	0	20
18:30 - 18:45	0	0	10	0	0	0	0	10	0	1	28	0	0	0	0	29
18:45 - 19:00	0	0	9	0	0	0	0	9	0	0	19	0	0	0	0	19
Hourly Total	**1**	**0**	**34**	**0**	**0**	**0**	**0**	**35**	**0**	**1**	**85**	**1**	**0**	**0**	**0**	**87**

TOTAL	**3**	**2**	**425**	**20**	**1**	**0**	**1**	**452**	**9**	**15**	**1048**	**68**	**2**	**0**	**0**	**1142**

APPENDIX F

PICADY Modelling Outputs

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: Proposed Site Access.j9
Path: C:\OneDrive\20-00668 - 52 Mumbles Road, Swansea\Capacity Analysis\PICADY
Report generation date: 09/07/2021 13:59:23

Summary of junction performance

	AM					PM					Saturday				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2021 With Development														
Stream B-C	D1	0.0	6.66	0.04	A	D2	0.1	7.30	0.08	A	D3	0.1	7.67	0.11	A
Stream B-A		0.1	13.76	0.06	B		0.2	16.07	0.17	C		0.5	18.04	0.31	C
Stream C-AB		0.0	6.84	0.04	A		0.1	6.79	0.08	A		0.2	6.58	0.14	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	
Site number	
Date	09/07/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	LAPTOP-7PJKROJB\lloyd
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 With Development	AM	ONE HOUR	07:45	09:15	15
D2	2021 With Development	PM	ONE HOUR	15:15	16:45	15
D3	2021 With Development	Saturday	ONE HOUR	11:45	13:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2021 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.20	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mumbles Road (S)		Major
B	Proposed Access		Minor
C	Mubles Road (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	16.33		✓	3.89	174.9	✓	2.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	9.80	9.10	8.30	7.54	6.89	✓	3.00	119	148

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	639	0.064	0.162	0.102	0.231
B-C	828	0.070	0.177	-	-
C-B	799	0.171	0.171	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1300	100.000
B		✓	34	100.000
C		✓	1048	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	28	1272
	B	15	0	19
	C	1026	22	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.04	6.66	0.0	A
B-A	0.06	13.76	0.1	B
C-AB	0.04	6.84	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	14	647	0.022	14	0.0	5.686	A
B-A	11	392	0.029	11	0.0	9.449	A
C-AB	17	628	0.026	16	0.0	5.886	A
C-A	772			772			
A-B	21			21			
A-C	958			958			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	17	612	0.028	17	0.0	6.055	A
B-A	13	344	0.039	13	0.0	10.882	B
C-AB	20	595	0.033	20	0.0	6.256	A
C-A	922			922			
A-B	25			25			
A-C	1144			1144			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	21	562	0.037	21	0.0	6.653	A
B-A	17	278	0.059	16	0.1	13.760	B
C-AB	24	550	0.044	24	0.0	6.844	A
C-A	1130			1130			
A-B	31			31			
A-C	1400			1400			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	21	562	0.037	21	0.0	6.656	A
B-A	17	278	0.059	17	0.1	13.764	B
C-AB	24	550	0.044	24	0.0	6.844	A
C-A	1130			1130			
A-B	31			31			
A-C	1400			1400			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	17	611	0.028	17	0.0	6.062	A
B-A	13	344	0.039	14	0.0	10.885	B
C-AB	20	595	0.033	20	0.0	6.257	A
C-A	922			922			
A-B	25			25			
A-C	1144			1144			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	14	647	0.022	14	0.0	5.693	A
B-A	11	392	0.029	11	0.0	9.453	A
C-AB	17	628	0.026	17	0.0	5.889	A
C-A	772			772			
A-B	21			21			
A-C	958			958			

2021 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.46	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2021 With Development	PM	ONE HOUR	15:15	16:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1195	100.000
B		✓	80	100.000
C		✓	1418	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	35	1160
	B	43	0	37
	C	1376	42	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.08	7.30	0.1	A
B-A	0.17	16.07	0.2	C
C-AB	0.08	6.79	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:15 - 15:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	28	617	0.045	28	0.0	6.109	A
B-A	32	399	0.081	32	0.1	9.793	A
C-AB	32	643	0.049	32	0.1	5.882	A
C-A	1036			1036			
A-B	26			26			
A-C	873			873			

15:30 - 15:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	33	583	0.057	33	0.1	6.550	A
B-A	39	346	0.112	39	0.1	11.716	B
C-AB	38	615	0.062	38	0.1	6.240	A
C-A	1237			1237			
A-B	31			31			
A-C	1043			1043			

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	41	534	0.076	41	0.1	7.297	A
B-A	47	271	0.175	47	0.2	16.036	C
C-AB	47	578	0.081	47	0.1	6.784	A
C-A	1514			1514			
A-B	39			39			
A-C	1277			1277			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	41	533	0.076	41	0.1	7.305	A
B-A	47	271	0.174	47	0.2	16.070	C
C-AB	47	578	0.081	47	0.1	6.787	A
C-A	1514			1514			
A-B	39			39			
A-C	1277			1277			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	33	582	0.057	33	0.1	6.565	A
B-A	39	346	0.112	39	0.1	11.741	B
C-AB	38	615	0.062	38	0.1	6.245	A
C-A	1237			1237			
A-B	31			31			
A-C	1043			1043			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	28	616	0.045	28	0.0	6.123	A
B-A	32	400	0.081	33	0.1	9.810	A
C-AB	32	643	0.049	32	0.1	5.888	A
C-A	1036			1036			
A-B	26			26			
A-C	873			873			

2021 With Development, Saturday

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.87	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2021 With Development	Saturday	ONE HOUR	11:45	13:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1035	100.000
B		✓	137	100.000
C		✓	1585	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	48	987
	B	83	0	54
	C	1511	74	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	2
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.11	7.67	0.1	A
B-A	0.31	18.04	0.5	C
C-AB	0.14	6.58	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

11:45 - 12:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	41	610	0.067	40	0.1	6.314	A
B-A	62	419	0.149	62	0.2	10.060	B
C-AB	56	672	0.084	56	0.1	5.839	A
C-A	1137			1137			
A-B	36			36			
A-C	743			743			

12:00 - 12:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	49	578	0.084	48	0.1	6.797	A
B-A	75	365	0.204	74	0.3	12.361	B
C-AB	68	653	0.104	68	0.1	6.154	A
C-A	1357			1357			
A-B	43			43			
A-C	887			887			

12:15 - 12:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	59	529	0.112	59	0.1	7.659	A
B-A	91	291	0.314	91	0.4	17.909	C
C-AB	86	632	0.135	85	0.2	6.580	A
C-A	1660			1660			
A-B	53			53			
A-C	1087			1087			

12:30 - 12:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	59	529	0.112	59	0.1	7.673	A
B-A	91	291	0.314	91	0.5	18.035	C
C-AB	86	632	0.135	86	0.2	6.583	A
C-A	1660			1660			
A-B	53			53			
A-C	1087			1087			

12:45 - 13:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	49	577	0.084	49	0.1	6.814	A
B-A	75	365	0.204	75	0.3	12.448	B
C-AB	68	653	0.104	68	0.1	6.161	A
C-A	1357			1357			
A-B	43			43			
A-C	887			887			

13:00 - 13:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	41	610	0.067	41	0.1	6.331	A
B-A	62	419	0.149	63	0.2	10.116	B
C-AB	56	672	0.084	56	0.1	5.845	A
C-A	1137			1137			
A-B	36			36			
A-C	743			743			

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

Filename: A4067 Derwen Fawr Road.j9
Path: C:\OneDrive\20-00668 - 52 Mumbles Road, Swansea\Capacity Analysis\PICADY
Report generation date: 09/07/2021 11:58:52

Summary of junction performance

	AM					PM					Saturday				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2021 Without Development														
Stream B-C	D1	0.1	8.35	0.05	A	D2	0.1	7.87	0.05	A	D3	0.1	8.05	0.12	A
Stream B-A		1.3	32.67	0.57	D		1.0	30.36	0.50	D		1.2	31.90	0.56	D
Stream C-AB		0.0	7.41	0.03	A		0.1	7.40	0.08	A		0.1	7.28	0.12	A
	2021 With Development														
Stream B-C	D4	0.1	8.25	0.05	A	D5	0.1	7.93	0.06	A	D6	0.1	8.44	0.13	A
Stream B-A		1.2	30.83	0.56	D		1.0	31.40	0.51	D		1.5	38.78	0.61	E
Stream C-AB		0.0	7.34	0.03	A		0.1	7.43	0.08	A		0.2	7.50	0.13	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	
Site number	
Date	09/07/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	LAPTOP-7PJKROJB\lloyd
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Without Development	AM	ONE HOUR	07:45	09:15	15
D2	2021 Without Development	PM	ONE HOUR	15:15	16:45	15
D3	2021 Without Development	Saturday	ONE HOUR	11:45	13:15	15
D4	2021 With Development	AM	ONE HOUR	07:45	09:15	15
D5	2021 With Development	PM	ONE HOUR	15:15	16:45	15
D6	2021 With Development	Saturday	ONE HOUR	11:45	13:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2021 Without Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.64	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mumbles Road (S)		Major
B	Derwen Fawr Road		Minor
C	Mumbles Road (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	16.64		✓	4.20	118.3	✓	11.13

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B	Two lanes	5.00	5.00	73	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	641	0.063	0.158	0.100	0.226
B-C	798	0.066	0.166	-	-
C-B	782	0.163	0.163	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Without Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1529	100.000
B		✓	154	100.000
C		✓	1103	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	189	1340
	B	134	0	20
	C	1089	14	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	1	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.05	8.35	0.1	A
B-A	0.57	32.67	1.3	D
C-AB	0.03	7.41	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	575	0.026	15	0.0	6.429	A
B-A	101	376	0.268	99	0.4	12.936	B
C-AB	11	590	0.018	10	0.0	6.210	A
C-A	820			820			
A-B	142			142			
A-C	1009			1009			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	527	0.034	18	0.0	7.075	A
B-A	120	326	0.369	120	0.6	17.346	C
C-AB	13	553	0.023	13	0.0	6.662	A
C-A	979			979			
A-B	170			170			
A-C	1205			1205			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	455	0.048	22	0.1	8.319	A
B-A	148	257	0.574	145	1.2	31.340	D
C-AB	15	501	0.031	15	0.0	7.408	A
C-A	1199			1199			
A-B	208			208			
A-C	1475			1475			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	453	0.049	22	0.1	8.348	A
B-A	148	257	0.574	147	1.3	32.673	D
C-AB	15	501	0.031	15	0.0	7.408	A
C-A	1199			1199			
A-B	208			208			
A-C	1475			1475			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	525	0.034	18	0.0	7.103	A
B-A	120	326	0.369	123	0.6	17.957	C
C-AB	13	553	0.023	13	0.0	6.663	A
C-A	979			979			
A-B	170			170			
A-C	1205			1205			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	574	0.026	15	0.0	6.441	A
B-A	101	376	0.268	102	0.4	13.154	B
C-AB	11	590	0.018	11	0.0	6.210	A
C-A	820			820			
A-B	142			142			
A-C	1009			1009			

2021 Without Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.24	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2021 Without Development	PM	ONE HOUR	15:15	16:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1389	100.000
B		✓	131	100.000
C		✓	1474	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	166	1223
	B	107	0	24
	C	1438	36	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	2	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.05	7.87	0.1	A
B-A	0.50	30.36	1.0	D
C-AB	0.08	7.40	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:15 - 15:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	597	0.030	18	0.0	6.220	A
B-A	81	360	0.224	79	0.3	12.779	B
C-AB	27	607	0.045	27	0.0	6.203	A
C-A	1083			1083			
A-B	125			125			
A-C	921			921			

15:30 - 15:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	552	0.039	22	0.0	6.782	A
B-A	96	308	0.312	96	0.4	16.897	C
C-AB	32	573	0.056	32	0.1	6.655	A
C-A	1293			1293			
A-B	149			149			
A-C	1099			1099			

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	26	485	0.055	26	0.1	7.853	A
B-A	118	236	0.499	116	0.9	29.487	D
C-AB	40	526	0.075	40	0.1	7.398	A
C-A	1583			1583			
A-B	183			183			
A-C	1347			1347			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	26	484	0.055	26	0.1	7.874	A
B-A	118	236	0.499	118	1.0	30.361	D
C-AB	40	526	0.075	40	0.1	7.398	A
C-A	1583			1583			
A-B	183			183			
A-C	1347			1347			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	551	0.039	22	0.0	6.801	A
B-A	96	308	0.312	98	0.5	17.321	C
C-AB	32	573	0.056	32	0.1	6.657	A
C-A	1293			1293			
A-B	149			149			
A-C	1099			1099			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	596	0.030	18	0.0	6.234	A
B-A	81	360	0.224	81	0.3	12.949	B
C-AB	27	607	0.045	27	0.0	6.209	A
C-A	1083			1083			
A-B	125			125			
A-C	921			921			

2021 Without Development, Saturday

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.67	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2021 Without Development	Saturday	ONE HOUR	11:45	13:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1204	100.000
B		✓	185	100.000
C		✓	1626	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	163	1041
	B	131	0	54
	C	1563	63	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	2
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.12	8.05	0.1	A
B-A	0.56	31.90	1.2	D
C-AB	0.12	7.28	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

11:45 - 12:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	41	615	0.066	40	0.1	6.264	A
B-A	99	378	0.261	97	0.3	12.758	B
C-AB	47	633	0.075	47	0.1	6.145	A
C-A	1177			1177			
A-B	123			123			
A-C	784			784			

12:00 - 12:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	49	573	0.085	48	0.1	6.863	A
B-A	118	327	0.360	117	0.5	17.071	C
C-AB	57	604	0.094	57	0.1	6.580	A
C-A	1405			1405			
A-B	147			147			
A-C	936			936			

12:15 - 12:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	59	508	0.117	59	0.1	8.018	A
B-A	144	257	0.562	142	1.2	30.669	D
C-AB	69	563	0.123	69	0.1	7.282	A
C-A	1721			1721			
A-B	179			179			
A-C	1146			1146			

12:30 - 12:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	59	507	0.117	59	0.1	8.049	A
B-A	144	256	0.562	144	1.2	31.897	D
C-AB	69	563	0.123	69	0.1	7.285	A
C-A	1721			1721			
A-B	179			179			
A-C	1146			1146			

12:45 - 13:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	49	571	0.085	49	0.1	6.892	A
B-A	118	327	0.360	120	0.6	17.636	C
C-AB	57	604	0.094	57	0.1	6.584	A
C-A	1405			1405			
A-B	147			147			
A-C	936			936			

13:00 - 13:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	41	614	0.066	41	0.1	6.282	A
B-A	99	378	0.261	100	0.4	12.967	B
C-AB	47	633	0.075	48	0.1	6.154	A
C-A	1177			1177			
A-B	123			123			
A-C	784			784			

2021 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.57	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2021 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1510	100.000
B		✓	154	100.000
C		✓	1073	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	189	1321
	B	134	0	20
	C	1060	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	1	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.05	8.25	0.1	A
B-A	0.56	30.83	1.2	D
C-AB	0.03	7.34	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	578	0.026	15	0.0	6.398	A
B-A	101	381	0.265	99	0.4	12.727	B
C-AB	10	592	0.017	10	0.0	6.177	A
C-A	798			798			
A-B	142			142			
A-C	995			995			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	530	0.034	18	0.0	7.027	A
B-A	120	332	0.363	120	0.6	16.908	C
C-AB	12	556	0.021	12	0.0	6.617	A
C-A	953			953			
A-B	170			170			
A-C	1188			1188			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	460	0.048	22	0.0	8.224	A
B-A	148	264	0.559	145	1.2	29.710	D
C-AB	14	505	0.028	14	0.0	7.340	A
C-A	1167			1167			
A-B	208			208			
A-C	1454			1454			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	458	0.048	22	0.1	8.250	A
B-A	148	264	0.559	147	1.2	30.833	D
C-AB	14	505	0.028	14	0.0	7.340	A
C-A	1167			1167			
A-B	208			208			
A-C	1454			1454			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	529	0.034	18	0.0	7.050	A
B-A	120	332	0.363	123	0.6	17.446	C
C-AB	12	556	0.021	12	0.0	6.618	A
C-A	953			953			
A-B	170			170			
A-C	1188			1188			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	577	0.026	15	0.0	6.412	A
B-A	101	381	0.265	102	0.4	12.937	B
C-AB	10	592	0.017	10	0.0	6.180	A
C-A	798			798			
A-B	142			142			
A-C	995			995			

2021 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2021 With Development	PM	ONE HOUR	15:15	16:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1402	100.000
B		✓	131	100.000
C		✓	1490	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	166	1236
	B	107	0	24
	C	1454	36	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	2	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.06	7.93	0.1	A
B-A	0.51	31.40	1.0	D
C-AB	0.08	7.43	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:15 - 15:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	595	0.030	18	0.0	6.239	A
B-A	81	357	0.225	79	0.3	12.901	B
C-AB	27	606	0.045	27	0.0	6.220	A
C-A	1095			1095			
A-B	125			125			
A-C	931			931			

15:30 - 15:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	550	0.039	22	0.0	6.812	A
B-A	96	305	0.316	96	0.4	17.155	C
C-AB	32	571	0.057	32	0.1	6.679	A
C-A	1307			1307			
A-B	149			149			
A-C	1111			1111			

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	26	481	0.055	26	0.1	7.909	A
B-A	118	232	0.508	116	1.0	30.426	D
C-AB	40	524	0.076	40	0.1	7.433	A
C-A	1601			1601			
A-B	183			183			
A-C	1361			1361			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	26	480	0.055	26	0.1	7.932	A
B-A	118	232	0.508	118	1.0	31.398	D
C-AB	40	524	0.076	40	0.1	7.433	A
C-A	1601			1601			
A-B	183			183			
A-C	1361			1361			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	549	0.039	22	0.0	6.834	A
B-A	96	305	0.316	98	0.5	17.609	C
C-AB	32	571	0.057	32	0.1	6.684	A
C-A	1307			1307			
A-B	149			149			
A-C	1111			1111			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	594	0.030	18	0.0	6.252	A
B-A	81	357	0.225	81	0.3	13.075	B
C-AB	27	606	0.045	27	0.0	6.226	A
C-A	1095			1095			
A-B	125			125			
A-C	931			931			

2021 With Development, Saturday

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2021 With Development	Saturday	ONE HOUR	11:45	13:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1266	100.000
B		✓	188	100.000
C		✓	1709	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	163	1103
	B	131	0	57
	C	1643	66	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	2
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.13	8.44	0.1	A
B-A	0.61	38.78	1.5	E
C-AB	0.13	7.50	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

11:45 - 12:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	43	606	0.071	43	0.1	6.388	A
B-A	99	364	0.271	97	0.4	13.413	B
C-AB	50	625	0.079	49	0.1	6.248	A
C-A	1237			1237			
A-B	123			123			
A-C	830			830			

12:00 - 12:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	51	562	0.091	51	0.1	7.054	A
B-A	118	310	0.379	117	0.6	18.510	C
C-AB	59	595	0.100	59	0.1	6.725	A
C-A	1477			1477			
A-B	147			147			
A-C	992			992			

12:15 - 12:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	63	491	0.128	63	0.1	8.395	A
B-A	144	236	0.611	141	1.4	36.588	E
C-AB	73	552	0.132	73	0.2	7.501	A
C-A	1809			1809			
A-B	179			179			
A-C	1214			1214			

12:30 - 12:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	63	489	0.128	63	0.1	8.443	A
B-A	144	236	0.611	144	1.5	38.775	E
C-AB	73	552	0.132	73	0.2	7.504	A
C-A	1809			1809			
A-B	179			179			
A-C	1214			1214			

12:45 - 13:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	51	559	0.092	51	0.1	7.090	A
B-A	118	310	0.379	121	0.6	19.355	C
C-AB	59	595	0.100	59	0.1	6.732	A
C-A	1477			1477			
A-B	147			147			
A-C	992			992			

13:00 - 13:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	43	605	0.071	43	0.1	6.408	A
B-A	99	364	0.271	100	0.4	13.667	B
C-AB	50	625	0.079	50	0.1	6.260	A
C-A	1237			1237			
A-B	123			123			
A-C	830			830			