Land adjacent to Pludds Meadow,
Laugharne

Transport Statement

13 April 2023

For and on behalf of

Mr Ken Davies

Project Ref: 2023-752

LvW Highways Ltd
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1 INTRODUCTION

1.1 LvW Highways Ltd has been appointed by Mr Ken Davies to produce a Transport Statement in support of a LDP2 candidate site for the Construction of 17 no. dwelling houses, access road and associated infrastructure at Land adjacent to Pludds Meadow, Laugharne.

Purpose of the report

1.2 This report will outline and assess any transport issues in relation to the site. It will consider the traffic generation of the development and potential impact on the surrounding transport network with any required mitigation measures outlined.

1.3 The Transport Statement will consider the access arrangements to the site for all modes of travel including walking, cycling, and public transport. This report will also outline and assess any transport issues in relation to the site and quantify whether the road network is suitable to accommodate the predicted impact of the development.

1.4 It finds that there is a good range of facilities within walking and cycling distance to the site and that the site benefits from ready access to good quality, regular public transport services.

1.5 The site's proximity to services and its accessibility by sustainable modes of transport provide opportunities for many of the trips generated by users of the development, to be made by sustainable, non-car, means.

1.6 This Transport Statement is produced in accordance with, and in recognition of, local and central government guidance and follows our understanding of the requirements set out in Planning Policy Wales.

1.7 LvW Highways Ltd as independent transport planning consultants have prepared this Transport Statement providing what we consider is a fair and unbiased appraisal of the traffic and highways issues arising due to the proposed development and with consideration of other proposed developments in the area.

Report Structure

1.8 The structure of this Transport Statement is as follows:

- Section 2: Provides a summary of relevant local planning policy;
- Section 3: Outlines the existing accessibility of the site by modes of movement and describes the existing highway and transport conditions in the vicinity of the site including an analysis of collision data and existing traffic volumes;
- Section 4 Outlines the relevant characteristics of the proposed development including provision for walking, cycling and public transport; estimates the number of vehicle trips that would be generated by the development;
- Section 5: Presents a summary of the report and identifies the main conclusions that can be drawn from the Transport Statement.

2 PLANNING POLICIES

Introduction

2.1 The following is a list of current Planning Policy documents discussed briefly below:-

- Planning Policy Wales (Edition 11, February 2021),
- Technical Advice Note (TAN) 18: Transport (2007),
- Future Wales – the National Plan 2040 (Feb 2021),
- Active Travel (Wales) Act 2013 and
- Wellbeing of Future Generations (Wales) Act 2015.
- Carmarthenshire Local Development Plan (2006-2021),

Planning Policy Wales

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

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

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

Future Wales: The National Plan 2040

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

The Active Travel (Wales) Act 2013

2.5 The Active Travel (Wales) Act 2013 is Welsh Government legislation aimed to support an increase in the level of walking and cycling in Wales, to encourage a shift in travel behaviour to active travel modes, and to facilitate the building of walking and cycling infrastructure.

2.6 Active travel is a term used to describe walking and cycling for purposeful journeys to a destination, or in combination with public transport. Whilst walking and cycling are in themselves healthy activities that are to be encouraged, it is when they displace car journeys that they deliver significant benefits for the health and well-being of Wales. Achieving modal shift by displacing private car journeys with walking and cycling and public transport is at the heart of Llwybr Newydd, the Wales Transport Strategy.

2.7 The provisions of the act therefore put in place the conditions that will allow many more people whose current mode of travel is the car to switch to more sustainable

modes for shorter journeys and facilitate access to public transport as part of longer distance journeys.

2.8 The active travel network is designed to serve everyday journeys. These are also known as utility journeys – trips with a purpose rather than purely for leisure. Examples of destinations which can be considered to form an everyday or utility journey include; school or other educational establishments, local shops, employment sites, healthcare facilities, and other destinations people travel to for a purpose.

2.9 In the Welsh Government publication "Active Travel Act Guidance July 2021" Table 4.1 provides a guide for network development in relation to reasonable distances that would be travelled by each respective mode. Table 4.1 is not descriptive of all active users and travel distances may be dependent upon a number of factors such as journey purpose, topography or suitability of route. We have presented Table 4.1 in **Figure 1** below.

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

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

Figure 1: Typical distance range for each mode of active travel

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

Well-being of Future Generations (Wales) Act

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

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

A prosperous Wales

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

A resilient Wales

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

A healthier Wales

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

A more equal Wales

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

A Wales of cohesive communities

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

A Wales of vibrant culture and thriving Welsh language

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

A globally responsible Wales

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

Carmarthenshire Local Development Plan (2006-2021)

Policy TR2 Location of Development – Transport Considerations

2.13 Proposals which have the potential to generate a significant number of trips either as an origin, or as a destination (including residential, employment, retail and leisure) will be expected through design, to maximise accessibility by alternative modes of transport. Improving accessibility is an important objective of the Plan with the location of new developments important in ensuring accessibility can be maximised. The rural nature of the County raises challenges in this regard, but proposals will be expected and encouraged to achieve this.

Policy TR3 Highways in Developments - Design Considerations

2.14 Proposals should incorporate facilities encouraging and affording the opportunity to those attending the sites to utilise alternative means of transport. These facilities could include showers, changing facilities and storage. Developers should be able to demonstrate that appropriate levels of access to local services by walking, cycling and public transport for new residents and the wider community are achieved (TAN18: Transport – Para 3.6).

Planning Policy Summary

2.15 The overall aim of Planning Policy is to deliver a planning system which is positive in outlook and enables development, helping to deliver sustainable places that include homes, jobs and infrastructure, whilst providing opportunities to protect and

enhance our most important built and natural environments and support the use of the Welsh language.

2.16 In terms of Highways and Transportation this is for walking and cycling to be the natural mode of choice for short everyday journeys, or as part of a longer journey in combination with other sustainable modes.

2.17 We will show that the proposed development at the Land adjacent to Pludds Meadow, Laugharne is located in a sustainable location.

2.18 The proposed development site is accessible by a range of different transport modes such as Walking, Cycling and Public Transport provision and therefore will not be overly reliant on the use of the private motor vehicle.

3 EXISTING CONDITIONS

3.1 This section of the report will consider the development site and its location relative to the existing highway network. Reference will be made to prevailing traffic conditions where this is deemed to be relevant to the proposed development.

Site Location & Surrounding Area

3.2 The proposed site is located to the south west of Laugharne town centre at the top of Stoneway Road (OSGR 229766, 210386) and its location within the local area is shown in **Figure 2**.

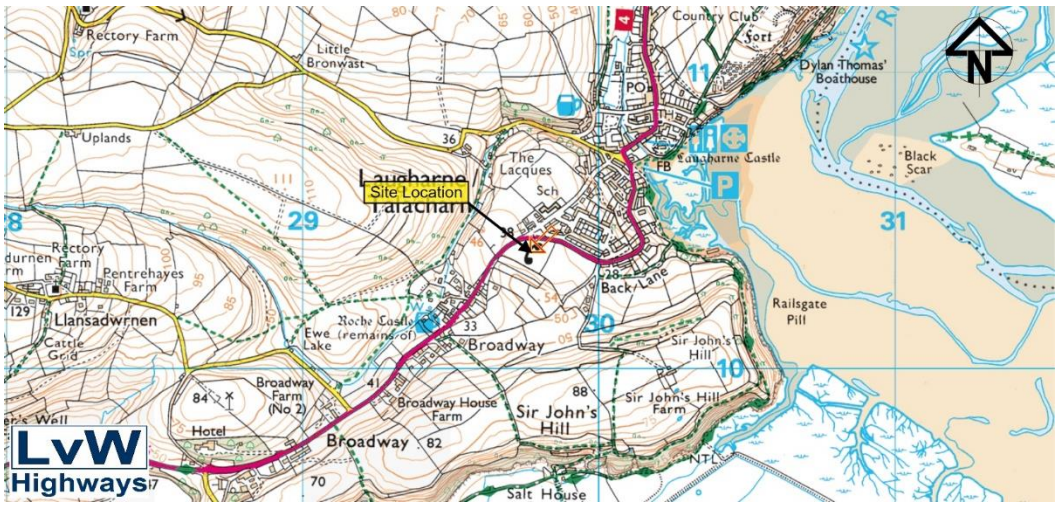


Figure 2: Site location within the local area

3.3 Laugharne is a town in Carmarthenshire, Wales, lying on the estuary of the River Tâf. It is known for having been the home of Dylan Thomas from 1949 until his death in 1953. According to the 2011 census, Laugharne has a population of 1,222.

3.4 Laugharne is about 6 km south of St Clears and 20km south west of Carmarthen as can be seen in **Figure 3**.

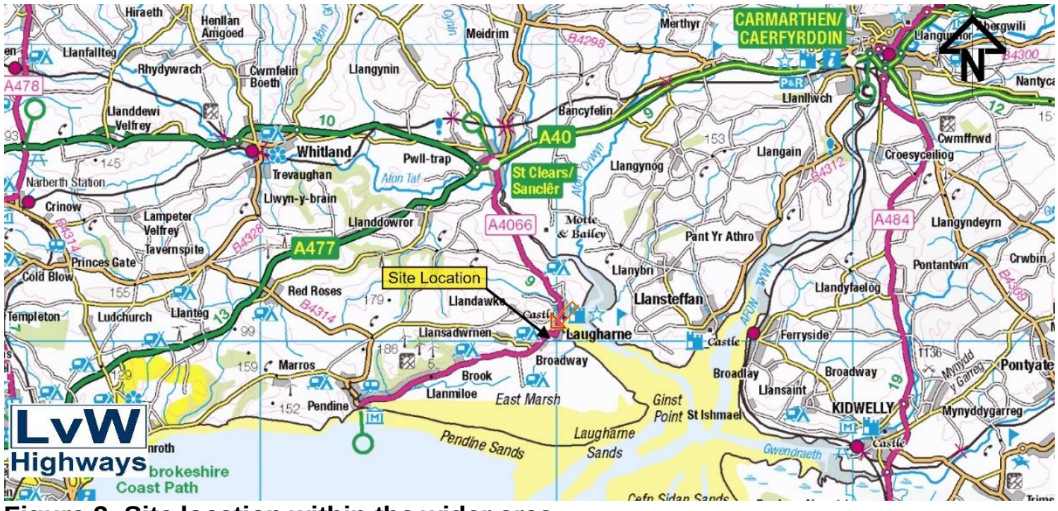


Figure 3: Site location within the wider area

3.5 If travelling from the West, the main route to the site from the A40 and A477 is via St Clears, turn right at the traffic signal controlled junction onto the A4066 heading through lower St Clears over the river bridge and continue south in to Laugharne.

3.6 The main route to the site from the M4 and A40 east is via Carmarthen. Take the A40 off slip directions to St Clears and Laugharne, at its junction with the A4066, turn right and head south in to Laugharne.

3.7 The A4066 as it heads out of Laugharne to Broadway and Pendine has been constructed as a typical primary road with a footway on both sides in the vicinity of the bus stops.

3.8 As the A4066 passes the entrance to the site and Stoneway Road, the carriageway is approximately 7.0m wide with two traffic lanes of 3.5m wide to accommodate the traffic lanes and road widening as it turns through almost 90 degrees bend.

Proposed site

3.9 **Figure 4** (an extract from Google Earth) shows an aerial view of the proposed development site and its relation to Laugharne.

Figure 4: Aerial view of development site

3.10 The development site is currently open field grazing land. To the north and west the site is bounded by the A4066. At the southern boundary is a band of trees that separate the development field for adjacent agricultural fields. The eastern boundary is also tree and shrub lined separating the development field from the neighbouring Pludd's Meadow residential development.

3.11 The A4066 is currently subject to a 30mph speed limit as it passes the site and runs through Laugharne to the north-east and Broadway to the south-west.

Active Travel Network

3.12 Active Travel means walking and cycling (including the use of mobility scooters and electric wheelchairs) for everyday journeys. These include journeys to work, to the shops or to access services, such as health, leisure centres and bus/rail stations. Active travel is important in promoting healthier lifestyles and reducing the negative impacts of traffic upon neighbourhoods and communities.

3.13 Laugharne does not appear on the Carmarthenshire County Council Integrated Network Maps.

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

3.14 Local Authorities are required to provide free transport for all pupils of compulsory school age (5-16) if their nearest suitable school is:

- Beyond 2 miles / 3.22 kilometres (if below the age of 8); or
- Beyond 3 miles / 4.83 kilometres (if aged between 8 and 16).

3.15 A 400m walking distance to a bus stop and an 800m walking distance to a railway station has been widely adopted by many Highway Authorities. However, the reason why these distances have been selected is not clear. The most recent publication from CIHT (2015) acknowledges that the research is old and more work is required.

Pedestrian Facilities

3.16 The development site is ideally situated for walkers to connect to the local primary school and Laugharne town centre. On the A4066 there are footways running along the carriageway providing access to the bus stops and shelters. Once at Stoneway Road there are lightly trafficked streets leading to Laugharne town centre.

3.17 There are dropped kerbs and tactile paving provided on the footways along the A4066.

3.18 Manual for Streets considers the width of footways required for pedestrian activity and **Figure 5** shows the width of typical pedestrian users.

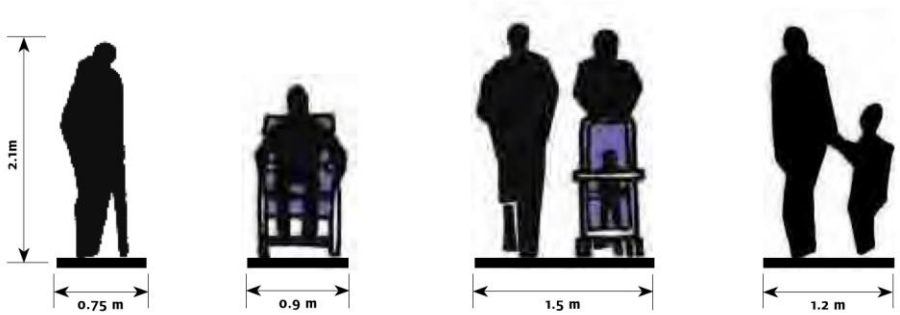


Figure 5: Manual for Street minimum footway widths

3.19 As shown in **Figure 6**, an extract from DfT's 'Inclusive Mobility' document (2002), a footway width of 1.5m is suitable for a wheelchair user and ambulant person side by side.

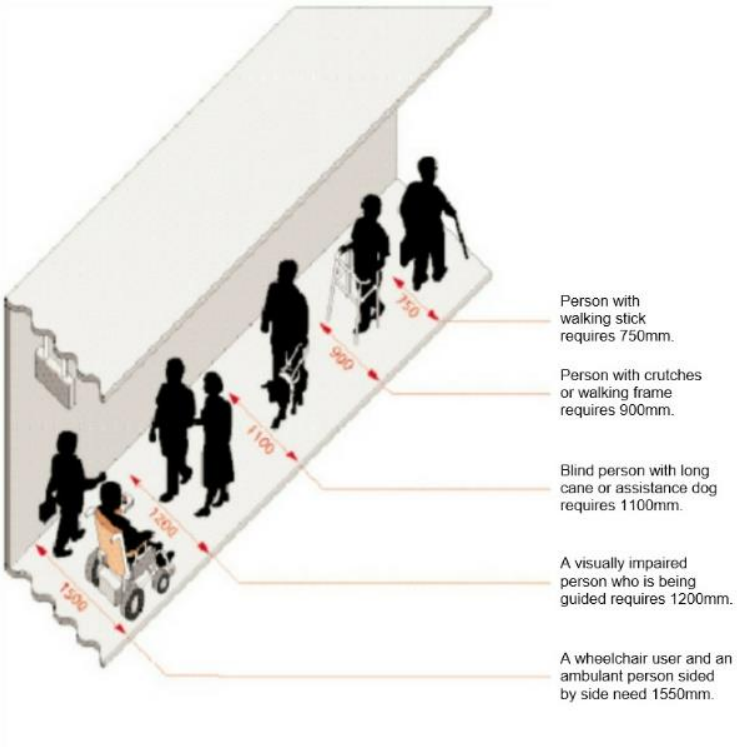


Figure 6: Footway widths (DfT 'Inclusive Mobility' 2002)

3.20 Pedestrian access to bus stops located on the local roads are available via the existing footway links.

3.21 **Figure 7** shows the pedestrian isochrones for 400m, 1.61km (1 mile), and 3.22km (2 miles) from the centre of the proposed development site within walking distance of this notional point.

3.22 The isochrones for walking shows that many of the local areas are within the statutory walking distances. We consider, that if these distances are presumed acceptable for primary school children, then they must be acceptable for adults.

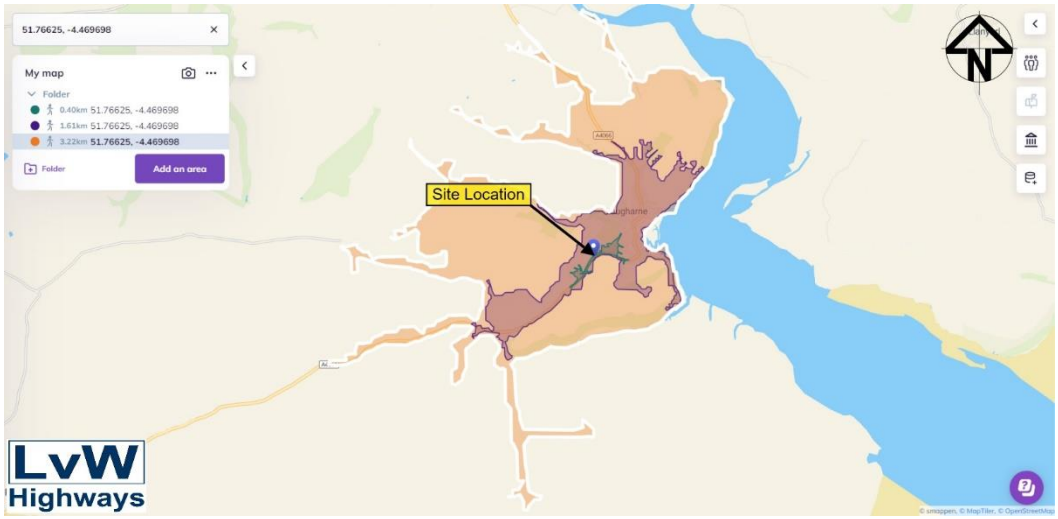


Figure 7: Walking isochrones for 400m, 1610m (1mile) and 3220m (2miles)

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

3.24 On the basis that there is an acceptable level of provision for pedestrians it is reasonable to expect that typical able bodied people are capable of walking at least 3.22km (2 miles) for day to day activities.

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

Public Rights of Way

3.26 There are many Public Rights of Way in and around Laugharne as can be seen in **Figure 8** which is an extract from the Carmarthenshire consolidated definitive map of public rights of way for the County of Carmarthenshire.

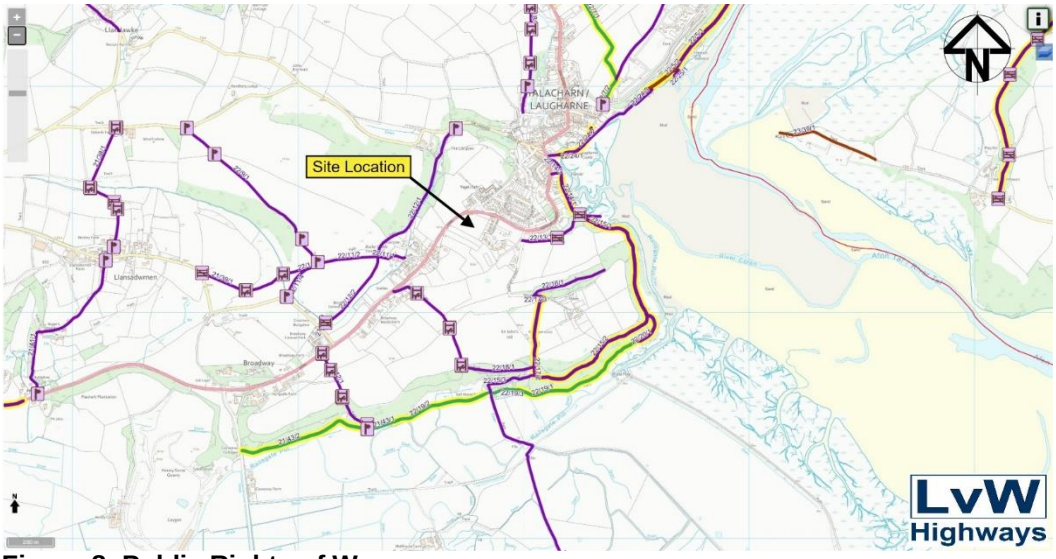


Figure 8: Public Rights of Way

Cycle Facilities

3.27 In the vicinity of the development site, cyclists are accommodated on the carriageway in line with the guidance contained in Manual for Streets, Manual for Streets 2 and The Highway Code.

3.28 The Institution of Highways and Transportation advises that the mean average length for cycling journeys is approximately 4 km although states that journeys of up to three times these distances are not uncommon for regular commuters.

3.29 The Welsh Government suggest that cycling for utility journeys could be undertaken for lengths of up to 8km (5 miles).

3.30 **Figure 9** shows the cycling isochrones for 4 and 8 kilometres from the centre of the proposed development site.

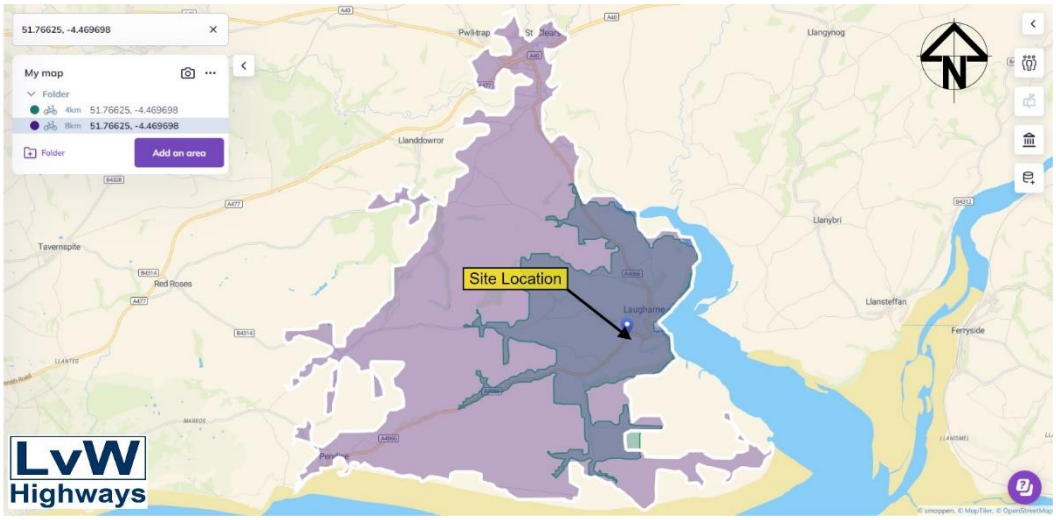


Figure 9: Cycling isochrones 4km and 8km

3.31 To identify if designated cycling routes run near to the development site we have undertaken a review of information available on-line on the Sustrans webpages. This shows the site is very close to National Route 4 as can be seen in **Figure 10**.

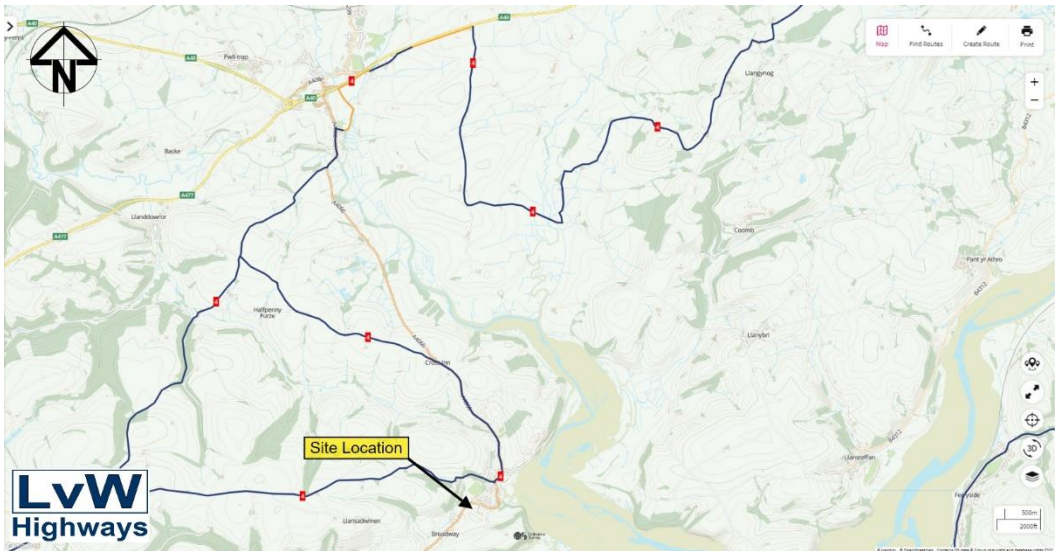


Figure 10: National Cycle Network

3.32 National Cycle Route 4 is a long distance route between London and Fishguard via Reading, Bath, Bristol, Newport, Swansea, Carmarthen, Tenby, Haverfordwest and St. Davids.

3.33 Heading west from Swansea the Celtic Trail West cycle route features two large traffic-free sections, the Millennium Coastal Park near Llanelli and the Brunel Trail along a disused railway between Pembroke and Haverfordwest. A path between Pembrey and Burry Port provides a cycle and walking link along a scenic old railway and also gives access to two local tourist attractions: Pembrey Country Park and the Millennium Coastal Park. The rest of the route can be hilly but rewards the cyclist with stunning coastal scenery.

3.34 In the vicinity of the development site, to get to NCR 4 cyclists can use the lightly trafficked Stoneway Road, a typical residential lane suitable for family cycling. Pedestrians and cyclists can get to Stoneway Road along a short section of the A4066. Stoneway Road turns to a traffic free route as it passes the school and leads to the town centre, although it does has a fairly steep gradient.

Public Transport Network

3.35 The proposed development site is very conveniently located to access public transport. There are bus stops on the southern side of the proposed site access, know as Orchard Park. These bus stops are within 100m of the proposed site access and there are several bus stops in Laugharne within 400m.

3.36 The close proximity of the proposed development site to these public transport services reduce the need to travel, especially by private car and promote the use of more sustainable travel modes.

Bus Services

3.37 The westbound bus stop has yellow bus stop road markings on the running carriageway and a bus shelter present on the footway. For the eastbound direction buses there is a bus shelter and stop on the corner of the junction of the A4066 and Stoneway Road some 100m from the site entrance.

3.38 The 222 service stops at these bus stops six days a week. The bus runs five times a day between Pendine and Carmarthen.

3.39 These stops are within a five minute walking distance of the application site and provide access to the regular and frequent bus services to local destinations. **Table 1** lists the bus services that are available from Orchard Park bus stop.

Service	Route	Frequency
222	Pendine – Carmarthen Orchard Park stop	Mon-Sat 07:31, 09:57, 12:25, 14:20, 17:05
222	Carmarthen – Pendine Orchard Park stop	Mon-Sat 09:10, 11:55, 13:45, 16:35, 18:25

Table 1: Bus Routes & Frequency

Rail Services

3.40 Carmarthen railway station is on is on the West Wales Line serving the town and is located, south of the River Towy. The station is operated by Transport for Wales. Great Western Railway also run a limited service between Carmarthen and London Paddington, usually one train each way daily with additional services on Sunday.

3.41 To the east, Transport for Wales operate regular services to Swansea, Cardiff Central, Crewe and Manchester Piccadilly. Great Western Railway currently operate one service per day (Mon-Sat, 3 on Sundays) between this station and London Paddington. The majority of local train services west of Carmarthen are timed to connect with the London Paddington services at either Swansea or Cardiff Central.

3.42 To the west, Transport for Wales operate services to Pembroke Dock, Milford Haven and Fishguard Harbour. Carmarthen is the eastern terminus for a few of these services.

3.43 The Welsh Government are looking into the provision of a railway station at St Clears but the timing of this is unknown.

Accessibility and Sustainability Assessment Conclusions

3.44 Walking and cycling both offer viable modes of transport for access to the development site. These modes would be particularly effective at reducing car travel.

3.45 The town is well connected by bus provision, particularly to the larger population centres in the district and neighbouring districts where services frequencies are hourly or sub-hourly.

3.46 The provision to smaller more local destinations is more infrequent 1 hourly to 3 hourly but some of these service also compliment more frequent provision.

3.47 The proximity of rail provision is accessible and provides services to local destinations at sub hourly frequencies.

3.48 The site is located in a sustainable location with real choice in non-car modes of transport due to its accessible location.

Existing Vehicle Movements on A4066

3.49 To determine the volume of traffic that currently uses the A4066 we have extracted data from the DfT traffic counts website[1] and 'Count Point 10638' is located just south of the junction with Stoneway Road. **Figure 11** shows the location of Count Point 10638 and shows that it is some 30m south of Stoneway Road junction.

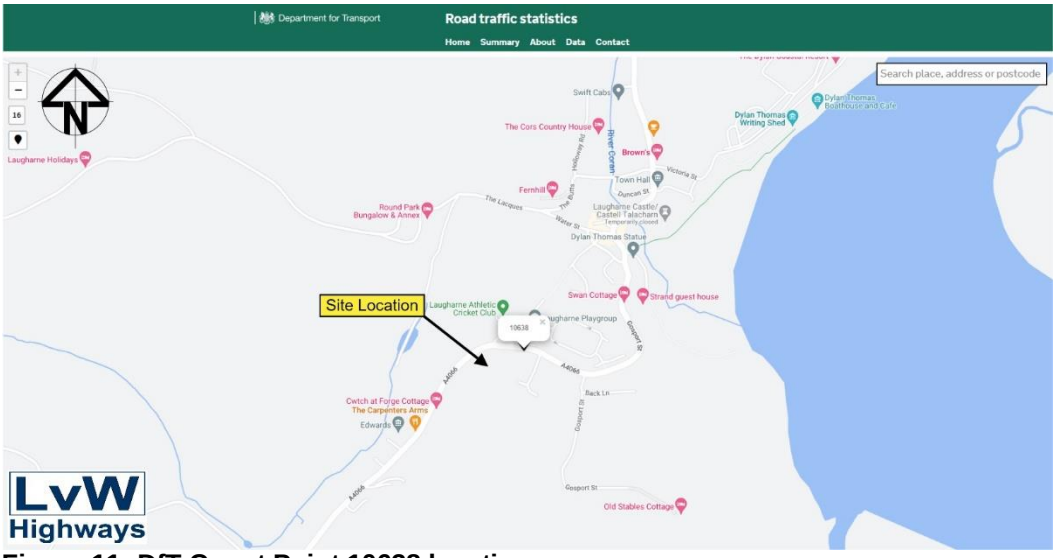


Figure 11: DfT Count Point 10638 location

3.50 **Table 2** describes the typical annual average daily traffic flows on the A4066 over the years from 2000 to 2021. It shows the directional flow north and south and also the total two-way flows.

[1] Road traffic statistics - Manual count point: 10638 (dft.gov.uk)

Year	Northbound	Southbound	Two-way
2000			2088
2001			2132
2002	960	810	1770
2003	1000	846	1846
2004	966	825	1791
2005	961	827	1788
2006	974	840	1814
2007	1360	1548	2908
2008	1354	1539	2893
2009	1375	1564	2939
2010	1339	1524	2863
2011	1344	1529	2873
2012	1324	1503	2827
2013	1346	1528	2874
2014	1384	1570	2954
2015	1139	1232	2371
2016	1164	1260	2424
2017	1173	1270	2443
2018	1177	1274	2451
2019	1179	1277	2456
2020	890	966	1856
2021	981	1064	2045

Table 2: Annual Average Daily Traffic Flows on the A4066

3.51 **Chart 1** shows how the traffic flows have fluctuate over the years from 2000 to 2021. The recorded data classifies the number of vehicles into the standard vehicle classification sets, with heavy goods vehicles identified separately as motorcycles; pedal cycles; light goods vehicles and buses and coaches etc.

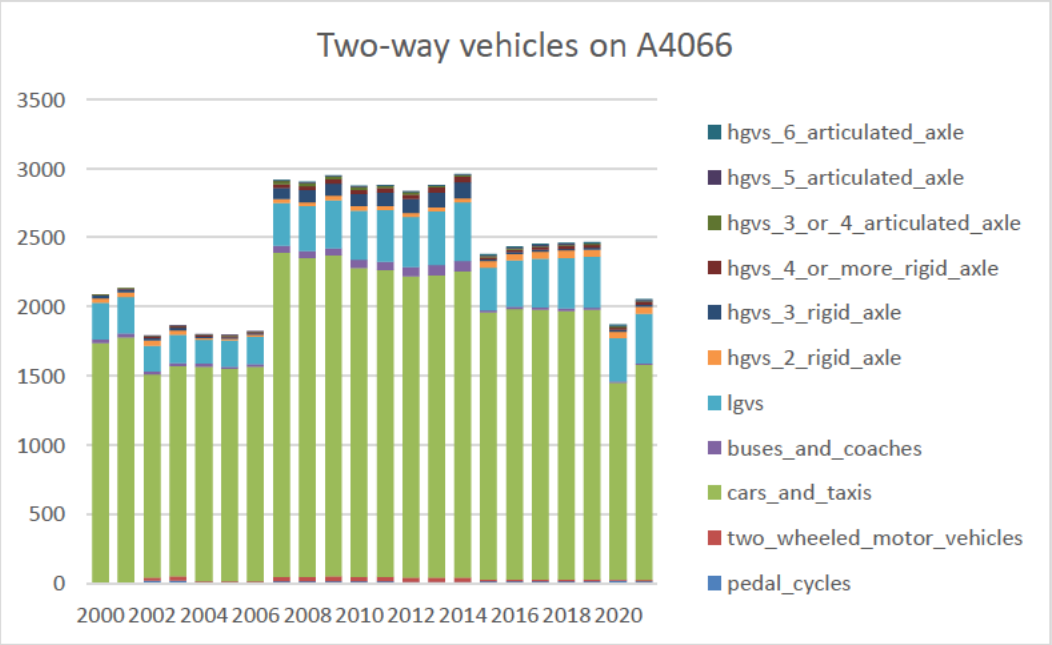


Chart 1: Annual Average Daily Traffic Flows on the A4066

3.52 If we apply a typical daily flow profile on the 2021 AADF two-way traffic flows as seen in **Chart 2**, we can see how the volume of traffic increases and decreases during the morning and evening peak hours.

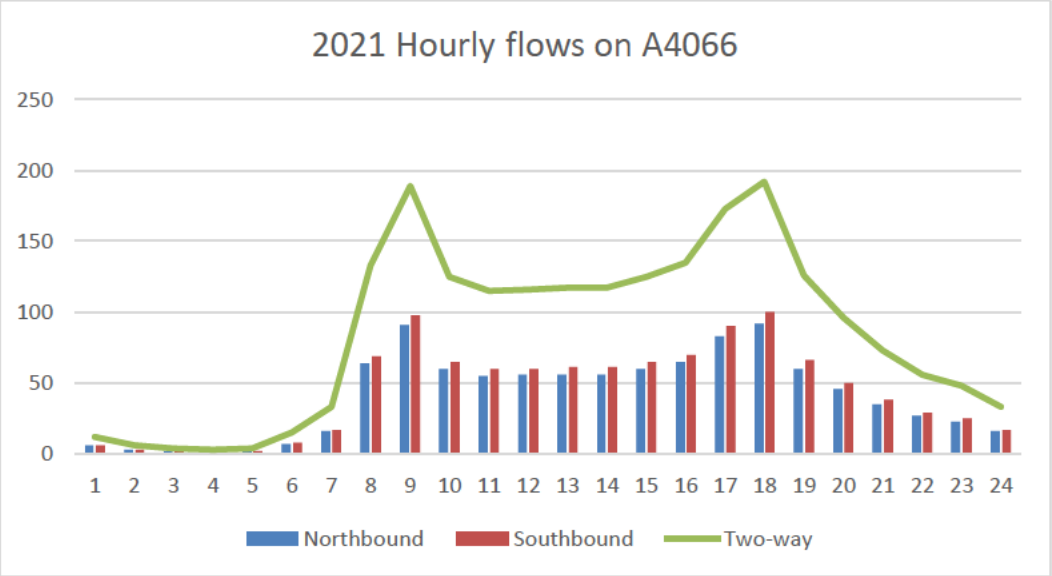


Chart 2: Typical 2021 daily flow profile for A4066

3.53 Information contained on the website also provides directional data for the traffic on the A4066. This information is shown in **Table 3** for the year 2021.

year	direction	bicycles	motor bikes	cars and taxis	buses and coaches	lgvs	all hgvs	all motor vehicles
2021	N	7	3	753	6	174	44	981
2021	S	5	9	803	6	187	59	1064

Table 3: 2021 AADF directional flow on A4066

Highway Trips

3.54 In order to assess the impact that the existing land use has on the transport infrastructure, it is necessary to assess the likely level of vehicular trips generated by the land-use on the site.

3.55 As previously mentioned the field is actively farmed, grazed with sheep, and is well maintained, with a silage crop taken at least annually. This generates agricultural vehicle movements on a regular basic with more frequent visits in the spring and summer months.

Personal Injury Collision/Accident Data

3.56 The DfT (and the legislation) refers to this as an 'accident report', but we prefer to use the more accurate term 'collision'.

3.57 A review has been undertaken on local highway network safety in order to establish whether there are any current accident clusters or blackspots in the vicinity of the site that may be exasperated by the development proposals. Personal Injury

Collision (PIC) data has been reviewed from online resources for the road network within the vicinity of the site for the latest five year period.

3.58 This data has been sourced from the National statistics authority and reported on by the Department for transport each year. The information uses data obtained directly from official sources and compiled in an easy-to-use format showing each collisions on a map.

3.59 An examination of the PIC data indicated that there have been no PICs recorded over the 5-year period review along the A4066 in the vicinity of the site access as can be seen in **Figure 12**.

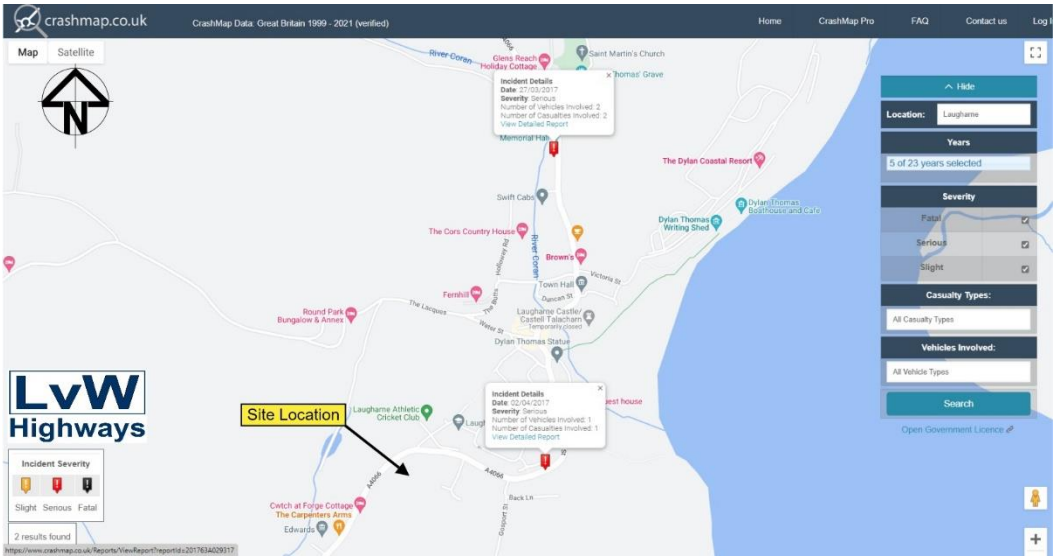


Figure 12: Personal Injury Collisions 2016 to 2020

3.60 The personal injury collision data does not appear to identify any significant highway safety issues or concentration of collisions i.e. 'black spot' within the immediate area of the development site to warrant further investigation.

3.61 The traffic generated by the proposed development (as discussed later on in this report) is highly unlikely to exasperate the existing safety record to a significant level to warrant concern.

Highway Safety Summary

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

20mph

3.63 On 17th September 2023, new Welsh Government legislation will introduce a default 20mph speed limit on restricted (street lit) roads across Wales in place of the current 30mph limits. This is being done to:

- Improve road safety
- Create safer walking and cycling areas
- help improve our health and wellbeing

3.64 Selected roads which have a strategic role and are less of a risk to walkers and cyclists may be an exception to the legislation.

3.65 The County Council has assessed all roads within Carmarthenshire to map the impacts of the legislation and to identify these exceptions.

3.66 Wales is due to become one of the first countries in the world, and the first nation in the UK, to introduce legislation to have a default 20mph speed limit on roads where cars mix with pedestrians and cyclists.

3.67 Public Health Wales believe that lowering the default speed limit to 20mph could have substantial health benefits. 20mph will reduce the risk of collisions, help people feel safer and benefit people's physical and mental wellbeing. Driving slower produces less noise, reduces fuel consumption, and exhaust and non-exhaust emissions are likely to be reduced at lower speeds, tyres and roads will not breakdown so much, thereby reducing non exhaust emissions.

3.68 The Welsh Government is working closely with GoSafe and the Police, who enforce speed limits in Wales, to ensure that the new speed limits are respected and driver behaviour change is supported.

Air Quality Management Area (AQMA)

3.69 The location of the site is not within or near a designated Air Quality Management Area (AQMA).

Abnormal Loads

3.70 There are no abnormal load uses associated with the current site or expected with the development of the site.

4 DEVELOPMENT PROPOSALS

Introduction

4.1 The proposed development is for the Construction of 17 no. dwelling houses, access road and associated infrastructure on Land adjacent to Pludds Meadow, Laugharne.

4.2 It is likely that further discussions on the site layout will take place as part of the detail design process and therefore the plan may slightly change as a result of the planning processes.

4.3 The current layout shows that the development site will accommodate the following schedule of dwellings shown in **Table 4**.

House Type	Total Number
3 Bedrooms bungalow	4
3 Bedrooms semi-detached	8
4 Bedrooms detached	5

Table 4: Schedule of house types

4.4 The approach taken in developing the layout plan is founded on giving maximum encouragement to walking and cycling to and from the development. The inclusion of a new footway on the south side of the development access along the A4066 road will play an important role in connecting the development to its surroundings for pedestrians.

4.5 The layout design will place an emphasis on the principles of "Manual for Streets" in facilitating a choice of direct and attractive routes for pedestrians and cyclists that are aligned with key desire lines and take advantage of the attractiveness associated with a suburban location.

4.6 For the purposes of the assessment, all the residential dwellings will be classified as private properties in order to provide a robust case in terms of ownership of the properties, as houses for rent typically generate a lower volume of vehicle traffic flows.

Highway Access Scheme

4.7 The proposed access scheme provides a continuous footway along the development side of the A4066 south and links with the existing pedestrian footway from the bus stops and Pludd's Meadow. To the south the footway will continue to the site limits.

4.8 The proposed highway access can be seen in the site layout drawings in **Appendix A**.

4.9 The applicant would welcome the opportunity to work with the LHA to prepare an achievable scheme to be considered via a S38 and S278 of the Highways Act if the site is included in the LDP2.

4.10 The A4066 is an adopted highway with no limitations on the volume or size of vehicles allowed to use it. The A4066 as it passes in front of the development site will be (from 17th September 2023) subject to a statutory speed limit of 20mph. Therefore visibility splays of 2.4m x 25m are required as identified in Manual for Streets. Visibility splays greater than this will be achieved with the relocation of the hedgerow behind the visibility splays.

4.11 It is assumed that the centreline of boundary hedgerows are located at least 1m behind the visibility splay to the east and behind the proposed footway along the site frontage.

4.12 All highway users are subject to the rules, regulations and laws of the Highway Code.

4.13 In the research undertaken for MfS2 (see para 10.4.2) carried out by TMS Consultancy'[2] they have found no evidence that failure to provide visibility at priority junctions in accordance with the values recommended in MfS1 or DMRB (as appropriate) will result in an increased risk of injury collisions. Research into cycle safety at T-junctions found that higher cycle collision rates are associated with greater visibility[3].

4.14 MfS2 states in para 10.5.9; "The Y-distances should be based on recommended SSD values. However, based on the research referred to above, unless there is local evidence to the contrary, a reduction in visibility below recommended levels will not necessarily lead to a significant problem."

4.15 The internal streets are provided with a 5.5m wide carriageway sufficient for two vehicles to pass freely and allow visitor parking on-street.

Proposed Public Transport Access

4.16 In respect of the site and the level of development, the existing bus services are considered suitable to meet the public transport requirements of the site and achieve a modest modal shift.

4.17 Bus stops are located on the A4066 are within 100 metres of the site. Bus services are provided from these bus stops to a variety of destinations.

On Site Parking

4.18 TAN 18 supplements Planning Policy Wales and states in paragraph 4.6 that *"Maximum car parking standards should be used at regional and local level as a form of demand management."* and in paragraph 4.7 it requires LHA's in determining maximum car parking standards for new development, regard should be given to alternative transport modes, economic objectives, public and shared parking arrangements.

4.19 Paragraph 4.13 goes on to say *"Where appropriate, the local parking strategy should link parking levels on new development sites with either the existence or introduction of on-street control regimes. Maximum parking standards should not be applied so rigidly that they become minimum standards. Maximum standards should allow developers the discretion to reduce parking levels."*

4.20 The parking provisions are guided by the Supplementary Planning Guidance (SPG) document 'Carmarthenshire County Council Parking Standards Supplementary Planning Guidance, March 2012.

4.21 TAN 18 supplements Planning Policy Wales and states that *'Maximum car parking standards should be used at regional and local level as a form of demand management'* and, that for new developments, regard should be given to alternative transport modes, economic objectives, public and shared parking arrangements.

[2] Research for MfS2 – High risk collisions sites and Y distance visibility, TMS Consultancy, 2010
[3] Layout and design factors affecting cycle safety at T-junctions, Traffic Engineering and Control, October 1992

4.22 The CCC Parking Standards acknowledge this in paragraph 1.2 & 4.3 and therefore, the Parking Standards should be read, interpreted and used as a maximum provision and NOT as a minimum provision.

4.23 The parking standards guidance is determined by land use and location, with development being located in zones 1 to 6, with zone one being applicable to city centre and the centres of largest towns.

4.24 The location of the application site is considered to be within the guidance for a development within Zone 4 Suburban or Near Urban for parking calculation purposes.

4.25 The current site layout is generally providing 1 parking space per bedroom with visitor spaces accommodated on the access road.

4.26 Provision for secure cycle storage will be provided within each dwelling.

4.27 In accordance with Planning Policy Wales requirements ULEV charge points will be provided at each dwelling. It is intended that this be passive provision in that the underlying infrastructure will be put in place that will allow a charge point to be easily installed at a future date.

Servicing Arrangements

4.28 Sufficient room within the site will be included for emergency vehicles/refuse vehicles to turn and exit in forward gear. Turning heads are provided at the end of each cul-de-sac.

Highway Trips

4.29 This section describes the traffic analysis undertaken to determine the likely effect that the proposed residential development dwellings accessed off the A4066 may have on the surrounding highway network. The traffic analysis includes the calculation of the number of vehicle trips associated with the development.

4.30 Predict and Provide is a demand-led supply methodology used for Transport Planning purposes, it is a reactive methodology. It forecast a most likely mobility future (within sensitivity-tested bound of uncertainty) and provides a means to accommodate projected demand.

4.31 The problem with sticking with the Predict and Provide approach, include: not supporting Net Zero or the increase in work from home provision; under provision of walking and cycling facilities; and the over provision of highway capacity. Its base assumption is that people will maintain past travel behaviour.

4.32 The latest thinking in Transport Planning is Decide and Provide, this is a supply-led demand methodology and considered a proactive approach. The methodology starts with deciding on a preferred accessibility future (and the outcomes that represents to a community) and provide a means to move towards it in a way that accommodates the deep uncertainty ahead.

4.33 Decide and Provide allows us to adopt a more positive and integrated transport and land use planning approach; achieve more meaningful implementation of a modal hierarchy that prioritises walking, wheeling and cycling; and better support of the decarbonisation of transport. However, there is a deep uncertainty using this methodology such as the changes in consumer behaviour, the increase in the take up of ultra-low emission vehicles, electric and autonomous vehicles, things such as new pandemics and other interruptions and these have to be considered carefully.

4.34 As the proposed development is not built, one estimate of trips is based on information extracted from the TRICS® Version 7.9.4 database. TRICS is a database containing details of historic trip generations from sites across Britain for various land uses and provides an estimate of the likely levels of transport generation for the proposed use. The TRICS data depicts what has happened in the past, not what is going to happen in the future. The data results from TRICS is an attempt to project future trip rates based upon the selection criteria assumptions.

4.35 As required by the TRICS Good Practice Guide we have provided information below on the steps taken to filter the database to arrive at the results, so that the LHA receiving the data can fully understand how the data was obtained in the first place.

Proposed use – Residential Dwellings Private

4.36 The TRICS selection criteria used are, 03/A – Houses Privately Owned (GDO use class C3); Housing developments where at least 75% of units are privately owned. Of the total number of units, 75% must also be houses (sum of "non-split" terraced, detached, semi-detached, bungalows, etc.), with no more than 25% of the total units being flats. Includes properties that are privately owned and then privately rented. Trip rates are calculated by Site Area, Dwellings, Housing Density, or Total Bedrooms.

4.37 The vehicle trip generation rates for the proposed development have been filtered using the following selection criteria:-

Land use & trip rate selection

- Calculate multi modal trip rates.
- Regions of the development: All.

Primary Filtering

- Select No. of Dwellings
- No. of units: Maximum of 30.
- Survey days: Monday – Friday, excludes weekend.
- Locations of the development: Suburban Area, Edge of Town; Neighbourhood Centre.

Secondary Filtering

- Population within 1 mile: limit to 5,001 to 10,000.
- Population within 5 miles: limit to 25,001 to 50,000.

4.38 The TRICS output is provided in detail in **Appendix B** and summarised below.

4.39 The trip rate has been calculated based on the proposed total number of private dwellings.

4.40 **Table 5** shows the average hourly trips during the day as well as the daily flows that the private dwellings could typically have. These are calculated by multiplying the trip rates produced from the TRICS data with the proposed number of private dwellings.

Time Range	Arrivals	Departures	Totals
07:00-08:00	1	5	6
08:00-09:00	4	9	13
09:00-10:00	2	4	6
10:00-11:00	2	2	4
11:00-12:00	3	4	7
12:00-13:00	4	3	7
13:00-14:00	4	4	8
14:00-15:00	2	5	7
15:00-16:00	7	4	11
16:00-17:00	6	4	10
17:00-18:00	8	4	12
18:00-19:00	4	4	8
Daily Trip Rates:	47	52	99

Table 5: Vehicular Trips for 17 private dwellings (Proposed Use)

4.41 This clearly shows that if the residential dwellings were occupied, it is estimated that it could attract and produce 99 vehicle movements a day.

4.42 To visualise how these trips arrive and depart throughout a typical day, the arrivals and departures are plotted on **Chart 3**. It can been seen that a development of private dwellings will generate two peak periods, one in the morning and the other in the afternoon to evening.

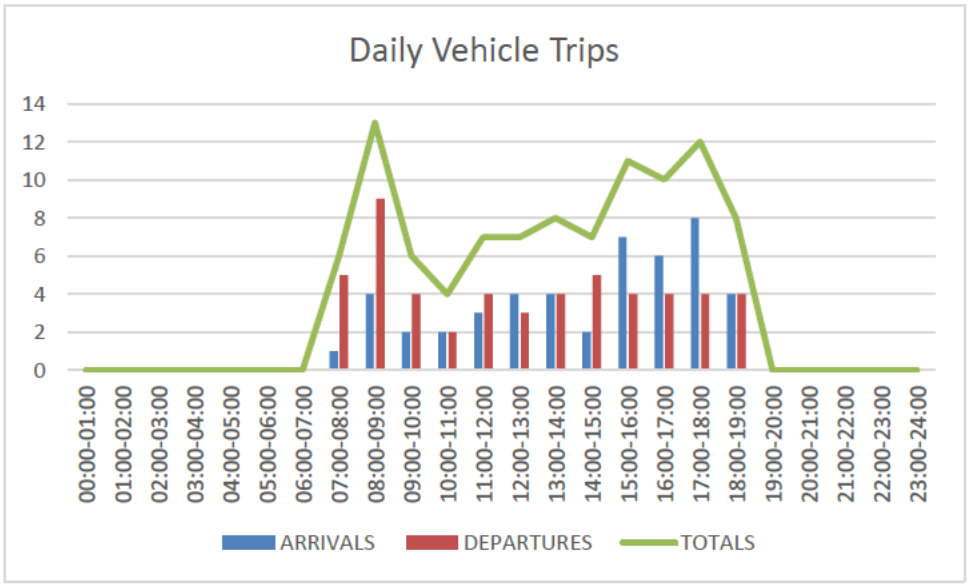


Chart 3: Vehicular Trips for 17 private dwellings (Proposed Use)

4.43 The development is likely to be at its busiest during the morning and evening peak hours and the data suggests that 13 vehicle movements will be generated during its busiest hour (08:00-09:00) and 12 vehicles in the evening peak hour (17:00-18:00).

4.44 During the AM peak hour (08:00-09:00) it is anticipated that the proposed development could attract 4 vehicle movements (arrivals) and produce 9 vehicle movements (departures). To put this in context, vehicle movements per hour

equates to on average, approximately one movement every five minutes. This is not considered to be significant.

4.45 During the PM peak hour (17:00-18:00) it is anticipated that the proposed development could attract 8 vehicle movements (arrivals) and produce 4 vehicle movements (departures). To put this in context, vehicle movements per hour equates to on average, approximately one movement every five minutes. This is not considered to be significant.

4.46 The TRICS data suggests that, based on typical trip rates for residential, the proposed development has the potential to generate around 47 arrivals and 52 departures per day.

Mode Share

4.47 The multi modal TRICS data provides information on the suggested number of trips made by various mode as shown in **Table 6**.

Summary of Daily Trip Rates:	ARRIVALS	DEPARTURES	TOTALS
Count Type: TOTAL VEHICLES	47	52	99
Count Type: TAXIS	0	0	0
Count Type: OGVS	0	0	0
Count Type: PSVS	0	0	0
Count Type: CYCLISTS	0	0	0
Count Type: VEHICLE OCCUPANTS	65	70	135
Count Type: PEDESTRIANS	15	14	29
Count Type: BUS/TRAM PASSENGERS	1	0	1
Count Type: TOTAL RAIL PASSENGERS	0	0	0
Count Type: PUBLIC TRANSPORT USERS	1	0	1
Count Type: TOTAL PEOPLE	84	89	173
Count Type: CARS	42	44	86
Count Type: LGVS	5	3	8
Count Type: MOTOR CYCLES	0	0	0

Table 6: Summary of Daily Trips by Mode (Proposed Use)

4.48 Of the total movements it is anticipated that, 18.9% of the total movements would walk or cycle, 2.5% would use public transport, 41% would be single vehicle occupants and the remaining 37.6% would be multi vehicle occupants. This is represented graphically in **Chart 4**.

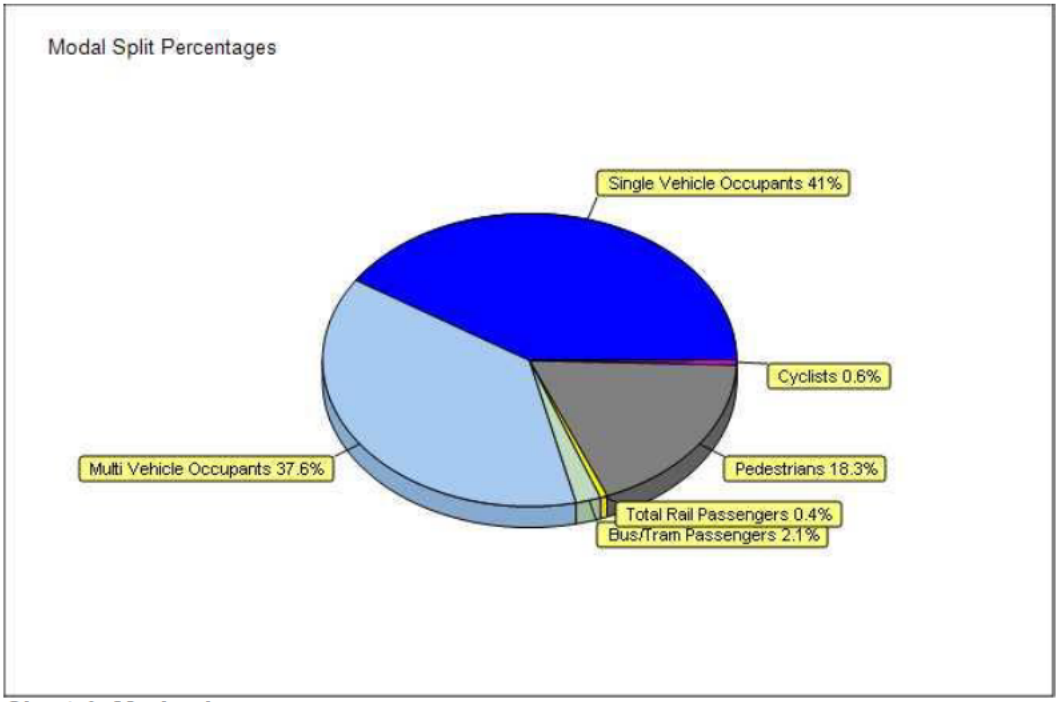


Chart 4: Mode share

4.49 **Chart 5** shows the daily flow profile of the calculated pedestrian movements to and from the proposed development.

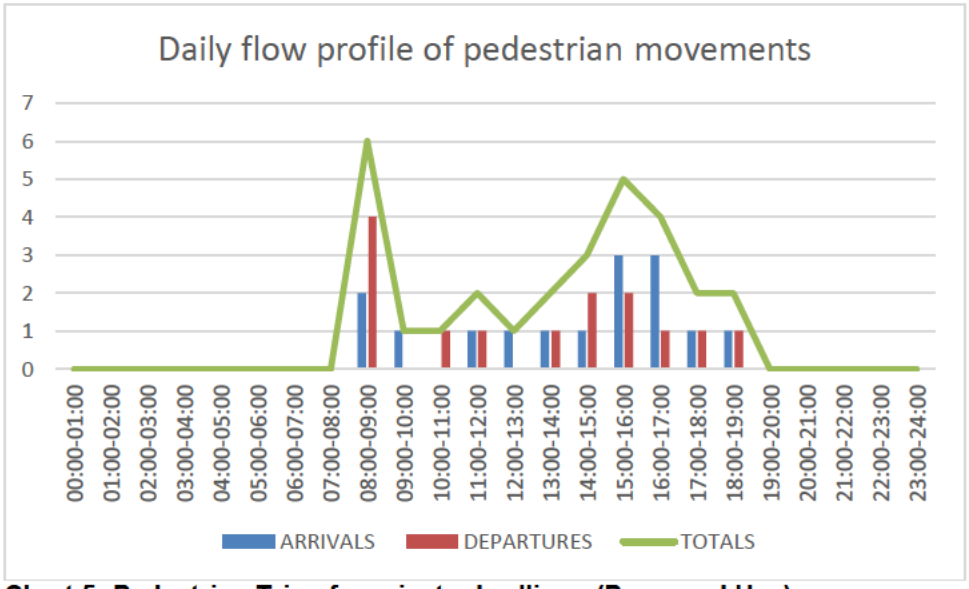


Chart 5: Pedestrian Trips for private dwellings (Proposed Use)

Trip Distribution

4.50 Trip distribution refers to the estimate of origins and destinations of the new generated trips to and from the development site, which needs to be assigned across the highway network. Route assignment concerns the selection of routes between origin and destination.

4.51 Based on the surrounding area and location of the towns and villages, we have estimated that 70% of vehicles will access and depart from the site from Laugharne along the A4066. The remaining would 30% would depart and arrive from Broadway/Pendine direction.

Assessment of the A4066 Carriageway

4.52 Road capacity is the maximum potential capacity of a given roadway. It is usually expressed in terms of vehicles per hour or day. The UK Highways Agency in advice note TA 79/99 Traffic Capacity of Urban Links, has analysed the traffic flows on urban trunk roads to assess the capacities that can be achieved for different road types and widths. In TA 79/99 capacity is defined as the maximum sustainable flow of traffic passing in one hour, under favourable road and traffic conditions.

4.53 Although this document has been withdrawn from the DMRB, it is still a good reference that provides base line information on road capacities.

4.54 The assessment of the A4066 carriageway has be undertaken using Table 2 of the Design Manual for Roads and Bridges (DMRB) TA 79/99. The principal factors that may affect flow levels on urban roads, according to the DMRB classification, are summarised in **Table 7**. For the purpose of this assessment, the A4066 carriageway has been classed as an 'urban road' its features largely reflect those listed against a UAP3–type carriageway.

Feature	ROAD TYPE				
	Urban Motorway	Urban All-purpose			
	UM	UAP1	UAP2	UAP3	UAP4
General Description	Through route with grade separated junctions, hardshoulders or hardstrips, and motorway restrictions.	High standard single/dual carriageway road carrying predominantly through traffic with limited access.	Good standard single/dual carriageway road with frontage access and more than two side roads per km.	Variable standard road carrying mixed traffic with frontage access, side roads, bus stops and at-grade pedestrian crossings.	Busy high street carrying predominantly local traffic with frontage activity including loading and unloading.
Speed Limit	60mph or less	40 to 60 mph for dual, & generally 40mph for single carriageway	Generally 40 mph	30 mph to 40 mph	30mph
Side Roads	None	0 to 2 per km	more than 2 per km	more than 2 per km	more than 2 per km
Access to roadside development	None. Grade separated for major only.	limited access	access to residential properties	frontage access	unlimited access to houses, shops & businesses
Parking and loading	none	restricted	restricted	unrestricted	unrestricted
Pedestrian crossings	grade separated	mostly grade separated	some at-grade	some at-grade	frequent at-grade
Bus stops	none	in lay-bys	at kerbside	at kerbside	at kerbside

Table 7: Types of urban roads (DMRB Classification)

4.55 **Table 8** sets out the flow capacity for each road type. The flows presented are the maximum that typical urban roads can carry consistently (by direction, e.g. one-way) in an hour.

		Two-way Single Carriageway- Busiest direction flow (Assumes a 60/40 directional split)									Dual Carriageway			
		Total number of Lanes									Number of Lanes in each direction			
		2				2-3	3	3-4	4	4+	2		3	4
Carriageway width		6.1m	6.75m	7.3m	9.0m	10.0m	12.3m	13.5m	14.6m	18.0m	6.75m	7.3m	11.0m	14.6m
Road type	**UM**	**Not applicable**										4000	5600	7200
	UAP1	1020	1320	1590	1860	2010	2550	2800	3050	3300	3350	3600	5200	*
	UAP2	1020	1260	1470	1550	1650	1700	1900	2100	2700	2950	3200	4800	*
	UAP3	900	1110	1300	1530	1620	*	*	*	*	2300	2600	3300	*
	UAP4	750	900	1140	1320	1410	*	*	*	*	*	*	*	*

Table 8: Capacities of urban roads (DMRB classification) per hour

4.56 For the purposes of this assessment, the section of the A4066 carriageway passing the site is considered to reflect UAP 3.

4.57 Table 8 shows that for a UAP3 road type, with a carriageway width of 6.75m the capacity of the road is 1100 vehicles per hour in one direction. It is acknowledged that some short sections of the A4066 have a carriageway width less than 6.75m and therefore the capacity of the road would be slightly less than the 1100 vehicles per hour identified for a 6.75m wide carriageway.

4.58 We know from Table 2 that the A4066 has carried just over 1500 vehicles in a day (2007-2014) so there is sufficient capacity to accommodate additional traffic.

4.59 In light of the findings presented, it is considered that the A4066 carriageway would retain sufficient latent capacity to accommodate the predicted traffic volumes that could be generated by the proposed development.

Section Conclusion

4.60 This section has reviewed the proposed development and the mitigation measures, and it has concluded the following:

4.61 **Site Access Scheme and Parking:** A simple T-junction access to the development site is proposed at its connection with the A4066 and a footway will be provided along the whole site frontage with the A4066. The internal layout will be designed where pedestrians and cyclists will interact with motorised traffic.

4.62 **Pedestrian and Cycle Facilities and Routes:** The development site will provide segregated pedestrian facilities, with footways provided as part of the site access junction connecting the site with the local pedestrian network within the local town. A number of footpaths are located within close proximity to the development that provide recreational routes to other areas of the local neighbourhood.

4.63 **Public Transport:** There are several bus stops located within close proximity to the development site providing frequent access to local town centres.

4.64 **Highway Trips:** During the AM peak hour it is anticipated that the proposed development could attract 4 vehicle movements (arrivals) and produce 9 vehicle movements (departures). During the PM peak hour it is anticipated that the proposed development could attract 8 vehicle movements (arrivals) and produce 4 vehicle movements (departures).

4.65 It has been concluded that the highway network can satisfactorily accommodate the predicted traffic flows when the development is operational.

5 SUMMARY AND CONCLUSIONS

Introduction

5.1 This document has been prepared in support of an application for a residential development of 17 dwellings on Land adjacent to Pludds Meadow, Laugharne.

Existing Conditions

5.2 The site is well located in terms of access to the local road network. The main roads within the study area is the A4066.

5.3 There are regular local bus services serving the town and connecting to the railway station that services a range of destinations.

Policy Review

5.4 The proposed development meets the objectives of national policy, as set out in the Planning Policy Wales (PPW) and supports the aims of current government planning guidance on the integration of land use planning and transport for a number of reasons, inter-alia:

- it encourages walking through the provision of a new footway along the A4066 linking into the town centre;
- a highway access scheme;
- at the local level, Carmarthenshire transport policy aspirations build upon national policy by seeking to reduce reliance on the car and encourage the use of non-car modes of transport.

5.5 The development proposals accord with the objectives of the adopted Local Plan in that they seek to promote travel on foot, cycle and by public transport for residents and the provision of sufficient on-site parking spaces.

5.6 The proposed development would accord with these policies and would also be integrated into the existing built up areas, thus enabling its residents and visitors to readily access other facilities.

Accident Data

5.7 We have examined the personal injury accident records in detail for the highway links and junctions in the vicinity of the site for the 5 years 2017 to 2021. This information does not identify any major accident problems on the surrounding highway network.

5.8 We have established from the recent personal injury accident history that there is not an identified accident problem along the local highway network in the vicinity of the proposed site.

5.9 Evidence shows that no fatal personal injury accidents were recorded on local road links. As such, the development traffic movements associated with the development proposals should not have a detrimental effect on highway safety.

Proposed Development

5.10 The proposed development will comprise a residential development of 17 dwellings accessed via the A4066.

5.11 Access to these facilities by non-motorised modes will be encouraged through the provision of a footway connecting to the existing footways along the site frontage.

5.12 Parking will be provided in accordance with current standards as indicated by Carmarthenshire.

Traffic Generation, Distribution and Assignment

5.13 It is expected that the proposed development would exhibit higher levels of trips by car than foot, cycle and bus due to its location and the nature of the development.

5.14 All vehicles will enter and leave the site via the new access, being the shortest distance to the wider highway network.

Impact on the Local Highway Network

5.15 During the AM peak hour it is anticipated that the proposed development could attract 4 vehicle movements (arrivals) and produce 9 vehicle movements (departures).

5.16 During the PM peak hour it is anticipated that the proposed development could attract 8 vehicle movements (arrivals) and produce 4 vehicle movements (departures).

5.17 It has been concluded that the highway network can satisfactorily accommodate the predicted traffic flows when the development is operational.

Overall Conclusion

5.18 This report has investigated the transport implications for the Construction of 17 no. dwelling houses, access road and associated infrastructure on Land adjacent to Pludds Meadow, Laugharne.

5.19 It is considered that this development is appropriate and acceptable in traffic and transportation terms. That the traffic movements associated with the development proposals are currently accommodated on the highway network and do not have a detrimental impact on the free flow of traffic due to the existing volumes of traffic using the local highway network.

5.20 It is considered that the application site meets planning policy requirements in terms of being in an appropriate location that is safely accessed and that the impacts of the development on the continued operation and safety of the surrounding highway network would be acceptable.

5.21 We conclude that, with respect to transport, this development complies with the Welsh Governments development guidance as set out in Planning Policy Wales and is appropriate and acceptable in traffic and transport terms. The Well-being of Future Generations Act put in place four aspects of well-being: economic, social, environmental and cultural and this development assists with meeting these aspects.

Closure

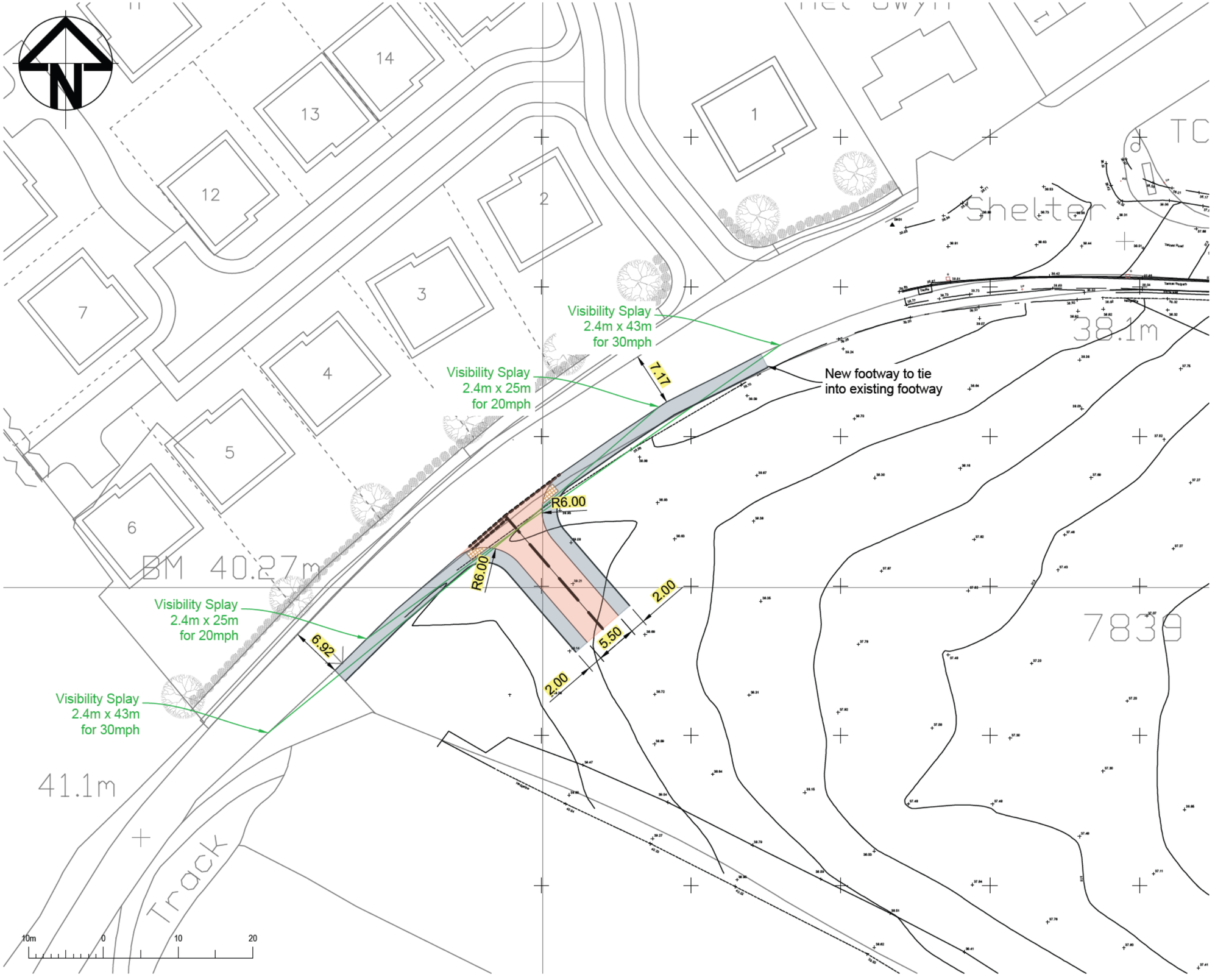
5.22 LvW Highways Ltd has prepared this report with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on interpretation of data collected has been accepted in good faith as being accurate and fair.

5.23 This report is for the exclusive use of Mr Ken Davies no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from LvW Highways Ltd.

5.24 LvW Highways Ltd disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of work.

APPENDIX A

Site Access and Layout



General Notes

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No.	Revision/Issue	Date
B	For Planning	13.04.2023
A	For Discussion	23.03.2023

Firm Name and Address

LvW Highways Ltd
Blaenparc
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Project Name and Address

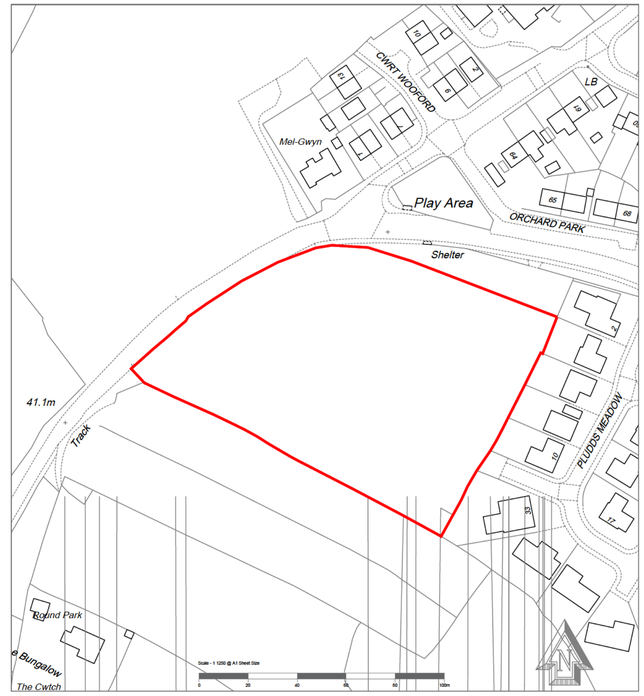
Pludds Meadow, Phase 2
Laugharne, Carm's.
Proposed Highway
Access and
Visibility Splays

Project	2023–752
Date	13.04.2023
Scale	1:500@A3L
Sheet	SK01

Karl von Weber 13.04.2023 752b–.dwg

Proposed Housing Site Layout Plan
Proposed Residential Candidate Site At
Land Adjoining Pludds Meadow, Laugharne.
Scale - 1:500

Proposed Housing Site Location Plan
Proposed Residential Candidate Site At
Land Adjoining Pludds Meadow, Laugharne.
Scale - 1:1250



Key
PROPOSED SITE BOUNDARY

KEY TO SITE LAYOUT :

- TRANSLOCATED & NEW HEDGEROWS
- EXISTING HEDGEROWS
- EXISTING PERIMETER TREES RETAINED
- PARKING AREAS
- HIGHWAY
- FOOTWAY
- PROPOSED SITE BOUNDARY
- PROPOSED SUDS AREAS
- SHARED PRIVATE DRIVE

KEY TO HOUSING:

HOUSE TYPE	TOTAL NUMBER
A-ARMANI 3 Bed Bungalow	4
B-BOSS 3 Bed Semi Detached-Pair	8
C-CARTIER 4 Bed Detached	5

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2 Llandeilo Road,
Cross Hands,
Carmarthenshire,
SA14 6NA

Project
LDP Site Layout Plan

Site
Proposed Residential Candidate Site At
Land Adjoining Pludds Meadow, Laugharne.

Drawing No GA-01
Revision –
Date 30.03.2023.
Scale 1:500 & 1:1250 @ A1

APPENDIX B

TRICS Data

Calculation Reference: AUDIT-452201-230405-0422

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	1 days
03	SOUTH WEST		
	DC	DORSET	1 days
10	WALES		
	PS	POWYS	1 days
12	CONNAUGHT		
	CS	SLIGO	1 days
16	ULSTER (REPUBLIC OF IRELAND)		
	DN	DONEGAL	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: No of Dwellings
Actual Range: 6 to 30 (units:)
Range Selected by User: 4 to 30 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/15 to 09/11/22

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
Wednesday	3 days
Thursday	1 days

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

Selected survey types:

Manual count	5 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)	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
Village	2

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,

Secondary Filtering selection:

Use Class:

C3	5 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 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:

1,000 or Less	1 days
1,001 to 5,000	2 days
5,001 to 10,000	2 days

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

Population within 5 miles:

5,000 or Less	2 days
5,001 to 25,000	1 days
25,001 to 50,000	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	4 days
1.6 to 2.0	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.

Travel Plan:

Yes	2 days
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	5 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 CS-03-A-03 MIXED HOUSES SLIGO
TOP ROAD
STRANDHILL
STRANDHILL
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 30
Survey date: THURSDAY *27/10/16* *Survey Type: MANUAL*

2 DC-03-A-10 MIXED HOUSES DORSET
ADDISON CLOSE
GILLINGHAM

Edge of Town
Residential Zone
Total No of Dwellings: 26
Survey date: WEDNESDAY *09/11/22* *Survey Type: MANUAL*

3 DN-03-A-06 DETACHED HOUSING DONEGAL
GLENFIN ROAD
BALLYBOFEY

Edge of Town
Residential Zone
Total No of Dwellings: 6
Survey date: WEDNESDAY *10/10/18* *Survey Type: MANUAL*

4 ES-03-A-06 MIXED HOUSES EAST SUSSEX
BISHOPS LANE
RINGMER

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 12
Survey date: WEDNESDAY *16/06/21* *Survey Type: MANUAL*

5 PS-03-A-02 DETACHED/SEMI-DETACHED POWYS
GUNROG ROAD
WELSHPOOL

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 28
Survey date: MONDAY *11/05/15* *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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 1.74

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	20	0.049	5	20	0.284	5	20	0.333
08:00 - 09:00	5	20	0.255	5	20	0.520	5	20	0.775
09:00 - 10:00	5	20	0.147	5	20	0.216	5	20	0.363
10:00 - 11:00	5	20	0.118	5	20	0.147	5	20	0.265
11:00 - 12:00	5	20	0.176	5	20	0.216	5	20	0.392
12:00 - 13:00	5	20	0.206	5	20	0.176	5	20	0.382
13:00 - 14:00	5	20	0.255	5	20	0.255	5	20	0.510
14:00 - 15:00	5	20	0.137	5	20	0.284	5	20	0.421
15:00 - 16:00	5	20	0.392	5	20	0.245	5	20	0.637
16:00 - 17:00	5	20	0.363	5	20	0.235	5	20	0.598
17:00 - 18:00	5	20	0.480	5	20	0.206	5	20	0.686
18:00 - 19:00	5	20	0.206	5	20	0.225	5	20	0.431
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.784			3.009			5.793

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:	6 - 30 (units:)
Survey date date range:	01/01/15 - 09/11/22
Number of weekdays (Monday-Friday):	5
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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TAXIS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	20	0.000	5	20	0.000	5	20	0.000
08:00 - 09:00	5	20	0.000	5	20	0.000	5	20	0.000
09:00 - 10:00	5	20	0.000	5	20	0.000	5	20	0.000
10:00 - 11:00	5	20	0.000	5	20	0.000	5	20	0.000
11:00 - 12:00	5	20	0.010	5	20	0.010	5	20	0.020
12:00 - 13:00	5	20	0.000	5	20	0.000	5	20	0.000
13:00 - 14:00	5	20	0.000	5	20	0.000	5	20	0.000
14:00 - 15:00	5	20	0.000	5	20	0.000	5	20	0.000
15:00 - 16:00	5	20	0.000	5	20	0.000	5	20	0.000
16:00 - 17:00	5	20	0.000	5	20	0.000	5	20	0.000
17:00 - 18:00	5	20	0.000	5	20	0.000	5	20	0.000
18:00 - 19:00	5	20	0.000	5	20	0.000	5	20	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.010			0.010			0.020

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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	20	0.000	5	20	0.000	5	20	0.000
08:00 - 09:00	5	20	0.000	5	20	0.000	5	20	0.000
09:00 - 10:00	5	20	0.020	5	20	0.020	5	20	0.040
10:00 - 11:00	5	20	0.000	5	20	0.000	5	20	0.000
11:00 - 12:00	5	20	0.020	5	20	0.020	5	20	0.040
12:00 - 13:00	5	20	0.000	5	20	0.000	5	20	0.000
13:00 - 14:00	5	20	0.010	5	20	0.010	5	20	0.020
14:00 - 15:00	5	20	0.000	5	20	0.000	5	20	0.000
15:00 - 16:00	5	20	0.000	5	20	0.000	5	20	0.000
16:00 - 17:00	5	20	0.000	5	20	0.000	5	20	0.000
17:00 - 18:00	5	20	0.000	5	20	0.000	5	20	0.000
18:00 - 19:00	5	20	0.000	5	20	0.000	5	20	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.050			0.050			0.100

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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PSVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	20	0.000	5	20	0.000	5	20	0.000
08:00 - 09:00	5	20	0.010	5	20	0.010	5	20	0.020
09:00 - 10:00	5	20	0.000	5	20	0.000	5	20	0.000
10:00 - 11:00	5	20	0.000	5	20	0.000	5	20	0.000
11:00 - 12:00	5	20	0.000	5	20	0.000	5	20	0.000
12:00 - 13:00	5	20	0.000	5	20	0.000	5	20	0.000
13:00 - 14:00	5	20	0.000	5	20	0.000	5	20	0.000
14:00 - 15:00	5	20	0.000	5	20	0.000	5	20	0.000
15:00 - 16:00	5	20	0.000	5	20	0.000	5	20	0.000
16:00 - 17:00	5	20	0.000	5	20	0.000	5	20	0.000
17:00 - 18:00	5	20	0.010	5	20	0.010	5	20	0.020
18:00 - 19:00	5	20	0.000	5	20	0.000	5	20	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.020			0.020			0.040

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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	20	0.000	5	20	0.000	5	20	0.000
08:00 - 09:00	5	20	0.000	5	20	0.000	5	20	0.000
09:00 - 10:00	5	20	0.000	5	20	0.000	5	20	0.000
10:00 - 11:00	5	20	0.000	5	20	0.000	5	20	0.000
11:00 - 12:00	5	20	0.000	5	20	0.000	5	20	0.000
12:00 - 13:00	5	20	0.000	5	20	0.000	5	20	0.000
13:00 - 14:00	5	20	0.000	5	20	0.010	5	20	0.010
14:00 - 15:00	5	20	0.000	5	20	0.000	5	20	0.000
15:00 - 16:00	5	20	0.000	5	20	0.000	5	20	0.000
16:00 - 17:00	5	20	0.010	5	20	0.000	5	20	0.010
17:00 - 18:00	5	20	0.010	5	20	0.010	5	20	0.020
18:00 - 19:00	5	20	0.010	5	20	0.010	5	20	0.020
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.030			0.030			0.060

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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	20	0.069	5	20	0.382	5	20	0.451
08:00 - 09:00	5	20	0.373	5	20	0.931	5	20	1.304
09:00 - 10:00	5	20	0.176	5	20	0.275	5	20	0.451
10:00 - 11:00	5	20	0.137	5	20	0.206	5	20	0.343
11:00 - 12:00	5	20	0.225	5	20	0.314	5	20	0.539
12:00 - 13:00	5	20	0.265	5	20	0.196	5	20	0.461
13:00 - 14:00	5	20	0.363	5	20	0.324	5	20	0.687
14:00 - 15:00	5	20	0.167	5	20	0.382	5	20	0.549
15:00 - 16:00	5	20	0.627	5	20	0.255	5	20	0.882
16:00 - 17:00	5	20	0.539	5	20	0.324	5	20	0.863
17:00 - 18:00	5	20	0.647	5	20	0.245	5	20	0.892
18:00 - 19:00	5	20	0.245	5	20	0.265	5	20	0.510
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.833			4.099			7.932

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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PEDESTRIANS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	20	0.010	5	20	0.029	5	20	0.039
08:00 - 09:00	5	20	0.118	5	20	0.225	5	20	0.343
09:00 - 10:00	5	20	0.049	5	20	0.029	5	20	0.078
10:00 - 11:00	5	20	0.029	5	20	0.069	5	20	0.098
11:00 - 12:00	5	20	0.049	5	20	0.039	5	20	0.088
12:00 - 13:00	5	20	0.039	5	20	0.010	5	20	0.049
13:00 - 14:00	5	20	0.059	5	20	0.069	5	20	0.128
14:00 - 15:00	5	20	0.088	5	20	0.098	5	20	0.186
15:00 - 16:00	5	20	0.186	5	20	0.147	5	20	0.333
16:00 - 17:00	5	20	0.157	5	20	0.088	5	20	0.245
17:00 - 18:00	5	20	0.049	5	20	0.078	5	20	0.127
18:00 - 19:00	5	20	0.088	5	20	0.049	5	20	0.137
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.921			0.930			1.851

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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	20	0.000	5	20	0.000	5	20	0.000
08:00 - 09:00	5	20	0.000	5	20	0.020	5	20	0.020
09:00 - 10:00	5	20	0.020	5	20	0.010	5	20	0.030
10:00 - 11:00	5	20	0.000	5	20	0.010	5	20	0.010
11:00 - 12:00	5	20	0.010	5	20	0.000	5	20	0.010
12:00 - 13:00	5	20	0.029	5	20	0.000	5	20	0.029
13:00 - 14:00	5	20	0.000	5	20	0.020	5	20	0.020
14:00 - 15:00	5	20	0.020	5	20	0.000	5	20	0.020
15:00 - 16:00	5	20	0.039	5	20	0.020	5	20	0.059
16:00 - 17:00	5	20	0.000	5	20	0.010	5	20	0.010
17:00 - 18:00	5	20	0.000	5	20	0.010	5	20	0.010
18:00 - 19:00	5	20	0.000	5	20	0.000	5	20	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.118			0.100			0.218

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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	20	0.000	5	20	0.000	5	20	0.000
08:00 - 09:00	5	20	0.000	5	20	0.000	5	20	0.000
09:00 - 10:00	5	20	0.000	5	20	0.020	5	20	0.020
10:00 - 11:00	5	20	0.000	5	20	0.000	5	20	0.000
11:00 - 12:00	5	20	0.000	5	20	0.000	5	20	0.000
12:00 - 13:00	5	20	0.000	5	20	0.000	5	20	0.000
13:00 - 14:00	5	20	0.000	5	20	0.000	5	20	0.000
14:00 - 15:00	5	20	0.000	5	20	0.000	5	20	0.000
15:00 - 16:00	5	20	0.000	5	20	0.000	5	20	0.000
16:00 - 17:00	5	20	0.000	5	20	0.000	5	20	0.000
17:00 - 18:00	5	20	0.020	5	20	0.000	5	20	0.020
18:00 - 19:00	5	20	0.000	5	20	0.000	5	20	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.020			0.020			0.040

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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	20	0.000	5	20	0.000	5	20	0.000
08:00 - 09:00	5	20	0.000	5	20	0.020	5	20	0.020
09:00 - 10:00	5	20	0.020	5	20	0.029	5	20	0.049
10:00 - 11:00	5	20	0.000	5	20	0.010	5	20	0.010
11:00 - 12:00	5	20	0.010	5	20	0.000	5	20	0.010
12:00 - 13:00	5	20	0.029	5	20	0.000	5	20	0.029
13:00 - 14:00	5	20	0.000	5	20	0.020	5	20	0.020
14:00 - 15:00	5	20	0.020	5	20	0.000	5	20	0.020
15:00 - 16:00	5	20	0.039	5	20	0.020	5	20	0.059
16:00 - 17:00	5	20	0.000	5	20	0.010	5	20	0.010
17:00 - 18:00	5	20	0.020	5	20	0.010	5	20	0.030
18:00 - 19:00	5	20	0.000	5	20	0.000	5	20	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.138			0.119			0.257

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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 1.74

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	20	0.078	5	20	0.412	5	20	0.490
08:00 - 09:00	5	20	0.490	5	20	1.176	5	20	1.666
09:00 - 10:00	5	20	0.245	5	20	0.333	5	20	0.578
10:00 - 11:00	5	20	0.167	5	20	0.284	5	20	0.451
11:00 - 12:00	5	20	0.284	5	20	0.353	5	20	0.637
12:00 - 13:00	5	20	0.333	5	20	0.206	5	20	0.539
13:00 - 14:00	5	20	0.422	5	20	0.422	5	20	0.844
14:00 - 15:00	5	20	0.275	5	20	0.480	5	20	0.755
15:00 - 16:00	5	20	0.853	5	20	0.422	5	20	1.275
16:00 - 17:00	5	20	0.706	5	20	0.422	5	20	1.128
17:00 - 18:00	5	20	0.725	5	20	0.343	5	20	1.068
18:00 - 19:00	5	20	0.343	5	20	0.324	5	20	0.667
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.921			5.177			10.098

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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL CARS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	20	0.039	5	20	0.265	5	20	0.304
08:00 - 09:00	5	20	0.225	5	20	0.451	5	20	0.676
09:00 - 10:00	5	20	0.098	5	20	0.167	5	20	0.265
10:00 - 11:00	5	20	0.098	5	20	0.127	5	20	0.225
11:00 - 12:00	5	20	0.108	5	20	0.147	5	20	0.255
12:00 - 13:00	5	20	0.157	5	20	0.118	5	20	0.275
13:00 - 14:00	5	20	0.206	5	20	0.225	5	20	0.431
14:00 - 15:00	5	20	0.098	5	20	0.255	5	20	0.353
15:00 - 16:00	5	20	0.333	5	20	0.167	5	20	0.500
16:00 - 17:00	5	20	0.333	5	20	0.216	5	20	0.549
17:00 - 18:00	5	20	0.431	5	20	0.176	5	20	0.607
18:00 - 19:00	5	20	0.186	5	20	0.216	5	20	0.402
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.312			2.530			4.842

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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL LGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	20	0.010	5	20	0.020	5	20	0.030
08:00 - 09:00	5	20	0.020	5	20	0.059	5	20	0.079
09:00 - 10:00	5	20	0.029	5	20	0.029	5	20	0.058
10:00 - 11:00	5	20	0.020	5	20	0.020	5	20	0.040
11:00 - 12:00	5	20	0.029	5	20	0.029	5	20	0.058
12:00 - 13:00	5	20	0.049	5	20	0.059	5	20	0.108
13:00 - 14:00	5	20	0.039	5	20	0.020	5	20	0.059
14:00 - 15:00	5	20	0.039	5	20	0.029	5	20	0.068
15:00 - 16:00	5	20	0.059	5	20	0.078	5	20	0.137
16:00 - 17:00	5	20	0.029	5	20	0.020	5	20	0.049
17:00 - 18:00	5	20	0.049	5	20	0.020	5	20	0.069
18:00 - 19:00	5	20	0.020	5	20	0.010	5	20	0.030
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.392			0.393			0.785

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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL MOTOR CYCLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	20	0.000	5	20	0.000	5	20	0.000
08:00 - 09:00	5	20	0.000	5	20	0.000	5	20	0.000
09:00 - 10:00	5	20	0.000	5	20	0.000	5	20	0.000
10:00 - 11:00	5	20	0.000	5	20	0.000	5	20	0.000
11:00 - 12:00	5	20	0.010	5	20	0.010	5	20	0.020
12:00 - 13:00	5	20	0.000	5	20	0.000	5	20	0.000
13:00 - 14:00	5	20	0.000	5	20	0.000	5	20	0.000
14:00 - 15:00	5	20	0.000	5	20	0.000	5	20	0.000
15:00 - 16:00	5	20	0.000	5	20	0.000	5	20	0.000
16:00 - 17:00	5	20	0.000	5	20	0.000	5	20	0.000
17:00 - 18:00	5	20	0.000	5	20	0.000	5	20	0.000
18:00 - 19:00	5	20	0.000	5	20	0.000	5	20	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.010			0.010			0.020

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.*