

Land at Roch - East of Pilgrim's Way

Transport Statement

2 May 2023

For and on behalf of
**Wakefield Developments
(Pembrokeshire) Ltd**

Project Ref: 2021-626

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1 INTRODUCTION

- 1.1 LvW Highways Ltd is commissioned by Wakefield Developments (Pembrokeshire) Ltd to provide Highway and Transportation advice and prepare a Transport Statement (TS) in support of a residential development of 52 residential dwellings on Land at Roch - East of Pilgrim's Way.
- 1.2 The site location (OSGR 187450, 221270) and its surrounding area can be seen in **Figure 1**.

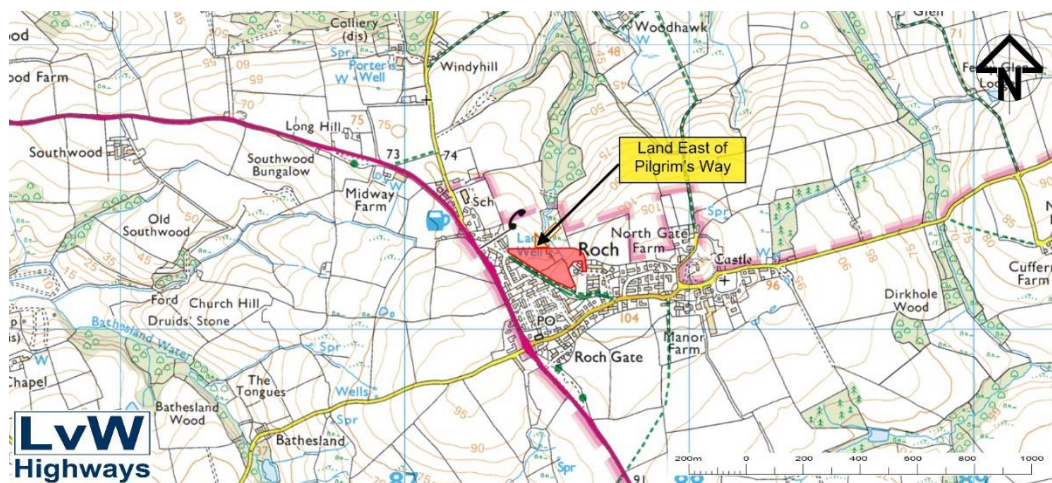


Figure 1: Site Location

Pre-application consultation

- 1.3 In preparing this assessment and as part of the planning application process for this site, pre-application advice has been sort from the Local Planning Authority. A formal pre-application submission was made and the Local Highway Authority responded with some comments.
- 1.4 The pre-application response is summarised below in terms of access and highways requirements.

With regard to highways infrastructure, the Highways Development Control Officer has stated that he would require a Transport Statement in support of an application for this level of development to order to address multi-modal access issues. This would inform the need for potential financial contributions for highways infrastructure. Roch is reasonably well served in terms of transport links as it has the benefit of good bus links, a school, local shops etc. but any developer would need to identify how it is intended to connect the site to those facilities, for example with footways, a bus stop facility and so on, through a Transport Statement. From such a Statement the Highways Development Control Officer would be able to establish what infrastructure contributions may or may not be required.

Purpose of the report

- 1.5 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.
- 1.6 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.

1.7 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 TAN 18: Transport.

1.8 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.

1.9 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. 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 modes of movements.

Report Structure

1.10 The structure of this Transport Statement is as follows:

- Section 2 provides an overview of relevant planning policy.
- Section 3 describes the site's location, the existing transport network that surrounds and serves it and the vehicle movements generated by the existing use of the site.
- Section 4 describes the proposed development, considers the likely trip generation of the proposed use of the land and considers its impact.
- Section 5 provides the scope for a Residential Travel Plan.
- Section 6 provides a summary and conclusion.

2 PLANNING POLICY

2.1 Relevant planning policy for highways are set out in the following:-

- 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.
- Pembrokeshire Local Development Plan (2013),

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 2** below.

Mode	Less than 1 mile	Up to 2 miles	Up to 3 miles	Up to 4 miles	Up to 5 miles	Up to 7.5 miles	Up to 15 miles
	●	●	●	●	●	●	●
	●	●	●	●	●	●	●
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 2: 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.

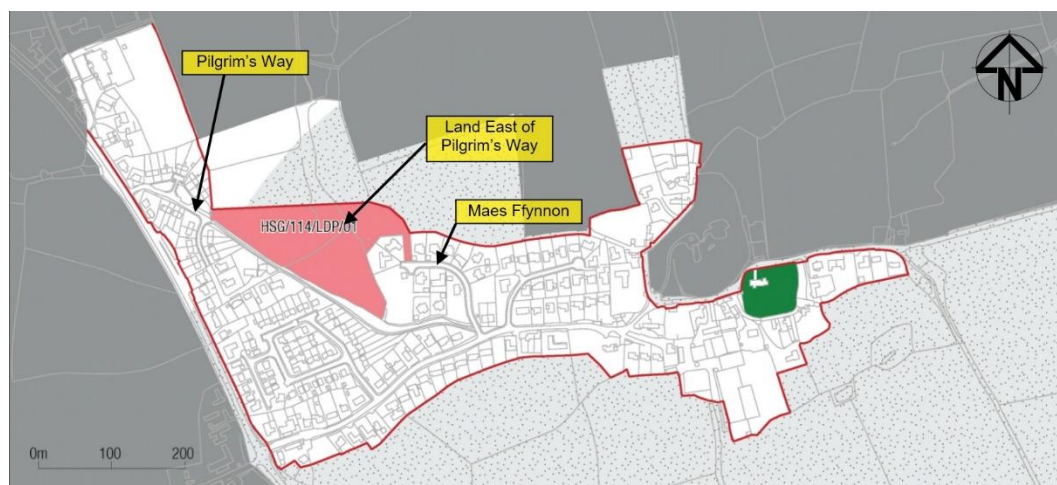
A globally responsible Wales

- 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.

Pembrokeshire Local Development Plan (2013)

2.13 The development site is an approved housing allocation site within the adopted LDP (HSG/114/LDP/01) and a further area to its north is being promoted as a candidate site for residential development as part of the LDP review process.

2.14 The allocated site 'Roch – East of Pilgrim's Way' is 2.19 hectares with an allocation of a minimum number of 44 units with a 20% indicative affordable housing requirement. **Figure 3** shows an extract from the proposals inset map 42 for Roch showing the site allocation.



Roch / Y Garn

Figure 3: LDP Site allocation

SPG Development Sites – Updated version, December 2016

“Access to the site will be shared between Maes Ffynnon and Pilgrim’s Way, with the former expected to serve no more than 25% of the total development. To reduce on-road parking on Pilgrim’s Way, a new parking area to serve existing properties on this road may be required within the allocation site. The two vehicular access routes serving the site will not be connected to provide a through-route for motor vehicles, although a link for cycles and pedestrians would be appropriate. The integrity of the path along the southern site boundary must be kept.

Separate accesses required at Pilgrim’s Way and Maes Ffynnon. Footway solution required at this location. Parking solution for council houses would facilitate access. Consult with the Local Highway Authority (PCC highways) regarding detailed access and car parking proposals for the site. Consult with the Council’s rights-of-way team if development proposals will result in a need to modify the path on the southern site boundary in any way.”

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 The proposed highway and access road leading to the site is suitable to serve the proposed residential development at the Land at Roch - East of Pilgrim's Way.
- 2.18 There will not be a potential significant increase in vehicular and pedestrian/vehicle conflicts to the detriment of the safety and free flow of traffic in and around the site.
- 2.19 We will show that the proposed residential dwelling at the Land at Roch - East of Pilgrim's Way is located in a sustainable location.
- 2.20 The propose residential dwellings are 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

Introduction

- 3.1 This section provides a review of the existing conditions at the site with relation to transport and movements. This includes a review of the site location and access to local facilities and amenities, a study of the existing local highway network and traffic conditions along with a local review of accident data.
- 3.2 The sustainability of the site is considered regarding the provision of alternative modes of transport to the car, including walking, cycling and public transport.

Site Location and Description

- 3.3 Roch is a village and parish 3.5km northeast of Nolton and 9km northwest of Haverfordwest and 14km southeast of St David's. In the 2011 census, Roch village had a population of 463. The Pembrokeshire National Park Authority boundary skirts around the village of Roch however, Roch Castle is within the National Park. These features can be seen in **Figure 4**.

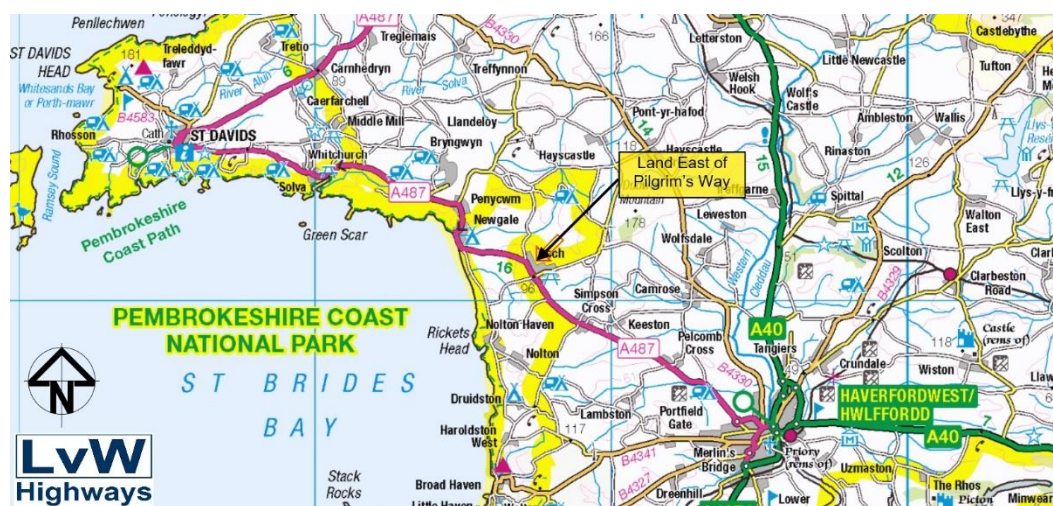


Figure 4: Site location within the wider area

- 3.4 If travelling West, the main route to the site from the A40 is via Haverfordwest onto the A487 in the direction of St David's.

Proposed site

- 3.5 The site is roughly triangular in shape consisting of agricultural land. There are currently two points of access, the main one is between a gap in the dwellings located on Maes Ffynnon and the second from a field gate off Pilgrim's Way on the western corner. These features can be seen in **Figure 5** (an extract from Google Earth).



Figure 5: Aerial view of residential development site

Active Travel Network

- 3.6 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.

- 3.7 Roch does not appear on the Pembrokeshire County Council Integrated Network Maps.

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

- 3.8 Local Authorities are required to provide free transport for all pupils of compulsory school age (5-16) if their nearest suitable school is:
- Beyond 2 miles / 3.22 kilometres (if below the age of 8); or
 - Beyond 3 miles / 4.83 kilometres (if aged between 8 and 16).

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

Pedestrian Facilities

- 3.10 There is a continuous footway on the southern side of Pilgrim's Way from its junction with Grassholm Close all the way to its junction with the A487(T). There are also footways on both sides of Maes Ffynnon and Church Road all the way to its junction with the A487(T). They also benefits from an appropriate system of street lighting.
- 3.11 The pedestrian footways within Roch are provided with a varying width between 2m and 1.5m.
- 3.12 The Welsh Government publication "Active Travel Act Guidance July 2021", refers to 'Inclusive Mobility' and 'Manual for Streets' that considers the width of footways required for pedestrian activity and **Figure 6** shows the width of typical pedestrian users.

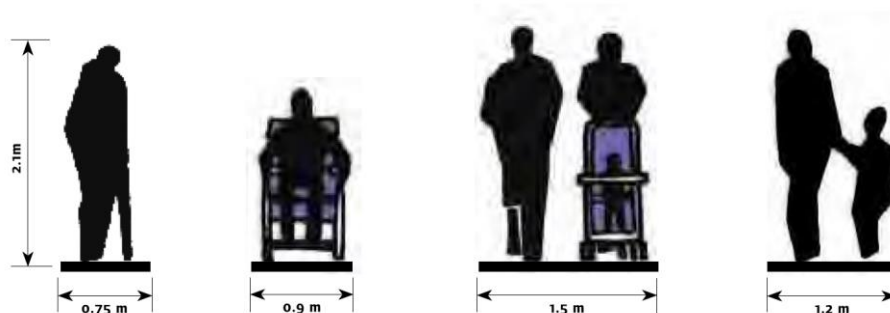


Figure 6: Manual for Street minimum footway widths

3.13

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

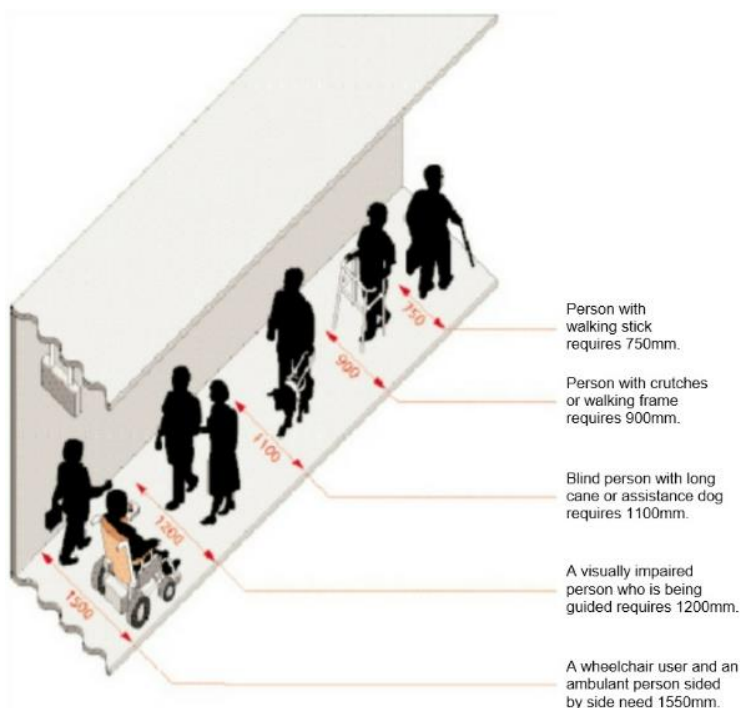


Figure 7: Footway widths (DfT 'Inclusive Mobility' 2002)

3.14

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

3.15

Figure 8 shows the pedestrian isochrones for 400m (mauve), 1.61km (1 mile dark blue), and 3.22km (2 miles light blue) from the centre of the proposed development site within walking distance of this notional point.

3.16

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

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

Public Rights of Way

- 3.18 There are a number of public footpaths and bridleways in the vicinity of the site all used predominantly for recreational use but also often used by residents as short cuts to other areas of Roch. .
- 3.19 There are two Public Right of Way (Footpath PP80/36 and Bridleway PP80/29) that runs along the southern boundary of the site linking Pilgrim's Way to Maes Ffynnon and Church Road as can be seen in **Figure 9**.

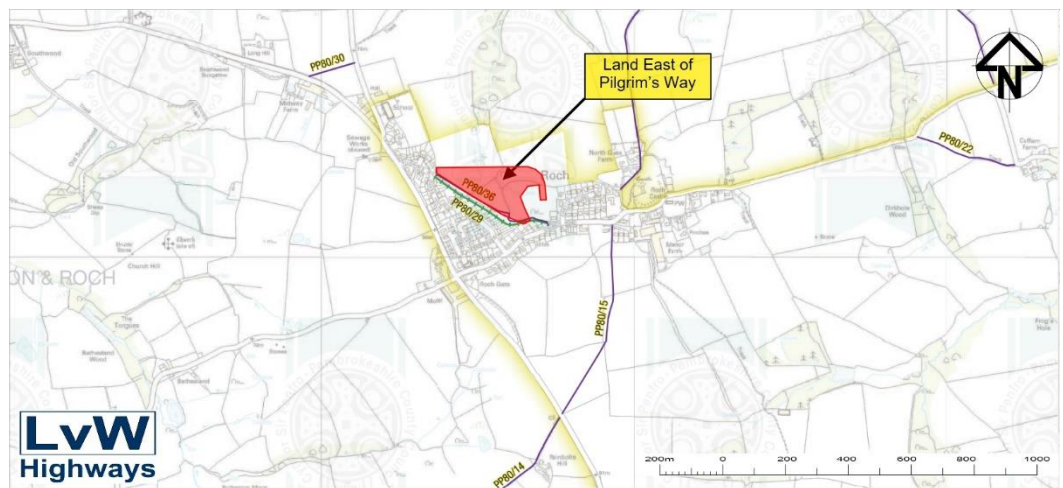


Figure 9: Public Right of Way footpaths in relation to the site

- 3.20 This PRoW is used to link the north of Roch where the Primary School is located, with the southern end of the village where the local conveniences store is on Church Road. The bridleway allows pedestrians and cyclists to use the quite traffic free lane and avoid using the footway along the A487(T).
- 3.21 Access to the footway from Pilgrim's Way is from the end of Pilgrim's Way. The signed footway is to the left of the picture and the bridleway is straight ahead as shown in **Plate 1**.



Plate 1: Access to footpath PP80/36 and bridle way PP80/29 from Pilgrim's Way

- 3.22 The footway leads into the development site field, but then the route becomes severely overgrown and in passable. The bridleway is hard surfaced and has street lighting present as can be seen in **Plate 2**.



Plate 2: Typical view along bridleway PP80/29

- 3.23 Access to the footway from Maes Ffynnon as can be seen in **Plate 3** is just about accessible but similar to the footway from Pilgrim's Way it becomes severely overgrown and in passable as shown in **Plate 4**.



Plate 3: Access to footpath PP80/36 from Maes Ffynnon



Plate 4: Overgrown footpath PP80/36

3.24 The bridleway PP80/29 is clearly accessible as can be seen in **Plate 5**.



Plate 5: Access to bridleway PP80/29 from Maes Ffynnon

3.25 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 2km for day to day activities. The thrust of sustainability policy is that there will be

an increasing propensity for people to use non single car occupancy modes, of which walking is one.

Cycle Facilities

- 3.26 There are a number of allocated cycle routes within the vicinity of the site that run through Roch which shows that cycling is suitable to be undertaken on the existing highways.
- 3.27 The Sustrans Route 4 is a fantastic long-distance cycling route from London to Fishguard in west Wales. Sustrans Route 4 follows the coast route along Welsh Road between Broad Haven and Newgale. There is an alternative route that runs from the coast road (Welsh Road) eastbound along the minor road to the A487(T) where it turns right along the A487(T) for approximately 500m before continuing along the minor road (Roch Hill) past the primary school northwards on to Roch Bridge. These routes can be seen in **Figure 10** the Sustrans Route 4 is shown as the red line running along the coast and the alternative route as the blue line passing through Roch.



Figure 10: Sustrans Cycle Routes (Red-Route 4, Blue-Alternative Route 4)

- 3.28 Pembrokeshire County Council also promote a circular cycle trail called Havens Trail¹ that passes through Roch. The Havens Trail is a really picturesque and interesting trail which starts and finishes at Haverfordwest. On route you pass the lofty tower of Roch Castle before arriving at the attractive St Brides Bay Heritage Coast havens. The full route can be seen in **Figure 11**.

¹ [Havens Trail - Pembrokeshire County Council](#)



Figure 11: Cycle Route Havens Trail

- 3.29 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. **Figure 12** shows the cycling isochrones for 4000m from the centre of the proposed development site.



Figure 12: Cycling isochrones 4000m (4km)

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

Public Transport

- 3.31 The proposed development site is very conveniently located to access public transport. There are bus stops on the A487 just south of its junction with Pilgrim's Way. These bus stops are within approximately 250m of the centre of the site and have yellow bus stop road markings on the running carriageway, raised kerbs for easy access and a bus shelter present on the footway.
- 3.32 There are also bus stops located on the A487 near its junction with Church Road.

- 3.33 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

- 3.34 In reviewing the public transport provision in the vicinity of and directly serving the area, it is evident that the site benefits from bus provision.

- 3.35 The nearest bus stops to the site are located on the A487(T). These stops are serviced by route T11 (circa 1 hour frequency) which link the site with Fishguard in the north and Haverfordwest to the south. The journey time via bus between Roch and Haverfordwest city centre is currently just 28 minutes.

- 3.36 All the timetables are available online at <https://www.traveline.cymru/>.

- 3.37 It is therefore concluded that the existing bus routes provide opportunities for residents of the development to make both commuting and leisure trips via sustainable modes of travel.

Rail Services

- 3.38 The nearest railway station to Roch is the town of Haverfordwest, 9km from Roch which provides further sustainable transport opportunities, particularly for trips further afield.

- 3.39 The station is staffed during the daytime (07:00 – 13:30, Mondays to Saturdays only) and has toilet facilities, a newspaper kiosk, ticket office and a station buffet on platform one. For times when the station building is closed, an automated ticket kiosk allows passengers to buy tickets with a debit or credit card, or to collect tickets from purchases made online. Train running information is provided by digital CIS displays, timetable posters and telephone. Step-free access is only possible to platform one, as the only route to platform two is via a stepped footbridge.

- 3.40 A bus stop outside the station allows interchanges with services to St Davids, Fishguard and Cardigan, as well as a direct service to Aberystwyth. There is also a Taxi rank directly outside the station.

- 3.41 Trains from Haverfordwest connect with services at Swansea. The usual service pattern is one train every two hours in each direction: southwards to Milford Haven; and east/northwards to Manchester Piccadilly via Swansea, Cardiff Central and Hereford.

- 3.42 Therefore, rail journeys are only considered suitable for long distance travel in connection with bus transport for the majority of commuters and visitors to Roch.

Accessibility and Sustainability Assessment Conclusions

- 3.43 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.

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

- 3.45 The provision to smaller more local destinations is more infrequent but some of these service also compliment more frequent provision.

- 3.46 The proximity of rail provision is accessible and provides services to national destinations.

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

Personal Injury Collision/Accident Data

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

3.49 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.

3.50 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.

3.51 An examination of the PIC data indicated that there have been no PICs recorded over the 5-year period review within Roch. However, there have been three collisions on the A487(T) within 200m either side of Roch crossroads as can be seen in **Figure 13**.

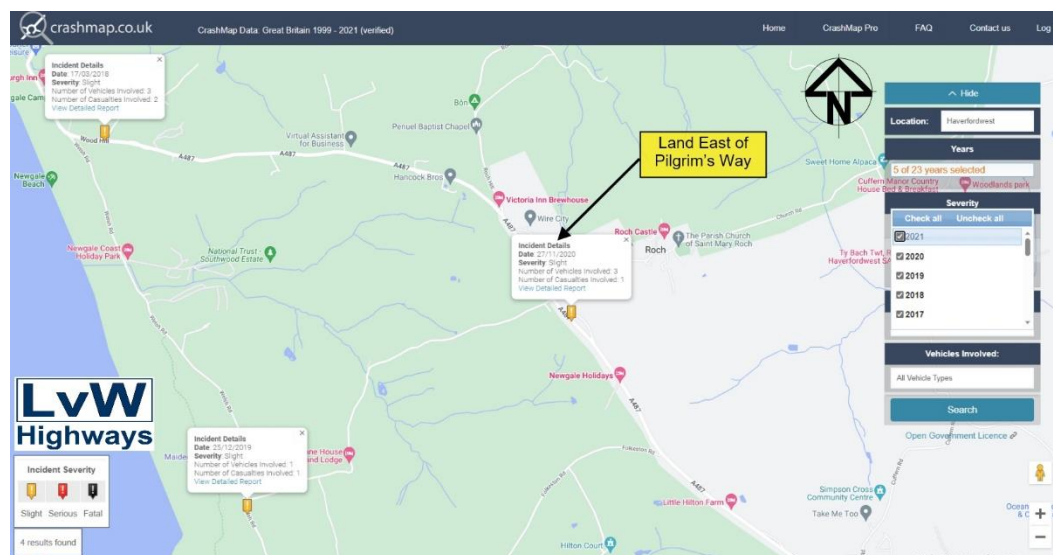


Figure 13: Personal Injury Collisions 2016 to 2020

3.52 The personal injury collision data does not therefore 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.

3.53 The minor increase in 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

3.54 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

- 3.55 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
- 3.56 Selected roads which have a strategic role and are less of a risk to walkers and cyclists may be an exception to the legislation.
- 3.57 The County Council has assessed all roads within Pembrokeshire to map the impacts of the legislation and to identify these exceptions.
- 3.58 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.
- 3.59 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.
- 3.60 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.

Site Access

- 3.61 The existing access to the site is provided directly off Maes Ffynnon and Pilgrim's Way. **Plate 6** shows the existing site access off Maes Ffynnon between the two dwellings.



Plate 6: Existing Site Access off Maes Ffynnon

- 3.62 **Plate 7** shows the existing field access off Pilgrim's Way.



Plate 7: Existing Site Access off Pilgrim's Way

Air Quality Management Area (AQMA)

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

Abnormal Loads

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

4 PROPOSED DEVELOPMENT

Proposed Scheme

- 4.1 The proposed development is for 52 residential dwellings on Land at Roch - East of Pilgrim's Way.
- 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 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 1**.

House Type	Total Number
1-bed Semi Detached Apartments	4
2 Bedroom Apartments	8
2 Bedroom Semi Detached Houses	8
3 Bedroom Semi Detached Houses	2
3 Bedroom Split-level Semi Detached Houses	2
3 Bedroom Detached Houses	13
4 Bedroom Detached 2-storey House	13
4 Bedroom Detached 2-storey split-level House	1
4 Bedroom Detached 2.5-storey House	1
Total No. Units	52

Table 1: Schedule of house types

- 4.4 The approach taken in developing the layout plan is founded on giving maximum encouragement to walking and cycling within the layout of the development. The inclusion of high quality pedestrian and cycle routes within the development will play an important role in connecting the development to its surroundings.
- 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.

Proposed Vehicle Access

- 4.7 The housing development would be accessed from the west (Pilgrim’s Way) and east (Maes Ffynnon) residential streets in Roch. The site would be developed along two access roads, running east-west, although the roads would be divided by an area of open ground with a pedestrian and cyclists link but they do not connect for vehicles. There would be two cul-de-sacs in each part of the site, running north-south, and an area of open space to the south west.
- 4.8 Pilgrim’s Way will provide access to 32 dwellings (61.5%) and Maes Ffynnon will serve 20 dwellings (38.5%). A plan of the indicative site layout and accesses options are included 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.

- 4.10 Pilgrim's Way and Maes Ffynnon are adopted highways with no limitations on the volume or size of vehicles allowed to use it. As they pass in front of the development site, they 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 some minor works at the Pilgrim's Way access.
- 4.11 All highway users are subject to the rules, regulations and laws of the Highway Code.
- 4.12 In the research undertaken for MfS2 (see para 10.4.2) carried out by TMS Consultancy² 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 visibility³.
- 4.13 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."
- 4.14 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 Walking and Cycling Access

- 4.15 The internal design will allow for informal roads space to be used by all road users, creating a safe environment for pedestrians and cyclists. This will provide better scope for effective integration with the existing built-up areas and offer the levels of accessibility that are a necessary part of sustainable development.
- 4.16 The proposed development will provide an external connection to Maes Ffynnon and Pilgrim's Way with the provision of 1.8m to 2.0m wide footways at the proposed accesses to the development. Footways will be provided on both sides of the development access from Pilgrim's Way. It is considered that the access from Maes Ffynnon will be either a shared surface access or have a footway on one side of the access.
- 4.17 Considering shared surfaces, Manual for Streets provides guidance based on research that there is a self-limiting factor on pedestrians sharing space with motorists, of around 100 vehicle per hour.
- 4.18 The most recent guidance on walking proximity is provided by Manual for Streets (MfS) which, at paragraph 4.4.1, states that:

"Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and PPG13 (paragraph 75 of that document) states that walking offers the greatest potential to replace short car trips, particularly those under 2.0km".

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

4.19 Manual for Streets 2 (MfS2) clearly identifies the contribution that cycling can make to transport sustainability and accessibility, identifying this mode of travel as a good substitute for short car trips, particularly those under 5km.

Proposed Public Transport Access

4.20 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 residents of the site and achieve a tangible modal shift.

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

On Site Parking

4.22 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.

4.23 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.”*

Pembrokeshire Parking Standards

4.24 Parking at the site will be provided in accordance with Pembrokeshire Council’s Supplementary Planning Guidance ‘Parking Standards’ (June 2013). Paragraph 3.5 says: *“Parking standards set out in this document indicate the maximum requirement in new developments. Only in exceptional circumstances should the maximum requirement be exceeded; in such instances an applicant would have to demonstrate, to the satisfaction of the Council, a need for additional parking, using a Travel Plan”.*

4.25 Furthermore, the development will show a range of parking options other than a focus on plot dominated car parking, in line with its Residential Design Guide.

4.26 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. The location of the application site is considered to be within the guidance for a development within Zones 2 – 6 as the site lies within Zone 5 for parking calculation purposes.

4.27 The parking standard for the type and location of the proposed new development is provided in **Table 2**.

Type of Development	Residents	Visitors
a) Residential - Houses	3 spaces per house	1 space per 5 units

Table 2: Parking Standards for private dwellings in Zones 2 to 6

4.28 Garages may only be counted as parking spaces if they have internal dimensions that meet disabled access requirements of 6m x 3.6m. All properties with a garage must also have a 6m long driveway which has a width of not less than 3.6m.

4.29 Visitor parking must be designed as an integral part of any development where it is required and must take into account the needs of the disabled.

- 4.30 For each individual dwelling the parking requirement are a maximum of 3 spaces.
- 4.31 However, following discussions between the architects and the LHA, the architects were asked to provide 3 spaces for the 4-bed units. Elsewhere they have shown 1 space for 1-bed apartments and 2 spaces for 2&3-bed units. As these number of parking spaces do not exceed the maximum of 3 spaces per dwelling, they meet the requirements of the parking standards.
- 4.32 Visitor parking has not been specifically identified.
- 4.33 Provision for secure cycle storage will be provided within each dwelling.
- 4.34 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

- 4.35 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

- 4.36 This section describes the traffic analysis undertaken to determine the likely effect that the proposed residential development may have on the surrounding highway network. The traffic analysis includes the calculation of the number of vehicle trips associated with the development.
- 4.37 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.
- 4.38 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.
- 4.39 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.
- 4.40 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.
- 4.41 As the proposed development is not built, one estimate of trips is based on information extracted from the TRICS® Version 7.8.3 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.

- 4.42 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

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

Land use & trip rate selection

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

Primary Filtering

- No. of units: Maximum of 100.
- 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.

- 4.44 The TRICS output is provided in detail in **Appendix B** and summarised below.
- 4.45 The trip rate has been calculated based on the proposed total number of private dwellings.
- 4.46 **Table 3** shows the average hourly trips during the day as well as the daily flows that the site development could typically have. These are calculated by multiplying the trip rates produced from the TRICS data with the proposed number of dwellings.

Time Range	Arrivals	Departures	Totals
07:00-08:00	3	12	16
08:00-09:00	9	22	31
09:00-10:00	10	11	21
10:00-11:00	8	9	17
11:00-12:00	8	10	18
12:00-13:00	11	11	22
13:00-14:00	11	10	21
14:00-15:00	11	12	23
15:00-16:00	16	12	28
16:00-17:00	17	12	29
17:00-18:00	20	11	31
18:00-19:00	15	11	25
Daily Trip Rates:	139	144	283

Table 3: Vehicular Trips for 52 private dwellings (Proposed Use)

4.47 This clearly shows that if the 52 dwellings were occupied, it is estimated that it could attract and produce 283 vehicle movements a day.

4.48 To visualise how these trips arrive and depart throughout a typical day, the arrivals and departures are plotted on **Chart 1**. It can be seen that a development of private dwellings will generate two peak periods, one in the morning and the other in the afternoon to evening.

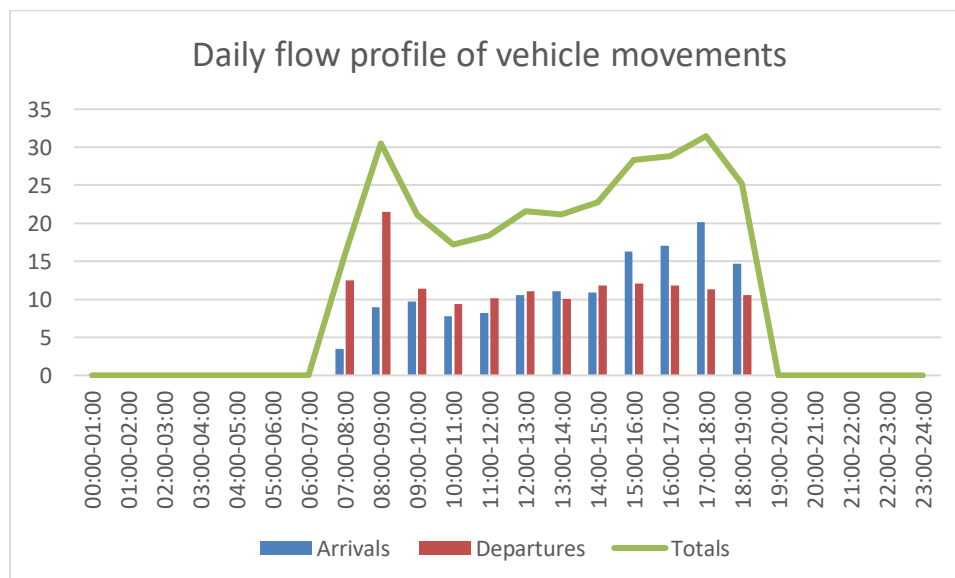


Chart 1: Vehicular Trips for 52 private dwellings

4.49 The development is likely to be at its busiest during the morning and evening peak hours and the data suggests that 31 vehicle movements will be generated during its busiest hour (08:00-09:00) and 31 vehicles in the evening peak hour (17:00-18:00).

4.50 During the AM peak hour (08:00-09:00) it is anticipated that the proposed development could attract 9 vehicle movements (arrivals) and produce 22 vehicle movements (departures). To put this in context, vehicle movements per hour equates to on average, no more than one movement every two minutes. This is not considered to be significant.

4.51 During the PM peak hour (17:00-18:00) it is anticipated that the proposed development could attract 20 vehicle movements (arrivals) and produce 11 vehicle movements (departures). To put this in context, vehicle movements per hour equates to on average, no more than one movement every two minutes. This is not considered to be significant.

4.52 The TRICS data suggests that, based on typical trip rates for residential, the proposed development has the potential to generate around 139 arrivals and 144 departures per day.

Mode Share

4.53 The multi modal TRICS data provides information on the suggested number of trips made by various mode as shown in **Table 4**.

Summary of Daily Trip Rates:	ARRIVALS	DEPARTURES	TOTALS
Count Type: TOTAL VEHICLES	139	144	283
Count Type: TAXIS	1	1	3
Count Type: OGVS	1	1	2
Count Type: PSVS	0	0	0
Count Type: CYCLISTS	2	2	4
Count Type: VEHICLE OCCUPANTS	178	185	364
Count Type: PEDESTRIANS	30	31	61
Count Type: BUS/TRAM PASSENGERS	3	4	7
Count Type: TOTAL RAIL PASSENGERS	2	2	4
Count Type: COACH PASSENGERS	0	0	0
Count Type: PUBLIC TRANSPORT USERS	5	5	10
Count Type: TOTAL PEOPLE	215	223	439
Count Type: CARS	119	124	244
Count Type: LGVS	16	16	32
Count Type: MOTOR CYCLES	1	1	2

Table 4: Summary of Daily Trips by Mode (Proposed Use)

4.54 Of the total movements it is anticipated that, 14.7% of the total movements would walk or cycle, 2.3% would use public transport, 33.8% would be single vehicle occupants and the remaining 49.2% would be multi vehicle occupants. This is represented graphically in **Chart 2**.

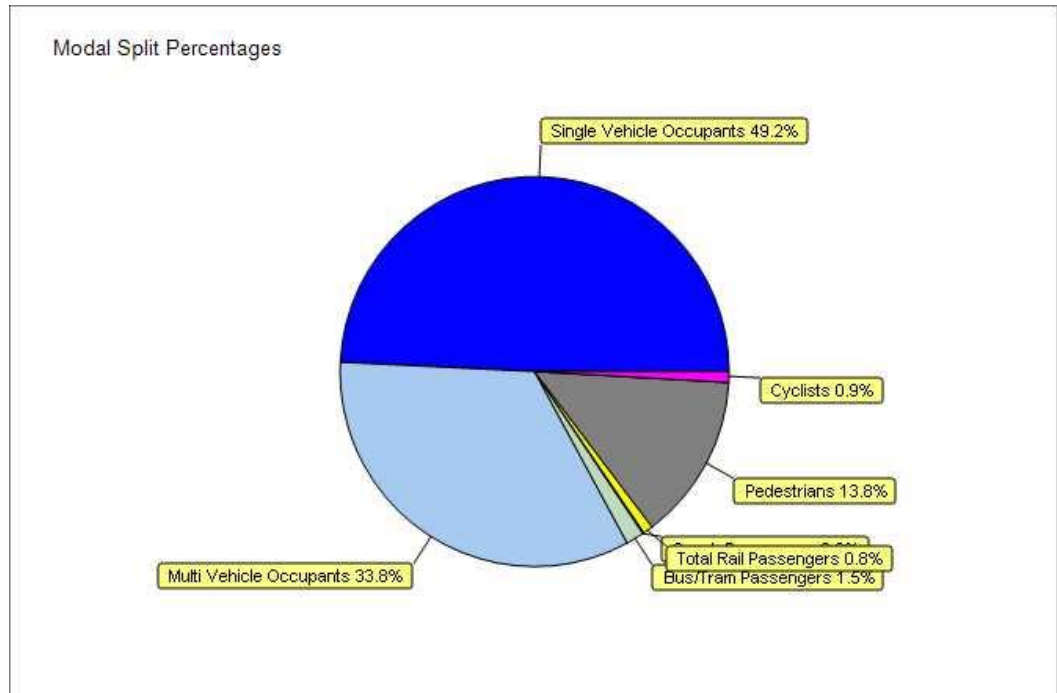


Chart 2: Mode share

4.55 **Chart 3** shows the daily flow profile of the calculated pedestrian movements to and from the proposed development.

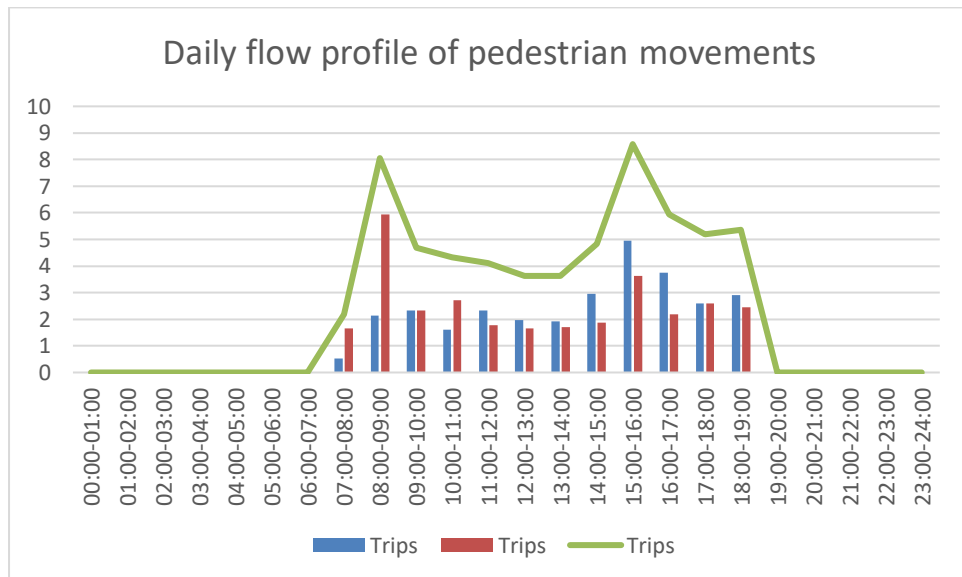


Chart 3: Pedestrian Trips for 52 private dwellings

Trip Distribution

4.56 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. At this stage, the generated traffic volumes have been distributed and assigned to the adjacent road system.

4.57 Based on the indicative site layout plan, 68% of vehicles will access the site from Pilgrim's Way and the other 32% from Maes Ffynnon.

4.58 The residents will use the access onto Maes Ffynnon and Pilgrim's Way to access and depart from the site. It is anticipated that most will depart and arrive from the south-east (90%) using the A487(T), Haverfordwest direction. The remaining smaller proportion (10%) will travel in the north-west direction to access the A487(T) Newgale, St David's direction.

4.59 However, this is our best guess based on the location of centres of population and distances to these centres of population. The actual distribution may differ from that predicted.

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 Maes Ffynnon and extension of Pilgrim's Way into the site. The internal layout will be designed where pedestrians and cyclists will have priority over motorised traffic.

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

4.63 **Public Transport:** There are several bus stops located within close proximity to the development site providing frequent access to the main towns of St David's and Haverfordwest.

5 SCOPE OF RESIDENTIAL TRAVEL PLAN

Introduction

- 5.1 It is recognised that Travel Plans are an important means of influencing transport to and from a given site. They provide a framework within which to address the important aims of cutting down on the proportion of journeys taken by single occupancy cars and increasing the use of more sustainable transport modes. They have an important role to play in the minimisation of the negative impacts of car travel including pollution and congestion.
- 5.2 A Travel Plan (TP) is an important tool for delivering accessible and sustainable communities and can act as a mechanism for ensuring that a sustainable access to a proposed new community is considered from the earliest stages of development.
- 5.3 A Travel Plan will provide a package of measures for:
- Minimising the number and length of car trips generated by a development;
 - Supporting more sustainable travel; and
 - Reducing the need to travel.
- 5.4 The Travel Plan will incorporate a series of objectives and targets that will set up a strategy to achieve the main aims of minimising the adverse impact caused by use of the private car and maximise the use of more sustainable modes of transport.
- 5.5 Travel planning for residential developments has the potential to help achieve more sustainable communities by improving their accessibility. In the past, new housing development has been characterised by high car trip generation. However, better choices about the location and density of new housing combined with the use of TPs should have a real impact on travel patterns and aid progress toward sustainable transport and land use objectives.
- 5.6 Travel behaviour change is more likely to come about when other changes are already happening (i.e. a house move) and therefore targeting new residential developments often provides a timely intervention when travel patterns are more likely to be predisposed to change and travel habits broken.
- 5.7 To this end, a detailed TP will be implemented for the proposed development in order to reduce the impact of the development on the surrounding road network by outlining measures to maximise the use of non-car modes of transport.
- 5.8 The TP for the development has been prepared in accordance with DfT's "Good Practice Guidelines: Delivering Travel Plans through the Planning Process" from April 2009. The Good Practice Guidelines states that Travel Plans should include relevant targets and measures to ensure that these can be achieved, as well as monitoring and management arrangements.

Objectives of the Travel Plan

- 5.9 The main objectives of the TPs are to:
- Reduce the need for unnecessary travel to and from the development and assist those who need to travel to do so by sustainable modes;
 - Achieve a minimum number of additional single occupancy car traffic movements to and from the development;

- Encourage those travelling to and from the development to use public transport, cycle, walk and car share in a safe and secure manner;
- Provide adequately for those with mobility difficulties; and
- Promote healthy lifestyles and sustainable, vibrant local communities by extending the benefits of the TPs through the local area where possible.

Proposed Travel Plan Targets and Measures

- 5.10 Setting targets is essential in assessing whether or not the Travel Plan has been successful and where, if necessary, improvements/amendments could be made. These targets should be SMART:
- Specific;
 - Measurable;
 - Achievable;
 - Realistic; and
 - Time-bound.
- 5.11 The TP then provides a series of measures that will be implemented and will have regard to the following hierarchy:
- Walking;
 - Cycling;
 - Public Transport; and
 - Vehicles.
- 5.12 The TP will combine site specific “hard measures” related to the provision of infrastructure works with “soft measures” such as marketing and promotion. The proposed measures will be appropriate to the site, realistic, and likely to affect travel behaviour. Restrictions related to the modes wished to be limited will be combined with incentives to attract people to more sustainable measures.

Implementation

- 5.13 A Travel Plan Co-ordinator will be appointed for the development in order to oversee and be responsible for the TP, implement the proposed measures and ensure that the information is kept up to date and relevant.
- 5.14 The TP Co-ordinator could be a representative from the developer, an external consultant or a member of the site management committee.
- 5.15 In terms of sources of information, Travel Packs will be provided to each dwelling providing information on local walking/cycling facilities, public transport routes in the area and car sharing initiatives.

Maintaining and Monitoring

- 5.16 The Travel Plan will be an iterative document that will evolve over the years and will require a process of monitoring and review in order to check the effectiveness of the measures that are introduced.
- 5.17 A survey will be conducted a year after first occupation of the full development in order to collect data on travel choices, behaviour for all travel purposes and modes of transport.

- 5.18 Preliminary targets can then be set for the development in discussion with the Travel Plan Officer from Pembrokeshire Council. The target is likely to be that single occupancy car trips should be reduced by between 5% and 10% within a five-year period.
- 5.19 Continued monitoring of the travel patterns of the new residents will be achieved by carrying out at least one more travel surveys during the five-year period of implementation of the Travel Plan, recording information of how people are travelling, and, more importantly, what might encourage them to travel differently. After the survey, there should be liaison with the Travel Plan Officer from Pembrokeshire Council in order to revise and amend the targets as necessary.

6 SUMMARY AND CONCLUSIONS

Introduction

- 6.1 This document has been prepared in support of an application for a residential development of 52 dwellings on Land at Roch - East of Pilgrim's Way.

Existing Conditions

- 6.2 The site is well located in terms of access to the local road network. The main road within the study area is the A487 (T).
- 6.3 There are regular local bus services serving the local towns and railway station in Haverfordwest that services a range of destinations.

Policy Review

- 6.4 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 and a network of footpaths throughout the development;
 - at the local level, Pembrokeshire Council 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.
- 6.5 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.
- 6.6 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

- 6.7 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 2015 to 2019. This information does not identify any major accident problems on the surrounding highway network.
- 6.8 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.
- 6.9 Evidence shows that no serious 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

- 6.10 The proposed development will comprise a residential development of 52 dwellings accessed via a new simple priority T- junction off Maes Ffynnon and Pilgrim's Way.
- 6.11 Access to these facilities by non-motorised modes will be encouraged through the provision of footways. The layout of the development will be designed to minimise the walking distance to the public transport infrastructure.

6.12 Networks of footways are included throughout the site which connect and integrate various elements of the development. The proposed routes will connect to the existing public rights of way on the periphery of the site providing safe routes to and from the local area.

6.13 Parking will be provided in accordance with current standards as indicated by Pembrokeshire Council.

Traffic Generation, Distribution and Assignment

6.14 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.

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

Impact on the Local Highway Network

6.16 During the AM peak hour it is anticipated that the proposed development could attract 9 vehicle movements (arrivals) and produce 22 vehicle movements (departures).

6.17 During the PM peak hour it is anticipated that the proposed development could attract 20 vehicle movements (arrivals) and produce 11 vehicle movements (departures).

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

Overall Conclusion

6.19 This report has investigated the transport implications for the Construction of 52 no. dwelling houses, access road and associated infrastructure on Land at Roch - East of Pilgrim's Way.

6.20 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.

6.21 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.

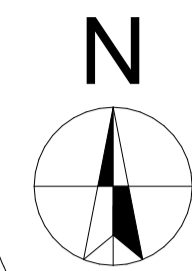
6.22 We conclude that, with respect to transport, this development complies with the Welsh Governments development guidance as set out in Planning Policy Wales and is appropriate and acceptable in traffic and transport terms. The Well-being of Future Generations Act put in place four aspects of well-being: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

Closure

- 6.23 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.
- 6.24 This report is for the exclusive use of Wakefield Developments (Pembrokeshire) Ltd no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from LvW Highways Ltd.
- 6.25 LvW Highways Ltd disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of work.

APPENDIX A

Indicative site layout and Access plans



Site Legend:

- Indicates Rear Gardens
- Indicates Front Gardens
- Indicates 2.0m Wide Perimeter Ecological Buffer
- Indicates SUDS Infiltration Features. TBC by Engineer.
- Indicates Public Open Space (min 400m2) 'POS'
- Indicates Retaining walls. TBC by Engineer.
- Indicates Air Source Heat Pump locations
- Indicates Bird Box. See Ecology Report.
- Indicates Bat Box. See Ecology Report.
- Indicates Bee Brick. See Ecology Report.

Note:
Hedgehog highway to be included in base of fence to allow hedgehog movement. See Ecologists Report.

Legend:

- Indicates Application Site Boundary

Note
'Site Application Area' = **2.60ha**
26,013m²
Developable 'Site Area' = **1.95ha**
19,500m²

House Type Mix

- 4 x 1-bed Semi Detached Apartments
Average Area = 53.7m²
- 8 x 2 Bedroom Apartments,
Areas = LGF = 65.5m² - GFL & FFL = 94.95m²
- 8 x 2 Bedroom Semi Detached Houses
Area = 76.0m²
- 2 x 3 Bedroom Semi Detached Houses
Area = 90.7m²
- 2 x 3 Bedroom Split-level Semi Detached Houses Area = 90.7m²
- 13 x 3 Bedroom Detached Houses
Area = 99.0m²
- 13 x 4 Bedroom Detached 2-storey House
Area = 116.4m²
- 1 x 4 Bedroom Detached 2-storey split-level House, Area = 123.2m²
- 1 x 4 Bedroom Detached 2.5-storey House Area = 145.9m²

Total No Units = 52 Units

Location of 'Lady Well' archaeological feature to be retained by record
5.0m buffer zone retained around 'Lady Well' as advised by DAT

Proposed Roof/Block Plan

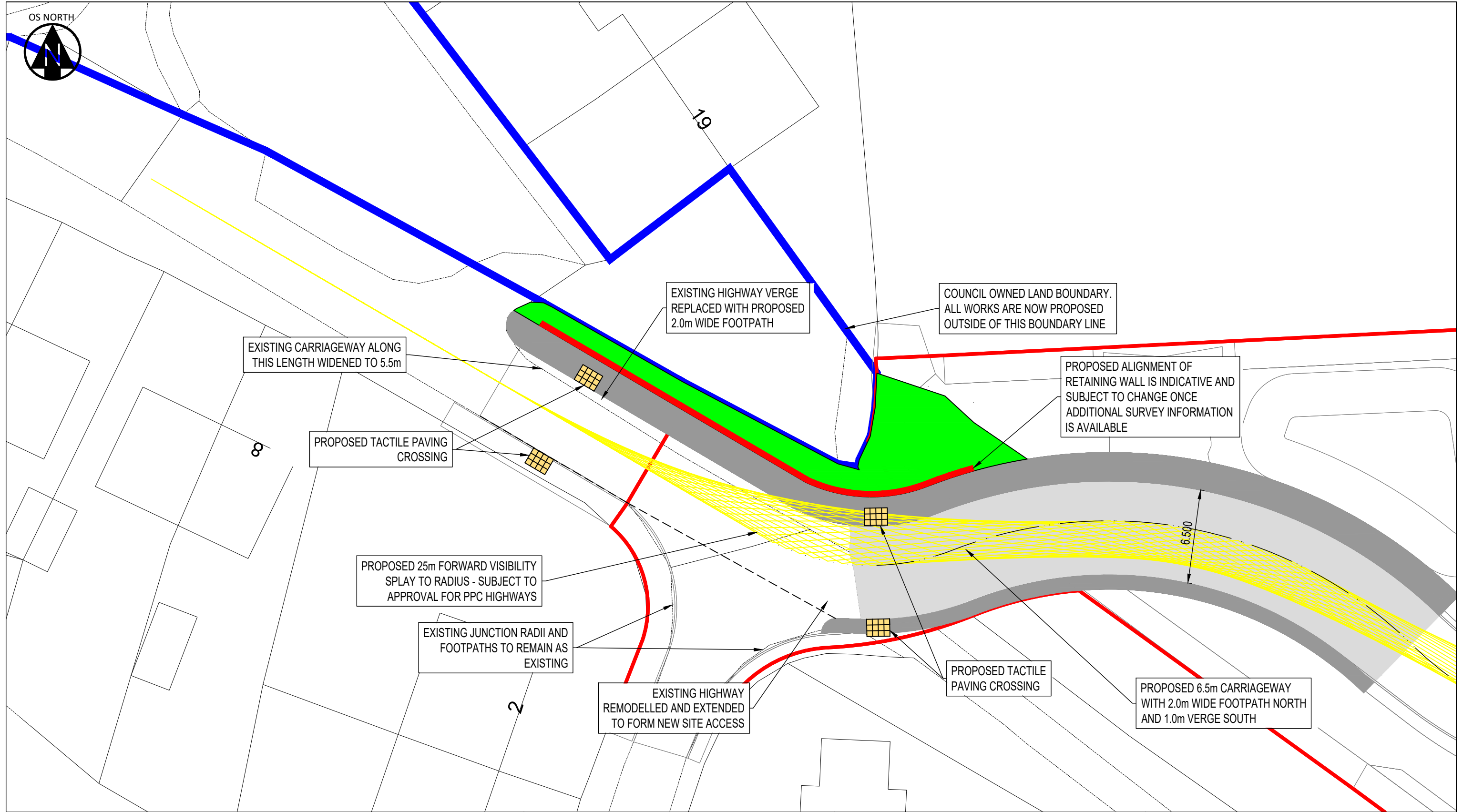
1:500

Revision:	Date:	By:	Notes:
Revision A - General Site Updates	27th April 2023	SE/RH	

16 Main Street,
Pembrokeshire,
SA65 9HJ
01348 435004/06
design@rlharchitectural.com
www.rlharchitectural.com

Client: WAKEFIELD DEVELOPMENTS PEMBROKESHIRE LIMITED	Scale: Noted Date: April '23 Drawn: SE/RH	Drawing Title: PLANNING DRAWINGS - Proposed Site Plan
Job Title: Proposed Residential Development, Land East of Pilgrims Way, Roch, Pembrokeshire SA62 6BQ		R534 P-02 A

OS NORTH



NOTES

REVISIONS

P04	26/04/23	Updated to suit new layout	JSL	CS	CS
P03	26/03/22	Updated to suit new layout	JSL	CS	CS
P02	08/10/21	Minor amendment to entrance geometry.	JSL	CS	CS
P01	27/09/21	First Issue.	JSL	CS	CS

Rev	Date	Description	By	Ckd	App
-----	------	-------------	----	-----	-----

Hydrock

FIRST FLOOR, CASTLEBRIDGE 5
CASTLEBRIDGE
5-19 COWBRIDGE ROAD EAST
CARDIFF
CF11 9AB
t: +44 (0) 2920 023665
e: cardiff@hydrock.com

CLIENT
WAKEFIELD DEVELOPMENTS
PEMBROKESHIRE LIMITED

PROJECT
RESIDENTIAL DEVELOPMENT AT
LAND OFF MAES FFYNONN,
ROCH, PEMBROKESHIRE

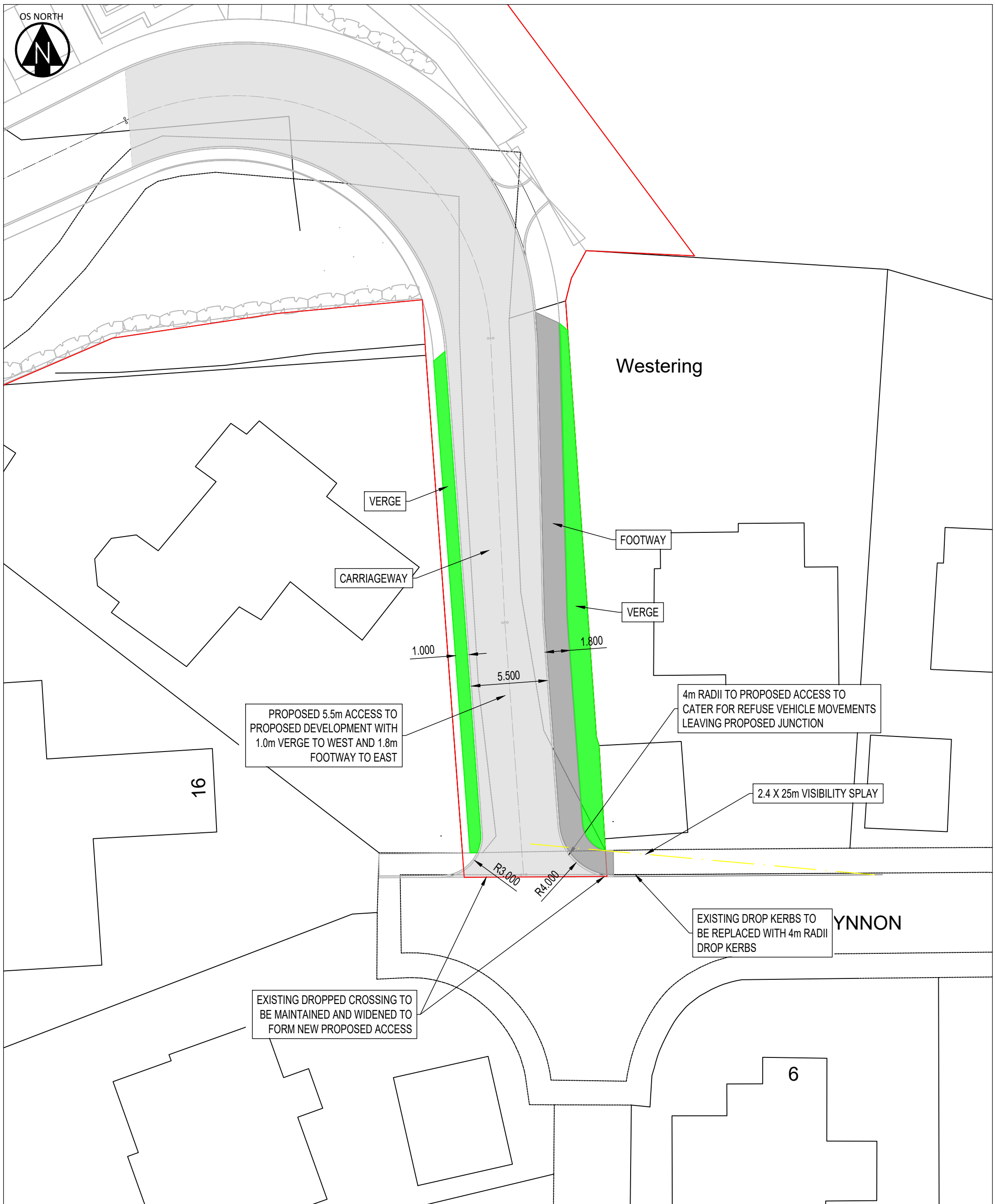
TITLE
PROPOSED ENTRANCE GENERAL
ARRANGEMENT OFF PILGRIMS WAY

HYDROCK PROJECT NO. C-20198-C	SCALE @ A3 1:250
----------------------------------	---------------------

STATUS DESCRIPTION INFORMATION	STATUS S2
-----------------------------------	--------------

DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) ROC-HYD-XX-XX-DR-C-2000	REVISION P04
--	-----------------

OS NORTH



Rev	Date	Description	By	Ckd	App
P03	26/04/23	Updated to suit new layout	JSL	CS	CS
P02	26/03/22	Updated to suit new layout	JSL	CS	CS
P01	27/09/21	First Issue.	JSL	CS	CS

Hydrock

FIRST FLOOR, CASTLEBRIDGE 5
CASTLEBRIDGE
5-19 COWBRIDGE ROAD EAST
CARDIFF
CF11 9AB
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CLIENT
**WAKEFIELD DEVELOPMENTS
PEMBROKESHIRE LIMITED**

PROJECT
**RESIDENTIAL DEVELOPMENT AT
LAND OFF MAES FFYNNON,
ROCH, PEMBROKESHIRE**

TITLE PROPOSED ENTRANCE GENERAL ARRANGEMENT OFF MAES FFYNNON	
HYDROCK PROJECT NO. C-20198-C	SCALE @ A3 1:250
STATUS DESCRIPTION INFORMATION	STATUS S2
DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) ROC-HYD-XX-XX-DR-C-2001	REVISION P03

APPENDIX B

TRICS Output

Calculation Reference: AUDIT-452201-230428-0414

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
	HC HAMPSHIRE	1 days
	WS WEST SUSSEX	2 days
03	SOUTH WEST	
	DC DORSET	2 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	2 days
	NF NORFOLK	3 days
	SF SUFFOLK	1 days
10	WALES	
	PS POWYS	1 days
12	CONNAUGHT	
	CS SLIGO	2 days
	LT LEITRIM	1 days
13	MUNSTER	
	TI TIPPERARY	1 days
14	LEINSTER	
	WC WICKLOW	1 days
16	ULSTER (REPUBLIC OF IRELAND)	
	CV CAVAN	2 days
	DN DONEGAL	1 days
17	ULSTER (NORTHERN IRELAND)	
	DE DERRY	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 90 (units:)
 Range Selected by User: 4 to 100 (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	4 days
Tuesday	2 days
Wednesday	4 days
Thursday	9 days
Friday	3 days

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

Selected survey types:

Manual count	22 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 undertaken using machines.

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	7
Village	8
Out of Town	2
No Sub Category	5

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	29 days - Selected
Servicing vehicles Excluded	48 days - Selected

Secondary Filtering selection:

Use Class:

C3	22 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	3 days
1,001 to 5,000	8 days
5,001 to 10,000	11 days

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

Population within 5 miles:

5,000 or Less	3 days
5,001 to 25,000	10 days
25,001 to 50,000	9 days

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

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	14 days
1.6 to 2.0	5 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	10 days
No	12 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	22 days
-----------------	---------

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

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

LIST OF SITES relevant to selection parameters

1	CA-03-A-07	MIXED HOUSES	CAMBRI DGESHI RE
	FIELD END NEAR ELY WITCHFORD Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 32 <i>Survey date: THURSDAY 27/05/21</i>		
	<i>Survey Type: MANUAL</i>		
2	CA-03-A-08	DETACHED & SEMI -DETACHED	CAMBRI DGESHI RE
	GIDDING ROAD SAWTRY Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 83 <i>Survey date: THURSDAY 13/10/22</i>		
	<i>Survey Type: MANUAL</i>		
3	CS-03-A-03	MIXED HOUSES	SLI GO
	TOP ROAD STRANDHILL STRANDHILL Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 30 <i>Survey date: THURSDAY 27/10/16</i>		
	<i>Survey Type: MANUAL</i>		
4	CS-03-A-04	DETACHED & SEMI -DETACHED	SLI GO
	R292 STRANDHILL Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 63 <i>Survey date: THURSDAY 27/10/16</i>		
	<i>Survey Type: MANUAL</i>		
5	CV-03-A-02	DETACHED & SEMI DETACHED	CAVAN
	R212 DUBLIN ROAD CAVAN KILLYNEBBER Edge of Town No Sub Category Total No of Dwellings: 80 <i>Survey date: MONDAY 22/05/17</i>		
	<i>Survey Type: MANUAL</i>		
6	CV-03-A-03	DETACHED HOUSES	CAVAN
	R212 DUBLIN ROAD CAVAN PULLAMORE NEAR Edge of Town No Sub Category Total No of Dwellings: 37 <i>Survey date: MONDAY 22/05/17</i>		
	<i>Survey Type: MANUAL</i>		
7	DC-03-A-09	MIXED HOUSES	DORSET
	A350 SHAFTESBURY Edge of Town No Sub Category Total No of Dwellings: 50 <i>Survey date: FRIDAY 19/11/21</i>		
	<i>Survey Type: MANUAL</i>		

LIST OF SITES relevant to selection parameters (Cont.)

8	DC-03-A-10 ADDISON CLOSE GILLINGHAM	MIXED HOUSES		DORSET
	Edge of Town Residential Zone Total No of Dwellings:		26	
	<i>Survey date: WEDNESDAY</i>		<i>09/11/22</i>	<i>Survey Type: MANUAL</i>
9	DE-03-A-04 GREENHALL HIGHWAY COLERAINE	SEMI-DETACHED & TERRACED		DERRY
	Edge of Town Residential Zone Total No of Dwellings:		38	
	<i>Survey date: THURSDAY</i>		<i>19/05/22</i>	<i>Survey Type: MANUAL</i>
10	DN-03-A-06 GLENFIN ROAD BALLYBOFEY	DETACHED HOUSING		DONEGAL
	Edge of Town Residential Zone Total No of Dwellings:		6	
	<i>Survey date: WEDNESDAY</i>		<i>10/10/18</i>	<i>Survey Type: MANUAL</i>
11	ES-03-A-06 BISHOPS LANE RINGMER	MIXED HOUSES		EAST SUSSEX
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings:		12	
	<i>Survey date: WEDNESDAY</i>		<i>16/06/21</i>	<i>Survey Type: MANUAL</i>
12	HC-03-A-23 CANADA WAY LIPHOOK	HOUSES & FLATS		HAMPSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		62	
	<i>Survey date: TUESDAY</i>		<i>19/11/19</i>	<i>Survey Type: MANUAL</i>
13	LT-03-A-01 ARD NA SI CARRICK-ON-SHANNON ATTIRORY	SEMI-DETACHED & DETACHED		LEITRIM
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		90	
	<i>Survey date: FRIDAY</i>		<i>24/04/15</i>	<i>Survey Type: MANUAL</i>
14	NF-03-A-05 HEATH DRIVE HOLT	MIXED HOUSES		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		40	
	<i>Survey date: THURSDAY</i>		<i>19/09/19</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

15	NF-03-A-34 NORWICH ROAD SWAFFHAM	MIXED HOUSES		NORFOLK
	Edge of Town Out of Town Total No of Dwellings:		80	
	<i>Survey date: TUESDAY</i>		<i>27/09/22</i>	<i>Survey Type: MANUAL</i>
16	NF-03-A-36 LONDON ROAD WYMONDHAM	MIXED HOUSES		NORFOLK
	Edge of Town No Sub Category Total No of Dwellings:		75	
	<i>Survey date: THURSDAY</i>		<i>29/09/22</i>	<i>Survey Type: MANUAL</i>
17	PS-03-A-02 GUNROG ROAD WELSHPOOL	DETACHED/SEMI-DETACHED		POWYS
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		28	
	<i>Survey date: MONDAY</i>		<i>11/05/15</i>	<i>Survey Type: MANUAL</i>
18	SF-03-A-06 BURY ROAD KENTFORD	DETACHED & SEMI-DETACHED		SUFFOLK
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings:		38	
	<i>Survey date: FRIDAY</i>		<i>22/09/17</i>	<i>Survey Type: MANUAL</i>
19	TI-03-A-01 BRITTAS ROAD THURLES	MIXED HOUSES		TIPPERARY
	Edge of Town Out of Town Total No of Dwellings:		76	
	<i>Survey date: THURSDAY</i>		<i>17/06/21</i>	<i>Survey Type: MANUAL</i>
20	WC-03-A-01 STATION ROAD WICKLOW CORPORATION MURRAGH	DETACHED HOUSES		WICKLOW
	Edge of Town No Sub Category Total No of Dwellings:		50	
	<i>Survey date: MONDAY</i>		<i>28/05/18</i>	<i>Survey Type: MANUAL</i>
21	WS-03-A-07 EMMS LANE NEAR HORSHAM BROOKS GREEN	BUNGALOWS		WEST SUSSEX
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings:		57	
	<i>Survey date: THURSDAY</i>		<i>19/10/17</i>	<i>Survey Type: MANUAL</i>
22	WS-03-A-16 BRACKLESHAM LANE BRACKLESHAM BAY	DETACHED & SEMI-DETACHED		WEST SUSSEX
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings:		58	
	<i>Survey date: WEDNESDAY</i>		<i>09/11/22</i>	<i>Survey Type: MANUAL</i>

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): 1.55

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.067	22	51	0.240	22	51	0.307
08:00 - 09:00	22	51	0.173	22	51	0.414	22	51	0.587
09:00 - 10:00	22	51	0.187	22	51	0.219	22	51	0.406
10:00 - 11:00	22	51	0.150	22	51	0.181	22	51	0.331
11:00 - 12:00	22	51	0.158	22	51	0.195	22	51	0.353
12:00 - 13:00	22	51	0.203	22	51	0.212	22	51	0.415
13:00 - 14:00	22	51	0.213	22	51	0.194	22	51	0.407
14:00 - 15:00	22	51	0.210	22	51	0.227	22	51	0.437
15:00 - 16:00	22	51	0.313	22	51	0.232	22	51	0.545
16:00 - 17:00	22	51	0.327	22	51	0.228	22	51	0.555
17:00 - 18:00	22	51	0.387	22	51	0.218	22	51	0.605
18:00 - 19:00	22	51	0.282	22	51	0.203	22	51	0.485
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.670			2.763			5.433

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.*

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Parameter summary

Trip rate parameter range selected: 6 - 90 (units:)
 Survey date date range: 01/01/15 - 09/11/22
 Number of weekdays (Monday-Friday): 22
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 4
 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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.003	22	51	0.002	22	51	0.005
08:00 - 09:00	22	51	0.001	22	51	0.002	22	51	0.003
09:00 - 10:00	22	51	0.002	22	51	0.002	22	51	0.004
10:00 - 11:00	22	51	0.001	22	51	0.001	22	51	0.002
11:00 - 12:00	22	51	0.004	22	51	0.004	22	51	0.008
12:00 - 13:00	22	51	0.001	22	51	0.001	22	51	0.002
13:00 - 14:00	22	51	0.004	22	51	0.002	22	51	0.006
14:00 - 15:00	22	51	0.001	22	51	0.003	22	51	0.004
15:00 - 16:00	22	51	0.005	22	51	0.005	22	51	0.010
16:00 - 17:00	22	51	0.004	22	51	0.004	22	51	0.008
17:00 - 18:00	22	51	0.002	22	51	0.002	22	51	0.004
18:00 - 19:00	22	51	0.000	22	51	0.000	22	51	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.028			0.028			0.056

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.000	22	51	0.000	22	51	0.000
08:00 - 09:00	22	51	0.002	22	51	0.001	22	51	0.003
09:00 - 10:00	22	51	0.006	22	51	0.005	22	51	0.011
10:00 - 11:00	22	51	0.004	22	51	0.003	22	51	0.007
11:00 - 12:00	22	51	0.004	22	51	0.007	22	51	0.011
12:00 - 13:00	22	51	0.000	22	51	0.001	22	51	0.001
13:00 - 14:00	22	51	0.002	22	51	0.002	22	51	0.004
14:00 - 15:00	22	51	0.000	22	51	0.000	22	51	0.000
15:00 - 16:00	22	51	0.002	22	51	0.001	22	51	0.003
16:00 - 17:00	22	51	0.000	22	51	0.001	22	51	0.001
17:00 - 18:00	22	51	0.002	22	51	0.002	22	51	0.004
18:00 - 19:00	22	51	0.000	22	51	0.000	22	51	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.022			0.023			0.045

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.001	22	51	0.000	22	51	0.001
08:00 - 09:00	22	51	0.001	22	51	0.002	22	51	0.003
09:00 - 10:00	22	51	0.000	22	51	0.000	22	51	0.000
10:00 - 11:00	22	51	0.000	22	51	0.000	22	51	0.000
11:00 - 12:00	22	51	0.000	22	51	0.000	22	51	0.000
12:00 - 13:00	22	51	0.000	22	51	0.000	22	51	0.000
13:00 - 14:00	22	51	0.000	22	51	0.000	22	51	0.000
14:00 - 15:00	22	51	0.000	22	51	0.000	22	51	0.000
15:00 - 16:00	22	51	0.000	22	51	0.000	22	51	0.000
16:00 - 17:00	22	51	0.001	22	51	0.001	22	51	0.002
17:00 - 18:00	22	51	0.001	22	51	0.001	22	51	0.002
18:00 - 19:00	22	51	0.000	22	51	0.000	22	51	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.004			0.004			0.008

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.002	22	51	0.006	22	51	0.008
08:00 - 09:00	22	51	0.002	22	51	0.014	22	51	0.016
09:00 - 10:00	22	51	0.000	22	51	0.005	22	51	0.005
10:00 - 11:00	22	51	0.004	22	51	0.002	22	51	0.006
11:00 - 12:00	22	51	0.003	22	51	0.003	22	51	0.006
12:00 - 13:00	22	51	0.004	22	51	0.000	22	51	0.004
13:00 - 14:00	22	51	0.004	22	51	0.002	22	51	0.006
14:00 - 15:00	22	51	0.005	22	51	0.000	22	51	0.005
15:00 - 16:00	22	51	0.005	22	51	0.003	22	51	0.008
16:00 - 17:00	22	51	0.004	22	51	0.000	22	51	0.004
17:00 - 18:00	22	51	0.005	22	51	0.004	22	51	0.009
18:00 - 19:00	22	51	0.002	22	51	0.001	22	51	0.003
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.040			0.040			0.080

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.075	22	51	0.291	22	51	0.366
08:00 - 09:00	22	51	0.210	22	51	0.609	22	51	0.819
09:00 - 10:00	22	51	0.213	22	51	0.283	22	51	0.496
10:00 - 11:00	22	51	0.179	22	51	0.232	22	51	0.411
11:00 - 12:00	22	51	0.198	22	51	0.251	22	51	0.449
12:00 - 13:00	22	51	0.256	22	51	0.259	22	51	0.515
13:00 - 14:00	22	51	0.267	22	51	0.246	22	51	0.513
14:00 - 15:00	22	51	0.265	22	51	0.294	22	51	0.559
15:00 - 16:00	22	51	0.463	22	51	0.286	22	51	0.749
16:00 - 17:00	22	51	0.453	22	51	0.290	22	51	0.743
17:00 - 18:00	22	51	0.518	22	51	0.275	22	51	0.793
18:00 - 19:00	22	51	0.335	22	51	0.251	22	51	0.586
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.432			3.567			6.999

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.010	22	51	0.032	22	51	0.042
08:00 - 09:00	22	51	0.041	22	51	0.114	22	51	0.155
09:00 - 10:00	22	51	0.045	22	51	0.045	22	51	0.090
10:00 - 11:00	22	51	0.031	22	51	0.052	22	51	0.083
11:00 - 12:00	22	51	0.045	22	51	0.034	22	51	0.079
12:00 - 13:00	22	51	0.038	22	51	0.032	22	51	0.070
13:00 - 14:00	22	51	0.037	22	51	0.033	22	51	0.070
14:00 - 15:00	22	51	0.057	22	51	0.036	22	51	0.093
15:00 - 16:00	22	51	0.095	22	51	0.070	22	51	0.165
16:00 - 17:00	22	51	0.072	22	51	0.042	22	51	0.114
17:00 - 18:00	22	51	0.050	22	51	0.050	22	51	0.100
18:00 - 19:00	22	51	0.056	22	51	0.047	22	51	0.103
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.577			0.587			1.164

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.000	22	51	0.006	22	51	0.006
08:00 - 09:00	22	51	0.001	22	51	0.022	22	51	0.023
09:00 - 10:00	22	51	0.005	22	51	0.011	22	51	0.016
10:00 - 11:00	22	51	0.005	22	51	0.004	22	51	0.009
11:00 - 12:00	22	51	0.003	22	51	0.003	22	51	0.006
12:00 - 13:00	22	51	0.007	22	51	0.005	22	51	0.012
13:00 - 14:00	22	51	0.002	22	51	0.003	22	51	0.005
14:00 - 15:00	22	51	0.005	22	51	0.005	22	51	0.010
15:00 - 16:00	22	51	0.012	22	51	0.007	22	51	0.019
16:00 - 17:00	22	51	0.010	22	51	0.001	22	51	0.011
17:00 - 18:00	22	51	0.005	22	51	0.002	22	51	0.007
18:00 - 19:00	22	51	0.004	22	51	0.000	22	51	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.059			0.069			0.128

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.000	22	51	0.009	22	51	0.009
08:00 - 09:00	22	51	0.000	22	51	0.016	22	51	0.016
09:00 - 10:00	22	51	0.000	22	51	0.005	22	51	0.005
10:00 - 11:00	22	51	0.000	22	51	0.001	22	51	0.001
11:00 - 12:00	22	51	0.001	22	51	0.000	22	51	0.001
12:00 - 13:00	22	51	0.001	22	51	0.000	22	51	0.001
13:00 - 14:00	22	51	0.000	22	51	0.000	22	51	0.000
14:00 - 15:00	22	51	0.001	22	51	0.000	22	51	0.001
15:00 - 16:00	22	51	0.000	22	51	0.000	22	51	0.000
16:00 - 17:00	22	51	0.005	22	51	0.001	22	51	0.006
17:00 - 18:00	22	51	0.015	22	51	0.000	22	51	0.015
18:00 - 19:00	22	51	0.014	22	51	0.000	22	51	0.014
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.037			0.032			0.069

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 COACH PASSENGERS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.000	22	51	0.000	22	51	0.000
08:00 - 09:00	22	51	0.000	22	51	0.002	22	51	0.002
09:00 - 10:00	22	51	0.000	22	51	0.000	22	51	0.000
10:00 - 11:00	22	51	0.000	22	51	0.000	22	51	0.000
11:00 - 12:00	22	51	0.000	22	51	0.000	22	51	0.000
12:00 - 13:00	22	51	0.000	22	51	0.000	22	51	0.000
13:00 - 14:00	22	51	0.000	22	51	0.000	22	51	0.000
14:00 - 15:00	22	51	0.000	22	51	0.000	22	51	0.000
15:00 - 16:00	22	51	0.000	22	51	0.000	22	51	0.000
16:00 - 17:00	22	51	0.002	22	51	0.000	22	51	0.002
17:00 - 18:00	22	51	0.000	22	51	0.000	22	51	0.000
18:00 - 19:00	22	51	0.000	22	51	0.000	22	51	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.002			0.002			0.004

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.000	22	51	0.015	22	51	0.015
08:00 - 09:00	22	51	0.001	22	51	0.040	22	51	0.041
09:00 - 10:00	22	51	0.005	22	51	0.015	22	51	0.020
10:00 - 11:00	22	51	0.005	22	51	0.005	22	51	0.010
11:00 - 12:00	22	51	0.004	22	51	0.003	22	51	0.007
12:00 - 13:00	22	51	0.008	22	51	0.005	22	51	0.013
13:00 - 14:00	22	51	0.002	22	51	0.003	22	51	0.005
14:00 - 15:00	22	51	0.006	22	51	0.005	22	51	0.011
15:00 - 16:00	22	51	0.012	22	51	0.007	22	51	0.019
16:00 - 17:00	22	51	0.017	22	51	0.002	22	51	0.019
17:00 - 18:00	22	51	0.020	22	51	0.002	22	51	0.022
18:00 - 19:00	22	51	0.017	22	51	0.000	22	51	0.017
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.097			0.102			0.199

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): 1.55

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.086	22	51	0.345	22	51	0.431
08:00 - 09:00	22	51	0.254	22	51	0.777	22	51	1.031
09:00 - 10:00	22	51	0.264	22	51	0.348	22	51	0.612
10:00 - 11:00	22	51	0.219	22	51	0.291	22	51	0.510
11:00 - 12:00	22	51	0.249	22	51	0.291	22	51	0.540
12:00 - 13:00	22	51	0.305	22	51	0.295	22	51	0.600
13:00 - 14:00	22	51	0.310	22	51	0.284	22	51	0.594
14:00 - 15:00	22	51	0.332	22	51	0.335	22	51	0.667
15:00 - 16:00	22	51	0.574	22	51	0.366	22	51	0.940
16:00 - 17:00	22	51	0.545	22	51	0.334	22	51	0.879
17:00 - 18:00	22	51	0.593	22	51	0.330	22	51	0.923
18:00 - 19:00	22	51	0.410	22	51	0.299	22	51	0.709
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.141			4.295			8.436

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.052	22	51	0.220	22	51	0.272
08:00 - 09:00	22	51	0.147	22	51	0.377	22	51	0.524
09:00 - 10:00	22	51	0.151	22	51	0.185	22	51	0.336
10:00 - 11:00	22	51	0.113	22	51	0.149	22	51	0.262
11:00 - 12:00	22	51	0.125	22	51	0.156	22	51	0.281
12:00 - 13:00	22	51	0.172	22	51	0.176	22	51	0.348
13:00 - 14:00	22	51	0.181	22	51	0.166	22	51	0.347
14:00 - 15:00	22	51	0.181	22	51	0.201	22	51	0.382
15:00 - 16:00	22	51	0.267	22	51	0.194	22	51	0.461
16:00 - 17:00	22	51	0.289	22	51	0.187	22	51	0.476
17:00 - 18:00	22	51	0.355	22	51	0.192	22	51	0.547
18:00 - 19:00	22	51	0.264	22	51	0.188	22	51	0.452
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.297			2.391			4.688

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.011	22	51	0.018	22	51	0.029
08:00 - 09:00	22	51	0.023	22	51	0.030	22	51	0.053
09:00 - 10:00	22	51	0.025	22	51	0.026	22	51	0.051
10:00 - 11:00	22	51	0.032	22	51	0.027	22	51	0.059
11:00 - 12:00	22	51	0.023	22	51	0.026	22	51	0.049
12:00 - 13:00	22	51	0.029	22	51	0.033	22	51	0.062
13:00 - 14:00	22	51	0.026	22	51	0.023	22	51	0.049
14:00 - 15:00	22	51	0.026	22	51	0.023	22	51	0.049
15:00 - 16:00	22	51	0.040	22	51	0.032	22	51	0.072
16:00 - 17:00	22	51	0.031	22	51	0.034	22	51	0.065
17:00 - 18:00	22	51	0.028	22	51	0.022	22	51	0.050
18:00 - 19:00	22	51	0.017	22	51	0.014	22	51	0.031
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.311			0.308			0.619

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	22	51	0.000	22	51	0.001	22	51	0.001
08:00 - 09:00	22	51	0.000	22	51	0.003	22	51	0.003
09:00 - 10:00	22	51	0.003	22	51	0.002	22	51	0.005
10:00 - 11:00	22	51	0.001	22	51	0.001	22	51	0.002
11:00 - 12:00	22	51	0.002	22	51	0.003	22	51	0.005
12:00 - 13:00	22	51	0.002	22	51	0.002	22	51	0.004
13:00 - 14:00	22	51	0.001	22	51	0.002	22	51	0.003
14:00 - 15:00	22	51	0.002	22	51	0.001	22	51	0.003
15:00 - 16:00	22	51	0.000	22	51	0.001	22	51	0.001
16:00 - 17:00	22	51	0.003	22	51	0.001	22	51	0.004
17:00 - 18:00	22	51	0.001	22	51	0.000	22	51	0.001
18:00 - 19:00	22	51	0.001	22	51	0.000	22	51	0.001
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.016			0.017			0.033

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.*