acstro

Transport Assessment

Bryncaerau
Tenby Road
St Clears
Carmarthenshire

October 2024

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Appendices

Revision History

A	15th October 2024	First Issue

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Acstro Ltd., Yr Hen Farchnad, Unit 19, Carmarthen Street,
Llandeilo, SA19 6BJ
www.acstro.com

1 Introduction

1.1 Acstro has been appointed to prepare a Transport Assessment in support of development proposals for land opposite at Bryncaerau, Tenby Road, St Clears.

1.2 The proposed development comprises of the construction of 115 dwellings, including 60 affordable and social rented homes. The extent and location of the application site is shown in Appendix 1.

Appendix 1 Location Plan

1.3 The proposal has been the subject of pre-application enquiry and the scope and content of this Transport Assessment has been informed by the advice provided by the Highway Authority.

Appendix 2 Highway Authority Pre-application Comments

1.4 This document considers the transport implications of the proposed development. It demonstrates that the site is in a sustainable location that is closely related to existing facilities and services and is accessible to pedestrians, cyclists and public transport users. It is also demonstrated that safe vehicular access to the site can be provided and adequate parking provision is made for the future occupiers and users of the site. Finally an assessment is provided that demonstrates that the development's traffic will have no significant detrimental impact on the operation of nearby junctions.

1.5 The structure of the Transport Assessment is as follows:

- Section 2 describes the relevant planning policy context that is relevant in terms of transport issues.
- Section 3 describes the site, its proximity to services and facilities and its accessibility by all forms of transport.
- Section 4 describes the proposed development and its access arrangements.
- Section 5 considers the impact of the development's traffic on the surrounding highway network.
- Section 6 provides a summary and conclusion.

2 Policy Context

Future Wales - The National Plan 2040

2.1 This is the national development framework that sets out the direction for development in Wales to 2040.

2.2 Policies 11 and 12 relate to national and regional connectivity, respectively. These seek to encourage longer-distance trips to be made by public transport, while also making longer journeys possible by electric vehicles. In urban areas, to support sustainable growth and regeneration, the priorities are improving and integrating active travel and public transport. In rural areas the priorities are supporting the uptake of ultra-low emission vehicles and diversifying and sustaining local bus services. Active travel must be an essential and integral component of all new developments.

2.3 Planning authorities must act to reduce levels of car parking in urban areas, including supporting car-free developments in accessible locations and developments with car parking spaces that allow them to be converted to other uses over time. Where car parking is provided for new non-residential development, planning authorities should seek a minimum of 10% of car parking spaces to have electric vehicle charging points.

Planning Policy Wales (12th Edition)

2.4 Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales.

2.5 In terms of transport related policies paragraph 4.1.1 states that “the planning system should enable people to access jobs and services through shorter, more efficient and sustainable journeys, by walking, cycling and public transport”.

2.6 Paragraph 4.1.10 states that “the planning system has a key role to play in reducing the need to travel and supporting sustainable transport, by facilitating developments which:

- are sited in the right locations, where they can be easily accessed by sustainable modes of travel and without the need for a car;
- are designed in a way which integrates them with existing land uses and neighbourhoods; and
- make it possible for all short journeys within and beyond the development to be easily made by walking and cycling.”

2.7 PPW advocates a sustainable transport hierarchy for planning, the hierarchy being, from top to bottom:

- Walking and Cycling
- Public Transport
- Ultra Low Emission Vehicles
- Other Private Motor Vehicles

2.8 It is Welsh Government policy to require the use of a sustainable transport hierarchy in relation to new development, which prioritises walking, cycling and public transport ahead of the private motor vehicles.

2.9 However, for most rural areas the opportunities for reducing car use and increasing walking, cycling and use of public transport are more limited than in urban areas. In rural areas most new development should be located in settlements which have relatively good accessibility by non-car modes when compared to the rural area as a whole. (paragraph 3.39).

2.10 The transport hierarchy recognises that Ultra Low Emission Vehicles (ULEV) also have an important role to play in the decarbonisation of transport, particularly in rural areas with limited public transport services. To this end the provision of ULEV charging points is encouraged within new developments.

2.11 PPW recommends (4.1.51) that "a design-led approach to the provision of car parking should be taken, which ensures an appropriate level of car parking is integrated in a way which does not dominate the development. Parking provision should be informed by the local context, including public transport accessibility, urban design principles and the objective of reducing reliance on the private car and supporting a modal shift to walking, cycling and public transport. Planning authorities must support schemes which keep parking levels down, especially off-street parking, when well designed".

Llwybr Newydd – The Wales Transport Strategy 2021

2.12 This document sets out the Welsh Government's vision for how the country's transport system can help deliver on a pathway to creating a more prosperous, green and equal society. It lists its priorities as being:

1. Bringing services to people in order to reduce the need to travel. To this end a target has been set that of 30% of the workforce works remotely on a regular basis.
2. Allow people and goods to move easily from door to door by accessible, sustainable and efficient transport services and infrastructure.
3. Encourage people to make the change to more sustainable transport.

2.13 Modal shift is at the heart of Llwybr Newydd. This means the proportion of trips made by sustainable modes increases and fewer trips are made by private cars.

2.14 The Welsh Government has set a target of 45% of journeys to be made by public transport, walking and cycling by 2040. This represents an increase of 13 percentage points on the estimated baseline (2021) mode share of 32%.

TAN18 Transportation

2.15 Planning Policy Wales Technical Advice Note 18 (TAN18) details the Welsh Government Government's policies in terms of transportation and repeats the general principles advocated in PPW i.e. that development is encouraged in sustainable, accessible, locations that will reduce the need to travel by car. Its aim is to promote an efficient and sustainable transport system and to counter the negative impacts associated with road traffic growth, for example increased air pollution, green house gases and congestion (2.1). It sees the integration of transport and land use planning as key (2.3) in achieving the Welsh Government Governments' sustainable development policy objectives by:

- promoting travel efficient settlement patterns;
- ensuring new development is located where there is good access by public transport, walking and cycling thereby minimizing the need for travel and fostering social inclusion;

- managing parking provision;
- ensuring that new development includes appropriate provision for pedestrians, cycling, public transport, and traffic management and parking/servicing;
- encouraging the location of development near other related uses to encourage multi-purpose trips; and
- ensuring that transport infrastructure necessary to serve new development allows existing transport networks to continue to perform their identified functions.

2.16 The needs of walkers and cyclists must be taken into consideration and the use of these most sustainable forms of transport encouraged in all developments (TAN18 Chapter 6). Similarly, all development should be accessible by public transport (Chapter 7).

The Active Travel (Wales) Act 2013

2.17 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.

2.18 The Active Travel (Wales) Act 2013 requires local authorities in Wales to produce maps of walking and cycling networks in their local area, known as Active Travel Network Maps (ATNMs). These maps are designed to show two main things:

- **Existing routes** – those current walking and cycling routes that already meet Welsh Government active travel standards, meaning they can be readily used for everyday journeys, and
- **Future routes** – new routes that the local authority proposes to create in the future, as well as current routes that are planned for improvement to bring them up to the standards.

2.19 An extract from the ATNM is provided below and shows a number of existing and future active travel routes in and around St Clears. They include a future walking and cycling route (SC10) along Tenby Road, from which the application site is accessed. The ATNM identifies this route as being a medium-term priority.

Figure 1 Active Travel Network Map

Carmarthenshire Local Development Plan (LDP), 2014-2021.

2.20 The Carmarthenshire Local Development Plan (LDP) was adopted in December 2014, and sets out the Authority's policies and proposals for the future development and use of land. The LDP will guide development up to 2021.

2.21 Part of the application site is allocated for residential development (Ref: T2/5/h4 – land adjacent to Brittania Terrace) with the remainder lying outside of but adjacent to the defined development limits.

2.22 Transport and Accessibility Policy is specified in Section 6.5, which describes the fundamental nature of an integrated and sustainable transport system to the delivery of the LDP strategy, which focuses growth in a way which reflects the sustainability of settlements and their accessibility in terms of the highway network and access to bus routes.

2.23 Policy TR2 applies to the transport considerations for the location of a development. It states that proposals which have a potential for significant trip generation will be permitted where:

- It is located in a manner consistent with the plans strategic objectives, its settlement framework and its policies and proposals;
- It is accessible to non car modes of transport including public transport, cycling and walking;
- Provision is made for the non-car modes of transport and for those with mobility difficulties in the design of the proposal and the provision of on site facilities;
- Travel Plans have been considered and where appropriate incorporated.

2.24 Policy TR3 applies to the design considerations of highways in developments. The design and layout of all development proposals will, where appropriate, be required to include:

- An integrated network of convenient and safe pedestrian and cycle routes (within and from the site) which promotes the interests of pedestrians, cyclists and public transport;
- Suitable provision for access by public transport;
- Appropriate parking and where applicable, servicing space in accordance with required standards;
- Infrastructure and spaces allowing safe and easy access for those with mobility difficulties;
- Required access standards reflective of the relevant class of road and speed restrictions including visibility splays and design features and calming measures necessary to ensure highway safety and the ease of movement is maintained, and where required enhanced;
- Provision for Sustainable Urban Drainage Systems to allow for the disposal of surface water run-off from the highway.

2.25 Policy TR4 refers to cycling and walking and states that developments should, where appropriate seek to incorporate, or where acceptable, facilitate links to the cycle, rights of way and bridleway network to ensure an integrated sustainable approach in respect of any site.

CSS Wales – Wales Parking Standards (2014)

2.26 Parking requirements for new development in Carmarthenshire is set out in CSS Wales 2014 Wales Parking Standards.

2.27 For residential development a parking provision of one space per bedroom, up to a maximum of 3 spaces per dwelling, and one visitor parking space per 5 dwellings is recommended.

3 Existing Conditions

3.1 The site is shown in context of surrounding amenities and transport links in Appendix 3.

Appendix 3 Site Context

3.2 The site comprises of undeveloped agricultural land. The application site lies to the north of Tenby Road. At its south western corner is a relatively recent development comprising of a petrol filling station (PFS) and two Drive-thru units (Greggs and McDonald's). This is served by a new access road known as Heol Waun Saggard. To the south east of the site is St Clears Business Park.

3.3 The site is located approximately 500m to the west of St Clears' town centre and around 200m north of the A40/A477 roundabout.

3.4 There is a good selection of amenities located near to the site, a selection of which is provided in the table below.

3.5 A wider range of services and facilities can be accessed at Carmarthen, some 15km to the east.

Type	Location	Walk Distance / Time
Convenience Store	Budgens, Heol Waun Saggard	100m / 1 Minute
	Spar, Bear Square	550m / 6 minutes
	CK Supermarket, Pentre Road	700m / 9 minutes
	Co-op, Station Hill	1800m / 25 minutes
Post Office	Spar, Bear Square	550m / 6 minutes
Health	Coach & Horses Surgery	650m / 8 minutes
	Evans Pharmacy, Pentre Road	850m / 11 minutes
Education	Ysgol Griffith Jones	1600m / 22 minutes
Leisure / Sports	St Clears Leisure Centre	1200m / 16 minutes
	St Clears Rugby Football Club	1700m / 23 minutes
Food & Drink	Greggs, McDonalds - Heol Waun Saggard	100m / 1 minute
	Starbucks, St Clears Roundabout	160m / 2 minutes
	Several, Pentre Road	500 – 900m / 6 – 11 minutes

Table 1 Proximity to Amenities

Active Travel

3.6 Active travel is a term used to describe walking and cycling for purposeful journeys (also referred to as utility 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. The Welsh Government's *Active Travel Act Guidance* (2021) suggests that many people will walk up to 2 miles (approximately 3km) or cycle up to 5 miles (approximately 8km) for utility journeys.

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 Active Travel
(Source: Active Travel Guidance Table 4.1)

3.7 Figure 4 shows the areas that are within 2-miles of the application site where utility journeys to and from the site may be viable on foot. This catchment area encompasses the entirety of St Clears' urban area and demonstrates that all of the town's amenities are within acceptable walking distance to the application site.

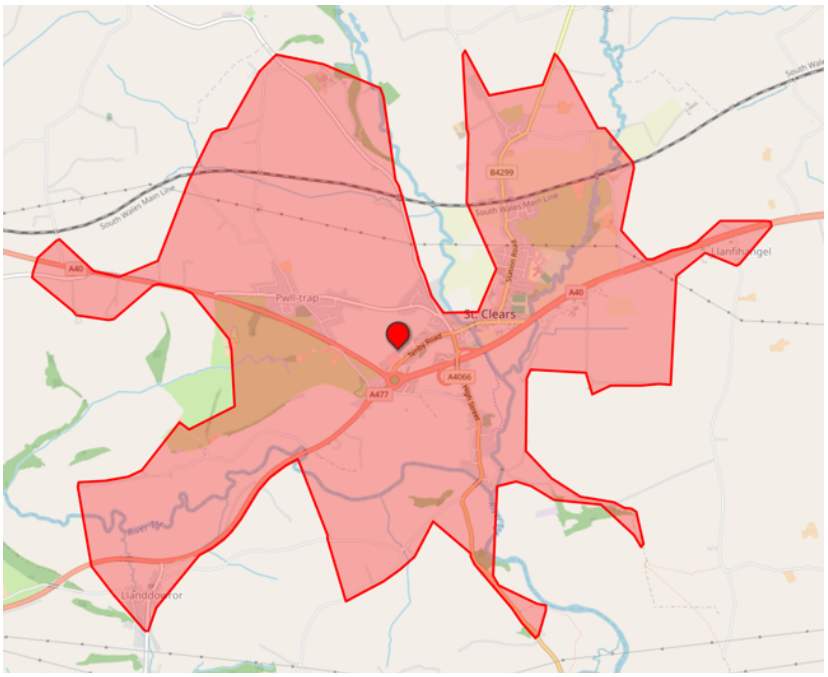


Figure 3 2-Mile Walk Catchment

3.8 The site is accessible to pedestrian from footways that run alongside Heol Waun Saggard. These are recently constructed and provide high quality segregated routes for walkers. There is a crossing point, with central refuge, at the access road's junction with Tenby Road, providing for journeys to and from the west (e.g. Starbucks).

3.9 To the east the footway from Heol Waun Saggard continues for some 100m along the northern side of Tenby Road before terminating. There are intermittent sections of footway on the northern side of Tenby Road between the site and the town centre.

3.10 On the opposite, southern side of Tenby Road an uninterrupted footway continues to the centre of St Clears. An uncontrolled pedestrian crossing point is located immediately to the east of the Heol Waun Saggard junction that provides safe access to the southern footway.

Figure 4 Heol Waun Saggard Footways

Figure 5 Refuge Crossing at the Heol Waun Saggard Junction

Figure 6 Tenby Road Crossing Point

Figure 7 Uncontrolled Crossing Point at Bear Square Signalised Crossroads

3.11 On reaching the town centre, pedestrians must cross a signalised crossroads (Bear Square). Pedestrian crossing across all four arms is uncontrolled.

3.12 It will be demonstrated later in this report that there have been no recorded injuries to pedestrians over the latest 5-year period for which data is available.

3.13 National Cycle Network (NCN) Route 4 runs through St Clears and links the town to Carmarthen to the east and Laugharne and Amroth to the south and west.

Public Transport Network

3.14 The nearest bus stop is located on Tenby Road, around 100m east of the PFS development access. It provides access to the eastbound 222 service only. Additional bus services can be accessed from bus stops in the town centre, some 600m or 8 minutes' walk from the application site.

Service No.	Route	Details
221	Carmarthen - Login	2 Journeys Wednesdays 1 Journey Saturdays
222	Pendine - Carmarthen	5 Journeys (Mon-Sat) Eastbound only
223	Carmarthen - Glandwr	2 Journeys (First Tuesday in each month)
322	Carmarthen - Haverfordwest	3 Journeys (Mon-Sat)

Table 2 St Clears Bus Services

3.15 From St Clears journeys by bus to Carmarthen town centre take approximately 15 minutes and to Whitland approximately 30 minutes.

3.16 Railway stations are located in Carmarthen and Whitland and can be reached by using either the No. 222 or 322 bus services described above, facilitating links to the national rail network.

Highway Network

3.17 The proposed development will be accessed from Heol Waun Saggard, which was designed with this in mind as the junction to the proposed residential development access already constructed.

Figure 8 Access to the Proposed Development at Heol Waun Saggard

3.18 Heol Waun Saggard connects with Tenby Road at a priority junction. A review of the Transport Assessment documents that accompanied the planning application for the PFS / Drive-thru development reveals that this junction was designed with future development in mind. Capacity assessments and sensitivity tests were undertaken to consider the junction's performance in the event of a future, 100-unit, residential development. The conclusions were that the additional development would have minimal impact on the operation of the junction. That assessment was based on the predicted traffic flows of the PFS / Drive-thru development. This has been updated to reflect the actual flows and is described in detail later in this document.

Figure 9 Heol Waun Saggard / Tenby Road Junction

3.19 Tenby Road is subject to a 20mph speed limit at this junction. To the west of the junction, the speed limit increases to 40mph as it approaches the A40/A477 Trunk Road Roundabout. To the east of the junction Tenby Road links with the town centre at the Bear Square signal controlled junction.

3.20 Peak hour traffic surveys were undertaken on Tuesday 27th February 2024 at Tenby Road's junctions with the PFS / Drive-thru development, the A40/A477 roundabout and Bear Square signal controlled crossroads to establish the volume of current traffic movements. The results are shown in the following figure.

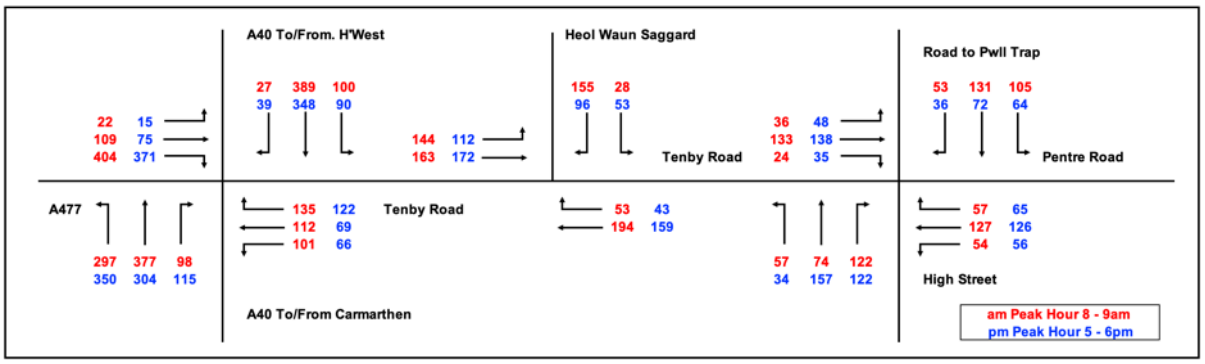


Figure 10 Observed Peak Hour Traffic Movements

3.21 A review of the safety of the highway network serving the development has been undertaken by examining the injury collision records for the latest 5-year period (2019 – 2023 inclusive).

3.22 There are no injury collisions recorded on Tenby Road, demonstrating that the street operates safely.

3.23 There is one recorded injury collision that occurred at the Bear Square signal-controlled junction. This occurred at 01:37 on 27th April 2021 when there was a collision between two cars, resulting in slight injuries to four of the vehicle occupants. The absence of a cluster of records indicates that this was an isolated incident and that the junction otherwise operates safely.

3.24 There have been no recorded injuries to pedestrians or cyclists on Tenby Road, Bear Square or Pentre Road.

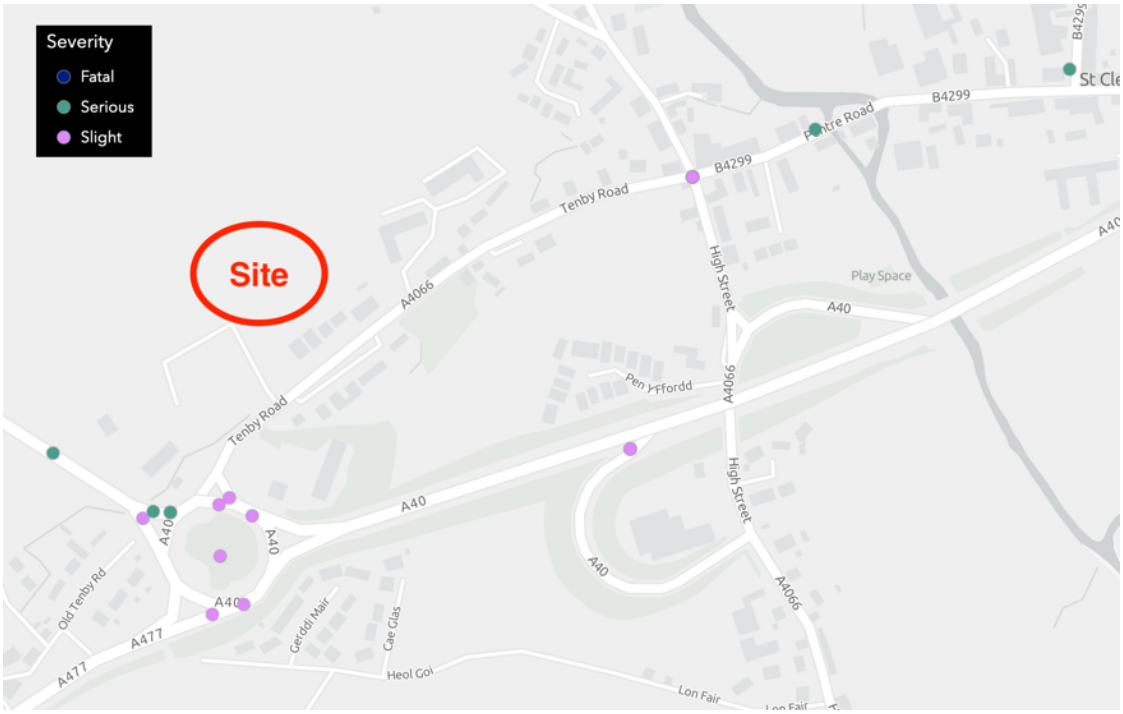


Figure 11 Injury Accident Location & Severity (Source: DfT / MAVRIC)

4 Proposed Development

4.1 The development comprises of 115 new homes (50 open market, 5 affordable and 60 social rented units).

Figure 12 Proposed Layout

Access

4.2 All but two of the dwellings will be accessed from Heol Waun Saggard, utlising the existing stub junction that has already been constructed. The streets within the development will be built to an adoptable standard with 5.5m wide carriageways and 2m footways on each side. Pockets of no more than 5 dwellings will be served by shared private driveways. Turning areas are provided at appropriate locations that allow for the safe movement of refuse, delivery and emergency vehicles throughout the development.

4.3 Plots 1 and 2 will be accessed directly from Tenby Road.

Parking

4.4 Parking provision will align with the requirements of the CSS Wales Parking Standards (2014) at one space per bedroom, up to a maximum of three per unit.

4.5 There are no designated visitor car parking spaces provided as experience has found that visitors tend to ignore any dedicated provision in order to park as near as possible to the property they are visiting. Dedicated visitor spaces can also be problematic as there is a tendency for the nearest property to adopt the space as their own, making it unavailable for visitors. It is proposed therefore that visitor parking be accommodated informally at the kerbside.

Trip Generation

4.6 A traffic generation estimate has been undertaken based on typical trip rates for developments of privately owned houses obtained from the TRICS trip rate database. By adopting trip rates associated with privately owned houses, the assessment can be considered as worst-case as it does not make allowance for the generally lower trip rates associated with affordable or social rented homes, which make up a significant proportion of the proposed development. The detailed TRICS output is provided as Appendix 3 and summarised below.

Appendix 4 TRICS Trip Rate Data

Time Range	Trip Rate per Dwelling			Trip Generation (115 Dwellings)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
am peak Hour 08:00-09:00	0.148	0.343	0.491	17	39	56
pm Peak Hour 16:00-17:00	0.317	0.153	0.47	36	18	54

Table 3 Vehicle Trip Rates & Proposed Development Trip Generation

5 Traffic Impact

Assessment Year

5.1 For the purpose of this assessment of the development traffic's impact on the surrounding highway network it is assumed that the development will be completed and occupied within 5 years i.e. by 2029.

5.2 As a baseline for the assessment a growth factor (1.0496), obtained from the DfT's TEMPRO software programme, has been applied to the observed peak hour flows shown in Figure 10. This is to reflect the anticipated growth in background traffic between 2024 and 2029. The resultant 2029 baseline peak hour traffic flows are shown below.

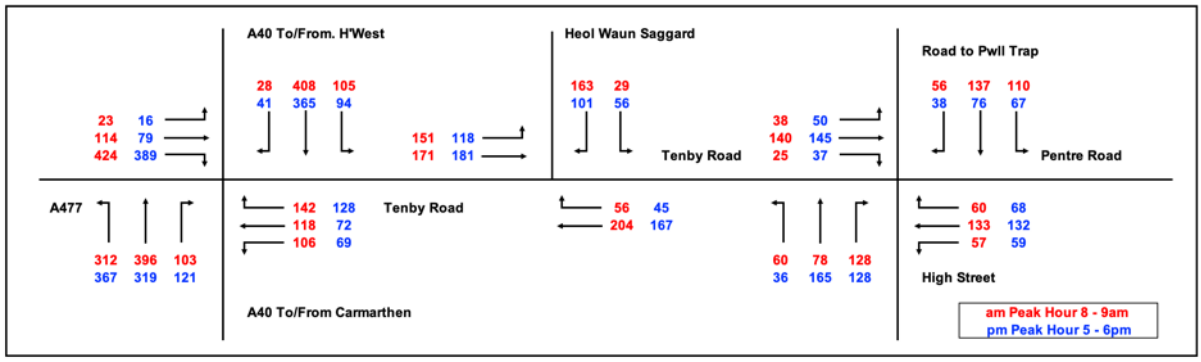


Figure 13 2029 Baseline Traffic

Trip Assignment & Distribution

5.3 The development traffic has been distributed on the surrounding highway network to reflect national Census data on Travel Flow. This provides details of the place of work of residents of St Clears.

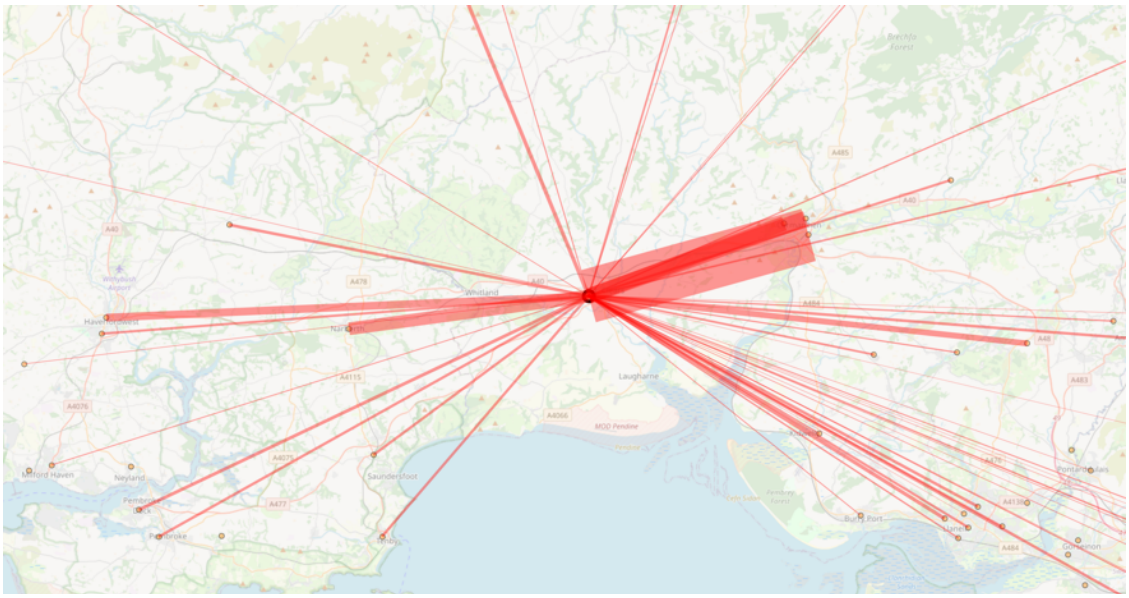


Figure 14 2011 Census Travel to Work Flows for St Clears Residents
(datashine.org.uk)

5.4 Based on the census data it is estimated that peak hour flows will be distributed in the following way:

- 57% of traffic travels to/from the east along the A40
- 21% of traffic travels to/from the west along the A40
- 11% of traffic travels to/from the south along the A477
- 11% of traffic travels to/from the north with an assumed equal split using the road to Llangynin / Pwll Trap and Station Road

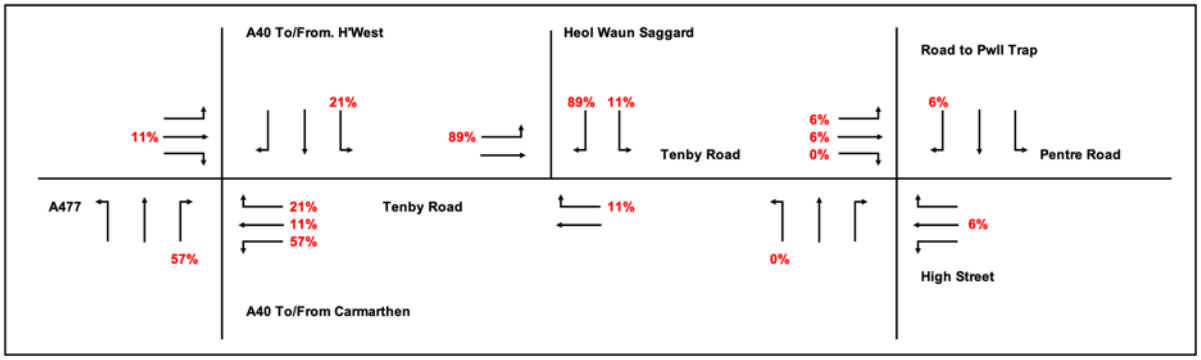


Figure 15 Development Traffic Assignment

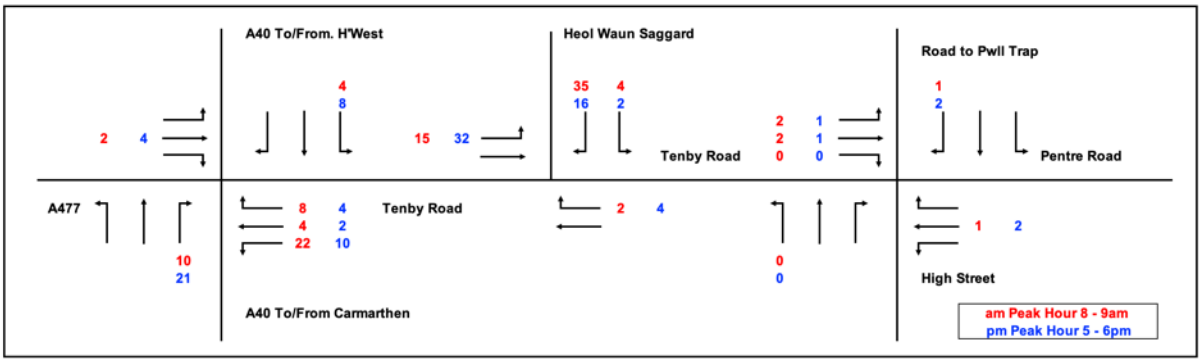


Figure 16 Development Traffic Distribution

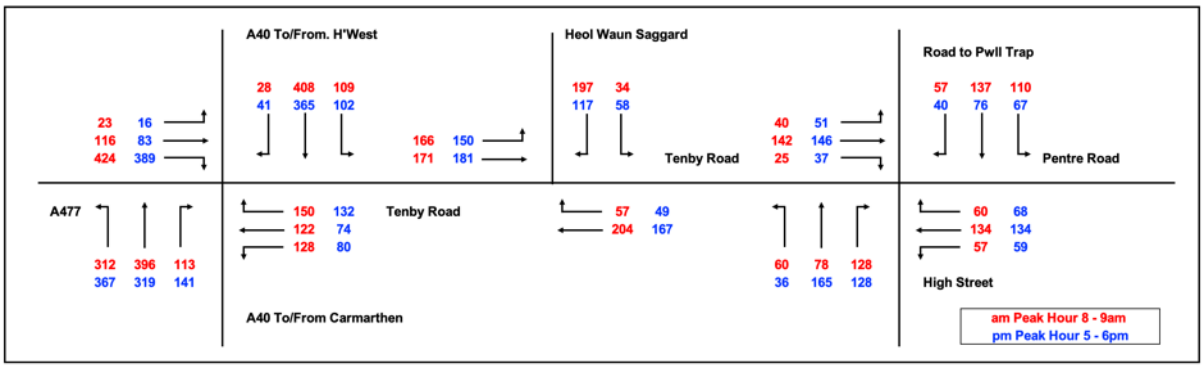


Figure 17 2029 Baseline + Development Traffic

Heol Waun Saggard Junction Capacity Assessment

5.5 The operation of the Heol Waun Saggard junction with Tenby Road has been assessed using the industry standard Junctions 10 software. This calculates a number of indicators of a junction's performance including the ratio of flow against capacity (RFC). A RFC of less than 1 indicates that the junction is operating with spare capacity but it is considered that a RFC of above 0.85 means that traffic flow is approaching the junction's capacity and some level of delay or congestion can be expected.

5.6 The detailed model results from the assessment are included in Appendix 4 and show that the maximum RFC figures for the junction for the 2029 baseline scenario (no development) are 0.52 during the morning peak hour and 0.39 during the evening peak hour.

5.7 The addition of the development traffic increases these figures to 0.63 and 0.44, respectively. These are comfortably below the 0.85 threshold described above and indicate that the junction will continue to operate efficiently with the addition of the development traffic.

Appendix 5 Heol Waun Saggard Capacity Assessment

	AM									PM								
	Set ID	Q (Veh)	Q95 (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Res Cap	Set ID	Q (Veh)	Q95 (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Res Cap
	Existing Layout - 2024																	
Stream B-AC	D1	0.9	3.7	16.99	0.49	C	4.95	A	36 % [Stream B-AC]	D2	0.6	2.6	12.47	0.36	B	3.57	A	72 % [Stream B-AC]
Stream C-AB		0.3	0.6	7.01	0.15	A					0.2	0.8	7.01	0.12	A			
	Existing Layout - 2029 Baseline																	
Stream B-AC	D3	1.1	4.1	18.35	0.52	C	5.31	A	29 % [Stream B-AC]	D4	0.6	2.8	13.09	0.39	B	3.73	A	64 % [Stream B-AC]
Stream C-AB		0.3	0.7	7.04	0.16	A					0.2	0.8	7.03	0.12	A			
	Existing Layout - 2029 Baseline + Development																	
Stream B-AC	D5	1.6	7.2	23.84	0.63	C	7.37	A	14 % [Stream B-AC]	D6	0.8	3.2	14.60	0.44	B	4.22	A	49 % [Stream B-AC]
Stream C-AB		0.3	0.9	7.11	0.16	A					0.2	0.6	7.22	0.14	A			

Table 4 Heol Waun Saggard Junction Capacity Summary

Traffic Impact

5.8 The impact of the development on the junctions within the study area is shown in the table below.

5.9 The development will lead to an increase of around 2% at the A40 / A477 roundabout and 1% at the Bear Square signalised crossroads. These are insignificant and will have no material impact on the operation of the junctions. Given that traffic flow will generally fluctuate by ±10% from day-to-day the volume of increased traffic as a result of the development will be difficult to distinguish from existing variations in flow.

Junction	Peak Hour	2029 Baseline Traffic Flow	Development Traffic Generation	% Impact
A40 / A477 / Tenby Road Roundabout	am	2279	50	2%
	pm	2061	48	2%
Bear Square Crossroads	am	1021	6	1%
	pm	1000	6	1%

Table 5 Development Traffic Impact

5.10 The assessment demonstrates that the volume of traffic generated by the development is insignificant and will have no material impact, in terms of the operation and safety of the highway network.

6 Summary & Conclusion

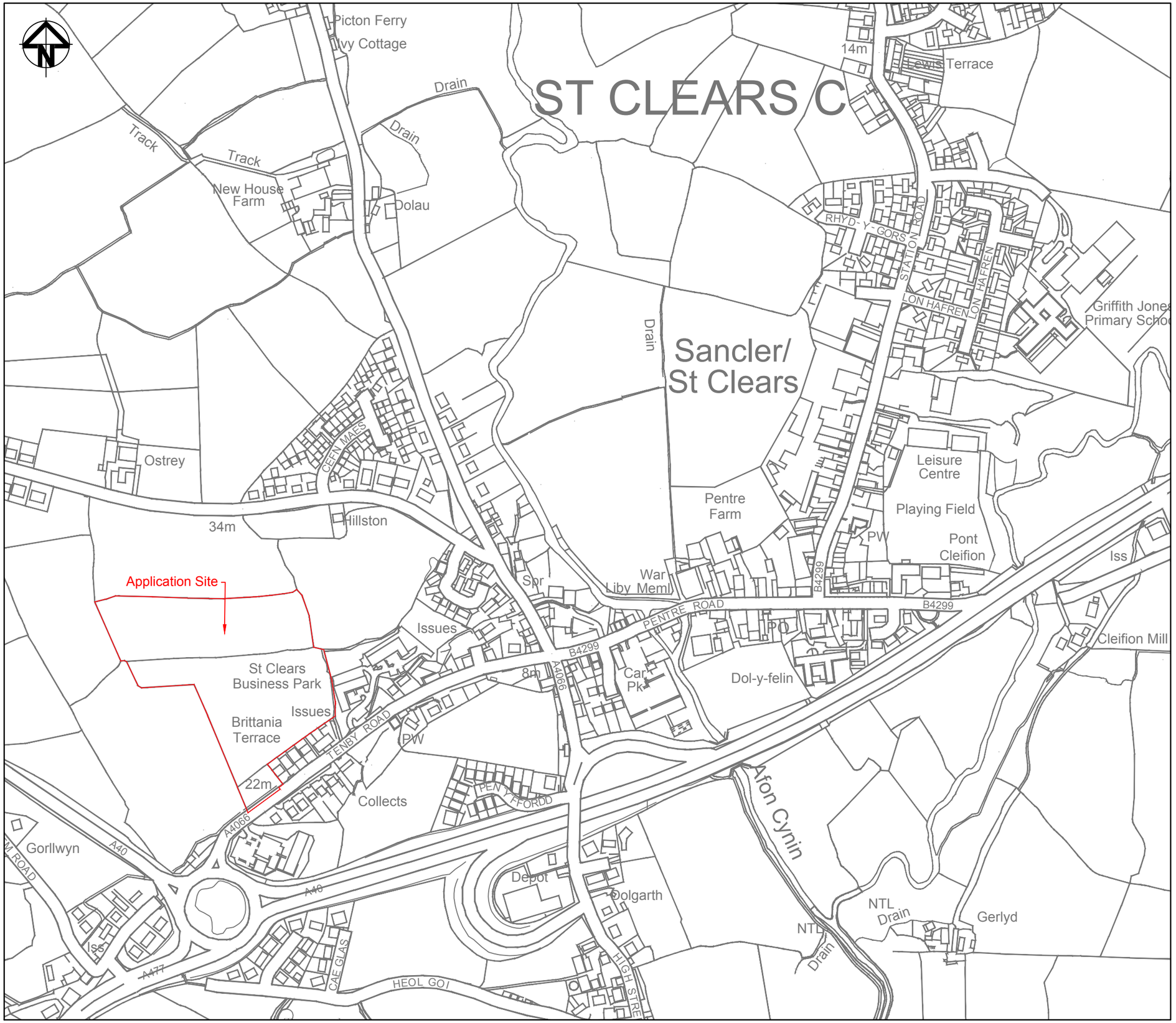
6.1 In summary this Transport Statement has demonstrated that:

- There is a good range of local amenities that are accessible to the future residents of the development on foot or by bike. Residents of the development will therefore not be reliant on the car to access essential day-to-day services.
- There are regular bus services that connect St Clears to larger settlements where a wider range of services can be accessed
- The highway network in the vicinity generally operates safely. The development will not lead to a significant increase in traffic and will therefore have no material impact on the highway safety at this location.
- Planning permission is sought for a development comprising of 115 dwellings.
- The proposed development will be accessed from a purpose built junction on the recently constructed Heol Waun Saggard. The development's access and internal layout will be to adoptable standards.
- Car parking provision will align with the Council's recommended levels.
- It has been demonstrated that the development's traffic will have an insignificant impact on existing traffic volumes, which will have no material impact on the operation of the surrounding highway network.

6.2 It is considered that the site meets planning policy requirements in terms of being in an appropriate location that is safely accessible by all forms of transport and that the impacts of the development on the continued operation and safety of the surrounding highway network would be acceptable.

6.3 It is concluded therefore that there are no transport related issues that should prevent planning permission for the proposed development.

Appendix 1 Location Plan



KEY

Site

A	First Issue	17-10-24

acstro
Ty Penbryn, Salem, Llandeilo.SA19 7LT
E-mail: mail@acstro.com
www.acstro.com
Tel: 01558 824021

Project	**ST CLEARS**
Drawing	**LOCATION PLAN**
Drawing No.	**1734-ACS-XX-ZZ-DR-T-001-A**
Scale	**1:5000 @ A3**

Appendix 2 Highway Authority Pre-application Comments

From: Morgan, Geraint
Sent: 11 August 2023 10:51
To: Helen Rice; REG Planning Consultations
Cc: Aaron Z Evans
Subject: PRE_01675 Pre Application Highways Response

Land at Tenby Road, St Clears, Carmarthenshire

Proposed residential development.

Please find below our Pre App response for the above application.

The Highways Planning Liaison Team has undertaken a review of the transport and planning related documents submitted for the proposed development Pre Application Consultation. This includes:

- Pre-Application Enquiry Form,
- Capacity Sketch Plan; and the
- Planning Statement.

Proposed Development

The proposal is submitted by the Draycott Group and consists of residential development on land off Tenby Road, St Clears.

The proposed housing numbers are:
- 61 units of private housing
- 16 units of low-cost home ownership; and
- 48 units of socially rented homes.

From a transport perspective the applicant has requested details of the accompanying information and documentation required to accompany any future planning application and comments on the draft site layout (access and design). Comments on these elements are provided below:
.

Highway and Transportation Requirements for Planning Applications

Carmarthenshire County Council expect planning submissions to be accompanied by appropriate plans and information to ensure that any recommendation on the acceptability of a development from a transport perspective is based on a robust evidence base.

The key considerations expected for a development of this type are as follows:

- **Site Access and Accessibility** - the accessibility of the proposed site by all modes of travel and the appropriateness of the proposed access arrangements. This should include consideration of access by all modes (inclusive of 'swept path analysis for larger vehicles);

- **Sustainable transport options** – the existing accessibility of the site by sustainable transport modes, as well as the potential future improvements that can be implemented to improve sustainable access. This will need to make explicit reference to the Integrated Network Maps, produced by Carmarthenshire County Council, which summarises the existing and future aspirations for active travel within Carmarthenshire;

- **Parking** – the proposed parking levels appraised against the CSS Wales standards, for both vehicles and pedal cycles. EV charging infrastructure should also be provided in accordance with Planning Policy Wales requirements.

- **Emergency vehicle access** – the access arrangements for vehicles accessing the site in the case of an emergency. This will need to consider the appropriateness of the proposed access, and discuss whether a separate emergency access is required;

- **Trip generation and Traffic Impact during peak periods** – the anticipated trip generation of the proposed development during the peak periods, and the impact of the vehicle trips on the wider highway network. The impact analysis should consider key junctions along the surrounding road network including the proposed site access junctions, the St Clears A40 Roundabout and St Clears Traffic Signals (Tenby Road, Pentre Road and High Street);

- **Travel Planning** – a Travel Plan that outlines a list of measures to encourage sustainable travel at the proposed development;
- **Road safety for all users** – the road safety implications of the proposed development for all road users;

Supporting Information

A Design and Access Statement and evidence based submissions will be required to demonstrate appropriate consideration has been given to the above. Submissions should be accompanied by appropriate plans to ensure that the proposal can be properly assessed. It is expected that plans are submitted to Carmarthenshire County Council to demonstrate that the design can accommodate appropriate vehicle types and that schemes are deliverable. Further details on the requirements for evidence based submissions is provided below.

- **Swept path analysis** should be used to determine the suitability of a design to accommodate the appropriate size of vehicle. Whilst it may be acceptable for the occasional large vehicle to have to cross lanes to negotiate a particular junction (e.g. refuse vehicle), a development that will need to accommodate more frequent large vehicles (e.g. buses, delivery or service vehicles) may require more generous swept paths. All swept path analysis for servicing vehicles should be undertaken using the 26t rigid three axle Refuse Collection Vehicles, with rear wheel steering, as used within the county.
- An important consideration for highway design is the **existing land ownership** on which the scheme will be constructed. If a highway scheme requires 3rd party land then the Developer will be required to demonstrate that an appropriate agreement through planning (e.g. Section 106) has been entered into and approved. This is to ensure that the land can be secured to safeguard the safe implementation of the proposed highway scheme. Carmarthenshire County Council expect all highway scheme drawings to be accompanied by a land ownership plan to ensure that proposed mitigation is deliverable within the available land constraints.
- A **Transport Assessment** is required to review the potential impact of the scheme on the surrounding transportation network. Reference should be made to the Carmarthenshire County Council document: 'Transport Assessment Guidance for Developments in Carmarthenshire', in addition to TAN 18. Carmarthenshire County Council's 'Transport Assessment Guidance for Developments in Carmarthenshire' and Annex D of TAN 18 provide guidance on the required structure and content of Transport Assessments. Given the proximity of the site to the Trunk Road Network and the potential traffic impact of the development, the scope of the Transport Assessment should be agreed with both Carmarthenshire County Council and the Welsh Governments' South Wales Trunk Road Agent (SWTRA).

Comments on the Draft Site Layout and Access Arrangements

The site layout and access arrangements should be designed in accordance with Carmarthenshire County Council's Highway Design Guide.

In terms of the wider site access, there are concerns about whether the recently constructed access junction on the A4066 Tenby Road has sufficient capacity to accommodate traffic generated by the proposed development in addition to the site's committed developments (Greggs, McDonalds and the PFS). Junction capacity analysis will therefore need to be undertaken to determine whether the proposed access arrangements are appropriate and whether mitigation is required. Given the extent of development across the wider site, it may be appropriate to consider a secondary access point for the site.

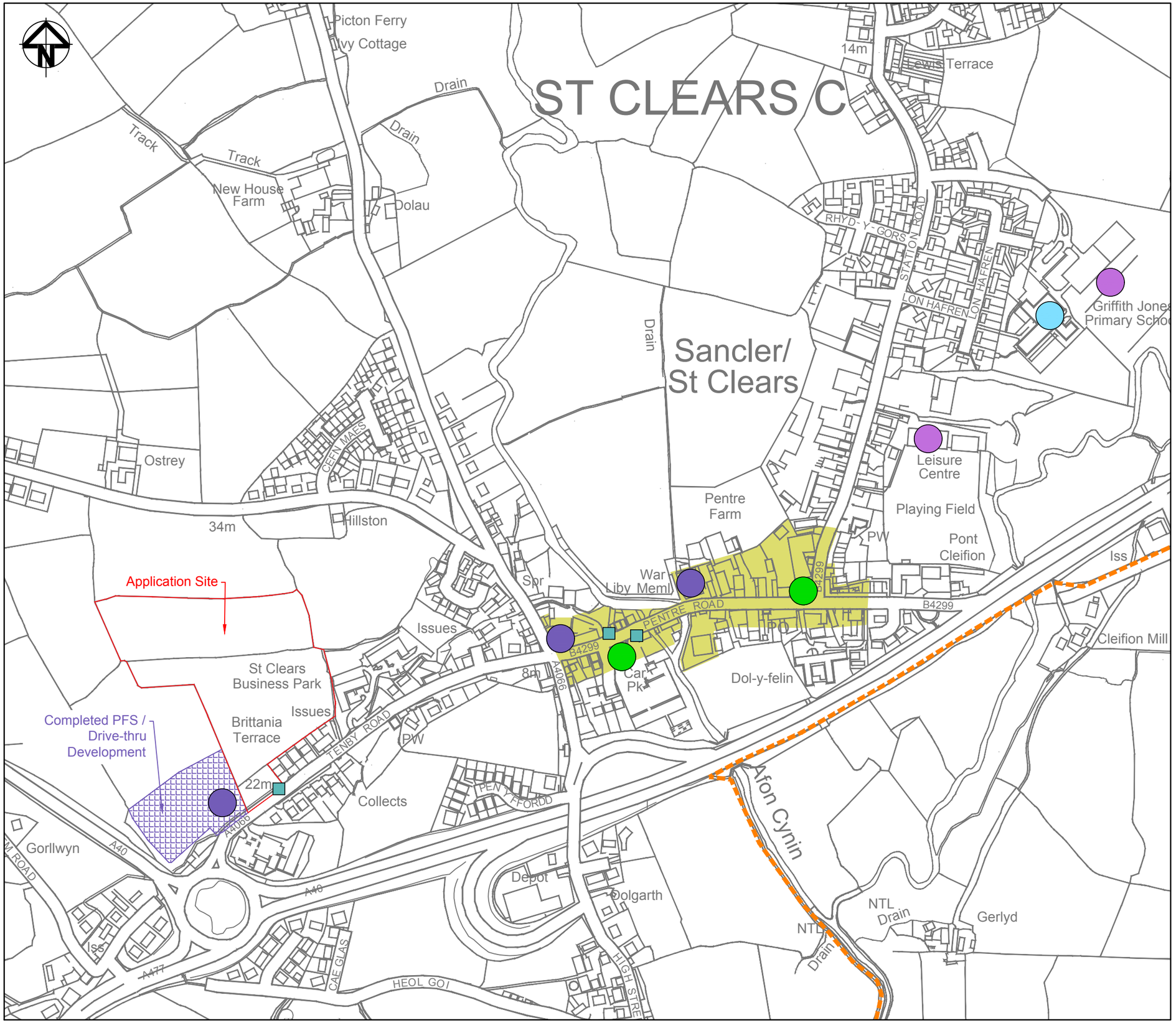
The analysis requested above should carefully consider the impact of the development on the immediate site access (proposed along the wider site access road), the A4066 Tenby Road Access Junction (constructed for the wider site) and the A40 St Clears Roundabout. This analysis should consider the implications of forecast queueing on downstream junctions e.g. traffic queuing along the A4066 Tenby Road approach to the St Clears Roundabout blocking traffic from exiting the wider site)

Notwithstanding the above, the proposed site layout appears to be acceptable from a Section 38 (Highways Adoption) perspective.

Kind Regards

Geraint Morgan (He/him/his) MTCP
Principal Consultant
Engineering Services

Appendix 3 Site Context



KEY

- Site
- Bus Stop
- National Cycle Network Route
- Town Centre
- Convenience Store / Supermarket
- Leisure Facility
- School
- GP Surgery / Pharmacy

A	First Issue	17-10-24

acstro
Ty Penbryn, Salem, Llandeilo.SA19 7LT
E-mail: mail@acstro.com
www.acstro.com
Tel: 01558 824021

Project	**ST CLEARS**
Drawing	**SITE CONTEXT**
Drawing No.	**1734-ACS-XX-ZZ-DR-T-002-A**
Scale	**1:5000 @ A3**

Appendix 4 TRICS Trip Rate Data

Acstro Ltd Salem Llandeilo Licence No: 648801

Calculation Reference: AUDIT-648801-241016-1047

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	CT	CENTRAL BEDFORDSHIRE	1 days
	ES	EAST SUSSEX	6 days
	EX	ESSEX	2 days
	HC	HAMPSHIRE	6 days
	KC	KENT	3 days
	SC	SURREY	2 days
	WB	WEST BERKSHIRE	1 days
	WS	WEST SUSSEX	5 days
03	SOUTH WEST		
	DC	DORSET	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	12 days
	SF	SUFFOLK	2 days
05	EAST MIDLANDS		
	LE	LEICESTERSHIRE	1 days
08	NORTH WEST		
	AC	CHESHIRE WEST & CHESTER	1 days
09	NORTH		
	DH	DURHAM	3 days
11	SCOTLAND		
	AS	ABERDEENSHIRE	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: 50 to 150 (units:)
Range Selected by User: 50 to 150 (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: 01/01/16 to 14/05/24

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	5 days
Tuesday	16 days
Wednesday	9 days
Thursday	13 days
Friday	5 days

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

Selected survey types:

Manual count	43 days
Directional ATC Count	5 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	5
Edge of Town	31
Neighbourhood Centre (PPS6 Local Centre)	12

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	35
Village	10
Out of Town	1
No Sub Category	2

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	9 days - Selected
Servicing vehicles Excluded	56 days - Selected

Secondary Filtering selection:

Use Class:

C3	48 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:

1,001 to 5,000	12 days
5,001 to 10,000	13 days
10,001 to 15,000	9 days
15,001 to 20,000	7 days
20,001 to 25,000	6 days
25,001 to 50,000	1 days

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

Population within 5 miles:

5,001 to 25,000	8 days
25,001 to 50,000	9 days
50,001 to 75,000	6 days
75,001 to 100,000	6 days
100,001 to 125,000	3 days
125,001 to 250,000	14 days
250,001 to 500,000	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	8 days
1.1 to 1.5	34 days
1.6 to 2.0	6 days

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

Travel Plan:

Yes	34 days
No	14 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	47 days
2 Poor	1 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 AC-03-A-06 DETACHED HOUSES CHESHIRE WEST & CHESTER
COMMON LANE
NEAR CHESTER
WAVERTON
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 99
Survey date: FRIDAY *29/04/22* *Survey Type: MANUAL*

2 AS-03-A-02 MIXED HOUSES ABERDEENSHIRE
FARROCHIE ROAD
STONEHAVEN

Edge of Town
Residential Zone
Total No of Dwellings: 131
Survey date: WEDNESDAY *20/04/22* *Survey Type: MANUAL*

3 CA-03-A-08 DETACHED & SEMI-DETACHED CAMBRIDGESHIRE
GIDDING ROAD
SAWTRY

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 83
Survey date: THURSDAY *13/10/22* *Survey Type: MANUAL*

4 CT-03-A-03 MIXED HOUSES CENTRAL BEDFORDSHIRE
ARLESEY ROAD
STOTFOLD

Edge of Town
Residential Zone
Total No of Dwellings: 73
Survey date: TUESDAY *27/06/23* *Survey Type: MANUAL*

5 DC-03-A-11 MIXED HOUSES DORSET
A350
SHAFTESBURY

Edge of Town
No Sub Category
Total No of Dwellings: 141
Survey date: TUESDAY *31/10/23* *Survey Type: MANUAL*

6 DH-03-A-01 SEMI DETACHED DURHAM
GREENFIELDS ROAD
BISHOP AUCKLAND

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 50
Survey date: TUESDAY *28/03/17* *Survey Type: MANUAL*

7 DH-03-A-02 MIXED HOUSES DURHAM
LEAZES LANE
BISHOP AUCKLAND
ST HELEN AUCKLAND
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 125
Survey date: MONDAY *27/03/17* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

8 DH-03-A-03 SEMI-DETACHED & TERRACED DURHAM
PILGRIMS WAY
DURHAM

Edge of Town
Residential Zone
Total No of Dwellings: 57
Survey date: FRIDAY *19/10/18* *Survey Type: MANUAL*

9 ES-03-A-07 MIXED HOUSES & FLATS EAST SUSSEX
NEW ROAD
HAILSHAM
HELLINGLY
Edge of Town
Residential Zone
Total No of Dwellings: 91
Survey date: THURSDAY *07/11/19* *Survey Type: MANUAL*

10 ES-03-A-08 MIXED HOUSES & FLATS EAST SUSSEX
WRESTWOOD ROAD
BEXHILL

Edge of Town
Residential Zone
Total No of Dwellings: 110
Survey date: WEDNESDAY *12/10/22* *Survey Type: MANUAL*

11 ES-03-A-10 MIXED HOUSES & FLATS EAST SUSSEX
WATERGATE
BEXHILL-ON-SEA

Edge of Town
Residential Zone
Total No of Dwellings: 139
Survey date: THURSDAY *28/09/23* *Survey Type: MANUAL*

12 ES-03-A-11 MIXED HOUSES EAST SUSSEX
BISHOPS LANE
RINGMER

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 105
Survey date: THURSDAY *28/09/23* *Survey Type: MANUAL*

13 ES-03-A-12 MIXED HOUSES & FLATS EAST SUSSEX
HOREBEECH LANE
HORAM

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 123
Survey date: TUESDAY *03/10/23* *Survey Type: MANUAL*

14 ES-03-A-14 MIXED HOUSES & FLATS EAST SUSSEX
RATTLE ROAD
NEAR EASTBOURNE
STONE CROSS
Edge of Town
Residential Zone
Total No of Dwellings: 120
Survey date: TUESDAY *30/04/24* *Survey Type: MANUAL*

15 EX-03-A-02 DETACHED & SEMI-DETACHED ESSEX
MANOR ROAD
CHIGWELL
GRANGE HILL
Edge of Town
Residential Zone
Total No of Dwellings: 97
Survey date: MONDAY *27/11/17* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

16 EX-03-A-03 MIXED HOUSES ESSEX
KESTREL GROVE
RAYLEIGH

Edge of Town
Residential Zone
Total No of Dwellings: 123
Survey date: MONDAY *27/09/21* *Survey Type: MANUAL*

17 HC-03-A-23 HOUSES & FLATS HAMPSHIRE
CANADA WAY
LIPHOOK

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 62
Survey date: TUESDAY *19/11/19* *Survey Type: MANUAL*

18 HC-03-A-27 MIXED HOUSES HAMPSHIRE
DAIRY ROAD
ANDOVER

Edge of Town
Residential Zone
Total No of Dwellings: 73
Survey date: TUESDAY *16/11/21* *Survey Type: MANUAL*

19 HC-03-A-28 MIXED HOUSES & FLATS HAMPSHIRE
EAGLE AVENUE
WATERLOOVILLE
LOVEDEAN
Edge of Town
Residential Zone
Total No of Dwellings: 125
Survey date: MONDAY *08/11/21* *Survey Type: MANUAL*

20 HC-03-A-32 MIXED HOUSES & FLATS HAMPSHIRE
GREEN LANE
FARNHAM
WEYBOURNE
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 105
Survey date: THURSDAY *29/06/23* *Survey Type: MANUAL*

21 HC-03-A-36 MIXED HOUSES & FLATS HAMPSHIRE
HAVANT ROAD
EMSWORTH

Edge of Town
Residential Zone
Total No of Dwellings: 145
Survey date: TUESDAY *12/09/23* *Survey Type: MANUAL*

22 HC-03-A-37 MIXED HOUSES HAMPSHIRE
REDFIELDS LANE
FLEET
CHURCH CROOKHAM
Edge of Town
Residential Zone
Total No of Dwellings: 50
Survey date: WEDNESDAY *27/03/24* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

23 KC-03-A-03 MIXED HOUSES & FLATS KENT
HYTHE ROAD
ASHFORD
WILLESBOROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 51
Survey date: THURSDAY 14/07/16 Survey Type: MANUAL

24 KC-03-A-04 SEMI-DETACHED & TERRACED KENT
KILN BARN ROAD
AYLESFORD
DITTON
Edge of Town
Residential Zone
Total No of Dwellings: 110
Survey date: FRIDAY 22/09/17 Survey Type: MANUAL

25 KC-03-A-10 MIXED HOUSES KENT
HEADCORN ROAD
STAPLEHURST

Edge of Town
Residential Zone
Total No of Dwellings: 106
Survey date: TUESDAY 09/05/23 Survey Type: MANUAL

26 LE-03-A-02 DETACHED & OTHERS LEICESTERSHIRE
MELBOURNE ROAD
IBSTOCK

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 85
Survey date: THURSDAY 28/06/18 Survey Type: MANUAL

27 NF-03-A-14 MIXED HOUSES NORFOLK
BEAUFORT WAY
GREAT YARMOUTH
BRADWELL
Edge of Town
Residential Zone
Total No of Dwellings: 150
Survey date: THURSDAY 05/10/17 Survey Type: DIRECTIONAL ATC COUNT

28 NF-03-A-24 MIXED HOUSES & FLATS NORFOLK
HUNSTANTON ROAD
HUNSTANTON

Edge of Town
Residential Zone
Total No of Dwellings: 127
Survey date: WEDNESDAY 22/09/21 Survey Type: DIRECTIONAL ATC COUNT

29 NF-03-A-25 MIXED HOUSES & FLATS NORFOLK
WOODFARM LANE
GORLESTON-ON-SEA

Edge of Town
Residential Zone
Total No of Dwellings: 55
Survey date: TUESDAY 21/09/21 Survey Type: MANUAL

30 NF-03-A-26 MIXED HOUSES NORFOLK
HEATH DRIVE
HOLT

Edge of Town
Residential Zone
Total No of Dwellings: 91
Survey date: WEDNESDAY 22/09/21 Survey Type: DIRECTIONAL ATC COUNT

LIST OF SITES relevant to selection parameters (Cont.)

31 NF-03-A-27 MIXED HOUSES & FLATS NORFOLK
YARMOUTH ROAD
NEAR NORWICH
BLOFIELD
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 93
Survey date: THURSDAY *16/09/21* *Survey Type: MANUAL*

32 NF-03-A-33 MIXED HOUSES NORFOLK
LONDON ROAD
ATTLEBOROUGH

Edge of Town
Residential Zone
Total No of Dwellings: 143
Survey date: THURSDAY *29/09/22* *Survey Type: MANUAL*

33 NF-03-A-34 MIXED HOUSES NORFOLK
NORWICH ROAD
SWAFFHAM

Edge of Town
Out of Town
Total No of Dwellings: 80
Survey date: TUESDAY *27/09/22* *Survey Type: MANUAL*

34 NF-03-A-35 MIXED HOUSES & FLATS NORFOLK
REPTON AVENUE
NORWICH

Edge of Town
Residential Zone
Total No of Dwellings: 116
Survey date: WEDNESDAY *28/09/22* *Survey Type: MANUAL*

35 NF-03-A-36 MIXED HOUSES NORFOLK
LONDON ROAD
WYMONDHAM

Edge of Town
No Sub Category
Total No of Dwellings: 75
Survey date: THURSDAY *29/09/22* *Survey Type: MANUAL*

36 NF-03-A-44 MIXED HOUSES NORFOLK
MILL LANE
NEAR NORWICH
HORSFORD
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 125
Survey date: WEDNESDAY *21/09/22* *Survey Type: DIRECTIONAL ATC COUNT*

37 NF-03-A-49 MIXED HOUSES NORFOLK
BRANDON ROAD
SWAFFHAM

Edge of Town
Residential Zone
Total No of Dwellings: 141
Survey date: FRIDAY *14/09/18* *Survey Type: DIRECTIONAL ATC COUNT*

LIST OF SITES relevant to selection parameters (Cont.)

38 NF-03-A-52 MIXED HOUSES NORFOLK
LYNNSPORT WAY
KING'S LYNN

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 130
Survey date: TUESDAY *07/11/23* *Survey Type: MANUAL*

39 SC-03-A-09 MIXED HOUSES & FLATS SURREY
AMLETS LANE
CRANLEIGH

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 136
Survey date: TUESDAY *24/05/22* *Survey Type: MANUAL*

40 SC-03-A-11 MIXED HOUSES SURREY
FOLLY HILL
FARNHAM

Edge of Town
Residential Zone
Total No of Dwellings: 96
Survey date: TUESDAY *14/05/24* *Survey Type: MANUAL*

41 SF-03-A-07 MIXED HOUSES SUFFOLK
FOXHALL ROAD
IPSWICH

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 73
Survey date: THURSDAY *09/05/19* *Survey Type: MANUAL*

42 SF-03-A-10 TERRACED & SEMI-DETACHED SUFFOLK
LOVETOFTS DRIVE
IPSWICH
WHITEHOUSE
Edge of Town
Residential Zone
Total No of Dwellings: 149
Survey date: TUESDAY *22/06/21* *Survey Type: MANUAL*

43 WB-03-A-03 MIXED HOUSES WEST BERKSHIRE
DORKING WAY
READING
CALCOT
Edge of Town
Residential Zone
Total No of Dwellings: 108
Survey date: FRIDAY *09/09/22* *Survey Type: MANUAL*

44 WS-03-A-07 BUNGALOWS WEST SUSSEX
EMMS LANE
NEAR HORSHAM
BROOKS GREEN
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 57
Survey date: THURSDAY *19/10/17* *Survey Type: MANUAL*

45 WS-03-A-14 MIXED HOUSES WEST SUSSEX
TODDINGTON LANE
LITTLEHAMPTON
WICK
Edge of Town
Residential Zone
Total No of Dwellings: 117
Survey date: WEDNESDAY *20/10/21* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

46 WS-03-A-16 DETACHED & SEMI-DETACHED WEST SUSSEX
BRACKLESHAM LANE
BRACKLESHAM BAY

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 58
Survey date: WEDNESDAY 09/11/22 Survey Type: MANUAL

47 WS-03-A-19 MIXED HOUSES & FLATS WEST SUSSEX
TURNERS HILL ROAD
EAST GRINSTEAD

Edge of Town
Residential Zone
Total No of Dwellings: 92
Survey date: MONDAY 15/05/23 Survey Type: MANUAL

48 WS-03-A-22 MIXED HOUSES & FLATS WEST SUSSEX
SHOPWHYKE ROAD
CHICHESTER

Edge of Town
Residential Zone
Total No of Dwellings: 129
Survey date: TUESDAY 19/03/24 Survey Type: MANUAL

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	48	103	0.078	48	103	0.288	48	103	0.366
08:00 - 09:00	48	103	0.148	48	103	0.343	48	103	0.491
09:00 - 10:00	48	103	0.125	48	103	0.165	48	103	0.290
10:00 - 11:00	48	103	0.122	48	103	0.148	48	103	0.270
11:00 - 12:00	48	103	0.125	48	103	0.138	48	103	0.263
12:00 - 13:00	48	103	0.153	48	103	0.142	48	103	0.295
13:00 - 14:00	48	103	0.155	48	103	0.152	48	103	0.307
14:00 - 15:00	48	103	0.158	48	103	0.179	48	103	0.337
15:00 - 16:00	48	103	0.254	48	103	0.168	48	103	0.422
16:00 - 17:00	48	103	0.258	48	103	0.162	48	103	0.420
17:00 - 18:00	48	103	0.317	48	103	0.153	48	103	0.470
18:00 - 19:00	48	103	0.253	48	103	0.134	48	103	0.387
19:00 - 20:00	1	97	0.062	1	97	0.052	1	97	0.114
20:00 - 21:00	1	97	0.031	1	97	0.021	1	97	0.052
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.239			2.245			4.484

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

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

Parameter summary

Trip rate parameter range selected:	50 - 150 (units:)
Survey date date range:	01/01/16 - 14/05/24
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	17
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.

Appendix 5 Heol Waun Saggard Capacity Assessment

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905

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

Filename: Heol Waun Saggard.j10
Path: C:\Users\AlunRees\OneDrive - Acstro Limited\Shared with Everyone\ACSTRO Jobs\1734 St Clears\Junctions
Report generation date: 17/10/2024 08:46:33

«Existing Layout - 2029 Baseline + Development, PM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	AM									PM								
	Set ID	Q (Veh)	Q95 (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Res Cap	Set ID	Q (Veh)	Q95 (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Res Cap
	Existing Layout - 2024																	
Stream B-AC	D1	0.9	3.7	16.99	0.49	C	4.95	A	36 % [Stream B-AC]	D2	0.6	2.6	12.47	0.36	B	3.57	A	72 % [Stream B-AC]
Stream C-AB		0.3	0.6	7.01	0.15	A					0.2	0.8	7.01	0.12	A			
	Existing Layout - 2029 Baseline																	
Stream B-AC	D3	1.1	4.1	18.35	0.52	C	5.31	A	29 % [Stream B-AC]	D4	0.6	2.8	13.09	0.39	B	3.73	A	64 % [Stream B-AC]
Stream C-AB		0.3	0.7	7.04	0.16	A					0.2	0.8	7.03	0.12	A			
	Existing Layout - 2029 Baseline + Development																	
Stream B-AC	D5	1.6	7.2	23.84	0.63	C	7.37	A	14 % [Stream B-AC]	D6	0.8	3.2	14.60	0.44	B	4.22	A	49 % [Stream B-AC]
Stream C-AB		0.3	0.9	7.11	0.16	A					0.2	0.6	7.22	0.14	A			

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of Av. delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted Av.s. Res Cap indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

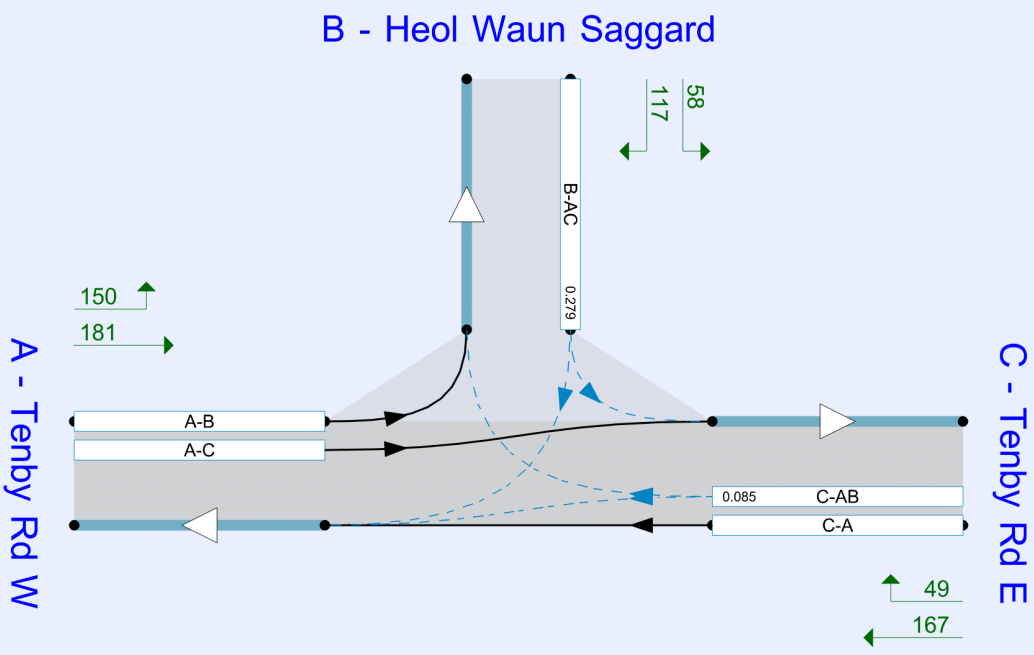
File summary

File Description

Title	Heol Waun Saggard
Location	
Site number	
Date	17/10/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\AlunRees
Description	

Units

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



Flows show original traffic demand (Veh/hr).
Streams (downstream end) show RFC ()

The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75	✓				✓	Delay	0.85	36.00	20.00		

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	✓	100.000	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2029 Baseline + Development	PM	ONE HOUR	16:45	18:15	15	✓

Existing Layout - 2029 Baseline + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		4.22	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	49	Stream B-AC	4.22	A

Arms

Arms

Arm	Name	Description	Arm type
A	Tenby Rd W		Major
B	Heol Waun Saggard		Minor
C	Tenby Rd E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Tenby Rd E	7.00			0.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Heol Waun Saggard	One lane	3.90	40	40

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	556	0.097	0.245	0.154	0.350
B-C	708	0.104	0.262	-	-
C-B	574	0.213	0.213	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

Traffic Demand

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
A - Tenby Rd W		ONE HOUR	✓	331	100.000
B - Heol Waun Saggard		ONE HOUR	✓	175	100.000
C - Tenby Rd E		ONE HOUR	✓	216	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Tenby Rd W	B - Heol Waun Saggard	C - Tenby Rd E
From	A - Tenby Rd W	0	150	181
	B - Heol Waun Saggard	117	0	58
	C - Tenby Rd E	167	49	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A - Tenby Rd W	B - Heol Waun Saggard	C - Tenby Rd E
From	A - Tenby Rd W	10	10	10
	B - Heol Waun Saggard	10	10	10
	C - Tenby Rd E	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.44	14.60	0.8	3.2	B	161	241
C-AB	0.14	7.22	0.2	0.6	A	62	94
C-A						136	204
A-B						138	206
A-C						166	249

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	132	33	473	0.279	130	0.0	0.4	10.460	B
C-AB	48	12	558	0.085	47	0.0	0.1	7.037	A
C-A	115	29			115				
A-B	113	28			113				
A-C	136	34			136				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	157	39	459	0.343	157	0.4	0.5	11.899	B
C-AB	60	15	567	0.106	60	0.1	0.2	7.109	A
C-A	134	34			134				
A-B	135	34			135				
A-C	163	41			163				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	193	48	439	0.439	192	0.5	0.8	14.480	B
C-AB	79	20	578	0.137	79	0.2	0.2	7.214	A
C-A	158	40			158				
A-B	165	41			165				
A-C	199	50			199				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	193	48	439	0.439	193	0.8	0.8	14.596	B
C-AB	79	20	578	0.137	79	0.2	0.2	7.221	A
C-A	158	40			158				
A-B	165	41			165				
A-C	199	50			199				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	157	39	459	0.343	158	0.8	0.5	12.023	B
C-AB	60	15	567	0.106	60	0.2	0.2	7.120	A
C-A	134	34			134				
A-B	135	34			135				
A-C	163	41			163				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	132	33	473	0.279	132	0.5	0.4	10.593	B
C-AB	48	12	559	0.085	48	0.2	0.1	7.054	A
C-A	115	29			115				
A-B	113	28			113				
A-C	136	34			136				

Q Variation Results for each time segment

16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.38	0.00	0.00	0.38	0.38			N/A	N/A
C-AB	0.13	0.00	0.00	0.13	0.13			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.51	0.51	1.00	1.40	1.45			N/A	N/A
C-AB	0.16	0.00	0.00	0.16	0.16			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.76	0.03	0.26	0.76	0.76			N/A	N/A
C-AB	0.23	0.03	0.26	0.48	0.64			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.77	0.03	0.29	1.12	3.25			N/A	N/A
C-AB	0.23	0.03	0.25	0.45	0.48			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.53	0.05	0.55	1.31	1.41			N/A	N/A
C-AB	0.17	0.00	0.00	0.17	0.17			N/A	N/A

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.39	0.03	0.32	1.05	1.28			N/A	N/A
C-AB	0.13	0.00	0.00	0.13	0.13			N/A	N/A

acstro

Acstro Ltd., Yr Hen Farchnad, Unit 19,Carmarthen Road, Llandeilo, Carmarthenshire SA19 6BJ

(01558) 824021
www.acstro.com