TRANSPORT STATEMENT

August 2018

Dyffryn Road
Saron
Carmarthenshire

acstro

Table of Contents

Appendices

Revision History

Issue 1	17th August 2018	

1196 Dyffryn Rd Saron Transport Statement.docx

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1 Introduction

1.1 Acstro has been appointed to prepare a Transport Statement to support the promotion of land off Dyffryn Road, Saron as a candidate site for inclusion, as suitable for residential development, in Carmarthenshire County Council's Revised Local Development Plan 2018 – 2033.

1.2 The candidate site's location is shown in Appendix 1.

Appendix 1 Location Plan

1.3 The site is currently undeveloped. It is considered that the candidate site has the potential to deliver approximately 27 dwellings and will be accessed from Dyffryn Road.

1.4 This document considers the transport implications of the candidate site and follows the general guidance of Carmarthenshire's 'Site Assessment Methodology – February 2018". In particular, this Transport Statement demonstrates that the candidate 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.

1.5 The structure of the Transport Statement is as follows:

- Section 2 describes the relevant planning policy context that is relevant in terms of transport issues;
- Section 3 describes the site's location, 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 provides a summary and conclusion.

2 Policy Context

Planning Policy Wales

2.1 Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government.

2.2 In terms of transport related policies it places the sustainability of development at the heart of the decision making process (pp 4.7.4) and requires that new development proposals minimize the need to travel and increase accessibility by modes other than the private car. It requires that major generators of travel demand be located within existing urban areas that are well served by public transport, or can be reached by walking or cycling.

2.3 The principles discussed above are repeated again in PPW's Chapter 8, which deals specifically with Transport issues. In 8.1.4 it reinforces the Welsh Government's objectives for transport through:

- reducing the need to travel, especially by private car, by locating development where there is good access by public transport, walking and cycling;
- locating development near other related uses to encourage multi-purpose trips and reduce the length of journeys;
- improving accessibility by walking, cycling and public transport;
- ensuring that transport is accessible to all, taking into account the needs of disabled and other less mobile people;
- promoting walking and cycling;
- supporting the provision of high quality public transport;
- supporting traffic management measures;
- promoting sustainable transport options for freight and commerce;
- supporting sustainable travel options in rural areas;
- supporting necessary infrastructure improvements; and
- ensuring that, as far as possible, transport infrastructure does not contribute to land take, urban sprawl or neighbourhood severance.

2.4 In terms of plan making and development control it advises (8.7.1) that the following issues should be taken into account:

- the impacts of the proposed development on travel demand;
- the level and nature of public transport provision;
- accessibility by a range of different transport modes;
- the willingness of a developer to promote travel by public transport, walking or cycling, or to provide infrastructure or measures to manage traffic
- the environmental impact of both transport infrastructure and the traffic generated; and
- the effects on the safety and convenience of other users.

2.5 PPW also requires that the proposed access to a development should reflect the likely travel patterns involved. It should ensure that people can reach the development, as far as practicable, by walking, cycling and public transport, as well as by car (pp 8.7.3).

TAN18 Transportation

2.6 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.

2.7 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

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

2.9 The Active Travel (Wales) Act 2013 makes it a legal requirement for local authorities in Wales to map and plan for suitable routes for active travel, and to build and improve infrastructure for walking and cycling every year. It creates new duties to consider the needs of walkers and cyclists and make better provision for them. It also requires the consideration of walking and cycling as a mode of transport and the Act focuses on the promotion of walking and cycling for purposeful journeys, rather than as a purely recreational activity.

2.10 The Act is supported by the Active Travel Action Plan Wales (2014), and many of the actions of the Active Travel Action Plan Wales document also benefit recreational or competitive walking and cycling. 'Walking' in the Active Travel Action Plan for Wales includes the use of wheelchairs and mobility scooters and 'cycling' includes the use of electric bikes, but not motorcycles.

Carmarthenshire Local Development Plan 2006 -2021

2.11 The LDP seeks to promote sustainable development. Policy GP1 requires that development, amongst other things, has an appropriate and safe access and does not give rise to parking or highway safety concerns and that it promotes ease of access by pedestrians, cyclists and public transport users.

2.12 Policy SP3 sets out the settlement framework for the County. Saron is part of the Ammanford / Cross Hands Growth Area.

2.13 The site is located adjacent to Saron's current settlement limits (policy GP2) and the candidate site is therefore closely related to the existing settlement.

2.14 Policy TR3 relates to the design of highways in developments and requires that developments provide:

- 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.

2.15 Proposals that do not generate unacceptable levels of traffic on the surrounding road network and would not be detrimental to highway safety or cause significant harm to the amenity of residents will be permitted.

2.16 Proposals that will not result in offsite congestion in terms of parking or service provision or where the capacity of the network is sufficient to serve the development will be permitted. Developers may be required to facilitate appropriate works as part of the granting of any permission.

3 Location & Accessibility

Location

3.1 The site is shown in the context of nearby facilities and the surrounding transport network in Appendix 2.

Appendix 2 Site Context

3.2 The site is located to the south of Dyffryn Road in Saron. It is located some 1.8km from Tycroes, 1.7km from Capel Hendre and 3km from Ammanford's town centre.

3.3 There are a number of facilities available in Saron, including a primary school, convenience store, public house, Saron Junior football club and playing field. Walk distances to these facilities from the candidate site are provided in the table below.

Facility	Walk Distance from Site
Church	85m
Public House	270m
Convenience Store	280m
Village Hall	320m
Chapel	400m
Saron Juniors Football Club/Playing Field	850m
Saron Primary School	1km
Capel Hendre Post Office	1.7km

Table 1. Walk Distances from the Site to Local Facilities

3.4 The walk distances quoted above are measured from the proposed site entrance on Dyffryn Road and assume a route along the public highway network.

3.5 Capel Hendre Industrial Estate and the employment opportunities it provides is located some 2.3km south of the site. A broader range of services and facilities is available in Ammanford, which is some 3km to the east of the site.

3.6 The site is in an appropriate location where there are a range of amenities available from within 2km, reducing the need to travel longer distances to access services and facilities; facilitating travel choices that are more sustainable than private car, including healthy active travel modes, such as walking or cycling.

Active Travel

3.7 The Chartered Institution of Highways and Transportation's (CIHT) 'Planning for Walking' (2015) states that "Across Britain about 80 per cent of journeys shorter than 1 mile (1.6km) are made wholly on foot – something that has changed little in thirty years. In 2012 walkers accounted for 79 per cent of all journeys shorter than 1 mile, but beyond that distance cars are the dominant mode (DfT, annual)". It is considered that 2km, a distance that can be walked in around 25 to 30 minutes, represents a reasonable distance to expect that walking can be a viable option.

3.8 As described previously there is a range of services and facilities within the 2km walking distance to the candidate site.

3.9 The site is accessible to pedestrians via the existing footways that run alongside Dyffryn Road. These footways are of good quality being approximately 2m wide and benefiting from street lighting. The footways link with the wider pedestrian network that provides a continuous facility for pedestrians walking between the site and the facilities available locally.

3.10 The Chartered Institution of Highways and Transportation's 'Planning for Cycling' (2014) states that 'cycle use is more seasonal than for other modes, with up to twice as many cyclists in summer compared with winter. The majority of cycling trips are for short distances, with 80% being less than five miles (8km) and with 40% being less than two miles (3km). However, the majority of trips by all modes are also short distances (67% are less than five miles, and 38% are less than two miles); therefore, the bicycle is a potential mode for many of these trips (National Travel Survey, 2013, Department for Transport).'

3.11 Whilst there are currently no segregated cycle routes in the immediate area of the site, Ammanford and Cross Hands are both within reasonable cycling distance to the proposed site at 3km and 5km respectively.

Public Transport

3.12 The nearest bus stops to the site are located on Dyffryn Road and are within approximately 65m from the candidate site's proposed access for eastbound services to Ammanford; and 80m for destinations to the west.

3.13 They provide access to bus services 128 and 129. These provide public transport to (and from) Ammanford, Carmarthen, Cross Hands and Llanelli where connecting services can be accessed.

Service	Route	Details
128	Ammanford – Llanelli (via Cross Hands)	6 daily services each direction
129	Ammanford - Carmarthen	8 daily services each direction

Table 2. Local Bus Services

3.14 These bus services also link with Ammanford railway station is located approximately 3km to the east of the site. The station provides access to the Heart of Wales line services. There are four trains a day to Shrewsbury northbound from Monday to Saturday (plus a fifth to Llandovery) and five southbound to Llanelli and Swansea.

Highway Network

3.15 The site is adjacent to and will be accessed from Dyffryn Road. Dyffryn Road links Saron to Ammanford to the east and Capel Hendre to the south west.

3.16 There is a junction with Saron Road opposite the proposed access location of the candidate site, which continues to the B4556 to the north.

3.17 Dyffryn Road is approximately 10m wide as it passes the site and subject to a 30mph speed limit. It is a two lane single carriage way with a ghost island right turn lane from from the east onto Saron Road.

3.18 The ghost-island junction arrangement ensures that right turning traffic causes no delay to through traffic. Design guidance for ghost-island junctions is provided within the DfT's 'Design Manual for Roads and Bridges' (DMRB) and 'Manual for Streets' (MfS).

Figure 1 Dyffryn Road / Saron Road Junction

3.19 Within DMRB guidance is provided in TD42/95 (Geometric Design of Major / Minor Priority Junctions). DMRB recommends that a right-turn ghost island is provided at priority junctions where the traffic flow from the minor arm exceeds 300 to 500 movements per day, as is the case for this development (see trip generation estimate later in this chapter). However, DMRB applies specifically to trunk roads, which Dyffryn Road is not.

3.20 MfS provides the relevant design guidance for non-trunk roads within 30mph limit areas and has been published in two volumes in 2007 and 2010 (MfS2) respectively. Its guidance in respect to the provision of right-turn lanes is not consistent with that of DMRB.

3.21 MfS2 provides clarification on the situations where its advice should be followed rather than DMRB's. It states in 1.3.2 and 1.3.3 that the starting point for any scheme affecting non-trunk roads within 30mph areas, designers should follow the advice of MfS. It is considered therefore that in this situation, where a junction is to be created on a non-trunk road within a 30mph speed limit area that it is MfS that applies rather than DMRB.

3.22 Guidance on right turn lanes is provided within MfS2's paragraphs 9.4.7 and 9.4.8. They state that:

> *TD42/95 recommends that consideration should be given to providing a right turning lane at priority junctions where the side road flows exceeds 500 vehicles per day, but this advice relates to trunk roads, where there is an emphasis on providing an unimpeded route for through traffic. It is a relatively low flow, and junctions without right turn lanes will often be able to cater for higher level of turning traffic without resulting in significant congestion.*
>
> *Right turning lanes make it more difficult for pedestrians to cross major roads and lead to higher traffic speeds and authorities should therefore consider carefully all of the effects before deciding to provide them. Removing unnecessary right turn lanes can also be considered, and will bring substantial benefits to non-motorised users.*

3.23 The guidance therefore is that, unless the lack of a right turn lane results in significant congestion, one should not be provided.

3.24 The proposed development provides an opportunity to remove the right-turn lane and in doing so reduce traffic speed and improve conditions for pedestrians, cyclists and all road users. This will be described in more detail in the following chapter.

3.25 Further to the west on Dyffryn Road is Nant-y-Ci Road, approximately 110m from the candidate site.Nant-y-Ci Road continues south towards Tycroes, becoming Cwmfferws Road. At Tycroes Cwmfferws Road joins the A483 trunk road that links Ammanford and the M4.

3.26 The site therefore has good access to the strategic highway network.

3.27 A review of the safety record of the highway network in the vicinity of the candidate site has been undertaken. The injury accident locations & their severity are illustrated in Figure 2.

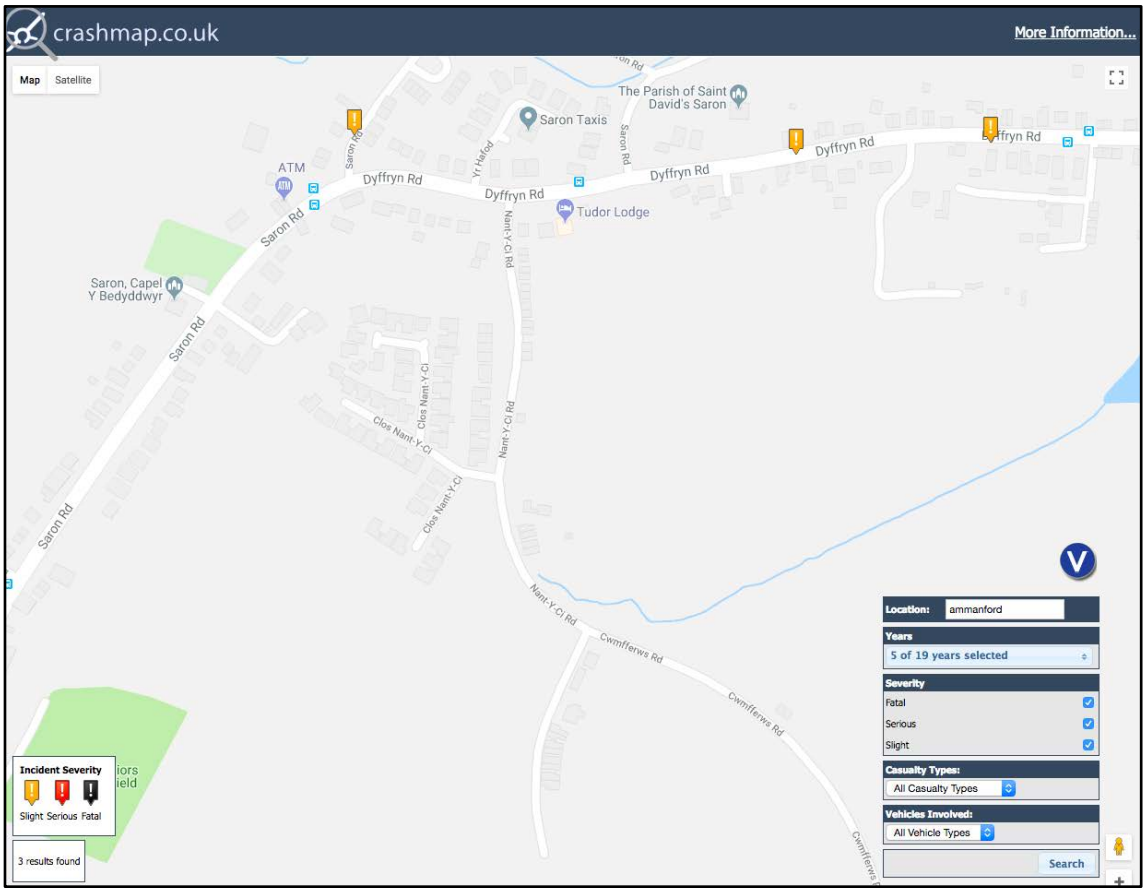

Figure 2 Injury Accident Locations & Severity (2013 - 2017)

3.28 Over the latest five-year period (2013 to 2017 inclusive) there are three, slight severity, injury accidents recorded on Dyffryn Road at sporadic locations. The absence of clusters of accidents or accidents of greater severity indicates that the local highway network is operating with an acceptable level of safety.

4 Proposed Development

4.1 It is considered that the candidate site is possible of delivering approximately 27 dwellings.

Access

4.2 Two indicative access arrangement options are provided as Appendix 3.

Appendix 3 Indicative Access Arrangement

4.3 The site is located directly opposite an existing priority junction and the creation of a new access to the site will essentially form a crossroads.

4.4 Given that the arrangement would generate traffic movements to and from four directions it is considered desirable to introduce a means of controlling the potential conflicting movements. This can be done is two ways, by introducing a roundabout where drivers give way to circulating traffic or by introducing signal controls. The indicative access options provided in Appendix 3 demonstrate that either of these options is possible at this location.

4.5 In addition to providing safe access to the candidate site a roundabout at this location will act to reduce the speed of traffic travelling along Dyffryn Road and so will deliver traffic calming benefits.

4.6 A signal controlled junction would deliver similar benefits but will also provide enhanced crossing facilities for pedestrians and cyclists.

4.7 Both options therefore deliver wider benefits to existing users of Dyffryn Road.

4.8 The access into the site would be to adoptable standards, providing a 5.5m wide carriageway with 2m wide footways on both sides.

4.9 The indicative access arrangements demonstrates that a safe and appropriate access can be provided to the candidate site.

Trip Generation

4.10 The potential trip generation of the proposed development of the site has been estimated by reference to the TRICS trip rate database, a database of over 7,100 traffic surveys of various types of development throughout the UK and Ireland.

4.11 From the TRICS database evidence of the trip rates of developments of privately owned houses (development of up to 100 units) in urban locations (but not town/city centres) in mainland Britain (excluding Greater London) have been analysed. Full details are provided as Appendix 4 and summarised below.

Appendix 4 TRICS Trip Rate Data

	Trip Rate per House			Trip Generation (27 Dwellings)		
Time Range	**Arrivals**	**Departures**	**Total**	**Arrivals**	**Departures**	**Total**
am peak Hour 08:00-09:00	0.177	0.383	0.56	5	10	15
pm Peak Hour 16:00-17:00	0.307	0.177	0.484	8	5	13
Daily	2.315	2.327	4.642	63	63	125

Table 3 Vehicle Trip Rates & Proposed Development Trip Generation

4.12 The TRICS data suggests that the proposed development will generate some 13 to 15 peak hour vehicle movements.

4.13 This represents an increase of less than one additional movement every 4 minutes, on average, during peak times. It is unlikely that this level of traffic will cause any significant traffic issues on the surrounding highway network.

5 Summary & Conclusion

5.1 In summary this Transport Statement has demonstrated that:

- The candidate site's location is closely related to Saron's existing settlement and the facilities that it provides;
- There are a good range of services and facilities near to the site offering education, shopping, employment, leisure and social opportunities. These can be accessed from the site by walking, cycling or by public transport.
- The site is accessible to pedestrians and is well connected to the existing footway network.
- A safe and appropriate access, that would meet current design standards, can be provided to the site from Dyffryn Road. It is considered that the site could be accessed either by the creation of a roundabout junction or a signal-controlled junction.

5.2 As such it is considered that the candidate 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.

5.3 It is concluded therefore that there are no transport related issues that should prevent the inclusion of this candidate site in Carmarthenshire County Council's Revised Local Development Plan 2018 – 2033.

Appendix 1 Location Plan

A	Site Location	27/07/18

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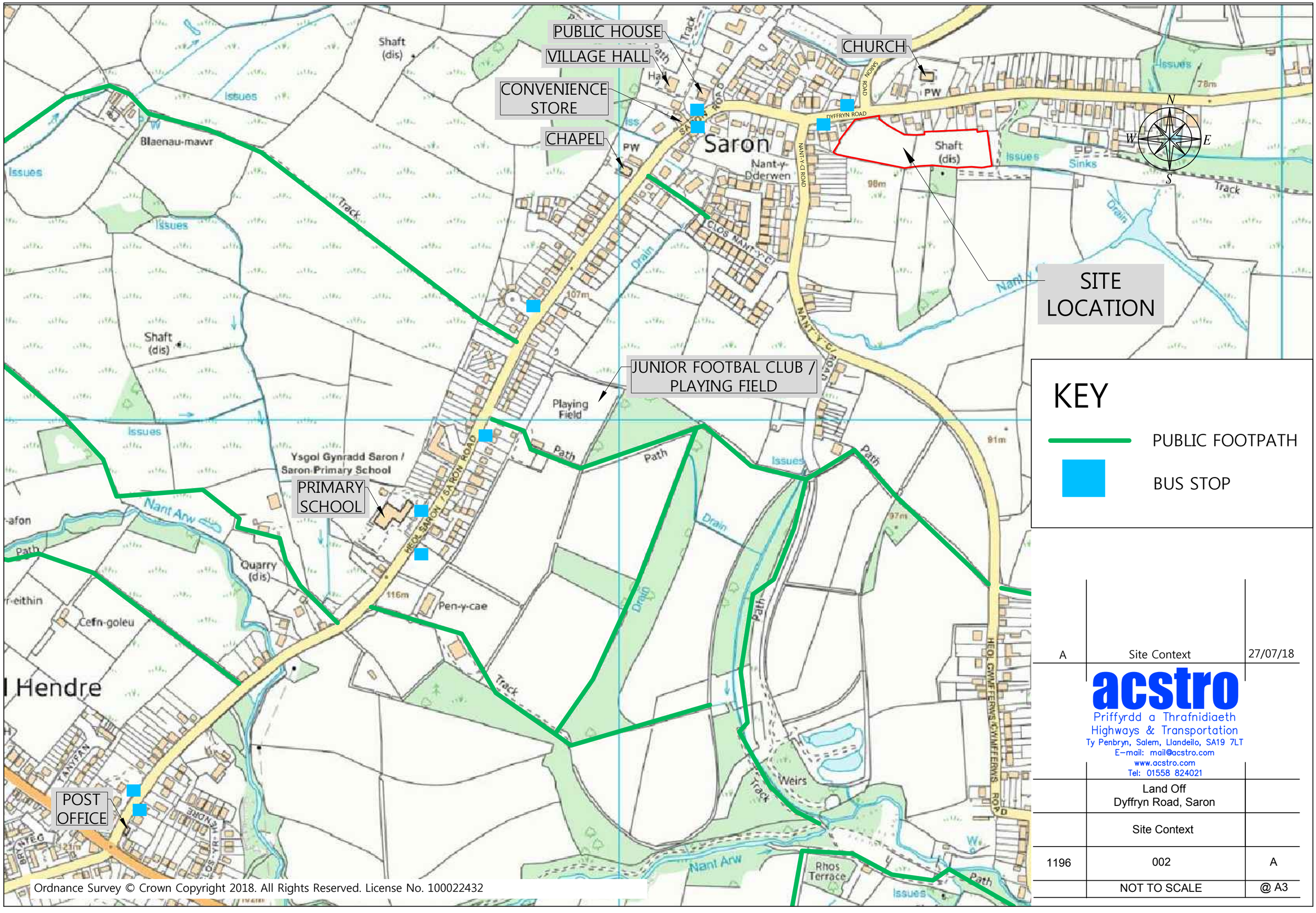
Tel: 01558 824021

	Dyffryn Road, saron	
	Location Plan	
1196	001	A
	NOT TO SCALE	@ A3

Appendix 2 Site Context



KEY

PUBLIC FOOTPATH

BUS STOP

A	Site Context	27/07/18

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	Land Off Dyffryn Road, Saron	
	Site Context	
1196	002	A
	NOT TO SCALE	@ A3

Appendix 3 Indicative Access Arrangement

PROPOSED ROUNDABOUT JUNCTION

PROPOSED RE-ALIGNED KERB

6.0m

EXISTING KERB

6.6m

PROPOSED RE-ALIGNED KERB

EXISTING KERB

2.0m

2.0m

PROPOSED ACCESS

5.5m

10

205

12

14

13

1

158

154

144

142

140

A	First Issue	14-08-18

acstro
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LAND OFF DYFFRYN ROAD, SARON

ROUNDABOUT ACCESS OPTION

1196	105	A
	1:500	@ A3

St David's Churc

PROPOSED SIGNAL CONTROLLED JUNCTION

PEDESTRIAN / CYCLE CROSSING REFUGE

2.0m

2.0m

PROPOSED ACCESS

5.5m

10

205

12

14

13

154

158

144

142

140

A	First Issue	14-08-18

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LAND OFF DYFFRYN ROAD, SARON

SIGNAL CONTROLLED JUNCTION ACCESS OPTION

1196	106	A
	1:500	@ A3

Appendix 4 TRICS Trip Rate Data

Calculation Reference: AUDIT-648801-180426-0401

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	HC	HAMPSHIRE	1 days
	WS	WEST SUSSEX	1 days
03	SOUTH WEST		
	DV	DEVON	1 days
	SM	SOMERSET	1 days
04	EAST ANGLIA		
	NF	NORFOLK	2 days
	SF	SUFFOLK	2 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
	WK	WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	3 days
10	WALES		
	PS	POWYS	1 days
11	SCOTLAND		
	AG	ANGUS	1 days
	HI	HIGHLAND	1 days
	PK	PERTH & KINROSS	1 days

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

Secondary 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: Number of dwellings
Actual Range: 7 to 70 (units:)
Range Selected by User: 5 to 100 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 27/11/17

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	3 days
Tuesday	3 days
Wednesday	6 days
Thursday	4 days
Friday	1 days

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

Selected survey types:

Manual count	17 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	8
Edge of Town	7
Neighbourhood Centre (PPS6 Local Centre)	2

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

Selected Location Sub Categories:

Residential Zone	14
Village	2
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village,

Secondary Filtering selection:

Use Class:

C3	17 days

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

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	3 days
5,001 to 10,000	5 days
10,001 to 15,000	3 days
15,001 to 20,000	4 days
20,001 to 25,000	1 days

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

Population within 5 miles:

5,001 to 25,000	4 days
25,001 to 50,000	8 days
50,001 to 75,000	5 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	5 days
1.1 to 1.5	11 days
1.6 to 2.0	1 days

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

Travel Plan:

Yes	1 days
No	16 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	17 days

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

LIST OF SITES relevant to selection parameters

1 AG-03-A-01 BUNGALOWS/DET. ANGUS
KEPTIE ROAD

ARBROATH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 7
Survey date: TUESDAY *22/05/12* *Survey Type: MANUAL*

2 DV-03-A-03 TERRACED & SEMI DETACHED DEVON
LOWER BRAND LANE

HONITON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 70
Survey date: MONDAY *28/09/15* *Survey Type: MANUAL*

3 HC-03-A-19 HOUSES & FLATS HAMPSHIRE
CANADA WAY

LIPHOOK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 62
Survey date: MONDAY *27/11/17* *Survey Type: MANUAL*

4 HI-03-A-14 SEMI-DETACHED & TERRACED HIGHLAND
KING BRUDE ROAD
SCORGUIE
INVERNESS
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 40
Survey date: WEDNESDAY *23/03/16* *Survey Type: MANUAL*

5 NF-03-A-01 SEMI DET. & BUNGALOWS NORFOLK
YARMOUTH ROAD

CAISTER-ON-SEA
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 27
Survey date: TUESDAY *16/10/12* *Survey Type: MANUAL*

6 NF-03-A-03 DETACHED HOUSES NORFOLK
HALING WAY

THETFORD
Edge of Town
Residential Zone
Total Number of dwellings: 10
Survey date: WEDNESDAY *16/09/15* *Survey Type: MANUAL*

7 NY-03-A-07 DETACHED & SEMI DET. NORTH YORKSHIRE
CRAVEN WAY

BOROUGHBRIDGE
Edge of Town
No Sub Category
Total Number of dwellings: 23
Survey date: TUESDAY *18/10/11* *Survey Type: MANUAL*

8 NY-03-A-11 PRIVATE HOUSING NORTH YORKSHIRE
HORSEFAIR

BOROUGHBRIDGE
Edge of Town
Residential Zone
Total Number of dwellings: 23
Survey date: WEDNESDAY *18/09/13* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 NY-03-A-13 TERRACED HOUSES NORTH YORKSHIRE
CATTERICK ROAD
OLD HOSPITAL COMPOUND
CATTERICK GARRISON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 10
Survey date: WEDNESDAY 10/05/17 Survey Type: MANUAL

10 PK-03-A-01 DETAC. & BUNGALOWS PERTH & KINROSS
TULLYLUMB TERRACE
GORNHILL
PERTH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 36
Survey date: WEDNESDAY 11/05/11 Survey Type: MANUAL

11 PS-03-A-02 DETACHED/SEMI-DETACHED POWYS
GUNROG ROAD

WELSHPOOL
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 28
Survey date: MONDAY 11/05/15 Survey Type: MANUAL

12 SF-03-A-05 DETACHED HOUSES SUFFOLK
VALE LANE

BURY ST EDMUNDS
Edge of Town
Residential Zone
Total Number of dwellings: 18
Survey date: WEDNESDAY 09/09/15 Survey Type: MANUAL

13 SF-03-A-06 DETACHED & SEMI-DETACHED SUFFOLK
BURY ROAD

KENTFORD
Neighbourhood Centre (PPS6 Local Centre)
Village
Total Number of dwellings: 38
Survey date: FRIDAY 22/09/17 Survey Type: MANUAL

14 SH-03-A-05 SEMI-DETACHED/TERRACED SHROPSHIRE
SANDCROFT
SUTTON HILL
TELFORD
Edge of Town
Residential Zone
Total Number of dwellings: 54
Survey date: THURSDAY 24/10/13 Survey Type: MANUAL

15 SM-03-A-01 DETACHED & SEMI SOMERSET
WEMBDON ROAD
NORTHFIELD
BRIDGWATER
Edge of Town
Residential Zone
Total Number of dwellings: 33
Survey date: THURSDAY 24/09/15 Survey Type: MANUAL

16 WK-03-A-02 BUNGALOWS WARWICKSHIRE
NARBERTH WAY
POTTERS GREEN
COVENTRY
Edge of Town
Residential Zone
Total Number of dwellings: 17
Survey date: THURSDAY 17/10/13 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

17 WS-03-A-07 BUNGALOWS WEST SUSSEX
EMMS LANE
BROOKS GREEN
NEAR HORSHAM
Neighbourhood Centre (PPS6 Local Centre)
Village
Total Number of dwellings: 57
Survey date: THURSDAY *19/10/17* *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
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	17	33	0.092	17	33	0.286	17	33	0.378
08:00 - 09:00	17	33	0.177	17	33	0.383	17	33	0.560
09:00 - 10:00	17	33	0.161	17	33	0.174	17	33	0.335
10:00 - 11:00	17	33	0.136	17	33	0.136	17	33	0.272
11:00 - 12:00	17	33	0.130	17	33	0.161	17	33	0.291
12:00 - 13:00	17	33	0.168	17	33	0.165	17	33	0.333
13:00 - 14:00	17	33	0.148	17	33	0.150	17	33	0.298
14:00 - 15:00	17	33	0.186	17	33	0.213	17	33	0.399
15:00 - 16:00	17	33	0.237	17	33	0.184	17	33	0.421
16:00 - 17:00	17	33	0.307	17	33	0.177	17	33	0.484
17:00 - 18:00	17	33	0.320	17	33	0.159	17	33	0.479
18:00 - 19:00	17	33	0.253	17	33	0.139	17	33	0.392
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.315			2.327			4.642

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:	7 - 70 (units:)
Survey date date range:	01/01/10 - 27/11/17
Number of weekdays (Monday-Friday):	17
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	2
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.

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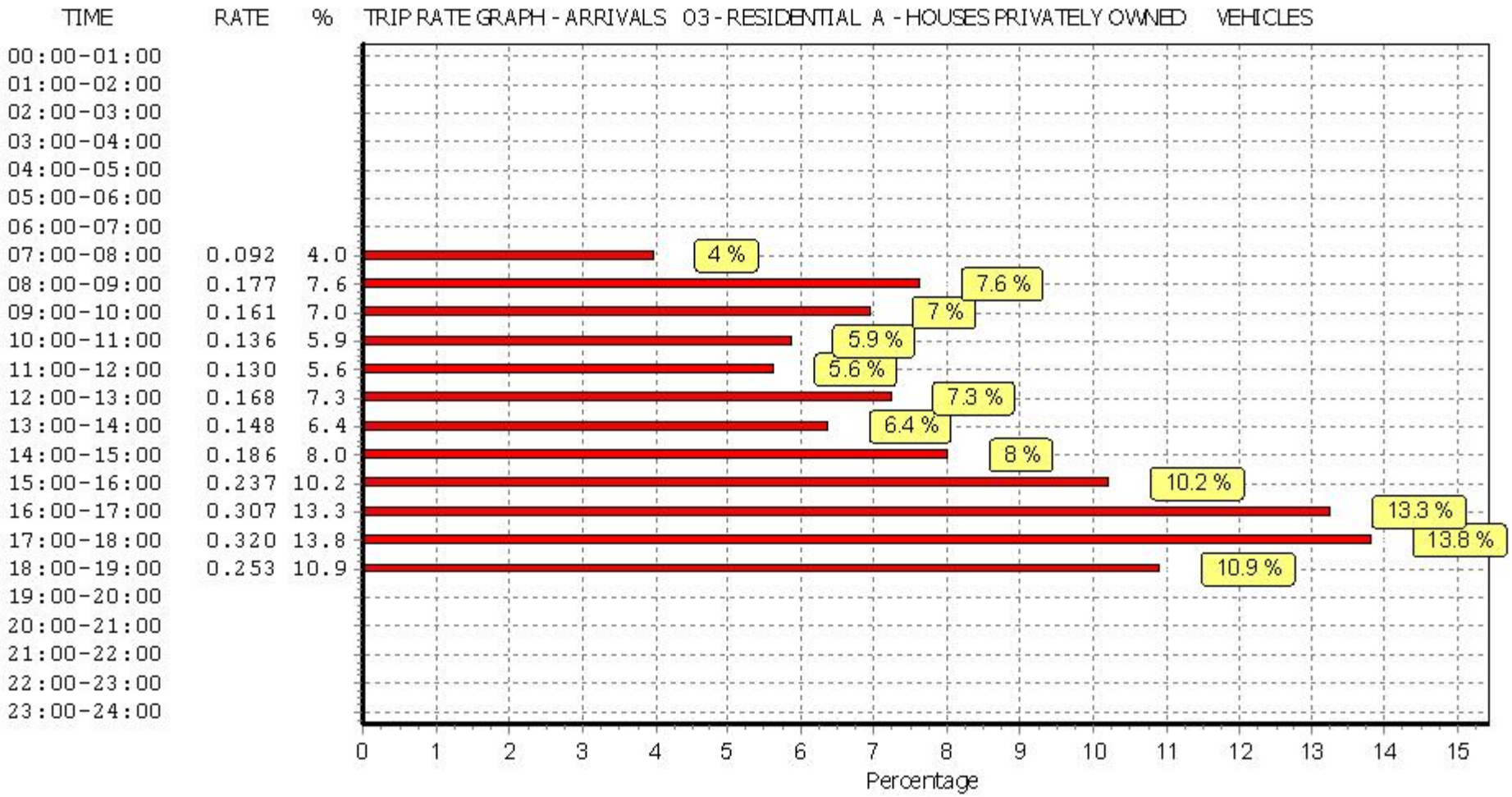

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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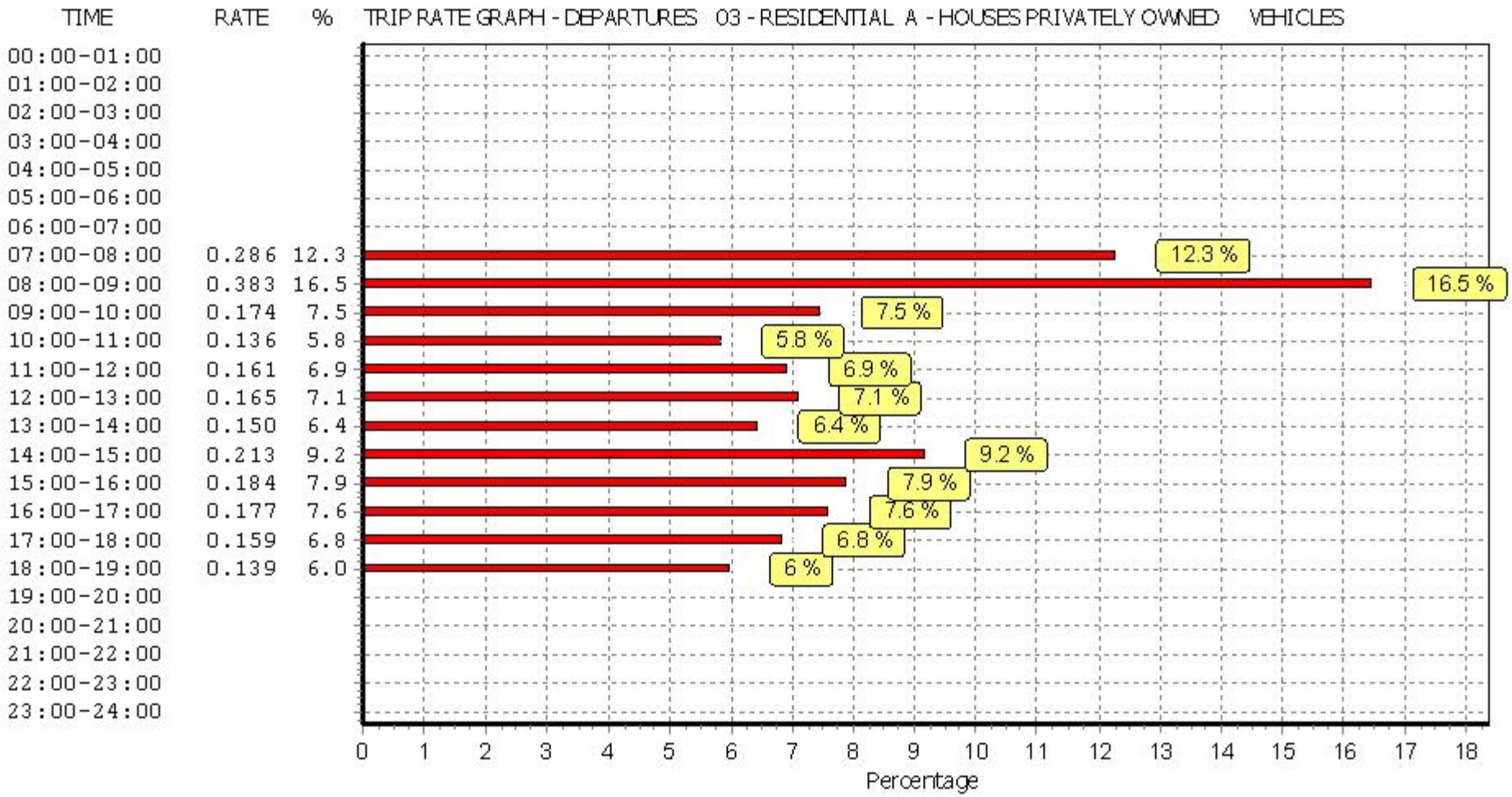

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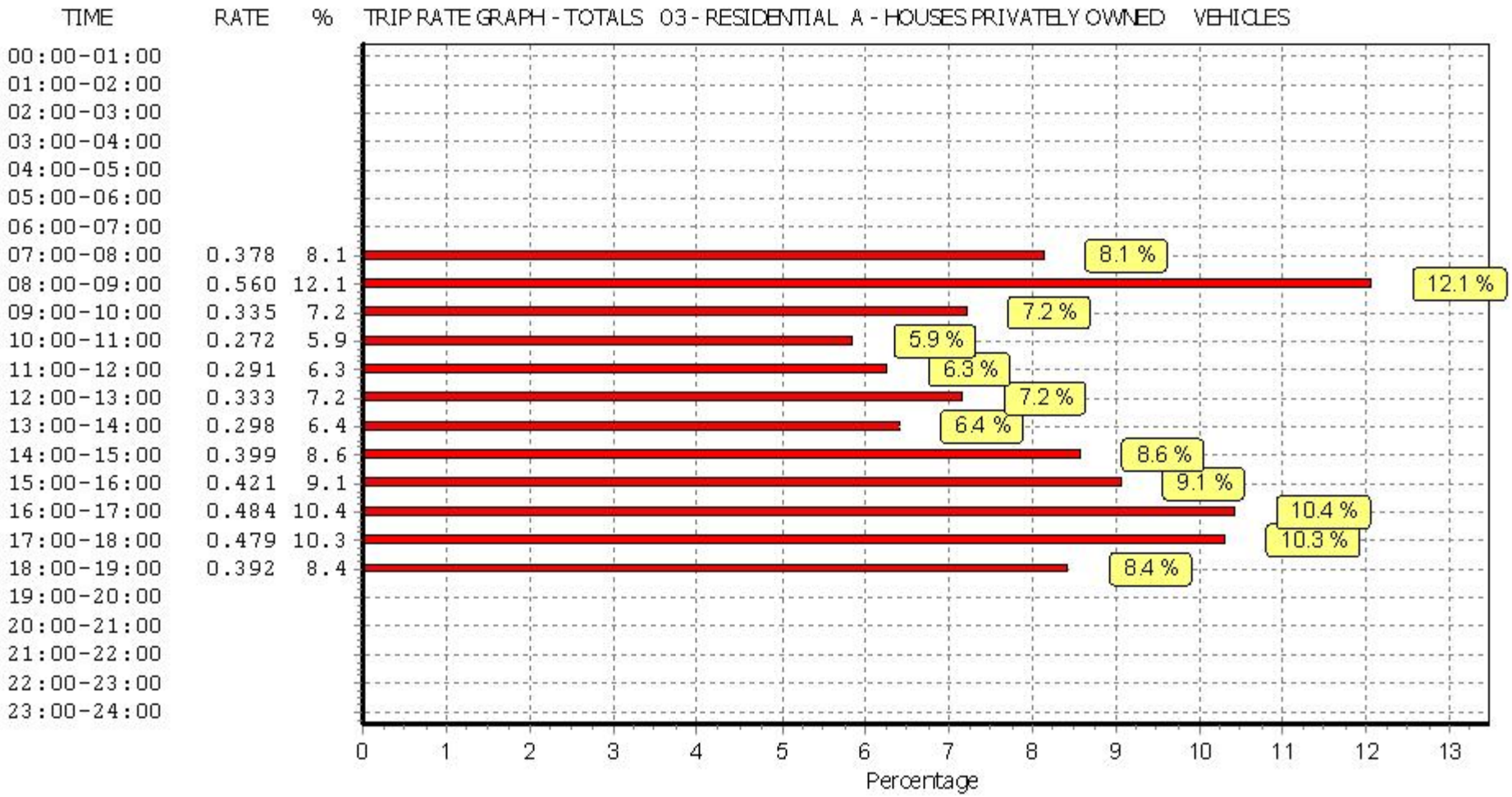

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