



TRANSPORT STATEMENT

August 2018



CLDP Proposed Residential Allocation on Land at Waterloo Road Penygroes



acstro

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| | | |
|---------|-----------------------------|--|
| Issue 1 | 2 nd May 2018 | |
| Issue 2 | 9 th August 2018 | |
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1122 Waerloo Road TS.docx

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1 Introduction

- 1.1 Acstro has been appointed to prepare a Transport Statement to support the promotion of land to the east of Waterloo Road, Penygroes, Carmarthenshire 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 site is currently in agricultural use. It is considered that the candidate site has the potential to deliver up to around 50 dwellings. The candidate site's location is shown in Appendix 1.

Appendix 1 Location Plan

- 1.3 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.
- 1.4 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. An estimate of the likely trip generation of the proposed development of the land is also provided.
 - 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'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's 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. Penygroes is within the Ammanford/Cross Hands Growth Area (Policy GP2). Part of the site, adjacent to Waterloo Road, is within the existing development limits (Policy GP2).
- 2.13 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.
- 2.14 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.
- 2.15 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 east of and will be accessed from Waterloo Road, which links Penygroes and Capel Hendre. The site is some 750m south of Penygroes Square and 2km north of Capel Hendre. Cross Hands is approximately 3km to the west, while Ammanford is some 6km to the east.
- 3.3 There are a number of facilities available in Penygroes and Capel Hendre, including a primary school, convenience store, post office and GP surgery. Walk distances to these facilities from the candidate site are provided in the table below.

| Facility | Walk Distance from Site |
|---------------------------------------------------------|-------------------------|
| Penygroes Primary School | 400m |
| Penygroes Rugby Club & Penygroes Library | 600m |
| Penygroes Pharmacy & GP Surgery | 700m |
| Penygroes Post Office, Convenience Store & Farmers Arms | 850m |
| Capel Hendre Post Office & Convenience Store | 1.9km |
| Public House | 450m |
| Village Hall | 450m |
| Capel Hendre Post Office | 1.8km |

Table 1 Walk Distances from the Site to Local Facilities

- 3.4 Capel Hendre Industrial Estate and Cross Hands Business Park and the employment and retail opportunities they provide are approximately 2.5km south and west of the site, respectively.
- 3.5 In summary therefore the site is in an appropriate location where there is a wide range of services and facilities nearby. This will minimise the distance travelled by residents of the site to access services and increase the possibility that sustainable modes of travel are used to make those trips.

Active Travel

- 3.6 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.
- 3.7 The services and facilities listed in Table 1 are therefore within reasonable walking distance to the site.

- 3.8 The site is accessible to pedestrians from the adjacent footway on Waterloo Road. There are footways on both sides of Waterloo Road. The footways are of a good standard being generally around 2m wide and benefiting from street lighting. The footways continue uninterrupted north to Penygroes and south to Capel Hendre. The footways link with, and are part of, the wider pedestrian network in the area that provide good quality pedestrian routes in all directions.
- 3.9 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).'
- 3.10 Whilst there are currently no segregated cycle routes in the immediate area of the site, Cross Hands and Ammanford are both within reasonable cycling distance to the proposed site at 3km and 6km respectively.

Public Transport Network

- 3.11 The nearest bus stops are located on Waterloo Road near the junction with Bryndedwyddfa, approximately 70m north of the candidate site. They provide access to the following bus services

| Service No | Route | Frequency |
|------------|----------------------------------------|---------------------------------|
| 128 | Ammanford – Llanelli (via Cross Hands) | 6 daily services each direction |
| 129 | Ammanford - Carmarthen | 8 daily services each direction |

Table 2 Public Transport Services

- 3.12 The bus services passing the site provide access to Carmarthen's bus and rail stations that provide national public transport links.

Highway Network

- 3.13 The site is adjacent to and will be accessed from Waterloo Road that links Penygroes and Capel Hendre. The road is subject to a 30mph speed limit.
- 3.14 From Penygroes the A476 can be accessed via either Norton Road or Gate Road. The Cross Hands Economic Link Road is currently being constructed and this will link the A48 at Cross Hands Business Park to the A476 at its junction with Gate Road. The new link road will cross and be accessible from Norton Road.
- 3.15 From Capel Hendre the A483 trunk road and M4 are accessible via Coopers Road.
- 3.16 The site therefore benefits from good access to the local and strategic road networks.

4 Proposed Development

- 4.1 It is considered that the candidate site is capable of delivering approximately 50 dwellings.

Access

- 4.2 An indicative access arrangement is shown as Appendix 3.

Appendix 3 Indicative Access Arrangement

- 4.3 The access shown is to adoptable standards, providing a 5.5m wide carriageway with 2m wide footways on both sides that connect with the existing Waterloo Road footway.
- 4.4 As the access is located within a 30mph speed limit area, visibility splays of 2.4 x 43m would normally be the minimum requirement. In this case it is possible to provide in excess of the minimum requirement; 2.4 x 90m in both directions.
- 4.5 The land opposite the candidate site benefits from planning permission for residential development with the approved access located some 50m north of the proposed access to the candidate site.

Trip Generation

- 4.6 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.
- 4.7 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

| Time Range | Trip Rate per House | | | Trip Generation (50 Houses) | | |
|-----------------------------|---------------------|------------|-------|-----------------------------|------------|-------|
| | Arrivals | Departures | Total | Arrivals | Departures | Total |
| am peak Hour 08:00-09:00 | 0.177 | 0.383 | 0.56 | 9 | 19 | 28 |
| pm Peak Hour 16:00-17:00 | 0.307 | 0.177 | 0.484 | 15 | 9 | 24 |
| Daily | 2.315 | 2.327 | 4.642 | 116 | 116 | 232 |

Table 3 Vehicle Trip Rates & Proposed Development Trip Generation

- 4.8 The TRICS data suggests that the proposed development will generate some 24 to 28 peak hour vehicle movements.
- 4.9 This represents an increase of, on average, less than one additional movement every 2 minutes or so 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

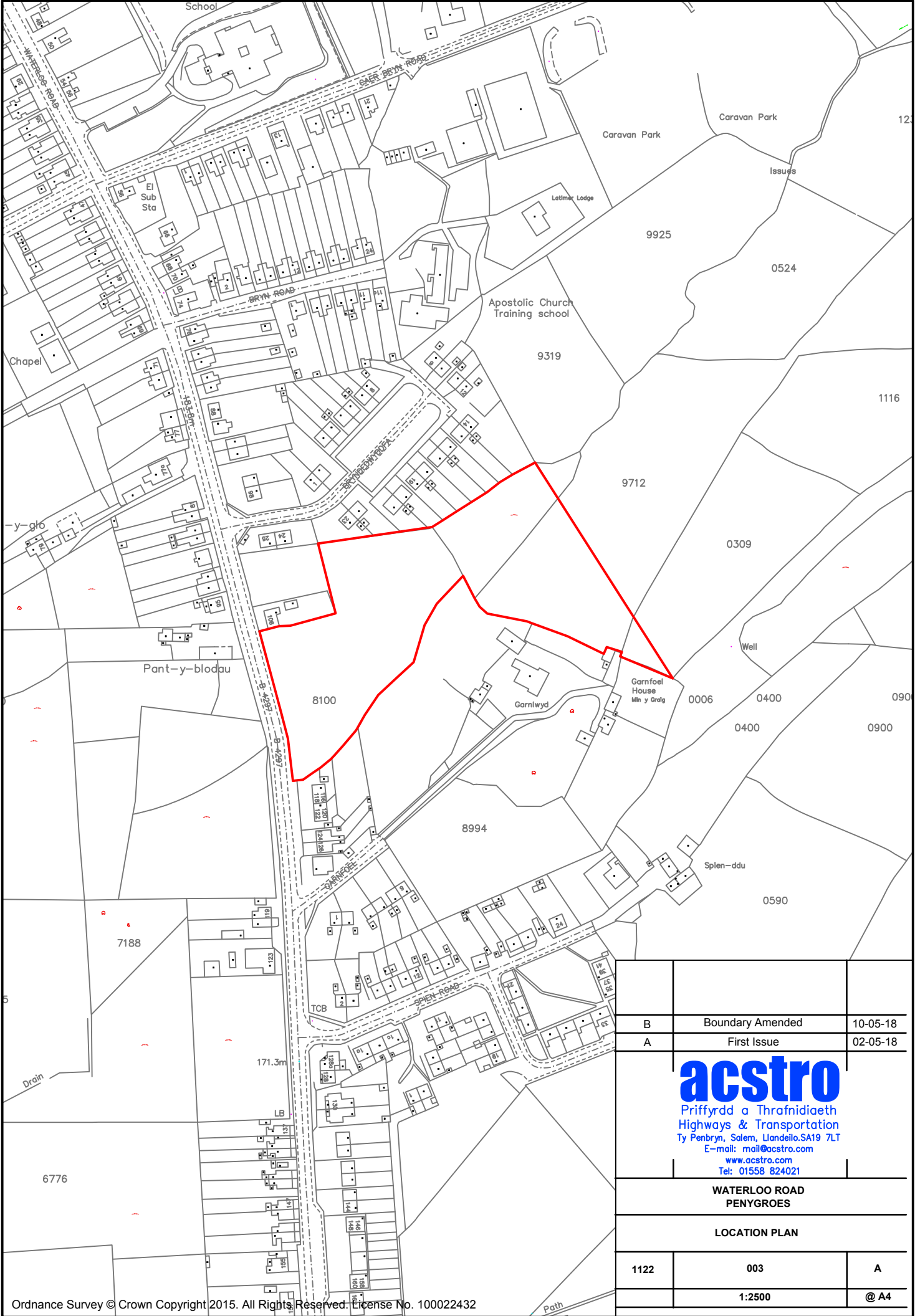
5.1 In summary this Transport Statement has demonstrated that:

- The candidate site's location is closely related to Penygroes and Capel Hendre and the facilities provided at these locations.
- There are a good range of services and facilities within walking and cycling distance to the site offering education, shopping, employment, leisure and social opportunities.
- The site is accessible to pedestrians and is well connected to the existing footway network.
- The site is accessible to public transport users with bus stops located within a short walk of the site;
- A safe and appropriate access, that meets current design standards, can be provided to the site from Waterloo Road.
- The estimated traffic generation of the proposed development is unlikely to cause significant detrimental impact to the safe operation of the surrounding highway network.

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.

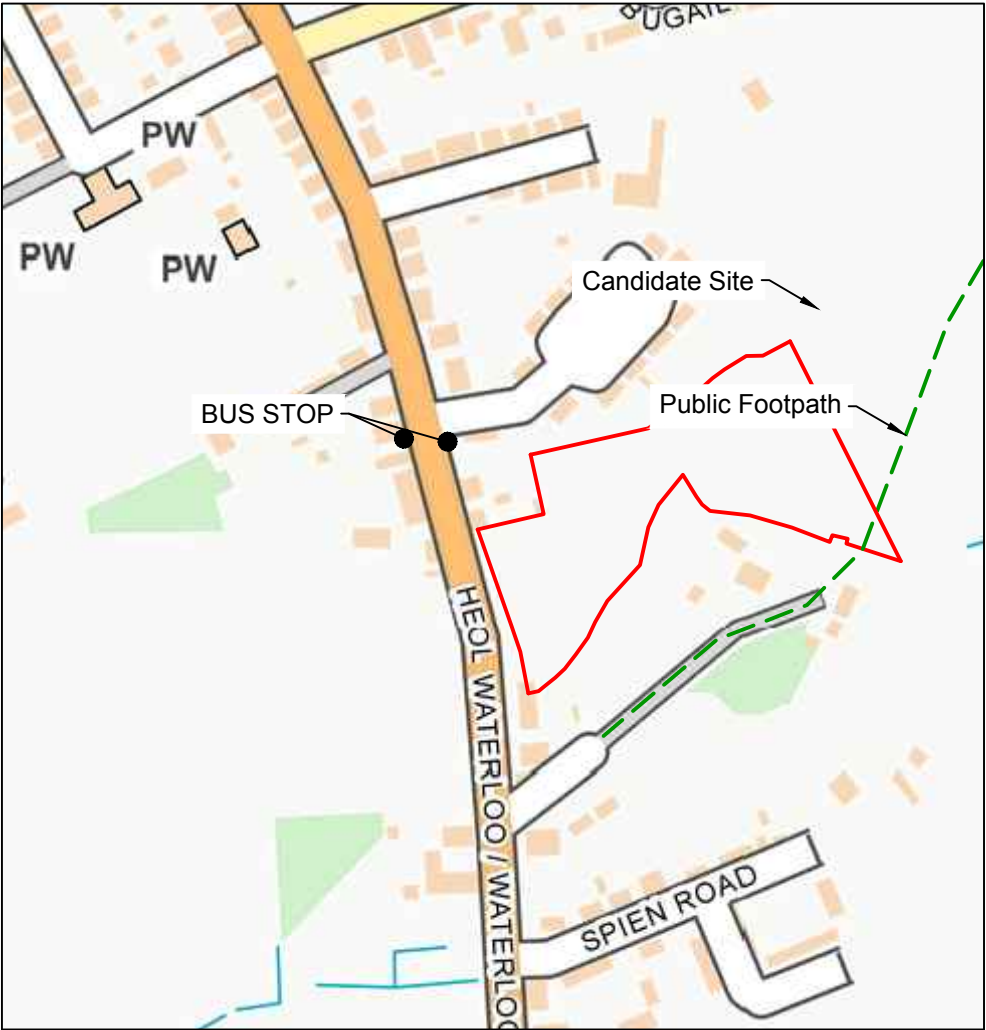
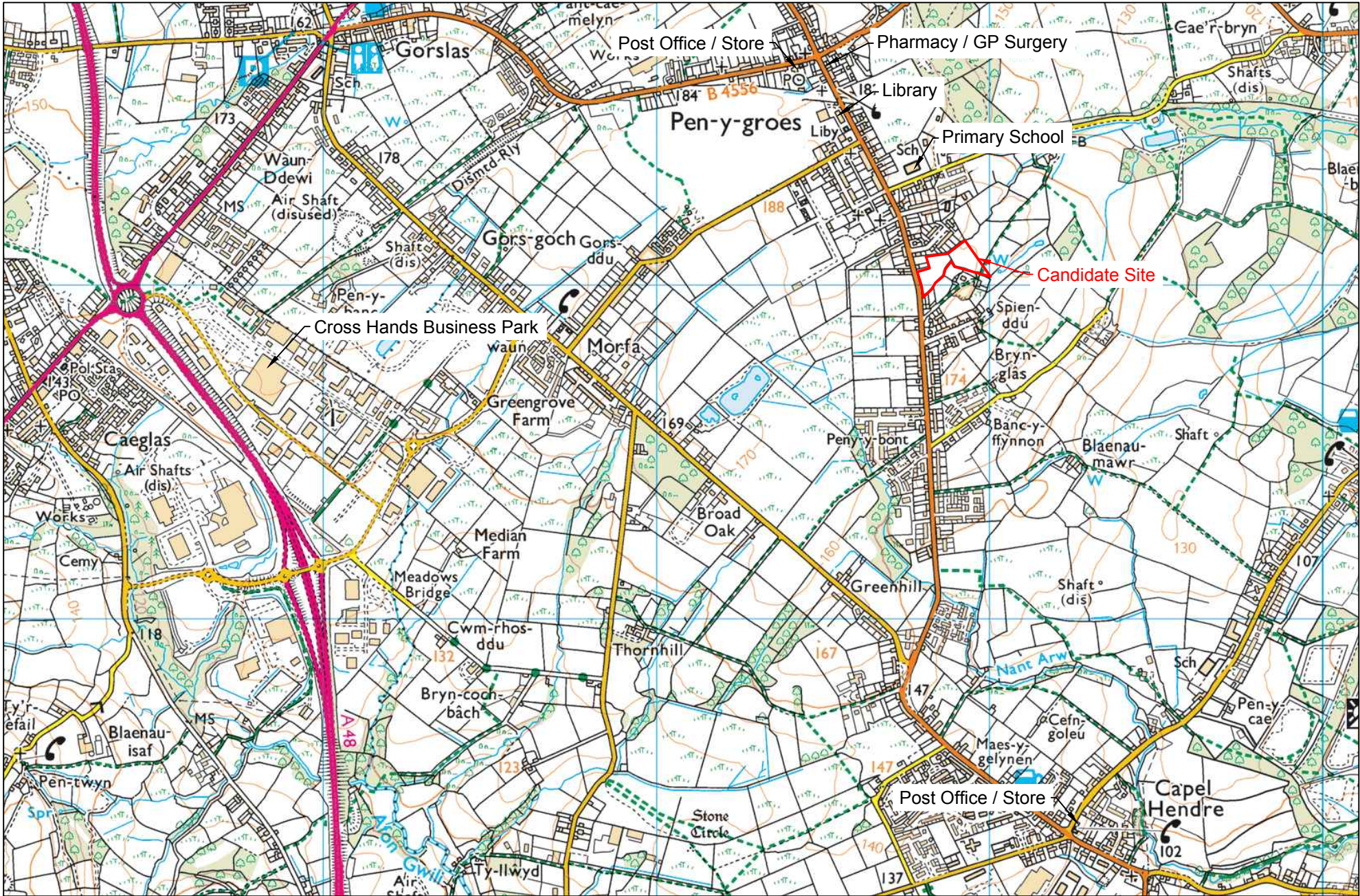
5.3 It is concluded therefore that there are no transport related issues that should prevent the inclusion of this candidate site in Carmarthenshire County Council's Revised Local Development Plan 2018 – 2033.

Appendix 1 Location Plan



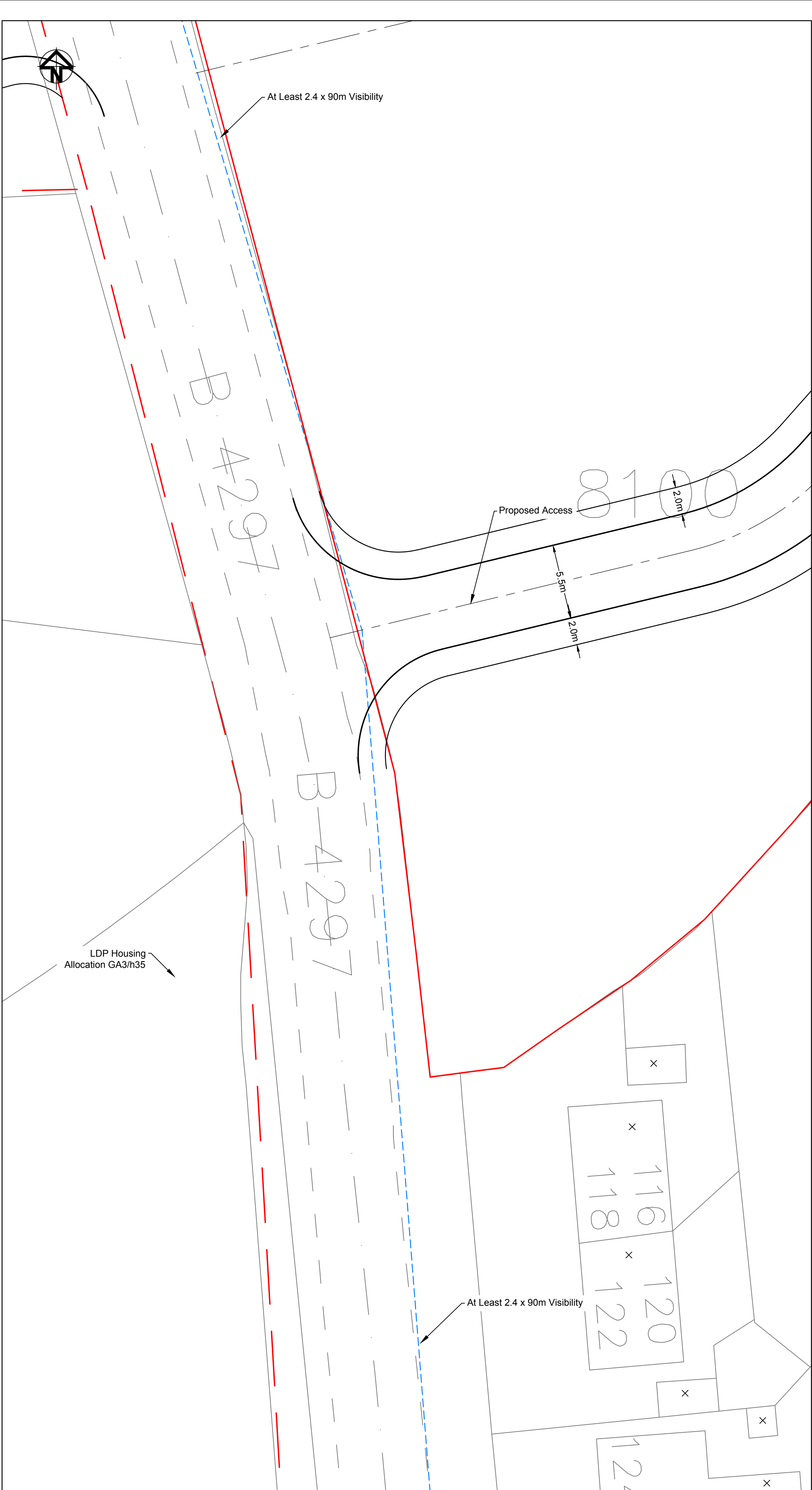
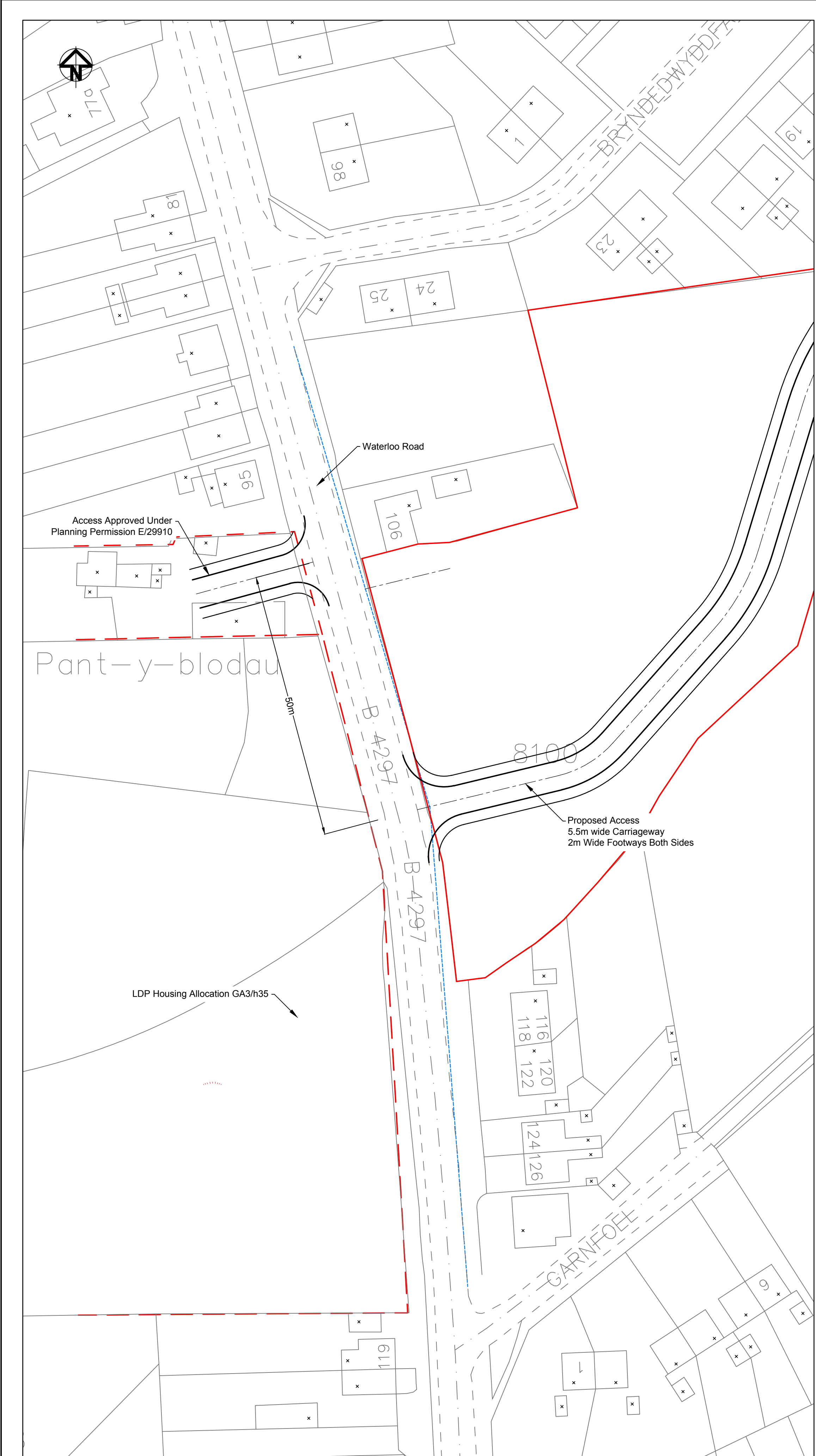
| | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------|
| | | |
| B | Boundary Amended | 10-05-18 |
| A | First Issue | 02-05-18 |
| <div><div>acstro</div><div>Priffyrdd a Thrafnidiaeth</div><div>Highways & Transportation</div><div>Ty Penbryn, Salem, Llandello.SA19 7LT</div><div>E-mail: mail@acstro.com</div><div>www.acstro.com</div><div>Tel: 01558 824021</div></div> | | |
| WATERLOO ROAD PENYGROES | | |
| LOCATION PLAN | | |
| 1122 | 003 | A |
| | 1:2500 | @ A4 |

Appendix 2 Site Context



| | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------|
| B | Boundary amended | 10-05-18 |
| A | First Issue | 02-05-18 |
| <div><div>acstro</div><div>Prifffyrdd a Thrafnidiaeth</div><div>Highways & Transportation</div><div>Ty Penbryn, Salem, Llandeilo, SA19 7LT</div><div>E-mail: mail@acstro.com</div><div>www.acstro.com</div><div>Tel: 01558 824021</div></div> | | |
| WATERLOO ROAD PENYNGROES | | |
| SITE CONTEXT | | |
| 0249 | 004 | B |
| | NOT TO SCALE | @ A3 |

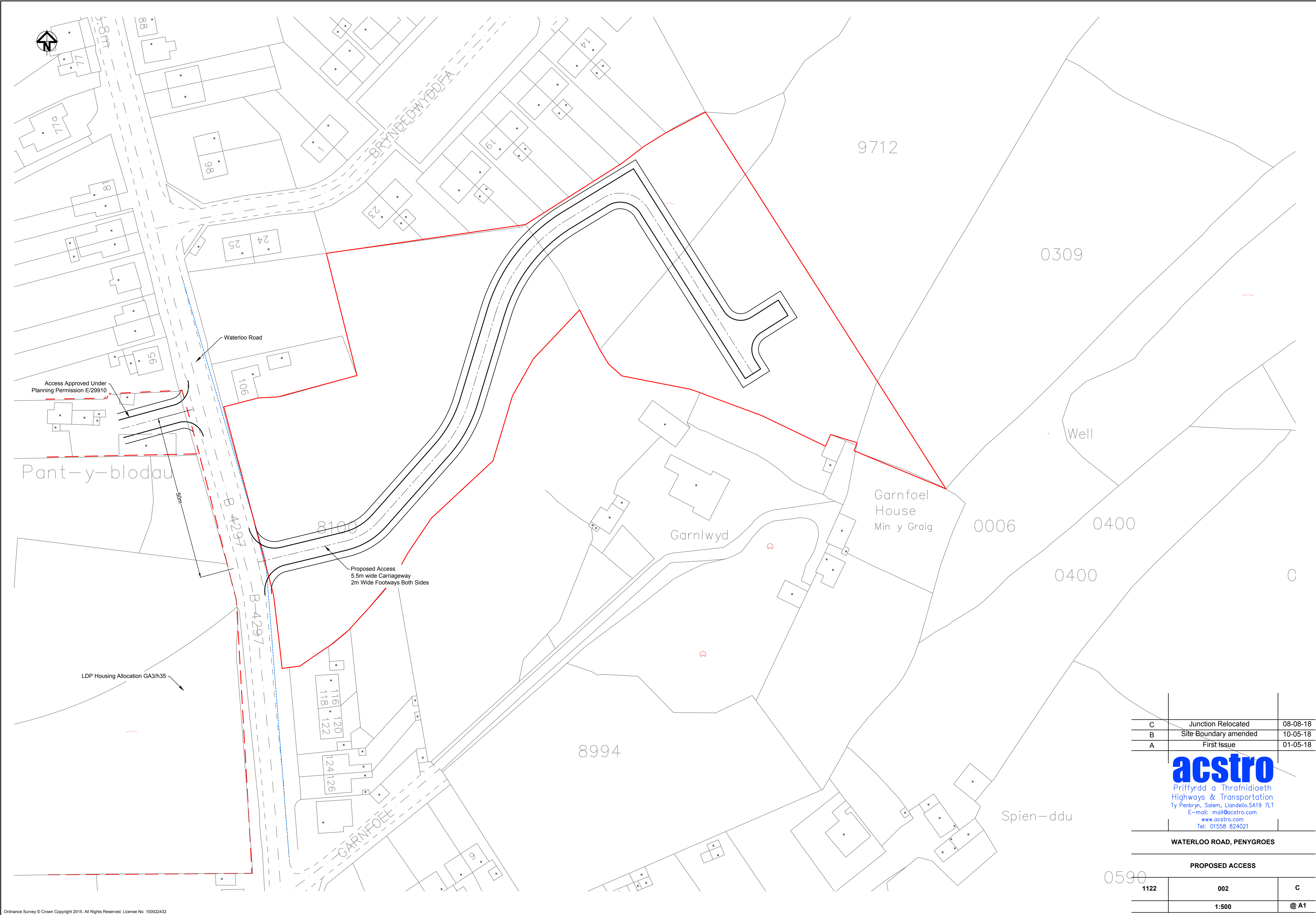
Appendix 3 Indicative Access Arrangement



| | | |
|---|--------------------|----------|
| D | Junction Relocated | 08-08-18 |
| C | Boundary Amended | 10-05-18 |
| B | Candidate Site | 01-05-18 |
| A | First Issue | 07-11-17 |

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| | | |
|---------------------------|---------------|------|
| WATERLOO ROAD, PENYNGROES | | |
| PROPOSED ACCESS | | |
| 1122 | 001 | D |
| | 1:500 & 1:200 | @ A1 |



| | | |
|---|-----------------------|----------|
| C | Junction Relocated | 08-08-18 |
| B | Site Boundary amended | 10-05-18 |
| A | First Issue | 01-05-18 |

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WATERLOO ROAD, PENYGROES

PROPOSED ACCESS

| | | |
|------|-------|------|
| 1122 | 002 | C |
| | 1:500 | @ A1 |

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 undertaken 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 KEPTIE ROAD | BUNGALOWS/DET. | ANGUS |
| | 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 LOWER BRAND LANE | TERRACED & SEMI DETACHED | DEVON |
| | 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 CANADA WAY | HOUSES & FLATS | HAMPSHIRE |
| | 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 KING BRUDE ROAD SCORGUIE INVERNESS | SEMI-DETACHED & TERRACED | HIGHLAND |
| | 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 YARMOUTH ROAD | SEMI DET. & BUNGALOWS | NORFOLK |
| | 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 HALING WAY | DETACHED HOUSES | NORFOLK |
| | 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 CRAVEN WAY | DETACHED & SEMI DET. | NORTH YORKSHIRE |
| | 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 HORSEFAIR | PRIVATE HOUSING | NORTH YORKSHIRE |
| | 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

| Time Range | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---------------|----------|-------------|-----------|------------|-------------|-----------|----------|-------------|-----------|
| | No. Days | Ave. DWELLS | Trip Rate | No. Days | Ave. DWELLS | Trip Rate | No. Days | Ave. DWELLS | Trip Rate |
| 00:00 - 01:00 | | | | | | | | | |
| 01:00 - 02:00 | | | | | | | | | |
| 02:00 - 03:00 | | | | | | | | | |
| 03:00 - 04:00 | | | | | | | | | |
| 04:00 - 05:00 | | | | | | | | | |
| 05:00 - 06:00 | | | | | | | | | |
| 06:00 - 07:00 | | | | | | | | | |
| 07:00 - 08:00 | 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.*

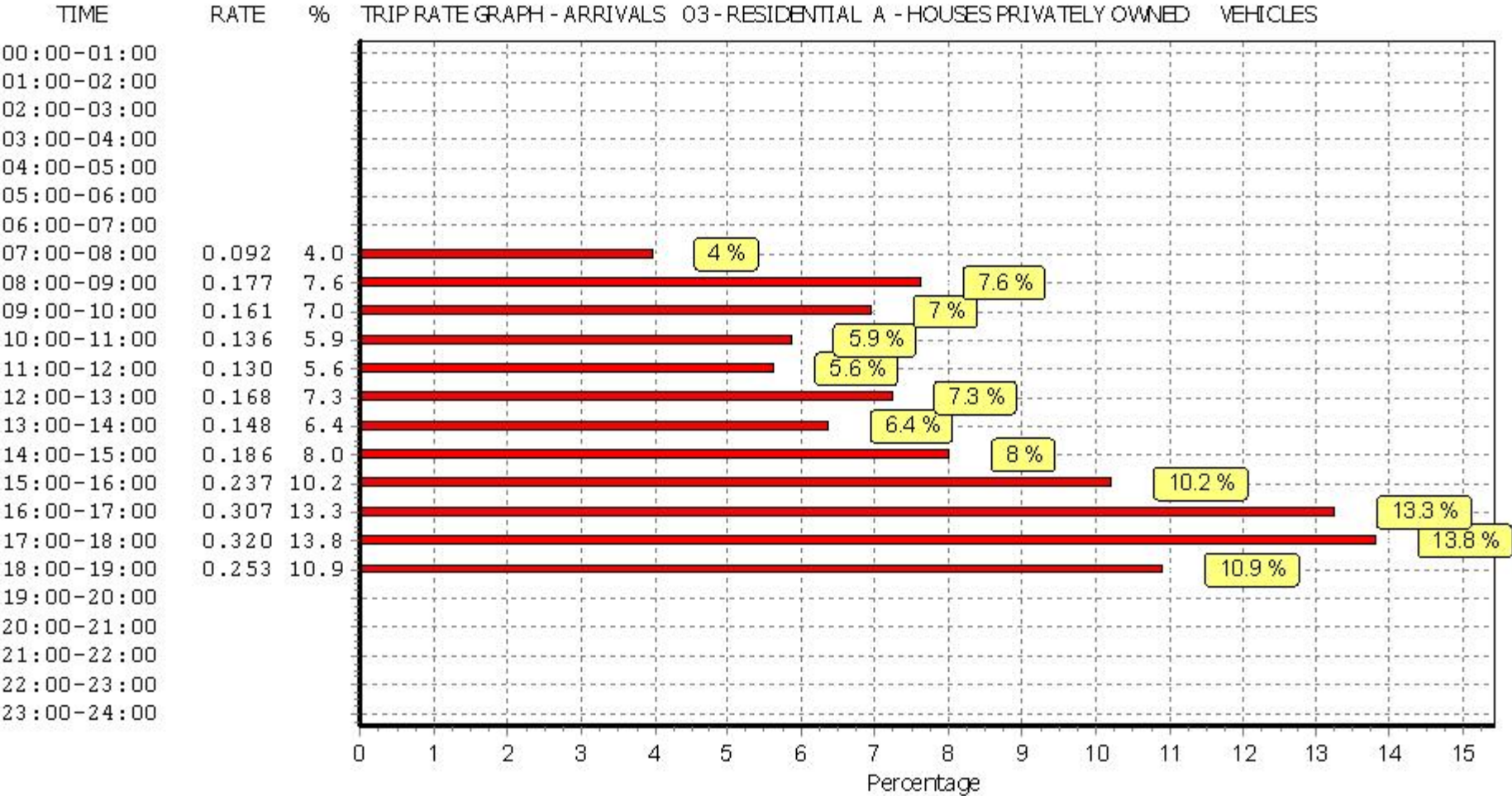
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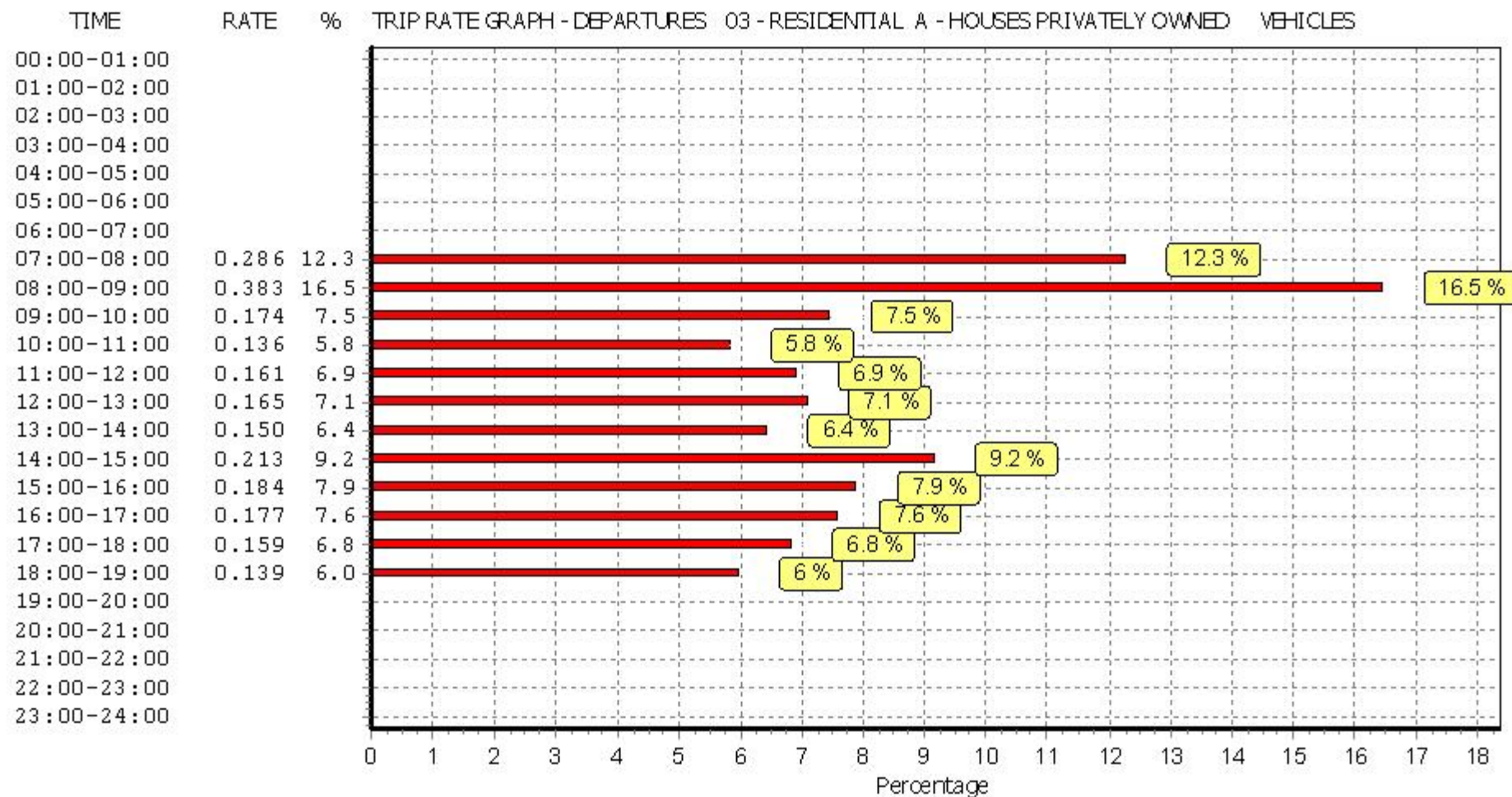
Parameter summary

| | |
|-----------------------------------------------|---------------------|
| 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 |

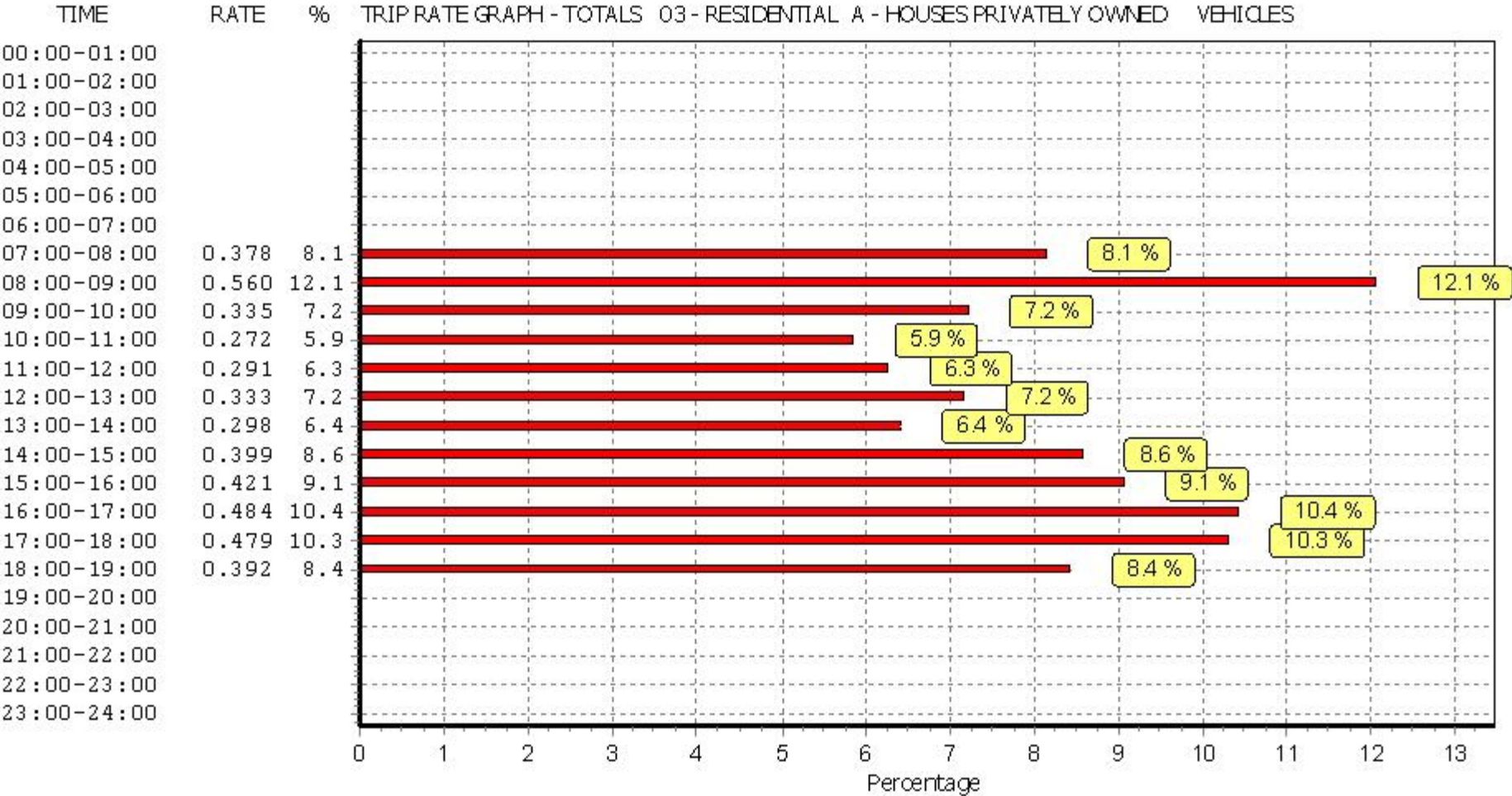
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



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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