SCP

Transportation Planning : Infrastructure Design

Transport Assessment

Proposed Residential Development

Llangollen Road, Acrefair, Wrexham

Clwyd Alyn Housing Ltd

January 2023

Doc Ref: DR/210486/TA/00

Prepared by:	Natalie Ternent
Checked by:	Rob Holloway
Approved by:	David Roberts

Document Revision Control

Revision	Date	Status	Prepared By	Approved By
0	20.01.23	DRAFT	NT	DR

Colwyn Chambers
19 York Street
Manchester
M2 3BA

T: 0161 832 4400

E: info@scptransport.co.uk
W: www. scptransport.co.uk

This document has been prepared for the titled project or named part thereof and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of SCP being obtained. SCP accepts no responsibility or liability for the consequence of this document being used for a purpose other than the purposes for which it was commissioned. Any person using or relying on the document for such other purposes agrees and will by such use or reliance be taken to confirm his agreement to indemnify SCP for all loss or damage resulting there from. SCP accepts no responsibility or liability for this document to any party other than the person by whom it was commissioned.

CONTENTS

1.0 INTRODUCTION 1
2.0 POLICY CONTEXT AND TRANSPORT IMPLEMENTATION STRATEGY 4
3.0 EXISTING CONDITIONS 11
4.0 PROPOSED DEVELOPMENT 13
5.0 ACCESSIBILITY 15
6.0 TRIP GENERATION 22
7.0 TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT 24
8.0 FUTURE BASELINE AND ASSESSMENT TRAFFIC FLOWS 25
9.0 ANTICIPATED HIGHWAY IMPACT 26
10.0 SUMMARY AND CONCLUSIONS 27

APPENDICES

1 Traffic Survey Data
2 Proposed Site Layout
3 Visibility Splays at Site Access
4 Swept Path Analysis of a Refuse Vehicle
5 TRICS Data
6 Site Access / Llangollen Road Priority Junction – PICADY Assessment

TRAFFIC FLOW FIGURES

1 2021 Surveyed Traffic Flows
2 Traffic Distribution
3 Traffic Assignment
4 2028 Traffic Flows
5 Committed Development Flows
6 2028 Base + Committed Development Flows
7 2028 ‘With’ Development Flows

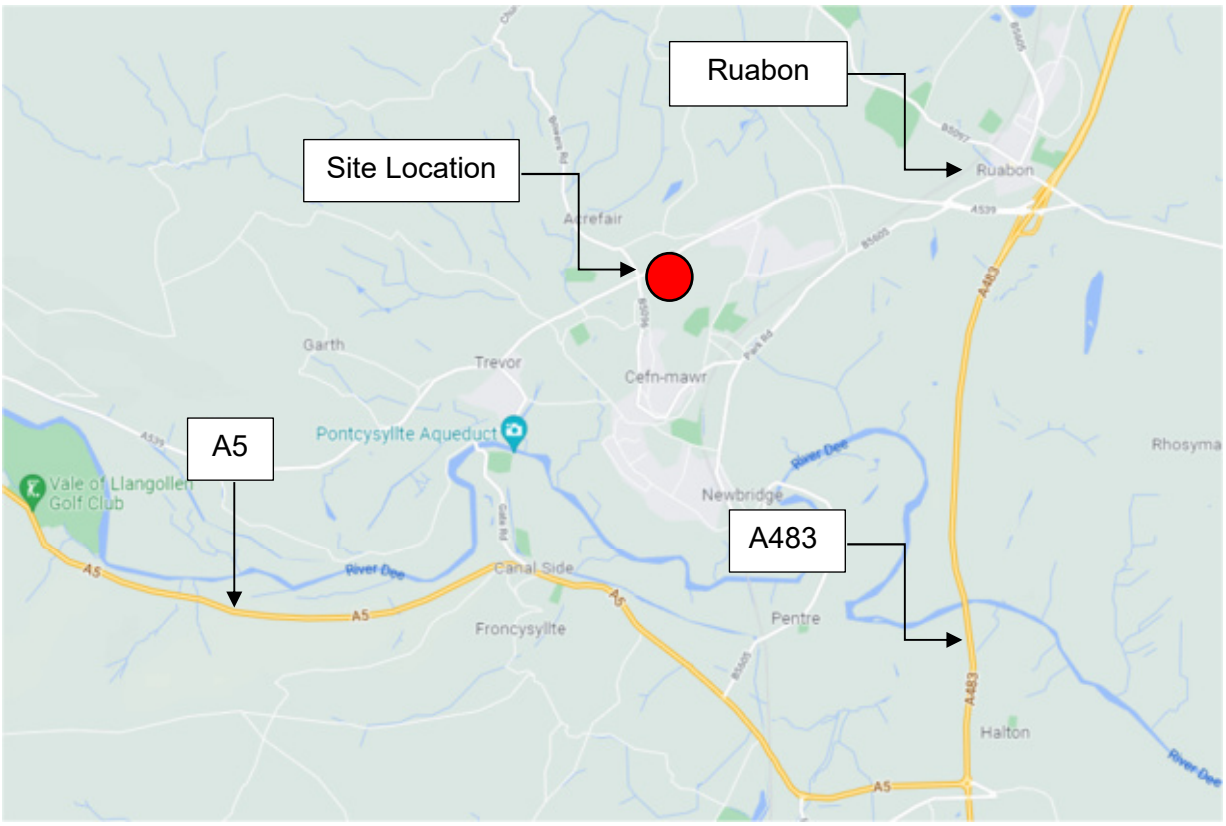
1.0 INTRODUCTION

General

1.1 Clwyd Alyn Housing Limited seek full planning permission for a residential development comprising up to 200 dwellings on a plot of land accessed from A539 Llangollen Road, Acrefair, Wrexham.

1.2 The location of the site in relation to the wider highway network is shown on **Figure 1.1** below and the site boundary in relation to the local highway network is shown in red on **Figure 1.2** overleaf.

Figure 1.1 – Site Location – Wider Highway Network



Source: Google Maps

Figure 1.2 – Site Location Plan – Local View



Source: Google Maps

1.3 The site is a brownfield site that used to contain the former Air Products Site, which closed in 2009. The site boundary contained the main operations on the site whilst an adjacent parcel of land, located to the north-east of the red line boundary, provided a car park for the Air Products site (which is visible on Figure 1.2).

1.4 The site was granted outline planning permission in 2013 under application ref: P/2012/0045 for a mixed-use development comprising residential, commercial and leisure uses with a further outline application submitted in 2016 for 232 residential dwellings with all matters reserved except for access. The application was approved in 2018 but the site remains undeveloped, and the planning permission has now lapsed.

1.5 The site adjacent that contained the Air Products car park is currently under consideration by Wrexham Council for the construction of 21 residential dwellings with access to be taken from Llangollen Road, approximately 50m north-east of the site access for this proposed development. Further details can be found under application reference: P/2021/0793.

1.6 This TA provides an assessment of the traffic and transport implications associated with the development proposals to inform Wrexham County Council (WCC), as local highway and planning authority.

1.7 The structure of this report is as follows:

- Chapter 2 – summarises relevant national and local transport policies and evaluated a Transport Implementation Strategy;
- Chapter 3 – provides an appraisal of the existing conditions of the site including an appraisal of the local highway network, existing traffic conditions and road safety record;
- Chapter 4 – provides an appraisal of the development proposals including the proposed site access arrangements, servicing arrangements and car parking;
- Chapter 5 – presents a review of the accessibility of the site by walking, cycling and public transport modes;
- Chapter 6 – presents estimates of the trip generating potential of the scheme;
- Chapter 7 – sets out the methodologies for estimating the distribution of site traffic and assigning this traffic through the TA study area;
- Chapter 8 – describes the future baseline traffic conditions on the local highway network in relation to traffic growth;
- Chapter 9 – presents an assessment of the impact of the development on the operational performance of the local highway network; and;
- Chapter 10 – provides the summary and conclusions to the above chapters.

2.0 POLICY CONTEXT AND TRANSPORT IMPLEMENTATION STRATEGY

Introduction

2.1 Technical Advice Note 18 (TAN 18) sets out the need for all TA supporting documents in Wales to include a Transport Implementation Strategy (TIS), which should include the following information in respect of each particular development proposal:

- Details of how the development and the TIS relate to transport planning policies and strategy. TIS's are intended to incorporate all the elements of a Travel Plan (TP) and to ensure that these are integrated with design elements of the new development;
- A set of objectives and targets relating to managing travel demand for the development;
- A framework for monitoring the objectives and targets, including the future modal split of transport to the development; and
- Details of measures proposed to improve access by public transport, walking and cycling to reduce the number and impacts of motorised journeys associated with the development.

2.2 This TIS section is therefore prepared having regard to the advice from TAN 18, as outlined above. It is considered that this TIS can be taken forward and used as a framework for a future detailed Travel Plan that can be secured as part of a planning condition, if considered necessary.

Policy Context - Planning Policy Wales (PPW)

2.3 In terms of the national transport policy that is relevant to the TIS, the latest 11th edition of PPW was published in February 2021 by the Welsh Government and sets out a framework for the Welsh planning authorities to prepare their development plans. Chapter 4 of PPW sets out the approach to Transport.

2.4 Paragraph 4.1.1 of PPW 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. By influencing the location, scale, density, mix of uses and design of new development, the planning system can improve choice in transport and secure accessibility in a way which supports sustainable development, increases physical activity, improves health and helps to tackle the causes of climate change and airborne pollution by:*

- *Enabling More Sustainable Travel Choices – measures to increase walking, cycling and public transport, reduce dependency on the car for daily travel;*
- *Network Management – measures to make best use of the available capacity, supported by targeted new infrastructure; and*

- *Demand Management – the application of strategies and policies to reduce travel demand, specifically that of single-occupancy private vehicles".*

2.5 Paragraph 4.1.9 of PPW states that the Welsh Government is committed to reducing reliance on the private car and supporting a modal shift to walking, cycling and public transport. This then leads on to say at paragraph 4.1.10 that "*The planning system has a key role to play in reducing the need to travel, particularly by private car, 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."*

2.6 With reference to the Active Travel (Wales) Act 2013, Paragraph 4.1.27 of PPW states that walking and cycling should be promoted for shorter journeys, particularly everyday journeys to work and education establishments or to other local services and facilities. "*The Active Travel Act requires local authorities to produce Integrated Network Maps, identifying the walking and cycling routes required to create fully integrated networks for walking and cycling to access work, education, services and facilities*".

2.7 In reference to supporting documentation with planning applications, paragraph 4.1.55 of PPW states that *"Transport Assessments are an important mechanism for setting out the scale of anticipated impacts of a proposed development, or redevelopment, is likely to have. They assist in helping to anticipate the impacts of development so that they can be understood and catered for appropriately."*

TIS Objectives and Targets

2.8 The objectives of a TIS should benefit both the occupiers of a development and the wider community. The objectives will be set out in the following sections and form the basis for a TP for the development. Site specific objectives that are relevant to the proposed development are as follows:

- Reduce vehicle use in and around the site;
- Improve the image of the local area;

- Reduce the transport impact of the development upon the environment;
- Promote more sustainable ways of travelling; and
- Support government policy to manage travel demand more effectively.

2.9 In order to achieve the objective of reducing single occupancy vehicle travel, realistic short term annual targets for mode share will be set.

2.10 The proposed development is located in the Cefn Ward. The 2011 UK Census shows that single occupancy travel to work by car mode is, on average; lower in the Cefn Ward (69.3%) to Wrexham (72.3%) and Wales (71.2%). The existing local single occupancy modal share percentage of 69.3% will form the initial baseline target for the residential properties on the site. The following table shows the figures obtained from the Census data:

Table 2.1 – Mode Share from Local, Regional and National Area (2011 Census)

Travel to Work (W05000244) Census Statistics	Cefn Ward	Wrexham County	Wales Country
All Usual Residents Aged 16 to 74 in Employment	2,167	63,614	1,363,615
Work Mainly at or From Home	55	2,624	73,140
Underground, Metro, Light Rail, Tram	3	37	1,175
Train	11	521	27,341
Bus, Minibus or Coach	185	3,416	62,903
Taxi	21	449	6,523
Motorcycle, Scooter or Moped	17	403	7,694
Driving a Car or Van	1,463	44,090	918,645
Passenger in a Car or Van	225	5,278	92,727
Bicycle	17	832	19,659
On Foot	164	5,621	145,135
Other Method of Travel to Work	6	343	8,673
Total Persons Travelling to Work	**2,112**	**60,990**	**1,290,475**
Single Occupancy Car Journeys (%)	**69.3%**	**72.3%**	**71.2%**
Car Shares (%)	**10.7%**	**8.7%**	**7.2%**
Public Transport (%)	**9.4%**	**6.5%**	**7.1%**
Walking (%)	**7.8%**	**9.2%**	**11.2%**
Bicycle (%)	**0.8%**	**1.4%**	**1.5%**
Taxi (%)	**1.0%**	**0.7%**	**0.5%**
Motorcycle (%)	**0.8%**	**0.6%**	**0.7%**

2.11 If it is demonstrated (through surveys) that the level of single occupancy car travel from the proposed development is lower than the 69.3% local level, the initial short-term targets will be reassessed in conjunction with the local authority to seek to bring levels of car use down further.

2.12 In addition to the single occupancy car travel targets, if it is demonstrated that the level of public transport travel usage to / from the site is less than the 9.4% for the ward, the initial short-term targets will be to increase the public transport travel to that level. Once public transport usage

from the development is at 9.4%, the targets will be reassessed to try to increase public transport usage levels even further. The same targets will apply to walking and cycling trips as outlined above, with targets being reassessed annually to increase the level of sustainable modes of transport trips taken from the site.

Achieving the TIS Objectives and the Monitoring Process

2.13 The objectives and monitoring of the TIS will substantially be achieved through the appointment of suitable Travel Plan Co-ordinator/s (TPC/s). The TPC role for the development would most commonly be overseen by a Management Company, although in time this role could evolve to be overseen by the residents of the site themselves. Appropriate start-up funding will be provided for the TPC/s to cover the administration costs involved.

2.14 Once appointed, the TPC/s will act as the main contact for the TIS and will be responsible for implementing the TIS measures, involving new residents, maintaining a database and monitoring the effects of implementation. A full set of duties and responsibilities of the TPC/s is set out in the sections below.

2.15 The TPC/s will inform the Local Planning Authority and the appropriate local public transport operators of their contact details. Similarly, the TPC/s will obtain the contact details of the owners and complete a 'Contact' form to provide easy reference when dealing with relevant matters.

2.16 The TPC/s will undertake an initial resident travel survey, within three months of 30% occupation of the site, to enable a resident travel database to be set up. The TPC/s will prepare and distribute a questionnaire to each resident, to collect the following details:

- Postcode area of place of employment;
- Normal working hours;
- Mode of travel to work;
- Car ownership / usage;
- Reasons for not using public transport and other modes;
- The anticipated take-up of a car sharing scheme, the use of public transport or other non-car modes of travel to work; and
- Information relating to potential areas for sustainable travel improvement, upon which the TPC/s could act and draw up measures to improve the TIS.

2.17 On receipt of the completed questionnaires the TPC/s will set up a travel database within 3 months of completion of the travel survey.

2.18 The TPC/s will agree the annual targets with the LPA within 1 month of completion of the travel survey analysis, this will be based on the target principles outlined above. The initial travel survey results for the proportion of residents travelling by single occupancy vehicles should be recorded along with the agreed short term annual targets.

2.19 The TPC/s will ensure that any changes to the TIS or any relevant information is passed on to residents on an annual basis electronically.

2.20 The TPC/s will ensure that residents are provided with information to allow ease of use of the local public transport by providing up-to-date public transport route maps and timetable information in residential 'welcome packs', and updating by leaflet drop, as necessary. Contact details for local taxi firms will also be provided by the TPC/s.

2.21 The TPC/s will liaise regularly with local public transport operators to ensure that information remains valid. The TPC/s will provide details of the websites and telephone advice services, such as http://www.traveline.info/ to enable residents to obtain details on their individual journey requirements.

2.22 The TPC/s will also liaise with the local public transport operators and release survey data to the operators to identify travel demands and allow appropriate services to be provided. The TPC/s will check regularly to ensure that the information supplied to residents remains valid.

2.23 The TPC/s will encourage walking as a mode of travel to the site by implementing the following initiatives:

- Raise awareness of the health benefits of walking through promotional material; and
- Provide a map showing walking routes, indicating distances and times to the most common destinations near to the site.

2.24 In conjunction with the pedestrian initiatives, the TPC/s will investigate the potential to set up a bicycle user group (BUG) to encourage residents to cycle to work.

2.25 The TPC/s will investigate setting up a car sharing scheme or utilising an existing one locally, utilising the online website www.liftshare.com, within 3 months of receiving the initial residents travel surveys. Residents will be contacted by the TPC/s to allow potential car sharers to register an interest and provide details of their journey to and from work along with their contact phone number and work location. The TPC/s will then identify suitable matches for residents that may be able to share their journeys to and from work or for shopping trips.

2.26 The TPC/s will make the new residents aware of the existence of the TIS by providing them with a copy of the TIS as part of a welcome pack as they move into their properties. The existence of the TIS would also be highlighted in promotional literature and advertising for the new dwellings.

2.27 The TPC/s will monitor travel patterns on an annual basis for the first five years of the occupation of the site. The monitoring of the plan is important for the following reasons:

- It will ensure that the Local Planning Authority can see that the aims and objectives of the TIS are being achieved as residents will establish their travel habits within five years;
- It justifies the commitment of the TPC/s and of other resources;
- It maintains support for the plan by reporting successes; and
- It identifies any measures that are not working or problems with the approach of the Plan.

2.28 Surveys will be used to monitor travel to and from the site. The surveys can be used to monitor the number of residents walking, cycling, using cars and using public transport. The results can then be compared with the mode share targets identified earlier in this framework TIS.

2.29 The TPC/s will develop the monitoring programme in conjunction with the Local Planning Authority to ensure that the monitoring procedures are appropriate. The TPC/s will maintain a monitoring table of progress to key TIS targets based on the results of the monitoring travel surveys. This table will be published and distributed by leaflet to residents on the site as part of the annual update.

2.30 The TPC/s will make information on mode share available to the Local Planning Authority as part of the continuous monitoring process, subject to the provisions of the Data Protection Act.

2.31 The TPC/s will undertake an annual review of the TIS in conjunction with the Local Planning Authority. This review will be important in assessing the effectiveness of the measures implemented and to identify areas where modification may be necessary. In particular the following will be assessed:

- The level of car/non-car usage at the site;
- Comments received from residents.

2.32 When reviewing the effectiveness of the TIS, the following questions will be asked:

- Which areas offer the greatest potential for change/improvement?
- Was the initiative implemented by the target date?
- How well used is each scheme/initiative?

- How much did it cost to introduce?

2.33 The TPC/s will compare the mode share statistics obtained from the annual monitoring to the targets set for the development. The TPC/s will set revised realistic targets for modal shifts to non-car travel modes and investigate the effectiveness of the TIS initiatives being promoted in conjunction with the Local Planning Authority.

2.34 In light of the data collected from the monitoring process, the TPC/s will adapt the TIS to enable the revised agreed targets to be achieved and submit a review report to be agreed with the Local Planning Authority.

2.35 It is considered that the delivery of the TIS / TP can be secured by planning condition, as appropriate.

3.0 EXISTING CONDITIONS

Site Location

3.1 The proposed development site comprises an irregular shaped plot of land located in Acrefair and is located to the south of A539 Llangollen Road, as shown in **Figures 1.1** and **1.2** earlier.

3.2 The site is surrounded by residential dwellings and is bounded by A539 Llangollen Road to the north, B5096 King Street to the west/south-west and woodland or greenspace to its remaining sides. The topography of the surrounding area is hilly with Public Right of Ways (PROW) being located within close proximity to the site, providing connections to other parts of Acrefair and the surrounding local villages.

Local Highway Network

A539 Llangollen Road

3.3 A539 Llangollen Road is a primary road serving Acrefair, which runs in a north-east/south-west direction in the local area between Overton Bridge, east of the proposed development, to Llangollen, to the west. Llangollen Road meets with the A483 just before Overton Bridge, which is a strategic route in Wales running north/south between Chester and the M4 Motorway just north of Swansea.

3.4 Locally, the road is a single carriageway road approximately 7m wide and provides footways along both sides of the road with bus stops within close proximity to the site along with regularly spaced street-lighting. Within the vicinity of the site access, Llangollen Road is subject to a 30mph speed limit and does not provide any Traffic Regulation Orders (TROs) although reduces to 20mph approximately 200m south-west of the site access, where Llangollen Road meets with B5096 King Street and Chapel Street at a crossroads junction, where dragons' teeth markings are located on the westbound side of the carriageway leading into the 20mph zone.

3.5 From the existing site access that served the former Air Products site, bus stops are located within 100m to the north-east of the access. The bus stops provide a flag with pole and timetable information, which is discussed later in this report.

B5096 King Street

3.6 B5096 King Street is located to the south-west of the site and travels in a north/south direction from its junction with Llangollen Road into the village of Cefn Mawr. King Street is a local road and is typical of the roads found within the local area, whereby there are different housing types along the route with pockets of terraced housing found with vehicles parked on-street.

3.7 At its junction with Llangollen Road, King Street is subject to a 20mph speed limit and is approximately 6m wide with a continuous footway along the southbound side of the carriageway to its junction with High Street and an intermittent footway on the adjacent side of the road and is covered by street lighting.

3.8 Access to King Street can also be found along the southern boundary of the site via a link on to Station Road, which is an unadopted road.

Road Safety

3.9 In order to identify critical locations on the network with a poor accident record, the personal injury accident data has been obtained from the online resource CrashMap for the most recently available 5-year period up to December 2021. The site access has been reviewed and 250m either side of the junction, which includes the A539 Llangollen Road/Chapel Street/B5096 King Street crossroads junction to the south-west of the site.

3.10 The results show that no accidents have occurred within the study area. Therefore, the existing accident record does not represent a material concern in the context of the proposed development.

Traffic Surveys

3.11 An Automated Traffic Counter (ATC) was installed along Llangollen Road, adjacent to the existing site access, for a 7-day period between 13th to 19th November 2021 to record vehicle flow and speeds passing the site.

3.12 The data reveals that the average two-way traffic flows are in the order of 1,000 PCU's in both the AM and PM peak hours. Also, the ATC shows that the 85th percentile speeds passing the site are 39.8mph north-eastbound and 41.3mph south-westbound, which highlights that vehicle are travelling at speeds higher than the speed limit of Llangollen Road in the vicinity of the site.

3.13 The ATC results are contained in **Appendix 1** and presented in **Traffic Figure 1**.

4.0 PROPOSED DEVELOPMENT

General

4.1 The development proposals consist of the construction of 159 residential dwellings and public open space accessed from the existing

4.2 The housing mix consists of:

- 26 no. 1-bed apartments;
- 7 no. 2-bed bungalows;
- 58 no. 2-bed houses
- 47 no. 3-bed houses; and
- 21 no. 4-bed dwellings.

4.3 The proposed site layout plan is contained in **Appendix 2**.

Proposed Site Access Arrangements

4.4 Vehicular access to the development will be provided from the existing access that served the Air Products site in an improved form. The access road will be 5.5m wide with footways on either side of the carriageway that will tie-in with the existing footways on Llangollen Road.

4.5 The speed limit along Llangollen Road is 30mph directly outside of the site however the speeds recorded along Llangollen Road as part of the ATC installed along the road in 2021 recorded speeds higher than the speed limit. The 7-day 85th percentile speeds were recorded as:

- North-Eastbound – 39.8mph
- South-Westbound – 41.3mph

4.6 The recorded 85th percentile flows are higher than the 30mph speed limit, the site access has therefore been designed to DMRB standards for a 40mph road.

4.7 The lefthand visibility splay is achievable to 120m although it is not possible to achieve the desirable minimum value to the right, however, the absolute minimum value of 90m is achievable. The visibility splays from the site access are shown in **Appendix 3**. This is consistent with the previous application.

4.8 Whilst not necessary to make any design changes in support of this application, the Council may wish to be aware of this localised speeding for their forward planning.

Internal Site Layout and Servicing

4.9 The site will have a main spine road, measuring 5.5m in width with 2m wide footways provided within the site, either on one or both sides of the carriageway as appropriate (please note this is an outline application at this stage). The footways will ensure that the whole of the development is well connected internally and link to the existing PROW CEF / 24, therefore providing a continuous link from Llangollen Road to the PROW. More information on the PROW network is contained in the following chapter.

4.10 In order to demonstrate that the site can be serviced sufficiently, a swept path analysis of a refuse vehicle has been undertaken throughout the site. SCP drawing SCP\210486\ATR01, presented in **Appendix 4**, demonstrates that a refuse vehicle can enter the site via the site access, route through the site and turn at appropriate points and exit the site in a forward gear.

Parking

4.11 Local parking standards are set out in WCBC's Local Planning Guidance Note No.16. for residential development, the following maximum parking standards apply:

- 1-bed dwellings - 1.5 spaces per unit;
- 2-bed dwellings - 2 spaces per unit;
- 3-bed and 4-bed dwellings - 3 spaces per unit; and
- 5+ bed dwellings - 4 spaces per unit.

4.12 Parking for each plot will be captured in a mixture of driveways and parking bays within close proximity to each dwelling, as shown in **Appendix 2**, and the level of parking to be provided is in line with WCBC's maximum standards.

5.0 ACCESSIBILITY

5.1 This chapter presents a review of the accessibility of the site by walking, cycling and public transport modes.

5.2 The accessibility of the site by non-car modes has been assessed by comparison with the following threshold distances, as set out by Andrew Davies AM 'Minister for Economic Development and Transport' in his foreword to the 2003 *"Walking and Cycling Strategy for Wales"* document:

Table 5.1 – Walk / Cycle Distance Thresholds

Threshold Distance	Significance	Reference
1 mile	Walking can offer viable and attractive alternatives [to car trips]	Walking and Cycling Strategy for Wales
5 miles	Cycling can offer viable and attractive alternatives [to car trips]	Walking and Cycling Strategy for Wales

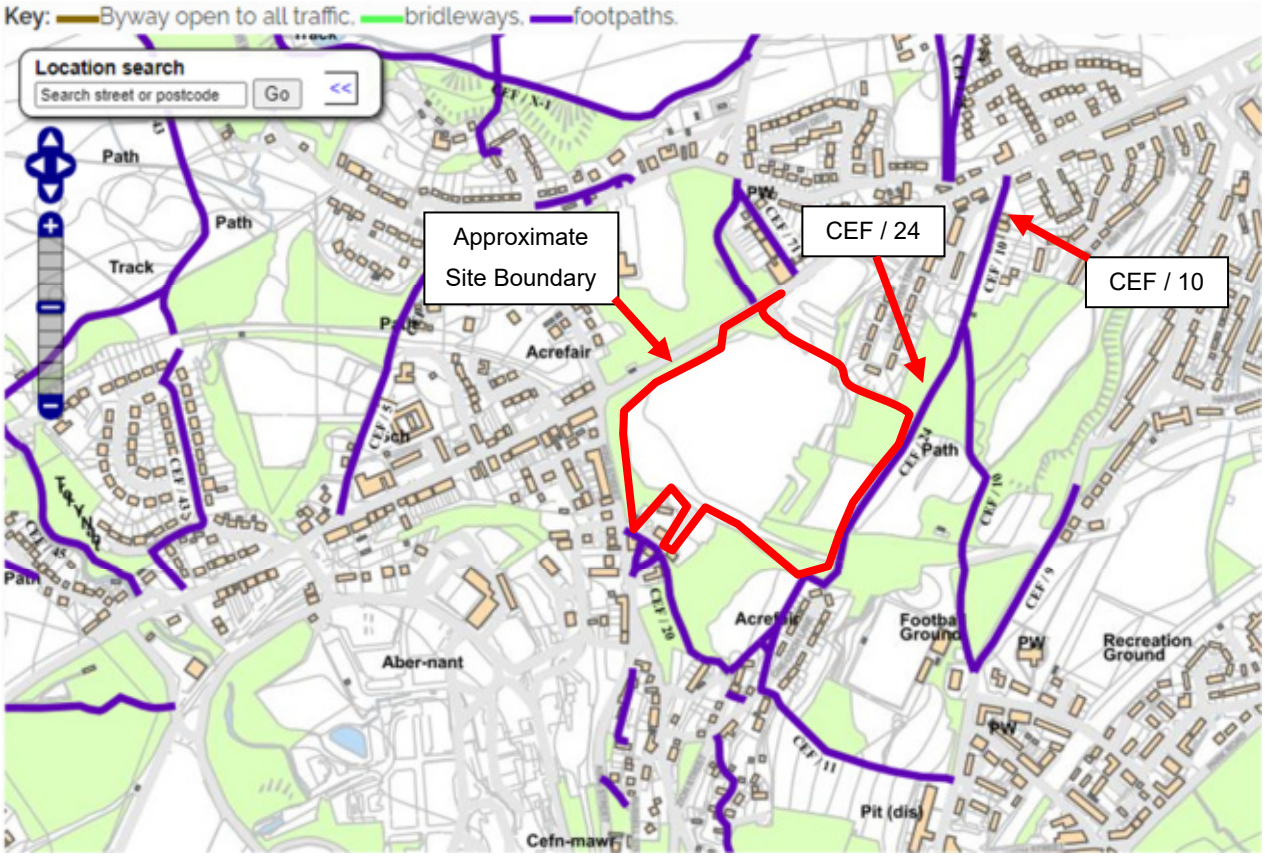
Pedestrian Accessibility

5.3 The roads in the vicinity of the site benefit from wide footpaths and pedestrians will benefit from street lighting and natural surveillance from the residential properties that abut the main walking routes.

5.4 Pedestrian access to the site will be provided from the access onto Llangollen Road via footways that will link from Llangollen Road and continue throughout the site. The footways around the site are street-lit and surfaced.

5.5 The connections provided as part of the overall development will link to Public Right of Way (PROW) CEF / 24 at the eastern / south-eastern end of the site. This PROW connects to CEF / 10 and collectively, the routes run between Llangollen Road and King Street and facilitate access to other PROWS in the area. CEF / 24 is highlighted in **Figure 5.1**.

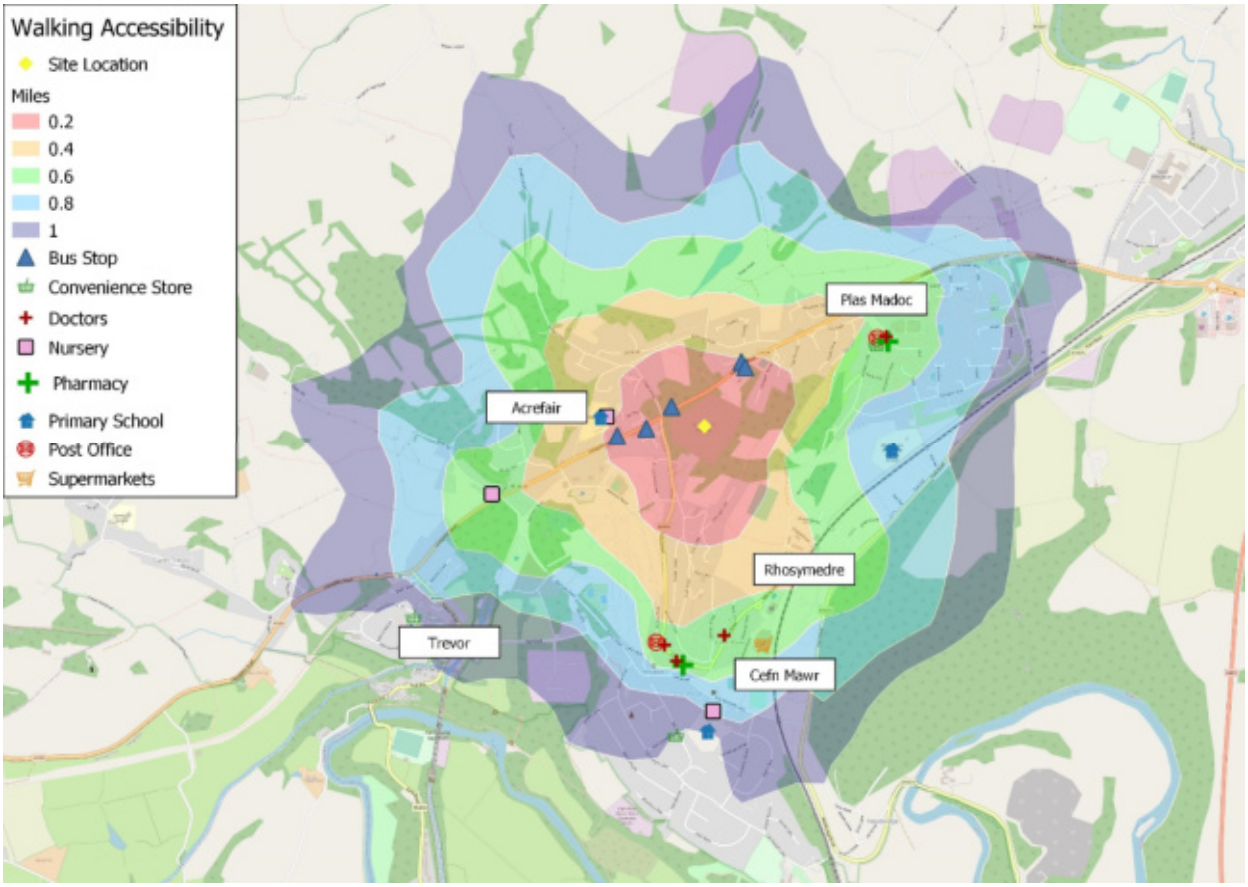
Figure 5.1 – Public Rights of Way



Source: Wrexham Council

5.6 The pedestrian accessibility of the development has been modelled using the Geographical Information System (GIS) software TRACC to produce isochrone mapping figures. The purpose of the isochrones is to demonstrate the areas within an acceptable walking distance of 1-mile of the site. The areas located within 1-mile walking distance of the site are shown below on **Figure 5.2** overleaf**.** The catchment includes footpaths CEF 10 and CEF 24 that could be used by residents during daytime hours as the footpaths are surfaced for providing a stable walking route.

Figure 5.2 – Walk Accessibility



5.7 **Figure 5.2** demonstrates that the site is within acceptable walking distance of Cefn Mawr, Trevor and Plas Madoc with numerous local facilities available within these areas for residents to access from the proposed development.

5.8 **Table 5.2** below identifies a selection of key facilities located within 1-mile of the site including convenience stores, sports facilities, healthcare and transport connections. The distances have been measured from the site access and do not use the proposed link connecting to the PROWS to the east of the site boundary.

5.9 It should be noted that this is not an extensive list and is correct as of November 2022.

Table 5.2 – Local Facilities

Facility	Details	Distance from the Development Site (miles)
Bus Stop	Llangollen Road (northbound and southbound)	0.07
Primary School	Ysgol Acrefair Primary School	0.3
Vets	Dee Valley Vets (part-time hours)	0.4
Leisure Centre and Sports Field	Plas Madoc Leisure Centre and Plas Madoc Sports Field	0.5
Convenience Store	Premier (Peris)	0.5
Post Office	Plas Madoc Post Office (Inside Premier)	0.5
Pharmacy	Alexanders Pharmacy Acrefair	0.5
Primary School	Rhosymedre Community Primary School	0.7
Doctors	Crane Medical Centre	0.7

5.10 The table highlights that there are facilities available within acceptable walking distance from the proposed development for residents to access without being reliant on the use of the private car.

Cycle Accessibility

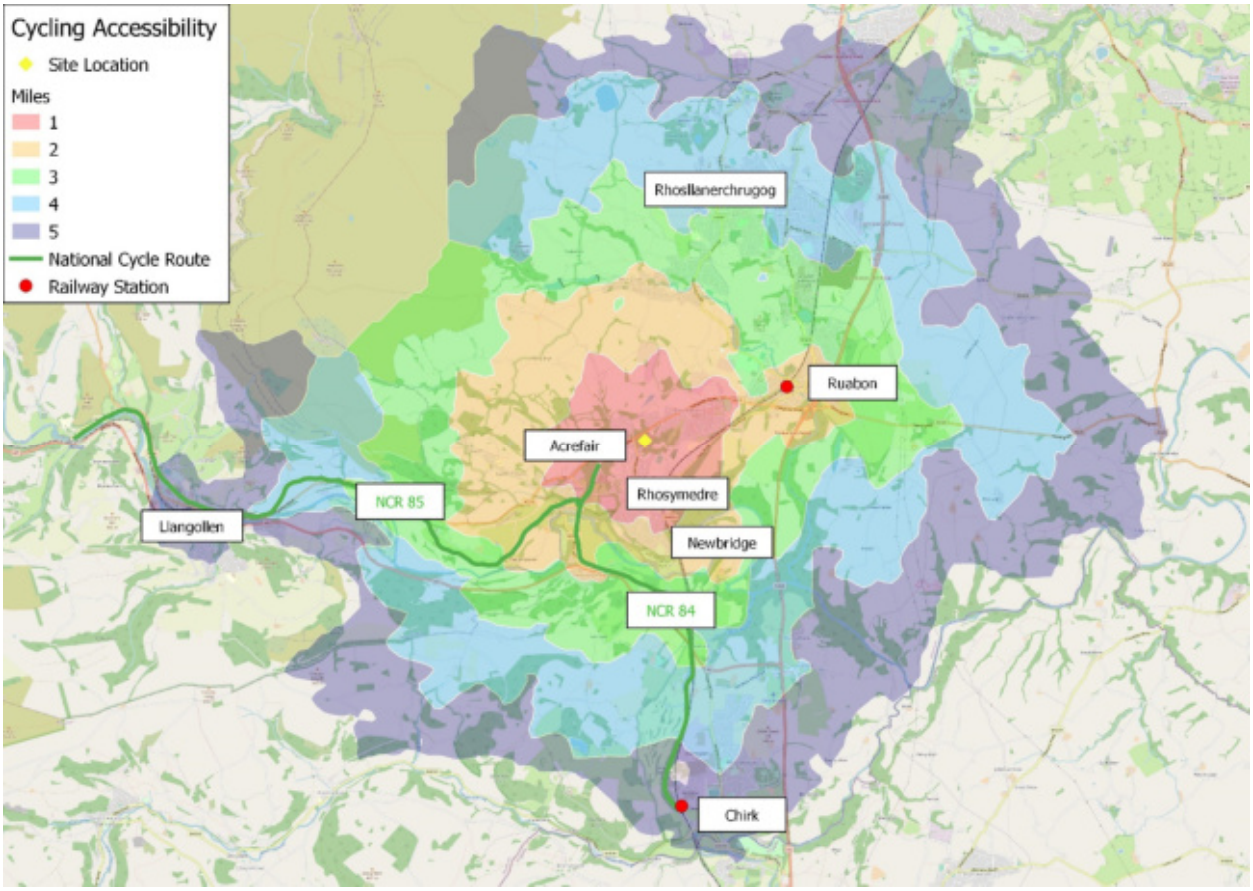
5.11 As mentioned earlier in this chapter, the "*Walking and Cycling Strategy for Wales*" document identifies that a cycle distance of 5 miles is a healthy and viable alternative to the private car as a whole journey or as part of a longer journey by public transport.

5.12 Route 85 of the National Cycle Network is located less than 1 mile south-west of the site and is accessed from Tower Hill at Trevor where the route travels in a broadly east-west direction as a traffic-free route utilising the canal towpath along the Llangollen Canal to Berwyn. Just south of Trevor, Route 85 connects to Route 84 of the National Cycle Network, which is also a traffic-free route running in a north/south direction to Chirk Railway Station.

5.13 Other local routes within the vicinity of the site provide opportunities to cycle from the proposed residential development for access to education, work and leisure pursuits.

5.14 TRACC software has been used to assess the accessibility of the development by bicycle from the site. Isochrones illustrating the areas which lie within 5 miles of the site can be seen on the **Figure 5.2**.

Figure 5.2 – Cycle Accessibility



5.15 The plan demonstrates that, in addition to the areas that can be reached by walking, Llangollen, Chirk and Ruabon, amongst others, are all located within the acceptable 5-mile cycle catchment from the site. Access to Ruabon by cycle allows for multi-modal connections by rail, which is discussed below.

Public Transport

5.16 The development is well placed to encourage travel by bus. Guidance published by the CIHT 'Planning for Public Transport in Developments' (1999), recommends that "*Bus stops are located to minimise passengers' walking distance to their final destination. The maximum walking distance to a bus stop should not exceed 400m and preferably be no more than 300m.*"

5.17 There are bus stops located on both sides of Llangollen Road. The eastbound bus stop is approximately 60m walk distance from the site access whilst the nearest westbound bus stop is 100m from the site access. Details of the bus services and frequencies which use these stops are provided in **Table 5.3**.

Table 5.3 – Bus Services

Service Number	Route	Average Service Headway (mins)		
		Mon- Fri	Sat	Sun
2	Wrexham – Chirk - Oswestry	Hourly	Hourly	Hourly
2A	Wrexham – Cefn-Mawr – Oswestry	Hourly	Hourly	-
5	Wrexham – Ruabon - Llangollen	30 minutes	30 minutes	40 minutes
T3 TrawsCymru	Wrexham – Corwen – Dolgellau - Barmouth	9 services per day	9 services per day	5 services per day

5.18 The above table demonstrates that prospective residents of the site will have access to a high bus service provision for a relatively rural location, all stopping close to the site.

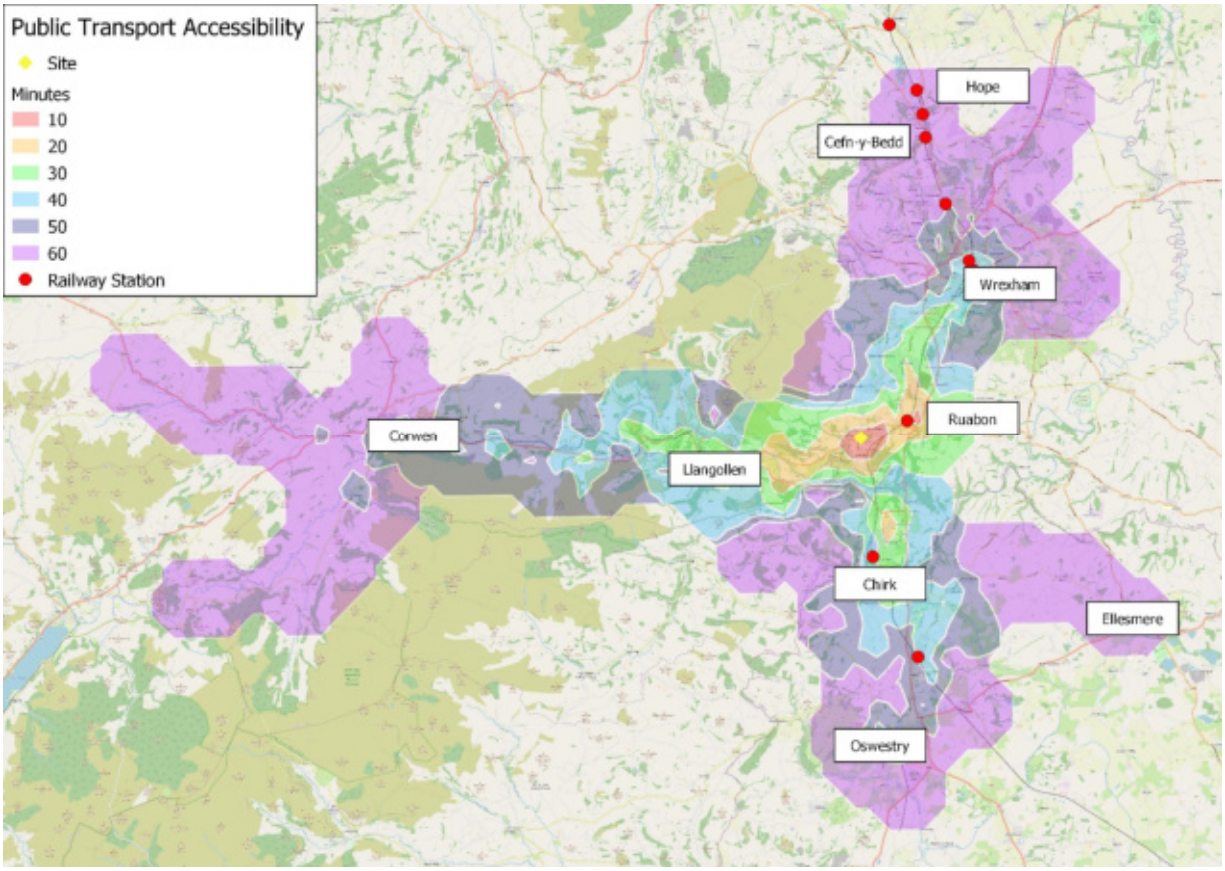
5.19 The nearest railway station to the site is Ruabon Railway Station, located approximately 1.5 miles north-east from the site. The railway station can be accessed within a 30-minute walk or 10-minute cycle along Llangollen Road or via bus services 2, 2A, 5 and T3 TrawsCymru that serve the bus stops near to the development site.

5.20 Ruabon Railway Station provides hourly direct services to Holyhead and Shrewsbury as well as 2-hourly direct services to Birmingham International and Cardiff Central throughout the week.

5.21 At the station, there is a small car park that is chargeable for vehicles parking as well as a pick-up and set down point for taxis. Cycle parking can also be found at the station. A bus stop located adjacent to the entrance provides a shelter with seating and timetable information.

5.22 The level of accessibility by public transport has been analysed using GIS software to assess the accessibility of the site and is shown on **Figure 5.3**. The plan illustrates the distance that can be travelled within 60 minutes by public transport to and from the site, which includes the time taken to walk to the bus stops.

Figure 5.3 – 60 Minute Public Transport Accessibility



5.23 **Figure 5.3** demonstrates that Ellesmere, Oswestry, Chirk and Wrexham, amongst others, are within a suitable 60-minute commute time.

Summary

5.24 Overall, the site is considered to be well located in terms of its accessibility by all the major non-car modes of transport and very well connected for a relatively rural location. These findings demonstrate that future residents will not be wholly reliant on the private car to travel for employment, education, leisure or retail purposes.

6.0 TRIP GENERATION

6.1 This Chapter provides an estimate of the vehicular, pedestrian, public transport and cycle trips likely to be generated by the proposed development.

6.2 In order to estimate the trip generating potential of the proposed development, average trip rates from the industry standard TRICS Database (V7.9.3) have been obtained based on directly comparable proxy sites. Please be advised that a revised TRICS assessment has been carried out as the previously approved trip rates only included vehicles and not a multi-modal assessment.

6.3 The selection criteria for the TRICS based trip rates is as follows:

- Residential;
- Houses Privately owned;
- Multi-modal surveys;
- Sites in Greater London and Ireland excluded as not considered compatible due to their unique trip making characteristics;
- Selection by number of dwellings (50 – 400, to obtain a suitable sample size);
- Weekday surveys only; and
- Sites in 'Town Centre' and 'Edge of Town' locations have been excluded.

6.4 The multi-modal TRICS outputs for the proposed development are presented in **Appendix 5** and are summarised in **Table 6.1**. It should be noted that a separate TRICS assessment for the proposed apartments has not been included as some of the sites surveyed includes a proportion of apartments alongside houses within the same development, therefore, this assessment is robust.

Table 6.1 – Estimated Trip Generation – 159 Dwellings

Mode	Weekday AM Peak Hour		Weekday PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Vehicles	20	57	53	22
Cycles	1	2	1	1
Pedestrians	5	13	8	5
Pub. Trans.	0	6	4	0

6.5 As shown at **Table 6.1**, it is estimated that the proposed development will generate a total of 77 two-way vehicle movements in the AM peak hour and 75 two-way vehicle movements in the PM peak hour.

6.6 As expected, comparing the previously approved development for residential development with these revised proposal results in a net reduction in vehicle movements arriving and departing the site in the peak hours. Transport assessment produced in support of the previously approved, larger development proposals did not result in off site junction impacts or a need for highway mitigation. It is reasonable to conclude therefore that these proposals would not give rise to offsite impacts either and off-site junctions have not therefore been reassessed as part of this application.

6.7 Notwithstanding the above, a detailed assessment of the site access/Llangollen Road junction has been undertaken in the following chapter.

7.0 TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

Trip Distribution Methodology

7.1 The methodology used to estimate the trip distribution of the proposed development traffic routing through the site access/Llangollen Road priority junction based on the distribution of vehicles recorded from the ATC.

7.2 The trip distribution percentages are presented in **Table 7.1**.

Table 7.1 –Trip Distribution Percentages

Time	Route	% Assigned to Each Route
AM	Left out to Llangollen Rd (W)/Left in from Llangollen Rd (E)	56%
	Right out to Llangollen Rd (E)/Right in from Llangollen Rd (W)	44%
PM	Left out to Llangollen Rd (W)/Left in from Llangollen Rd (E)	54%
	Right out to Llangollen Rd (E)/Right in from Llangollen Rd (W)	46%

7.3 This methodology has been adopted to distribute trips for the proposed site. The percentage distribution of vehicular trips generated by the proposed development is also presented diagrammatically in **Traffic Figure 2**.

Traffic Assignment

7.4 The traffic assignment of the proposed scheme has been obtained by applying the relevant estimated trip distribution proportions to the relevant estimated traffic generation figures. The traffic assignment for the scheme is presented in **Traffic Figure 3**.

8.0 FUTURE BASELINE AND ASSESSMENT TRAFFIC FLOWS

Future Baseline Traffic Flows

8.1 A future assessment year of 2028 has been adopted for this TA (i.e. based on the year of application + 5 years for developments outside of the strategic road network).

8.2 In order to quantify the level of background traffic growth that could occur on the local network between the date of the traffic surveys and the assessment year, National Trip End Model NTEM / National Traffic Model (NTM) growth factors, modified by TEMPRO local growth factors, have been used as summarised in **Table 8.1** below.

Table 8.1 – Traffic Growth Factors

Period	AM Peak	PM Peak
2021-2028	1.0695	1.0710

8.3 The above growth factors have been applied to the surveyed traffic flows to obtain the 2028 future assessment flows, as shown in **Traffic Figure 4.**

Committed Development

8.4 The adjacent Gower Homes site for 21 dwellings has been included in this assessment in anticipation that it will be approved. No formal assessment has been provided due to the small scale of development, therefore the TRICS data contained in Chapter 6 of this report has been utilised for 21 dwellings and utilising the same distribution. The traffic flows are contained in **Traffic Figure 5** whilst the base + committed development flows are presented in **Traffic Figure 6**.

8.5 We are not aware of any other committed developments that need to be taken into account in the assessments within this TA.

9.0 ANTICIPATED HIGHWAY IMPACT

Overview

9.1 This chapter describes the future traffic conditions on the local highway network with the proposed in place.

Assessment Methodology

9.2 An assessment of the site access with Llangollen Road junction has been undertaken using Junctions 9 (PICADY) software. Junctions 9 (PICADY) models the results generating a Ratio to Flow capacity (RFC) along with an estimate of the likely traffic queues. RFC values between 0.00 and 0.85 are generally accepted as representing stable and acceptable operating conditions. Values between 0.85 and one represents variable operation (i.e. possible queues building up at the junction during the period under consideration and increases in vehicular delay moving through the junction). RFC values in excess of one represents overloaded conditions (i.e. congested conditions).

9.3 Capacity assessments have been undertaken in 2028 'with' and 'without' development scenarios. The 2028 'without' development traffic flows, but including committed development, are shown on **Traffic Figures 6** whilst the 'with' development flows are presented in **Traffic Figure 7.**

Site Access / Llangollen Road Priority Junction

9.4 The PICADY results for the site access / Llangollen Road junction are presented in **Appendix 6** with the results summarised in **Table 9.1**.

Table 9.1 – Site Access / Llangollen Junction 2028 'With' Development – PICADY Results

Movement	AM PEAK		PM PEAK	
	RFC	MMQ	RFC	MMQ
Site Access - Left	0.07	0.1	0.03	0.0
Site Access - Right	0.09	0.1	0.04	0.0
Llangollen Road (West) – Ahead / Right	0.02	0.0	0.06	0.1

9.5 The above results show that the site access / Llangollen Road junction is predicted to operate well within the practical capacity threshold of 0.85 RFC on all movements in the 'with' development scenario.

10.0 SUMMARY AND CONCLUSIONS

10.1 Clwyd Alyn Housing Ltd seek planning permission for a residential development comprising 159 dwellings on a plot of land accessed from Llangollen Road, Acrefair, Wrexham.

10.2 The site was granted outline planning permission in 2013 under application ref: P/2012/0045 for a mixed-use development comprising residential, commercial and leisure uses with a further outline application submitted in 2016 for 232 residential dwellings with all matters reserved except for access. The application was approved in 2018 but the site remains undeveloped, and the planning permission has now lapsed.

10.3 The most recently available five-year road safety record of the local area around the site has been examined and in our professional opinion, we consider that there is not a safety concern in the vicinity of the development.

10.4 Vehicular access to the development will be taken from the existing access that served the main Air Products site and improved to provide footways along either side of the road. The access and internal spine road will allow service vehicles to arrive and depart the site in forward gear.

10.5 The accessibility of the site has been assessed by walk, cycle, and bus and train modes. Overall, we consider the site to be very well located in terms of its accessibility by all the major non-car modes of transport given its relatively rural location. These findings demonstrate that future residents will not be wholly reliant on the private car to travel for employment, education, leisure and retail purposes.

10.6 The traffic generation of the site will be far below that of the recently permitted scheme and we have therefore concluded that, as with that scheme, there will be no material impact on surrounding junctions. The impact of the traffic arising from the scheme has been tested in detail at the site access/Llangollen Road junction and the assessments show that there is sufficient spare capacity to accommodate the proposed development.

10.7 In reference to supporting documentation with planning applications, paragraph 4.1.55 of PPW states that "*Transport Assessments are an important mechanism for setting out the scale of anticipated impacts of a proposed development, or redevelopment, is likely to have. They assist in helping to anticipate the impacts of development so that they can be understood and catered for appropriately*."

10.8 Having regard to the above, it is concluded that there are no highway or transport related reasons to withhold planning permission for the scheme and the proposed development is therefore recommended for approval.

S|C|P

APPENDIX 1

Automatic Classified Counts, Acrefair

LOCATION: A539

Direction : NORTHEASTBOUND

Saturday 13/11/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	21	6	0	0	0	0	0	0	0	0	0	0	0	27
2	7	1	0	0	0	0	0	0	0	0	0	0	0	8
3	7	1	0	0	0	0	0	0	0	0	0	0	0	8
4	8	1	1	0	0	0	0	0	0	0	0	0	0	10
5	6	1	0	0	0	0	0	0	0	0	0	0	0	7
6	8	6	0	0	0	0	0	0	0	0	0	0	0	14
7	21	10	0	0	0	0	0	0	0	0	1	4	0	36
8	87	20	0	0	1	0	0	1	0	0	0	3	0	112
9	135	56	0	0	2	0	0	0	0	0	0	3	0	196
10	197	53	0	0	2	0	0	1	0	0	0	5	0	258
11	252	58	1	0	1	0	0	1	0	0	0	7	0	320
12	334	96	0	0	0	0	0	0	0	0	0	3	0	433
13	350	82	0	0	0	0	0	0	1	0	0	6	0	439
14	297	88	0	0	0	0	0	1	0	0	0	3	0	389
15	260	74	0	1	0	0	0	0	0	0	0	1	0	336
16	233	69	0	0	2	0	0	0	0	0	0	5	0	309
17	214	52	0	0	2	0	0	0	0	0	0	1	0	269
18	212	51	0	0	0	0	0	0	0	0	0	1	0	264
19	197	46	1	0	0	0	0	0	0	0	0	1	0	245
20	138	32	1	0	0	0	0	0	1	0	0	2	0	174
21	90	19	0	0	0	0	0	0	0	0	0	1	0	110
22	86	20	0	0	0	0	0	0	0	0	0	0	0	106
23	51	17	0	0	0	0	0	0	0	0	0	0	0	68
24	43	15	1	0	0	0	0	0	0	0	0	1	0	60
7-19	2768	745	2	1	10	0	0	4	1	0	0	39	0	3570
6-22	3103	826	3	1	10	0	0	4	2	0	1	46	0	3996
6-24	3197	858	4	1	10	0	0	4	2	0	1	47	0	4124
0-24	3254	874	5	1	10	0	0	4	2	0	1	47	0	4198

Direction : SOUTHWESTBOUND

Saturday 13/11/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	12	6	0	0	0	0	0	0	0	0	0	0	0	18
2	9	3	0	0	0	0	0	0	0	0	0	0	0	12
3	2	1	0	0	0	0	0	0	0	0	0	0	0	3
4	3	1	0	0	0	0	0	0	0	0	0	0	0	4
5	6	2	0	0	1	0	0	0	0	0	0	0	0	9
6	26	18	0	0	0	0	0	0	0	0	0	0	0	44
7	24	7	0	0	0	0	0	0	0	0	0	0	0	31
8	51	26	1	0	2	0	0	0	1	0	0	2	0	83
9	136	59	0	0	0	0	0	1	0	0	0	5	0	201
10	174	65	0	0	3	0	0	2	1	0	0	2	0	247
11	219	90	0	0	3	0	0	0	0	0	0	2	0	314
12	209	95	1	1	1	0	0	0	0	0	0	2	0	309
13	260	85	1	0	2	0	1	1	0	0	0	5	0	355
14	272	93	0	0	1	0	0	0	0	0	0	3	0	369
15	247	79	1	1	0	0	0	0	0	0	0	2	0	330
16	261	98	0	0	0	0	0	0	0	0	0	3	0	362
17	275	102	0	1	0	0	0	0	0	0	0	0	0	378
18	259	77	0	0	0	0	0	0	0	0	0	2	0	338
19	143	64	0	0	0	0	0	0	0	0	0	1	0	208
20	99	28	0	0	0	0	0	0	0	0	0	2	0	129
21	76	26	0	0	0	0	0	0	0	0	0	2	0	104
22	57	24	0	0	0	0	0	0	0	0	0	2	0	83
23	62	28	0	0	0	0	0	0	0	0	0	1	0	91
24	42	13	0	0	0	0	0	0	0	0	0	0	0	55
7-19	2506	933	4	3	12	0	1	4	2	0	0	29	0	3494
6-22	2762	1018	4	3	12	0	1	4	2	0	0	35	0	3841
6-24	2866	1059	4	3	12	0	1	4	2	0	0	36	0	3987
0-24	2924	1090	4	3	13	0	1	4	2	0	0	36	0	4077

LOCATION: A539

Direction : NORTHEASTBOUND

Saturday 13/11/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	7	12	5	2	0	1	0	0	0	0	27
2	0	0	1	2	3	2	0	0	0	0	0	0	8
3	0	0	2	1	2	2	1	0	0	0	0	0	8
4	0	0	0	2	2	4	1	1	0	0	0	0	10
5	0	0	0	5	1	0	1	0	0	0	0	0	7
6	0	0	3	3	2	5	1	0	0	0	0	0	14
7	0	0	3	17	5	6	2	3	0	0	0	0	36
8	0	0	16	64	24	6	1	1	0	0	0	0	112
9	0	0	33	112	38	11	1	1	0	0	0	0	196
10	0	1	62	133	50	9	3	0	0	0	0	0	258
11	0	6	61	174	70	6	2	1	0	0	0	0	320
12	0	0	116	255	56	5	1	0	0	0	0	0	433
13	0	9	136	239	46	8	1	0	0	0	0	0	439
14	0	0	97	227	63	2	0	0	0	0	0	0	389
15	0	0	89	201	40	5	1	0	0	0	0	0	336
16	1	0	97	148	54	5	3	1	0	0	0	0	309
17	1	1	66	140	51	9	0	0	1	0	0	0	269
18	0	0	63	137	52	10	1	0	0	1	0	0	264
19	0	1	50	128	54	7	4	1	0	0	0	0	245
20	0	0	33	81	42	15	2	1	0	0	0	0	174
21	0	0	16	52	31	10	1	0	0	0	0	0	110
22	0	1	13	53	21	15	2	1	0	0	0	0	106
23	0	0	7	30	26	3	1	0	1	0	0	0	68
24	0	0	5	20	27	4	4	0	0	0	0	0	60
7-19	2	18	886	1958	598	83	18	5	1	1	0	0	3570
6-22	2	19	951	2161	697	129	25	10	1	1	0	0	3996
6-24	2	19	963	2211	750	136	30	10	2	1	0	0	4124
0-24	2	19	976	2236	765	151	34	12	2	1	0	0	4198

Direction : SOUTHWESTBOUND

Saturday 13/11/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	1	5	2	4	5	1	0	0	0	0	18
2	0	0	0	5	3	0	2	1	1	0	0	0	12
3	0	0	2	0	0	1	0	0	0	0	0	0	3
4	0	0	1	2	1	0	0	0	0	0	0	0	4
5	0	0	2	6	1	0	0	0	0	0	0	0	9
6	0	0	4	15	14	8	3	0	0	0	0	0	44
7	0	0	3	6	14	5	2	1	0	0	0	0	31
8	0	0	15	33	20	10	5	0	0	0	0	0	83
9	0	5	45	89	40	15	6	1	0	0	0	0	201
10	0	6	76	116	38	8	3	0	0	0	0	0	247
11	0	0	70	145	76	20	1	1	1	0	0	0	314
12	0	0	92	132	69	12	3	1	0	0	0	0	309
13	2	4	74	197	64	13	1	0	0	0	0	0	355
14	0	0	130	169	57	11	1	1	0	0	0	0	369
15	0	3	85	151	77	12	2	0	0	0	0	0	330
16	0	0	72	197	78	15	0	0	0	0	0	0	362
17	0	2	88	213	65	8	2	0	0	0	0	0	378
18	0	0	101	159	59	13	6	0	0	0	0	0	338
19	1	2	40	85	46	26	6	2	0	0	0	0	208
20	0	0	24	56	32	11	4	2	0	0	0	0	129
21	0	0	20	43	30	7	2	2	0	0	0	0	104
22	0	0	11	29	27	8	6	2	0	0	0	0	83
23	0	1	24	32	21	9	3	1	0	0	0	0	91
24	0	0	4	23	12	12	2	1	0	1	0	0	55
7-19	3	22	888	1686	689	163	36	6	1	0	0	0	3494
6-22	3	22	946	1820	792	194	50	13	1	0	0	0	3841
6-24	3	23	974	1875	825	215	55	15	1	1	0	0	3987
0-24	3	23	984	1908	846	228	65	17	2	1	0	0	4077

Automatic Classified Counts, Acrefair

LOCATION: A539

Direction : NORTHEASTBOUND

Sunday 14/11/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	28	7	0	0	0	0	0	0	0	0	0	0	0	35
2	15	4	0	0	0	0	0	0	0	0	0	0	0	19
3	4	4	0	0	0	0	0	0	0	0	0	0	0	8
4	8	1	0	0	0	0	0	0	0	0	0	0	0	9
5	4	0	0	0	0	0	0	0	0	0	0	0	0	4
6	10	3	0	0	0	0	0	0	0	0	0	0	0	13
7	26	8	1	0	0	0	0	0	0	0	0	1	0	36
8	41	14	1	0	0	0	0	0	0	0	0	2	0	58
9	86	25	0	0	0	0	0	0	0	0	0	2	0	113
10	172	43	0	2	1	0	0	1	0	0	0	2	0	221
11	226	52	0	0	2	0	0	0	0	0	0	0	0	280
12	265	73	0	3	1	0	0	0	0	0	0	1	0	343
13	335	78	0	0	0	0	1	0	0	0	0	0	0	414
14	313	85	1	0	0	0	0	0	0	0	0	1	0	400
15	268	65	0	0	2	0	0	0	0	0	0	1	0	336
16	234	56	1	0	1	0	0	0	0	0	0	1	0	293
17	185	48	0	0	0	0	0	0	0	0	0	1	0	234
18	141	43	2	0	0	0	0	0	0	0	0	0	0	186
19	122	35	0	0	1	0	0	0	0	0	0	3	0	161
20	87	27	0	0	1	0	0	0	0	0	0	2	0	117
21	82	20	0	0	0	0	0	0	0	0	0	1	0	103
22	46	9	0	0	0	0	0	0	0	0	0	0	0	55
23	35	8	1	0	0	0	0	0	0	0	0	1	0	45
24	17	5	0	0	0	0	0	0	0	0	0	0	0	22
7-19	2388	617	5	5	8	0	1	1	0	0	0	14	0	3039
6-22	2629	681	6	5	9	0	1	1	0	0	0	18	0	3350
6-24	2681	694	7	5	9	0	1	1	0	0	0	19	0	3417
0-24	2750	713	7	5	9	0	1	1	0	0	0	19	0	3505

Direction : SOUTHWESTBOUND

Sunday 14/11/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	33	14	0	0	0	0	0	0	1	0	0	0	0	48
2	17	6	0	0	0	0	0	0	0	0	0	0	0	23
3	6	4	0	0	0	0	0	0	0	0	0	0	0	10
4	6	2	0	0	0	0	0	0	0	0	0	0	0	8
5	7	3	0	0	0	0	0	0	0	0	0	0	0	10
6	12	4	0	0	0	0	0	0	0	0	0	0	0	16
7	24	6	0	0	1	0	0	1	0	0	0	0	0	32
8	43	16	0	0	0	0	0	0	0	0	0	0	0	59
9	69	19	0	0	2	0	0	0	0	0	0	0	0	90
10	127	52	0	0	1	0	0	0	0	0	0	1	0	181
11	159	69	0	0	1	0	0	0	0	0	0	3	0	232
12	166	64	0	1	1	0	0	0	0	0	0	1	0	233
13	262	88	0	1	0	0	0	0	0	0	0	0	0	351
14	260	96	0	1	1	0	0	0	0	0	0	2	0	360
15	284	112	0	2	1	0	0	0	1	0	0	0	0	400
16	343	140	0	0	1	0	1	1	0	0	0	0	0	486
17	311	109	0	0	0	0	1	0	0	0	0	2	0	423
18	221	93	0	0	1	0	0	0	0	0	0	2	0	317
19	168	51	0	0	0	0	0	0	0	0	0	0	0	219
20	83	37	0	0	2	0	0	0	0	0	0	1	0	123
21	50	25	0	0	0	0	0	0	0	0	0	1	0	76
22	36	20	0	0	0	0	0	0	0	0	0	1	0	57
23	28	8	0	0	0	0	0	0	0	0	0	0	0	36
24	18	6	0	0	0	0	0	0	0	0	0	1	0	25
7-19	2413	909	0	5	9	0	2	1	1	0	0	11	0	3351
6-22	2606	997	0	5	12	0	2	2	1	0	0	14	0	3639
6-24	2652	1011	0	5	12	0	2	2	1	0	0	15	0	3700
0-24	2733	1044	0	5	12	0	2	2	2	0	0	15	0	3815

LOCATION: A539

Direction : NORTHEASTBOUND

Sunday 14/11/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	3	17	5	7	2	1	0	0	0	0	35
2	0	0	0	5	6	2	2	4	0	0	0	0	19
3	0	0	0	1	3	3	0	1	0	0	0	0	8
4	0	1	0	1	2	1	3	0	1	0	0	0	9
5	0	0	0	0	2	0	2	0	0	0	0	0	4
6	0	0	0	5	6	0	1	1	0	0	0	0	13
7	0	0	4	12	8	9	2	0	0	1	0	0	36
8	0	0	6	34	11	5	2	0	0	0	0	0	58
9	0	0	19	51	31	12	0	0	0	0	0	0	113
10	0	1	34	141	38	6	1	0	0	0	0	0	221
11	0	0	65	172	34	8	1	0	0	0	0	0	280
12	0	1	55	221	61	3	2	0	0	0	0	0	343
13	0	19	86	228	76	5	0	0	0	0	0	0	414
14	1	1	74	245	74	4	1	0	0	0	0	0	400
15	1	1	60	197	73	3	1	0	0	0	0	0	336
16	0	0	68	170	45	8	2	0	0	0	0	0	293
17	1	0	67	115	44	5	2	0	0	0	0	0	234
18	0	0	47	96	33	8	2	0	0	0	0	0	186
19	0	0	23	89	37	11	1	0	0	0	0	0	161
20	0	0	17	57	33	8	2	0	0	0	0	0	117
21	0	0	10	46	37	8	2	0	0	0	0	0	103
22	0	0	4	22	16	8	4	1	0	0	0	0	55
23	0	0	11	14	11	5	3	1	0	0	0	0	45
24	0	0	2	18	1	0	0	1	0	0	0	0	22
7-19	3	23	604	1759	557	78	15	0	0	0	0	0	3039
6-22	3	23	639	1896	651	111	25	1	0	1	0	0	3350
6-24	3	23	652	1928	663	116	28	3	0	1	0	0	3417
0-24	3	24	655	1957	687	129	38	10	1	1	0	0	3505

Direction : SOUTHWESTBOUND

Sunday 14/11/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	3	14	18	7	1	2	1	2	0	0	48
2	0	0	1	4	10	4	0	3	1	0	0	0	23
3	0	0	1	0	5	1	1	1	1	0	0	0	10
4	0	0	2	2	1	1	2	0	0	0	0	0	8
5	0	0	0	3	2	2	3	0	0	0	0	0	10
6	0	0	0	6	3	4	2	0	1	0	0	0	16
7	0	0	4	10	10	5	1	2	0	0	0	0	32
8	0	1	5	18	19	8	3	5	0	0	0	0	59
9	0	0	15	30	32	9	3	0	1	0	0	0	90
10	0	0	24	102	38	13	4	0	0	0	0	0	181
11	0	1	38	118	57	15	0	3	0	0	0	0	232
12	0	1	57	108	45	13	7	1	0	1	0	0	233
13	0	19	78	164	63	19	5	3	0	0	0	0	351
14	0	4	74	168	92	20	2	0	0	0	0	0	360
15	0	7	90	201	80	20	2	0	0	0	0	0	400
16	0	4	173	230	68	11	0	0	0	0	0	0	486
17	0	0	123	230	49	15	4	0	1	1	0	0	423
18	0	0	86	165	50	11	3	0	2	0	0	0	317
19	0	0	45	111	42	13	5	3	0	0	0	0	219
20	0	0	19	58	22	16	5	2	0	1	0	0	123
21	0	0	10	37	19	7	2	1	0	0	0	0	76
22	0	0	12	23	13	5	3	0	1	0	0	0	57
23	0	1	4	14	9	6	1	0	0	0	0	1	36
24	0	0	5	5	6	4	4	1	0	0	0	0	25
7-19	0	37	808	1645	635	167	38	15	4	2	0	0	3351
6-22	0	37	853	1773	699	200	49	20	5	3	0	0	3639
6-24	0	38	862	1792	714	210	54	21	5	3	0	1	3700
0-24	0	38	869	1821	753	229	63	27	9	5	0	1	3815

Automatic Classified Counts, Acrefair

LOCATION: A539

Direction : NORTHEASTBOUND

Monday 15/11/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	7	2	0	0	0	0	0	0	0	0	0	0	0	9
2	3	0	0	0	0	0	0	0	0	0	0	0	0	3
3	3	2	0	0	0	0	0	0	0	0	0	0	0	5
4	1	1	0	0	0	0	0	0	0	0	0	0	0	2
5	6	0	0	0	0	0	0	0	0	0	0	0	0	6
6	16	8	0	1	0	0	0	0	0	0	0	0	0	25
7	44	15	0	0	0	0	0	0	0	0	0	0	0	59
8	141	51	0	0	0	0	0	0	0	0	0	2	0	194
9	320	85	3	0	1	0	0	0	1	0	0	10	0	420
10	168	59	0	0	1	0	0	0	0	0	0	6	0	234
11	179	62	0	0	5	0	0	0	0	0	0	2	0	248
12	188	65	1	0	2	0	0	1	1	0	1	5	0	264
13	215	67	0	0	0	0	0	1	0	0	0	1	0	284
14	175	69	0	1	2	0	0	0	1	0	0	3	0	251
15	234	64	1	0	4	0	0	0	0	0	0	6	0	309
16	297	73	1	0	3	0	1	0	0	0	1	2	0	378
17	328	110	1	0	2	0	0	0	0	0	0	5	0	446
18	350	93	0	0	5	0	0	1	0	0	0	2	0	451
19	203	62	0	0	1	0	0	0	0	0	0	2	0	268
20	141	27	1	0	0	0	0	0	0	0	0	1	0	170
21	83	24	0	0	1	0	0	0	0	0	0	0	0	108
22	70	20	0	0	0	0	0	0	0	0	0	1	0	91
23	43	8	1	0	0	0	0	0	0	0	0	0	0	52
24	11	1	0	0	0	0	0	0	0	0	0	0	0	12

7-19	2798	860	7	1	26	0	1	3	3	0	2	46	0	3747
6-22	3136	946	8	1	27	0	1	3	3	0	2	48	0	4175
6-24	3190	955	9	1	27	0	1	3	3	0	2	48	0	4239
0-24	3226	968	9	2	27	0	1	3	3	0	2	48	0	4289

Direction : SOUTHWESTBOUND

Monday 15/11/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	5	4	0	0	0	0	0	0	0	0	0	0	0	9
2	5	0	0	0	0	0	0	0	0	0	0	0	0	5
3	4	2	0	0	0	0	0	0	0	0	0	0	0	6
4	4	4	0	0	0	0	0	0	0	0	0	2	0	10
5	7	7	0	0	0	0	0	0	0	0	0	1	0	15
6	35	17	0	0	0	0	0	1	1	0	0	0	0	54
7	91	46	0	0	0	0	0	1	0	0	0	1	0	139
8	215	96	0	0	4	0	0	1	2	0	0	2	0	320
9	325	116	2	0	2	0	0	0	0	0	0	6	0	451
10	208	92	2	0	2	0	0	1	0	0	1	3	0	309
11	175	76	1	0	0	0	0	0	1	0	0	9	0	262
12	193	65	0	0	3	0	0	0	1	0	0	4	0	266
13	170	80	0	0	1	0	0	2	1	0	0	3	0	257
14	188	79	1	0	0	0	1	0	3	1	0	4	0	277
15	213	107	0	0	0	0	0	0	1	0	0	4	0	325
16	285	116	0	0	1	0	0	0	1	0	0	3	0	406
17	202	106	0	0	2	0	0	0	1	0	0	3	0	314
18	168	89	1	0	4	0	0	0	0	0	0	2	0	264
19	128	47	0	0	0	0	0	0	0	0	0	3	0	178
20	94	28	0	0	0	0	0	0	0	0	0	2	0	124
21	65	24	0	0	0	0	0	0	0	0	0	0	0	89
22	41	16	0	0	0	0	0	0	0	0	0	0	0	57
23	41	12	0	0	0	0	0	0	0	0	0	0	0	53
24	14	6	0	0	0	0	0	0	1	0	0	0	0	21

7-19	2470	1069	7	0	19	0	1	4	11	1	1	46	0	3629
6-22	2761	1183	7	0	19	0	1	5	11	1	1	49	0	4038
6-24	2816	1201	7	0	19	0	1	5	12	1	1	49	0	4112
0-24	2876	1235	7	0	19	0	1	6	13	1	1	52	0	4211

LOCATION: A539

Direction : NORTHEASTBOUND

Monday 15/11/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	2	4	2	1	0	0	0	0	0	0	9
2	0	0	2	1	0	0	0	0	0	0	0	0	3
3	0	0	0	3	0	1	0	0	0	0	1	0	5
4	0	0	0	2	0	0	0	0	0	0	0	0	2
5	0	0	0	0	2	2	1	1	0	0	0	0	6
6	0	0	2	9	3	7	3	1	0	0	0	0	25
7	0	0	8	18	17	12	3	1	0	0	0	0	59
8	0	0	50	102	33	7	2	0	0	0	0	0	194
9	0	4	153	228	31	4	0	0	0	0	0	0	420
10	0	0	45	142	38	8	1	0	0	0	0	0	234
11	0	1	85	130	28	3	1	0	0	0	0	0	248
12	0	2	52	155	49	6	0	0	0	0	0	0	264
13	0	1	72	161	44	6	0	0	0	0	0	0	284
14	0	1	64	138	41	5	2	0	0	0	0	0	251
15	0	0	103	155	41	8	1	1	0	0	0	0	309
16	1	1	137	183	53	3	0	0	0	0	0	0	378
17	0	2	158	244	33	8	1	0	0	0	0	0	446
18	1	1	157	239	42	10	0	0	0	1	0	0	451
19	0	0	60	150	46	8	2	1	0	1	0	0	268
20	0	0	33	88	36	12	1	0	0	0	0	0	170
21	0	0	23	50	21	12	2	0	0	0	0	0	108
22	0	0	13	33	25	13	5	1	0	0	1	0	91
23	0	0	3	22	19	4	4	0	0	0	0	0	52
24	0	0	2	5	2	3	0	0	0	0	0	0	12
7-19	2	13	1136	2027	479	76	10	2	0	2	0	0	3747
6-22	2	13	1213	2216	578	125	21	4	0	2	1	0	4175
6-24	2	13	1218	2243	599	132	25	4	0	2	1	0	4239
0-24	2	13	1224	2262	606	143	29	6	0	2	2	0	4289

Direction : SOUTHWESTBOUND

Monday 15/11/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	0	4	3	1	1	0	0	0	0	0	9
2	0	0	0	0	1	1	1	2	0	0	0	0	5
3	0	0	0	1	1	4	0	0	0	0	0	0	6
4	0	0	1	5	0	2	1	0	0	1	0	0	10
5	0	0	0	5	6	2	0	1	1	0	0	0	15
6	0	0	3	14	24	8	4	1	0	0	0	0	54
7	0	2	17	53	31	26	4	5	0	1	0	0	139
8	0	1	65	178	61	12	2	1	0	0	0	0	320
9	0	1	159	212	59	19	1	0	0	0	0	0	451
10	0	0	62	160	70	14	3	0	0	0	0	0	309
11	0	1	81	131	42	6	1	0	0	0	0	0	262
12	0	0	50	141	61	12	1	0	1	0	0	0	266
13	0	2	53	134	45	19	2	1	1	0	0	0	257
14	0	4	97	131	35	9	1	0	0	0	0	0	277
15	0	0	106	175	32	9	2	1	0	0	0	0	325
16	0	0	126	208	60	11	0	1	0	0	0	0	406
17	0	0	85	150	64	10	4	1	0	0	0	0	314
18	0	0	46	138	66	12	1	0	1	0	0	0	264
19	0	0	24	80	52	15	5	1	1	0	0	0	178
20	0	0	18	53	32	16	4	0	1	0	0	0	124
21	0	0	11	38	25	12	2	0	0	0	0	1	89
22	0	0	11	17	15	10	1	1	0	2	0	0	57
23	0	2	7	15	14	8	3	2	1	1	0	0	53
24	0	0	1	9	4	4	2	1	0	0	0	0	21
7-19	0	9	954	1838	647	148	23	6	4	0	0	0	3629
6-22	0	11	1011	1999	750	212	34	12	5	3	0	1	4038
6-24	0	13	1019	2023	768	224	39	15	6	4	0	1	4112
0-24	0	13	1023	2052	803	242	46	19	7	5	0	1	4211

Automatic Classified Counts, Acrefair

LOCATION: A539

Direction : NORTHEASTBOUND

Tuesday 16/11/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	8	3	0	0	0	0	0	0	0	0	0	0	0	11
2	6	0	0	0	0	0	0	0	0	0	0	0	0	6
3	3	1	0	0	0	0	0	0	0	0	0	0	0	4
4	2	0	1	0	0	0	0	0	0	0	0	0	0	3
5	5	0	0	0	0	0	0	0	0	0	0	0	0	5
6	19	8	0	0	0	0	0	0	0	0	0	1	0	28
7	43	16	2	0	1	0	0	1	0	0	0	2	0	65
8	151	50	3	0	0	0	0	0	0	0	0	2	0	206
9	298	86	1	0	1	0	0	0	0	0	0	2	0	388
10	167	76	0	0	3	0	0	0	0	0	0	6	0	252
11	194	61	0	0	3	0	0	0	0	0	1	3	0	262
12	168	49	2	0	2	0	0	1	0	0	0	9	0	231
13	213	54	0	0	2	0	1	1	0	0	0	8	0	279
14	212	56	0	0	0	0	1	0	0	0	0	6	0	275
15	243	66	1	1	4	0	1	0	0	0	0	5	0	321
16	289	76	1	0	1	0	1	0	0	0	0	2	0	370
17	281	106	0	0	0	0	0	0	2	0	0	4	0	393
18	324	97	0	0	3	0	0	0	0	0	0	4	0	428
19	199	44	0	0	1	0	0	0	0	0	0	2	0	246
20	113	23	0	0	1	0	0	0	1	0	0	0	0	138
21	91	22	0	0	0	0	0	0	0	0	0	2	0	115
22	67	13	0	0	0	0	0	0	0	0	0	1	0	81
23	49	13	0	0	0	0	0	0	0	0	0	0	0	62
24	14	2	0	0	0	0	0	0	0	0	0	0	0	16

7-19	2739	821	8	1	20	0	4	2	2	0	1	53	0	3651
6-22	3053	895	10	1	22	0	4	3	3	0	1	58	0	4050
6-24	3116	910	10	1	22	0	4	3	3	0	1	58	0	4128
0-24	3159	922	11	1	22	0	4	3	3	0	1	59	0	4185

Direction : SOUTHWESTBOUND

Tuesday 16/11/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	8	2	0	0	0	0	0	0	0	0	0	0	0	10
2	4	0	0	0	0	0	0	0	0	0	0	0	0	4
3	3	4	0	0	0	0	0	0	0	0	0	0	0	7
4	2	2	0	0	0	0	0	0	0	0	0	1	0	5
5	6	2	0	0	0	0	0	0	0	0	0	0	0	8
6	45	18	1	0	0	0	0	1	0	0	0	1	0	66
7	91	41	0	0	0	0	0	0	0	0	0	2	0	134
8	243	84	0	0	2	0	0	1	1	0	0	3	0	334
9	351	128	0	0	1	0	0	0	0	0	0	3	0	483
10	185	79	0	0	3	0	1	0	2	0	0	8	0	278
11	167	82	0	0	1	0	0	0	0	0	0	5	0	255
12	153	84	0	0	3	0	0	0	0	0	0	4	0	244
13	188	60	0	0	0	0	0	0	0	0	0	8	0	256
14	177	87	0	1	1	0	0	2	0	0	1	3	0	272
15	198	93	0	0	3	0	0	0	0	0	0	3	0	297
16	285	111	1	1	2	0	0	0	1	0	0	5	0	406
17	250	102	0	0	2	0	0	0	1	0	0	8	0	363
18	181	78	0	0	1	0	0	0	0	0	0	4	0	264
19	142	40	0	0	0	0	0	0	0	0	0	0	0	182
20	84	32	0	0	1	0	0	0	0	0	0	2	0	119
21	65	23	0	0	0	0	0	0	0	0	0	1	0	89
22	43	12	0	0	0	0	0	0	0	0	0	3	0	58
23	40	8	0	0	0	0	0	0	0	0	0	0	0	48
24	22	5	0	0	0	0	0	0	0	0	0	0	0	27

7-19	2520	1028	1	2	19	0	1	3	5	0	1	54	0	3634
6-22	2803	1136	1	2	20	0	1	3	5	0	1	62	0	4034
6-24	2865	1149	1	2	20	0	1	3	5	0	1	62	0	4109
0-24	2933	1177	2	2	20	0	1	4	5	0	1	64	0	4209

LOCATION: A539

Direction : NORTHEASTBOUND

Tuesday 16/11/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	2	5	2	1	0	0	0	1	0	0	11
2	0	0	0	2	2	1	1	0	0	0	0	0	6
3	0	0	0	1	3	0	0	0	0	0	0	0	4
4	0	0	0	0	3	0	0	0	0	0	0	0	3
5	0	0	1	2	2	0	0	0	0	0	0	0	5
6	0	0	1	5	10	8	4	0	0	0	0	0	28
7	0	0	9	30	14	6	5	1	0	0	0	0	65
8	1	4	45	114	35	6	1	0	0	0	0	0	206
9	1	5	89	225	57	9	2	0	0	0	0	0	388
10	0	3	80	134	29	4	2	0	0	0	0	0	252
11	0	4	91	134	28	5	0	0	0	0	0	0	262
12	1	2	77	120	28	3	0	0	0	0	0	0	231
13	0	1	56	170	45	6	0	1	0	0	0	0	279
14	0	4	78	144	45	4	0	0	0	0	0	0	275
15	0	1	93	197	25	3	1	1	0	0	0	0	321
16	0	0	105	208	50	7	0	0	0	0	0	0	370
17	0	1	143	200	45	3	1	0	0	0	0	0	393
18	0	0	112	264	42	10	0	0	0	0	0	0	428
19	0	2	56	134	45	7	2	0	0	0	0	0	246
20	0	0	23	70	31	10	2	2	0	0	0	0	138
21	0	0	25	60	19	9	0	1	1	0	0	0	115
22	0	0	13	37	25	6	0	0	0	0	0	0	81
23	0	0	8	32	12	8	1	1	0	0	0	0	62
24	0	0	1	5	5	1	3	0	1	0	0	0	16
7-19	3	27	1025	2044	474	67	9	2	0	0	0	0	3651
6-22	3	27	1095	2241	563	98	16	6	1	0	0	0	4050
6-24	3	27	1104	2278	580	107	20	7	2	0	0	0	4128
0-24	3	27	1108	2293	602	117	25	7	2	1	0	0	4185

Direction : SOUTHWESTBOUND

Tuesday 16/11/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	1	0	1	4	1	1	0	2	0	0	10
2	0	0	0	1	0	1	1	1	0	0	0	0	4
3	0	0	2	1	3	1	0	0	0	0	0	0	7
4	0	0	0	1	1	3	0	0	0	0	0	0	5
5	0	0	0	3	4	1	0	0	0	0	0	0	8
6	0	0	2	22	22	16	3	1	0	0	0	0	66
7	0	0	18	64	32	11	8	0	1	0	0	0	134
8	0	4	135	151	37	6	1	0	0	0	0	0	334
9	0	1	125	243	85	28	1	0	0	0	0	0	483
10	0	1	64	147	54	12	0	0	0	0	0	0	278
11	0	7	82	118	33	11	4	0	0	0	0	0	255
12	1	0	72	112	40	15	3	1	0	0	0	0	244
13	0	0	54	141	48	11	2	0	0	0	0	0	256
14	0	2	85	142	35	6	2	0	0	0	0	0	272
15	0	5	97	133	46	11	5	0	0	0	0	0	297
16	1	1	139	185	60	19	1	0	0	0	0	0	406
17	0	0	115	195	37	12	4	0	0	0	0	0	363
18	0	0	69	135	47	9	3	1	0	0	0	0	264
19	0	1	64	78	32	6	1	0	0	0	0	0	182
20	0	0	22	36	31	24	4	2	0	0	0	0	119
21	0	0	13	44	22	6	2	0	0	0	2	0	89
22	0	0	16	20	13	2	3	2	0	1	1	0	58
23	0	0	10	14	15	5	1	1	1	1	0	0	48
24	0	0	6	9	4	4	1	1	1	1	0	0	27
7-19	2	22	1101	1780	554	146	27	2	0	0	0	0	3634
6-22	2	22	1170	1944	652	189	44	6	1	1	3	0	4034
6-24	2	22	1186	1967	671	198	46	8	3	3	3	0	4109
0-24	2	22	1191	1995	702	224	51	11	3	5	3	0	4209

Automatic Classified Counts, Acrefair

LOCATION: A539

Direction : NORTHEASTBOUND

Wednesday 17/11/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	6	2	0	0	0	0	0	0	0	0	0	0	0	8
2	9	3	0	0	0	0	0	0	0	0	0	0	0	12
3	2	2	0	0	0	0	0	0	0	0	0	0	0	4
4	4	0	0	0	0	0	0	0	0	0	0	0	0	4
5	8	2	0	0	0	0	0	0	0	0	0	1	0	11
6	16	6	0	0	0	0	0	0	0	0	0	0	0	22
7	53	9	1	0	0	0	0	0	0	0	0	3	0	66
8	180	49	2	1	1	0	0	0	0	0	0	3	0	236
9	280	73	0	0	1	0	1	0	0	0	0	2	0	357
10	176	53	1	0	1	0	0	0	0	0	0	2	0	233
11	171	62	0	0	4	0	0	0	0	0	0	9	0	246
12	216	50	0	0	4	0	0	0	1	0	1	3	0	275
13	215	60	0	0	4	0	0	1	0	0	0	3	0	283
14	223	50	0	0	0	0	0	0	1	0	0	4	0	278
15	254	87	2	0	1	0	0	2	0	0	1	5	0	352
16	230	58	0	0	1	0	0	0	0	0	0	4	0	293
17	194	59	1	0	1	0	0	0	1	0	0	1	0	257
18	145	44	0	0	0	0	0	0	0	0	0	3	0	192
19	172	52	0	0	0	0	0	0	0	0	0	1	0	225
20	119	38	0	0	1	0	0	1	0	0	0	0	0	159
21	97	20	0	0	0	0	0	0	0	0	0	2	0	119
22	78	17	0	0	0	0	0	0	0	0	0	0	0	95
23	50	10	0	0	0	0	0	0	0	0	0	0	0	60
24	25	3	0	0	0	0	0	0	0	0	0	0	0	28
7-19	2456	697	6	1	18	0	1	3	3	0	2	40	0	3227
6-22	2803	781	7	1	19	0	1	4	3	0	2	45	0	3666
6-24	2878	794	7	1	19	0	1	4	3	0	2	45	0	3754
0-24	2923	809	7	1	19	0	1	4	3	0	2	46	0	3815

Direction : SOUTHWESTBOUND

Wednesday 17/11/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	3	3	0	0	0	0	0	0	0	0	0	0	0	6
2	6	0	0	0	0	0	0	0	0	0	0	0	0	6
3	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4	3	1	0	0	0	0	0	0	0	0	0	1	0	5
5	8	2	0	0	0	0	0	0	0	0	0	0	0	10
6	45	21	0	0	1	0	0	0	0	0	0	0	0	67
7	96	35	0	0	2	0	0	2	0	0	0	2	0	137
8	246	98	0	0	1	0	1	0	0	0	0	3	0	349
9	335	133	1	0	3	0	0	1	1	0	1	5	0	480
10	176	70	0	0	3	0	0	1	0	0	0	7	0	257
11	157	62	0	0	0	0	0	1	0	0	0	5	0	225
12	179	65	0	0	2	0	0	0	1	0	0	6	0	253
13	192	85	0	0	1	0	0	1	0	0	0	3	0	282
14	185	82	0	0	1	0	0	2	1	0	1	1	0	273
15	220	77	0	0	1	0	0	1	2	0	0	4	0	305
16	267	111	1	0	4	0	1	0	0	0	0	8	0	392
17	183	82	0	0	3	0	0	1	1	0	0	2	0	272
18	161	78	0	0	0	0	0	0	0	0	0	1	0	240
19	117	45	0	0	0	0	0	0	1	0	0	2	0	165
20	79	34	0	0	0	0	0	0	0	0	0	0	0	113
21	72	19	1	0	0	0	0	0	0	0	0	0	0	92
22	51	15	0	0	0	0	0	0	0	0	0	1	0	67
23	36	8	0	0	0	0	0	0	0	0	0	0	0	44
24	15	3	0	0	0	0	0	0	0	0	0	0	0	18
7-19	2418	988	2	0	19	0	2	8	7	0	2	47	0	3493
6-22	2716	1091	3	0	21	0	2	10	7	0	2	50	0	3902
6-24	2767	1102	3	0	21	0	2	10	7	0	2	50	0	3964
0-24	2832	1131	3	0	22	0	2	10	7	0	2	51	0	4060

LOCATION: A539

Direction : NORTHEASTBOUND

Wednesday 17/11/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	1	1	1	2	1	1	1	0	0	0	8
2	0	0	0	6	3	2	1	0	0	0	0	0	12
3	0	0	0	3	1	0	0	0	0	0	0	0	4
4	0	0	0	1	1	1	1	0	0	0	0	0	4
5	0	0	0	3	2	4	1	1	0	0	0	0	11
6	0	0	1	8	2	7	3	1	0	0	0	0	22
7	0	0	15	23	10	16	0	1	1	0	0	0	66
8	0	1	51	116	55	10	2	1	0	0	0	0	236
9	1	7	115	173	57	3	0	0	1	0	0	0	357
10	0	0	59	128	35	8	1	0	1	1	0	0	233
11	0	5	72	131	32	4	1	0	0	1	0	0	246
12	0	5	104	130	33	3	0	0	0	0	0	0	275
13	0	3	75	154	46	5	0	0	0	0	0	0	283
14	0	1	86	144	38	6	2	0	1	0	0	0	278
15	1	1	114	196	37	2	1	0	0	0	0	0	352
16	0	5	113	137	35	2	1	0	0	0	0	0	293
17	0	0	115	107	25	6	4	0	0	0	0	0	257
18	0	1	69	88	25	6	2	1	0	0	0	0	192
19	0	2	85	92	40	5	1	0	0	0	0	0	225
20	0	1	37	82	34	4	1	0	0	0	0	0	159
21	0	0	33	52	29	3	1	0	1	0	0	0	119
22	0	1	26	41	20	6	0	1	0	0	0	0	95
23	0	0	7	33	19	1	0	0	0	0	0	0	60
24	0	0	3	13	8	1	0	1	1	1	0	0	28
7-19	2	31	1058	1596	458	60	15	2	3	2	0	0	3227
6-22	2	33	1169	1794	551	89	17	4	5	2	0	0	3666
6-24	2	33	1179	1840	578	91	17	5	6	3	0	0	3754
0-24	2	33	1181	1862	588	107	24	8	7	3	0	0	3815

Direction : SOUTHWESTBOUND

Wednesday 17/11/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	0	2	2	1	0	1	0	0	0	0	6
2	0	0	2	2	1	0	0	0	1	0	0	0	6
3	0	0	0	0	1	0	1	0	0	0	0	0	2
4	0	0	0	0	0	1	2	0	2	0	0	0	5
5	0	0	0	5	4	1	0	0	0	0	0	0	10
6	0	0	3	21	24	10	7	2	0	0	0	0	67
7	0	0	15	37	41	30	13	0	1	0	0	0	137
8	0	4	101	183	46	10	5	0	0	0	0	0	349
9	1	17	135	262	54	10	1	0	0	0	0	0	480
10	0	0	79	132	41	3	1	1	0	0	0	0	257
11	0	0	64	112	36	10	3	0	0	0	0	0	225
12	0	6	83	119	40	5	0	0	0	0	0	0	253
13	0	4	54	143	64	11	6	0	0	0	0	0	282
14	0	1	88	127	38	12	6	1	0	0	0	0	273
15	0	5	106	127	49	17	0	0	1	0	0	0	305
16	1	5	183	169	27	5	1	1	0	0	0	0	392
17	0	2	113	99	51	7	0	0	0	0	0	0	272
18	0	2	55	117	50	7	7	2	0	0	0	0	240
19	0	0	50	59	37	14	4	0	1	0	0	0	165
20	0	0	24	38	38	9	3	1	0	0	0	0	113
21	0	0	16	48	16	7	3	1	1	0	0	0	92
22	0	0	12	24	22	6	0	0	1	0	1	1	67
23	0	0	7	19	9	5	1	1	0	0	1	1	44
24	0	0	3	4	9	2	0	0	0	0	0	0	18
7-19	2	46	1111	1649	533	111	34	5	2	0	0	0	3493
6-22	2	46	1178	1796	650	163	53	7	5	0	1	1	3902
6-24	2	46	1188	1819	668	170	54	8	5	0	2	2	3964
0-24	2	46	1193	1849	700	183	64	11	8	0	2	2	4060

Automatic Classified Counts, Acrefair

LOCATION: A539

Direction : NORTHEASTBOUND

Thursday 18/11/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	8	1	0	0	0	0	0	0	0	0	0	0	0	9
2	3	1	0	0	0	0	0	0	0	0	0	0	0	4
3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
4	3	3	0	0	0	0	0	0	0	0	0	0	0	6
5	4	1	0	0	0	0	0	0	0	0	0	1	0	6
6	16	4	1	0	0	0	0	0	0	0	0	1	0	22
7	47	15	0	0	1	0	0	0	0	0	0	0	0	63
8	154	64	0	0	0	0	0	0	0	0	0	5	0	223
9	276	82	0	0	0	0	0	0	0	0	1	5	0	364
10	199	66	2	0	1	0	0	0	0	0	2	6	0	276
11	175	74	0	0	0	0	0	1	0	0	0	5	0	255
12	236	67	1	0	2	0	1	0	1	0	0	4	0	312
13	204	77	0	0	2	0	0	0	0	0	0	5	0	288
14	192	53	0	1	1	0	1	0	0	0	0	7	0	255
15	268	79	1	0	2	0	0	1	0	0	0	5	0	356
16	288	85	0	0	3	0	0	1	0	0	0	4	0	381
17	299	110	0	0	0	0	0	0	0	0	0	1	0	410
18	336	92	1	0	3	0	0	0	0	0	0	4	0	436
19	238	76	0	0	1	0	0	0	0	0	0	2	0	317
20	172	34	0	0	0	0	0	0	0	0	0	1	0	207
21	92	27	0	0	0	0	0	0	0	0	0	1	0	120
22	66	22	0	0	0	0	0	0	0	0	0	0	0	88
23	56	12	0	0	0	0	0	0	0	0	0	1	0	69
24	26	2	0	0	0	0	0	0	0	0	0	0	0	28

7-19	2865	925	5	1	15	0	2	3	1	0	3	53	0	3873
6-22	3242	1023	5	1	16	0	2	3	1	0	3	55	0	4351
6-24	3324	1037	5	1	16	0	2	3	1	0	3	56	0	4448
0-24	3361	1047	6	1	16	0	2	3	1	0	3	58	0	4498

Direction : SOUTHWESTBOUND

Thursday 18/11/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	9	1	0	0	0	0	0	0	0	0	0	0	0	10
2	3	2	0	0	0	0	0	0	0	0	0	0	0	5
3	1	0	0	0	0	0	0	0	0	1	0	0	0	2
4	1	3	0	0	0	0	0	0	0	0	0	0	0	4
5	7	2	0	0	1	0	0	0	0	0	0	2	0	12
6	40	18	0	0	0	0	0	0	0	0	0	0	0	58
7	89	40	0	0	1	0	0	0	0	0	0	0	0	130
8	223	105	0	0	1	0	0	0	0	0	0	5	0	334
9	364	133	1	0	2	0	2	0	0	0	0	4	0	506
10	208	72	1	0	2	0	1	1	1	0	0	2	0	288
11	150	101	0	0	2	0	0	0	0	0	0	5	0	258
12	188	73	1	0	1	0	0	2	0	0	1	4	0	270
13	180	73	1	0	4	0	1	1	0	0	0	6	0	266
14	213	90	0	0	1	0	1	1	1	0	0	3	0	310
15	238	95	0	0	1	0	0	2	1	1	0	5	0	343
16	317	112	1	0	0	0	0	2	0	0	0	7	0	439
17	231	107	0	1	0	0	0	0	1	0	0	4	0	344
18	191	67	0	0	1	0	0	0	0	0	0	2	0	261
19	141	52	0	0	0	0	0	0	0	0	0	4	0	197
20	119	30	0	0	0	0	0	0	1	0	0	4	0	154
21	75	26	0	0	0	0	0	0	0	0	0	0	0	101
22	66	22	1	0	1	0	0	0	0	0	0	0	0	90
23	47	9	0	0	0	0	0	0	0	0	0	1	0	57
24	22	5	0	0	0	0	0	0	0	0	0	0	0	27

7-19	2644	1080	5	1	15	0	5	9	4	1	1	51	0	3816
6-22	2993	1198	6	1	17	0	5	9	5	1	1	55	0	4291
6-24	3062	1212	6	1	17	0	5	9	5	1	1	56	0	4375
0-24	3123	1238	6	1	18	0	5	9	5	2	1	58	0	4466

LOCATION: A539

Direction : NORTHEASTBOUND

Thursday 18/11/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	0	2	7	0	0	0	0	0	0	0	9
2	0	0	0	1	3	0	0	0	0	0	0	0	4
3	0	0	0	1	1	1	0	0	0	0	0	0	3
4	0	0	0	0	4	1	0	1	0	0	0	0	6
5	0	0	0	1	2	1	1	0	1	0	0	0	6
6	0	0	2	6	9	4	1	0	0	0	0	0	22
7	0	0	7	30	15	5	2	4	0	0	0	0	63
8	0	0	57	120	35	9	2	0	0	0	0	0	223
9	0	4	84	227	46	3	0	0	0	0	0	0	364
10	0	1	85	132	49	8	1	0	0	0	0	0	276
11	0	0	91	130	31	3	0	0	0	0	0	0	255
12	0	1	111	162	33	5	0	0	0	0	0	0	312
13	0	1	96	152	31	6	2	0	0	0	0	0	288
14	0	3	91	125	32	4	0	0	0	0	0	0	255
15	0	0	141	176	37	2	0	0	0	0	0	0	356
16	0	3	139	191	43	5	0	0	0	0	0	0	381
17	2	0	121	224	49	12	2	0	0	0	0	0	410
18	0	0	141	223	63	8	1	0	0	0	0	0	436
19	0	0	88	155	61	10	2	1	0	0	0	0	317
20	0	0	55	92	46	11	3	0	0	0	0	0	207
21	0	2	18	57	30	11	1	1	0	0	0	0	120
22	0	0	13	43	17	6	7	2	0	0	0	0	88
23	0	1	7	32	21	8	0	0	0	0	0	0	69
24	0	0	3	9	9	2	3	2	0	0	0	0	28
7-19	2	13	1245	2017	510	75	10	1	0	0	0	0	3873
6-22	2	15	1338	2239	618	108	23	8	0	0	0	0	4351
6-24	2	16	1348	2280	648	118	26	10	0	0	0	0	4448
0-24	2	16	1350	2291	674	125	28	11	1	0	0	0	4498

Direction : SOUTHWESTBOUND

Thursday 18/11/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	1	3	3	1	1	1	0	0	0	0	10
2	0	0	1	1	2	1	0	0	0	0	0	0	5
3	0	0	1	0	0	0	0	1	0	0	0	0	2
4	0	0	0	0	2	1	1	0	0	0	0	0	4
5	0	0	3	4	1	2	2	0	0	0	0	0	12
6	0	0	3	22	17	11	3	2	0	0	0	0	58
7	0	0	16	44	36	19	11	3	1	0	0	0	130
8	0	1	93	157	63	14	2	1	0	3	0	0	334
9	0	0	121	309	63	10	3	0	0	0	0	0	506
10	0	1	51	151	60	22	2	1	0	0	0	0	288
11	0	0	63	137	45	11	2	0	0	0	0	0	258
12	0	0	92	114	52	9	3	0	0	0	0	0	270
13	1	1	63	142	52	6	1	0	0	0	0	0	266
14	0	10	97	142	50	11	0	0	0	0	0	0	310
15	0	5	130	145	48	12	1	2	0	0	0	0	343
16	0	0	177	216	38	6	2	0	0	0	0	0	439
17	1	0	102	167	60	13	1	0	0	0	0	0	344
18	0	0	51	122	66	19	2	1	0	0	0	0	261
19	0	0	40	84	60	11	1	0	1	0	0	0	197
20	0	0	24	61	40	21	8	0	0	0	0	0	154
21	0	0	20	44	28	6	3	0	0	0	0	0	101
22	0	0	9	33	23	17	4	4	0	0	0	0	90
23	0	0	5	19	17	10	5	1	0	0	0	0	57
24	0	0	3	8	7	6	0	2	1	0	0	0	27
7-19	2	18	1080	1886	657	144	20	5	1	3	0	0	3816
6-22	2	18	1149	2068	784	207	46	12	2	3	0	0	4291
6-24	2	18	1157	2095	808	223	51	15	3	3	0	0	4375
0-24	2	18	1166	2125	833	239	58	19	3	3	0	0	4466

Automatic Classified Counts, Acrefair

LOCATION: A539

Direction : NORTHEASTBOUND

Friday 19/11/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	10	2	0	0	0	0	0	0	0	0	0	0	0	12
2	5	2	0	0	0	0	0	0	0	0	0	1	0	8
3	3	1	0	0	0	0	0	0	0	0	0	0	0	4
4	4	2	0	0	0	0	0	0	0	0	0	0	0	6
5	10	2	0	0	0	0	0	0	0	0	0	0	0	12
6	19	7	0	0	1	0	0	0	0	0	0	0	0	27
7	40	15	1	1	0	0	0	0	0	0	0	2	0	59
8	147	42	1	0	2	0	0	0	0	0	0	6	0	198
9	301	73	0	0	2	0	0	0	0	0	0	4	0	380
10	194	74	0	0	1	0	0	1	0	0	0	6	0	276
11	217	65	2	0	1	0	0	0	0	0	0	7	0	292
12	260	86	1	0	0	0	1	0	1	0	0	2	0	351
13	245	68	1	0	1	0	0	0	0	0	0	7	0	322
14	256	75	2	0	0	0	0	0	0	0	0	6	0	339
15	339	85	1	1	3	0	0	0	0	0	1	8	0	438
16	377	102	0	0	1	0	0	0	2	0	0	6	0	488
17	396	116	0	0	1	0	0	0	0	0	1	1	0	515
18	372	109	1	0	1	0	1	1	0	0	0	1	0	486
19	264	75	0	0	2	0	0	0	2	0	0	1	0	344
20	169	46	0	0	0	0	0	1	1	0	0	2	0	219
21	99	19	0	0	0	0	0	0	0	0	0	1	0	119
22	80	25	0	0	0	0	0	0	0	0	0	0	0	105
23	50	22	0	0	0	0	0	0	0	0	0	0	0	72
24	41	19	1	0	0	0	0	0	0	0	0	0	0	61
7-19	3368	970	9	1	15	0	2	2	5	0	2	55	0	4429
6-22	3756	1075	10	2	15	0	2	3	6	0	2	60	0	4931
6-24	3847	1116	11	2	15	0	2	3	6	0	2	60	0	5064
0-24	3898	1132	11	2	16	0	2	3	6	0	2	61	0	5133

Direction : SOUTHWESTBOUND

Friday 19/11/2021	VEHICLE CLASSIFICATION													TOTAL
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	8	2	0	0	0	0	0	0	0	0	0	0	0	10
2	4	0	0	0	0	0	0	0	0	0	0	0	0	4
3	4	1	0	0	0	0	0	0	0	0	0	0	0	5
4	4	1	0	0	0	0	0	0	0	0	0	1	0	6
5	7	2	0	0	0	0	0	0	0	0	0	0	0	9
6	32	21	0	0	1	0	0	0	0	0	0	0	0	54
7	95	26	1	0	1	0	0	2	0	0	0	1	0	126
8	211	77	0	0	1	0	0	0	0	0	0	4	0	293
9	346	93	1	0	1	0	0	0	0	0	0	8	0	449
10	204	84	1	0	0	0	1	0	1	0	0	8	0	299
11	200	94	1	0	0	0	0	1	1	0	0	5	0	302
12	220	76	0	0	1	0	0	0	0	0	0	11	0	308
13	239	80	1	0	1	0	0	0	1	0	0	8	0	330
14	239	72	1	0	0	0	0	0	0	0	0	2	0	314
15	296	89	1	2	3	0	0	1	1	0	0	2	0	395
16	371	118	1	1	2	0	1	0	1	0	0	9	0	504
17	245	102	0	1	2	0	0	0	0	0	0	6	0	356
18	218	70	2	0	0	0	0	0	1	0	0	0	0	291
19	174	54	0	0	0	0	0	0	0	0	0	1	0	229
20	109	42	0	0	0	0	0	0	0	0	0	1	0	152
21	105	31	0	0	0	0	0	0	0	0	0	2	0	138
22	56	24	0	0	0	0	0	1	0	0	0	0	0	81
23	54	15	1	0	1	0	0	0	0	0	0	1	0	72
24	33	21	0	0	0	0	0	0	0	0	0	0	0	54
7-19	2963	1009	9	4	11	0	2	2	6	0	0	64	0	4070
6-22	3328	1132	10	4	12	0	2	5	6	0	0	68	0	4567
6-24	3415	1168	11	4	13	0	2	5	6	0	0	69	0	4693
0-24	3474	1195	11	4	14	0	2	5	6	0	0	70	0	4781

LOCATION: A539

Direction : NORTHEASTBOUND

Friday 19/11/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	2	3	5	1	1	0	0	0	0	0	12
2	0	0	1	1	2	2	1	1	0	0	0	0	8
3	0	0	0	1	1	2	0	0	0	0	0	0	4
4	0	0	2	1	1	1	1	0	0	0	0	0	6
5	0	0	1	2	1	4	1	2	1	0	0	0	12
6	0	0	0	7	10	5	2	2	1	0	0	0	27
7	0	0	8	15	26	6	4	0	0	0	0	0	59
8	0	0	28	108	46	12	2	1	0	1	0	0	198
9	5	16	100	199	57	3	0	0	0	0	0	0	380
10	0	1	75	151	40	7	1	1	0	0	0	0	276
11	1	0	89	167	32	3	0	0	0	0	0	0	292
12	1	10	101	198	36	5	0	0	0	0	0	0	351
13	1	1	97	184	34	4	1	0	0	0	0	0	322
14	1	2	77	189	65	4	1	0	0	0	0	0	339
15	6	19	149	214	43	5	1	0	1	0	0	0	438
16	2	9	209	219	44	3	1	1	0	0	0	0	488
17	0	1	215	252	41	5	1	0	0	0	0	0	515
18	0	2	228	200	52	4	0	0	0	0	0	0	486
19	0	0	85	206	45	7	1	0	0	0	0	0	344
20	0	0	43	120	47	5	4	0	0	0	0	0	219
21	0	0	25	54	26	11	2	1	0	0	0	0	119
22	0	0	23	38	30	6	6	1	0	1	0	0	105
23	0	0	11	28	21	8	3	1	0	0	0	0	72
24	0	0	7	29	9	7	6	1	1	1	0	0	61
7-19	17	61	1453	2287	535	62	9	3	1	1	0	0	4429
6-22	17	61	1552	2514	664	90	25	5	1	2	0	0	4931
6-24	17	61	1570	2571	694	105	34	7	2	3	0	0	5064
0-24	17	61	1576	2586	714	120	40	12	4	3	0	0	5133

Direction : SOUTHWESTBOUND

Friday 19/11/2021	VEHICLE SPEED (MPH)												TOTAL
Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	1	3	3	1	2	0	0	0	0	0	10
2	0	0	1	2	0	0	0	1	0	0	0	0	4
3	0	0	0	0	2	2	1	0	0	0	0	0	5
4	0	0	0	0	4	1	1	0	0	0	0	0	6
5	0	0	1	1	5	0	0	1	0	1	0	0	9
6	0	0	3	16	13	11	7	3	1	0	0	0	54
7	0	1	12	47	37	19	7	3	0	0	0	0	126
8	0	1	72	161	54	3	1	1	0	0	0	0	293
9	1	2	112	234	81	17	1	1	0	0	0	0	449
10	0	0	70	153	58	15	2	1	0	0	0	0	299
11	0	10	86	141	50	14	1	0	0	0	0	0	302
12	0	1	88	155	51	12	1	0	0	0	0	0	308
13	1	2	96	171	46	10	4	0	0	0	0	0	330
14	0	2	111	133	51	14	2	1	0	0	0	0	314
15	0	10	152	164	56	11	2	0	0	0	0	0	395
16	0	1	202	212	72	13	3	1	0	0	0	0	504
17	0	0	101	186	57	11	1	0	0	0	0	0	356
18	0	0	64	158	54	12	2	1	0	0	0	0	291
19	0	0	52	116	43	15	2	1	0	0	0	0	229
20	0	1	35	75	27	10	3	0	0	0	1	0	152
21	0	0	41	60	25	9	3	0	0	0	0	0	138
22	0	0	15	34	22	5	3	1	1	0	0	0	81
23	0	0	19	17	17	13	4	1	1	0	0	0	72
24	0	0	13	12	11	10	3	4	0	1	0	0	54
7-19	2	29	1206	1984	673	147	22	7	0	0	0	0	4070
6-22	2	31	1309	2200	784	190	38	11	1	0	1	0	4567
6-24	2	31	1341	2229	812	213	45	16	2	1	1	0	4693
0-24	2	31	1347	2251	839	228	56	21	3	2	1	0	4781

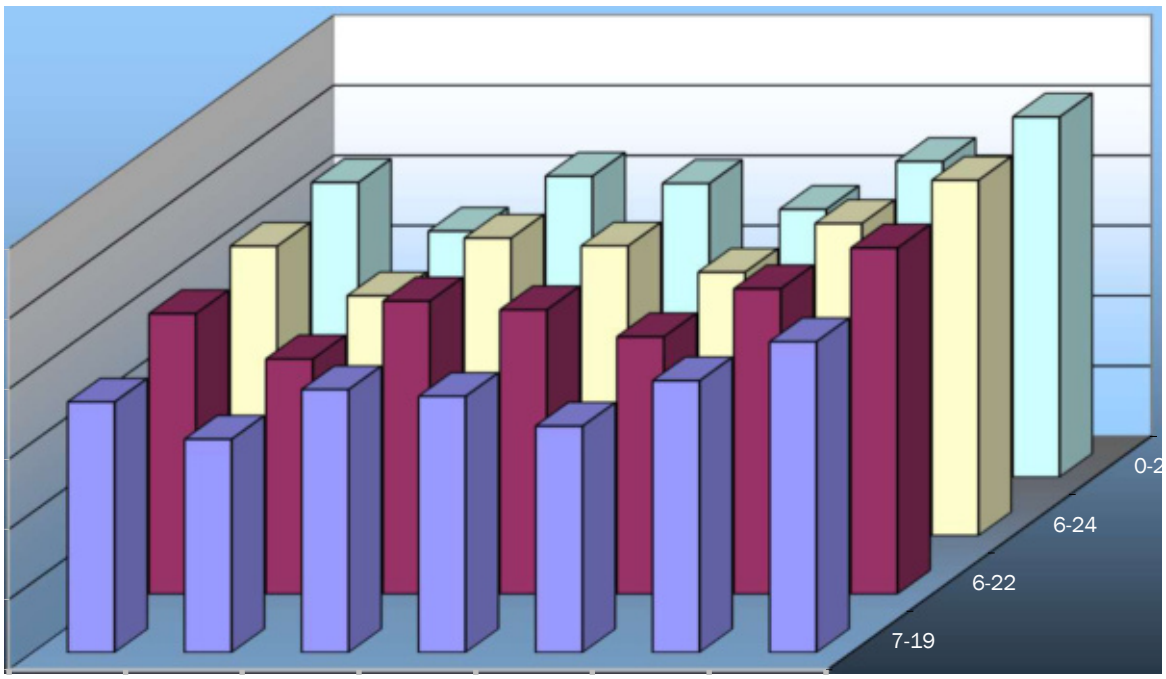
Automatic Classified Counts, Acrefair

LOCATION: A539

Direction : NORTHEASTBOUND

VEHICLE FLOWS									
Hr Ending	Saturday 13-Nov-21	Sunday 14-Nov-21	Monday 15-Nov-21	Tuesday 16-Nov-21	Wednesday 17-Nov-21	Thursday 18-Nov-21	Friday 19-Nov-21	WEEKDAY AVERAGE	WEEK AVERAGE
1	27	35	9	11	8	9	12	10	16
2	8	19	3	6	12	4	8	7	9
3	8	8	5	4	4	3	4	4	5
4	10	9	2	3	4	6	6	4	6
5	7	4	6	5	11	6	12	8	7
6	14	13	25	28	22	22	27	25	22
7	36	36	59	65	66	63	59	62	55
8	112	58	194	206	236	223	198	211	175
9	196	113	420	388	357	364	380	382	317
10	258	221	234	252	233	276	276	254	250
11	320	280	248	262	246	255	292	261	272
12	433	343	264	231	275	312	351	287	316
13	439	414	284	279	283	288	322	291	330
14	389	400	251	275	278	255	339	280	312
15	336	336	309	321	352	356	438	355	350
16	309	293	378	370	293	381	488	382	359
17	269	234	446	393	257	410	515	404	361
18	264	186	451	428	192	436	486	399	349
19	245	161	268	246	225	317	344	280	258
20	174	117	170	138	159	207	219	179	169
21	110	103	108	115	119	120	119	116	113
22	106	55	91	81	95	88	105	92	89
23	68	45	52	62	60	69	72	63	61
24	60	22	12	16	28	28	61	29	32

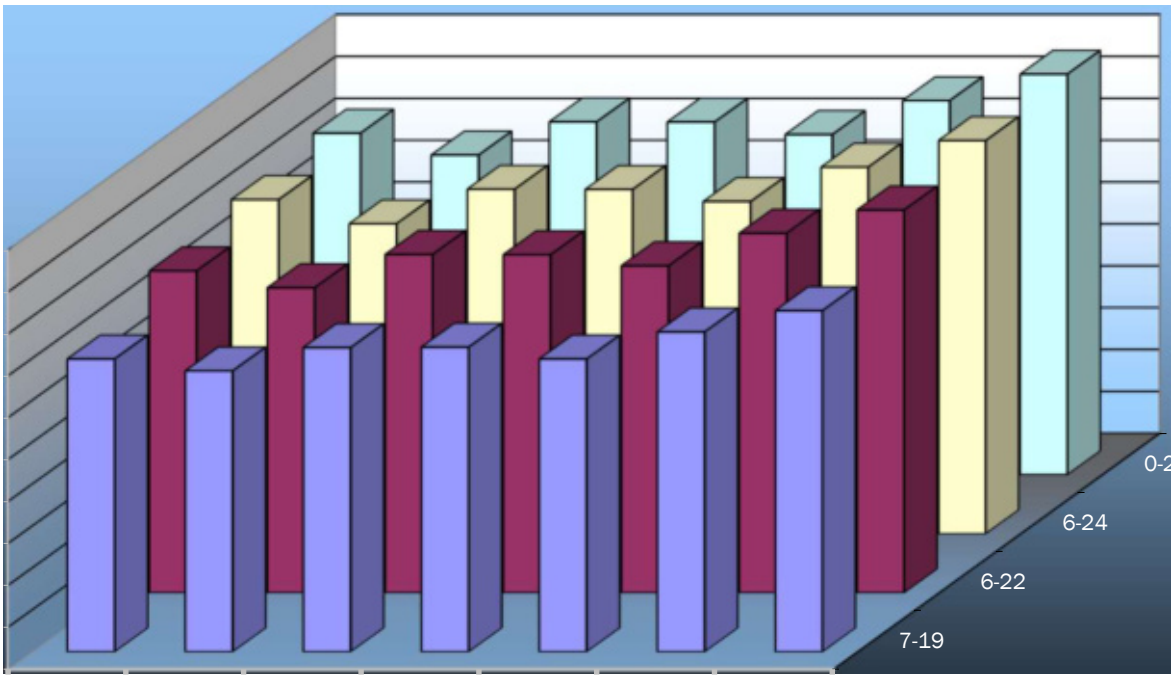
7-19	3570	3039	3747	3651	3227	3873	4429	3785	3648
6-22	3996	3350	4175	4050	3666	4351	4931	4235	4074
6-24	4124	3417	4239	4128	3754	4448	5064	4327	4168
0-24	4198	3505	4289	4185	3815	4498	5133	4384	4232



LOCATION: A539

Direction : SOUTHWESTBOUND

SOUTHWESTBOUND									
Hr Ending	Saturday 13-Nov-21	Sunday 14-Nov-21	Monday 15-Nov-21	Tuesday 16-Nov-21	Wednesday 17-Nov-21	Thursday 18-Nov-21	Friday 19-Nov-21	WEEKDAY AVERAGE	WEEK AVERAGE
1	18	48	9	10	6	10	10	9	16
2	12	23	5	4	6	5	4	5	8
3	3	10	6	7	2	2	5	4	5
4	4	8	10	5	5	4	6	6	6
5	9	10	15	8	10	12	9	11	10
6	44	16	54	66	67	58	54	60	51
7	31	32	139	134	137	130	126	133	104
8	83	59	320	334	349	334	293	326	253
9	201	90	451	483	480	506	449	474	380
10	247	181	309	278	257	288	299	286	266
11	314	232	262	255	225	258	302	260	264
12	309	233	266	244	253	270	308	268	269
13	355	351	257	256	282	266	330	278	300
14	369	360	277	272	273	310	314	289	311
15	330	400	325	297	305	343	395	333	342
16	362	486	406	406	392	439	504	429	428
17	378	423	314	363	272	344	356	330	350
18	338	317	264	264	240	261	291	264	282
19	208	219	178	182	165	197	229	190	197
20	129	123	124	119	113	154	152	132	131
21	104	76	89	89	92	101	138	102	98
22	83	57	57	58	67	90	81	71	70
23	91	36	53	48	44	57	72	55	57
24	55	25	21	27	18	27	54	29	32
7-19	3494	3351	3629	3634	3493	3816	4070	3728	3641
6-22	3841	3639	4038	4034	3902	4291	4567	4166	4045
6-24	3987	3700	4112	4109	3964	4375	4693	4251	4134
0-24	4077	3815	4211	4209	4060	4466	4781	4345	4231



Automatic Classified Counts, Acrefair

LOCATION: A539

Direction : NORTHEASTBOUND

AVERAGE SPEEDS							
Hr Ending	Saturday 13-Nov-21	Sunday 14-Nov-21	Monday 15-Nov-21	Tuesday 16-Nov-21	Wednesday 17-Nov-21	Thursday 18-Nov-21	Friday 19-Nov-21
1	33.5	36.5	33.6	36.4	42.7	36.9	35.9
2	36.4	41.4	28.0	38.8	37.2	36.8	40.2
3	36.8	41.1	43.5	36.8	34.3	38.0	39.3
4	41.5	41.1	33.0	38.0	40.5	41.3	35.5
5	35.9	43.0	43.8	33.5	40.7	43.0	42.8
6	36.8	38.0	38.4	39.5	39.3	36.9	40.2
7	37.2	37.5	36.6	35.4	35.2	35.9	36.2
8	33.8	34.6	32.4	32.1	33.1	32.4	34.1
9	33.4	34.2	30.6	32.0	31.1	31.8	30.8
10	32.6	33.0	32.8	31.3	32.5	31.9	32.0
11	32.7	32.2	31.1	30.9	31.5	31.0	31.3
12	31.8	32.8	32.5	31.0	30.6	31.0	30.9
13	31.1	31.7	32.0	32.5	31.8	31.3	31.3
14	32.0	32.6	32.2	31.6	31.7	30.9	32.2
15	31.8	32.7	31.5	31.4	31.1	30.6	30.0
16	31.8	32.4	30.9	31.7	30.5	30.8	29.9
17	32.4	32.0	30.8	30.9	30.6	31.6	30.4
18	32.8	32.6	31.0	31.8	31.4	31.5	30.0
19	33.1	33.9	32.8	32.5	31.2	32.4	32.0
20	33.9	34.3	33.4	34.1	32.6	32.9	33.1
21	34.4	35.1	33.8	33.4	32.7	34.0	33.9
22	34.8	36.8	36.2	34.1	32.7	35.2	34.7
23	35.2	34.9	36.3	34.9	33.9	34.7	35.3
24	36.3	33.5	35.1	39.1	36.8	37.6	36.8

10-12	32.2	32.5	31.8	30.9	31.0	31.0	31.1
14-16	31.8	32.6	31.2	31.6	30.8	30.7	30.0
0-24	34.2	35.3	33.9	33.9	34.0	34.2	34.1

85TH PERCENTILE							
Hr Ending	Saturday 13-Nov-21	Sunday 14-Nov-21	Monday 15-Nov-21	Tuesday 16-Nov-21	Wednesday 17-Nov-21	Thursday 18-Nov-21	Friday 19-Nov-21
1	40.0	43.0	39.3	47.3	53.2	39.1	42.4
2	42.3	49.1	32.3	44.7	42.3	39.3	48.8
3	45.0	47.1	61.9	39.3	36.8	43.0	44.0
4	47.8	53.2	33.0	38.0	47.0	47.4	44.7
5	41.5	48.8	49.7	38.6	47.2	51.9	52.2
6	44.3	44.1	45.6	45.0	46.2	42.4	47.1
7	44.6	45.3	43.0	41.8	42.4	42.6	42.1
8	38.7	39.5	37.4	37.5	38.3	37.3	39.4
9	38.2	39.3	35.1	37.0	36.5	36.1	36.9
10	37.7	37.2	37.2	36.2	37.9	36.9	36.9
11	37.8	36.6	35.8	35.8	37.0	35.6	35.8
12	36.1	36.9	37.0	36.0	35.6	35.6	36.1
13	36.1	37.1	36.5	37.0	36.6	36.1	36.0
14	36.2	36.9	36.9	36.5	36.9	35.8	37.0
15	36.1	37.2	36.5	35.8	35.7	35.1	36.3
16	37.1	37.0	35.8	36.2	35.6	35.6	35.2
17	37.6	37.2	35.4	35.5	35.9	36.7	34.9
18	38.0	37.6	36.1	36.0	36.9	36.2	34.8
19	38.3	38.5	38.0	37.4	36.5	37.4	36.4
20	39.4	39.2	38.4	39.6	37.5	38.3	37.9
21	39.3	39.9	39.4	39.1	38.3	39.8	39.6
22	40.6	42.8	43.7	38.9	38.5	41.7	41.7
23	40.5	42.2	41.5	40.5	37.8	39.9	41.4
24	41.5	38.5	41.2	47.2	45.7	45.0	44.8

10-12	37.0	36.7	36.4	35.9	36.3	35.6	36.0
14-16	36.6	37.1	36.1	36.0	35.6	35.3	35.7
0-24	39.8	41.0	39.4	39.0	39.7	39.4	40.1

7 DAY AVERAGE SPEED	34.2
7 DAY AVERAGE 85th PERCENTILE	39.8

5 DAY OFF PEAK AVERAGE SPEED	31.0
5 DAY OFF PEAK AVERAGE 85th PERCENTILE	35.9

LOCATION: A539

Direction : SOUTHWESTBOUND

AVERAGE SPEEDS							
Hr Ending	Saturday 13-Nov-21	Sunday 14-Nov-21	Monday 15-Nov-21	Tuesday 16-Nov-21	Wednesday 17-Nov-21	Thursday 18-Nov-21	Friday 19-Nov-21
1	40.6	38.9	37.4	46.8	39.7	38.3	37.8
2	40.5	40.3	47.0	44.3	35.5	35.5	36.1
3	31.3	41.8	40.5	34.4	43.0	39.3	42.0
4	32.4	36.8	39.0	40.0	51.0	41.8	40.5
5	31.9	40.5	39.3	36.8	36.0	35.7	40.8
6	36.8	39.9	37.8	37.8	38.1	37.4	39.3
7	37.8	36.9	36.2	35.1	37.5	36.8	36.4
8	35.0	37.5	32.9	30.5	31.8	32.7	32.2
9	33.2	35.3	31.4	32.5	31.0	32.1	32.3
10	31.5	34.1	33.2	32.6	31.7	33.6	32.9
11	33.4	33.8	31.7	31.4	32.3	32.6	31.6
12	32.5	33.3	33.3	32.4	31.1	31.9	32.1
13	32.4	32.2	33.2	32.9	33.2	32.3	31.8
14	31.5	33.2	31.1	31.5	32.1	31.3	31.7
15	32.5	32.6	31.5	31.7	31.5	31.1	30.7
16	33.0	31.1	31.7	31.6	29.8	30.6	31.1
17	32.3	32.0	32.6	31.6	31.0	32.0	32.0
18	32.3	32.4	33.5	32.5	33.1	33.7	32.9
19	34.2	33.6	35.0	31.6	33.2	33.8	33.1
20	34.5	35.2	35.2	35.8	34.5	35.3	33.3
21	34.3	34.8	35.9	35.1	34.3	33.9	32.7
22	36.2	34.7	36.4	35.2	36.2	37.0	34.7
23	33.7	36.9	36.9	36.0	37.3	37.3	35.5
24	37.2	37.5	37.9	37.0	35.4	38.1	37.0
10-12	32.9	33.6	32.5	31.9	31.7	32.2	31.8
14-16	32.8	31.8	31.6	31.6	30.7	30.9	30.9
0-24	34.2	35.6	35.4	34.9	35.0	34.7	34.6

85TH PERCENTILE							
Hr Ending	Saturday 13-Nov-21	Sunday 14-Nov-21	Monday 15-Nov-21	Tuesday 16-Nov-21	Wednesday 17-Nov-21	Thursday 18-Nov-21	Friday 19-Nov-21
1	48.2	47.4	42.7	58.9	47.2	46.3	44.9
2	49.4	48.0	53.5	52.8	47.5	42.1	47.9
3	41.4	51.0	44.7	41.2	50.1	58.7	46.2
4	37.5	45.8	50.4	44.5	57.7	46.5	44.7
5	35.9	46.8	46.8	40.3	39.5	44.0	52.5
6	42.5	47.1	43.3	43.1	44.1	43.4	46.6
7	44.0	43.9	43.6	41.1	43.9	43.7	42.8
8	41.2	45.1	37.8	35.6	37.1	38.8	36.9
9	39.6	41.5	36.5	37.6	36.5	36.5	37.5
10	37.2	39.0	38.1	37.4	36.6	38.7	38.0
11	38.7	39.1	36.6	37.4	37.5	37.5	37.4
12	37.9	39.5	38.2	38.2	36.4	37.3	37.1
13	37.7	38.9	38.8	37.7	38.6	37.3	37.1
14	36.6	38.5	36.4	36.5	37.8	36.9	37.3
15	37.8	38.0	36.4	37.4	37.4	36.8	36.4
16	37.6	36.1	36.6	36.9	34.9	35.3	36.3
17	37.0	37.3	37.8	36.6	36.3	37.2	36.8
18	37.6	37.7	38.4	37.7	38.9	39.0	37.8
19	40.9	39.3	40.6	36.9	39.6	39.1	38.4
20	40.5	42.0	41.1	42.4	40.5	41.2	39.8
21	40.3	40.4	44.6	43.0	40.5	39.4	38.4
22	42.6	41.5	44.9	45.0	47.3	43.6	41.2
23	40.4	49.5	46.2	44.4	50.3	43.5	43.2
24	44.2	45.7	44.6	47.2	40.7	46.1	46.2
10-12	38.3	39.3	37.4	37.8	37.0	37.4	37.3
14-16	37.7	37.0	36.5	37.2	36.1	36.0	36.4
0-24	40.3	42.5	41.6	41.2	41.5	41.2	40.9

7 DAY AVERAGE SPEED	34.9
7 DAY AVERAGE 85th PERCENTILE	41.3

5 DAY OFF PEAK AVERAGE SPEED	31.6
5 DAY OFF PEAK AVERAGE 85th PERCENTILE	36.9

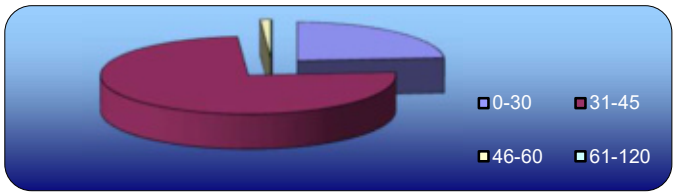
Automatic Classified Counts, Acrefair

LOCATION: A539

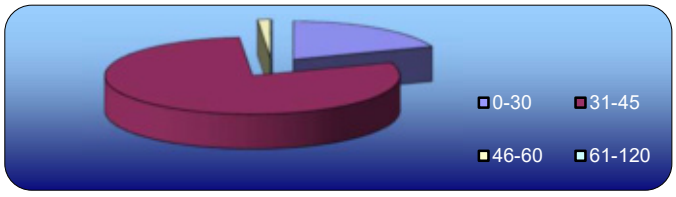
Direction : NORTHEASTBOUND

SPEED SUMMARY							
SPEED (MPH)	Saturday 13-Nov-21	Sunday 14-Nov-21	Monday 15-Nov-21	Tuesday 16-Nov-21	Wednesday 17-Nov-21	Thursday 18-Nov-21	Friday 19-Nov-21
0-30	997	682	1239	1138	1216	1368	1654
31-45	3152	2773	3011	3012	2557	3090	3420
46-60	48	49	35	34	39	40	56
61-120	1	1	4	1	3	0	3
TOTAL	4198	3505	4289	4185	3815	4498	5133

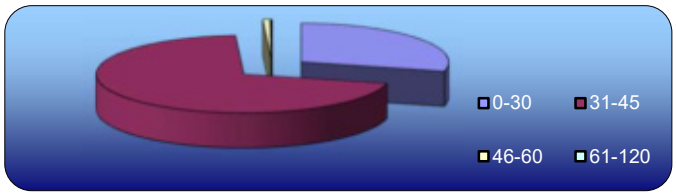
Saturday 13-Nov-21



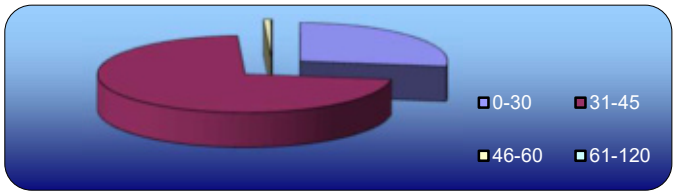
Sunday 14-Nov-21



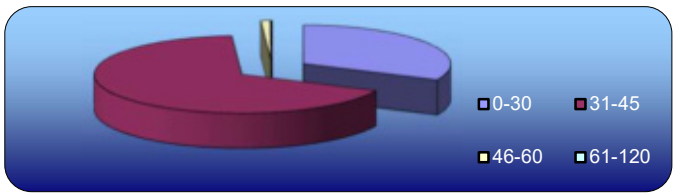
Monday 15-Nov-21



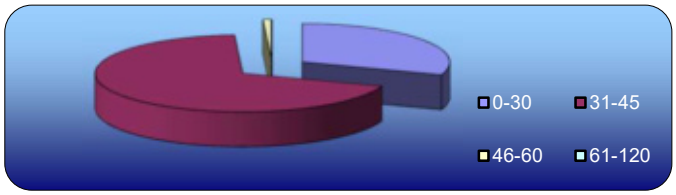
Tuesday 16-Nov-21



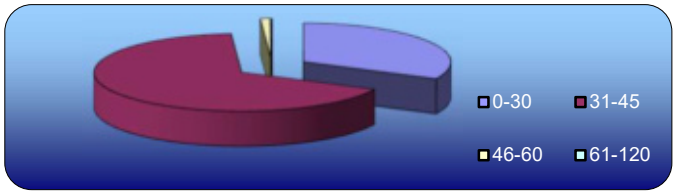
Wednesday 17-Nov-21



Thursday 18-Nov-21



Friday 19-Nov-21

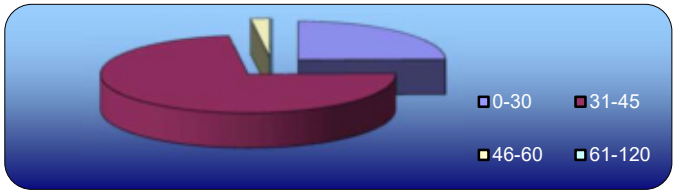


LOCATION: A539

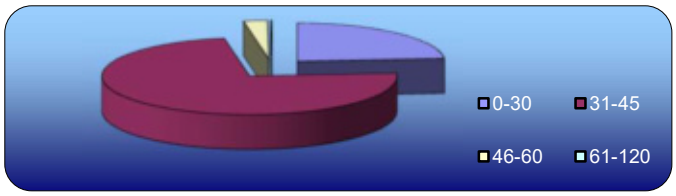
Direction : SOUTHWESTBOUND

SPEED SUMMARY							
SPEED (MPH)	Saturday 13-Nov-21	Sunday 14-Nov-21	Monday 15-Nov-21	Tuesday 16-Nov-21	Wednesday 17-Nov-21	Thursday 18-Nov-21	Friday 19-Nov-21
0-30	1010	907	1036	1215	1241	1186	1380
31-45	2982	2803	3097	2921	2732	3197	3318
46-60	84	99	72	65	83	80	80
61-120	1	6	6	8	4	3	3
TOTAL	4077	3815	4211	4209	4060	4466	4781

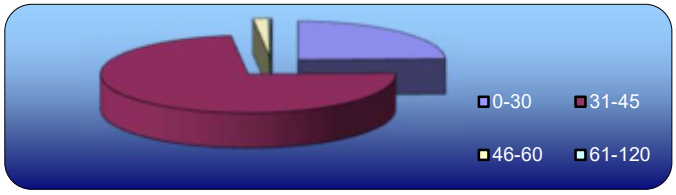
Saturday
13-Nov-21



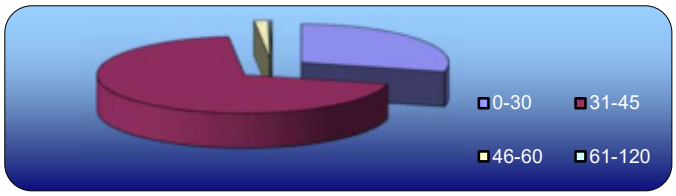
Sunday
14-Nov-21



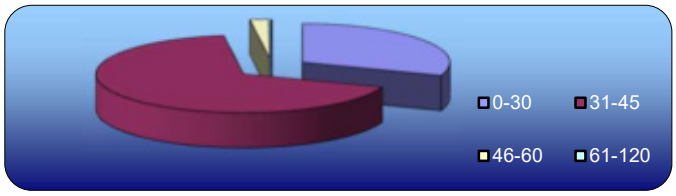
Monday
15-Nov-21



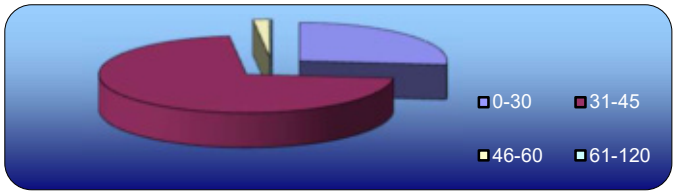
Tuesday
16-Nov-21



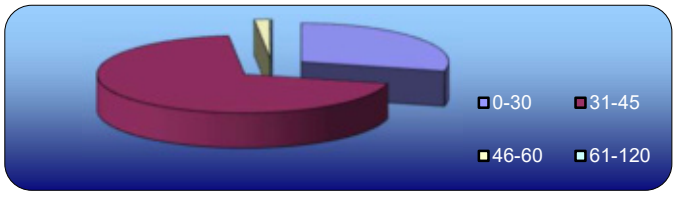
Wednesday
17-Nov-21



Thursday
18-Nov-21



Friday
19-Nov-21

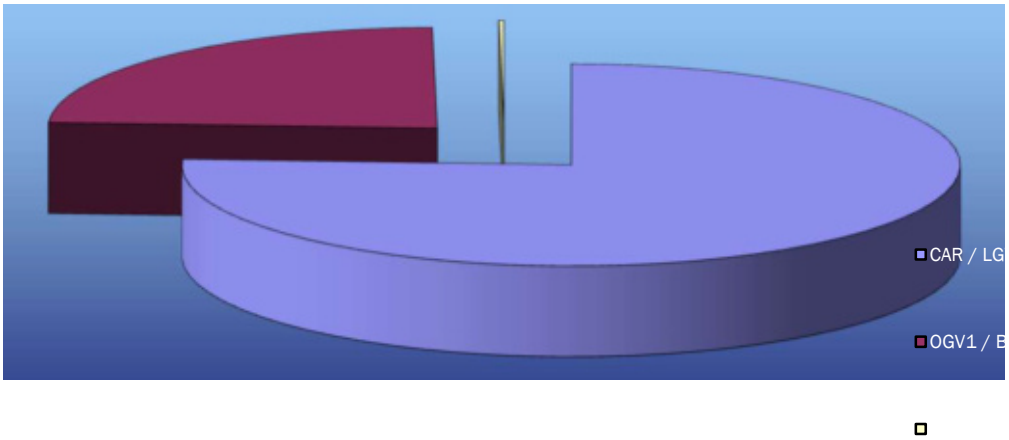


Automatic Classified Counts, Acrefair

LOCATION: A539

Direction : NORTHEASTBOUND

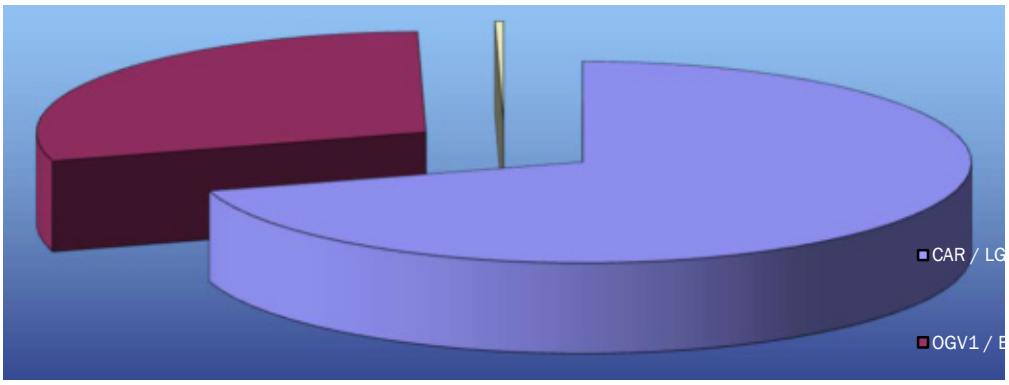
VEHICLE CLASSIFICATION				
	CAR / LGV / CARAVAN	OGV1 / BUS	OGV2	TOTAL
13-Nov-21				
7-19	2768	796	6	3570
6-22	3103	885	8	3996
6-24	3197	919	8	4124
0-24	3254	936	8	4198
14-Nov-21				
7-19	2388	645	6	3039
6-22	2629	715	6	3350
6-24	2681	730	6	3417
0-24	2750	749	6	3505
15-Nov-21				
7-19	2798	940	9	3747
6-22	3136	1030	9	4175
6-24	3190	1040	9	4239
0-24	3226	1053	10	4289
16-Nov-21				
7-19	2739	906	6	3651
6-22	3053	989	8	4050
6-24	3116	1004	8	4128
0-24	3159	1018	8	4185
17-Nov-21				
7-19	2456	762	9	3227
6-22	2803	853	10	3666
6-24	2878	866	10	3754
0-24	2923	882	10	3815
18-Nov-21				
7-19	2865	1000	8	3873
6-22	3242	1101	8	4351
6-24	3324	1116	8	4448
0-24	3361	1129	8	4498
19-Nov-21				
7-19	3368	1051	10	4429
6-22	3756	1162	13	4931
6-24	3847	1204	13	5064
0-24	3898	1222	13	5133
AVERAGE				
7-19	2769	871	8	3648
6-22	3103	962	9	4074
6-24	3176	983	9	4168
0-24	3224	998	9	4232



LOCATION: A539

Direction : SOUTHWESTBOUND

VEHICLE CLASSIFICATION				
	CAR / LGV / CARAVAN	OGV1 / BUS	OGV2	TOTAL
13-Nov-21				
7-19	2506	979	9	3494
6-22	2762	1070	9	3841
6-24	2866	1112	9	3987
0-24	2924	1144	9	4077
14-Nov-21				
7-19	2413	931	7	3351
6-22	2606	1025	8	3639
6-24	2652	1040	8	3700
0-24	2733	1073	9	3815
15-Nov-21				
7-19	2470	1142	17	3629
6-22	2761	1259	18	4038
6-24	2816	1277	19	4112
0-24	2876	1314	21	4211
16-Nov-21				
7-19	2520	1103	11	3634
6-22	2803	1220	11	4034
6-24	2865	1233	11	4109
0-24	2933	1264	12	4209
17-Nov-21				
7-19	2418	1058	17	3493
6-22	2716	1167	19	3902
6-24	2767	1178	19	3964
0-24	2832	1209	19	4060
18-Nov-21				
7-19	2644	1156	16	3816
6-22	2993	1281	17	4291
6-24	3062	1296	17	4375
0-24	3123	1325	18	4466
19-Nov-21				
7-19	2963	1095	12	4070
6-22	3328	1224	15	4567
6-24	3415	1263	15	4693
0-24	3474	1292	15	4781
AVERAGE				
7-19	2562	1066	13	3641
6-22	2853	1178	14	4045
6-24	2920	1200	14	4134
0-24	2985	1232	15	4231



S|C|P

APPENDIX 2

PROPOSED RESIDENTIAL
DEVELOPMENT BY GOWER HOMES



0 100 200 metres

N

LEGEND

- MINESHAFT COLLAPSE RADIUS
- MINESHAFT LOCATION / DIAMETER
- BRICK FACED RETAINING WALL WITH APPROXIMATE HEIGHT INDICATED
- TIMBER CRIBLOCK RETAINING WALL
- EXTERNAL STORE / SHED
- BIN STORE LOCATION
- ASPHALT ROAD AND PARKING BAYS
- ASPHALT FOOTPATH
- BLOCK PAVIOR (NON-ADOPTABLE)
- GRASSCRETE PARKING BAY
- PAVING
- RAIN GARDEN
- PROPOSED LEVEL (DRAFT)
- SECTION INDICATOR. REFER TO DRAWING 20 FOR CROSS SECTIONS

SCHEDULE OF ACCOMMODATION

	3P2B WHEELCHAIR BUNGALOW	1
	3P2B BUNGALOW	6
	2P1B WALK-UP APARTMENT	26
	4P2B HOUSE	58
	5P3B HOUSE	34
	5P3B HOUSE	13
	6P4B HOUSE	16
	7P4B HOUSE	5
TOTAL No. DWELLINGS		**159**

APPROXIMATE SITE AREA 71,802m²

NOTES:
ALL DIMENSIONS TO BE CHECKED AND CONFIRMED ON SITE PRIOR TO ANY WORKS OR FABRICATION.

DO NOT SCALE OFF THIS DRAWING.

ANY ERRORS, OMISSIONS OR DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF MUNRO ASSOCIATES IMMEDIATELY.

REV	DATE	DESCRIPTION	BY
H	11.01.23	Minor revisions to highway turning heads. Draft external levels added. Cross section indicators added. Drawing issued for PAC.	PO
G	06.10.22	Red line site boundary revised.	PO
F	05.10.22	Pedestrian link to public footpath added.	PO
E	04.10.22	Minor amendments following client comments.	PO
D	27.09.22	Revised scheme of 159 dwellings and detail added.	PO
C	25.05.22	Revised scheme of 160 dwellings	PO
B	16.05.22	Revised scheme of 160 dwellings	PO
A	08.04.22	Revised scheme of 170 dwellings	PO

Drawing Status
DRAFT

munro associates
www.munro-associates.com
UNIT 29, THE RURAL ENTERPRISE CENTRE, STAFFORD DRIVE, BATTLEFIELD ENTERPRISE PARK, SHREWSBURY, SY1 3FE.
T: 01743 341438 E: design@munro-associates.com

Client
Clwyd Alyn

Project
Residential Development
The Works, Acrefair
LL14 3HW

Scale
1:1000 @ A1
1:2000 @ A3

Date
March 2022

Drawn
P Oliver

Drawing Title
SITE LAYOUT

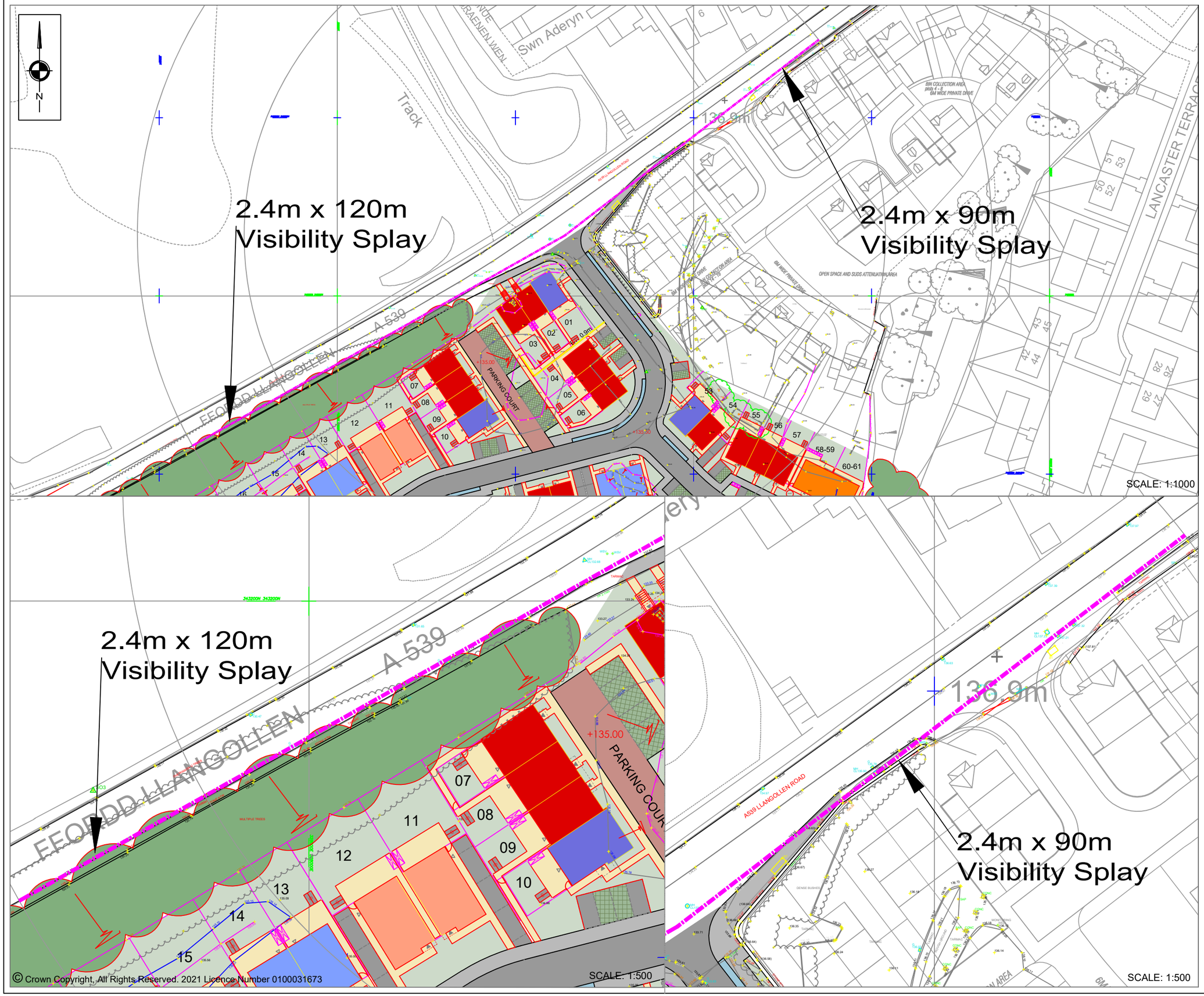
Project No.	Drawing No.	Revision
21-231	**10**	**H**

© THE CONTENTS OF THIS DRAWING ARE THE COPYRIGHT OF MUNRO ASSOCIATES. IT MUST NOT BE REPRODUCED NOR AMENDED BY A THIRD PARTY WITHOUT OUR WRITTEN PERMISSION.

Munro Associates (Architectural Services) Limited
Registered Office: Charlton House, Drayton's Passage, Shoplatch, Shrewsbury, Shropshire, SY1 1HF.
Registered in England and Wales
Registration No. 08117820 Vat No. 650 8829 15

S|C|P

APPENDIX 3



NOTES

REVISIONS

REV	DESCRIPTION	DATE	BY
-	-	-	-

SCP

Transportation Planning : Infrastructure Design

Colwyn Chambers, 19 York Street, Manchester, M2 3BA, Tel 0161 832 4400, www.scptransport.co.uk, Email info@scptransport.co.uk

Client Name:
CLIENT NAME

Project Title:
PROPOSED RESIDENTIAL DEVELOPMENT, LLANGOLLEN ROAD, ACREFAIR, WREXHAM

Drawing Title:
VISIBILITY SPLAYS AT SITE ACCESS

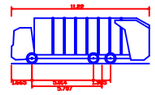
Drawn By:	Date:
NT	18.11.2022
Checked:	Scale:
DR	AS SPECIFIED @ A3
Status:	Approved/Unapproved:
PLANNING	-

Drawing No.	Rev.
SCP/210486/D01	-

S|C|P

APPENDIX 4

NOTES



Phoenix 2 Dua Recycler (P2-15W with Elite 6x4 chassis)

Overall Length	11.220m
Overall Width	2.490m
Overall Body Height	3.756m
Min Body Ground Clearance	0.549m
Track Width	2.490m
Lock to lock time	4.0s
Kerb to Kerb Turning Radius	11.350m

SCALE - 1:500 @ A3

REVISIONS

REV	DESCRIPTION	DATE	BY
-	-	-	-

S C P

Transportation Planning : Infrastructure Design

Colwyn Chambers, 19 York Street, Manchester, M2 3BA, Tel 0161 832 4400, www.scptransport.co.uk, Email info@scptransport.co.uk

Client Name:

CLWYD ALYN HOUSING LTD

Project Title:

PROPOSED RESIDENTIAL DEVELOPMENT, LLANGOLLEN ROAD, ACREFAIR, WREXHAM

Drawing Title:

SWEPT PATH ASSESSMENT OF A REFUSE VEHICLE

Drawn By: NT	Date: 20.01.2023
Checked: DR	Scale: 1:1000 @ A3 UNLESS SPECIFIED
Status: PLANNING	Approved/Unapproved: -
Drawing No. SCP/210486/ATR01	Rev. -

© Crown Copyright, All Rights Reserved. 2023 Licence Number 0100031673

S|C|P

APPENDIX 5

Calculation Reference: AUDIT-726001-221108-1128

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	**SOUTH EAST**		
	ES	EAST SUSSEX	4 days
	EX	ESSEX	1 days
	HC	HAMPSHIRE	6 days
	HF	HERTFORDSHIRE	1 days
	KC	KENT	5 days
	SC	SURREY	3 days
	SP	SOUTHAMPTON	1 days
	WS	WEST SUSSEX	5 days
03	**SOUTH WEST**		
	DC	DORSET	1 days
	DV	DEVON	2 days
04	**EAST ANGLIA**		
	NF	NORFOLK	5 days
05	**EAST MIDLANDS**		
	DY	DERBY	1 days
	LE	LEICESTERSHIRE	1 days
06	**WEST MIDLANDS**		
	ST	STAFFORDSHIRE	1 days
09	**NORTH**		
	DH	DURHAM	3 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 380 (units:)
Range Selected by User: 50 to 400 (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: 01/01/14 to 30/06/22

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	8 days
Tuesday	9 days
Wednesday	7 days
Thursday	11 days
Friday	5 days

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

Selected survey types:

Manual count	40 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)	6

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	31
Village	6
Out of Town	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, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3	40 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 500m Range:
All Surveys Included
Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	4 days
5,001 to 10,000	14 days
10,001 to 15,000	11 days
15,001 to 20,000	6 days
20,001 to 25,000	4 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	6 days
25,001 to 50,000	7 days
50,001 to 75,000	7 days
75,001 to 100,000	7 days
100,001 to 125,000	1 days
125,001 to 250,000	9 days
250,001 to 500,000	3 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	28 days
1.6 to 2.0	4 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	20 days
No	20 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	40 days

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

LIST OF SITES relevant to selection parameters

1 **DC-03-A-09** **MIXED HOUSES** **DORSET**
A350
SHAFTESBURY

Edge of Town
No Sub Category
Total No of Dwellings: 50
Survey date: FRIDAY *19/11/21* *Survey Type: MANUAL*

2 **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*

3 **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*

4 **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*

5 **DV-03-A-02** **HOUSES & BUNGALOWS** **DEVON**
MILLHEAD ROAD
HONITON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 116
Survey date: FRIDAY *25/09/15* *Survey Type: MANUAL*

6 **DV-03-A-03** **TERRACED & SEMI DETACHED** **DEVON**
LOWER BRAND LANE
HONITON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 70
Survey date: MONDAY *28/09/15* *Survey Type: MANUAL*

7 **DY-03-A-01** **MIXED HOUSES** **DERBY**
RADBOURNE LANE
DERBY

Edge of Town
Residential Zone
Total No of Dwellings: 371
Survey date: TUESDAY *10/07/18* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

8 **ES-03-A-03** **MIXED HOUSES & FLATS** **EAST SUSSEX**
SHEPHAM LANE
POLEGATE

Edge of Town
Residential Zone
Total No of Dwellings: 212
Survey date: MONDAY *11/07/16* *Survey Type: MANUAL*

9 **ES-03-A-04** **MIXED HOUSES & FLATS** **EAST SUSSEX**
NEW LYDD ROAD
CAMBER

Edge of Town
Residential Zone
Total No of Dwellings: 134
Survey date: FRIDAY *15/07/16* *Survey Type: MANUAL*

10 **ES-03-A-05** **MIXED HOUSES & FLATS** **EAST SUSSEX**
RATTLE ROAD
NEAR EASTBOURNE
STONE CROSS
Edge of Town
Residential Zone
Total No of Dwellings: 99
Survey date: WEDNESDAY *05/06/19* *Survey Type: MANUAL*

11 **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*

12 **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*

13 **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*

14 **HC-03-A-24** **MIXED HOUSES & FLATS** **HAMPSHIRE**
STONEHAM LANE
EASTLEIGH

Edge of Town
Residential Zone
Total No of Dwellings: 243
Survey date: WEDNESDAY *10/11/21* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

15 **HC-03-A-26** **MIXED HOUSES & FLATS** **HAMPSHIRE**
BOTLEY ROAD
WHITELEY

Edge of Town
Out of Town
Total No of Dwellings: 270
Survey date: THURSDAY *24/06/21* *Survey Type: MANUAL*

16 **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*

17 **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*

18 **HC-03-A-29** **MIXED HOUSES & FLATS** **HAMPSHIRE**
CROW LANE
RINGWOOD
CROW
Edge of Town
Residential Zone
Total No of Dwellings: 195
Survey date: THURSDAY *30/06/22* *Survey Type: MANUAL*

19 **HF-03-A-03** **MIXED HOUSES** **HERTFORDSHIRE**
HARE STREET ROAD
BUNTINGFORD

Edge of Town
Residential Zone
Total No of Dwellings: 160
Survey date: MONDAY *08/07/19* *Survey Type: MANUAL*

20 **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*

21 **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*

LIST OF SITES relevant to selection parameters (Cont.)

22 **KC-03-A-06** **MIXED HOUSES & FLATS** **KENT**
MARGATE ROAD
HERNE BAY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 363
Survey date: WEDNESDAY *27/09/17* *Survey Type: MANUAL*

23 **KC-03-A-07** **MIXED HOUSES** **KENT**
RECULVER ROAD
HERNE BAY

Edge of Town
Residential Zone
Total No of Dwellings: 288
Survey date: WEDNESDAY *27/09/17* *Survey Type: MANUAL*

24 **KC-03-A-08** **MIXED HOUSES** **KENT**
MAIDSTONE ROAD
CHARING

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 159
Survey date: TUESDAY *22/05/18* *Survey Type: MANUAL*

25 **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*

26 **NF-03-A-04** **MIXED HOUSES** **NORFOLK**
NORTH WALSHAM ROAD
NORTH WALSHAM

Edge of Town
Residential Zone
Total No of Dwellings: 70
Survey date: WEDNESDAY *18/09/19* *Survey Type: MANUAL*

27 **NF-03-A-06** **MIXED HOUSES** **NORFOLK**
BEAUFORT WAY
GREAT YARMOUTH
BRADWELL
Edge of Town
Residential Zone
Total No of Dwellings: 275
Survey date: MONDAY *23/09/19* *Survey Type: MANUAL*

28 **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*

LIST OF SITES relevant to selection parameters (Cont.)

29 **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*

30 **NF-03-A-30** **MIXED HOUSES** **NORFOLK**
BRANDON ROAD
SWAFFHAM

Edge of Town
Residential Zone
Total No of Dwellings: 266
Survey date: THURSDAY *23/09/21* *Survey Type: MANUAL*

31 **SC-03-A-04** **DETACHED & TERRACED** **SURREY**
HIGH ROAD
BYFLEET

Edge of Town
Residential Zone
Total No of Dwellings: 71
Survey date: THURSDAY *23/01/14* *Survey Type: MANUAL*

32 **SC-03-A-05** **MIXED HOUSES** **SURREY**
REIGATE ROAD
HORLEY

Edge of Town
Residential Zone
Total No of Dwellings: 207
Survey date: MONDAY *01/04/19* *Survey Type: MANUAL*

33 **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*

34 **SP-03-A-02** **MIXED HOUSES & FLATS** **SOUTHAMPTON**
BARNFIELD WAY
NEAR SOUTHAMPTON
HEDGE END
Edge of Town
Out of Town
Total No of Dwellings: 250
Survey date: TUESDAY *12/10/21* *Survey Type: MANUAL*

35 **ST-03-A-07** **DETACHED & SEMI-DETACHED** **STAFFORDSHIRE**
BEACONSIDE
STAFFORD
MARSTON GATE
Edge of Town
Residential Zone
Total No of Dwellings: 248
Survey date: WEDNESDAY *22/11/17* *Survey Type: MANUAL*

36 **WS-03-A-04** **MIXED HOUSES** **WEST SUSSEX**
HILLS FARM LANE
HORSHAM
BROADBRIDGE HEATH
Edge of Town
Residential Zone
Total No of Dwellings: 151
Survey date: THURSDAY *11/12/14* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

37 **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*

38 **WS-03-A-08** **MIXED HOUSES** **WEST SUSSEX**
ROUNDSTONE LANE
ANGMERING

Edge of Town
Residential Zone
Total No of Dwellings: 180
Survey date: THURSDAY *19/04/18* *Survey Type: MANUAL*

39 **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*

40 **WS-03-A-15** **MIXED HOUSES** **WEST SUSSEX**
HILLAND ROAD
BILLINGSHURST

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 380
Survey date: TUESDAY *23/11/21* *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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
SF-03-A-09	Surveyed during COVID restrictions
SF-03-A-10	Surveyed during COVID restrictions
WS-03-A-12	Surveyed during COVID restrictions
WS-03-A-13	Surveyed during COVID restrictions

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.77

	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	40	156	0.078	40	156	0.301	40	156	0.379
08:00 - 09:00	40	156	0.125	**40**	**156**	**0.361**	**40**	**156**	**0.486**
09:00 - 10:00	40	156	0.132	40	156	0.167	40	156	0.299
10:00 - 11:00	40	156	0.122	40	156	0.155	40	156	0.277
11:00 - 12:00	40	156	0.126	40	156	0.147	40	156	0.273
12:00 - 13:00	40	156	0.151	40	156	0.148	40	156	0.299
13:00 - 14:00	40	156	0.158	40	156	0.147	40	156	0.305
14:00 - 15:00	40	156	0.157	40	156	0.171	40	156	0.328
15:00 - 16:00	40	156	0.246	40	156	0.159	40	156	0.405
16:00 - 17:00	40	156	0.266	40	156	0.157	40	156	0.423
17:00 - 18:00	**40**	**156**	**0.336**	40	156	0.140	40	156	0.476
18:00 - 19:00	40	156	0.272	40	156	0.142	40	156	0.414
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.169			2.195			4.364

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.*

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected:	50 - 380 (units:)
Survey date date range:	01/01/14 - 30/06/22
Number of weekdays (Monday-Friday):	40
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	7
Surveys manually removed from selection:	4

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	40	156	0.004	40	156	0.008	40	156	0.012
08:00 - 09:00	40	156	0.004	**40**	**156**	**0.013**	40	156	0.017
09:00 - 10:00	40	156	0.001	40	156	0.003	40	156	0.004
10:00 - 11:00	40	156	0.003	40	156	0.004	40	156	0.007
11:00 - 12:00	40	156	0.002	40	156	0.004	40	156	0.006
12:00 - 13:00	40	156	0.004	40	156	0.003	40	156	0.007
13:00 - 14:00	40	156	0.002	40	156	0.001	40	156	0.003
14:00 - 15:00	40	156	0.003	40	156	0.002	40	156	0.005
15:00 - 16:00	40	156	0.008	40	156	0.005	40	156	0.013
16:00 - 17:00	**40**	**156**	**0.011**	40	156	0.007	**40**	**156**	**0.018**
17:00 - 18:00	40	156	0.009	40	156	0.005	40	156	0.014
18:00 - 19:00	40	156	0.005	40	156	0.005	40	156	0.010
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.056			0.060			0.116

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	40	156	0.016	40	156	0.036	40	156	0.052
08:00 - 09:00	40	156	0.033	**40**	**156**	**0.082**	40	156	0.115
09:00 - 10:00	40	156	0.038	40	156	0.041	40	156	0.079
10:00 - 11:00	40	156	0.029	40	156	0.037	40	156	0.066
11:00 - 12:00	40	156	0.027	40	156	0.027	40	156	0.054
12:00 - 13:00	40	156	0.024	40	156	0.025	40	156	0.049
13:00 - 14:00	40	156	0.030	40	156	0.023	40	156	0.053
14:00 - 15:00	40	156	0.030	40	156	0.034	40	156	0.064
15:00 - 16:00	**40**	**156**	**0.081**	40	156	0.044	**40**	**156**	**0.125**
16:00 - 17:00	40	156	0.053	40	156	0.038	40	156	0.091
17:00 - 18:00	40	156	0.048	40	156	0.029	40	156	0.077
18:00 - 19:00	40	156	0.038	40	156	0.038	40	156	0.076
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.447			0.454			0.901

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	40	156	0.001	40	156	0.027	40	156	0.028
08:00 - 09:00	40	156	0.001	**40**	**156**	**0.038**	**40**	**156**	**0.039**
09:00 - 10:00	40	156	0.002	40	156	0.012	40	156	0.014
10:00 - 11:00	40	156	0.005	40	156	0.007	40	156	0.012
11:00 - 12:00	40	156	0.004	40	156	0.005	40	156	0.009
12:00 - 13:00	40	156	0.006	40	156	0.007	40	156	0.013
13:00 - 14:00	40	156	0.005	40	156	0.005	40	156	0.010
14:00 - 15:00	40	156	0.006	40	156	0.005	40	156	0.011
15:00 - 16:00	**40**	**156**	**0.025**	40	156	0.008	40	156	0.033
16:00 - 17:00	40	156	0.019	40	156	0.004	40	156	0.023
17:00 - 18:00	40	156	0.023	40	156	0.003	40	156	0.026
18:00 - 19:00	40	156	0.024	40	156	0.004	40	156	0.028
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.121			0.125			0.246

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.*

S|C|P

APPENDIX 6

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462
© Copyright TRL Limited, 2019

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

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Site Access.j9
Path: M:\Job Library\2021\210486 - Llangollen Road, Acrefair, Wrexham\Traffic Data
Report generation date: 21/12/2022 11:40:45

«2028 Base + Comm, AM
»Junction Network
»Arms
»Traffic Demand
»Origin-Destination Data
»Vehicle Mix
»Results

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2028 Base + Comm									
Stream B-C	D1	0.0	0.00	0.00	A	D2	0.0	0.00	0.00	A
Stream B-A		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2028 Base + Comm + Dev									
Stream B-C	D3	0.1	7.86	0.07	A	D4	0.0	7.23	0.03	A
Stream B-A		0.1	13.40	0.09	B		0.0	12.25	0.04	B
Stream C-AB		0.0	7.44	0.02	A		0.1	7.39	0.06	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	
Site number	
Date	15/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SCP\natalie.ternent
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Analysis Set Details

ID	Network flow scaling factor (%)
A1	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)
D1	2028 Base + Comm	AM	ONE HOUR	07:45	09:15	15

2028 Base + Comm, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A539 (East)		Major
B	Site Access		Minor
C	A539 (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.40			125.0	✓	1.00

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	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	8.20	4.20	2.75	2.75	2.75		1.00	24	32

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	556	0.100	0.252	0.158	0.359
B-C	715	0.108	0.272	-	-
C-B	646	0.246	0.246	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	582	100.000
B		✓	0	100.000
C		✓	460	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	582
	B	0	0	0
	C	460	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	23
	B	0	0	0
	C	27	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	596	0.000	0	0.0	0.000	A
B-A	0	391	0.000	0	0.0	0.000	A
C-AB	0	1222	0.000	0	0.0	0.000	A
C-A	346			346			
A-B	0			0			
A-C	438			438			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	573	0.000	0	0.0	0.000	A
B-A	0	359	0.000	0	0.0	0.000	A
C-AB	0	1175	0.000	0	0.0	0.000	A
C-A	414			414			
A-B	0			0			
A-C	523			523			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	541	0.000	0	0.0	0.000	A
B-A	0	315	0.000	0	0.0	0.000	A
C-AB	0	1109	0.000	0	0.0	0.000	A
C-A	506			506			
A-B	0			0			
A-C	641			641			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	541	0.000	0	0.0	0.000	A
B-A	0	315	0.000	0	0.0	0.000	A
C-AB	0	1109	0.000	0	0.0	0.000	A
C-A	506			506			
A-B	0			0			
A-C	641			641			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	573	0.000	0	0.0	0.000	A
B-A	0	359	0.000	0	0.0	0.000	A
C-AB	0	1175	0.000	0	0.0	0.000	A
C-A	414			414			
A-B	0			0			
A-C	523			523			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	596	0.000	0	0.0	0.000	A
B-A	0	391	0.000	0	0.0	0.000	A
C-AB	0	1222	0.000	0	0.0	0.000	A
C-A	346			346			
A-B	0			0			
A-C	438			438			

S|C|P

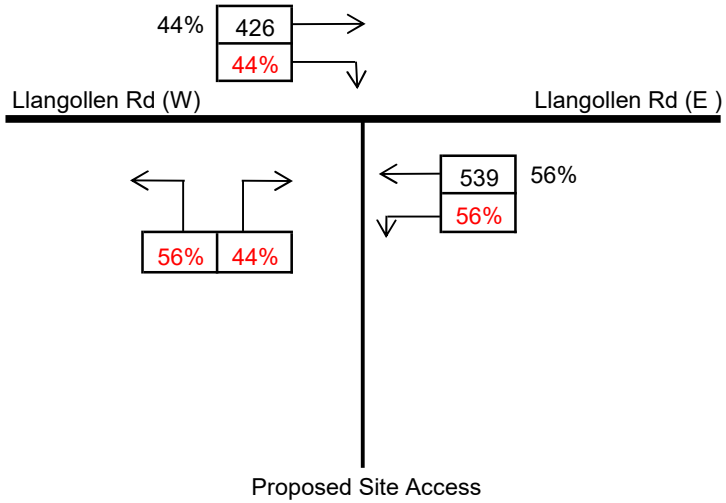
FIGURES

AM Peak

08:00 - 09:00

Two-way flow

964.6

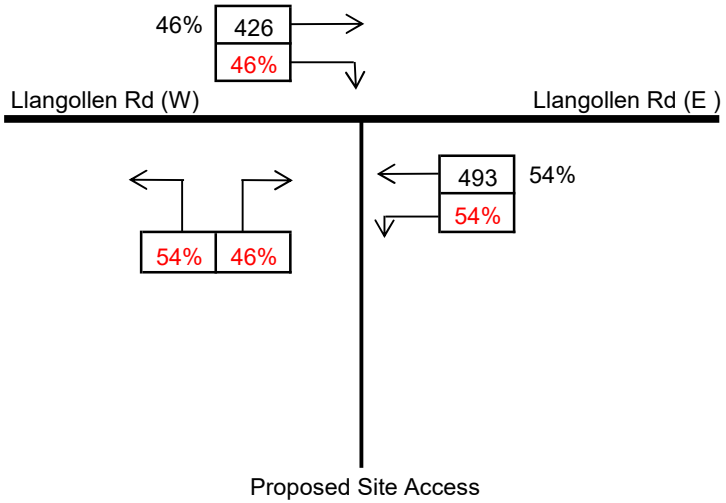


PM Peak

15:00 - 16:00

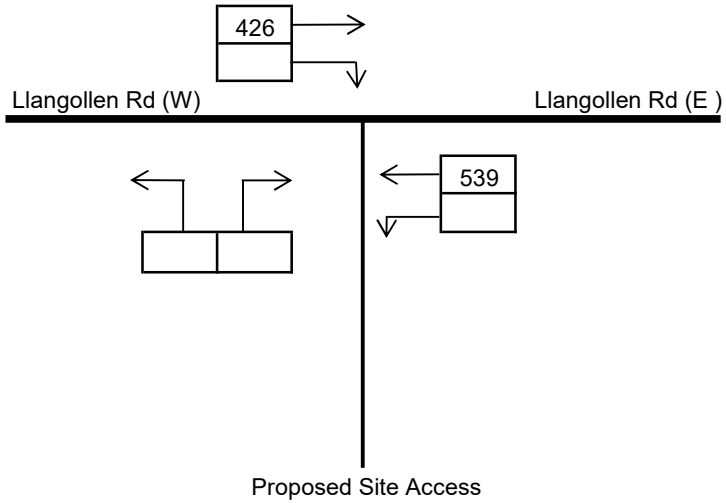
Two-way flow

918.3

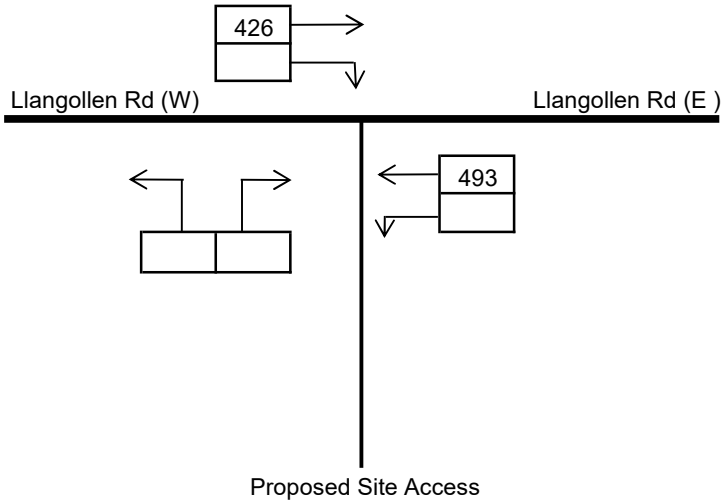


S C P Transportation Planning : Infrastructure Design	**Distribution**	**12/01/2023**	Job No: 210486
	Proposed Residential Development, Acrefair, Wrexham	**Traffic Figure 2**	

AM Peak
08:00 - 09:00



PM Peak
15:00 - 16:00



Note: Data in PCUs

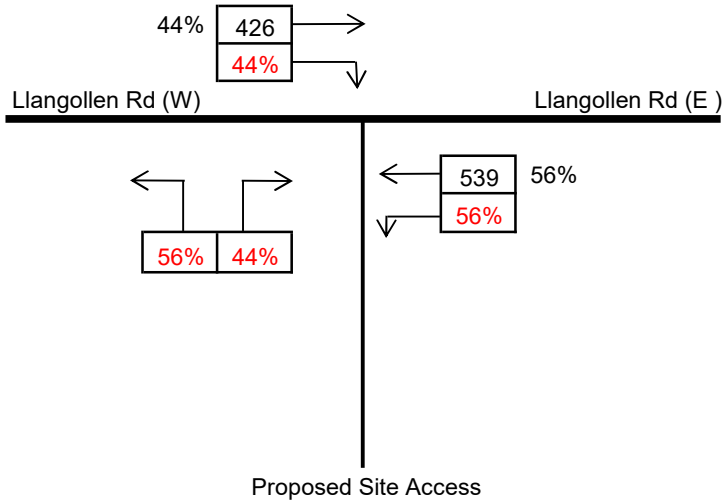
SCP Transportation Planning : Infrastructure Design	**Base**	**12/01/2023**	Job No: 210486
	Proposed Residential Development, Acrefair, Wrexham	**Traffic Figure 1**	

AM Peak

08:00 - 09:00

Two-way flow

964.6

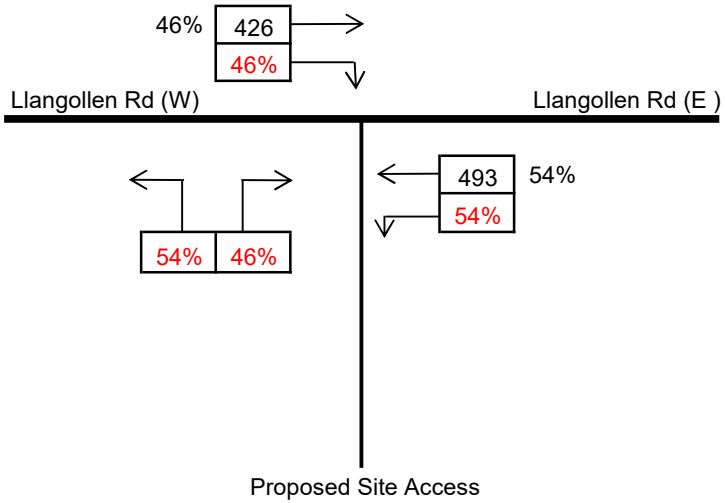


PM Peak

15:00 - 16:00

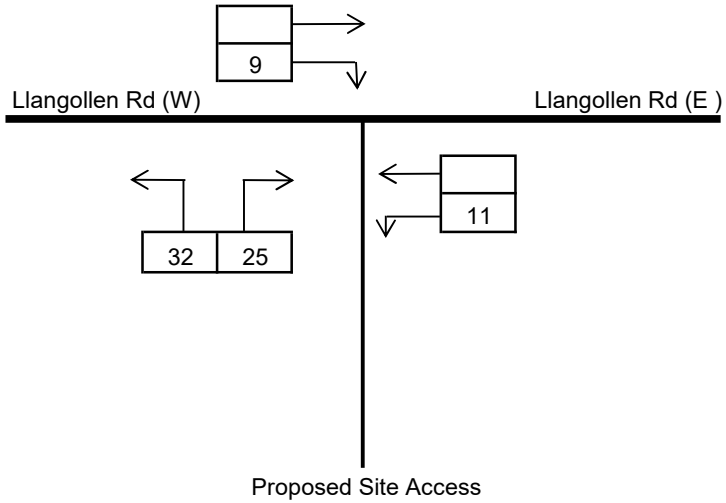
Two-way flow

918.3

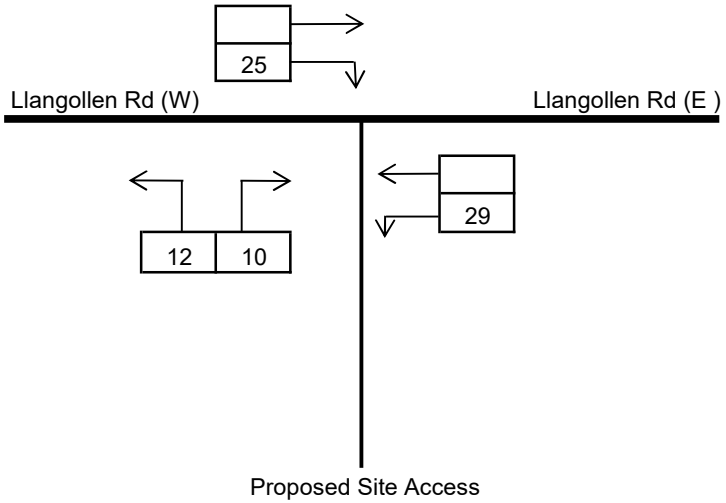


S C P Transportation Planning : Infrastructure Design	**Distribution**	**12/01/2023**	Job No: 210486
	Proposed Residential Development, Acrefair, Wrexham	**Traffic Figure 2**	

AM Peak



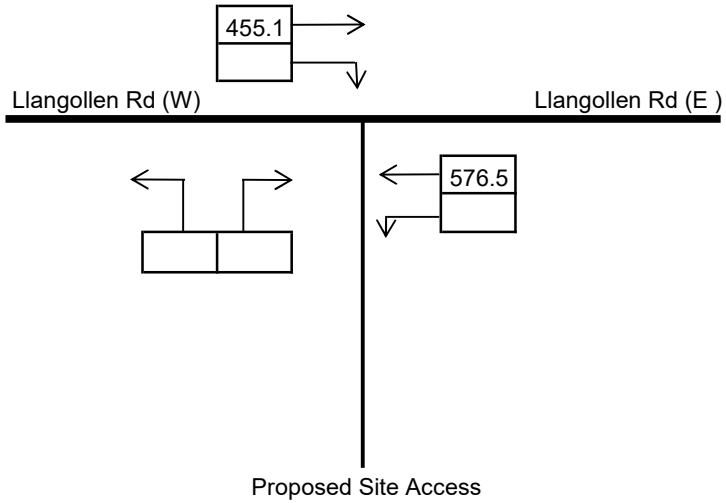
PM Peak



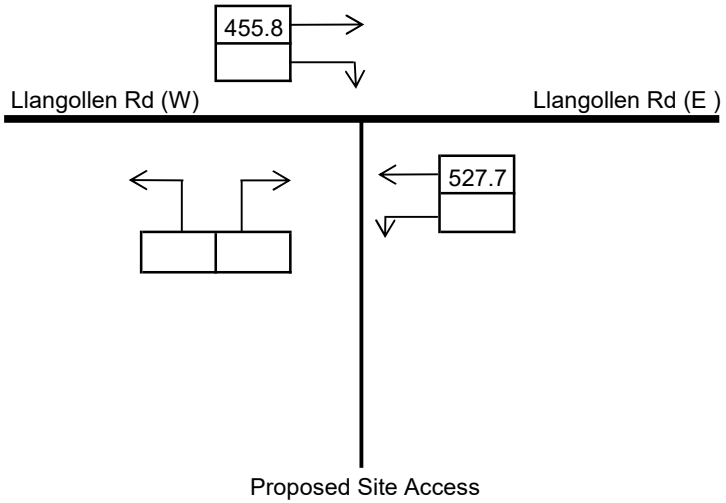
Note: Data in PCUs

S C P Transportation Planning : Infrastructure Design	**Development Trip Generation**	**12/01/2023**	Job No: 210486
	Proposed Residential Development, Acrefair, Wrexham	**Traffic Figure 3**	

AM Peak



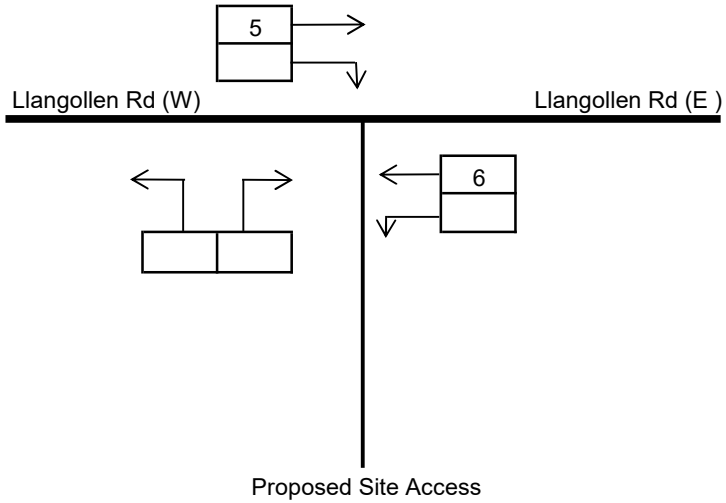
PM Peak



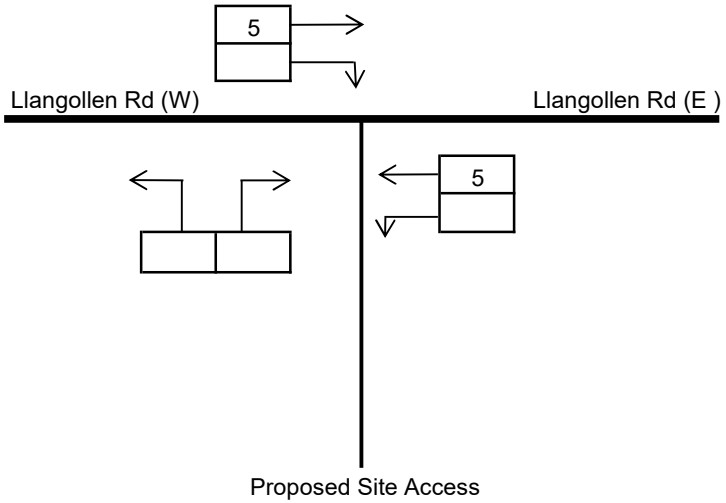
Note: Data in PCUs

S C P Transportation Planning : Infrastructure Design	**Base**	**12/01/2023**	Job No: 210486
	Proposed Residential Development, Acrefair, Wrexham	**Traffic Figure 4**	

AM Peak



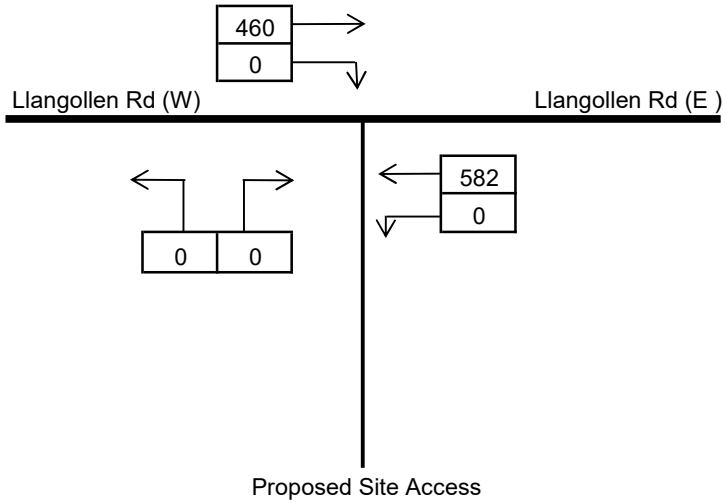
PM Peak



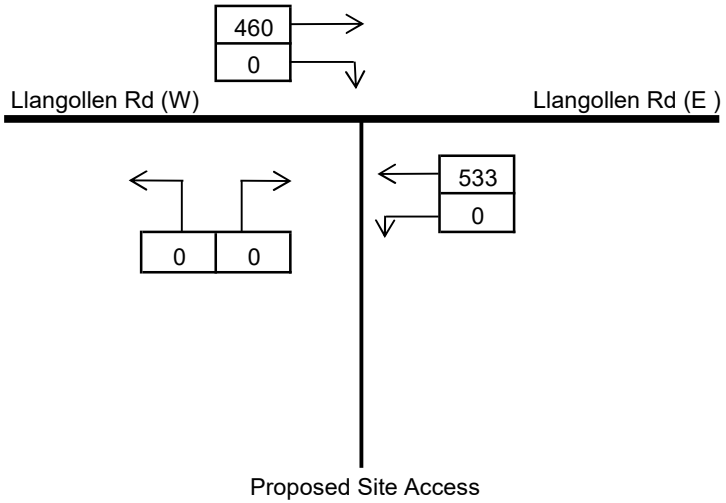
Note: Data in PCUs

S C P Transportation Planning : Infrastructure Design	**Committed Development**	**12/01/2023**	Job No: 210486
	Proposed Residential Development, Acrefair, Wrexham	**Traffic Figure 5**	

AM Peak



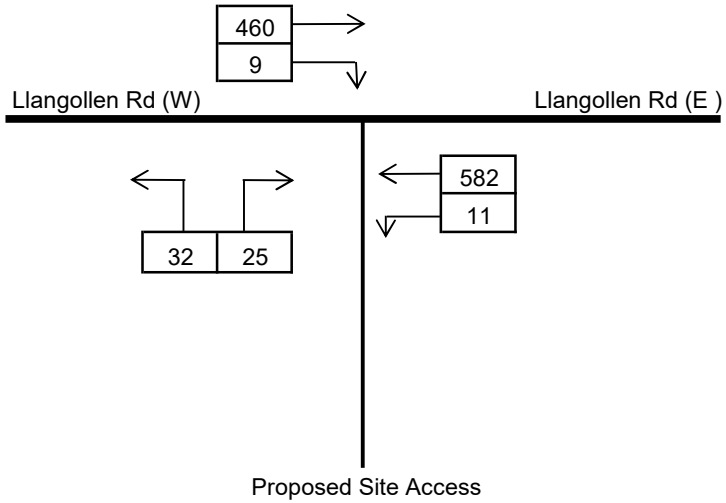
PM Peak



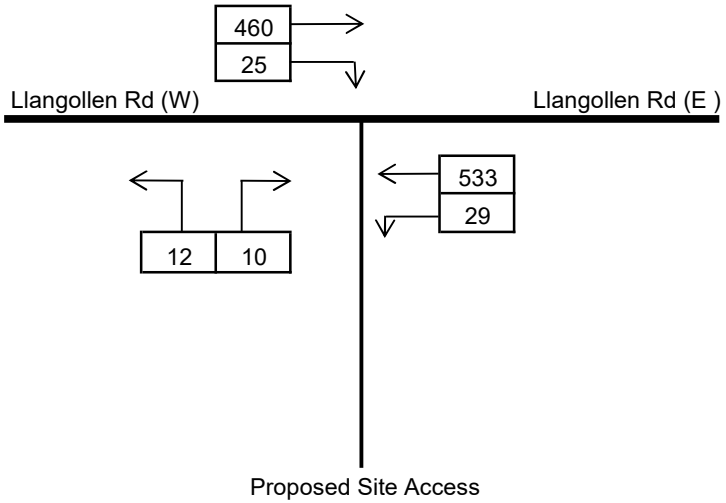
Note: Data in PCUs

SCP Transportation Planning : Infrastructure Design	**Base 2028 + Committed Development**	**12/01/2023**	Job No: 210486
	Proposed Residential Development, Acrefair, Wrexham	**Traffic Figure 6**	

AM Peak



PM Peak



Note: Data in PCUs

SCP Transportation Planning : Infrastructure Design	**Base 2028 + Committed Development + Development**	**12/01/2023**	Job No: 210486
	Proposed Residential Development, Acrefair, Wrexham	**Traffic Figure 7**	