LDP-EBD-HN1.3.2

Pell Frischmann

Proposed Residential Development, Land off Highmere Drive, Connah's Quay

Transport Assessment

April 2019

Prepared for:

J. A. Thomas & Son

excellence through innovation

REVISION RECORD Report Ref: 102394 / 101 / R01					
Rev	**Description**	**Date**	**Originator**	**Checked**	**Approved**
-	1st Draft	10.04.19	C Ebbrell	R Ellam	R Ellam

Prepared for:

J. A. Thomas & Son

Prepared by:

Pell Frischmann
Piccadilly House
49 Piccadilly
Manchester
M1 2AP

CONTENTS

1. INTRODUCTION 1
Overview 1

2. REVELANT TRANSPORT PLANNING POLICY 3
Introduction 3
National Planning Policy Framework (NPPF) 2019 3
Flintshire Local Development Plan 2015-2030 3
Flintshire Unitary Development Plan 2000-2015 4

3. EXISTING HIGHWAY NETWORK 5
Existing Site 5
Local Highway Network 5
Personal Injury Accident (PIA) Review 6

4. DERIVATION OF TRAFFIC FLOWS 10
Existing Traffic Flows 10
Traffic Growth 10
Committed Development 11

5. DEVELOPMENT PROPOSALS & ACCESS STRATEGY 12
Vehicular Access Strategy 12
Highmere Drive 12
Pedestrian & Cycle Access 13

6. SUSTAINABLE ACCESSIBILITY 15

7. TRIP GENERATION AND DISTRIBUTION 18
Trip Generation 18
Trip Distribution 18
With Development Traffic Flows 19

8. JUNCTION ASSESSMENTS 20
Introduction 20
Highmere Drive / Golftyn Lane 20
Golftyn Lane / Kelsterton Road 21
Ffordd Llanarth / Mold Road 22

9. SUMMARY & CONCLUSIONS 24

APPENDICES

Appendix A – FCC Scoping Response

Appendix B – Traffic Survey Results

Appendix C – Proposed Site Layout Plan

Appendix D – Site Visit Photographs

Appendix E – TRICS Outputs

Appendix F – Correspondence with FCC Regarding Trip Rates

Appendix G – Traffic Distribution

Appendix H – Highmere Drive / Golftyn Lane Junction PICADY Output

Appendix I – Golftyn Lane / Kelsterton Road Junction PICADY Output

Appendix J – Ffordd Llanarth / Mold Road Junction ARCADY Output

1. INTRODUCTION

Overview

1.1.1 Pell Frischmann has been commissioned by J. A. Thomas & Son to prepare a Transport Assessment in relation to proposed residential development at a site on land off Highmere Drive, Connah's Quay, Flintshire.

1.1.2 The development site is located immediately to the west of Highmere Drive, and is currently undeveloped agricultural land. The location of the site is shown on **Plan 1**.

Plan 1 – Site Location

1.1.3 The development proposals comprise the construction of up to 212 residential dwellings at the site, along with associated highways infrastructure and landscaping works.

1.1.4 The site will be accessed via a new priority access onto Highmere Drive.

1.1.5 This Transport Assessment (TA) addresses the transportation and highways issues associated with the proposed development, and has been informed by initial scoping discussions with the relevant highway authority, Flintshire County Council (FCC). A record of that scoping correspondence is attached at **Appendix A**.

1.1.6 Following this introduction, the TA covers the following aspects:

- The relevant transport planning policy;
- The existing conditions on the local highway network;
- The forecast trip generation and distribution from the proposed site, onto the wider network;
- Analysis of junction performance with and without the development; and
- An overall summary of the traffic related impacts of the development.

2. REVELANT TRANSPORT PLANNING POLICY

Introduction

2.1.1 This section of the report considers the relevant local, regional and national transport planning policy relevant to the proposed development.

National Planning Policy Framework (NPPF) 2019

2.1.2 The revised National Planning Policy Framework (NPPF) was published by the Ministry of Housing, Communities & Local Government in February 2019.

2.1.3 The NPPF emphasises a favourability towards sustainable development, as is evident in Paragraph 103: *"Significant development should be focussed on locations which are or can be made sustainable, through the limiting the need to travel and offering a genuine choice of transport modes."*

2.1.4 Paragraph 108 sets out the criteria upon which new developments should be judged from a highways and transportation perspective. When deciding upon planning applications it should be ensured that:

a) *"Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*

b) *Safe and suitable access to the site can be achieved for all users; and*

c) *Any significant impacts of the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

2.1.5 Paragraph 109 states that *"Development should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."*

Flintshire Local Development Plan 2015-2030

2.1.6 The proposed development site has been put forward as a potential candidate site for the emerging Local Development Plan (LDP) for Flintshire.

2.1.7 The site is listed as 'CON095 - Highmere Drive, Connah's Quay', a potential housing development site, within the *'Preferred Strategy Consultation Document Background Paper -Consideration of Candidate Sites against the Preferred Strategy / Invitation for Alternative Sites'* document.

2.1.8 The document comments that *"The site may have the potential to contribute to the Council's windfall allowance given that it is currently within a settlement boundary".*

As such, although the site may not be allocated within the LDP, allowance will be made for development at the site on the condition that it accords with the principles of the LDP.

Flintshire Unitary Development Plan 2000-2015

2.1.9 As the LDP is yet to be adopted, the Unitary Development Plan 2000-2015, adopted in September 2011, currently provides the policy framework for development in Flintshire. Relevant transport planning policy from that document has been identified below:

STR2 Transport and Communications

2.1.10 New development is expected to achieve the following requirements:

- Minimise journey distance and time, particularly by private car;
- Address congestion and safety issues through traffic management/calming;
- Enabling efficient use of and where necessary, providing improvements to, public transport; and
- Enabling alternative means of travel including cycling and walking.

2.1.11 The following sections of this TA will describe how the proposed development accords with the policies set out in this section.

3. EXISTING HIGHWAY NETWORK

Existing Site

3.1.1 The site is located immediately to the west of Highmere Drive, Connah's Quay.

3.1.2 The site is currently undeveloped agricultural land, and as such does not generate any material traffic movements. An informal access to the site for agricultural vehicles exists and is located opposite Buttermere Close.

3.1.3 The site is bound to the north by existing residential properties on Degas Close and Courbet Drive, to the south and west by Golftyn Lane, existing farm buildings and agricultural land, and to the east by Highmere Drive and existing residential properties on Pembry Rise.

Local Highway Network

Highmere Drive

3.1.4 Highmere Drive is a single carriageway residential cul-de-sac which extends along the site's eastern boundary. The road extends in a general southwest – northeast orientation, forming a priority junction with Golftyn Lane at its north-eastern end.

3.1.5 The carriageway measures approximately 5.5m in width along the site frontage, and a speed limit of 30mph is in place along its entire length.

3.1.6 A number of residential cul-de-sacs take access from Highmere Drive; those are Pembry Rise, Newby Walk, Stainton Grove, Caldbeck Crescent, Manby Close, Grasmere Close and Buttermere Close.

3.1.7 A lit pedestrian footway extends along the eastern side of Highmere Drive between Buttermere Close and its junction with Golftyn Lane. A pedestrian footway on the western side of Highmere Drive commences at the Pembry Rise junction and continues to Golftyn Lane.

Golftyn Lane / Ffordd Llanarth

3.1.8 Golftyn Lane / Ffordd Llanarth is a single carriageway road which extends in a general north-south orientation between Kelsterton Road (B5129) in the north and Mold Road (B5126) in the south. The road is known as Golftyn Lane between Kelsterton Road and Highvale and is known as Ffordd Llanarth to the south of this point.

3.1.9 A 30mph speed limit is enforced along the extent of Golftyn Lane / Ffordd Llanarth, which has a carriageway width of approximately 7.0m. Traffic calming measures in the way of speed cushions are in place along Golftyn Lane / Ffordd Llanarth.

3.1.10 Lit pedestrian footways are in place on both sides of Golftyn Lane in the vicinity of the site.

3.1.11 A traffic-free section of National Cycle Network Route 5 extends along the eastern side of Golftyn Lane between Viking Way and Kelsterton Road utilising the shared pedestrian footway/cycleway in place there.

Kelsterton Road (B5129)

3.1.12 Golftyn Lane meets Kelsterton Road (B5129) at a priority junction at a point approximately 1km north of the Highmere Drive / Golftyn Lane junction.

3.1.13 Kelsterton Road is a single carriageway road which has a single lane in each direction in proximity to the junction. Kelsterton Road (B5129) extends from its junction with the A548 in the northwest, through Connah's Quay and Shotton to its junction with the A494 and A550 at the Queensferry Interchange in the southeast.

3.1.14 The carriageway measures approximately 7.5m in width in proximity to the junction, with a 2.5m wide right turn ghost island in place from Kelsterton Road to Golftyn Lane. An on-road cycle lane extends along the northern side of the carriageway from the junction towards Shotton, and a shared pedestrian footway/cycleway extends along the southern edge of the carriageway.

3.1.15 A 30mph speed limit is in effect on Kelsterton Road.

Mold Road (B5126)

3.1.16 Ffordd Llanarth meets Mold Road (B5126) at a three-arm mini roundabout junction approximately 700m to the south of the Highmere Drive / Golftyn Lane junction.

3.1.17 Mold Road extends in a general east-west orientation between its junction with High Street (B5129) in Shotton in the east to Northop in the west. The carriageway measures approximately 7.0m in width, and a lit pedestrian footway extends along the northern side of Mold Road to the west of the Ffordd Llanarth junction.

3.1.18 The speed limit on Mold Road is 30mph from its junction with High Street in Shotton to a point approximately 525m west of the Ffordd Llanarth junction. To the west of this point the speed limit on Mold Road is 50mph.

Personal Injury Accident (PIA) Review

3.1.19 In order to review the road safety record of the local highway network, Personal Injury Accident (PIA) data has been acquired from the Crashmap website for the most recent 5-year period available (2014-2018).

3.1.20 The review has been focussed on Highmere Drive, and on the three off-site junctions at which the proposed development would have the greatest impact (Highmere Drive / Golftyn Lane, Golftyn Lane / Kelsterton Road and Ffordd Llanarth / Mold Road).

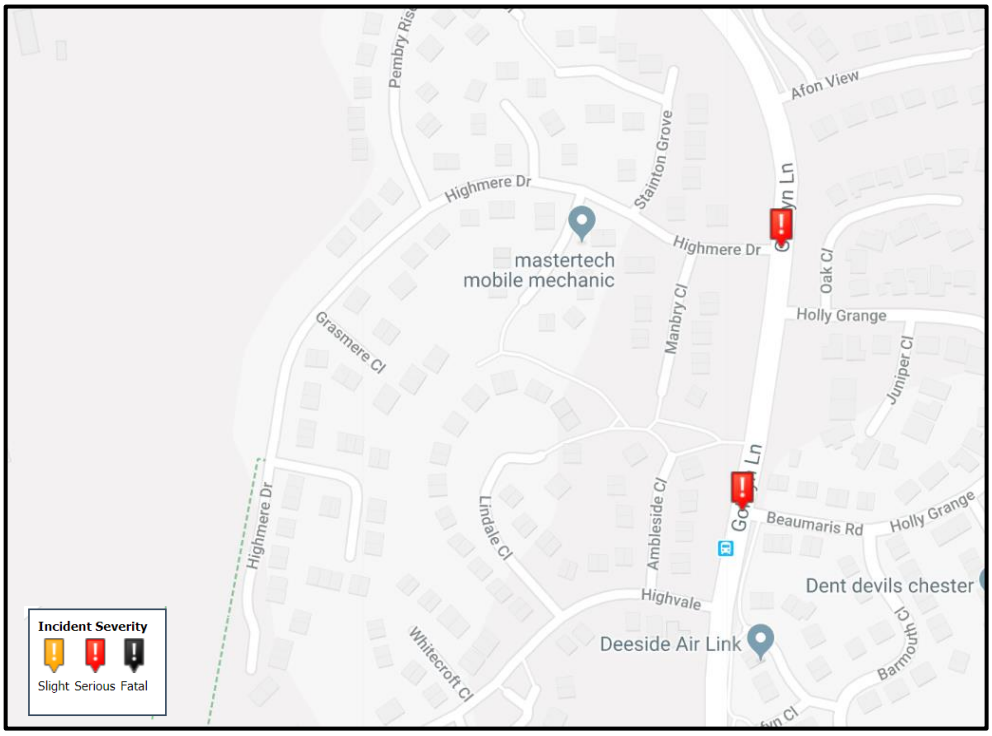
3.1.21 **Plan 2** shows the PIAs which have occurred on Highmere Drive and at its junction with Golftyn Lane during the study period. **Plans 3** and **4** present the same information for the Golftyn Lane / Kelsterton Road junction and the Ffordd Llanarth / Mold Road junction respectively.

3.1.22 A total of 8 PIAs were recorded within the study area in the most recent 5 year period. Those PIAs are summarised by year and severity in **Table 3.1**

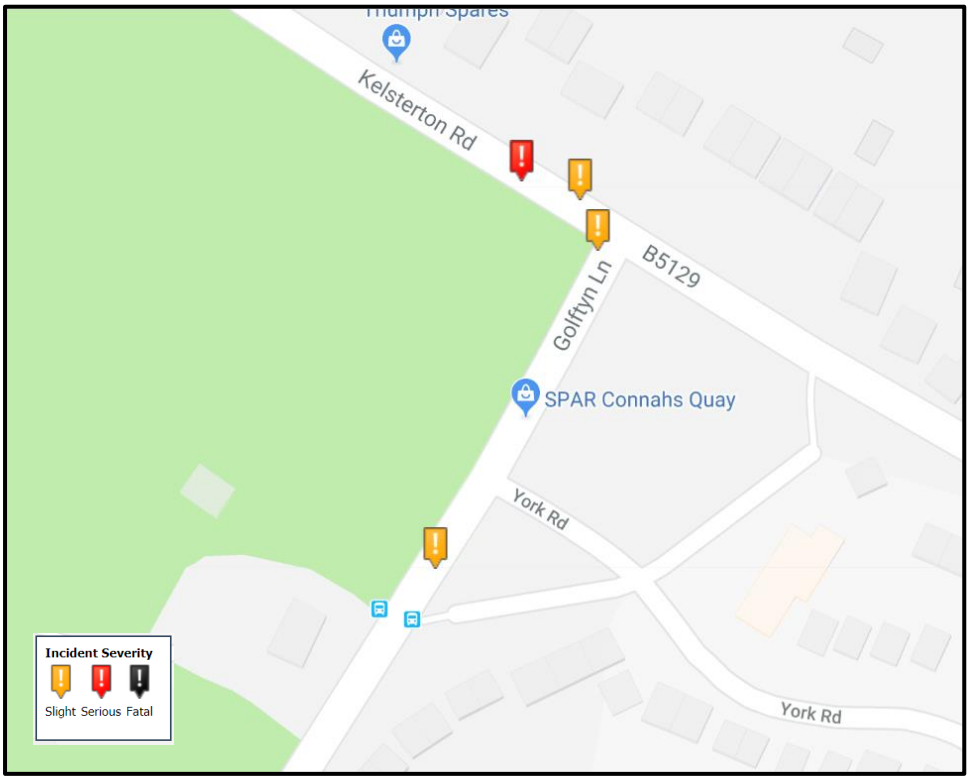
Table 3.1 – Summary of PIAs

	2014	2015	2016	2017	2018	Total
Slight	2	0	0	2	0	**4**
Serious	0	0	1	1	1	**3**
Fatal	0	0	1	0	0	**1**
Total	**2**	**0**	**2**	**3**	**1**	**8**

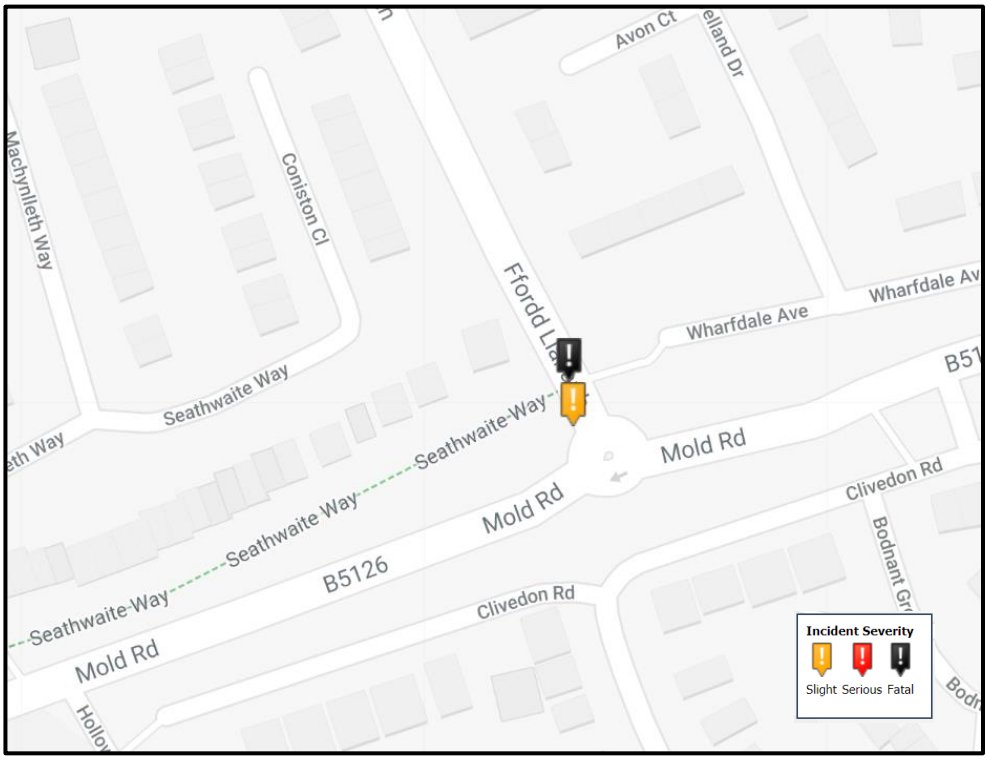
Plan 2 - Location of PIAs – Highmere Drive (2014-2018)



Plan 3 - Location of PIAs – Golftyn Lane / Kelsterton Road (2014-2018)



Plan 4 - Location of PIAs – Ffordd Llanarth / Mold Road (2014-2018)



3.1.23 Of the 8 PIAs which occurred within the study area in the most recent 5 year period, 4 were classified as 'slight', 3 were classified as 'serious' and one fatal accident was recorded.

3.1.24 No PIAs were recorded on Highmere Drive where the proposed site will take access. The nearest PIA to the site occurred at the Highmere Drive / Golftyn Lane junction, approximately 340m from the proposed site access location. That PIA occurred on 23rd May 2016 and involved two vehicles, one of which was a two-wheeled motor vehicle, and resulted in a 'serious' injury to one person.

3.1.25 One fatal accident occurred within the study area. This occurred on 16th July 2016 and involved a vehicle and a cyclist. The cyclist involved suffered fatal injuries in the incident. The driver involved in the incident has subsequently pleaded guilty to causing death by careless driving.

3.1.26 Since that accident occurred, Welsh Government funding has been granted to allow for road safety improvement works to be undertaken at the Ffordd Llanarth / Mold Road junction. The works will result in the implementation of interactive School Warning Signs, improved road signage and carriageway markings, carriageway resurfacing works and a new zebra crossing on Mold Road.

3.1.27 The PIA occurrence rate over the most recent five year study period equates to less than two PIAs per year, which is considered low. Whilst a fatal accident has been recorded in the study area, highway improvement works are due to be undertaken in that area in order to improve road safety.

3.1.28 The quantum of traffic which is forecast to be generated by the proposed development is not expected to result in any material impact on highway safety.

4. DERIVATION OF TRAFFIC FLOWS

Existing Traffic Flows

4.1.1 In order to establish existing traffic flow conditions in proximity to the site, three Manual Classified Turning Count Surveys were undertaken on Wednesday 6th & Thursday 7th March 2019. The following junctions were surveyed:

- Highmere Drive / Golftyn Lane Priority Junction
- Golftyn Lane / Kelsterton Road (B5129) Priority Junction
- Ffordd Llanarth / Mold Road (B5126) Mini-Roundabout Junction

4.1.2 The surveys were undertaken for the following time periods:

- AM: 07:00-10:00 (Thursday 7th March 2019)
- PM: 15:30-18:30 (Wednesday 6th March 2019)

4.1.3 The full results of those surveys have been attached at **Appendix B**.

4.1.4 **Figures 1** and **2** present the observed 2019 AM and PM peak hour traffic flows in PCUs (Passenger Car Units) respectively. The weekday AM and PM peak hours identified were 08:00-09:00 and 16:15-17:15.

Traffic Growth

4.1.5 As is good practise, the impact of the proposed development in highways and transportation terms has been assessed for a future year, five years subsequent to the registration date of the planning application for the development. The future year assessed in this report is 2024.

4.1.6 In order to growth the observed 2019 network flows to 2024 future year network flows, traffic growth factors have been derived from the industry standard TEMPRO database and then applied to the 2019 network flows.

4.1.7 The growth factors used to estimate the 2024 future year network flows are as follows:

- AM Peak – 1.0413
- PM Peak - 1.0383

4.1.8 The 2024 Base AM and PM peak flows are set out in **Figures 3** and **4** respectively.

Committed Development

4.1.9 In line with pre-application advice from Flintshire County Council (FCC), two relevant committed developments have been identified:

- Residential Development at Broad Oak Holdings – 33 dwellings (Application Reference: 058583)
- Residential Development at Fairoaks Drive – 37 dwellings (Application Reference: 051266).

4.1.10 Neither application submitted a Transport Assessment/Statement which assessed the traffic related impact of each development, and as such it is not possible to include the trips generated by each development within the assessments contained within this report.

4.1.11 However, the traffic generation potential for each development is low, and as such the committed developments will not result in a material difference to traffic conditions in proximity to the site.

5. DEVELOPMENT PROPOSALS & ACCESS STRATEGY

5.1.1 The development proposals comprise a total of 212 residential dwellings which will provide an extension to the existing urban area in Connah's Quay.

5.1.2 The development proposals also comprise associated highways infrastructure and landscaping works. A proposed site plan which shows the maximum quantum of development which could be delivered on site is attached at **Appendix C**.

Vehicular Access Strategy

5.1.3 The proposed development will take access from Highmere Drive via a new simple priority junction. The junction will be located approximately 25m north of the existing Highmere Drive / Buttermere Close junction. The layout of the proposed junction is shown on the proposed site plan attached at **Appendix C**.

5.1.4 The proposed site access will have a carriageway width of at least 5.5m and 2m wide footways will extend along each side of the road. Adequate visibility splays will be achievable from the proposed site access in line with Manual for Streets standards.

Highmere Drive

5.1.5 One of the initial matters raised by FCC during scoping discussions was the existing on-street parking on Highmere Drive, and the potential for the proposed development to increase conflicts at points of narrowed carriageway as a result of that on-street parking.

5.1.6 A site visit was undertaken on Tuesday 2nd April 2019 at 20:00 (i.e. at a time when most people have returned home from work and parked their vehicle) and observations were made with regards to on street parking.

5.1.7 A total of six vehicles were parked on Highmere Drive between the proposed site access location and the Highmere Drive / Golftyn Lane junction, with three vehicles parked on each side of the road. The available carriageway width next to each parked vehicle was measured.

5.1.8 The narrowest point on the carriageway measured 4.4m, i.e. wide enough to allow the widest vehicle types expected to serve the development (refuse vehicles & fire tenders) to pass. Vehicles were also observed to wait behind parked vehicles to allow vehicles travelling in the opposing direction to pass before manoeuvring around the parked vehicle without difficulty.

5.1.9 This together with the low frequency of large vehicle movements along Highmere Drive suggests that on-street parking will not negatively impact on traffic movements from the development.

5.1.10 Photographs taken during the site visit have been attached at **Appendix D**.

Pedestrian & Cycle Access

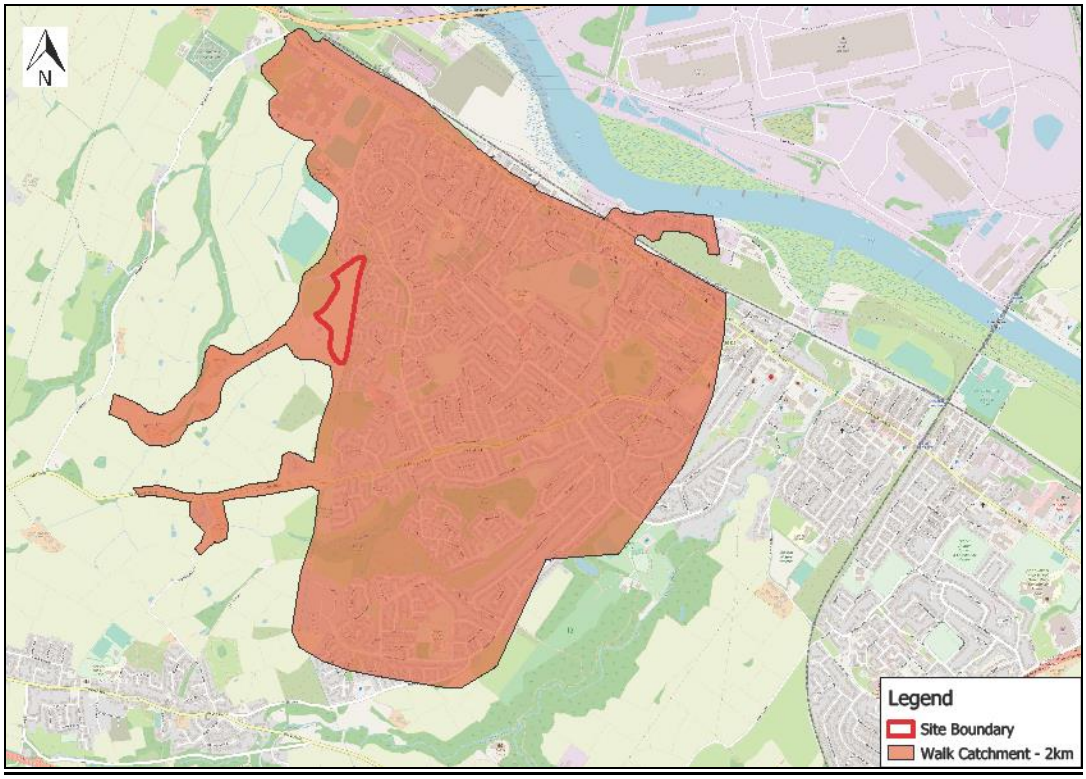
5.1.11 Pedestrian and cycle access to the proposed development will be provided at the main vehicular access point.

5.1.12 Table 3.2 of the Chartered Institution of Highways and Transportation (CIHT) document *'Providing for Journeys on Foot'* introduces suggested acceptable and preferred maximum walking distances to a range of destinations. 2km is identified as the maximum acceptable walking distance to commuting, school and sight-seeing trips.

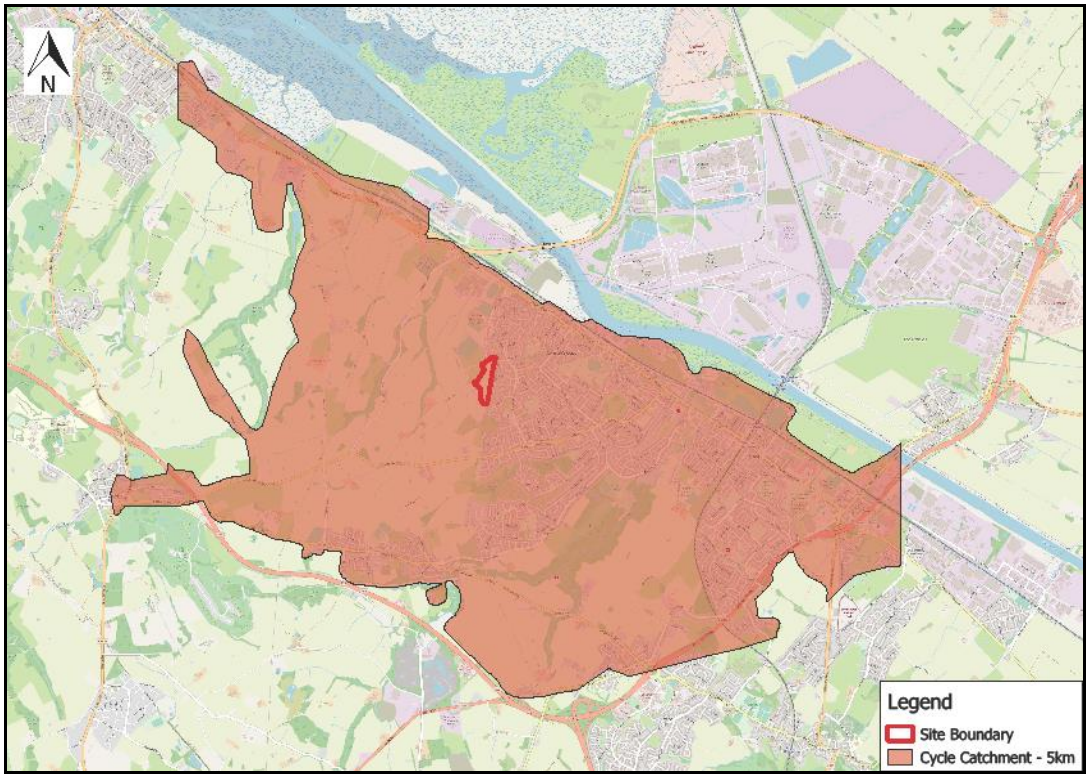
5.1.13 **Plan 5** shows a 2km walk catchment, equating to a 24 minute walk (at 1.4 m/s) from the development site. This shows that the majority of the built up area of Connah's Quay is located with a 2km walk of the site. As such, a wide range of retail, education, leisure and employment facilities are located within a maximum acceptable walking distance of the site.

5.1.14 5km is widely regarded as an acceptable cycle distance. A 5km cycle catchment from the site is shown on **Plan 6**. This shows that the entirety of Connah's Quay as well as much of Wepre, Shotton and parts of Queensferry are located within a 5km cycle of the site.

Plan 5 – 2km Walk Catchment from Site



Plan 6 – 5km Cycle Catchment from Site



6. SUSTAINABLE ACCESSIBILITY

Pedestrian Accessibility

6.1.1 As stated in the previous section, 2km is accepted as an acceptable walking distance to a range of destinations.

6.1.2 In addition, *'Providing for Journeys on Foot'* states that *"walking accounts for accounts for over a quarter of all journeys and for four fifths of journeys of less than one mile"* (Paragraph 1.12). As such, around 80% of people can be expected to make journeys of less than one mile (1.6km) on foot.

6.1.3 **Table 6.1** shows the local facilities and amenities located in proximity to the site, as well as the walking distance and walking time (assuming a walk speed of 1.4 m/s) from the site.

Table 6.1 – Facilities Accessible On Foot

	Facility	Distance from Site (m)	Walking Time (min)
Education	Bryn Deva Primary School	950	11
	Golftyn Primary School	1100	13
	Connah's Quay High School	750	9
	Coleg Cambria	1400	17
Health	The Quay Health Centre	2300	27
	Morrisons Pharmacy	800	10
Shopping	Quay Shopping Centre	850	10
	Morrisons	850	10
Leisure	Connah's Quay Central Park	1000	12
	Sir Gawain & The Green Knight Public House	800	10
	Connah's Quay Sports Centre	700	8
Miscellaneous	Connah's Quay Youth & Community Centre	750	9
	Esso PFS	1300	15
	ATM	850	10
	Post Office	1100	13
	Citizen's Advice Bureau	1300	15

6.1.4 **Table 6.1** shows that a range of facilities and amenities are located within an acceptable walking distance of the site. Education facilities from primary level to further education level are accessible within a 17 minute walk of the site, while shopping opportunities at Quay Shopping Centre are located approximately 850m from the centre of the site.

6.1.5 A wide range of other facilities and amenities including a sports centre, post office, and a youth & community centre are also located within an acceptable walking distance from the site.

Accessibility by Public Transport

6.1.6 The closest bus stops to the site are located on Golftyn Lane adjacent to Viking Way, approximately 550m from the centre of the site (equating to a walk time of 6 minutes 33 seconds). The bus services which serve the bus stop closest to the site are set out in **Table 6.2**.

Table 6.2 – Local Bus Services

		One Way Frequency Per Hour					
		Weekday				Saturday	Sunday
Service No	Service Description	AM Peak	Inter Peak	PM Peak	Evenings		
10	Chester - Sealand - Garden City - Queensferry - Shotton - Wepre - Connah's Quay	2	2	2	1	2	1
10S	Sealand School - Queensferry - Shotton - Golftyn	0	One service at 15:10	0	0	0	0
D2	Flint - Oakenholt - Kelsterton - Golftyn - Wepre - Shotton - Queensferry - Connah's Quay	0	0	0	One service at 18:27	0	0
	Total	**2**	**2**	**2**	**1**	**2**	**1**

Note: School Bus Service Only

6.1.7 **Table 6.2** shows that the bus stop closest to the site is served by two one-way services per hour in both AM and PM peak hours as well during the inter-peak and on Saturdays. One one-way service per hour will serve the stop on weekday evenings and on Sundays.

6.1.8 The services set out in **Table 6.2** serve a range of destinations including Chester, Flint, Connah's Quay and Queensferry.

6.1.9 The nearest rail station to the proposed development is Shotton railway station, which is located approximately 3.3km from the proposed development, and can be accessed via the number 10 bus service from the site.

6.1.10 Shotton railway station is split into high-level and low-level platforms. The high-level platforms are served by hourly services in both directions which extend between Wrexham and Bidston. The low-level station is served by services which extend to a range of destinations including Llandudno, Manchester, Chester, Holyhead and Birmingham.

6.1.11 In light of the information set out above, it is considered that the proposed development is located in an area which is readily accessible by sustainable modes.

7. TRIP GENERATION AND DISTRIBUTION

Trip Generation

7.1.1 The proposed development site is currently undeveloped greenfield land, and as such does not currently generate any material traffic movements.

7.1.2 The industry standard Trip Rates Information Computer System (TRICS) database has been used to forecast the likely trip generation of the proposed development. Trip rates have been taken from similar residential sites which have been selected using the following criteria:

- Land use: 03 – Residential, A – Houses Privately Owned
- Sites located in: Wales, North & North West England
- No. of Units: 11-400
- Date range: 01/01/10 to 17/11/17
- Location: Edge of Town Centre, Suburban & Edge of Town

7.1.3 The full TRICS output has been attached at **Appendix E**.

7.1.4 The trip rates adopted and the resulting forecast development traffic generations for the weekday AM and PM peak hour periods are set out in **Table 7.1** below. The trip rates shown below have been agreed with FCC, as is shown in the correspondence attached at **Appendix F**.

Table 7.1 – Trip Rates & Vehicular Trip Generation (212 Units)

	Trip Rate			Trip Gen		
	Arr	Dep	Tot	Arr	Dep	Tot
AM (08:00-09:00)	0.148	0.363	0.511	31	77	108
PM (17:00-18:00)	0.336	0.166	0.502	71	35	106
Daily	2.348	2.475	4.823	498	525	1022

7.1.5 **Table 7.1** shows that the proposed development has the potential to generate up to 108 two-way vehicular movements in the AM peak hour, and up to 106 two-way vehicular movements in the PM peak hour. That equates to less than 2 two-way vehicle movements per minute in both the AM and PM peak hours on average.

Trip Distribution

7.1.6 The distribution of vehicular trips from the site is expected to mirror those made by existing residents in the local area. As such, development trips have been attributed

onto the local highway network based on 2011 census 'journey to work' data for the Middle Super Output Area (MSOA) in which the site is located – W02000065: Flintshire 008.

7.1.7 The distribution of site development traffic is set out in **Appendix G**, and is summarised in **Table 7.2** below.

Table 7.2 – Development Traffic Distribution

Highmere Drive / Golftyn Lane		Golftyn Lane / Kelsterton Rd		Ffordd Llanarth / Mold Rd	
North	South	East	West	East	West
47%	53%	5%	42%	32%	21%

7.1.8 **Figures 5 & 6** show the AM and PM peak hour development traffic generation distributed onto the network.

With Development Traffic Flows

7.1.9 In order to provide a robust assessment, the peak traffic generation period for the proposed development has been attributed to the network peak hour within the junction assessments set out in this report.

7.1.10 2024 'With Development' traffic flows have been derived by adding the distributed development trips shown in **Figures 5 & 6** to the 2024 Base Flows presented in **Figures 3 & 4**.

7.1.11 The 2024 With Development traffic flows are set out in **Figures 7 & 8** for the weekday AM and PM peak hour respectively.

8. JUNCTION ASSESSMENTS

Introduction

8.1.1 This section of the report sets out the junction assessments undertaken for three off-site junctions as agreed through scoping discussions with Flintshire County Council (FCC).

8.1.2 The impact of the proposed development has been assessed at the following junctions for the future year of 2024:

- Highmere Drive / Golftyn Lane 3 arm priority junction
- Golftyn Lane / Kelsterton Road 3 arm priority junction
- Ffordd Llanarth / Mold Road 3 arm mini roundabout junction

8.1.3 The junction assessments have been undertaken for both weekday AM (08:00-09:00) and PM (16:15-17:15) peak hours. Results are presented for the Base (without development) and 'With Development' scenarios.

8.1.4 The junctions have been assessed using JUNCTIONS9 software (using the PICADY programme for priority junctions and the ARCADY programme for roundabout junctions). The key result outputs generated by JUNCTIONS9 are:

- The ratio of flow to capacity (RFC) – Values of less than 1.0 indicate that the junction is operating within capacity.
- Mean max queue (MMQ)

Highmere Drive / Golftyn Lane

8.1.5 The Highmere Drive / Golftyn Lane priority junction has been modelled using the PICADY programme within JUNCTIONS9 software. The junction modelling output for the Highmere Drive / Golftyn Lane junction has been attached at **Appendix H**. The results of the model have been summarised in **Table 8.1**.

Table 8.1 – Summary of Highmere Drive / Golftyn Lane Modelling Results

Traffic Stream	2019 Observed		2024 Base		2024 With Development		Development Impact	
	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC
AM Peak (08:00-09:00)								
Highmere Dr to Golftyn Lane (S)	0	0.11	0	0.11	0	0.21	0	0.10
Highmere Dr to Golftyn Lane (N)	0	0.12	0	0.13	0	0.27	0	0.14
Golftyn Lane (N) to Highmere Dr & Ahead	0	0.03	0	0.03	0	0.08	0	0.05
PM Peak (16:15-17:15)								
Highmere Dr to Golftyn Lane (S)	0	0.03	0	0.03	0	0.07	0	0.04
Highmere Dr to Golftyn Lane (N)	0	0.09	0	0.10	0	0.17	0	0.07
Golftyn Lane (N) to Highmere Dr & Ahead	0	0.10	0	0.10	1	0.21	0	0.11

8.1.6 **Table 8.1** shows that the Highmere Drive / Golftyn Lane priority junction is forecast to operate well within capacity in each of the tested scenarios in both the AM and PM peak hours.

8.1.7 In the 'With Development' scenario, the junction is forecast to operate with 73% spare capacity in the AM peak hour and 79% spare capacity in the PM peak hour. No material queues are forecast on any arm in the 'With Development' scenario.

Golftyn Lane / Kelsterton Road

8.1.8 The Golftyn Lane / Kelsterton Road priority junction has been modelled using the PICADY programme within JUNCTIONS9 software. The junction modelling output for the Golftyn Lane / Kelsterton Road junction has been attached at **Appendix I**. The results of the model have been summarised in **Table 8.2**.

Table 8.2 – Summary of Golftyn Lane / Kelsterton Road Modelling Results

Traffic Stream	2019 Observed		2024 Base		2024 With Development		Development Impact	
	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC
AM Peak (08:00-09:00)								
Golftyn Lane to Kelsterton Rd (W)	17	1.02	28	1.09	44	1.17	16	0.08
Golftyn Lane to Kelsterton Rd (E)	6	1.00	8	1.06	11	1.13	3	0.07
Kelsterton Rd (W) to Golftyn Lane & Ahead	1	0.32	1	0.34	1	0.37	0	0.03
PM Peak (16:15-17:15)								
Golftyn Lane to Kelsterton Rd (W)	1	0.41	1	0.44	1	0.48	0	0.04
Golftyn Lane to Kelsterton Rd (E)	1	0.35	1	0.39	1	0.43	0	0.04
Kelsterton Rd (W) to Golftyn Lane & Ahead	3	0.74	3	0.77	5	0.83	1	0.06

8.1.9 **Table 8.2** shows that the Golftyn Lane / Kelsterton Road priority junction is currently operating over capacity in the AM peak hour. In the PM peak hour, the junction is operating with 26% spare capacity. Once traffic growth is accounted for in the 2024 Base scenario, the junction is forecast to operate 9% over capacity in the AM peak hour and 33% within capacity in the PM peak hour.

8.1.10 The proposed development is forecast to have an 8% impact on capacity in the AM peak hour, resulting in the junction operating 17% over capacity in that hour. The junction will continue to operate within capacity in the PM peak hour.

8.1.11 **Table 8.3** presents the number of additional vehicle movements which would be experienced at the junction as a result of the proposed development in both AM and PM peak hours.

Table 8.3 – Development Impact at the Kelsterton Road / Golftyn Lane Junction

	Arrivals		Departures		Total Movemements
	Kelsterton Rd (W) to Golftyn Lane	Kelsterton Rd (E) to Golftyn Lane	Golftyn Lane to Kelsterton Rd (W)	Golftyn Lane to Kelsterton Rd (E)	
AM	13	1	33	4	51
PM	15	2	30	3	50

8.1.12 **Table 8.3** shows that the proposed development will result in an additional 51 vehicle movements routing via the Kelsterton Road / Golftyn Lane junction in the AM peak hour and an additional 50 vehicle movements in the PM peak hour. That equates to less than one additional vehicle movement at the junction per minute on average across both peak hours.

8.1.13 As the junction is shown to operate over capacity in the Base scenario, the queue lengths forecast by the model for the With Development scenario are unreliable.

8.1.14 In the context of the additional traffic flows forecast at the junction as a result of the proposed development, i.e. less than one additional vehicle movement per minute on average, the impact of the proposed development at this junction is not considered to be severe.

Ffordd Llanarth / Mold Road

8.1.15 The Ffordd Llanarth / Mold Road mini-roundabout junction has been modelled using the ARCADY programme within JUNCTIONS9 software. The junction modelling output for the Ffordd Llanarth / Mold Road junction has been attached at **Appendix J**. The results of the model have been summarised in **Table 8.4**.

Table 8.4 – Summary of Ffordd Llanarth / Mold Road Modelling Results

Arm	2019 Observed		2024 Base		2024 With Development		Development Impact	
	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC
AM Peak (08:00-09:00)								
Mold Rd (W)	3	0.75	4	0.79	4	0.80	0	0.01
Ffordd Llanarth	3	0.77	4	0.80	6	0.87	2	0.07
Mold Rd (E)	1	0.55	1	0.58	1	0.59	0	0.01
PM Peak (16:15-17:15)								
Mold Rd (W)	2	0.63	2	0.66	2	0.69	0	0.03
Ffordd Llanarth	5	0.84	6	0.88	8	0.90	2	0.02
Mold Rd (E)	1	0.59	2	0.62	2	0.65	0	0.03

8.1.16 **Table 8.4** shows that the Ffordd Llanarth / Mold Road mini-roundabout junction is forecast to operate within capacity in each of the tested scenarios in both AM and PM peak hours.

8.1.17 In the 'With Development' scenario, the junction is forecast to operate with 13% spare capacity in the AM peak hour and 10% spare capacity in the PM peak hour. The maximum queue forecast on any arm is 8 PCUs on Ffordd Llanarth in the 2024 'With Development' PM peak hour. This level of queueing is not considered to be severe.

9. SUMMARY & CONCLUSIONS

9.1.1 Pell Frischmann have been appointed by J. A. Thomas & Son to produce a Transport Assessment in relation to a proposed residential development at a site off Highmere Drive, Connah's Quay. A total of 212 residential units are proposed at the site.

9.1.2 The site will take access via a new priority junction onto Highmere Drive. The site has been proven to have good pedestrian connectivity to Connah's Quay and good connectivity by cycle to surrounding areas including Connah's Quay, Wepre and Shotton.

9.1.3 In terms of sustainable accessibility, the site is located within a reasonable walking distance of a range of important everyday facilities, and benefits from good public transport links to a range of further afield destinations.

9.1.4 An assessment of the road safety record has been undertaken and found that no PIAs occurred in the vicinity of the site access location. Furthermore, there is no evidence to suggest that the proposed development would negatively impact upon road safety in the local area.

9.1.5 The proposed development is forecast to generate a total of 108 two-way vehicle movements in the AM peak hour and a total of 106 two-way vehicle movements in the PM peak hour (i.e. less than two vehicle movements every minute on average in the peak hours).

9.1.6 Junction assessments indicate that the Highmere Drive / Golftyn Lane priority junction and the Ffordd Llanarth / Mold Road mini-roundabout junctions will operate within capacity with the development in the future year of 2024 in both peak hours.

9.1.7 The Golftyn Lane / Kelsterton Road junction has been shown to operate within capacity during the PM peak hour both in Baseline and With Development Scenarios. However, the junction is forecast to operate above capacity between 08:30 and 09:00 in each of the 2019 observed, 2024 Base and 2024 With Development scenarios. In the context of the additional development flows at the junction resulting from the proposed development, the impact of the proposed development on this junction is not considered to be severe.

9.1.8 In light of the above, the proposed development is not expected to result in any traffic conditions which could be considered 'severe'.

Figures

Figure 1 - 2019 Weekday AM Peak (08:00-09:00)

Pell Frischmann

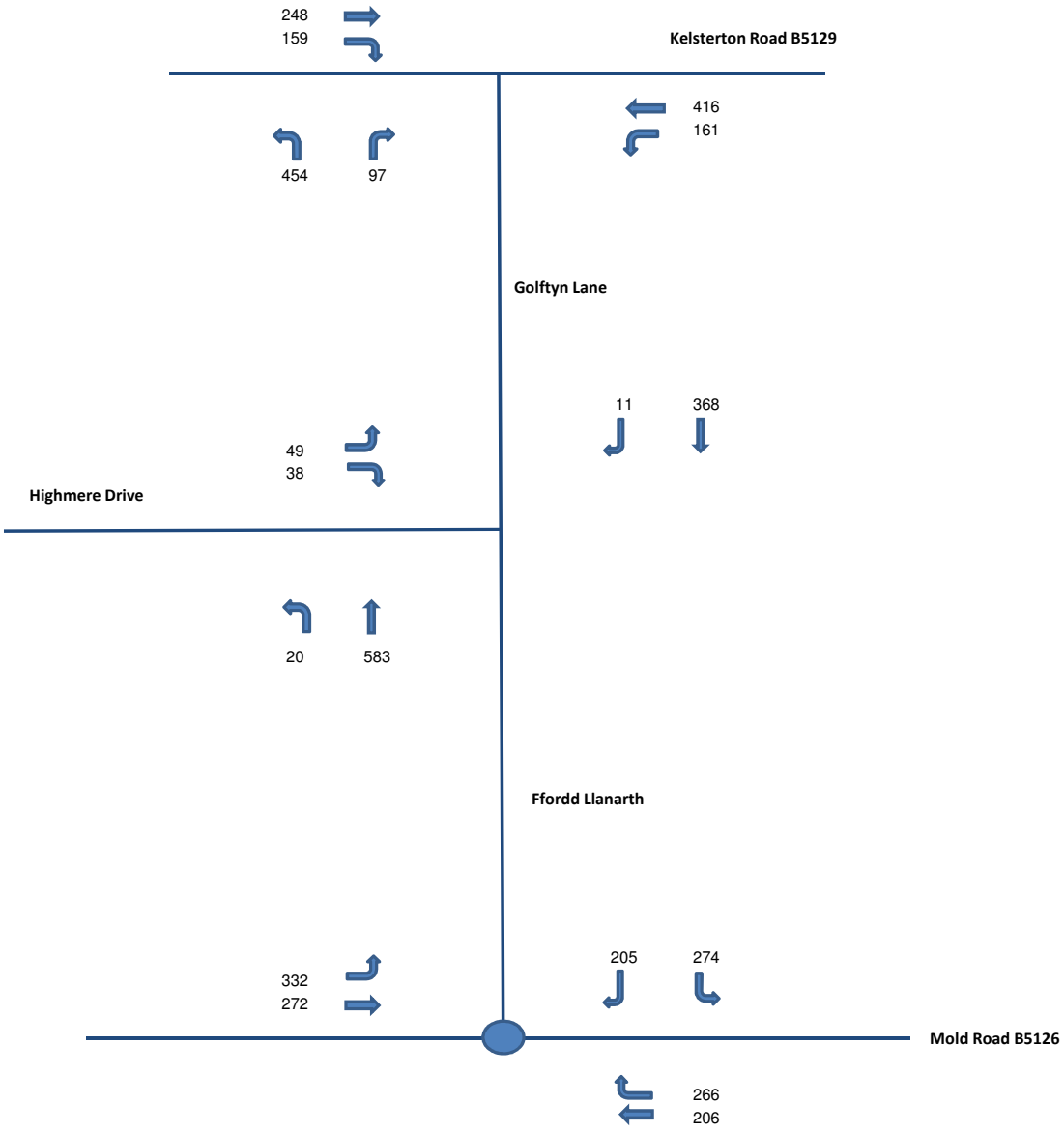


Figure 2 - 2019 Weekday PM Peak (16:15-17:15)

Pell Frischmann

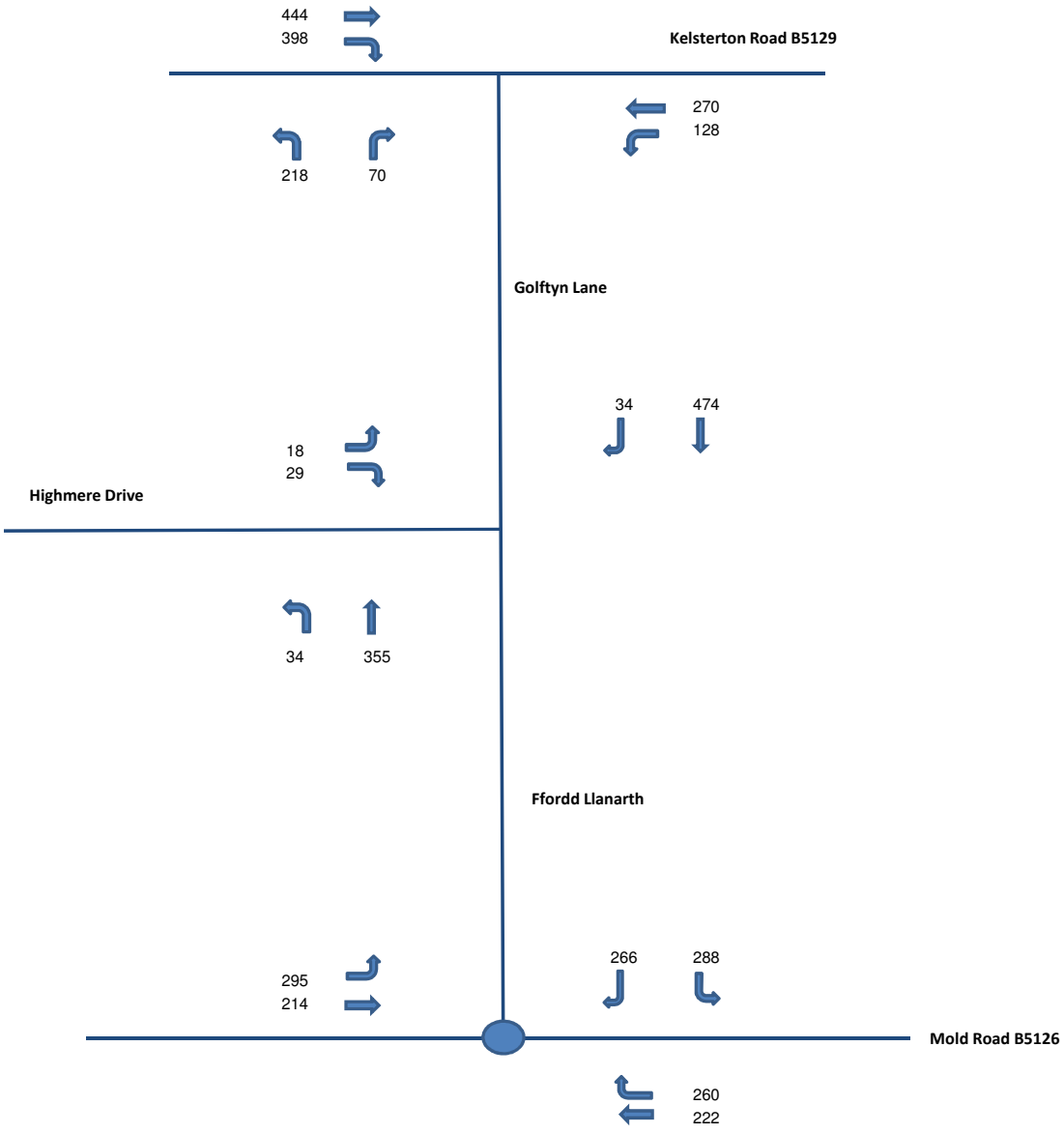


Figure 3 - 2024 Baseline AM

Pell Frischmann

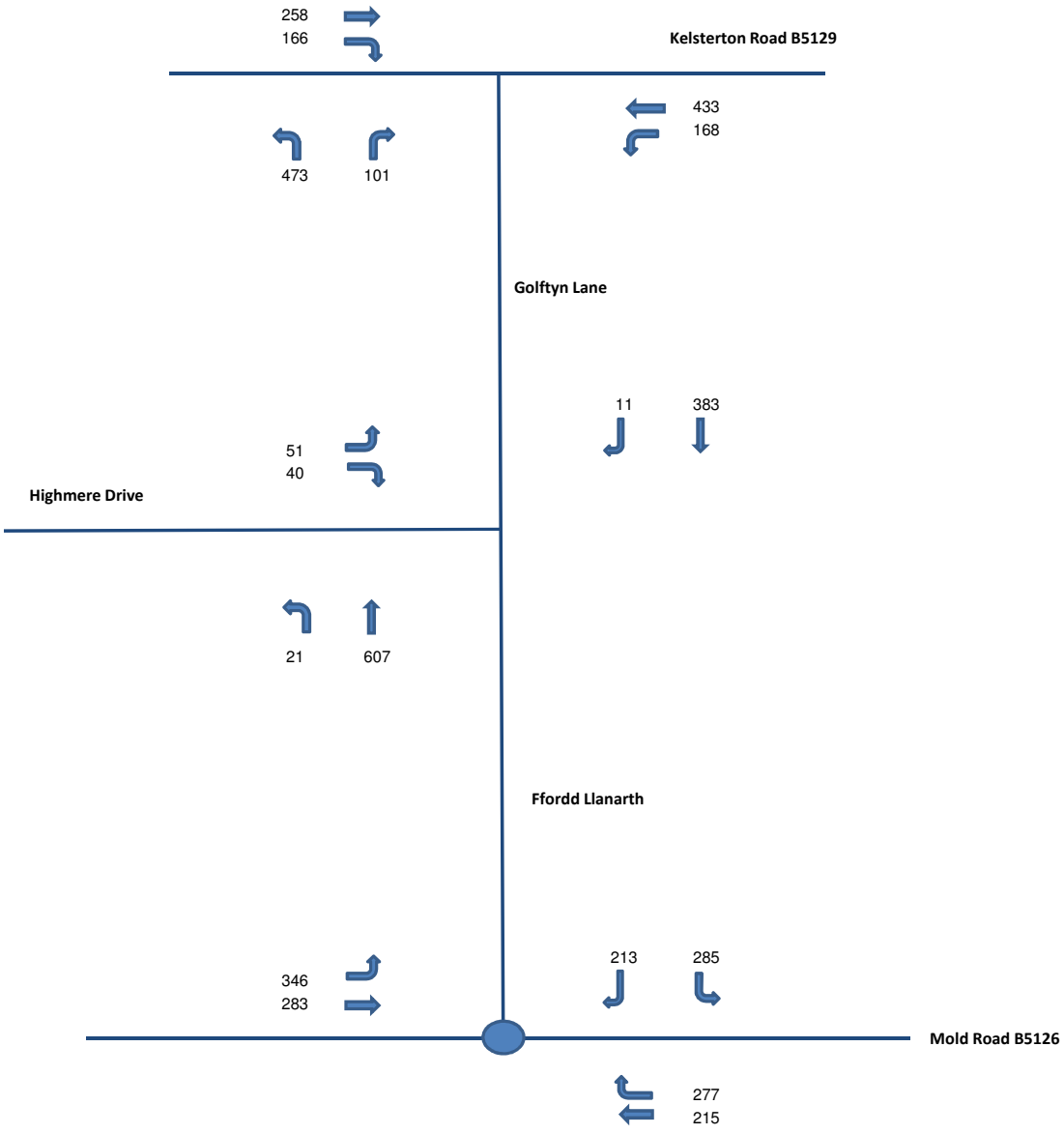


Figure 4 - 2024 Baseline PM

Pell Frischmann

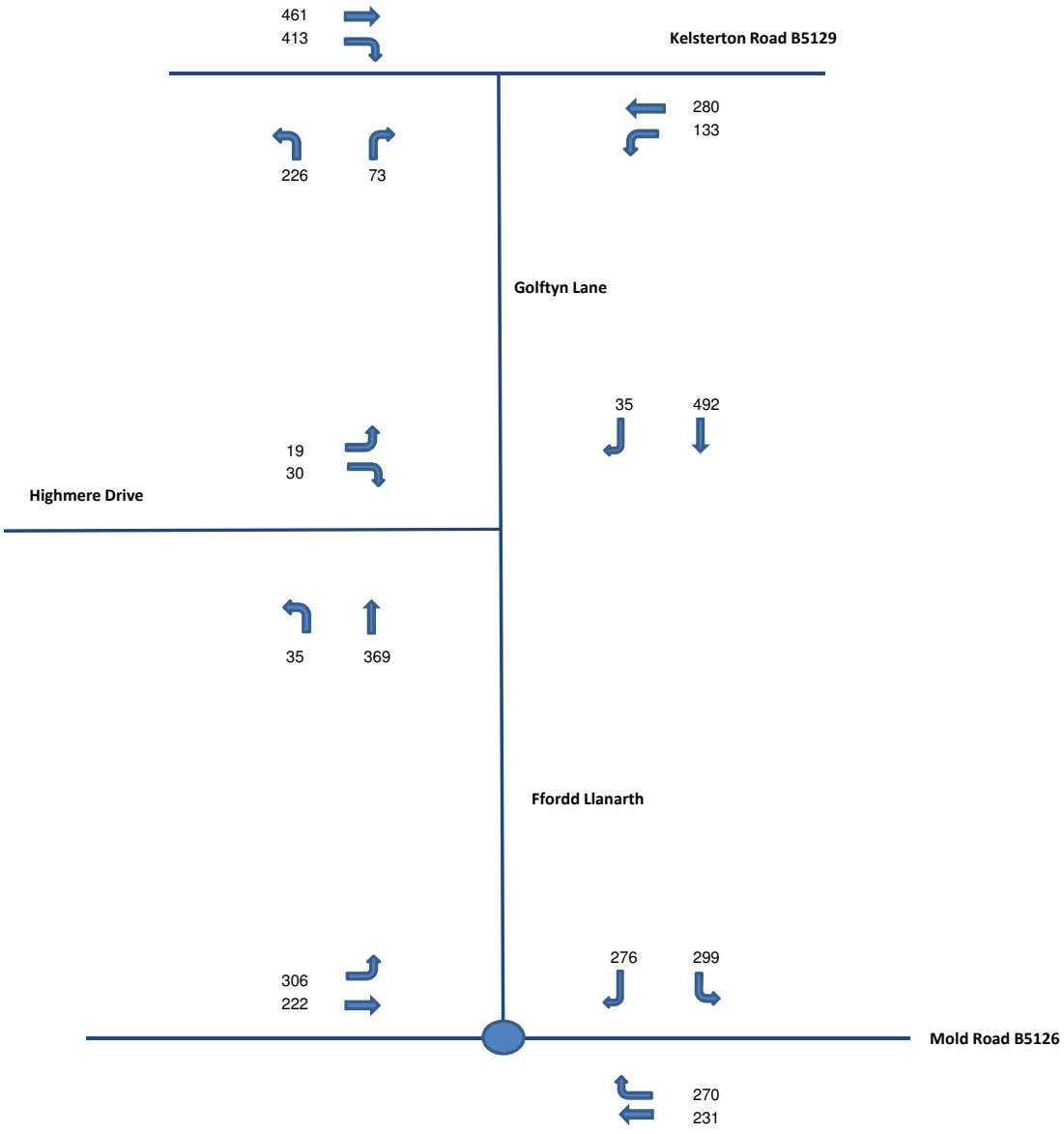


Figure 5 - AM Peak Development Trip Generation

Pell Frischmann

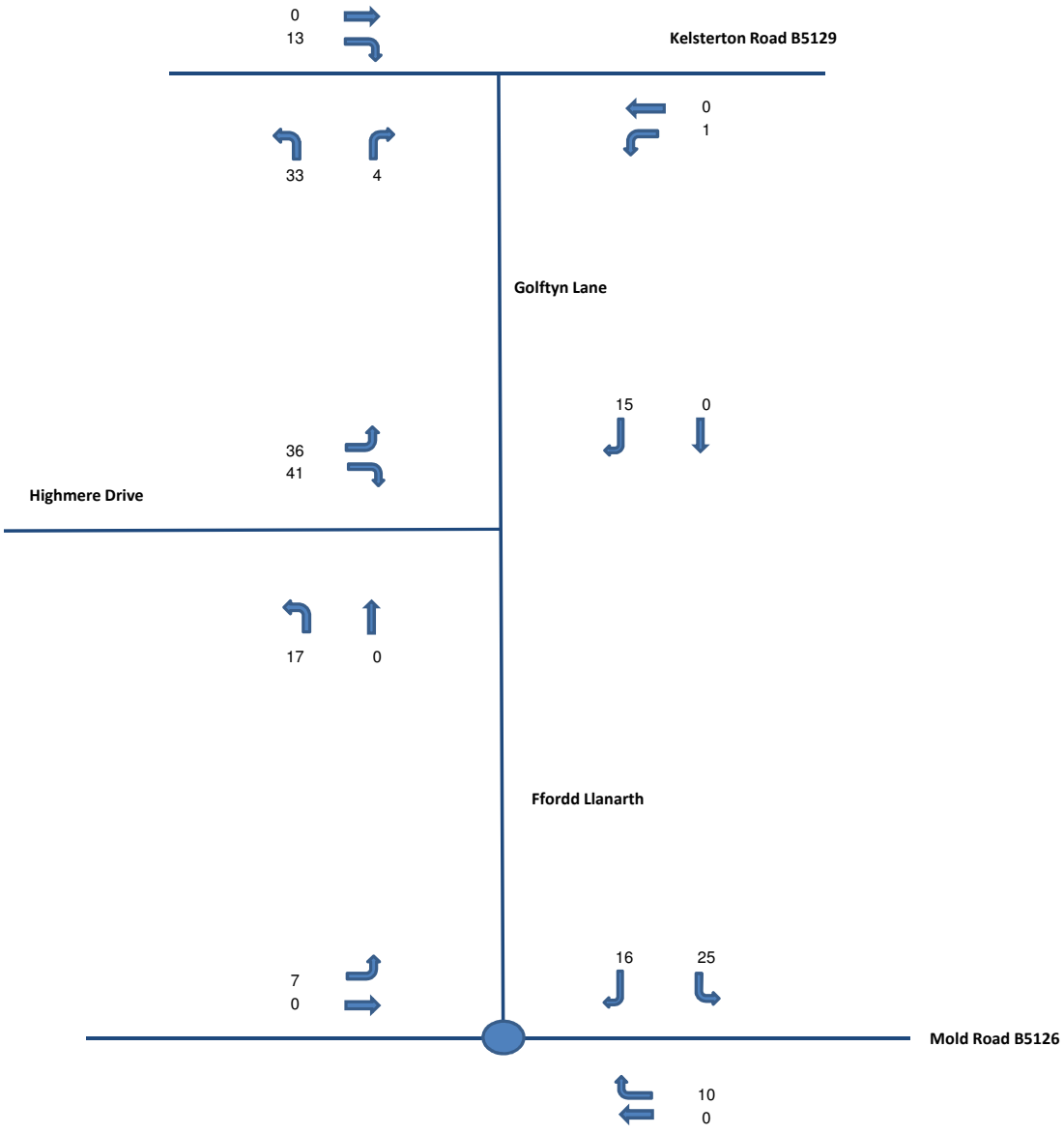


Figure 6 - PM Peak Development Trip Generation

Pell Frischmann

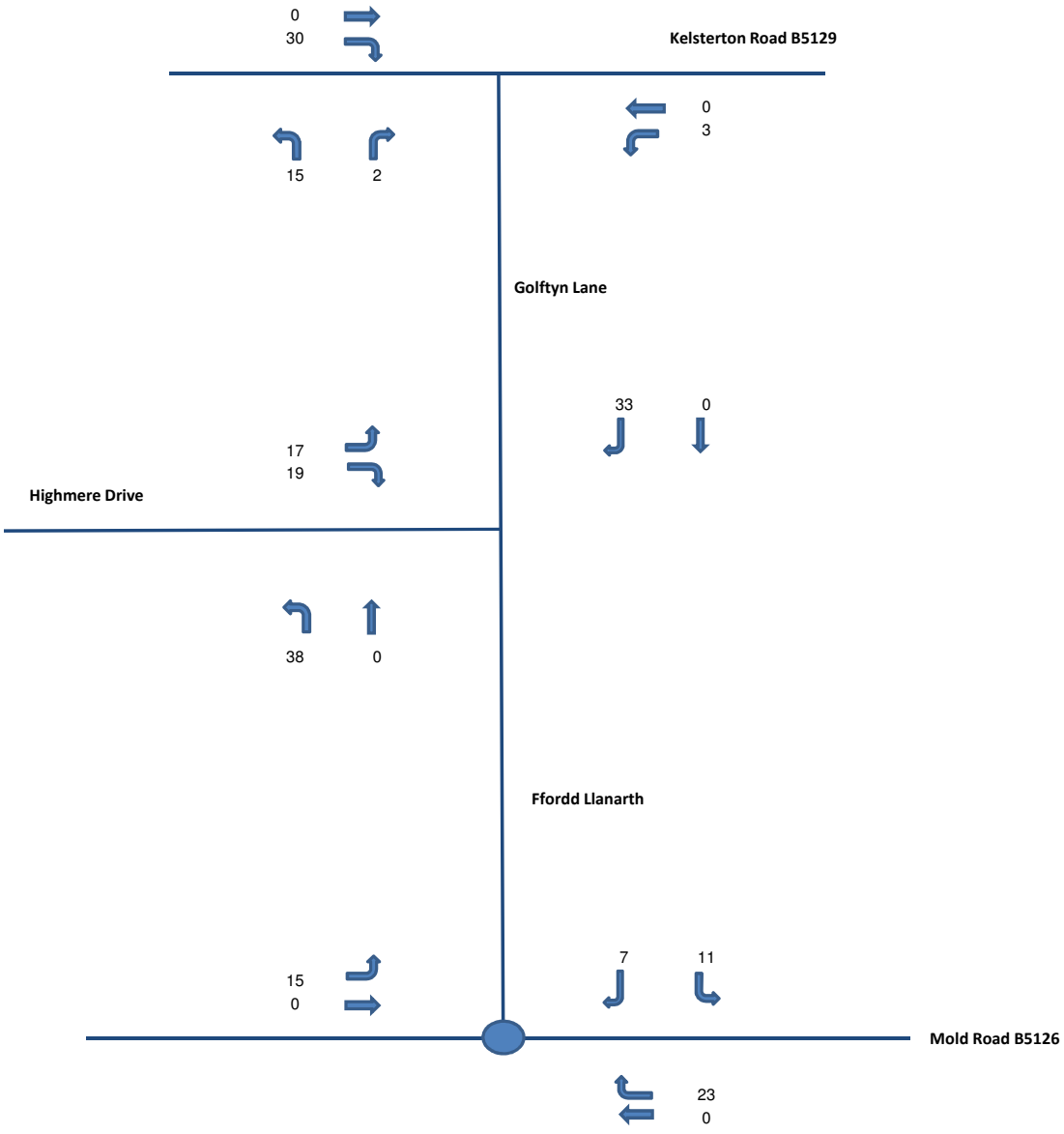


Figure 7 - 2024 AM Peak With Development

Pell Frischmann

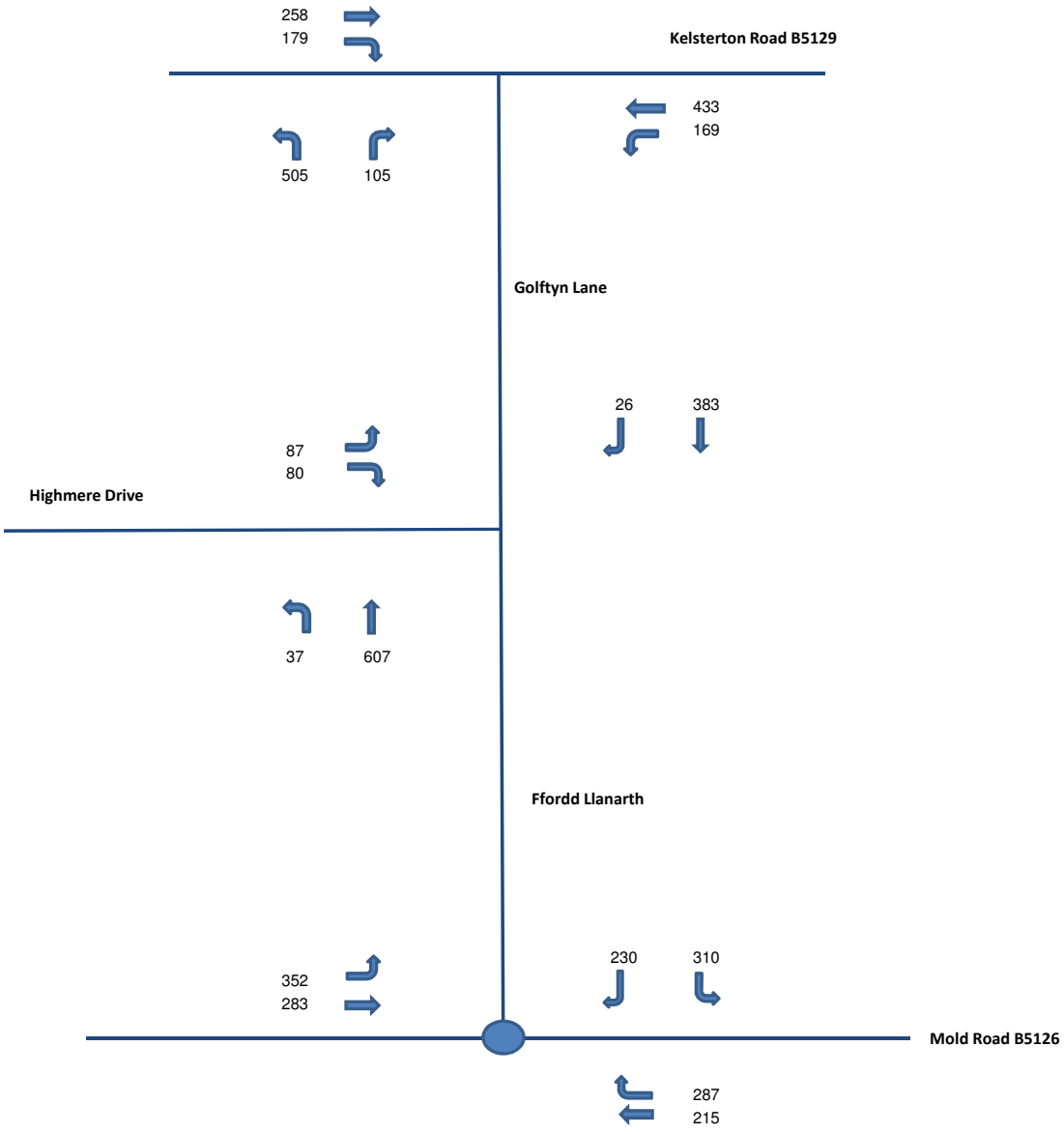
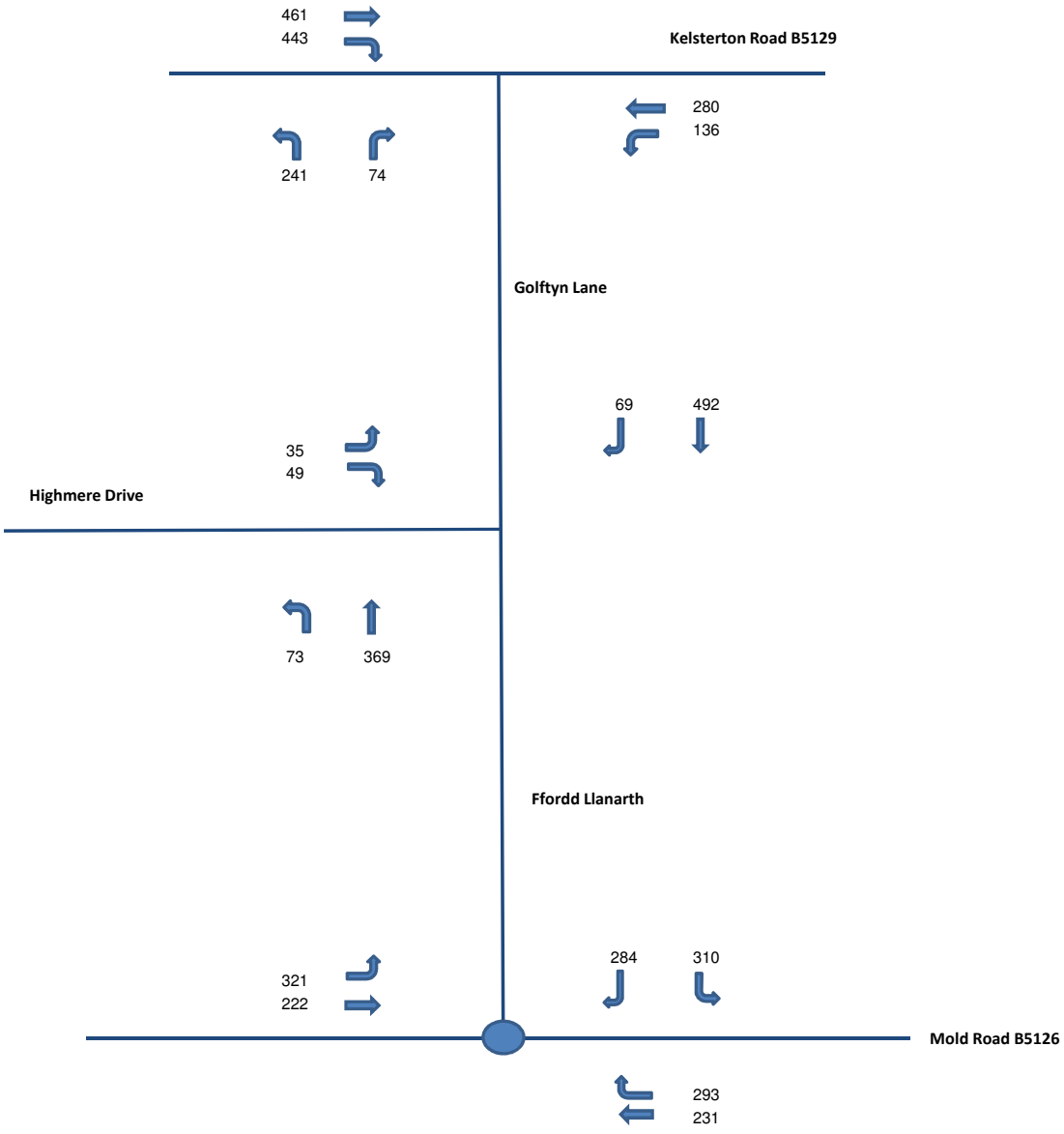


Figure 8 - 2024 PM Peak With Development

Pell Frischmann



Appendices

Appendix A – FCC Scoping Response

Charlie Ebbrell

From: Colin Simpson <colin.simpson@flintshire.gov.uk>
Sent: 05 February 2019 16:53
To: Charlie Ebbrell
Cc: Richard Ellam
Subject: RE: Land off Highmere Drive, Connah's Quay

Hi Charlie

I accept that your notes reasonably represent our discussion.

TAs submitted by various consultants over the past couple of years have contained widely varying TRICs generation rates, largely due to un-representative survey locations being included within the calculations. With some consultants we have insisted upon the use of 85th percentile generation rates rather than average. I would welcome submission of TRICs data for consideration/discussion prior to its inclusion in the detailed assessment.

The two development/application sites that I referred to were 33no. dwellings at Broad Oak Holdings, application 058583 and 37 no. dwellings at Fairoaks Drive, 051266. Fairoaks is partially occupied but construction on Broad Oaks development has not commenced. Traffic generated on Mold Road by these two developments is unlikely to have a significant effect on the capacity of the roundabout.

Traffic accident data can be obtained from Streetscene colleagues, Lee Shone (lee.shone@flintshire.gov.uk 01352 704497 or Claire Parry (Claire.parry@flintshire.gov.uk 01352 704529).

Regards, Colin

Colin Simpson BTech CEng MICE MCIHT
Senior Engineer | Uwch Beiriannydd
Highways Development Control | Rheoli Datblygu Priffyrdd
Planning and Environment | Cynllunio a'r Amgylchedd
Flintshire County Council | Cyngor Sir y Fflint
County Hall | Neuadd y Sir
Mold | Yr Wyddgrug
CH7 6NF | CH7 6NF

Tel | Ffôn | 01352 704618
Email | Ebost | colin.simpson@flintshire.gov.uk

From: Charlie Ebbrell [mailto:CEbbrell@pellfrischmann.com]
Sent: 05 February 2019 16:14
To: Colin Simpson <colin.simpson@flintshire.gov.uk>
Cc: Richard Ellam <REllam@pellfrischmann.com>
Subject: Land off Highmere Drive, Connah's Quay

Good afternoon Colin,

Thank you again for your time earlier, it was really useful to meet to discuss the site.

I have set out a summary of the points we discussed below. I'd be grateful if you could confirm my understanding of our meeting.

- FCC has no objection to development at the site in principle, subject to the contents of the Transport Assessment (TA).
- The main vehicular access is to be provided onto Highmere Drive via a simple priority junction. FCC has no objection in principle to this access location.
- Residential parking along Highmere Drive is a potential concern, the impact of the proposed development on potential conflicts there should be assessed.
- Three offsite junctions are to be assessed:
    1) Highmere Drive / Golftyn Lane priority junction
    2) Golftyn Lane / Kelsterton Rd priority right-turn ghost island junction
    3) Ffordd Llanarth / Mold Road roundabout junction
- Representative trip rates taken from the TRICS database will be used to provide the basis for assessment of the potential site traffic generation.
- The distribution of proposed development trips will be based on the latest census data.
- In terms of committed development, two applications have been submitted for small residential developments to the south of the site. Whilst these developments are likely to have little traffic/highways impact, they should be covered in the TA.
- Road accident data for the most recent 5 year period should be assessed in the vicinity of the site to establish any existing highway safety issues.
- Pedestrian & cycle connectivity to the site, as well as connectivity to public transport services should be assessed.

Please let me know if there are any points which I have missed or misinterpreted.

Best regards,

Charlie Ebbrell
Graduate Transport Planner

Pell Frischmann
"Excellence through Innovation since 1926"
9 Acorn Business Park, Stockport, United Kingdom, SK4 1AS

Mobile: 44 (0)7919458604
E-mail: cebbrell@pellfrischmann.com
Website: www.pellfrischmann.com
Twitter: @Pell_Frischmann

Pell Frischmann
Winner of The Queen's Award for Enterprise for International Trade 2015

Consider the environment. Please do not print this e-mail unless absolutely necessary.

****

We welcome correspondence in Welsh. We will respond to correspondence received in Welsh without delay.

Appendix B – Traffic Survey Results

Connahs Quay - Manual Traffic Survey: Wednesday, 06 March 2019

Produced by Streetwise Services Ltd.

Junction: **A - (North) Golftyn Lane / B - (South) Golftyn Lane / C - Highmere Drive**

Approach: **A - (North) Golftyn Lane**

	A to B									A to C								
TIME	**P/CYCLE**	**M/CYCLE**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**PCU**	**TOTAL**	**P/CYCLE**	**M/CYCLE**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**PCU**	**TOTAL**
15:30 - 15:45	0	0	100	8	0	0	1	**110.0**	**109**	0	0	5	0	0	0	0	**5.0**	**5**
15:45 - 16:00	0	1	70	10	2	0	2	**87.4**	**85**	0	0	5	3	0	0	0	**8.0**	**8**
Hourly Total	**0**	**1**	**170**	**18**	**2**	**0**	**3**	**197**	**194**	**0**	**0**	**10**	**3**	**0**	**0**	**0**	**13**	**13**
16:00 - 16:15	0	0	129	4	1	0	0	**134.5**	**134**	0	0	5	0	0	0	0	**5.0**	**5**
16:15 - 16:30	0	0	77	3	1	0	13	**107.5**	**94**	0	0	5	1	0	0	0	**6.0**	**6**
16:30 - 16:45	1	0	124	12	1	0	0	**137.7**	**138**	0	1	3	2	0	0	0	**5.4**	**6**
16:45 - 17:00	0	0	113	4	0	0	1	**119.0**	**118**	0	0	6	1	0	0	0	**7.0**	**7**
Hourly Total	**1**	**0**	**443**	**23**	**3**	**0**	**14**	**499**	**484**	**0**	**1**	**19**	**4**	**0**	**0**	**0**	**23**	**24**
17:00 - 17:15	0	0	100	5	0	1	1	**109.3**	**107**	1	0	14	1	0	0	0	**15.2**	**16**
17:15 - 17:30	0	0	94	6	0	0	2	**104.0**	**102**	0	0	6	0	0	0	0	**6.0**	**6**
17:30 - 17:45	0	2	102	4	0	0	0	**106.8**	**108**	0	0	8	0	0	0	0	**8.0**	**8**
17:45 - 18:00	0	0	82	6	0	0	1	**90.0**	**89**	0	0	7	1	0	0	0	**8.0**	**8**
Hourly Total	**0**	**2**	**378**	**21**	**0**	**1**	**4**	**410**	**406**	**1**	**0**	**35**	**2**	**0**	**0**	**0**	**37**	**38**
18:00 - 18:15	0	0	112	8	0	0	0	**120.0**	**120**	0	0	6	0	0	0	0	**6.0**	**6**
18:15 - 18:30	0	0	69	4	0	0	2	**77.0**	**75**	0	0	5	1	0	0	0	**6.0**	**6**
Hourly Total	**0**	**0**	**181**	**12**	**0**	**0**	**2**	**197**	**195**	**0**	**0**	**11**	**1**	**0**	**0**	**0**	**12**	**12**
Session Total	**1**	**3**	**1172**	**74**	**5**	**1**	**23**	**1303**	**1279**	**1**	**1**	**75**	**10**	**0**	**0**	**0**	**85**	**87**

TIME	A to A								
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	0	0	0	0	0	0.0	0
15:45 - 16:00	0	0	0	0	0	0	0	0.0	0
Hourly Total	0	0	0	0	0	0	0	0	0
16:00 - 16:15	0	0	0	0	0	0	0	0.0	0
16:15 - 16:30	0	0	0	0	0	0	0	0.0	0
16:30 - 16:45	0	0	0	0	0	0	0	0.0	0
16:45 - 17:00	0	0	0	0	0	0	0	0.0	0
Hourly Total	0	0	0	0	0	0	0	0	0
17:00 - 17:15	0	0	0	0	0	0	0	0.0	0
17:15 - 17:30	0	0	0	0	0	0	0	0.0	0
17:30 - 17:45	0	0	0	0	0	0	0	0.0	0
17:45 - 18:00	0	0	0	0	0	0	0	0.0	0
Hourly Total	0	0	0	0	0	0	0	0	0
18:00 - 18:15	0	0	0	0	0	0	0	0.0	0
18:15 - 18:30	0	0	0	0	0	0	0	0.0	0
Hourly Total	0	0	0	0	0	0	0	0	0
Session Total	0	0	0	0	0	0	0	0	0

	From A								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	105	8	0	0	1	115.0	114
15:45 - 16:00	0	1	75	13	2	0	2	95.4	93
Hourly Total	0	1	180	21	2	0	3	210	207
16:00 - 16:15	0	0	134	4	1	0	0	139.5	139
16:15 - 16:30	0	0	82	4	1	0	13	113.5	100
16:30 - 16:45	1	1	127	14	1	0	0	143.1	144
16:45 - 17:00	0	0	119	5	0	0	1	126.0	125
Hourly Total	1	1	462	27	3	0	14	522	508
17:00 - 17:15	1	0	114	6	0	1	1	124.5	123
17:15 - 17:30	0	0	100	6	0	0	2	110.0	108
17:30 - 17:45	0	2	110	4	0	0	0	114.8	116
17:45 - 18:00	0	0	89	7	0	0	1	98.0	97
Hourly Total	1	2	413	23	0	1	4	447	444
18:00 - 18:15	0	0	118	8	0	0	0	126.0	126
18:15 - 18:30	0	0	74	5	0	0	2	83.0	81
Hourly Total	0	0	192	13	0	0	2	209	207
Session Total	2	4	1247	84	5	1	23	1388	1366

	To A								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	59	4	0	0	1	65.0	64
15:45 - 16:00	0	0	69	3	0	0	6	84.0	78
Hourly Total	0	0	128	7	0	0	7	149	142
16:00 - 16:15	0	0	51	2	1	2	9	77.1	65
16:15 - 16:30	0	1	79	8	0	0	2	91.4	90
16:30 - 16:45	0	0	68	5	0	0	0	73.0	73
16:45 - 17:00	0	0	99	7	0	0	1	108.0	107
Hourly Total	0	1	297	22	1	2	12	350	335
17:00 - 17:15	0	0	93	6	1	0	0	100.5	100
17:15 - 17:30	0	0	75	3	0	0	0	78.0	78
17:30 - 17:45	0	0	68	6	0	0	1	76.0	75
17:45 - 18:00	0	0	96	5	0	0	1	103.0	102
Hourly Total	0	0	332	20	1	0	2	358	355
18:00 - 18:15	0	0	72	3	0	0	0	75.0	75
18:15 - 18:30	0	0	54	4	0	0	0	58.0	58
Hourly Total	0	0	126	7	0	0	0	133	133
Session Total	0	1	883	56	2	2	21	990	965

Connahs Quay - Manual Traffic Survey: Wednesday, 06 March 2019

Produced by Streetwise Services Ltd.

Junction: A - (North) Golftyn Lane / B - (South) Golftyn Lane / C - Highmere Drive

Approach: B - (South) Golftyn Lane

	B to C									B to A								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	9	0	0	0	0	9.0	9	0	0	57	3	0	0	1	62.0	61
15:45 - 16:00	0	0	7	1	0	0	0	8.0	8	0	0	68	2	0	0	6	82.0	76
Hourly Total	**0**	**0**	**16**	**1**	**0**	**0**	**0**	**17**	**17**	**0**	**0**	**125**	**5**	**0**	**0**	**7**	**144**	**137**
16:00 - 16:15	0	0	8	3	0	0	0	11.0	11	0	0	50	2	1	2	9	76.1	64
16:15 - 16:30	0	0	6	1	1	0	0	8.5	8	0	1	76	8	0	0	2	88.4	87
16:30 - 16:45	0	0	6	2	1	0	0	9.5	9	0	0	64	4	0	0	0	68.0	68
16:45 - 17:00	0	0	5	2	0	0	0	7.0	7	0	0	97	5	0	0	1	104.0	103
Hourly Total	**0**	**0**	**25**	**8**	**2**	**0**	**0**	**36**	**35**	**0**	**1**	**287**	**19**	**1**	**2**	**12**	**337**	**322**
17:00 - 17:15	0	0	6	1	1	0	0	8.5	8	0	0	88	5	1	0	0	94.5	94
17:15 - 17:30	0	0	15	0	0	0	0	15.0	15	0	0	73	2	0	0	0	75.0	75
17:30 - 17:45	0	0	11	0	0	0	0	11.0	11	0	0	66	6	0	0	1	74.0	73
17:45 - 18:00	0	0	4	1	0	0	0	5.0	5	0	0	94	4	0	0	1	100.0	99
Hourly Total	**0**	**0**	**36**	**2**	**1**	**0**	**0**	**40**	**39**	**0**	**0**	**321**	**17**	**1**	**0**	**2**	**344**	**341**
18:00 - 18:15	0	0	7	2	0	0	0	9.0	9	0	0	69	3	0	0	0	72.0	72
18:15 - 18:30	0	0	15	2	1	0	0	18.5	18	0	0	50	2	0	0	0	52.0	52
Hourly Total	**0**	**0**	**22**	**4**	**1**	**0**	**0**	**28**	**27**	**0**	**0**	**119**	**5**	**0**	**0**	**0**	**124**	**124**
Session Total	**0**	**0**	**99**	**15**	**4**	**0**	**0**	**121**	**118**	**0**	**1**	**852**	**46**	**2**	**2**	**21**	**949**	**924**

B to B

TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	0	0	0	0	0	0.0	0
15:45 - 16:00	0	0	0	0	0	0	0	0.0	0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
16:00 - 16:15	0	0	0	0	0	0	0	0.0	0
16:15 - 16:30	0	0	0	0	0	0	0	0.0	0
16:30 - 16:45	0	0	0	0	0	0	0	0.0	0
16:45 - 17:00	0	0	0	0	0	0	0	0.0	0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
17:00 - 17:15	0	0	0	0	0	0	0	0.0	0
17:15 - 17:30	0	0	0	0	0	0	0	0.0	0
17:30 - 17:45	0	0	0	0	0	0	0	0.0	0
17:45 - 18:00	0	0	0	0	0	0	0	0.0	0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
18:00 - 18:15	0	0	0	0	0	0	0	0.0	0
18:15 - 18:30	0	0	0	0	0	0	0	0.0	0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

From B

TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	66	3	0	0	1	71.0	70
15:45 - 16:00	0	0	75	3	0	0	6	90.0	84
Hourly Total	**0**	**0**	**141**	**6**	**0**	**0**	**7**	161	154
16:00 - 16:15	0	0	58	5	1	2	9	87.1	75
16:15 - 16:30	0	1	82	9	1	0	2	96.9	95
16:30 - 16:45	0	0	70	6	1	0	0	77.5	77
16:45 - 17:00	0	0	102	7	0	0	1	111.0	110
Hourly Total	**0**	**1**	**312**	**27**	**3**	**2**	**12**	373	357
17:00 - 17:15	0	0	94	6	2	0	0	103.0	102
17:15 - 17:30	0	0	88	2	0	0	0	90.0	90
17:30 - 17:45	0	0	77	6	0	0	1	85.0	84
17:45 - 18:00	0	0	98	5	0	0	1	105.0	104
Hourly Total	**0**	**0**	**357**	**19**	**2**	**0**	**2**	383	380
18:00 - 18:15	0	0	76	5	0	0	0	81.0	81
18:15 - 18:30	0	0	65	4	1	0	0	70.5	70
Hourly Total	**0**	**0**	**141**	**9**	**1**	**0**	**0**	152	151
Session Total	0	1	951	61	6	2	21	1069	1042

To B

TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	101	8	0	0	1	111.0	110
15:45 - 16:00	0	1	74	10	2	0	2	91.4	89
Hourly Total	**0**	**1**	**175**	**18**	**2**	**0**	**3**	202	199
16:00 - 16:15	0	0	132	7	2	0	0	142.0	141
16:15 - 16:30	0	0	83	6	2	0	13	118.0	104
16:30 - 16:45	1	0	131	13	1	0	0	145.7	146
16:45 - 17:00	0	0	117	5	0	0	1	124.0	123
Hourly Total	**1**	**0**	**463**	**31**	**5**	**0**	**14**	530	514
17:00 - 17:15	0	0	105	5	0	1	1	114.3	112
17:15 - 17:30	0	0	102	6	0	0	2	112.0	110
17:30 - 17:45	0	2	108	4	0	0	0	112.8	114
17:45 - 18:00	0	0	90	8	0	0	1	100.0	99
Hourly Total	**0**	**2**	**405**	**23**	**0**	**1**	**4**	439	435
18:00 - 18:15	0	0	121	8	1	0	0	130.5	130
18:15 - 18:30	0	0	76	4	0	0	2	84.0	82
Hourly Total	**0**	**0**	**197**	**12**	**1**	**0**	**2**	215	212
Session Total	1	3	1240	84	8	1	23	1386	1360

Connahs Quay - Manual Traffic Survey: Wednesday, 06 March 2019

Produced by Streetwise Services Ltd.

Junction: A - (North) Golftyn Lane / B - (South) Golftyn Lane / C - Highmere Drive

Approach: C - Highmere Drive

	C to A									C to B								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	2	1	0	0	0	3.0	3	0	0	1	0	0	0	0	1.0	1
15:45 - 16:00	0	0	1	1	0	0	0	2.0	2	0	0	4	0	0	0	0	4.0	4
Hourly Total	**0**	**0**	**3**	**2**	**0**	**0**	**0**	**5**	**5**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**5**	**5**
16:00 - 16:15	0	0	1	0	0	0	0	1.0	1	0	0	3	3	1	0	0	7.5	7
16:15 - 16:30	0	0	3	0	0	0	0	3.0	3	0	0	6	3	1	0	0	10.5	10
16:30 - 16:45	0	0	4	1	0	0	0	5.0	5	0	0	7	1	0	0	0	8.0	8
16:45 - 17:00	0	0	2	2	0	0	0	4.0	4	0	0	4	1	0	0	0	5.0	5
Hourly Total	**0**	**0**	**10**	**3**	**0**	**0**	**0**	**13**	**13**	**0**	**0**	**20**	**8**	**2**	**0**	**0**	**31**	**30**
17:00 - 17:15	0	0	5	1	0	0	0	6.0	6	0	0	5	0	0	0	0	5.0	5
17:15 - 17:30	0	0	2	1	0	0	0	3.0	3	0	0	8	0	0	0	0	8.0	8
17:30 - 17:45	0	0	2	0	0	0	0	2.0	2	0	0	6	0	0	0	0	6.0	6
17:45 - 18:00	0	0	2	1	0	0	0	3.0	3	0	0	8	2	0	0	0	10.0	10
Hourly Total	**0**	**0**	**11**	**3**	**0**	**0**	**0**	**14**	**14**	**0**	**0**	**27**	**2**	**0**	**0**	**0**	**29**	**29**
18:00 - 18:15	0	0	3	0	0	0	0	3.0	3	0	0	9	0	1	0	0	10.5	10
18:15 - 18:30	0	0	4	2	0	0	0	6.0	6	0	0	7	0	0	0	0	7.0	7
Hourly Total	**0**	**0**	**7**	**2**	**0**	**0**	**0**	**9**	**9**	**0**	**0**	**16**	**0**	**1**	**0**	**0**	**18**	**17**
Session Total	**0**	**0**	**31**	**10**	**0**	**0**	**0**	**41**	**41**	**0**	**0**	**68**	**10**	**3**	**0**	**0**	**83**	**81**

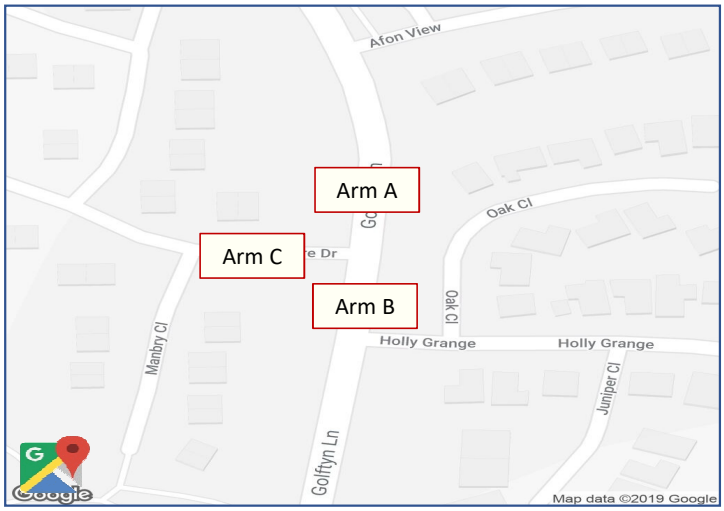
C to C								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	From C									To C								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	3	1	0	0	0	4.0	4	0	0	14	0	0	0	0	14.0	14
15:45 - 16:00	0	0	5	1	0	0	0	6.0	6	0	0	12	4	0	0	0	16.0	16
Hourly Total	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**10**	**10**	**0**	**0**	**26**	**4**	**0**	**0**	**0**	**30**	**30**
16:00 - 16:15	0	0	4	3	1	0	0	8.5	8	0	0	13	3	0	0	0	16.0	16
16:15 - 16:30	0	0	9	3	1	0	0	13.5	13	0	0	11	2	1	0	0	14.5	14
16:30 - 16:45	0	0	11	2	0	0	0	13.0	13	0	1	9	4	1	0	0	14.9	15
16:45 - 17:00	0	0	6	3	0	0	0	9.0	9	0	0	11	3	0	0	0	14.0	14
Hourly Total	**0**	**0**	**30**	**11**	**2**	**0**	**0**	**44**	**43**	**0**	**1**	**44**	**12**	**2**	**0**	**0**	**59**	**59**
17:00 - 17:15	0	0	10	1	0	0	0	11.0	11	1	0	20	2	1	0	0	23.7	24
17:15 - 17:30	0	0	10	1	0	0	0	11.0	11	0	0	21	0	0	0	0	21.0	21
17:30 - 17:45	0	0	8	0	0	0	0	8.0	8	0	0	19	0	0	0	0	19.0	19
17:45 - 18:00	0	0	10	3	0	0	0	13.0	13	0	0	11	2	0	0	0	13.0	13
Hourly Total	**0**	**0**	**38**	**5**	**0**	**0**	**0**	**43**	**43**	**1**	**0**	**71**	**4**	**1**	**0**	**0**	**77**	**77**
18:00 - 18:15	0	0	12	0	1	0	0	13.5	13	0	0	13	2	0	0	0	15.0	15
18:15 - 18:30	0	0	11	2	0	0	0	13.0	13	0	0	20	3	1	0	0	24.5	24
Hourly Total	**0**	**0**	**23**	**2**	**1**	**0**	**0**	**27**	**26**	**0**	**0**	**33**	**5**	**1**	**0**	**0**	**40**	**39**
Session Total	**0**	**0**	**99**	**20**	**3**	**0**	**0**	**124**	**122**	**1**	**1**	**174**	**25**	**4**	**0**	**0**	**206**	**205**

Connahs Quay - Manual Traffic Survey: Wednesday, 06 March 2019

Produced by Streetwise Services Ltd.

Junction: **A - (North) Golftyn Lane / B - (South) Golftyn Lane / C - Highmere Drive**



Matrix Totals:	**PCU values**	
Show single Session:	**No**	
	07:00 to 10:00	
Custom Start / End:	**15:30**	**18:30**
Show Peak Times:	**Yes**	
	16:15 to 17:15	

Arm Destination

Arm Origin	A	B	C	Total	% Total
A	0	473.5	33.6	**507**	**100.00%**
B	354.9	0	33.5	**388.4**	**100.00%**
C	18	28.5	0	**46.5**	**100.00%**
Total	**373**	**502**	**67.1**		
% Total	**100.00%**	**100.00%**	**100.00%**		

Classifications	Include
P/CYCLE	**Yes**
M/CYCLE	**Yes**
CAR	**Yes**
LGV	**Yes**
OGV1	**Yes**
OGV2	**Yes**
BUS	**Yes**

Connahs Quay: Queue Length Survey - Wednesday, 06 March 2

Produced by Streetwise Services Ltd.

Junction: A - (North) Golftyn Lane / B - (South) Golftyn Lane / C - Highmere

	A - (North) Golftyn Lan	B - (South) Golftyn Lane		C - Highmere Drive
	Lane 1	Lane 1	Lane 2	Lane 1
Survey Period	Max	Max	Max	Max
15:30 - 15:35	2	0	0	0
15:35 - 15:40	0	0	0	0
15:40 - 15:45	3	0	0	1
15:45 - 15:50	1	0	0	1
15:50 - 15:55	2	0	0	1
15:55 - 16:00	3	1	0	1
16:00 - 16:05	0	0	0	3
16:05 - 16:10	0	1	0	1
16:10 - 16:15	2	0	0	1
16:15 - 16:20	0	0	0	2
16:20 - 16:25	0	0	0	1
16:25 - 16:30	2	0	0	2
16:30 - 16:35	1	0	0	1
16:35 - 16:40	0	0	0	1
16:40 - 16:45	0	0	0	0
16:45 - 16:50	2	0	0	1
16:50 - 16:55	0	0	0	1
16:55 - 17:00	6	0	0	2
17:00 - 17:05	5	1	0	1
17:05 - 17:10	0	0	0	0
17:10 - 17:15	3	0	0	1
17:15 - 17:20	0	0	0	1

17:20 - 17:25	2	0	0	3
17:25 - 17:30	0	0	0	1
17:30 - 17:35	0	0	0	1
17:35 - 17:40	1	0	0	0
17:40 - 17:45	0	0	0	1
17:45 - 17:50	0	0	0	1
17:50 - 17:55	6	0	0	1
17:55 - 18:00	2	0	0	2
18:00 - 18:05	1	0	0	2
18:05 - 18:10	0	0	0	1
18:10 - 18:15	0	0	0	1
18:15 - 18:20	0	0	0	1
18:20 - 18:25	2	0	0	1
18:25 - 18:30	0	0	0	0

Connahs Quay - Manual Traffic Survey: Thursday, 07 March 2019

Produced by Streetwise Services Ltd.

Junction: **A - (North) Golftyn Lane / B - (South) Golftyn Lane / C - Highmere Drive**

Approach: **A - (North) Golftyn Lane**

	A to B									A to C								
TIME	**P/CYCLE**	**M/CYCLE**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**PCU**	**TOTAL**	**P/CYCLE**	**M/CYCLE**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**PCU**	**TOTAL**
07:00 - 07:15	0	0	22	4	1	1	0	**29.8**	**28**	0	0	0	0	0	0	0	**0.0**	**0**
07:15 - 07:30	0	0	30	2	1	0	1	**35.5**	**34**	0	0	2	0	0	0	0	**2.0**	**2**
07:30 - 07:45	0	0	31	3	0	1	0	**36.3**	**35**	0	0	0	0	0	0	0	**0.0**	**0**
07:45 - 08:00	0	0	39	4	2	0	3	**52.0**	**48**	0	0	3	0	0	0	0	**3.0**	**3**
Hourly Total	**0**	**0**	**122**	**13**	**4**	**2**	**4**	**154**	**145**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**5**	**5**
08:00 - 08:15	0	0	33	4	1	1	1	**42.8**	**40**	0	0	3	0	0	0	0	**3.0**	**3**
08:15 - 08:30	0	0	65	4	2	1	3	**80.3**	**75**	0	0	0	0	0	0	0	**0.0**	**0**
08:30 - 08:45	0	0	107	12	0	0	1	**121.0**	**120**	0	0	4	2	0	0	0	**6.0**	**6**
08:45 - 09:00	0	0	105	7	1	0	5	**123.5**	**118**	0	0	2	0	0	0	0	**2.0**	**2**
Hourly Total	**0**	**0**	**310**	**27**	**4**	**2**	**10**	**368**	**353**	**0**	**0**	**9**	**2**	**0**	**0**	**0**	**11**	**11**
09:00 - 09:15	0	0	58	5	1	2	4	**77.1**	**70**	0	0	2	0	0	0	0	**2.0**	**2**
09:15 - 09:30	0	0	35	4	1	2	2	**49.1**	**44**	0	0	1	0	0	0	0	**1.0**	**1**
09:30 - 09:45	0	0	39	3	1	0	0	**43.5**	**43**	0	0	1	0	0	0	0	**1.0**	**1**
09:45 - 10:00	0	0	37	3	3	0	1	**46.5**	**44**	0	0	2	1	0	0	0	**3.0**	**3**
Hourly Total	**0**	**0**	**169**	**15**	**6**	**4**	**7**	**216**	**201**	**0**	**0**	**6**	**1**	**0**	**0**	**0**	**7**	**7**
Session Total	**0**	**0**	**601**	**55**	**14**	**8**	**21**	**738**	**699**	**0**	**0**	**20**	**3**	**0**	**0**	**0**	**23**	**23**

A to A								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

	From A								To A								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	22	4	1	1	0	29.8	28	0	0	33	5	0	0	0	38.0	38
07:15 - 07:30	0	0	32	2	1	0	1	37.5	36	0	1	46	5	2	2	1	61.0	57
07:30 - 07:45	0	0	31	3	0	1	0	36.3	35	0	0	75	5	0	3	0	86.9	83
07:45 - 08:00	0	0	42	4	2	0	3	55.0	51	1	0	106	6	3	0	1	118.7	117
Hourly Total	**0**	**0**	**127**	**13**	**4**	**2**	**4**	**159**	**150**	**1**	**1**	**260**	**21**	**5**	**5**	**2**	**305**	**295**
08:00 - 08:15	0	0	36	4	1	1	1	45.8	43	1	0	109	9	0	1	0	120.5	120
08:15 - 08:30	0	0	65	4	2	1	3	80.3	75	0	2	149	10	1	0	4	169.3	166
08:30 - 08:45	0	0	111	14	0	0	1	127.0	126	0	0	179	10	1	0	5	200.5	195
08:45 - 09:00	0	0	107	7	1	0	5	125.5	120	0	0	115	9	2	3	4	141.9	133
Hourly Total	**0**	**0**	**319**	**29**	**4**	**2**	**10**	**379**	**364**	**1**	**2**	**552**	**38**	**4**	**4**	**13**	**632**	**614**
09:00 - 09:15	0	0	60	5	1	2	4	79.1	72	0	1	70	4	1	0	0	75.9	76
09:15 - 09:30	0	0	36	4	1	2	2	50.1	45	0	0	40	4	1	0	2	49.5	47
09:30 - 09:45	0	0	40	3	1	0	0	44.5	44	0	0	39	2	0	0	0	41.0	41
09:45 - 10:00	0	0	39	4	3	0	1	49.5	47	0	0	37	7	0	0	1	46.0	45
Hourly Total	**0**	**0**	**175**	**16**	**6**	**4**	**7**	**223**	**208**	**0**	**1**	**186**	**17**	**2**	**0**	**3**	**212**	**209**
Session Total	**0**	**0**	**621**	**58**	**14**	**8**	**21**	**761**	**722**	**2**	**4**	**998**	**76**	**11**	**9**	**18**	**1149**	**1118**

Connahs Quay - Manual Traffic Survey: Thursday, 07 March 2019

Produced by Streetwise Services Ltd.

Junction: A - (North) Golftyn Lane / B - (South) Golftyn Lane / C - Highmere Drive

Approach: B - (South) Golftyn Lane

	B to C									B to A								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	1	0	0	0	0	1.0	1	0	0	29	5	0	0	0	34.0	34
07:15 - 07:30	0	1	1	0	0	0	0	1.4	2	0	1	40	4	2	2	1	54.0	50
07:30 - 07:45	0	0	3	0	0	0	0	3.0	3	0	0	66	4	0	3	0	76.9	73
07:45 - 08:00	0	0	5	0	0	0	0	5.0	5	1	0	99	5	3	0	1	110.7	109
Hourly Total	**0**	**1**	**10**	**0**	**0**	**0**	**0**	10	11	**1**	**1**	**234**	**18**	**5**	**5**	**2**	276	266
08:00 - 08:15	0	0	2	2	1	0	0	5.5	5	1	0	103	6	0	1	0	111.5	111
08:15 - 08:30	0	0	4	1	0	0	0	5.0	5	0	2	135	8	0	0	4	151.8	149
08:30 - 08:45	0	0	2	0	1	0	0	3.5	3	0	0	171	8	1	0	5	190.5	185
08:45 - 09:00	0	0	6	0	0	0	0	6.0	6	0	0	104	9	1	3	4	129.4	121
Hourly Total	**0**	**0**	**14**	**3**	**2**	**0**	**0**	20	19	**1**	**2**	**513**	**31**	**2**	**4**	**13**	583	566
09:00 - 09:15	0	0	6	0	0	0	0	6.0	6	0	1	67	4	1	0	0	72.9	73
09:15 - 09:30	0	0	5	1	0	0	0	6.0	6	0	0	39	4	1	0	2	48.5	46
09:30 - 09:45	0	0	1	0	0	0	0	1.0	1	0	0	39	2	0	0	0	41.0	41
09:45 - 10:00	0	0	1	2	0	0	0	3.0	3	0	0	37	7	0	0	1	46.0	45
Hourly Total	**0**	**0**	**13**	**3**	**0**	**0**	**0**	16	16	**0**	**1**	**182**	**17**	**2**	**0**	**3**	208	205
Session Total	**0**	**1**	**37**	**6**	**2**	**0**	**0**	46	46	**2**	**4**	**929**	**66**	**9**	**9**	**18**	1067	1037

B to B								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

	From B									To B								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	30	5	0	0	0	35.0	35	0	0	25	4	1	1	0	32.8	31
07:15 - 07:30	0	2	41	4	2	2	1	55.4	52	0	0	38	3	1	0	1	44.5	43
07:30 - 07:45	0	0	69	4	0	3	0	79.9	76	0	0	39	5	0	1	0	46.3	45
07:45 - 08:00	1	0	104	5	3	0	1	115.7	114	0	0	52	4	2	0	3	65.0	61
Hourly Total	**1**	**2**	**244**	**18**	**5**	**5**	**2**	**287**	**277**	**0**	**0**	**154**	**16**	**4**	**2**	**4**	**189**	**180**
08:00 - 08:15	1	0	105	8	1	1	0	117.0	116	0	0	38	5	1	1	1	48.8	46
08:15 - 08:30	0	2	139	9	0	0	4	156.8	154	0	0	72	4	2	1	3	87.3	82
08:30 - 08:45	0	0	173	8	2	0	5	194.0	188	0	0	121	12	0	0	1	135.0	134
08:45 - 09:00	0	0	110	9	1	3	4	135.4	127	0	0	115	8	1	0	5	134.5	129
Hourly Total	**1**	**2**	**527**	**34**	**4**	**4**	**13**	**603**	**585**	**0**	**0**	**346**	**29**	**4**	**2**	**10**	**406**	**391**
09:00 - 09:15	0	1	73	4	1	0	0	78.9	79	0	0	63	5	1	2	4	82.1	75
09:15 - 09:30	0	0	44	5	1	0	2	54.5	52	0	0	39	4	1	2	2	53.1	48
09:30 - 09:45	0	0	40	2	0	0	0	42.0	42	0	0	46	4	1	0	0	51.5	51
09:45 - 10:00	0	0	38	9	0	0	1	49.0	48	0	0	39	5	3	0	1	50.5	48
Hourly Total	**0**	**1**	**195**	**20**	**2**	**0**	**3**	**224**	**221**	**0**	**0**	**187**	**18**	**6**	**4**	**7**	**237**	**222**
Session Total	**2**	**5**	**966**	**72**	**11**	**9**	**18**	**1114**	**1083**	**0**	**0**	**687**	**63**	**14**	**8**	**21**	**832**	**793**

Connahs Quay - Manual Traffic Survey: Thursday, 07 March 2019

Produced by Streetwise Services Ltd.

Junction: A - (North) Golftyn Lane / B - (South) Golftyn Lane / C - Highmere Drive

Approach: C - Highmere Drive

	C to A									C to B								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	4	0	0	0	0	4.0	4	0	0	3	0	0	0	0	3.0	3
07:15 - 07:30	0	0	6	1	0	0	0	7.0	7	0	0	8	1	0	0	0	9.0	9
07:30 - 07:45	0	0	9	1	0	0	0	10.0	10	0	0	8	2	0	0	0	10.0	10
07:45 - 08:00	0	0	7	1	0	0	0	8.0	8	0	0	13	0	0	0	0	13.0	13
Hourly Total	**0**	**0**	**26**	**3**	**0**	**0**	**0**	29	29	**0**	**0**	**32**	**3**	**0**	**0**	**0**	35	35
08:00 - 08:15	0	0	6	3	0	0	0	9.0	9	0	0	5	1	0	0	0	6.0	6
08:15 - 08:30	0	0	14	2	1	0	0	17.5	17	0	0	7	0	0	0	0	7.0	7
08:30 - 08:45	0	0	8	2	0	0	0	10.0	10	0	0	14	0	0	0	0	14.0	14
08:45 - 09:00	0	0	11	0	1	0	0	12.5	12	0	0	10	1	0	0	0	11.0	11
Hourly Total	**0**	**0**	**39**	**7**	**2**	**0**	**0**	49	48	**0**	**0**	**36**	**2**	**0**	**0**	**0**	38	38
09:00 - 09:15	0	0	3	0	0	0	0	3.0	3	0	0	5	0	0	0	0	5.0	5
09:15 - 09:30	0	0	1	0	0	0	0	1.0	1	0	0	4	0	0	0	0	4.0	4
09:30 - 09:45	0	0	0	0	0	0	0	0.0	0	0	0	7	1	0	0	0	8.0	8
09:45 - 10:00	0	0	0	0	0	0	0	0.0	0	0	0	2	2	0	0	0	4.0	4
Hourly Total	**0**	**0**	**4**	**0**	**0**	**0**	**0**	4	4	**0**	**0**	**18**	**3**	**0**	**0**	**0**	21	21
Session Total	**0**	**0**	**69**	**10**	**2**	**0**	**0**	82	81	**0**	**0**	**86**	**8**	**0**	**0**	**0**	94	94

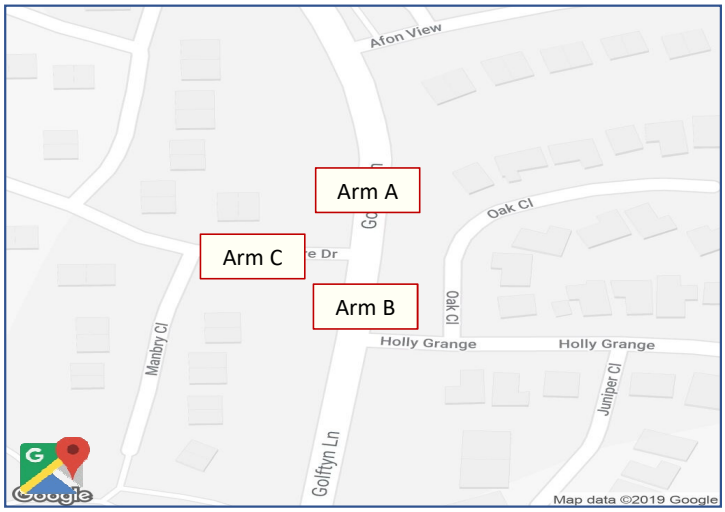
C to C								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	0	0

	From C									To C								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	7	0	0	0	0	7.0	7	0	0	1	0	0	0	0	1.0	1
07:15 - 07:30	0	0	14	2	0	0	0	16.0	16	0	1	3	0	0	0	0	3.4	4
07:30 - 07:45	0	0	17	3	0	0	0	20.0	20	0	0	3	0	0	0	0	3.0	3
07:45 - 08:00	0	0	20	1	0	0	0	21.0	21	0	0	8	0	0	0	0	8.0	8
Hourly Total	**0**	**0**	**58**	**6**	**0**	**0**	**0**	64	64	**0**	**1**	**15**	**0**	**0**	**0**	**0**	15	16
08:00 - 08:15	0	0	11	4	0	0	0	15.0	15	0	0	5	2	1	0	0	8.5	8
08:15 - 08:30	0	0	21	2	1	0	0	24.5	24	0	0	4	1	0	0	0	5.0	5
08:30 - 08:45	0	0	22	2	0	0	0	24.0	24	0	0	6	2	1	0	0	9.5	9
08:45 - 09:00	0	0	21	1	1	0	0	23.5	23	0	0	8	0	0	0	0	8.0	8
Hourly Total	**0**	**0**	**75**	**9**	**2**	**0**	**0**	87	86	**0**	**0**	**23**	**5**	**2**	**0**	**0**	31	30
09:00 - 09:15	0	0	8	0	0	0	0	8.0	8	0	0	8	0	0	0	0	8.0	8
09:15 - 09:30	0	0	5	0	0	0	0	5.0	5	0	0	6	1	0	0	0	7.0	7
09:30 - 09:45	0	0	7	1	0	0	0	8.0	8	0	0	2	0	0	0	0	2.0	2
09:45 - 10:00	0	0	2	2	0	0	0	4.0	4	0	0	3	3	0	0	0	6.0	6
Hourly Total	**0**	**0**	**22**	**3**	**0**	**0**	**0**	25	25	**0**	**0**	**19**	**4**	**0**	**0**	**0**	23	23
Session Total	**0**	**0**	**155**	**18**	**2**	**0**	**0**	176	175	**0**	**1**	**57**	**9**	**2**	**0**	**0**	69	69

Connahs Quay - Manual Traffic Survey: Thursday, 07 March 2019

Produced by Streetwise Services Ltd.

Junction: **A - (North) Golftyn Lane / B - (South) Golftyn Lane / C - Highmere Drive**



Matrix Totals:	**PCU values**
Show single Session:	**No**
	07:00 to 10:00
Custom Start / End:	**07:00** **18:30**
Show Peak Times:	**Yes**
	08:00 to 09:00

Arm Destination

Arm Origin	A	B	C	Total	% Total
A	0	367.6	11	**379**	**100.00%**
B	583.2	0	20	**603.2**	**100.00%**
C	49	38	0	**87**	**100.00%**
Total	**632**	**405.6**	**31**		
% Total	**100.00%**	**100.00%**	**100.00%**		

Classifications	Include
P/CYCLE	**Yes**
M/CYCLE	**Yes**
CAR	**Yes**
LGV	**Yes**
OGV1	**Yes**
OGV2	**Yes**
BUS	**Yes**

Connahs Quay: Queue Length Survey - Thursday, 07 March 20

Produced by Streetwise Services Ltd.

Junction: A - (North) Golftyn Lane / B - (South) Golftyn Lane / C - Highmere

	A - (North) Golftyn La	B - (South) Golftyn Lane		C - Highmere Drive
	Lane 1	Lane 1	Lane 2	Lane 1
Survey Period	Max	Max	Max	Max
07:00 - 07:05	0	0	0	1
07:05 - 07:10	0	0	0	1
07:10 - 07:15	0	0	0	1
07:15 - 07:20	0	0	0	1
07:20 - 07:25	0	0	0	1
07:25 - 07:30	0	0	0	1
07:30 - 07:35	0	0	0	1
07:35 - 07:40	0	0	0	2
07:40 - 07:45	0	0	0	0
07:45 - 07:50	0	0	0	1
07:50 - 07:55	0	2	0	2
07:55 - 08:00	0	0	0	1
08:00 - 08:05	1	0	0	1
08:05 - 08:10	0	0	0	2
08:10 - 08:15	0	0	0	2
08:15 - 08:20	0	0	0	1
08:20 - 08:25	0	0	0	1
08:25 - 08:30	0	0	0	3
08:30 - 08:35	9	6	1	3
08:35 - 08:40	1	6	0	3
08:40 - 08:45	6	0	0	3
08:45 - 08:50	3	0	0	3
08:50 - 08:55	0	0	0	4

08:55 - 09:00	0	0	0	0
09:00 - 09:05	1	0	0	1
09:05 - 09:10	0	0	0	1
09:10 - 09:15	1	0	0	0
09:15 - 09:20	0	0	0	0
09:20 - 09:25	0	0	0	1
09:25 - 09:30	0	0	0	1
09:30 - 09:35	0	0	0	1
09:35 - 09:40	0	0	0	1
09:40 - 09:45	0	0	0	0
09:45 - 09:50	0	0	0	1
09:50 - 09:55	0	0	0	1
09:55 - 10:00	0	0	0	0

Connahs Quay - Manual Traffic Survey: Wednesday, 06 March 2019

Produced by Streetwise Services Ltd.

Junction: A - (East) B5129 Kelsterton Road / B - Golftyn Lane / C - (West) B5129 Kelsterton Road

Approach: A - (East) B5129 Kelsterton Road

	A to B									A to C								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	21	4	3	0	0	29.5	28	0	1	55	5	0	1	2	66.7	64
15:45 - 16:00	0	0	19	4	1	0	0	24.5	24	1	0	38	10	1	1	0	52.0	51
Hourly Total	**0**	**0**	**40**	**8**	**4**	**0**	**0**	**54**	**52**	**1**	**1**	**93**	**15**	**1**	**2**	**2**	**119**	**115**
16:00 - 16:15	0	1	32	2	0	0	1	36.4	36	0	2	50	7	2	0	2	64.8	63
16:15 - 16:30	0	0	23	1	0	0	0	24.0	24	0	0	50	5	1	0	1	58.5	57
16:30 - 16:45	1	0	23	3	0	0	0	26.2	27	1	0	60	4	0	0	2	68.2	67
16:45 - 17:00	0	0	31	1	0	0	0	32.0	32	1	0	53	9	1	1	0	66.0	65
Hourly Total	**1**	**1**	**109**	**7**	**0**	**0**	**1**	**118**	**119**	**2**	**2**	**213**	**25**	**4**	**1**	**5**	**257**	**252**
17:00 - 17:15	0	0	39	2	0	1	1	45.3	43	0	0	70	5	0	0	1	77.0	76
17:15 - 17:30	0	0	28	3	0	0	0	31.0	31	3	0	57	4	0	1	2	67.9	67
17:30 - 17:45	0	1	49	2	0	0	0	51.4	52	0	0	88	2	1	1	2	97.8	94
17:45 - 18:00	0	1	35	2	0	0	0	37.4	38	0	0	67	7	0	0	1	76.0	75
Hourly Total	**0**	**2**	**151**	**9**	**0**	**1**	**1**	**165**	**164**	**3**	**0**	**282**	**18**	**1**	**2**	**6**	**320**	**312**
18:00 - 18:15	0	0	31	0	0	0	0	31.0	31	0	0	57	5	0	0	1	64.0	63
18:15 - 18:30	0	0	23	3	0	0	0	26.0	26	0	0	59	2	1	0	2	66.5	64
Hourly Total	**0**	**0**	**54**	**3**	**0**	**0**	**0**	**57**	**57**	**0**	**0**	**116**	**7**	**1**	**0**	**3**	**131**	**127**
Session Total	**1**	**3**	**354**	**27**	**4**	**1**	**2**	**394**	**392**	**6**	**3**	**704**	**65**	**7**	**5**	**16**	**827**	**806**

A to A								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	From A									To A								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	1	76	9	3	1	2	96.2	92	1	0	65	5	2	0	2	77.2	75
15:45 - 16:00	1	0	57	14	2	1	0	76.5	75	2	1	84	9	0	0	5	103.8	101
Hourly Total	**1**	**1**	**133**	**23**	**5**	**2**	**2**	**173**	**167**	**3**	**1**	**149**	**14**	**2**	**0**	**7**	**181**	**176**
16:00 - 16:15	0	3	82	9	2	0	3	101.2	99	0	1	121	10	0	0	0	131.4	132
16:15 - 16:30	0	0	73	6	1	0	1	82.5	81	4	2	104	8	1	0	6	127.1	125
16:30 - 16:45	2	0	83	7	0	0	2	94.4	94	0	1	110	17	0	0	0	127.4	128
16:45 - 17:00	1	0	84	10	1	1	0	98.0	97	2	3	111	15	1	1	2	135.4	135
Hourly Total	**3**	**3**	**322**	**32**	**4**	**1**	**6**	**376**	**371**	**6**	**7**	**446**	**50**	**2**	**1**	**8**	**521**	**520**
17:00 - 17:15	0	0	109	7	0	1	2	122.3	119	0	0	111	11	1	0	0	123.5	123
17:15 - 17:30	3	0	85	7	0	1	2	98.9	98	0	0	122	10	0	0	3	138.0	135
17:30 - 17:45	0	1	137	4	1	1	2	149.2	146	1	0	88	11	1	0	1	102.7	102
17:45 - 18:00	0	1	102	9	0	0	1	113.4	113	0	0	100	7	0	0	1	109.0	108
Hourly Total	**3**	**2**	**433**	**27**	**1**	**3**	**7**	**485**	**476**	**1**	**0**	**421**	**39**	**2**	**0**	**5**	**473**	**468**
18:00 - 18:15	0	0	88	5	0	0	1	95.0	94	0	1	81	4	0	0	1	87.4	87
18:15 - 18:30	0	0	82	5	1	0	2	92.5	90	0	1	91	4	2	0	2	102.4	100
Hourly Total	**0**	**0**	**170**	**10**	**1**	**0**	**3**	**188**	**184**	**0**	**2**	**172**	**8**	**2**	**0**	**3**	**190**	**187**
Session Total	**7**	**6**	**1058**	**92**	**11**	**6**	**18**	**1222**	**1198**	**10**	**10**	**1188**	**111**	**8**	**1**	**23**	**1365**	**1351**

Connahs Quay - Manual Traffic Survey: Wednesday, 06 March 2019

Produced by Streetwise Services Ltd.

Junction: A - (North) Golftyn Lane / B - (South) Golftyn Lane / C - Highmere Drive

Approach: B - (South) Golftyn Lane

	B to C									B to A								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	9	0	0	0	0	9.0	9	0	0	57	3	0	0	1	62.0	61
15:45 - 16:00	0	0	7	1	0	0	0	8.0	8	0	0	68	2	0	0	6	82.0	76
Hourly Total	**0**	**0**	**16**	**1**	**0**	**0**	**0**	**17**	**17**	**0**	**0**	**125**	**5**	**0**	**0**	**7**	**144**	**137**
16:00 - 16:15	0	0	8	3	0	0	0	11.0	11	0	0	50	2	1	2	9	76.1	64
16:15 - 16:30	0	0	6	1	1	0	0	8.5	8	0	1	76	8	0	0	2	88.4	87
16:30 - 16:45	0	0	6	2	1	0	0	9.5	9	0	0	64	4	0	0	0	68.0	68
16:45 - 17:00	0	0	5	2	0	0	0	7.0	7	0	0	97	5	0	0	1	104.0	103
Hourly Total	**0**	**0**	**25**	**8**	**2**	**0**	**0**	**36**	**35**	**0**	**1**	**287**	**19**	**1**	**2**	**12**	**337**	**322**
17:00 - 17:15	0	0	6	1	1	0	0	8.5	8	0	0	88	5	1	0	0	94.5	94
17:15 - 17:30	0	0	15	0	0	0	0	15.0	15	0	0	73	2	0	0	0	75.0	75
17:30 - 17:45	0	0	11	0	0	0	0	11.0	11	0	0	66	6	0	0	1	74.0	73
17:45 - 18:00	0	0	4	1	0	0	0	5.0	5	0	0	94	4	0	0	1	100.0	99
Hourly Total	**0**	**0**	**36**	**2**	**1**	**0**	**0**	**40**	**39**	**0**	**0**	**321**	**17**	**1**	**0**	**2**	**344**	**341**
18:00 - 18:15	0	0	7	2	0	0	0	9.0	9	0	0	69	3	0	0	0	72.0	72
18:15 - 18:30	0	0	15	2	1	0	0	18.5	18	0	0	50	2	0	0	0	52.0	52
Hourly Total	**0**	**0**	**22**	**4**	**1**	**0**	**0**	**28**	**27**	**0**	**0**	**119**	**5**	**0**	**0**	**0**	**124**	**124**
Session Total	**0**	**0**	**99**	**15**	**4**	**0**	**0**	**121**	**118**	**0**	**1**	**852**	**46**	**2**	**2**	**21**	**949**	**924**

B to B								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	From B									To B								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	1	2	53	3	0	0	2	61.0	61	0	0	62	10	4	0	1	80.0	77
15:45 - 16:00	0	0	56	6	1	0	1	65.5	64	0	1	77	12	1	0	6	102.9	97
Hourly Total	**1**	**2**	**109**	**9**	**1**	**0**	**3**	**127**	**125**	**0**	**1**	**139**	**22**	**5**	**0**	**7**	**183**	**174**
16:00 - 16:15	0	0	59	1	1	2	0	66.1	63	0	1	120	5	0	1	2	131.7	129
16:15 - 16:30	1	1	46	1	0	0	14	75.6	63	0	0	94	7	0	1	3	109.3	105
16:30 - 16:45	0	0	70	11	0	0	0	81.0	81	1	1	108	19	1	0	0	129.1	130
16:45 - 17:00	0	0	63	3	1	0	0	67.5	67	0	0	130	11	1	0	0	142.5	142
Hourly Total	**1**	**1**	**238**	**16**	**2**	**2**	**14**	**290**	**274**	**1**	**2**	**452**	**42**	**2**	**2**	**5**	**513**	**506**
17:00 - 17:15	0	0	57	5	1	0	0	63.5	63	0	0	131	9	0	1	1	144.3	142
17:15 - 17:30	0	0	55	4	0	0	0	59.0	59	0	0	131	9	0	0	1	142.0	141
17:30 - 17:45	0	0	55	4	0	0	0	59.0	59	0	3	138	7	0	0	0	146.2	148
17:45 - 18:00	0	0	73	4	1	0	0	78.5	78	0	1	121	7	0	0	0	128.4	129
Hourly Total	**0**	**0**	**240**	**17**	**2**	**0**	**0**	**260**	**259**	**0**	**4**	**521**	**32**	**0**	**1**	**2**	**561**	**560**
18:00 - 18:15	0	0	73	5	0	0	0	78.0	78	0	0	108	4	0	0	0	112.0	112
18:15 - 18:30	0	0	53	1	0	0	0	54.0	54	0	0	82	5	0	0	1	89.0	88
Hourly Total	**0**	**0**	**126**	**6**	**0**	**0**	**0**	**132**	**132**	**0**	**0**	**190**	**9**	**0**	**0**	**1**	**201**	**200**
Session Total	**2**	**3**	**713**	**48**	**5**	**2**	**17**	**809**	**790**	**1**	**7**	**1302**	**105**	**7**	**3**	**15**	**1458**	**1440**

Connahs Quay - Manual Traffic Survey: Wednesday, 06 March 2019

Produced by Streetwise Services Ltd.

Junction: A - (East) B5129 Kelsterton Road / B - Golftyn Lane / C - (West) B5129 Kelsterton Road

Approach: C - (West) B5129 Kelsterton Road

	C to A									C to B								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	1	0	46	5	2	0	0	54.2	54	0	0	41	6	1	0	1	50.5	49
15:45 - 16:00	2	1	67	7	0	0	5	84.8	82	0	1	58	8	0	0	6	78.4	73
Hourly Total	**3**	**1**	**113**	**12**	**2**	**0**	**5**	139	136	**0**	**1**	**99**	**14**	**1**	**0**	**7**	129	122
16:00 - 16:15	0	1	99	10	0	0	0	109.4	110	0	0	88	3	0	1	1	95.3	93
16:15 - 16:30	3	2	90	8	1	0	3	106.9	107	0	0	71	6	0	1	3	85.3	81
16:30 - 16:45	0	1	90	14	0	0	0	104.4	105	0	1	85	16	1	0	0	102.9	103
16:45 - 17:00	2	3	98	15	1	1	2	122.4	122	0	0	99	10	1	0	0	110.5	110
Hourly Total	**5**	**7**	**377**	**47**	**2**	**1**	**5**	443	444	**0**	**1**	**343**	**35**	**2**	**2**	**4**	394	387
17:00 - 17:15	0	0	101	9	0	0	0	110.0	110	0	0	92	7	0	0	0	99.0	99
17:15 - 17:30	0	0	102	10	0	0	3	118.0	115	0	0	103	6	0	0	1	111.0	110
17:30 - 17:45	1	0	75	10	1	0	1	88.7	88	0	2	89	5	0	0	0	94.8	96
17:45 - 18:00	0	0	80	5	0	0	1	87.0	86	0	0	86	5	0	0	0	91.0	91
Hourly Total	**1**	**0**	**358**	**34**	**1**	**0**	**5**	404	399	**0**	**2**	**370**	**23**	**0**	**0**	**1**	396	396
18:00 - 18:15	0	1	66	3	0	0	1	71.4	71	0	0	77	4	0	0	0	81.0	81
18:15 - 18:30	0	1	73	3	2	0	2	83.4	81	0	0	59	2	0	0	1	63.0	62
Hourly Total	**0**	**2**	**139**	**6**	**2**	**0**	**3**	155	152	**0**	**0**	**136**	**6**	**0**	**0**	**1**	144	143
Session Total	**9**	**10**	**987**	**99**	**7**	**1**	**18**	1141	1131	**0**	**4**	**948**	**78**	**3**	**2**	**13**	1063	1048

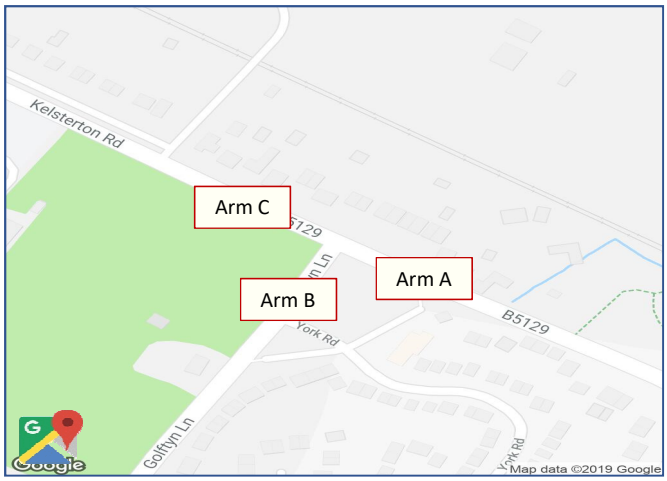
C to C								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	From C									To C								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	1	0	87	11	3	0	1	104.7	103	1	3	89	8	0	1	2	104.7	104
15:45 - 16:00	2	2	125	15	0	0	11	163.2	155	1	0	77	14	2	1	1	98.5	96
Hourly Total	**3**	**2**	**212**	**26**	**3**	**0**	**12**	**269**	**258**	**2**	**3**	**166**	**22**	**2**	**2**	**3**	**203**	**200**
16:00 - 16:15	0	1	187	13	0	1	1	204.7	203	0	2	87	8	3	2	2	108.9	104
16:15 - 16:30	3	2	161	14	1	1	6	192.2	188	0	1	82	6	1	0	12	113.9	102
16:30 - 16:45	0	2	175	30	1	0	0	207.3	208	1	0	110	12	0	0	2	126.2	125
16:45 - 17:00	2	3	197	25	2	1	2	232.9	232	1	0	103	12	2	1	0	120.5	119
Hourly Total	**5**	**8**	**720**	**82**	**4**	**3**	**9**	**837**	**831**	**2**	**3**	**382**	**38**	**6**	**3**	**16**	**469**	**450**
17:00 - 17:15	0	0	193	16	0	0	0	209.0	209	0	0	117	8	0	0	1	127.0	126
17:15 - 17:30	0	0	205	16	0	0	4	229.0	225	3	0	92	8	0	1	2	106.9	106
17:30 - 17:45	1	2	164	15	1	0	1	183.5	184	0	0	130	5	1	1	2	142.8	139
17:45 - 18:00	0	0	166	10	0	0	1	178.0	177	0	0	120	9	1	0	1	132.5	131
Hourly Total	**1**	**2**	**728**	**57**	**1**	**0**	**6**	**800**	**795**	**3**	**0**	**459**	**30**	**2**	**2**	**6**	**510**	**502**
18:00 - 18:15	0	1	143	7	0	0	1	152.4	152	0	0	115	9	0	0	1	126.0	125
18:15 - 18:30	0	1	132	5	2	0	3	146.4	143	0	0	94	2	1	0	2	101.5	99
Hourly Total	**0**	**2**	**275**	**12**	**2**	**0**	**4**	**299**	**295**	**0**	**0**	**209**	**11**	**1**	**0**	**3**	**228**	**224**
Session Total	**9**	**14**	**1935**	**177**	**10**	**3**	**31**	**2205**	**2179**	**7**	**6**	**1216**	**101**	**11**	**7**	**28**	**1410**	**1376**

Connahs Quay - Manual Traffic Survey: Thursday, 07 March 2019

Produced by Streetwise Services Ltd.

Junction: **A - (East) B5129 Kelsterton Road / B - Golftyn Lane / C - (West) B5129 Kelsterton Road**



Matrix Totals:	**PCU values**	
Show single Session:	**No**	
	07:00 to 10:00	
Custom Start / End:	**16:15**	**17:15**
Show Peak Times:	**No**	

Arm Destination

Arm Origin	A	B	C	Total	% Total
A	0	127.5	269.7	**397**	**100.00%**
B	69.7	0	217.9	**287.6**	**100.00%**
C	443.7	397.7	0	**841.4**	**100.00%**
Total	**513**	**525.2**	**487.6**		
% Total	**100.00%**	**100.00%**	**100.00%**		

Classifications	Include
P/CYCLE	**Yes**
M/CYCLE	**Yes**
CAR	**Yes**
LGV	**Yes**
OGV1	**Yes**
OGV2	**Yes**
BUS	**Yes**

Connahs Quay: Queue Length Survey - Wednesday, 06 March 2019

Produced by Streetwise Services Ltd.

Junction: A - (East) B5129 Kelsterton Road / B - Golftyn Lane / C - (West) B5129 Kelsterton Road

	A - (East) B5129 Kelsterto	B - Golftyn Lane		C - (West) B5129 Kelsterton Road	
	Lane 1	Lane 1	Lane 2	Lane 1	Lane 2
Survey Period	Max	Max	Max	Max	Max
15:30 - 15:35	0	7	1	0	1
15:35 - 15:40	0	3	0	0	2
15:40 - 15:45	0	3	1	0	3
15:45 - 15:50	0	10	0	0	3
15:50 - 15:55	0	5	1	0	3
15:55 - 16:00	0	3	0	0	1
16:00 - 16:05	2	5	0	0	7
16:05 - 16:10	0	5	2	0	4
16:10 - 16:15	0	7	0	0	8
16:15 - 16:20	0	6	0	0	3
16:20 - 16:25	0	9	1	0	8
16:25 - 16:30	0	3	0	0	4
16:30 - 16:35	0	2	0	0	1
16:35 - 16:40	0	6	1	0	3
16:40 - 16:45	0	9	1	0	6
16:45 - 16:50	0	6	1	0	2
16:50 - 16:55	0	4	1	0	11
16:55 - 17:00	0	1	1	0	6
17:00 - 17:05	0	3	0	0	2
17:05 - 17:10	0	5	1	0	3
17:10 - 17:15	0	2	2	0	5
17:15 - 17:20	0	1	0	0	5
17:20 - 17:25	0	8	1	0	3
17:25 - 17:30	0	8	0	0	3
17:30 - 17:35	0	9	1	0	2
17:35 - 17:40	0	3	1	0	7
17:40 - 17:45	0	2	1	0	14
17:45 - 17:50	0	3	0	0	5
17:50 - 17:55	0	7	1	0	6
17:55 - 18:00	0	8	1	0	4
18:00 - 18:05	0	2	0	0	2
18:05 - 18:10	0	7	1	0	10

18:10 - 18:15	0	5	1	0	3
18:15 - 18:20	0	3	0	0	3
18:20 - 18:25	0	3	0	0	4
18:25 - 18:30	0	6	1	0	3

Connahs Quay - Manual Traffic Survey: Thursday, 07 March 2019

Produced by Streetwise Services Ltd.

Junction: A - (East) B5129 Kelsterton Road / B - Golftyn Lane / C - (West) B5129 Kelsterton Road

Approach: A - (East) B5129 Kelsterton Road

	A to B									A to C								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	7	1	0	0	0	8.0	8	0	1	26	4	0	2	1	37.0	34
07:15 - 07:30	0	0	6	2	0	0	0	8.0	8	1	0	46	9	0	0	0	55.2	56
07:30 - 07:45	0	0	9	1	0	0	0	10.0	10	0	2	66	7	0	0	2	77.8	77
07:45 - 08:00	0	0	8	2	0	0	0	10.0	10	0	0	45	10	2	1	1	62.3	59
Hourly Total	**0**	**0**	**30**	**6**	**0**	**0**	**0**	36	36	**1**	**3**	**183**	**30**	**2**	**3**	**4**	232	226
08:00 - 08:15	0	0	20	2	2	0	0	25.0	24	0	0	62	12	4	0	1	82.0	79
08:15 - 08:30	1	0	31	1	0	0	0	32.2	33	1	1	91	8	0	0	1	101.6	102
08:30 - 08:45	0	0	47	6	0	0	0	53.0	53	0	1	95	16	0	0	6	123.4	118
08:45 - 09:00	0	0	45	1	0	1	1	50.3	48	0	0	95	10	1	0	1	108.5	107
Hourly Total	**1**	**0**	**143**	**10**	**2**	**1**	**1**	160	158	**1**	**2**	**343**	**46**	**5**	**0**	**9**	416	406
09:00 - 09:15	0	0	15	4	0	0	0	19.0	19	0	1	84	14	2	0	1	103.4	102
09:15 - 09:30	0	0	15	1	0	0	1	18.0	17	0	0	52	9	2	1	1	68.3	65
09:30 - 09:45	0	0	14	1	0	0	0	15.0	15	0	0	34	7	1	0	2	46.5	44
09:45 - 10:00	0	0	18	0	0	0	0	18.0	18	0	0	43	7	3	2	1	61.1	56
Hourly Total	**0**	**0**	**62**	**6**	**0**	**0**	**1**	70	69	**0**	**1**	**213**	**37**	**8**	**3**	**5**	279	267
Session Total	**1**	**0**	**235**	**22**	**2**	**1**	**2**	266	263	**2**	**6**	**739**	**113**	**15**	**6**	**18**	927	899

A to A								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

	From A									To A								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	1	33	5	0	2	1	45.0	42	0	0	33	5	0	0	1	40.0	39
07:15 - 07:30	1	0	52	11	0	0	0	63.2	64	2	0	48	6	2	0	3	63.4	61
07:30 - 07:45	0	2	75	8	0	0	2	87.8	87	1	1	40	4	3	1	0	51.4	50
07:45 - 08:00	0	0	53	12	2	1	1	72.3	69	0	0	49	10	2	0	2	66.0	63
Hourly Total	1	3	213	36	2	3	4	268	262	3	1	170	25	7	1	6	221	213
08:00 - 08:15	0	0	82	14	6	0	1	107.0	103	0	0	71	10	0	1	1	85.3	83
08:15 - 08:30	2	1	122	9	0	0	1	133.8	135	2	0	56	14	0	0	4	78.4	76
08:30 - 08:45	0	1	142	22	0	0	6	176.4	171	0	0	79	12	1	0	1	94.5	93
08:45 - 09:00	0	0	140	11	1	1	2	158.8	155	0	0	71	12	0	0	2	87.0	85
Hourly Total	2	2	486	56	7	1	10	576	564	2	0	277	48	1	1	8	345	337
09:00 - 09:15	0	1	99	18	2	0	1	122.4	121	0	0	80	12	1	0	2	97.5	95
09:15 - 09:30	0	0	67	10	2	1	2	86.3	82	0	0	69	5	0	0	3	80.0	77
09:30 - 09:45	0	0	48	8	1	0	2	61.5	59	1	0	73	13	2	0	1	91.2	90
09:45 - 10:00	0	0	61	7	3	2	1	79.1	74	0	0	60	13	2	0	2	80.0	77
Hourly Total	0	1	275	43	8	3	6	349	336	1	0	282	43	5	0	8	349	339
Session Total	3	6	974	135	17	7	20	1193	1162	6	1	729	116	13	2	22	915	889

Connahs Quay - Manual Traffic Survey: Thursday, 07 March 2019

Produced by Streetwise Services Ltd.

Junction: A - (East) B5129 Kelsterton Road / B - Golftyn Lane / C - (West) B5129 Kelsterton Road

Approach: B - Golftyn Lane

	B to C									B to A								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	45	6	0	0	0	51.0	51	0	0	5	0	0	0	0	5.0	5
07:15 - 07:30	0	0	43	7	0	2	0	54.6	52	0	0	13	2	1	0	0	16.5	16
07:30 - 07:45	0	0	91	7	0	3	0	104.9	101	1	0	18	3	1	0	0	22.7	23
07:45 - 08:00	0	0	98	7	2	0	0	108.0	107	0	0	15	3	0	0	0	18.0	18
Hourly Total	**0**	**0**	**277**	**27**	**2**	**5**	**0**	319	311	**1**	**0**	**51**	**8**	**2**	**0**	**0**	62	62
08:00 - 08:15	0	2	78	5	0	1	0	86.1	86	0	0	23	3	0	0	0	26.0	26
08:15 - 08:30	0	0	110	4	1	0	1	117.5	116	0	0	14	3	0	0	0	17.0	17
08:30 - 08:45	0	1	104	11	1	0	4	124.9	121	0	0	22	2	0	0	1	26.0	25
08:45 - 09:00	0	0	101	3	2	1	8	125.3	115	0	0	25	1	0	0	1	28.0	27
Hourly Total	**0**	**3**	**393**	**23**	**4**	**2**	**13**	454	438	**0**	**0**	**84**	**9**	**0**	**0**	**2**	97	95
09:00 - 09:15	0	0	78	5	3	2	3	98.1	91	0	0	15	0	0	0	1	17.0	16
09:15 - 09:30	0	1	38	5	0	0	0	43.4	44	0	0	20	1	0	0	0	21.0	21
09:30 - 09:45	0	0	26	1	0	0	0	27.0	27	0	0	14	3	1	0	1	20.5	19
09:45 - 10:00	0	0	28	7	0	0	0	35.0	35	0	0	16	0	1	0	0	17.5	17
Hourly Total	**0**	**1**	**170**	**18**	**3**	**2**	**3**	204	197	**0**	**0**	**65**	**4**	**2**	**0**	**2**	76	73
Session Total	**0**	**4**	**840**	**68**	**9**	**9**	**16**	977	946	**1**	**0**	**200**	**21**	**4**	**0**	**4**	235	230

B to B								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

	From B									To B								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	50	6	0	0	0	56.0	56	0	0	21	4	1	1	0	28.8	27
07:15 - 07:30	0	0	56	9	1	2	0	71.1	68	0	0	26	3	1	0	1	32.5	31
07:30 - 07:45	1	0	109	10	1	3	0	127.6	124	0	0	28	4	0	0	0	32.0	32
07:45 - 08:00	0	0	113	10	2	0	0	126.0	125	0	0	27	4	1	1	2	38.8	35
Hourly Total	**1**	**0**	**328**	**35**	**4**	**5**	**0**	**381**	**373**	**0**	**0**	**102**	**15**	**3**	**2**	**3**	**133**	**125**
08:00 - 08:15	0	2	101	8	0	1	0	112.1	112	0	0	42	4	2	1	2	55.3	51
08:15 - 08:30	0	0	124	7	1	0	1	134.5	133	1	0	60	3	1	1	2	71.0	68
08:30 - 08:45	0	1	126	13	1	0	5	150.9	146	0	0	69	10	1	0	4	88.5	84
08:45 - 09:00	0	0	126	4	2	1	9	153.3	142	0	0	81	6	1	1	7	104.8	96
Hourly Total	**0**	**3**	**477**	**32**	**4**	**2**	**15**	**551**	**533**	**1**	**0**	**252**	**23**	**5**	**3**	**15**	**320**	**299**
09:00 - 09:15	0	0	93	5	3	2	4	115.1	107	0	0	42	9	0	1	0	53.3	52
09:15 - 09:30	0	1	58	6	0	0	0	64.4	65	0	0	41	4	1	2	2	55.1	50
09:30 - 09:45	0	0	40	4	1	0	1	47.5	46	0	0	37	5	2	0	0	45.0	44
09:45 - 10:00	0	0	44	7	1	0	0	52.5	52	0	0	50	4	3	0	0	58.5	57
Hourly Total	**0**	**1**	**235**	**22**	**5**	**2**	**5**	**280**	**270**	**0**	**0**	**170**	**22**	**6**	**3**	**2**	**212**	**203**
Session Total	**1**	**4**	**1040**	**89**	**13**	**9**	**20**	**1212**	**1176**	**1**	**0**	**524**	**60**	**14**	**8**	**20**	**665**	**627**

Connahs Quay - Manual Traffic Survey: Thursday, 07 March 2019

Produced by Streetwise Services Ltd.

Junction: A - (East) B5129 Kelsterton Road / B - Golftyn Lane / C - (West) B5129 Kelsterton Road

Approach: C - (West) B5129 Kelsterton Road

	C to A									C to B								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	28	5	0	0	1	35.0	34	0	0	14	3	1	1	0	20.8	19
07:15 - 07:30	2	0	35	4	1	0	3	46.9	45	0	0	20	1	1	0	1	24.5	23
07:30 - 07:45	0	1	22	1	2	1	0	28.7	27	0	0	19	3	0	0	0	22.0	22
07:45 - 08:00	0	0	34	7	2	0	2	48.0	45	0	0	19	2	1	1	2	28.8	25
Hourly Total	**2**	**1**	**119**	**17**	**5**	**1**	**6**	**158**	**151**	**0**	**0**	**72**	**9**	**3**	**2**	**3**	**97**	**89**
08:00 - 08:15	0	0	48	7	0	1	1	59.3	57	0	0	22	2	0	1	2	30.3	27
08:15 - 08:30	2	0	42	11	0	0	4	61.4	59	0	0	29	2	1	1	2	38.8	35
08:30 - 08:45	0	0	57	10	1	0	0	68.5	68	0	0	22	4	1	0	4	35.5	31
08:45 - 09:00	0	0	46	11	0	0	1	59.0	58	0	0	36	5	1	0	6	54.5	48
Hourly Total	**2**	**0**	**193**	**39**	**1**	**1**	**6**	**248**	**242**	**0**	**0**	**109**	**13**	**3**	**2**	**14**	**160**	**141**
09:00 - 09:15	0	0	65	12	1	0	1	80.5	79	0	0	27	5	0	1	0	34.3	33
09:15 - 09:30	0	0	49	4	0	0	3	59.0	56	0	0	26	3	1	2	1	37.1	33
09:30 - 09:45	1	0	59	10	1	0	0	70.7	71	0	0	23	4	2	0	0	30.0	29
09:45 - 10:00	0	0	44	13	1	0	2	62.5	60	0	0	32	4	3	0	0	40.5	39
Hourly Total	**1**	**0**	**217**	**39**	**3**	**0**	**6**	**273**	**266**	**0**	**0**	**108**	**16**	**6**	**3**	**1**	**142**	**134**
Session Total	**5**	**1**	**529**	**95**	**9**	**2**	**18**	**679**	**659**	**0**	**0**	**289**	**38**	**12**	**7**	**18**	**399**	**364**

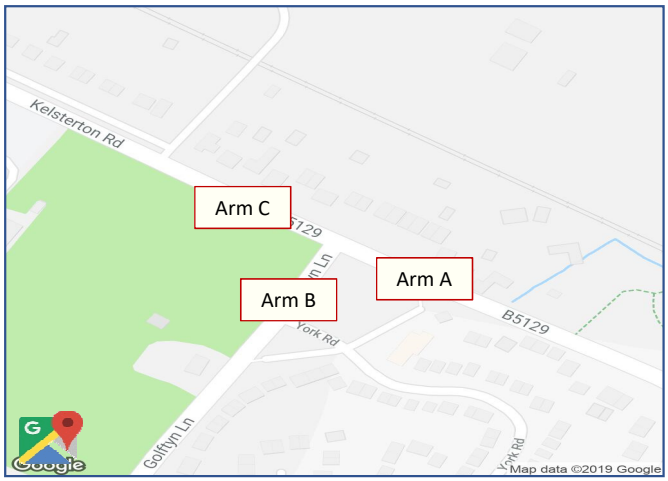
C to C								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

	From C									To C								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	42	8	1	1	1	55.8	53	0	1	71	10	0	2	1	88.0	85
07:15 - 07:30	2	0	55	5	2	0	4	71.4	68	1	0	89	16	0	2	0	109.8	108
07:30 - 07:45	0	1	41	4	2	1	0	50.7	49	0	2	157	14	0	3	2	182.7	178
07:45 - 08:00	0	0	53	9	3	1	4	76.8	70	0	0	143	17	4	1	1	170.3	166
Hourly Total	**2**	**1**	**191**	**26**	**8**	**3**	**9**	**254**	**240**	**1**	**3**	**460**	**57**	**4**	**8**	**4**	**550**	**537**
08:00 - 08:15	0	0	70	9	0	2	3	89.6	84	0	2	140	17	4	1	1	168.1	165
08:15 - 08:30	2	0	71	13	1	1	6	100.2	94	1	1	201	12	1	0	2	219.1	218
08:30 - 08:45	0	0	79	14	2	0	4	104.0	99	0	2	199	27	1	0	10	248.3	239
08:45 - 09:00	0	0	82	16	1	0	7	113.5	106	0	0	196	13	3	1	9	233.8	222
Hourly Total	**2**	**0**	**302**	**52**	**4**	**3**	**20**	**407**	**383**	**1**	**5**	**736**	**69**	**9**	**2**	**22**	**870**	**844**
09:00 - 09:15	0	0	92	17	1	1	1	114.8	112	0	1	162	19	5	2	4	201.5	193
09:15 - 09:30	0	0	75	7	1	2	4	96.1	89	0	1	90	14	2	1	1	111.7	109
09:30 - 09:45	1	0	82	14	3	0	0	100.7	100	0	0	60	8	1	0	2	73.5	71
09:45 - 10:00	0	0	76	17	4	0	2	103.0	99	0	0	71	14	3	2	1	96.1	91
Hourly Total	**1**	**0**	**325**	**55**	**9**	**3**	**7**	**415**	**400**	**0**	**2**	**383**	**55**	**11**	**5**	**8**	**484**	**464**
Session Total	**5**	**1**	**818**	**133**	**21**	**9**	**36**	**1076**	**1023**	**2**	**10**	**1579**	**181**	**24**	**15**	**34**	**1904**	**1845**

Connahs Quay - Manual Traffic Survey: Thursday, 07 March 2019

Produced by Streetwise Services Ltd.

Junction: **A - (East) B5129 Kelsterton Road / B - Golftyn Lane / C - (West) B5129 Kelsterton Road**



Matrix Totals:	**PCU values**	
Show single Session:	**No**	
	07:00 to 10:00	
Custom Start / End:	**08:00**	**09:00**
Show Peak Times:	**No**	

Arm Destination

Arm Origin	A	B	C	Total	% Total
A	0	160.5	415.5	**576**	**100.00%**
B	97	0	453.8	**550.8**	**100.00%**
C	248.2	159.1	0	**407.3**	**100.00%**
Total	**345**	**319.6**	**869.3**		
% Total	**100.00%**	**100.00%**	**100.00%**		

Classifications	Include
P/CYCLE	**Yes**
M/CYCLE	**Yes**
CAR	**Yes**
LGV	**Yes**
OGV1	**Yes**
OGV2	**Yes**
BUS	**Yes**

Connahs Quay: Queue Length Survey - Thursday, 07 March 2019

Produced by Streetwise Services Ltd.

Junction: A - (East) B5129 Kelsterton Road / B - Golftyn Lane / C - (West) B5129 Kelsterton Road

	A - (East) B5129 Kelsterton	B - Golftyn Lane		C - (West) B5129 Kelsterton Road	
	Lane 1	Lane 1	Lane 2	Lane 1	Lane 2
Survey Period	Max	Max	Max	Max	Max
07:00 - 07:05	0	4	0	0	0
07:05 - 07:10	0	2	0	0	0
07:10 - 07:15	0	2	1	1	0
07:15 - 07:20	0	2	1	1	0
07:20 - 07:25	0	3	0	1	0
07:25 - 07:30	0	4	0	1	0
07:30 - 07:35	0	4	0	0	0
07:35 - 07:40	0	9	1	1	0
07:40 - 07:45	0	9	0	1	0
07:45 - 07:50	0	9	0	0	0
07:50 - 07:55	0	5	2	0	0
07:55 - 08:00	0	10	0	0	0
08:00 - 08:05	0	11	0	1	0
08:05 - 08:10	0	15	1	2	0
08:10 - 08:15	0	5	1	4	0
08:15 - 08:20	0	10	1	1	0
08:20 - 08:25	0	9	1	2	0
08:25 - 08:30	0	6	1	2	0
08:30 - 08:35	0	14	1	2	0
08:35 - 08:40	0	11	1	1	0
08:40 - 08:45	0	12	2	4	0
08:45 - 08:50	0	10	1	4	0
08:50 - 08:55	4	12	1	2	0
08:55 - 09:00	0	17	1	6	0
09:00 - 09:05	0	16	1	1	0
09:05 - 09:10	0	8	1	1	0
09:10 - 09:15	0	9	1	1	0
09:15 - 09:20	0	5	0	2	0
09:20 - 09:25	0	3	0	1	0
09:25 - 09:30	0	3	1	3	0
09:30 - 09:35	0	2	0	1	0
09:35 - 09:40	0	3	0	0	0

09:40 - 09:45	0	2	0	1	0
09:45 - 09:50	0	6	1	1	0
09:50 - 09:55	0	2	1	1	0
09:55 - 10:00	0	1	0	0	0

Connahs Quay - Manual Traffic Survey: Wednesday, 06 March 2019

Produced by Streetwise Services Ltd.

Junction: **A - Ffordd Llanarth / B - (East B5126 Mold Road / C - (West) B5126 Mold Road**

Approach: **A - Ffordd Llanarth**

	A to B									A to C								
TIME	**P/CYCLE**	**M/CYCLE**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**PCU**	**TOTAL**	**P/CYCLE**	**M/CYCLE**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**PCU**	**TOTAL**
15:30 - 15:45	0	0	56	4	0	0	1	**62.0**	**61**	0	0	59	4	0	0	1	**65.0**	**64**
15:45 - 16:00	0	0	63	4	0	0	1	**69.0**	**68**	0	0	35	3	2	0	0	**41.0**	**40**
Hourly Total	**0**	**0**	**119**	**8**	**0**	**0**	**2**	**131**	**129**	**0**	**0**	**94**	**7**	**2**	**0**	**1**	**106**	**104**
16:00 - 16:15	0	0	73	4	0	0	1	**79.0**	**78**	0	0	67	3	0	0	0	**70.0**	**70**
16:15 - 16:30	0	0	53	6	1	0	2	**64.5**	**62**	0	0	51	5	0	1	11	**80.3**	**68**
16:30 - 16:45	0	0	62	5	1	0	1	**70.5**	**69**	1	0	71	4	0	0	0	**75.2**	**76**
16:45 - 17:00	0	1	67	6	0	0	0	**73.4**	**74**	0	0	50	5	0	0	0	**55.0**	**55**
Hourly Total	**0**	**1**	**255**	**21**	**2**	**0**	**4**	**287**	**283**	**1**	**0**	**239**	**17**	**0**	**1**	**11**	**280**	**269**
17:00 - 17:15	0	0	78	2	0	0	0	**80.0**	**80**	0	0	46	5	0	1	1	**55.3**	**53**
17:15 - 17:30	0	0	65	3	0	0	2	**72.0**	**70**	0	0	49	2	0	0	1	**53.0**	**52**
17:30 - 17:45	0	0	76	3	0	0	0	**79.0**	**79**	0	0	61	4	0	0	1	**67.0**	**66**
17:45 - 18:00	0	0	65	5	0	0	0	**70.0**	**70**	0	1	47	4	0	0	0	**51.4**	**52**
Hourly Total	**0**	**0**	**284**	**13**	**0**	**0**	**2**	**301**	**299**	**0**	**1**	**203**	**15**	**0**	**1**	**3**	**226**	**223**
18:00 - 18:15	0	0	61	0	1	0	1	**64.5**	**63**	0	0	75	3	0	0	0	**78.0**	**78**
18:15 - 18:30	0	1	52	1	0	0	2	**57.4**	**56**	0	0	46	3	0	0	0	**49.0**	**49**
Hourly Total	**0**	**1**	**113**	**1**	**1**	**0**	**3**	**122**	**119**	**0**	**0**	**121**	**6**	**0**	**0**	**0**	**127**	**127**
Session Total	**0**	**2**	**771**	**43**	**3**	**0**	**11**	**841**	**830**	**1**	**1**	**657**	**45**	**2**	**2**	**15**	**739**	**723**

TIME	A to A								
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	0	0	0	0	0	0.0	0
15:45 - 16:00	0	0	0	0	0	0	0	0.0	0
Hourly Total	0	0	0	0	0	0	0	0	0
16:00 - 16:15	0	0	0	0	0	0	0	0.0	0
16:15 - 16:30	0	0	0	0	0	0	0	0.0	0
16:30 - 16:45	0	0	0	0	0	0	0	0.0	0
16:45 - 17:00	0	0	0	0	0	0	0	0.0	0
Hourly Total	0	0	0	0	0	0	0	0	0
17:00 - 17:15	0	0	0	0	0	0	0	0.0	0
17:15 - 17:30	0	0	0	0	0	0	0	0.0	0
17:30 - 17:45	0	0	0	0	0	0	0	0.0	0
17:45 - 18:00	0	0	0	0	0	0	0	0.0	0
Hourly Total	0	0	0	0	0	0	0	0	0
18:00 - 18:15	0	0	0	0	0	0	0	0.0	0
18:15 - 18:30	0	0	0	0	0	0	0	0.0	0
Hourly Total	0	0	0	0	0	0	0	0	0
Session Total	0	0	0	0	0	0	0	0	0

TIME	From A								
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	115	8	0	0	2	127.0	125
15:45 - 16:00	0	0	98	7	2	0	1	110.0	108
Hourly Total	0	0	213	15	2	0	3	237	233
16:00 - 16:15	0	0	140	7	0	0	1	149.0	148
16:15 - 16:30	0	0	104	11	1	1	13	144.8	130
16:30 - 16:45	1	0	133	9	1	0	1	145.7	145
16:45 - 17:00	0	1	117	11	0	0	0	128.4	129
Hourly Total	1	1	494	38	2	1	15	567	552
17:00 - 17:15	0	0	124	7	0	1	1	135.3	133
17:15 - 17:30	0	0	114	5	0	0	3	125.0	122
17:30 - 17:45	0	0	137	7	0	0	1	146.0	145
17:45 - 18:00	0	1	112	9	0	0	0	121.4	122
Hourly Total	0	1	487	28	0	1	5	527	522
18:00 - 18:15	0	0	136	3	1	0	1	142.5	141
18:15 - 18:30	0	1	98	4	0	0	2	106.4	105
Hourly Total	0	1	234	7	1	0	3	249	246
Session Total	1	3	1428	88	5	2	26	1580	1553

TIME	To A								
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	108	6	0	0	3	120.0	117
15:45 - 16:00	0	0	102	9	1	0	4	120.5	116
Hourly Total	0	0	210	15	1	0	7	241	233
16:00 - 16:15	0	0	73	6	1	2	10	105.1	92
16:15 - 16:30	0	1	122	13	1	0	2	140.9	139
16:30 - 16:45	0	1	100	4	1	0	1	107.9	107
16:45 - 17:00	0	0	160	6	0	0	0	166.0	166
Hourly Total	0	2	455	29	3	2	13	521	504
17:00 - 17:15	0	0	125	10	2	0	1	140.0	138
17:15 - 17:30	0	0	117	5	0	0	1	124.0	123
17:30 - 17:45	0	0	121	10	0	0	1	133.0	132
17:45 - 18:00	0	0	119	7	0	0	0	126.0	126
Hourly Total	0	0	482	32	2	0	3	523	519
18:00 - 18:15	0	0	105	7	0	1	2	118.3	115
18:15 - 18:30	0	0	105	1	1	0	0	107.5	107
Hourly Total	0	0	210	8	1	1	2	226	222
Session Total	0	2	1357	84	7	3	25	1511	1478

Connahs Quay - Manual Traffic Survey: Wednesday, 06 March 2019

Produced by Streetwise Services Ltd.

Junction: A - Ffordd Llanarth / B - (East B5126 Mold Road / C - (West) B5126 Mold Road

Approach: B - (East B5126 Mold Road

	B to C									B to A								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	44	5	0	0	0	49.0	49	0	0	57	2	0	0	3	65.0	62
15:45 - 16:00	0	0	44	1	2	1	0	50.3	48	0	0	45	5	1	0	0	51.5	51
Hourly Total	**0**	**0**	**88**	**6**	**2**	**1**	**0**	**99**	**97**	**0**	**0**	**102**	**7**	**1**	**0**	**3**	**117**	**113**
16:00 - 16:15	0	0	40	7	1	1	0	50.8	49	0	0	41	4	0	0	0	45.0	45
16:15 - 16:30	0	0	34	6	1	0	0	41.5	41	0	1	58	6	1	0	0	65.9	66
16:30 - 16:45	0	0	58	1	0	0	0	59.0	59	0	1	49	1	1	0	1	53.9	53
16:45 - 17:00	0	0	54	9	0	0	0	63.0	63	0	0	74	4	0	0	0	78.0	78
Hourly Total	**0**	**0**	**186**	**23**	**2**	**1**	**0**	**214**	**212**	**0**	**2**	**222**	**15**	**2**	**0**	**1**	**243**	**242**
17:00 - 17:15	0	0	53	5	0	0	0	58.0	58	0	0	59	3	0	0	0	62.0	62
17:15 - 17:30	0	0	41	0	0	0	0	41.0	41	0	0	62	3	0	0	1	67.0	66
17:30 - 17:45	0	0	41	3	0	0	0	44.0	44	0	0	59	7	0	0	1	68.0	67
17:45 - 18:00	0	0	40	4	1	0	0	45.5	45	0	0	57	4	0	0	0	61.0	61
Hourly Total	**0**	**0**	**175**	**12**	**1**	**0**	**0**	**189**	**188**	**0**	**0**	**237**	**17**	**0**	**0**	**2**	**258**	**256**
18:00 - 18:15	0	0	49	1	0	0	0	50.0	50	0	0	46	4	0	0	0	50.0	50
18:15 - 18:30	0	1	37	1	0	0	0	38.4	39	0	0	64	1	1	0	0	66.5	66
Hourly Total	**0**	**1**	**86**	**2**	**0**	**0**	**0**	**88**	**89**	**0**	**0**	**110**	**5**	**1**	**0**	**0**	**117**	**116**
Session Total	**0**	**1**	**535**	**43**	**5**	**2**	**0**	**590**	**586**	**0**	**2**	**671**	**44**	**4**	**0**	**6**	**735**	**727**

B to B								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	1	0	0	0	0	1.0	1
0	0	0	0	0	0	0	0.0	0
0	0	1	0	0	0	0	1	1
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	1	1

	From B									To B								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	101	7	0	0	3	114.0	111	1	0	91	14	0	0	1	107.2	107
15:45 - 16:00	0	0	89	6	3	1	0	101.8	99	1	0	107	12	1	0	1	122.7	122
Hourly Total	0	0	190	13	3	1	3	216	210	2	0	198	26	1	0	2	230	229
16:00 - 16:15	0	0	81	11	1	1	0	95.8	94	0	0	109	10	1	0	4	128.5	124
16:15 - 16:30	0	1	92	12	2	0	0	107.4	107	0	0	94	17	1	0	2	116.5	114
16:30 - 16:45	0	1	107	2	1	0	1	112.9	112	0	1	116	9	1	0	1	128.9	128
16:45 - 17:00	0	0	128	13	0	0	0	141.0	141	0	1	110	13	0	0	0	123.4	124
Hourly Total	0	2	406	38	4	1	1	457	454	0	2	429	49	3	0	7	498	490
17:00 - 17:15	0	0	112	8	0	0	0	120.0	120	0	0	126	8	0	0	0	134.0	134
17:15 - 17:30	0	0	103	3	0	0	1	108.0	107	0	0	122	6	0	0	2	132.0	130
17:30 - 17:45	0	0	101	10	0	0	1	113.0	112	0	0	114	11	1	0	0	126.5	126
17:45 - 18:00	0	0	97	8	1	0	0	106.5	106	0	0	114	8	1	0	0	123.5	123
Hourly Total	0	0	413	29	1	0	2	448	445	0	0	476	33	2	0	2	516	513
18:00 - 18:15	0	0	95	5	0	0	0	100.0	100	0	0	98	3	1	0	1	104.5	103
18:15 - 18:30	0	1	101	2	1	0	0	104.9	105	0	1	85	4	0	1	2	95.7	93
Hourly Total	0	1	196	7	1	0	0	205	205	0	1	183	7	1	1	3	200	196
Session Total	0	3	1207	87	9	2	6	1326	1314	2	3	1286	115	7	1	14	1444	1428

Connahs Quay - Manual Traffic Survey: Wednesday, 06 March 2019

Produced by Streetwise Services Ltd.

Junction: A - Ffordd Llanarth / B - (East B5126 Mold Road / C - (West) B5126 Mold Road

Approach: C - (West) B5126 Mold Road

	C to A									C to B								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	0	0	51	4	0	0	0	55.0	55	1	0	35	10	0	0	0	45.2	46
15:45 - 16:00	0	0	57	4	0	0	4	69.0	65	1	0	44	8	1	0	0	53.7	54
Hourly Total	**0**	**0**	**108**	**8**	**0**	**0**	**4**	124	120	**2**	**0**	**79**	**18**	**1**	**0**	**0**	99	100
16:00 - 16:15	0	0	32	2	1	2	10	60.1	47	0	0	36	6	1	0	3	49.5	46
16:15 - 16:30	0	0	64	7	0	0	2	75.0	73	0	0	41	11	0	0	0	52.0	52
16:30 - 16:45	0	0	51	3	0	0	0	54.0	54	0	1	54	4	0	0	0	58.4	59
16:45 - 17:00	0	0	86	2	0	0	0	88.0	88	0	0	43	7	0	0	0	50.0	50
Hourly Total	**0**	**0**	**233**	**14**	**1**	**2**	**12**	278	262	**0**	**1**	**174**	**28**	**1**	**0**	**3**	210	207
17:00 - 17:15	0	0	66	7	2	0	1	78.0	76	0	0	48	6	0	0	0	54.0	54
17:15 - 17:30	0	0	55	2	0	0	0	57.0	57	0	0	57	3	0	0	0	60.0	60
17:30 - 17:45	0	0	62	3	0	0	0	65.0	65	0	0	37	8	1	0	0	46.5	46
17:45 - 18:00	0	0	62	3	0	0	0	65.0	65	0	0	49	3	1	0	0	53.5	53
Hourly Total	**0**	**0**	**245**	**15**	**2**	**0**	**1**	265	263	**0**	**0**	**191**	**20**	**2**	**0**	**0**	214	213
18:00 - 18:15	0	0	59	3	0	1	2	68.3	65	0	0	37	3	0	0	0	40.0	40
18:15 - 18:30	0	0	41	0	0	0	0	41.0	41	0	0	33	3	0	1	0	38.3	37
Hourly Total	**0**	**0**	**100**	**3**	**0**	**1**	**2**	109	106	**0**	**0**	**70**	**6**	**0**	**1**	**0**	78	77
Session Total	**0**	**0**	**686**	**40**	**3**	**3**	**19**	776	751	**2**	**1**	**514**	**72**	**4**	**1**	**3**	601	597

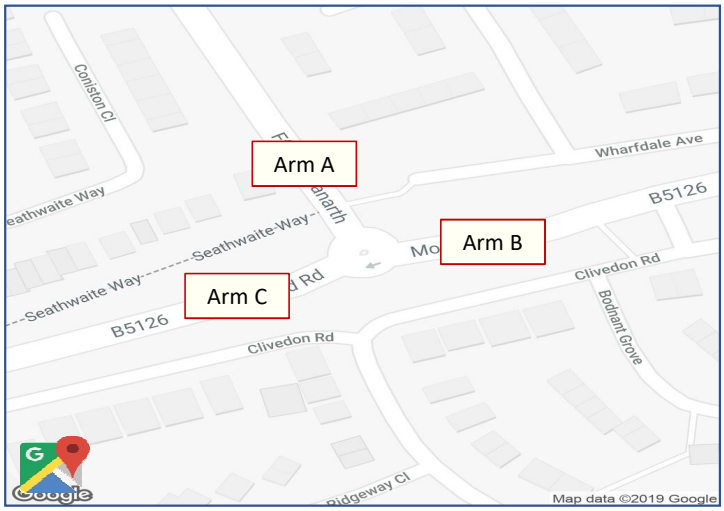
C to C								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	From C									To C								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
15:30 - 15:45	1	0	86	14	0	0	0	100.2	101	0	0	103	9	0	0	1	114.0	113
15:45 - 16:00	1	0	101	12	1	0	4	122.7	119	0	0	79	4	4	1	0	91.3	88
Hourly Total	**2**	**0**	**187**	**26**	**1**	**0**	**4**	**223**	**220**	**0**	**0**	**182**	**13**	**4**	**1**	**1**	**205**	**201**
16:00 - 16:15	0	0	68	8	2	2	13	109.6	93	0	0	107	10	1	1	0	120.8	119
16:15 - 16:30	0	0	105	18	0	0	2	127.0	125	0	0	85	11	1	1	11	121.8	109
16:30 - 16:45	0	1	105	7	0	0	0	112.4	113	1	0	129	5	0	0	0	134.2	135
16:45 - 17:00	0	0	129	9	0	0	0	138.0	138	0	0	104	14	0	0	0	118.0	118
Hourly Total	**0**	**1**	**407**	**42**	**2**	**2**	**15**	**487**	**469**	**1**	**0**	**425**	**40**	**2**	**2**	**11**	**495**	**481**
17:00 - 17:15	0	0	114	13	2	0	1	132.0	130	0	0	99	10	0	1	1	113.3	111
17:15 - 17:30	0	0	112	5	0	0	0	117.0	117	0	0	90	2	0	0	1	94.0	93
17:30 - 17:45	0	0	99	11	1	0	0	111.5	111	0	0	102	7	0	0	1	111.0	110
17:45 - 18:00	0	0	111	6	1	0	0	118.5	118	0	1	87	8	1	0	0	96.9	97
Hourly Total	**0**	**0**	**436**	**35**	**4**	**0**	**1**	**479**	**476**	**0**	**1**	**378**	**27**	**1**	**1**	**3**	**415**	**411**
18:00 - 18:15	0	0	96	6	0	1	2	108.3	105	0	0	124	4	0	0	0	128.0	128
18:15 - 18:30	0	0	74	3	0	1	0	79.3	78	0	1	83	4	0	0	0	87.4	88
Hourly Total	**0**	**0**	**170**	**9**	**0**	**2**	**2**	**188**	**183**	**0**	**1**	**207**	**8**	**0**	**0**	**0**	**215**	**216**
Session Total	**2**	**1**	**1200**	**112**	**7**	**4**	**22**	**1377**	**1348**	**1**	**2**	**1192**	**88**	**7**	**4**	**15**	**1330**	**1309**

Connahs Quay - Manual Traffic Survey: Wednesday, 06 March 2019

Produced by Streetwise Services Ltd.

Junction: **A - Ffordd Llanarth / B - (East B5126 Mold Road / C - (West) B5126 Mold Road**



Matrix Totals:	**PCU values**	
Show single Session:	**No**	
	07:00 to 10:00	
Custom Start / End:	**16:15**	**17:15**
Show Peak Times:	**No**	

Arm Destination

Arm Origin	A	B	C	Total	% Total
A	0	288.4	265.8	**554**	**100.00%**
B	259.8	0	221.5	**481.3**	**100.00%**
C	295	214.4	0	**509.4**	**100.00%**
Total	**555**	**502.8**	**487.3**		
% Total	**100.00%**	**100.00%**	**100.00%**		

Classifications	Include
P/CYCLE	**Yes**
M/CYCLE	**Yes**
CAR	**Yes**
LGV	**Yes**
OGV1	**Yes**
OGV2	**Yes**
BUS	**Yes**

Connahs Quay: Queue Length Survey - Wednesday, 06 March 2019

Produced by Streetwise Services Ltd.

Junction: A - Ffordd Llanarth / B - (East B5126 Mold Road / C - (West) B5126 Mold Road

	A - Ffordd Llanarth	(East B5126 Mold R	C - (West) B5126 Mold Road	
	Lane 1	Lane 1	Lane 1	Lane 2
Survey Period	Max	Max	Max	Max
15:30 - 15:35	7	7	2	0
15:35 - 15:40	3	5	3	0
15:40 - 15:45	2	3	1	0
15:45 - 15:50	1	3	4	0
15:50 - 15:55	5	4	2	0
15:55 - 16:00	3	3	2	0
16:00 - 16:05	6	5	9	0
16:05 - 16:10	4	3	7	0
16:10 - 16:15	5	4	2	0
16:15 - 16:20	5	5	2	0
16:20 - 16:25	9	6	5	0
16:25 - 16:30	3	2	4	0
16:30 - 16:35	4	5	2	0
16:35 - 16:40	8	9	2	1
16:40 - 16:45	11	7	2	0
16:45 - 16:50	8	5	4	0
16:50 - 16:55	3	6	5	0
16:55 - 17:00	4	6	6	0
17:00 - 17:05	7	4	3	0
17:05 - 17:10	5	7	3	0
17:10 - 17:15	2	6	6	0
17:15 - 17:20	4	4	4	0
17:20 - 17:25	5	6	5	0
17:25 - 17:30	10	3	3	0
17:30 - 17:35	8	2	3	0
17:35 - 17:40	4	3	3	0
17:40 - 17:45	4	6	4	0
17:45 - 17:50	8	7	3	1
17:50 - 17:55	4	6	2	0

17:55 - 18:00	3	4	2	0
18:00 - 18:05	4	5	4	0
18:05 - 18:10	6	9	3	0
18:10 - 18:15	4	4	5	0
18:15 - 18:20	3	2	3	0
18:20 - 18:25	4	3	2	0
18:25 - 18:30	3	6	4	0

Connahs Quay - Manual Traffic Survey: Thursday, 07 March 2019

Produced by Streetwise Services Ltd.

Junction: A - Ffordd Llanarth / B - (East B5126 Mold Road / C - (West) B5126 Mold Road

Approach: A - Ffordd Llanarth

	A to B									A to C								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	12	1	2	0	1	18.0	16	0	0	19	2	0	1	0	23.3	22
07:15 - 07:30	0	0	13	0	0	0	1	15.0	14	0	0	40	2	0	0	0	42.0	42
07:30 - 07:45	0	0	28	2	1	1	0	33.8	32	0	0	32	3	0	0	1	37.0	36
07:45 - 08:00	0	0	30	3	0	0	2	37.0	35	0	0	39	2	0	1	0	43.3	42
Hourly Total	**0**	**0**	**83**	**6**	**3**	**1**	**4**	**104**	**97**	**0**	**0**	**130**	**9**	**0**	**2**	**1**	**146**	**142**
08:00 - 08:15	0	0	35	3	2	0	1	43.0	41	0	0	39	4	0	1	0	45.3	44
08:15 - 08:30	0	0	51	2	0	0	2	57.0	55	0	0	47	0	0	1	1	51.3	49
08:30 - 08:45	0	0	79	6	0	0	0	85.0	85	0	0	47	4	0	0	2	55.0	53
08:45 - 09:00	0	0	80	7	1	0	0	88.5	88	0	0	44	1	0	0	4	53.0	49
Hourly Total	**0**	**0**	**245**	**18**	**3**	**0**	**3**	**274**	**269**	**0**	**0**	**177**	**9**	**0**	**2**	**7**	**205**	**195**
09:00 - 09:15	0	0	43	6	0	0	0	49.0	49	0	0	39	4	2	2	4	58.6	51
09:15 - 09:30	0	0	29	1	0	0	2	34.0	32	0	0	24	3	1	2	1	35.1	31
09:30 - 09:45	0	0	35	2	0	0	0	37.0	37	0	0	25	0	1	0	1	28.5	27
09:45 - 10:00	0	0	33	3	1	0	0	37.5	37	0	0	22	3	0	0	0	25.0	25
Hourly Total	**0**	**0**	**140**	**12**	**1**	**0**	**2**	**158**	**155**	**0**	**0**	**110**	**10**	**4**	**4**	**6**	**147**	**134**
Session Total	**0**	**0**	**468**	**36**	**7**	**1**	**9**	**536**	**521**	**0**	**0**	**417**	**28**	**4**	**8**	**14**	**498**	**471**

A to A								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	From A									To A								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	31	3	2	1	1	41.3	38	0	0	22	4	2	0	1	31.0	29
07:15 - 07:30	0	0	53	2	0	0	1	57.0	56	0	2	40	2	1	1	1	48.6	47
07:30 - 07:45	0	0	60	5	1	1	1	70.8	68	0	0	63	4	1	3	1	77.4	72
07:45 - 08:00	0	0	69	5	0	1	2	80.3	77	0	0	89	7	2	0	0	99.0	98
Hourly Total	**0**	**0**	**213**	**15**	**3**	**3**	**5**	**250**	**239**	**0**	**2**	**214**	**17**	**6**	**4**	**3**	**256**	**246**
08:00 - 08:15	0	0	74	7	2	1	1	88.3	85	0	0	104	10	1	1	1	119.8	117
08:15 - 08:30	0	0	98	2	0	1	3	108.3	104	1	1	120	7	0	0	4	135.6	133
08:30 - 08:45	0	0	126	10	0	0	2	140.0	138	0	0	156	7	1	1	5	176.8	170
08:45 - 09:00	0	0	124	8	1	0	4	141.5	137	0	0	140	13	1	2	3	165.1	159
Hourly Total	**0**	**0**	**422**	**27**	**3**	**2**	**10**	**479**	**464**	**1**	**1**	**520**	**37**	**3**	**4**	**13**	**597**	**579**
09:00 - 09:15	0	0	82	10	2	2	4	107.6	100	0	1	93	3	0	0	2	100.4	99
09:15 - 09:30	0	0	53	4	1	2	3	69.1	63	0	0	54	7	1	0	0	62.5	62
09:30 - 09:45	0	0	60	2	1	0	1	65.5	64	0	0	44	4	0	0	1	50.0	49
09:45 - 10:00	0	0	55	6	1	0	0	62.5	62	0	1	65	11	0	0	0	76.4	77
Hourly Total	**0**	**0**	**250**	**22**	**5**	**4**	**8**	**305**	**289**	**0**	**2**	**256**	**25**	**1**	**0**	**3**	**290**	**287**
Session Total	**0**	**0**	**885**	**64**	**11**	**9**	**23**	**1034**	**992**	**1**	**5**	**990**	**79**	**10**	**8**	**19**	**1143**	**1112**

Connahs Quay - Manual Traffic Survey: Thursday, 07 March 2019

Produced by Streetwise Services Ltd.

Junction: A - Ffordd Llanarth / B - (East B5126 Mold Road / C - (West) B5126 Mold Road

Approach: B - (East B5126 Mold Road

	B to C									B to A								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	14	2	0	0	0	16.0	16	0	0	10	3	0	0	0	13.0	13
07:15 - 07:30	0	0	35	2	0	0	0	37.0	37	0	2	13	1	0	0	1	16.8	17
07:30 - 07:45	0	0	34	6	0	0	0	40.0	40	0	0	25	1	1	0	1	29.5	28
07:45 - 08:00	0	0	30	2	1	0	1	35.5	34	0	0	25	3	1	0	0	29.5	29
Hourly Total	**0**	**0**	**113**	**12**	**1**	**0**	**1**	129	127	**0**	**2**	**73**	**8**	**2**	**0**	**2**	89	87
08:00 - 08:15	0	1	46	6	0	0	0	52.4	53	0	0	53	5	0	0	0	58.0	58
08:15 - 08:30	0	0	38	6	1	0	1	47.5	46	0	0	43	3	0	0	3	52.0	49
08:30 - 08:45	0	0	45	7	2	0	0	55.0	54	0	0	67	6	1	0	2	78.5	76
08:45 - 09:00	0	0	43	8	0	0	0	51.0	51	0	0	69	8	0	0	0	77.0	77
Hourly Total	**0**	**1**	**172**	**27**	**3**	**0**	**1**	206	204	**0**	**0**	**232**	**22**	**1**	**0**	**5**	266	260
09:00 - 09:15	0	0	37	9	2	0	0	49.0	48	0	1	46	2	0	0	1	50.4	50
09:15 - 09:30	0	0	19	3	2	0	0	25.0	24	0	0	27	6	1	0	0	34.5	34
09:30 - 09:45	0	0	20	6	1	0	0	27.5	27	0	0	21	2	0	0	1	25.0	24
09:45 - 10:00	0	0	25	5	2	1	0	35.3	33	0	0	48	6	0	0	0	54.0	54
Hourly Total	**0**	**0**	**101**	**23**	**7**	**1**	**0**	137	132	**0**	**1**	**142**	**16**	**1**	**0**	**2**	164	162
Session Total	**0**	**1**	**386**	**62**	**11**	**1**	**2**	472	463	**0**	**3**	**447**	**46**	**4**	**0**	**9**	519	509

B to B								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	1	0	0	0	0	1.0	1
0	0	1	0	0	0	0	1	1
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	1	1

	From B									To B								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	24	5	0	0	0	29.0	29	0	1	28	3	4	0	1	39.4	37
07:15 - 07:30	0	2	48	3	0	0	1	53.8	54	0	0	28	2	1	0	1	33.5	32
07:30 - 07:45	0	0	59	7	1	0	1	69.5	68	0	0	60	4	1	1	0	67.8	66
07:45 - 08:00	0	0	56	5	2	0	1	66.0	64	0	0	82	8	1	1	2	97.8	94
Hourly Total	0	2	187	20	3	0	3	219	215	0	1	198	17	7	2	4	239	229
08:00 - 08:15	0	1	99	11	0	0	0	110.4	111	0	0	91	11	3	1	1	110.8	107
08:15 - 08:30	0	0	81	9	1	0	4	99.5	95	0	0	109	7	0	0	2	120.0	118
08:30 - 08:45	0	0	112	13	3	0	2	133.5	130	0	0	143	9	1	1	0	155.8	154
08:45 - 09:00	0	0	112	16	0	0	0	128.0	128	0	0	140	14	3	0	0	158.5	157
Hourly Total	0	1	404	49	4	0	6	471	464	0	0	483	41	7	2	3	546	536
09:00 - 09:15	0	1	83	11	2	0	1	99.4	98	0	0	81	13	0	0	0	94.0	94
09:15 - 09:30	0	0	46	9	3	0	0	59.5	58	0	0	49	4	1	0	2	58.5	56
09:30 - 09:45	0	0	41	8	1	0	1	52.5	51	0	0	66	9	2	0	0	78.0	77
09:45 - 10:00	0	0	73	11	2	1	0	89.3	87	0	0	54	3	2	0	0	60.0	59
Hourly Total	0	1	243	39	8	1	2	300	294	0	0	250	29	5	0	2	291	286
Session Total	0	4	834	108	15	1	11	990	973	0	1	931	87	19	4	9	1076	1051

Connahs Quay - Manual Traffic Survey: Thursday, 07 March 2019

Produced by Streetwise Services Ltd.

Junction: A - Ffordd Llanarth / B - (East B5126 Mold Road / C - (West) B5126 Mold Road

Approach: C - (West) B5126 Mold Road

	C to A									C to B								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	0	12	1	2	0	1	18.0	16	0	1	16	2	2	0	0	21.4	21
07:15 - 07:30	0	0	27	1	1	1	0	31.8	30	0	0	15	2	1	0	0	18.5	18
07:30 - 07:45	0	0	38	3	0	3	0	47.9	44	0	0	32	2	0	0	0	34.0	34
07:45 - 08:00	0	0	64	4	1	0	0	69.5	69	0	0	51	5	1	1	0	59.8	58
Hourly Total	**0**	**0**	**141**	**9**	**4**	**4**	**1**	167	159	**0**	**1**	**114**	**11**	**4**	**1**	**0**	133	131
08:00 - 08:15	0	0	51	5	1	1	1	61.8	59	0	0	56	8	1	1	0	67.8	66
08:15 - 08:30	1	1	77	4	0	0	1	83.6	84	0	0	58	5	0	0	0	63.0	63
08:30 - 08:45	0	0	89	1	0	1	3	98.3	94	0	0	64	3	1	1	0	70.8	69
08:45 - 09:00	0	0	71	5	1	2	3	88.1	82	0	0	60	7	2	0	0	70.0	69
Hourly Total	**1**	**1**	**288**	**15**	**2**	**4**	**8**	331	319	**0**	**0**	**238**	**23**	**4**	**2**	**0**	272	267
09:00 - 09:15	0	0	47	1	0	0	1	50.0	49	0	0	38	7	0	0	0	45.0	45
09:15 - 09:30	0	0	27	1	0	0	0	28.0	28	0	0	20	3	1	0	0	24.5	24
09:30 - 09:45	0	0	23	2	0	0	0	25.0	25	0	0	31	7	2	0	0	41.0	40
09:45 - 10:00	0	1	17	5	0	0	0	22.4	23	0	0	21	0	1	0	0	22.5	22
Hourly Total	**0**	**1**	**114**	**9**	**0**	**0**	**1**	125	125	**0**	**0**	**110**	**17**	**4**	**0**	**0**	133	131
Session Total	**1**	**2**	**543**	**33**	**6**	**8**	**10**	623	603	**0**	**1**	**462**	**51**	**12**	**3**	**0**	538	529

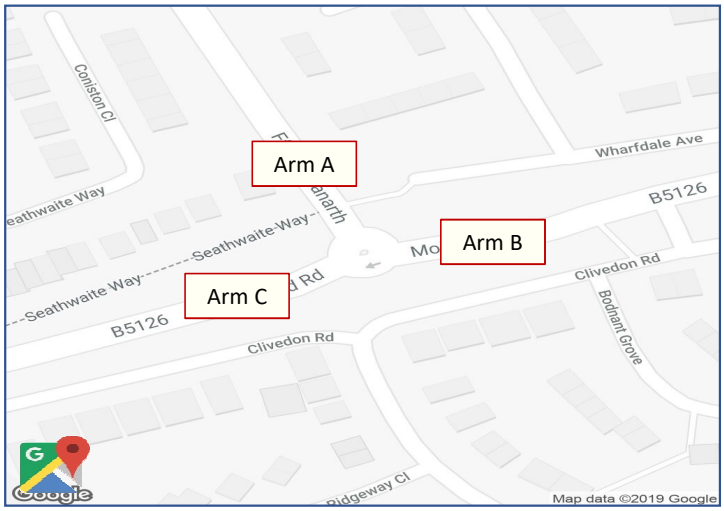
C to C								
P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0.0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

	From C									To C								
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	PCU	TOTAL
07:00 - 07:15	0	1	28	3	4	0	1	39.4	37	0	0	33	4	0	1	0	39.3	38
07:15 - 07:30	0	0	42	3	2	1	0	50.3	48	0	0	75	4	0	0	0	79.0	79
07:30 - 07:45	0	0	70	5	0	3	0	81.9	78	0	0	66	9	0	0	1	77.0	76
07:45 - 08:00	0	0	115	9	2	1	0	129.3	127	0	0	69	4	1	1	1	78.8	76
Hourly Total	0	1	255	20	8	5	1	301	290	0	0	243	21	1	2	2	275	269
08:00 - 08:15	0	0	107	13	2	2	1	129.6	125	0	1	85	10	0	1	0	97.7	97
08:15 - 08:30	1	1	135	9	0	0	1	146.6	147	0	0	85	6	1	1	2	98.8	95
08:30 - 08:45	0	0	153	4	1	2	3	169.1	163	0	0	92	11	2	0	2	110.0	107
08:45 - 09:00	0	0	131	12	3	2	3	158.1	151	0	0	87	9	0	0	4	104.0	100
Hourly Total	1	1	526	38	6	6	8	603	586	0	1	349	36	3	2	8	411	399
09:00 - 09:15	0	0	85	8	0	0	1	95.0	94	0	0	76	13	4	2	4	107.6	99
09:15 - 09:30	0	0	47	4	1	0	0	52.5	52	0	0	43	6	3	2	1	60.1	55
09:30 - 09:45	0	0	54	9	2	0	0	66.0	65	0	0	45	6	2	0	1	56.0	54
09:45 - 10:00	0	1	38	5	1	0	0	44.9	45	0	0	47	8	2	1	0	60.3	58
Hourly Total	0	1	224	26	4	0	1	258	256	0	0	211	33	11	5	6	285	266
Session Total	1	3	1005	84	18	11	10	1162	1132	0	1	803	90	15	9	16	971	934

Connahs Quay - Manual Traffic Survey: Thursday, 07 March 2019

Produced by Streetwise Services Ltd.

Junction: **A - Ffordd Llanarth / B - (East B5126 Mold Road / C - (West) B5126 Mold Road**



Matrix Totals:	**PCU values**	
Show single Session:	**No**	
	07:00 to 10:00	
Custom Start / End:	**08:00**	**09:00**
Show Peak Times:	**No**	

Arm Destination

Arm Origin	A	B	C	Total	% Total
A	0	273.5	204.6	**478**	**100.00%**
B	265.5	0	205.9	**471.4**	**100.00%**
C	331.8	271.6	0	**603.4**	**100.00%**
Total	**597**	**545.1**	**410.5**		
% Total	**100.00%**	**100.00%**	**100.00%**		

Classifications	Include
P/CYCLE	**Yes**
M/CYCLE	**Yes**
CAR	**Yes**
LGV	**Yes**
OGV1	**Yes**
OGV2	**Yes**
BUS	**Yes**

Connahs Quay: Queue Length Survey - Thursday, 07 March 20

Produced by Streetwise Services Ltd.

Junction: A - Ffordd Llanarth / B - (East B5126 Mold Road / C - (West) B512

	A - Ffordd Llanarth	(East B5126 Mold R	C - (West) B5126 Mold Road	
	Lane 1	Lane 1	Lane 1	Lane 2
Survey Period	Max	Max	Max	Max
07:00 - 07:05	1	0	1	0
07:05 - 07:10	2	1	0	0
07:10 - 07:15	1	0	1	0
07:15 - 07:20	1	0	3	0
07:20 - 07:25	3	1	0	0
07:25 - 07:30	1	2	1	0
07:30 - 07:35	2	1	0	0
07:35 - 07:40	1	3	2	0
07:40 - 07:45	2	2	2	0
07:45 - 07:50	2	2	4	0
07:50 - 07:55	3	2	2	0
07:55 - 08:00	2	3	2	0
08:00 - 08:05	4	5	2	0
08:05 - 08:10	3	3	4	0
08:10 - 08:15	4	2	4	0
08:15 - 08:20	2	2	4	0
08:20 - 08:25	5	4	3	0
08:25 - 08:30	7	3	7	0
08:30 - 08:35	4	5	5	0
08:35 - 08:40	10	11	4	0
08:40 - 08:45	7	5	6	0
08:45 - 08:50	14	3	6	0
08:50 - 08:55	4	5	6	0

08:55 - 09:00	5	9	4	0
09:00 - 09:05	4	4	3	0
09:05 - 09:10	3	2	2	0
09:10 - 09:15	2	2	3	0
09:15 - 09:20	3	3	1	0
09:20 - 09:25	1	0	5	0
09:25 - 09:30	1	1	2	0
09:30 - 09:35	2	3	1	0
09:35 - 09:40	1	0	0	0
09:40 - 09:45	3	2	2	0
09:45 - 09:50	1	4	1	0
09:50 - 09:55	1	2	1	0
09:55 - 10:00	1	1	1	0

Appendix C – Proposed Site Layout Plan

Type		Area	Qty.	Total area
House	2b4p	83.0m²/893ft²	66	5,478.0m²/58,965ft²
House	3b4p	88.0m²/947ft²	32	2,816.0m²/30,311ft²
House	3b5p	94.0m²/1,012ft²	68	6,392.0m²/68,803ft²
Bungalow	2b3p	58.0m²/624ft²	10	580.0m²/6,243ft²
Flat	1b2p	51.0m²/594ft²	16	816.0m²/8,783ft²
Flat	2b3p	65.0m²/700ft²	20	130.0m²/1,399ft²
		Total	212	16,212.0m²/174,506ft²

Overhead power lines with
3m easement to both sides

Site area
5.20ha/12.85 acres

project: Proposed Residential Scheme at Highmere Drive, Connah's Quay for Lane End Developments

title: Proposed Site Plan

status: Feasibility

date: 03/07/18

scale: 1:1000 at A2

drawn by: APS

drawing no: 18-390-F01

checked by: APS

BUILDING DESIGN eden
Eden Building Design
Beech Farm
Lymm Road
Thelwall
Cheshire
WA4 2TG
Tel 01925 840880
Email info@edenbuildingdesign.co.uk
Web www.edenbuildingdesign.co.uk

Appendix D – Site Visit Photographs

Site Visit: 02/04/19 20:30

Pell Frischmann

Available carriageway width: 4.4m

Available carriageway width: 5.1m

Appendix E – TRICS Outputs

Calculation Reference: AUDIT-610801-190322-0340

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

08	NORTH WEST		
	CH	CHESHIRE	2 days
	LC	LANCASHIRE	1 days
09	NORTH		
	CB	CUMBRIA	1 days
	DH	DURHAM	1 days
10	WALES		
	PS	POWYS	2 days
	VG	VALE OF GLAMORGAN	1 days

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

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
Actual Range: 11 to 50 (units:)
Range Selected by User: 11 to 400 (units:)

Parking Spaces Range: Selected: 26 to 741 Actual: 26 to 741

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

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

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

Selected survey days:

Monday	4 days
Tuesday	3 days
Friday	1 days

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

Selected survey types:

Manual count	8 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:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	3
Edge of Town	3

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	8

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	8 days

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

Population within 1 mile:

5,001 to 10,000	3 days
10,001 to 15,000	3 days
15,001 to 20,000	2 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	3 days
75,001 to 100,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	6 days

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

Travel Plan:

No	8 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	8 days

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

LIST OF SITES relevant to selection parameters

1 CB-03-A-05 DETACHED/TERRACED HOUSING CUMBRIA
MACADAM WAY
PENRITH

Edge of Town Centre
Residential Zone
Total Number of dwellings: 50
Survey date: TUESDAY *21/06/16* *Survey Type: MANUAL*

2 CH-03-A-08 DETACHED CHESHIRE
WHITCHURCH ROAD
CHESTER
BOUGHTON HEATH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 11
Survey date: TUESDAY *22/05/12* *Survey Type: MANUAL*

3 CH-03-A-09 TERRACED HOUSES CHESHIRE
GREYSTOKE ROAD
MACCLESFIELD
HURDSFIELD
Edge of Town
Residential Zone
Total Number of dwellings: 24
Survey date: MONDAY *24/11/14* *Survey Type: MANUAL*

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

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 50
Survey date: TUESDAY *28/03/17* *Survey Type: MANUAL*

5 LC-03-A-31 DETACHED HOUSES LANCASHIRE
GREENSIDE
PRESTON
COTTAM
Edge of Town
Residential Zone
Total Number of dwellings: 32
Survey date: FRIDAY *17/11/17* *Survey Type: MANUAL*

6 PS-03-A-01 MIXED HOUSES POWYS
BRYN GLAS
WELSHPOOL

Edge of Town Centre
Residential Zone
Total Number of dwellings: 16
Survey date: MONDAY *11/05/15* *Survey Type: MANUAL*

7 PS-03-A-02 DETACHED/SEMI-DETACHED POWYS
GUNROG ROAD
WELSHPOOL

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

8 VG-03-A-01 SEMI-DETACHED & TERRACED VALE OF GLAMORGAN
ARTHUR STREET
BARRY

Edge of Town
Residential Zone
Total Number of dwellings: 12
Survey date: MONDAY *08/05/17* *Survey Type: MANUAL*

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	28	0.054	8	28	0.274	8	28	0.328
08:00 - 09:00	8	28	0.148	8	28	0.363	8	28	0.511
09:00 - 10:00	8	28	0.152	8	28	0.179	8	28	0.331
10:00 - 11:00	8	28	0.130	8	28	0.179	8	28	0.309
11:00 - 12:00	8	28	0.161	8	28	0.175	8	28	0.336
12:00 - 13:00	8	28	0.175	8	28	0.211	8	28	0.386
13:00 - 14:00	8	28	0.170	8	28	0.170	8	28	0.340
14:00 - 15:00	8	28	0.179	8	28	0.229	8	28	0.408
15:00 - 16:00	8	28	0.287	8	28	0.224	8	28	0.511
16:00 - 17:00	8	28	0.323	8	28	0.135	8	28	0.458
17:00 - 18:00	8	28	0.336	8	28	0.166	8	28	0.502
18:00 - 19:00	8	28	0.233	8	28	0.170	8	28	0.403
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.348			2.475			4.823

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

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

Parameter summary

Trip rate parameter range selected:	11 - 50 (units:)
Survey date date range:	01/01/10 - 17/11/17
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
TAXIS
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	8	28	0.000	8	28	0.000	8	28	0.000
08:00 - 09:00	8	28	0.004	8	28	0.004	8	28	0.008
09:00 - 10:00	8	28	0.009	8	28	0.004	8	28	0.013
10:00 - 11:00	8	28	0.013	8	28	0.018	8	28	0.031
11:00 - 12:00	8	28	0.000	8	28	0.000	8	28	0.000
12:00 - 13:00	8	28	0.000	8	28	0.000	8	28	0.000
13:00 - 14:00	8	28	0.004	8	28	0.004	8	28	0.008
14:00 - 15:00	8	28	0.000	8	28	0.000	8	28	0.000
15:00 - 16:00	8	28	0.009	8	28	0.009	8	28	0.018
16:00 - 17:00	8	28	0.000	8	28	0.000	8	28	0.000
17:00 - 18:00	8	28	0.000	8	28	0.000	8	28	0.000
18:00 - 19:00	8	28	0.000	8	28	0.000	8	28	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.039			0.039			0.078

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
OGVS
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	8	28	0.009	8	28	0.009	8	28	0.018
08:00 - 09:00	8	28	0.000	8	28	0.000	8	28	0.000
09:00 - 10:00	8	28	0.004	8	28	0.004	8	28	0.008
10:00 - 11:00	8	28	0.000	8	28	0.000	8	28	0.000
11:00 - 12:00	8	28	0.000	8	28	0.000	8	28	0.000
12:00 - 13:00	8	28	0.000	8	28	0.000	8	28	0.000
13:00 - 14:00	8	28	0.000	8	28	0.000	8	28	0.000
14:00 - 15:00	8	28	0.000	8	28	0.000	8	28	0.000
15:00 - 16:00	8	28	0.000	8	28	0.000	8	28	0.000
16:00 - 17:00	8	28	0.000	8	28	0.000	8	28	0.000
17:00 - 18:00	8	28	0.000	8	28	0.000	8	28	0.000
18:00 - 19:00	8	28	0.000	8	28	0.000	8	28	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.013			0.013			0.026

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
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	8	28	0.000	8	28	0.009	8	28	0.009
08:00 - 09:00	8	28	0.000	8	28	0.000	8	28	0.000
09:00 - 10:00	8	28	0.000	8	28	0.009	8	28	0.009
10:00 - 11:00	8	28	0.009	8	28	0.000	8	28	0.009
11:00 - 12:00	8	28	0.000	8	28	0.000	8	28	0.000
12:00 - 13:00	8	28	0.000	8	28	0.000	8	28	0.000
13:00 - 14:00	8	28	0.009	8	28	0.004	8	28	0.013
14:00 - 15:00	8	28	0.004	8	28	0.009	8	28	0.013
15:00 - 16:00	8	28	0.009	8	28	0.000	8	28	0.009
16:00 - 17:00	8	28	0.018	8	28	0.004	8	28	0.022
17:00 - 18:00	8	28	0.004	8	28	0.009	8	28	0.013
18:00 - 19:00	8	28	0.004	8	28	0.013	8	28	0.017
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.057			0.057			0.114

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.*

Appendix F – Correspondence with FCC Regarding Trip Rates

Charlie Ebbrell

From: Colin Simpson <colin.simpson@flintshire.gov.uk>
Sent: 29 March 2019 16:03
To: Charlie Ebbrell
Subject: RE: Land off Highmere Drive, Connah's Quay

Afternoon Charlie

As discussed, we have received a number of submissions containing suspiciously low TRICs generation rates and we have subsequently asked for 85th percentile values to be used rather than average values. I can however confirm that generation rates that you have submitted fall within the anticipated range; on that basis I can confirm their suitability for use.

Regards, Colin

Colin Simpson BTech CEng MICE MCIHT
Senior Engineer | Uwch Beiriannydd
Highways Development Control | Rheoli Datblygu Priffyrdd
Planning and Environment | Cynllunio a'r Amgylchedd
Flintshire County Council | Cyngor Sir y Fflint
County Hall | Neuadd y Sir
Mold | Yr Wyddgrug
CH7 6NF | CH7 6NF

Tel | Ffôn | 01352 704618
Email | Ebost | colin.simpson@flintshire.gov.uk

From: Charlie Ebbrell [mailto:CEbbrell@pellfrischmann.com]
Sent: 22 March 2019 13:30
To: Colin Simpson <colin.simpson@flintshire.gov.uk>
Subject: RE: Land off Highmere Drive, Connah's Quay

Good afternoon Colin,

Further to your email below, please see attached the TRICS output containing the trip rates which we propose to use within our Transport Assessment.

Please could you take a look at these and let me know whether you feel they are suitable for use in our assessment?

Best regards,

Charlie Ebbrell
Graduate Transport Planner

Pell Frischmann
"Excellence through Innovation since 1926"
9 Acorn Business Park, Stockport, United Kingdom, SK4 1AS

Mobile: 44 (0)7919458604
E-mail: cebbrell@pellfrischmann.com
Website: www.pellfrischmann.com
Twitter: @Pell_Frischmann

Appendix G – Traffic Distribution

Area	MSOA	No of Trips	% of Overall	Highmere Dr / Golftyn Ln		Golftyn Ln / Kelsterton Rd		Ffordd Llanarth / Mold Rd		A494 / B5129 / A550				A55 J33A	A55 J33		
				North Towards Kelsterton Rd	South Towards Mold Rd	West Towards A548	East Towards Connah's Quay	West Towards A55	East Towards Shotton	A494 North Towards Wirral	B5129 SE Towards Sandycroft	A550 South Towards Hawarden	A494 SW Towards Ewloe	A55 Eastbound	A55 Westbound		
Within Flintshire																	
Flintshire	1	6	0.2%	0.2%		0.2%											
Flintshire	2	11	0.3%	0.15%	0.15%	0.15%		0.15%							0.15%	50%	50%
Flintshire	3	78	2.2%	2.2%		2.2%											
Flintshire	4	171	4.9%	4.9%		4.9%											
Flintshire	5	15	0.4%	0.2%	0.2%	0.2%		0.2%							0.2%	50%	50%
Flintshire	6	20	0.6%		0.6%			0.6%							0.6%		
Flintshire	7	199	5.7%	5.7%		5.7%											
Flintshire	8	236	6.8%	6.8%		6.8%											
Flintshire	9	647	18.6%	9.3%	9.3%	9.3%			9.3%	9.3%						50%	50%
Flintshire	10	36	1.0%		1.0%			1.0%									
Flintshire	11	240	6.9%		6.9%				6.9%		6.9%						
Flintshire	12	67	1.9%		1.9%				1.9%								
Flintshire	13	87	2.5%		2.5%			1.25%	1.25%			1.25%				50%	50%
Flintshire	14	12	0.3%		0.3%			0.3%									
Flintshire	15	299	8.6%		8.6%			4.3%	4.3%			4.3%				50%	50%
Flintshire	16	175	5.0%		5.0%			5.0%									
Flintshire	17	60	1.7%		1.7%			1.7%						1.7%			
Flintshire	18	3	0.1%		0.1%			0.1%						0.1%			
Flintshire	19	7	0.2%		0.2%			0.2%									
Flintshire	20	5	0.1%		0.1%			0.1%						0.1%			
Outside Flintshire																	
Wrexham		125	3.6%		3.6%			3.6%						3.6%			
South Wales		5	0.1%		0.1%			0.1%						0.1%			
Gwynedd		6	0.2%		0.2%			0.2%							0.2%		
Conwy		27	0.8%		0.8%			0.8%							0.8%		
Denbighshire		56	1.6%		1.6%			1.6%							1.6%		
Anglesey		1	0.0%		0.0%			0.0%							0.0%		
Wirral		49	1.4%	1.4%		0.7%	0.7%			0.7%						50%	50%
Liverpool		25	0.7%	0.7%		0.35%	0.35%			0.35%						50%	50%
Sefton		4	0.1%	0.1%		0.05%	0.05%			0.05%						50%	50%
Knowsley		3	0.1%	0.1%		0.05%	0.05%			0.05%						50%	50%
St Helens		4	0.1%	0.1%		0.05%	0.05%			0.05%						50%	50%
NE England		5	0.1%	0.1%		0.05%	0.05%			0.05%						50%	50%
Cheshire East		14	0.4%	0.4%		0.2%	0.2%			0.2%						50%	50%
Cheshire West & Chester		570	16.4%	8.2%	8.2%	8.2%			8.2%	8.2%						50%	50%
Halton		23	0.7%	0.7%		0.35%	0.35%			0.35%						50%	50%
Warrington		17	0.5%	0.5%		0.25%	0.25%			0.25%						50%	50%
Greater Manchester		61	1.8%	1.8%		0.9%	0.9%			0.9%						50%	50%
Preston & NW		16	0.5%	0.5%		0.25%	0.25%			0.25%						50%	50%
Yorkshire		32	0.9%	0.9%		0.45%	0.45%			0.45%						50%	50%
Midlands		27	0.8%	0.8%		0.4%	0.4%			0.4%						50%	50%
London		15	0.4%	0.4%		0.2%	0.2%			0.2%						50%	50%
SW England		9	0.3%	0.3%		0.15%	0.15%			0.15%						50%	50%
South & SE England		17	0.5%	0.5%		0.25%	0.25%			0.25%						50%	50%
Total		3,485	100.0%	47.0%	53.1%	42.3%	4.7%	21.2%	31.9%	22.2%	6.9%	5.6%	0.0%	5.6%	3.5%		

Appendix H – Highmere Drive / Golftyn Lane Junction PICADY Output

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 770558 software@trl.co.uk www.trlsoftware.co.uk

Filename: Golftyn Lane_Highmere Drive.j9
Path: P:\data\Manchester Office Projects\102394 - Land at Highmere Drive, Connah's Quay TA\1. Work In Progress\Transport\Junction Assessments\JUNCTIONS9
Report generation date: 02/04/2019 12:01:57

»2019, AM
»2019, PM
»2024, AM
»2024, PM
»2024 + Dev, AM
»2024 + Dev, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2019									
Stream B-C	0.1	8.10	0.11	A	71 % [Stream B-A]	0.0	6.06	0.03	A	99 % [Stream B-A]
Stream B-A	0.1	11.98	0.12	B		0.1	11.51	0.09	B	
Stream C-AB	0.0	5.01	0.03	A		0.2	4.66	0.10	A	
	2024									
Stream B-C	0.1	8.30	0.11	A	64 % [Stream B-A]	0.0	6.12	0.03	A	92 % [Stream B-A]
Stream B-A	0.2	12.46	0.13	B		0.1	11.81	0.10	B	
Stream C-AB	0.0	4.99	0.03	A		0.2	4.63	0.10	A	
	2024 + Dev									
Stream B-C	0.3	9.83	0.21	A	37 % [Stream B-A]	0.1	6.51	0.07	A	64 % [Stream B-A]
Stream B-A	0.4	15.36	0.27	C		0.2	13.46	0.17	B	
Stream C-AB	0.1	5.14	0.08	A		0.5	4.99	0.21	A	

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Golftyn Lane / Highmere Drive
Location	
Site number	
Date	01/04/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PFGROUP\JGreen
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	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2019	AM	ONE HOUR	07:45	09:15	15
D2	2019	PM	ONE HOUR	16:45	18:15	15
D3	2024	AM	ONE HOUR	07:45	09:15	15
D4	2024	PM	ONE HOUR	16:45	18:15	15
D5	2024 + Dev	AM	ONE HOUR	07:45	09:15	15
D6	2024 + Dev	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2019, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Golftyn Lane / Highmere Drive	T-Junction	Two-way	0.89	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	71	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	Golftyn Lane (S)		Major
B	Highmere Drive		Minor
C	Golftyn Lane (N)		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	7.20			122.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	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	9.60	4.00	3.10	3.00	3.00		1.00	21	21

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	574	0.099	0.250	0.158	0.358
1	B-C	677	0.098	0.249	-	-
1	C-B	645	0.237	0.237	-	-

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

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	2019	AM	ONE HOUR	07:45	09:15	15

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		✓	603	100.000
B		✓	87	100.000
C		✓	379	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	20	583
	B	38	0	49
	C	368	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.11	8.10	0.1	A
B-A	0.12	11.98	0.1	B
C-AB	0.03	5.01	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)	LOS
B-C	37	556	0.066	37	0.1	6.925	A
B-A	29	416	0.069	28	0.1	9.284	A
C-AB	13	732	0.018	13	0.0	5.012	A
C-A	272			272			
A-B	15			15			
A-C	439			439			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	44	532	0.083	44	0.1	7.375	A
B-A	34	385	0.089	34	0.1	10.256	B
C-AB	18	752	0.024	18	0.0	4.900	A
C-A	323			323			
A-B	18			18			
A-C	524			524			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	54	498	0.108	54	0.1	8.100	A
B-A	42	342	0.122	42	0.1	11.969	B
C-AB	25	783	0.032	25	0.0	4.750	A
C-A	392			392			
A-B	22			22			
A-C	642			642			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	54	498	0.108	54	0.1	8.104	A
B-A	42	342	0.122	42	0.1	11.981	B
C-AB	25	783	0.032	25	0.0	4.750	A
C-A	392			392			
A-B	22			22			
A-C	642			642			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	44	532	0.083	44	0.1	7.383	A
B-A	34	385	0.089	34	0.1	10.272	B
C-AB	18	752	0.024	18	0.0	4.901	A
C-A	323			323			
A-B	18			18			
A-C	524			524			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	37	556	0.066	37	0.1	6.935	A
B-A	29	416	0.069	29	0.1	9.304	A
C-AB	13	732	0.018	13	0.0	5.014	A
C-A	272			272			
A-B	15			15			
A-C	439			439			

2019, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Golftyn Lane / Highmere Drive	T-Junction	Two-way	0.82	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	99	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2019	PM	ONE HOUR	16:45	18:15	15

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		✓	389	100.000
B		✓	47	100.000
C		✓	508	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	34	355
	B	29	0	18
	C	474	34	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	6.06	0.0	A
B-A	0.09	11.51	0.1	B
C-AB	0.10	4.66	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	14	655	0.021	13	0.0	5.613	A
B-A	22	402	0.054	22	0.1	9.457	A
C-AB	45	818	0.056	45	0.1	4.656	A
C-A	337			337			
A-B	26			26			
A-C	267			267			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	16	638	0.025	16	0.0	5.790	A
B-A	26	378	0.069	26	0.1	10.229	B
C-AB	61	855	0.072	61	0.1	4.536	A
C-A	396			396			
A-B	31			31			
A-C	319			319			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	20	614	0.032	20	0.0	6.058	A
B-A	32	345	0.093	32	0.1	11.500	B
C-AB	88	908	0.097	88	0.2	4.395	A
C-A	471			471			
A-B	37			37			
A-C	391			391			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	20	614	0.032	20	0.0	6.059	A
B-A	32	345	0.093	32	0.1	11.509	B
C-AB	89	908	0.098	89	0.2	4.398	A
C-A	471			471			
A-B	37			37			
A-C	391			391			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	16	638	0.025	16	0.0	5.791	A

B-A	26	378	0.069	26	0.1	10.241	B
C-AB	61	855	0.072	62	0.1	4.541	A
C-A	395			395			
A-B	31			31			
A-C	319			319			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	14	655	0.021	14	0.0	5.617	A
B-A	22	402	0.054	22	0.1	9.477	A
C-AB	46	818	0.056	46	0.1	4.663	A
C-A	337			337			
A-B	26			26			
A-C	267			267			

2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Golftyn Lane / Highmere Drive	T-Junction	Two-way	0.92	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	64	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2024	AM	ONE HOUR	07:45	09:15	15

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		✓	628	100.000
B		✓	91	100.000
C		✓	394	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	21	607
	B	40	0	51
	C	383	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.11	8.30	0.1	A
B-A	0.13	12.46	0.2	B
C-AB	0.03	4.99	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)	LOS
B-C	38	551	0.070	38	0.1	7.016	A
B-A	30	409	0.074	30	0.1	9.475	A
C-AB	14	736	0.019	14	0.0	4.985	A
C-A	283			283			
A-B	16			16			
A-C	457			457			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	46	526	0.087	46	0.1	7.499	A
B-A	36	377	0.095	36	0.1	10.538	B
C-AB	18	758	0.024	18	0.0	4.868	A
C-A	336			336			
A-B	19			19			
A-C	546			546			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	56	490	0.115	56	0.1	8.289	A
B-A	44	333	0.132	44	0.2	12.448	B
C-AB	26	790	0.033	26	0.0	4.711	A
C-A	408			408			
A-B	23			23			
A-C	668			668			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	56	490	0.115	56	0.1	8.295	A
B-A	44	333	0.132	44	0.2	12.463	B
C-AB	26	790	0.033	26	0.0	4.712	A
C-A	408			408			
A-B	23			23			
A-C	668			668			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	46	526	0.087	46	0.1	7.505	A

B-A	36	377	0.095	36	0.1	10.558	B
C-AB	18	758	0.024	18	0.0	4.871	A
C-A	336			336			
A-B	19			19			
A-C	546			546			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	38	551	0.070	38	0.1	7.028	A
B-A	30	409	0.074	30	0.1	9.498	A
C-AB	14	736	0.019	14	0.0	4.985	A
C-A	283			283			
A-B	16			16			
A-C	457			457			

2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Golftyn Lane / Highmere Drive	T-Junction	Two-way	0.84	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	92	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2024	PM	ONE HOUR	16:45	18:15	15

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		✓	404	100.000
B		✓	49	100.000
C		✓	527	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	35	369
	B	30	0	19
	C	492	35	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	6.12	0.0	A
B-A	0.10	11.81	0.1	B
C-AB	0.10	4.63	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	14	651	0.022	14	0.0	5.649	A
B-A	23	397	0.057	22	0.1	9.595	A
C-AB	48	825	0.058	47	0.1	4.628	A
C-A	349			349			
A-B	26			26			
A-C	278			278			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	17	634	0.027	17	0.0	5.836	A
B-A	27	372	0.072	27	0.1	10.419	B
C-AB	65	864	0.075	65	0.1	4.505	A
C-A	409			409			
A-B	31			31			
A-C	332			332			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	21	609	0.034	21	0.0	6.122	A
B-A	33	338	0.098	33	0.1	11.795	B
C-AB	94	919	0.103	94	0.2	4.366	A
C-A	486			486			
A-B	39			39			
A-C	406			406			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	21	609	0.034	21	0.0	6.122	A
B-A	33	338	0.098	33	0.1	11.810	B
C-AB	94	919	0.103	94	0.2	4.371	A
C-A	486			486			
A-B	39			39			
A-C	406			406			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	17	634	0.027	17	0.0	5.838	A

B-A	27	372	0.072	27	0.1	10.435	B
C-AB	65	864	0.075	65	0.1	4.510	A
C-A	409			409			
A-B	31			31			
A-C	332			332			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	14	651	0.022	14	0.0	5.653	A
B-A	23	397	0.057	23	0.1	9.614	A
C-AB	48	825	0.058	48	0.1	4.634	A
C-A	349			349			
A-B	26			26			
A-C	278			278			

2024 + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Golftyn Lane / Highmere Drive	T-Junction	Two-way	1.92	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	37	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2024 + Dev	AM	ONE HOUR	07:45	09:15	15

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		✓	644	100.000
B		✓	167	100.000
C		✓	409	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	37	607
	B	80	0	87
	C	383	26	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.21	9.83	0.3	A
B-A	0.27	15.36	0.4	C
C-AB	0.08	5.14	0.1	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)	LOS
B-C	65	538	0.122	65	0.1	7.607	A
B-A	60	403	0.149	60	0.2	10.448	B
C-AB	32	733	0.044	32	0.1	5.132	A
C-A	276			276			
A-B	28			28			
A-C	457			457			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	78	508	0.154	78	0.2	8.376	A
B-A	72	370	0.195	72	0.2	12.065	B
C-AB	43	755	0.057	43	0.1	5.057	A
C-A	325			325			
A-B	33			33			
A-C	546			546			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	96	462	0.207	95	0.3	9.804	A
B-A	88	322	0.273	88	0.4	15.303	C
C-AB	62	787	0.079	62	0.1	4.967	A
C-A	388			388			
A-B	41			41			
A-C	668			668			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	96	462	0.207	96	0.3	9.830	A
B-A	88	322	0.273	88	0.4	15.364	C
C-AB	62	787	0.079	62	0.1	4.968	A
C-A	388			388			
A-B	41			41			
A-C	668			668			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	78	507	0.154	79	0.2	8.404	A

B-A	72	370	0.194	72	0.2	12.117	B
C-AB	43	755	0.057	43	0.1	5.063	A
C-A	324			324			
A-B	33			33			
A-C	546			546			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	65	537	0.122	66	0.1	7.636	A
B-A	60	404	0.149	60	0.2	10.500	B
C-AB	32	733	0.044	33	0.1	5.137	A
C-A	276			276			
A-B	28			28			
A-C	457			457			

2024 + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Golftyn Lane / Highmere Drive	T-Junction	Two-way	1.50	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	64	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2024 + Dev	PM	ONE HOUR	16:45	18:15	15

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		✓	442	100.000
B		✓	84	100.000
C		✓	561	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	73	369
	B	49	0	35
	C	492	69	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.07	6.51	0.1	A
B-A	0.17	13.46	0.2	B
C-AB	0.21	4.99	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	26	642	0.041	26	0.0	5.847	A
B-A	37	386	0.096	36	0.1	10.276	B
C-AB	95	820	0.116	94	0.2	4.958	A
C-A	328			328			
A-B	55			55			
A-C	278			278			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	31	621	0.051	31	0.1	6.103	A
B-A	44	359	0.123	44	0.1	11.421	B
C-AB	129	858	0.150	128	0.3	4.941	A
C-A	376			376			
A-B	66			66			
A-C	332			332			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	39	591	0.065	38	0.1	6.509	A
B-A	54	321	0.168	54	0.2	13.432	B
C-AB	188	912	0.206	187	0.5	4.975	A
C-A	430			430			
A-B	80			80			
A-C	406			406			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	39	591	0.065	39	0.1	6.511	A
B-A	54	321	0.168	54	0.2	13.463	B
C-AB	189	913	0.207	188	0.5	4.986	A
C-A	429			429			
A-B	80			80			
A-C	406			406			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	31	621	0.051	32	0.1	6.107	A

B-A	44	359	0.123	44	0.1	11.455	B
C-AB	129	858	0.150	130	0.3	4.955	A
C-A	375			375			
A-B	66			66			
A-C	332			332			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	26	641	0.041	26	0.0	5.855	A
B-A	37	386	0.096	37	0.1	10.323	B
C-AB	95	820	0.116	96	0.2	4.976	A
C-A	327			327			
A-B	55			55			
A-C	278			278			

Appendix I – Golftyn Lane / Kelsterton Road Junction PICADY Output

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 770558 software@trl.co.uk www.trlsoftware.co.uk

Filename: Kelsterton Road_Golftyn Lane.j9
Path: P:\data\Manchester Office Projects\102394 - Land at Highmere Drive, Connah's Quay TA\1. Work In Progress\Transport\Junction Assessments\JUNCTIONS9
Report generation date: 02/04/2019 11:56:38

»2019, AM
»2019, PM
»2024, AM
»2024, PM
»2024 + Dev, AM
»2024 + Dev, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2019									
Stream B-C	17.2	122.38	1.02	F	-12 % [Stream B-A]	0.7	10.42	0.41	B	9 % [Stream B-A]
Stream B-A	5.9	210.15	1.00	F		0.5	24.98	0.35	C	
Stream C-AB	0.5	9.83	0.32	A		2.8	22.13	0.74	C	
	2024									
Stream B-C	27.6	180.99	1.09	F	-15 % [Stream B-A]	0.8	11.29	0.44	B	5 % [Stream B-A]
Stream B-A	7.8	273.59	1.06	F		0.6	28.54	0.39	D	
Stream C-AB	0.5	10.25	0.34	B		3.4	24.89	0.77	C	
	2024 + Dev									
Stream B-C	44.0	268.51	1.17	F	-19 % [Stream B-A]	0.9	12.51	0.48	B	1 % [Stream B-A]
Stream B-A	10.6	354.73	1.13	F		0.7	33.27	0.43	D	
Stream C-AB	0.6	10.69	0.37	B		4.8	30.88	0.83	D	

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Kelsterton Road / Golftyn Lane
Location	
Site number	
Date	01/04/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PFGROUP\JGreen
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	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2019	AM	ONE HOUR	07:45	09:15	15
D2	2019	PM	ONE HOUR	16:45	18:15	15
D3	2024	AM	ONE HOUR	07:45	09:15	15
D4	2024	PM	ONE HOUR	16:45	18:15	15
D5	2024 + Dev	AM	ONE HOUR	07:45	09:15	15
D6	2024 + Dev	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2019, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kelsterton Road / Golftyn Lane	T-Junction	Two-way	50.49	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-12	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	Kelsterton Road (E)		Major
B	Golftyn Lane		Minor
C	Kelsterton Road (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.70		✓	2.40	210.0	✓	10.00

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	10.00	8.53	4.58	3.68	3.42		1.00	108	77

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	558	0.099	0.249	0.157	0.356
1	B-C	751	0.112	0.282	-	-
1	C-B	711	0.267	0.267	-	-

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

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	2019	AM	ONE HOUR	07:45	09:15	15

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		✓	577	100.000
B		✓	551	100.000
C		✓	407	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	161	416
	B	97	0	454
	C	248	159	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	1.02	122.38	17.2	F
B-A	1.00	210.15	5.9	F
C-AB	0.32	9.83	0.5	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)	LOS
B-C	342	609	0.561	337	1.2	12.987	B
B-A	73	338	0.216	72	0.3	13.501	B
C-AB	120	595	0.201	119	0.2	7.547	A
C-A	187			187			
A-B	121			121			
A-C	313			313			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	408	570	0.716	404	2.3	21.064	C
B-A	87	255	0.342	86	0.5	21.227	C
C-AB	143	572	0.250	143	0.3	8.374	A
C-A	223			223			
A-B	145			145			
A-C	374			374			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	500	502	0.996	466	10.8	69.071	F
B-A	107	107	0.996	90	4.7	148.709	F
C-AB	175	541	0.324	174	0.5	9.803	A
C-A	273			273			
A-B	177			177			
A-C	458			458			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	500	489	1.022	474	17.2	122.381	F
B-A	107	113	0.944	102	5.9	210.150	F
C-AB	175	541	0.324	175	0.5	9.834	A
C-A	273			273			
A-B	177			177			
A-C	458			458			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	408	542	0.753	463	3.5	59.570	F
B-A	87	187	0.467	107	1.0	54.121	F
C-AB	143	572	0.250	143	0.3	8.408	A
C-A	223			223			
A-B	145			145			
A-C	374			374			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	342	606	0.564	351	1.3	14.529	B
B-A	73	329	0.222	76	0.3	14.340	B
C-AB	120	595	0.201	120	0.3	7.590	A
C-A	187			187			
A-B	121			121			
A-C	313			313			

2019, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kelsterton Road / Golftyn Lane	T-Junction	Two-way	8.49	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	9	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2019	PM	ONE HOUR	16:45	18:15	15

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		✓	398	100.000
B		✓	288	100.000
C		✓	842	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	128	270
	B	70	0	218
	C	444	398	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.41	10.42	0.7	B
B-A	0.35	24.98	0.5	C
C-AB	0.74	22.13	2.8	C
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	164	672	0.244	163	0.3	7.056	A
B-A	53	338	0.156	52	0.2	12.575	B
C-AB	300	631	0.475	296	0.9	10.648	B
C-A	334			334			
A-B	96			96			
A-C	203			203			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	196	643	0.305	196	0.4	8.031	A
B-A	63	290	0.217	63	0.3	15.806	C
C-AB	359	617	0.582	357	1.3	13.746	B
C-A	398			398			
A-B	115			115			
A-C	243			243			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	240	588	0.408	239	0.7	10.288	B
B-A	77	223	0.346	76	0.5	24.352	C
C-AB	456	617	0.738	450	2.7	20.969	C
C-A	472			472			
A-B	141			141			
A-C	297			297			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	240	585	0.410	240	0.7	10.416	B
B-A	77	221	0.349	77	0.5	24.977	C
C-AB	456	617	0.738	455	2.8	22.127	C
C-A	472			472			
A-B	141			141			
A-C	297			297			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	196	641	0.306	197	0.4	8.118	A

B-A	63	287	0.219	64	0.3	16.183	C
C-AB	359	617	0.582	364	1.4	14.529	B
C-A	398			398			
A-B	115			115			
A-C	243			243			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	164	671	0.245	165	0.3	7.119	A
B-A	53	335	0.157	53	0.2	12.770	B
C-AB	300	631	0.475	302	0.9	11.008	B
C-A	334			334			
A-B	96			96			
A-C	203			203			

2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kelsterton Road / Golftyn Lane	T-Junction	Two-way	71.88	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-15	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2024	AM	ONE HOUR	07:45	09:15	15

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		✓	601	100.000
B		✓	574	100.000
C		✓	424	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	168	433
	B	101	0	473
	C	258	166	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	1.09	180.99	27.6	F
B-A	1.06	273.59	7.8	F
C-AB	0.34	10.25	0.5	B
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)	LOS
B-C	356	602	0.592	351	1.4	14.034	B
B-A	76	322	0.236	75	0.3	14.474	B
C-AB	125	590	0.212	124	0.3	7.707	A
C-A	194			194			
A-B	126			126			
A-C	326			326			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	425	559	0.761	419	2.9	24.749	C
B-A	91	230	0.394	90	0.6	25.310	D
C-AB	149	566	0.263	149	0.4	8.614	A
C-A	232			232			
A-B	151			151			
A-C	389			389			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	521	492	1.058	470	15.6	91.019	F
B-A	111	105	1.058	91	5.7	170.467	F
C-AB	183	534	0.342	182	0.5	10.211	B
C-A	284			284			
A-B	185			185			
A-C	477			477			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	521	479	1.088	473	27.6	180.987	F
B-A	111	110	1.012	103	7.8	273.594	F
C-AB	183	534	0.342	183	0.5	10.247	B
C-A	284			284			
A-B	185			185			
A-C	477			477			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	425	520	0.818	504	7.9	138.313	F

B-A	91	119	0.766	104	4.6	214.039	F
C-AB	149	566	0.263	150	0.4	8.655	A
C-A	232			232			
A-B	151			151			
A-C	389			389			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	356	585	0.608	381	1.6	19.651	C
B-A	76	299	0.254	93	0.3	18.838	C
C-AB	125	590	0.212	125	0.3	7.756	A
C-A	194			194			
A-B	126			126			
A-C	326			326			

2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kelsterton Road / Golftyn Lane	T-Junction	Two-way	9.58	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	5	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2024	PM	ONE HOUR	16:45	18:15	15

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		✓	413	100.000
B		✓	299	100.000
C		✓	874	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	133	280
	B	73	0	226
	C	461	413	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.44	11.29	0.8	B
B-A	0.39	28.54	0.6	D
C-AB	0.77	24.89	3.4	C
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	170	667	0.255	169	0.3	7.212	A
B-A	55	329	0.167	54	0.2	13.077	B
C-AB	311	628	0.495	307	1.0	11.096	B
C-A	347			347			
A-B	100			100			
A-C	211			211			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	203	635	0.320	203	0.5	8.306	A
B-A	66	279	0.235	65	0.3	16.806	C
C-AB	373	614	0.607	371	1.5	14.648	B
C-A	413			413			
A-B	120			120			
A-C	252			252			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	249	571	0.436	248	0.8	11.083	B
B-A	80	209	0.385	79	0.6	27.538	D
C-AB	484	627	0.772	477	3.2	23.139	C
C-A	478			478			
A-B	146			146			
A-C	308			308			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	249	567	0.438	249	0.8	11.289	B
B-A	80	206	0.390	80	0.6	28.541	D
C-AB	484	627	0.772	483	3.4	24.891	C
C-A	478			478			
A-B	146			146			
A-C	308			308			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	203	633	0.321	204	0.5	8.428	A

B-A	66	276	0.238	67	0.3	17.341	C
C-AB	373	614	0.607	380	1.6	15.779	C
C-A	413			413			
A-B	120			120			
A-C	252			252			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	170	665	0.256	171	0.3	7.285	A
B-A	55	326	0.168	55	0.2	13.309	B
C-AB	311	628	0.495	314	1.0	11.536	B
C-A	347			347			
A-B	100			100			
A-C	211			211			

2024 + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kelsterton Road / Golftyn Lane	T-Junction	Two-way	105.98	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-19	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2024 + Dev	AM	ONE HOUR	07:45	09:15	15

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		✓	602	100.000
B		✓	610	100.000
C		✓	437	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	169	433
	B	105	0	505
	C	258	179	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	1.17	268.51	44.0	F
B-A	1.13	354.73	10.6	F
C-AB	0.37	10.69	0.6	B
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)	LOS
B-C	380	598	0.635	374	1.7	15.594	C
B-A	79	304	0.260	78	0.3	15.790	C
C-AB	135	590	0.229	134	0.3	7.874	A
C-A	194			194			
A-B	127			127			
A-C	326			326			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	454	552	0.822	445	3.9	31.228	D
B-A	94	198	0.476	92	0.8	33.347	D
C-AB	161	566	0.284	161	0.4	8.864	A
C-A	232			232			
A-B	152			152			
A-C	389			389			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	556	490	1.135	478	23.5	123.853	F
B-A	116	102	1.133	91	6.9	202.275	F
C-AB	197	534	0.369	196	0.6	10.646	B
C-A	284			284			
A-B	186			186			
A-C	477			477			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	556	476	1.167	474	44.0	268.507	F
B-A	116	105	1.101	101	10.6	354.727	F
C-AB	197	534	0.369	197	0.6	10.689	B
C-A	284			284			
A-B	186			186			
A-C	477			477			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	454	517	0.878	506	31.1	267.340	F

B-A	94	112	0.840	106	7.7	322.006	F
C-AB	161	566	0.284	162	0.4	8.914	A
C-A	232			232			
A-B	152			152			
A-C	389			389			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	380	563	0.675	495	2.4	90.691	F
B-A	79	183	0.432	107	0.8	61.201	F
C-AB	135	590	0.229	135	0.3	7.927	A
C-A	194			194			
A-B	127			127			
A-C	326			326			

2024 + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kelsterton Road / Golftyn Lane	T-Junction	Two-way	12.19	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	1	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2024 + Dev	PM	ONE HOUR	16:45	18:15	15

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		✓	416	100.000
B		✓	315	100.000
C		✓	904	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	136	280
	B	74	0	241
	C	461	443	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.48	12.51	0.9	B
B-A	0.43	33.27	0.7	D
C-AB	0.83	30.88	4.8	D
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	181	665	0.273	180	0.4	7.394	A
B-A	56	319	0.175	55	0.2	13.588	B
C-AB	334	628	0.532	329	1.1	11.902	B
C-A	347			347			
A-B	102			102			
A-C	211			211			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	217	632	0.343	216	0.5	8.645	A
B-A	67	267	0.249	66	0.3	17.869	C
C-AB	402	617	0.652	399	1.8	16.350	C
C-A	411			411			
A-B	122			122			
A-C	252			252			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	265	559	0.475	264	0.9	12.141	B
B-A	81	193	0.422	80	0.7	31.468	D
C-AB	552	666	0.829	542	4.4	27.278	D
C-A	443			443			
A-B	150			150			
A-C	308			308			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	265	553	0.480	265	0.9	12.507	B
B-A	81	189	0.431	81	0.7	33.269	D
C-AB	552	666	0.829	550	4.8	30.876	D
C-A	443			443			
A-B	150			150			
A-C	308			308			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	217	628	0.345	218	0.5	8.816	A

B-A	67	262	0.254	68	0.3	18.716	C
C-AB	402	617	0.652	413	2.0	18.596	C
C-A	411			411			
A-B	122			122			
A-C	252			252			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	181	664	0.273	182	0.4	7.485	A
B-A	56	316	0.176	56	0.2	13.885	B
C-AB	334	628	0.532	337	1.2	12.526	B
C-A	347			347			
A-B	102			102			
A-C	211			211			

Appendix J – Ffordd Llanarth / Mold Road Junction ARCADY Output

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947

Filename: Mold Road_Ffordd Llanarth.j9
Path: P:\data\Manchester Office Projects\102394 - Land at Highmere Drive, Connah's Quay TA\1. Work In Progress\Transport\Junction Assessments\JUNCTIONS9
Report generation date: 04/04/2019 10:40:52

»2019, AM
»2019, PM
»2024, AM
»2024, PM
»2024 + Dev, AM
»2024 + Dev, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2019									
Arm 1	2.9	16.21	0.75	C	9 %	1.7	10.91	0.63	B	3 %
Arm 2	3.1	22.01	0.77	C		4.7	29.20	0.84	D	
Arm 3	1.2	8.43	0.55	A	[Arm 2]	1.4	9.66	0.59	A	[Arm 2]
	2024									
Arm 1	3.6	19.21	0.79	C	5 %	1.9	11.92	0.66	B	-1 %
Arm 2	3.8	26.41	0.80	D		6.1	36.87	0.88	E	
Arm 3	1.3	9.01	0.58	A	[Arm 2]	1.6	10.44	0.62	B	[Arm 2]
	2024 + Dev									
Arm 1	3.9	20.68	0.80	C	-1 %	2.2	13.37	0.69	B	-3 %
Arm 2	5.9	38.13	0.87	E		7.6	44.77	0.90	E	
Arm 3	1.4	9.55	0.59	A	[Arm 2]	1.8	11.45	0.65	B	[Arm 2]

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Mold Road / Ffordd Llanarth
Location	
Site number	
Date	02/04/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PFGROUP\JGreen
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

Mini-roundabout model	Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9		✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2019	AM	ONE HOUR	07:45	09:15	15
D2	2019	PM	ONE HOUR	16:45	18:15	15
D3	2024	AM	ONE HOUR	07:45	09:15	15
D4	2024	PM	ONE HOUR	16:45	18:15	15
D5	2024 + Dev	AM	ONE HOUR	07:45	09:15	15
D6	2024 + Dev	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2019, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Mold Road / Ffordd Llanarth	Mini-roundabout	1, 2, 3	15.63	C

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		9	Arm 2

Arms

Arms

Arm	Name	Description
1	Mold Road (W)	
2	Ffordd Llanarth	
3	Mold Road (E)	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	3.90	3.90	4.90	12.8	9.70	5.80	0.0	
2	3.50	3.50	4.20	2.7	12.90	10.50	0.0	
3	3.90	3.90	4.70	1.9	16.10	14.50	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.655	1077
2	0.626	876
3	0.657	1095

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

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	2019	AM	ONE HOUR	07:45	09:15	15

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 (%)
1		✓	604	100.000
2		✓	479	100.000
3		✓	472	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	332	272
	2	205	0	274
	3	206	266	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.75	16.21	2.9	C
2	0.77	22.01	3.1	C
3	0.55	8.43	1.2	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	455	199	947	0.480	451	0.9	7.206	A
2	361	203	749	0.481	357	0.9	9.099	A
3	355	153	994	0.357	353	0.6	5.594	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	543	239	921	0.589	541	1.4	9.419	A
2	431	244	724	0.595	429	1.4	12.106	B
3	424	183	974	0.435	423	0.8	6.535	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	665	292	886	0.750	659	2.8	15.478	C
2	527	297	690	0.764	521	3.0	20.553	C
3	520	223	948	0.548	518	1.2	8.331	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	665	293	886	0.751	665	2.9	16.210	C
2	527	299	689	0.766	527	3.1	22.012	C
3	520	225	947	0.549	520	1.2	8.426	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	543	240	920	0.590	549	1.5	9.834	A
2	431	247	722	0.597	437	1.5	12.911	B
3	424	187	972	0.437	426	0.8	6.612	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	455	201	946	0.481	457	0.9	7.393	A
2	361	206	748	0.482	363	1.0	9.416	A
3	355	155	993	0.358	356	0.6	5.662	A

2019, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Mold Road / Ffordd Llanarth	Mini-roundabout	1, 2, 3	17.08	C

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		3	Arm 2

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2019	PM	ONE HOUR	16:45	18:15	15

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 (%)
1		✓	509	100.000
2		✓	554	100.000
3		✓	482	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	295	214
	2	266	0	288
	3	222	260	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.63	10.91	1.7	B
2	0.84	29.20	4.7	D
3	0.59	9.66	1.4	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	383	194	950	0.403	381	0.7	6.291	A
2	417	160	776	0.537	413	1.1	9.784	A
3	363	198	965	0.376	360	0.6	5.936	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	458	233	925	0.495	456	1.0	7.666	A
2	498	192	756	0.659	495	1.9	13.636	B
3	433	238	939	0.462	432	0.8	7.094	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	560	285	891	0.629	558	1.6	10.719	B
2	610	234	730	0.836	600	4.4	25.938	D
3	531	288	906	0.586	529	1.4	9.491	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	560	286	890	0.630	560	1.7	10.907	B
2	610	236	729	0.837	609	4.7	29.203	D
3	531	292	903	0.588	531	1.4	9.664	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	458	235	924	0.495	460	1.0	7.812	A
2	498	194	755	0.660	509	2.0	15.185	C
3	433	244	934	0.464	435	0.9	7.244	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	383	196	949	0.404	384	0.7	6.393	A
2	417	162	775	0.538	420	1.2	10.242	B
3	363	202	962	0.377	364	0.6	6.027	A

2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Mold Road / Ffordd Llanarth	Mini-roundabout	1, 2, 3	18.32	C

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		5	Arm 2

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2024	AM	ONE HOUR	07:45	09:15	15

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 (%)
1		✓	629	100.000
2		✓	498	100.000
3		✓	492	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	346	283
	2	213	0	285
	3	215	277	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.79	19.21	3.6	C
2	0.80	26.41	3.8	D
3	0.58	9.01	1.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	474	207	942	0.503	470	1.0	7.561	A
2	375	211	744	0.504	371	1.0	9.552	A
3	370	159	991	0.374	368	0.6	5.760	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	565	248	915	0.618	563	1.6	10.168	B
2	448	253	718	0.624	445	1.6	13.095	B
3	442	190	970	0.456	441	0.8	6.800	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	693	304	878	0.788	685	3.4	17.961	C
2	548	308	683	0.802	540	3.6	23.917	C
3	542	231	943	0.574	540	1.3	8.882	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	693	305	878	0.789	692	3.6	19.208	C
2	548	311	681	0.805	547	3.8	26.409	D
3	542	234	941	0.576	542	1.3	9.008	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	565	250	914	0.619	573	1.7	10.789	B
2	448	258	715	0.626	456	1.7	14.327	B
3	442	195	967	0.458	444	0.9	6.917	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	474	209	941	0.503	476	1.0	7.794	A
2	375	214	742	0.505	378	1.0	9.950	A
3	370	162	989	0.375	371	0.6	5.842	A

2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Mold Road / Ffordd Llanarth	Mini-roundabout	1, 2, 3	20.40	C

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		-1	Arm 2

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2024	PM	ONE HOUR	16:45	18:15	15

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 (%)
1		✓	528	100.000
2		✓	575	100.000
3		✓	501	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	306	222
	2	276	0	299
	3	231	270	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.66	11.92	1.9	B
2	0.88	36.87	6.1	E
3	0.62	10.44	1.6	B

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	398	202	945	0.421	395	0.7	6.504	A
2	433	166	772	0.560	428	1.2	10.307	B
3	377	205	960	0.393	375	0.6	6.123	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	475	242	919	0.517	473	1.0	8.053	A
2	517	199	752	0.688	513	2.1	14.893	B
3	450	246	933	0.483	449	0.9	7.419	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	581	296	884	0.658	578	1.9	11.656	B
2	633	243	724	0.874	620	5.5	30.995	D
3	552	297	900	0.613	549	1.5	10.199	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	581	297	883	0.658	581	1.9	11.917	B
2	633	244	723	0.875	631	6.1	36.866	E
3	552	303	896	0.616	551	1.6	10.440	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	475	244	918	0.517	478	1.1	8.245	A
2	517	201	751	0.689	532	2.3	17.463	C
3	450	255	927	0.486	453	1.0	7.631	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	398	204	944	0.421	399	0.7	6.624	A
2	433	168	771	0.561	437	1.3	10.893	B
3	377	210	957	0.394	378	0.7	6.235	A

2024 + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Mold Road / Ffordd Llanarth	Mini-roundabout	1, 2, 3	22.97	C

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		-1	Arm 2

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2024 + Dev	AM	ONE HOUR	07:45	09:15	15

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 (%)
1		✓	635	100.000
2		✓	540	100.000
3		✓	502	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	352	283
	2	230	0	310
	3	215	287	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.80	20.68	3.9	C
2	0.87	38.13	5.9	E
3	0.59	9.55	1.4	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	478	215	937	0.510	474	1.0	7.710	A
2	407	211	744	0.546	402	1.2	10.383	B
3	378	171	982	0.385	375	0.6	5.908	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	571	257	909	0.628	568	1.6	10.494	B
2	485	253	718	0.676	482	2.0	15.069	C
3	451	205	960	0.470	450	0.9	7.049	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	699	315	871	0.802	691	3.7	19.131	C
2	595	308	684	0.870	581	5.3	31.779	D
3	553	248	932	0.593	551	1.4	9.377	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	699	316	871	0.803	698	3.9	20.682	C
2	595	311	681	0.873	592	5.9	38.129	E
3	553	252	929	0.595	553	1.4	9.554	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	571	259	908	0.629	579	1.7	11.226	B
2	485	258	715	0.679	500	2.2	17.792	C
3	451	213	955	0.473	453	0.9	7.211	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	478	217	936	0.511	481	1.1	7.964	A
2	407	214	742	0.548	410	1.2	10.978	B
3	378	175	980	0.386	379	0.6	6.003	A

2024 + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Mold Road / Ffordd Llanarth	Mini-roundabout	1, 2, 3	24.00	C

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		-3	Arm 2

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2024 + Dev	PM	ONE HOUR	16:45	18:15	15

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 (%)
1		✓	543	100.000
2		✓	594	100.000
3		✓	524	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	321	222
	2	284	0	310
	3	231	293	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.69	13.37	2.2	B
2	0.90	44.77	7.6	E
3	0.65	11.45	1.8	B

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	409	219	934	0.438	406	0.8	6.775	A
2	447	166	772	0.579	442	1.3	10.725	B
3	394	211	956	0.413	392	0.7	6.349	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	488	263	905	0.539	487	1.1	8.563	A
2	534	199	752	0.710	530	2.3	15.950	C
3	471	253	928	0.507	470	1.0	7.828	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	598	321	867	0.689	594	2.1	12.983	B
2	654	243	724	0.903	637	6.6	35.619	E
3	577	304	895	0.645	574	1.8	11.114	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	598	322	866	0.690	598	2.2	13.372	B
2	654	244	723	0.904	650	7.6	44.772	E
3	577	311	891	0.648	577	1.8	11.450	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	488	265	904	0.540	492	1.2	8.822	A
2	534	201	750	0.712	554	2.6	19.901	C
3	471	265	921	0.512	474	1.1	8.107	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	409	221	933	0.438	410	0.8	6.915	A
2	447	168	771	0.580	452	1.4	11.441	B
3	394	216	953	0.414	396	0.7	6.481	A