



Greenhill Construction

**Herbert Road, Newport**

## **TRANSPORT ASSESSMENT**

December 2013

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## CONTENTS

<b>1.0</b>	<b>Introduction.....</b>	<b>1</b>
<b>2.0</b>	<b>Policy review.....</b>	<b>3</b>
<b>3.0</b>	<b>Existing situation .....</b>	<b>8</b>
<b>4.0</b>	<b>Highway safety .....</b>	<b>15</b>
<b>5.0</b>	<b>Development proposals.....</b>	<b>19</b>
<b>6.0</b>	<b>Transport characteristics .....</b>	<b>21</b>
<b>7.0</b>	<b>Potential impact .....</b>	<b>27</b>
<b>8.0</b>	<b>Conclusions.....</b>	<b>32</b>

### Figures

<b>Figure 3.1</b>	Site location/local highway network
<b>Figure 3.2</b>	2013 base traffic flows
<b>Figure 3.3</b>	Public transport
<b>Figure 3.4</b>	Rail network map
<b>Figure 3.5</b>	Local amenities
<b>Figure 3.6</b>	Cycle routes
<b>Figure 4.1</b>	Personal injury accident study area
<b>Figure 4.2</b>	Location of personal injury accidents
<b>Figure 5.1</b>	Layout of proposed development
<b>Figure 5.2</b>	Vehicular access
<b>Figure 5.3</b>	Visibility splays
<b>Figure 6.1</b>	Distribution of development traffic
<b>Figure 6.2</b>	2017 base traffic flows
<b>Figure 6.3</b>	2022 base traffic flows
<b>Figure 6.4</b>	2017 final future flows
<b>Figure 6.5</b>	2022 final future flows
<b>Figure 7.1</b>	Clarence Place/Church St/Chepstow Rd/Corporation Rd/East Usk Rd signalised junction
<b>Figure 7.2</b>	Caerleon Rd/Church Rd/Turner St/Tesco priority junction
<b>Figure 7.3</b>	Turner Street/Trostrey Street priority junction

### Appendices

<b>Appendix A</b>	Base traffic surveys
<b>Appendix B</b>	Accident statistics
<b>Appendix C</b>	Car parking sustainability assessment
<b>Appendix D</b>	TRICS data – Houses privately owned
<b>Appendix E</b>	TRICS data – Houses for rent
<b>Appendix F</b>	TRICS data – Flats privately owned
<b>Appendix G</b>	TRICS data – Flats for rent
<b>Appendix H</b>	LINSIG - Clarence Place/Church St/Chepstow Rd/Corporation Rd/East Usk Rd signalised junction
<b>Appendix I</b>	PICADY - Caerleon Rd/Church Rd/Turner St/Tesco priority junction
<b>Appendix J</b>	PICADY - Turner Street/Trostrey Street priority junction

# **1 INTRODUCTION**

## **1.1 Background**

1.1.1 Asbri Transport has been appointed by Greenhill Construction, to produce a Transport Assessment report in support of a planning application to develop land at Herbert Road, Newport for residential use. The site is allocated in Newport City Council's Unitary Development Plan and the Draft Local Development Plan.

1.1.2 The proposed development comprises up to 250 residential dwellings (85% open market/15% affordable), together with a total of 348 car parking spaces

1.1.3 In producing this statement, we have discussed and agreed the scope with the Local Highway Authority, as follows:

- Estimate vehicle trip generation using TRICS 2013 (a) trip generation data base;
- Assess the impact of the proposed development for the year of opening (2017) and 'year of opening + 5 years' (2022);
- Analyse the impact of the proposed development at the following junctions:
  - Clarence Place/East Usk Road/Church Road/Chepstow Road/Corporation Road signalised junction
  - Caerleon Road/Turner Street/Tesco priority junction
  - Turner Street/Trostrey Street priority junction
  - Turner Street under railway bridge (link).
- Review site accessibility; and,
- Assess on-site parking provision.

## **1.2 Purpose of the report**

1.2.1 The purpose of the report is to assess the likely travel characteristics of the proposed development, identify the impact of this travel on the surrounding transport network, and identify any measures required to mitigate the impact of the proposed development.

### **1.3 Structure of the report**

1.3.1 Following this introductory chapter, the report is structured as follows:

- Section 2 reviews the development proposals in relation to national, regional and local planning policies;
- Section 3 describes the existing transport conditions surrounding the development;
- Section 4 reviews personal injury accident data for the study area;
- Section 5 outlines the development proposals;
- Section 6 considers the likely demand generated by the proposed development;
- Section 7 assesses the impact of the development on the surrounding highway network; and,
- Section 8 provides the conclusions of the report.

## **2 POLICY REVIEW**

### **2.1 Introduction**

2.1.1 This section of the report reviews national, regional and local transport related planning policy guidance that is relevant to the proposed development site.

### **2.2 Wales Spatial Plan – People, Places, Futures**

2.2.1 The Wales Spatial Plan – People, Places Future (WSP) – was originally adopted by the National Assembly for Wales in November 2004, and updated in 2008 to bring the WSP into line with One Wales: Connecting the Nation (see below).

2.2.2 The Plan has amongst its goals: ‘Achieving sustainable accessibility. To balance the social, economic and environmental impacts of travel while enhancing accessibility and to tackle the challenge of benefiting from larger networked regions while reducing the negative impacts of travel’.

2.2.3 It states ‘Citizens must be able to access job opportunities and public services – health, social services, education, etc – if equality of opportunity is to be successfully promoted in Wales’.

2.2.4 With regards to building communities, the Plan explains that a lack of good quality housing affects people’s health, well-being and influences their long term life chances. There is a need to maintain a mix of tenure and size of housing to ensure balanced communities. In the context of responding to and mitigating the effects of climate change, the WSP supports changing behaviour and is in favour of ‘greener’ modes of travel such as car sharing, public transport, walking and cycling.

2.2.5 The general principles set out for new housing include the need for sites to be linked to public transport nodes, including walking and cycling networks.

### **2.3 Planning Policy Wales**

2.3.1 Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Assembly Government. It is supplemented by a series of Technical Advice Notes (TANs). Procedural advice is given in circulars and policy clarification letters.

2.3.2 PPW provides a firm steer that new developments should be directed to existing urban areas where there is greatest potential for reducing the need to travel due to the co-location of houses, jobs, shops, services and public transport facilities. It aims to extend choice in transport and secure accessibility in a way which supports sustainable development and helps to tackle the causes of climate change by : encouraging a more effective and efficient transport system, with greater use of the more sustainable and healthy forms of travel, and minimising the need to travel.

2.3.3 PPW states that:

*'Land use planning can help to achieve the Assembly Government's objectives for transport through:*

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

- 2.3.4 With regards to promoting walking and cycling, PPW states that:
- 2.3.5 ‘Walking should be promoted for shorter trips. The impact of policies and development on pedestrians should be considered. Planning authorities should promote specific measures to assist pedestrians including the provision of safe, convenient and well-signed routes.’
- 2.3.6 PPW also states that:
- ‘Cycling should also be encouraged for short trips and as a substitute for shorter car journeys or, as part of a longer journey when combined with public transport’.*
- 2.3.7 In relation to parking, PPW states that:
- 2.3.8 ‘Car parking provision is a major influence on the choice of means of transport and the pattern of development. Local authorities should ensure that new developments provide lower levels of parking than have generally been achieved in the past. Minimum parking standards are no longer appropriate.’

## **2.4 One Wales: Connecting the Nation – The Wales Transport Strategy**

- 2.4.1 National transport policy for Wales is specified within the Wales Transport Strategy, One Wales: Connecting the Nation, which is supplemented by a series of Technical Advice Notes (TANs).
- 2.4.2 This policy aims to maximise the consideration of access during the planning of new services and facilities, influence and alter travel patterns, promote sustainable travel and contribute to environmental improvements. The goal of One Wales: Connecting the Nation is to:
- ‘Promote sustainable transport networks that safeguard the environment while strengthening our country’s economic and social life. The transport strategy identifies a series of high-level outcomes and sets out the steps to their delivery. The One Wales programme is working to achieve a nation with access for all, where travelling between communities and accessing services, jobs and facilities in different parts of Wales is both easy and sustainable, and which support the growth of our economy.’*

2.4.3 The Strategy aims to maximise the positive contribution that transport makes and promote healthy lifestyles, such as walking and cycling for short journeys. It prioritises actions that influence the number of trips, distance travelled and mode of travel chosen, such as ensuring that new developments take transport implications into account. A significant number of car trips could be replaced by making walking and cycling more attractive options and it focuses on travel behaviour.

## **2.5 Technical Advice Note (TAN) 18**

2.5.1 TAN 18 describes how to integrate land use and transport planning, and explains how transport impacts should be assessed and mitigated.

2.5.2 It states that the location of new residential development has a significant influence on travel patterns as the majority of trips start or finish at home.

2.5.3 Development plans should identify residential sites that are accessible to jobs, shops, services and where public transport services have capacity to absorb the development. Plans should promote housing development at locations with good access by walking and cycling to schools and public transport stops, and by all modes to employment, services, shopping and leisure.

2.5.4 TAN 18 identifies thresholds at which a Transport Assessment should be produced in support of a planning application. Any housing development over 100 dwellings requires a Transport Assessment. This document is intended to consider the impact of a proposed development of up to a maximum of 250 units.

## **2.6 Newport City Council Unitary Development Plan**

2.6.1 The UDP provides a policy framework that integrates and balances the social, economic and environmental issues in order to meet the needs of those living, working and visiting Newport.

2.6.2 The UDP is effectively time expired but will continue to be the statutory development plan until the new Local Development Plan (LDP) is adopted. As such it continues to provide the basis for the determination of all planning applications within the local authority.

2.6.3 The principle aims of the Plan are as follows:

- Move towards environmentally sustainable development involving:
  - urban regeneration,
  - conservation of the natural and built environment and the prudent use of natural resources,
- Facilitate improvements to the economy and general living standards.
- Conserve and enhance the built and natural environment, and to counter decline in biodiversity.

2.6.4 In relation to transport the UDPs' specific objectives are as follows:

- Adopting land allocation policies which reduce the need to travel.
- The provision of sustainable transport infrastructure:
  - promote use of public transport, cycling, walking and other non-polluting transport;
  - contribute towards the integrated transport strategy;
  - provide appropriate transport modes to serve new development areas;
  - enhance Newport's strategic position in the regional transport network.

## **2.7 Newport Local Development Plan (Deposit)**

2.7.1 The emerging LDP (a Deposit Plan was published in March 2012) has a focus on regeneration which seeks to maximise the use of previously developed, brownfield land. Regeneration is seen as a key means of achieving sustainable development. The availability of a large amount of previously developed land provides the Council with confidence that a significant proportion of the 9,600 dwellings required by 2026, will be met by development on identified 'brownfield' land and windfall sites.

### **3 EXISTING SITUATION**

#### **3.1 Introduction**

3.1.1 In order to assess the impact of the development proposals, it is necessary to establish the conditions that exist within the surrounding transport network. This section of the report therefore describes the current highway network, together with a description of the existing transport infrastructure including: public transport, pedestrian and cycle facilities.

#### **3.2 Site location**

3.2.1 The 5.1 hectare (12.7 acre) site is situated within the St Julian's area of Newport, and is located approximately 1.6km (1 mile) from Newport city centre.

3.2.2 The site itself is bounded to the north by Glan Usk Primary School and to the east by the Welsh Marches Railway Line. The southern boundary of the site abuts existing warehouse/ industrial premises, and the western boundary abuts the River Usk.

3.2.3 The location of the site is shown in **Figure 3.1**.

#### **3.3 Highway network**

3.3.1 The highway network in vicinity of the site is also shown in Figure 3.1.

3.3.2 The proposed site access is located at the intersection between Collier Street/Courtney Street, which form two sides of a square around a green amenity/play space). The other two sides of the square are formed by Crawford Street and Turner Street.

##### ***Collier Street***

3.3.3 Collier street is a residential access road, with an approximate carriageway width of 7.6m, and footways on both sides of the carriageway (approximately 2m wide).

3.3.4 Traffic calming has been implemented along the road (in the form of speed cushions), and there are parking restrictions along the eastern side of the carriageway (double yellow lines).

3.3.5 The road is lit, and is subject to a 30mph speed limit.

#### ***Courtney Street***

3.3.6 Courtney Street is a residential access road, with an approximate carriageway width of 8.5m, and a footway on the northern side of the carriageway (approximately 2m wide).

3.3.7 Traffic calming has been implemented along the road (in the form of speed cushions). There are no parking restrictions along the majority of the road, although there are parking restrictions on the approach to the junction with Crawford Street.

3.3.8 The road is lit, and is subject to a 30 mph speed limit.

#### ***Crawford Street***

3.3.9 Crawford Street is a residential road (albeit with industrial premises fronting the southern end of the carriageway), with an approximate carriageway width of 7.2m, and footways on both sides of the carriageway.

3.3.10 Traffic calming has been implemented along the road (in the form of speed cushions), and there are parking restrictions along the western side of the carriageway (double yellow lines).

3.3.11 The road is lit and subject to a 30mph speed limit.

#### ***Turner Street***

3.3.12 Turner Street links the development to the local transport network through a simple priority junction. The road is a uniform width of approximately 8.7m, narrowing to approximately 4.8m as it passes under the Welsh Marches Line. Through the narrowing, a priority system is in operation with priority for westbound traffic.

- 3.3.13 There is a height restriction under the railway bridge of 3.1m, and there is also a weight limit (7.5 tonne) along the road between 11pm and 7 am.
- 3.3.14 Within proximity of the junction with Caerleon Road the road is fronted by commercial premises and beyond the railway bridge, predominately by residential dwellings.
- 3.3.15 The road has pedestrian footways on both sides of the carriageway along its length, is lit and subject to a 30mph speed limit and is traffic-calmed along its length.

#### ***B4596 Caerleon Road***

- 3.3.16 The B4596 Caerleon Road to the south east of the site, runs in a north east – south west direction connecting to the M4 in the north (providing access to the wider network) and the B4237 to the south west and the B4591 to the west.
- 3.3.17 The width of the road varies along its length within the study area. However, in proximity of the site the road is approximately 9m wide to the north east and 11.5 m wide to the south west,
- 3.3.18 The road has pedestrian footways on both sides of the carriageway, is lit and subject to a 30mph speed limit.

### **3.4 Base traffic flows**

- 3.4.1 Fully classified turning counts have been undertaken at the following Junctions:
- Clarence Place/East Usk Road/Church Road/Chepstow Road/Corporation Road junction;
  - Turner Street/Caerleon Road junction; and
  - Turner Street/Trostrey Street junction.
- 3.4.2 The surveys were undertaken on Thursday 31 January 2013 (between 0730-0930 and 1630-1830 hours). The peak hour traffic flows are summarised in **Figure 3.2**, and the surveys are presented in full in **Appendix A**.

### 3.5 Public Transport

3.5.1 The proposed development is reasonably well served by public transport, with a number of scheduled bus services connecting Newport with destinations such as Cardiff, Cwbran, Pontypool and Monmouth (see Table 3.1 below for full details).

3.5.2 The site is also accessible by rail, with the nearest rail station, Newport Railway Station, located approximately 1.3km from the south west of the site access.

### 3.6 Bus services

3.6.1 There are existing bus stops on Caerleon Road – both north east bound and south west bound - within easy walking distance (i.e. 400m) of the site access facilitating movement within Newport and to neighboring settlements.

3.6.2 **Table 3.1** below outlines the services that call at bus stops within the vicinity of the site.

Route No.	Origin/Destination	Frequency
2A	Newport-Gaer	0600-2300/Service every 40 minutes between 0700-2000 (Monday-Saturday)
2A	Newport-Gaer	1000-2200/Service every 2 hours (Sunday)
2C	Newport-Gaer	0630-2100/Service every 40 minutes between 0720-1800 (Monday-Saturday)
2C	Newport-Gaer	1100-2100/Service every 2 hours (Sunday)
3B	Newport – Malpas woodlands – Newport	0910-1745/Service every 10, 15, 40 & 45 past the hour (Monday-Saturday)
6	Newport – Always – Ringland	0525-2300/Hourly service between 0525-1825(Monday-Saturday)
6	Newport – Always – Ringland	One service at 2215 (Sunday)

**Table 3.1** Existing scheduled bus services

8A	Newport – Maindee - Ringland	0440-2300/Service every 40 minutes between 0540-2300 (Monday-Saturday)
8A	Newport – Maindee – Ringland	0940-2230/Service every 40 minutes between 1220-2140 (Sunday)
8C	Newport – Maindee – Ringland	0520-2240/Service every 40 minutes (Monday-Saturday)
8C	Newport – Maindee – Ringland	0900-2200/Service every 20 and 40 past the hour and on the hour (Sunday)
10A	Newport – Christchurch	0850-1650/Service every 2 hours (Monday-Saturday)
10C	Newport – Christchurch	0950-1750/Service every 2 hours (Monday-Saturday)
11A	Newport – Allt-yr-yn – Brynglas	0711-2230/Service every 33minutes past from 0833-2133 (Monday-Saturday)
11C	Newport – Brynglas	0655-2200/Service every 11minutes past the hour (Monday-Saturday)
15	Newport – Cwmbran – Pontypool – Trevethin	06:45-18:15/Service every 15minutes (Monday-Friday)
15	Newport – Cwmbran – Pontypool – Trevethin	07:15-18:15/Service every 15minutes (Saturday)
16	Newport – Bettws - Newport	04:55-2300/Service every 20minutes between 07:15-18:15 (Monday-Saturday)
16	Newport – Bettws – Newport	09:00-22:00/Hourly service (Sunday)
17	Newport – Malpas Almond Drive	07:15-18:45/Service every 07:15-18:45 (Monday-Saturday)
18	Newport – Malpas Almond Drive	06:20-18:20/Service every 20 and 40 minutes past the hour (Monday-Saturday)
19	Newport – Malpas Court	06:00-23:00/Service every 20minutes between 07:30-19:50 (Monday-Saturday)
20	Newport – Spytty Retail Park – Newport	09:20-17:20/Hourly service (Monday-Saturday)
23	Newport – Cwmbran – Pontypool – Varteg Hill	07:40-22:10/Service every half hour between 08:00-18:00 (Monday-Saturday)
26A	Newport – St Julians	0720-2230/Service every 40minutes from 0720-1720 (Monday-Saturday)
26C	Newport – St Julians	0500-2300/Service every 40minutes from 0700-1740 (Monday-Saturday)

**Table 3.1(cont'd)** Existing scheduled bus services

Route No.	Origin/Destination	Frequency
27	Newport – Caerleon trinity View	04:55-23:40/Service every 18 and 54 minutes past the hour between 07:18-17:54 (Monday-Saturday)
28	Newport – Caerleon Eastfield Road	07:06-22:00/Hourly service (Monday-Saturday)
28B	Newport – Caerleon Eastfield Road	07:30-17:30/Hourly service (Monday-Saturday)
42	Newport – Spytty Park	Service every 18 and 54 minutes past the hour between 07:18-17:54 (Monday-Saturday)
43	Newport – Nash College	05:35-22:30/Service every half hour (Monday-Saturday)
44	Newport – Nash College	07:30-17:30/Hourly service (Monday-Saturday)
60	Newport – Caerleon – Usk – Raglan – Monmouth	06:30-17:35/Hourly service between 10:05-16:05 (Monday-Saturday)
62	Newport – Caerwent – Sudbrook – Caldicot	06:50-18:15/Service every 2 hours between 10:05-16:05 (Monday-Saturday)
63	Newport – Whiston – Goldcliff – Wetlands Reserve – Newport	07:00-18:00/Service every 2 hours between 10:00-18:00 (Monday-Saturday)
73	Newport – Parc Seymour – Caerwent – Chepstow	05:55-17:40/Service every 40 minutes past the hour between 07:40-17:40 (Monday-Saturday)
X30	Newport – Cardiff Express	0700-1900/Service every 20minutes (Monday-Saturday)

**Table 3.1(cont'd)** Existing scheduled bus services

3.6.3 Local bus routes/stops are shown in **Figure 3.3**.

#### ***Rail services***

3.6.4 As outlined above, the closest rail station is Newport Railway Station. The station is located approximately 1.3km (<1 mile) south of the site, which is within the preferred maximum walk distance of 2km (for commuting purposes). The location of the station is identified in Figure 3.3.

3.6.5 The station is situated on the Great Western Mainline, The Valleys Lines and the Welsh Marches Line, with services to Cardiff Central (to the west), Hereford (to the north) and Bristol Parkway/Templemeads (to the East).

3.6.6 A rail network map is presented in **Figure 3.4**.

### **3.7 Walking and cycling**

- 3.7.1 As outlined above, the majority of roads within the vicinity of the site have footways on one or both sides of the carriageway, providing links between the site and the surrounding facilities.
- 3.7.2 The Chartered Institution of Highways and Transportation (IHT) guidelines 'Providing for journeys on foot' indicates that the desirable walking distance for commuting/school journeys is 500 metres, the acceptable walking distance is 1.0km and 2.0km is the preferred maximum.
- 3.7.3 **Figure 3.5** indicates the 500m, 1.0km and 2.0km isochrones from the centre of the proposed site. Local amenities within walking distance of the site include comparison and convenience goods retail, Primary School, places of worship and a Post Office.

#### ***Cycle routes***

- 3.7.4 There are no formal cycle facilities within the immediate vicinity of the site. However, there are a number of routes to the west of the River Usk, that are within easy cycling distance of the site, including:
- National Cycle Route 47 (Celtic Trail East);
  - National Cycle Route 49 (Monmouthshire and Brecon Canal – Newport);  
and,
  - National Cycle Route 88 – providing a link to Caerleon.
- 3.7.5 These routes are shown in **Figure 3.6**.

## 4 HIGHWAY SAFETY

4.1.1 This section of the report reviews collision data within the study area, including all surveyed junctions (as outlined in **Figure 4.1**), this consists of:

- Caerleon Road in the vicinity of the site;
- Clarence Place/Usk Road/Church Road/Chepstow Road/Corporation Road signalised junction;
- Caerleon Road/Turner Street/Tesco priority junction;
- Turner Street/Trostrey Street priority junction; and,
- Turner Street.

4.1.2 Personal injury accident data for the study was obtained for the five year period 2008 - 2013, and this is presented in full in **Appendix B. Table 4.1** below summarises details of the number of collisions resulting in personal injury, the number of casualties and the severity of personal injury.

	Personal Injuries			Casualties
	Fatal	Serious	Slight	
2009	0	1	9	13
2010	0	1	4	5
2011	0	1	5	8
2012	0	2	6	9
2013	0	2	0	2
Total	1	7	24	38

**Table 4.1** Collision severity and number of casualties by year

4.1.3 It can be deduced from the table above that there have been a total of 32 collisions within the study area, resulting in a total of 38 casualties, with:

- Slight injuries being sustained in 75% of the total casualties; and,
- 22% of the collisions resulted in serious injuries being sustained.

4.1.4 The locations of these collisions are set out in **Table 4.2** below, and summarised in **Figure 4.2**.

	Number of PIAs by severity			Total no. of collisions
	Fatal	Serious	Slight	
<b>Junctions</b>				
Clarence Place/East Usk Road/Church Road/Chepstow Road/Corporation Road	1	2	8	11
Clarence Place/Rodney Road	0	0	2	2
Dean Street/Caerleon Road	0	0	1	1
Turner Street/Caerleon Road	0	0	1	1
<b>Total</b>	<b>1</b>	<b>2</b>	<b>12</b>	<b>15</b>

**Table 4.2** Location of personal injury accidents by severity

## 4.2 Analysis of collision data

4.2.1 The majority of collisions involved vehicle/vehicle conflicts (24 incidents), one involved a powered two wheeler, five involved pedal cycles, and there were two accidents involving pedestrians that resulted in personal injury.

4.2.2 It can be seen from Figure 4.2, and Table 4.2 above, that there are three notable accident clusters within the study area, as follows:

- Location 1 - Adjacent to the old arts college on the B4596;
- Location 2 - Clarence Place/East Usk Road/Church Road/Chepstow Road/Corporation Road junction; and,
- Location 3 – In proximity of Kwik fit Clarence Place

### ***Location 1 - Adjacent to the old arts college on the B4596***

4.2.3 There were a total of 5 collisions during the five year study period, three of which resulted in serious injuries being sustained, and two resulting in slight injuries. Of the collisions two were vehicle/vehicle conflicts, two were vehicle/pedestrian conflicts and one involved a vehicle and motorcycle.

4.2.4 Both collisions with pedestrians were as a result of an individual stepping into a 'live' carriageway in an inappropriate location. One instance involved a pedestrian alighting from a bus and attempting to cross the carriageway in front of the vehicle where their presence was obscured to road users. The second instance involved a pedestrian stepping into the bus lane and being struck by a car inappropriately using the lane. The remaining collisions occurred between vehicle and are as a result of poor driver behavior.

***Location 2 - Clarence Place/East Usk Road/Church Road/Chepstow Road/Corporation Road junction***

4.2.5 A total of 11 collisions occurred in proximity of the junction during the five year study period. One collision resulted in fatal injuries being sustained, two collisions resulted in serious injuries and the remaining 8 collisions resulted in slight injuries being sustained. Of the collisions seven involved vehicle/pedestrian conflict, one occurred between a vehicle/pedal cycle and three involved vehicle/vehicle conflict.

4.2.6 Of the vehicle/pedestrian collisions two instances occurred whilst pedestrians were utilising a controlled crossing point (one of which resulted in fatal injuries being sustained). The remaining vehicle/pedestrian conflicts occurred at locations other than pedestrian crossing points. The single instance of vehicle/cycle conflict was a result of the cyclist failing to comply with the traffic signals at the junction. The remaining collisions occurred between vehicle and are as a result of poor driver behavior.

***Location 3***

4.2.7 In all, there were a total of 5 collisions on Clarence Place in proximity of Kwik Fit during the five year study period, of which four resulted in slight injuries being sustained and one resulted in serious injuries. Two of the collisions involved vehicle/vehicle conflict, two involved vehicle/pedestrian conflict and one involved a vehicle/pedal cycle.

4.2.8 Both collisions with pedestrians were as a result of an individual stepping into a 'live' carriageway, at an inappropriate location. It is unclear from the Council provided data under what circumstances the single instance of vehicle/cycle conflict occurred. The remaining collisions occurred between vehicle and are as a result of poor driver behavior.

## **5 DEVELOPMENT PROPOSALS**

### **5.1 Land use**

5.1.1 As outlined in Chapter 1, it is proposed to redevelop the site to construct up to 250 residential dwellings, together with a total of 348 car parking spaces. The layout of the proposed development is shown in **Figure 5.1**.

### **5.2 Access**

#### ***Vehicular access***

5.2.1 As part of the re-development of the site, it is proposed to construct a new vehicular access to the site from Collier Street/Courtney Street, via a simple priority junction (see **Figure 5.2**).

5.2.2 The required visibility splays at the proposed site access (see **Figure 5.3**) are based on the sight stopping distance (SSD) of vehicles along the site frontage. In accordance with a speed limit of 30mph, the required SSD is 43m. It can be seen from the diagram that the required visibility splays can be accommodated within land owned by the applicant/highway authority.

#### ***Pedestrians and cyclists***

5.2.3 The main vehicular access to the site will incorporate facilities for pedestrians and cyclists. In addition, there is a pedestrian link between the site and Charnwood Road (to the east of the railway line), which travels under the railway. This provides a connection between the site and the St Julian's area of Newport.

### **5.3 Car parking**

#### ***Parking standards***

5.3.1 The proposed provision is in accordance with 'Newport City Council Parking Standards 2012'. Based on the adopted standards, the required number of car parking spaces is outlined in **Table 5.1** below.

Dwelling type/no. of units	Parking standard	Maximum Parking provision	Accessibility adjustment	Actual provision
100 x three bed	1 space per bedroom (max 3)	300	Reduced by up to 1 space	200
135 x two bed	1 space per bedroom	270	Reduced by up to 1 space	135
13 x one bed	1 space per bedroom	13		13
Visitor spaces	1 space per 5 units	50		0
<b>Total</b>		<b>633</b>		<b>348</b>

**Table 5.1 Car parking provision – residential development**

5.3.2 The table above includes an adjustment (in accordance with Appendix 5 of the parking standards) to take account of the accessibility of the site by a range of transport modes, and to a range of local facilities. The sustainability assessment is presented in **Appendix C**.

5.3.3 As identified above, it is proposed to provide a total of 348 car parking spaces. It is anticipated that the majority of spaces will be located on-plot or within dedicated parking courts. However, the majority of visitor spaces will be accommodated on-street.

## 6 TRANSPORT CHARACTERISTICS

### 6.1 Introduction

6.1.1 In order to assess the impact of the development proposals on the existing transport infrastructure, it is necessary to establish the person trips likely to be generated by the proposed development.

6.1.2 This section of the report, therefore outlines the methodology used to predict traffic generation for the proposed development, and provides an estimate of future trips to/from the development site.

### 6.2 Trip generation

#### *Residential dwellings – privately owned*

6.2.1 The vehicle trip generation rates for the proposed residential dwellings have been obtained from the TRICS 2013(b) trip generation database. Sites were selected on the basis of the following selection criteria:

- Land use: residential – privately owned;
- Survey days: Monday – Friday;
- Number of units: 50 to 180 dwellings; and,
- Location of the development: UK, excluding Greater London, Northern Ireland and Republic of Ireland.

6.2.2 The TRICS outputs are set out in **Appendix D** and the peak periods are summarised in **Table 6.1** below. It should be noted that 85<sup>th</sup> percentile trip rates have been used to provide a robust assessment of the scheme.

Peak Period	Trip rate			Vehicles		
	Arrive	Depart	Total	Arrive	Depart	Total
Am peak	0.245	0.465	0.71	29	55	84
Pm peak	0.463	0.321	0.784	55	38	93

**Table 6.1** Summary of trip rates/vehicular generation – housing privately owned

6.2.3 It can be seen from the table above that the open market housing element of the proposed development is likely to generated 84 vehicles two-way in the am peak period and 93 vehicles two-way in the pm peak period.

***Residential dwellings – affordable housing***

6.2.4 The vehicle trip generation rates for the proposed affordable housing element have been obtained from the TRICS 2013(b) trip generation database. Sites were selected on the basis of the following selection criteria:

- Land use: residential – houses for rent;
- Survey days: Monday – Friday;
- Number of units: 11 to 50 dwellings; and,
- Location of the development: UK, excluding Greater London, Northern Ireland and Republic of Ireland.

6.2.5 The TRICS outputs are set out in **Appendix E** and the peak periods are summarised in **Table 6.2** below. It should be noted that average trip rates have been used due to the lack of sufficient surveys within the TRICS database.

Peak Period	Trip rate			Vehicles		
	Arrive	Depart	Total	Arrive	Depart	Total
Am peak	0.124	0.242	0.366	3	5	8
Pm peak	0.304	0.165	0.469	6	4	10

**Table 6.2** Summary of trip rates/vehicular generation – affordable housing

6.2.6 It can be seen from the table above that the proposed development is likely to generated 8 vehicles two-way in the am peak period and 10 vehicles two-way in the pm peak period.

### ***Flats privately owned***

6.2.7 The vehicle trip generation rates for open market flat element of the proposed development have been obtained from the TRICS 2013(b) trip generation database. Sites were selected on the basis of the following selection criteria:

- Land use: residential – flats – privately owned;
- Survey days: Monday – Friday;
- Number of units: 6 to 30 dwellings; and,
- Location of the development: UK, excluding Greater London, Northern Ireland and Republic of Ireland.

6.2.8 The TRICS outputs are set out in **Appendix F** and the peak periods are summarised in **Table 6.3** below. It should be noted that average trip rates have been used due to the lack of sufficient surveys within the TRICS database.

Peak Period	Trip rate			Vehicles		
	Arrive	Depart	Total	Arrive	Depart	Total
Am peak	0.098	0.318	0.416	9	28	37
Pm peak	0.275	0.167	0.442	24	15	39

**Table 6.3** Summary of trip rates/vehicular generation – open market flats

6.2.9 It can be seen from the table above that the proposed development is likely to generated 37 vehicles two-way in the am peak period and 39 vehicles two-way in the pm peak period.

### ***Flats - affordable***

6.2.10 The vehicle trip generation rates for open market affordable flats element of the proposed development have been obtained from the TRICS 2013(b) trip generation database. Sites were selected on the basis of the following selection criteria:

- Land use: residential – flats - affordable;
- Survey days: Monday – Friday;

- Number of units: 6 to 30 dwellings; and,
- Location of the development: UK, excluding Greater London, Northern Ireland and Republic of Ireland.

6.2.11 The TRICS outputs are set out in **Appendix G** and the peak periods are summarised in **Table 6.4** below. It should be noted that average trip rates have been used due to the lack of sufficient surveys within the TRICS database.

Peak Period	Trip rate			Vehicles		
	Arrive	Depart	Total	Arrive	Depart	Total
Am peak	0.151	0.136	0.287	2	2	4
Pm peak	0.136	0.096	0.232	2	1	3

**Table 6.4** Summary of trip rates/vehicular generation – affordable flats

6.2.12 It can be seen from the table above that the proposed development is likely to generated 4 vehicles two-way in the am peak period and 3 vehicles two-way in the pm peak period.

***Total trip generation***

6.2.13 Total trips generated by the private and sheltered housing are detailed in **Table 6.5** below.

Peak period	Vehicle Arrivals	Vehicle Departures	Total Vehicles
Am peak	43	90	133
Pm peak	87	58	145

**Table 6.5** Total trips generated

6.2.14 It can be seen from the table above that the proposed development is likely to generated a total of 133 vehicles two-way in the am peak period and 145 vehicles two-way in the pm peak period.

### 6.3 Assignment and distribution of development traffic

6.3.1 Development traffic has been assigned to the local highway network on the basis of existing traffic movements throughout the study area. The distribution of development traffic is summarised in **Figure 6.1**.

### 6.4 Future traffic flows

6.4.1 As set out in Chapter 1.0, the impact of the development has been assessed for the opening year 2017 and future year 2022.

6.4.2 In order to obtain the base traffic flows (i.e. with no development traffic) in 2017 and 2022, the surveyed traffic flows (2013) have been factored using NTM growth factors.

6.4.3 The factors to be applied to the base (surveyed) flows are identified in **Table 6.6** below.

Period	NTMF growth factors	
	Weekday am	Weekday pm
2013 – 2017	1.0548	1.0528
2013 – 2022	1.1492	1.1423

**Table 6.6** NTM growth factors

6.4.4 It should be noted that the above growth factors take account of committed development within the local area, as the factors are based on the most recent planning data contained in the Local Plan.

#### ***Future base traffic flows***

6.4.5 The future base traffic flows (i.e. with no development) for all assessment periods have been obtained by factoring the surveyed flows (Figure 3.3) using the factors set out in Table 4.5 above.

6.4.6 The 2017 and 2022 base flows are set out in **Figure 6.2** and **6.3** respectively.

### ***Final future traffic flows***

- 6.4.7 The final future traffic flows have been obtained by combining the residential development generated traffic flows (identified in Figure 6.1) with the 2017 and 2022 future base traffic flows (identified in Figures 6.2 and 6.3).
- 6.4.8 The final future flows in 2017 and 2022 are set out in the **Figures 6.4 and 6.5** respectively.

## **7 POTENTIAL IMPACT**

### **7.1 Introduction**

7.1.1 This section of the report identifies the impact of the development proposals on the surrounding highway network, and identifies any mitigation measures required to reduce the impact of development generated traffic, should these be required at the following junctions:

- Clarence Place/Church St/Chepstow Rd/Corporation Rd/East Usk Rd signalised junction;
- Caerleon Rd/Church Rd/Turner St/Tesco priority junction;
- Turner St/Trostrey St priority junction; and,
- Turner Street (under bridge).

### **7.2 Junction capacity**

#### ***Clarence Place/Church St/Chepstow Rd/Corporation Rd/East Usk Rd***

7.2.1 The operation of the existing junction (see **Figure 7.1**) has been assessed for each of the assessment periods, using the JCT program LINSIG v2. The results of the analysis are presented in full in **Appendix H**, and summarised in **Table 7.1** below.

Approach arm	No development				With development			
	0800-0900		1700-1800		0800-0900		1700-1800	
	Deg sat	Max q	Deg sat	Max q	Deg sat	Max q	Deg sat	Max q
2013 – Base year								
East Usk Rd (L)	7.0	< 1	10.8	< 1				
East Usk Rd (A+L)	19.0	< 1	64.7	2				
Church Rd (A+L)	51.0	7	35.1	5				
Chepstow Rd (A+L)	58.2	7	74.9	9				
Corporation Rd (L)	57.3	4	74.8	6				
Corporation Rd (A)	1.9	< 1	5.3	< 1				
Clarence PI (L+A)	59.5	9	76.2	14				
Clarence PI (R)	39.7	7	48.3	9				
2017 – Opening year								
East Usk Rd (L)	7.6	< 1	11.3	< 1	7.6	< 1	11.3	< 1
East Usk Rd (A+L)	20.1	1	36.9	2	20.1	1	36.9	2
Church Rd (A+L)	53.8	8	36.8	5	59.6	9	39.2	6
Chepstow Rd (A+L)	61.4	8	78.9	10	64.0	8.1	83.3	10
Corporation Rd (L)	60.6	4	78.9	6	60.6	4.2	78.9	6
Corporation Rd (A)	1.9	< 1	5.7	< 1	1.9	< 1	5.7	< 1
Clarence PI (L+A)	62.9	10	80.3	16	64.6	10	84.7	18
Clarence PI (R)	41.8	7	50.8	10	41.8	7.4	50.8	10
2022 – Future year								
East Usk Rd (L)	8.1	< 1	12.4	< 1	8.1	< 1	12.4	< 1
East Usk Rd (A+L)	21.8	1	39.7	2	21.8	1	39.7	2
Church Rd (A+L)	58.6	9	40.1	6	64.5	10	42.3	6
Chepstow Rd (A+L)	66.8	9	85.6	11	69.7	9	90.4	13
Corporation Rd (L)	66.0	5	85.6	8	66.0	5	85.6	8
Corporation Rd (A)	2.3	< 1	6.0	< 1	6.0	< 1	6.0	< 1
Clarence PI (L+A)	68.5	11	87.1	18	69.9	11	91.4	22
Clarence PI (R)	45.5	9	55.1	11	45.5	9	55.1	11

**Table 7.1** Clarence Place/Church St/Chepstow Rd/Corporation Rd/East Usk Rd signalised junction

7.2.2 It can be seen from the results of the analysis that the existing junction will operate at capacity with development, with a maximum degree of saturation of 91.4% and a mean max. queue of 22 pcus in the Pm peak period on the Clarence Place (left and ahead) approach to the junction.

***Caerleon Rd/Church Rd/Turner St/Tesco***

7.2.3 The operation of the existing junction (see **Figure 7.2**) has been assessed for each of the assessment periods, using the TRL program PICADY/5.0. The results of the analysis are presented in full in **Appendix I**, and summarised in **Table 7.2** below.

Approach arm	No development				With development			
	0800-0900		1700-1800		0800-0900		1700-1800	
	RFC	Max q	RFC	Max q	RFC	Max q	RFC	Max q
2013 – Base year								
Tesco Store	0.132	< 1	0.067	< 1				
Caerleon Rd (N)	0.134	< 1	0.128	< 1				
Turner St	0.441	< 1	0.430	< 1				
Caerleon Rd (S)	0.034	< 1	0.034	< 1				
2017 – Opening year								
Tesco Store	0.140	< 1	0.072	< 1	0.156	< 1	0.086	< 1
Caerleon Rd (N)	0.146	< 1	0.153	< 1	0.186	< 1	0.245	< 1
Turner St	0.474	< 1	0.620	2	0.718	2	0.796	4
Caerleon Rd (S)	0.038	< 1	0.051	< 1	0.039	< 1	0.054	< 1
2022– Future year								
Tesco Store	0.157	< 1	0.080	< 1	0.174	< 1	0.092	< 1
Caerleon Rd (N)	0.166	< 1	0.173	< 1	0.211	< 1	0.275	< 1
Turner St	0.538	1	0.707	2	0.793	3	0.895	6
Caerleon Rd (S)	0.042	< 1	0.057	< 1	0.046	< 1	0.060	< 1

**Table 7.2** Caerleon Rd/Church Rd/Turner St/Tesco priority junction

7.2.4 It can be seen from the results of the analysis that the existing junction will operate at capacity with development, with a maximum RFC of 0.895 and a mean max. queue of 6pcus in the pm peak period on the Turner Street approach to the junction.

***Turner Street/Trostrey Street***

7.2.5 The operation of the existing junction (see **Figure 7.3**) has been assessed for each of the assessment periods, using the TRL program PICADY/5.0. The results of the analysis are presented in full in **Appendix J**, and summarised in **Table 7.3** below.

Approach arm	No development				With development			
	0800-0900		1700-1800		0800-0900		1700-1800	
	RFC	Max q	RFC	Max q	RFC	Max q	RFC	Max q
2013 – Base year								
	0.044	< 1	0.020	< 1				
	0.013	< 1	0.007	< 1				
2017 – Opening year								
	0.044	< 1	0.022	< 1	0.046	< 1	0.022	< 1
	0.013	< 1	0.007	< 1	0.014	< 1	0.007	< 1
2022 – Future year								
	0.050	< 1	0.022	< 1	0.053	< 1	0.022	< 1
	0.015	< 1	0.008	< 1	0.016	< 1	0.009	< 1

**Table 7.3 Turner Street/Trostrey Street priority junction**

7.2.6 It can be seen from the results of the analysis that the existing junction has sufficient capacity to accommodate the proposed development, with a maximum RFC of 0.053 and a mean max. queue of less than one pcu in the am peak period on the Trostrey Street approach to the junction.

***Turner Street (one-way priority working under railway bridge)***

7.2.7 **Table 7.4** below compares the base traffic volumes (vehicles per minute) with base + development traffic volumes (vehicles per minute) through the one-way working.

Approach arm	Base traffic flows (vehs/min)		Base + development (vehs/min)	
	am	pm	am	pm
2013 – Base year				
Eastbound	1.58	1.53		
Westbound	0.62	1.52		
2017 – Opening year				
Eastbound	1.67	1.62	3.2	2.6
Westbound	0.65	1.6	1.35	3.1
2022 – Future year				
Eastbound	1.82	1.75	3.4	2.72
Westbound	0.7	1.73	1.42	3.2

**Table 7.4 Increase in traffic flows along Turner Street**

7.2.8 It can be seen from the table that even with development generated traffic, the maximum 'give way' flow is 3.4 vehicles per minute (or 1 vehicle every 18 seconds), which is giving-way to a maximum flow of 2.72 vehicles per minute (or 1 vehicle every 22 seconds).

7.2.9 Based on the flows outlined in the table above, it is considered that the existing one-way shuttle working has sufficient capacity to accommodate the volume of traffic generated by the proposed development.

### **7.3 Summary**

7.3.1 Capacity analysis indicates that the existing highway network has sufficient capacity to accommodate the proposed development, with minimal increases in existing queues and delays for road users.

7.3.2 It is also considered that the impact of the development can be further reduced through:

- the implementation of a series of sustainable transport measures; and,
- the adoption of an effective Travel Plan – a management tool designed to minimise the adverse impacts of travel on the local environment.

7.3.3 In summary, it is considered that based on the results of the analysis, no mitigation measures are required as a result of the proposed allocation.

## **8 CONCLUSIONS**

### **8.1 Background**

8.1.1 Asbri Transport has been appointed by Greenhill Construction, to produce a Transport Assessment report in support of a planning application to develop land at Herbert Road, Newport for residential use. The site is allocated in Newport City Council's Unitary Development Plan and the Draft Local Development Plan.

8.1.2 The 5.1 hectare (12.7 acre) site is situated within the St Julian's area of Newport, and is located approximately 1.6km (1 mile) from Newport city centre. As part of the re-development of the site, it is proposed to construct up to 250 residential dwellings, including a mix of 15% affordable and 85% open market homes. Parking will be provided in accordance with 'Newport City Council Parking Standards 2012', with a total of 348 car parking spaces.

8.1.3 It is considered that the proposed development complies with relevant national and local policies, as the site's location on the outskirts of the town provides easy access to local facilities, including the school, and is within walking distance of the wider range of facilities in Newport. The layout of the site has been designed to ensure ease of pedestrian and cyclist access and will include links to the surrounding pedestrian and cycling networks. Access to the existing public transport network is within close proximity to the site.

8.1.4 The proposed vehicle and pedestrian access on to Collier Street/Courtney Street will be a simple priority junction, with pedestrian facilities. In addition, there is a pedestrian link between the site and Charnwood Road (to the east of the railway line), which travels under the railway. This provides a connection between the site and the St Julian's area of Newport.

8.1.5 It is predicted that the development will generated 133 vehicle movements (two-way) in the morning peak hour and 145 vehicle movements (two-way) in the evening peak hour.

8.1.6 Capacity assessments have been carried out at the three junctions and through the priority narrowing along Turner Street, as agreed with Newport City Council. The results of the assessments indicate:

- Clarence Place/Church St/Chepstow Rd/Corporation Rd/East Usk Rd signalised junction has sufficient capacity to accommodate the predicted development traffic in 2017 (year of opening) and 2022 (year of opening + 5 years);
- Caerleon Rd/Church Rd/Turner St/Tesco priority junction has sufficient capacity to accommodate the predicted development traffic in 2017 (year of opening) and 2022 (year of opening + 5 years);
- Turner St/Trostrey St priority junction has sufficient capacity to accommodate the predicted development traffic in 2017 (year of opening) and 2022 (year of opening + 5 years); and,
- Priority narrowing along Turner Street has sufficient capacity to accommodate the predicted development traffic in 2017 (year of opening) and 2022 (year of opening + 5 years).

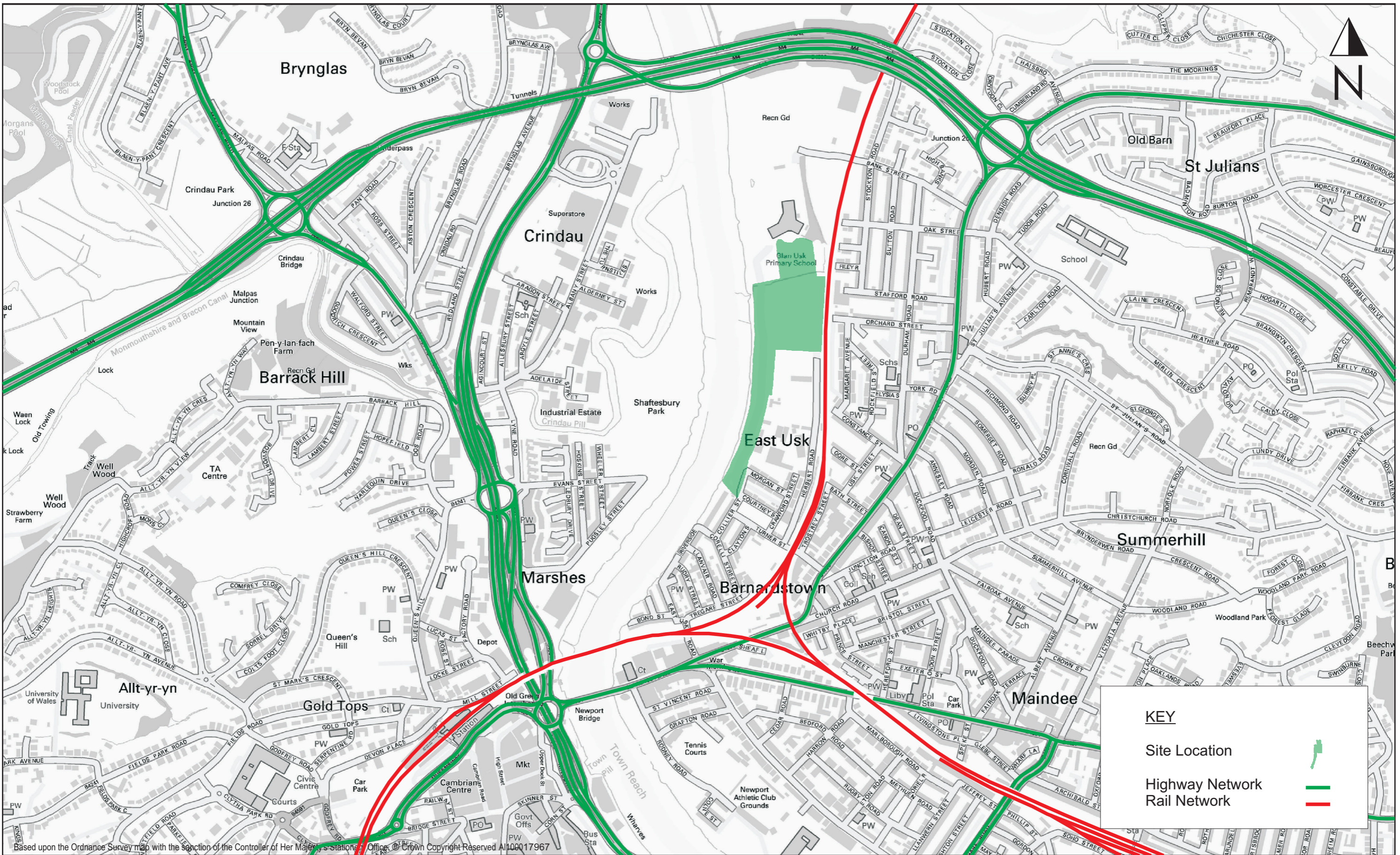
## **8.2 Conclusion**

8.2.1 In summary, it is considered that the existing highway network has sufficient capacity to accommodate the proposed development, with minimal increases in existing queues and delays for road users.


8.2.2 It is considered that the impact of the development can be further reduced through the provision of links to the existing pedestrian and cycle network and to public transport facilities. The adoption of an effective Travel Plan will also increase the attractiveness of travelling by more sustainable modes and minimise any adverse impact of travel on the local environment.

# Figures

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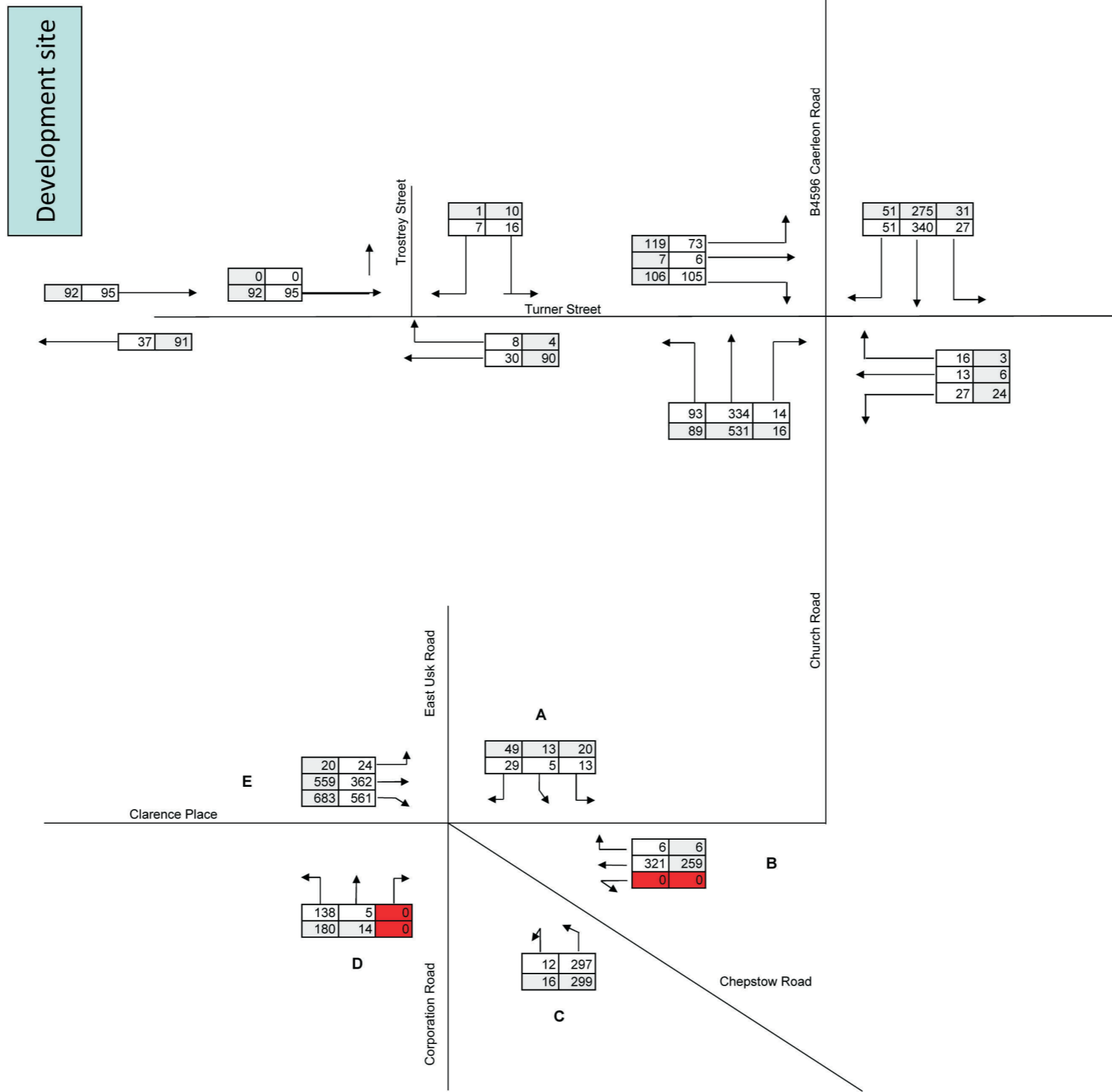
Based upon the Ordnance Survey map with the sanction of the Controller of Her Majesty's Stationery Office. © Crown Copyright Reserved All 10017967

Drawing Title  <b>Site location/Local Highway Network</b>	Client  <b>Greenhill Construction</b>	 1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff T 029 2073 2652 F 029 2073 2670	Scale: NTS Designed by: KR Drawn by: KR Ckd/Appd: AR 1st Issued: Jan 2013 Job No: T12.172	File Extension:  Drg No: <b>Figure 3.1</b>
	Job Title  <b>Herbert Road, Newport</b>			




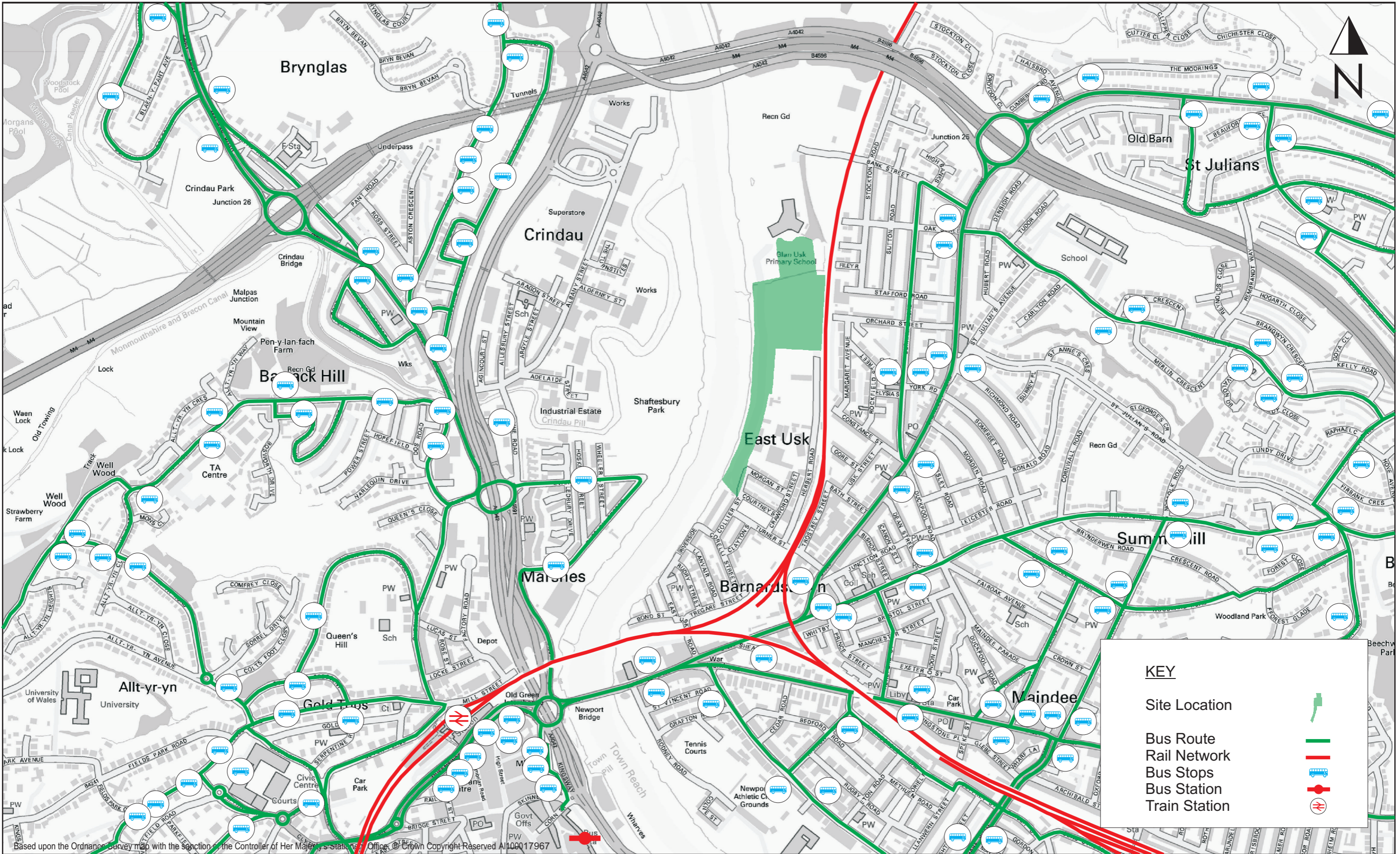
All flows in pcus

AM PM



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Drawing Title	Client		Scale:	NTS	File Extension:
	Greenhill Construction		Designed by:	KR	
Base traffic flows	Job Title	1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff	Drawn by:	KR	Drg No: <b>Figure 3.2</b>
	Herbert Road, Newport	T 029 2073 2652 F 029 2073 2670	Ckd/Appd:	AR	
			1st Issued:	Nov 2013	
			Job No:	T12.172	

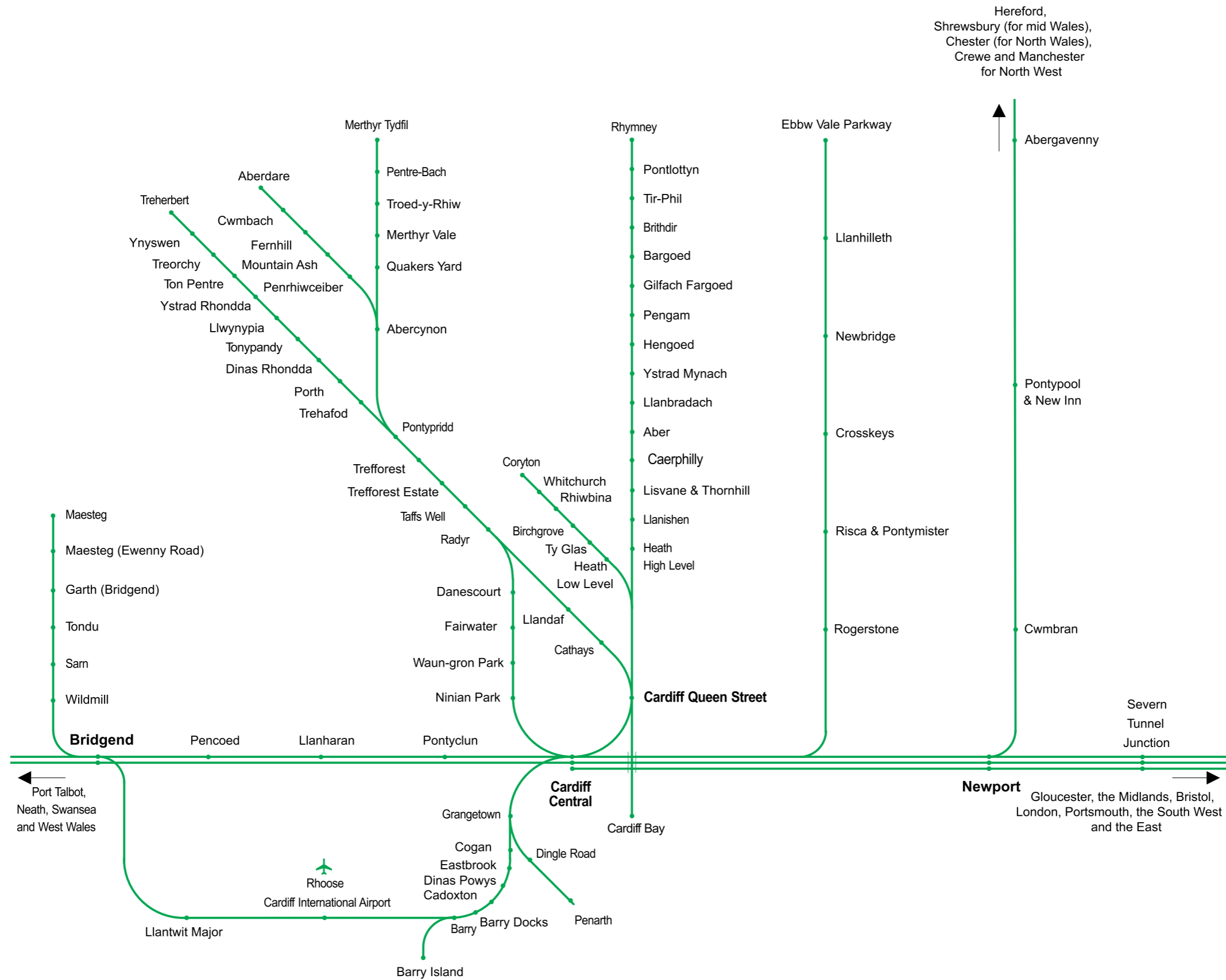


**KEY**


- Site Location
- Bus Route
- Rail Network
- Bus Stops
- Bus Station
- Train Station

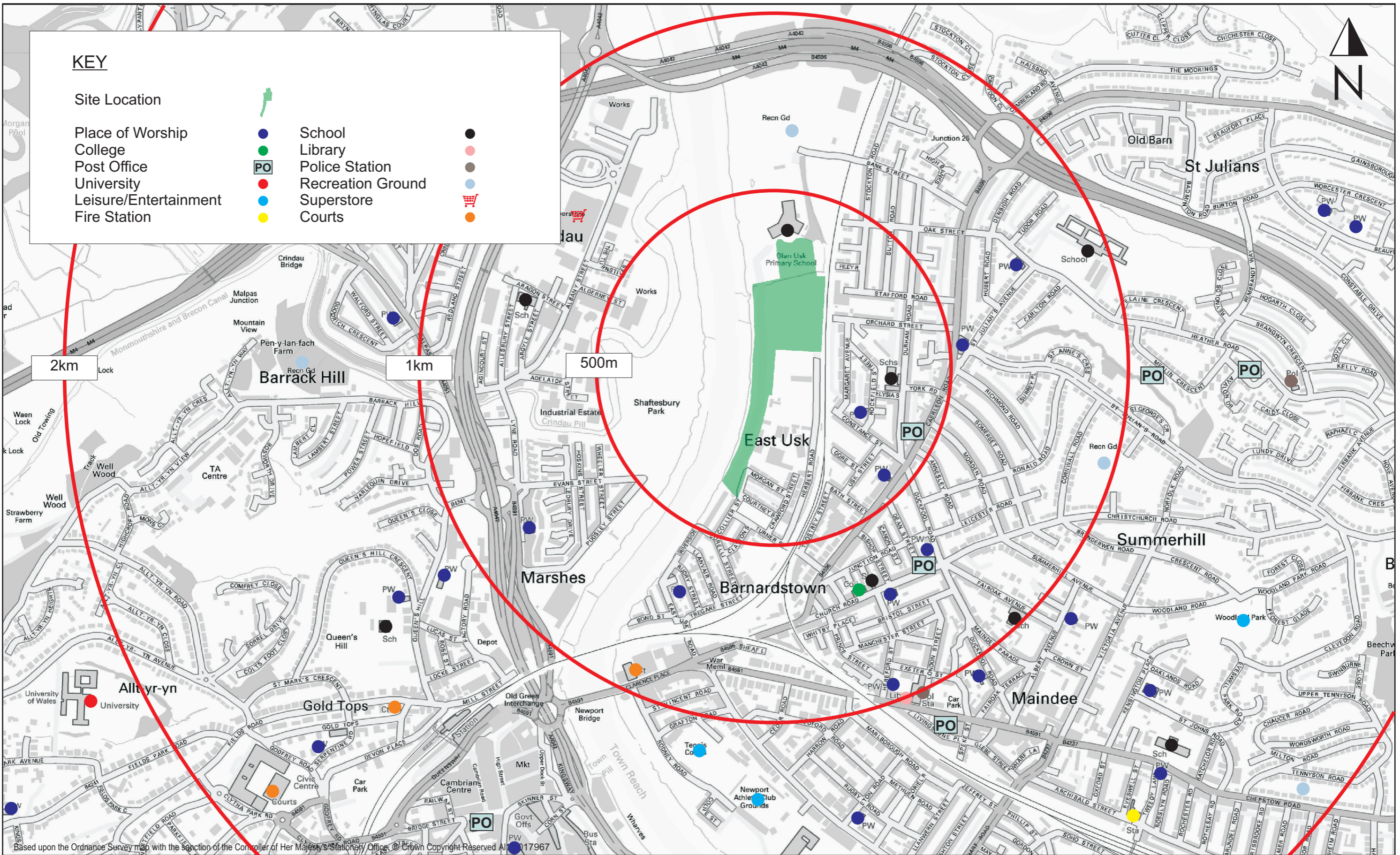
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Drawing Title	Client		Scale:	NTS	File Extension:
	Public Transport		Greenhill Construction	Designed by:	
	Job Title	1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff	Drawn by:	KR	Drg No:
		Herbert Road, Newport	Ckd/Appd:	AR	
			1st Issued:	Jan 2013	
			Job No:	T12.172	



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Drawing Title	Client	 1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff CF23 8RS T 029 2073 2652 F 029 2073 2670	Scale: NTS	File Extension:
	Job Title		Designed by: KR	
Rail network	Greenhill Construction	Dyffryn Road, Hawthorn	Drawn by: KR	Drg No: Figure 3.4
			Ckd/Appd: AR	
			1st Issued: Nov 2013	
			Job No: T13.179	



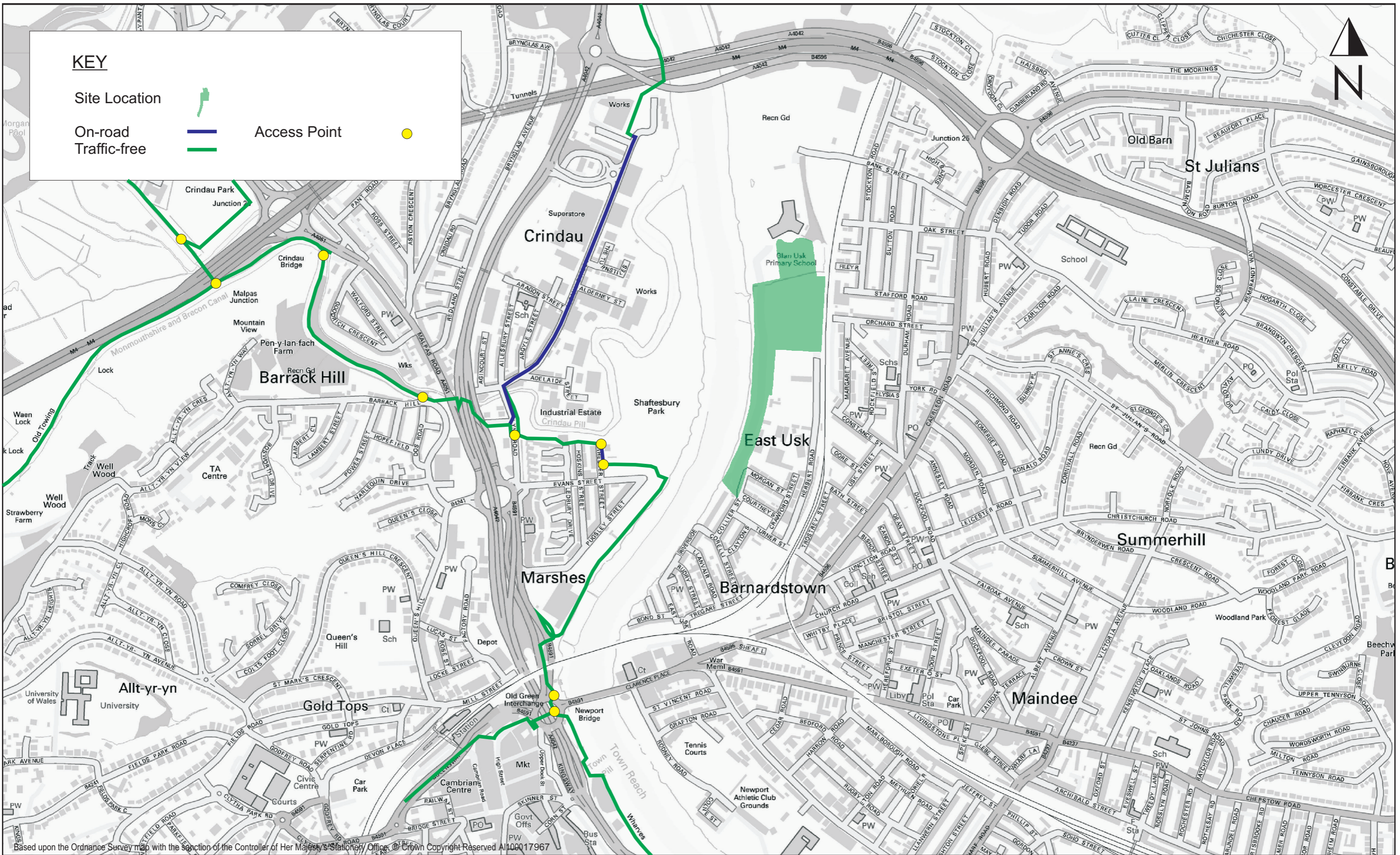
**KEY**

Site Location		School		Library		Police Station		Recreation Ground		Superstore		Courts	
Place of Worship		College		Post Office		University		Leisure/Entertainment		Fire Station			


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Drawing Title	Client		Scale:	NTS	File Extension:
	Local facilities		Greenhill Construction	Designed by:	
	Job Title	Herbert Road, Newport	Drawn by:	KR	
			Ckd/Appd:	AR	
			1st Issued:	Jan 2013	Drg No:
			Job No:	T12.172	Figure 3.5

1st Floor, Westview House  
Oak Tree Court  
Mulberry Drive  
Cardiff Gate Business Park  
Cardiff  
T 029 2073 2652  
F 029 2073 2670



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Drawing Title  <b>Cycle Infrastructure</b>	Client  <b>Greenhill Construction</b>	 1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff T 029 2073 2652 F 029 2073 2670	Scale: NTS	File Extension:
	Job Title  <b>Herbert Road, Newport</b>		Designed by: KR	Drg No:  <b>Figure 3.6</b>
		Drawn by: KR	1st Issued: Jan 2013	
			Job No: T12.172	



Drawing Title  <b>Personal injury accident study area</b>	Client  <b>Greenhill Construction</b>	 1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff CF23 8RS T 029 2073 2652 F 029 2073 2670	Scale: NTS						
	Job Title  <b>Herbert Road, Newport</b>		Designed by: KR						
			Drawn by: KR	Rev.	Date.	Amendment.	Des.	Drn.	
			Ckd/Appd: AR	Drg No:		<b>Figure 4.1</b>	Rev		
			1st Issued: Nov 2013						
			Job No: T12.172						

Collision data location and severity		
<span style="color: green;">●</span> Slight	<span style="color: blue;">●</span> Serious	<span style="color: red;">●</span> Fatal




Drawing Title  Personal injury accident locations	Client  Greenhill Construction	 1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff CF23 8RS T 029 2073 2652 F 029 2073 2670	Scale: NTS						
	Job Title  Herbert Road, Newport		Designed by: KR						
			Drawn by: KR						
			Ckd/Appd: AR	Rev.	Date.	Amendment.			Des. Drn.
			1st Issued: Nov 2013	Drg No:		Figure 4.2			Rev
			Job No: T12.172						



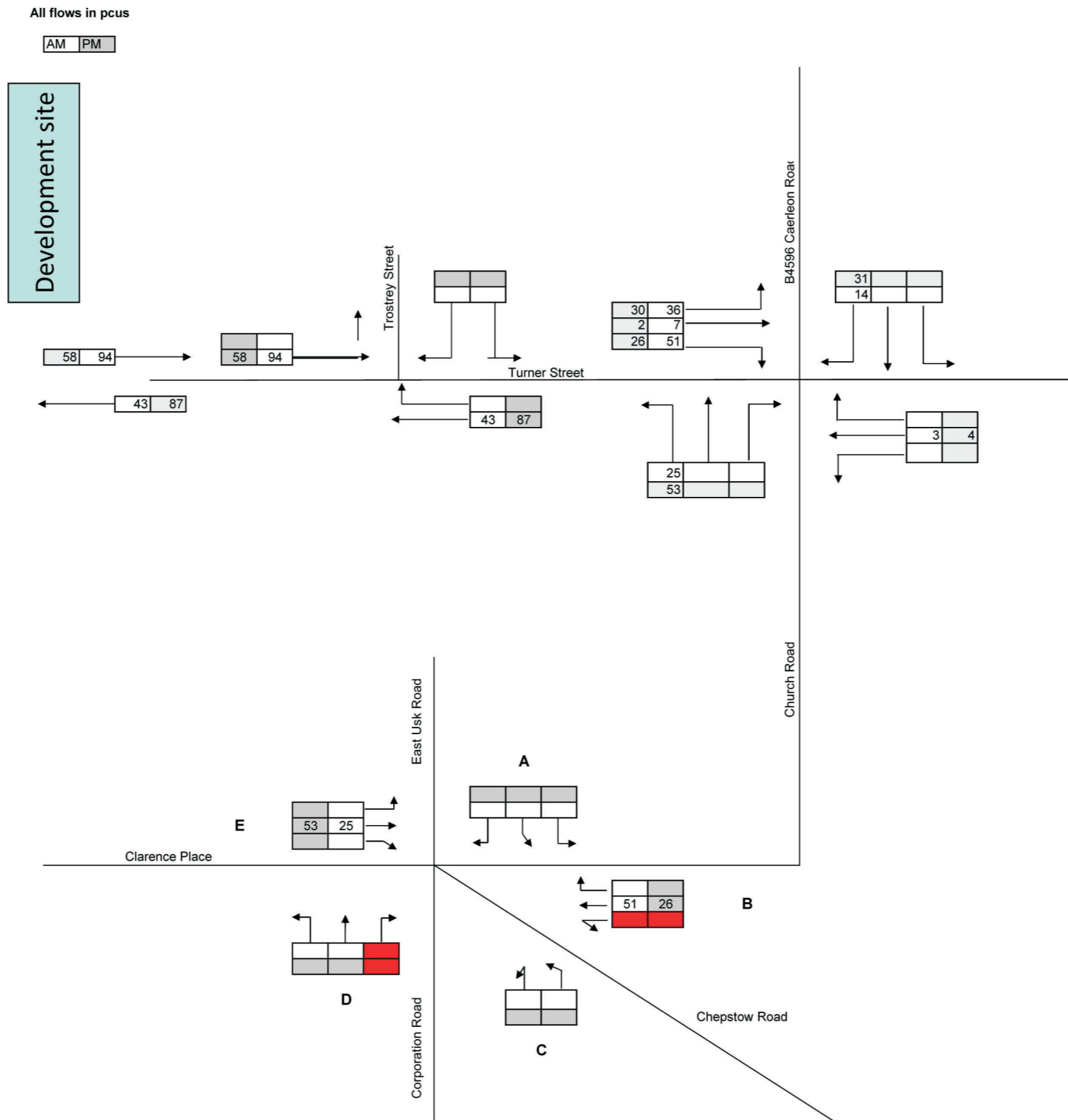
Drawing Title  Layout of proposed development	Client  Greenhill Construction	 1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff CF23 8RS T 029 2073 2652 F 029 2073 2670	Scale: NTS						
	Job Title  Herbert Road, Newport		Designed by: KR	Drawn by: KR	Ckd/Appd: AR	Rev.	Date.	Amendment.	Des.
			1st Issued: Nov 2013	Drg No:			Figure 5.1		
			Job No: T12.172				Rev		




Drawing Title  Vehicular access	Client  Greenhill Construction	 1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff CF23 8RS T 029 2073 2652 F 029 2073 2670	Scale: 1:500 @ A3						
	Job Title  Herbert Road, Newport		Designed by: KR	Drawn by: KR	Ckd/Appd: AR	Rev.	Date.	Amendment.	Des.
			1st Issued: Nov 2013	Drg No:		Figure 5.2			Rev
			Job No: T12.172						

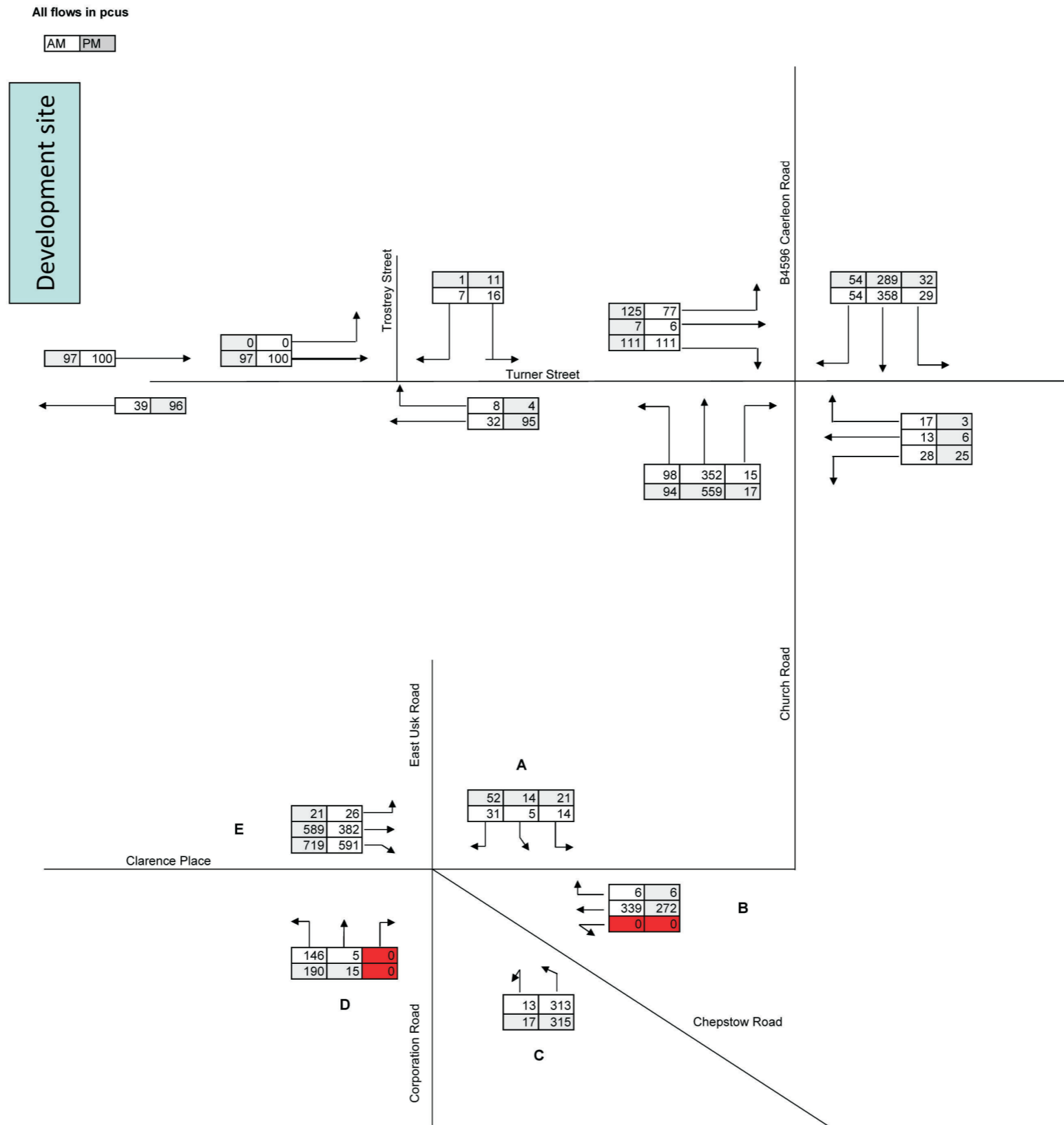


Drawing Title  Visibility splays	Client  Greenhill Construction	 1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff CF23 8RS T 029 2073 2652 F 029 2073 2670	Scale: 1:500 @ A3						
	Job Title  Herbert Road, Newport		Designed by: KR	Drawn by: KR	Ckd/Appd: AR	Rev.	Date.	Amendment.	Des.
			1st Issued: Nov 2013	Drg No:		Figure 5.3			Rev
			Job No: T12.172						




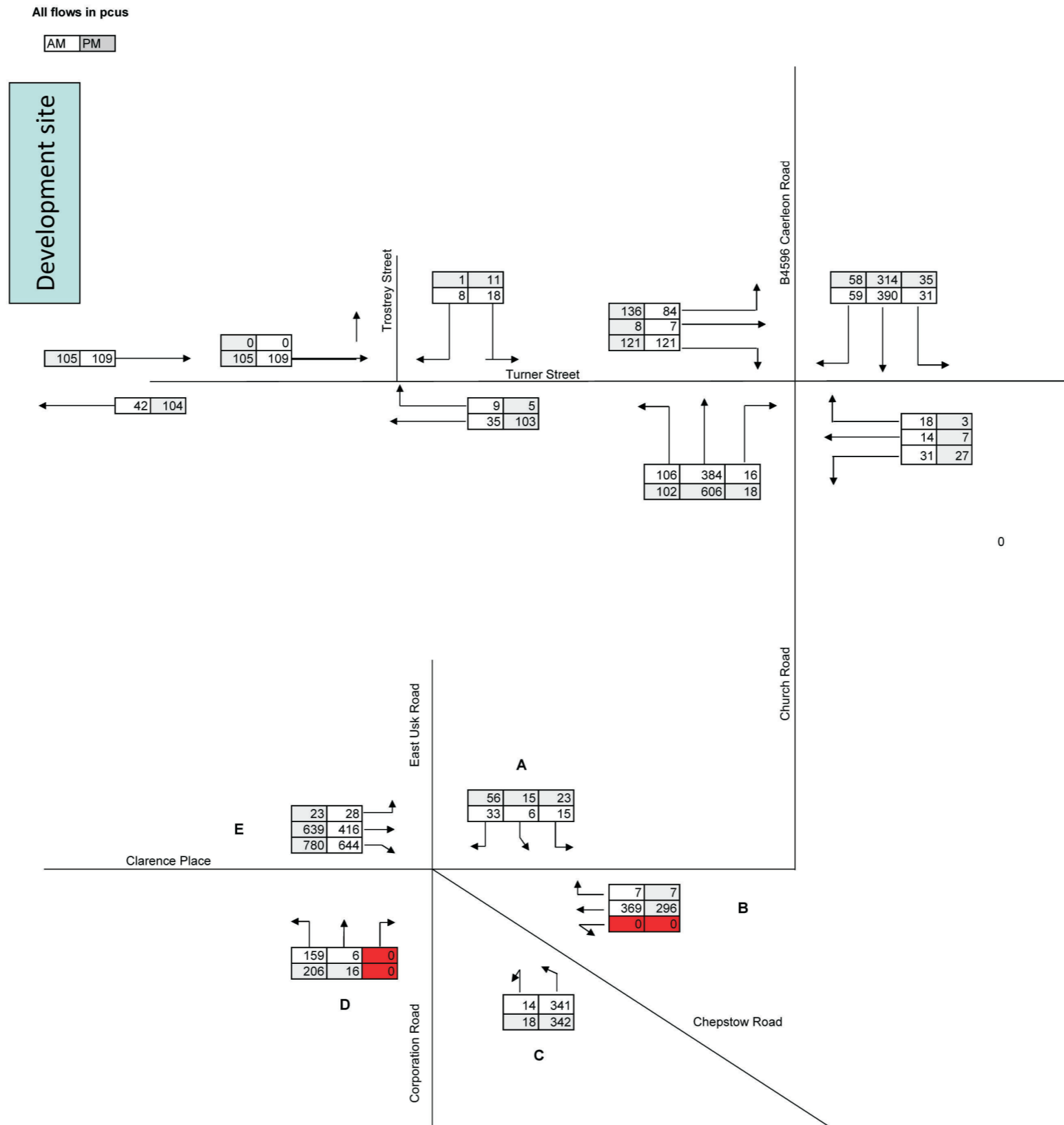
Based upon the Ordnance Survey map with the sanction of the Controller of Her Majesty's Stationery Office. © Crown Copyright Reserved AI100017967

Drawing Title  Distribution of development flows	Client  Greenhill Construction	 1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff T 029 2073 2652 F 029 2073 2670	Scale: NTS	File Extension:
	Job Title  Herbert Road, Newport		Designed by: KR	
			Drawn by: KR	
			Ckd/Appd: AR	
			1st Issued: Nov 2013	Drg No:  Figure 6.1
			Job No: T12.172	




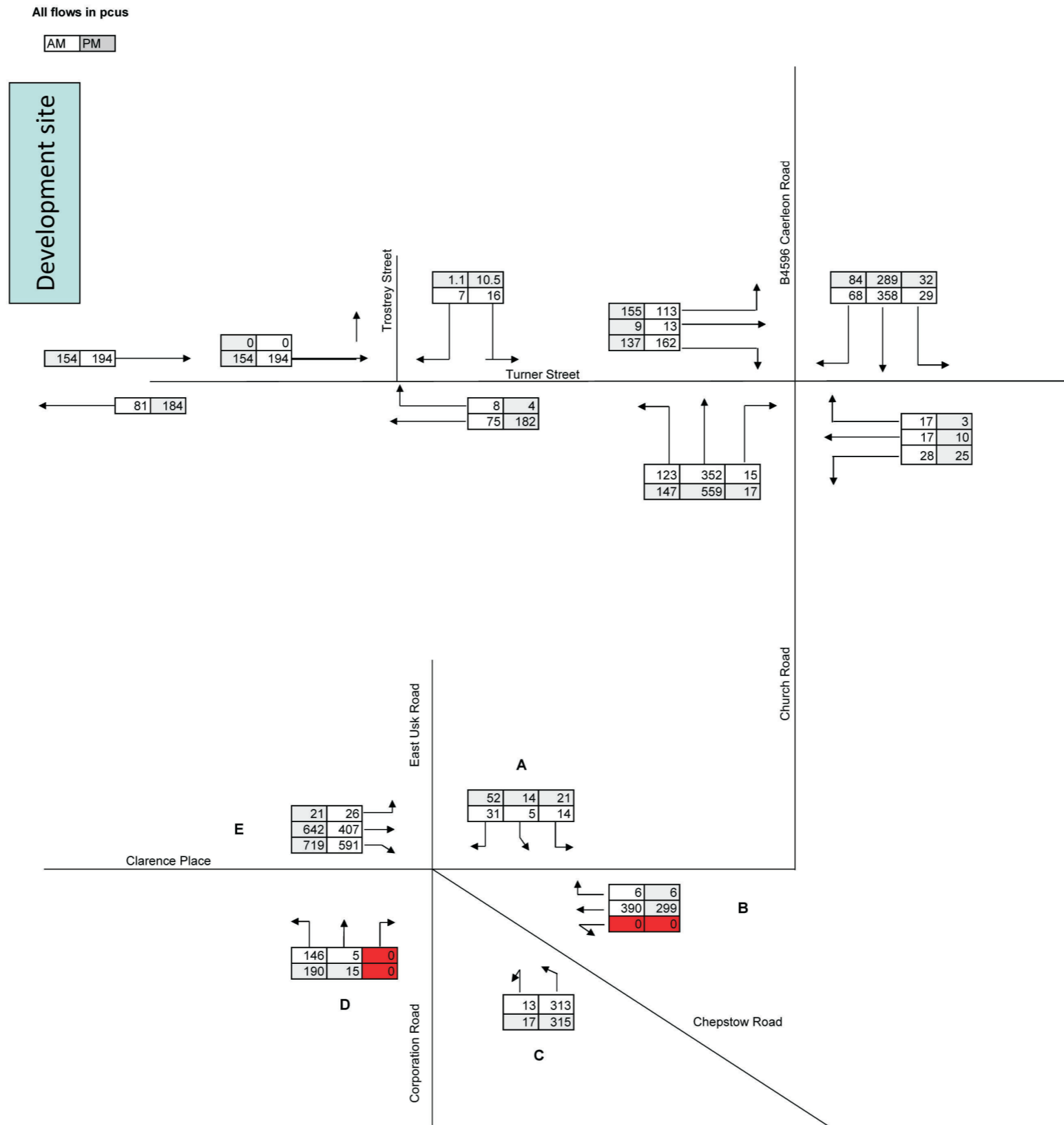
Based upon the Ordnance Survey map with the sanction of the Controller of Her Majesty's Stationery Office. © Crown Copyright Reserved AI100017967

Drawing Title	Client		Scale:	NTS	File Extension:
	2017 base traffic flows		Greenhill Construction	Designed by:	
	Job Title	1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff	Drawn by:	KR	
		T 029 2073 2652 F 029 2073 2670	Ckd/Appd:	AR	
			1st Issued:	Nov 2013	Drg No:
			Job No:	T12.172	Figure 6.2




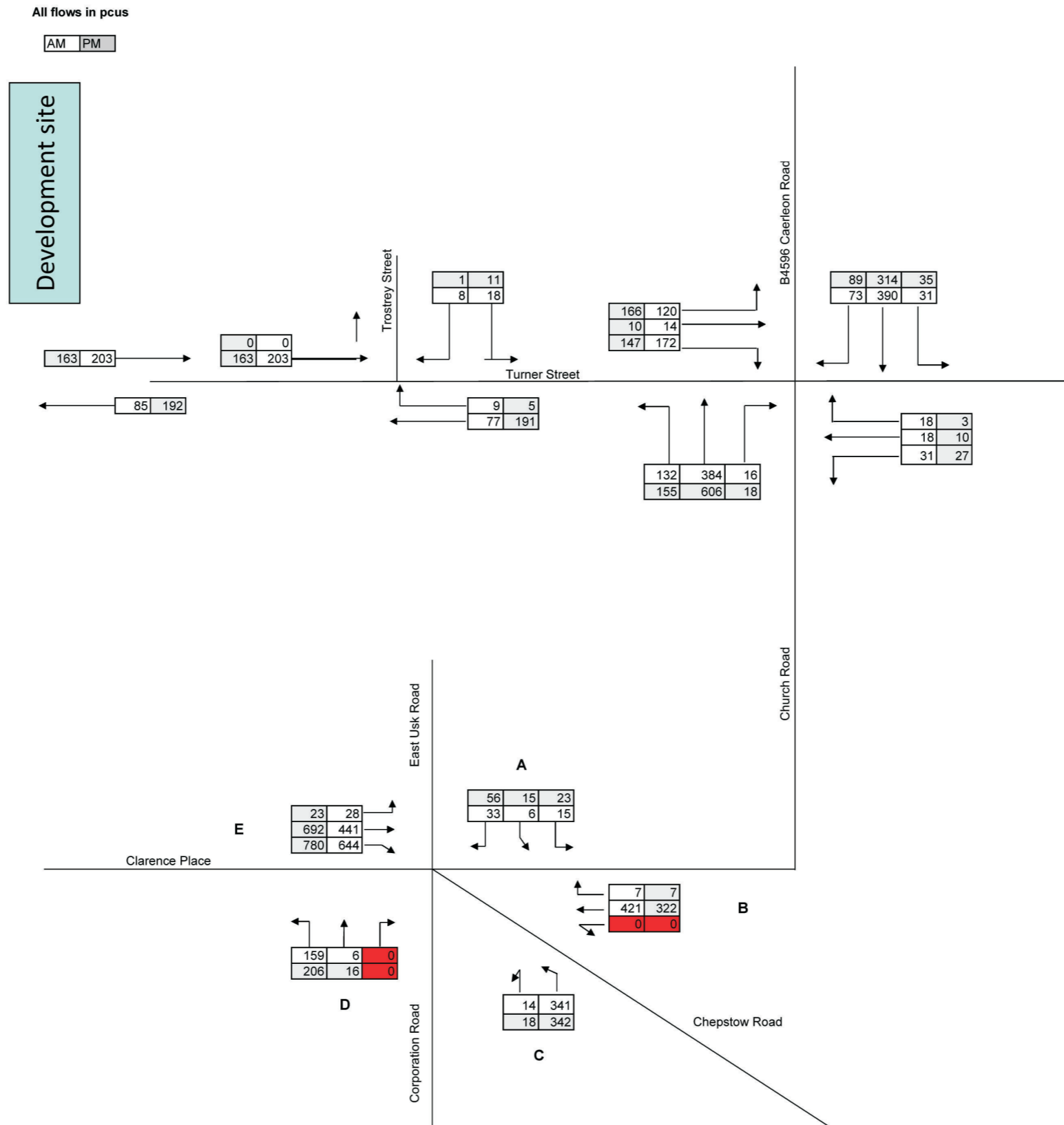
Based upon the Ordnance Survey map with the sanction of the Controller of Her Majesty's Stationery Office. © Crown Copyright Reserved AI100017967

Drawing Title	Client		Scale:	NTS	File Extension:
	2022 base traffic flows		Greenhill Construction	Designed by:	
	Job Title	1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff	Drawn by:	KR	
		T 029 2073 2652 F 029 2073 2670	Ckd/Appd:	AR	
			1st Issued:	Nov 2013	Drg No:
			Job No:	T12.172	Figure 6.3




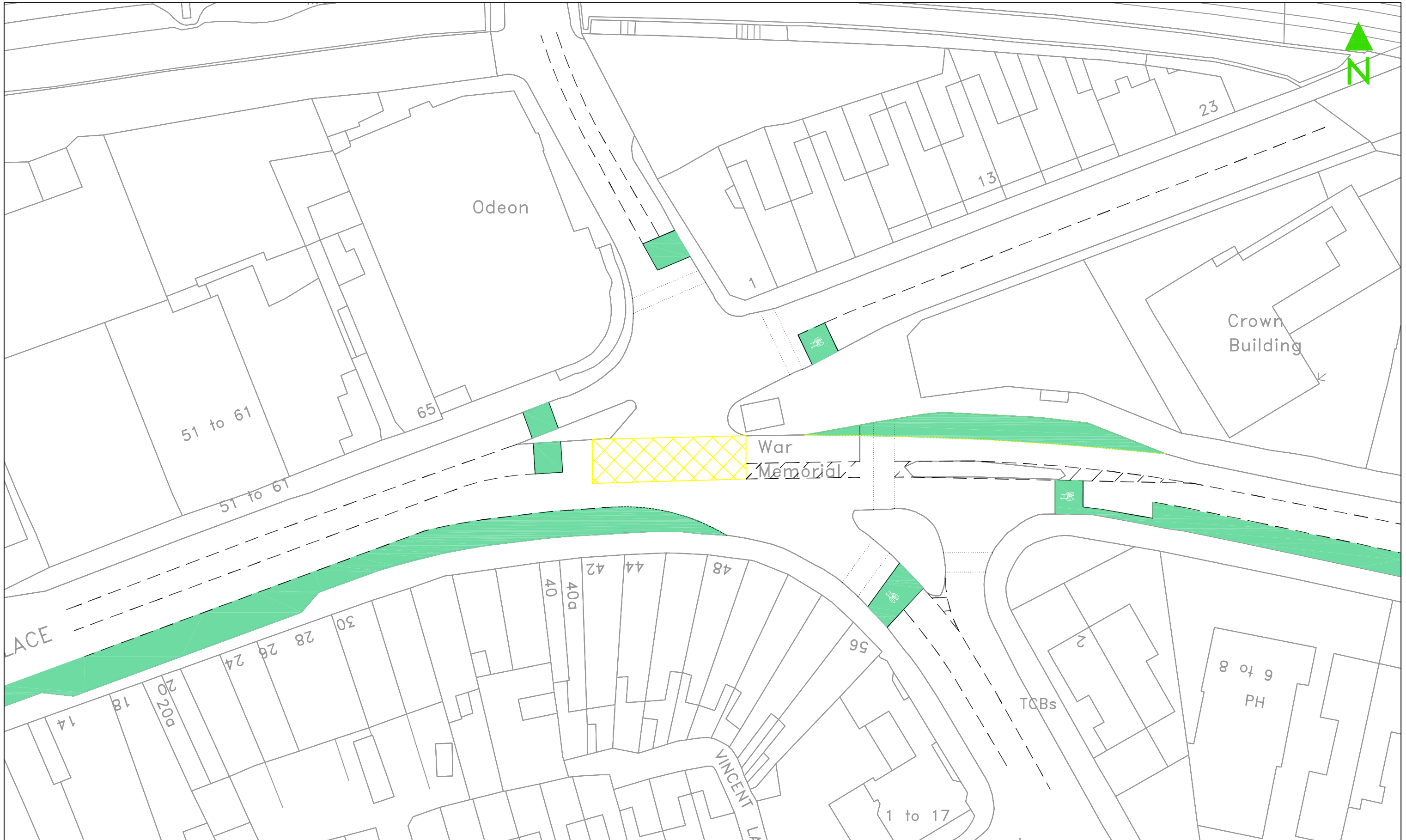
Based upon the Ordnance Survey map with the sanction of the Controller of Her Majesty's Stationery Office. © Crown Copyright Reserved AI100017967

Drawing Title	Client		Scale:	NTS	File Extension:
	2017 Final future flowss		Greenhill Construction	Designed by:	
	Job Title	1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff	Drawn by:	KR	
		T 029 2073 2652 F 029 2073 2670	Ckd/Appd:	AR	
			1st Issued:	Nov 2013	Drg No:
			Job No:	T12.172	Figure 6.4

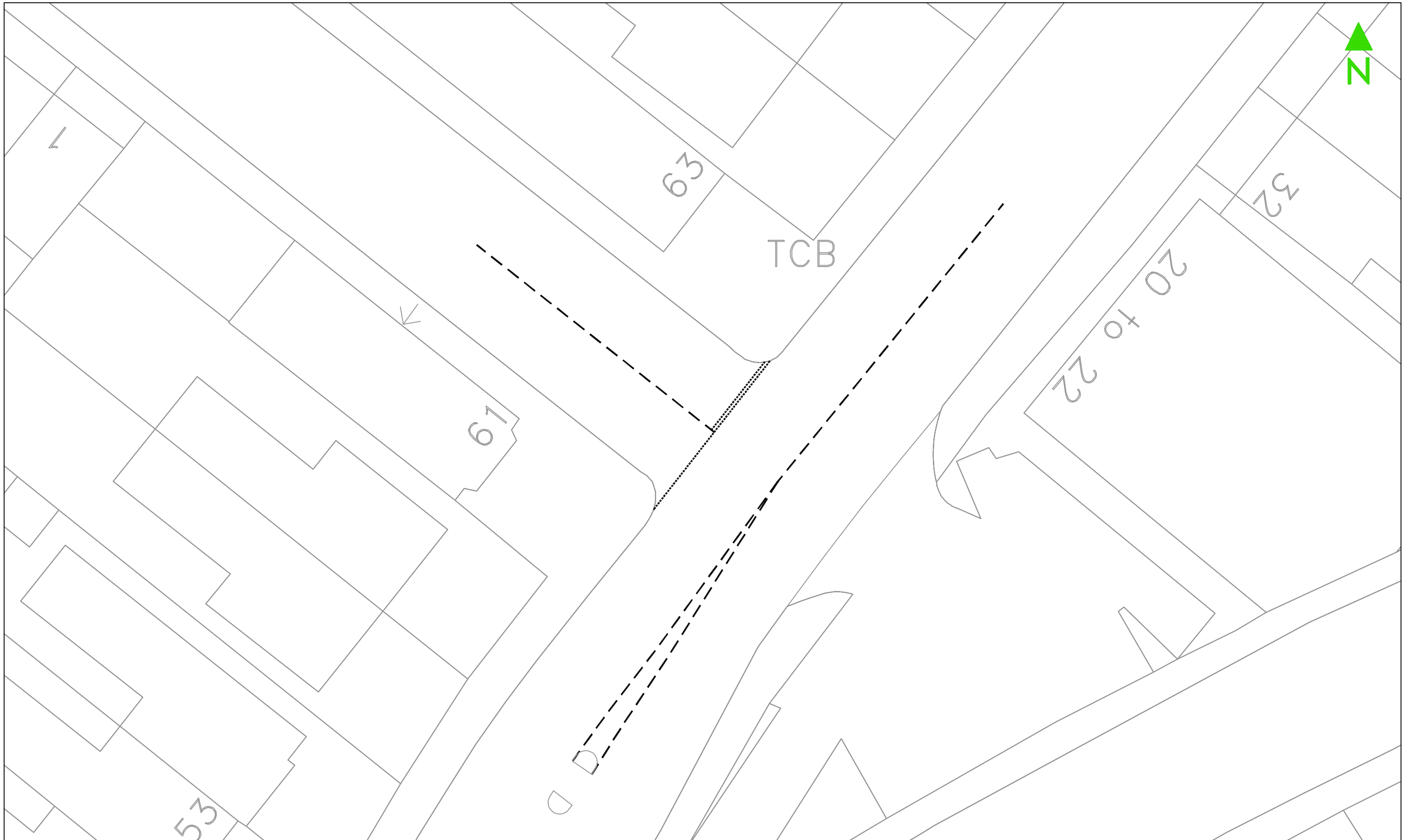


Based upon the Ordnance Survey map with the sanction of the Controller of Her Majesty's Stationery Office. © Crown Copyright Reserved AI100017967

Drawing Title	Client		Scale:	NTS	File Extension:
	2022 final future flows		Greenhill Construction	Designed by:	
	Job Title	1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff	Drawn by:	KR	
		T 029 2073 2652 F 029 2073 2670	Ckd/Appd:	AR	
			1st Issued:	Nov 2013	Drg No:
			Job No:	T12.172	Figure 6.5



Drawing Title  <b>Clarence Place/Church Street/Chepstow Road Corporation Road signalised junction</b>	Client  <b>Greenhill Construction</b>	 1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff CF23 8RS T 029 2073 2652 F 029 2073 2670	Scale: 1:500 @ A3						
	Job Title  <b>Herbert Road, Newport</b>		Designed by: KR Drawn by: KR Ckd/Appd: AR 1st Issued: Nov 2013 Job No: T12.172	Rev. Date. Amendment. Drg No: <b>Figure 7.1</b>	Des. Drn. Rev				



Drawing Title  <b>Caerleon Road/Church Road/Turner Street priority junction</b>	Client <b>Greenhill Construction</b>	 1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff CF23 8RS T 029 2073 2652 F 029 2073 2670	Scale: 1:200 @ A3							
	Job Title <b>Herbert Road, Newport</b>		Designed by: KR	Drawn by: KR						
			Ckd/Appd: AR	Rev.	Date.	Amendment.			Des.	Drn.
			1st Issued: Nov 2013	Drg No:			Rev			
			Job No: T12.172	Figure 7.2						



Drawing Title  <b>Turner Street/Trostre Street priority junction priority junction</b>	Client  <b>Greenhill Construction</b>	 1st Floor, Westview House Oak Tree Court Mulberry Drive Cardiff Gate Business Park Cardiff CF23 8RS T 029 2073 2652 F 029 2073 2670	Scale: 1:200 @ A3						
	Job Title  <b>Herbert Road, Newport</b>		Designed by: KR	Drawn by: KR	Ckd/Appd: AR	Rev.	Date.	Amendment.	Des.
			1st Issued: Nov 2013	Drg No: <b>Figure 7.3</b>				Rev	
			Job No: T12.172						

# Appendices

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# Appendix A

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TIME	1								TOT	2								TOT
	CAR	LGV	OGV1	OGV2	PSV	PCL	MCL	CAR		LGV	OGV1	OGV2	PSV	PCL	MCL			
0730-0745	8	4	0	0	0	0	0	12	2	0	0	0	0	0	0	2		
0745-0800	7	5	2	0	0	0	0	14	4	1	0	0	0	0	0	5		
0800-0815	6	1	1	0	0	0	0	8	0	0	0	0	0	0	0	0		
0815-0830	14	8	2	0	0	0	0	24	0	0	0	0	0	0	0	0		
0830-0845	7	10	0	0	0	0	0	17	0	0	0	0	0	0	0	0		
0845-0900	19	5	0	0	0	0	0	24	0	0	0	0	0	0	0	0		
0900-0915	14	8	3	0	0	0	0	25	0	0	0	0	0	0	0	0		
0915-0930	19	4	1	0	0	0	0	24	0	0	0	0	0	0	0	0		
<b>PTOT</b>	<b>94</b>	<b>45</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>148</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>		

TIME	3								TOT	4								TOT
	CAR	LGV	OGV1	OGV2	PSV	PCL	MCL	CAR		LGV	OGV1	OGV2	PSV	PCL	MCL			
0730-0745	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1		
0745-0800	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1		
0800-0815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
0815-0830	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	1		
0830-0845	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1		
0845-0900	0	0	1	0	0	0	0	1	0	1	1	1	0	0	0	13		
0900-0915	2	0	0	0	0	0	0	2	0	1	0	0	0	0	0	1		
0915-0930	0	0	1	0	0	0	0	1	0	2	2	0	0	0	0	4		
<b>PTOT</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>		

TIME	5								TOT	6								TOT
	CAR	LGV	OGV1	OGV2	PSV	PCL	MCL	CAR		LGV	OGV1	OGV2	PSV	PCL	MCL			
0730-0745	1	0	0	0	0	0	0	4	2	1	0	0	0	0	0	3		
0745-0800	2	1	0	0	0	0	0	2	1	0	0	0	0	0	0	1		
0800-0815	0	0	0	0	0	0	0	5	3	2	0	0	0	0	0	5		
0815-0830	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0		
0830-0845	0	0	0	0	0	0	0	8	0	2	0	0	0	0	0	2		
0845-0900	0	3	0	0	0	0	0	6	8	3	1	0	0	0	0	12		
0900-0915	1	0	0	0	0	0	0	5	3	1	0	0	0	0	0	4		
0915-0930	2	2	0	0	0	0	0	3	3	1	0	0	0	0	0	4		
<b>PTOT</b>	<b>24</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>20</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>		

TIME	1								TOT	2								TOT
	CAR	LGV	OGV1	OGV2	PSV	PCL	MCL	CAR		LGV	OGV1	OGV2	PSV	PCL	MCL			
1630-1645	34	5	0	0	0	0	0	39	0	0	0	0	0	0	0	0		
1645-1700	19	6	1	0	0	0	1	27	3	0	0	0	0	0	0	3		
1700-1715	7	1	0	0	0	0	1	9	0	0	0	0	0	0	0	0		
1715-1730	37	6	0	0	0	0	0	24	0	0	0	0	0	0	0	0		
1730-1745	23	5	0	0	0	0	1	29	0	0	0	0	0	0	0	0		
1745-1800	12	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0		
1800-1815	15	1	0	0	0	0	0	16	0	0	0	0	0	0	0	0		
1815-1830	9	1	2	0	0	0	0	12	3	0	0	0	0	0	0	3		
<b>P/TOT</b>	<b>156</b>	<b>25</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>355</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>		

TIME	3								TOT	4								TOT
	CAR	LGV	OGV1	OGV2	PSV	PCL	MCL	CAR		LGV	OGV1	OGV2	PSV	PCL	MCL			
1630-1645	2	0	0	0	0	0	0	2	0	1	0	0	0	0	0	1		
1645-1700	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1		
1700-1715	1	0	0	0	0	0	0	1	2	1	0	0	0	0	0	3		
1715-1730	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3		
1730-1745	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	4		
1745-1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1800-1815	2	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2		
1815-1830	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
<b>P/TOT</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>7</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>		

TIME	5								TOT	6								TOT
	CAR	LGV	OGV1	OGV2	PSV	PCL	MCL	CAR		LGV	OGV1	OGV2	PSV	PCL	MCL			
1630-1645	0	1	0	0	0	0	0	1	11	6	0	0	0	0	0	17		
1645-1700	1	1	0	0	0	0	0	2	15	4	0	0	0	0	0	19		
1700-1715	4	0	0	0	0	0	0	4	5	0	0	0	0	0	0	5		
1715-1730	0	0	0	0	0	0	0	0	10	3	0	0	0	0	0	13		
1730-1745	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9		
1745-1800	0	0	0	0	0	0	0	0	20	3	1	0	0	0	0	24		
1800-1815	0	0	0	0	0	0	0	0	32	5	0	0	0	0	0	37		
1815-1830	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	7		
<b>P/TOT</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>107</b>	<b>23</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>262</b>		

Site Number: 5020 - Herbert Road, Newport  
 Census Number: 1000  
 Approach Dir From: SOUTH  
 Start Date: 05/03/13  
 Count Start: Tue, 07:30

County Number: 1000  
 Count Type: TURNING  
 Weather: Not Entered  
 Period: 07:30 to 09:30  
 Last Entry: 09:29

Vehicles

TIME	Tesco (12) ← LEFT →						From north Caerleon Rd south (8) ← AHEAD →						Turner St (4) → RIGHT →					
	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS
	07:30	0	2	0	0	0	0	1	32	4	2	0	2	0	3	3	1	0
07:45	0	4	0	0	0	0	1	22	7	0	1	2	0	7	8	0	0	0
08:00	0	2	1	0	0	0	1	48	3	1	0	2	0	5	5	0	0	0
08:15	0	5	1	0	0	0	0	40	12	4	1	2	0	5	1	0	0	0
Hr/Total	0	13	2	0	0	0	3	142	26	7	2	8	0	20	17	1	0	0
08:30	0	3	0	1	0	0	1	45	5	0	1	3	0	10	0	0	0	0
08:45	0	2	0	0	0	0	0	27	4	0	0	2	0	8	1	0	0	0
09:00	0	3	0	0	0	0	0	35	10	1	0	2	0	8	2	0	0	0
09:15	0	2	1	0	0	0	0	28	5	1	0	3	0	8	2	0	0	0
Hr/Total	0	10	1	1	0	0	1	135	24	2	1	10	0	34	5	0	0	0
Total	0	23	3	1	0	0	4	277	50	9	3	18	0	54	22	1	0	0

TIME	Turner Street (1) ← LEFT →						From south Caerleon Rd North (2) ← AHEAD →						Tesco (3) → RIGHT →					
	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS
	07:30	0	8	4	0	0	0	1	23	6	2	0	1	0	1	0	0	0
07:45	0	7	13	0	0	0	1	24	3	0	0	3	0	1	0	0	0	0
08:00	0	7	13	0	0	0	0	38	4	0	0	3	0	3	1	0	0	0
08:15	0	8	1	1	0	0	1	44	6	1	0	2	0	2	0	0	0	0
Hr/Total	0	30	31	1	0	0	3	129	19	3	0	9	0	7	1	0	0	0
08:30	0	8	1	0	0	0	0	38	11	0	0	2	0	2	0	0	0	0
08:45	0	13	4	0	0	0	0	31	7	0	0	3	0	0	1	0	0	0
09:00	0	12	6	1	0	0	0	27	3	0	0	2	0	1	0	0	0	0
09:15	0	6	2	0	0	0	1	27	8	3	0	2	0	3	1	0	0	0
Hr/Total	0	39	13	1	0	0	1	123	29	3	0	9	0	6	2	0	0	0
Total	0	69	44	2	0	0	4	252	48	6	0	18	0	13	3	0	0	0

TIME	Caerleon Rd North (5) ← LEFT →						From west Tesco (6) ← AHEAD →						Caerleon Rd South (7) → RIGHT →					
	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS
	07:30	0	7	0	0	0	0	0	0	0	0	0	0	0	15	2	0	0
07:45	0	8	0	0	0	0	0	2	0	0	0	0	0	10	3	0	0	0
08:00	0	7	3	0	0	0	0	1	1	0	0	0	0	7	5	0	0	0
08:15	0	10	2	0	0	0	0	0	0	0	0	0	0	8	4	1	0	0
Hr/Total	0	32	5	0	0	0	0	3	1	0	0	0	0	40	14	1	0	0
08:30	0	17	3	0	0	0	0	1	0	0	0	0	0	8	7	0	0	0
08:45	0	12	0	0	0	0	0	1	0	0	0	0	0	10	7	0	0	0
09:00	0	2	3	0	0	0	0	0	1	0	0	0	0	6	7	0	0	0
09:15	0	5	4	0	0	0	0	0	0	0	0	0	0	11	3	0	0	0
Hr/Total	0	36	10	0	0	0	0	2	1	0	0	0	0	35	24	0	0	0
Total	0	68	15	0	0	0	0	5	2	0	0	0	0	75	38	1	0	0

TIME	Caerleon Rd South (9) ← LEFT →						From east Turner Street (10) ← AHEAD →						Caerleon Rd North (11) → RIGHT →					
	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS
	07:30	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
07:45	0	3	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0
08:00	0	4	1	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0
08:15	0	2	1	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0
Hr/Total	0	12	2	0	0	0	0	2	1	0	0	0	0	9	1	0	0	0
08:30	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	4	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0
09:00	0	3	1	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0
09:15	0	2	2	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0
Hr/Total	0	14	3	0	0	0	0	2	2	1	0	0	0	5	0	0	0	0
Total	0	26	5	0	0	0	0	4	3	1	0	0	0	14	1	0	0	0

Vehicles

TIME	From north																	
	Tesco (12)						Caerleon Rd south (8)						Turner St (4)					
	← LEFT →						← AHEAD →						← RIGHT →					
	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS
16:30	0	7	0	0	0	0	0	25	3	0	0	3	0	12	1	0	0	0
16:45	1	2	0	0	0	0	1	34	2	1	0	0	0	8	1	0	0	0
17:00	0	3	1	0	0	0	0	23	2	1	0	2	0	3	1	0	0	0
17:15	0	2	0	0	0	0	1	29	2	0	0	4	0	5	1	0	0	0
Hr/Total	1	14	1	0	0	0	2	111	9	2	0	9	0	28	4	0	0	0
17:30	0	6	0	0	0	0	2	16	2	0	0	1	1	6	1	0	0	0
17:45	0	6	0	0	0	0	1	32	1	0	0	1	0	12	0	0	0	0
18:00	0	4	1	0	0	0	0	32	6	0	0	3	0	3	0	0	0	0
18:15	0	4	1	0	0	0	0	25	5	0	0	4	0	5	1	0	0	0
Hr/Total	0	20	2	0	0	0	3	105	14	0	0	9	1	26	2	0	0	0
Total	1	34	3	0	0	0	5	216	23	2	0	18	1	54	6	0	0	0

TIME	From south																	
	Turner Street (1)						Caerleon Rd North (2)						Tesco (3)					
	← LEFT →						← AHEAD →						← RIGHT →					
	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS
16:30	0	11	2	1	0	0	0	62	5	3	0	2	0	3	0	0	0	0
16:45	1	7	1	0	0	0	2	54	7	0	0	2	0	2	0	0	0	0
17:00	1	10	1	0	0	0	0	79	5	0	0	2	0	3	1	0	0	0
17:15	0	15	5	0	0	0	0	67	5	0	0	3	0	1	0	0	0	0
Hr/Total	2	43	9	1	0	0	2	262	22	3	0	9	0	9	1	0	0	0
17:30	0	7	1	0	0	0	1	75	5	0	0	2	1	4	0	0	0	0
17:45	0	11	2	0	0	0	0	71	3	0	0	4	0	1	0	0	0	0
18:00	0	12	0	0	0	0	1	55	3	0	0	2	0	5	0	0	0	0
18:15	0	7	1	0	0	0	0	47	6	0	0	0	0	4	0	0	0	0
Hr/Total	0	37	4	0	0	0	2	248	17	0	0	8	1	14	0	0	0	0
Total	2	80	13	1	0	0	4	510	39	3	0	17	1	23	1	0	0	0

TIME	From west																	
	Caerleon Rd North (5)						Tesco (6)						Caerleon Rd South (7)					
	← LEFT →						← AHEAD →						← RIGHT →					
	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS
16:30	0	16	8	1	0	0	0	1	0	0	0	0	0	24	8	0	0	0
16:45	1	19	3	0	0	0	0	2	0	0	0	0	0	13	2	0	0	0
17:00	1	36	1	1	0	0	0	1	0	0	0	0	1	15	2	0	0	0
17:15	0	14	2	0	0	0	0	1	0	0	0	0	0	13	2	0	0	0
Hr/Total	2	85	14	2	0	0	0	5	0	0	0	0	1	65	14	0	0	0
17:30	1	15	1	0	0	0	0	0	1	0	0	0	0	12	1	0	0	0
17:45	0	7	2	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
18:00	0	5	0	0	0	0	0	0	0	0	0	0	0	12	3	0	0	0
18:15	0	6	1	0	0	0	0	2	0	0	0	0	0	13	0	0	0	0
Hr/Total	1	33	4	0	0	0	0	2	1	0	0	0	0	45	4	0	0	0
Total	3	118	18	2	0	0	0	7	1	0	0	0	1	110	18	0	0	0

TIME	From east																	
	Caerleon Rd South (9)						Turner Street (10)						Caerleon Rd North (11)					
	← LEFT →						← AHEAD →						← RIGHT →					
	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS	MCL	CAR	LGV	GV1	GV2	BUS
16:30	0	5	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
16:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	4	0	0	0	0	0	2	1	0	0	0	0	0	1	0	0	0
17:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr/Total	0	14	0	0	0	0	0	3	1	0	0	0	0	1	1	0	0	0
17:30	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
17:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	0	5	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
18:15	0	5	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0
Hr/Total	0	17	0	0	0	0	0	4	0	0	0	0	1	0	1	0	0	0
Total	0	31	0	0	0	0	0	7	1	0	0	0	1	1	2	0	0	0

CHEPSTOW ROAD / O172  
THRU 31 JANUARY 2013  
JUNCTION TURNING COUNTS

SITE: 1

LOCATION: Clarence Place/Church Road/Chepstow Road/Corporation Road

TIME	A-B					TOT	A-C					TOT	A-D - BANNED					TOT	A-E					TOT	A-A					TOT							
	CAR	LGV	OGV1	OGV2	BUS		MC	PIC	CAR	LGV	OGV1		OGV2	BUS	MC	PIC	CAR		LGV	OGV1	OGV2	BUS	MC		PIC	CAR	LGV	OGV1	OGV2		BUS	MC	PIC				
07:30	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	4	0	0	0	0	0	0
07:45	1	0	0	0	0	0	1	2	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	8	2	0	0	0	0	0	10	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	6	0	0	0	0	0	0
08:15	1	0	0	0	0	0	1	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	0	0	0	0	0	0
08:30	1	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6	0	0	0	0	0	0
08:45	3	1	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	4	0	0	0	0	0	0
09:00	1	0	1	0	0	0	2	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	4	3	1	0	0	0	0	8	0	0	0	0	0	0
09:15	2	0	0	0	0	0	2	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
PTOT	9	1	2	0	0	0	12	12	1	1	0	0	0	14	0	0	0	0	0	0	0	0	0	30	10	2	0	0	0	0	51	0	0	0	0	0	0

PEAK HOUR: 08:30-09:30	7	2	2	0	0	0	10	4	1	0	0	0	14	0	0	0	0	0	0	0	0	0	16	5	2	0	0	0	0	26	0	0	0	0	0	0
PEAK HOUR: 09:30-10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TIME	A-B					TOT	A-C					TOT	A-D - BANNED					TOT	A-E					TOT	A-A					TOT							
	CAR	LGV	OGV1	OGV2	BUS		MC	PIC	CAR	LGV	OGV1		OGV2	BUS	MC	PIC	CAR		LGV	OGV1	OGV2	BUS	MC		PIC	CAR	LGV	OGV1	OGV2		BUS	MC	PIC				
16:30	5	0	0	0	0	0	5	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	8	0	0	0	0	0	0
16:45	6	1	0	0	0	0	7	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	19	0	0	0	0	0	0
17:00	13	0	0	0	0	0	13	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	13	0	0	0	0	0	0
17:15	1	0	0	0	0	0	1	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	17	0	0	0	0	0	0
17:30	5	1	0	0	0	0	6	2	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	14	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	4	1	0	0	0	0	5	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	5	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	6	0	0	0	0	0	0
PTOT	30	2	0	0	0	0	32	20	2	0	0	0	0	22	0	0	0	0	0	0	0	0	0	83	3	0	0	0	0	0	92	0	0	0	0	0	0

PEAK HOUR: 17:00-18:00	19	1	0	0	0	0	20	11	2	0	0	0	13	0	0	0	0	0	0	0	0	0	48	1	0	0	0	0	0	49	0	0	0	0	0	0
PEAK HOUR: 17:00-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TIME	B-C					TOT	B-D - BANNED					TOT	B-E					TOT	B-A					TOT	B-B					TOT							
	CAR	LGV	OGV1	OGV2	BUS		MC	PIC	CAR	LGV	OGV1		OGV2	BUS	MC	PIC	CAR		LGV	OGV1	OGV2	BUS	MC		PIC	CAR	LGV	OGV1	OGV2		BUS	MC	PIC				
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53	13	1	1	4	0	0	0	0	72	2	0	0	0	0	0	2	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	9	1	0	2	0	0	0	0	72	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	10	5	0	1	0	0	0	0	76	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	1	0	0	0	0	1	0	0	0	0	0	0	0	87	8	3	0	3	0	0	0	0	101	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	8	4	0	3	0	0	0	0	75	1	0	0	0	0	0	1	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	4	2	0	3	0	0	0	0	61	1	0	0	0	0	0	1	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	2	0	0	1	1	0	0	0	58	2	1	0	0	0	0	3	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	12	7	0	0	0	0	0	0	10	0	0	0	0	0	0	1	0	0	0	0	0	0
PTOT	0	1	0	0	0	0	1	6	0	0	0	0	0	0	593	74	23	2	22	0	10	0	0	634	7	1	0	0	0	0	8	0	0	0	0	0	0

PEAK HOUR: 08:30-09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	203	30	13	1	12	0	10	0	0	260	5	1	0	0	0	0	6	0	0	0	0	0	0
PEAK HOUR: 09:30-10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TIME	B-C					TOT	B-D - BANNED					TOT	B-E					TOT	B-A					TOT	B-B					TOT						
	CAR	LGV	OGV1	OGV2	BUS		MC	PIC	CAR	LGV	OGV1		OGV2	BUS	MC	PIC	CAR		LGV	OGV1	OGV2	BUS	MC		PIC	CAR	LGV	OGV1	OGV2		BUS	MC	PIC			
16:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0	55	8	1	0	3	0	0	0	67	1	0	0	0	0	0	1	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	8	1	0	2	0	0	36	1	1	0	0	0	0	2	0	0	0	0	0	0	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	6	0	0	1	1	0	55	2	0	0	0	0	0	0	0	0	0	0	0	0	
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	5	1	0	8	2	0	58	3	0	0	0	0	0	3	0	0	0	0	0	0	
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63	2	0	0	1	0	0	66	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	2	0	0	2	2	0	66	1	0	0	0	0	0	1	0	0	0	0	0	0	
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	2	0	0	1	2	0	0	55	1	0	0	0	0	0	1	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	2	0	0	1	0	0	51	0	0	0	0	0	0	0	0	0	0	0	0	0	
PTOT	2	0	0	0	0	0	2	6	2	0	0	0	0	0	492	35	3	0	19	5	2	544	3	1	0	0	0	0	10	0	0	0	0	0	0	

PEAK HOUR: 17:00-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	214	16	1	0
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# Appendix **B**

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Accidents between dates 01/11/2008 and 31/10/2013 (60) months

**Selection:**

Selected using Manual Selection

**Notes:**

HERBERT ROAD, NEWPORT

Police Ref.	Date	Cas.	Sev.	P2W	Cycs	Peds	Ch	OAPs	Vis.	Manv.	Road Cond.	Time	Location
00810/08	11/2008	1	Fatal	0	0	1	0	0	Dark	No turn	Wet/Damp	1757	N/B ON CAERLEON ROAD NEWPORT AT JUNCTION WIT
00102/09	03/2009	1	Slight	0	0	0	0	0	Light	Right	Wet/Damp	1743	O/S KWIK FIT, CLARENCE PLACE, NEWPORT
00145/09	01/2009	2	Slight	0	0	0	0	1	Dark	No turn	Dry	1820	EASTBOUND ON CAERLEON ROAD 19 METRES WEST OF JUNCTIO
00147/09	03/2009	1	Slight	0	0	0	0	0	Light	Left	Dry	1630	CLARENCE PLACE J/W RODNEY ROAD NEWPORT
00166/09	02/2009	1	Serious	0	0	1	0	0	Light	No turn	Snow	1454	O/S 111 CAERLEON ROAD, NEWPORT, GWENT
00182/09	04/2009	1	Slight	0	0	1	0	0	Light	No turn	Dry	0858	OUTSIDE BODYMASTERS, CAERLEON ROAD, NEWPORT
00254/09	04/2009	3	Slight	0	0	0	0	0	Dark	No turn	Dry	2111	O/S NO 17-25 CHEPSTOW ROAD, NEWPORT
00508/09	08/2009	1	Slight	0	1	0	1	0	Light	No turn	Dry	1444	O/S NO 68 CAERLEON ROAD, NEWPORT
00617/09	09/2009	1	Slight	0	0	0	0	0	Light	Right	Dry	1235	ON CHEPSTOW ROAD AT ENTRANCE TO SHELL FILLING STATION
00892/09	11/2009	1	Slight	0	0	0	0	1	Dark	No turn	Wet/Damp	1650	TRAFFIC LIGHTS, CLARENCE PLACE J/W CHEPSTOW ROAD
00958/09	08/2009	1	Slight	0	1	0	0	0	Light	Right	Wet/Damp	1748	J/W RODNEY ROAD, CLARENCE PLACE, NEWPORT
00061/10	02/2010	1	Slight	0	0	1	0	0	Light	No turn	Dry	1648	S/EBOUND ON CLARENCE PLACE, NEWPORT, OUTSIDE THE IV
00227/10	04/2010	1	Slight	0	1	0	1	0	Light	No turn	Dry	2136	O/S 66 CAERLEON ROAD, NEWPORT
00231/10	04/2010	1	Serious	0	0	1	0	0	Light	No turn	Dry	1206	O/S 24 CLARENCE PLACE, NEWPORT
00277/10	04/2010	1	Slight	0	0	0	0	0	Dark	Right	Wet/Damp	2058	O/S NO 24 CLARENCE PLACE, NEWPORT
00855/10	06/2010	1	Slight	0	1	0	0	0	Light	Left	Dry	1945	CLARENCE PLACE, NEWPORT (AT JUNCTION WITH EAST USK ROAD)
00094/11	02/2011	1	Slight	0	0	1	0	0	Light	Right	Dry	1725	DEAN STREET J/W B4596 CAERLEON ROAD, NEWPORT
00248/11	05/2011	1	Slight	0	0	1	0	0	Dark	No turn	Dry	0240	B4591 6-8 CHEPSTOW ROAD, NEWPORT
00468/11	07/2011	1	Slight	0	0	0	0	0	Dark	No turn	Dry	0130	B4596 CAERLEON ROAD J/W TURNER STREET, NEWPORT
00545/11	10/2011	1	Serious	0	0	1	0	0	Light	No turn	Dry	0937	O/S ICELAND, B4591 CLARENCE PLACE, NEWPORT
00112/11	03/2011	3	Slight	0	0	0	0	0	Light	Right	Dry	1540	B4591 CLARENCE PLACE, NEWPORT OUTSIDE KWICK FIT
00620/11	11/2011	1	Slight	0	0	1	0	0	Dark	No turn	Wet/Damp	1730	O/S 24 CLARANCE PLACE NEWPORT
00004/12	01/2012	1	Slight	0	0	1	0	0	Dark	Left	Wet/Damp	0648	VEH 1 TURNING INTO SHELL GARAGE FORECOURT ON CHEPTO
00057/12	01/2012	1	Slight	0	0	0	0	0	Dark	No turn	Dry	1800	CLARENCE PLACE NEWPORT NEAR TRAFFIC LIGHTS
00064/12	01/2012	1	Slight	0	0	1	0	0	Light	No turn	Wet/Damp	0859	OPPOSITE ICELAND STORE, CLARENCE PLACE, NEWPORT.
00573/12	10/2012	1	Slight	0	0	0	0	0	Light	No turn	Dry	1710	B4591 CLARENCE PLACE, NEWPORT
00574/12	10/2012	1	Slight	0	1	0	0	0	Light	No turn	Wet/Damp	1503	B4591 CLARENCE PLACE, NEWPORT
00726/12	12/2012	1	Serious	0	0	1	0	0	Dark	No turn	Wet/Damp	2147	O/S 19 CAERLEON ROAD, NEWPORT
00743/12	12/2012	2	Slight	0	0	2	1	0	Dark	No turn	Wet/Damp	1543	B4591 CLARENCE PLACE, NEWPORT
00761/12	11/2012	1	Serious	1	0	0	0	0	Dark	Right	Wet/Damp	2132	B4596 CLARENCE PLACE NEWPORT
00478/13	09/2013	1	Serious	0	0	1	0	0	Dark	No turn	Dry	2230	B4591 CHEPSTOW ROAD, NEWPORT
00550/13	09/2013	1	Serious	0	0	1	0	0	Light	No turn	Wet/Damp	1315	B4591 CLARENCE PLACE, NEWPORT

Column Totals 38 1 5 16 3 2

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

**Selection:**

Selected using Manual Selection

**Notes:**

HERBERT ROAD, NEWPORT

Police Ref.	Date	Cas.	Sev.	P2W	Cycs	Peds Ch	OAPs	Vis.	Manv.	Road Cond.	Time	Location
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				1	5	15	3	2				
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32

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

**Selection:**

Selected using Manual Selection

**Notes:**

HERBERT ROAD, NEWPORT

Police Ref.	Date	Cas.	Sev.	P2W	Cycs	Peds	Ch	OAPs	Vis.	Manv.	Road Cond.	Time	Location
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No. of Accidents

Total number of accidents listed:

## AccsMap - Accident Analysis System

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

**Selection:**

Selected using Manual Selection

**Notes:**

HERBERT ROAD, NEWPORT

**Accidents by Severity**

Fatal	1	3.13%
Serious	7	21.88%
Slight	24	75.00%
Total	32	

**Accidents by Lighting**

Daylight	18	56.25%
Darkness	14	43.75%
Total	32	

**Accidents by Road Surface**

Dry	18	56.25%
Wet/Damp	13	40.63%
Snow	1	3.13%
Total	32	

**Casualties by Class**

Driver / Rider	15	39.47%
Vehicle Passenger	7	18.42%
Pedestrian	16	42.11%
Total	38	

**Casualties by Severity**

Fatal	1	2.63%
Serious	7	18.42%
Slight	30	78.95%
Total	38	

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

Selection:  
Selected using Manual Selection

Notes:  
HERBERT ROAD, NEWPORT

00810/08 11/2008 Time 1757 Vehicles 1 Casualties 1 Fatal  
Other Road surface Wet/Damp Darkness: street lights present and lit  
Special Conditions None Road Type Single carriageway  
VEH1 WAS TRAVELLING N/B ALONG CAERLEON ROAD WHEN COLLIDED WITH PEDESTRIAN WHO WAS CROSSING THE ROAD ON PEDESTRIAN CROSSING FROM THE DRIVERS OFFSIDE.  
Occurred on N/B ON CAERLEON ROAD NEWPORT AT JUNCTION WITH CLARENCE PLACE NEWPORT

Vehicle Reference 1 Car Going ahead  
Not in restricted lane No skidding, jack-knifing or overturning  
Vehicle direction SW to NE  
FRV Not foreign registered vehicle Journey Journey as part of work

Casualty Reference: 1 Pedestrian Severity: Fatal  
Pedestrian Direction: NW  
Not Applicable

00102/09 03/2009 Time 1743 Vehicles 2 Casualties 1 Slight  
Raining without high winds Road surface Wet/Damp Daylight: street lights present  
Special Conditions None Road Type Single carriageway  
V1 WAS PULLING OUT OF CAR PARK ONTO CLARENCE PLACE, AND COLLIDED WITH V2 WHICH WAS TRAV ALONG CLARENCE PLACE.  
Occurred on O/S KWIK FIT, CLARENCE PLACE, NEWPORT

Vehicle Reference 1 Car Turning right  
Not in restricted lane No skidding, jack-knifing or overturning  
Vehicle direction NW to SW  
FRV Not foreign registered vehicle Journey Unknown

Casualty Reference: 1 Driver/rider Severity: Slight  
11

Vehicle Reference 2 Car Going ahead  
Not in restricted lane No skidding, jack-knifing or overturning  
Vehicle direction SW to NE  
FRV Not foreign registered vehicle Journey Unknown

00145/09 01/2009 Time 1820 Vehicles 2 Casualties 2 Slight  
Unknown Road surface Dry Darkness: street lights present and lit  
Special Conditions None Road Type Single carriageway  
VEH 1 HAS DRIVEN INTO THE BACK OF VEH 2 WHILE BOTH VEHICLES TRAVELLED NORTH-EASTBOUND ON CAERLEON ROAD, NEWPORT.  
Occurred on EASTBOUND ON CAERLEON ROAD 19 METRES WEST OF JUNCTION WITH CHURCH ROAD

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

**Selection:**

Selected using Manual Selection

**Notes:**

HERBERT ROAD, NEWPORT

Vehicle Reference 1 Car  
Not in restricted lane

Going ahead  
No skidding, jack-knifing or overturning

Vehicle direction SW to NE  
FRV Not foreign registered vehicle

Journey Unknown

Vehicle Reference 2 Car  
Not in restricted lane

Slowing or Stopping  
No skidding, jack-knifing or overturning

Vehicle direction SW to NE  
FRV Not foreign registered vehicle

Journey Unknown

Casualty Reference: 1

Driver/rider

Severity:

Slight

17

Casualty Reference: 2

Passenger

Severity:

Slight

17

00147/09 03/2009 Time 1630 Vehicles 2 Casualties 1 Slight  
Fine without high winds Road surface Dry Daylight:street lights present  
Special Conditions None Road Type Single carriageway  
VEH2 TRAVELLING ALONG CLARENCE PLACE TOWARDS CITY CENTRE WHEN VEH1 PULLED OUT OF RODNEY ROAD ONTO CLARENCE PLACE AND COLLISION OCCURRED.  
Occurred on CLARENCE PLACE J/W RODNEY ROAD NEWPORT

Vehicle Reference 1 Car  
Not in restricted lane

Turning left  
No skidding, jack-knifing or overturning

Vehicle direction SE to SW  
FRV Not foreign registered vehicle

Journey Unknown

Vehicle Reference 2 Car  
Not in restricted lane

Going ahead  
No skidding, jack-knifing or overturning

Vehicle direction NE to SW  
FRV Not foreign registered vehicle

Journey Unknown

Casualty Reference: 1

Driver/rider

Severity:

Slight

Not Applicable

00166/09 02/2009 Time 1454 Vehicles 1 Casualties 1 Serious  
Snowing without high winds Road surface Snow Daylight:street lights present  
Special Conditions None Road Type Single carriageway  
VEH 1 TRAV ALONG CAERLEON RD AFTER PULLING AWAY FROM TRAFFIC LIGHTS. PEDESTRIAN RAN OUT INTO THE ROAD FROM BEHIND A VAN AND COLLIDED WITH VEH 1.  
Occurred on O/S 111 CAERLEON ROAD, NEWPORT, GWENT

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

Selection:

Selected using Manual Selection

Notes:

HERBERT ROAD, NEWPORT

Vehicle Reference 1 Car  
Not in restricted lane

Going ahead  
No skidding, jack-knifing or overturning

Vehicle direction NE to SW  
FRV Not foreign registered vehicle

Journey Unknown

Casualty Reference: 1  
Pedestrian Direction: SE  
Not Applicable

Pedestrian Severity: Serious

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00182/09 04/2009 Time 0858 Vehicles 1 Casualties 1 Slight  
Fine without high winds Road surface Dry Daylight:street lights present  
Special Conditions None Road Type Single carriageway  
VEH 1 HAS DRIVEN NORTH-EASTBOUND ON CLARENCE PLACE WHEN IT HAS CONTINUED THIS DIRECTION OF TRAVEL INTO CAERLEON ROAD WHEN A PEDESTRIAN HAS WALKED OUT INTO THE PATH OF VEH 1 ON THE PEDESTRIAN CROSSING FACILITY. VEH 1 HAS THEN IMPACTED WITH THE PEDESTRIAN  
Occurred on OUTSIDE BODYMASTERS, CAERLEON ROAD, NEWPORT

Vehicle Reference 1 Car  
Not in restricted lane

Going ahead  
No skidding, jack-knifing or overturning

Vehicle direction SW to NE  
FRV Not foreign registered vehicle

Journey Unknown

Casualty Reference: 1  
Pedestrian Direction: SE  
Not Applicable

Pedestrian Severity: Slight

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00254/09 04/2009 Time 2111 Vehicles 3 Casualties 3 Slight  
Fine without high winds Road surface Dry Darkness: street lights present and lit  
Special Conditions None Road Type Single carriageway  
V1 TRAV ALONG CHEPSTOW ROAD AWAY FROM CITY CENTRE, SLOWED TO ALLOW PEDESTRIANS TO CROSS ROAD. V2, TRAV BEHIND, STOPPED SUDDENLY, V3 COLLIDED WITH THE REAR OF V2, WHICH WAS THEN PUSHED INTO V1.  
Occurred on O/S NO 17-25 CHEPSTOW ROAD, NEWPORT

Vehicle Reference 1 Car  
Not in restricted lane

Waiting to go ahead but held up  
No skidding, jack-knifing or overturning

Vehicle direction W to E  
FRV Not foreign registered vehicle

Journey Unknown

Vehicle Reference 2 Car  
Not in restricted lane

Slowing or Stopping  
No skidding, jack-knifing or overturning

Vehicle direction W to E  
FRV Not foreign registered vehicle

Journey Unknown

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

Selection:  
Selected using Manual Selection

Notes:  
HERBERT ROAD, NEWPORT

Casualty Reference: 1 Driver/rider Severity: Slight

11

Casualty Reference: 3 Passenger Severity: Slight

11

Vehicle Reference 3 Car Going ahead  
Not in restricted lane No skidding, jack-knifing or overturning

Vehicle direction W to E  
FRV Not foreign registered vehicle Journey Unknown

Casualty Reference: 2 Driver/rider Severity: Slight

11

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00508/09 08/2009 Time 1444 Vehicles 2 Casualties 1 Slight  
Fine without high winds Road surface Dry Daylight: no street lighting  
Special Conditions None Road Type Single carriageway  
V1 TRAV ALONG PAVEMENT OF CAERLEON ROAD, COLLIDED WITH OPEN DOOR OF V2, WHICH WAS PARKED AT THE  
SIDE OF THE ROAD.  
Occurred on O/S NO 68 CAERLEON ROAD, NEWPORT

Vehicle Reference 1 Pedal cycle Going ahead  
Footway (pavement) No skidding, jack-knifing or overturning

Vehicle direction NE to SW  
FRV Not foreign registered vehicle Journey Unknown

Casualty Reference: 1 Driver/rider Severity: Slight

Not Applicable

Vehicle Reference 2 Car Parked  
Not in restricted lane No skidding, jack-knifing or overturning

Vehicle direction Par to Parked  
FRV Not foreign registered vehicle Journey Unknown

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00617/09 09/2009 Time 1235 Vehicles 2 Casualties 1 Slight  
Fine without high winds Road surface Dry Daylight: no street lighting  
Special Conditions None Road Type Single carriageway  
VEH 2 HAS ATTEMPTED TO TURN RIGHT INTO THE FILLING STATION AFTER TRAVELLING WESTBOUND ON CHEPSTOW  
ROAD BUT HAS MISJUDGED THE SPEED OF VEH 1 WHO WAS TRAVELLING IN THE OPPOSITE DIRECTION. THIS RESULTED  
IN VEH 2 IMPACTING WITH THE FRONT OF VEH 1.  
Occurred on ON CHEPSTOW ROAD AT ENTRANCE TO SHELL FILLING STATION, NEWPORT, GWENT

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

**Selection:**

Selected using Manual Selection

**Notes:**

HERBERT ROAD, NEWPORT

Vehicle Reference 1 Car  
Not in restricted lane

Going ahead  
No skidding, jack-knifing or overturning

Vehicle direction NW to SE  
FRV Not foreign registered vehicle

Journey Unknown

Casualty Reference: 1

Driver/rider

Severity: Slight

17

Vehicle Reference 2 Car  
Not in restricted lane

Turning right  
No skidding, jack-knifing or overturning

Vehicle direction SE to N  
FRV Not foreign registered vehicle

Journey Unknown

00892/09 11/2009 Time 1650 Vehicles 3 Casualties 1 Slight  
Raining without high winds Road surface Wet/Damp Darkness: street lights present and lit  
Special Conditions None Road Type Single carriageway  
V1 STOPPED IN TRAFFIC AT RED TRAFFIC LIGHTS, V2 COLLIDED WITH THE REAR OF V1, WHICH WAS THEN SHUNTED INTO THE REAR OF V3. V2 AND V3 DID NOT STOP TO EXCHANGE DETAILS.  
Occurred on TRAFFIC LIGHTS, CLARENCE PLACE J/W CHEPSTOW ROAD, NEWPORT

Vehicle Reference 1 Car  
Not in restricted lane

Waiting to go ahead but held up  
No skidding, jack-knifing or overturning

Vehicle direction SW to NE  
FRV Not foreign registered vehicle

Journey Unknown

Casualty Reference: 1

Driver/rider

Severity: Slight

11

Vehicle Reference 2 Car  
Not in restricted lane

Slowing or Stopping  
No skidding, jack-knifing or overturning

Vehicle direction SW to NE  
FRV Not foreign registered vehicle

Journey Unknown

Vehicle Reference 3 Car  
Not in restricted lane

Waiting to go ahead but held up  
No skidding, jack-knifing or overturning

Vehicle direction SW to NE  
FRV Not foreign registered vehicle

Journey Unknown

00958/09 08/2009 Time 1748 Vehicles 2 Casualties 1 Slight  
Other Road surface Wet/Damp Daylight:street lights present  
Special Conditions None Road Type Single carriageway  
V1 TRAV ALONG CLARENCE PLACE TOWARDS CITY CENTRE. V2 CROSSED THE ROAD AND COLLISION OCCURRED.

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

**Selection:**

Selected using Manual Selection

**Notes:**

HERBERT ROAD, NEWPORT

Occurred on J/W RODNEY ROAD, CLARENCE PLACE, NEWPORT

Vehicle Reference 1 Car Going ahead  
Not in restricted lane No skidding, jack-knifing or overturning

Vehicle direction NE to SW  
FRV Not foreign registered vehicle Journey Unknown

Vehicle Reference 2 Pedal cycle Turning right  
Not in restricted lane No skidding, jack-knifing or overturning

Vehicle direction NE to N  
FRV Not foreign registered vehicle Journey Unknown

Casualty Reference: 1 Driver/rider Severity: Slight

Not Applicable

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00061/10 02/2010 Time 1648 Vehicles 1 Casualties 1 Slight

Fine without high winds Road surface Dry Daylight:street lights present

Special Conditions None Road Type Single carriageway

VEH 1 HAS STARTED TO MOVE OFF WHEN A PEDESTRIAN HAS RUN INTO THE CARRIAGEWAY RESULTING IN A COLLISION.

Occurred on S/EBOUND ON CLARENCE PLACE, NEWPORT, OUTSIDE THE IVY BUSH PUBLIC HOUSE.

Vehicle Reference 1 Car Moving off  
Not in restricted lane No skidding, jack-knifing or overturning

Vehicle direction NE to SW  
FRV Not foreign registered vehicle Journey Unknown

Casualty Reference: 1 Pedestrian Severity: Slight

Pedestrian Direction: SE  
Not Applicable

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00227/10 04/2010 Time 2136 Vehicles 2 Casualties 1 Slight

Fine without high winds Road surface Dry Daylight:street lights present

Special Conditions None Road Type Single carriageway

VEH1 TRAVELLING S.W ALONG CAERLEON ROAD WHEN VEH2 ENTERED ROAD FROM PAVEMENT AND COLLISION OCCURRED.

Occurred on O/S 66 CAERLEON ROAD, NEWPORT

Vehicle Reference 1 Car Going ahead  
Not in restricted lane No skidding, jack-knifing or overturning

Vehicle direction NE to SW  
FRV Not foreign registered vehicle Journey Unknown

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

Selection:

Selected using Manual Selection

Notes:

HERBERT ROAD, NEWPORT

Vehicle Reference 2 Pedal cycle  
Not in restricted lane

Going ahead  
No skidding, jack-knifing or overturning

Vehicle direction SE to NW  
FRV Not foreign registered vehicle

Journey Unknown

Casualty Reference: 1

Driver/rider

Severity: Slight

Not Applicable

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00231/10 04/2010 Time 1206 Vehicles 1 Casualties 1 Serious  
Fine without high winds Road surface Dry Daylight: no street lighting  
Special Conditions None Road Type Single carriageway  
O/S 24 CLARENCE PLACE, NEWPORT  
Occurred on O/S 24 CLARENCE PLACE, NEWPORT

Vehicle Reference 1 Bus or coach  
Bus lane

Going ahead  
No skidding, jack-knifing or overturning

Vehicle direction NE to SW  
FRV Not foreign registered vehicle

Journey Journey as part of work

Casualty Reference: 1

Pedestrian

Severity: Serious

Pedestrian Direction: NE  
Not Applicable

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00277/10 04/2010 Time 2058 Vehicles 2 Casualties 1 Slight  
Fine without high winds Road surface Wet/Damp Darkness: street lights present and lit  
Special Conditions None Road Type Single carriageway  
V1 WAS IN THE CENTRE OF THE ROAD WAITING TO TURN RIGHT INTO CLARENCE HOUSE ACCESS ROAD. V2 COLLIDED WITH THE REAR OF V1.  
Occurred on O/S NO 24 CLARENCE PLACE, NEWPORT

Vehicle Reference 1 Car  
Not in restricted lane

Waiting to turn right  
No skidding, jack-knifing or overturning

Vehicle direction NE to NW  
FRV Not foreign registered vehicle

Journey Unknown

Casualty Reference: 1

Driver/rider

Severity: Slight

11

Vehicle Reference 2 Car  
Not in restricted lane

Going ahead  
No skidding, jack-knifing or overturning

Vehicle direction NE to SW  
FRV Not foreign registered vehicle

Journey Unknown

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

Selection:  
Selected using Manual Selection

Notes:  
HERBERT ROAD, NEWPORT

00855/10 06/2010 Time 1945 Vehicles 2 Casualties 1 Slight  
Fine without high winds Road surface Dry Daylight: no street lighting  
Special Conditions None Road Type Single carriageway  
VEH 1 A PEDAL CYCLE HAS EMERGED OUT OF EAST USK ROAD AND HAS FAILED TO COMPLY WITH TRAFFIC SIGNALS  
AND HAS COLLIDED WITH VEH 2  
Occurred on CLARENCE PLACE, NEWPORT (AT JUNCTION WITH EAST USK ROAD)

Vehicle Reference 1 Pedal cycle Turning left  
Not in restricted lane No skidding, jack-knifing or overturning

Vehicle direction NW to NE  
FRV Not foreign registered vehicle Journey Unknown

Casualty Reference: 1 Driver/rider Severity: Slight

Not Applicable

Vehicle Reference 2 Car Going ahead  
Not in restricted lane No skidding, jack-knifing or overturning

Vehicle direction SW to NE  
FRV Not foreign registered vehicle Journey Unknown

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00094/11 02/2011 Time 1725 Vehicles 1 Casualties 1 Slight  
Fine without high winds Road surface Dry Daylight:street lights present  
Special Conditions None Road Type Single carriageway  
VEH 1 TRAV ALONG JUNCTION ROAD IN DIRECTION OF CAERLEON ROAD. STOPPED AT THE JUNCTION AND THEN  
PULLED OUT AND COLLIDED WITH A PEDESTRIAN CROSSING THE ROAD.  
Occurred on DEAN STREET J/W B4596 CAERLEON ROAD, NEWPORT

Vehicle Reference 1 Car Turning right  
Not in restricted lane No skidding, jack-knifing or overturning

Vehicle direction NE to N  
FRV Not foreign registered vehicle Journey Unknown

Casualty Reference: 1 Pedestrian Severity: Slight  
Pedestrian Direction: SW  
Not Applicable

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00248/11 05/2011 Time 0240 Vehicles 1 Casualties 1 Slight  
Fine without high winds Road surface Dry Darkness: street lights present and lit  
Special Conditions None Road Type Single carriageway  
PEDESTRIAN WAS TALKING ON MOBILE PHONE IMPAIRED BY ALCOHOL AND CROSSING THE ROAD, COLLIDED WITH  
AN UNKNOWN VEHICLE.  
Occurred on B4591 6-8 CHEPSTOW ROAD, NEWPORT

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

Selection:

Selected using Manual Selection

Notes:

HERBERT ROAD, NEWPORT

Vehicle Reference 1 Car  
Not in restricted lane

Going ahead  
No skidding, jack-knifing or overturning

Vehicle direction E to W  
FRV Not foreign registered vehicle

Journey Unknown

Casualty Reference: 1  
Pedestrian Direction: S  
Not Applicable

Pedestrian Severity: Slight

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00468/11 07/2011 Time 0130 Vehicles 2 Casualties 1 Slight  
Fine without high winds Road surface Dry Darkness: street lights present and lit  
Special Conditions None Road Type Single carriageway  
VEH 2 WAS TRAV DOWN CAERLEON ROAD TOWARDS THE CITY CENTRE WHEN VEH 1 HAS SWAYED OUT TOWARDS HIS  
VEHICLE RESULTING IN O/S WINGS IMPACTING.  
Occurred on B4596 CAERLEON ROAD J/W TURNER STREET, NEWPORT

Vehicle Reference 1 Car  
Not in restricted lane

Going ahead  
No skidding, jack-knifing or overturning

Vehicle direction SW to NE  
FRV Not foreign registered vehicle

Journey Unknown

Vehicle Reference 2 Taxi  
Not in restricted lane

Going ahead  
No skidding, jack-knifing or overturning

Vehicle direction NE to SW  
FRV Not foreign registered vehicle

Journey Journey as part of work

Casualty Reference: 1

Passenger Severity: Slight

17

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00545/11 10/2011 Time 0937 Vehicles 1 Casualties 1 Serious  
Fine without high winds Road surface Dry Daylight:street lights present  
Special Conditions None Road Type Single carriageway  
PEDESTRIAN HAD ALIGHTED FROM THE NO 42 BUS AT CLARENCE PLACE AN WALKED IN FRONT OF THE BUS.  
PEDESTRIAN WALKED OUT IN ROAD INFRONT OF VEH 1 WHICH WAS TRAV EAST ALONG CLARENCE PLACE AND  
COLLIDED WITH VEH 1.  
Occurred on O/S ICELAND, B4591 CLARENCE PLACE, NEWPORT

Vehicle Reference 1 Van or Goods <= 3.5 tonnes mgw  
Not in restricted lane Skidded  
Going ahead

Vehicle direction SW to NE  
FRV Not foreign registered vehicle

Journey Journey as part of work

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

**Selection:**

Selected using Manual Selection

**Notes:**

HERBERT ROAD, NEWPORT

Casualty Reference: 1 Pedestrian Severity: Serious  
Pedestrian Direction: SE  
Not Applicable

00112/11 03/2011 Time 1540 Vehicles 2 Casualties 3 Slight  
Fine without high winds Road surface Dry Daylight:street lights present  
Special Conditions None Road Type Single carriageway  
VEH 1 INDICATED TO TURN RIGHT INTO KWICK FIT. VEH 1 PROCEEDED TO TURN RIGHT, VEH 2 TRAV EAST ALONG CLARENCE PLACE COLLIDED WITH VEH 1 AS IT WAS TURNING RIGHT.  
Occurred on B4591 CLARENCE PLACE, NEWPORT OUTSIDE KWICK FIT

Vehicle Reference 1 Car Turning right  
Not in restricted lane No skidding, jack-knifing or overturning  
Vehicle direction NE to N  
FRV Not foreign registered vehicle Journey Unknown  
Casualty Reference: 1 Passenger Severity: Slight  
17  
Casualty Reference: 2 Passenger Severity: Slight  
17  
Casualty Reference: 3 Passenger Severity: Slight  
17

Vehicle Reference 2 Car Going ahead  
Not in restricted lane No skidding, jack-knifing or overturning  
Vehicle direction SW to NE  
FRV Not foreign registered vehicle Journey Unknown

00620/11 11/2011 Time 1730 Vehicles 1 Casualties 1 Slight  
Raining without high winds Road surface Wet/Damp Darkness: street lights present and lit  
Special Conditions None Road Type Single carriageway  
VEH 1 HAS HIT PEDESTRIAN O/S 24 CLARENCE PLACE. PED INFORMED POLICE THAT HE WAS INJURED.  
Occurred on O/S 24 CLARENCE PLACE NEWPORT

Vehicle Reference 1 Car Going ahead  
Not in restricted lane No skidding, jack-knifing or overturning  
Vehicle direction NE to SW  
FRV Not foreign registered vehicle Journey Unknown  
Casualty Reference: 1 Pedestrian Severity: Slight  
Pedestrian Direction: SE  
Not Applicable

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

**Selection:**

Selected using Manual Selection

**Notes:**

HERBERT ROAD, NEWPORT

00004/12 01/2012 Time 0648 Vehicles 1 Casualties 1 Slight  
 Fine with high winds Road surface Wet/Damp Darkness: street lights present and lit  
 Special Conditions None Road Type Single carriageway  
 VEH 1 TURNING INTO THE SHELL GARAGE FORECOURT ON CHEPSTOW ROAD TOWARDS MAINDEE WHEN PEDESTRIAN  
 WALKED IN FRONT OF HIM AND HAS FAILED TO LOOK PROPERLY AS USING HER MOBILE PHONE AND HAS COLLIDED  
 WITH VEH 1.  
 Occurred on VEH 1 TURNING INTO SHELL GARAGE FORECOURT ON CHEPTOW ROAD NEWPORT

Vehicle Reference 1 Minibus Turning left  
 Not in restricted lane No skidding, jack-knifing or overturning  
 Vehicle direction W to N  
 FRV Not foreign registered vehicle Journey Journey as part of work

Casualty Reference: 1 Pedestrian Severity: Slight  
 Pedestrian Direction: W  
 Not Applicable

00057/12 01/2012 Time 1800 Vehicles 4 Casualties 1 Slight  
 Fine without high winds Road surface Dry Darkness: street lights present and lit  
 Special Conditions None Road Type Single carriageway  
 VEH 1 STOPPED AT RED TRAFFIC LIGHT. VEH 2 COLLIDED WITH REAR OF VEH 1. VEH 3 COLLIDED WITH REAR OF VEH 2  
 . VEH 4 COLLIDED WITH REAR OF VEH 3.  
 Occurred on CLARENCE PLACE NEWPORT NEAR TRAFFIC LIGHTS

Vehicle Reference 1 Car Waiting to go ahead but held up  
 Not in restricted lane No skidding, jack-knifing or overturning  
 Vehicle direction S to NW  
 FRV Not foreign registered vehicle Journey Unknown

Casualty Reference: 1 Driver/rider Severity: Slight

11

Vehicle Reference 2 Car Slowing or Stopping  
 Not in restricted lane No skidding, jack-knifing or overturning  
 Vehicle direction S to NW  
 FRV Not foreign registered vehicle Journey Unknown

Vehicle Reference 3 Car Slowing or Stopping  
 Not in restricted lane No skidding, jack-knifing or overturning  
 Vehicle direction S to NW  
 FRV Not foreign registered vehicle Journey Unknown

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

Selection:

Selected using Manual Selection

Notes:

HERBERT ROAD, NEWPORT

Vehicle Reference 4 Car  
Not in restricted lane

Slowing or Stopping  
No skidding, jack-knifing or overturning

Vehicle direction E to W  
FRV Not foreign registered vehicle

Journey Unknown

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00064/12 01/2012 Time 0859 Vehicles 1 Casualties 1 Slight  
Fine without high winds Road surface Wet/Damp Daylight:street lights present  
Special Conditions None Road Type Single carriageway  
VEH 1 WAS TRAVELLING IN AN ACTIVE BUS LANE. CASUALTY HAS STEPPED INTO THE PATH OF VEH 1 AND HAS COLLIDED WITH VEHICLE CAUSING INJURY.  
Occurred on OPPOSITE ICELAND STORE, CLARENCE PLACE, NEWPORT.

Vehicle Reference 1 Car  
Bus lane

Going ahead  
No skidding, jack-knifing or overturning

Vehicle direction NE to SW  
FRV Not foreign registered vehicle

Journey Unknown

Casualty Reference: 1  
Pedestrian Direction: SE  
Not Applicable

Pedestrian Severity: Slight

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00573/12 10/2012 Time 1710 Vehicles 2 Casualties 1 Slight  
Fine without high winds Road surface Dry Daylight:street lights present  
Special Conditions None Road Type Single carriageway  
VEH 1 HAS COLLIDED WITH THE REAR OF VEH 2 WHILST VEH 2 IS STATIONARY AT TRAFFIC LIGHTS.  
Occurred on B4591 CLARENCE PLACE, NEWPORT

Vehicle Reference 1 Car  
Not in restricted lane

Going ahead  
No skidding, jack-knifing or overturning

Vehicle direction W to E  
FRV Not foreign registered vehicle

Journey Unknown

Casualty Reference: 1

Passenger Severity: Slight

17

Vehicle Reference 2 Car  
Not in restricted lane

Waiting to go ahead but held up  
No skidding, jack-knifing or overturning

Vehicle direction W to E  
FRV Not foreign registered vehicle

Journey Unknown

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

Selection:  
Selected using Manual Selection

Notes:  
HERBERT ROAD, NEWPORT

00574/12 10/2012 Time 1503 Vehicles 2 Casualties 1 Slight  
Raining without high winds Road surface Wet/Damp Daylight:street lights present  
Special Conditions None Road Type Single carriageway

VEH 1 HAS COLLIDED WITH VEH 2.  
Occurred on B4591 CLARENCE PLACE, NEWPORT

Vehicle Reference 1 Car Going ahead  
Not in restricted lane Skidded  
Vehicle direction SW to NE  
FRV Not foreign registered vehicle Journey Journey as part of work

Vehicle Reference 2 Pedal cycle Going ahead  
Not in restricted lane No skidding, jack-knifing or overturning  
Vehicle direction S to N  
FRV Not foreign registered vehicle Journey Unknown

Casualty Reference: 1 Driver/rider Severity: Slight  
Not Applicable

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00726/12 12/2012 Time 2147 Vehicles 1 Casualties 1 Serious  
Fine without high winds Road surface Wet/Damp Darkness: street lights present and lit  
Special Conditions None Road Type Single carriageway

VEH 1 RAN OVER PEDESTRIAN.  
Occurred on O/S 19 CAERLEON ROAD, NEWPORT

Vehicle Reference 1 Car Moving off  
Not in restricted lane No skidding, jack-knifing or overturning  
Vehicle direction W to E  
FRV Not foreign registered vehicle Journey Unknown

Casualty Reference: 1 Pedestrian Severity: Serious  
Pedestrian Direction: 0  
Not Applicable

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00743/12 12/2012 Time 1543 Vehicles 1 Casualties 2 Slight  
Raining without high winds Road surface Wet/Damp Darkness: street lights present but unlit  
Special Conditions None Road Type Single carriageway

PEDESTRIAN HAS COLLIDED WITH VEH 1  
Occurred on B4591 CLARENCE PLACE, NEWPORT

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

**Selection:**

Selected using Manual Selection

**Notes:**

HERBERT ROAD, NEWPORT

Vehicle Reference 1 Car  
Not in restricted lane

Slowing or Stopping  
No skidding, jack-knifing or overturning

Vehicle direction E to W  
FRV Not foreign registered vehicle

Journey Unknown

Casualty Reference: 1  
Pedestrian Direction: N  
Not Applicable

Pedestrian Severity: Slight

Casualty Reference: 2  
Pedestrian Direction: N  
Not Applicable

Pedestrian Severity: Slight  
School pupil to or from school 2009

00761/12 11/2012 Time 2132 Vehicles 2 Casualties 1 Serious  
Raining without high winds Road surface Wet/Damp Darkness: street lights present and lit  
Special Conditions None Road Type Single carriageway  
VEH 1 HAS COLLIDED WITH VEH 2  
Occurred on B4596 CLARENCE PLACE NEWPORT

Vehicle Reference 1 Taxi  
Not in restricted lane

Turning right  
No skidding, jack-knifing or overturning

Vehicle direction NE to N  
FRV Not foreign registered vehicle

Journey Journey as part of work

Vehicle Reference 2 Motorcycle over 125cc and up to 500cc Going ahead  
Not in restricted lane No skidding, jack-knifing or overturning

Vehicle direction NE to SW  
FRV Not foreign registered vehicle

Journey Unknown

Casualty Reference: 1 Driver/rider Severity: Serious  
Not Applicable

00478/13 09/2013 Time 2230 Vehicles 1 Casualties 1 Serious  
Fine without high winds Road surface Dry Darkness: street lights present and lit  
Special Conditions None Road Type Single carriageway  
VEH 1 HAS COLLIDED WITH PEDESTRIAN  
Occurred on B4591 CHEPSTOW ROAD, NEWPORT

Vehicle Reference 1 Car  
Not in restricted lane

Going ahead  
No skidding, jack-knifing or overturning

Vehicle direction W to E  
FRV Not foreign registered vehicle

Journey Unknown

Accidents between dates 01/11/2008 and 31/10/2013 (60) months

Selection:  
Selected using Manual Selection

Notes:  
HERBERT ROAD, NEWPORT

Casualty Reference: 1 Pedestrian Severity: Serious  
Pedestrian Direction: S  
Not Applicable

00550/13 09/2013 Time 1315 Vehicles 1 Casualties 1 Serious  
Raining without high winds Road surface Wet/Damp Daylight  
Special Conditions None Road Type Single carriageway  
PED RAN OUT INTO ROAD AND COLLIDED WITH VEH 1  
Occurred on B4591 CLARENCE PLACE, NEWPORT

Vehicle Reference 1 Car Going ahead  
Bus lane No skidding, jack-knifing or overturning

Vehicle direction SW to NE  
FRV Not foreign registered vehicle Journey Other

Casualty Reference: 1 Pedestrian Severity: Serious  
Pedestrian Direction: SE  
Not Applicable

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2	1	6	19	26
2-wheeled motor vehicles	0	1	0	1
Pedal cycles	0	0	5	5
Horses & other	0	0	0	0
Total	1	7	24	32

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	0	9	9
Passenger	0	0	7	7
Motorcycle rider	0	1	0	1
Cyclist	0	0	5	5
Pedestrian	1	6	9	16
Other	0	0	0	0
Total	1	7	30	38

# Appendix C

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## Sustainability Appraisal

The proposed of this Sustainability Appraisal is to demonstrate the parking proposed at the proposed scheme at Land South of Glan Usk School, Herbert Road, Newport.

The Newport Parking Standard 2012 Supplementary Planning Guidance set out the appropriate parking provision for various types of development. The following standards are appropriate for the proposed development:

The Newport Parking Standards 2012 states that residential development requires 1 space per bedroom (up to 3 spaces per dwelling maximum).

The document sets out a method of awarding sustainability points, which takes account of a site's accessibility and proximity to services. In accordance with Appendix 5 of the Newport Parking Standards, the site achieves the following sustainability score:

### ROUTE 1: FROM COLLIER STREET ENTRANCE OF PROPOSED DEVELOPMENT

#### LOCAL FACILITIES:

- Caerleon Road District
- School

All of the above facilities are within 400m walking distance from the development site scoring 2pts x 2 = **4 points**.

#### PUBLIC TRANSPORT:

Access to bus stop is within 400m scoring **2 points**

#### FREQUENCY OF PUBLIC TRANSPORT:

BUS SERVICE ROUTE	ROUTE	FREQUENCY
26a	Newport – St. Julians via St. Julians Rd	Every 20mins
26c	Newport – St. Julians via Beaufort Rd	Every 20mins
27	Newport – Caerleon via Trinity View	Every 20mins
28	Newport – Caerleon via Eastfield Road	Every 20mins

The above bus routes are intermittent therefore run every 10 minutes scoring **2 points**

#### CYCLE ROUTE:

Cycle Route is within 50m scoring **1 point**.

#### TOTAL:

The total score is **8 points** which allows a reduction of up to 1 car parking spaces per dwelling provided that a minimum of 1 space per dwelling is provided.

Based on this reduction, it is deemed that a 20% parking reduction can be achieved thus reducing each dwelling by 1no. space. However, one space per dwelling house is unpractical with modern living; therefore 2 no. spaces have been provided to all 4 & 5 Person dwellings with the exception of

the 6Person dwelling where 3 no. spaces have been provided. The flats & FOGs have been provided with 1 space per unit in accordance with the sustainability credits scored.

### **ROUTE 2: FROM CHARNWOOD ROAD ENTRANCE OF PROPOSED DEVELOPMENT**

#### **LOCAL FACILITIES:**

- School
- General Store
- Doctors Surgery
- Caerleon Road District Centre

All of the above facilities are within 400m walking distance from the development site scoring 2pts x 2 = **4 points**.

The access to the school achieves **3 points**.

#### **PUBLIC TRANSPORT:**

Access to bus stop is within 400m scoring **2 points**.

#### **FREQUENCY OF PUBLIC TRANSPORT:**

<b>BUS SERVICE ROUTE</b>	<b>ROUTE</b>	<b>FREQUENCY</b>
10a	Newport – Christchurch via Gibbs Road	Every 2 hours
28b	Newport – Caerleon via Ponthir Road	Every 1 hour
27	Newport – Caerleon via Trinity View	Every 20mins
28	Newport – Caerleon via Eastfield Road	Every 20mins

The above bus routes are intermittent therefore run every 10 minutes scoring **2 points**.

#### **CYCLE ROUTE:**

Cycle Route is within 100m scoring **1 point**.

#### **TOTAL SCORE:**

The total score is **12 points** which allows a reduction of up to 1 car parking spaces per dwelling, provided that a minimum of 1 space per dwelling is provided.

Based on this reduction, it is deemed that a 20% parking reduction can be achieved thus reducing each dwelling by 1no. space. However, one space per dwelling house is unpractical with modern living; therefore 2 no. spaces have been provided to all 4 & 5 Person dwellings with the exception of the 6Person dwelling where 3 no. spaces have been provided. The flats & FOGs have been provided with 1 space per unit in accordance with the sustainability credits scored.

### **ROUTE 3: FROM CENTRE POINT OF PROPOSED DEVELOPMENT**

#### **LOCAL FACILITIES:**

- School
- General Store
- Doctors Surgery
- Nursery
- Park

All of the above facilities are within 800m walking distance from the development site scoring 1pts x 2 = **2 points**.

#### **PUBLIC TRANSPORT:**

Access to bus stop is within 800m scoring **1 points**.

**CYCLE ROUTE:**

Cycle Route is within 100m scoring **1 point**.

**FREQUENCY OF PUBLIC TRANSPORT:**

BUS SERVICE ROUTE	ROUTE	FREQUENCY
10a	Newport – Christchurch via Gibbs Road	Every 2 hours
28b	Newport – Caerleon via Ponthir Road	Every 1 hour
27	Newport – Caerleon via Trinity View	Every 20mins
28	Newport – Caerleon via Eastfield Road	Every 20mins
26a	Newport – St. Julians via St. Julians Rd	Every 20mins
26c	Newport – St. Julians via Beaufort Rd	Every 20mins

The above bus routes are intermittent therefore run every 10 minutes scoring **2 points**.

**TOTAL SCORE:**

The total score is **6 points** which allows for no reduction in car parking spaces.

**VISITOR PARKING**

All off-street parking spaces located throughout the development for visitors. Visitor parking can also be accommodated within the estate road.

**CONCLUSION**

Whilst Route 3 does not score enough credits to reduce parking allowances, both Routes 1 & 2 score in excess of 7 credits thus enabling us to reduce parking by 1 space. As it is not defined in Appendix 5 of the Newport Parking standards where distances to amenities are specifically taken from in a new development, it is at the discretion of the Local Authority Officer to determine this criterion. However, we have taken the mean average credits from all three locations, giving us a total of 8 points and therefore allowing us to reduce parking by 1 no. parking space to each unit throughout the development. However, one space per dwelling house is unpractical with modern living; therefore 2 no. spaces have been provided to all 4 & 5 Person dwellings. The flats & FOGs have been provided with 1 space per unit in accordance with the sustainability credits scored.

# Appendix D

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**TRIP RATE CALCULATION SELECTION PARAMETERS:**

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

**VEHICLES**Selected regions and areas:

<b>01</b>	<b>GREATER LONDON</b>	
	BT BRENT	1 days
	WF WALTHAM FOREST	1 days
<b>03</b>	<b>SOUTH WEST</b>	
	CW CORNWALL	1 days
	DC DORSET	1 days
	WL WILTSHIRE	1 days
<b>04</b>	<b>EAST ANGLIA</b>	
	NF NORFOLK	1 days
	SF SUFFOLK	2 days
<b>05</b>	<b>EAST MIDLANDS</b>	
	LN LINCOLNSHIRE	1 days
	NT NOTTINGHAMSHIRE	1 days
<b>06</b>	<b>WEST MIDLANDS</b>	
	SH SHROPSHIRE	1 days
	WM WEST MIDLANDS	2 days
	WO WORCESTERSHIRE	1 days
<b>07</b>	<b>YORKSHIRE &amp; NORTH LINCOLNSHIRE</b>	
	NY NORTH YORKSHIRE	3 days
<b>08</b>	<b>NORTH WEST</b>	
	CH CHESHIRE	2 days
	LC LANCASHIRE	1 days
<b>09</b>	<b>NORTH</b>	
	CB CUMBRIA	1 days

**Filtering Stage 2 selection:**

Parameter: Number of dwellings  
 Actual Range: 51 to 174 (units: )  
 Range Selected by User: 50 to 180 (units: )

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/05 to 22/10/12

Selected survey days:

Monday	5 days
Tuesday	8 days
Wednesday	3 days
Thursday	1 days
Friday	4 days

Selected survey types:

Manual count	21 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	11
Edge of Town	9

Selected Location Sub Categories:

Residential Zone	15
Built-Up Zone	1
Out of Town	1
No Sub Category	4

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>BT-03-A-01</b>	<b>SEMI DETACHED</b>		<b>BRENT</b>
	KENTON ROAD			
	BRENT			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	82		
	<i>Survey date: TUESDAY</i>	<i>20/11/07</i>		<i>Survey Type: MANUAL</i>
<b>2</b>	<b>CB-03-A-04</b>	<b>SEMI DETACHED</b>		<b>CUMBRIA</b>
	MOORCLOSE ROAD			
	SALTERBACK			
	WORKINGTON			
	Edge of Town			
	No Sub Category			
	Total Number of dwellings:	82		
	<i>Survey date: FRIDAY</i>	<i>24/04/09</i>		<i>Survey Type: MANUAL</i>
<b>3</b>	<b>CH-03-A-02</b>	<b>HOUSES/FLATS</b>		<b>CHESHIRE</b>
	SYDNEY ROAD			
	CREWE			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	174		
	<i>Survey date: TUESDAY</i>	<i>14/10/08</i>		<i>Survey Type: MANUAL</i>
<b>4</b>	<b>CH-03-A-06</b>	<b>SEMI-DET./BUNGALOWS</b>		<b>CHESHIRE</b>
	CREWE ROAD			
	CREWE			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Number of dwellings:	129		
	<i>Survey date: TUESDAY</i>	<i>14/10/08</i>		<i>Survey Type: MANUAL</i>
<b>5</b>	<b>CW-03-A-02</b>	<b>SEMI D./DETACHED</b>		<b>CORNWALL</b>
	BOSVEAN GARDENS			
	TRURO			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	73		
	<i>Survey date: TUESDAY</i>	<i>18/09/07</i>		<i>Survey Type: MANUAL</i>
<b>6</b>	<b>DC-03-A-01</b>	<b>DETACHED</b>		<b>DORSET</b>
	ISAACS CLOSE			
	POOLE			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	51		
	<i>Survey date: WEDNESDAY</i>	<i>16/07/08</i>		<i>Survey Type: MANUAL</i>
<b>7</b>	<b>LC-03-A-22</b>	<b>BUNGALOWS</b>		<b>LANCASHIRE</b>
	CLIFTON DRIVE NORTH			
	BLACKPOOL			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	98		
	<i>Survey date: TUESDAY</i>	<i>18/10/05</i>		<i>Survey Type: MANUAL</i>

**LIST OF SITES relevant to selection parameters (Cont.)**

<b>8</b>	<b>LN-03-A-01</b>	<b>MIXED HOUSES</b>		<b>LINCOLNSHIRE</b>
	BRANT ROAD BRACEBRIDGE LINCOLN Edge of Town Residential Zone Total Number of dwellings: 150 <i>Survey date: TUESDAY 15/05/07</i>			<i>Survey Type: MANUAL</i>
<b>9</b>	<b>NF-03-A-02</b>	<b>HOUSES &amp; FLATS</b>		<b>NORFOLK</b>
	DEREHAM ROAD  NORWICH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 98 <i>Survey date: MONDAY 22/10/12</i>			<i>Survey Type: MANUAL</i>
<b>10</b>	<b>NT-03-A-03</b>	<b>SEMI DETACHED</b>		<b>NOTTINGHAMSHIRE</b>
	B6018 SUTTON ROAD  KIRKBY-IN-ASHFIELD Edge of Town Residential Zone Total Number of dwellings: 166 <i>Survey date: WEDNESDAY 28/06/06</i>			<i>Survey Type: MANUAL</i>
<b>11</b>	<b>NY-03-A-01</b>	<b>MIXED HOUSES</b>		<b>NORTH YORKSHIRE</b>
	GRAMMAR SCHOOL LANE  NORTHALLERTON Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 52 <i>Survey date: TUESDAY 25/09/07</i>			<i>Survey Type: MANUAL</i>
<b>12</b>	<b>NY-03-A-05</b>	<b>HOUSES AND FLATS</b>		<b>NORTH YORKSHIRE</b>
	BOROUGHBRIDGE ROAD  RIPON Edge of Town No Sub Category Total Number of dwellings: 71 <i>Survey date: MONDAY 22/09/08</i>			<i>Survey Type: MANUAL</i>
<b>13</b>	<b>NY-03-A-06</b>	<b>BUNGALOWS &amp; SEMI DET.</b>		<b>NORTH YORKSHIRE</b>
	HORSEFAIR  BOROUGHBRIDGE Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 115 <i>Survey date: FRIDAY 14/10/11</i>			<i>Survey Type: MANUAL</i>
<b>14</b>	<b>SF-03-A-01</b>	<b>SEMI DETACHED</b>		<b>SUFFOLK</b>
	A1156 FELIXSTOWE ROAD RACECOURSE IPSWICH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 77 <i>Survey date: WEDNESDAY 23/05/07</i>			<i>Survey Type: MANUAL</i>

***LIST OF SITES relevant to selection parameters (Cont.)***

<b>15</b>	<b>SF-03-A-03</b>	<b>MIXED HOUSES</b>		<b>SUFFOLK</b>
	BARTON HILL			
	FORNHAM ST MARTIN			
	BURY ST EDMUNDS			
	Edge of Town			
	Out of Town			
	Total Number of dwellings:	101		
	<i>Survey date: MONDAY</i>	<i>15/05/06</i>		<i>Survey Type: MANUAL</i>
<b>16</b>	<b>SH-03-A-04</b>	<b>TERRACED</b>		<b>SHROPSHIRE</b>
	ST MICHAEL'S STREET			
	SHREWSBURY			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Number of dwellings:	108		
	<i>Survey date: THURSDAY</i>	<i>11/06/09</i>		<i>Survey Type: MANUAL</i>
<b>17</b>	<b>WF-03-A-01</b>	<b>TERRACED</b>		<b>WALTHAM FOREST</b>
	CLEVELAND PARK AVENUE			
	WALTHAMSTOW			
	Edge of Town Centre			
	Built-Up Zone			
	Total Number of dwellings:	53		
	<i>Survey date: TUESDAY</i>	<i>30/01/07</i>		<i>Survey Type: MANUAL</i>
<b>18</b>	<b>WL-03-A-01</b>	<b>SEMI D./TERRACED W. BASSETT</b>		<b>WILTSHIRE</b>
	MAPLE DRIVE			
	WOOTTON BASSETT			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	99		
	<i>Survey date: MONDAY</i>	<i>02/10/06</i>		<i>Survey Type: MANUAL</i>
<b>19</b>	<b>WM-03-A-01</b>	<b>TERRACED</b>		<b>WEST MIDLANDS</b>
	FOLESHILL ROAD			
	FOLESHILL			
	COVENTRY			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	79		
	<i>Survey date: FRIDAY</i>	<i>03/02/06</i>		<i>Survey Type: MANUAL</i>
<b>20</b>	<b>WM-03-A-03</b>	<b>MIXED HOUSING</b>		<b>WEST MIDLANDS</b>
	BASELEY WAY			
	ROWLEYS GREEN			
	COVENTRY			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	84		
	<i>Survey date: MONDAY</i>	<i>24/09/07</i>		<i>Survey Type: MANUAL</i>
<b>21</b>	<b>WO-03-A-03</b>	<b>DETACHED</b>		<b>WORCESTERSHIRE</b>
	BLAKEBROOK			
	BLAKEBROOK			
	KIDDERMINSTER			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	138		
	<i>Survey date: FRIDAY</i>	<i>05/05/06</i>		<i>Survey Type: MANUAL</i>

Asbri Transport Mulberry Drive Cardiff

Licence No: 317901

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

**VEHICLES****Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	21	99	0.072	21	99	0.295	21	99	0.367
08:00 - 09:00	21	99	0.163	<b>21</b>	<b>99</b>	<b>0.391</b>	21	99	0.554
09:00 - 10:00	21	99	0.187	21	99	0.227	21	99	0.414
10:00 - 11:00	21	99	0.170	21	99	0.201	21	99	0.371
11:00 - 12:00	21	99	0.200	21	99	0.193	21	99	0.393
12:00 - 13:00	21	99	0.214	21	99	0.195	21	99	0.409
13:00 - 14:00	21	99	0.196	21	99	0.172	21	99	0.368
14:00 - 15:00	21	99	0.205	21	99	0.205	21	99	0.410
15:00 - 16:00	21	99	0.288	21	99	0.220	21	99	0.508
16:00 - 17:00	21	99	0.317	21	99	0.199	21	99	0.516
17:00 - 18:00	<b>21</b>	<b>99</b>	<b>0.372</b>	21	99	0.237	<b>21</b>	<b>99</b>	<b>0.609</b>
18:00 - 19:00	21	99	0.263	21	99	0.212	21	99	0.475
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.647			2.747			5.394

**Parameter summary**

Trip rate parameter range selected: 51 - 174 (units: )  
 Survey date range: 01/01/05 - 22/10/12  
 Number of weekdays (Monday-Friday): 21  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

Asbri Transport Mulberry Drive Cardiff

Licence No: 317901

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED  
VEHICLES

Ranking Type: DEPARTURES Time Range: 17:00-18:00

15th Percentile = No. 18

85th Percentile = No. 4

Median Values

Arrivals: 0.425

Departures: 0.219

Totals: 0.644

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Departures)			Travel Plan
								Arrivals	Departures	Totals	
1	BT-03-A-01	SEMI DETACHED	BRENT	BRENT	82	Tue	20/11/07	0.439	0.427	0.866	
2	WM-03-A-03	MIXED HOUSING	COVENTRY	WEST MIDLANDS	84	Mon	24/09/07	0.405	0.369	0.774	
3	DC-03-A-01	DETACHED	POOLE	DORSET	51	Wed	16/07/08	0.510	0.333	0.843	
4	WF-03-A-01	TERRACED	WALTHAMSTOW	WALTHAM FOREST	53	Tue	30/01/07	0.434	0.321	0.755	
5	WO-03-A-03	DETACHED	KIDDERMINSTER	WORCESTERSHIRE	138	Fri	05/05/06	0.558	0.319	0.877	
6	NT-03-A-03	SEMI DETACHED	KIRKBY-IN-ASHFIELD	NOTTINGHAMSHIRE	166	Wed	28/06/06	0.398	0.307	0.705	
7	SH-03-A-04	TERRACED	SHREWSBURY	SHROPSHIRE	108	Thu	11/06/09	0.463	0.296	0.759	
8	CH-03-A-02	HOUSES/FLATS	CREWE	CHESHIRE	174	Tue	14/10/08	0.322	0.236	0.558	
9	NY-03-A-01	MIXED HOUSES	NORTHALLERTON	NORTH YORKSHIRE	52	Tue	25/09/07	0.154	0.231	0.385	
10	SF-03-A-03	MIXED HOUSES	BURY ST EDMUNDS	SUFFOLK	101	Mon	15/05/06	0.525	0.228	0.753	
11	CW-03-A-02	SEMI D./DETATC	TRURO	CORNWALL	73	Tue	18/09/07	0.425	0.219	0.644	
12	LN-03-A-01	MIXED HOUSES	LINCOLN	LINCOLNSHIRE	150	Tue	15/05/07	0.413	0.213	0.626	
13	CB-03-A-04	SEMI DETACHED	WORKINGTON	CUMBRIA	82	Fri	24/04/09	0.354	0.207	0.561	
14	WM-03-A-01	TERRACED	COVENTRY	WEST MIDLANDS	79	Fri	03/02/06	0.342	0.203	0.545	
15	NY-03-A-06	BUNGALOWS & SE	BOROUGHBRIDGE	NORTH YORKSHIRE	115	Fri	14/10/11	0.296	0.174	0.470	
16	LC-03-A-22	BUNGALOWS	BLACKPOOL	LANCASHIRE	98	Tue	18/10/05	0.347	0.173	0.520	
17	NY-03-A-05	HOUSES AND FLA	RIPON	NORTH YORKSHIRE	71	Mon	22/09/08	0.437	0.169	0.606	
18	SF-03-A-01	SEMI DETACHED	IPSWICH	SUFFOLK	77	Wed	23/05/07	0.247	0.169	0.416	
19	NF-03-A-02	HOUSES & FLATS	NORWICH	NORFOLK	98	Mon	22/10/12	0.235	0.143	0.378	
20	WL-03-A-01	SEMI D./TERRAC	WOOTTON BASSETT	WILTSHIRE	99	Mon	02/10/06	0.374	0.141	0.515	
21	CH-03-A-06	SEMI-DET./BUNG	CREWE	CHESHIRE	129	Tue	14/10/08	0.132	0.140	0.272	

Asbri Transport Mulberry Drive Cardiff

Licence No: 317901

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED  
VEHICLES

Ranking Type: ARRIVALS

Time Range: 08:00-09:00

15th Percentile = No. 18

85th Percentile = No. 4

Median Values

Arrivals: 0.152

Departures: 0.418

Totals: 0.570

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Arrivals)			Travel Plan
								Arrivals	Departures	Totals	
1	BT-03-A-01	SEMI DETACHED	BRENT	BRENT	82	Tue	20/11/07	0.415	0.488	0.903	
2	WM-03-A-03	MIXED HOUSING	COVENTRY	WEST MIDLANDS	84	Mon	24/09/07	0.321	0.405	0.726	
3	SH-03-A-04	TERRACED	SHREWSBURY	SHROPSHIRE	108	Thu	11/06/09	0.287	0.454	0.741	
4	WF-03-A-01	TERRACED	WALTHAMSTOW	WALTHAM FOREST	53	Tue	30/01/07	0.245	0.358	0.603	
5	WO-03-A-03	DETACHED	KIDDERMINSTER	WORCESTERSHIRE	138	Fri	05/05/06	0.203	0.543	0.746	
6	LN-03-A-01	MIXED HOUSES	LINCOLN	LINCOLNSHIRE	150	Tue	15/05/07	0.187	0.440	0.627	
7	CB-03-A-04	SEMI DETACHED	WORKINGTON	CUMBRIA	82	Fri	24/04/09	0.183	0.366	0.549	
8	LC-03-A-22	BUNGALOWS	BLACKPOOL	LANCASHIRE	98	Tue	18/10/05	0.173	0.337	0.510	
9	NY-03-A-01	MIXED HOUSES	NORTHALLERTON	NORTH YORKSHIRE	52	Tue	25/09/07	0.173	0.173	0.346	
10	CH-03-A-06	SEMI-DET./BUNG	CREWE	CHESHIRE	129	Tue	14/10/08	0.163	0.240	0.403	
11	WM-03-A-01	TERRACED	COVENTRY	WEST MIDLANDS	79	Fri	03/02/06	0.152	0.418	0.570	
12	NF-03-A-02	HOUSES & FLATS	NORWICH	NORFOLK	98	Mon	22/10/12	0.122	0.347	0.469	
13	NY-03-A-05	HOUSES AND FLA	RIPON	NORTH YORKSHIRE	71	Mon	22/09/08	0.113	0.465	0.578	
14	SF-03-A-03	MIXED HOUSES	BURY ST EDMUNDS	SUFFOLK	101	Mon	15/05/06	0.109	0.554	0.663	
15	NT-03-A-03	SEMI DETACHED	KIRKBY-IN-ASHFIELD	NOTTINGHAMSHIRE	166	Wed	28/06/06	0.108	0.313	0.421	
16	SF-03-A-01	SEMI DETACHED	IPSWICH	SUFFOLK	77	Wed	23/05/07	0.104	0.416	0.520	
17	CH-03-A-02	HOUSES/FLATS	CREWE	CHESHIRE	174	Tue	14/10/08	0.103	0.374	0.477	
18	DC-03-A-01	DETACHED	POOLE	DORSET	51	Wed	16/07/08	0.098	0.373	0.471	
19	CW-03-A-02	SEMI D./DETATC	TRURO	CORNWALL	73	Tue	18/09/07	0.096	0.329	0.425	
20	NY-03-A-06	BUNGALOWS & SE	BOROUGHBRIDGE	NORTH YORKSHIRE	115	Fri	14/10/11	0.096	0.400	0.496	
21	WL-03-A-01	SEMI D./TERRAC	WOOTTON BASSETT	WILTSHIRE	99	Mon	02/10/06	0.071	0.333	0.404	

Asbri Transport Mulberry Drive Cardiff

Licence No: 317901

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED  
VEHICLES

Ranking Type: DEPARTURES Time Range: 08:00-09:00

15th Percentile = No. 18

85th Percentile = No. 4

Median Values

Arrivals: 0.103

Departures: 0.374

Totals: 0.477

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Departures)			Travel Plan
								Arrivals	Departures	Totals	
1	SF-03-A-03	MIXED HOUSES	BURY ST EDMUNDS	SUFFOLK	101	Mon	15/05/06	0.109	0.554	0.663	
2	WO-03-A-03	DETACHED	KIDDERMINSTER	WORCESTERSHIRE	138	Fri	05/05/06	0.203	0.543	0.746	
3	BT-03-A-01	SEMI DETACHED	BRENT	BRENT	82	Tue	20/11/07	0.415	0.488	0.903	
4	NY-03-A-05	HOUSES AND FLA	RIPON	NORTH YORKSHIRE	71	Mon	22/09/08	0.113	0.465	0.578	
5	SH-03-A-04	TERRACED	SHREWSBURY	SHROPSHIRE	108	Thu	11/06/09	0.287	0.454	0.741	
6	LN-03-A-01	MIXED HOUSES	LINCOLN	LINCOLNSHIRE	150	Tue	15/05/07	0.187	0.440	0.627	
7	WM-03-A-01	TERRACED	COVENTRY	WEST MIDLANDS	79	Fri	03/02/06	0.152	0.418	0.570	
8	SF-03-A-01	SEMI DETACHED	IPSWICH	SUFFOLK	77	Wed	23/05/07	0.104	0.416	0.520	
9	WM-03-A-03	MIXED HOUSING	COVENTRY	WEST MIDLANDS	84	Mon	24/09/07	0.321	0.405	0.726	
10	NY-03-A-06	BUNGALOWS & SE	BOROUGHBRIDGE	NORTH YORKSHIRE	115	Fri	14/10/11	0.096	0.400	0.496	
11	CH-03-A-02	HOUSES/FLATS	CREWE	CHESHIRE	174	Tue	14/10/08	0.103	0.374	0.477	
12	DC-03-A-01	DETACHED	POOLE	DORSET	51	Wed	16/07/08	0.098	0.373	0.471	
13	CB-03-A-04	SEMI DETACHED	WORKINGTON	CUMBRIA	82	Fri	24/04/09	0.183	0.366	0.549	
14	WF-03-A-01	TERRACED	WALTHAMSTOW	WALTHAM FOREST	53	Tue	30/01/07	0.245	0.358	0.603	
15	NF-03-A-02	HOUSES & FLATS	NORWICH	NORFOLK	98	Mon	22/10/12	0.122	0.347	0.469	
16	LC-03-A-22	BUNGALOWS	BLACKPOOL	LANCASHIRE	98	Tue	18/10/05	0.173	0.337	0.510	
17	WL-03-A-01	SEMI D./TERRAC	WOOTTON BASSETT	WILTSHIRE	99	Mon	02/10/06	0.071	0.333	0.404	
18	CW-03-A-02	SEMI D./DETATC	TRURO	CORNWALL	73	Tue	18/09/07	0.096	0.329	0.425	
19	NT-03-A-03	SEMI DETACHED	KIRKBY-IN-ASHFIELD	NOTTINGHAMSHIRE	166	Wed	28/06/06	0.108	0.313	0.421	
20	CH-03-A-06	SEMI-DET./BUNG	CREWE	CHESHIRE	129	Tue	14/10/08	0.163	0.240	0.403	
21	NY-03-A-01	MIXED HOUSES	NORTHALLERTON	NORTH YORKSHIRE	52	Tue	25/09/07	0.173	0.173	0.346	

Asbri Transport Mulberry Drive Cardiff

Licence No: 317901

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED  
VEHICLES

Ranking Type: ARRIVALS

Time Range: 17:00-18:00

15th Percentile = No. 18

85th Percentile = No. 4

Median Values

Arrivals: 0.398

Departures: 0.307

Totals: 0.705

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Arrivals)			Travel Plan
								Arrivals	Departures	Totals	
1	WO-03-A-03	DETACHED	KIDDERMINSTER	WORCESTERSHIRE	138	Fri	05/05/06	0.558	0.319	0.877	
2	SF-03-A-03	MIXED HOUSES	BURY ST EDMUNDS	SUFFOLK	101	Mon	15/05/06	0.525	0.228	0.753	
3	DC-03-A-01	DETACHED	POOLE	DORSET	51	Wed	16/07/08	0.510	0.333	0.843	
4	SH-03-A-04	TERRACED	SHREWSBURY	SHROPSHIRE	108	Thu	11/06/09	0.463	0.296	0.759	
5	BT-03-A-01	SEMI DETACHED	BRENT	BRENT	82	Tue	20/11/07	0.439	0.427	0.866	
6	NY-03-A-05	HOUSES AND FLA	RIPON	NORTH YORKSHIRE	71	Mon	22/09/08	0.437	0.169	0.606	
7	WF-03-A-01	TERRACED	WALTHAMSTOW	WALTHAM FOREST	53	Tue	30/01/07	0.434	0.321	0.755	
8	CW-03-A-02	SEMI D./DETATC	TRURO	CORNWALL	73	Tue	18/09/07	0.425	0.219	0.644	
9	LN-03-A-01	MIXED HOUSES	LINCOLN	LINCOLNSHIRE	150	Tue	15/05/07	0.413	0.213	0.626	
10	WM-03-A-03	MIXED HOUSING	COVENTRY	WEST MIDLANDS	84	Mon	24/09/07	0.405	0.369	0.774	
11	NT-03-A-03	SEMI DETACHED	KIRKBY-IN-ASHFIELD	NOTTINGHAMSHIRE	166	Wed	28/06/06	0.398	0.307	0.705	
12	WL-03-A-01	SEMI D./TERRAC	WOOTTON BASSETT	WILTSHIRE	99	Mon	02/10/06	0.374	0.141	0.515	
13	CB-03-A-04	SEMI DETACHED	WORKINGTON	CUMBRIA	82	Fri	24/04/09	0.354	0.207	0.561	
14	LC-03-A-22	BUNGALOWS	BLACKPOOL	LANCASHIRE	98	Tue	18/10/05	0.347	0.173	0.520	
15	WM-03-A-01	TERRACED	COVENTRY	WEST MIDLANDS	79	Fri	03/02/06	0.342	0.203	0.545	
16	CH-03-A-02	HOUSES/FLATS	CREWE	CHESHIRE	174	Tue	14/10/08	0.322	0.236	0.558	
17	NY-03-A-06	BUNGALOWS & SE	BOROUGHBRIDGE	NORTH YORKSHIRE	115	Fri	14/10/11	0.296	0.174	0.470	
18	SF-03-A-01	SEMI DETACHED	IPSWICH	SUFFOLK	77	Wed	23/05/07	0.247	0.169	0.416	
19	NF-03-A-02	HOUSES & FLATS	NORWICH	NORFOLK	98	Mon	22/10/12	0.235	0.143	0.378	
20	NY-03-A-01	MIXED HOUSES	NORTHALLERTON	NORTH YORKSHIRE	52	Tue	25/09/07	0.154	0.231	0.385	
21	CH-03-A-06	SEMI-DET./BUNG	CREWE	CHESHIRE	129	Tue	14/10/08	0.132	0.140	0.272	

# Appendix E

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TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL  
 Category : B - HOUSES FOR RENT  
 VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	DV DEVON	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
11	SCOTLAND	
	MO MORAY	2 days

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

Filtering Stage 2 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: 15 to 46 (units: )  
 Range Selected by User: 11 to 50 (units: )

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/05 to 04/07/11

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	1 days
Tuesday	2 days
Wednesday	2 days
Friday	1 days

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

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	4

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	2
Built-Up Zone	1
No Sub Category	3

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.

LIST OF SITES relevant to selection parameters

1	DS-03-B-01	TERRACED/SEMI/BUNG.		DERBYSHIRE
	COCKAYNE STREET			
	BOULTON			
	DERBY			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		29	
	Survey date: MONDAY		04/07/11	Survey Type: MANUAL
2	DV-03-B-01	TERRACED		DEVON
	HAM DRIVE			
	PLYMOUTH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		35	
	Survey date: WEDNESDAY		06/07/05	Survey Type: MANUAL
3	MO-03-B-01	SEMI DETACHED		MORAY
	HAWTHORN ROAD			
	ELGIN			
	Edge of Town Centre			
	No Sub Category			
	Total Number of dwellings:		15	
	Survey date: FRIDAY		12/05/06	Survey Type: MANUAL
4	MO-03-B-02	BUNGALOWS		MORAY
	PLUSCARDEN ROAD			
	ELGIN			
	Edge of Town Centre			
	No Sub Category			
	Total Number of dwellings:		40	
	Survey date: WEDNESDAY		10/05/06	Survey Type: MANUAL
5	SF-03-B-01	SEMI D./TERRACED		SUFFOLK
	A1144 ST PETERS STREET			
	LOWESTOFT			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Number of dwellings:		46	
	Survey date: TUESDAY		20/09/05	Survey Type: MANUAL
6	WY-03-B-01	TERRACED		WEST YORKSHIRE
	LINCOLN GREEN ROAD			
	LEEDS			
	Suburban Area (PPS6 Out of Centre)			
	Built-Up Zone			
	Total Number of dwellings:		29	
	Survey date: TUESDAY		18/09/07	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/B - HOUSES FOR RENT  
 VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	32	0.067	6	32	0.134	6	32	0.201
08:00 - 09:00	6	32	0.124	6	32	0.242	6	32	0.366
09:00 - 10:00	6	32	0.196	6	32	0.211	6	32	0.407
10:00 - 11:00	6	32	0.119	6	32	0.144	6	32	0.263
11:00 - 12:00	6	32	0.170	6	32	0.180	6	32	0.350
12:00 - 13:00	6	32	0.175	6	32	0.144	6	32	0.319
13:00 - 14:00	6	32	0.211	6	32	0.175	6	32	0.386
14:00 - 15:00	6	32	0.191	6	32	0.201	6	32	0.392
15:00 - 16:00	6	32	0.263	6	32	0.263	6	32	0.526
16:00 - 17:00	6	32	0.216	6	32	0.175	6	32	0.391
17:00 - 18:00	6	32	0.304	6	32	0.165	6	32	0.469
18:00 - 19:00	6	32	0.186	6	32	0.165	6	32	0.351
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
<b>Total Rates:</b>			<b>2.222</b>			<b>2.199</b>			<b>4.421</b>

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: 15 - 46 (units: )  
 Survey date date range: 01/01/05 - 04/07/11  
 Number of weekdays (Monday-Friday): 6  
 Number of Saturdays: 0  
 Number of Sundays: 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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

# Appendix **F**

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**TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 03 - RESIDENTIAL  
 Category : C - FLATS PRIVATELY OWNED

**VEHICLES**Selected regions and areas:

<b>01</b>	<b>GREATER LONDON</b>	
	IS ISLINGTON	1 days
	KI KINGSTON	1 days
	KN KENSINGTON AND CHELSEA	1 days
	TH TOWER HAMLETS	1 days
	WH WANDSWORTH	1 days
<b>02</b>	<b>SOUTH EAST</b>	
	HF HERTFORDSHIRE	1 days
	SC SURREY	2 days
<b>03</b>	<b>SOUTH WEST</b>	
	BR BRISTOL CITY	1 days
<b>04</b>	<b>EAST ANGLIA</b>	
	CA CAMBRIDGESHIRE	1 days
<b>06</b>	<b>WEST MIDLANDS</b>	
	ST STAFFORDSHIRE	1 days
	WM WEST MIDLANDS	1 days
<b>08</b>	<b>NORTH WEST</b>	
	CH CHESHIRE	1 days
<b>09</b>	<b>NORTH</b>	
	TV TEES VALLEY	2 days
<b>10</b>	<b>WALES</b>	
	FS FLINTSHIRE	1 days
<b>11</b>	<b>SCOTLAND</b>	
	HI HIGHLAND	1 days

**Filtering Stage 2 selection:**

Parameter: Number of dwellings  
 Actual Range: 30 to 140 (units: )  
 Range Selected by User: 30 to 150 (units: )

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/05 to 11/05/12

Selected survey days:

Monday	5 days
Tuesday	2 days
Wednesday	7 days
Friday	3 days

Selected survey types:

Manual count	17 days
Directional ATC Count	0 days

Selected Locations:

Town Centre	1
Edge of Town Centre	7
Suburban Area (PPS6 Out of Centre)	9

Selected Location Sub Categories:

Residential Zone	10
Built-Up Zone	2
No Sub Category	5

**LIST OF SITES relevant to selection parameters**

<b>1</b>	<b>BR-03-C-01</b>	<b>FLATS &amp; TERRACED</b>		<b>BRISTOL CITY</b>
	CLARENCE ROAD			
	BRISTOL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		102	
	<i>Survey date: MONDAY</i>		<i>09/11/09</i>	<i>Survey Type: MANUAL</i>
<b>2</b>	<b>CA-03-C-02</b>	<b>BLOCK OF FLATS</b>		<b>CAMBRIDGESHIRE</b>
	WESTFIELD ROAD			
	NETHERTON			
	PETERBOROUGH			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Number of dwellings:		44	
	<i>Survey date: TUESDAY</i>		<i>18/10/11</i>	<i>Survey Type: MANUAL</i>
<b>3</b>	<b>CH-03-C-01</b>	<b>BLOCKS OF FLATS</b>		<b>CHESHIRE</b>
	NEW CRANE STREET			
	CHESTER			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:		60	
	<i>Survey date: FRIDAY</i>		<i>17/10/08</i>	<i>Survey Type: MANUAL</i>
<b>4</b>	<b>FS-03-C-01</b>	<b>BLOCK OF FLATS</b>		<b>FLINTSHIRE</b>
	WREXHAM STREET			
	MOLD			
	Edge of Town Centre			
	Built-Up Zone			
	Total Number of dwellings:		30	
	<i>Survey date: MONDAY</i>		<i>06/07/09</i>	<i>Survey Type: MANUAL</i>
<b>5</b>	<b>HF-03-C-02</b>	<b>FLATS</b>		<b>HERTFORDSHIRE</b>
	BRIDGE ROAD EAST			
	WELWYN GARDEN CITY			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Number of dwellings:		86	
	<i>Survey date: WEDNESDAY</i>		<i>16/07/08</i>	<i>Survey Type: MANUAL</i>
<b>6</b>	<b>HI-03-C-01</b>	<b>FLATS</b>		<b>HIGHLAND</b>
	SHORE STREET			
	INVERNESS			
	Town Centre			
	Residential Zone			
	Total Number of dwellings:		38	
	<i>Survey date: WEDNESDAY</i>		<i>20/05/09</i>	<i>Survey Type: MANUAL</i>
<b>7</b>	<b>IS-03-C-01</b>	<b>FLATS</b>		<b>ISLINGTON</b>
	RAMSEY WALK			
	ISLINGTON			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		31	
	<i>Survey date: TUESDAY</i>		<i>04/11/08</i>	<i>Survey Type: MANUAL</i>

**LIST OF SITES relevant to selection parameters (Cont.)**

<b>8</b>	<b>KI-03-C-02</b>	<b>BLOCK OF FLATS</b>	<b>KINGSTON</b>
	SOPWITH WAY		
	KINGSTON UPON THAMES		
	Edge of Town Centre		
	No Sub Category		
	Total Number of dwellings:	132	
	<i>Survey date: MONDAY</i>	<i>14/06/10</i>	<i>Survey Type: MANUAL</i>
<b>9</b>	<b>KN-03-C-03</b>	<b>BLOCK OF FLATS</b>	<b>KENSINGTON AND CHELSEA</b>
	ALLEN STREET		
	KENSINGTON		
	Edge of Town Centre		
	Residential Zone		
	Total Number of dwellings:	72	
	<i>Survey date: FRIDAY</i>	<i>11/05/12</i>	<i>Survey Type: MANUAL</i>
<b>10</b>	<b>SC-03-C-01</b>	<b>FLATS</b>	<b>SURREY</b>
	HEATHCOTE ROAD		
	CAMBERLEY		
	Edge of Town Centre		
	Residential Zone		
	Total Number of dwellings:	140	
	<i>Survey date: MONDAY</i>	<i>21/07/08</i>	<i>Survey Type: MANUAL</i>
<b>11</b>	<b>SC-03-C-02</b>	<b>FLATS</b>	<b>SURREY</b>
	CONSTITUTION HILL		
	WOKING		
	Suburban Area (PPS6 Out of Centre)		
	Built-Up Zone		
	Total Number of dwellings:	36	
	<i>Survey date: WEDNESDAY</i>	<i>23/07/08</i>	<i>Survey Type: MANUAL</i>
<b>12</b>	<b>ST-03-C-01</b>	<b>BLOCKS OF FLATS</b>	<b>STAFFORDSHIRE</b>
	ETRURIA COURT		
	HUMBERT ROAD		
	STOKE-ON-TRENT		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Number of dwellings:	33	
	<i>Survey date: WEDNESDAY</i>	<i>26/11/08</i>	<i>Survey Type: MANUAL</i>
<b>13</b>	<b>TH-03-C-03</b>	<b>FLATS</b>	<b>TOWER HAMLETS</b>
	PALMERS ROAD		
	BETHNAL GREEN		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	69	
	<i>Survey date: WEDNESDAY</i>	<i>12/11/08</i>	<i>Survey Type: MANUAL</i>
<b>14</b>	<b>TV-03-C-01</b>	<b>APARTMENTS BLOCKS</b>	<b>TEES VALLEY</b>
	OXFORD ROAD		
	LINTHORPE		
	MIDDLESBROUGH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	85	
	<i>Survey date: MONDAY</i>	<i>06/10/08</i>	<i>Survey Type: MANUAL</i>

**LIST OF SITES relevant to selection parameters (Cont.)**

<b>15</b>	<b>TV-03-C-02</b>	<b>FLATS</b>		<b>TEES VALLEY</b>
	ACKLAM ROAD			
	LINTHORPE			
	MIDDLESBROUGH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		85	
	<i>Survey date: WEDNESDAY</i>		<i>29/06/11</i>	<i>Survey Type: MANUAL</i>
<b>16</b>	<b>WH-03-C-01</b>	<b>BLOCKS OF FLATS</b>		<b>WANDSWORTH</b>
	AMIES STREET			
	CLAPHAM JUNCTION			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:		30	
	<i>Survey date: WEDNESDAY</i>		<i>09/05/12</i>	<i>Survey Type: MANUAL</i>
<b>17</b>	<b>WM-03-C-03</b>	<b>FLATS</b>		<b>WEST MIDLANDS</b>
	LODE LANE			
	SOLIHULL			
	Edge of Town Centre			
	No Sub Category			
	Total Number of dwellings:		60	
	<i>Survey date: FRIDAY</i>		<i>21/09/07</i>	<i>Survey Type: MANUAL</i>

Asbri Transport Mulberry Drive Cardiff

Licence No: 317901

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

**VEHICLES****Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	17	67	0.022	17	67	0.145	17	67	0.167
08:00 - 09:00	17	67	0.068	<b>17</b>	<b>67</b>	<b>0.234</b>	17	67	0.302
09:00 - 10:00	17	67	0.066	17	67	0.083	17	67	0.149
10:00 - 11:00	17	67	0.059	17	67	0.064	17	67	0.123
11:00 - 12:00	17	67	0.060	17	67	0.060	17	67	0.120
12:00 - 13:00	17	67	0.067	17	67	0.077	17	67	0.144
13:00 - 14:00	17	67	0.073	17	67	0.075	17	67	0.148
14:00 - 15:00	17	67	0.072	17	67	0.081	17	67	0.153
15:00 - 16:00	17	67	0.116	17	67	0.071	17	67	0.187
16:00 - 17:00	17	67	0.109	17	67	0.082	17	67	0.191
17:00 - 18:00	<b>17</b>	<b>67</b>	<b>0.206</b>	17	67	0.102	<b>17</b>	<b>67</b>	<b>0.308</b>
18:00 - 19:00	17	67	0.163	17	67	0.096	17	67	0.259
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.081			1.170			2.251

**Parameter summary**

Trip rate parameter range selected: 30 - 140 (units: )  
 Survey date range: 01/01/05 - 11/05/12  
 Number of weekdays (Monday-Friday): 17  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 1

Asbri Transport Mulberry Drive Cardiff

Licence No: 317901

RANK ORDER for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED  
VEHICLES

Ranking Type: DEPARTURES Time Range: 17:00-18:00

WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under  
20 surveys is not recommended by TRICS and may be misleading.

15th Percentile = No. 14

85th Percentile = No. 4

Median Values

Arrivals: 0.341

Departures: 0.091

Totals: 0.432

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Departures)			Travel Plan
								Arrivals	Departures	Totals	
1	TV-03-C-01	APARTMENTS BLO	MIDDLESBROUGH	TEES VALLEY	85	Mon	06/10/08	0.424	0.212	0.636	
2	HI-03-C-01	FLATS	INVERNESS	HIGHLAND	38	Wed	20/05/09	0.237	0.211	0.448	
3	TV-03-C-02	FLATS	MIDDLESBROUGH	TEES VALLEY	85	Wed	29/06/11	0.329	0.176	0.505	
4	CH-03-C-01	BLOCKS OF FLAT	CHESTER	CHESHIRE	60	Fri	17/10/08	0.217	0.167	0.384	
5	BR-03-C-01	FLATS & TERRAC	BRISTOL	BRISTOL CITY	102	Mon	09/11/09	0.275	0.127	0.402	
6	WM-03-C-03	FLATS	SOLIHULL	WEST MIDLANDS	60	Fri	21/09/07	0.267	0.117	0.384	
7	HF-03-C-02	FLATS	WELWYN GARDEN CITY	HERTFORDSHIRE	86	Wed	16/07/08	0.140	0.093	0.233	
8	SC-03-C-01	FLATS	CAMBERLEY	SURREY	140	Mon	21/07/08	0.229	0.093	0.322	
9	CA-03-C-02	BLOCK OF FLATS	PETERBOROUGH	CAMBRIDGESHIRE	44	Tue	18/10/11	0.341	0.091	0.432	
10	KI-03-C-02	BLOCK OF FLATS	KINGSTON UPON THAME	KINGSTON	132	Mon	14/06/10	0.098	0.083	0.181	
11	FS-03-C-01	BLOCK OF FLATS	MOLD	FLINTSHIRE	30	Mon	06/07/09	0.067	0.067	0.134	
12	SC-03-C-02	FLATS	WOKING	SURREY	36	Wed	23/07/08	0.139	0.056	0.195	
13	IS-03-C-01	FLATS	ISLINGTON	ISLINGTON	31	Tue	04/11/08	0.000	0.032	0.032	
14	ST-03-C-01	BLOCKS OF FLAT	STOKE-ON-TRENT	STAFFORDSHIRE	33	Wed	26/11/08	0.212	0.030	0.242	
15	TH-03-C-03	FLATS	BETHNAL GREEN	TOWER HAMLETS	69	Wed	12/11/08	0.029	0.014	0.043	
16	KN-03-C-03	BLOCK OF FLATS	KENSINGTON	KENSINGTON AND CHEL	72	Fri	11/05/12	0.111	0.014	0.125	
17	WH-03-C-01	BLOCKS OF FLAT	CLAPHAM JUNCTION	WANDSWORTH	30	Wed	09/05/12	0.233	0.000	0.233	

Asbri Transport Mulberry Drive Cardiff

Licence No: 317901

RANK ORDER for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED  
VEHICLES

Ranking Type: ARRIVALS Time Range: 08:00-09:00

WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under  
20 surveys is not recommended by TRICS and may be misleading.

15th Percentile = No. 14

85th Percentile = No. 4

Median Values

Arrivals: 0.058

Departures: 0.101

Totals: 0.159

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Arrivals)			Travel Plan
								Arrivals	Departures	Totals	
1	WH-03-C-01	BLOCKS OF FLAT	CLAPHAM JUNCTION	WANDSWORTH	30	Wed	09/05/12	0.167	0.400	0.567	
2	TV-03-C-01	APARTMENTS BLO	MIDDLESBROUGH	TEES VALLEY	85	Mon	06/10/08	0.129	0.306	0.435	
3	CH-03-C-01	BLOCKS OF FLAT	CHESTER	CHESHIRE	60	Fri	17/10/08	0.100	0.267	0.367	
4	BR-03-C-01	FLATS & TERRAC	BRISTOL	BRISTOL CITY	102	Mon	09/11/09	0.098	0.284	0.382	
5	HI-03-C-01	FLATS	INVERNESS	HIGHLAND	38	Wed	20/05/09	0.079	0.132	0.211	
6	HF-03-C-02	FLATS	WELWYN GARDEN CITY	HERTFORDSHIRE	86	Wed	16/07/08	0.070	0.198	0.268	
7	FS-03-C-01	BLOCK OF FLATS	MOLD	FLINTSHIRE	30	Mon	06/07/09	0.067	0.067	0.134	
8	IS-03-C-01	FLATS	ISLINGTON	ISLINGTON	31	Tue	04/11/08	0.065	0.032	0.097	
9	TH-03-C-03	FLATS	BETHNAL GREEN	TOWER HAMLETS	69	Wed	12/11/08	0.058	0.101	0.159	
10	SC-03-C-01	FLATS	CAMBERLEY	SURREY	140	Mon	21/07/08	0.057	0.257	0.314	
11	SC-03-C-02	FLATS	WOKING	SURREY	36	Wed	23/07/08	0.056	0.139	0.195	
12	KI-03-C-02	BLOCK OF FLATS	KINGSTON UPON THAME	KINGSTON	132	Mon	14/06/10	0.053	0.083	0.136	
13	WM-03-C-03	FLATS	SOLIHULL	WEST MIDLANDS	60	Fri	21/09/07	0.050	0.450	0.500	
14	TV-03-C-02	FLATS	MIDDLESBROUGH	TEES VALLEY	85	Wed	29/06/11	0.047	0.341	0.388	
15	KN-03-C-03	BLOCK OF FLATS	KENSINGTON	KENSINGTON AND CHEL	72	Fri	11/05/12	0.042	0.264	0.306	
16	ST-03-C-01	BLOCKS OF FLAT	STOKE-ON-TRENT	STAFFORDSHIRE	33	Wed	26/11/08	0.030	0.273	0.303	
17	CA-03-C-02	BLOCK OF FLATS	PETERBOROUGH	CAMBRIDGESHIRE	44	Tue	18/10/11	0.000	0.318	0.318	

Asbri Transport Mulberry Drive Cardiff

Licence No: 317901

RANK ORDER for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED  
VEHICLES

Ranking Type: DEPARTURES Time Range: 08:00-09:00

WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under  
20 surveys is not recommended by TRICS and may be misleading.

15th Percentile = No. 14

85th Percentile = No. 4

Median Values

Arrivals: 0.042

Departures: 0.264

Totals: 0.306

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Departures)			Travel Plan
								Arrivals	Departures	Totals	
1	WM-03-C-03	FLATS	SOLIHULL	WEST MIDLANDS	60	Fri	21/09/07	0.050	0.450	0.500	
2	WH-03-C-01	BLOCKS OF FLAT	CLAPHAM JUNCTION	WANDSWORTH	30	Wed	09/05/12	0.167	0.400	0.567	
3	TV-03-C-02	FLATS	MIDDLESBROUGH	TEES VALLEY	85	Wed	29/06/11	0.047	0.341	0.388	
4	CA-03-C-02	BLOCK OF FLATS	PETERBOROUGH	CAMBRIDGESHIRE	44	Tue	18/10/11	0.000	0.318	0.318	
5	TV-03-C-01	APARTMENTS BLO	MIDDLESBROUGH	TEES VALLEY	85	Mon	06/10/08	0.129	0.306	0.435	
6	BR-03-C-01	FLATS & TERRAC	BRISTOL	BRISTOL CITY	102	Mon	09/11/09	0.098	0.284	0.382	
7	ST-03-C-01	BLOCKS OF FLAT	STOKE-ON-TRENT	STAFFORDSHIRE	33	Wed	26/11/08	0.030	0.273	0.303	
8	CH-03-C-01	BLOCKS OF FLAT	CHESTER	CHESHIRE	60	Fri	17/10/08	0.100	0.267	0.367	
9	KN-03-C-03	BLOCK OF FLATS	KENSINGTON	KENSINGTON AND CHEL	72	Fri	11/05/12	0.042	0.264	0.306	
10	SC-03-C-01	FLATS	CAMBERLEY	SURREY	140	Mon	21/07/08	0.057	0.257	0.314	
11	HF-03-C-02	FLATS	WELWYN GARDEN CITY	HERTFORDSHIRE	86	Wed	16/07/08	0.070	0.198	0.268	
12	SC-03-C-02	FLATS	WOKING	SURREY	36	Wed	23/07/08	0.056	0.139	0.195	
13	HI-03-C-01	FLATS	INVERNESS	HIGHLAND	38	Wed	20/05/09	0.079	0.132	0.211	
14	TH-03-C-03	FLATS	BETHNAL GREEN	TOWER HAMLETS	69	Wed	12/11/08	0.058	0.101	0.159	
15	KI-03-C-02	BLOCK OF FLATS	KINGSTON UPON THAME	KINGSTON	132	Mon	14/06/10	0.053	0.083	0.136	
16	FS-03-C-01	BLOCK OF FLATS	MOLD	FLINTSHIRE	30	Mon	06/07/09	0.067	0.067	0.134	
17	IS-03-C-01	FLATS	ISLINGTON	ISLINGTON	31	Tue	04/11/08	0.065	0.032	0.097	

Asbri Transport Mulberry Drive Cardiff

Licence No: 317901

RANK ORDER for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED  
VEHICLES

Ranking Type: ARRIVALS Time Range: 17:00-18:00

WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under  
20 surveys is not recommended by TRICS and may be misleading.

15th Percentile = No. 14

85th Percentile = No. 4

Median Values

Arrivals: 0.217

Departures: 0.167

Totals: 0.384

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Arrivals)			Travel Plan
								Arrivals	Departures	Totals	
1	TV-03-C-01	APARTMENTS BLO	MIDDLESBROUGH	TEES VALLEY	85	Mon	06/10/08	0.424	0.212	0.636	
2	CA-03-C-02	BLOCK OF FLATS	PETERBOROUGH	CAMBRIDGESHIRE	44	Tue	18/10/11	0.341	0.091	0.432	
3	TV-03-C-02	FLATS	MIDDLESBROUGH	TEES VALLEY	85	Wed	29/06/11	0.329	0.176	0.505	
4	BR-03-C-01	FLATS & TERRAC	BRISTOL	BRISTOL CITY	102	Mon	09/11/09	0.275	0.127	0.402	
5	WM-03-C-03	FLATS	SOLIHULL	WEST MIDLANDS	60	Fri	21/09/07	0.267	0.117	0.384	
6	HI-03-C-01	FLATS	INVERNESS	HIGHLAND	38	Wed	20/05/09	0.237	0.211	0.448	
7	WH-03-C-01	BLOCKS OF FLAT	CLAPHAM JUNCTION	WANDSWORTH	30	Wed	09/05/12	0.233	0.000	0.233	
8	SC-03-C-01	FLATS	CAMBERLEY	SURREY	140	Mon	21/07/08	0.229	0.093	0.322	
9	CH-03-C-01	BLOCKS OF FLAT	CHESTER	CHESHIRE	60	Fri	17/10/08	0.217	0.167	0.384	
10	ST-03-C-01	BLOCKS OF FLAT	STOKE-ON-TRENT	STAFFORDSHIRE	33	Wed	26/11/08	0.212	0.030	0.242	
11	HF-03-C-02	FLATS	WELWYN GARDEN CITY	HERTFORDSHIRE	86	Wed	16/07/08	0.140	0.093	0.233	
12	SC-03-C-02	FLATS	WOKING	SURREY	36	Wed	23/07/08	0.139	0.056	0.195	
13	KN-03-C-03	BLOCK OF FLATS	KENSINGTON	KENSINGTON AND CHEL	72	Fri	11/05/12	0.111	0.014	0.125	
14	KI-03-C-02	BLOCK OF FLATS	KINGSTON UPON THAM	KINGSTON	132	Mon	14/06/10	0.098	0.083	0.181	
15	FS-03-C-01	BLOCK OF FLATS	MOLD	FLINTSHIRE	30	Mon	06/07/09	0.067	0.067	0.134	
16	TH-03-C-03	FLATS	BETHNAL GREEN	TOWER HAMLETS	69	Wed	12/11/08	0.029	0.014	0.043	
17	IS-03-C-01	FLATS	ISLINGTON	ISLINGTON	31	Tue	04/11/08	0.000	0.032	0.032	

# Appendix G

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**TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 03 - RESIDENTIAL  
 Category : D - FLATS FOR RENT

**VEHICLES**

Selected regions and areas:

<b>02 SOUTH EAST</b>	
ES EAST SUSSEX	1 days
HC HAMPSHIRE	3 days
OX OXFORDSHIRE	1 days
<b>03 SOUTH WEST</b>	
BR BRISTOL CITY	2 days
<b>04 EAST ANGLIA</b>	
NF NORFOLK	1 days
<b>05 EAST MIDLANDS</b>	
LN LINCOLNSHIRE	1 days
<b>08 NORTH WEST</b>	
CH CHESHIRE	1 days
LC LANCASHIRE	1 days
<b>09 NORTH</b>	
DH DURHAM	1 days
<b>11 SCOTLAND</b>	
DU DUNDEE CITY	1 days

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

**Filtering Stage 2 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: 6 to 30 (units: )  
 Range Selected by User: 6 to 30 (units: )

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/02 to 24/09/12

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

Selected survey days:

Monday	3 days
Tuesday	4 days
Wednesday	1 days
Thursday	3 days
Friday	2 days

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

Selected survey types:

Manual count	13 days
Directional ATC Count	0 days

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

Selected Locations:

Town Centre	1
Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	6
Edge of Town	5

*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.*

*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.*

**Filtering Stage 3 selection:**

**Use Class:**

C3 13 days

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

**Population within 1 mile:**

1,001 to 5,000	2 days
5,001 to 10,000	5 days
15,001 to 20,000	3 days
20,001 to 25,000	1 days
25,001 to 50,000	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	1 days
25,001 to 50,000	1 days
50,001 to 75,000	1 days
75,001 to 100,000	2 days
100,001 to 125,000	2 days
125,001 to 250,000	4 days
250,001 to 500,000	2 days

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

**Car ownership within 5 miles:**

0.6 to 1.0	6 days
1.1 to 1.5	7 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:**

Not Known	2 days
Yes	1 days
No	10 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.*

LIST OF SITES relevant to selection parameters

- |  |  |
|--|--|
| <p><b>1 BR-03-D-01 BLOCKS OF FLATS, BRISTOL</b><br/>           HONEY GARSTON ROAD<br/>           HARTCLIFFE<br/>           BRISTOL<br/>           Edge of Town<br/>           Residential Zone<br/>           Total Number of dwellings: 16<br/> <i>Survey date: THURSDAY 02/10/03</i></p>                   | <p><b>BRISTOL CITY</b></p> <p><i>Survey Type: MANUAL</i></p> |
| <p><b>2 BR-03-D-03 BLOCKS OF FLATS, BRISTOL</b><br/>           BRISTOL ROAD<br/><br/>           BRISTOL<br/>           Edge of Town<br/>           No Sub Category<br/>           Total Number of dwellings: 28<br/> <i>Survey date: TUESDAY 13/10/09</i></p>  | <p><b>BRISTOL CITY</b></p> <p><i>Survey Type: MANUAL</i></p> |
| <p><b>3 CH-03-D-01 BLOCK OF FLATS, CHESTER</b><br/>           HEATH LANE<br/>           BOUGHTON HEATH<br/>           CHESTER<br/>           Suburban Area (PPS6 Out of Centre)<br/>           Residential Zone<br/>           Total Number of dwellings: 30<br/> <i>Survey date: THURSDAY 24/05/12</i></p>  | <p><b>CHESHIRE</b></p> <p><i>Survey Type: MANUAL</i></p>     |
| <p><b>4 DH-03-D-01 BLOCKS OF FLATS, DURHAM</b><br/>           DRYBURN ROAD<br/>           FRAMWELLGATE MOOR<br/>           DURHAM<br/>           Edge of Town<br/>           No Sub Category<br/>           Total Number of dwellings: 24<br/> <i>Survey date: THURSDAY 20/06/02</i></p>                     | <p><b>DURHAM</b></p> <p><i>Survey Type: MANUAL</i></p>       |
| <p><b>5 DU-03-D-01 FLATS IN HOUSES, NEAR DUNDEE</b><br/>           JUBILEE PARK<br/>           LETHAM<br/>           NEAR DUNDEE<br/>           Suburban Area (PPS6 Out of Centre)<br/>           Residential Zone<br/>           Total Number of dwellings: 17<br/> <i>Survey date: FRIDAY 06/05/11</i></p> | <p><b>DUNDEE CITY</b></p> <p><i>Survey Type: MANUAL</i></p>  |
| <p><b>6 ES-03-D-04 BLOCKS OF FLATS, LEWES</b><br/>           WALWERS LANE<br/><br/>           LEWES<br/>           Town Centre<br/>           Built-Up Zone<br/>           Total Number of dwellings: 24<br/> <i>Survey date: MONDAY 24/09/12</i></p>  | <p><b>EAST SUSSEX</b></p> <p><i>Survey Type: MANUAL</i></p>  |
| <p><b>7 HC-03-D-02 FLATS, EASTLEIGH</b><br/>           BOURNEMOUTH ROAD<br/>           AMPFIELD<br/>           EASTLEIGH<br/>           Suburban Area (PPS6 Out of Centre)<br/>           No Sub Category<br/>           Total Number of dwellings: 10<br/> <i>Survey date: FRIDAY 16/11/07</i></p>          | <p><b>HAMPSHIRE</b></p> <p><i>Survey Type: MANUAL</i></p>    |

***LIST OF SITES relevant to selection parameters (Cont.)***

<b>8</b>	<b>HC-03-D-04</b>	<b>BLOCK OF FLATS, WINCHESTER</b>	<b>HAMPSHIRE</b>
	ROMSEY ROAD		
	WINCHESTER		
	Edge of Town Centre		
	Residential Zone		
	Total Number of dwellings:	23	
	<i>Survey date: WEDNESDAY</i>	<i>02/12/09</i>	<i>Survey Type: MANUAL</i>
<b>9</b>	<b>HC-03-D-05</b>	<b>BLOCK OF FLATS, BASINGSTOKE</b>	<b>HAMPSHIRE</b>
	WORTING ROAD		
	BASINGSTOKE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	29	
	<i>Survey date: MONDAY</i>	<i>18/10/10</i>	<i>Survey Type: MANUAL</i>
<b>10</b>	<b>LC-03-D-02</b>	<b>FLATS/TERRACED HOUSING, PRESTON</b>	<b>LANCASHIRE</b>
	GRAHAM STREET		
	PRESTON		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Number of dwellings:	30	
	<i>Survey date: MONDAY</i>	<i>18/06/07</i>	<i>Survey Type: MANUAL</i>
<b>11</b>	<b>LN-03-D-01</b>	<b>BLOCKS OF FLATS, LINCOLN</b>	<b>LINCOLNSHIRE</b>
	WOODFIELD AVENUE		
	BIRCHWOOD		
	LINCOLN		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	20	
	<i>Survey date: TUESDAY</i>	<i>10/09/02</i>	<i>Survey Type: MANUAL</i>
<b>12</b>	<b>NF-03-D-01</b>	<b>BLOCK OF FLATS, G. YARMOUTH</b>	<b>NORFOLK</b>
	DICKENS AVENUE		
	GREAT YARMOUTH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	15	
	<i>Survey date: TUESDAY</i>	<i>20/09/05</i>	<i>Survey Type: MANUAL</i>
<b>13</b>	<b>OX-03-D-01</b>	<b>FLATS, OXFORD</b>	<b>OXFORDSHIRE</b>
	FAIRLAWN END		
	UPPER WOLVERCOTE		
	OXFORD		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	6	
	<i>Survey date: TUESDAY</i>	<i>05/10/10</i>	<i>Survey Type: MANUAL</i>

*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/D - FLATS FOR RENT

**VEHICLES**

**Calculation factor: 1 DWELLS**

**BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	21	0.048	13	21	0.099	13	21	0.147
08:00 - 09:00	13	21	0.151	13	21	0.136	13	21	0.287
09:00 - 10:00	13	21	0.092	13	21	0.088	13	21	0.180
10:00 - 11:00	13	21	0.074	13	21	0.103	13	21	0.177
11:00 - 12:00	13	21	0.059	13	21	0.066	13	21	0.125
12:00 - 13:00	13	21	0.092	13	21	0.085	13	21	0.177
13:00 - 14:00	13	21	0.107	13	21	0.099	13	21	0.206
14:00 - 15:00	13	21	0.151	13	21	0.107	13	21	0.258
15:00 - 16:00	13	21	0.088	13	21	0.103	13	21	0.191
16:00 - 17:00	13	21	0.114	13	21	0.129	13	21	0.243
17:00 - 18:00	13	21	0.136	13	21	0.096	13	21	0.232
18:00 - 19:00	13	21	0.162	13	21	0.136	13	21	0.298
19:00 - 20:00	2	18	0.114	2	18	0.086	2	18	0.200
20:00 - 21:00	<b>2</b>	<b>18</b>	<b>0.200</b>	<b>2</b>	<b>18</b>	<b>0.200</b>	<b>2</b>	<b>18</b>	<b>0.400</b>
21:00 - 22:00	2	18	0.086	2	18	0.086	2	18	0.172
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.674			1.619			3.293

*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: 6 - 30 (units: )  
 Survey date date range: 01/01/02 - 24/09/12  
 Number of weekdays (Monday-Friday): 13  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 2

*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/D - FLATS FOR RENT

**OGVS**

**Calculation factor: 1 DWELLS**

**BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	21	0.000	13	21	0.000	13	21	0.000
08:00 - 09:00	<b>13</b>	<b>21</b>	<b>0.007</b>	13	21	0.000	13	21	0.007
09:00 - 10:00	13	21	0.007	<b>13</b>	<b>21</b>	<b>0.011</b>	<b>13</b>	<b>21</b>	<b>0.018</b>
10:00 - 11:00	13	21	0.004	13	21	0.007	13	21	0.011
11:00 - 12:00	13	21	0.000	13	21	0.000	13	21	0.000
12:00 - 13:00	13	21	0.000	13	21	0.000	13	21	0.000
13:00 - 14:00	13	21	0.000	13	21	0.000	13	21	0.000
14:00 - 15:00	13	21	0.000	13	21	0.000	13	21	0.000
15:00 - 16:00	13	21	0.000	13	21	0.000	13	21	0.000
16:00 - 17:00	13	21	0.000	13	21	0.000	13	21	0.000
17:00 - 18:00	13	21	0.004	13	21	0.004	13	21	0.008
18:00 - 19:00	13	21	0.000	13	21	0.000	13	21	0.000
19:00 - 20:00	2	18	0.000	2	18	0.000	2	18	0.000
20:00 - 21:00	2	18	0.000	2	18	0.000	2	18	0.000
21:00 - 22:00	2	18	0.000	2	18	0.000	2	18	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.022			0.022			0.044

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

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

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 Number of weekdays (Monday-Friday): 13  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 2

*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/D - FLATS FOR RENT

**PSVS**

**Calculation factor: 1 DWELLS**

**BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	21	0.000	13	21	0.000	13	21	0.000
08:00 - 09:00	13	21	0.000	13	21	0.000	13	21	0.000
09:00 - 10:00	13	21	0.000	13	21	0.000	13	21	0.000
10:00 - 11:00	13	21	0.000	13	21	0.000	13	21	0.000
11:00 - 12:00	13	21	0.000	13	21	0.000	13	21	0.000
12:00 - 13:00	13	21	0.000	13	21	0.000	13	21	0.000
13:00 - 14:00	13	21	0.000	13	21	0.000	13	21	0.000
14:00 - 15:00	13	21	0.000	13	21	0.000	13	21	0.000
15:00 - 16:00	13	21	0.000	13	21	0.000	13	21	0.000
16:00 - 17:00	13	21	0.000	13	21	0.000	13	21	0.000
17:00 - 18:00	13	21	0.000	13	21	0.000	13	21	0.000
18:00 - 19:00	13	21	0.000	13	21	0.000	13	21	0.000
19:00 - 20:00	2	18	0.000	2	18	0.000	2	18	0.000
20:00 - 21:00	2	18	0.000	2	18	0.000	2	18	0.000
21:00 - 22:00	2	18	0.000	2	18	0.000	2	18	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

*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.*

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 Survey date date range: 01/01/02 - 24/09/12  
 Number of weekdays (Monday-Friday): 13  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 2

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TRIP RATE for Land Use 03 - RESIDENTIAL/D - FLATS FOR RENT

**CYCLISTS**

**Calculation factor: 1 DWELLS**

**BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	21	0.000	13	21	0.004	13	21	0.004
08:00 - 09:00	13	21	0.000	13	21	0.011	13	21	0.011
09:00 - 10:00	<b>13</b>	<b>21</b>	<b>0.007</b>	<b>13</b>	<b>21</b>	<b>0.015</b>	<b>13</b>	<b>21</b>	<b>0.022</b>
10:00 - 11:00	13	21	0.007	13	21	0.004	13	21	0.011
11:00 - 12:00	13	21	0.004	13	21	0.000	13	21	0.004
12:00 - 13:00	13	21	0.004	13	21	0.000	13	21	0.004
13:00 - 14:00	13	21	0.000	13	21	0.004	13	21	0.004
14:00 - 15:00	13	21	0.004	13	21	0.000	13	21	0.004
15:00 - 16:00	13	21	0.007	13	21	0.004	13	21	0.011
16:00 - 17:00	13	21	0.000	13	21	0.004	13	21	0.004
17:00 - 18:00	13	21	0.000	13	21	0.007	13	21	0.007
18:00 - 19:00	13	21	0.007	13	21	0.007	13	21	0.014
19:00 - 20:00	2	18	0.000	2	18	0.000	2	18	0.000
20:00 - 21:00	2	18	0.000	2	18	0.000	2	18	0.000
21:00 - 22:00	2	18	0.000	2	18	0.000	2	18	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.040			0.060			0.100

*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.*

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# Appendix H

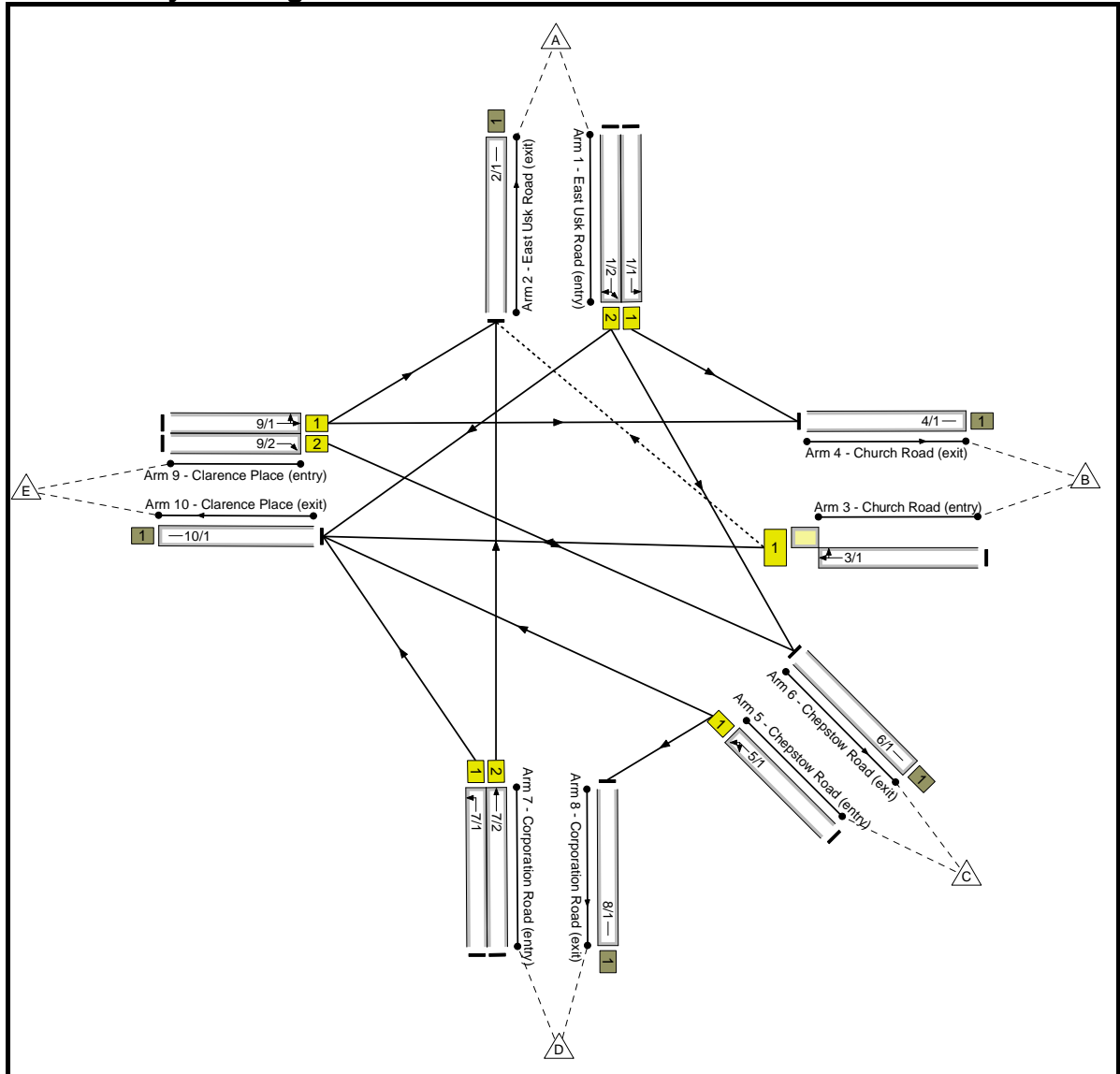
---

## Full Input Data And Results

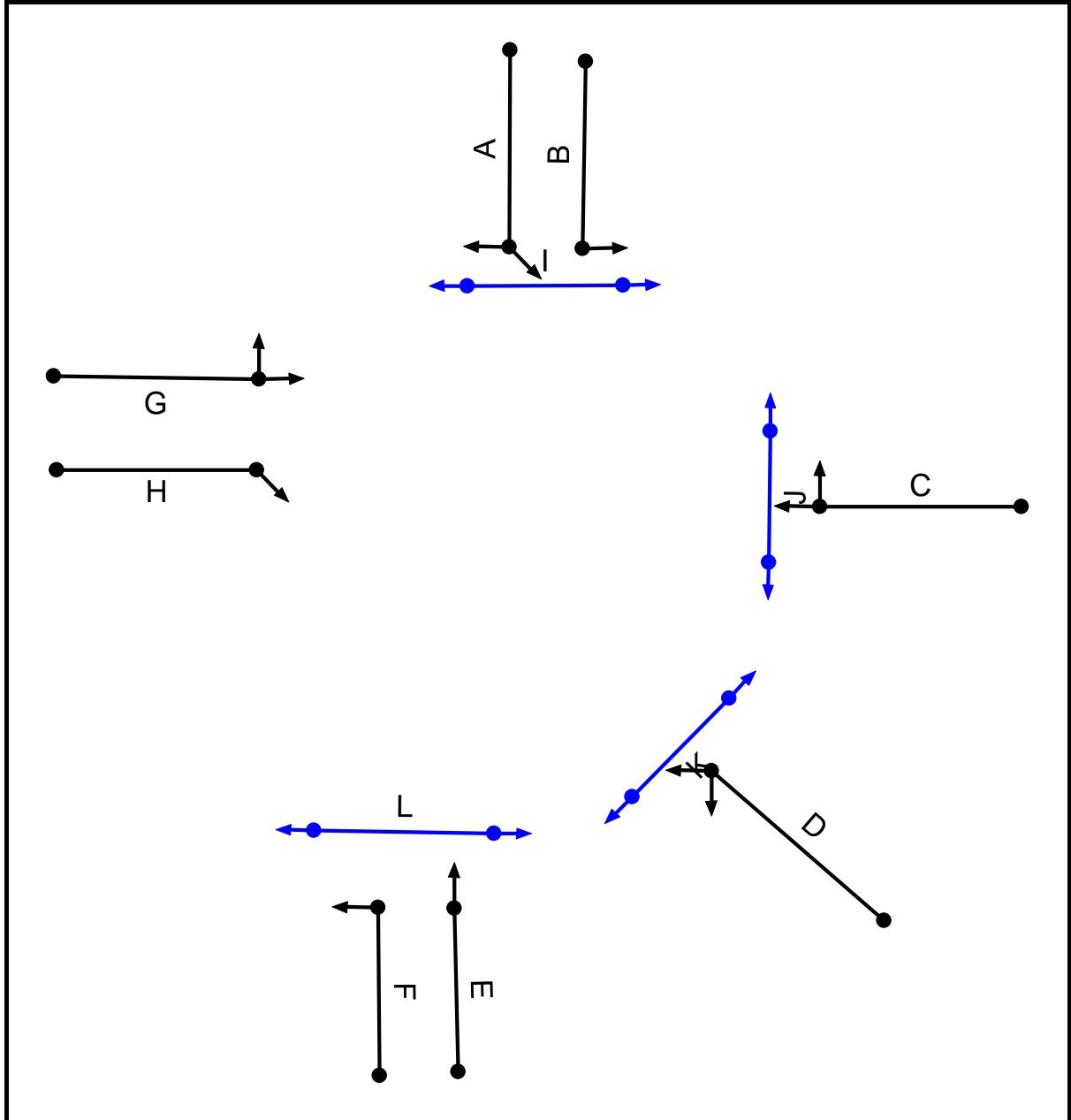
### User and Project Details

<b>Project:</b>	T12.172 Herbert Road, Newport
<b>Title:</b>	Transport Assessment
<b>Location:</b>	Clarence Pl/East Usk Rd/Church Rd/Chepstow Rd/Corporation Rd
<b>File name:</b>	Clarance place signalised jct.lsgx
<b>Author:</b>	Transport Planner
<b>Company:</b>	
<b>Address:</b>	
<b>Controller:</b>	Generic
<b>SCN:</b>	
<b>Notes:</b>	

### Junction Layout Diagram



### Phase Diagram



**Phase Input Data**

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Traffic		7	7
H	Traffic		7	7
I	Pedestrian		7	7
J	Pedestrian		7	7
K	Pedestrian		7	7
L	Pedestrian		7	7

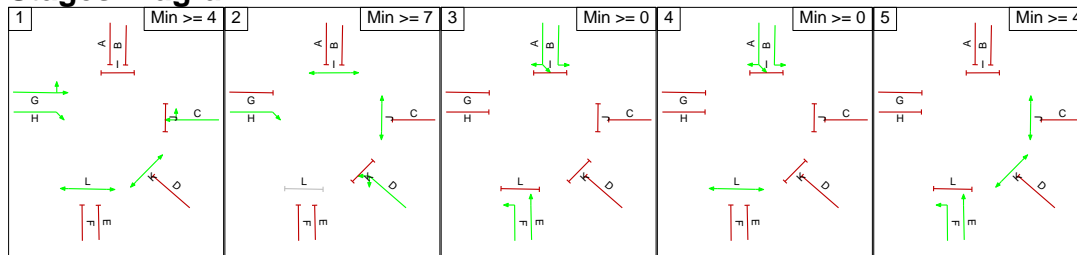
**Phase Intergreens Matrix**

	Starting Phase											
	A	B	C	D	E	F	G	H	I	J	K	L
Terminating Phase	A	-	5	7	-	-	5	5	5	-	8	-
B	-	-	-	-	-	-	5	-	5	5	-	-
C	5	-	-	6	6	6	-	-	6	5	-	-
D	6	-	6	-	5	6	-	-	-	-	5	-
E	-	-	6	5	-	-	5	5	8	-	-	5
F	-	-	6	6	-	-	-	-	-	-	-	5
G	5	6	-	-	5	-	-	-	5	6	-	-
H	5	-	-	-	5	-	-	-	-	-	-	-
I	5	5	6	-	8	-	5	-	-	-	-	-
J	-	5	5	-	-	-	5	-	-	-	-	-
K	8	-	-	5	-	-	-	-	-	-	-	-
L	-	-	-	-	5	5	-	-	-	-	-	-

### Phases in Stage

Stage No.	Phases in Stage
1	C G H K L
2	D H I J
3	A B E F
4	A B L
5	E F J K

### Stages Diagram



### Phase Delays

There are no phase delays defined in this stage stream

### Prohibited Stage Changes

From Stage	To Stage				
	1	2	3	4	5
1		6	8	8	6
2	6		8	6	8
3	8	8		5	8
4	8	7	5		8
5	6	8	8	8	

Full Input Data And Results

**Link Input Data**

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	East Usk Road (entry) Left	U	1	B	2	3
1/2	East Usk Road (entry) Ahead Right	U	1	A	2	3
2/1	East Usk Road (exit)	U	1		2	3
3/1	Church Road (entry) Right Ahead	O	1	C	2	3
4/1	Church Road (exit)	U	1		2	3
5/1	Chepstow Road (entry) U-Turn Ahead	U	1	D	2	3
6/1	Chepstow Road (exit)	U	1		2	3
7/1	Corporation Road (entry) Left	U	1	F	2	3
7/2	Corporation Road (entry) Ahead	U	1	E	2	3
8/1	Corporation Road (exit)	U	1		2	3
9/1	Clarence Place (entry) Left Ahead	U	1	G	2	3
9/2	Clarence Place (entry) Right	U	1	H	2	3
10/1	Clarence Place (exit)	U	1		2	3

Full Input Data And Results

**Give-Way Link Input Data**

Arm/ Link	Link Name	Movement	Max Flow when Giving Way (PCU/Hr)	Opposing Link	Opp. Link Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non- Blocking Storage (PCU)	RTF	Right Turn Move up time (s)	Max Turns in Intergreen (PCU)
3/1	Church Road (entry) Right Ahead	3/1 to 2/1	1440	9/1	1.09	9/1	2.00	2.00	0.50	2	2.00

**Lane Input Data**

Arm/ Lane	Link Num	Physic al Lengt h (PCU)	Expect ed Usage (PCU)	Sat Flo w Typ e	User Saturati on Flow (PCU/Hr )	Lan e Widt h (m)	Gradie nt	Nearsi de Lane	Allowed Turns	Turni ng Radiu s (m)
1/1 (East Usk Road (entry) Lane 1)	Link 1 (East Usk Road (entry) Left)	Inf	Inf	Geo m	1800	2.38	0.00	Y	Arm 4 Left (Church Road (exit))	Inf
1/2 (East Usk Road (entry) Lane 2)	Link 2 (East Usk Road (entry) Ahead Right)	Inf	Inf	Geo m	1800	2.57	0.00	N	Arm 6 Ahead (Chepsto w Road (exit))	Inf
									Arm 10 Right (Clarence Place (exit))	Inf
2/1 (East Usk Road (exit) Lane 1)	Link 1 (East Usk Road (exit))	Inf	Inf	Inf (Exit )	1800	3.25	0.00	Y		
3/1 (Church Road (entry) Lane 1)	Link 1 (Church Road (entry) Right Ahead)	Inf	Inf	Geo m	1800	4.46	0.00	Y	Arm 2 Right (East Usk Road (exit))	Inf
									Arm 10 Ahead (Clarence Place (exit))	Inf
4/1 (Church Road (exit) Lane 1)	Link 1 (Church Road (exit))	Inf	Inf	Inf (Exit )	1800	3.25	0.00	Y		
5/1 (Chepsto w Road (entry) Lane 1)	Link 1 (Chepsto w Road (entry) U- Turn Ahead)	Inf	Inf	Geo m	1800	3.77	0.00	Y	Arm 8 U- Turn (Corporati on Road (exit))	Inf
									Arm 10 Ahead (Clarence Place (exit))	Inf
6/1 (Chepsto w Road (exit) Lane 1)	Link 1 (Chepsto w Road (exit))	Inf	Inf	Inf (Exit )	1800	3.25	0.00	Y		

## Full Input Data And Results

7/1 (Corporation Road (entry) Lane 1)	Link 1 (Corporation Road (entry) Left)	Inf	Inf	Geom	1800	3.55	0.00	Y	Arm 10 Left (Clarence Place (exit))	Inf
7/2 (Corporation Road (entry) Lane 2)	Link 2 (Corporation Road (entry) Ahead)	Inf	Inf	Geom	1800	4.16	0.00	N	Arm 2 Ahead (East Usk Road (exit))	Inf
8/1 (Corporation Road (exit) Lane 1)	Link 1 (Corporation Road (exit))	Inf	Inf	Inf (Exit)	1800	3.25	0.00	Y		
9/1 (Clarence Place (entry) Lane 1)	Link 1 (Clarence Place (entry) Left Ahead)	Inf	Inf	Geom	1800	3.97	0.00	Y	Arm 2 Left (East Usk Road (exit))	Inf
									Arm 4 Ahead (Church Road (exit))	Inf
9/2 (Clarence Place (entry) Lane 2)	Link 2 (Clarence Place (entry) Right)	Inf	Inf	Geom	1800	4.40	0.00	N	Arm 6 Right (Chepstow Road (exit))	Inf
10/1 (Clarence Place (exit) Lane 1)	Link 1 (Clarence Place (exit))	Inf	Inf	Inf (Exit)	1800	3.25	0.00	Y		

## Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2013 no dev AM 0830-0930'	08:30	09:30	01:00	
2: '2013 no dev PM 1700-1800'	17:00	18:00	01:00	
3: '2017 no dev AM 0830-0930'	08:30	09:30	01:00	
4: '2017 no dev PM 1700-1800'	17:00	18:00	01:00	
5: '2022 no dev AM 0830-0930'	08:30	09:30	01:00	
6: '2022 no dev PM 1700-1800'	17:00	18:00	01:00	
7: '2017 with dev AM 0830-0930'	08:30	09:30	01:00	
8: '2017 with dev PM 1700-1800'	17:00	18:00	01:00	
9: '2022 with dev AM 0830-0930'	08:30	09:30	01:00	
10: '2022 with dev PM 1700-1800'	17:00	18:00	01:00	

**Flow Group 1: '2013 no dev AM 0830-0930'**  
**Traffic Flow Matrix**  
**Desired Flow :**

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	13	5	0	29	47
	B	6	0	0	0	321	327
	C	0	0	0	12	297	309
	D	5	0	0	0	138	143
	E	24	362	561	0	0	947
	Tot.	35	375	566	12	785	1773

**Link Traffic Flows**

Arm/Link	Flow Group 1: 2013 no dev AM 0830-0930
1/1	13
1/2	34
2/1	35
3/1	327
4/1	375
5/1	309
6/1	566
7/1	138
7/2	5
8/1	12
9/1	386
9/2	561
10/1	785

**Lane Saturation Flows**

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (East Usk Road (entry) Lane 1)	2.38	0.00	Y	Arm 4 Left (Church Road exit)	Inf	100.0 %	1853
1/2 (East Usk Road (entry) Lane 2)	2.57	0.00	N	Arm 6 Ahead (Chepstow Road exit)  Arm 10 Right (Clarence Place exit)	Inf  Inf	14.7 %  85.3 %	2012
2/1 (East Usk Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
3/1 (Church Road (entry) Lane 1)	4.46	0.00	Y	Arm 2 Right (East Usk Road exit)	Inf	1.8 %	2061
4/1 (Church Road (exit) Lane 1)				Arm 10 Ahead (Clarence Place exit)	Inf	98.2 %	
5/1 (Chepstow Road (entry) Lane 1)	3.77	0.00	Y	Arm 8 U-Turn (Corporation Road exit)	Inf	3.9 %	1992
6/1 (Chepstow Road (exit) Lane 1)				Arm 10 Ahead (Clarence Place exit)	Inf	96.1 %	
7/1 (Corporation Road (entry) Lane 1)	3.55	0.00	Y	Arm 10 Left (Clarence Place exit)	Inf	100.0 %	1970
7/2 (Corporation Road (entry) Lane 2)	4.16	0.00	N	Arm 2 Ahead (East Usk Road exit)	Inf	100.0 %	2171
8/1 (Corporation Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
9/1 (Clarence Place (entry) Lane 1)	3.97	0.00	Y	Arm 2 Left (East Usk Road exit)	Inf	6.2 %	2012
9/2 (Clarence Place (entry) Lane 2)				Arm 4 Ahead (Church Road exit)	Inf	93.8 %	
	4.40	0.00	N	Arm 6 Right (Chepstow Road exit)	Inf	100.0 %	2195

Full Input Data And Results

10/1 (Clarence Place (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)	Inf
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**Flow Group 2: '2013 no dev PM 1700-1800'**

**Traffic Flow Matrix**

**Desired Flow :**

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	20	13	0	49	82
	B	6	0	0	0	259	265
	C	0	0	0	16	299	315
	D	14	0	0	0	180	194
	E	20	559	683	0	0	1262
	Tot.	40	579	696	16	787	2118

**Link Traffic Flows**

Arm/Link	Flow Group 2: 2013 no dev PM 1700-1800
1/1	20
1/2	62
2/1	40
3/1	265
4/1	579
5/1	315
6/1	696
7/1	180
7/2	14
8/1	16
9/1	579
9/2	683
10/1	787

**Lane Saturation Flows**

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (East Usk Road (entry) Lane 1)	2.38	0.00	Y	Arm 4 Left (Church Road exit)	Inf	100.0 %	1853
1/2 (East Usk Road (entry) Lane 2)	2.57	0.00	N	Arm 6 Ahead (Chepstow Road exit)  Arm 10 Right (Clarence Place exit)	Inf  Inf	21.0 %  79.0 %	2012
2/1 (East Usk Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
3/1 (Church Road (entry) Lane 1)	4.46	0.00	Y	Arm 2 Right (East Usk Road exit)  Arm 10 Ahead (Clarence Place exit)	Inf  Inf	2.3 %  97.7 %	2061
4/1 (Church Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
5/1 (Chepstow Road (entry) Lane 1)	3.77	0.00	Y	Arm 8 U-Turn (Corporation Road exit)  Arm 10 Ahead (Clarence Place exit)	Inf  Inf	5.1 %  94.9 %	1992
6/1 (Chepstow Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
7/1 (Corporation Road (entry) Lane 1)	3.55	0.00	Y	Arm 10 Left (Clarence Place exit)	Inf	100.0 %	1970
7/2 (Corporation Road (entry) Lane 2)	4.16	0.00	N	Arm 2 Ahead (East Usk Road exit)	Inf	100.0 %	2171
8/1 (Corporation Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
9/1 (Clarence Place (entry) Lane 1)	3.97	0.00	Y	Arm 2 Left (East Usk Road exit)  Arm 4 Ahead (Church Road exit)	Inf  Inf	3.5 %  96.5 %	2012
9/2 (Clarence Place (entry) Lane 2)	4.40	0.00	N	Arm 6 Right (Chepstow Road exit)	Inf	100.0 %	2195

Full Input Data And Results

10/1 (Clarence Place (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)	Inf
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**Flow Group 3: '2017 no dev AM 0830-0930'**

**Traffic Flow Matrix**

**Desired Flow :**

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	14	5	0	31	50
	B	6	0	0	0	339	345
	C	0	0	0	13	313	326
	D	5	0	0	0	146	151
	E	26	382	591	0	0	999
	Tot.	37	396	596	13	829	1871

**Link Traffic Flows**

Arm/Link	Flow Group 3: 2017 no dev AM 0830-0930
1/1	14
1/2	36
2/1	37
3/1	345
4/1	396
5/1	326
6/1	596
7/1	146
7/2	5
8/1	13
9/1	408
9/2	591
10/1	829

**Lane Saturation Flows**

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (East Usk Road (entry) Lane 1)	2.38	0.00	Y	Arm 4 Left (Church Road exit)	Inf	100.0 %	1853
1/2 (East Usk Road (entry) Lane 2)	2.57	0.00	N	Arm 6 Ahead (Chepstow Road exit)  Arm 10 Right (Clarence Place exit)	Inf  Inf	13.9 %  86.1 %	2012
2/1 (East Usk Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
3/1 (Church Road (entry) Lane 1)	4.46	0.00	Y	Arm 2 Right (East Usk Road exit)	Inf	1.7 %	2061
4/1 (Church Road (exit) Lane 1)				Arm 10 Ahead (Clarence Place exit)	Inf	98.3 %	
5/1 (Chepstow Road (entry) Lane 1)	3.77	0.00	Y	Arm 8 U-Turn (Corporation Road exit)	Inf	4.0 %	1992
6/1 (Chepstow Road (exit) Lane 1)				Arm 10 Ahead (Clarence Place exit)	Inf	96.0 %	
7/1 (Corporation Road (entry) Lane 1)	3.55	0.00	Y	Arm 10 Left (Clarence Place exit)	Inf	100.0 %	1970
7/2 (Corporation Road (entry) Lane 2)	4.16	0.00	N	Arm 2 Ahead (East Usk Road exit)	Inf	100.0 %	2171
8/1 (Corporation Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
9/1 (Clarence Place (entry) Lane 1)	3.97	0.00	Y	Arm 2 Left (East Usk Road exit)	Inf	6.4 %	2012
9/2 (Clarence Place (entry) Lane 2)				Arm 4 Ahead (Church Road exit)	Inf	93.6 %	
	4.40	0.00	N	Arm 6 Right (Chepstow Road exit)	Inf	100.0 %	2195

Full Input Data And Results

10/1 (Clarence Place (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)	Inf
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**Flow Group 4: '2017 no dev PM 1700-1800'**

**Traffic Flow Matrix**

**Desired Flow :**

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	21	14	0	52	87
	B	6	0	0	0	272	278
	C	0	0	0	17	315	332
	D	15	0	0	0	190	205
	E	21	589	719	0	0	1329
	Tot.	42	610	733	17	829	2231

**Link Traffic Flows**

Arm/Link	Flow Group 4: 2017 no dev PM 1700-1800
1/1	21
1/2	66
2/1	42
3/1	278
4/1	610
5/1	332
6/1	733
7/1	190
7/2	15
8/1	17
9/1	610
9/2	719
10/1	829

## Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (East Usk Road (entry) Lane 1)	2.38	0.00	Y	Arm 4 Left (Church Road exit)	Inf	100.0 %	1853
1/2 (East Usk Road (entry) Lane 2)	2.57	0.00	N	Arm 6 Ahead (Chepstow Road exit)  Arm 10 Right (Clarence Place exit)	Inf  Inf	21.2 %  78.8 %	2012
2/1 (East Usk Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
3/1 (Church Road (entry) Lane 1)	4.46	0.00	Y	Arm 2 Right (East Usk Road exit)	Inf	2.2 %	2061
4/1 (Church Road (exit) Lane 1)				Arm 10 Ahead (Clarence Place exit)	Inf	97.8 %	
5/1 (Chepstow Road (entry) Lane 1)	3.77	0.00	Y	Arm 8 U-Turn (Corporation Road exit)	Inf	5.1 %	1992
6/1 (Chepstow Road (exit) Lane 1)				Arm 10 Ahead (Clarence Place exit)	Inf	94.9 %	
7/1 (Corporation Road (entry) Lane 1)	3.55	0.00	Y	Arm 10 Left (Clarence Place exit)	Inf	100.0 %	1970
7/2 (Corporation Road (entry) Lane 2)	4.16	0.00	N	Arm 2 Ahead (East Usk Road exit)	Inf	100.0 %	2171
8/1 (Corporation Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
9/1 (Clarence Place (entry) Lane 1)	3.97	0.00	Y	Arm 2 Left (East Usk Road exit)	Inf	3.4 %	2012
9/2 (Clarence Place (entry) Lane 2)				Arm 4 Ahead (Church Road exit)	Inf	96.6 %	
	4.40	0.00	N	Arm 6 Right (Chepstow Road exit)	Inf	100.0 %	2195

Full Input Data And Results

10/1 (Clarence Place (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)	Inf
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**Flow Group 5: '2022 no dev AM 0830-0930'**

**Traffic Flow Matrix**

**Desired Flow :**

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	15	6	0	33	54
	B	7	0	0	0	369	376
	C	0	0	0	14	341	355
	D	6	0	0	0	159	165
	E	28	416	644	0	0	1088
	Tot.	41	431	650	14	902	2038

**Link Traffic Flows**

Arm/Link	Flow Group 5: 2022 no dev AM 0830-0930
1/1	15
1/2	39
2/1	41
3/1	376
4/1	431
5/1	355
6/1	650
7/1	159
7/2	6
8/1	14
9/1	444
9/2	644
10/1	902

**Lane Saturation Flows**

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (East Usk Road (entry) Lane 1)	2.38	0.00	Y	Arm 4 Left (Church Road exit)	Inf	100.0 %	1853
1/2 (East Usk Road (entry) Lane 2)	2.57	0.00	N	Arm 6 Ahead (Chepstow Road exit)  Arm 10 Right (Clarence Place exit)	Inf  Inf	15.4 %  84.6 %	2012
2/1 (East Usk Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
3/1 (Church Road (entry) Lane 1)	4.46	0.00	Y	Arm 2 Right (East Usk Road exit)  Arm 10 Ahead (Clarence Place exit)	Inf  Inf	1.9 %  98.1 %	2061
4/1 (Church Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
5/1 (Chepstow Road (entry) Lane 1)	3.77	0.00	Y	Arm 8 U-Turn (Corporation Road exit)  Arm 10 Ahead (Clarence Place exit)	Inf  Inf	3.9 %  96.1 %	1992
6/1 (Chepstow Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
7/1 (Corporation Road (entry) Lane 1)	3.55	0.00	Y	Arm 10 Left (Clarence Place exit)	Inf	100.0 %	1970
7/2 (Corporation Road (entry) Lane 2)	4.16	0.00	N	Arm 2 Ahead (East Usk Road exit)	Inf	100.0 %	2171
8/1 (Corporation Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
9/1 (Clarence Place (entry) Lane 1)	3.97	0.00	Y	Arm 2 Left (East Usk Road exit)  Arm 4 Ahead (Church Road exit)	Inf  Inf	6.3 %  93.7 %	2012
9/2 (Clarence Place (entry) Lane 2)	4.40	0.00	N	Arm 6 Right (Chepstow Road exit)	Inf	100.0 %	2195

Full Input Data And Results

10/1 (Clarence Place (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)	Inf
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**Flow Group 6: '2022 no dev PM 1700-1800'**

**Traffic Flow Matrix**

**Desired Flow :**

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	23	15	0	56	94
	B	7	0	0	0	296	303
	C	0	0	0	18	342	360
	D	16	0	0	0	206	222
	E	23	639	780	0	0	1442
	Tot.	46	662	795	18	900	2421

**Link Traffic Flows**

Arm/Link	Flow Group 6: 2022 no dev PM 1700-1800
1/1	23
1/2	71
2/1	46
3/1	303
4/1	662
5/1	360
6/1	795
7/1	206
7/2	16
8/1	18
9/1	662
9/2	780
10/1	900

## Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (East Usk Road (entry) Lane 1)	2.38	0.00	Y	Arm 4 Left (Church Road exit)	Inf	100.0 %	1853
1/2 (East Usk Road (entry) Lane 2)	2.57	0.00	N	Arm 6 Ahead (Chepstow Road exit)  Arm 10 Right (Clarence Place exit)	Inf  Inf	21.1 %  78.9 %	2012
2/1 (East Usk Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
3/1 (Church Road (entry) Lane 1)	4.46	0.00	Y	Arm 2 Right (East Usk Road exit)  Arm 10 Ahead (Clarence Place exit)	Inf  Inf	2.3 %  97.7 %	2061
4/1 (Church Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
5/1 (Chepstow Road entry) Lane 1)	3.77	0.00	Y	Arm 8 U-Turn (Corporation Road exit)  Arm 10 Ahead (Clarence Place exit)	Inf  Inf	5.0 %  95.0 %	1992
6/1 (Chepstow Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
7/1 (Corporation Road entry) Lane 1)	3.55	0.00	Y	Arm 10 Left (Clarence Place exit)	Inf	100.0 %	1970
7/2 (Corporation Road entry) Lane 2)	4.16	0.00	N	Arm 2 Ahead (East Usk Road exit)	Inf	100.0 %	2171
8/1 (Corporation Road exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
9/1 (Clarence Place (entry) Lane 1)	3.97	0.00	Y	Arm 2 Left (East Usk Road exit)  Arm 4 Ahead (Church Road exit)	Inf  Inf	3.5 %  96.5 %	2012
9/2 (Clarence Place (entry) Lane 2)	4.40	0.00	N	Arm 6 Right (Chepstow Road exit)	Inf	100.0 %	2195

Full Input Data And Results

10/1 (Clarence Place (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)	Inf
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**Flow Group 7: '2017 with dev AM 0830-0930'**

**Traffic Flow Matrix**

**Desired Flow :**

		Destination					
Origin		A	B	C	D	E	Tot.
	A	0	14	5	0	31	50
	B	6	0	0	0	390	396
	C	0	0	0	13	313	326
	D	5	0	0	0	146	151
	E	26	407	591	0	0	1024
	Tot.	37	421	596	13	880	1947

**Link Traffic Flows**

Arm/Link	Flow Group 7: 2017 with dev AM 0830-0930
1/1	14
1/2	36
2/1	37
3/1	396
4/1	421
5/1	326
6/1	596
7/1	146
7/2	5
8/1	13
9/1	433
9/2	591
10/1	880

**Lane Saturation Flows**

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (East Usk Road (entry) Lane 1)	2.38	0.00	Y	Arm 4 Left (Church Road exit)	Inf	100.0 %	1853
1/2 (East Usk Road (entry) Lane 2)	2.57	0.00	N	Arm 6 Ahead (Chepstow Road exit)  Arm 10 Right (Clarence Place exit)	Inf  Inf	13.9 %  86.1 %	2012
2/1 (East Usk Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
3/1 (Church Road (entry) Lane 1)	4.46	0.00	Y	Arm 2 Right (East Usk Road exit)  Arm 10 Ahead (Clarence Place exit)	Inf  Inf	1.5 %  98.5 %	2061
4/1 (Church Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
5/1 (Chepstow Road (entry) Lane 1)	3.77	0.00	Y	Arm 8 U-Turn (Corporation Road exit)  Arm 10 Ahead (Clarence Place exit)	Inf  Inf	4.0 %  96.0 %	1992
6/1 (Chepstow Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
7/1 (Corporation Road (entry) Lane 1)	3.55	0.00	Y	Arm 10 Left (Clarence Place exit)	Inf	100.0 %	1970
7/2 (Corporation Road (entry) Lane 2)	4.16	0.00	N	Arm 2 Ahead (East Usk Road exit)	Inf	100.0 %	2171
8/1 (Corporation Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
9/1 (Clarence Place (entry) Lane 1)	3.97	0.00	Y	Arm 2 Left (East Usk Road exit)  Arm 4 Ahead (Church Road exit)	Inf  Inf	6.0 %  94.0 %	2012
9/2 (Clarence Place (entry) Lane 2)	4.40	0.00	N	Arm 6 Right (Chepstow Road exit)	Inf	100.0 %	2195

Full Input Data And Results

10/1 (Clarence Place (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)	Inf
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**Flow Group 8: '2017 with dev PM 1700-1800'**

**Traffic Flow Matrix**

**Desired Flow :**

		Destination					
Origin		A	B	C	D	E	Tot.
	A	0	21	14	0	52	87
	B	6	0	0	0	299	305
	C	0	0	0	17	315	332
	D	15	0	0	0	190	205
	E	21	642	719	0	0	1382
	Tot.	42	663	733	17	856	2311

**Link Traffic Flows**

Arm/Link	Flow Group 8: 2017 with dev PM 1700-1800
1/1	21
1/2	66
2/1	42
3/1	305
4/1	663
5/1	332
6/1	733
7/1	190
7/2	15
8/1	17
9/1	663
9/2	719
10/1	856

**Lane Saturation Flows**

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (East Usk Road (entry) Lane 1)	2.38	0.00	Y	Arm 4 Left (Church Road exit)	Inf	100.0 %	1853
1/2 (East Usk Road (entry) Lane 2)	2.57	0.00	N	Arm 6 Ahead (Chepstow Road exit)  Arm 10 Right (Clarence Place exit)	Inf  Inf	21.2 %  78.8 %	2012
2/1 (East Usk Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
3/1 (Church Road (entry) Lane 1)	4.46	0.00	Y	Arm 2 Right (East Usk Road exit)  Arm 10 Ahead (Clarence Place exit)	Inf  Inf	2.0 %  98.0 %	2061
4/1 (Church Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
5/1 (Chepstow Road (entry) Lane 1)	3.77	0.00	Y	Arm 8 U-Turn (Corporation Road exit)  Arm 10 Ahead (Clarence Place exit)	Inf  Inf	5.1 %  94.9 %	1992
6/1 (Chepstow Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
7/1 (Corporation Road (entry) Lane 1)	3.55	0.00	Y	Arm 10 Left (Clarence Place exit)	Inf	100.0 %	1970
7/2 (Corporation Road (entry) Lane 2)	4.16	0.00	N	Arm 2 Ahead (East Usk Road exit)	Inf	100.0 %	2171
8/1 (Corporation Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
9/1 (Clarence Place (entry) Lane 1)	3.97	0.00	Y	Arm 2 Left (East Usk Road exit)  Arm 4 Ahead (Church Road exit)	Inf  Inf	3.2 %  96.8 %	2012
9/2 (Clarence Place (entry) Lane 2)	4.40	0.00	N	Arm 6 Right (Chepstow Road exit)	Inf	100.0 %	2195

Full Input Data And Results

10/1 (Clarence Place (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)	Inf
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**Flow Group 9: '2022 with dev AM 0830-0930'**

**Traffic Flow Matrix**

**Desired Flow :**

		Destination					
Origin		A	B	C	D	E	Tot.
		A	0	15	6	0	33
	B	7	0	0	0	421	428
	C	0	0	0	14	341	355
	D	16	0	0	0	159	175
	E	28	441	644	0	0	1113
	Tot.	51	456	650	14	954	2125

**Link Traffic Flows**

Arm/Link	Flow Group 9: 2022 with dev AM 0830-0930
1/1	15
1/2	39
2/1	51
3/1	428
4/1	456
5/1	355
6/1	650
7/1	159
7/2	16
8/1	14
9/1	469
9/2	644
10/1	954

**Lane Saturation Flows**

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (East Usk Road (entry) Lane 1)	2.38	0.00	Y	Arm 4 Left (Church Road exit)	Inf	100.0 %	1853
1/2 (East Usk Road (entry) Lane 2)	2.57	0.00	N	Arm 6 Ahead (Chepstow Road exit)  Arm 10 Right (Clarence Place exit)	Inf  Inf	15.4 %  84.6 %	2012
2/1 (East Usk Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
3/1 (Church Road (entry) Lane 1)	4.46	0.00	Y	Arm 2 Right (East Usk Road exit)  Arm 10 Ahead (Clarence Place exit)	Inf  Inf	1.6 %  98.4 %	2061
4/1 (Church Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
5/1 (Chepstow Road (entry) Lane 1)	3.77	0.00	Y	Arm 8 U-Turn (Corporation Road exit)  Arm 10 Ahead (Clarence Place exit)	Inf  Inf	3.9 %  96.1 %	1992
6/1 (Chepstow Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
7/1 (Corporation Road (entry) Lane 1)	3.55	0.00	Y	Arm 10 Left (Clarence Place exit)	Inf	100.0 %	1970
7/2 (Corporation Road (entry) Lane 2)	4.16	0.00	N	Arm 2 Ahead (East Usk Road exit)	Inf	100.0 %	2171
8/1 (Corporation Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
9/1 (Clarence Place (entry) Lane 1)	3.97	0.00	Y	Arm 2 Left (East Usk Road exit)  Arm 4 Ahead (Church Road exit)	Inf  Inf	6.0 %  94.0 %	2012
9/2 (Clarence Place (entry) Lane 2)	4.40	0.00	N	Arm 6 Right (Chepstow Road exit)	Inf	100.0 %	2195

Full Input Data And Results

10/1 (Clarence Place (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)	Inf
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**Flow Group 10: '2022 with dev PM 1700-1800'**

**Traffic Flow Matrix**

**Desired Flow :**

		Destination					
Origin		A	B	C	D	E	Tot.
		A	0	23	15	0	56
	B	7	0	0	0	322	329
	C	0	0	0	18	342	360
	D	16	0	0	0	206	222
	E	23	692	780	0	0	1495
	Tot.	46	715	795	18	926	2500

**Link Traffic Flows**

Arm/Link	Flow Group 10: 2022 with dev PM 1700-1800
1/1	23
1/2	71
2/1	46
3/1	329
4/1	715
5/1	360
6/1	795
7/1	206
7/2	16
8/1	18
9/1	715
9/2	780
10/1	926

## Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (East Usk Road (entry) Lane 1)	2.38	0.00	Y	Arm 4 Left (Church Road exit)	Inf	100.0 %	1853
1/2 (East Usk Road (entry) Lane 2)	2.57	0.00	N	Arm 6 Ahead (Chepstow Road exit)  Arm 10 Right (Clarence Place exit)	Inf  Inf	21.1 %  78.9 %	2012
2/1 (East Usk Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
3/1 (Church Road (entry) Lane 1)	4.46	0.00	Y	Arm 2 Right (East Usk Road exit)  Arm 10 Ahead (Clarence Place exit)	Inf  Inf	2.1 %  97.9 %	2061
4/1 (Church Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
5/1 (Chepstow Road entry) Lane 1)	3.77	0.00	Y	Arm 8 U-Turn (Corporation Road exit)  Arm 10 Ahead (Clarence Place exit)	Inf  Inf	5.0 %  95.0 %	1992
6/1 (Chepstow Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
7/1 (Corporation Road entry) Lane 1)	3.55	0.00	Y	Arm 10 Left (Clarence Place exit)	Inf	100.0 %	1970
7/2 (Corporation Road entry) Lane 2)	4.16	0.00	N	Arm 2 Ahead (East Usk Road exit)	Inf	100.0 %	2171
8/1 (Corporation Road exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
9/1 (Clarence Place (entry) Lane 1)	3.97	0.00	Y	Arm 2 Left (East Usk Road exit)  Arm 4 Ahead (Church Road exit)	Inf  Inf	3.2 %  96.8 %	2012
9/2 (Clarence Place (entry) Lane 2)	4.40	0.00	N	Arm 6 Right (Chepstow Road exit)	Inf	100.0 %	2195

Full Input Data And Results

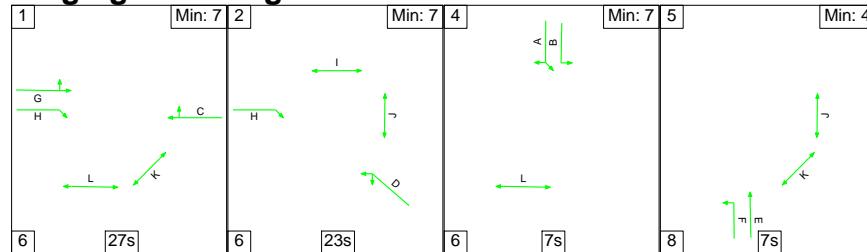
10/1 (Clarence Place (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)	Inf
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**Scenario 1: '2013 no dev Am'**

Staging Plan 1: 'Staging Plan No. 2'

Flow Group 1: '2013 no dev AM 0830-0930'

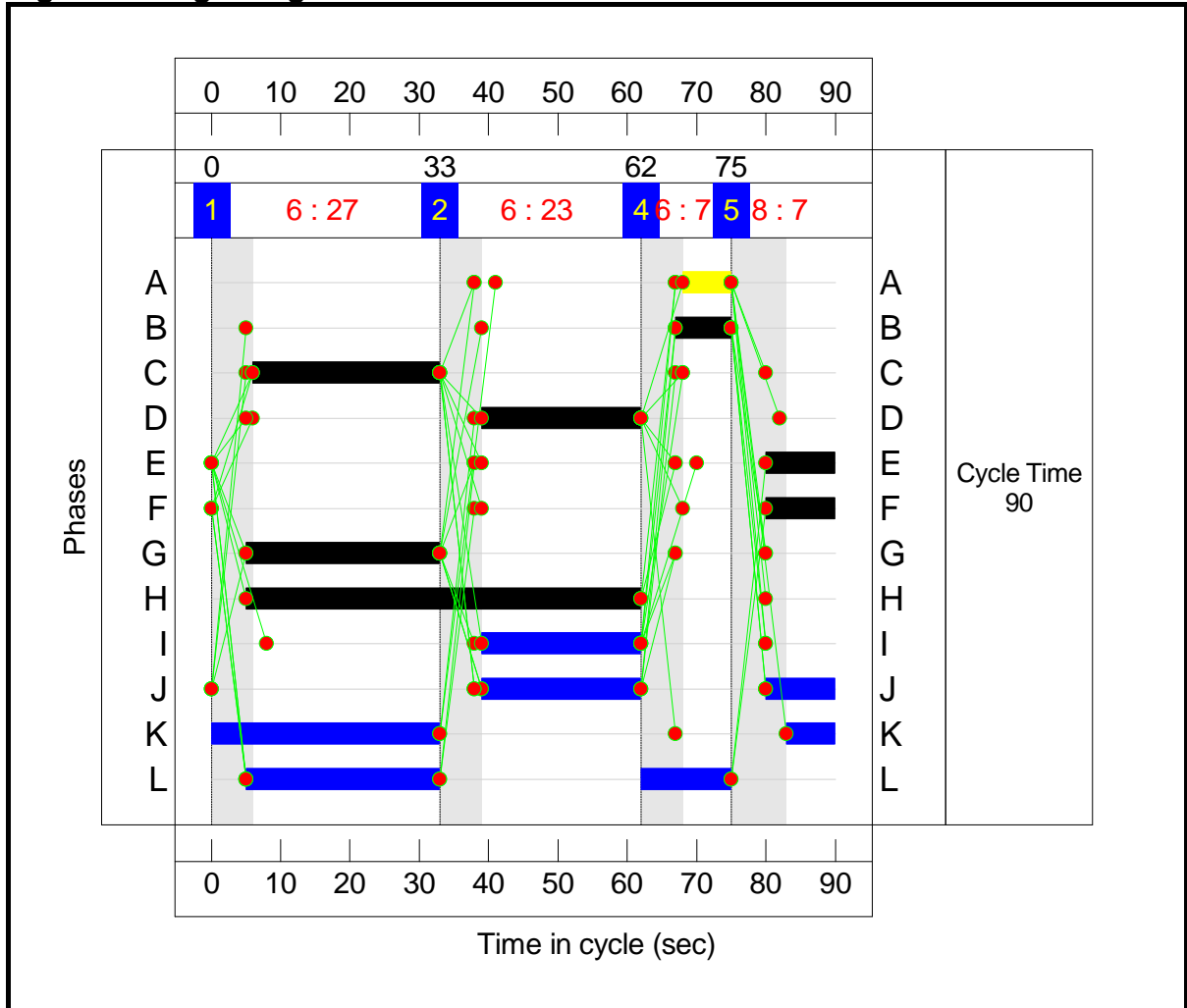
**Staging Plan Diagram**



**Stage Timings**

Stage	1	2	4	5
Duration	27	23	7	7
Change Point	0	33	62	75

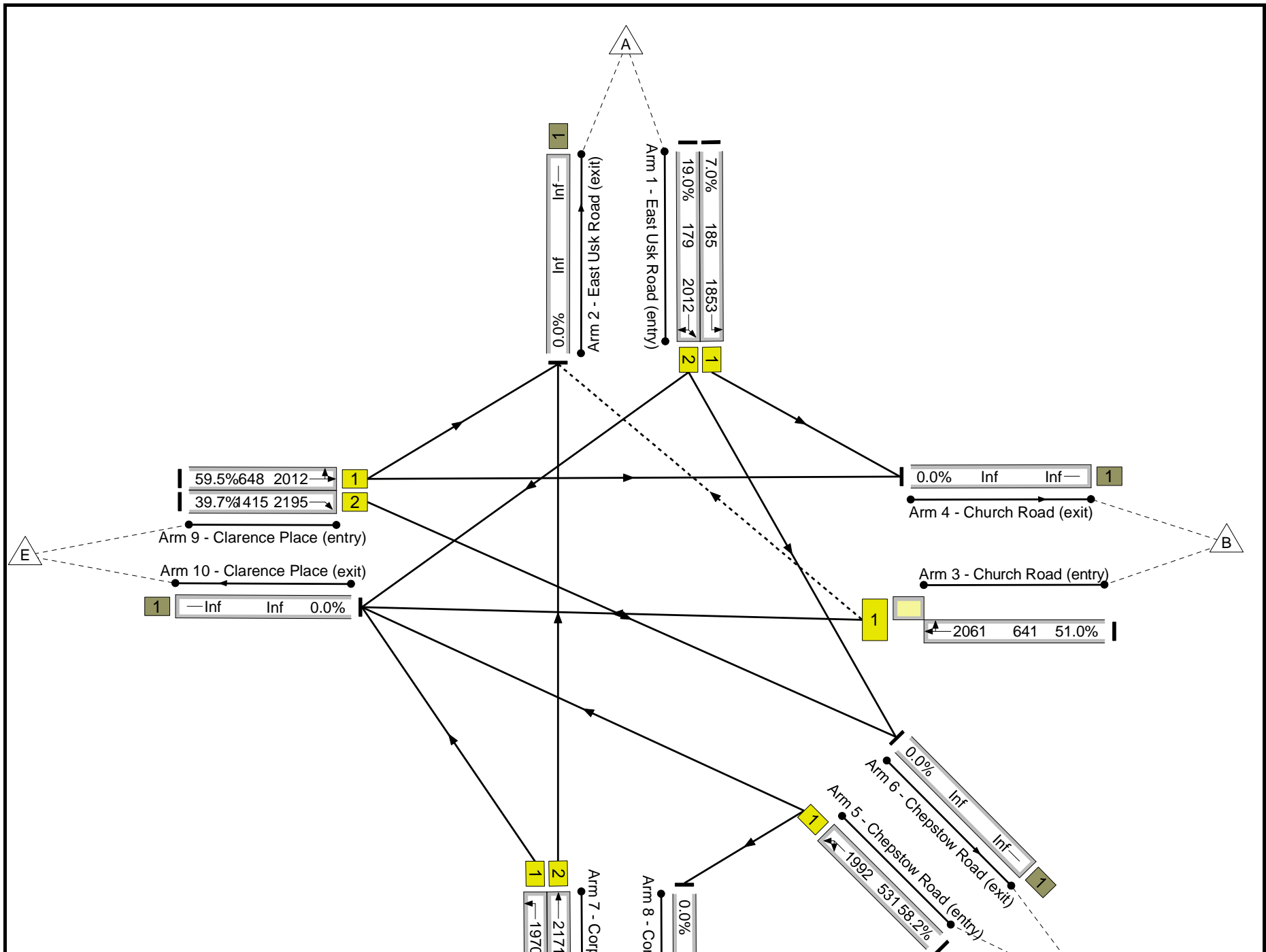
### Signal Timings Diagram



Full Input Data And Results

**Junction Layout Diagram**

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

**Link Results**

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	East Usk Road (entry) Left	U	N/A	N/A	B		1	8	-	13	1853	1853	185	7.0
1/2	East Usk Road (entry) Ahead Right	U	N/A	N/A	A		1	7	-	34	2012	2012	179	19.0
2/1	East Usk Road (exit)	U	N/A	N/A	-		-	-	-	35	Inf	Inf	Inf	0.0
3/1	Church Road (entry) Right Ahead	O	N/A	N/A	C		1	27	-	327	2061	2061	641	51.0
4/1	Church Road (exit)	U	N/A	N/A	-		-	-	-	375	Inf	Inf	Inf	0.0
5/1	Chepstow Road (entry) U-Turn Ahead	U	N/A	N/A	D		1	23	-	309	1992	1992	531	58.2
6/1	Chepstow Road (exit)	U	N/A	N/A	-		-	-	-	566	Inf	Inf	Inf	0.0
7/1	Corporation Road (entry) Left	U	N/A	N/A	F		1	10	-	138	1970	1970	241	57.3
7/2	Corporation Road (entry) Ahead	U	N/A	N/A	E		1	10	-	5	2171	2171	265	1.9
8/1	Corporation Road (exit)	U	N/A	N/A	-		-	-	-	12	Inf	Inf	Inf	0.0
9/1	Clarence Place (entry) Left Ahead	U	N/A	N/A	G		1	28	-	386	2012	2012	648	59.5
9/2	Clarence Place (entry) Right	U	N/A	N/A	H		1	57	-	561	2195	2195	1415	39.7

Full Input Data And Results

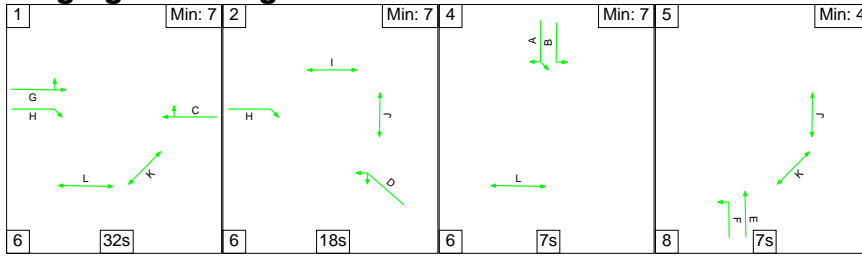
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
10/1	Clarence Place (exit)	U	N/A	N/A	-	-	-	-	-	785	Inf	Inf	Inf	0.0
1/1	13	13	-	-	-	0.1	0.0	-	0.2	47.3	0.3	0.0	0.3	
1/2	34	34	-	-	-	0.4	0.1	-	0.5	50.5	0.8	0.1	0.9	
2/1	35	35	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
3/1	327	327	6	0	0	2.3	0.5	0.0	2.8	31.2	6.6	0.5	7.1	
4/1	375	375	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/1	309	309	-	-	-	2.5	0.7	-	3.1	36.7	6.7	0.7	7.4	
6/1	566	566	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	138	138	-	-	-	1.4	0.7	-	2.1	54.6	3.2	0.7	3.9	
7/2	5	5	-	-	-	0.0	0.0	-	0.1	42.0	0.1	0.0	0.1	
8/1	12	12	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
9/1	386	386	-	-	-	2.7	0.7	-	3.5	32.4	8.0	0.7	8.8	
9/2	561	561	-	-	-	1.2	0.3	-	1.5	9.7	6.5	0.3	6.9	
10/1	785	785	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
PRC for Signalled Links (%):			51.2		Total Delay for Signalled Links (pcuHr):			13.78						
PRC Over All Links (%):			51.2		Total Delay Over All Links(pcuHr):			13.78		Cycle Time (s): 90				

**Scenario 2: '2013 no dev Pm'**

Staging Plan 1: 'Staging Plan No. 2'

Flow Group 2: '2013 no dev PM 1700-1800'

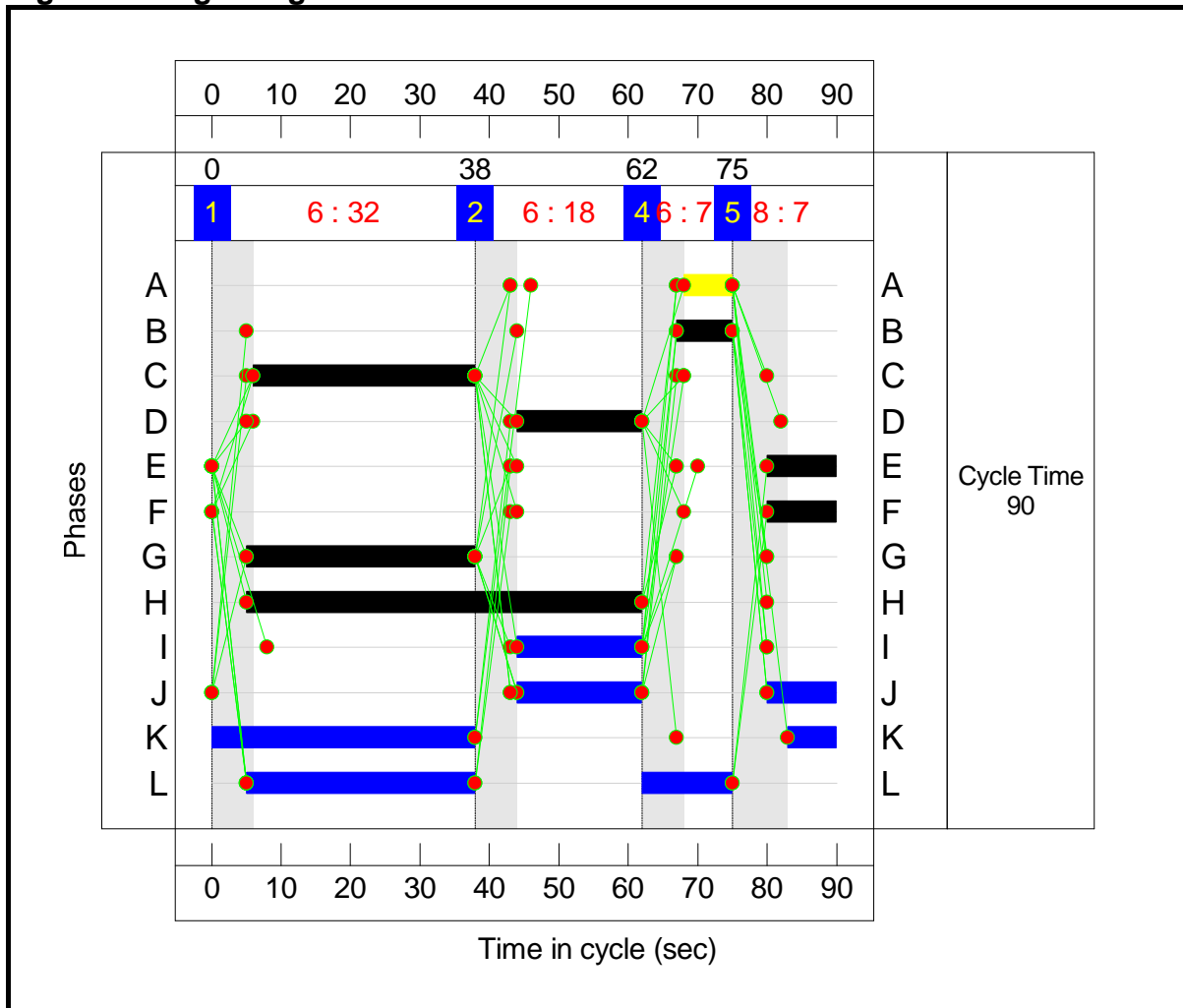
**Staging Plan Diagram**



**Stage Timings**

Stage	1	2	4	5
Duration	32	18	7	7
Change Point	0	38	62	75

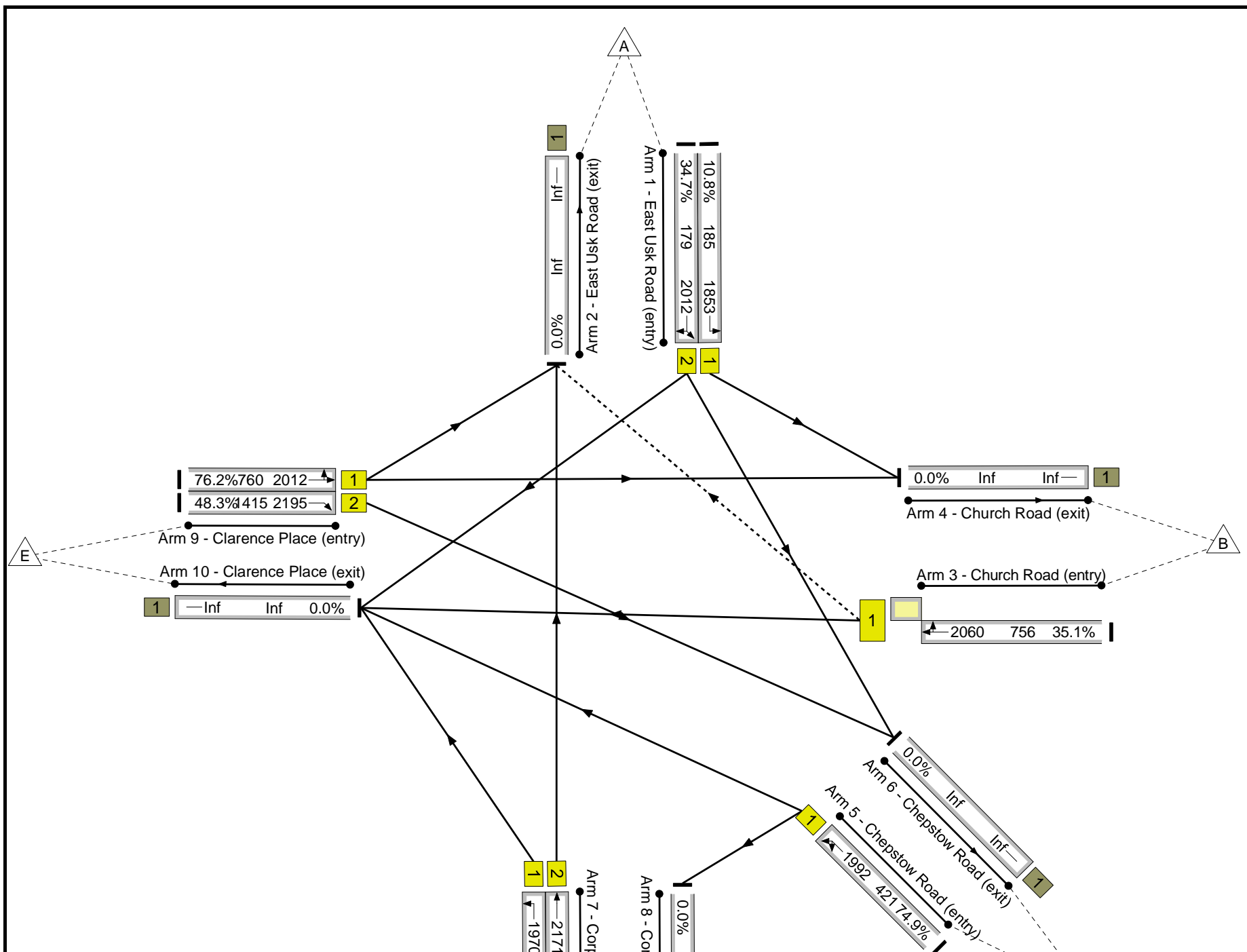
**Signal Timings Diagram**



Full Input Data And Results

**Junction Layout Diagram**

# Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

**Link Results**

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	East Usk Road (entry) Left	U	N/A	N/A	B		1	8	-	20	1853	1853	185	10.8
1/2	East Usk Road (entry) Ahead Right	U	N/A	N/A	A		1	7	-	62	2012	2012	179	34.7
2/1	East Usk Road (exit)	U	N/A	N/A	-		-	-	-	40	Inf	Inf	Inf	0.0
3/1	Church Road (entry) Right Ahead	O	N/A	N/A	C		1	32	-	265	2061	2060	756	35.1
4/1	Church Road (exit)	U	N/A	N/A	-		-	-	-	579	Inf	Inf	Inf	0.0
5/1	Chepstow Road (entry) U-Turn Ahead	U	N/A	N/A	D		1	18	-	315	1992	1992	421	74.9
6/1	Chepstow Road (exit)	U	N/A	N/A	-		-	-	-	696	Inf	Inf	Inf	0.0
7/1	Corporation Road (entry) Left	U	N/A	N/A	F		1	10	-	180	1970	1970	241	74.8
7/2	Corporation Road (entry) Ahead	U	N/A	N/A	E		1	10	-	14	2171	2171	265	5.3
8/1	Corporation Road (exit)	U	N/A	N/A	-		-	-	-	16	Inf	Inf	Inf	0.0
9/1	Clarence Place (entry) Left Ahead	U	N/A	N/A	G		1	33	-	579	2012	2012	760	76.2
9/2	Clarence Place (entry) Right	U	N/A	N/A	H		1	57	-	683	2195	2195	1415	48.3

Full Input Data And Results

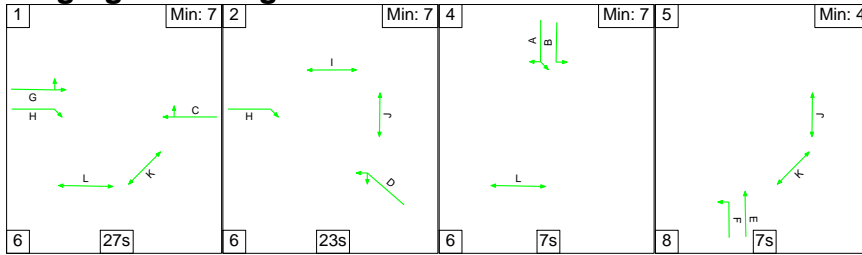
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
10/1	Clarence Place (exit)	U	N/A	N/A	-	-	-	-	-	787	Inf	Inf	Inf	0.0
1/1	20	20	-	-	-	0.2	0.1	-	0.3	47.8	0.5	0.1	0.5	
1/2	62	62	-	-	-	0.7	0.3	-	0.9	53.9	1.4	0.3	1.7	
2/1	40	40	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
3/1	265	265	6	0	0	1.5	0.3	0.0	1.8	24.7	4.8	0.3	5.1	
4/1	579	579	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/1	315	315	-	-	-	2.9	1.5	-	4.4	49.9	7.4	1.5	8.8	
6/1	696	696	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	180	180	-	-	-	1.9	1.4	-	3.3	66.5	4.3	1.4	5.7	
7/2	14	14	-	-	-	0.1	0.0	-	0.2	42.3	0.3	0.0	0.3	
8/1	16	16	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
9/1	579	579	-	-	-	3.9	1.6	-	5.5	34.2	12.5	1.6	14.1	
9/2	683	683	-	-	-	1.6	0.5	-	2.0	10.7	8.7	0.5	9.2	
10/1	787	787	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
PRC for Signalled Links (%):			18.1		Total Delay for Signalled Links (pcuHr):			18.40						
PRC Over All Links (%):			18.1		Total Delay Over All Links(pcuHr):			18.40		Cycle Time (s): 90				

**Scenario 3: '2017 no dev Am'**

Staging Plan 1: 'Staging Plan No. 2'

Flow Group 3: '2017 no dev AM 0830-0930'

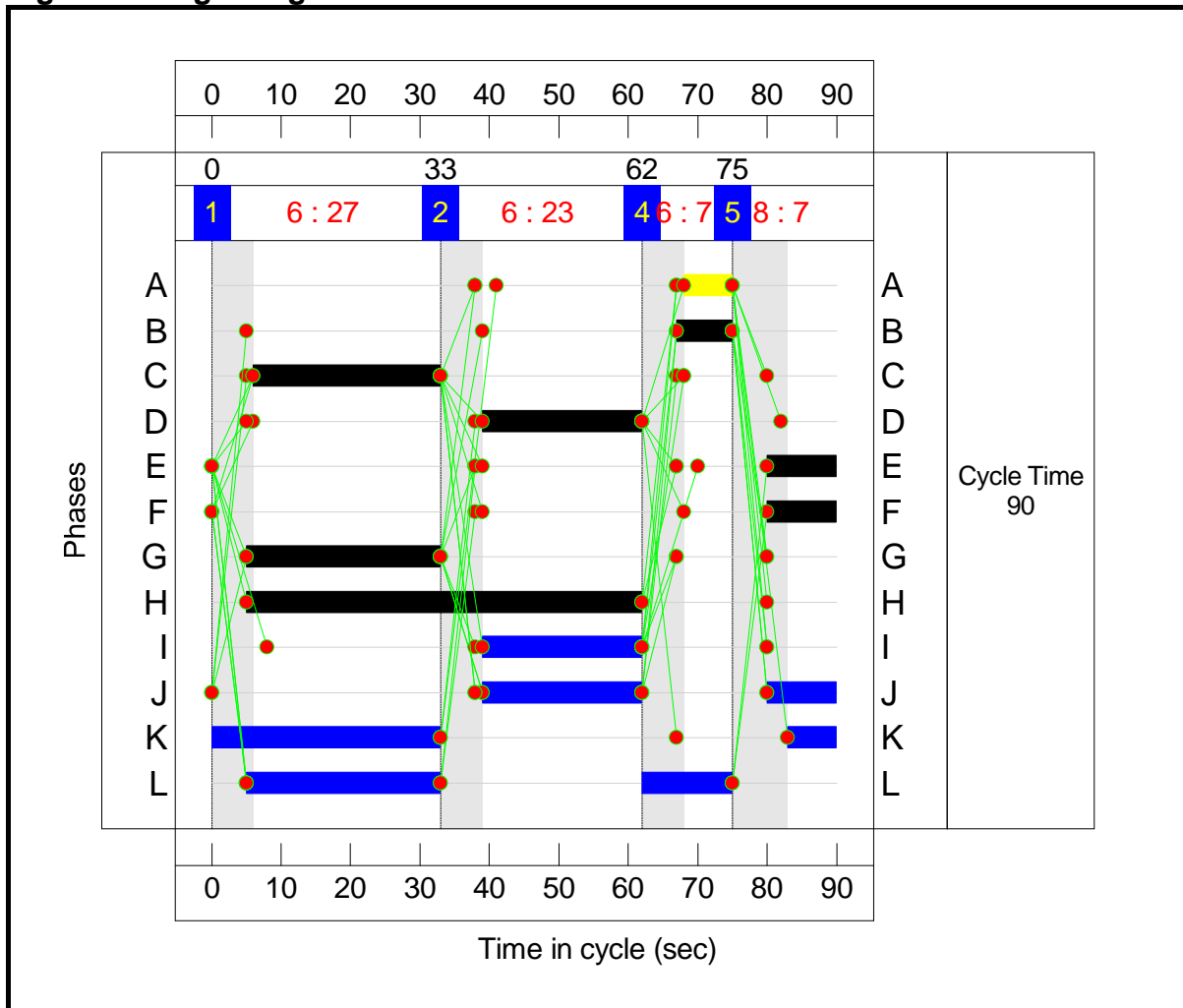
**Staging Plan Diagram**



**Stage Timings**

Stage	1	2	4	5
Duration	27	23	7	7
Change Point	0	33	62	75

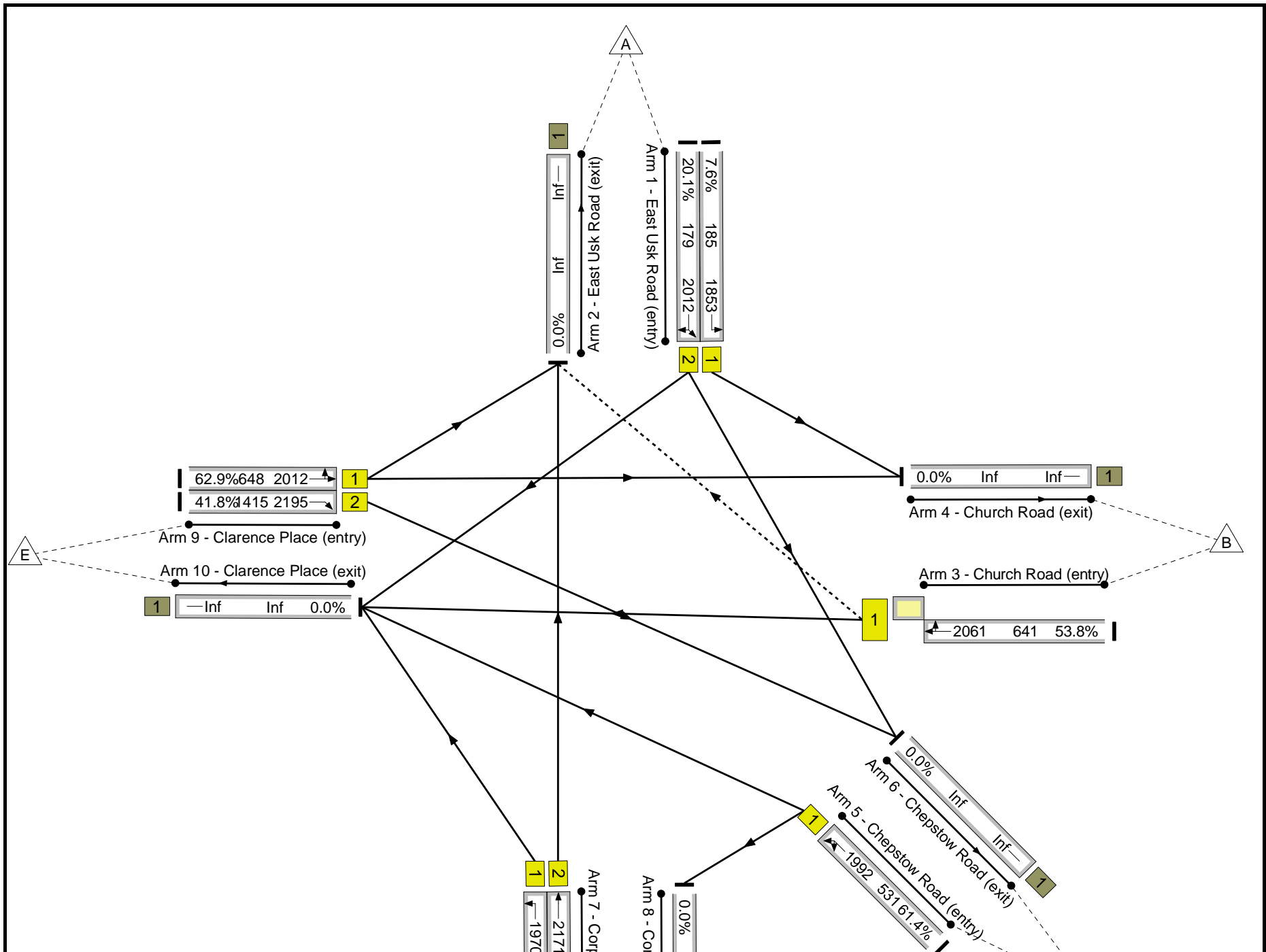
**Signal Timings Diagram**



Full Input Data And Results

**Junction Layout Diagram**

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

**Link Results**

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	East Usk Road (entry) Left	U	N/A	N/A	B		1	8	-	14	1853	1853	185	7.6
1/2	East Usk Road (entry) Ahead Right	U	N/A	N/A	A		1	7	-	36	2012	2012	179	20.1
2/1	East Usk Road (exit)	U	N/A	N/A	-		-	-	-	37	Inf	Inf	Inf	0.0
3/1	Church Road (entry) Right Ahead	O	N/A	N/A	C		1	27	-	345	2061	2061	641	53.8
4/1	Church Road (exit)	U	N/A	N/A	-		-	-	-	396	Inf	Inf	Inf	0.0
5/1	Chepstow Road (entry) U-Turn Ahead	U	N/A	N/A	D		1	23	-	326	1992	1992	531	61.4
6/1	Chepstow Road (exit)	U	N/A	N/A	-		-	-	-	596	Inf	Inf	Inf	0.0
7/1	Corporation Road (entry) Left	U	N/A	N/A	F		1	10	-	146	1970	1970	241	60.6
7/2	Corporation Road (entry) Ahead	U	N/A	N/A	E		1	10	-	5	2171	2171	265	1.9
8/1	Corporation Road (exit)	U	N/A	N/A	-		-	-	-	13	Inf	Inf	Inf	0.0
9/1	Clarence Place (entry) Left Ahead	U	N/A	N/A	G		1	28	-	408	2012	2012	648	62.9
9/2	Clarence Place (entry) Right	U	N/A	N/A	H		1	57	-	591	2195	2195	1415	41.8

Full Input Data And Results

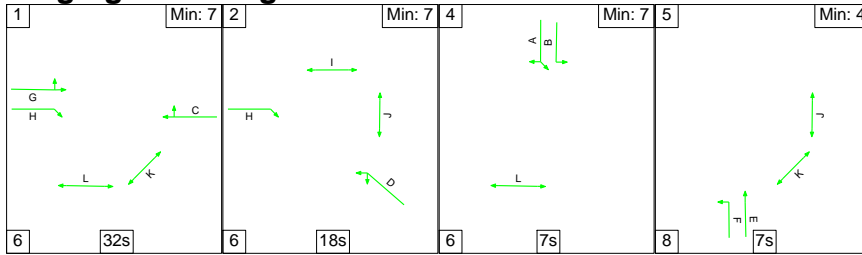
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
10/1	Clarence Place (exit)	U	N/A	N/A	-	-	-	-	-	829	Inf	Inf	Inf	0.0
1/1	14	14	-	-	-	0.1	0.0	-	0.2	47.4	0.3	0.0	0.4	
1/2	36	36	-	-	-	0.4	0.1	-	0.5	50.7	0.8	0.1	1.0	
2/1	37	37	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
3/1	345	345	6	0	0	2.5	0.6	0.0	3.1	31.8	7.1	0.6	7.7	
4/1	396	396	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/1	326	326	-	-	-	2.6	0.8	-	3.4	37.6	7.1	0.8	7.9	
6/1	596	596	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	146	146	-	-	-	1.5	0.8	-	2.3	56.2	3.4	0.8	4.2	
7/2	5	5	-	-	-	0.0	0.0	-	0.1	42.0	0.1	0.0	0.1	
8/1	13	13	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
9/1	408	408	-	-	-	2.9	0.8	-	3.8	33.4	8.6	0.8	9.5	
9/2	591	591	-	-	-	1.3	0.4	-	1.6	10.0	7.1	0.4	7.4	
10/1	829	829	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
PRC for Signalled Links (%):			43.0		Total Delay for Signalled Links (pcuHr):			14.91						
PRC Over All Links (%):			43.0		Total Delay Over All Links(pcuHr):			14.91		Cycle Time (s): 90				

**Scenario 4: '2017 no dev Pm'**

Staging Plan 1: 'Staging Plan No. 2'

Flow Group 4: '2017 no dev PM 1700-1800'

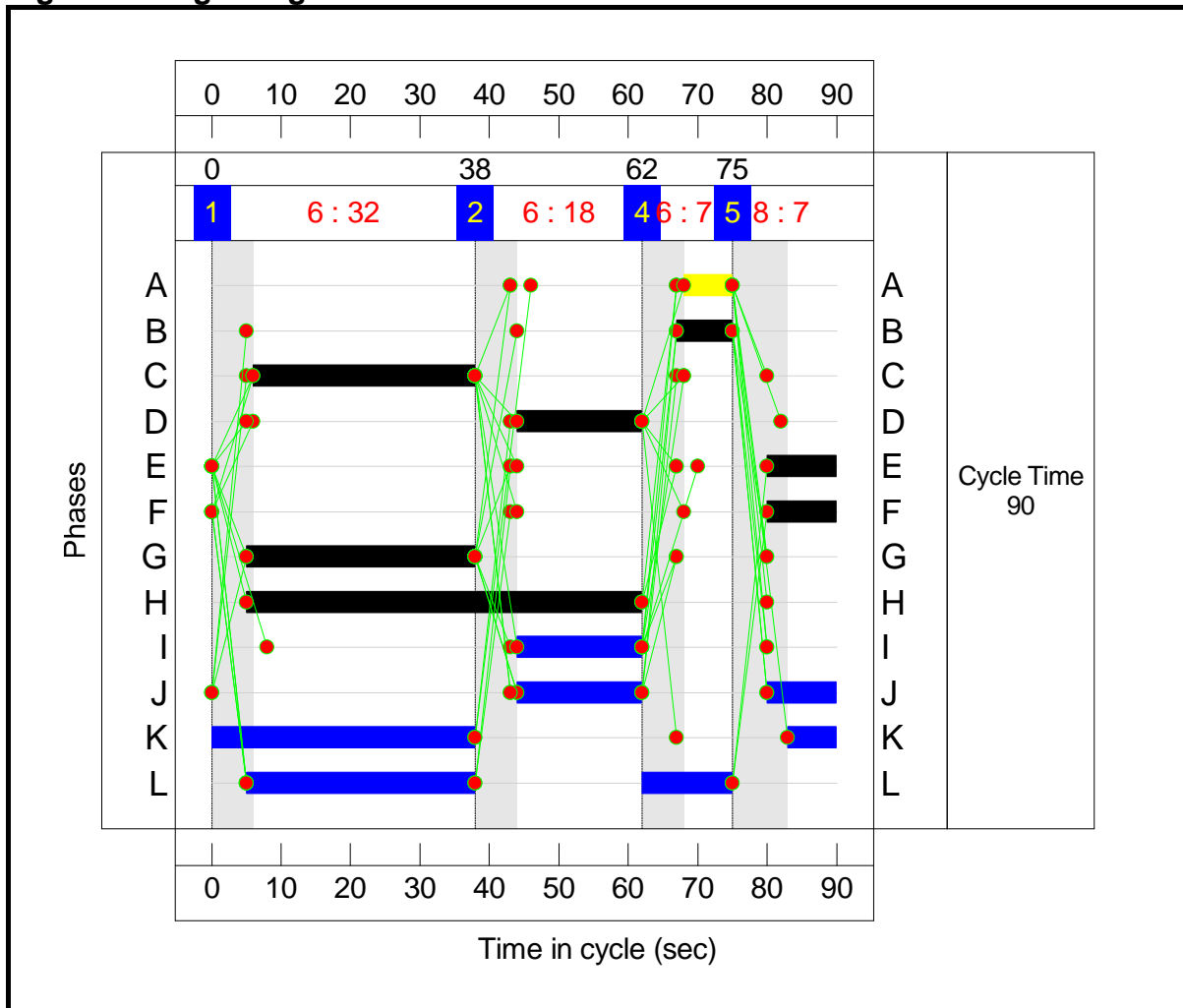
**Staging Plan Diagram**



**Stage Timings**

Stage	1	2	4	5
Duration	32	18	7	7
Change Point	0	38	62	75

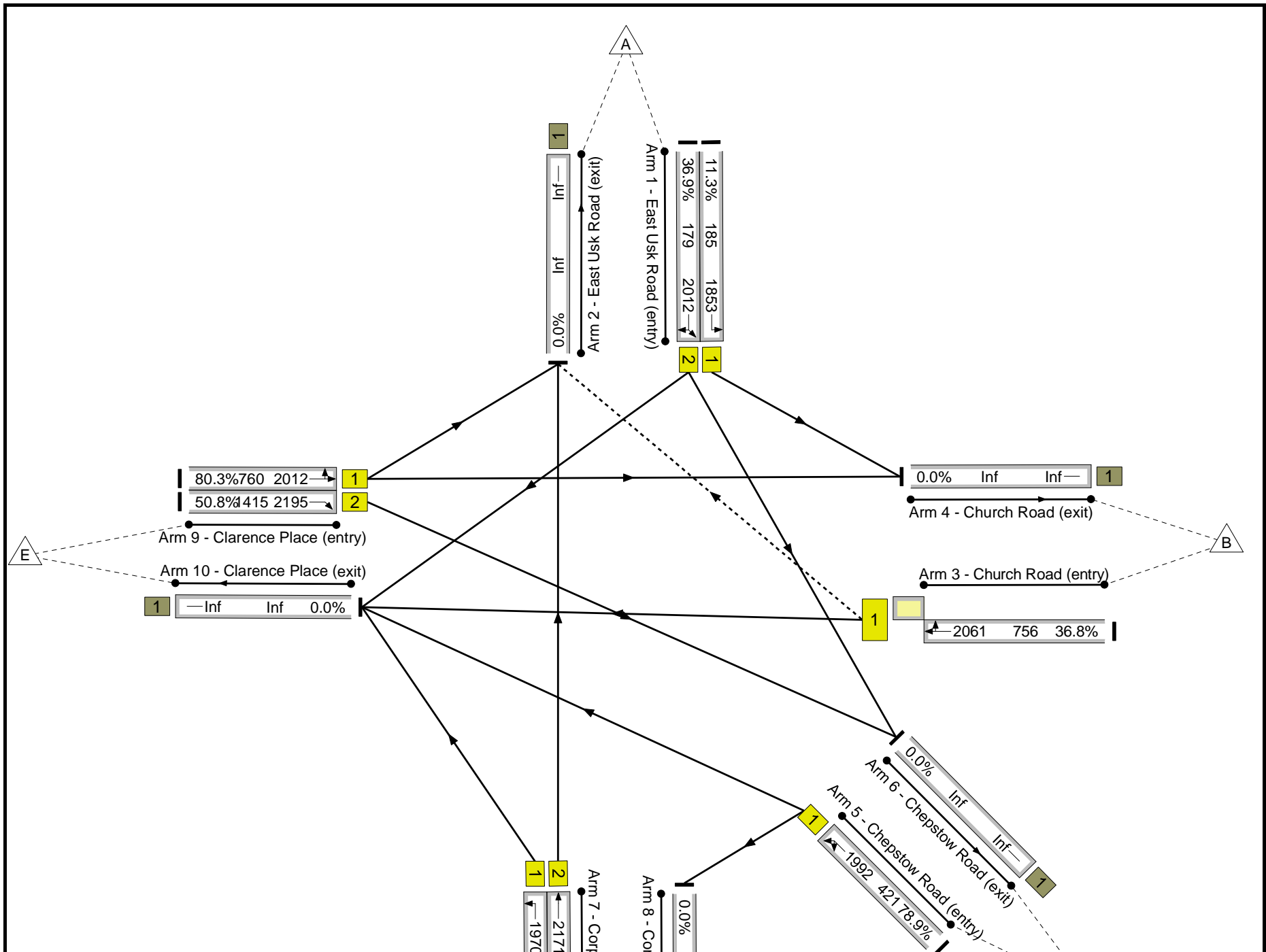
**Signal Timings Diagram**



Full Input Data And Results

**Junction Layout Diagram**

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

**Link Results**

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	East Usk Road (entry) Left	U	N/A	N/A	B		1	8	-	21	1853	1853	185	11.3
1/2	East Usk Road (entry) Ahead Right	U	N/A	N/A	A		1	7	-	66	2012	2012	179	36.9
2/1	East Usk Road (exit)	U	N/A	N/A	-		-	-	-	42	Inf	Inf	Inf	0.0
3/1	Church Road (entry) Right Ahead	O	N/A	N/A	C		1	32	-	278	2061	2061	756	36.8
4/1	Church Road (exit)	U	N/A	N/A	-		-	-	-	610	Inf	Inf	Inf	0.0
5/1	Chepstow Road (entry) U-Turn Ahead	U	N/A	N/A	D		1	18	-	332	1992	1992	421	78.9
6/1	Chepstow Road (exit)	U	N/A	N/A	-		-	-	-	733	Inf	Inf	Inf	0.0
7/1	Corporation Road (entry) Left	U	N/A	N/A	F		1	10	-	190	1970	1970	241	78.9
7/2	Corporation Road (entry) Ahead	U	N/A	N/A	E		1	10	-	15	2171	2171	265	5.7
8/1	Corporation Road (exit)	U	N/A	N/A	-		-	-	-	17	Inf	Inf	Inf	0.0
9/1	Clarence Place (entry) Left Ahead	U	N/A	N/A	G		1	33	-	610	2012	2012	760	80.3
9/2	Clarence Place (entry) Right	U	N/A	N/A	H		1	57	-	719	2195	2195	1415	50.8

Full Input Data And Results

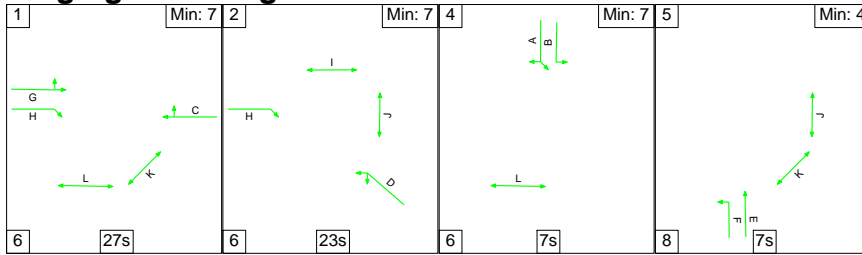
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)			
10/1	Clarence Place (exit)	U	N/A	N/A	-	-	-	-	-	829	Inf	Inf	Inf	0.0		
1/1	21	21	-	-	-	0.2	0.1	-	0.3	47.8	0.5	0.1	0.5			
1/2	66	66	-	-	-	0.7	0.3	-	1.0	54.5	1.5	0.3	1.8			
2/1	42	42	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0			
3/1	278	278	6	0	0	1.6	0.3	0.0	1.9	25.0	5.0	0.3	5.3			
4/1	610	610	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0			
5/1	332	332	-	-	-	3.1	1.8	-	4.9	53.1	7.8	1.8	9.6			
6/1	733	733	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0			
7/1	190	190	-	-	-	2.0	1.8	-	3.8	71.5	4.6	1.8	6.3			
7/2	15	15	-	-	-	0.1	0.0	-	0.2	42.3	0.3	0.0	0.4			
8/1	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0			
9/1	610	610	-	-	-	4.2	2.0	-	6.2	36.7	13.6	2.0	15.5			
9/2	719	719	-	-	-	1.7	0.5	-	2.2	11.0	9.4	0.5	9.9			
10/1	829	829	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0			
PRC for Signalled Links (%):			12.1	Total Delay for Signalled Links (pcuHr):			20.48	PRC Over All Links (%):			12.1	Total Delay Over All Links(pcuHr):			20.48	Cycle Time (s): 90

**Scenario 5: '2022 no dev Am'**

Staging Plan 1: 'Staging Plan No. 2'

Flow Group 5: '2022 no dev AM 0830-0930'

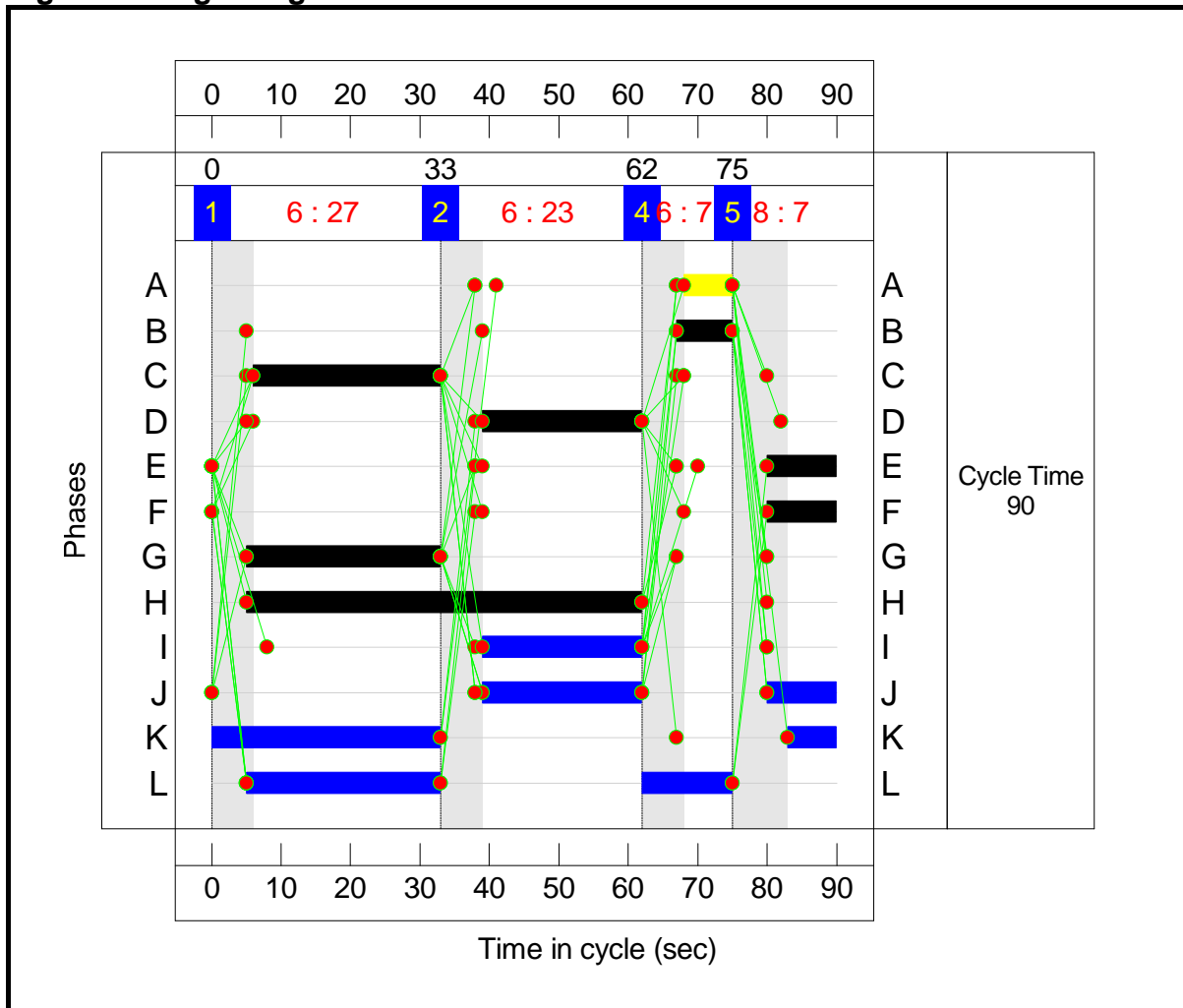
**Staging Plan Diagram**



**Stage Timings**

Stage	1	2	4	5
Duration	27	23	7	7
Change Point	0	33	62	75

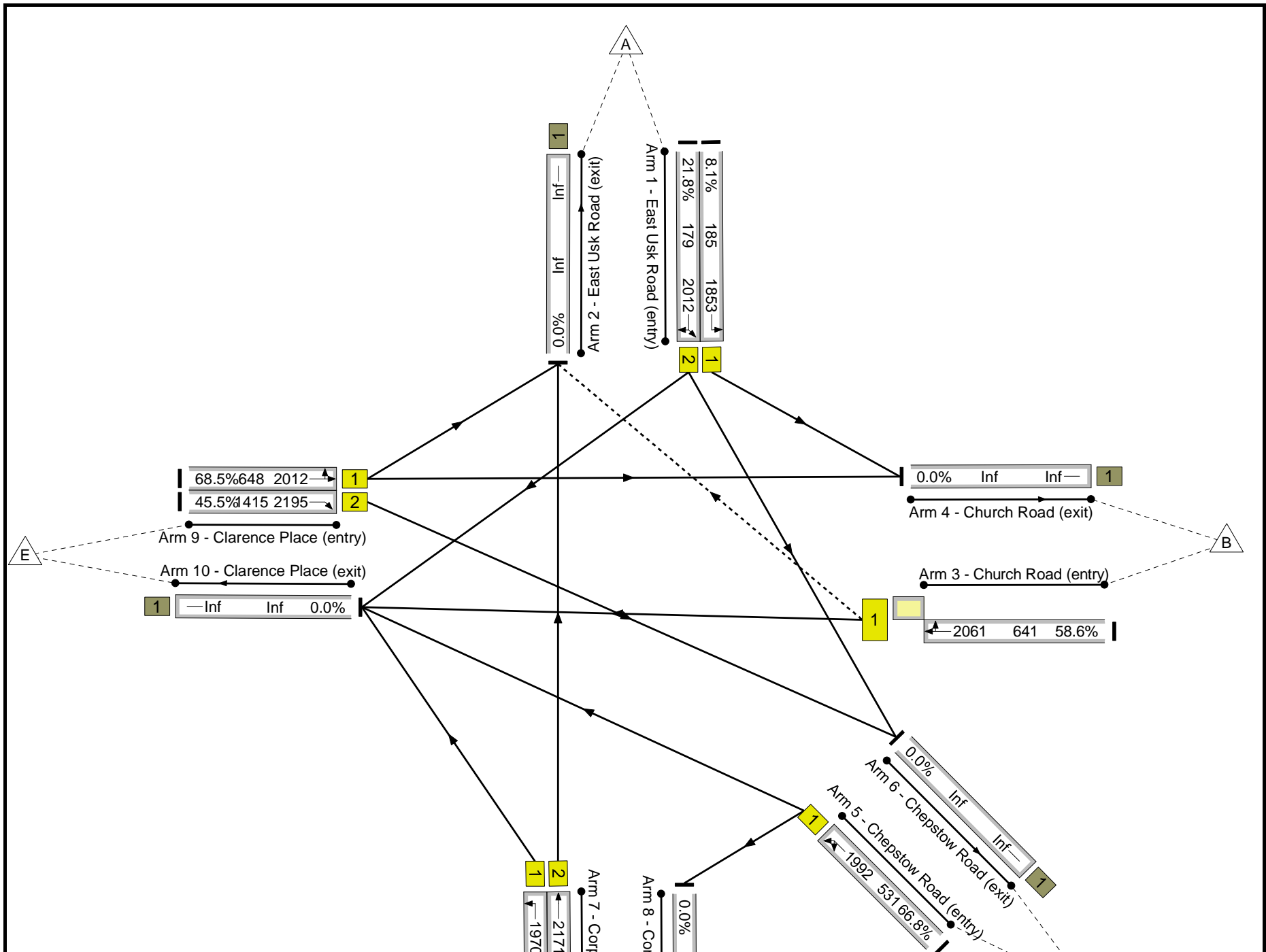
**Signal Timings Diagram**



Full Input Data And Results

**Junction Layout Diagram**

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

**Link Results**

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	East Usk Road (entry) Left	U	N/A	N/A	B		1	8	-	15	1853	1853	185	8.1
1/2	East Usk Road (entry) Ahead Right	U	N/A	N/A	A		1	7	-	39	2012	2012	179	21.8
2/1	East Usk Road (exit)	U	N/A	N/A	-		-	-	-	41	Inf	Inf	Inf	0.0
3/1	Church Road (entry) Right Ahead	O	N/A	N/A	C		1	27	-	376	2061	2061	641	58.6
4/1	Church Road (exit)	U	N/A	N/A	-		-	-	-	431	Inf	Inf	Inf	0.0
5/1	Chepstow Road (entry) U-Turn Ahead	U	N/A	N/A	D		1	23	-	355	1992	1992	531	66.8
6/1	Chepstow Road (exit)	U	N/A	N/A	-		-	-	-	650	Inf	Inf	Inf	0.0
7/1	Corporation Road (entry) Left	U	N/A	N/A	F		1	10	-	159	1970	1970	241	66.0
7/2	Corporation Road (entry) Ahead	U	N/A	N/A	E		1	10	-	6	2171	2171	265	2.3
8/1	Corporation Road (exit)	U	N/A	N/A	-		-	-	-	14	Inf	Inf	Inf	0.0
9/1	Clarence Place (entry) Left Ahead	U	N/A	N/A	G		1	28	-	444	2012	2012	648	68.5
9/2	Clarence Place (entry) Right	U	N/A	N/A	H		1	57	-	644	2195	2195	1415	45.5

Full Input Data And Results

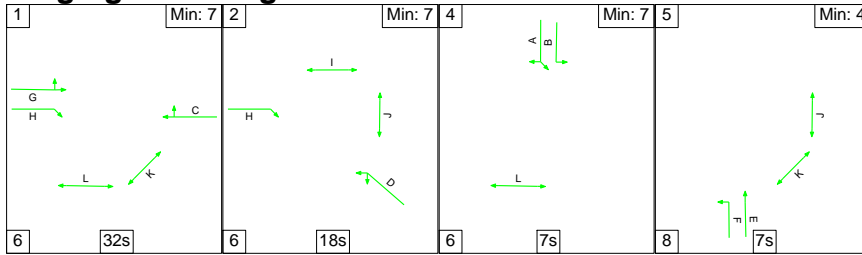
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
10/1	Clarence Place (exit)	U	N/A	N/A	-	-	-	-	902	Inf	Inf	Inf	0.0	
1/1	15	15	-	-	-	0.2	0.0	-	0.2	47.5	0.3	0.0	0.4	
1/2	39	39	-	-	-	0.4	0.1	-	0.6	51.0	0.9	0.1	1.0	
2/1	41	41	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
3/1	376	376	7	0	0	2.7	0.7	0.0	3.4	33.0	7.8	0.7	8.5	
4/1	431	431	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/1	355	355	-	-	-	2.9	1.0	-	3.9	39.6	7.9	1.0	8.9	
6/1	650	650	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	159	159	-	-	-	1.7	1.0	-	2.6	59.2	3.8	1.0	4.7	
7/2	6	6	-	-	-	0.1	0.0	-	0.1	42.1	0.1	0.0	0.1	
8/1	14	14	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
9/1	444	444	-	-	-	3.3	1.1	-	4.3	35.2	9.6	1.1	10.7	
9/2	644	644	-	-	-	1.4	0.4	-	1.9	10.4	8.1	0.4	8.5	
10/1	902	902	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
PRC for Signalled Links (%):			31.4		Total Delay for Signalled Links (pcuHr):			16.99						
PRC Over All Links (%):			31.4		Total Delay Over All Links(pcuHr):			16.99		Cycle Time (s): 90				

**Scenario 6: '2022 no dev Pm'**

Staging Plan 1: 'Staging Plan No. 2'

Flow Group 6: '2022 no dev PM 1700-1800'

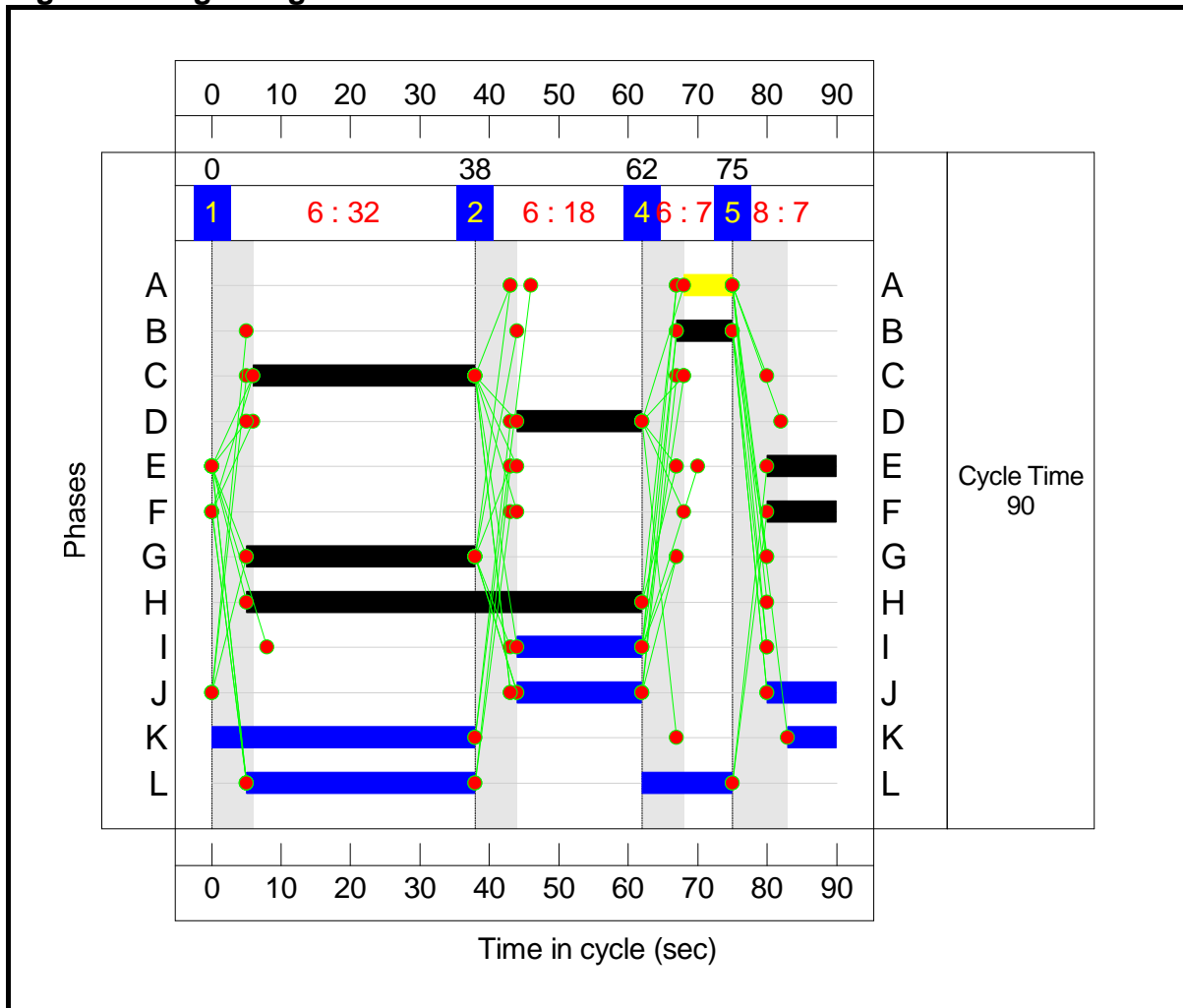
**Staging Plan Diagram**



**Stage Timings**

Stage	1	2	4	5
Duration	32	18	7	7
Change Point	0	38	62	75

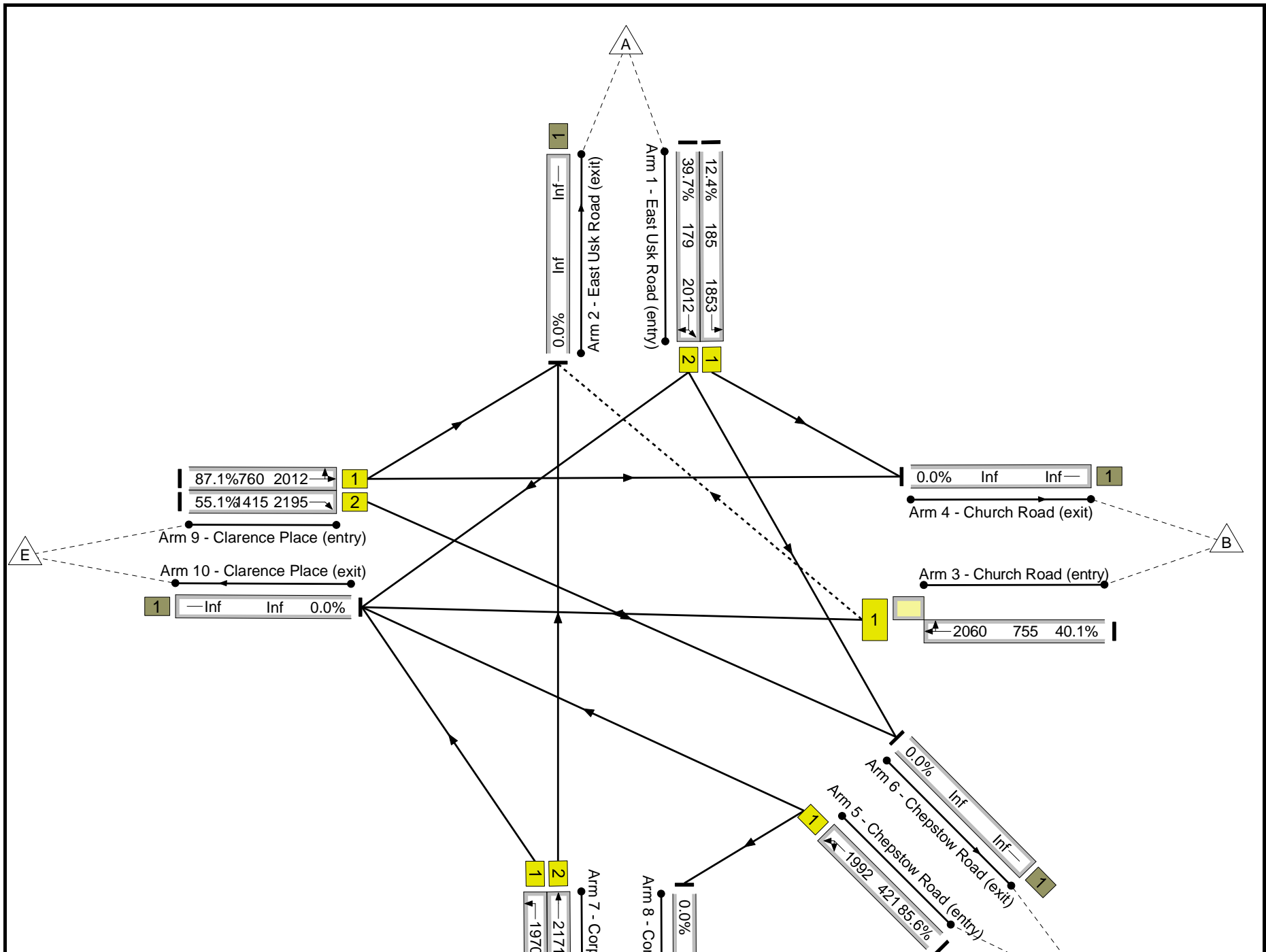
**Signal Timings Diagram**



Full Input Data And Results

**Junction Layout Diagram**

# Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

**Link Results**

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	East Usk Road (entry) Left	U	N/A	N/A	B		1	8	-	23	1853	1853	185	12.4
1/2	East Usk Road (entry) Ahead Right	U	N/A	N/A	A		1	7	-	71	2012	2012	179	39.7
2/1	East Usk Road (exit)	U	N/A	N/A	-		-	-	-	46	Inf	Inf	Inf	0.0
3/1	Church Road (entry) Right Ahead	O	N/A	N/A	C		1	32	-	303	2061	2060	755	40.1
4/1	Church Road (exit)	U	N/A	N/A	-		-	-	-	662	Inf	Inf	Inf	0.0
5/1	Chepstow Road (entry) U-Turn Ahead	U	N/A	N/A	D		1	18	-	360	1992	1992	421	85.6
6/1	Chepstow Road (exit)	U	N/A	N/A	-		-	-	-	795	Inf	Inf	Inf	0.0
7/1	Corporation Road (entry) Left	U	N/A	N/A	F		1	10	-	206	1970	1970	241	85.6
7/2	Corporation Road (entry) Ahead	U	N/A	N/A	E		1	10	-	16	2171	2171	265	6.0
8/1	Corporation Road (exit)	U	N/A	N/A	-		-	-	-	18	Inf	Inf	Inf	0.0
9/1	Clarence Place (entry) Left Ahead	U	N/A	N/A	G		1	33	-	662	2012	2012	760	87.1
9/2	Clarence Place (entry) Right	U	N/A	N/A	H		1	57	-	780	2195	2195	1415	55.1

Full Input Data And Results

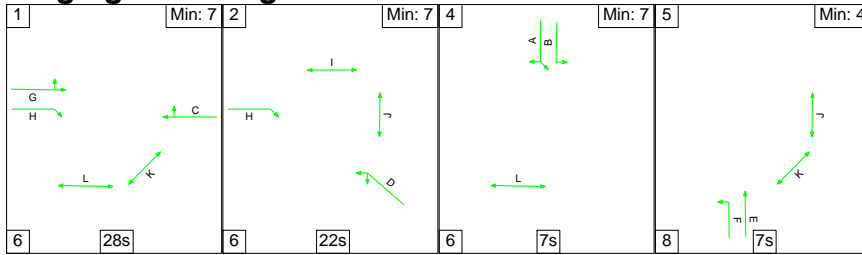
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)				
10/1	Clarence Place (exit)	U	N/A	N/A	-	-	-	-	-	900	Inf	Inf	Inf	0.0			
1/1	23	23	-	-	-	0.2	0.1	-	0.3	48.0	0.5	0.1	0.6				
1/2	71	71	-	-	-	0.8	0.3	-	1.1	55.3	1.7	0.3	2.0				
2/1	46	46	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0				
3/1	303	303	7	0	0	1.8	0.3	0.0	2.2	25.6	5.6	0.3	5.9				
4/1	662	662	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0				
5/1	360	360	-	-	-	3.4	2.7	-	6.1	61.5	8.6	2.7	11.3				
6/1	795	795	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0				
7/1	206	206	-	-	-	2.2	2.6	-	4.8	83.8	5.0	2.6	7.6				
7/2	16	16	-	-	-	0.2	0.0	-	0.2	42.3	0.4	0.0	0.4				
8/1	18	18	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0				
9/1	662	662	-	-	-	4.8	3.2	-	7.9	43.2	15.3	3.2	18.4				
9/2	780	780	-	-	-	1.9	0.6	-	2.5	11.7	10.6	0.6	11.2				
10/1	900	900	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0				
PRC for Signalled Links (%):			3.3	Total Delay for Signalled Links (pcuHr):			25.15	PRC Over All Links (%):			3.3	Total Delay Over All Links (pcuHr):			25.15	Cycle Time (s):	90

**Scenario 7: '2017 with dev Am'**

Staging Plan 1: 'Staging Plan No. 2'

Flow Group 7: '2017 with dev AM 0830-0930'

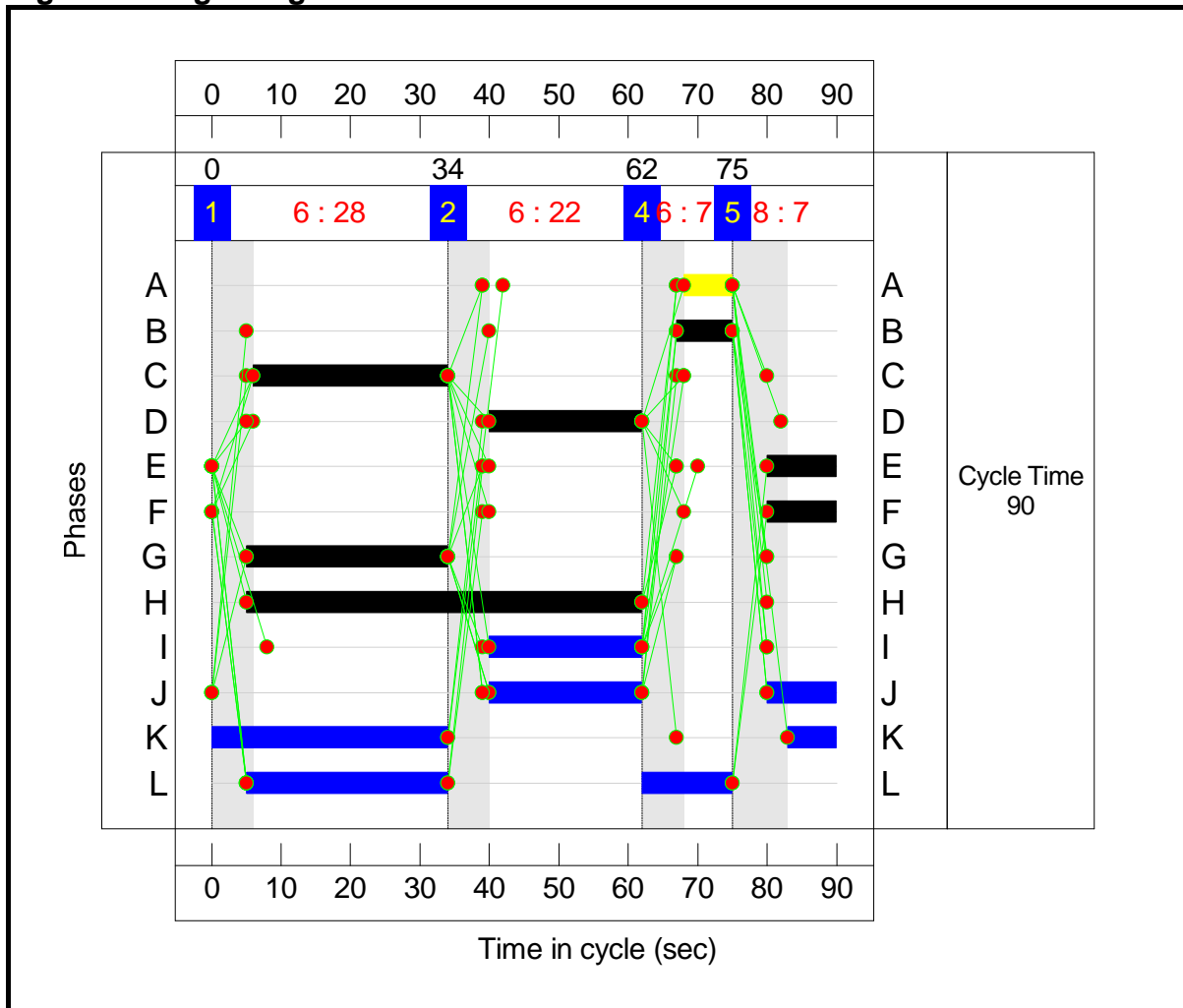
**Staging Plan Diagram**



**Stage Timings**

Stage	1	2	4	5
Duration	28	22	7	7
Change Point	0	34	62	75

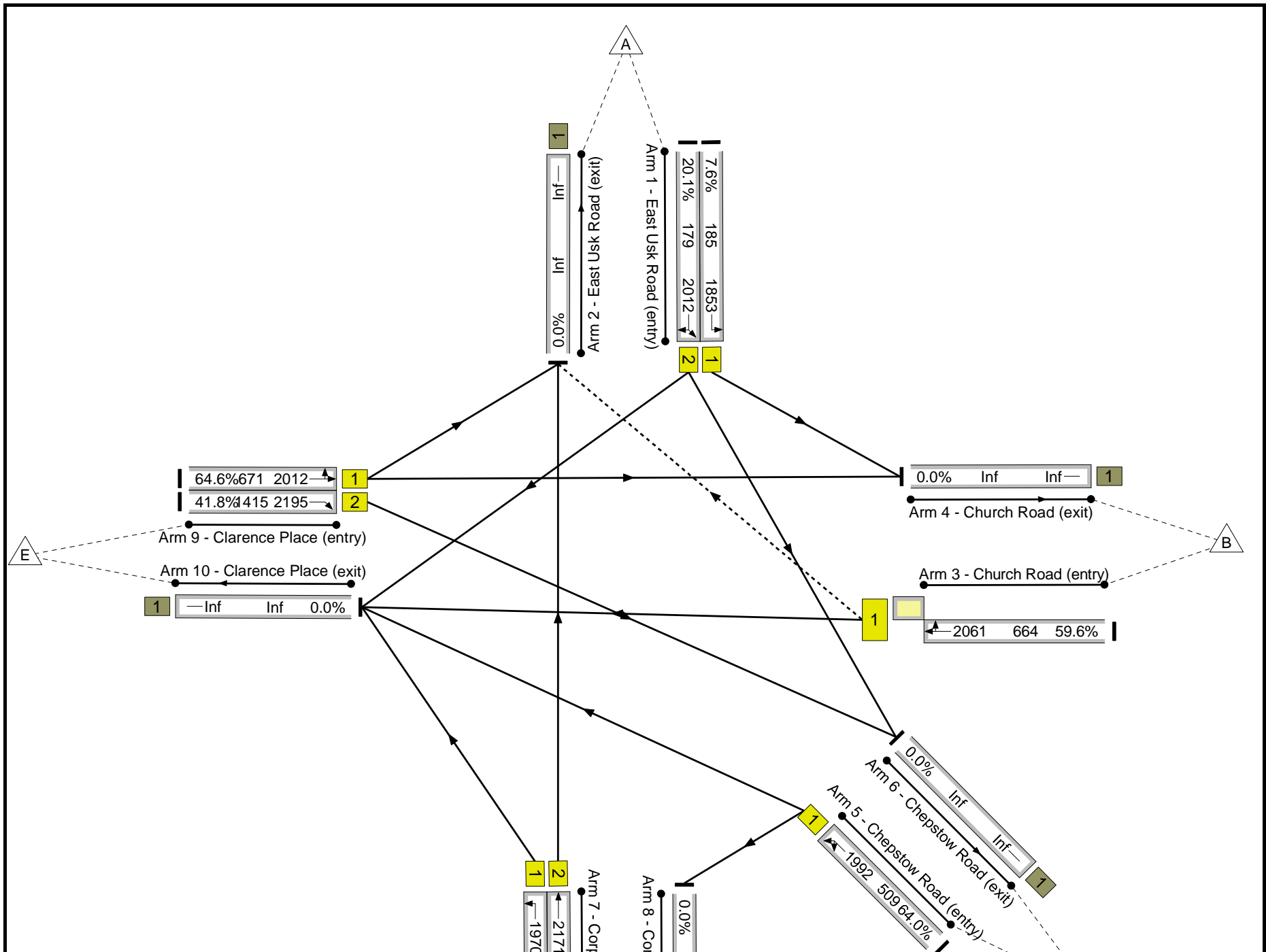
**Signal Timings Diagram**



Full Input Data And Results

**Junction Layout Diagram**

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

**Link Results**

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	East Usk Road (entry) Left	U	N/A	N/A	B		1	8	-	14	1853	1853	185	7.6
1/2	East Usk Road (entry) Ahead Right	U	N/A	N/A	A		1	7	-	36	2012	2012	179	20.1
2/1	East Usk Road (exit)	U	N/A	N/A	-		-	-	-	37	Inf	Inf	Inf	0.0
3/1	Church Road (entry) Right Ahead	O	N/A	N/A	C		1	28	-	396	2061	2061	664	59.6
4/1	Church Road (exit)	U	N/A	N/A	-		-	-	-	421	Inf	Inf	Inf	0.0
5/1	Chepstow Road (entry) U-Turn Ahead	U	N/A	N/A	D		1	22	-	326	1992	1992	509	64.0
6/1	Chepstow Road (exit)	U	N/A	N/A	-		-	-	-	596	Inf	Inf	Inf	0.0
7/1	Corporation Road (entry) Left	U	N/A	N/A	F		1	10	-	146	1970	1970	241	60.6
7/2	Corporation Road (entry) Ahead	U	N/A	N/A	E		1	10	-	5	2171	2171	265	1.9
8/1	Corporation Road (exit)	U	N/A	N/A	-		-	-	-	13	Inf	Inf	Inf	0.0
9/1	Clarence Place (entry) Left Ahead	U	N/A	N/A	G		1	29	-	433	2012	2012	671	64.6
9/2	Clarence Place (entry) Right	U	N/A	N/A	H		1	57	-	591	2195	2195	1415	41.8

Full Input Data And Results

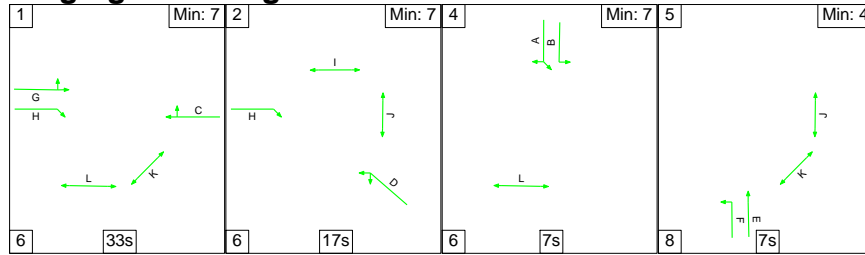
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
10/1	Clarence Place (exit)	U	N/A	N/A	-	-	-	-	-	880	Inf	Inf	Inf	0.0
1/1	14	14	-	-	-	0.1	0.0	-	0.2	47.4	0.3	0.0	0.4	
1/2	36	36	-	-	-	0.4	0.1	-	0.5	50.7	0.8	0.1	1.0	
2/1	37	37	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
3/1	396	396	6	0	0	2.8	0.7	0.0	3.6	32.4	8.3	0.7	9.0	
4/1	421	421	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/1	326	326	-	-	-	2.7	0.9	-	3.6	39.6	7.2	0.9	8.1	
6/1	596	596	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	146	146	-	-	-	1.5	0.8	-	2.3	56.2	3.4	0.8	4.2	
7/2	5	5	-	-	-	0.0	0.0	-	0.1	42.0	0.1	0.0	0.1	
8/1	13	13	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
9/1	433	433	-	-	-	3.1	0.9	-	4.0	33.0	9.1	0.9	10.0	
9/2	591	591	-	-	-	1.3	0.4	-	1.6	10.0	7.1	0.4	7.4	
10/1	880	880	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
PRC for Signalled Links (%):			39.4		Total Delay for Signalled Links (pcuHr):			15.78						
PRC Over All Links (%):			39.4		Total Delay Over All Links(pcuHr):			15.78		Cycle Time (s): 90				

**Scenario 8: '2017 with dev Pm'**

Staging Plan 1: 'Staging Plan No. 2'

Flow Group 8: '2017 with dev PM 1700-1800'

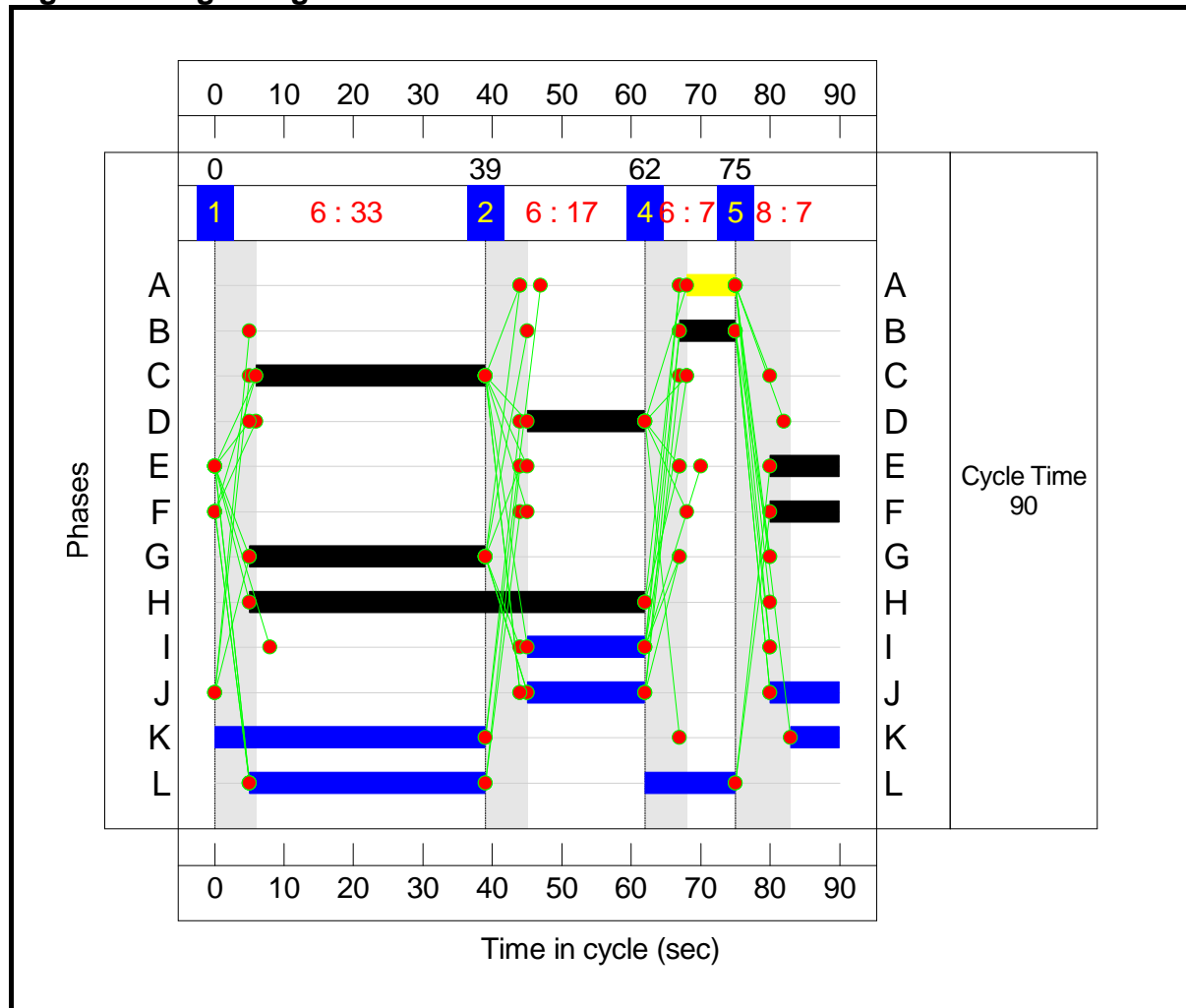
**Staging Plan Diagram**



**Stage Timings**

Stage	1	2	4	5
Duration	33	17	7	7
Change Point	0	39	62	75

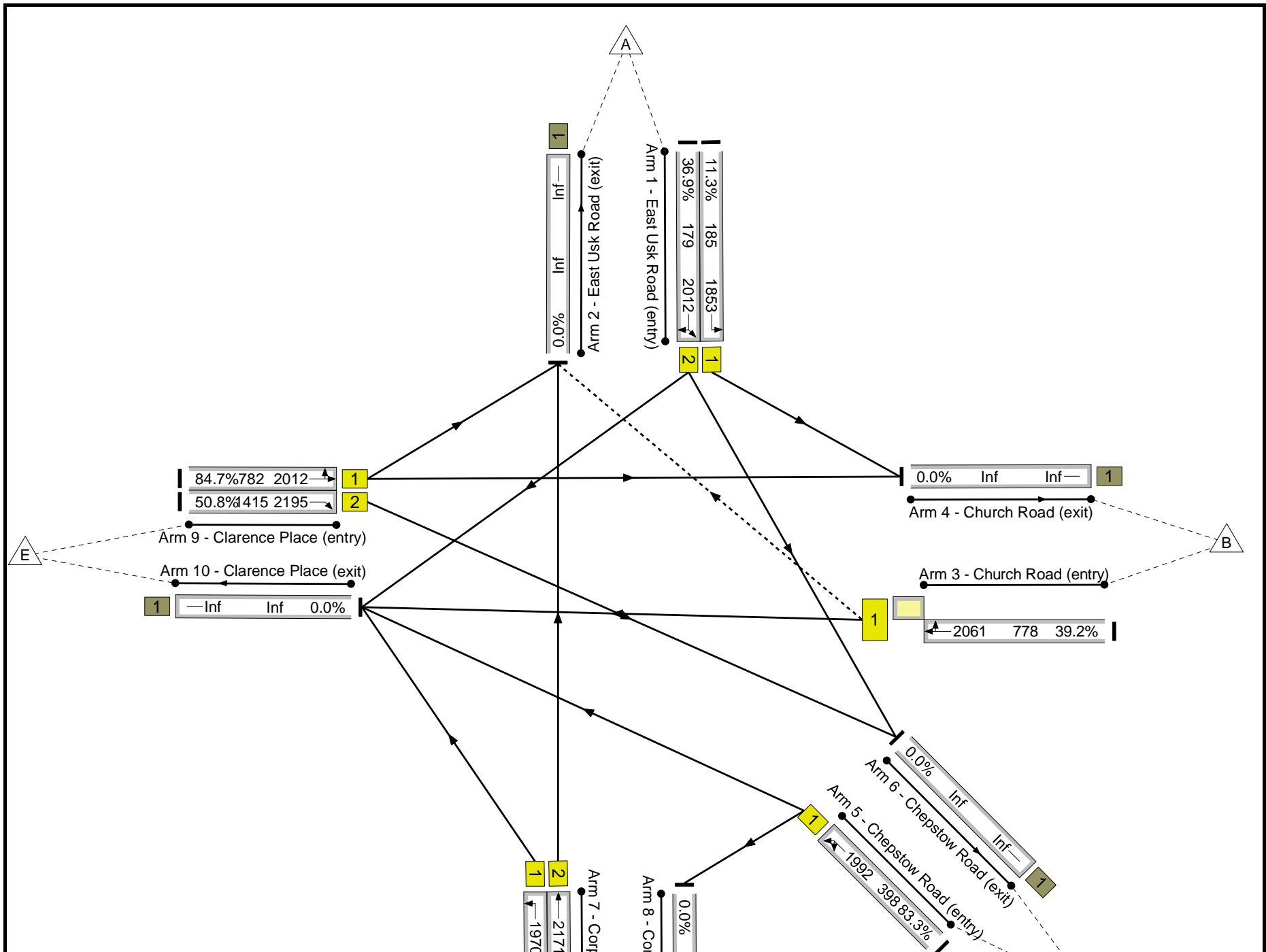
**Signal Timings Diagram**



Full Input Data And Results

**Junction Layout Diagram**

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

**Link Results**

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	East Usk Road (entry) Left	U	N/A	N/A	B		1	8	-	21	1853	1853	185	11.3
1/2	East Usk Road (entry) Ahead Right	U	N/A	N/A	A		1	7	-	66	2012	2012	179	36.9
2/1	East Usk Road (exit)	U	N/A	N/A	-		-	-	-	42	Inf	Inf	Inf	0.0
3/1	Church Road (entry) Right Ahead	O	N/A	N/A	C		1	33	-	305	2061	2061	778	39.2
4/1	Church Road (exit)	U	N/A	N/A	-		-	-	-	663	Inf	Inf	Inf	0.0
5/1	Chepstow Road (entry) U-Turn Ahead	U	N/A	N/A	D		1	17	-	332	1992	1992	398	83.3
6/1	Chepstow Road (exit)	U	N/A	N/A	-		-	-	-	733	Inf	Inf	Inf	0.0
7/1	Corporation Road (entry) Left	U	N/A	N/A	F		1	10	-	190	1970	1970	241	78.9
7/2	Corporation Road (entry) Ahead	U	N/A	N/A	E		1	10	-	15	2171	2171	265	5.7
8/1	Corporation Road (exit)	U	N/A	N/A	-		-	-	-	17	Inf	Inf	Inf	0.0
9/1	Clarence Place (entry) Left Ahead	U	N/A	N/A	G		1	34	-	663	2012	2012	782	84.7
9/2	Clarence Place (entry) Right	U	N/A	N/A	H		1	57	-	719	2195	2195	1415	50.8

Full Input Data And Results

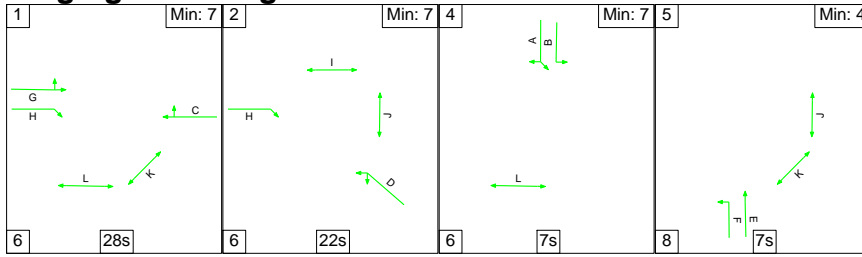
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
10/1	Clarence Place (exit)	U	N/A	N/A	-	-	-	-	-	856	Inf	Inf	Inf	0.0
1/1	21	21	-	-	-	0.2	0.1	-	0.3	47.8	0.5	0.1	0.5	
1/2	66	66	-	-	-	0.7	0.3	-	1.0	54.5	1.5	0.3	1.8	
2/1	42	42	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
3/1	305	305	6	0	0	1.7	0.3	0.0	2.1	24.6	5.5	0.3	5.8	
4/1	663	663	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/1	332	332	-	-	-	3.2	2.3	-	5.5	59.9	7.9	2.3	10.3	
6/1	733	733	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	190	190	-	-	-	2.0	1.8	-	3.8	71.5	4.6	1.8	6.3	
7/2	15	15	-	-	-	0.1	0.0	-	0.2	42.3	0.3	0.0	0.4	
8/1	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
9/1	663	663	-	-	-	4.6	2.7	-	7.3	39.5	15.1	2.7	17.8	
9/2	719	719	-	-	-	1.7	0.5	-	2.2	11.0	9.4	0.5	9.9	
10/1	856	856	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
PRC for Signalled Links (%):			6.2		Total Delay for Signalled Links (pcuHr):			22.32						
PRC Over All Links (%):			6.2		Total Delay Over All Links(pcuHr):			22.32		Cycle Time (s): 90				

**Scenario 9: '2022 with dev Am'**

Staging Plan 1: 'Staging Plan No. 2'

Flow Group 9: '2022 with dev AM 0830-0930'

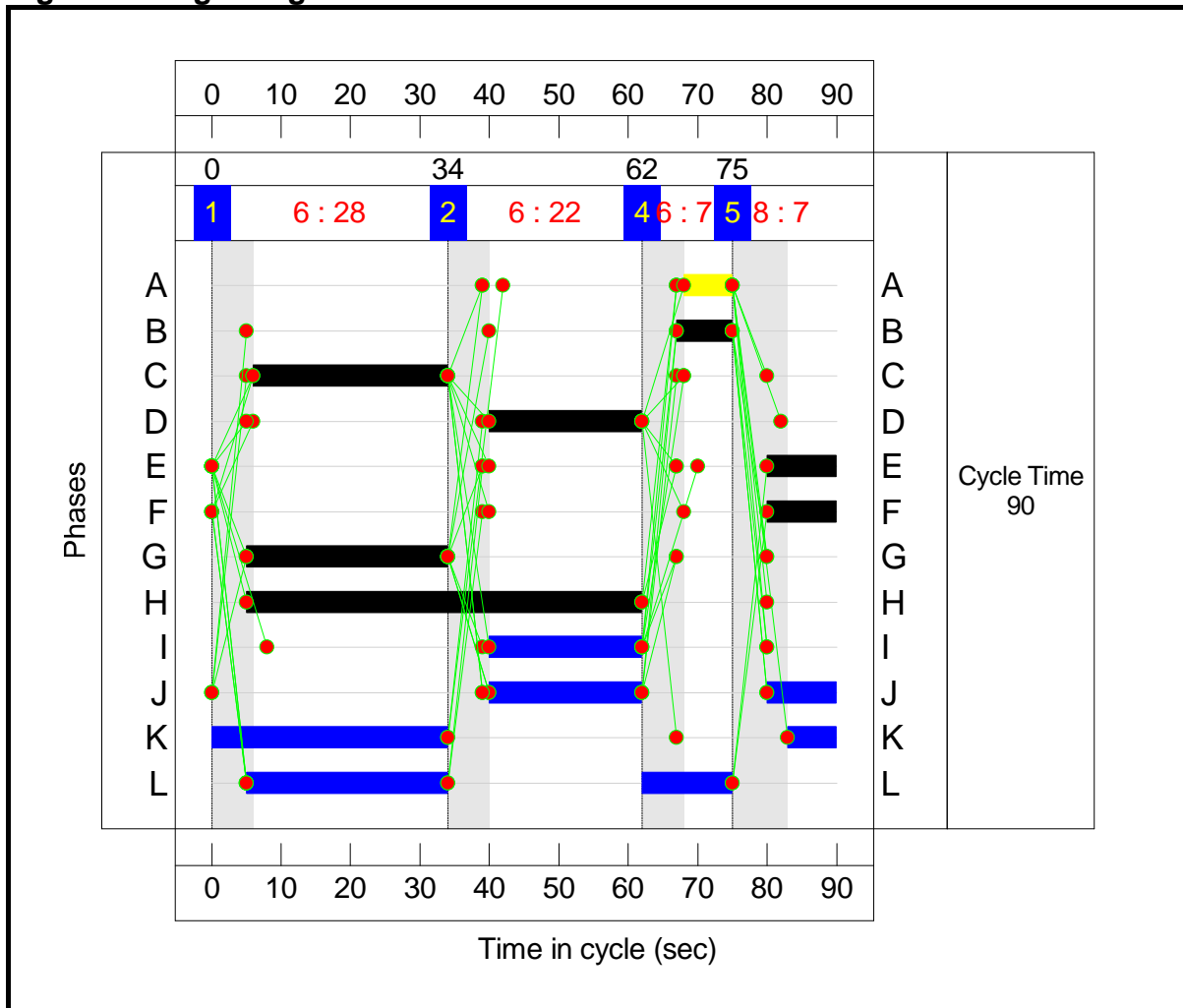
**Staging Plan Diagram**



**Stage Timings**

Stage	1	2	4	5
Duration	28	22	7	7
Change Point	0	34	62	75

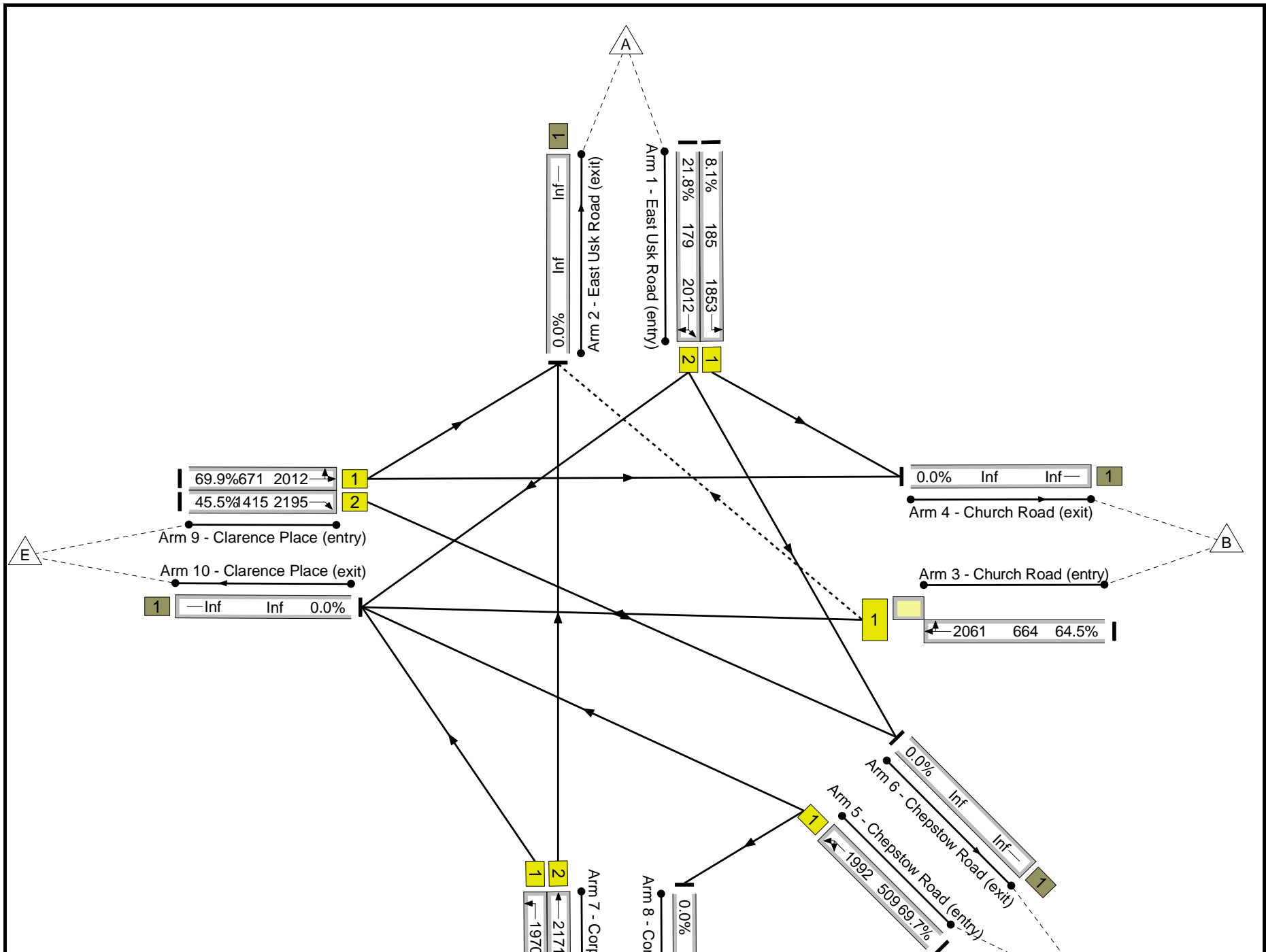
**Signal Timings Diagram**



Full Input Data And Results

**Junction Layout Diagram**

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

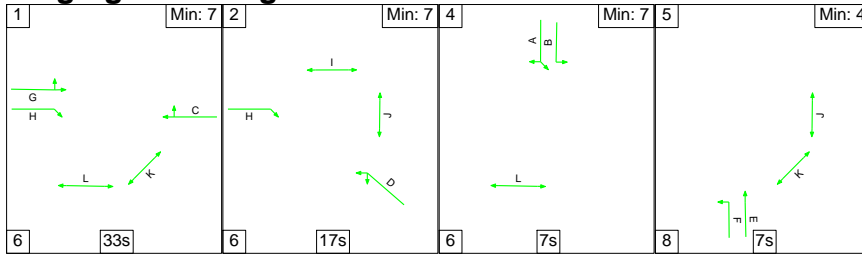
**Link Results**

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	East Usk Road (entry) Left	U	N/A	N/A	B		1	8	-	15	1853	1853	185	8.1
1/2	East Usk Road (entry) Ahead Right	U	N/A	N/A	A		1	7	-	39	2012	2012	179	21.8
2/1	East Usk Road (exit)	U	N/A	N/A	-		-	-	-	51	Inf	Inf	Inf	0.0
3/1	Church Road (entry) Right Ahead	O	N/A	N/A	C		1	28	-	428	2061	2061	664	64.5
4/1	Church Road (exit)	U	N/A	N/A	-		-	-	-	456	Inf	Inf	Inf	0.0
5/1	Chepstow Road (entry) U-Turn Ahead	U	N/A	N/A	D		1	22	-	355	1992	1992	509	69.7
6/1	Chepstow Road (exit)	U	N/A	N/A	-		-	-	-	650	Inf	Inf	Inf	0.0
7/1	Corporation Road (entry) Left	U	N/A	N/A	F		1	10	-	159	1970	1970	241	66.0
7/2	Corporation Road (entry) Ahead	U	N/A	N/A	E		1	10	-	16	2171	2171	265	6.0
8/1	Corporation Road (exit)	U	N/A	N/A	-		-	-	-	14	Inf	Inf	Inf	0.0
9/1	Clarence Place (entry) Left Ahead	U	N/A	N/A	G		1	29	-	469	2012	2012	671	69.9
9/2	Clarence Place (entry) Right	U	N/A	N/A	H		1	57	-	644	2195	2195	1415	45.5

Full Input Data And Results

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
10/1	Clarence Place (exit)	U	N/A	N/A	-	-	-	-	-	954	Inf	Inf	Inf	0.0
1/1	15	15	-	-	-	0.2	0.0	-	0.2	47.5	0.3	0.0	0.4	
1/2	39	39	-	-	-	0.4	0.1	-	0.6	51.0	0.9	0.1	1.0	
2/1	51	51	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
3/1	428	428	7	0	0	3.1	0.9	0.0	4.0	33.8	9.0	0.9	9.9	
4/1	456	456	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/1	355	355	-	-	-	3.0	1.1	-	4.1	41.9	8.0	1.1	9.1	
6/1	650	650	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	159	159	-	-	-	1.7	1.0	-	2.6	59.2	3.8	1.0	4.7	
7/2	16	16	-	-	-	0.2	0.0	-	0.2	42.3	0.4	0.0	0.4	
8/1	14	14	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
9/1	469	469	-	-	-	3.4	1.1	-	4.5	34.9	10.2	1.1	11.3	
9/2	644	644	-	-	-	1.4	0.4	-	1.9	10.4	8.1	0.4	8.5	
10/1	954	954	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
PRC for Signalled Links (%):			28.7		Total Delay for Signalled Links (pcuHr):			18.11						
PRC Over All Links (%):			28.7		Total Delay Over All Links(pcuHr):			18.11		Cycle Time (s): 90				

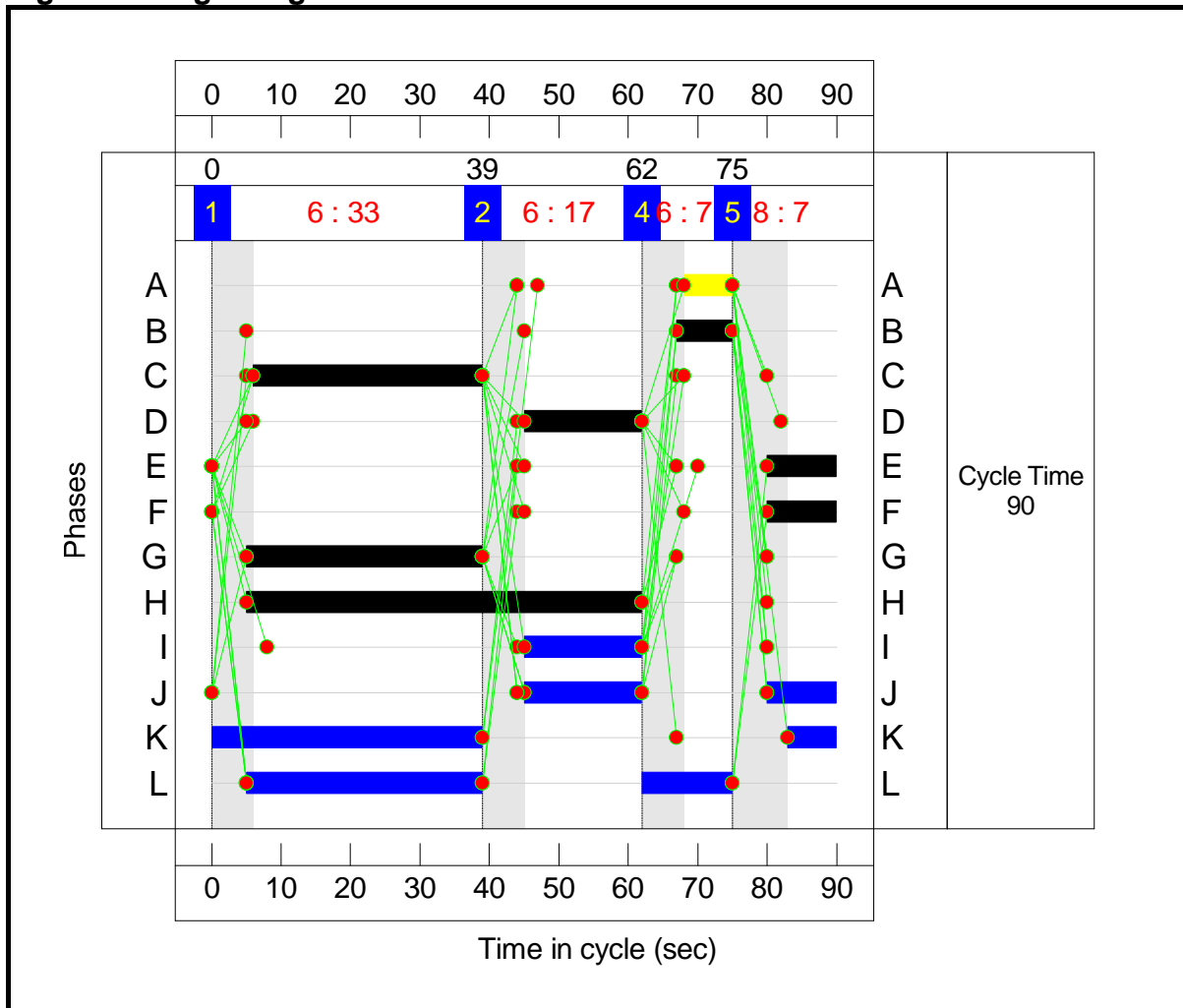
**Scenario 10: '2022 with dev Pm'**  
 Staging Plan 1: 'Staging Plan No. 2'  
 Flow Group 10: '2022 with dev PM 1700-1800'  
**Staging Plan Diagram**



**Stage Timings**

Stage	1	2	4	5
Duration	33	17	7	7
Change Point	0	39	62	75

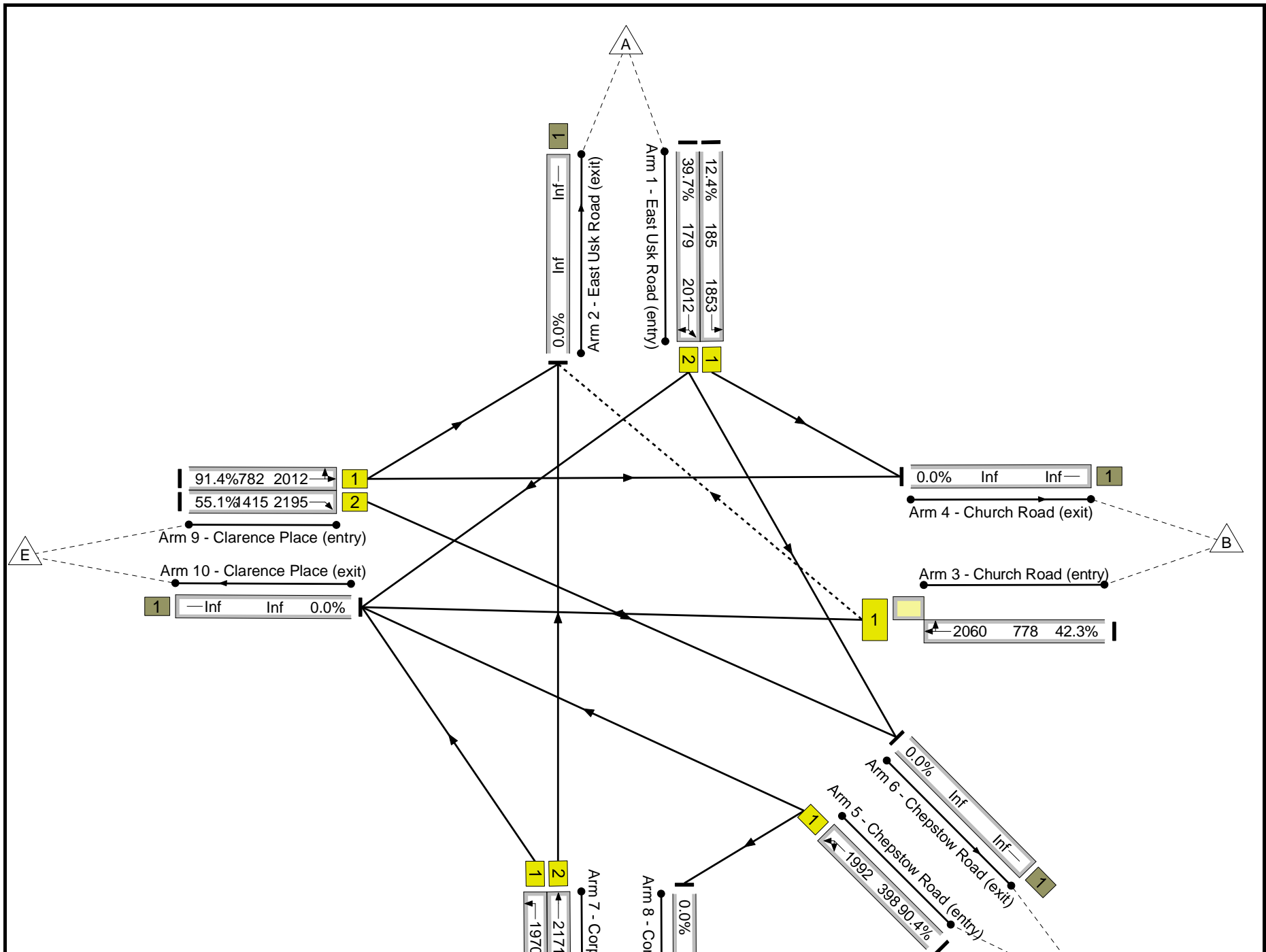
**Signal Timings Diagram**



Full Input Data And Results

**Junction Layout Diagram**

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

**Link Results**

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	East Usk Road (entry) Left	U	N/A	N/A	B		1	8	-	23	1853	1853	185	12.4
1/2	East Usk Road (entry) Ahead Right	U	N/A	N/A	A		1	7	-	71	2012	2012	179	39.7
2/1	East Usk Road (exit)	U	N/A	N/A	-		-	-	-	46	Inf	Inf	Inf	0.0
3/1	Church Road (entry) Right Ahead	O	N/A	N/A	C		1	33	-	329	2061	2060	778	42.3
4/1	Church Road (exit)	U	N/A	N/A	-		-	-	-	715	Inf	Inf	Inf	0.0
5/1	Chepstow Road (entry) U-Turn Ahead	U	N/A	N/A	D		1	17	-	360	1992	1992	398	90.4
6/1	Chepstow Road (exit)	U	N/A	N/A	-		-	-	-	795	Inf	Inf	Inf	0.0
7/1	Corporation Road (entry) Left	U	N/A	N/A	F		1	10	-	206	1970	1970	241	85.6
7/2	Corporation Road (entry) Ahead	U	N/A	N/A	E		1	10	-	16	2171	2171	265	6.0
8/1	Corporation Road (exit)	U	N/A	N/A	-		-	-	-	18	Inf	Inf	Inf	0.0
9/1	Clarence Place (entry) Left Ahead	U	N/A	N/A	G		1	34	-	715	2012	2012	782	91.4
9/2	Clarence Place (entry) Right	U	N/A	N/A	H		1	57	-	780	2195	2195	1415	55.1

Full Input Data And Results

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
10/1	Clarence Place (exit)	U	N/A	N/A	-	-	-	-	-	926	Inf	Inf	Inf	0.0
1/1	23	23	-	-	-	0.2	0.1	-	0.3	48.0	0.5	0.1	0.6	
1/2	71	71	-	-	-	0.8	0.3	-	1.1	55.3	1.7	0.3	2.0	
2/1	46	46	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
3/1	329	329	7	0	0	1.9	0.4	0.0	2.3	25.2	6.0	0.4	6.4	
4/1	715	715	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/1	360	360	-	-	-	3.5	3.9	-	7.4	74.1	8.7	3.9	12.6	
6/1	795	795	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	206	206	-	-	-	2.2	2.6	-	4.8	83.8	5.0	2.6	7.6	
7/2	16	16	-	-	-	0.2	0.0	-	0.2	42.3	0.4	0.0	0.4	
8/1	18	18	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
9/1	715	715	-	-	-	5.2	4.7	-	9.8	49.5	16.9	4.7	21.5	
9/2	780	780	-	-	-	1.9	0.6	-	2.5	11.7	10.6	0.6	11.2	
10/1	926	926	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
PRC for Signalled Links (%):			-1.5		Total Delay for Signalled Links (pcuHr):			28.46						
PRC Over All Links (%):			-1.5		Total Delay Over All Links(pcuHr):			28.46		Cycle Time (s): 90				

# Appendix I

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TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.0 ANALYSIS PROGRAM  
RELEASE 3.0 (JUNE 2006)

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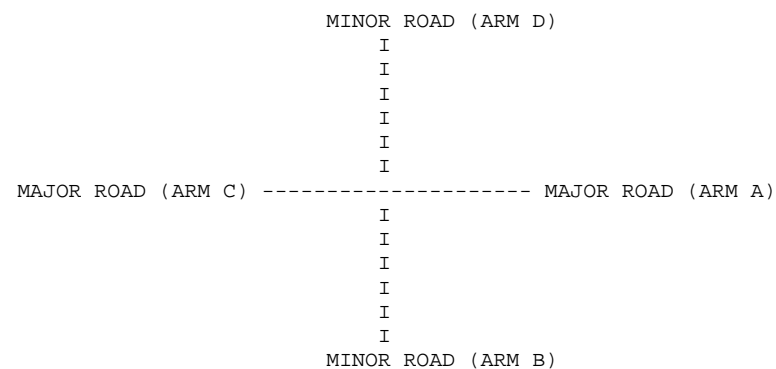
Run with file:-  
"T:\T12\Jobs\T12.172\_Herbert Road, Newport\Analysis\PICADY\AM\Turner Street junction AM.vpi"  
(drive-on-the-left ) at 16:11:01 on Wednesday, 27 November 2013

RUN INFORMATION  
\*\*\*\*\*

RUN TITLE: Turner Street priority junction  
LOCATION: Newport  
DATE: 22/03/13  
CLIENT: Greenhill Construction  
ENUMERATOR: Transport Planner  
JOB NUMBER: T12.172  
STATUS: Draft 1  
DESCRIPTION: Cross road junction of Turnstreet/Caerleon Road/Tesco

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY  
\*\*\*\*\*

INPUT DATA  
-----



ARM A IS Caerleon Road (north)  
ARM B IS Tesco store  
ARM C IS Caerleon Road (south)  
ARM D IS Turner Street

STREAM LABELLING CONVENTION  
-----

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B  
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C  
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	( W ) 9.07 M.	I	( W ) 9.07 M.	I
I	CENTRAL RESERVE WIDTH	I	( WCR ) 0.00 M.	I	( WCR ) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	( WC-B ) 2.20 M.	I	( WA-D ) 2.20 M.	I
I	- VISIBILITY	I	( VC-B ) 176.0 M.	I	( VA-D ) 117.0 M.	I
I	- BLOCKS TRAFFIC	I	YES	I	YES	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	( VB-C ) 47.0 M.	I	( VD-A ) 28.0 M.	I
I	- VISIBILITY TO RIGHT	I	( VB-A ) 32.0 M.	I	( VD-C ) 28.0 M.	I
I	- LANE 1 WIDTH	I	( WB-C ) 4.00 M.	I	( WD-A ) 4.39 M.	I
I	- LANE 2 WIDTH	I	( WB-A ) 0.00 M.	I	( WD-C ) 0.00 M.	I

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted )

B-C Stream

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	Stream B-C	Stream A-C	Stream A-B	I
I	708.57	0.24	0.09	I

D-A Stream

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	Stream D-A	Stream C-A	Stream C-D	I
I	730.85	0.25	0.10	I

B-A Stream

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	Stream B-A	Stream A-C	Stream A-D	Stream D-A	Stream D-B	I
I	559.48	0.22	0.22	0.22	0.22	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	Stream A-B	Stream C-A	Stream C-B	Stream D-C	I
I	0.09	0.14	0.32	0.11	I

D-C Stream

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	Stream D-C	Stream C-A	Stream C-B	Stream B-C	Stream B-D	I
I	570.06	0.23	0.23	0.23	0.23	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	Stream C-D	Stream A-C	Stream A-D	Stream B-A	I
I	0.09	0.14	0.32	0.11	I

C-B Stream

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	Stream C-B	Stream A-C	Stream A-D	I
I	675.89	0.23	0.32	I

A-D Stream

I	Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	641.72	0.23	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

B-D Stream From Right Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

D-B Stream From Left Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

D-B Stream From Right Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

TRAFFIC DEMAND DATA





I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.30-09.45										I
I	B-ACD	0.70	8.62	0.082		0.11	0.09	1.4		0.13	I
I	A-BCD	1.01	12.63	0.080		0.20	0.15	2.2		0.09	I
I	A-B	0.31									I
I	A-C	3.93									I
I	D-ABC	2.31	8.55	0.270		0.52	0.38	5.8		0.16	I
I	C-ABD	0.28	13.49	0.021		0.03	0.03	0.4		0.08	I
I	C-D	1.14									I
I	C-A	4.11									I

\*WARNING\* NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.1
09.00	0.2
09.15	0.2
09.30	0.1
09.45	0.1

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.2
09.00	0.3
09.15	0.3
09.30	0.2
09.45	0.1

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.4	
08.45	0.5	
09.00	0.8	*
09.15	0.8	*
09.30	0.5	*
09.45	0.4	

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0
09.45	0.0

-----  
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD  
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I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	I	I			I			I			I
I	B-ACD	I	77.1	51.4	I	10.5	0.14	I	10.5	0.14	I
I	A-BCD	I	124.5	83.0	I	19.1	0.15	I	19.1	0.15	I
I	A-B	I	33.2	22.1	I			I			I
I	A-C	I	417.7	278.5	I			I			I
I	D-ABC	I	253.3	168.8	I	48.9	0.19	I	48.9	0.19	I
I	C-ABD	I	34.3	22.9	I	3.1	0.09	I	3.1	0.09	I
I	C-D	I	124.7	83.2	I			I			I
I	C-A	I	448.0	298.6	I			I			I
I	ALL	I	1512.7	1008.5	I	81.7	0.05	I	81.7	0.05	I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted )

B-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	Stream B-C	Stream	A-C	Stream	A-B	I
I	708.57		0.24		0.09	I

D-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	Stream D-A	Stream	C-A	Stream	C-D	I
I	730.85		0.25		0.10	I

B-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream B-A	Stream	A-C	Stream	A-D	Stream	D-A	Stream	D-B	I
I	559.48		0.22		0.22		0.22		0.22	I

I	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream	A-B	Stream	C-A	Stream	C-B	Stream	D-C	I
I		0.09		0.14		0.32		0.11	I

D-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream D-C	Stream	C-A	Stream	C-B	Stream	B-C	Stream	B-D	I
I	570.06		0.23		0.23		0.23		0.23	I

I	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream	C-D	Stream	A-C	Stream	A-D	Stream	B-A	I
I		0.09		0.14		0.32		0.11	I

C-B Stream

I	Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	I
I	675.89	0.23	0.32	I

A-D Stream

I	Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	641.72	0.23	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	0.14	0.14			I

B-D Stream From Right Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	0.14	0.14			I

D-B Stream From Left Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I	0.14	0.14			I

D-B Stream From Right Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I	0.14	0.14			I

TRAFFIC DEMAND DATA

ARM	FLOW SCALE (%)
A	100
B	100
C	100
D	100

Demand set: Turner Street priority junction 2017 Am no dev

TIME PERIOD BEGINS 08.15 AND ENDS 09.45

LENGTH OF TIME PERIOD - 90 MINUTES.

LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	5.51	8.27	5.51
ARM B	15.00	45.00	75.00	0.73	1.09	0.73
ARM C	15.00	45.00	75.00	5.81	8.72	5.81
ARM D	15.00	45.00	75.00	2.42	3.64	2.42

TIME	TURNING PROPORTIONS				
	FROM/TO	ARM A	ARM B	ARM C	ARM D
08.15 - 09.45	ARM A	0.000	0.066	0.812	0.122
		0.0	29.0	358.0	54.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.293	0.000	0.483	0.224
		17.0	0.0	28.0	13.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.757	0.032	0.000	0.211
		352.0	15.0	0.0	98.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.397	0.031	0.572	0.000
		77.0	6.0	111.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Turner Street priority junction 2017 Am no dev  
AND FOR TIME PERIOD 1



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-ACD	0.87	8.14	0.107		0.16	0.12	1.9		0.14	I
I	A-BCD	1.44	13.18	0.109		0.33	0.22	3.4		0.09	I
I	A-B	0.39									I
I	A-C	4.78									I
I	D-ABC	2.91	8.06	0.361		0.89	0.58	9.0		0.20	I
I	C-ABD	0.40	14.07	0.029		0.05	0.04	0.6		0.07	I
I	C-D	1.43									I
I	C-A	5.14									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.30-09.45										I
I	B-ACD	0.73	8.52	0.085		0.12	0.09	1.4		0.13	I
I	A-BCD	1.09	12.74	0.086		0.22	0.16	2.4		0.09	I
I	A-B	0.33									I
I	A-C	4.11									I
I	D-ABC	2.43	8.45	0.288		0.58	0.41	6.4		0.17	I
I	C-ABD	0.31	13.61	0.023		0.04	0.03	0.4		0.08	I
I	C-D	1.20									I
I	C-A	4.32									I

\*WARNING\* NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.1
09.00	0.2
09.15	0.2
09.30	0.1
09.45	0.1

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.2
08.45	0.2
09.00	0.3
09.15	0.3
09.30	0.2
09.45	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.4	
08.45	0.6	*
09.00	0.9	*
09.15	0.9	*
09.30	0.6	*
09.45	0.4	

QUEUE FOR STREAM C-ABD  
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TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
08.45	0.0
09.00	0.1
09.15	0.1
09.30	0.0
09.45	0.0

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 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD  
 -----

I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	I	I			I			I			I
I	B-ACD	I	79.8	53.2	I	11.1	0.14	I	11.1	0.14	I
I	A-BCD	I	136.2	90.8	I	21.2	0.16	I	21.2	0.16	I
I	A-B	I	35.3	23.5	I			I			I
I	A-C	I	435.6	290.4	I			I			I
I	D-ABC	I	267.0	178.0	I	54.8	0.21	I	54.8	0.21	I
I	C-ABD	I	37.9	25.2	I	3.5	0.09	I	3.5	0.09	I
I	C-D	I	131.1	87.4	I			I			I
I	C-A	I	471.0	314.0	I			I			I
I	ALL	I	1593.9	1062.6	I	90.7	0.06	I	90.7	0.06	I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted )

B-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	Stream B-C	Stream	A-C	Stream	A-B	I
I	708.57		0.24		0.09	I

D-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	Stream D-A	Stream	C-A	Stream	C-D	I
I	730.85		0.25		0.10	I

B-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream B-A	Stream	A-C	Stream	A-D	Stream	D-A	Stream	D-B	I
I	559.48		0.22		0.22		0.22		0.22	I

I	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream	A-B	Stream	C-A	Stream	C-B	Stream	D-C	I
I		0.09		0.14		0.32		0.11	I

D-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream D-C	Stream	C-A	Stream	C-B	Stream	B-C	Stream	B-D	I
I	570.06		0.23		0.23		0.23		0.23	I

I	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream	C-D	Stream	A-C	Stream	A-D	Stream	B-A	I
I		0.09		0.14		0.32		0.11	I

C-B Stream

I	Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	I
I	675.89	0.23	0.32	I

A-D Stream

I	Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	641.72	0.23	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

B-D Stream From Right Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

D-B Stream From Left Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	I
I	0.14	0.14		I

D-B Stream From Right Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	I
I	0.14	0.14		I

TRAFFIC DEMAND DATA

ARM	FLOW SCALE (%)
A	100
B	100
C	100
D	100

Demand set: Turner Street priority junction 2022 Am no dev

TIME PERIOD BEGINS 08.15 AND ENDS 09.45

LENGTH OF TIME PERIOD - 90 MINUTES.  
 LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	6.00	9.00	6.00
ARM B	15.00	45.00	75.00	0.79	1.18	0.79
ARM C	15.00	45.00	75.00	6.32	9.49	6.32
ARM D	15.00	45.00	75.00	2.65	3.98	2.65

TIME	TURNING PROPORTIONS				
	FROM/TO	ARM A	ARM B	ARM C	ARM D
08.15 - 09.45	ARM A	0.000	0.065	0.813	0.123
		0.0	31.0	390.0	59.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.286	0.000	0.492	0.222
		18.0	0.0	31.0	14.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.759	0.032	0.000	0.209
		384.0	16.0	0.0	106.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.396	0.033	0.571	0.000
		84.0	7.0	121.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Turner Street priority junction 2022 Am no dev  
 AND FOR TIME PERIOD 1



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-ACD	0.94	7.96	0.119		0.18	0.14	2.1		0.14	I
I	A-BCD	1.66	13.42	0.123		0.39	0.26	4.0		0.09	I
I	A-B	0.41									I
I	A-C	5.13									I
I	D-ABC	3.18	7.83	0.405		1.14	0.70	11.0		0.22	I
I	C-ABD	0.45	14.32	0.031		0.06	0.04	0.6		0.07	I
I	C-D	1.54									I
I	C-A	5.59									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.30-09.45										I
I	B-ACD	0.79	8.38	0.094		0.14	0.11	1.6		0.13	I
I	A-BCD	1.25	12.94	0.096		0.26	0.19	2.8		0.09	I
I	A-B	0.35									I
I	A-C	4.42									I
I	D-ABC	2.66	8.27	0.322		0.70	0.48	7.5		0.18	I
I	C-ABD	0.34	13.82	0.025		0.04	0.03	0.5		0.07	I
I	C-D	1.30									I
I	C-A	4.71									I

\*WARNING\* NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.1
09.00	0.2
09.15	0.2
09.30	0.1
09.45	0.1

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.2
08.45	0.3
09.00	0.4
09.15	0.4
09.30	0.3
09.45	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.5	
08.45	0.7	*
09.00	1.1	*
09.15	1.1	*
09.30	0.7	*
09.45	0.5	

QUEUE FOR STREAM C-ABD  
-----

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
08.45	0.0
09.00	0.1
09.15	0.1
09.30	0.0
09.45	0.0

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 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD  
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I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	I	I			I			I			I
I	B-ACD	I	86.7	57.8	I	12.6	0.15	I	12.6	0.15	I
I	A-BCD	I	157.3	104.8	I	25.2	0.16	I	25.2	0.16	I
I	A-B	I	37.1	24.7	I			I			I
I	A-C	I	466.4	310.9	I			I			I
I	D-ABC	I	291.8	194.5	I	67.5	0.23	I	67.5	0.23	I
I	C-ABD	I	42.5	28.3	I	4.0	0.09	I	4.0	0.09	I
I	C-D	I	141.5	94.3	I			I			I
I	C-A	I	512.5	341.7	I			I			I
I	ALL	I	1735.7	1157.1	I	109.2	0.06	I	109.2	0.06	I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted )

B-C Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	B-C	Stream	A-C	Stream	A-B	Stream	A-B	I
I		708.57		0.24		0.09			I

D-A Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	D-A	Stream	C-A	Stream	C-D	Stream	C-D	I
I		730.85		0.25		0.10			I

B-A Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	B-A	Stream	A-C	Stream	A-D	Stream	D-A	Stream	D-B	Stream	D-C	Stream	D-C	I
I		559.48		0.22		0.22		0.22		0.22		0.22			I

I		Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I		Stream	A-B	Stream	C-A	Stream	C-B	Stream	C-B	Stream	D-C	Stream	D-C	I
I			0.09		0.14		0.32		0.11					I

D-C Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	D-C	Stream	C-A	Stream	C-B	Stream	B-C	Stream	B-D	Stream	B-D	Stream	B-D	I
I		570.06		0.23		0.23		0.23		0.23		0.23			I

I		Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I		Stream	C-D	Stream	A-C	Stream	A-D	Stream	B-A	Stream	B-A	Stream	B-A	I
I			0.09		0.14		0.32		0.11					I

C-B Stream

I	Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	I
I	675.89	0.23	0.32	I

A-D Stream

I	Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	641.72	0.23	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

B-D Stream From Right Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

D-B Stream From Left Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	I
I	0.14	0.14		I

D-B Stream From Right Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	I
I	0.14	0.14		I

TRAFFIC DEMAND DATA

ARM	FLOW SCALE (%)
A	100
B	100
C	100
D	100

Demand set: Turner Street priority junction 2017 Am with dev

TIME PERIOD BEGINS 08.15 AND ENDS 09.45

LENGTH OF TIME PERIOD - 90 MINUTES.  
 LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	5.69	8.53	5.69
ARM B	15.00	45.00	75.00	0.77	1.16	0.77
ARM C	15.00	45.00	75.00	6.13	9.19	6.13
ARM D	15.00	45.00	75.00	3.60	5.40	3.60

TIME	TURNING PROPORTIONS				
	FROM/TO	ARM A	ARM B	ARM C	ARM D
08.15 - 09.45	ARM A	0.000	0.064	0.787	0.149
		0.0	29.0	358.0	68.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.274	0.000	0.452	0.274
		17.0	0.0	28.0	17.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.718	0.031	0.000	0.251
		352.0	15.0	0.0	123.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.392	0.045	0.563	0.000
		113.0	13.0	162.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Turner Street priority junction 2017 Am with dev  
 AND FOR TIME PERIOD 1



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-ACD	0.93	7.88	0.118		0.18	0.14	2.1		0.14	I
I	A-BCD	1.82	13.12	0.139		0.42	0.28	4.3		0.09	I
I	A-B	0.37									I
I	A-C	4.62									I
I	D-ABC	4.32	7.94	0.544		2.42	1.24	20.1		0.29	I
I	C-ABD	0.41	14.24	0.029		0.05	0.04	0.6		0.07	I
I	C-D	1.79									I
I	C-A	5.13									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.30-09.45										I
I	B-ACD	0.78	8.30	0.094		0.14	0.10	1.6		0.13	I
I	A-BCD	1.38	12.69	0.109		0.28	0.20	3.1		0.09	I
I	A-B	0.32									I
I	A-C	4.00									I
I	D-ABC	3.61	8.35	0.433		1.24	0.78	12.3		0.21	I
I	C-ABD	0.31	13.75	0.023		0.04	0.03	0.4		0.07	I
I	C-D	1.51									I
I	C-A	4.32									I

\*WARNING\* NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.1
09.00	0.2
09.15	0.2
09.30	0.1
09.45	0.1

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.2
08.45	0.3
09.00	0.4
09.15	0.4
09.30	0.3
09.45	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.7	*
08.45	1.1	*
09.00	2.3	**
09.15	2.4	**
09.30	1.2	*
09.45	0.8	*

QUEUE FOR STREAM C-ABD  
-----

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
08.45	0.0
09.00	0.1
09.15	0.1
09.30	0.0
09.45	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I
I	B-ACD	I 85.3	I 56.9	I 12.5	I 0.15	I 12.5	I 0.15	I
I	A-BCD	I 172.2	I 114.8	I 27.0	I 0.16	I 27.0	I 0.16	I
I	A-B	I 34.0	I 22.7	I	I	I	I	I
I	A-C	I 420.0	I 280.0	I	I	I	I	I
I	D-ABC	I 396.4	I 264.3	I 125.5	I 0.32	I 125.5	I 0.32	I
I	C-ABD	I 39.1	I 26.0	I 3.6	I 0.09	I 3.6	I 0.09	I
I	C-D	I 164.5	I 109.7	I	I	I	I	I
I	C-A	I 470.9	I 313.9	I	I	I	I	I
I	ALL	I 1782.5	I 1188.3	I 168.5	I 0.09	I 168.6	I 0.09	I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted )

B-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	Stream B-C	Stream	A-C	Stream	A-B	I
I	708.57		0.24		0.09	I

D-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	Stream D-A	Stream	C-A	Stream	C-D	I
I	730.85		0.25		0.10	I

B-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream B-A	Stream	A-C	Stream	A-D	Stream	D-A	Stream	D-B	I
I	559.48		0.22		0.22		0.22		0.22	I

I	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream	A-B	Stream	C-A	Stream	C-B	Stream	D-C	I
I		0.09		0.14		0.32		0.11	I

D-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream D-C	Stream	C-A	Stream	C-B	Stream	B-C	Stream	B-D	I
I	570.06		0.23		0.23		0.23		0.23	I

I	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream	C-D	Stream	A-C	Stream	A-D	Stream	B-A	I
I		0.09		0.14		0.32		0.11	I

C-B Stream

I	Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	I
I	675.89	0.23	0.32	I

A-D Stream

I	Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	641.72	0.23	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

B-D Stream From Right Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

D-B Stream From Left Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	I
I	0.14	0.14		I

D-B Stream From Right Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	I
I	0.14	0.14		I

TRAFFIC DEMAND DATA

ARM	FLOW SCALE (%)
A	100
B	100
C	100
D	100

Demand set: Turner Street priority junction 2022 Am with dev

TIME PERIOD BEGINS 08.15 AND ENDS 09.45

LENGTH OF TIME PERIOD - 90 MINUTES.

LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	6.18	9.26	6.18
ARM B	15.00	45.00	75.00	0.84	1.26	0.84
ARM C	15.00	45.00	75.00	6.65	9.98	6.65
ARM D	15.00	45.00	75.00	3.83	5.74	3.83

TIME	TURNING PROPORTIONS				
	FROM/TO	ARM A	ARM B	ARM C	ARM D
08.15 - 09.45	ARM A	0.000	0.063	0.789	0.148
		0.0	31.0	390.0	73.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.269	0.000	0.463	0.269
		18.0	0.0	31.0	18.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.722	0.030	0.000	0.248
		384.0	16.0	0.0	132.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.392	0.046	0.562	0.000
		120.0	14.0	172.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Turner Street priority junction 2022 Am with dev  
AND FOR TIME PERIOD 1



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-ACD	1.00	7.70	0.130		0.21	0.15	2.3		0.15	I
I	A-BCD	2.06	13.36	0.154		0.50	0.33	5.0		0.09	I
I	A-B	0.39									I
I	A-C	4.95									I
I	D-ABC	4.58	7.71	0.594		3.48	1.54	25.8		0.35	I
I	C-ABD	0.46	14.50	0.032		0.07	0.04	0.6		0.07	I
I	C-D	1.92									I
I	C-A	5.59									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.30-09.45										I
I	B-ACD	0.84	8.16	0.103		0.15	0.12	1.8		0.14	I
I	A-BCD	1.55	12.88	0.120		0.33	0.23	3.5		0.09	I
I	A-B	0.34									I
I	A-C	4.31									I
I	D-ABC	3.84	8.17	0.470		1.54	0.91	14.5		0.24	I
I	C-ABD	0.35	13.97	0.025		0.04	0.03	0.5		0.07	I
I	C-D	1.62									I
I	C-A	4.71									I

\*WARNING\* NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.1
09.00	0.2
09.15	0.2
09.30	0.2
09.45	0.1

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.2
08.45	0.3
09.00	0.5
09.15	0.5 *
09.30	0.3
09.45	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.9 *
08.45	1.4 *
09.00	3.2 ***
09.15	3.5 ***
09.30	1.5 **
09.45	0.9 *

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
08.45	0.0
09.00	0.1
09.15	0.1
09.30	0.0
09.45	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	B-ACD	I	92.2	I	61.5	I	14.1	I	0.15	I
I	A-BCD	I	197.0	I	131.4	I	31.8	I	0.16	I
I	A-B	I	35.6	I	23.7	I		I		I
I	A-C	I	447.3	I	298.2	I		I		I
I	D-ABC	I	421.2	I	280.8	I	163.9	I	0.39	I
I	C-ABD	I	45.8	I	30.5	I	4.3	I	0.09	I
I	C-D	I	175.6	I	117.1	I		I		I
I	C-A	I	510.9	I	340.6	I		I		I
I	ALL	I	1925.6	I	1283.7	I	214.0	I	0.11	I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB  
 ===== end of file =====

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.0 ANALYSIS PROGRAM  
RELEASE 3.0 (JUNE 2006)

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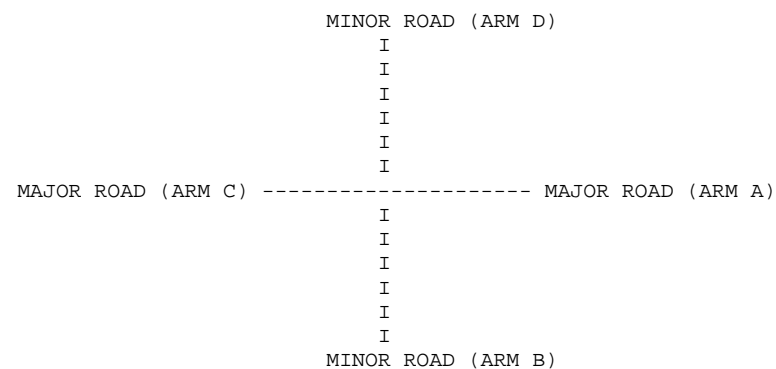
Run with file:-  
"T:\T12\Jobs\T12.172\_Herbert Road, Newport\Analysis\PICADY\PM\Turner Street junction PM.vpi"  
(drive-on-the-left ) at 16:17:44 on Wednesday, 27 November 2013

RUN INFORMATION  
\*\*\*\*\*

RUN TITLE: Turner Street priority junction  
LOCATION: Newport  
DATE: 22/03/13  
CLIENT: Greenhill Construction  
ENUMERATOR: Transport Planner  
JOB NUMBER: T12.172  
STATUS: Draft 1  
DESCRIPTION: Cross road junction of Turnstreet/Caerleon Road/Tesco

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY  
\*\*\*\*\*

INPUT DATA  
-----



ARM A IS Caerleon Road (north)  
ARM B IS Tesco store  
ARM C IS Caerleon Road (south)  
ARM D IS Turner Street

STREAM LABELLING CONVENTION  
-----

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B  
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C  
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	( W ) 9.07 M.	I	( W ) 9.07 M.	I
I	CENTRAL RESERVE WIDTH	I	( WCR ) 0.00 M.	I	( WCR ) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	( WC-B ) 2.20 M.	I	( WA-D ) 2.20 M.	I
I	- VISIBILITY	I	( VC-B ) 176.0 M.	I	( VA-D ) 117.0 M.	I
I	- BLOCKS TRAFFIC	I	YES	I	YES	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	( VB-C ) 47.0 M.	I	( VD-A ) 28.0 M.	I
I	- VISIBILITY TO RIGHT	I	( VB-A ) 32.0 M.	I	( VD-C ) 28.0 M.	I
I	- LANE 1 WIDTH	I	( WB-C ) 4.00 M.	I	( WD-A ) 4.39 M.	I
I	- LANE 2 WIDTH	I	( WB-A ) 0.00 M.	I	( WD-C ) 0.00 M.	I

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted )

B-C Stream

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	Stream B-C	Stream A-C	Stream A-B	I
I	708.57	0.24	0.09	I

D-A Stream

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	Stream D-A	Stream C-A	Stream C-D	I
I	730.85	0.25	0.10	I

B-A Stream

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	Stream B-A	Stream A-C	Stream A-D	Stream D-A	Stream D-B	I
I	559.48	0.22	0.22	0.22	0.22	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	Stream A-B	Stream C-A	Stream C-B	Stream D-C	I
I	0.09	0.14	0.32	0.11	I

D-C Stream

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	Stream D-C	Stream C-A	Stream C-B	Stream B-C	Stream B-D	I
I	570.06	0.23	0.23	0.23	0.23	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	Stream C-D	Stream A-C	Stream A-D	Stream B-A	I
I	0.09	0.14	0.32	0.11	I

C-B Stream

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	Stream C-B	Stream A-C	Stream A-D	I
I	675.89	0.23	0.32	I

A-D Stream

I	Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	641.72	0.23	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

B-D Stream From Right Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

D-B Stream From Left Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

D-B Stream From Right Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

TRAFFIC DEMAND DATA

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I ARM I FLOW SCALE(%) I
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I A I 100 I
I B I 100 I
I C I 100 I
I D I 100 I
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Demand set: Turner Street priority junction 2013 PM no dev

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MINUTES.  
 LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

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I I NUMBER OF MINUTES FROM START WHEN I RATE OF FLOW (VEH/MIN) I
I ARM I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I
I I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK I
-----
I ARM A I 15.00 I 45.00 I 75.00 I 4.46 I 6.69 I 4.46 I
I ARM B I 15.00 I 45.00 I 75.00 I 0.41 I 0.62 I 0.41 I
I ARM C I 15.00 I 45.00 I 75.00 I 5.51 I 8.27 I 5.51 I
I ARM D I 15.00 I 45.00 I 75.00 I 2.30 I 3.45 I 2.30 I
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I I TURNING PROPORTIONS I
I I TURNING COUNTS (VEH/HR) I
I I (PERCENTAGE OF H.V.S) I
I I
I I
I TIME I FROM/TO I ARM A I ARM B I ARM C I ARM D I
-----
I 17.00 - 18.30 I I I I I I
I I ARM A I 0.000 I 0.087 I 0.770 I 0.143 I
I I I 0.0 I 31.0 I 275.0 I 51.0 I
I I I ( 0.0)I ( 0.0)I ( 0.0)I ( 0.0)I
I I I I I I
I I ARM B I 0.091 I 0.000 I 0.727 I 0.182 I
I I I 3.0 I 0.0 I 24.0 I 6.0 I
I I I ( 0.0)I ( 0.0)I ( 0.0)I ( 0.0)I
I I I I I I
I I ARM C I 0.757 I 0.032 I 0.000 I 0.211 I
I I I 334.0 I 14.0 I 0.0 I 93.0 I
I I I ( 0.0)I ( 0.0)I ( 0.0)I ( 0.0)I
I I I I I I
I I ARM D I 0.397 I 0.033 I 0.571 I 0.000 I
I I I 73.0 I 6.0 I 105.0 I 0.0 I
I I I ( 0.0)I ( 0.0)I ( 0.0)I ( 0.0)I
I I I I I I
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TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Turner Street priority junction 2013 PM no dev  
 AND FOR TIME PERIOD 1

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I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY I
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING I
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN) I
I 17.00-17.15 I
I B-ACD 0.41 9.73 0.043 I 0.00 0.04 0.6 I 0.11 I
I A-BCD 0.92 12.07 0.076 I 0.00 0.13 1.9 I 0.09 I
I A-B 0.36 I I I I I
I A-C 3.20 I I I I I
I D-ABC 2.31 8.68 0.266 I 0.00 0.36 5.1 I 0.16 I
I C-ABD 0.28 13.63 0.020 I 0.00 0.02 0.4 I 0.07 I
I C-D 1.14 I I I I I
I C-A 4.11 I I I I I
I I
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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.15-18.30										I
I	B-ACD	0.41	9.73	0.043		0.06	0.04	0.7		0.11	I
I	A-BCD	0.92	12.08	0.076		0.18	0.13	2.0		0.09	I
I	A-B	0.36									I
I	A-C	3.20									I
I	D-ABC	2.31	8.68	0.266		0.50	0.37	5.7		0.16	I
I	C-ABD	0.28	13.63	0.020		0.03	0.02	0.4		0.07	I
I	C-D	1.14									I
I	C-A	4.11									I

\*WARNING\* NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1
18.30	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.3
18.00	0.3
18.15	0.2
18.30	0.1

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.4	
17.30	0.5	
17.45	0.7	*
18.00	0.7	*
18.15	0.5	*
18.30	0.4	

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0
18.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I						
I	I	I	I	I	* DELAY *	I	* DELAY *	I						
I	I	I	I	I	I	I	I	I						
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)						
I	B-ACD	I	45.4	I	30.3	I	5.1	I	0.11	I	5.1	I	0.11	I
I	A-BCD	I	113.5	I	75.7	I	17.0	I	0.15	I	17.0	I	0.15	I
I	A-B	I	38.3	I	25.5	I		I		I		I		I
I	A-C	I	339.6	I	226.4	I		I		I		I		I
I	D-ABC	I	253.3	I	168.8	I	47.3	I	0.19	I	47.4	I	0.19	I
I	C-ABD	I	33.9	I	22.6	I	3.1	I	0.09	I	3.1	I	0.09	I
I	C-D	I	124.8	I	83.2	I		I		I		I		I
I	C-A	I	448.2	I	298.8	I		I		I		I		I
I	ALL	I	1397.1	I	931.4	I	72.4	I	0.05	I	72.5	I	0.05	I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity will be adjusted )

B-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	Stream B-C	Stream	A-C	Stream	A-B	I
I	708.57		0.24		0.09	I

D-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	Stream D-A	Stream	C-A	Stream	C-D	I
I	730.85		0.25		0.10	I

B-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream B-A	Stream	A-C	Stream	A-D	Stream	D-A	Stream	D-B	I
I	559.48		0.22		0.22		0.22		0.22	I

I	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream	A-B	Stream	C-A	Stream	C-B	Stream	D-C	I
I		0.09		0.14		0.32		0.11	I

D-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream D-C	Stream	C-A	Stream	C-B	Stream	B-C	Stream	B-D	I
I	570.06		0.23		0.23		0.23		0.23	I

I	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream	C-D	Stream	A-C	Stream	A-D	Stream	B-A	I
I		0.09		0.14		0.32		0.11	I

C-B Stream

I	Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	I
I	675.89	0.23	0.32	I

A-D Stream

I	Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	641.72	0.23	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

B-D Stream From Right Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

D-B Stream From Left Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	I
I	0.14	0.14		I

D-B Stream From Right Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	I
I	0.14	0.14		I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

Demand set: Turner Street priority junction 2017 PM no dev

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MINUTES.

LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	4.69	I	7.03	I	4.69
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.43	I	0.64	I	0.43
I	ARM C	I	15.00	I	45.00	I	75.00	I	8.38	I	12.56	I	8.38
I	ARM D	I	15.00	I	45.00	I	75.00	I	3.04	I	4.56	I	3.04

I		I TURNING PROPORTIONS								I		
I		I TURNING COUNTS (VEH/HR)								I		
I		I (PERCENTAGE OF H.V.S)								I		
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
I	17.00 - 18.30	I	ARM A	I	0.000	I	0.085	I	0.771	I	0.144	I
I		I		I	0.0	I	32.0	I	289.0	I	54.0	I
I		I		I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)	I
I		I	ARM B	I	0.088	I	0.000	I	0.735	I	0.176	I
I		I		I	3.0	I	0.0	I	25.0	I	6.0	I
I		I		I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)	I
I		I	ARM C	I	0.834	I	0.025	I	0.000	I	0.140	I
I		I		I	559.0	I	17.0	I	0.0	I	94.0	I
I		I		I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)	I
I		I	ARM D	I	0.514	I	0.029	I	0.457	I	0.000	I
I		I		I	125.0	I	7.0	I	111.0	I	0.0	I
I		I		I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)	I
I		I		I		I		I		I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Turner Street priority junction 2017 PM no dev  
AND FOR TIME PERIOD 1



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-ACD	0.51	9.16	0.056		0.08	0.06	0.9		0.12	I
I	A-BCD	1.35	11.95	0.113		0.33	0.22	3.3		0.09	I
I	A-B	0.43									I
I	A-C	3.84									I
I	D-ABC	3.64	7.86	0.463		1.58	0.89	14.2		0.24	I
I	C-ABD	0.55	15.97	0.034		0.08	0.05	0.7		0.06	I
I	C-D	1.37									I
I	C-A	8.13									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.15-18.30										I
I	B-ACD	0.43	9.49	0.045		0.06	0.05	0.7		0.11	I
I	A-BCD	1.03	11.70	0.088		0.22	0.16	2.4		0.09	I
I	A-B	0.37									I
I	A-C	3.30									I
I	D-ABC	3.05	8.34	0.366		0.89	0.59	9.2		0.19	I
I	C-ABD	0.41	15.26	0.027		0.05	0.03	0.5		0.07	I
I	C-D	1.15									I
I	C-A	6.85									I

\*WARNING\* NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1
18.30	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.2
17.45	0.3
18.00	0.3
18.15	0.2
18.30	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.6	*
17.30	0.8	*
17.45	1.5	**
18.00	1.6	**
18.15	0.9	*
18.30	0.6	*

QUEUE FOR STREAM    C-ABD  
-----

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.1
18.00	0.1
18.15	0.0
18.30	0.0

-----  
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD  
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I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	I	I			I			I			I
I	B-ACD	I	46.8	31.2	I	5.5	0.12	I	5.5	0.12	I
I	A-BCD	I	128.2	85.5	I	21.1	0.16	I	21.1	0.16	I
I	A-B	I	38.7	25.8	I			I			I
I	A-C	I	349.3	232.9	I			I			I
I	D-ABC	I	334.5	223.0	I	88.0	0.26	I	88.0	0.26	I
I	C-ABD	I	55.3	36.8	I	4.7	0.09	I	4.7	0.09	I
I	C-D	I	124.8	83.2	I			I			I
I	C-A	I	742.2	494.8	I			I			I
I	ALL	I	1819.6	1213.1	I	119.4	0.07	I	119.4	0.07	I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted )

B-C Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	B-C	Stream	A-C	Stream	A-B	Stream	A-B	I
I		708.57		0.24		0.09			I

D-A Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	D-A	Stream	C-A	Stream	C-D	Stream	C-D	I
I		730.85		0.25		0.10			I

B-A Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	B-A	Stream	A-C	Stream	A-D	Stream	D-A	Stream	D-B	Stream	D-C	Stream	D-C	I
I		559.48		0.22		0.22		0.22		0.22		0.22			I

I	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	A-B	Stream	C-A	Stream	C-B	Stream	C-B	Stream	D-C	Stream	D-C	I
I		0.09		0.14		0.32		0.11					I

D-C Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I	
I	Stream	D-C	Stream	C-A	Stream	C-B	Stream	B-C	Stream	B-D	Stream	B-D	I
I		570.06		0.23		0.23		0.23		0.23			I

I	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	C-D	Stream	A-C	Stream	A-D	Stream	B-A	Stream	B-A	Stream	B-A	I
I		0.09		0.14		0.32		0.11					I

C-B Stream

I	Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	I
I	675.89	0.23	0.32	I

A-D Stream

I	Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	641.72	0.23	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

B-D Stream From Right Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

D-B Stream From Left Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	I
I	0.14	0.14		I

D-B Stream From Right Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	I
I	0.14	0.14		I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

Demand set: Turner Street priority junction 2022 PM no dev

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MINUTES.

LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	5.09	I	7.63	I	5.09
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.46	I	0.69	I	0.46
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.07	I	13.61	I	9.07
I	ARM D	I	15.00	I	45.00	I	75.00	I	3.31	I	4.97	I	3.31

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	17.00 - 18.30	I	ARM A	I	0.000	I	0.086	I	0.771	I	0.143
I		I		I	0.0	I	35.0	I	314.0	I	58.0
I		I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)
I		I	ARM B	I	0.081	I	0.000	I	0.730	I	0.189
I		I		I	3.0	I	0.0	I	27.0	I	7.0
I		I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)
I		I	ARM C	I	0.835	I	0.025	I	0.000	I	0.140
I		I		I	606.0	I	18.0	I	0.0	I	102.0
I		I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)
I		I	ARM D	I	0.513	I	0.030	I	0.457	I	0.000
I		I		I	136.0	I	8.0	I	121.0	I	0.0
I		I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Turner Street priority junction 2022 PM no dev  
AND FOR TIME PERIOD 1



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-ACD	0.55	8.97	0.062		0.09	0.07	1.0		0.12	I
I	A-BCD	1.53	12.10	0.126		0.39	0.26	3.9		0.09	I
I	A-B	0.46									I
I	A-C	4.11									I
I	D-ABC	3.97	7.61	0.522		2.29	1.13	18.4		0.29	I
I	C-ABD	0.61	16.33	0.037		0.09	0.05	0.8		0.06	I
I	C-D	1.48									I
I	C-A	8.79									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.15-18.30										I
I	B-ACD	0.46	9.33	0.050		0.07	0.05	0.8		0.11	I
I	A-BCD	1.16	11.82	0.098		0.26	0.18	2.7		0.09	I
I	A-B	0.40									I
I	A-C	3.55									I
I	D-ABC	3.33	8.13	0.409		1.13	0.71	11.2		0.21	I
I	C-ABD	0.46	15.57	0.029		0.05	0.04	0.6		0.07	I
I	C-D	1.25									I
I	C-A	7.41									I

\*WARNING\* NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1
18.30	0.1

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.3
17.45	0.4
18.00	0.4
18.15	0.3
18.30	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.7	*
17.30	1.1	*
17.45	2.2	**
18.00	2.3	**
18.15	1.1	*
18.30	0.7	*

QUEUE FOR STREAM C-ABD  
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TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1
18.30	0.0

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 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD  
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I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	I	I			I			I			I
I	B-ACD	I	50.9	34.0	I	6.1	0.12	I	6.1	0.12	I
I	A-BCD	I	145.3	96.9	I	24.8	0.17	I	24.8	0.17	I
I	A-B	I	41.6	27.7	I			I			I
I	A-C	I	373.3	248.9	I			I			I
I	D-ABC	I	364.8	243.2	I	116.9	0.32	I	117.0	0.32	I
I	C-ABD	I	62.5	41.7	I	5.4	0.09	I	5.4	0.09	I
I	C-D	I	135.0	90.0	I			I			I
I	C-A	I	801.8	534.5	I			I			I
I	ALL	I	1975.2	1316.8	I	153.3	0.08	I	153.3	0.08	I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted )

B-C Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	B-C	Stream	A-C	Stream	A-B	Stream	A-B	I
I		708.57		0.24		0.09			I

D-A Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	D-A	Stream	C-A	Stream	C-D	Stream	C-D	I
I		730.85		0.25		0.10			I

B-A Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	B-A	Stream	A-C	Stream	A-D	Stream	D-A	Stream	D-B	Stream	D-C	Stream	D-C	I
I		559.48		0.22		0.22		0.22		0.22		0.22			I

I	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	A-B	Stream	C-A	Stream	C-B	Stream	C-B	Stream	D-C	Stream	D-C	I
I		0.09		0.14		0.32		0.11					I

D-C Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I	
I	Stream	D-C	Stream	C-A	Stream	C-B	Stream	B-C	Stream	B-D	Stream	B-D	I
I		570.06		0.23		0.23		0.23		0.23			I

I	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	C-D	Stream	A-C	Stream	A-D	Stream	A-D	Stream	B-A	Stream	B-A	I
I		0.09		0.14		0.32		0.11					I

C-B Stream

I	Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	I
I	675.89	0.23	0.32	I

A-D Stream

I	Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	641.72	0.23	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

B-D Stream From Right Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.14	0.14		I

D-B Stream From Left Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	I
I	0.14	0.14		I

D-B Stream From Right Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	I
I	0.14	0.14		I

TRAFFIC DEMAND DATA

ARM	FLOW SCALE (%)
A	100
B	100
C	100
D	100

Demand set: Turner Street priority junction 2017 PM with dev

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MINUTES.

LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
A	15.00	45.00	75.00	5.06	7.59	5.06
B	15.00	45.00	75.00	0.47	0.71	0.47
C	15.00	45.00	75.00	9.04	13.56	9.04
D	15.00	45.00	75.00	3.76	5.64	3.76

TIME	TURNING PROPORTIONS				
	FROM/TO	ARM A	ARM B	ARM C	ARM D
17.00 - 18.30	ARM A	0.000	0.079	0.714	0.207
		0.0	32.0	289.0	84.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.079	0.000	0.658	0.263
		3.0	0.0	25.0	10.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.773	0.024	0.000	0.203
		559.0	17.0	0.0	147.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.515	0.030	0.455	0.000
		155.0	9.0	137.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Turner Street priority junction 2017 PM with dev  
AND FOR TIME PERIOD 1



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-ACD	0.57	8.67	0.066		0.09	0.07	1.1		0.12	I
I	A-BCD	2.13	11.81	0.180		0.55	0.36	5.4		0.10	I
I	A-B	0.39									I
I	A-C	3.55									I
I	D-ABC	4.51	7.66	0.588		3.52	1.50	25.2		0.34	I
I	C-ABD	0.58	16.29	0.035		0.08	0.05	0.7		0.06	I
I	C-D	2.14									I
I	C-A	8.12									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.15-18.30										I
I	B-ACD	0.48	9.06	0.053		0.07	0.06	0.9		0.12	I
I	A-BCD	1.62	11.58	0.140		0.36	0.25	3.8		0.10	I
I	A-B	0.35									I
I	A-C	3.12									I
I	D-ABC	3.78	8.18	0.462		1.50	0.88	14.0		0.23	I
I	C-ABD	0.43	15.54	0.028		0.05	0.04	0.5		0.07	I
I	C-D	1.80									I
I	C-A	6.84									I

\*WARNING\* NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1
18.30	0.1

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.3
17.45	0.5 *
18.00	0.5 *
18.15	0.4
18.30	0.3

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.8 *
17.30	1.4 *
17.45	3.3 ***
18.00	3.5 ****
18.15	1.5 *
18.30	0.9 *

QUEUE FOR STREAM    C-ABD  
-----

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.1
18.00	0.1
18.15	0.0
18.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	B-ACD	I	52.3	34.9	I	6.5	0.12	I	6.5	0.12	I
I	A-BCD	I	201.4	134.3	I	34.4	0.17	I	34.4	0.17	I
I	A-B	I	35.5	23.7	I			I			I
I	A-C	I	320.6	213.7	I			I			I
I	D-ABC	I	414.3	276.2	I	162.8	0.39	I	162.8	0.39	I
I	C-ABD	I	59.1	39.4	I	5.0	0.09	I	5.0	0.09	I
I	C-D	I	194.9	129.9	I			I			I
I	C-A	I	741.2	494.1	I			I			I
I	ALL	I	2019.2	1346.1	I	208.8	0.10	I	208.8	0.10	I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted )

B-C Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	B-C	Stream	A-C	Stream	A-B	Stream	A-B	I
I		708.57		0.24		0.09			I

D-A Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	D-A	Stream	C-A	Stream	C-D	Stream	C-D	I
I		730.85		0.25		0.10			I

B-A Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	B-A	Stream	A-C	Stream	A-D	Stream	D-A	Stream	D-B	Stream	D-C	Stream	D-C	I
I		559.48		0.22		0.22		0.22		0.22		0.22			I

I	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	A-B	Stream	C-A	Stream	C-B	Stream	D-C	Stream	D-C	Stream	D-C	I
I		0.09		0.14		0.32		0.11					I

D-C Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I	
I	Stream	D-C	Stream	C-A	Stream	C-B	Stream	B-C	Stream	B-D	Stream	B-D	I
I		570.06		0.23		0.23		0.23		0.23			I

I	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	Stream	C-D	Stream	A-C	Stream	A-D	Stream	B-A	Stream	B-A	Stream	B-A	I
I		0.09		0.14		0.32		0.11					I

C-B Stream

I	Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	I
I	675.89	0.23	0.32	I

A-D Stream

I	Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	641.72	0.23	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	0.14	0.14			I

B-D Stream From Right Hand Lane

I	Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	559.48	0.22	0.22	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I	0.14	0.14			I

D-B Stream From Left Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I	0.14	0.14			I

D-B Stream From Right Hand Lane

I	Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I	570.06	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I	0.14	0.14			I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

Demand set: Turner Street priority junction 2022 PM with dev

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MINUTES.

LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	5.47	I	8.21	I	5.47
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.50	I	0.75	I	0.50
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.74	I	14.61	I	9.74
I	ARM D	I	15.00	I	45.00	I	75.00	I	4.04	I	6.06	I	4.04

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	17.00 - 18.30	I	ARM A	I	0.000	I	0.080	I	0.717	I	0.203
I		I		I	0.0	I	35.0	I	314.0	I	89.0
I		I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)
I		I	ARM B	I	0.075	I	0.000	I	0.675	I	0.250
I		I		I	3.0	I	0.0	I	27.0	I	10.0
I		I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)
I		I	ARM C	I	0.778	I	0.023	I	0.000	I	0.199
I		I		I	606.0	I	18.0	I	0.0	I	155.0
I		I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)
I		I	ARM D	I	0.514	I	0.031	I	0.455	I	0.000
I		I		I	166.0	I	10.0	I	147.0	I	0.0
I		I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)	I	( 0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Turner Street priority junction 2022 PM with dev  
AND FOR TIME PERIOD 1



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-ACD	0.60	8.56	0.070		0.10	0.08	1.2		0.13	I
I	A-BCD	2.37	11.96	0.198		0.66	0.41	6.2		0.10	I
I	A-B	0.42									I
I	A-C	3.77									I
I	D-ABC	4.84	7.41	0.653		6.36	2.03	38.4		0.48	I
I	C-ABD	0.73	17.11	0.043		0.10	0.06	0.9		0.06	I
I	C-D	2.23									I
I	C-A	8.71									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.15-18.30										I
I	B-ACD	0.50	8.98	0.056		0.08	0.06	0.9		0.12	I
I	A-BCD	1.79	11.70	0.153		0.41	0.29	4.3		0.10	I
I	A-B	0.37									I
I	A-C	3.34									I
I	D-ABC	4.05	7.97	0.509		2.03	1.07	17.2		0.26	I
I	C-ABD	0.48	15.84	0.030		0.06	0.04	0.6		0.07	I
I	C-D	1.89									I
I	C-A	7.40									I

\*WARNING\* NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1
18.30	0.1

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.3
17.30	0.4
17.45	0.6 *
18.00	0.7 *
18.15	0.4
18.30	0.3

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	1.0 *
17.30	1.8 **
17.45	5.4 *****
18.00	6.4 *****
18.15	2.0 **
18.30	1.1 *

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1
18.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM I	TOTAL DEMAND I	* QUEUEING * I	* INCLUSIVE QUEUEING * I
I I	I I	I * DELAY * I	I * DELAY * I
I I	I (VEH) (VEH/H) I	I (MIN) (MIN/VEH) I	I (MIN) (MIN/VEH) I
I B-ACD I	55.1 I 36.7 I	7.0 I 0.13 I	7.0 I 0.13 I
I A-BCD I	225.9 I 150.6 I	40.4 I 0.18 I	40.4 I 0.18 I
I A-B I	37.8 I 25.2 I	I I	I I
I A-C I	339.2 I 226.1 I	I I	I I
I D-ABC I	444.6 I 296.4 I	245.7 I 0.55 I	245.8 I 0.55 I
I C-ABD I	69.4 I 46.3 I	6.0 I 0.09 I	6.0 I 0.09 I
I C-D I	204.2 I 136.2 I	I I	I I
I C-A I	798.5 I 532.4 I	I I	I I
I ALL I	2174.8 I 1449.8 I	299.1 I 0.14 I	299.2 I 0.14 I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB  
 ===== end of file =====

# Appendix J

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.0 ANALYSIS PROGRAM  
RELEASE 3.0 (JUNE 2006)

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EMAIL: SoftwareBureau@trl.co.uk

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS  
IN NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-  
"T:\T12\Jobs\T12.172\_Herbert Road, Newport\Analysis\PICADY\Trostre St\Am\Turner\_Trostre Am.vpi"  
(drive-on-the-left ) at 10:31:17 on Thursday, 28 November 2013

RUN INFORMATION  
\*\*\*\*\*

RUN TITLE: Turner St\_Trostre St  
LOCATION: Newport  
DATE: 28/11/13  
CLIENT: Greenhill Construction  
ENUMERATOR: Transport Planner  
JOB NUMBER: T12.172  
STATUS:  
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY  
\*\*\*\*\*

INPUT DATA  
-----

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I  
I  
I  
I  
I  
I  
I

MINOR ROAD (ARM B)

ARM A IS Turner St (West)  
ARM B IS Trostre St  
ARM C IS Turner St (East)

STREAM LABELLING CONVENTION  
-----

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

-----  
 GEOMETRIC DATA  
 -----

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I ( W )	6.70 M.	I
I	CENTRAL RESERVE WIDTH	I (WCR )	0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	2.20 M.	I
I	- VISIBILITY	I (VC-B)	190.0 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	23.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	13.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	3.40 M.	I
I	- LANE 2 WIDTH	I (WB-A)	0.00 M.	I

.SLOPES AND INTERCEPT  
 -----

(NB:Streams may be combined, in which case capacity will be adjusted )

I	Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	I
I	657.43	0.25	0.10	I

I	Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	511.14	0.23	0.09	0.14	0.33	I

I	Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	I
I	683.99	0.26	0.26	I

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA  
 -----



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-AC	0.34	9.69	0.036		0.03	0.04	0.5		0.11	I
I	C-AB	0.12	11.03	0.011		0.01	0.01	0.2		0.09	I
I	A-B	0.00									I
I	A-C	1.42									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-AC	0.42	9.60	0.044		0.04	0.05	0.7		0.11	I
I	C-AB	0.15	10.95	0.013		0.01	0.01	0.2		0.09	I
I	A-B	0.00									I
I	A-C	1.74									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-AC	0.42	9.60	0.044		0.05	0.05	0.7		0.11	I
I	C-AB	0.15	10.95	0.013		0.01	0.01	0.2		0.09	I
I	A-B	0.00									I
I	A-C	1.74									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-AC	0.34	9.69	0.036		0.05	0.04	0.6		0.11	I
I	C-AB	0.12	11.03	0.011		0.01	0.01	0.2		0.09	I
I	A-B	0.00									I
I	A-C	1.42									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-AC	0.29	9.75	0.030		0.04	0.03	0.5		0.11	I
I	C-AB	0.10	11.09	0.009		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.19									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM I	TOTAL DEMAND I	* QUEUEING * I	* INCLUSIVE QUEUEING * I
I I	I I	* DELAY * I	* DELAY * I
I I	(VEH) (VEH/H) I	(MIN) (MIN/VEH) I	(MIN) (MIN/VEH) I
I B-AC I	31.7 I 21.1 I	3.4 I 0.11 I	3.4 I 0.11 I
I C-AB I	11.0 I 7.3 I	1.0 I 0.09 I	1.0 I 0.09 I
I A-B I	0.0 I 0.0 I	I I	I I
I A-C I	130.8 I 87.2 I	I I	I I
I ALL I	214.7 I 143.1 I	4.4 I 0.02 I	4.4 I 0.02 I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted )

I Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
I 657.43	0.25	0.10

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
I 511.14	0.23	0.09	0.14	0.33

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
I 683.99	0.26	0.26

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-AC	0.34	9.67	0.036		0.03	0.04	0.5		0.11	I
I	C-AB	0.12	11.01	0.011		0.01	0.01	0.2		0.09	I
I	A-B	0.00									I
I	A-C	1.50									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-AC	0.42	9.58	0.044		0.04	0.05	0.7		0.11	I
I	C-AB	0.15	10.93	0.013		0.01	0.01	0.2		0.09	I
I	A-B	0.00									I
I	A-C	1.84									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-AC	0.42	9.58	0.044		0.05	0.05	0.7		0.11	I
I	C-AB	0.15	10.93	0.013		0.01	0.01	0.2		0.09	I
I	A-B	0.00									I
I	A-C	1.84									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-AC	0.34	9.67	0.036		0.05	0.04	0.6		0.11	I
I	C-AB	0.12	11.01	0.011		0.01	0.01	0.2		0.09	I
I	A-B	0.00									I
I	A-C	1.50									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-AC	0.29	9.74	0.030		0.04	0.03	0.5		0.11	I
I	C-AB	0.10	11.08	0.009		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.25									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM I	TOTAL DEMAND I	* QUEUEING * I	* INCLUSIVE QUEUEING * I
I I	I I	* DELAY * I	* DELAY * I
I I	(VEH) (VEH/H) I	(MIN) (MIN/VEH) I	(MIN) (MIN/VEH) I
I B-AC I	31.7 I 21.1 I	3.4 I 0.11 I	3.4 I 0.11 I
I C-AB I	11.0 I 7.3 I	1.0 I 0.09 I	1.0 I 0.09 I
I A-B I	0.0 I 0.0 I	I I	I I
I A-C I	137.6 I 91.8 I	I I	I I
I ALL I	224.4 I 149.6 I	4.4 I 0.02 I	4.4 I 0.02 I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted )

I Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
I 657.43	0.25	0.10

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
I 511.14	0.23	0.09	0.14	0.33

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
I 683.99	0.26	0.26

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-AC	0.39	9.62	0.040		0.03	0.04	0.6		0.11	I
I	C-AB	0.13	10.98	0.012		0.01	0.01	0.2		0.09	I
I	A-B	0.00									I
I	A-C	1.63									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-AC	0.48	9.52	0.050		0.04	0.05	0.8		0.11	I
I	C-AB	0.17	10.89	0.015		0.01	0.02	0.2		0.09	I
I	A-B	0.00									I
I	A-C	2.00									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-AC	0.48	9.52	0.050		0.05	0.05	0.8		0.11	I
I	C-AB	0.17	10.89	0.015		0.02	0.02	0.2		0.09	I
I	A-B	0.00									I
I	A-C	2.00									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-AC	0.39	9.62	0.040		0.05	0.04	0.6		0.11	I
I	C-AB	0.13	10.98	0.012		0.02	0.01	0.2		0.09	I
I	A-B	0.00									I
I	A-C	1.63									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-AC	0.33	9.69	0.034		0.04	0.04	0.5		0.11	I
I	C-AB	0.11	11.05	0.010		0.01	0.01	0.2		0.09	I
I	A-B	0.00									I
I	A-C	1.37									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.0
09.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM I	TOTAL DEMAND I	* QUEUEING * I	* INCLUSIVE QUEUEING * I
I I	I I	* DELAY * I	* DELAY * I
I I	(VEH) (VEH/H) I	(MIN) (MIN/VEH) I	(MIN) (MIN/VEH) I
I B-AC I	35.8 I 23.9 I	3.9 I 0.11 I	3.9 I 0.11 I
I C-AB I	12.4 I 8.3 I	1.1 I 0.09 I	1.1 I 0.09 I
I A-B I	0.0 I 0.0 I	I I	I I
I A-C I	150.0 I 100.0 I	I I	I I
I ALL I	246.4 I 164.3 I	5.0 I 0.02 I	5.0 I 0.02 I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted )

I Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
I 657.43	0.25	0.10

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
I 511.14	0.23	0.09	0.14	0.33

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
I 683.99	0.26	0.26

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-AC	0.34	9.29	0.037		0.03	0.04	0.6		0.11	I
I	C-AB	0.12	10.65	0.011		0.01	0.01	0.2		0.09	I
I	A-B	0.00									I
I	A-C	2.91									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-AC	0.42	9.11	0.046		0.04	0.05	0.7		0.12	I
I	C-AB	0.15	10.49	0.014		0.01	0.01	0.2		0.10	I
I	A-B	0.00									I
I	A-C	3.56									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-AC	0.42	9.11	0.046		0.05	0.05	0.7		0.12	I
I	C-AB	0.15	10.49	0.014		0.01	0.01	0.2		0.10	I
I	A-B	0.00									I
I	A-C	3.56									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-AC	0.34	9.29	0.037		0.05	0.04	0.6		0.11	I
I	C-AB	0.12	10.65	0.011		0.01	0.01	0.2		0.09	I
I	A-B	0.00									I
I	A-C	2.91									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-AC	0.29	9.41	0.031		0.04	0.03	0.5		0.11	I
I	C-AB	0.10	10.77	0.009		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	2.43									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM I	TOTAL DEMAND I	* QUEUEING * I	* INCLUSIVE QUEUEING * I
I I	I I	* DELAY * I	* DELAY * I
I I	(VEH) (VEH/H) I	(MIN) (MIN/VEH) I	(MIN) (MIN/VEH) I
I B-AC I	31.7 I 21.1 I	3.5 I 0.11 I	3.5 I 0.11 I
I C-AB I	11.0 I 7.3 I	1.0 I 0.10 I	1.0 I 0.10 I
I A-B I	0.0 I 0.0 I	I I	I I
I A-C I	267.0 I 178.0 I	I I	I I
I ALL I	412.9 I 275.3 I	4.6 I 0.01 I	4.6 I 0.01 I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted )

I Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
I 657.43	0.25	0.10

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
I 511.14	0.23	0.09	0.14	0.33

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
I 683.99	0.26	0.26

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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I ARM I FLOW SCALE(%) I
-----
I A I 100 I
I B I 100 I
I C I 100 I
-----

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Demand set: Turner St\_Trostre St 2022 Am with dev

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MINUTES.  
 LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

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-----
I I NUMBER OF MINUTES FROM START WHEN I RATE OF FLOW (VEH/MIN) I
I ARM I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I
I I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK I
-----
I ARM A I 15.00 I 45.00 I 75.00 I 2.54 I 3.81 I 2.54 I
I ARM B I 15.00 I 45.00 I 75.00 I 0.32 I 0.49 I 0.32 I
I ARM C I 15.00 I 45.00 I 75.00 I 1.08 I 1.61 I 1.08 I
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I I TURNING PROPORTIONS I
I I TURNING COUNTS (VEH/HR) I
I I (PERCENTAGE OF H.V.S) I
I I -----
I TIME I FROM/TO I ARM A I ARM B I ARM C I
I -----
I 07.45 - 09.15 I I I I I
I I ARM A I 0.000 I 0.000 I 1.000 I
I I I 0.0 I 0.0 I 203.0 I
I I I ( 0.0)I ( 0.0)I ( 0.0)I
I I I I I I
I I ARM B I 0.308 I 0.000 I 0.692 I
I I I 8.0 I 0.0 I 18.0 I
I I I ( 0.0)I ( 0.0)I ( 0.0)I
I I I I I I
I I ARM C I 0.895 I 0.105 I 0.000 I
I I I 77.0 I 9.0 I 0.0 I
I I I ( 0.0)I ( 0.0)I ( 0.0)I
I I I I I I
I I I I I I
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TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Turner St\_Trostre St 2022 Am with dev  
 AND FOR TIME PERIOD 1

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-----
I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY I
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING I
I (RFC) (PEDI/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN) I
I 07.45-08.00 I
I B-AC 0.33 9.37 0.035 0.00 0.04 0.5 0.11 I
I C-AB 0.11 10.75 0.011 0.00 0.01 0.2 0.09 I
I A-B 0.00 I
I A-C 2.55 I
I I
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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-AC	0.39	9.24	0.042		0.04	0.04	0.6		0.11	I
I	C-AB	0.13	10.62	0.013		0.01	0.01	0.2		0.10	I
I	A-B	0.00									I
I	A-C	3.04									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-AC	0.48	9.05	0.053		0.04	0.06	0.8		0.12	I
I	C-AB	0.17	10.44	0.016		0.01	0.02	0.2		0.10	I
I	A-B	0.00									I
I	A-C	3.73									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-AC	0.48	9.05	0.053		0.06	0.06	0.8		0.12	I
I	C-AB	0.17	10.44	0.016		0.02	0.02	0.2		0.10	I
I	A-B	0.00									I
I	A-C	3.73									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-AC	0.39	9.24	0.042		0.06	0.04	0.7		0.11	I
I	C-AB	0.13	10.62	0.013		0.02	0.01	0.2		0.10	I
I	A-B	0.00									I
I	A-C	3.04									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-AC	0.33	9.37	0.035		0.04	0.04	0.6		0.11	I
I	C-AB	0.11	10.75	0.011		0.01	0.01	0.2		0.09	I
I	A-B	0.00									I
I	A-C	2.55									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.0
09.15	0.0

-----

QUEUE FOR STREAM C-AB

-----

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

-----

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

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I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	B-AC	I	35.8	23.9	I	4.0	0.11	I	4.0	0.11	I
I	C-AB	I	12.4	8.3	I	1.2	0.10	I	1.2	0.10	I
I	A-B	I	0.0	0.0	I			I			I
I	A-C	I	279.4	186.3	I			I			I
I	ALL	I	433.6	289.0	I	5.2	0.01	I	5.2	0.01	I

-----

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 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.0 ANALYSIS PROGRAM  
RELEASE 3.0 (JUNE 2006)

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Run with file:-  
"T:\T12\Jobs\T12.172\_Herbert Road, Newport\Analysis\PICADY\Trostrey St\Pm\Turner\_Trostrey Pm.vpi"  
(drive-on-the-left ) at 10:36:45 on Thursday, 28 November 2013

RUN INFORMATION  
\*\*\*\*\*

RUN TITLE: Turner St\_Trostrey St  
LOCATION: Newport  
DATE: 28/11/13  
CLIENT: Greenhill Construction  
ENUMERATOR: Transport Planner  
JOB NUMBER: T12.172  
STATUS:  
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY  
\*\*\*\*\*

INPUT DATA  
-----

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I  
I  
I  
I  
I  
I  
I

MINOR ROAD (ARM B)

ARM A IS Turner St (West)  
ARM B IS Trostrey St  
ARM C IS Turner St (East)

STREAM LABELLING CONVENTION  
-----

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

-----  
 GEOMETRIC DATA  
 -----

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	( W ) 6.70 M.
CENTRAL RESERVE WIDTH	( WCR ) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	( WC-B ) 2.20 M.
- VISIBILITY	( VC-B ) 190.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	( VB-C ) 23.0 M.
- VISIBILITY TO RIGHT	( VB-A ) 13.0 M.
- LANE 1 WIDTH	( WB-C ) 3.40 M.
- LANE 2 WIDTH	( WB-A ) 0.00 M.

.SLOPES AND INTERCEPT  
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(NB:Streams may be combined, in which case capacity will be adjusted )

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
657.43	0.25	0.10

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
511.14	0.23	0.09	0.14	0.33

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
683.99	0.26	0.26

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA  
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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	B-AC	0.16	10.31	0.016		0.01	0.02	0.2		0.10	I
I	C-AB	0.06	11.05	0.005		0.00	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.38									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-AC	0.20	10.23	0.020		0.02	0.02	0.3		0.10	I
I	C-AB	0.07	10.97	0.007		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.69									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	B-AC	0.20	10.23	0.020		0.02	0.02	0.3		0.10	I
I	C-AB	0.07	10.97	0.007		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.69									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-AC	0.16	10.31	0.016		0.02	0.02	0.2		0.10	I
I	C-AB	0.06	11.05	0.005		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.38									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-AC	0.14	10.37	0.013		0.02	0.01	0.2		0.10	I
I	C-AB	0.05	11.10	0.005		0.01	0.00	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.15									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM I	TOTAL DEMAND I	* QUEUEING * I	* INCLUSIVE QUEUEING * I
I I	I I	I * DELAY * I	I * DELAY * I
I I	I (VEH) (VEH/H) I	I (MIN) (MIN/VEH) I	I (MIN) (MIN/VEH) I
I B-AC I	15.1 I 10.1 I	1.5 I 0.10 I	1.5 I 0.10 I
I C-AB I	5.5 I 3.7 I	0.5 I 0.09 I	0.5 I 0.09 I
I A-B I	0.0 I 0.0 I	I I	I I
I A-C I	126.6 I 84.4 I	I I	I I
I ALL I	271.2 I 180.8 I	2.0 I 0.01 I	2.0 I 0.01 I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted )

I Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
I 657.43	0.25	0.10

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
I 511.14	0.23	0.09	0.14	0.33

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
I 683.99	0.26	0.26

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	B-AC	0.18	10.31	0.017		0.01	0.02	0.3		0.10	I
I	C-AB	0.06	11.03	0.005		0.00	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.45									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-AC	0.22	10.23	0.022		0.02	0.02	0.3		0.10	I
I	C-AB	0.07	10.94	0.007		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.78									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	B-AC	0.22	10.23	0.022		0.02	0.02	0.3		0.10	I
I	C-AB	0.07	10.94	0.007		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.78									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-AC	0.18	10.31	0.017		0.02	0.02	0.3		0.10	I
I	C-AB	0.06	11.03	0.005		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.45									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-AC	0.15	10.38	0.015		0.02	0.01	0.2		0.10	I
I	C-AB	0.05	11.09	0.005		0.01	0.00	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.22									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	16.5	I	1.6	I	1.6	I
I	C-AB	I	5.5	I	0.5	I	0.5	I
I	A-B	I	0.0	I		I		I
I	A-C	I	133.5	I		I		I
I	ALL	I	286.3	I	2.1	I	2.1	I

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .  
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 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted )

I	Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	I
I	657.43	0.25	0.10	I

I	Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	511.14	0.23	0.09	0.14	0.33	I

I	Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	I
I	683.99	0.26	0.26	I

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	B-AC	0.18	10.28	0.017		0.01	0.02	0.3		0.10	I
I	C-AB	0.07	11.00	0.007		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.57									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-AC	0.22	10.19	0.022		0.02	0.02	0.3		0.10	I
I	C-AB	0.09	10.90	0.008		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.93									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	B-AC	0.22	10.19	0.022		0.02	0.02	0.3		0.10	I
I	C-AB	0.09	10.90	0.008		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.93									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-AC	0.18	10.28	0.017		0.02	0.02	0.3		0.10	I
I	C-AB	0.07	11.00	0.007		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.57									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-AC	0.15	10.35	0.015		0.02	0.01	0.2		0.10	I
I	C-AB	0.06	11.06	0.006		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.32									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM I	TOTAL DEMAND I	* QUEUEING * I	* INCLUSIVE QUEUEING * I
I	I	* DELAY * I	* DELAY * I
I	(VEH)	(MIN)	(MIN)
I	(VEH/H)	(MIN/VEH)	(MIN/VEH)
I B-AC I	16.5 I	1.6 I	1.6 I
I C-AB I	6.9 I	0.6 I	0.6 I
I A-B I	0.0 I	I	I
I A-C I	144.5 I	I	I
I ALL I	309.7 I	2.3 I	2.3 I

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 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted )

I Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
I 657.43	0.25	0.10

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
I 511.14	0.23	0.09	0.14	0.33

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
I 683.99	0.26	0.26

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	B-AC	0.18	10.08	0.018		0.01	0.02	0.3		0.10	I
I	C-AB	0.06	10.81	0.006		0.00	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	2.31									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-AC	0.22	9.93	0.022		0.02	0.02	0.3		0.10	I
I	C-AB	0.07	10.67	0.007		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	2.83									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	B-AC	0.22	9.93	0.022		0.02	0.02	0.3		0.10	I
I	C-AB	0.07	10.67	0.007		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	2.83									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-AC	0.18	10.08	0.018		0.02	0.02	0.3		0.10	I
I	C-AB	0.06	10.81	0.006		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	2.31									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-AC	0.15	10.18	0.015		0.02	0.02	0.2		0.10	I
I	C-AB	0.05	10.90	0.005		0.01	0.00	0.1		0.09	I
I	A-B	0.00									I
I	A-C	1.93									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM I	TOTAL DEMAND I	* QUEUEING * I	* INCLUSIVE QUEUEING * I
I I	I I	* DELAY * I	* DELAY * I
I I	(VEH) (VEH/H) I	(MIN) (MIN/VEH) I	(MIN) (MIN/VEH) I
I B-AC I	16.5 I 11.0 I	1.7 I 0.10 I	1.7 I 0.10 I
I C-AB I	5.5 I 3.7 I	0.5 I 0.09 I	0.5 I 0.09 I
I A-B I	0.0 I 0.0 I	I I	I I
I A-C I	212.0 I 141.3 I	I I	I I
I ALL I	484.5 I 323.0 I	2.2 I 0.00 I	2.2 I 0.00 I

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 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted )

I Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
I 657.43	0.25	0.10 I

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
I 511.14	0.23	0.09	0.14	0.33 I

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
I 683.99	0.26	0.26 I

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA



I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	B-AC	0.18	10.04	0.018		0.01	0.02	0.3		0.10	I
I	C-AB	0.07	10.77	0.007		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	2.44									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-AC	0.22	9.89	0.022		0.02	0.02	0.3		0.10	I
I	C-AB	0.09	10.63	0.009		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	2.99									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	B-AC	0.22	9.89	0.022		0.02	0.02	0.3		0.10	I
I	C-AB	0.09	10.63	0.009		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	2.99									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-AC	0.18	10.04	0.018		0.02	0.02	0.3		0.10	I
I	C-AB	0.07	10.77	0.007		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	2.44									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-AC	0.15	10.15	0.015		0.02	0.02	0.2		0.10	I
I	C-AB	0.06	10.87	0.006		0.01	0.01	0.1		0.09	I
I	A-B	0.00									I
I	A-C	2.05									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-AB

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TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

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I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	B-AC	I	16.5	11.0	I	1.7	0.10	I	1.7	0.10	I
I	C-AB	I	6.9	4.6	I	0.6	0.09	I	0.6	0.09	I
I	A-B	I	0.0	0.0	I			I			I
I	A-C	I	224.4	149.6	I			I			I
I	ALL	I	510.7	340.4	I	2.3	0.00	I	2.3	0.00	I

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 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB  
 ===== end of file =====