Barnsley Town Centre, Transport Assessment

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1 Introduction

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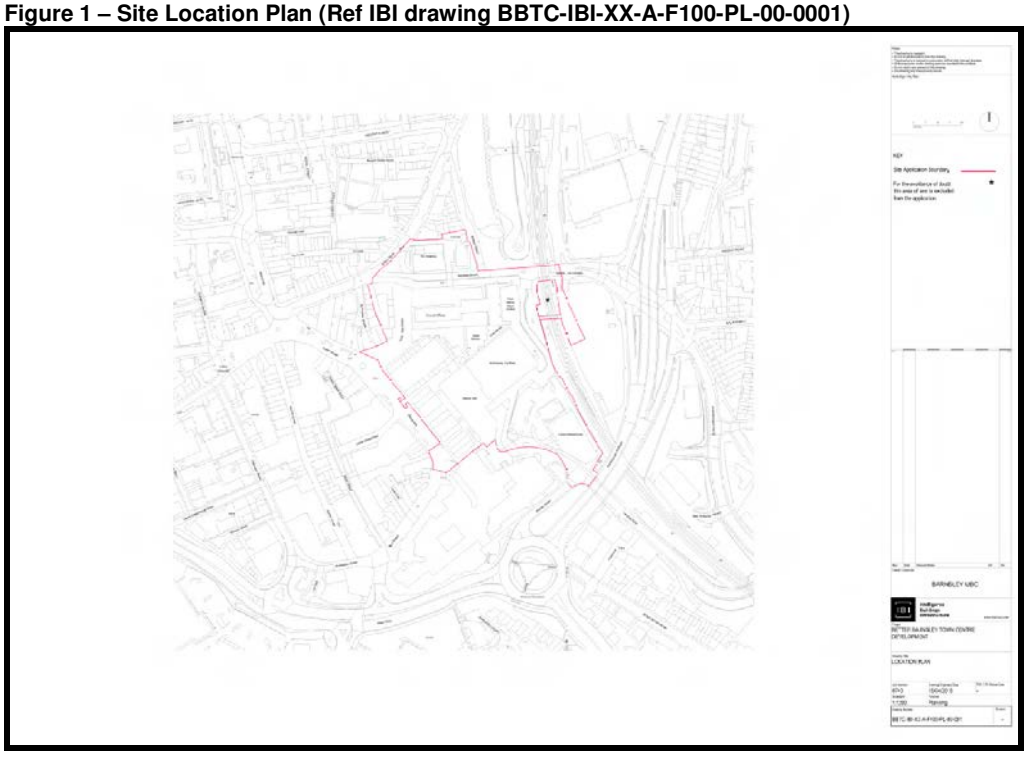
1.1 Introduction

AECOM have produced this Transport Assessment on behalf of Barnsley Metropolitan Borough Council in support of a redevelopment of the market area within Barnsley Town Centre. The proposals are briefly the demolition of the existing market area and multi storey car park and the construction of new retail units and a new market area along with a cinema and a library.

Within this report, the impact of the development traffic on the local highway network is assessed, with detailed modelling of key junctions being undertaken. The availability of sustainable access options including public transport, cycle routes and parking will also be reviewed within this report.

A site location plan, as taken from IBI drawing BBTC-IBI-XX-A-F100-PL-00-0001 is shown in **Figure 1** below.

Figure 1 – Site Location Plan (Ref IBI drawing BBTC-IBI-XX-A-F100-PL-00-0001)



This Transport Assessment has been undertaken with liaison with Barnsley Metropolitan Borough Council.

The Transport Assessment also takes due cognisance of local and national planning policy. Importantly the National Planning Policy Framework sets out the Government's aims for achieving sustainable development. As part of the Framework the Government sets out a presumption in favour of sustainable development.

Importantly, National Planning Policy Framework states that:

"Development should only be prevented or refused on transport grounds where the residual impact of development are severe."

This report seeks to demonstrate the sustainability of the site and its viability in terms of transport, and given its central location it is considered that the site is highly accessible by non-car modes of travel.

1.2 Report Structure

Following this introductory chapter, this Transport Assessment includes the following:

- Section 2 provides details of the proposed development;
- Section 3 outlines relevant national and local policy documents;
- Section 4 summarises existing conditions at the proposed development site;
- Section 5 details the accessibility of the development site, identifying sustainable transport modes;
- Section 6 presents the trip generation and distribution patterns of the proposed site;
- Section 7 summarises the highways operation; and
- Section 8 provides a summary and conclusion.

The following appendices are located at the rear of this Transport Assessment:

- **Appendix A - Drawings and Figures;**
- **Appendix B - Accident Data;**
- **Appendix C - Traffic Flow Diagrams and Traffic Count Data;**
- **Appendix D - TRICS Outputs; and**
- **Appendix E - ARCADY / PICADY / LINSIG modelling results.**

2 Proposals

2 Proposals

2.1 Proposed Floorspace

The proposed development can be set out as follows:

- 30 500m² Retail / Food & Drink (Use Classes A1, A3 & A4);
- 4 500m² Cinema (Use Class D2);
- 3 000m² Library (Use Class D1), and
- 12 000m² for the refurbished existing market development;

The total proposed floorspace is therefore 50,000sq.m with the existing market and retail provision having an approximate overall floor area of 18,000sq.m.

In addition as part of the proposals it is proposed to promote the close of the existing Kendray Street level crossing using a Traffic Regulation Order (TRO), with all access to the car parking within the new centre via Lambra Road and Wesley Street, although access into CEAG will still be from Kendray Street on the eastern side of the railway.

2.2 Car Parking

The development will comprise the following levels of car parking:

- 174 spaces on the former CEAG site to the east of the Kendry Street level crossing and linked to the site via new footbridge over the railway;
- 194 car parking spaces retained within the existing basement of the Metropolitan Centre, with an additional 52 parking spaces, and
- 56 car parking spaces to the south of the site, with access from Lambra Road.

Therefore, there is proposed to be a total of 476 car parking spaces on the site following its redevelopment.

The car parking accumulation based upon the existing flows into and out of the site for both a Friday and a Saturday can then be given as follows.

Table 1 – Friday Car Parking Accumulation

Time	Kendray IN	Lambra IN	Total IN	Lambra OUT	ACC
					10
0700	10	31	41	7	44
0800	33	72	105	21	128
0900	33	163	196	67	257
1000	17	158	175	149	283
1100	15	128	143	144	282
1200	15	105	120	150	252
1300	13	83	96	145	203
1400	11	67	78	126	155
1500	4	39	43	91	107
1600	36	15	51	99	59

1700	9	3	12	36	35
1800	4	0	4	5	34

The maximum parking accumulation on a Friday is therefore 283 spaces at 1000.

Table 2 – Saturday Car parking Accumulation

Time	Kendray IN	Lambra IN	Total IN	Lambra OUT	ACC
					10
0700	21	63	84	5	89
0800	28	201	229	28	290
0900	27	223	250	113	427
1000	13	232	245	178	494
1100	18	262	280	230	544
1200	23	220	243	243	544
1300	16	220	236	238	542
1400	22	161	183	238	487
1500	8	110	118	250	355
1600	16	41	57	235	177
1700	5	5	10	105	82
1800	3	0	3	9	76

The maximum accumulation can therefore be given as being 544 spaces between 1100 and 1300.

It should however be noted that the site is located in a highly sustainable location within the town centre adjacent to the public transport interchange and it is also proposed to provide VMS signage as part of the development to advise drivers of car parking availability within the town centre as a whole.

2.3 Access

The site currently takes access via an in only access across the Kendry Street level crossing and an access allowing all movements from Lambra Street, and as part of the proposals whilst the access from Lambra Street will remain the level crossing is to be closed and as such access will be via the new CEAG car park on Kendray Street.

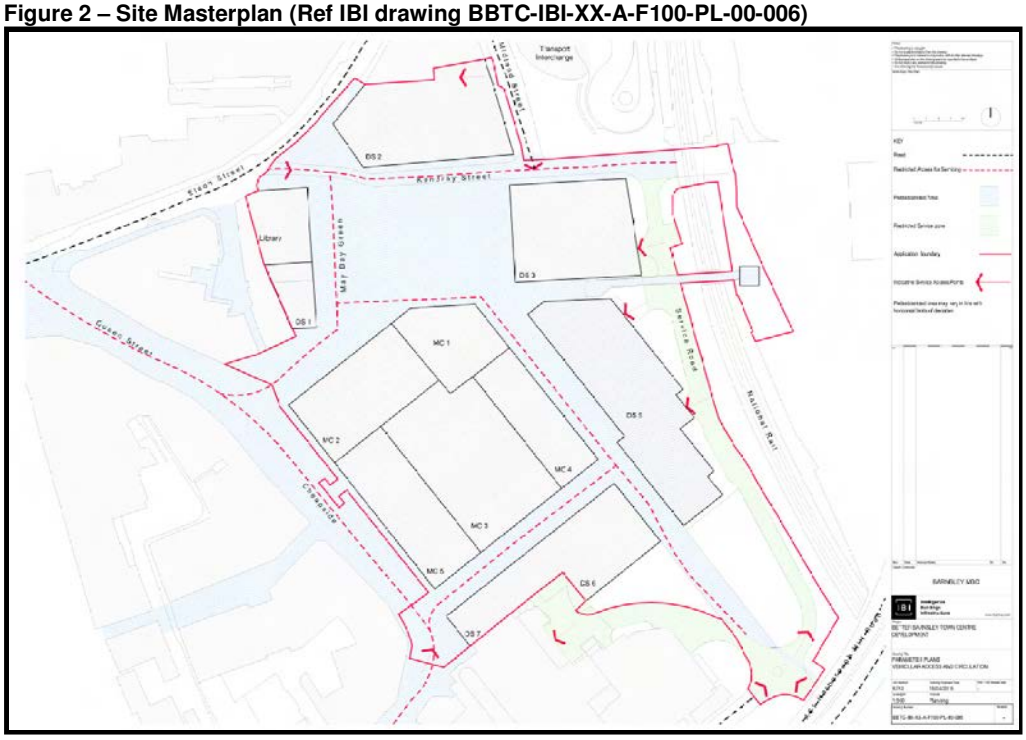
With access into the CEAG car park being taken from Kendry Street via an amendment to the existing traffic signalised junction.

The existing site is serviced via a ramp from Kendray Street, and as part of the redevelopment it is proposed to provide a new service road which will run parallel to the railway with access from both Kendray Street and Lambra Road.

2.4 Masterplan

The proposed layout of the site can be given as follows with reference to IBI drawing BBTC-IBI-XX-A-F100-PL-00-006.

Figure 2 – Site Masterplan (Ref IBI drawing BBTC-IBI-XX-A-F100-PL-00-006)



As can be seen from the above the site will feature excellent pedestrian permeability with a direct connection via Midland Street to the Interchange, which is only approximately 200m from the centre of the site as well as links into the wider town centre via Cheapside and Eldon Street.

3 Transport Policy

3 Transport Policy

3.1 Introduction

This section of the Transport Assessment sets out the policy context within which the proposal has been developed.

National transport and planning policy seeks to support the promotion of accessibility by all travel modes, particularly those sustainable modes. The following documents have been reviewed:

- The Transport White Paper (2011);
- National Planning Policy Framework (2012);
- South Yorkshire Third Local Transport Plan (LTP) (2011 – 2026);
- Barnsley Core Strategy; and
- Barnsley Sustainable Community Strategy

3.2 National Policy

The Transport White Paper (2011)

The January 2011 Transport White Paper: "Creating Growth, Cutting Carbon – Making Sustainable Local Transport Happen" sets out the Government's vision for a sustainable local transport system. The White Paper acknowledges that transport provision is essential for economic growth if the Government is to improve the economic deficit which it is currently facing. The Paper also recognises however, that the current levels of carbon emissions from transport cannot be sustained if the nation is to meet its national commitments on climate change mitigation as well as creating a safer and cleaner environment in which to live. With this in mind, the Government highlights sustainable transport solutions as a means by which the economy can grow, whilst also bringing about a positive impact on the environment.

Within the Paper, sustainable transport considers more than just public transport, walking and cycling schemes and acknowledges that it is not feasible for some trips to be undertaken by these modes. There is therefore a realisation that the car will continue to be an important mode of transport and a focus should be given to making car travel greener through electric and other low emission vehicles.

The proposed development is considered to accord with the aspirations of the White Paper as it is supplied by a range of sustainable transport links, including public transport, public footpaths and cycle routes. The implementation of a Travel Plan will also encourage users of the site to travel sustainably.

National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) which superseded the Planning Policy Guidance Notes in 2012 assessed governed national policy and principles relating to specific aspects of the town planning framework. In replacing the previous guidance notes and remaining a material consideration in planning applications, the NPPF provides a framework for local communities and Authorities to develop relevant local development plans and strategies.

The NPPF has two key themes:

- Providing a greater level of integration and simplification of the planning policies governing new development nationally; and
- Contributing to the achievement of sustainable development from an economic, social and environmental perspective.

Chapter 4 'Promoting Sustainable Transport', states that all developments which generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:

- The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major public transport infrastructure;

- Safe and suitable access to the site can be achieved for all people; and
- Improvements can be undertaken within the transport network that costs effectively limit the significant impacts of the development.

Developments should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe. This Transport Assessment seeks to demonstrate that the impact of the development proposals, in terms of transport, are not severe, and should therefore be approved.

3.3 Local Policy

South Yorkshire Local Transport Plan 2011 – 2026

The Local Transport Plan and the 'Sheffield City Region Transport Strategy' (SCRT) defines the priorities for the transport system for the next 15 years. It includes overarching aims as follows:

- Supporting economic growth;
- Enhancing social inclusion and health;
- Reducing emissions; and
- Maximising safety.

To achieve the overarching aims, the document identifies strategic policies. The most relevant policies for this development are:

- To focus new development along key public transport corridors and in places adjacent to existing services;
- To develop public transport that connects people to jobs and training in both urban and rural areas;
- To develop user-friendly public transport;
- To ensure public transport is accessible to all;
- To reduce carbon emissions;
- To encourage active travel and develop high quality cycling and walking networks;
- To provide information and travel advice for the users of all modes of transport, so that they can make informed travel choices; and
- To encourage safer road use and reduce casualties on the roads.

A series of actions are also mentioned which will support the policies outlined above:

- New links to major regeneration areas will be created to facilitate employment opportunities;
- More travel options will be given to people using a range of public transport enhancements (additional train, tram vehicles, etc);
- Pedestrian-friendly streets and footpaths will be designed as well as a continuous cycling network. The council will also support car clubs and car sharing schemes, making information about these travel options easy to find.
- The approach to traffic management in urban centres will acknowledge the importance of parking provision to local businesses, and the vulnerability of local economies to restricted access by car.

Barnsley Core Strategy (2011)

The government introduced a new planning system through the Planning and Compulsory Purchase Act 2004 that aims to respond more quickly to changing circumstances. As a result of these reforms Development Plans are being replaced by Local

Development Frameworks. The Barnsley Local Development Framework (LDF) follows national and former regional guidance but reflects local views and the situation in Barnsley. It establishes policies and proposals for the development and use of land up to the year 2026. It will be used when considering planning applications and to co-ordinate investment decisions that affect the towns, villages and countryside of Barnsley.
There are a number of key principles that have guided the preparation of Barnsley Core Strategy:

- Regard to and alignment with national, regional and local strategies and One Barnsley's Sustainable Community Strategy
- Regard to national planning policy
- The impact of the spatial strategy and policies on sustainability and climate change issues
- Deliverability to ensure proposals are achievable within the plan period (to 2026)
- Infrastructure requirements to ensure that proposals and policies are adequately supported by existing or planned infrastructure.
- Regard to the comments received through the process of adopting the Core Strategy.

Because access and sustainable travel are such important elements of achieving sustainable development, Barnsley's Transport Strategy is part of the LDF. The key principles and strategic policies are included in this chapter and are embedded throughout the Core Strategy. There are no sites allocated in the Core Strategy, however any specific site proposals would be evidence based and shown on the Proposals Maps which will accompany the Development Sites and Places DPD.

As explained in the Climate Change Section and Policy CSP1, reducing the impact of climate change is a key objective of the Core Strategy. In response to this challenge, the policies included in this Transport Strategy aim to contribute to the reduction in transportation related greenhouse gas emissions.

The overall aim for sustainable travel is firstly to reduce the need to travel, but where travel is necessary to make it easy for people to move between home, work, health, community and leisure facilities by walking, cycling, or where necessary using public transport. We want to reduce the need for individuals with a car to use it for these journeys. We also need to ensure that everybody has a real alternative option, other than the car.

However we recognise that some journeys will need to be made by road, including the movement of freight. Where these journeys are necessary we want to make sure the existing road network is used more efficiently, supporting a good bus network, allowing public transport, cars and freight to move quickly between their destinations, both within and outside the borough. This will have the added benefit of improving local air quality.

Achieving these aims will need us to change our travel behaviour, but by encouraging these 'smarter choices' and efficient movement, this strategy will also play a part in improving local prosperity, health, quality of life and reduce the impact of climate change. It aims to minimise the impact of travel on the environment and will help to reduce Barnsley's carbon emissions.

These aims are also reflected in the ambitions of the Sustainable Community Strategy, which realises the importance of having a high performing integrated transport system (Ambition 10) and recognises the role transportation can play in helping Barnsley to become a strong, healthy and just society. It recognises transport's role in reducing high levels of obesity, particularly among children, by facilitating a major increase in walking and cycling through the Fit for the Future programme, created to improve health and reduce health inequalities in Barnsley (Ambition 5).

In addressing these aims for accessible, inclusive and sustainable travel, Barnsley's Transport Strategy is consistent with the national goals set out in 'Delivering a Sustainable Transport System' (Department for Transport, November 2008) and Local Transport Plan guidance.

Barnsley Town Centre Area Sustainable Community Strategy

Published by Barnsley's Local Strategic Partnership, the Community Strategy sets out a strategic vision for the borough with Barnsley as a '21st century market town' at its heart.

Transport plays a role in that strategy by supporting:

- The economy by improving access to jobs and services;
- Inclusion through the support of community regeneration and quality of life; and
- The environment by reducing carbon footprint.

The strategy aims to reduce congestion and car dependency, whilst increasing walking, cycling and public transport use through the use of park and ride initiatives and travel planning.

As can be seen from the sections above, the proposed development site accords with both National and Local planning policy guidance.

4 Existing Conditions

4 Existing Conditions

4.1 Introduction

This section of the Transport Assessment sets out the location of the proposed development and provides a summary of the existing highway conditions within the vicinity of the site.

4.2 Site Location

Barnsley Markets is located approximately 150m to the South of Barnsley Interchange, off Cheapside to the West and Kendray Street to the North. The second site is CEAG which consists of a proposed surface level car park located approximately 100m to the south of Barnsley Interchange, off Kendray Street.

The site is broadly bound by Eldon Street and Midland Street to the north, Queen Street and Cheapside to the west, the Alhambra Centre to the south and the Wakefield – Barnsley – Sheffield railway to the east.

It currently has an in only access to the existing multi storey car park across then Kendray Street level crossing, as shown on Photographs 1 and 2 below, with the service access from Kendray Street also shown on photograph 1.

Photograph 1 – Existing in-only access

Photograph 2 – Existing Kendray Street level crossing

To the west Kendray Street forms a link into the town centre forming a link into the town centre and is split into two distinct sections. The first section is one way eastbound from its junction with Midland Road to the level crossing, and the second is one way westbound with a continuation of Midland Street forming a one way section to the junction with Eldon Street.

Midland Street runs pa t the Interchange and is one way southbound and is restricted to access only and continues onto Kendray Street as the priority movement. This is then shown on photographs 3 and 4 below.

Photograph 3 – Kendray Street looking East at the junction with Eldon Street

Photograph 4 – Midland Street looking South

Kendray Street the continues as a two way road to the east of the level crossing passing under the A61 Harborough Hill Road, which has all direction slip roads which form priority junctions, to then form a priority junction with Lambra Road, and this sis shown on the photographs below:

Photograph 5 – Pontefract Road looking North

Photograph 6 – Pontefract Road looking South

Photograph 7 – Lambra Road looking towards Pontefract Road

Lambra Road then continues north and passes underneath the A61 Harborough Hill Road to then form a priority junction with Wesley Street, it then continues to form a mini roundabout which then allows access into both the Alhambra Centre and the site, and this is shown on the following photographs.

Photograph 8 – Lambra Road / Wesley Street junction

Photograph9 – Lambra Road / Service Access mini roundabout

Wesley Road then continues to join the Alhambra roundabout, which is a four arm at grade junction forming part of the “ring road” around Barnsley town centre. It is formed by the A628 West Way to the west, Sheffield Road to the south, the A61Harborough Hill Road to the east and Wesley Street to the north, and is shown on the following photographs.

Photograph9 – Alhambra Roundabout – Wesley Street approach

Photograph9 – Alhambra Roundabout – A628 approach

Photograph 9 – Alhambra Roundabout – Sheffield Road approach

Wesley Street and Lambra Road therefore form the primary accesses into to the existing site from the west and south.

4.3 Traffic Data

Base traffic data was collected at the following junctions on Friday 13th June and Saturday 14th June 2015 between 1600 and 1830 and 1000 and 1600 respectively:

- Kendry Street / Schwasbisch Grund Way;
- A628 Pontefract Road / Lambra Road;
- Lambra Road / Wesley Street;
- A628 Harborough Hill Road / Wesley Street / A61 Sheffield Road – Alhambra Roundabout
- A61 Sheffield Road / Union Street / Taylor Row;
- A61 Sheffield Road / A6133 Park Road, and
- A628 Dodworth Road / Shambles Street / A628 / Racecommon Road – Townend Roundabout.

We also undertook a 12 hour ATC between 0700 to 1900 on both the Friday and a Saturday at the following locations in order to quantify the existing demand at the multi storey car park.

- Ramped entrance up to the car park from kendry Street, and
- Ramped entry and exit to and from the car park from the end of Lambra Road

The 2015 base traffic flows are shown in **Appendix C.**

We have then growthed the above traffic flows to a design year of 20120, which is 5 years post the registration of the planning application, using the following growth rates

2015 to 2020 Weekday PM Peak – 1.0732

2015 to 2020 Saturday Peak – 1.0745

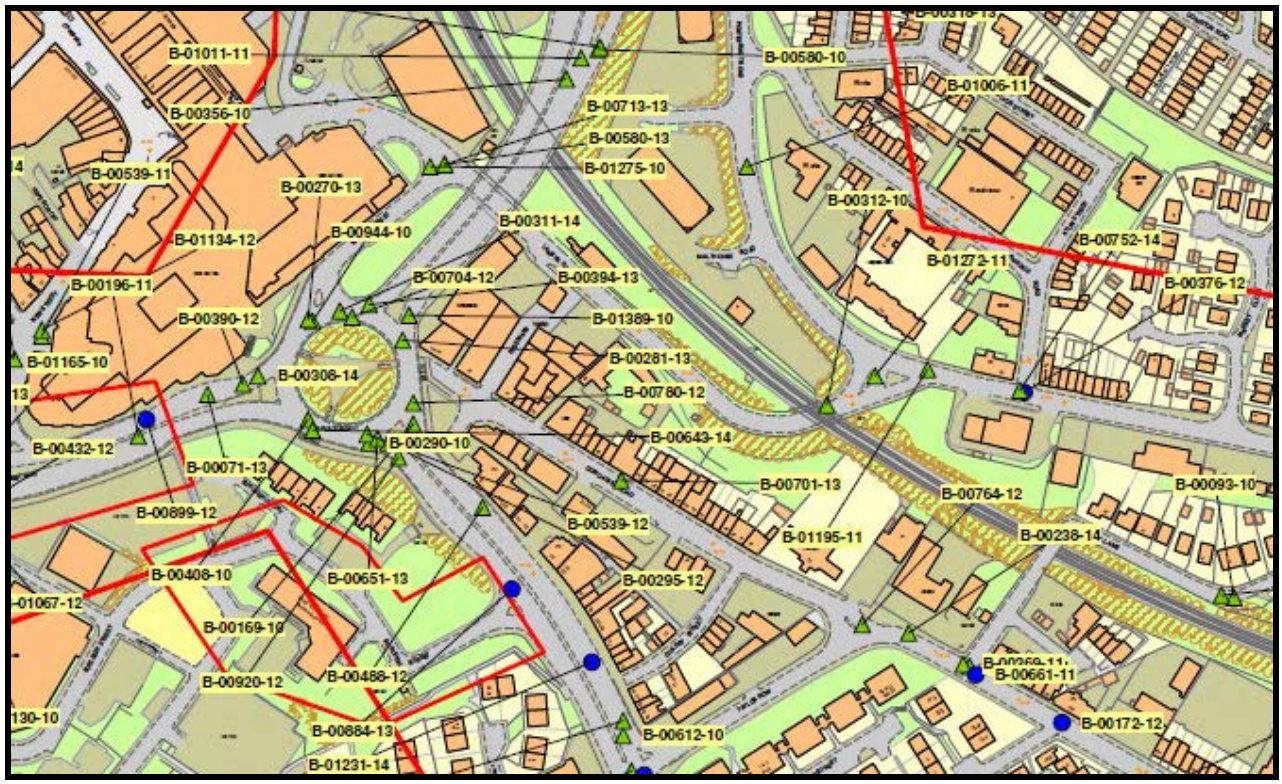
The 2020 base traffic flows are included in **Appendix C**.

4.4 Road Accident Data

The previous 5 years Road Safety data has been received from Barnsley MBC, and the full data is included with **Appendix B**, but can be set out below for ease of reference.

We can then set out the data based upon the key junctions under consideration as follows:

Figure 3 – Alhambra Roundabout / Wesley Street / Lambra Road / Pontefract Road – Accident data



There have been a total of 19 slight accidents at the Alhambra roundabout, 3 slight accidents at the Wesley Street / Lambra Road junction and 3 slight accidents at the Lambra Road / Pontefract Road junction over the previous 5 years

The accidents at the Alhambra roundabout can be summarised by type and year as follows:

Table 1 – Alhambra Roundabout accident data

	2010	2011	2012	2013	2014	2015	Total
Lane Change	1			1			2
Pedestrian			2	1			3
Rear Shunt	2		5	2	2		11
Fail to give way				1	1		2
PSV				1			1
Total	3	0	7	6	3	0	19

As would be expected the majority of the accidents at this junction are rear shunt types, although all have been of slight severity and whilst any accident is obviously undesirable this is not considered to constitute an accident problem.

The 2 slight severity accidents at the Wesley Street / Lambra Road junction occurred twice in 2013 as a result of a failure to give way and in 2010 where a rear shunt occurred as vehicle waited to turn left.

At the Pontefract Road junction the accidents occurred as a result of a rear shunt in 2010, a pedestrian being struck in 2011 and right turn manoeuvre without giving way in 2011.

It is therefore not considered that an accident problem currently exists at the Wesley Street / Lambra Road or the Pontefract Road junctions.

Figure 9 – Kendray Street – Accident data

As can be seen there have been a total 13 slight severity accidents in the vicinity of the site along Kendray Street in the previous 5 years, of which all have occurred at the sliproad junctions with the A61 Harborough Hill. Therefore, again, whilst any accident is obviously undesirable this is not considered to constitute an existing accident problem at this junction.

It is therefore considered that there are no existing road safety or accident problems that would be exacerbated by the addition of the development traffic.

4.5 Committed Development

The only committed development that has been included is the approved car park on the adjacent CEAG site which will be linked into the site and will provide 173 car parking spaces.

The traffic flows have been taken from the previous supporting information, which in fact allowed for a total of 250 parking spaces, and we have not reduced the flows to take account of the new total. This will therefore provide a level of robustness to the assessments.

5 Sustainable Access

5 Sustainable Access

5.1 Introduction

This chapter of the Transport Assessment considers the existing provision for sustainable travel to and from Barnsley Town Centre. The site is well served by a range of sustainable transport links which include pedestrian and cycle paths as well as frequent public transport links.

Given its location within Barnsley town centre adjacent to the Transport Interchange the site is considered to be highly accessible by alternative modes of travel and as such both employees and customers will have a real choice of transport modes by which to travel to the site.

5.2 Access for Pedestrians

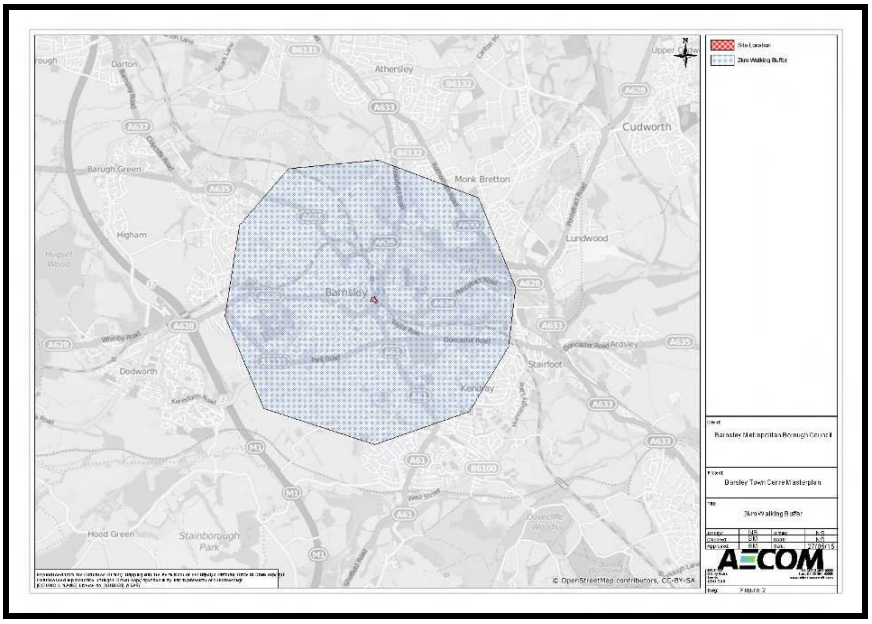
Walking is the most sustainable form of travel due to the positive environmental effects, including zero harmful emissions, associated with it. It also provides distinct health benefits and is the lowest cost form of travel. Walking is often required for the secondary part of a journey made using public transport.

An acceptable walking distance to work is generally considered to be 2km and whilst PPG13 has been replaced by the NPPF, it remains widely regarded and states that:

"Walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips particularly under 2 kilometres".

Figure 3 of **Appendix A** illustrates the indicative 2km walking isochrone although it can be given below for ease of reference.

Figure 3 – 2km Walking Isochrone



In addition, **Table 2** below provides an extract from 'Guidelines for Providing for Journeys on Foot' by the Institution of Highways and Transportation (IHT) and suggests acceptable walking distances for different types of journeys.

Table 2: Suggested Acceptable Walking Distance

	Commuting (m)
Desirable	500
Acceptable	1000
Preferred maximum	2000

With reference to the above table the desirable walking distance to a school or place of work is considered to be 500m, an acceptable distance of 1,000m and a preferred maximum of 2,000m. As before, a 2km Walking Isochrone plan has been provided at **Appendix A**, showing the acceptable walking distance catchment area from the site

As can be seen the majority of central Barnsley is included within the 2km walking isochrone. The highway network adjacent to the site is considered to have good pedestrian linkages with facilities to allow pedestrians to cross away from traffic or via controlled crossings.

The Alhambra roundabout has both at grade pedestrian crossings as well as underpasses under the roundabout, with full pedestrian facilities at the New Street / Upper New Street traffic signal controlled junction. To the north, pedestrian crossings are provided across both Shambles Street and Eldon Street, with the areas to the west being pedestrianised.

It can therefore be seen from the above sections that there are excellent existing facilities for pedestrians to access the development site.

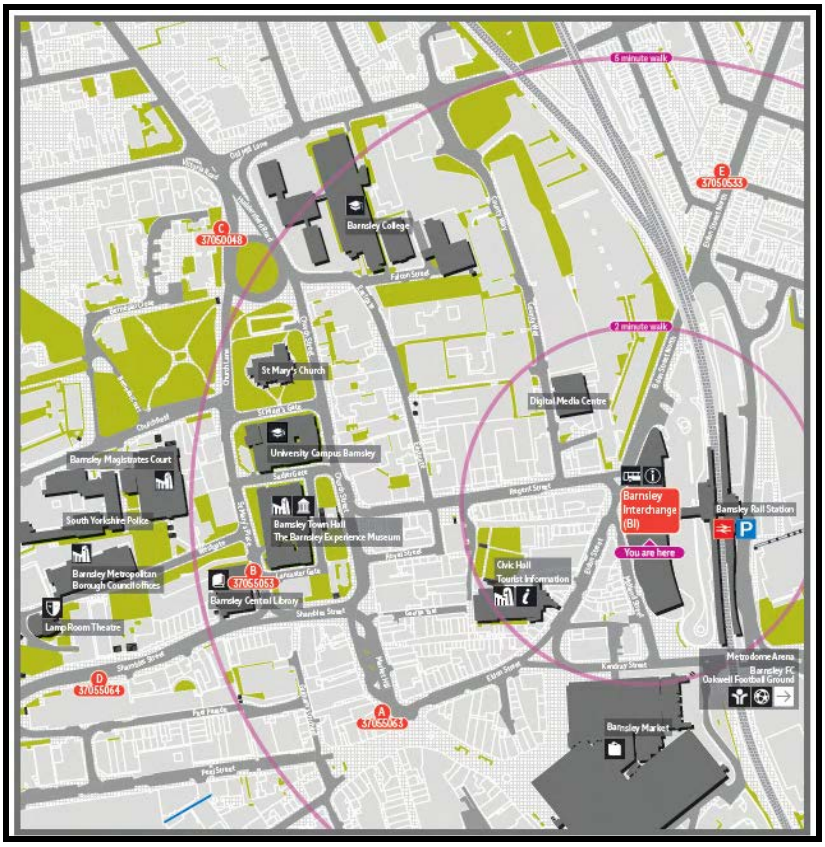
5.3 Access using Public Transport

Bus

Barnsley Interchange is located to the immediate north of the site and combines both the bus and rail station, thus providing an excellent facility to encourage alternative modes of travel.

An extract from the Barnsley MBC bus map is shown in **Figure 4** and as can be seen the site is partly within a 5 minute walk and entirely within a 10 minute walk from the Interchange.

Figure 4 – Town Centre Extract from the Bus Map



The bus station features the latest in technology such as the SYPTE scheme of "Your Next Bus", tracking buses with GPS to check what time they are due to arrive and depart, thus providing a greater level of certainty for users.

Bus services departing Barnsley Interchange can be found in **Appendix A,** but as would be expected this provides a number of high frequency services to all areas of Barnsley as well as the surrounding area.

It is therefore considered that the site is highly accessible by bus.

5.3.1 Rail

With reference to paragraph 6.16 of the IHT document *Planning for Public Transport in Developments* it is stated that *"people have been found to be willing to walk about twice as far to or from a station than a bus stop; up to about 800m for rail compared to about 400m for a bus*"

The nearest train station to the development is Barnsley Interchange located approximately 200m to the north of Barnsley Town Centre.

The station benefits from a manned ticket office, which is open to the public between 0600 and 1930 Monday – Saturday and 0845 – 1900 on Sunday, and the station provides a direct link to services from Leeds, Wakefield Kirkgate and Sheffield as well as other services as highlighted in **Table 3**.

Table 3-Rail Services

Station	Route (Main Stations)	Mon - Fri	Sat	Sun
Barnsley Interchange	Wakefield Kirkgate - Leeds	30 mins	30 mins	60 mins
	Wakefield Kirkgate – Castleford - Leeds	60 – 120 mins	60 – 120 mins	120 mins
	Meadowhall - Sheffield	30 mins	30 mins	60 mins
	Sheffield – Chesterfield - Nottingham	60 mins	60 mins	60 mins
	Denby Dale – Honley Huddersfield	60 mins	60 mins	60 mins

The above services combine to provide up to seven trains per hour between Monday and Saturday and up to five trains per hour on Sunday.

It is therefore considered that the site is highly accessible by rail and this provides a realistic alternative to the use of the private car.

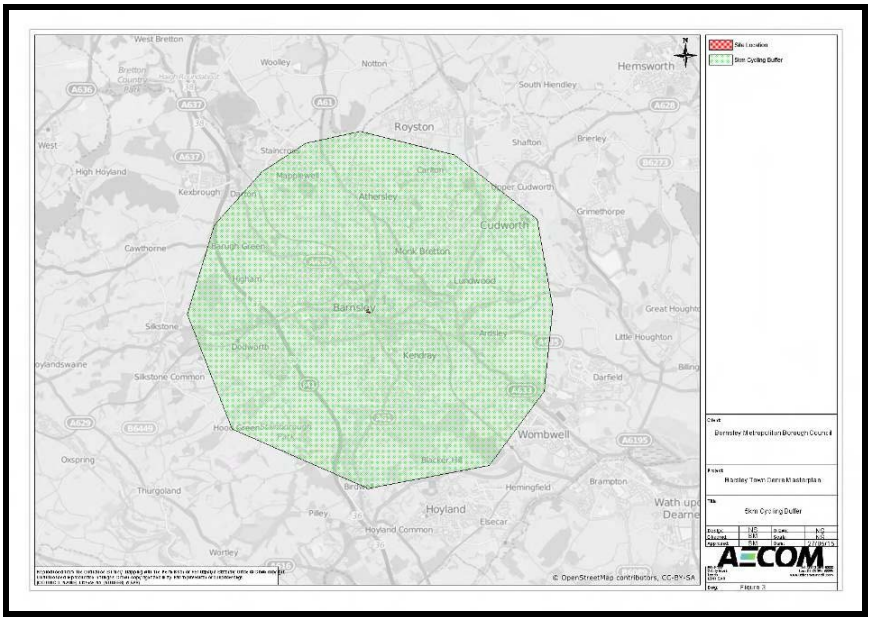
5.4 Access for Cyclists

Cycling is a viable and sustainable mode of transport to the site. Whilst PPG13 has been replaced, it is still widely regarded and states that

“Cycling also has the potential to substitute for short car trips, particularly those less than 5km and to form part of a longer journey by public transport”.

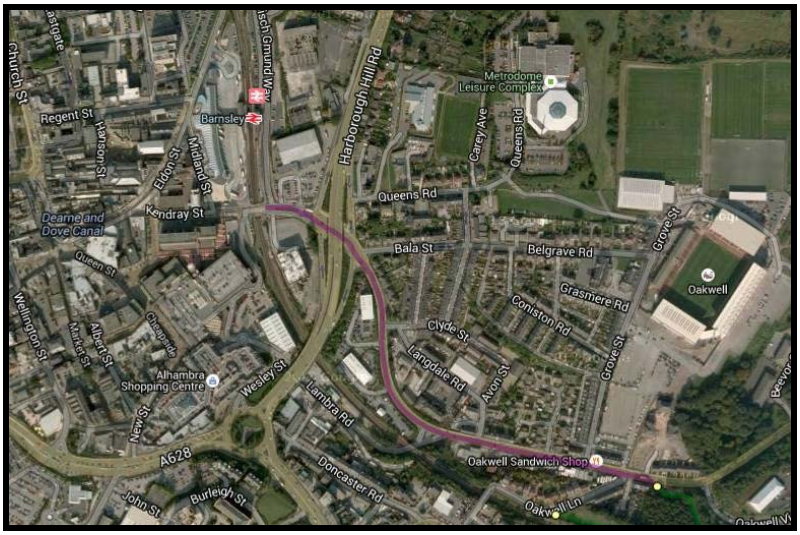
It is widely considered that cycle use provides a viable means of transport for journeys up to 5km. **Figure 5** of **Appendix A** illustrates the recommended 5km cycle isochrone around the site. Within a 5km cycle distance lie the residential areas of Dodworth, Athersley, Cudworth and Kendray where it is likely that people would cycle from to the site.

Figure 5 – 5km Cycling Isochrone



With reference to the SUSTRANS website there is an on road route along Pontefract Road just to the east of the Kendray Street level crossing, and this is shown below for ease of reference:

Figure 6 – SUSTRANS cycle route information



We would therefore consider that the site is accessible by cyclists and that this can provide a realistic alternative to the private car.

6 Trip Generation and Distribution

6 Trip Generation and Distribution

6.1 Introduction

This section of the Transport Assessment outlines the anticipated traffic generation and distribution associated with the development proposals. The trip generation methodology has been agreed by Barnsley Metropolitan Borough Council, and can be set out as follows.

6.2 Retail Trip Generation

As mentioned previously the existing market / retail units are to be replaced by new units and as such the proposed trip generation has been based upon the existing vehicle trips to the site as identified from the recent surveys.

Currently access is taken from an in only from Kendray Street and an in and out from Lambra Road and from the ATC data the following trip generation in the peak hours can be identified:

Table 4: Existing Kendray Street Peak Hour generation

	IN	OUT	TWO WAY
PM	9	N/A	9
SAT	23	N/A	23

Table 5: Existing Lambra Street Peak Hour generation

	IN	OUT	TWO WAY
PM	3	36	39
SAT	220	243	463

The existing site therefore generates a total of 9 and 23 two way trips from the Kendray Street entrance in the weekday PM and Saturday respectively. With the Lambra Street generating 39 and 463 two way trips

The above is based upon an existing floorspace of 17,731sq.m compared to a proposed total floorspace of 42,500sq.m, and increase of 24,769sq.m.

This increase represents a 140% increase in overall floorspace, although it is widely acknowledged that the new floorspace will not generate traffic at the same rate as the existing, with the increase providing a better quality environment which will allow customers to spend longer in the town centre.

Therefore, as agreed within the previous report in support of the town centre redevelopment, this overall increase has been reduced by 50% in order to assess the potential increases in traffic.

Therefore, based upon a 70% uplift the levels of additional traffic associated with the retail / market development can be given as follows:

Table 6: Additional Retail / Market Kendray Street Peak Hour Generation

	IN	OUT	TWO WAY
PM	6	0	6
SAT	16	0	16

From Table 6 above, it can be seen that the traffic generated by the additional retail / market space from Kendray Street would amount to 6 two-way vehicle movements in the Friday PM peak hour and 16 two-way vehicle movements in the Saturday peak hour.

Table 7: Additional Retail / Market Lambra Road Peak Hour Generation

	IN	OUT	TWO WAY
PM	2	25	27
SAT	154	170	323

From **Table 7** above, it can be seen that the traffic generated by the additional retail / market space from Lambra Road would amount to 27 two-way vehicle movements in the Friday PM peak hour and 323 two-way vehicle movements in the Saturday peak hour.

It should be noted that we have assumed therefore that the additional traffic generated by the proposed expansion of the retail and market offer is an uplift from the existing vehicle trips. However, we have also included the traffic from the committed CEAG car parking development site, which will also reflect trips to and from the market area.

Therefore, the above methodology whereby we have uplifted the existing market trips and included the CEAG traffic is considered to represent an extremely robust methodology.

6.3 Cinema Trip Generation

A robust interrogation of the TRICS 7.1.2 database has been undertaken to provide trip rates for development sites within Barnsley Town Centre. These trip rates have been used to calculate an estimated trip generation for each site and are presented in **Table 8**.

Table 8 – Friday and Saturday Cinema Trip Generation

	Arrivals	Departures	Two Way
Friday PM	14	11	25
Saturday	35	30	65

From **Table 8** above, it can be seen that the traffic generated by the proposed cinema development would amount to 25 two-way vehicle movements in the Friday PM peak hour and 65 two-way vehicle movements in the Saturday peak hour. It should also be noted that the above calculations make an allowance for linked trips; indeed very few peak hour trips associated with the cinema are considered as being 'new' to the network. In reality a significant proportion are likely to be trips that are also visiting another destination within the town centre as well as the cinema itself. As such, 30% of the original associated trips have been included within the assessment, and this has been agreed with BMBC.

TRICS outputs for each land use are contained in **Appendix D** for consideration. Trip rates shown are per $100m^2$ of floor area. It is noted that the peak arrival and departure time is between 1600 – 1700.

6.4 Library Trip Generation

The same process has been undertaken in order to calculate trip rates for the proposed Library development. It should be noted however, that as with the proposed cinema development, these calculations have made an allowance for linked trips, as a significant proportion are likely to be trips that are also visiting another destination within the town centre as well as the library itself. However, for ease of viewing, vehicle trip generation associated with the library development are shown in **Table 9.**

Table 9 – Friday and Saturday Library Trip Generation

	Arrivals	Departures	Two Way
Friday PM	41	47	88
Saturday	41	47	88

From **Table 9** above, it can be seen that the traffic generated by the proposed library development would amount to 88 two-way vehicle movements in the Friday PM peak hour and 88 two-way vehicle movements in the Saturday peak hour. Although as mentioned above it is assumed that all would be part of a linked trip associated with the town centre, and this has been agreed with BMBC.

6.5 Distribution

Vehicle trip generation for the proposed development site has been distributed using up-to-date distribution from the MCC carried out on 12th and 13th June 2015. Development distributions for Friday PM Peak and Saturday Peak are shown in **Figures 7 - 10**.

Figure 7 – Friday PM Peak Lambra Road Development Distribution

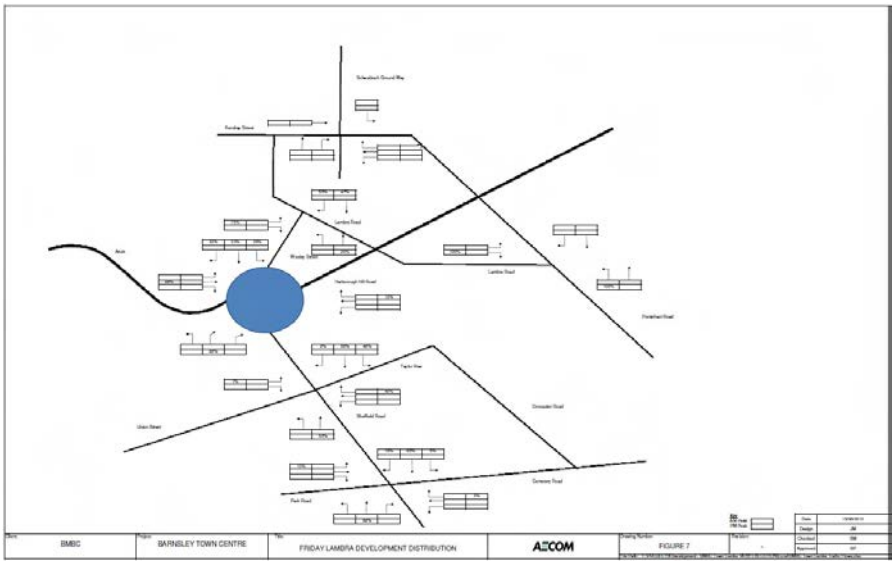


Figure 8 – Friday PM Peak Kendray Street Development Distribution

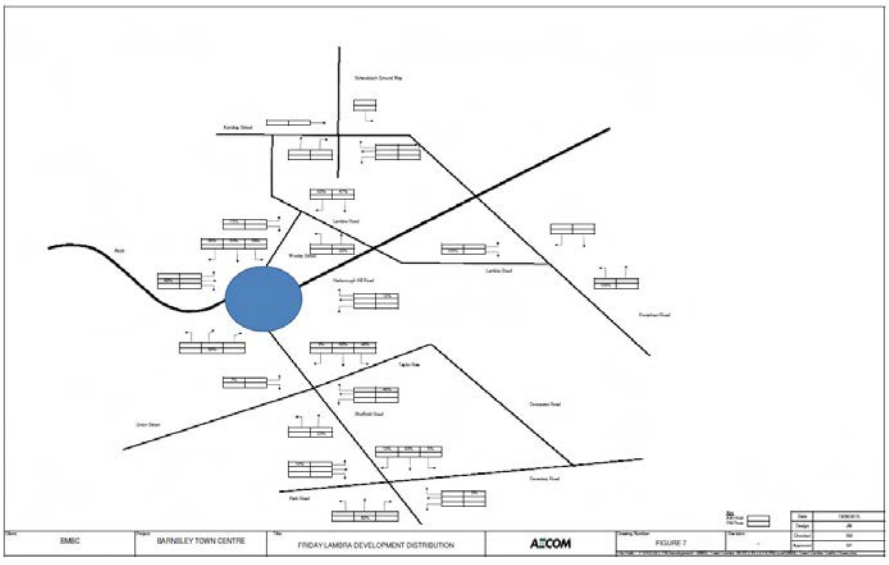


Figure 9 – Saturday Peak Lambra Road Development Distribution

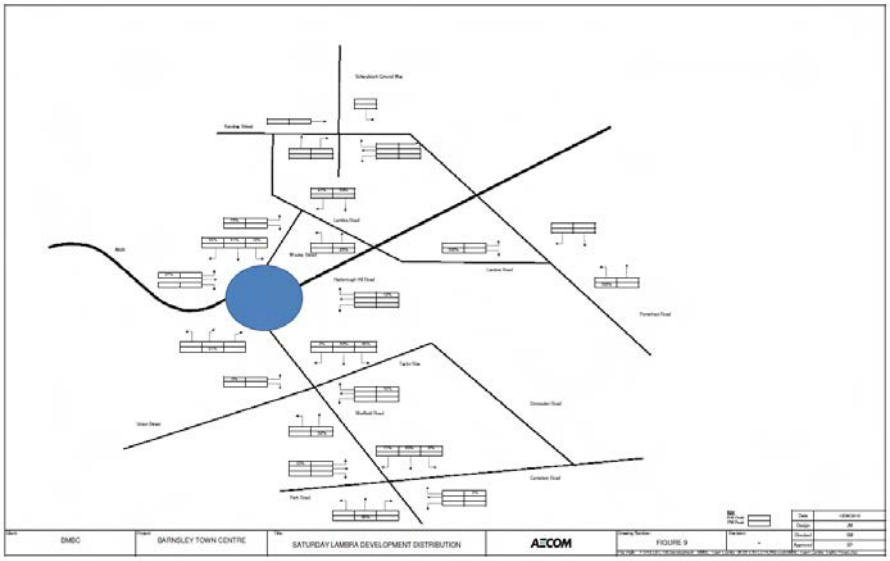
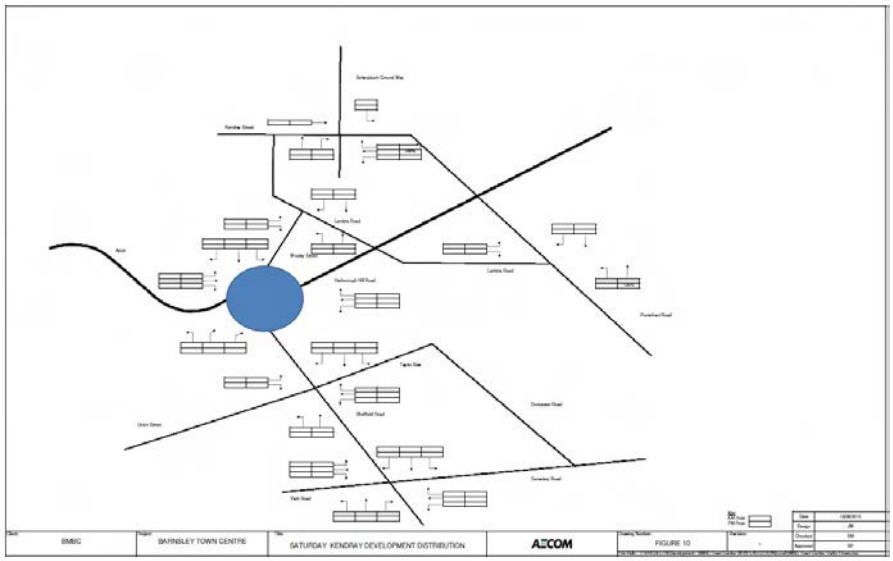


Figure 10 – Saturday Peak Kendray Street Development Distribution



6.6 Development Flow Diagrams

Traffic flow diagrams are located at **Appendix C**, indicating the relevant flows at each of the key junctions located in the area of the site. These figures show flows for both 2015 Base year and 2020 Base year plus additional committed development and development traffic generated by the Barnsley Town Centre development site. Listed below are the related figures:

- Figure 11 2015 Base

- Figure 12 2020 Base
- Figure 13 Development Traffic
- Figure 14 2020 Base + Committed Development + Proposed Development Traffic

7 Operational Assessments

7 Operational Assessments

7.1 Introduction

As agreed with Barnsley Metropolitan Borough Council, operational assessments have been undertaken at the following junctions:

- Schwabisch Gmund Way / Kendray Street;
- Alhambra Roundabout;
- Wesley Street / Lambra Road; and
- Pontefract Road / Lambra Road.

The results of the assessments can then be set out as follows, and it must be noted that these represent a robust assessment due to the following:

- The vehicle trip generation has included both an uplift in the existing trips to the site plus the full trips to the CEAG car park, whereas in reality the trips to the CEAG car park would represent a significant proportion of the uplifted trips;
- The CEAG traffic has been based upon the previous proposal of 250 spaces, whereas only 173 spaces are now proposed, and
- We have assumed that the level crossing would remain open in the modelling of the Schwabisch Gmund Way / Kendray Street junction but have redistributed trips away from the level crossing in the assessment of the other junctions.

7.2 Software Packages

The roundabout junction within the vicinity of the site has been modelled using the JUNCTIONS software, while priority junctions have been modelled using PICADY 5 software. JUNCTIONS 8 and PICADY 5 use Ratio of Flow Capacity (RFC) to measure the capacity of a junction. RFC values of 0.85 or less are considered to indicate the acceptable operation of the junction, values between 0.85 and unity represent variable operation (i.e. possible queues building up on approaches and increases in vehicle delay) and RFC values in excess of 1 represent overloaded conditions. Each approach also had a mean maximum queue (MMQ) value, which is the mean maximum number of vehicles expected to queue on the approach at the worst time period of operation.

LINSIG has been used to model the signalised junction at Schwabisch Gmund Way / Kendray Street, as well as the two mitigation schemes, where by individually assessing the operational capacity for each of the scenarios, we will examine the impact in terms of practical reserve capacity (PRC), whereby a scenario with a positive PRC value indicates that the junction is within operational capacity, and Degree of Saturation (DoS), where this indicates the a percentage capacity saturation.

The junctions above have then been for the following scenarios:

- 2015 Base
- 2020 Base
- 2015 Base + Committed Development + Proposed Development Traffic
- 2020 Base + Committed Development + Proposed Development Traffic

7.3 Alhambra Roundabout

The Alhambra roundabout is a four arm at grade junction forming part of the “ring road” around Barnsley town centre. It is formed by the A628 West Way to the west, Sheffield Road to the south, the A61Harborough Hill Road to the east and Wesley Street to the north.

The Alhambra four arm roundabout has been modelled using JUNCTIONS for the four scenarios during both the 2015 and 2020 evening peak hours. The results are shown within the following tables, with the full output being included within **Appendix E1**.

Table 10: 2015 PM / 2020 PM Peak Scenario Results

Approach	2015 Base		2020 Base	
	RFC	Queue	RFC	Queue
Wesley Street	0.72	2	0.85	5
Harborough Hill Road	0.74	3	0.81	4
Sheffield Road	0.69	2	0.76	3
A628	0.81	4	0.89	7

Table 11: 2015 Saturday / 2020 Saturday Peak Scenario Results

Approach	2015 Saturday Base		2020 Saturday Base	
	RFC	Queue	RFC	Queue
Wesley Street	0.46	1	0.53	1
Harborough Hill Road	0.78	3	0.86	6
Sheffield Road	0.66	2	0.73	3
A628	0.76	3	0.83	5

The results show that the junction operates well within an acceptable RFC for all scenarios apart from the A628 Arm which is 0.04 over the threshold, with a maximum queue of 7 vehicles. The highest RFC with the addition of the development flows is 0.89 along the Harborough Hill Road and A628 arms during the Saturday peak.

Table 12: 2020 PM Base + Development / 2020 Saturday Base + Development

Approach	2020 PM Base + Dev		2020 Saturday Base + Dev	
	RFC	Queue	RFC	Queue
Wesley Street	0.89	7	0.65	2
Harborough Hill Road	0.82	4	0.89	8
Sheffield Road	0.76	3	0.79	4
A628	0.89	8	0.89	7

Therefore, it can be seen that with the addition of the development traffic the junction is still predicted to operate at a similar level of capacity and the impact is therefore not considered to be severe.

Furthermore, it should be noted that the junction currently has “part time signals” on some approaches which will therefore improve the capacity from that given above. The above is therefore considered to represent a reasonably robust assessment.

7.4 Wesley Street / Lambra Road

The Wesley Street / Lambra Road junction is currently a three arm simple priority junction, which will then be converted into a four arm mini roundabout as part of the development in order to accommodate the new service road.

The Proposed Wesley Street / Lambra Road mini roundabout junction has been modelled using JUNCTIONS in its proposed mini roundabout layout for both the 2015 and 2020 peak hours. The results are shown within the following tables, with the full output being included in **Appendix E2**.

Table 13: 2020 PM Base + Development / 2020 Saturday Base + Development

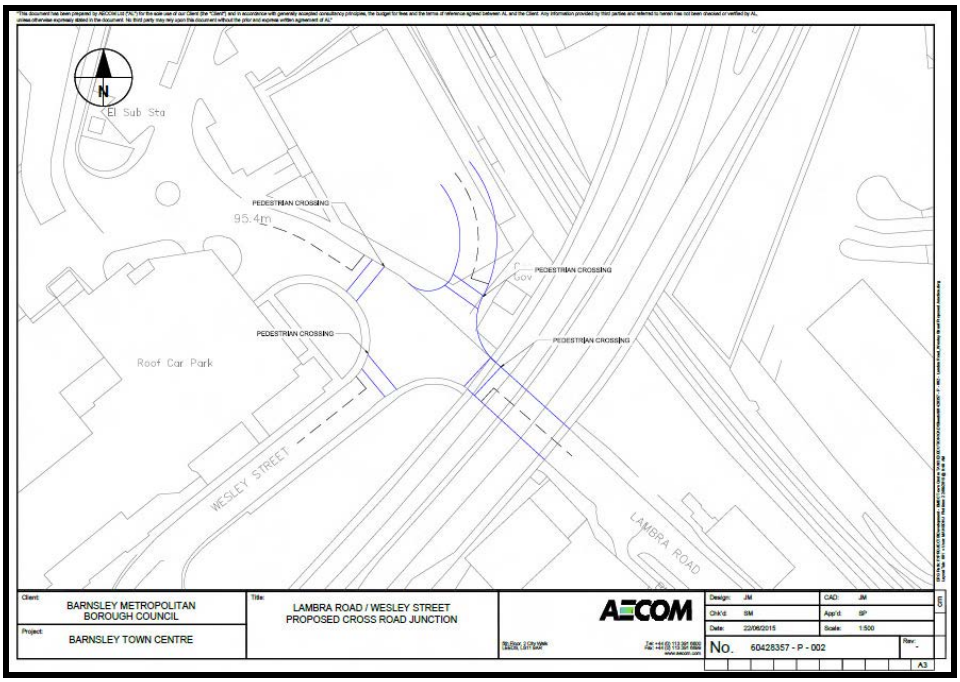
Approach	2020 PM Base + Dev		2020 Saturday Base + Dev	
	RFC	Queue	RFC	Queue
Lambra West	0.55	1	0.92	8
Service Road	0.09	0	0.83	4
Lambra East	0.35	1	0.62	2
Wesley Street	0.38	1	0.98	15

The results show that the junction operates well within an acceptable RFC for the Friday PM scenario, with a maximum queue of 1 vehicle. However, the 2020 Saturday Base + Development scenario operates above an acceptable RFC for 2 of the 4 arms

with a maximum queue of 15 vehicles. The highest RFC with the addition of the development flows is 0.98 along the Wesley Street arm during the Saturday peak. This will then result in a queue on Wesley Street which would potentially interact with the Alhambra roundabout.

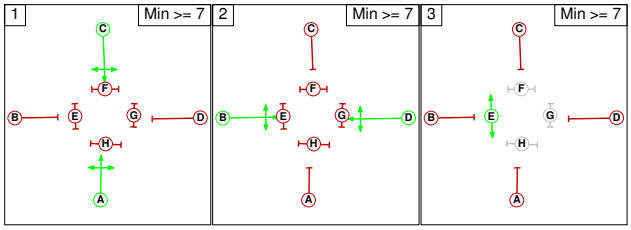
It is therefore proposed to provide a four arm traffic signalised junction instead of a mini roundabout and the layout is shown on AECOM drawing below.

Figure 15 – AECOM drawing P - 002 – Proposed Lambra Rd / Wesley St traffic signals



As can be seen from the above it is proposed to provide a simple signalised junction with single lane approaches on all arms with pedestrian crossings to allow full accessibility. However, due to the constrained nature of the site an “all red” pedestrian stage will be required and the staging is shown below.

Figure 16 – Wesley St / Lambra Rd - Stage Diagram



However, the junction has only been modelled using the scenario whereby the pedestrian stage is not called as it has been agreed with the Local Authority that this provides the most realistic assessment.

For the residential areas to the south and east, the main pedestrian access is considered to be across either Kendray Street or through the Alhambra centre, with little demand via this junction. Therefore, the results assuming that the pedestrians are not called every cycle can be given as follows.

The full LINSIG output is included in **Appendix E3**, but can be summarised as follows.

Table 14: 2020 PM and Saturday Peak Scenario Results – NO Peds every cycle

	2020 PM		2020 Saturday	
	Deg of Sat (%)	**MMQ**	**Deg of Sat (%)**	**MMQ**
Lambra Road (E)	34	3	54	3
Wesley Road	33	2	83	6
Lambra Road (W)	35	2	87	6
Service Road	20	1	67	4
	Cycletime 50s PRC+154.4%		Cycletime 50s PRC +3.5%	

As can be seen the junction is now predicted to operate within capacity in both the weekday PM and Saturday peak hours, with the queue on Wesley Street not extending back to the Alhambra roundabout.

It is therefore considered that the proposed signalisation is predicted to operate within capacity based upon the more realistic assumption whereby the pedestrian “all red” is not called every cycle.

7.5 Pontefract Road / Lambra Road

This junction is a simple priority T junction, with the left turn from Pontefract Road being slightly relocated away from the junction by a left turn slip.

The Pontefract Road / Lambra Road junction has been modelled using PICADY for the four scenarios during both the 2015 and 2020 evening peak hours. The results are shown within the following tables, with the full output being included in **Appendix E4.**

Table 15: 2015 PM / 2020 PM Peak Scenario Results

Approach	2015 Base		2020 Base	
	RFC	**Queue**	**RFC**	**Queue**
Lambra Road	0.769	3	0.862	5
Pontefract Road (Right in)	0.020	0	0.023	0

Table 16: 2015 Saturday / 2020 Saturday Peak Scenario Results

Approach	2015 Saturday Base		2020 Saturday Base	
	RFC	**Queue**	**RFC**	**Queue**
Lambra Road	1.112	31	1.241	55
Pontefract Road (Right in)	0.059	0	0.066	0

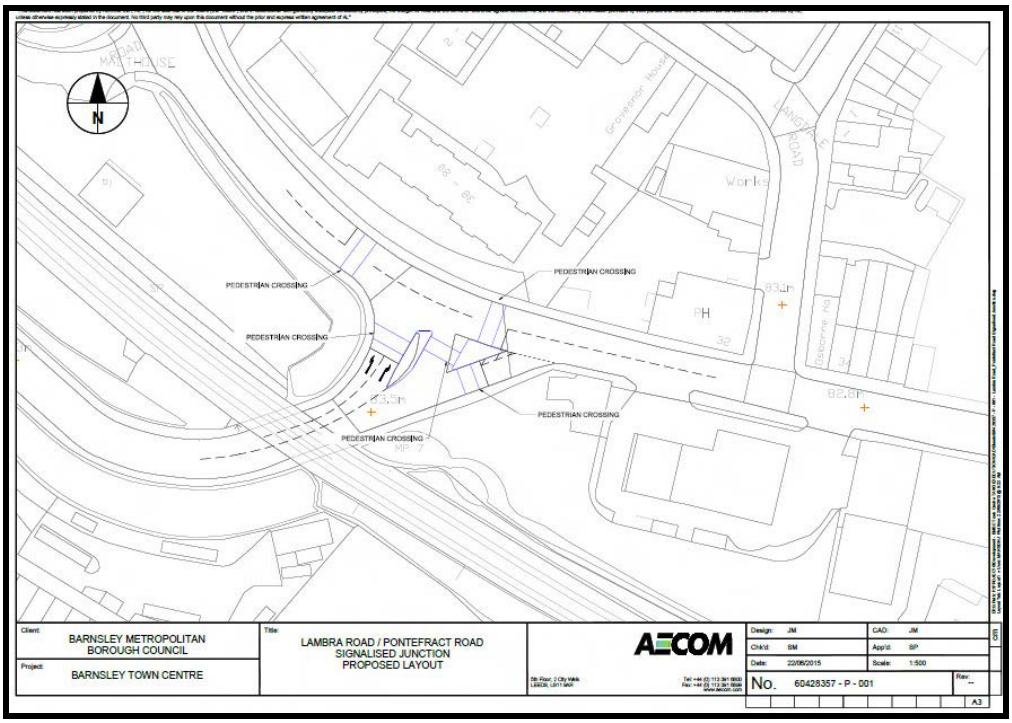
Table 17: 2020 PM Base + Development / 2020 Saturday Base + Development

Approach	2020 PM Base + Dev		2020 Saturday Base + Dev	
	RFC	**Queue**	**RFC**	**Queue**
Lambra Road	0.930	8	1.667	155
Pontefract Road (Right in)	0.024	0	0.069	0

The results show that the Lambra Road arm of the junction does not operate within an acceptable RFC for all scenarios, with a maximum queue of 155 vehicles. The highest RFC with the addition of the development flows is 1.667 along the Lambra Road arm during the Saturday peak.

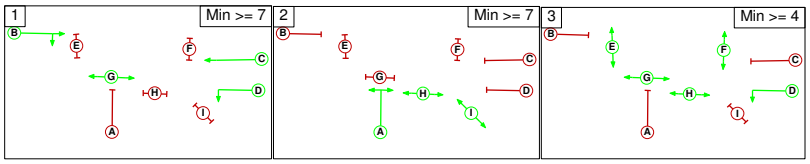
It is therefore proposed to provide traffic signals at this junction and the layout can be seen in the **AECOM drawing** which can be given below for ease of reference.

Figure 17 – AECOM drawing P - 001 – Proposed Lambra Rd / Pontefract Rd traffic signals



As can be seen it is proposed to provide a single lane approach on Pontefract Rd (W), with short flares on both Pontefract Rd (E) and Lambra Rd. The junction would operate on a 3 stages, as show below.

Figure 18 – Pontefract Road / Lambra Rd - Stage Diagram



The junction has been modelled using the above staging in the 2020 PM and Saturday peak hours and the results are included in **Appendix E5**, but can be summarised as follows.

Table 18: 2020 PM and Saturday Peak Scenario Results – NO Peds every cycle

	2020 PM		2020 Saturday	
	Deg of Sat (%)	**MMQ**	**Deg of Sat (%)**	**MMQ**
Pontefract rd (E)	67	11	89	23
Lambra Rd	79	9	89	21
Pontefract Rd (W)	61	11	65	11
	Cycletime 90s PRC+14.4%		Cycle time 120s PRC +1.4%	

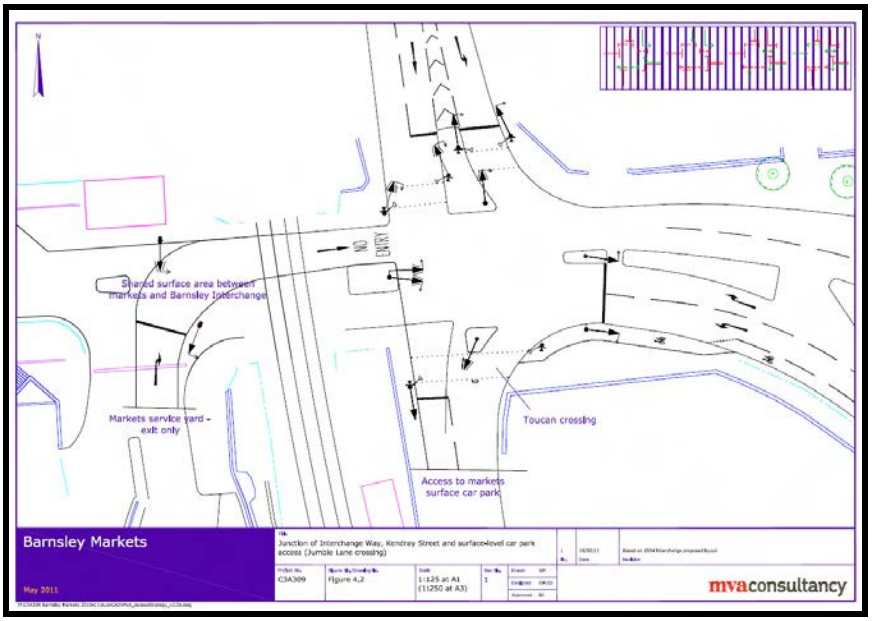
From the above all links are predicted to operate with degrees of saturation below 90% and the level of queuing can be accommodated on the network. Therefore, from the above, it is considered that the proposed traffic signalised junction

7.6 Schwabisch Gmund Way / Kendray Street

This is currently a three arm signalised junction, but with the construction of the CEAG development, a fourth signalsied arm will be added, and this has been the subject of a separate report which was prepared by others and received a planning consent in 2011.

The proposed MVA Consultancy layout can be shown below as taken from the approval which has been already granted for s car park on the site.

Figure 19 – MVA Consultancy Drawing – Proposed CEAG Access



However, since that that time the proposals have been amended and the access across the level crossing will now be closed using a Traffic Regulation Order (TRO), although this cannot obviously be guaranteed as the Order may not be successful should there be a valid objection.

We have therefore modelled the more robust scenario whereby the crossing will remain open and the traffic associated with the site will still use the crossing to gain access, and should the crossing be closed then the operation will improve as traffic will be removed and one approach would be closed.

The Schwabisch Gmund Way / Kendray Street junction has been modelled using LINSIG for the four scenarios during both the 2015 and 2020 peak hours. The results are included within **Appendix E6** but can be summarised as follows.

Table 19: 2015 PM / 2020 PM Peak Scenario Results

Approach	2015 Base			2020 Base		
	PRC	DoS (%)	Queue	PRC	DoS (%)	Queue
Schwabisch Gmund Way Left	68.9	39.7	6	57.2	42.6	7
Schwabisch Gmund Way Ahead		0.0	0		0.0	0
Kendray Street East Left		0.0	0		0.0	0
Kendray Street East Ahead Right		53.3	8		57.2	9
CEAG Car Park Ahead Right		0.0	0		0.0	0
Kendray Street West Ahead		43.6	3		46.9	3

Table 20: 2015 / 2020 Saturday Peak Scenario Results

Approach	2015 Saturday Base			2020 Saturday Base		
	PRC	DoS (%)	Queue	PRC	DoS (%)	Queue
Schwabisch Gmund Way Left	76.8	27.0	4	64.1	29.0	4
Schwabisch Gmund Way Ahead		0.0	0		0.0	0
Kendray Street East Left		0.0	0		0.0	0
Kendray Street East Ahead Right		50.9	7		54.8	8
CEAG Car Park Ahead Right		0.0	0		0.0	0
Kendray Street West Ahead		23.2	1		25.1	1

Table 21: 2020 PM / 2020 Saturday Base + Development Scenario Results

Approach	2020 Base + Dev			2020 Saturday Base + Dev		
	PRC	DoS (%)	Queue	PRC	DoS (%)	Queue
Schwabisch Gmund Way Left	53.0	42.6	7	62.4	30.1	4
Schwabisch Gmund Way Ahead		4.7	0		25.3	1
Kendray Street East Left		2.8	0		18.0	2
Kendray Street East Ahead Right		58.8	9		55.4	8
CEAG Car Park Ahead Right		32.1	1		54.2	3
Kendray Street West Ahead		46.9	3		25.1	1

The results show that the junction operates well within an acceptable PRC and DoS for all scenarios, with a maximum queue of 8 vehicles. The highest DoS with the addition of the development flows is 55.4% along the Kendray Street East arm during the Saturday peak.

7.7 Summary

We have modelled the following junctions in the weekday PM and Saturday peak hours:

- Schwabisch Gmund Way / Kendray Street;
- Alhambra Roundabout;
- Wesley Street / Lambra Road; and
- Pontefract Road / Lambra Road.

The Schwabisch Gmund Way / Kendray Street is currently a 3 arm traffic signalised junction but the CEAG committed car park, which will form part of the development, will form a new fourth signalised arm onto the junction. The proposed signalised layout with the addition of CEAG has been tested and is predicted to operate well within capacity.

The Alhambra Roundabout has been tested in its current layout and is predicted to operate at a similar level of capacity in both the base and the “with development “scenarios.

The Wesley Street / Lambra Road junction is currently a simple priority junction and is currently proposed to be converted into a mini roundabout to accommodate a fourth arm which will serve the proposed car parking and act as a service road. The mini roundabout is predicted to operate with some capacity constraints and as such traffic signals are required. It has been assumed that the “all red” pedestrian stage would not be required every cycle and as such the junction is predicted to operate within capacity at the design year.

The Pontefract Road / Lambra Road is currently a priority junction and with the addition of the development trips would be predicted to operate above capacity. Therefore, it is proposed to install traffic signals as part of the proposals.

8 Summary and Conclusions

8 Summary and Conclusions

This report has been prepared on behalf of Barnsley MBC in support of their proposal to redevelop the existing market and town centre.

The proposals will comprise of the following:

- 30 500m² Retail / Food & Drink (Use Classes A1, A3 & A4);
- 4 500m² Cinema (Use Class D2);
- 3 000m² Library (Use Class D1), and
- 12 000m² for the refurbished existing market development;

With access being via the existing all movements access from Lambra Road from a new service road which runs parallel to the railway. It is proposed to close the level crossing on Kendray Street, although CEAG will still take access from Kendray Street to the east of the crossing.

The development proposes the following levels of car parking:

- 174 spaces on the former CEAG site to the east of the Kendry Street level crossing and linked to the site via new footbridge over the railway;
- 194 car parking spaces retained within the existing basement of the Metropolitan Centre, with an additional 52 parking spaces, and
- 56 car parking spaces to the south of the site, with access from Lambra Road

The site has been assessed against the relevant National and Local Policy and given its proximity to the Transport Interchange in a highly accessible location then it is considered to accord with the principles of providing development in sustainable locations.

The site is located with the town centre adjacent to the Transport Interchange which allows safe and convenient access to regular bus and rail services to both residential areas within Barnsley as well as surrounding areas. It is therefore considered to be highly accessible with real alternatives for both employees and customers to the private car.

The trip generation has been derived based upon the existing vehicle movement to the centre uplifted to reflect the additional floorspace; in addition the full trip generation from the CEAG car park has also been added. This represents a robust assessment as the CEAG site will include a large proportion of the uplifted traffic. Furthermore, we have included the full trip generation from 250 spaces at CEAG, whereas only 173 spaces are now proposed.

Traffic surveys were undertaken t the following junctions on Friday 13th and Saturday 14th June in both the weekday PM and Saturday peak hours:

- Kendry Street / Schwasbisch Grund Way;
- A628 Pontefract Road / Lambra Road;
- Lambra Road / Wesley Street;
- A628 Harborough Hill Road / Wesley Street / A61 Sheffield Road – Alhambra Roundabout
- A61 Sheffield Road / Union Street / Taylor Row;
- A61 Sheffield Road / A6133 Park Road, and
- A628 Dodworth Road / Shambles Street / A628 / Racecommon Road – Townend Roundabout.

We also undertook a 12 hour ATC between 0700 to 1900 on both the Friday and a Saturday at the following locations in order to quantify the existing demand at the multi storey car park.

- Ramped entrance up to the car park from Kendry Street, and
- Ramped entry and exit to and from the car park from the end of Lambra Road

The highway network was then assessed at a year of registration of the planning application, 2015 and a design year 5 years hence, 2020.

The CEAG development site has been included as a committed development with the traffic flows being taken from the report which accompanied that application. This then provides an element of robustness as this assessed 250 parking spaces whereas the current proposal is for 173 parking spaces.

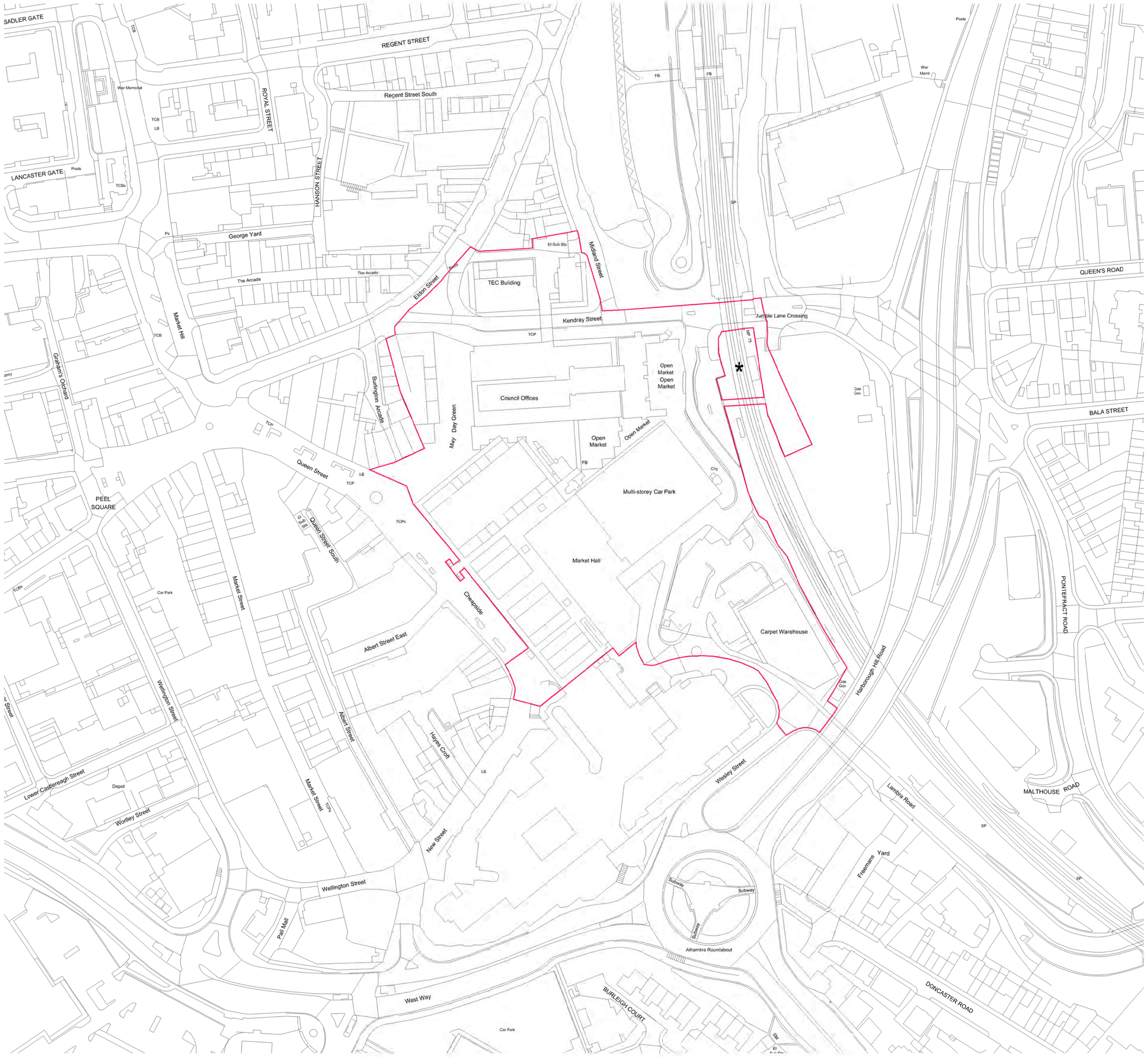
The Kendry Street / Schwasbisch Gmund Way traffic signalised junction has been assessed in its proposed layout, with the addition of the CEAG development, which incorporates a new signalised arm into the existing junction. However, the junction is still predicted to operate well within capacity at the design year.

The A628 Pontefract Road / Lambra Road priority junction has been assessed in its current priority junction layout and with the addition of the development traffic is predicted to operate above capacity. Therefore, it is proposed to provide traffic signals at this junction.

The Lambra Road / Wesley Street priority junction has been modelled as a mini roundabout, as currently proposed, however, this will then queue back on Wesley Street towards the Alhambra roundabout. It is therefore proposed to provide traffic signals at this junction.

The A628 Harborough Hill Road / Wesley Street / A61 Sheffield Road – Alhambra Roundabout has been modelled using ARCADY and is considered to operate with no additional capacity problems than would occur in the base, no development, situation.

Appendix A: Figures and Drawings



Notes:
- This drawing is copyright.
- Do not scale dimensions from this drawing.
- This drawing is to be read in conjunction with all other relevant drawings
- All discrepancies on this drawing are to be reported to the architect.
- Do not modify any element of this drawing.
- Use drawing only for purpose(s) issued.

North Sign / Key Plan

0 5 10 15
1:500 Scale

KEY

Site Application Boundary

For the avoidance of doubt this area of land is excluded from the application *

Rev	Date	Revision Notes	Dn.	Rv

Client / Contractor

BARNSLEY MBC

IBI
Intelligence
Buildings
Infrastructure
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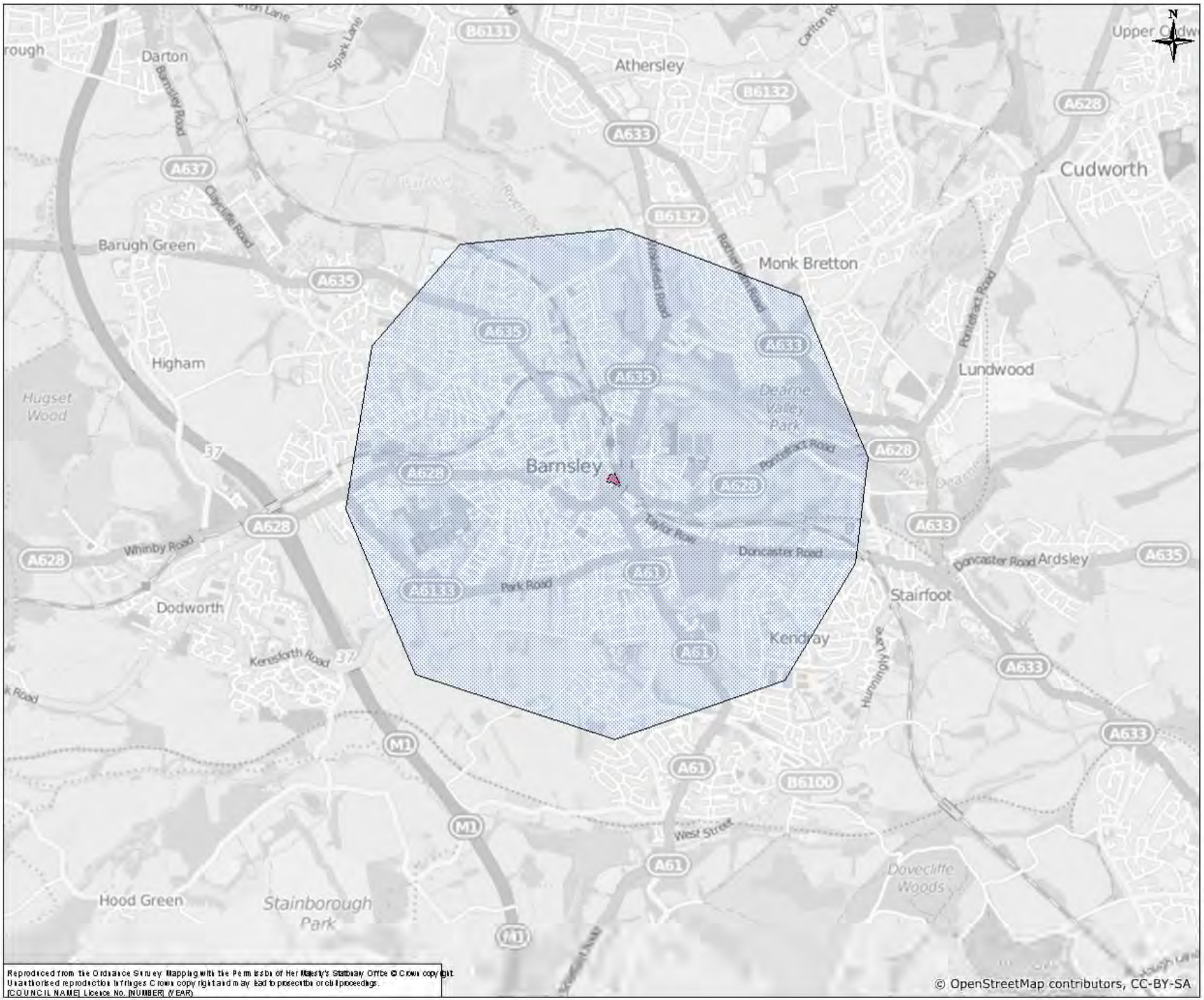
Project
BETTER BARNSLEY TOWN CENTRE DEVELOPMENT

Drawing Title
LOCATION PLAN

Job Number	Drawing Originated Date	PAS 1192 Status Code
6743	15/04/2015	-
Scale@A1	Purpose	
1:1250	Planning	

Drawing Number	Revision
BBTC-IBI-XX-A-F100-PL-00-001	-



Client:
Barnsley Metropolitan Borough Council

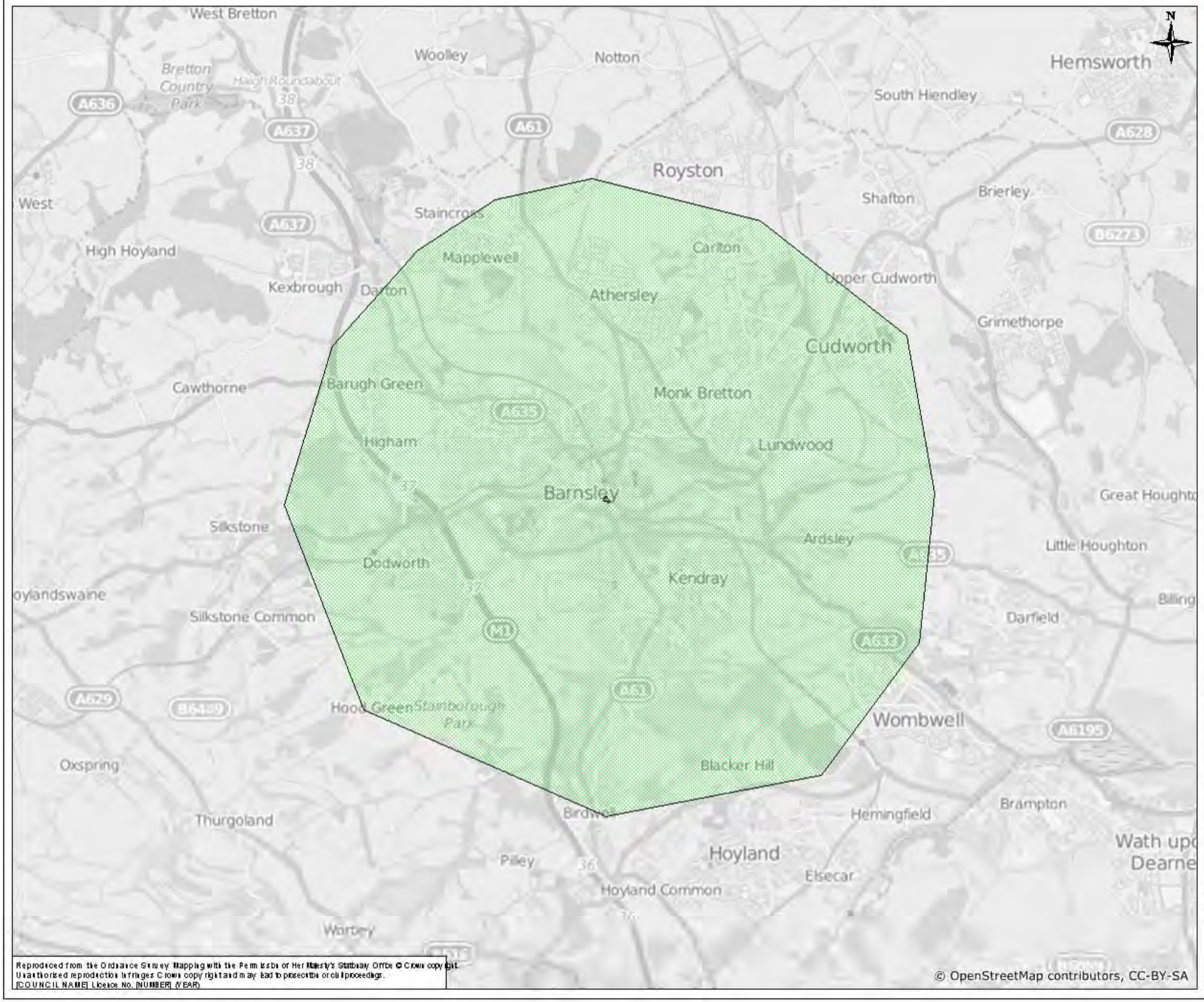
Project:
Barsley Town Cenre Masterplan

Title:
2km Walking Buffer

Design:	NS	Drawn:	NS
Checked:	SM	Scale:	NS
Approved:	SM	Date:	27/05/15

AECOM
5th Floor
2 City Walk
Leeds
LS11 9AR
Tel: 0113 391 6800
Fax: 0113 391 6808
www.aecom.com

Dwg: Figure 2



Client:
Barnsley Metropolitan Borough Council

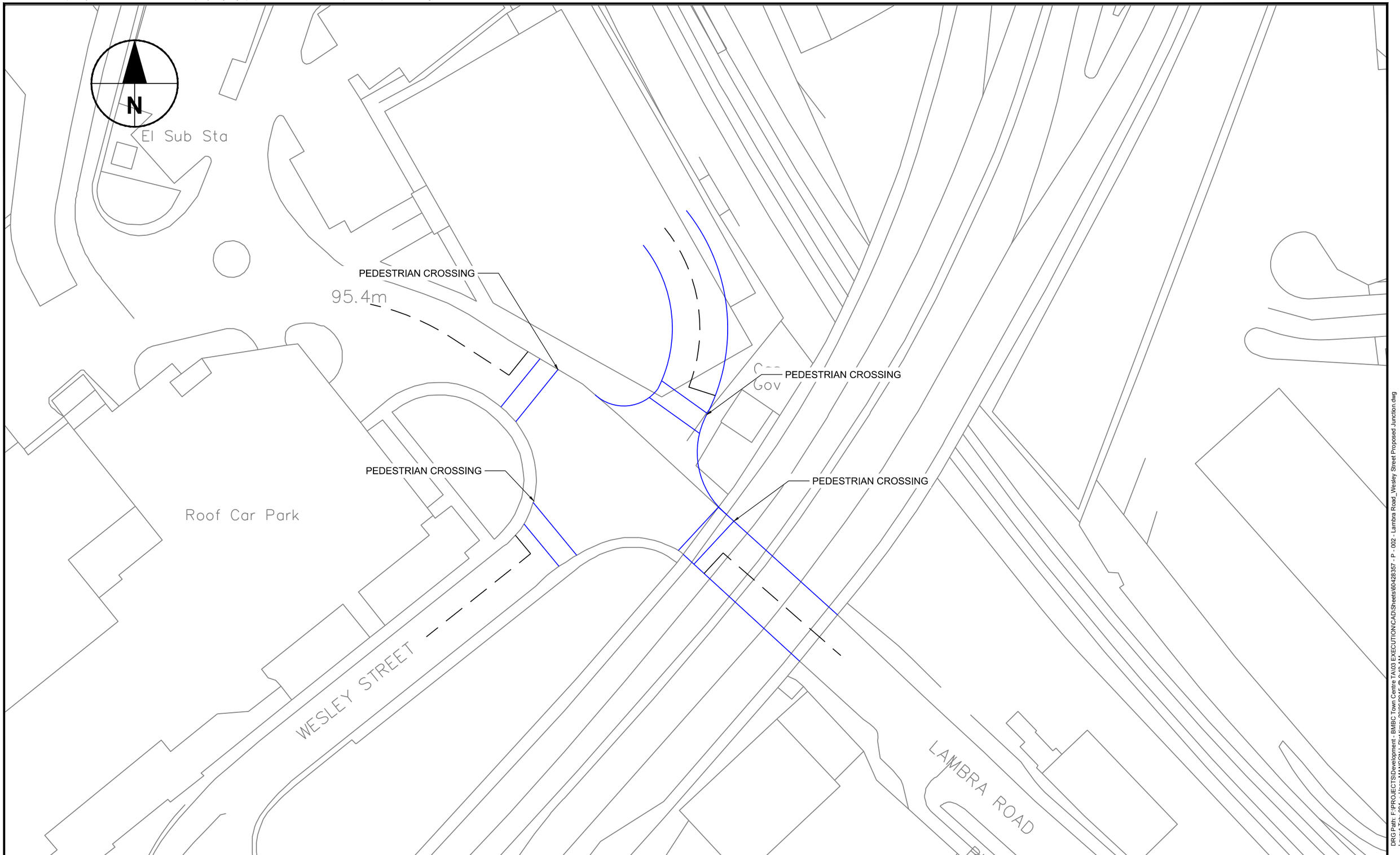
Project:
Barsley Town Cenre Masterplan

Title:
5km Cycling Buffer

Design:	NS	Drawn:	NS
Checked:	SM	Scale:	NS
Approved:	SM	Date:	27/05/15

AECOM
5th Floor
2 City Walk
Leeds
LS11 9AR
Tel: 0113 391 6800
Fax: 0113 391 6808
www.aecom.com

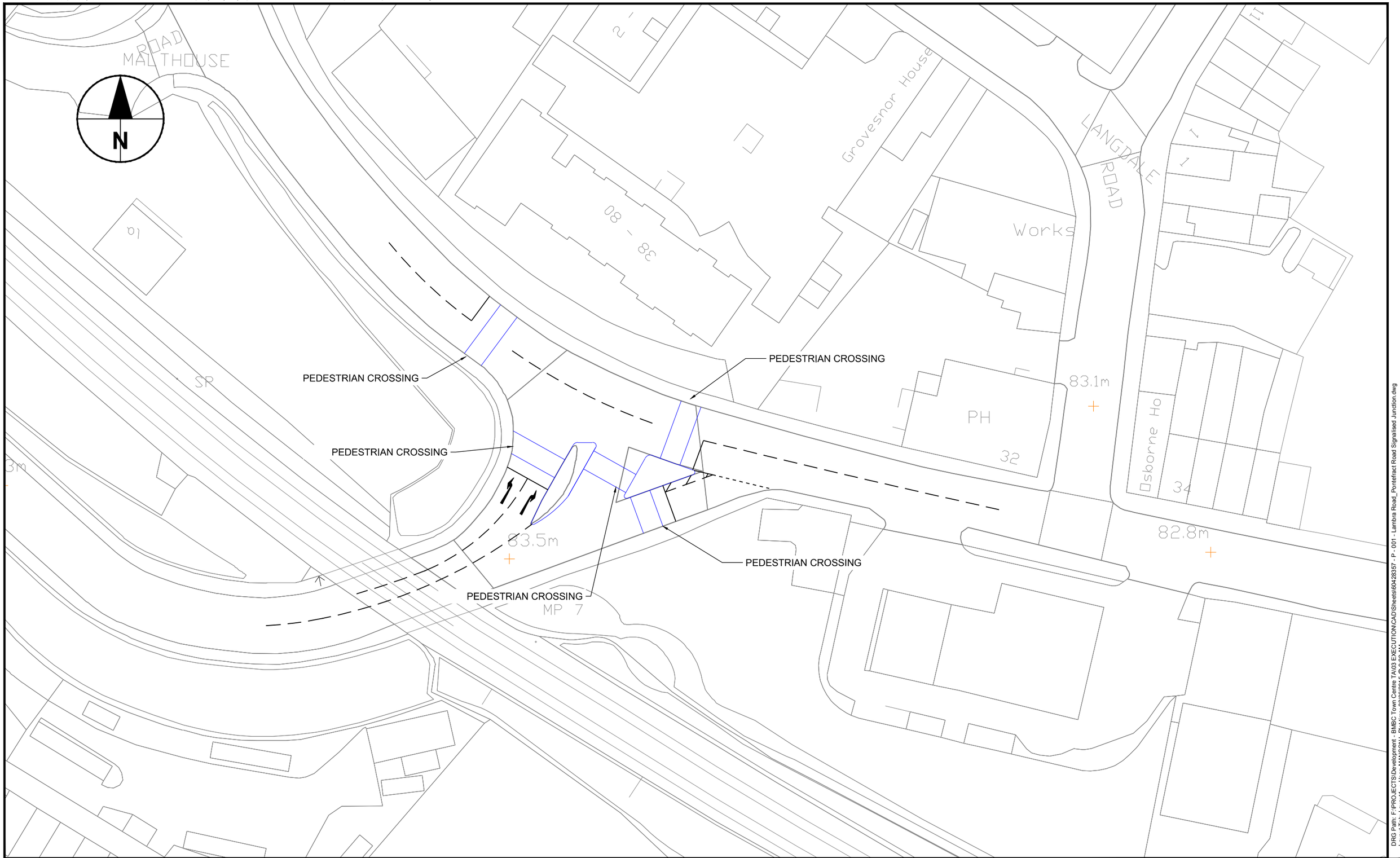
Dwg: Figure 3



Client: BARNSLEY METROPOLITAN BOROUGH COUNCIL	Title: LAMBRA ROAD / WESLEY STREET PROPOSED CROSS ROAD JUNCTION	AECOM	Design: JM / CAD: JM
Project: BARNSLEY TOWN CENTRE		5th Floor, 2 City Walk, LEEDS, LS11 9AR Tel: +44 (0) 113 391 6800 Fax: +44 (0) 113 391 6899 www.aecom.com	Chk'd: SM / App'd: SP Date: 22/06/2015 / Scale: 1:500 No. 60428357 - P - 002 / Rev: - A3

cm

DRG Path: F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\CAD\Sheets\60428357 - P - 002 - Lambra Road_Wesley Street Proposed Junction.dwg
Layout Tab: 001 ● User: MANSONJ Plot time: 22/06/2015 @ 9:48 AM



Client: BARNSLEY METROPOLITAN BOROUGH COUNCIL

Project: BARNSLEY TOWN CENTRE

Title: LAMBRA ROAD / PONTEFRACT ROAD SIGNALISED JUNCTION PROPOSED LAYOUT

AECOM
5th Floor, 2 City Walk
LEEDS, LS11 9AR
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Design:	JM	CAD:	JM
Chk'd:	SM	App'd:	SP
Date:	22/06/2015	Scale:	1:500

No. 60428357 - P - 001 Rev: --

A3

cm

DRG Path: F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\CAD\Sheets\60428357 - P - 001 - Lambra Road_Pontefract Road Signalised Junction.dwg
Layout Tab: Layout1 • User: MANSONJ Plot time: 22/06/2015 @ 9:22 AM

Appendix B: Accident Data

Accidents between dates **01/01/2010 and 31/12/2014** (60) months

Selection:
Selected using Build Query : Local_auth = 'Barnsley'

Notes:
AECOM - Steve Moss

Police Ref.	Acc Class	Date	Time	Grid References		Casualties Ftl	Ser	Slt	Causation Factors/ Prob	Ped L M D	Light	Weather	Road Surface	Vehicle Types
B-00033-10	Slight	11/01/2010	1625	434697	406512	0	0	1	405V1B	0 0 0	Dark	Snowing without high winds	Frost/Ice	11 11
B-00054-10	Slight	17/01/2010	1600	434012	406287	0	0	1	405V1B	1 1 5	Light	Fine without high winds	Dry	9
B-00093-10	Slight	21/01/2010	1230	435152	405991	0	0	1	103V1A 408V1A	0 0 0	Light	Fine without high winds	Wet/Damp	9 9
B-00127-10	Slight	01/02/2010	0810	434121	406239	0	0	1		1 3 6	Light	Fine without high winds	Dry	9
B-00169-10	Slight	06/02/2010	1745	434761	406074	0	0	5	501V2A 308V2B 408V1A 406V2B	0 0 0	Dark	Fine without high winds	Wet/Damp	9 9
B-00247-10	Slight	20/02/2010	2101	434862	405894	0	0	5	301V2B 307V2B 601V2B 602V2B	0 0 0	Dark	Fine without high winds	Wet/Damp	9 9
B-00264-10	Slight	26/02/2010	1555	434925	406693	0	0	1	806C1A 802C1A 808C1A	8 1 9	Light	Raining without high winds	Wet/Damp	9
B-00258-10	Slight	03/03/2010	0310	435511	405747	0	0	1	403V1A 509V1A	0 0 0	Dark	Fine without high winds	Dry	19
B-00290-10	Slight	09/03/2010	0915	434740	406065	0	0	1	405V2A 406V2A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00312-10	Slight	12/03/2010	1003	434958	406083	0	0	2	406V1B	0 0 0	Light	Fine without high winds	Wet/Damp	9 19 20
B-00348-10	Serious	22/03/2010	1627	434864	406481	0	1	1	308V1A 308V2A	0 0 0	Light	Raining without high winds	Wet/Damp	9 4
B-00356-10	Slight	22/03/2010	1720	434834	406239	0	0	2	405V2B	0 0 0	Light	Fine without high winds	Dry	9 9
B-00375-10	Serious	02/04/2010	1537	434136	406377	0	1	0	802C1A 804C1A	1 1 3	Light	Raining without high winds	Wet/Damp	5
B-00408-10	Slight	13/04/2010	1230	434711	406076	0	0	5	405V1A 406V1A	0 0 0	Light	Fine without high winds	Dry	9 9 9 9 9 9
B-00498-10	Slight	26/04/2010	1637	435441	405774	0	0	1	701V1A 602V2B	0 0 0	Light	Fine without high winds	Dry	1 9
B-00457-10	Slight	28/04/2010	1430	434099	406246	0	0	2	402V2A 405V2A 408V2A	0 0 0	Light	Fine without high winds	Dry	9 19
B-00464-10	Slight	30/04/2010	1745	434054	406250	0	0	1	405V2B	0 0 0	Light	Fine without high winds	Dry	9 9
B-00482-10	Slight	06/05/2010	0953	434752	406618	0	0	1	405V1A 103V2B 406V1B	0 0 0	Light	Fine without high winds	Wet/Damp	9 9
B-00595-10	Slight	29/05/2010	2330	435390	406044	0	0	1	103V1A 408V1A 410V1A 306V1B	0 0 0	Dark	Raining without high winds	Wet/Damp	9
B-00585-10	Serious	31/05/2010	1602	434043	406337	0	1	0	406V1B 301V1B 803C1B	1 1 7	Light	Fine without high winds	Dry	11
B-00580-10	Slight	31/05/2010	0945	434849	406253	0	0	2	405V2A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00612-10	Slight	09/06/2010	1230	434861	405925	0	0	1	501V2A	0 0 0	Light	Fine without high winds	Wet/Damp	9 9
B-00711-10	Slight	02/07/2010	1537	434809	405660	0	0	1	405V1A	0 0 0	Light	Fine without high winds	Dry	2 9
B-00779-10	Slight	22/07/2010	1320	434865	405908	0	0	1	509V2A 301V2A 103V2B	0 0 0	Light	Raining without high winds	Wet/Damp	9 9

Accidents between dates **01/01/2010** **and** **31/12/2014** (60) months

Selection:
Selected using Build Query : Local_auth = 'Barnsley'

Notes:
AECOM - Steve Moss

Police Ref.	Acc Class	Date	Time	Grid References	Casualties Ftl	Ser	Slt	Causation Factors/ Prob	Ped L M D	Light	Weather	Road Surface	Vehicle Types
B-00780-10	Slight	22/07/2010	1415	434826 406405	0	0	3	405V1A	0 0 0	Light	Raining without high winds	Wet/Damp	19 9
B-00916-10	Slight	28/08/2010	1720	435257 406063	0	0	1	703V1A 801C1B	1 9 1	Light	Fine without high winds	Dry	9
B-00944-10	Slight	11/09/2010	1245	434713 406123	0	0	1	405V2B	0 0 0	Light	Fine without high winds	Dry	9 11
B-00993-10	Slight	24/09/2010	0905	434850 406254	0	0	1	405V2A	0 0 0	Light	Fine with high winds	Dry	9 9
B-01054-10	Slight	03/10/2010	1528	435176 405707	0	0	1	802C1A 808C1A	1 9	Light	Fine without high winds	Dry	9
B-01088-10	Slight	15/10/2010	1400	434093 406242	0	0	1	406V2B	0 0 0	Light	Fine without high winds	Dry	2 9
B-01110-10	Slight	16/10/2010	2320	434126 406369	0	0	1		5 1 5	Dark	Fine without high winds	Dry	9
B-01122-10	Serious	23/10/2010	2233	435257 405838	0	1	1	802C1A	5 2 6	Dark	Fine without high winds	Dry	9
B-01130-10	Serious	25/10/2010	1330	434535 406030	0	1	0	802C1A 804C1A 808C1A	5 3 7	Light	Fine without high winds	Dry	9
B-01165-10	Slight	04/11/2010	2256	434539 406040	0	0	4	301V1B 301V2B	0 0 0	Dark	Raining with high winds	Wet/Damp	9 9
B-01192-10	Slight	08/11/2010	1533	434874 406346	0	0	1	405V1A 302V1B	0 0 0	Light	Raining without high winds	Wet/Damp	9 9
B-01275-10	Slight	28/11/2010	1100	434769 406197	0	0	1	103V1A 406V1B 410V1B	0 0 0	Light	Fine without high winds	Frost/Ice	9 9
B-01389-10	Slight	24/12/2010	1133	434759 406126	0	0	1	706V2A	0 0 0	Light	Fine without high winds	Wet/Damp	9 9
B-00008-11	Slight	05/01/2011	1450	435018 405526	0	0	1	405V2A 406V2A	0 0 0	Light	Fine without high winds	Wet/Damp	2 9
B-00018-11	Slight	07/01/2011	1200	434101 406245	0	0	1	307V2B	0 0 0	Light	Snowing without high winds	Snow	9 9
B-00135-11	Slight	08/02/2011	0705	434066 406311	0	0	1	405V1A	0 0 0	Dark	Fine without high winds	Frost/Ice	1 9
B-00191-11	Slight	25/02/2011	1956	435040 405473	0	0	2	302V2A 405V2A 406V2B	0 0 0	Dark	Fine without high winds	Dry	9 8
B-00196-11	Slight	27/02/2011	0410	434630 406068	0	0	1	405V1A 806C1A	5 1	Dark	Fine without high winds	Dry	9
B-00227-11	Serious	08/03/2011	1018	434536 406053	0	1	0	803C1A	1 3 1	Light	Fine without high winds	Dry	9
B-00300-11	Slight	21/03/2011	1110	434926 405685	0	0	2	406V2B	0 0 0	Light	Fine without high winds	Dry	9 14
B-00292-11	Serious	23/03/2011	1113	434963 405690	0	1	0	405V1B 406V1B	1 1 3	Light	Fine without high winds	Dry	9
B-00317-11	Slight	03/04/2011	1230	434097 406244	0	0	1	402V2A 408V1B	0 0 0	Light	Fine without high winds	Dry	9 9
B-00349-11	Slight	12/04/2011	1015	435026 405958	0	0	1	602V1A 601V1A 305V1A	9 5	Light	Fine without high winds	Dry	9
B-00369-11	Slight	12/04/2011	0950	435023 405959	0	0	2	406V1A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00403-11	Slight	03/05/2011	1715	434873 405897	0	0	2		0 0 0	Light	Fine without high winds	Dry	9 9
B-00461-11	Slight	16/05/2011	1225	434873 406377	0	0	1	406V1A 405V1B	0 0 0	Light	Fine without high winds	Dry	9 9
B-00501-11	Serious	28/05/2011	1010	434534 406054	0	1	0	802C1A 808C1A 306V1B 307V1B	1 1 2	Light	Fine without high winds	Dry	9

Accidents between dates **01/01/2010** **and** **31/12/2014** (60) months

Selection:
Selected using Build Query : Local_auth = 'Barnsley'

Notes:
AECOM - Steve Moss

Police Ref.	Acc Class	Date	Time	Grid References	Casualties Ftl	Ser	Slt	Causation Factors/ Prob	Ped L M D	Light	Weather	Road Surface	Vehicle Types
B-00539-11	Slight	16/06/2011	1240	434584 406116	0	0	1	405V1B	5 1 9	Light	Fine without high winds	Wet/Damp	8
B-00599-11	Slight	30/06/2011	1830	434830 406379	0	0	1	302V2A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00661-11	Serious	14/07/2011	1710	435029 405954	0	1	0	802C1B	5 1 2	Light	Fine without high winds	Dry	9
B-00742-11	Slight	05/08/2011	1450	434755 406513	0	0	5	408V1A	0 0 0	Light	Fine without high winds	Dry	11
B-00754-11	Slight	09/08/2011	1456	434876 406360	0	0	1	302V1A	0 0 0	Light	Fine without high winds	Dry	11 19
B-00778-11	Slight	16/08/2011	1615	434429 405623	0	0	1	405V2A	0 0 0	Light	Fine without high winds	Dry	1 9
B-00808-11	Slight	24/08/2011	0630	434667 405617	0	0	1	405V2A	0 0 0	Light	Fine without high winds	Dry	1 9
B-01011-11	Slight	31/08/2011	1500	434841 406249	0	0	1	406V2A 403V2A	0 0 0	Light	Fine without high winds	Wet/Damp	9 3
B-00882-11	Slight	17/09/2011	1700	435146 405992	0	0	1		5 9 1	Light	Fine without high winds	Dry	9
B-00918-11	Slight	24/09/2011	1010	434313 406151	0	0	1	403V1A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00968-11	Slight	08/10/2011	1755	435210 405710	0	0	1	103V1A 406V1A	0 0 0	Light	Fine without high winds	Wet/Damp	9 8
B-00972-11	Slight	10/10/2011	1500	435301 405821	0	0	1	405V1A	0 0 0	Light	Fine without high winds	Wet/Damp	3 9
B-01006-11	Slight	19/10/2011	0950	434920 406197	0	0	3	402V2A 405V2A 406V2B 706V2B	0 0 0	Light	Fine without high winds	Dry	9 9
B-01099-11	Slight	27/10/2011	1435	435516 405750	0	0	1	410V1A 306V1B	0 0 0	Light	Fine without high winds	Wet/Damp	9
B-01038-11	Slight	31/10/2011	1200	434457 406083	0	0	1	601V3A 901V3A	0 0 0	Light	Fine without high winds	Dry	9 9 9
B-01087-11	Slight	12/11/2011	1045	434829 406355	0	0	1	103V1B	0 0 0	Light	Fine without high winds	Wet/Damp	11 4
B-01105-11	Slight	14/11/2011	1940	433989 406286	0	0	1	405V1A 406V1A 308V1A	0 0 0	Dark	Other	Wet/Damp	9 1
B-01189-11	Slight	08/12/2011	1603	434905 405680	0	0	1	801C1A 802C1A 707C1A	5 2 3	Dark	Raining with high winds	Wet/Damp	9
B-01195-11	Slight	09/12/2011	1106	435006 406100	0	0	1	706V1A 103V1B	0 0 0	Light	Other	Wet/Damp	9 9
B-01199-11	Slight	12/12/2011	1625	435057 405436	0	0	1	103V1A 507V2A	0 0 0	Dark	Raining with high winds	Wet/Damp	3 9
B-01218-11	Slight	17/12/2011	1714	434876 406346	0	0	3	302V1A 405V1A	0 0 0	Dark	Raining without high winds	Wet/Damp	9 9
B-01275-11	Serious	22/12/2011	1145	434099 406333	0	1	0	999C1B	9 5	Light	Fine without high winds	Dry	9
B-01272-11	Slight	29/12/2011	1718	434981 406097	0	0	1	802C1A 807C1B	5 3 9	Dark	Raining without high winds	Wet/Damp	9
B-00049-12	Slight	16/01/2012	1550	434072 406309	0	0	1	402V1B 405V1B 405V2B	0 0 0	Light	Fine without high winds	Dry	9 2
B-00060-12	Slight	20/01/2012	0950	434516 405543	0	0	1	803C1B 405V1B	5 9 2	Light	Raining without high winds	Wet/Damp	9
B-00063-12	Serious	24/01/2012	0845	434922 405689	0	1	0	802C1A	4 4 2	Light	Raining without high winds	Wet/Damp	9
B-00112-12	Slight	05/02/2012	1355	434851 405889	0	0	1	501V1A 802C1B	4 1 1	Light	Fine without high winds	Wet/Damp	9

Accidents between dates **01/01/2010** **and** **31/12/2014** (60) months

Selection:
Selected using Build Query : Local_auth = 'Barnsley'

Notes:
AECOM - Steve Moss

Police Ref.	Acc Class	Date	Time	Grid References	Casualties Ftl	Ser	Slt	Causation Factors/ Prob	Ped L M D	Light	Weather	Road Surface	Vehicle Types
B-00154-12	Slight	11/02/2012	1320	434714 406736	0	0	2	405V1B 405V2B 403V2B	0 0 0	Light	Fine without high winds	Dry	9 9
B-00172-12	Serious	25/02/2012	1318	435070 405931	0	1	0	802C1A	4 3 2	Light	Fine without high winds	Dry	9
B-00764-12	Slight	27/02/2012	1400	434975 405978	0	0	1	405V1B	1 9 9	Light	Fine without high winds	Dry	9
B-00202-12	Slight	01/03/2012	1545	434057 406310	0	0	1	409V1A	0 0 0	Light	Fine without high winds	Dry	9 9 9
B-00241-12	Slight	19/03/2012	1550	434861 405932	0	0	1	806C1A 807C1A 808C1A 802C1B 803C1A	5 1 7	Light	Fine without high winds	Dry	9
B-00295-12	Slight	05/04/2012	1012	434749 406065	0	0	2	308V2A 402V2A 405V2A	0 0 0	Light	Fine without high winds	Dry	9 9 9
B-00306-12	Slight	12/04/2012	0730	434690 405626	0	0	1	405V2A 602V2A	0 0 0	Light	Fine without high winds	Dry	9 9 9
B-00360-12	Slight	18/04/2012	1420	434732 406719	0	0	1	406V2A	0 0 0	Light	Raining without high winds	Wet/Damp	8 9
B-00355-12	Slight	21/04/2012	2145	434878 406345	0	0	4	408V1A	0 0 0	Dark	Fine without high winds	Dry	11
B-00390-12	Slight	22/04/2012	0122	434680 406093	0	0	1	501V1A	0 0 0	Dark	Fine without high winds	Dry	9
B-00364-12	Slight	23/04/2012	1415	435120 405901	0	0	1	409V1A	0 0 0	Light	Fine without high winds	Dry	9 1
B-00376-12	Serious	24/04/2012	1243	435052 406089	0	1	1	403V2A 405V2B 404V1B	0 0 0	Light	Fine without high winds	Dry	5 9
B-00405-12	Slight	07/05/2012	0414	434401 406168	0	0	1	803C1A 406V1A	5 1 5	Dark	Fine without high winds	Dry	9
B-00432-12	Serious	15/05/2012	1840	434558 406037	0	1	0	802C1A 803C1A 806C1A	1 1 9	Light	Fine without high winds	Dry	9
B-00442-12	Slight	17/05/2012	1500	434875 406346	0	0	1	401V2A	0 0 0	Light	Fine without high winds	Dry	9 5
B-00488-12	Slight	28/05/2012	1435	434794 406034	0	0	1	408V1A	0 0 0	Light	Fine without high winds	Dry	11
B-00539-12	Slight	11/06/2012	1200	434739 406069	0	0	2	402V2A 410V2B	0 0 0	Light	Fine without high winds	Dry	9 9
B-00659-12	Slight	20/07/2012	1600	434666 405618	0	0	1	602V2A 405V2A 406V2A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00667-12	Slight	22/07/2012	1600	434535 406048	0	0	1	405V2A	0 0 0	Light	Fine without high winds	Dry	3 9
B-00687-12	Serious	30/07/2012	2000	434871 405906	0	1	0	301V2A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00704-12	Slight	05/08/2012	1750	434732 406125	0	0	1	509V1A 307V1A 405V1A	0 0 0	Light	Raining without high winds	Wet/Damp	9 9
B-00743-12	Slight	20/08/2012	1100	435289 406040	0	0	1	405V2A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00748-12	Slight	22/08/2012	1145	434725 406789	0	0	1		0 0 0	Light	Unknown	Dry	1 9
B-00780-12	Slight	28/08/2012	1905	434761 406084	0	0	1		0 0 0	Light	Fine without high winds	Dry	9 9

Accidents between dates **01/01/2010** **and** **31/12/2014** (60) months

Selection:
Selected using Build Query : Local_auth = 'Barnsley'

Notes:
AECOM - Steve Moss

Police Ref.	Acc Class	Date	Time	Grid References	Casualties Ftl	Ser	Slt	Causation Factors/ Prob	Ped L M D	Light	Weather	Road Surface	Vehicle Types
B-00838-12	Slight	12/09/2012	0001	434717 406736	0	0	1	405V2A 308V2A 406V2A	0 0 0	Light	Fine without high winds	Dry	14 2
B-00884-12	Serious	25/09/2012	2028	434609 405590	0	1	0	802C1A 806C1B 809C1A	5 9 9	Dark	Raining without high winds	Wet/Damp	9
B-00899-12	Serious	30/09/2012	0125	434634 406076	0	1	0	405V1A	5 1 3	Dark	Fine without high winds	Dry	9
B-00920-12	Slight	11/10/2012	0910	434754 406058	0	0	1		0 0 0	Light	Fine without high winds	Dry	1 9
B-00995-12	Slight	02/11/2012	1315	434299 406152	0	0	1		0 0 0	Light	Fine without high winds	Dry	9 9
B-01067-12	Slight	23/11/2012	0615	434540 406041	0	0	2	602V2A 301V2A	0 0 0	Dark	Fine without high winds	Dry	9 9
B-01120-12	Slight	04/12/2012	1840	434929 405758	0	0	1	802C1A 803C1B 806C1B 808C1A	5 1 9	Dark	Raining without high winds	Wet/Damp	9
B-01134-12	Slight	08/12/2012	1825	434584 406119	0	0	1	802C1A 809C1B	5 1 9	Dark	Fine without high winds	Dry	9
132587	Slight	14/01/2013	1047	434877 406341	0	0	1	401V2A	0 0 0	Light	Fine with high winds	Dry	11 9
132627	Slight	18/01/2013	1645	434030 406290	0	0	1	308V2B 307V2B 103V1A 103V2A	0 0 0	Dark	Snowing without high winds	Snow	9 9
132816	Slight	26/01/2013	1630	435510 405751	0	0	1	405V1B 802C1B	5 1 9	Dark	Fine without high winds	Dry	9
132934	Slight	05/02/2013	0735	434269 406171	0	0	1	103V2A 602V2B	0 0 0	Light	Fine without high winds	Dry	9 19
134252	Serious	23/02/2013	1125	435443 405774	0	1	0		0 0 0	Dark	Fine without high winds	Dry	11
B-00071-13	Slight	22/03/2013	0830	434663 406088	0	0	1	103V3A 405V3B	0 0 0	Light	Snowing without high winds	Snow	8 9 9
B-00154-13	Slight	21/04/2013	1440	434641 406534	0	0	1	805C1A 803C1A	4 3 9	Light	Fine without high winds	Dry	9
B-00152-13	Slight	23/04/2013	1800	435505 405751	0	0	1	803C1A 406V1B	7 5	Light	Fine without high winds	Dry	9
B-00174-13	Slight	30/04/2013	1705	435443 405775	0	0	1	405V1B	0 0 0	Light	Fine without high winds	Dry	9 1
B-00394-13	Slight	04/05/2013	1420	434740 406131	0	0	2	406V1A 405V1B	0 0 0	Light	Fine without high winds	Dry	11 9
B-00270-13	Slight	01/06/2013	0940	434711 406124	0	0	1	308V1B 408V1A	0 0 0	Light	Fine without high winds	Dry	11
B-00281-13	Slight	04/06/2013	1115	434756 406114	0	0	1	605V2B	0 0 0	Light	Fine without high winds	Dry	9 11
B-00318-13	Slight	05/06/2013	1415	434900 406320	0	0	6	405V1A 605V1A	0 0 0	Light	Fine without high winds	Dry	9 11
B-00319-13	Slight	15/06/2013	1509	434160 406387	0	0	1		0 0 0	Light	Fine without high winds	Dry	11
B-00329-13	Slight	16/06/2013	1734	435175 405711	0	0	1	308V1B 605V1B	0 0 0	Light	Fine without high winds	Dry	9 3
B-00408-13	Slight	28/06/2013	1427	434379 406123	0	0	1	109V1A 109V2A 808V1A 808V2A 805V1A 805V2A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00363-13	Serious	02/07/2013	1733	435496 405752	0	1	0	802C1A	5 1 3	Light	Raining without high winds	Wet/Damp	9
B-00379-13	Slight	07/07/2013	1600	435350 406028	0	0	7	204V1B	0 0 0	Light	Fine without high winds	Dry	9

Accidents between dates **01/01/2010** **and** **31/12/2014** (60) months

Selection:
Selected using Build Query : Local_auth = 'Barnsley'

Notes:
AECOM - Steve Moss

Police Ref.	Acc Class	Date	Time	Grid References		Casualties Ftl	Ser	Slt	Causation Factors/ Prob	Ped L M D	Light	Weather	Road Surface	Vehicle Types
B-00701-13	Slight	11/07/2013	2013	434860	406047	0	0	1	405V1A 405C1A	5 3 9	Light	Fine without high winds	Dry	9
B-00406-13	Slight	16/07/2013	1340	434109	406347	0	0	1	802C1A 808C1A	1 1 3	Light	Fine without high winds	Dry	11
B-00488-13	Slight	17/08/2013	2350	434300	406224	0	0	1	406V1B 805C1B	9 5 5	Dark	Fine without high winds	Dry	9
B-00507-13	Slight	27/08/2013	1815	435259	406043	0	0	1	406V1A 408V1A 601V1A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00542-13	Slight	13/09/2013	1205	434062	406313	0	0	4	405V1B 406V1B 602V1B	0 0 0	Light	Fine without high winds	Dry	11
B-00566-13	Slight	20/09/2013	1725	434131	406366	0	0	1	806C1A 406V1A	5 3 4	Light	Unknown	Dry	9
B-00584-13	Slight	29/09/2013	0845	434540	406040	0	0	6	301V1A 509V2A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00580-13	Slight	30/09/2013	1159	434776	406198	0	0	1	405V1A 602V1A 406V1A 306V2B	0 0 0	Light	Fine without high winds	Dry	9 9
B-00651-13	Slight	18/10/2013	0620	434744	406067	0	0	1	901V2A 902V2A 501V2A	0 0 0	Dark	Fine without high winds	Wet/Damp	9 9
B-00638-13	Slight	21/10/2013	2110	434732	406721	0	0	1	103V1A 102V1A	0 0 0	Dark	Fine without high winds	Wet/Damp	9 11
B-00677-13	Serious	30/10/2013	1400	435628	405735	0	1	0	505V1A	0 0 0	Light	Fine without high winds	Dry	9
B-00722-13	Slight	02/11/2013	1250	434868	406541	0	0	1	405V1A 510V1B	0 0 0	Light	Fine without high winds	Dry	9 9
B-00706-13	Slight	04/11/2013	1623	434982	405632	0	0	1	406V2A 404V1B	0 0 0	Light	Fine without high winds	Wet/Damp	9 9
B-00713-13	Slight	06/11/2013	1240	434776	406198	0	0	1	405V2A 403V2A 404V1B	0 0 0	Light	Fine without high winds	Wet/Damp	9 9
B-00748-13	Serious	13/11/2013	0714	434536	406056	0	1	1	802C1A 804C1A	1 3 1	Light	Fine without high winds	Wet/Damp	9
B-00791-13	Slight	20/11/2013	1310	435169	405873	0	0	1	408V1A 308V2B	0 0 0	Light	Fine without high winds	Dry	9 2
B-00788-13	Slight	24/11/2013	0100	434464	406369	0	0	1	703V1B 809C1B	8 3 5	Dark	Fine without high winds	Dry	9
B-00817-13	Slight	28/11/2013	1415	434763	406428	0	0	1	808C1A	9 5 3	Light	Fine without high winds	Dry	11
B-00824-13	Slight	30/11/2013	1340	434096	406243	0	0	1	405V1A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00884-13	Serious	23/12/2013	1830	434808	405995	0	1	0	806C1B 802C1A 809C1A	8 1 3	Dark	Fine without high winds	Wet/Damp	11
B-00174-14	Slight	03/01/2014	1355	434874	406366	0	0	1	405V1A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00148-14	Slight	14/01/2014	1550	434960	405863	0	0	1	607V1A 410V1A 405V1A 602V1A	0 0 0	Light	Fine without high winds	Dry	2 9
B-00058-14	Slight	21/01/2014	1715	434113	406244	0	0	1	408V1A 605V1A	0 0 0	Dark	Fine without high winds	Wet/Damp	9 9

Accidents between dates **01/01/2010** **and** **31/12/2014** (60) months

Selection:
Selected using Build Query : Local_auth = 'Barnsley'

Notes:
AECOM - Steve Moss

Police Ref.	Acc Class	Date	Time	Grid References		Casualties Ftl	Ser	Slt	Causation Factors/ Prob	Ped L M D	Light	Weather	Road Surface	Vehicle Types
B-00205-14	Slight	04/02/2014	1605	434757	406620	0	0	2	405V1A 406V1A 405V2A 406V2A 605V2A	0 0 0	Light	Fine without high winds	Dry	2 9
B-00110-14	Slight	04/02/2014	1633	435443	405774	0	0	1	802C1A 803C1A 806C1A	5 3 9	Light	Fine without high winds	Dry	9
B-00121-14	Slight	04/02/2014	0815	434908	405786	0	0	1	808C1A 802C1A	5 8 1	Light	Fine without high winds	Dry	9
B-00188-14	Slight	06/02/2014	1950	434604	406524	0	0	1	407V1A	9 7 3	Dark	Raining without high winds	Wet/Damp	9
B-00162-14	Slight	17/02/2014	1320	434116	406257	0	0	1	406V2B 308V2B	0 0 0	Light	Fine without high winds	Dry	9 9
B-00238-14	Slight	12/03/2014	1223	434997	405974	0	0	1	405V1B	6 9 4	Light	Fine without high winds	Dry	11
B-00260-14	Slight	18/03/2014	2310	435572	405746	0	0	2	901V2A	0 0 0	Dark	Fine without high winds	Dry	9 9
B-00264-14	Slight	18/03/2014	1615	434446	406074	0	0	1	802C1A 808C1A 803C1A	4 2 1	Light	Fine without high winds	Dry	9
B-00311-14	Slight	02/04/2014	1800	434726	406128	0	0	1	405V1B 406V1B 403V2A 308V2B 307V1B 710V2B	0 0 0	Light	Fine without high winds	Dry	9 9
B-00308-14	Slight	04/04/2014	2145	434687	406097	0	0	1	802C1A 808C1A 806C1A 809C1A	4 3 1	Dark	Fine without high winds	Dry	9
B-00351-14	Slight	10/04/2014	1245	434097	406332	0	0	1	605V1B 405V1B	0 0 0	Light	Fine without high winds	Dry	2 9
B-00515-14	Slight	17/04/2014	1540	435486	405759	0	0	4	509V1A 602V1A 902V1A	0 0 0	Light	Unknown	Dry	9 9 9 9
B-00372-14	Slight	27/04/2014	0826	435198	406054	0	0	1	201V1B 410V1A 509V1A 902V1A 999V1A	0 0 0	Light	Fine without high winds	Dry	9
B-00574-14	Slight	17/06/2014	1100	434523	406054	0	0	1	405V1A 406V1A	0 0 0	Light	Fine without high winds	Dry	8 9
B-00572-14	Serious	20/06/2014	2004	435561	405739	0	1	0	308V2A 408V1A 406V1B 406V2B	0 0 0	Light	Fine without high winds	Dry	3 9
B-00643-14	Slight	14/07/2014	1145	434713	406071	0	0	1	308V3A 405V3A 406V3A	0 0 0	Light	Fine without high winds	Dry	9 9 9
B-00674-14	Slight	18/07/2014	1307	434006	406287	0	0	1	803C1A	1 3 1	Light	Fine without high winds	Dry	9
B-00682-14	Slight	24/07/2014	1218	434115	406242	0	0	1	308V2B 406V1B	0 0 0	Light	Fine without high winds	Dry	9 9
B-00750-14	Slight	11/08/2014	1410	434110	406332	0	0	1	405V2B	0 0 0	Light	Fine without high winds	Dry	9 9
B-00752-14	Slight	11/08/2014	1155	435050	406090	0	0	1	706V2A 406V2A 404V1B	0 0 0	Light	Fine without high winds	Dry	9 9

Accidents between dates **01/01/2010** **and** **31/12/2014** (60) months

Selection:
Selected using Build Query : Local_auth = 'Barnsley'

Notes:
AECOM - Steve Moss

Police Ref.	Acc Class	Date	Time	Grid References		Casualties Ftl	Ser	Slt	Causation Factors/ Prob	Ped L M D	Light	Weather	Road Surface	Vehicle Types
B-00754-14	Slight	11/08/2014	1310	434902	405683	0	0	1	405V1A 710V1A	0 0 0	Light	Fine without high winds	Dry	22 21
B-00840-14	Slight	13/09/2014	2300	434144	406376	0	0	1	806C1A 810C1A	8 3 3	Dark	Fine without high winds	Dry	9
B-00845-14	Slight	15/09/2014	2001	434965	405680	0	0	1	308V1A 306V1B 405V1B 602V1B 710V1A 408V1A	0 0 0	Dark	Fine without high winds	Dry	9 9
B-00991-14	Serious	21/10/2014	1920	434891	406612	0	1	0		5 1 3	Dark	Fine without high winds	Dry	9
B-01109-14	Slight	22/10/2014	1715	435001	405567	0	0	1	505V2A	0 0 0	Light	Fine without high winds	Dry	9 9
B-01016-14	Slight	27/10/2014	1300	434571	406105	0	0	1	405V2B	5 7 9	Light	Fine without high winds	Dry	9
B-01187-14	Slight	14/11/2014	1312	434983	405634	0	0	1	510V1A	0 0 0	Light	Fine without high winds	Dry	9 9
B-01108-14	Slight	19/11/2014	1700	435176	406062	0	0	1	406V1A	0 0 0	Dark	Fine without high winds	Wet/Damp	9 9
B-01180-14	Slight	28/11/2014	1245	434075	406311	0	0	1	406V2B 602V2A	0 0 0	Light	Fine without high winds	Dry	9 9
B-01315-14	Slight	11/12/2014	1924	434447	406188	0	0	2	301V1B 301V2B	0 0 0	Dark	Fine without high winds	Wet/Damp	9 9
B-01231-14	Serious	12/12/2014	1346	434846	405960	0	1	0	405V1A 602V1A 802C1B 803C1B	5 1 6	Light	Fine without high winds	Wet/Damp	9
B-01273-14	Slight	22/12/2014	0740	434541	406041	0	0	1	301V1B 301V2B 406V2B 602V1B 602V2B	0 0 0	Dark	Fine with high winds	Dry	9 19
Column Totals						0	25	228						

Total number of accidents listed: 183

Selected Range of Accidents between dates 01/01/2010 and 31/12/2014
Selected using Manual Selection

Colour coding by SEVERITY

- Fatal (0)
- Serious (25)
- Slight (158)

B-00817-13 B-00599-11 B-00441-11 B-00174-14 B-00788-13 B-00754-11 B-00780-10 B-01218-11 B-01192-10 B-00442-12 B-00355-12 B-01087-11 132587 B-00993-10 B-00318-13 B-01011-11 B-00580-10 B-01006-11 B-00356-10 B-00713-13 B-00580-13 B-01016-14 B-01275-10 B-01038-11 B-00539-11 B-00270-13 B-00312-10 B-00311-14 B-00944-10 B-00752-14 B-00372-14 B-01134-12 B-01272-11 B-00501-11 B-00704-12 B-00394-13 B-00376-12 B-01108-14 B-00916-10 B-00196-11 B-00390-12 B-01389-10 B-00227-11 B-00281-13 B-01165-10 B-00308-14 B-00780-12 B-00584-13 B-00643-14 B-00290-10 B-00432-12 B-00701-13 B-00764-12 B-00093-10 B-00071-13 B-00539-12 B-00899-12 B-01195-11 B-00238-14 B-00882-1 B-00408-10 B-00295-12 B-00651-13 B-01067-12 B-00169-10 B-00364-12 B-00667-12 B-01273-14 B-00920-12 B-00488-12 B-00661-11 B-01130-10 B-00884-13 B-00172-12 B-00612-10 B-01231-14 B-00247-10 B-00241-12 B-00148-14 B-00687-12 B-00779-10 B-00121-14 B-00112-12 B-01120-12 B-00403-11 B-00300-11 B-00292-11

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South Yorkshire LTP Partnership
Licence No: 100019587 2015

MAKING SOUTH YORKSHIRE ROADS SAFER

DRAWING TITLE	Selected map area
SCALE	1 : 2600
DATE	23/06/2015
DWG No.	
DRAWN BY	

Colour coding by SEVERITY

- Fatal (0)
- Serious (25)
- Slight (158)

Selected Range of Accidents between dates 01/01/2010 and 31/12/2014
Selected using Manual Selection

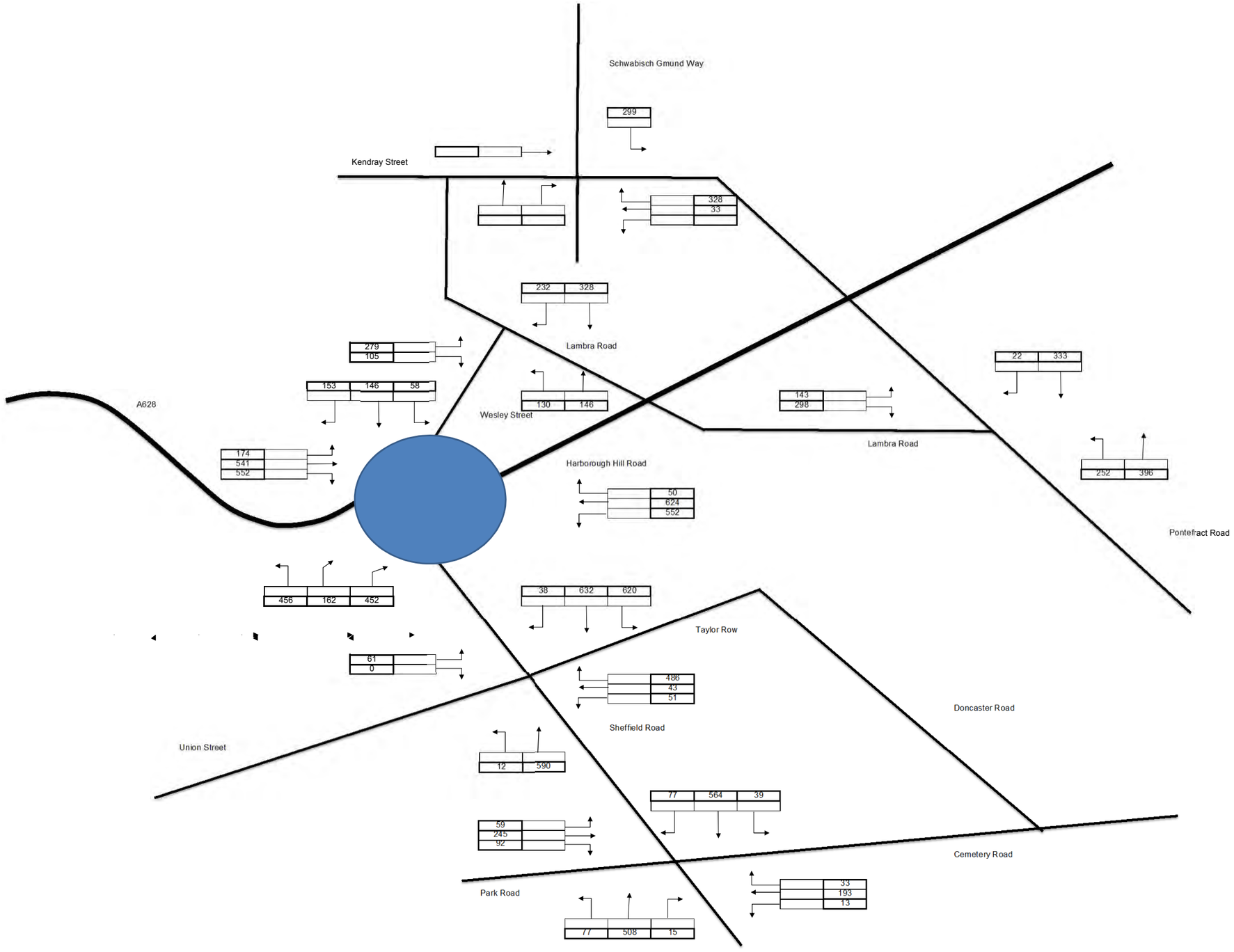
B-00748-12
B-00838-12
B-00154-12
B-00638-13
B-00360-12
B-00264-10
B-00991-14
B-00482-10
B-00205-14
B-00722-13
B-00742-11
B-00348-10
B-00817-13
B-00599-11
B-00461-11
B-00174-14
B-00754-11
B-01218-11
B-01192-10
B-00442-12
B-00355-12
132587
B-00318-13
B-01006-11
B-00780-10
B-01087-11
B-00993-10
B-01011-11
B-00580-10
B-01315-14
B-00788-13
B-00154-13
B-00033-10
B-00188-14

MAKING SOUTH YORKSHIRE ROADS SAFER

DRAWING TITLE
Selected map area

SCALE	1 : 2430
DATE	23/06/2015
DWG No.	
DRAWN BY	

Appendix C: Traffic Flow Diagrams

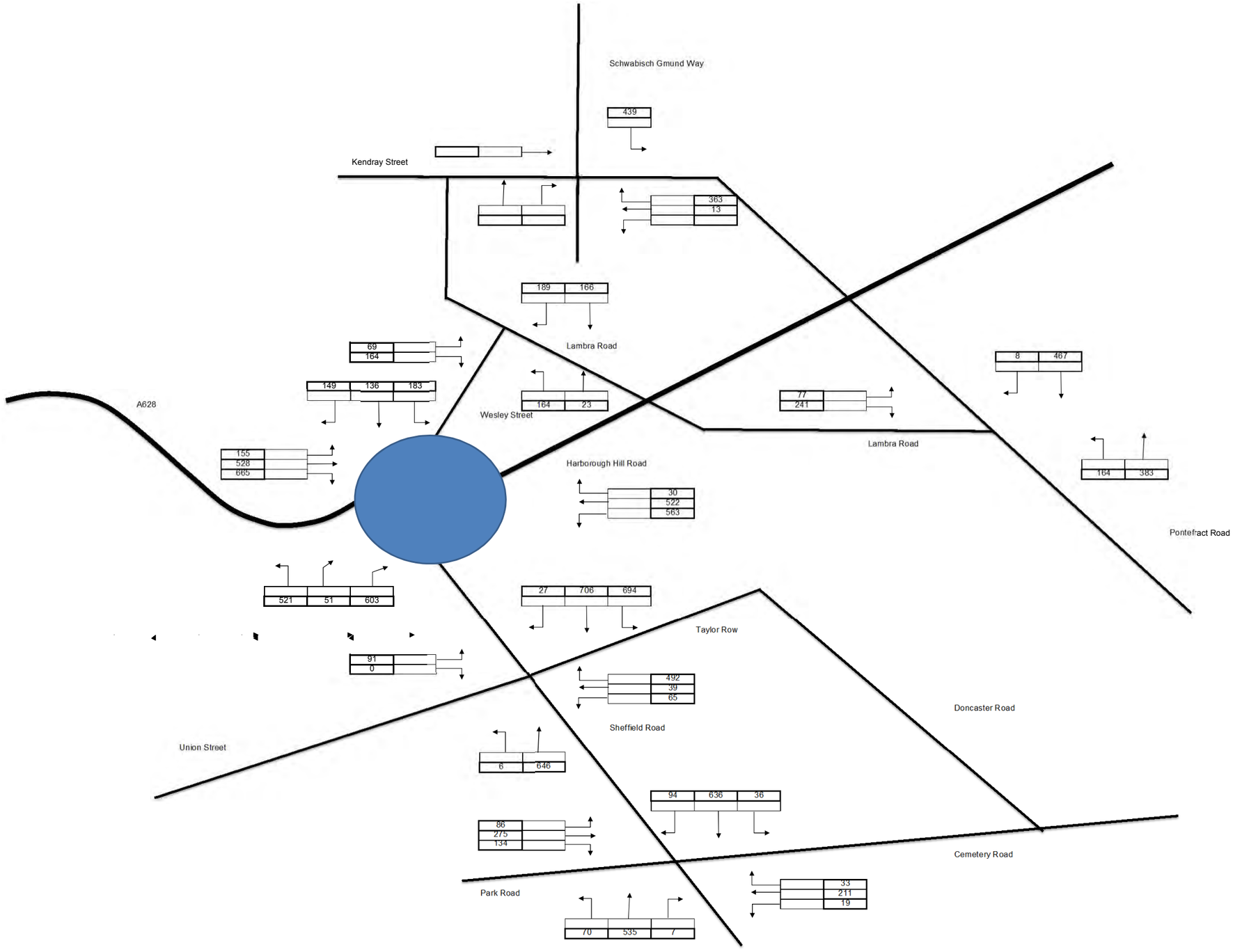


Key
AM Peak
PM Peak

Date	15/06/2015
Design	JM
Checked	SM
Approved	SP

Client:	Project:	Title:		Drawing Number:	Revision:
BMBC	BARNSLEY TOWN CENTRE	2015 BASE TRAFFIC FLOWS - SATURDAY PM	AECOM	FIGURE 11	-

File Path: F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Excel\BMBC Town Centre Traffic Flows.xlsx

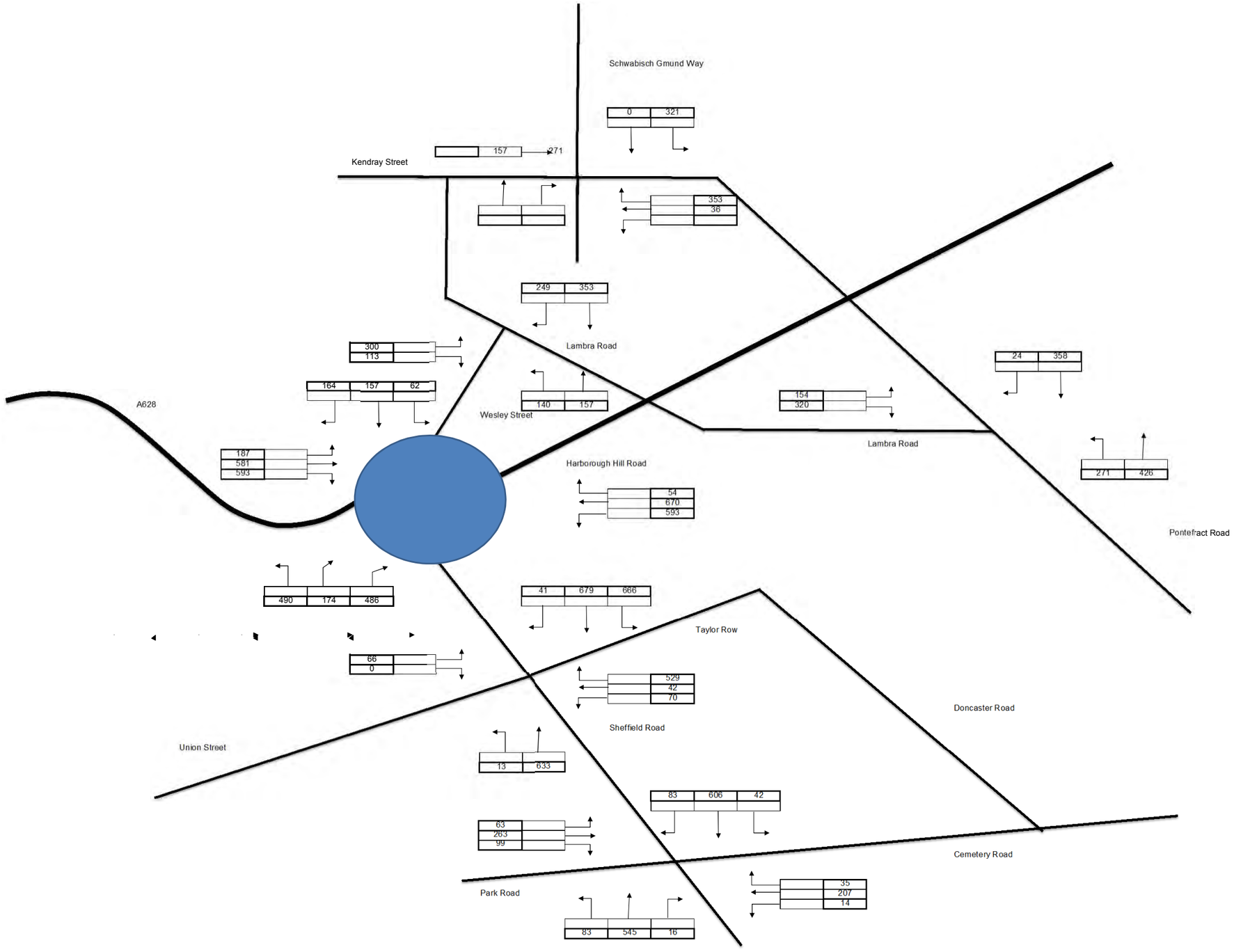


Key
AM Peak
PM Peak

Date	15/06/2015
Design	JM
Checked	SM
Approved	SP

Client:	Project:	Title:		Drawing Number:	Revision:
BMBC	BARNSLEY TOWN CENTRE	2015 BASE TRAFFIC FLOWS - FRIDAY PM	AECOM	FIGURE 11	-

File Path: F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Excel\BMBC Town Centre Traffic Flows.xlsx

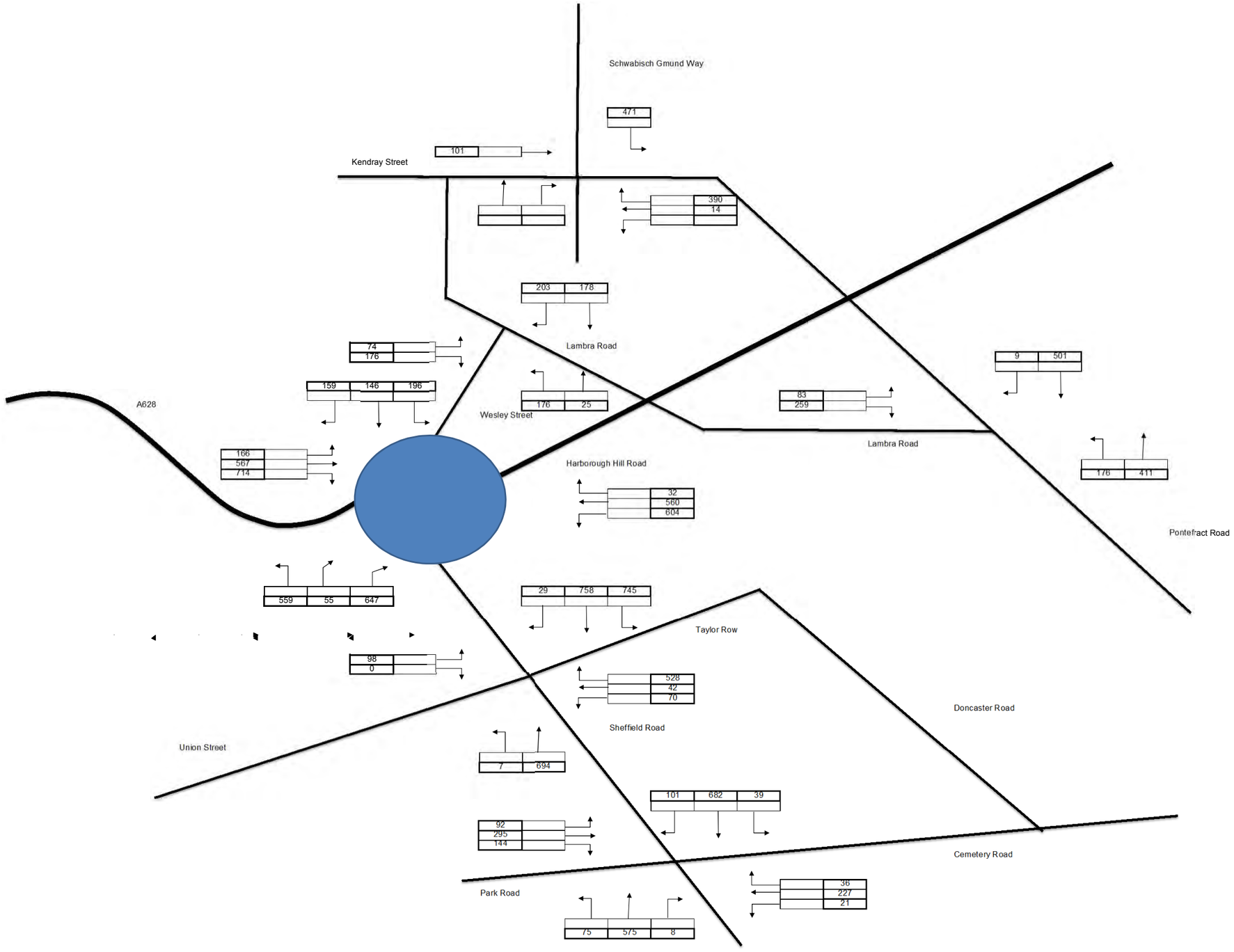


Key
AM Peak
PM Peak

Date	15/06/2015
Design	JM
Checked	SM
Approved	SP

Client:	Project:	Title:		Drawing Number:	Revision:
BMBC	BARNSLEY TOWN CENTRE	2020 BASE TRAFFIC FLOWS - SATURDAY	AECOM	FIGURE 12	-

File Path: F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Excel\BMBC Town Centre Traffic Flows.xlsx

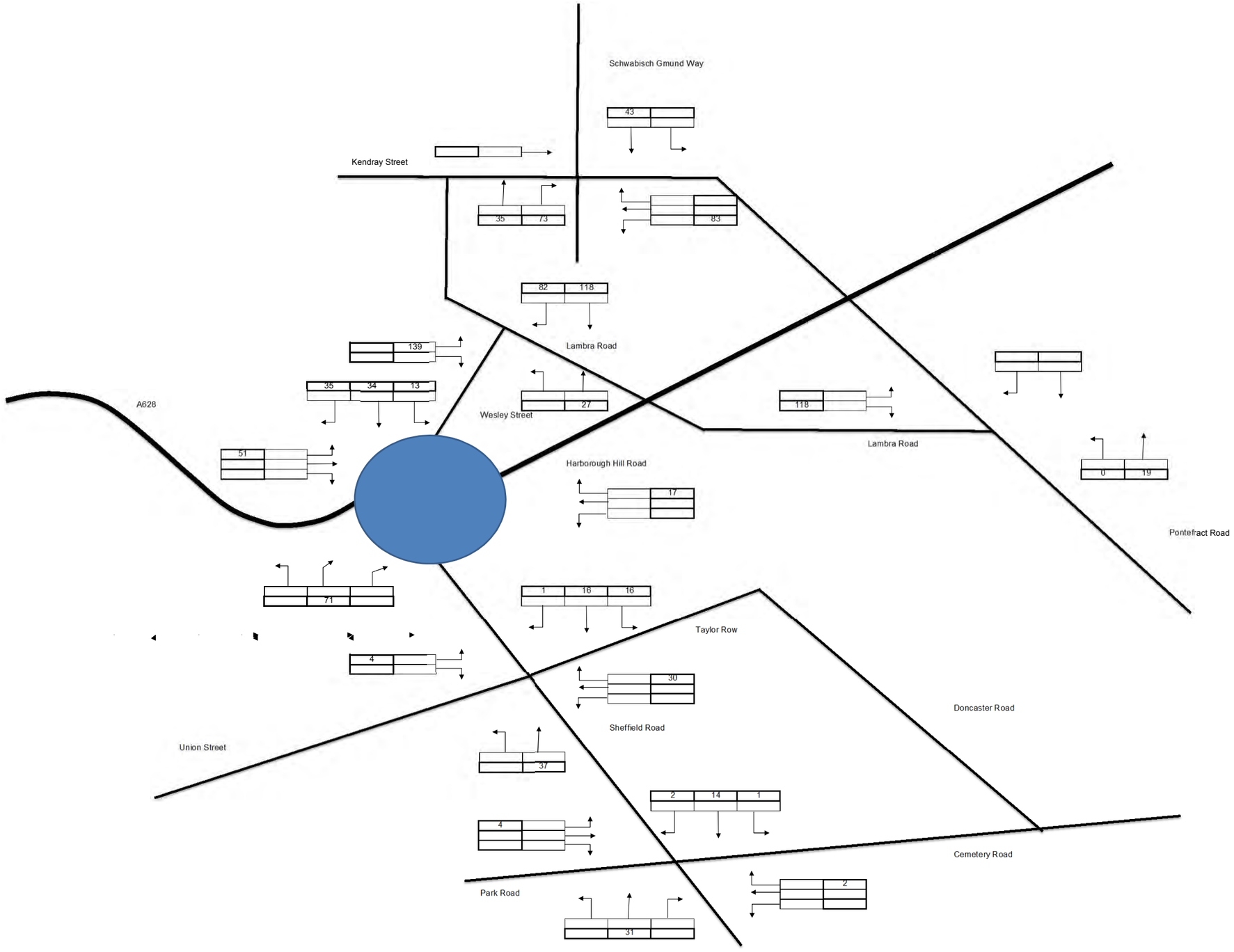


Key
AM Peak
PM Peak

Date	15/06/2015
Design	JM
Checked	SM
Approved	SP

Client:	Project:	Title:		Drawing Number:	Revision:
BMBC	BARNSLEY TOWN CENTRE	2020 BASE TRAFFIC FLOWS - FRIDAY PM	AECOM	FIGURE 12	-

File Path: F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Excel\BMBC Town Centre Traffic Flows.xlsx

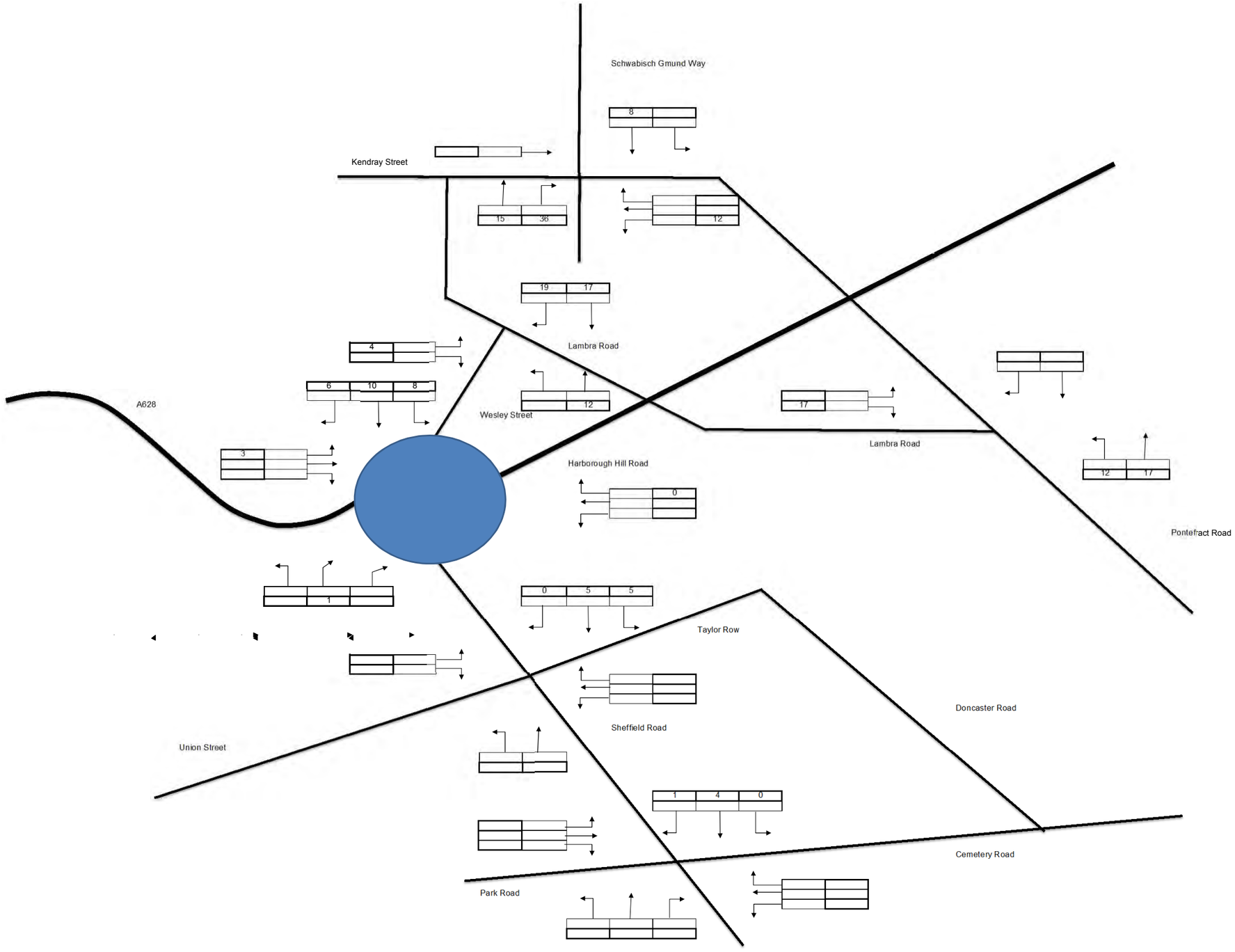


Key
AM Peak
PM Peak

Date	15/06/2015
Design	JM
Checked	SM
Approved	SP

Client:	Project:	Title:		Drawing Number:	Revision:
BMBC	BARNSLEY TOWN CENTRE	SATURDAY DEVELOPMENT TRAFFIC	AECOM	FIGURE 13	-

File Path: F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Excel\BMBC Town Centre Traffic Flows.xlsx

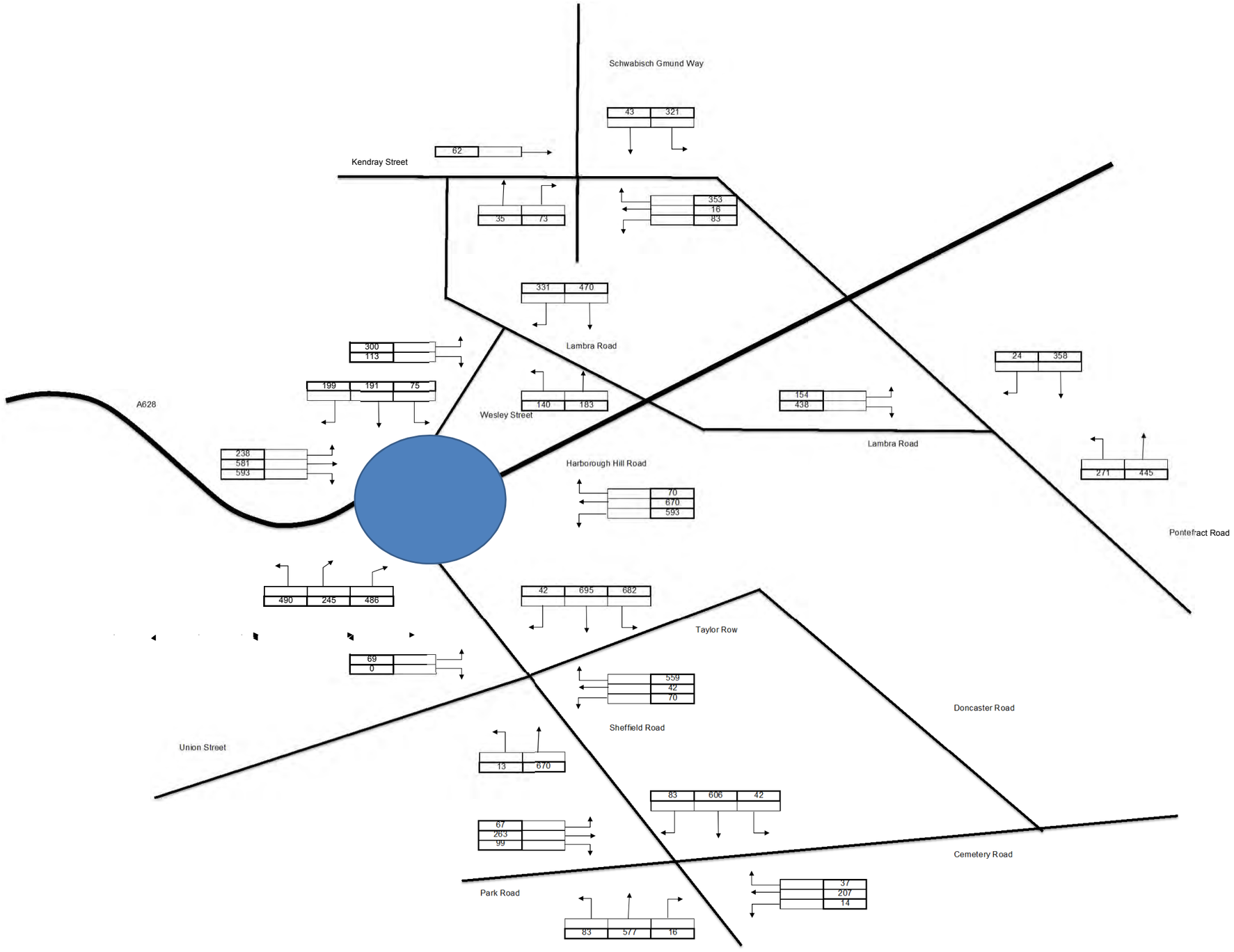


Key
AM Peak
PM Peak

Date	15/06/2015
Design	JM
Checked	SM
Approved	SP

Client:	Project:	Title:		Drawing Number:	Revision:
BMBC	BARNSLEY TOWN CENTRE	FRIDAY DEVELOPMENT TRAFFIC	AECOM	FIGURE 13	-

File Path: F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Excel\BMBC Town Centre Traffic Flows.xlsx

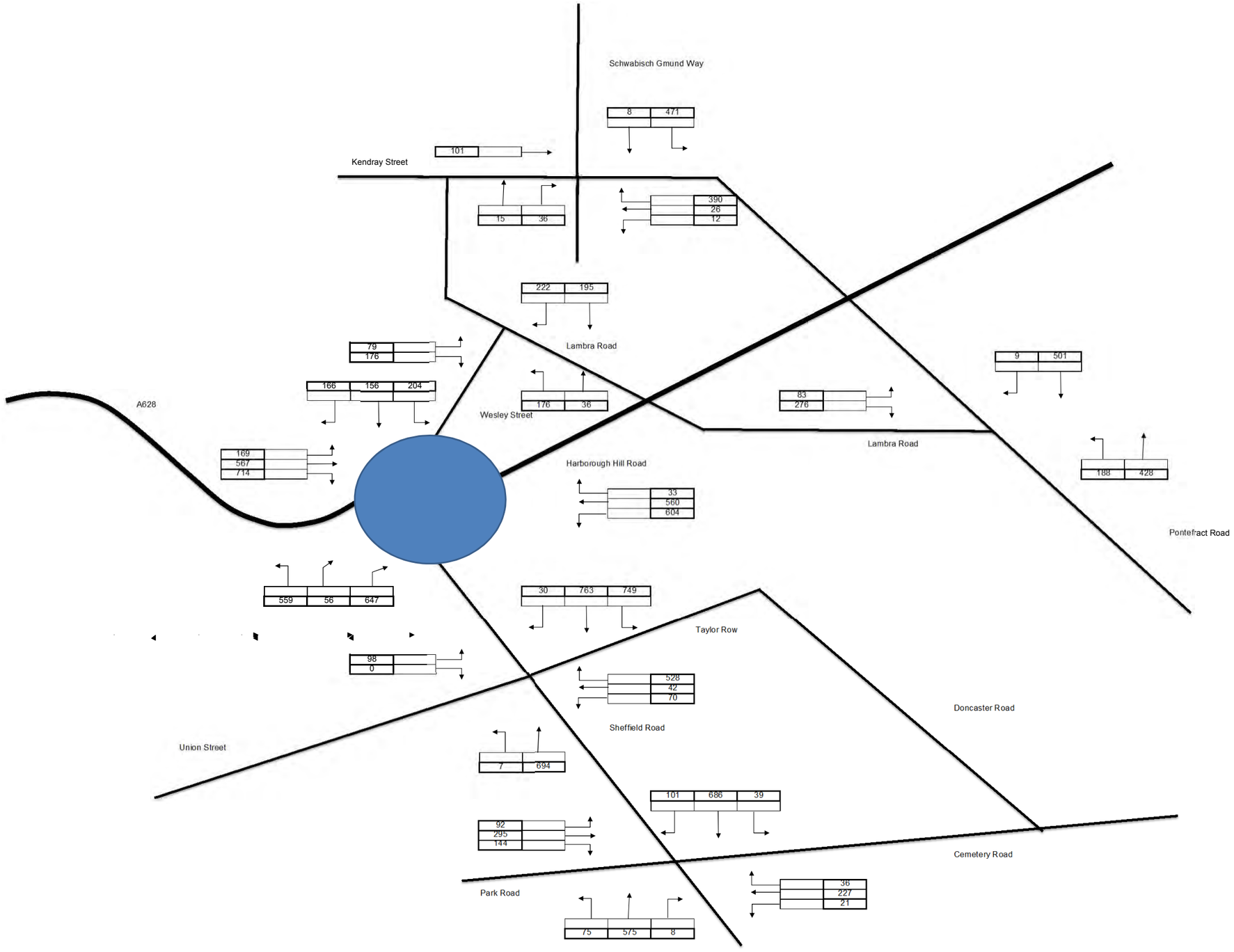


Key
AM Peak
PM Peak

Date	15/06/2015
Design	JM
Checked	SM
Approved	SP

Client:	Project:	Title:		Drawing Number:	Revision:
BMBC	BARNSLEY TOWN CENTRE	2020 BASE + DEV TRAFFIC FLOWS - SATURDAY	AECOM	FIGURE 14	-

File Path: F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Excel\BMBC Town Centre Traffic Flows.xlsx



Key
AM Peak
PM Peak

Date	15/06/2015
Design	JM
Checked	SM
Approved	SP

Client:	Project:	Title:		Drawing Number:	Revision:
BMBC	BARNSLEY TOWN CENTRE	2020 BASE + DEV TRAFFIC FLOWS - FRIDAY PM	AECOM	FIGURE 14	-

File Path: F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Excel\BMBC Town Centre Traffic Flows.xlsx

Appendix D: TRICS Outputs

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
Category : V - LIBRARY
VEHICLES

Selected regions and areas:

09	NORTH		
	TV	TEES VALLEY	1 days
10	WALES		
	CF	CARDIFF	1 days
11	SCOTLAND		
	FA	FALKIRK	1 days
15	GREATER DUBLIN		
	DL	DUBLIN	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:	Gross Floor Area
Actual Range:	402 to 1607 (units: sqm)
Range Selected by User:	402 to 4575 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/06 to 03/10/13

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
Thursday	3 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	3

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

Selected Location Sub Categories:

Residential Zone	3
Retail Zone	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

D1	4 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:

10,001 to 15,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	1 days

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

Population within 5 miles:

100,001 to 125,000	1 days
125,001 to 250,000	1 days
250,001 to 500,000	1 days
500,001 or More	1 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	3 days
1.1 to 1.5	1 days

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

Travel Plan:

No	4 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

1	CF-07-V-01	LIBRARY		CARDIFF
	CRICKHOWELL ROAD			
	ST MELLONS			
	CARDIFF			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross Floor Area:		402 sqm	
	Survey date: MONDAY		23/10/06	Survey Type: MANUAL
2	DL-07-V-01	LIBRARY		DUBLIN
	NAVAN ROAD			
	CABRA WEST			
	DUBLIN			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross Floor Area:		992 sqm	
	Survey date: THURSDAY		29/09/11	Survey Type: MANUAL
3	FA-07-V-01	LIBRARY		FALKIRK
	HOPE STREET			
	GRAHAMSTON			
	FALKIRK			
	Edge of Town Centre			
	Retail Zone			
	Total Gross Floor Area:		1607 sqm	
	Survey date: THURSDAY		30/05/13	Survey Type: MANUAL
4	TV-07-V-01	LIBRARY		TEES VALLEY
	ACKLAM ROAD			
	ACKLAM			
	MIDDLESBROUGH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross Floor Area:		500 sqm	
	Survey date: THURSDAY		03/10/13	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 07 - LEISURE/V - LIBRARY
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	402	0.000	1	402	0.000	1	402	0.000
08:00 - 09:00	1	402	1.493	1	402	0.498	1	402	1.991
09:00 - 10:00	4	875	1.057	4	875	0.600	4	875	1.657
10:00 - 11:00	4	875	1.371	4	875	0.800	4	875	2.171
11:00 - 12:00	4	875	1.428	4	875	1.628	4	875	3.056
12:00 - 13:00	4	875	0.914	4	875	1.057	4	875	1.971
13:00 - 14:00	4	875	1.114	4	875	0.971	4	875	2.085
14:00 - 15:00	4	875	1.028	4	875	1.171	4	875	2.199
15:00 - 16:00	4	875	1.285	4	875	0.943	4	875	2.228
16:00 - 17:00	4	875	1.371	4	875	1.571	4	875	2.942
17:00 - 18:00	4	875	0.828	4	875	1.314	4	875	2.142
18:00 - 19:00	4	875	0.600	4	875	0.885	4	875	1.485
19:00 - 20:00	2	1300	0.269	2	1300	0.269	2	1300	0.538
20:00 - 21:00	2	1300	0.000	2	1300	0.231	2	1300	0.231
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			12.758			11.938			24.696

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:	402 - 1607 (units: sqm)
Survey date date range:	01/01/06 - 03/10/13
Number of weekdays (Monday-Friday):	4
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 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 07 - LEISURE/V - LIBRARY
TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	402	0.000	1	402	0.000	1	402	0.000
08:00 - 09:00	1	402	0.000	1	402	0.000	1	402	0.000
09:00 - 10:00	4	875	0.057	4	875	0.057	4	875	0.114
10:00 - 11:00	4	875	0.086	4	875	0.086	4	875	0.172
11:00 - 12:00	4	875	0.000	4	875	0.000	4	875	0.000
12:00 - 13:00	4	875	0.029	4	875	0.029	4	875	0.058
13:00 - 14:00	4	875	0.000	4	875	0.000	4	875	0.000
14:00 - 15:00	4	875	0.029	4	875	0.029	4	875	0.058
15:00 - 16:00	4	875	0.000	4	875	0.000	4	875	0.000
16:00 - 17:00	4	875	0.000	4	875	0.000	4	875	0.000
17:00 - 18:00	4	875	0.000	4	875	0.000	4	875	0.000
18:00 - 19:00	4	875	0.000	4	875	0.000	4	875	0.000
19:00 - 20:00	2	1300	0.000	2	1300	0.000	2	1300	0.000
20:00 - 21:00	2	1300	0.000	2	1300	0.000	2	1300	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.201			0.201			0.402

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:	402 - 1607 (units: sqm)
Survey date date range:	01/01/06 - 03/10/13
Number of weekdays (Monday-Friday):	4
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 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 07 - LEISURE/V - LIBRARY
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	402	0.000	1	402	0.000	1	402	0.000
08:00 - 09:00	1	402	0.000	1	402	0.000	1	402	0.000
09:00 - 10:00	4	875	0.000	4	875	0.000	4	875	0.000
10:00 - 11:00	4	875	0.000	4	875	0.000	4	875	0.000
11:00 - 12:00	4	875	0.000	4	875	0.000	4	875	0.000
12:00 - 13:00	4	875	0.000	4	875	0.000	4	875	0.000
13:00 - 14:00	4	875	0.000	4	875	0.000	4	875	0.000
14:00 - 15:00	4	875	0.000	4	875	0.000	4	875	0.000
15:00 - 16:00	4	875	0.000	4	875	0.000	4	875	0.000
16:00 - 17:00	4	875	0.000	4	875	0.000	4	875	0.000
17:00 - 18:00	4	875	0.000	4	875	0.000	4	875	0.000
18:00 - 19:00	4	875	0.000	4	875	0.000	4	875	0.000
19:00 - 20:00	2	1300	0.000	2	1300	0.000	2	1300	0.000
20:00 - 21:00	2	1300	0.000	2	1300	0.000	2	1300	0.000
21:00 - 22:00									
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.

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:	402 - 1607 (units: sqm)
Survey date date range:	01/01/06 - 03/10/13
Number of weekdays (Monday-Friday):	4
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 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 07 - LEISURE/V - LIBRARY
PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	402	0.000	1	402	0.000	1	402	0.000
08:00 - 09:00	1	402	0.000	1	402	0.000	1	402	0.000
09:00 - 10:00	4	875	0.000	4	875	0.000	4	875	0.000
10:00 - 11:00	4	875	0.000	4	875	0.000	4	875	0.000
11:00 - 12:00	4	875	0.000	4	875	0.000	4	875	0.000
12:00 - 13:00	4	875	0.000	4	875	0.000	4	875	0.000
13:00 - 14:00	4	875	0.000	4	875	0.000	4	875	0.000
14:00 - 15:00	4	875	0.000	4	875	0.000	4	875	0.000
15:00 - 16:00	4	875	0.000	4	875	0.000	4	875	0.000
16:00 - 17:00	4	875	0.000	4	875	0.000	4	875	0.000
17:00 - 18:00	4	875	0.000	4	875	0.000	4	875	0.000
18:00 - 19:00	4	875	0.000	4	875	0.000	4	875	0.000
19:00 - 20:00	2	1300	0.000	2	1300	0.000	2	1300	0.000
20:00 - 21:00	2	1300	0.000	2	1300	0.000	2	1300	0.000
21:00 - 22:00									
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.

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:	402 - 1607 (units: sqm)
Survey date date range:	01/01/06 - 03/10/13
Number of weekdays (Monday-Friday):	4
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 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 07 - LEISURE/V - LIBRARY
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	402	0.000	1	402	0.000	1	402	0.000
08:00 - 09:00	1	402	0.000	1	402	0.000	1	402	0.000
09:00 - 10:00	4	875	0.029	4	875	0.000	4	875	0.029
10:00 - 11:00	4	875	0.057	4	875	0.000	4	875	0.057
11:00 - 12:00	4	875	0.057	4	875	0.029	4	875	0.086
12:00 - 13:00	4	875	0.057	4	875	0.057	4	875	0.114
13:00 - 14:00	4	875	0.057	4	875	0.114	4	875	0.171
14:00 - 15:00	4	875	0.057	4	875	0.086	4	875	0.143
15:00 - 16:00	4	875	0.143	4	875	0.057	4	875	0.200
16:00 - 17:00	4	875	0.114	4	875	0.143	4	875	0.257
17:00 - 18:00	4	875	0.057	4	875	0.143	4	875	0.200
18:00 - 19:00	4	875	0.086	4	875	0.000	4	875	0.086
19:00 - 20:00	2	1300	0.000	2	1300	0.115	2	1300	0.115
20:00 - 21:00	2	1300	0.000	2	1300	0.000	2	1300	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.714			0.744			1.458

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:	402 - 1607 (units: sqm)
Survey date date range:	01/01/06 - 03/10/13
Number of weekdays (Monday-Friday):	4
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 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 CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
Category : A - MULTIPLEX CINEMAS
VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	CN	CAMDEN	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	1 days
11	SCOTLAND		
	FA	FALKIRK	1 days
14	LEINSTER		
	WT	WESTMEATH	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: Gross floor area
Actual Range: 464 to 4500 (units: sqm)
Range Selected by User: 464 to 7828 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/05 to 03/12/09

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:
Friday 5 days

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

Selected survey types:
Manual count 5 days
Directional ATC Count 0 days

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

Selected Locations:
Town Centre 1
Edge of Town Centre 3
Edge of Town 1

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:
Retail Zone 2
Built-Up Zone 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.

Filtering Stage 3 selection:

Use Class:

D2	5 days

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

Population within 1 mile:

5,001 to 10,000	2 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days
50,001 to 100,000	1 days

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

Population within 5 miles:

5,001 to 25,000	1 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	1 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	1 days
1.1 to 1.5	2 days
1.6 to 2.0	1 days

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

Travel Plan:

No	5 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

1 CN-07-A-01 ODEON CAMDEN
TOTTENHAM COURT RD

BLOOMSBURY
Town Centre
Built-Up Zone
Total Gross floor area: 464 sqm
Survey date: FRIDAY 23/10/09 Survey Type: MANUAL

2 FA-07-A-01 CINEWORLD FALKIRK
STIRLING ROAD

FALKIRK
Edge of Town Centre
Built-Up Zone
Total Gross floor area: 4100 sqm
Survey date: FRIDAY 27/04/07 Survey Type: MANUAL

3 NY-07-A-02 VUE NORTH YORKSHIRE
STIRLING ROAD
CLIFTON MOOR
YORK
Edge of Town
Retail Zone
Total Gross floor area: 4500 sqm
Survey date: FRIDAY 18/09/09 Survey Type: MANUAL

4 SH-07-A-02 CINEWORLD SHROPSHIRE
OLD POTTS WAY

SHREWSBURY
Edge of Town Centre
Built-Up Zone
Total Gross floor area: 2400 sqm
Survey date: FRIDAY 19/06/09 Survey Type: MANUAL

5 WT-07-A-01 IMC WESTMEATH
JOHN BRODERICK STREET

ATHLONE
Edge of Town Centre
Retail Zone
Total Gross floor area: 2200 sqm
Survey date: FRIDAY 22/06/07 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 07 - LEISURE/A - MULTIPLEX CINEMAS
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	4	3300	0.068	4	3300	0.417	4	3300	0.485
01:00 - 02:00	3	3033	0.000	3	3033	0.527	3	3033	0.527
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00	1	2400	0.000	1	2400	0.000	1	2400	0.000
11:00 - 12:00	2	3250	0.015	2	3250	0.015	2	3250	0.030
12:00 - 13:00	5	2733	0.351	5	2733	0.095	5	2733	0.446
13:00 - 14:00	5	2733	0.717	5	2733	0.366	5	2733	1.083
14:00 - 15:00	5	2733	0.688	5	2733	0.278	5	2733	0.966
15:00 - 16:00	5	2733	0.783	5	2733	0.820	5	2733	1.603
16:00 - 17:00	5	2733	1.025	5	2733	0.827	5	2733	1.852
17:00 - 18:00	5	2733	1.295	5	2733	0.944	5	2733	2.239
18:00 - 19:00	5	2733	2.218	5	2733	1.156	5	2733	3.374
19:00 - 20:00	5	2733	2.862	5	2733	1.515	5	2733	4.377
20:00 - 21:00	5	2733	2.810	5	2733	2.430	5	2733	5.240
21:00 - 22:00	5	2733	2.722	5	2733	1.976	5	2733	4.698
22:00 - 23:00	5	2733	0.725	5	2733	2.898	5	2733	3.623
23:00 - 24:00	5	2733	0.198	5	2733	2.379	5	2733	2.577
Total Rates:			16.477			16.643			33.120

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:	464 - 4500 (units: sqm)
Survey date date range:	01/01/05 - 03/12/09
Number of weekdays (Monday-Friday):	5
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 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 07 - LEISURE/A - MULTIPLEX CINEMAS
TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	4	3300	0.061	4	3300	0.061	4	3300	0.122
01:00 - 02:00	3	3033	0.000	3	3033	0.000	3	3033	0.000
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00	1	2400	0.000	1	2400	0.000	1	2400	0.000
11:00 - 12:00	2	3250	0.000	2	3250	0.000	2	3250	0.000
12:00 - 13:00	5	2733	0.007	5	2733	0.000	5	2733	0.007
13:00 - 14:00	5	2733	0.007	5	2733	0.015	5	2733	0.022
14:00 - 15:00	5	2733	0.022	5	2733	0.015	5	2733	0.037
15:00 - 16:00	5	2733	0.015	5	2733	0.022	5	2733	0.037
16:00 - 17:00	5	2733	0.022	5	2733	0.022	5	2733	0.044
17:00 - 18:00	5	2733	0.029	5	2733	0.022	5	2733	0.051
18:00 - 19:00	5	2733	0.073	5	2733	0.081	5	2733	0.154
19:00 - 20:00	5	2733	0.051	5	2733	0.044	5	2733	0.095
20:00 - 21:00	5	2733	0.132	5	2733	0.132	5	2733	0.264
21:00 - 22:00	5	2733	0.154	5	2733	0.146	5	2733	0.300
22:00 - 23:00	5	2733	0.088	5	2733	0.102	5	2733	0.190
23:00 - 24:00	5	2733	0.022	5	2733	0.022	5	2733	0.044
Total Rates:			0.683			0.684			1.367

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:	464 - 4500 (units: sqm)
Survey date date range:	01/01/05 - 03/12/09
Number of weekdays (Monday-Friday):	5
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 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 07 - LEISURE/A - MULTIPLEX CINEMAS
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	4	3300	0.000	4	3300	0.000	4	3300	0.000
01:00 - 02:00	3	3033	0.000	3	3033	0.000	3	3033	0.000
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00	1	2400	0.000	1	2400	0.000	1	2400	0.000
11:00 - 12:00	2	3250	0.000	2	3250	0.000	2	3250	0.000
12:00 - 13:00	5	2733	0.007	5	2733	0.000	5	2733	0.007
13:00 - 14:00	5	2733	0.022	5	2733	0.015	5	2733	0.037
14:00 - 15:00	5	2733	0.000	5	2733	0.015	5	2733	0.015
15:00 - 16:00	5	2733	0.015	5	2733	0.007	5	2733	0.022
16:00 - 17:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
17:00 - 18:00	5	2733	0.007	5	2733	0.007	5	2733	0.014
18:00 - 19:00	5	2733	0.000	5	2733	0.007	5	2733	0.007
19:00 - 20:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
20:00 - 21:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
21:00 - 22:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
22:00 - 23:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
23:00 - 24:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
Total Rates:			0.051			0.051			0.102

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:	464 - 4500 (units: sqm)
Survey date date range:	01/01/05 - 03/12/09
Number of weekdays (Monday-Friday):	5
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 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 07 - LEISURE/A - MULTIPLEX CINEMAS
PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	4	3300	0.000	4	3300	0.000	4	3300	0.000
01:00 - 02:00	3	3033	0.000	3	3033	0.000	3	3033	0.000
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00	1	2400	0.000	1	2400	0.000	1	2400	0.000
11:00 - 12:00	2	3250	0.000	2	3250	0.000	2	3250	0.000
12:00 - 13:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
13:00 - 14:00	5	2733	0.044	5	2733	0.044	5	2733	0.088
14:00 - 15:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
15:00 - 16:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
16:00 - 17:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
17:00 - 18:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
18:00 - 19:00	5	2733	0.007	5	2733	0.000	5	2733	0.007
19:00 - 20:00	5	2733	0.007	5	2733	0.000	5	2733	0.007
20:00 - 21:00	5	2733	0.000	5	2733	0.007	5	2733	0.007
21:00 - 22:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
22:00 - 23:00	5	2733	0.000	5	2733	0.007	5	2733	0.007
23:00 - 24:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
Total Rates:			0.058			0.058			0.116

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

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

Parameter summary

Trip rate parameter range selected:	464 - 4500 (units: sqm)
Survey date date range:	01/01/05 - 03/12/09
Number of weekdays (Monday-Friday):	5
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 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 07 - LEISURE/A - MULTIPLEX CINEMAS
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	4	3300	0.000	4	3300	0.008	4	3300	0.008
01:00 - 02:00	3	3033	0.000	3	3033	0.000	3	3033	0.000
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00	1	2400	0.000	1	2400	0.000	1	2400	0.000
11:00 - 12:00	2	3250	0.000	2	3250	0.000	2	3250	0.000
12:00 - 13:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
13:00 - 14:00	5	2733	0.007	5	2733	0.007	5	2733	0.014
14:00 - 15:00	5	2733	0.015	5	2733	0.000	5	2733	0.015
15:00 - 16:00	5	2733	0.007	5	2733	0.007	5	2733	0.014
16:00 - 17:00	5	2733	0.022	5	2733	0.022	5	2733	0.044
17:00 - 18:00	5	2733	0.000	5	2733	0.000	5	2733	0.000
18:00 - 19:00	5	2733	0.037	5	2733	0.007	5	2733	0.044
19:00 - 20:00	5	2733	0.051	5	2733	0.022	5	2733	0.073
20:00 - 21:00	5	2733	0.015	5	2733	0.022	5	2733	0.037
21:00 - 22:00	5	2733	0.015	5	2733	0.015	5	2733	0.030
22:00 - 23:00	5	2733	0.007	5	2733	0.015	5	2733	0.022
23:00 - 24:00	5	2733	0.000	5	2733	0.015	5	2733	0.015
Total Rates:			0.176			0.140			0.316

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:	464 - 4500 (units: sqm)
Survey date date range:	01/01/05 - 03/12/09
Number of weekdays (Monday-Friday):	5
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 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 CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
Category : A - MULTIPLEX CINEMAS
VEHICLES

Selected regions and areas:

06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
08	NORTH WEST		
	MS	MERSEYSIDE	1 days
09	NORTH		
	TV	TEES VALLEY	1 days
12	CONNAUGHT		
	CS	SLIGO	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: Gross floor area
Actual Range: 2323 to 3205 (units: sqm)
Range Selected by User: 464 to 7828 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/05 to 03/12/09

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:

Saturday	4 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Town Centre	1
Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	1

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:

Development Zone	1
Retail Zone	1
Built-Up Zone	1
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

Not Known	1 days
D2	3 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:

10,001 to 15,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	1 days

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

Population within 5 miles:

5,001 to 25,000	1 days
75,001 to 100,000	2 days
500,001 or More	1 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	3 days
1.1 to 1.5	1 days

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

Travel Plan:

No	4 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

1	CS-07-A-01	GAIETY		SLIGO
	WINE STREET			
	SLIGO			
	Town Centre			
	No Sub Category			
	Total Gross floor area:		2500 sqm	
	Survey date: SATURDAY		16/06/07	Survey Type: MANUAL
2	MS-07-A-01	CINEWORLD		MERSEYSIDE
	MONTROSE WAY			
	SANDOWN PARK			
	LIVERPOOL			
	Suburban Area (PPS6 Out of Centre)			
	Retail Zone			
	Total Gross floor area:		3000 sqm	
	Survey date: SATURDAY		16/06/07	Survey Type: MANUAL
3	SH-07-A-01	CINEWORLD		SHROPSHIRE
	OLD POTTS WAY			
	SHREWSBURY			
	Edge of Town Centre			
	Built-Up Zone			
	Total Gross floor area:		2323 sqm	
	Survey date: SATURDAY		18/06/05	Survey Type: MANUAL
4	TV-07-A-01	VUE		TEES VALLEY
	MARINA WAY			
	HARTLEPOOL			
	Edge of Town Centre			
	Development Zone			
	Total Gross floor area:		3205 sqm	
	Survey date: SATURDAY		30/04/05	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 07 - LEISURE/A - MULTIPLEX CINEMAS
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	3	2608	0.038	3	2608	0.435	3	2608	0.473
01:00 - 02:00	2	2412	0.000	2	2412	0.228	2	2412	0.228
02:00 - 03:00	1	2323	0.000	1	2323	0.000	1	2323	0.000
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00	2	3103	1.015	2	3103	0.338	2	3103	1.353
11:00 - 12:00	3	2843	1.993	3	2843	1.888	3	2843	3.881
12:00 - 13:00	3	2843	2.580	3	2843	2.193	3	2843	4.773
13:00 - 14:00	4	2757	2.902	4	2757	2.185	4	2757	5.087
14:00 - 15:00	4	2757	2.457	4	2757	1.868	4	2757	4.325
15:00 - 16:00	4	2757	2.711	4	2757	2.648	4	2757	5.359
16:00 - 17:00	4	2757	2.748	4	2757	3.174	4	2757	5.922
17:00 - 18:00	4	2757	2.720	4	2757	2.920	4	2757	5.640
18:00 - 19:00	4	2757	2.448	4	2757	2.584	4	2757	5.032
19:00 - 20:00	4	2757	4.262	4	2757	3.672	4	2757	7.934
20:00 - 21:00	4	2757	4.135	4	2757	3.482	4	2757	7.617
21:00 - 22:00	4	2757	2.503	4	2757	1.759	4	2757	4.262
22:00 - 23:00	4	2757	0.725	4	2757	2.820	4	2757	3.545
23:00 - 24:00	4	2757	0.181	4	2757	2.203	4	2757	2.384
Total Rates:			33.418			34.397			67.815

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:	2323 - 3205 (units: sqm)
Survey date date range:	01/01/05 - 03/12/09
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	4
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 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 07 - LEISURE/A - MULTIPLEX CINEMAS
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	3	2608	0.000	3	2608	0.000	3	2608	0.000
01:00 - 02:00	2	2412	0.000	2	2412	0.000	2	2412	0.000
02:00 - 03:00	1	2323	0.000	1	2323	0.000	1	2323	0.000
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00	2	3103	0.000	2	3103	0.000	2	3103	0.000
11:00 - 12:00	3	2843	0.012	3	2843	0.000	3	2843	0.012
12:00 - 13:00	3	2843	0.000	3	2843	0.012	3	2843	0.012
13:00 - 14:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
14:00 - 15:00	4	2757	0.009	4	2757	0.000	4	2757	0.009
15:00 - 16:00	4	2757	0.000	4	2757	0.009	4	2757	0.009
16:00 - 17:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
17:00 - 18:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
18:00 - 19:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
19:00 - 20:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
20:00 - 21:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
21:00 - 22:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
22:00 - 23:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
23:00 - 24:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
Total Rates:			0.021			0.021			0.042

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:	2323 - 3205 (units: sqm)
Survey date date range:	01/01/05 - 03/12/09
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	4
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 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 07 - LEISURE/A - MULTIPLEX CINEMAS
PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	3	2608	0.000	3	2608	0.000	3	2608	0.000
01:00 - 02:00	2	2412	0.000	2	2412	0.000	2	2412	0.000
02:00 - 03:00	1	2323	0.000	1	2323	0.000	1	2323	0.000
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00	2	3103	0.016	2	3103	0.000	2	3103	0.016
11:00 - 12:00	3	2843	0.000	3	2843	0.000	3	2843	0.000
12:00 - 13:00	3	2843	0.000	3	2843	0.012	3	2843	0.012
13:00 - 14:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
14:00 - 15:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
15:00 - 16:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
16:00 - 17:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
17:00 - 18:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
18:00 - 19:00	4	2757	0.009	4	2757	0.009	4	2757	0.018
19:00 - 20:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
20:00 - 21:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
21:00 - 22:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
22:00 - 23:00	4	2757	0.009	4	2757	0.009	4	2757	0.018
23:00 - 24:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
Total Rates:			0.034			0.030			0.064

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:	2323 - 3205 (units: sqm)
Survey date date range:	01/01/05 - 03/12/09
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	4
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 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 07 - LEISURE/A - MULTIPLEX CINEMAS
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	3	2608	0.000	3	2608	0.000	3	2608	0.000
01:00 - 02:00	2	2412	0.000	2	2412	0.000	2	2412	0.000
02:00 - 03:00	1	2323	0.000	1	2323	0.000	1	2323	0.000
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00	2	3103	0.000	2	3103	0.000	2	3103	0.000
11:00 - 12:00	3	2843	0.023	3	2843	0.000	3	2843	0.023
12:00 - 13:00	3	2843	0.012	3	2843	0.047	3	2843	0.059
13:00 - 14:00	4	2757	0.009	4	2757	0.009	4	2757	0.018
14:00 - 15:00	4	2757	0.009	4	2757	0.000	4	2757	0.009
15:00 - 16:00	4	2757	0.000	4	2757	0.009	4	2757	0.009
16:00 - 17:00	4	2757	0.009	4	2757	0.000	4	2757	0.009
17:00 - 18:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
18:00 - 19:00	4	2757	0.000	4	2757	0.009	4	2757	0.009
19:00 - 20:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
20:00 - 21:00	4	2757	0.000	4	2757	0.009	4	2757	0.009
21:00 - 22:00	4	2757	0.009	4	2757	0.000	4	2757	0.009
22:00 - 23:00	4	2757	0.000	4	2757	0.000	4	2757	0.000
23:00 - 24:00	4	2757	0.000	4	2757	0.009	4	2757	0.009
Total Rates:			0.071			0.092			0.163

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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Parameter summary

Trip rate parameter range selected:	2323 - 3205 (units: sqm)
Survey date date range:	01/01/05 - 03/12/09
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	4
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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix E: JUNCTIONS / PICADY / LINSIG Outputs

Appendix E1: ALHAMBRA JUNCTIONS Outputs

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE SALES
TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: software@trl.co.uk

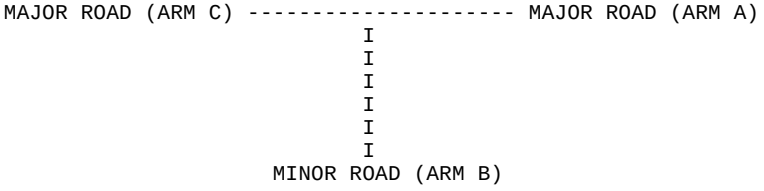
Run with file:-
"F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Modelling\PICADY\Lambra Ponte Priority.vpi"
(drive-on-the-left) at 08:13:16 on Wednesday, 17 June 2015

RUN INFORMATION

RUN TITLE	: Pontefract Road/Lamborough Road
LOCATION	: Barnsley
DATE	: 29/05/15
CLIENT	:
ENUMERATOR	: SmithsonN [UKLDS2PC32028]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Arm A
ARM B IS Arm B
ARM C IS Arm C

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) 8.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)150.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 30.0 M.
- VISIBILITY TO RIGHT	(VB-A) 200.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(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
899.99	0.31	0.12

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
702.90	0.29	0.11	0.18	0.41

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
660.83	0.23	0.23

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2020 Weekday PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	7.34	11.01	7.34
ARM B	15.00	45.00	75.00	3.67	5.51	3.67
ARM C	15.00	45.00	75.00	6.38	9.56	6.38

Demand set: 2020 Weekday PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.300	0.700
		0.0	176.0	411.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.759	0.000	0.241
		223.0	0.0	71.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.982	0.018	0.000
		501.0	9.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
16.45-17.00									
B-AC	3.69	8.42	0.438		0.00	0.76	10.7		0.21
C-A	6.29								
C-B	0.11	8.33	0.014		0.00	0.01	0.2		0.12
A-B	2.21								
A-C	5.16								

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)
17.00-17.15									
B-AC	4.40	7.86	0.560		0.76	1.22	17.2		0.28
C-A	7.51								
C-B	0.13	8.01	0.017		0.01	0.02	0.2		0.13
A-B	2.64								
A-C	6.16								

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)
17.15-17.30									
B-AC	5.39	7.08	0.762		1.22	2.80	36.4		0.53
C-A	9.19								
C-B	0.17	7.55	0.022		0.02	0.02	0.3		0.14
A-B	3.23								
A-C	7.54								

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)
17.30-17.45									
B-AC	5.39	7.08	0.762		2.80	2.97	43.6		0.58
C-A	9.19								
C-B	0.17	7.55	0.022		0.02	0.02	0.3		0.14
A-B	3.23								
A-C	7.54								

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)
17.45-18.00									
B-AC	4.40	7.86	0.560		2.97	1.33	22.0		0.31
C-A	7.51								
C-B	0.13	8.01	0.017		0.02	0.02	0.3		0.13
A-B	2.64								
A-C	6.16								

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)
18.00-18.15									
B-AC	3.69	8.42	0.438		1.33	0.80	12.7		0.21
C-A	6.29								
C-B	0.11	8.33	0.014		0.02	0.01	0.2		0.12
A-B	2.21								
A-C	5.16								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.2	*
17.30	2.8	***
17.45	3.0	***
18.00	1.3	*
18.15	0.8	*

QUEUE FOR STREAM C-B

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

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	404.7	269.8	142.4	0.35	142.5	0.35
C-A	689.6	459.7				
C-B	12.4	8.3	1.6	0.13	1.6	0.13
A-B	242.3	161.5				
A-C	565.7	377.1				
ALL	1914.6	1276.4	144.0	0.08	144.0	0.08

* 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 RUN*******

========== end of file ==========

Printed at 08:13:35 on 17/06/2015]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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EMAIL: software@trl.co.uk

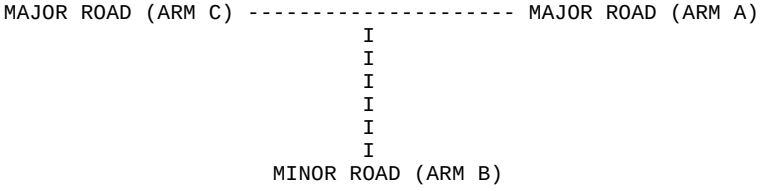
Run with file:-
"F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Modelling\PICADY\Lambra Ponte Priority.vpi"
(drive-on-the-left) at 10:40:42 on Friday, 19 June 2015

RUN INFORMATION

RUN TITLE	: Pontefract Road/Lamborough Road
LOCATION	: Barnsley
DATE	: 29/05/15
CLIENT	:
ENUMERATOR	: SmithsonN [UKLDS2PC32028]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Arm A
ARM B IS Arm B
ARM C IS Arm C

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) 8.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B) 80.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2020 Base + Dev Weekday PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	7.55	11.33	7.55
ARM B	15.00	45.00	75.00	3.89	5.83	3.89
ARM C	15.00	45.00	75.00	6.38	9.56	6.38

Demand set: 2020 Base + Dev Weekday PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.291	0.709
		0.0	176.0	428.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.772	0.000	0.228
		240.0	0.0	71.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.982	0.018	0.000
		501.0	9.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
16.45-17.00									
B-AC	3.90	7.35	0.531		0.00	1.09	14.9		0.28
C-A	6.29								
C-B	0.11	7.78	0.015		0.00	0.01	0.2		0.13
A-B	2.21								
A-C	5.37								

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)
17.00-17.15									
B-AC	4.66	6.84	0.681		1.09	1.97	26.6		0.43
C-A	7.51								
C-B	0.13	7.46	0.018		0.01	0.02	0.3		0.14
A-B	2.64								
A-C	6.41								

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)
17.15-17.30									
B-AC	5.71	6.14	0.930		1.97	6.43	72.4		1.08
C-A	9.19								
C-B	0.17	7.02	0.024		0.02	0.02	0.3		0.15
A-B	3.23								
A-C	7.85								

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)
17.30-17.45									
B-AC	5.71	6.14	0.930		6.43	7.97	109.2		1.49
C-A	9.19								
C-B	0.17	7.02	0.024		0.02	0.02	0.4		0.15
A-B	3.23								
A-C	7.85								

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)
17.45-18.00									
B-AC	4.66	6.84	0.681		7.97	2.34	48.5		0.64
C-A	7.51								
C-B	0.13	7.46	0.018		0.02	0.02	0.3		0.14
A-B	2.64								
A-C	6.41								

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)
18.00-18.15									
B-AC	3.90	7.35	0.531		2.34	1.18	19.2		0.30
C-A	6.29								
C-B	0.11	7.78	0.015		0.02	0.01	0.2		0.13
A-B	2.21								
A-C	5.37								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.1	*
17.15	2.0	**
17.30	6.4	******
17.45	8.0	********
18.00	2.3	**
18.15	1.2	*

QUEUE FOR STREAM C-B

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

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	428.1	285.4	290.8	0.68	290.9	0.68
C-A	689.6	459.7				
C-B	12.4	8.3	1.7	0.14	1.7	0.14
A-B	242.3	161.5				
A-C	589.1	392.7				
ALL	1961.4	1307.6	292.5	0.15	292.6	0.15

* 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 RUN*******

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2020 Base + Dev Saturday Peak

TIME PERIOD BEGINS 11.45 AND ENDS 13.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	9.52	14.29	9.52
ARM B	15.00	45.00	75.00	6.99	10.48	6.99
ARM C	15.00	45.00	75.00	4.78	7.16	4.78

Demand set: 2020 Base + Dev Saturday Peak

TIME	FROM/TO	ARM A	ARM B	ARM C
11.45 - 13.15				
	ARM A	0.000	0.416	0.584
		0.0	317.0	445.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.744	0.000	0.256
		416.0	0.0	143.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.937	0.063	0.000
		358.0	24.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 2

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)
11.45-12.00									
B-AC	7.01	7.38	0.951		0.00	7.53	78.5		0.90
C-A	4.49								
C-B	0.30	7.35	0.041		0.00	0.04	0.6		0.14
A-B	3.98								
A-C	5.58								

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)
12.00-12.15									
B-AC	8.38	6.87	1.220		7.53	31.43	295.5		3.31
C-A	5.36								
C-B	0.36	6.95	0.052		0.04	0.05	0.8		0.15
A-B	4.75								
A-C	6.67								

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)
12.15-12.30									
B-AC	10.26	6.15	1.667		31.43	93.08	934.1		10.39
C-A	6.57								
C-B	0.44	6.40	0.069		0.05	0.07	1.1		0.17
A-B	5.82								
A-C	8.17								

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)
12.30-12.45									
B-AC	10.26	6.15	1.667		93.08	154.69	1858.3		20.36
C-A	6.57								
C-B	0.44	6.40	0.069		0.07	0.07	1.1		0.17
A-B	5.82								
A-C	8.17								

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)
12.45-13.00									
B-AC	8.38	6.86	1.220		154.69	177.37	2490.4		23.73
C-A	5.36								
C-B	0.36	6.95	0.052		0.07	0.06	0.8		0.15
A-B	4.75								
A-C	6.67								

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)
13.00-13.15									
B-AC	7.01	7.38	0.951		177.37	172.57	2624.6		23.84
C-A	4.49								
C-B	0.30	7.35	0.041		0.06	0.04	0.7		0.14
A-B	3.98								
A-C	5.58								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
12.00	7.5	********
12.15	31.4	********************************
12.30	93.1	**********
12.45	154.7	**********
13.00	177.4	**********
13.15	172.6	**********

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
12.00	0.0
12.15	0.1
12.30	0.1
12.45	0.1
13.00	0.1
13.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	769.4	512.9	8281.4	10.76	10300.4	13.39
C-A	492.8	328.5				
C-B	33.0	22.0	5.1	0.15	5.1	0.15
A-B	436.3	290.9				
A-C	612.5	408.3				
ALL	2344.1	1562.7	8286.5	3.54	10305.5	4.40

* 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 RUN*******

========== end of file ==========

Printed at 10:40:48 on 19/06/2015]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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EMAIL: software@trl.co.uk

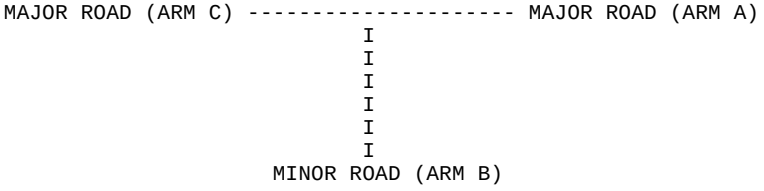
Run with file:-
"F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Modelling\PICADY\Lambra Ponte Priority.vpi"
(drive-on-the-left) at 10:39:26 on Friday, 19 June 2015

RUN INFORMATION

RUN TITLE	: Pontefract Road/Lamborough Road
LOCATION	: Barnsley
DATE	: 29/05/15
CLIENT	:
ENUMERATOR	: SmithsonN [UKLDS2PC32028]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Arm A
ARM B IS Arm B
ARM C IS Arm C

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)	8.50 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	2.20 M.
- VISIBILITY	(VC-B)	80.00 M.
- BLOCKS TRAFFIC (SPACES)		NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	50.0 M.
- VISIBILITY TO RIGHT	(VB-A)	50.0 M.
- LANE 1 WIDTH	(WB-C)	5.00 M.
- LANE 2 WIDTH	(WB-A)	0.00 M.

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2020 Weekday PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TO TOP OF PEAK TO RISE	FLOW STOPS IS REACHED	FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00		7.34	11.01	7.34
ARM B	15.00	45.00	75.00		3.67	5.51	3.67
ARM C	15.00	45.00	75.00		6.38	9.56	6.38

Demand set: 2020 Weekday PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.300	0.700
		0.0	176.0	411.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.759	0.000	0.241
		223.0	0.0	71.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.982	0.018	0.000
		501.0	9.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
16.45-17.00									
B-AC	3.69	7.44	0.496		0.00	0.95	13.1		0.26
C-A	6.29								
C-B	0.11	7.82	0.014		0.00	0.01	0.2		0.13
A-B	2.21								
A-C	5.16								

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)
17.00-17.15									
B-AC	4.40	6.95	0.634		0.95	1.63	22.4		0.38
C-A	7.51								
C-B	0.13	7.51	0.018		0.01	0.02	0.3		0.14
A-B	2.64								
A-C	6.16								

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)
17.15-17.30									
B-AC	5.39	6.26	0.862		1.63	4.49	54.0		0.83
C-A	9.19								
C-B	0.17	7.09	0.023		0.02	0.02	0.3		0.14
A-B	3.23								
A-C	7.54								

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)
17.30-17.45									
B-AC	5.39	6.26	0.862		4.49	5.10	72.6		1.02
C-A	9.19								
C-B	0.17	7.09	0.023		0.02	0.02	0.4		0.14
A-B	3.23								
A-C	7.54								

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)
17.45-18.00									
B-AC	4.40	6.95	0.634		5.10	1.85	33.4		0.46
C-A	7.51								
C-B	0.13	7.51	0.018		0.02	0.02	0.3		0.14
A-B	2.64								
A-C	6.16								

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)
18.00-18.15									
B-AC	3.69	7.44	0.496		1.85	1.02	16.4		0.27
C-A	6.29								
C-B	0.11	7.82	0.014		0.02	0.01	0.2		0.13
A-B	2.21								
A-C	5.16								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.6	**
17.30	4.5	****
17.45	5.1	*****
18.00	1.9	**
18.15	1.0	*

QUEUE FOR STREAM C-B

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

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	404.7	269.8	211.8	0.52	211.9	0.52
C-A	689.6	459.7				
C-B	12.4	8.3	1.7	0.14	1.7	0.14
A-B	242.3	161.5				
A-C	565.7	377.1				
ALL	1914.6	1276.4	213.5	0.11	213.6	0.11

* 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 RUN*******

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2020 Saturday Peak

TIME PERIOD BEGINS 11.45 AND ENDS 13.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	8.71	13.07	8.71
ARM B	15.00	45.00	75.00	5.51	8.27	5.51
ARM C	15.00	45.00	75.00	4.78	7.16	4.78

Demand set: 2020 Saturday Peak

TIME	FROM/TO	ARM A	ARM B	ARM C
11.45 - 13.15				
	ARM A	0.000	0.389	0.611
		0.0	271.0	426.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.676	0.000	0.324
		298.0	0.0	143.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.937	0.063	0.000
		358.0	24.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 2

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)
11.45-12.00									
B-AC	5.53	7.68	0.720		0.00	2.33	30.0		0.41
C-A	4.49								
C-B	0.30	7.53	0.040		0.00	0.04	0.6		0.14
A-B	3.40								
A-C	5.35								

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)
12.00-12.15									
B-AC	6.61	7.20	0.918		2.33	6.37	74.1		0.95
C-A	5.36								
C-B	0.36	7.16	0.050		0.04	0.05	0.8		0.15
A-B	4.06								
A-C	6.38								

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)
12.15-12.30									
B-AC	8.09	6.52	1.240		6.37	31.17	285.2		3.28
C-A	6.57								
C-B	0.44	6.66	0.066		0.05	0.07	1.0		0.16
A-B	4.97								
A-C	7.82								

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)
12.30-12.45									
B-AC	8.09	6.52	1.241		31.17	54.93	646.1		6.72
C-A	6.57								
C-B	0.44	6.66	0.066		0.07	0.07	1.1		0.16
A-B	4.97								
A-C	7.82								

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)
12.45-13.00									
B-AC	6.61	7.20	0.918		54.93	48.01	772.1		7.19
C-A	5.36								
C-B	0.36	7.16	0.050		0.07	0.05	0.8		0.15
A-B	4.06								
A-C	6.38								

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)
13.00-13.15									
B-AC	5.53	7.68	0.720		48.01	18.16	496.3		4.50
C-A	4.49								
C-B	0.30	7.53	0.040		0.05	0.04	0.6		0.14
A-B	3.40								
A-C	5.35								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
12.00	2.3	**
12.15	6.4	******
12.30	31.2	********************************
12.45	54.9	***
13.00	48.0	**
13.15	18.2	******************

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
12.00	0.0
12.15	0.1
12.30	0.1
12.45	0.1
13.00	0.1
13.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	607.0	404.7	2303.7	3.80	2325.2	3.83
C-A	492.8	328.5				
C-B	33.0	22.0	4.9	0.15	4.9	0.15
A-B	373.0	248.7				
A-C	586.4	390.9				
ALL	2092.2	1394.8	2308.6	1.10	2330.1	1.11

* 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 RUN*******

========== end of file ==========

Printed at 10:39:33 on 19/06/2015]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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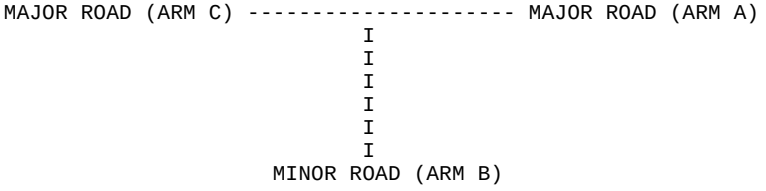
Run with file:-
"F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Modelling\PICADY\Lambra Ponte Priority.vpi"
(drive-on-the-left) at 08:48:04 on Friday, 19 June 2015

RUN INFORMATION

RUN TITLE	: Pontefract Road/Lamborough Road
LOCATION	: Barnsley
DATE	: 29/05/15
CLIENT	:
ENUMERATOR	: SmithsonN [UKLDS2PC32028]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Arm A
ARM B IS Arm B
ARM C IS Arm C

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) 8.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B) 80.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2020 Base + Dev Weekday PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	7.55	11.33	7.55
ARM B	15.00	45.00	75.00	3.89	5.83	3.89
ARM C	15.00	45.00	75.00	6.38	9.56	6.38

Demand set: 2020 Base + Dev Weekday PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.291	0.709
		0.0	176.0	428.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.772	0.000	0.228
		240.0	0.0	71.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.982	0.018	0.000
		501.0	9.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
16.45-17.00									
B-AC	3.90	7.35	0.531		0.00	1.09	14.9		0.28
C-A	6.29								
C-B	0.11	7.78	0.015		0.00	0.01	0.2		0.13
A-B	2.21								
A-C	5.37								

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)
17.00-17.15									
B-AC	4.66	6.84	0.681		1.09	1.97	26.6		0.43
C-A	7.51								
C-B	0.13	7.46	0.018		0.01	0.02	0.3		0.14
A-B	2.64								
A-C	6.41								

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)
17.15-17.30									
B-AC	5.71	6.14	0.930		1.97	6.43	72.4		1.08
C-A	9.19								
C-B	0.17	7.02	0.024		0.02	0.02	0.3		0.15
A-B	3.23								
A-C	7.85								

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)
17.30-17.45									
B-AC	5.71	6.14	0.930		6.43	7.97	109.2		1.49
C-A	9.19								
C-B	0.17	7.02	0.024		0.02	0.02	0.4		0.15
A-B	3.23								
A-C	7.85								

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)
17.45-18.00									
B-AC	4.66	6.84	0.681		7.97	2.34	48.5		0.64
C-A	7.51								
C-B	0.13	7.46	0.018		0.02	0.02	0.3		0.14
A-B	2.64								
A-C	6.41								

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)
18.00-18.15									
B-AC	3.90	7.35	0.531		2.34	1.18	19.2		0.30
C-A	6.29								
C-B	0.11	7.78	0.015		0.02	0.01	0.2		0.13
A-B	2.21								
A-C	5.37								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.1	*
17.15	2.0	**
17.30	6.4	******
17.45	8.0	********
18.00	2.3	**
18.15	1.2	*

QUEUE FOR STREAM C-B

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

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	428.1	285.4	290.8	0.68	290.9	0.68
C-A	689.6	459.7				
C-B	12.4	8.3	1.7	0.14	1.7	0.14
A-B	242.3	161.5				
A-C	589.1	392.7				
ALL	1961.4	1307.6	292.5	0.15	292.6	0.15

* 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 RUN*******

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2020 Base + Dev Saturday Peak

TIME PERIOD BEGINS 11.45 AND ENDS 13.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	9.52	14.29	9.52
ARM B	15.00	45.00	75.00	6.99	10.48	6.99
ARM C	15.00	45.00	75.00	4.78	7.16	4.78

Demand set: 2020 Base + Dev Saturday Peak

TIME	FROM/TO	ARM A	ARM B	ARM C
11.45 - 13.15				
	ARM A	0.000	0.416	0.584
		0.0	317.0	445.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.744	0.000	0.256
		416.0	0.0	143.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.937	0.063	0.000
		358.0	24.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 2

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)
11.45-12.00									
B-AC	7.01	7.38	0.951		0.00	7.53	78.5		0.90
C-A	4.49								
C-B	0.30	7.35	0.041		0.00	0.04	0.6		0.14
A-B	3.98								
A-C	5.58								

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)
12.00-12.15									
B-AC	8.38	6.87	1.220		7.53	31.43	295.5		3.31
C-A	5.36								
C-B	0.36	6.95	0.052		0.04	0.05	0.8		0.15
A-B	4.75								
A-C	6.67								

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)
12.15-12.30									
B-AC	10.26	6.15	1.667		31.43	93.08	934.1		10.39
C-A	6.57								
C-B	0.44	6.40	0.069		0.05	0.07	1.1		0.17
A-B	5.82								
A-C	8.17								

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)
12.30-12.45									
B-AC	10.26	6.15	1.667		93.08	154.69	1858.3		20.36
C-A	6.57								
C-B	0.44	6.40	0.069		0.07	0.07	1.1		0.17
A-B	5.82								
A-C	8.17								

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)
12.45-13.00									
B-AC	8.38	6.86	1.220		154.69	177.37	2490.4		23.73
C-A	5.36								
C-B	0.36	6.95	0.052		0.07	0.06	0.8		0.15
A-B	4.75								
A-C	6.67								

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)
13.00-13.15									
B-AC	7.01	7.38	0.951		177.37	172.57	2624.6		23.84
C-A	4.49								
C-B	0.30	7.35	0.041		0.06	0.04	0.7		0.14
A-B	3.98								
A-C	5.58								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
12.00	7.5	********
12.15	31.4	********************************
12.30	93.1	**********
12.45	154.7	**********
13.00	177.4	**********
13.15	172.6	**********

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
12.00	0.0
12.15	0.1
12.30	0.1
12.45	0.1
13.00	0.1
13.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	769.4	512.9	8281.4	10.76	10300.4	13.39
C-A	492.8	328.5				
C-B	33.0	22.0	5.1	0.15	5.1	0.15
A-B	436.3	290.9				
A-C	612.5	408.3				
ALL	2344.1	1562.7	8286.5	3.54	10305.5	4.40

* 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 RUN*******

========== end of file ==========

Printed at 08:49:25 on 19/06/2015]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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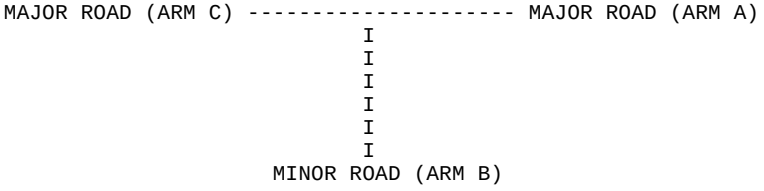
Run with file:-
"F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Modelling\PICADY\Lambra Ponte Priority.vpi"
(drive-on-the-left) at 10:40:13 on Friday, 19 June 2015

RUN INFORMATION

RUN TITLE	: Pontefract Road/Lamborough Road
LOCATION	: Barnsley
DATE	: 29/05/15
CLIENT	:
ENUMERATOR	: SmithsonN [UKLDS2PC32028]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Arm A
ARM B IS Arm B
ARM C IS Arm C

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) 8.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B) 80.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2015 Base Weekday PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	6.84	10.26	6.84
ARM B	15.00	45.00	75.00	3.41	5.12	3.41
ARM C	15.00	45.00	75.00	5.94	8.91	5.94

Demand set: 2015 Base Weekday PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.300	0.700
		0.0	164.0	383.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.758	0.000	0.242
		207.0	0.0	66.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.983	0.017	0.000
		467.0	8.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
16.45-17.00									
B-AC	3.43	7.61	0.450		0.00	0.80	11.1		0.23
C-A	5.86								
C-B	0.10	7.93	0.013		0.00	0.01	0.2		0.13
A-B	2.06								
A-C	4.81								

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)
17.00-17.15									
B-AC	4.09	7.16	0.572		0.80	1.27	17.8		0.32
C-A	7.00								
C-B	0.12	7.64	0.016		0.01	0.02	0.2		0.13
A-B	2.46								
A-C	5.74								

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)
17.15-17.30									
B-AC	5.01	6.52	0.769		1.27	2.86	37.0		0.58
C-A	8.57								
C-B	0.15	7.25	0.020		0.02	0.02	0.3		0.14
A-B	3.01								
A-C	7.03								

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)
17.30-17.45									
B-AC	5.01	6.52	0.769		2.86	3.06	44.7		0.64
C-A	8.57								
C-B	0.15	7.25	0.020		0.02	0.02	0.3		0.14
A-B	3.01								
A-C	7.03								

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)
17.45-18.00									
B-AC	4.09	7.16	0.572		3.06	1.40	23.3		0.35
C-A	7.00								
C-B	0.12	7.64	0.016		0.02	0.02	0.2		0.13
A-B	2.46								
A-C	5.74								

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)
18.00-18.15									
B-AC	3.43	7.61	0.450		1.40	0.84	13.4		0.24
C-A	5.86								
C-B	0.10	7.93	0.013		0.02	0.01	0.2		0.13
A-B	2.06								
A-C	4.81								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.3	*
17.30	2.9	***
17.45	3.1	***
18.00	1.4	*
18.15	0.8	*

QUEUE FOR STREAM C-B

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

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	375.8	250.5	147.2	0.39	147.3	0.39
C-A	642.8	428.5				
C-B	11.0	7.3	1.5	0.13	1.5	0.13
A-B	225.7	150.5				
A-C	527.2	351.4				
ALL	1782.5	1188.3	148.7	0.08	148.7	0.08

* 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 RUN*******

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2015 Saturday Peak

TIME PERIOD BEGINS 11.45 AND ENDS 13.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	8.10	12.15	8.10
ARM B	15.00	45.00	75.00	5.14	7.71	5.14
ARM C	15.00	45.00	75.00	4.44	6.66	4.44

Demand set: 2015 Saturday Peak

TIME	FROM/TO	ARM A	ARM B	ARM C
11.45 - 13.15				
	ARM A	0.000	0.389	0.611
		0.0	252.0	396.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.676	0.000	0.324
		278.0	0.0	133.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.938	0.062	0.000
		333.0	22.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 2

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)
11.45-12.00									
B-AC	5.16	7.85	0.657		0.00	1.79	23.7		0.34
C-A	4.18								
C-B	0.28	7.66	0.036		0.00	0.04	0.5		0.14
A-B	3.16								
A-C	4.97								

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)
12.00-12.15									
B-AC	6.16	7.41	0.831		1.79	3.96	50.0		0.65
C-A	4.99								
C-B	0.33	7.32	0.045		0.04	0.05	0.7		0.14
A-B	3.78								
A-C	5.93								

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)
12.15-12.30									
B-AC	7.54	6.78	1.112		3.96	18.63	176.9		2.10
C-A	6.11								
C-B	0.40	6.85	0.059		0.05	0.06	0.9		0.16
A-B	4.62								
A-C	7.27								

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)
12.30-12.45									
B-AC	7.54	6.78	1.112		18.63	30.95	372.7		3.95
C-A	6.11								
C-B	0.40	6.85	0.059		0.06	0.06	0.9		0.16
A-B	4.62								
A-C	7.27								

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)
12.45-13.00									
B-AC	6.16	7.41	0.831		30.95	15.70	349.9		3.34
C-A	4.99								
C-B	0.33	7.32	0.045		0.06	0.05	0.7		0.14
A-B	3.78								
A-C	5.93								

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)
13.00-13.15									
B-AC	5.16	7.85	0.657		15.70	2.09	74.8		0.78
C-A	4.18								
C-B	0.28	7.66	0.036		0.05	0.04	0.6		0.14
A-B	3.16								
A-C	4.97								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
12.00	1.8	**
12.15	4.0	****
12.30	18.6	******************
12.45	31.0	*******************************
13.00	15.7	***************
13.15	2.1	**

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
12.00	0.0
12.15	0.0
12.30	0.1
12.45	0.1
13.00	0.0
13.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	565.7	377.1	1048.0	1.85	1048.2	1.85
C-A	458.3	305.6				
C-B	30.3	20.2	4.4	0.14	4.4	0.14
A-B	346.9	231.2				
A-C	545.1	363.4				
ALL	1946.3	1297.5	1052.3	0.54	1052.6	0.54

* 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 RUN*******

========== end of file ==========

Printed at 10:40:19 on 19/06/2015]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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EMAIL: software@trl.co.uk

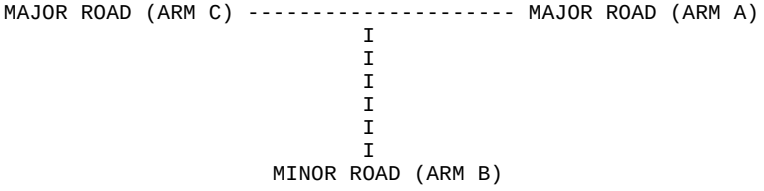
Run with file:-
"F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Modelling\PICADY\Lambra Ponte Priority.vpi"
(drive-on-the-left) at 10:34:45 on Tuesday, 16 June 2015

RUN INFORMATION

RUN TITLE	: Pontefract Road/Lamborough Road
LOCATION	: Barnsley
DATE	: 29/05/15
CLIENT	:
ENUMERATOR	: SmithsonN [UKLDS2PC32028]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Arm A
ARM B IS Arm B
ARM C IS Arm C

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) 8.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)150.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 30.0 M.
- VISIBILITY TO RIGHT	(VB-A) 200.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(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
899.99	0.31	0.12

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
702.90	0.29	0.11	0.18	0.41

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
660.83	0.23	0.23

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2015 Base Weekday PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	6.84	10.26	6.84
ARM B	15.00	45.00	75.00	3.41	5.12	3.41
ARM C	15.00	45.00	75.00	5.94	8.91	5.94

Demand set: 2015 Base Weekday PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.300	0.700
		0.0	164.0	383.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.758	0.000	0.242
		207.0	0.0	66.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.983	0.017	0.000
		467.0	8.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
16.45-17.00									
B-AC	3.43	8.62	0.397		0.00	0.65	9.1		0.19
C-A	5.86								
C-B	0.10	8.45	0.012		0.00	0.01	0.2		0.12
A-B	2.06								
A-C	4.81								

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)
17.00-17.15									
B-AC	4.09	8.10	0.505		0.65	0.99	14.0		0.25
C-A	7.00								
C-B	0.12	8.14	0.015		0.01	0.01	0.2		0.12
A-B	2.46								
A-C	5.74								

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)
17.15-17.30									
B-AC	5.01	7.37	0.679		0.99	1.96	26.5		0.40
C-A	8.57								
C-B	0.15	7.72	0.019		0.01	0.02	0.3		0.13
A-B	3.01								
A-C	7.03								

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)
17.30-17.45									
B-AC	5.01	7.37	0.679		1.96	2.03	30.1		0.42
C-A	8.57								
C-B	0.15	7.72	0.019		0.02	0.02	0.3		0.13
A-B	3.01								
A-C	7.03								

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)
17.45-18.00									
B-AC	4.09	8.10	0.505		2.03	1.05	16.9		0.26
C-A	7.00								
C-B	0.12	8.14	0.015		0.02	0.02	0.2		0.12
A-B	2.46								
A-C	5.74								

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)
18.00-18.15									
B-AC	3.43	8.62	0.397		1.05	0.67	10.6		0.19
C-A	5.86								
C-B	0.10	8.45	0.012		0.02	0.01	0.2		0.12
A-B	2.06								
A-C	4.81								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	1.0	*
17.30	2.0	**
17.45	2.0	**
18.00	1.1	*
18.15	0.7	*

QUEUE FOR STREAM C-B

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

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	375.8	250.5	107.3	0.29	107.3	0.29
C-A	642.8	428.5				
C-B	11.0	7.3	1.4	0.13	1.4	0.13
A-B	225.7	150.5				
A-C	527.2	351.4				
ALL	1782.5	1188.3	108.7	0.06	108.7	0.06

* 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 RUN*******

========== end of file ==========

Printed at 10:35:53 on 16/06/2015]

Appendix E2: WESLEY STREET / LAMBRA ROAD JUNCTIONS Outputs

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]

For sales and distribution information, program advice and maintenance, contact TRL:
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Filename: Wesley_Lambra_Mini.arc8
Path: F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Modelling\ARCADY
Report generation date: 24/06/2015 08:49:28

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2020 Sat Base + Dev			
Arm 1	7.75	74.29	0.92	F
Arm 2	4.30	42.72	0.83	E
Arm 3	1.60	15.64	0.62	C
Arm 4	14.59	89.61	0.98	F

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

"D1 - 2020 Sat Base + Dev, PM " model duration: 16:45 - 18:15
"D2 - 2020 Base + Dev, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 24/06/2015 08:49:27

File summary

Title	Wesley_Lambra_Mini
Location	Barnsley
Site Number	
Date	19/06/2015
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	mansonj
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - 2020 Sat Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2020 Sat Base + Dev, PM	2020 Sat Base + Dev	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3,4	60.20	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
1	1	(untitled)	
2	2	(untitled)	
3	3	(untitled)	
4	4	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	4.00	4.00	4.00	0.00	17.00	12.00	0.00	
2	3.65	3.65	4.00	1.00	19.00	15.00	0.00	
3	4.00	4.00	4.00	0.00	17.00	12.00	0.00	
4	4.00	4.00	4.00	0.00	17.00	12.00	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.565	702.164
2		(calculated)	(calculated)	0.592	772.127
3		(calculated)	(calculated)	0.565	744.764
4		(calculated)	(calculated)	0.565	744.764

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
	✓	✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	366.00	100.000
2	ONE HOUR	✓	352.00	100.000
3	ONE HOUR	✓	342.00	100.000
4	ONE HOUR	✓	552.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	217.000	149.000
	2	0.000	0.000	275.000	77.000
	3	104.000	98.000	0.000	140.000
	4	214.000	225.000	113.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.00	0.59	0.41
	2	0.00	0.00	0.78	0.22
	3	0.30	0.29	0.00	0.41
	4	0.39	0.41	0.20	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.92	74.29	7.75	F
2	0.83	42.72	4.30	E
3	0.62	15.64	1.60	C
4	0.98	89.61	14.59	F

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	275.54	271.18	323.51	0.00	519.52	0.530	1.09	14.261	B
2	265.00	261.52	354.91	0.00	561.98	0.472	0.87	11.851	B
3	257.48	254.90	167.60	0.00	650.14	0.396	0.64	9.051	A
4	415.57	409.05	150.55	0.00	659.77	0.630	1.63	14.021	B

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	329.03	325.43	388.11	0.00	483.05	0.681	1.99	22.324	C
2	316.44	313.98	425.84	0.00	519.98	0.609	1.49	17.265	C
3	307.45	306.32	201.17	0.00	631.19	0.487	0.93	11.041	B
4	496.24	490.48	180.92	0.00	642.62	0.772	3.07	22.800	C

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	402.97	386.47	460.23	0.00	442.33	0.911	6.12	53.171	F
2	387.56	378.56	504.50	0.00	473.40	0.819	3.73	35.018	E
3	376.55	374.05	240.14	0.00	609.19	0.618	1.55	15.145	C
4	607.76	576.57	220.93	0.00	620.03	0.980	10.87	59.009	F

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	402.97	396.45	470.87	0.00	436.33	0.924	7.75	74.295	F
2	387.56	385.31	517.82	0.00	465.52	0.833	4.30	42.718	E
3	376.55	376.36	245.68	0.00	606.06	0.621	1.60	15.642	C
4	607.76	592.87	222.30	0.00	619.26	0.981	14.59	89.609	F

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	329.03	349.45	418.90	0.00	465.67	0.707	2.64	34.995	D
2	316.44	326.34	459.80	0.00	499.87	0.633	1.82	21.785	C
3	307.45	309.88	213.65	0.00	624.14	0.493	0.99	11.541	B
4	496.24	539.10	183.03	0.00	641.43	0.774	3.88	43.589	E

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	275.54	281.33	333.74	0.00	513.74	0.536	1.20	15.849	C
2	265.00	268.53	368.11	0.00	554.16	0.478	0.94	12.754	B
3	257.48	258.76	173.27	0.00	646.94	0.398	0.67	9.304	A
4	415.57	423.95	152.84	0.00	658.48	0.631	1.78	15.854	C

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Filename: Wesley_Lambra_Mini.arc8
Path: F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Modelling\ARCADY
Report generation date: 24/06/2015 08:50:41

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2020 Base + Dev			
Arm 1	1.22	13.63	0.55	B
Arm 2	0.10	8.50	0.09	A
Arm 3	0.53	8.71	0.35	A
Arm 4	0.62	8.01	0.38	A

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

"D1 - 2020 Sat Base + Dev, PM" model duration: 16:45 - 18:15
"D2 - 2020 Base + Dev, PM " model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 24/06/2015 08:50:40

File summary

Title	Wesley_Lambra_Mini
Location	Barnsley
Site Number	
Date	19/06/2015
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	mansonj
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - 2020 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2020 Base + Dev, PM	2020 Base + Dev	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3,4	10.32	B

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
1	1	(untitled)	
2	2	(untitled)	
3	3	(untitled)	
4	4	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	4.00	4.00	4.00	0.00	17.00	12.00	0.00	
2	3.65	3.65	4.00	1.00	19.00	15.00	0.00	
3	4.00	4.00	4.00	0.00	17.00	12.00	0.00	
4	4.00	4.00	4.00	0.00	17.00	12.00	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.565	702.164
2		(calculated)	(calculated)	0.592	772.127
3		(calculated)	(calculated)	0.565	744.764
4		(calculated)	(calculated)	0.565	744.764

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	296.00	100.000
2	ONE HOUR	✓	37.00	100.000
3	ONE HOUR	✓	201.00	100.000
4	ONE HOUR	✓	254.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	138.000	158.000
	2	0.000	0.000	18.000	19.000
	3	25.000	0.000	0.000	176.000
	4	73.000	5.000	176.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.00	0.47	0.53
	2	0.00	0.00	0.49	0.51
	3	0.12	0.00	0.00	0.88
	4	0.29	0.02	0.69	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.55	13.63	1.22	B
2	0.09	8.50	0.10	A
3	0.35	8.71	0.53	A
4	0.38	8.01	0.62	A

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	222.84	220.67	135.27	0.00	625.79	0.356	0.54	8.842	A
2	27.86	27.65	352.20	0.00	563.58	0.049	0.05	6.717	A
3	151.32	150.17	131.99	0.00	670.25	0.226	0.29	6.906	A
4	191.22	189.83	18.68	0.00	734.22	0.260	0.35	6.598	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	266.10	265.25	162.43	0.00	610.46	0.436	0.76	10.402	B
2	33.26	33.20	423.19	0.00	521.55	0.064	0.07	7.371	A
3	180.69	180.34	158.63	0.00	655.21	0.276	0.38	7.576	A
4	228.34	227.94	22.43	0.00	732.10	0.312	0.45	7.134	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	325.90	324.15	198.81	0.00	589.92	0.552	1.20	13.453	B
2	40.74	40.63	517.47	0.00	465.72	0.087	0.09	8.467	A
3	221.31	220.70	193.89	0.00	635.30	0.348	0.53	8.669	A
4	279.66	279.00	27.45	0.00	729.27	0.383	0.61	7.983	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	325.90	325.83	199.27	0.00	589.66	0.553	1.22	13.634	B
2	40.74	40.74	519.59	0.00	464.47	0.088	0.10	8.495	A
3	221.31	221.29	194.84	0.00	634.76	0.349	0.53	8.706	A
4	279.66	279.64	27.52	0.00	729.23	0.384	0.62	8.007	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	266.10	267.80	163.17	0.00	610.04	0.436	0.79	10.570	B
2	33.26	33.37	426.47	0.00	519.61	0.064	0.07	7.407	A
3	180.69	181.28	160.08	0.00	654.39	0.276	0.39	7.617	A
4	228.34	228.98	22.55	0.00	732.03	0.312	0.46	7.167	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	222.84	223.75	136.56	0.00	625.07	0.357	0.56	8.990	A
2	27.86	27.92	356.54	0.00	561.01	0.050	0.05	6.755	A
3	151.32	151.69	133.77	0.00	669.24	0.226	0.30	6.959	A
4	191.22	191.64	18.87	0.00	734.11	0.260	0.36	6.640	A

Capabilities on project:
Transportation

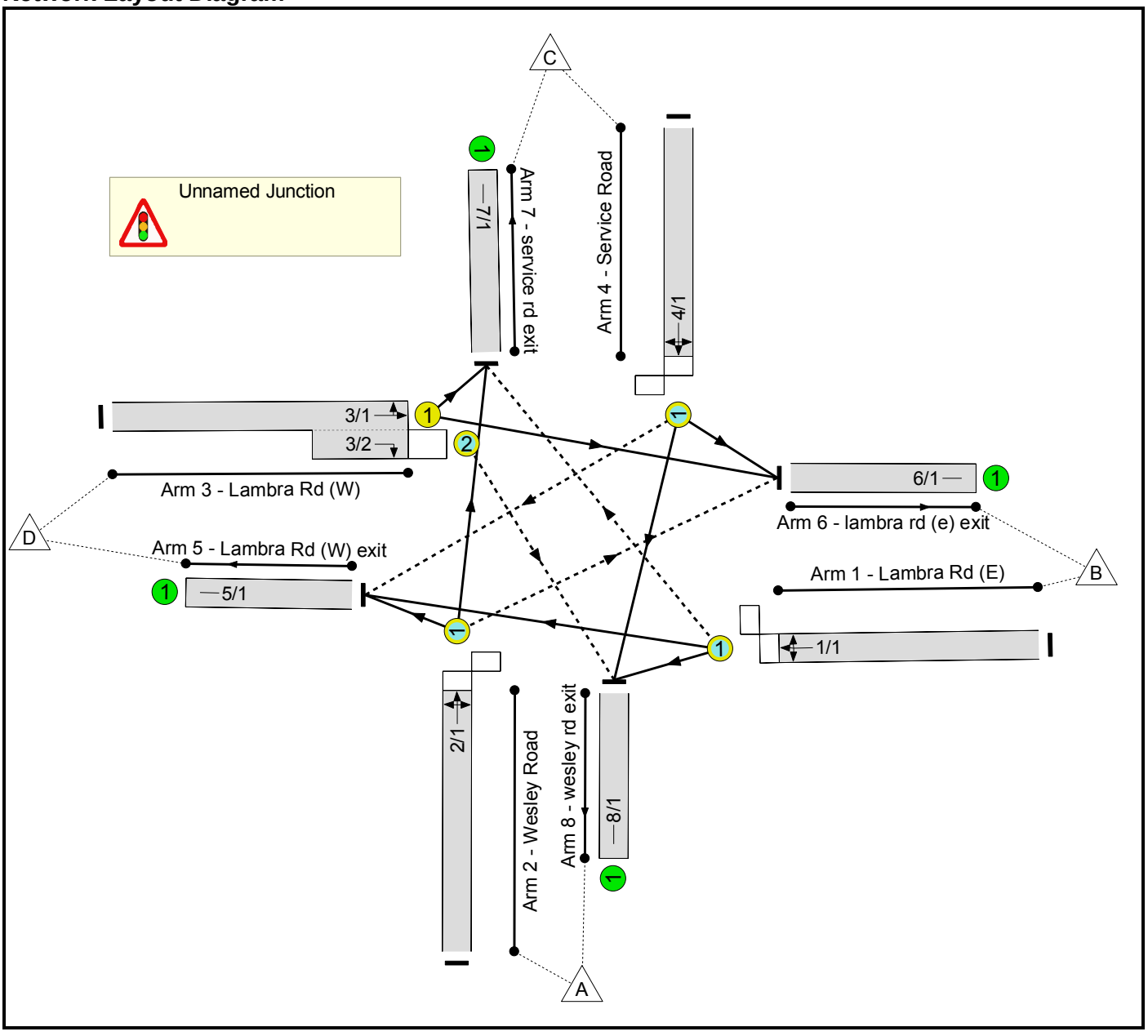
Appendix E3: WESLEY STREET / LAMBRA ROAD LINSIG Outputs

Full Input Data And Results

User and Project Details

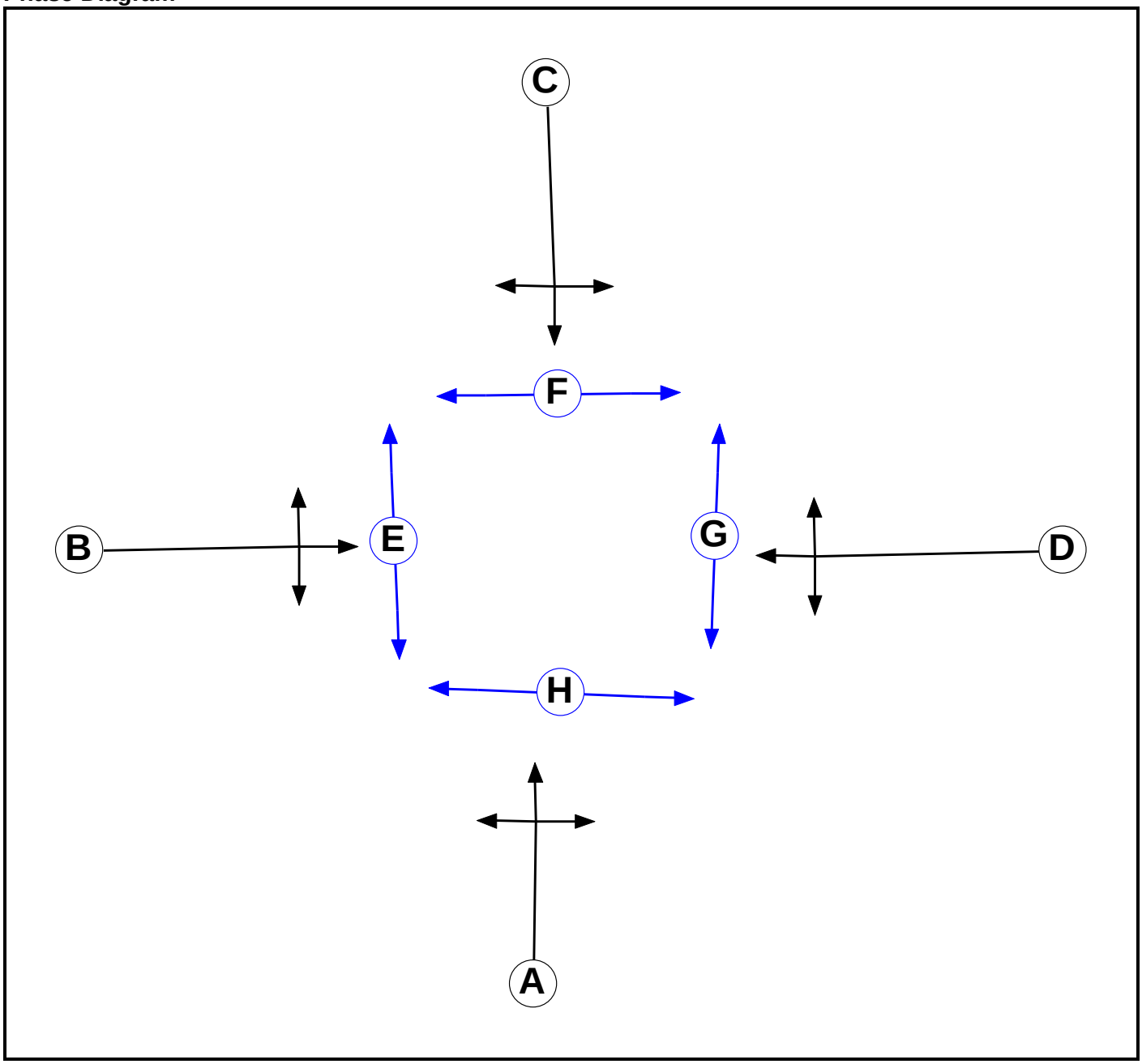
Project:	
Title:	
Location:	
File name:	Lambra Road - Mittigation (rev A).lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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	Pedestrian		7	7
F	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7

Full Input Data And Results

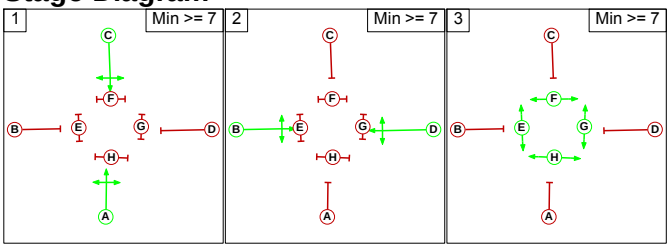
Phase Intergreens Matrix

		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		5	-	5	7	7	7	5
	B	5		5	-	5	7	7	7
	C	-	5		-	7	5	7	7
	D	5	-	-		7	7	5	7
	E	8	8	8	8		-	-	-
	F	8	8	8	8	-		-	-
	G	8	8	8	8	-	-		-
	H	8	8	8	8	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A C
2	B D
3	E F G H

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

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

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (Lambra Rd (E))	7/1 (Right)	1439	0	3/1	1.09	To 6/1 (Ahead) To 7/1 (Left)	2.00	1.00	0.50	2	2.00
2/1 (Wesley Road)	6/1 (Right)	1439	0	4/1	1.09	To 6/1 (Left) To 8/1 (Ahead)	2.00	1.00	0.50	2	2.00
3/2 (Lambra Rd (W))	8/1 (Right)	1439	0	1/1	1.09	To 5/1 (Ahead) To 8/1 (Left)	2.00	-	0.50	2	2.00
4/1 (Service Road)	5/1 (Right)	1439	0	2/1	1.09	To 5/1 (Left) To 7/1 (Ahead)	2.00	1.00	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Lambra Rd (E))	O	D	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 7 Right	15.00
											Arm 8 Left	8.00
2/1 (Wesley Road)	O	A	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Left	10.00
											Arm 6 Right	15.00
											Arm 7 Ahead	Inf
3/1 (Lambra Rd (W))	U	B	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Ahead	Inf
											Arm 7 Left	6.00
3/2 (Lambra Rd (W))	O	B	2	3	5.0	Geom	-	3.25	0.00	Y	Arm 8 Right	12.00
4/1 (Service Road)	O	C	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 5 Right	12.00
											Arm 6 Left	6.00
											Arm 8 Ahead	Inf
5/1 (Lambra Rd (W) exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (lambra rd (e) exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (service rd exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (wesley rd exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2020 PM base plus dev'	08:00	09:00	01:00	
2: '2020 SAT base plus dev'	08:00	09:00	01:00	

Full Input Data And Results

Scenario 1: '2020 PM' (FG1: '2020 PM base plus dev', Plan 1: 'with peds')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	176	5	73	254
	B	176	0	26	25	227
	C	80	78	0	0	158
	D	158	138	0	0	296
	Tot.	414	392	31	98	935

Traffic Lane Flows

Lane	Scenario 1: 2020 PM
Junction: Unnamed Junction	
1/1	227
2/1	254
3/1 (with short)	296(In) 138(Out)
3/2 (short)	158
4/1	158
5/1	98
6/1	392
7/1	31
8/1	414

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Lambra Rd (E))	4.00	0.00	Y	Arm 5 Ahead	Inf	11.0 %	1742	1742
				Arm 7 Right	15.00	11.5 %		
				Arm 8 Left	8.00	77.5 %		
2/1 (Wesley Road)	3.50	0.00	Y	Arm 5 Left	10.00	28.7 %	1766	1766
				Arm 6 Right	15.00	69.3 %		
				Arm 7 Ahead	Inf	2.0 %		
3/1 (Lambra Rd (W))	3.65	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1980	1980
				Arm 7 Left	6.00	0.0 %		
3/2 (Lambra Rd (W))	3.25	0.00	Y	Arm 8 Right	12.00	100.0 %	1724	1724
4/1 (Service Road)	3.65	0.00	Y	Arm 5 Right	12.00	0.0 %	1762	1762
				Arm 6 Left	6.00	49.4 %		
				Arm 8 Ahead	Inf	50.6 %		
5/1 (Lambra Rd (W) exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (lambra rd (e) exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (service rd exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (wesley rd exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2020 SAT' (FG2: '2020 SAT base plus dev', Plan 1: 'with peds')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	113	225	214	552
	B	140	0	114	104	358
	C	89	317	0	0	406
	D	376	217	0	0	593
	Tot.	605	647	339	318	1909

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2020 SAT
Junction: Unnamed Junction	
1/1	358
2/1	552
3/1 (with short)	593(In) 217(Out)
3/2 (short)	376
4/1	406
5/1	318
6/1	647
7/1	339
8/1	605

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Lambra Rd (E))	4.00	0.00	Y	Arm 5 Ahead	Inf	29.1 %	1823	1823
				Arm 7 Right	15.00	31.8 %		
				Arm 8 Left	8.00	39.1 %		
2/1 (Wesley Road)	3.50	0.00	Y	Arm 5 Left	10.00	38.8 %	1822	1822
				Arm 6 Right	15.00	20.5 %		
				Arm 7 Ahead	Inf	40.8 %		
3/1 (Lambra Rd (W))	3.65	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1980	1980
				Arm 7 Left	6.00	0.0 %		
3/2 (Lambra Rd (W))	3.25	0.00	Y	Arm 8 Right	12.00	100.0 %	1724	1724
4/1 (Service Road)	3.65	0.00	Y	Arm 5 Right	12.00	0.0 %	1657	1657
				Arm 6 Left	6.00	78.1 %		
				Arm 8 Ahead	Inf	21.9 %		
5/1 (Lambra Rd (W) exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (lambra rd (e) exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (service rd exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (wesley rd exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2020 PM' (FG1: '2020 PM base plus dev', Plan 2: 'no peds')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	176	5	73	254
	B	176	0	26	25	227
	C	80	78	0	0	158
	D	158	138	0	0	296
	Tot.	414	392	31	98	935

Traffic Lane Flows

Lane	Scenario 3: 2020 PM
Junction: Unnamed Junction	
1/1	227
2/1	254
3/1 (with short)	296(In) 138(Out)
3/2 (short)	158
4/1	158
5/1	98
6/1	392
7/1	31
8/1	414

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Lambra Rd (E))	4.00	0.00	Y	Arm 5 Ahead	Inf	11.0 %	1742	1742
				Arm 7 Right	15.00	11.5 %		
				Arm 8 Left	8.00	77.5 %		
2/1 (Wesley Road)	3.50	0.00	Y	Arm 5 Left	10.00	28.7 %	1766	1766
				Arm 6 Right	15.00	69.3 %		
				Arm 7 Ahead	Inf	2.0 %		
3/1 (Lambra Rd (W))	3.65	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1980	1980
				Arm 7 Left	6.00	0.0 %		
3/2 (Lambra Rd (W))	3.25	0.00	Y	Arm 8 Right	12.00	100.0 %	1724	1724
4/1 (Service Road)	3.65	0.00	Y	Arm 5 Right	12.00	0.0 %	1762	1762
				Arm 6 Left	6.00	49.4 %		
				Arm 8 Ahead	Inf	50.6 %		
5/1 (Lambra Rd (W) exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (lambra rd (e) exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (service rd exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (wesley rd exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2020 SAT' (FG2: '2020 SAT base plus dev', Plan 2: 'no peds')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	113	225	214	552
	B	140	0	114	104	358
	C	89	317	0	0	406
	D	376	217	0	0	593
	Tot.	605	647	339	318	1909

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2020 SAT
Junction: Unnamed Junction	
1/1	358
2/1	552
3/1 (with short)	593(In) 217(Out)
3/2 (short)	376
4/1	406
5/1	318
6/1	647
7/1	339
8/1	605

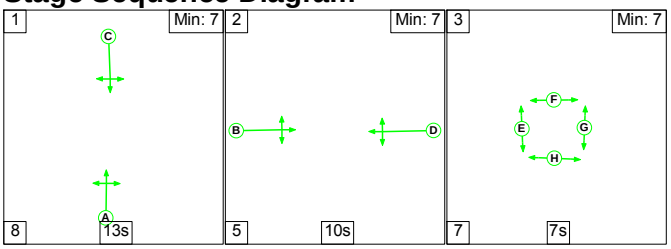
Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Lambra Rd (E))	4.00	0.00	Y	Arm 5 Ahead	Inf	29.1 %	1823	1823
				Arm 7 Right	15.00	31.8 %		
				Arm 8 Left	8.00	39.1 %		
2/1 (Wesley Road)	3.50	0.00	Y	Arm 5 Left	10.00	38.8 %	1822	1822
				Arm 6 Right	15.00	20.5 %		
				Arm 7 Ahead	Inf	40.8 %		
3/1 (Lambra Rd (W))	3.65	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1980	1980
				Arm 7 Left	6.00	0.0 %		
3/2 (Lambra Rd (W))	3.25	0.00	Y	Arm 8 Right	12.00	100.0 %	1724	1724
4/1 (Service Road)	3.65	0.00	Y	Arm 5 Right	12.00	0.0 %	1657	1657
				Arm 6 Left	6.00	78.1 %		
				Arm 8 Ahead	Inf	21.9 %		
5/1 (Lambra Rd (W) exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (lambra rd (e) exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (service rd exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (wesley rd exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2020 PM' (FG1: '2020 PM base plus dev', Plan 1: 'with peds')

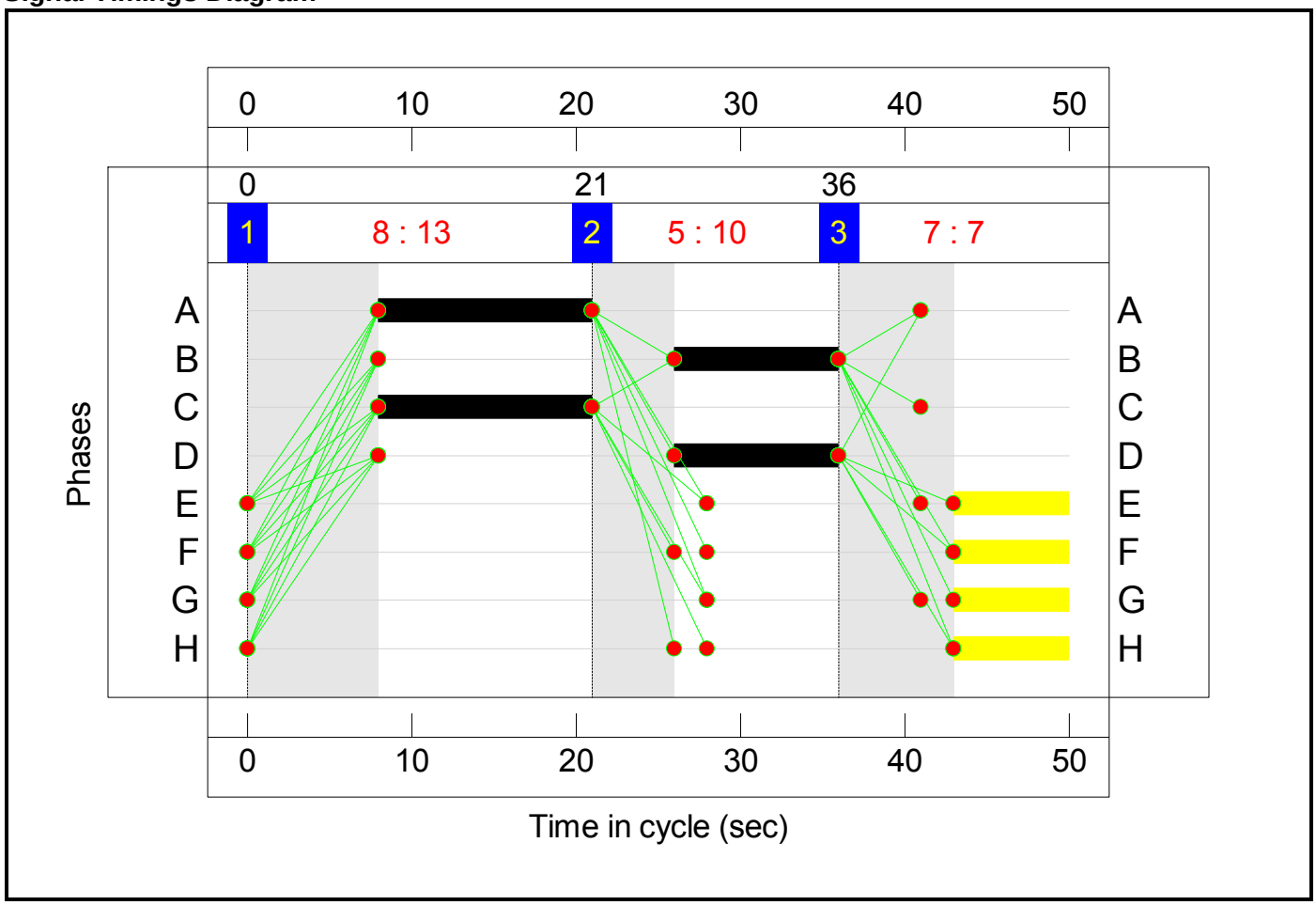
Stage Sequence Diagram



Stage Timings

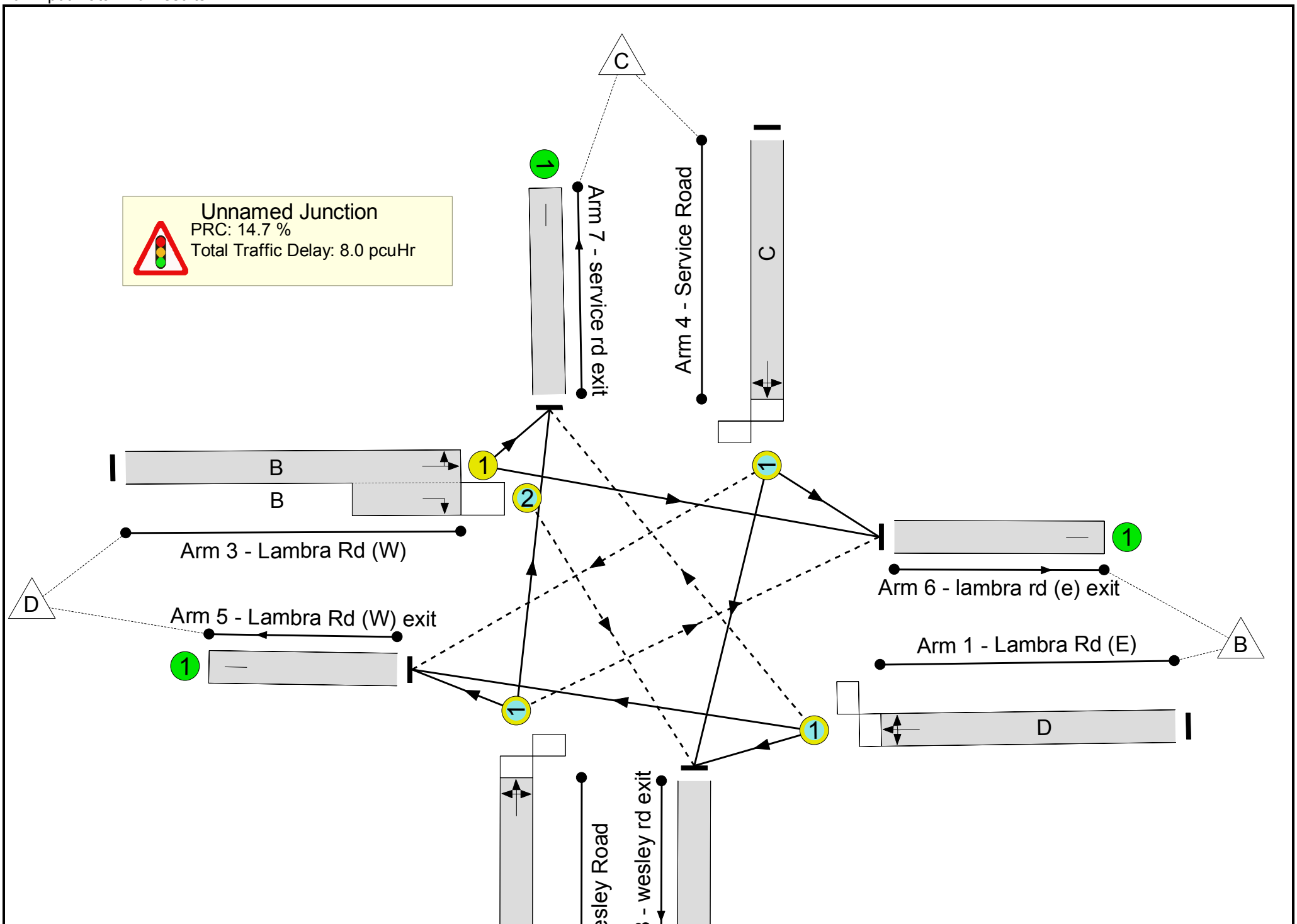
Stage	1	2	3
Duration	13	10	7
Change Point	0	21	36

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: 14.7 %
Total Traffic Delay: 8.0 pcuHr
C
Arm 7 - service rd exit
Arm 4 - Service Road
C
B
B
Arm 3 - Lambra Rd (W)
D
Arm 5 - Lambra Rd (W) exit
Arm 6 - lambra rd (e) exit
Arm 1 - Lambra Rd (E)
B
D
wesley Road
- wesley rd exit

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.4%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.4%**
1/1	Lambra Rd (E) Ahead Right Left	O	N/A	N/A	D		1	10	-	227	1742	383	59.2%
2/1	Wesley Road Left Right Ahead	O	N/A	N/A	A		1	13	-	254	1766	423	60.1%
3/1+3/2	Lambra Rd (W) Ahead Left Right	U+O	N/A	N/A	B		1	10	-	296	1980:1724	176+201	78.4 : 78.4%
4/1	Service Road Right Left Ahead	O	N/A	N/A	C		1	13	-	158	1762	493	32.0%
5/1	Lambra Rd (W) exit	U	N/A	N/A	-		-	-	-	98	Inf	Inf	0.0%
6/1	lambra rd (e) exit	U	N/A	N/A	-		-	-	-	392	Inf	Inf	0.0%
7/1	service rd exit	U	N/A	N/A	-		-	-	-	31	Inf	Inf	0.0%
8/1	wesley rd exit	U	N/A	N/A	-		-	-	-	414	Inf	Inf	0.0%

Full Input Data And Results

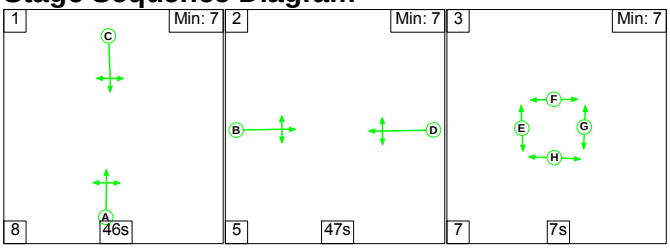
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**329**	**0**	**31**	**4.2**	**3.4**	**0.3**	**8.0**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**329**	**0**	**31**	**4.2**	**3.4**	**0.3**	**8.0**	**-**	**-**	**-**	**-**
1/1	227	227	25	0	1	1.1	0.7	0.0	1.8	29.1	2.8	0.7	3.5
2/1	254	254	172	0	4	1.1	0.7	0.1	1.9	27.6	3.1	0.7	3.8
3/1+3/2	296	296	131	0	27	1.4	1.7	0.2	3.3	40.3	1.8	1.7	3.6
4/1	158	158	0	0	0	0.6	0.2	0.0	0.9	19.6	1.7	0.2	1.9
5/1	98	98	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	392	392	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	31	31	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	414	414	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 14.7 Total Delay for Signalled Lanes (pcuHr): 7.96 Cycle Time (s): 50
PRC Over All Lanes (%): 14.7 Total Delay Over All Lanes(pcuHr): 7.96

Full Input Data And Results

Scenario 2: '2020 SAT' (FG2: '2020 SAT base plus dev', Plan 1: 'with peds')

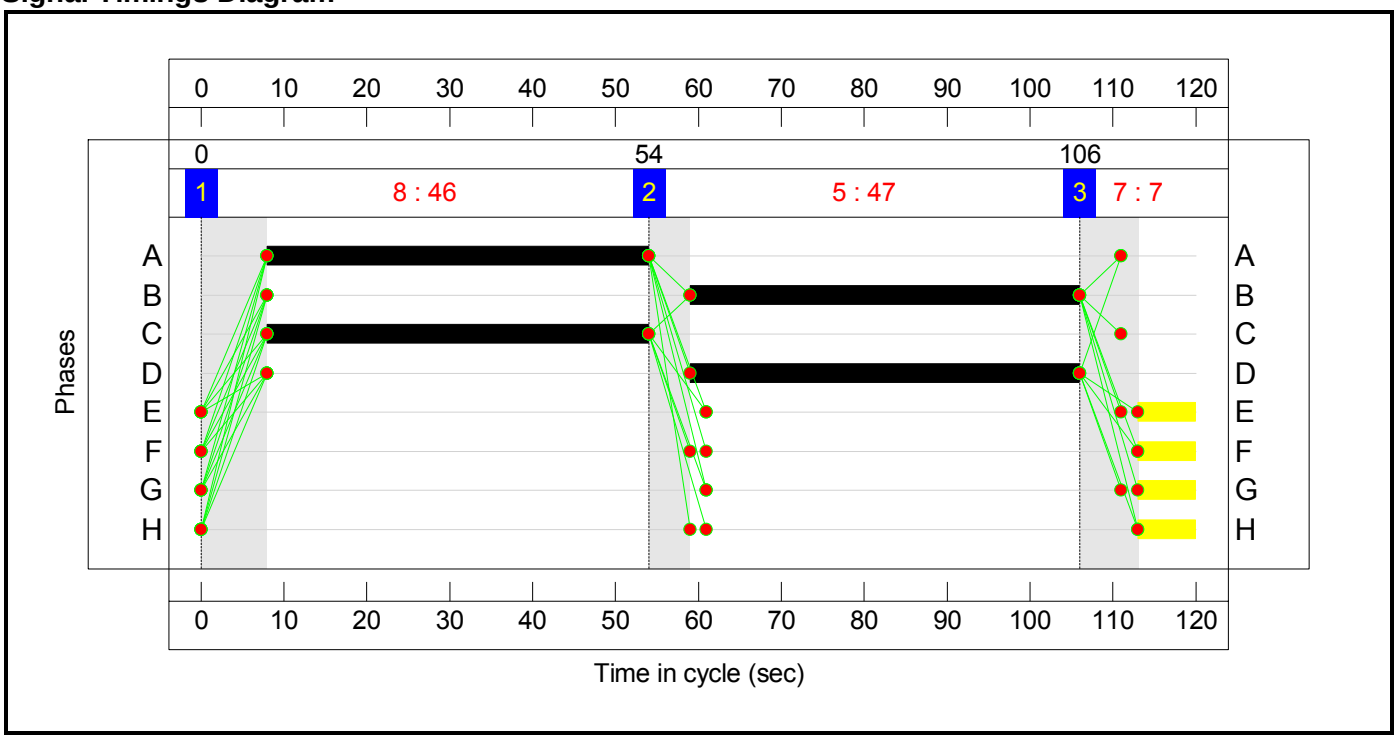
Stage Sequence Diagram



Stage Timings

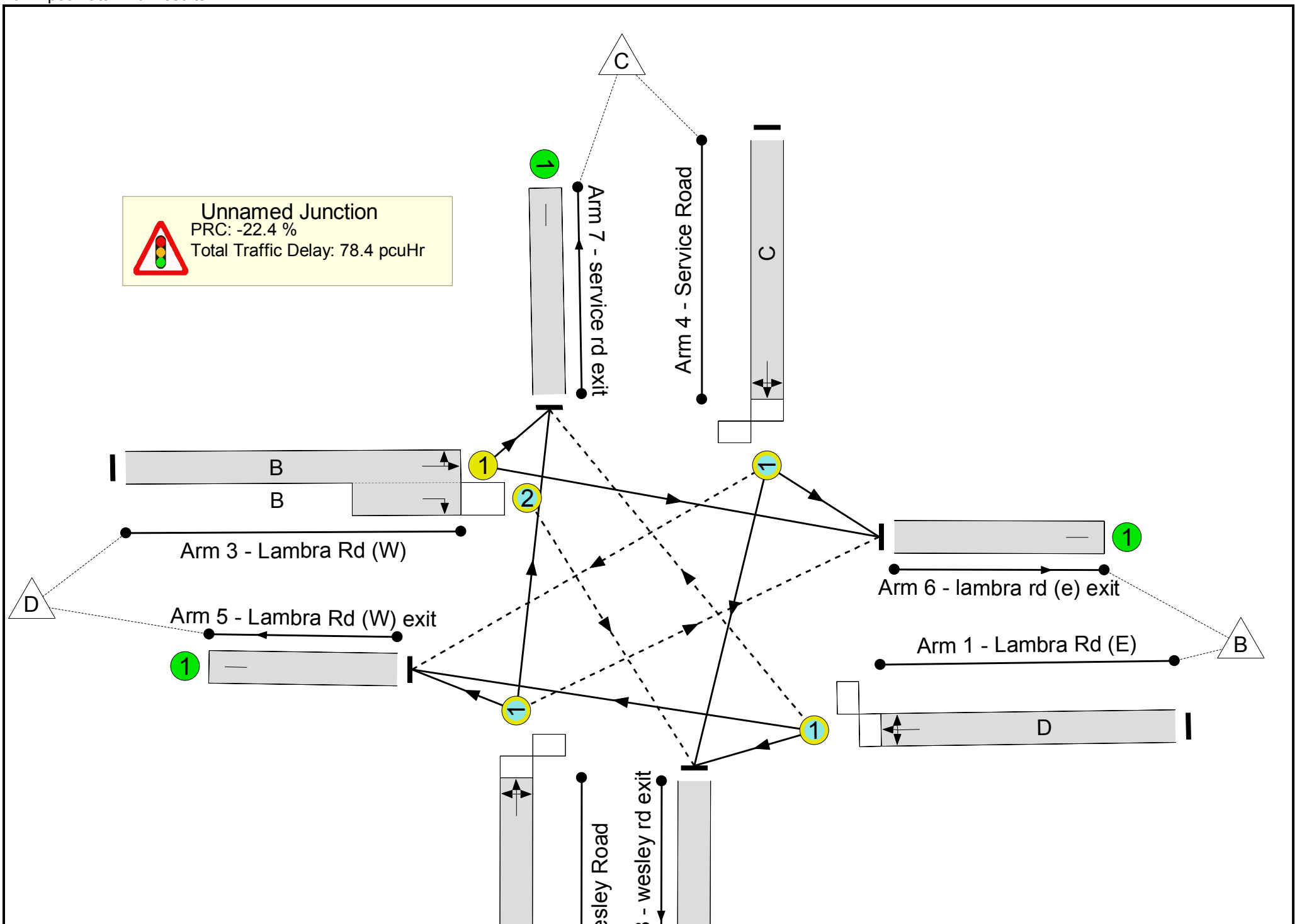
Stage	1	2	3
Duration	46	47	7
Change Point	0	54	106

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -22.4 %
Total Traffic Delay: 78.4 pcuHr
C
Arm 7 - service rd exit
Arm 4 - Service Road
C
B
B
Arm 3 - Lambra Rd (W)
D
Arm 5 - Lambra Rd (W) exit
Arm 6 - lambra rd (e) exit
Arm 1 - Lambra Rd (E)
B
D
wesley Road
- wesley rd exit

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**110.2%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**110.2%**
1/1	Lambra Rd (E) Ahead Right Left	O	N/A	N/A	D		1	47	-	358	1823	720	49.7%
2/1	Wesley Road Left Right Ahead	O	N/A	N/A	A		1	46	-	552	1822	501	110.2%
3/1+3/2	Lambra Rd (W) Ahead Left Right	U+O	N/A	N/A	B		1	47	-	593	1980:1724	203+352	106.7 : 106.7%
4/1	Service Road Right Left Ahead	O	N/A	N/A	C		1	46	-	406	1657	649	62.6%
5/1	Lambra Rd (W) exit	U	N/A	N/A	-		-	-	-	318	Inf	Inf	0.0%
6/1	lambra rd (e) exit	U	N/A	N/A	-		-	-	-	647	Inf	Inf	0.0%
7/1	service rd exit	U	N/A	N/A	-		-	-	-	339	Inf	Inf	0.0%
8/1	wesley rd exit	U	N/A	N/A	-		-	-	-	605	Inf	Inf	0.0%

Full Input Data And Results

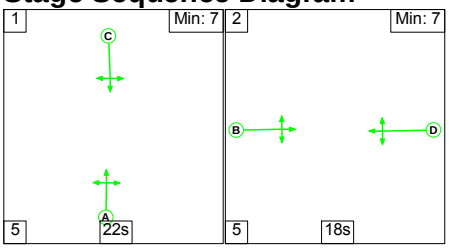
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**524**	**0**	**45**	**21.5**	**56.1**	**0.8**	**78.4**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**524**	**0**	**45**	**21.5**	**56.1**	**0.8**	**78.4**	**-**	**-**	**-**	**-**
1/1	358	358	113	0	1	2.7	0.5	0.0	3.2	32.3	9.0	0.5	9.4
2/1	552	501	99	0	3	8.6	30.1	0.2	38.8	253.1	20.1	30.1	50.2
3/1+3/2	593	569	312	0	40	6.9	24.7	0.6	32.2	195.7	16.8	24.7	41.5
4/1	406	406	0	0	0	3.3	0.8	0.0	4.1	36.8	10.8	0.8	11.7
5/1	298	298	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	637	637	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	318	318	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	581	581	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -22.4 Total Delay for Signalled Lanes (pcuHr): 78.41 Cycle Time (s): 120
PRC Over All Lanes (%): -22.4 Total Delay Over All Lanes(pcuHr): 78.41

Full Input Data And Results

Scenario 3: '2020 PM' (FG1: '2020 PM base plus dev', Plan 2: 'no peds')

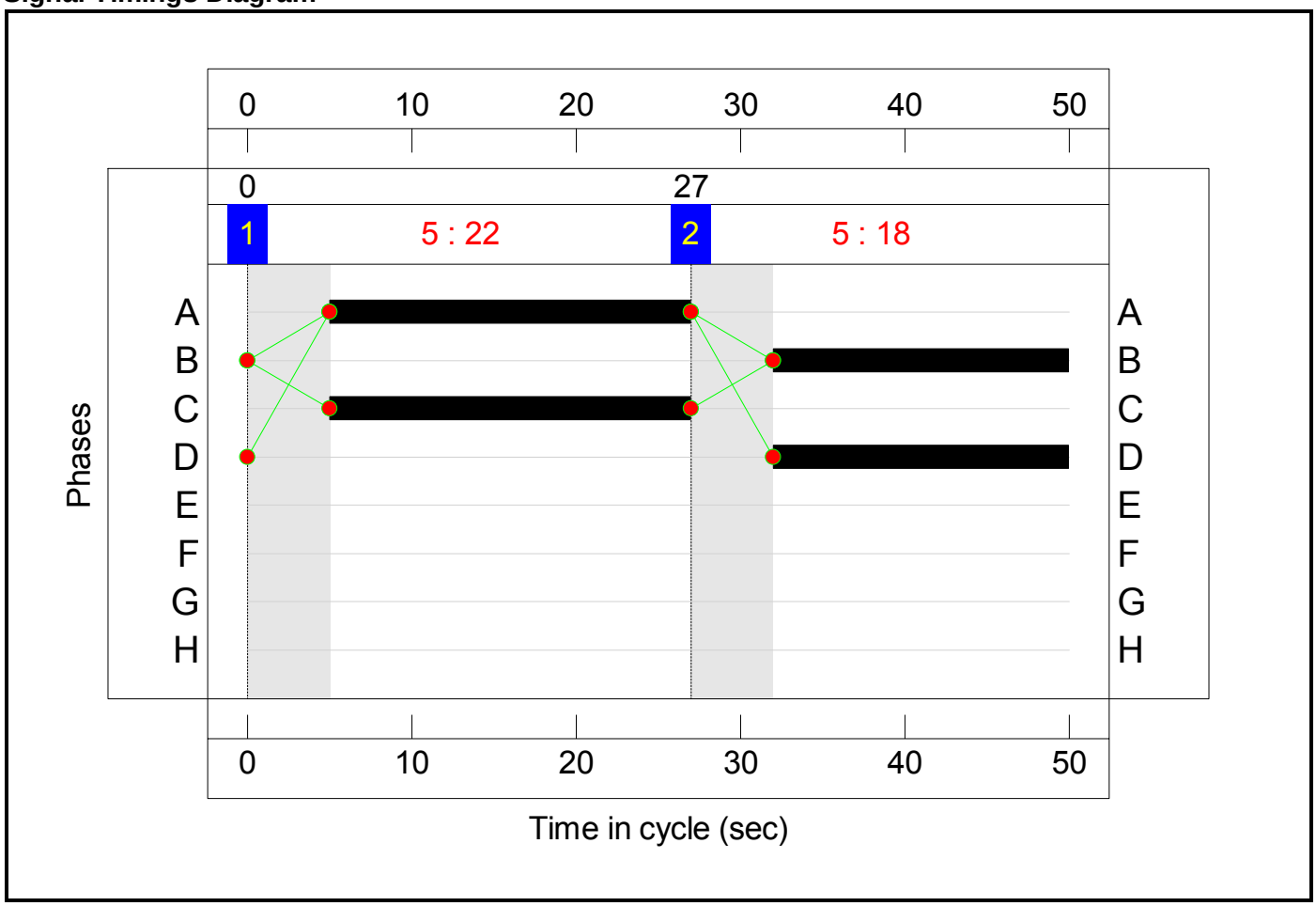
Stage Sequence Diagram



Stage Timings

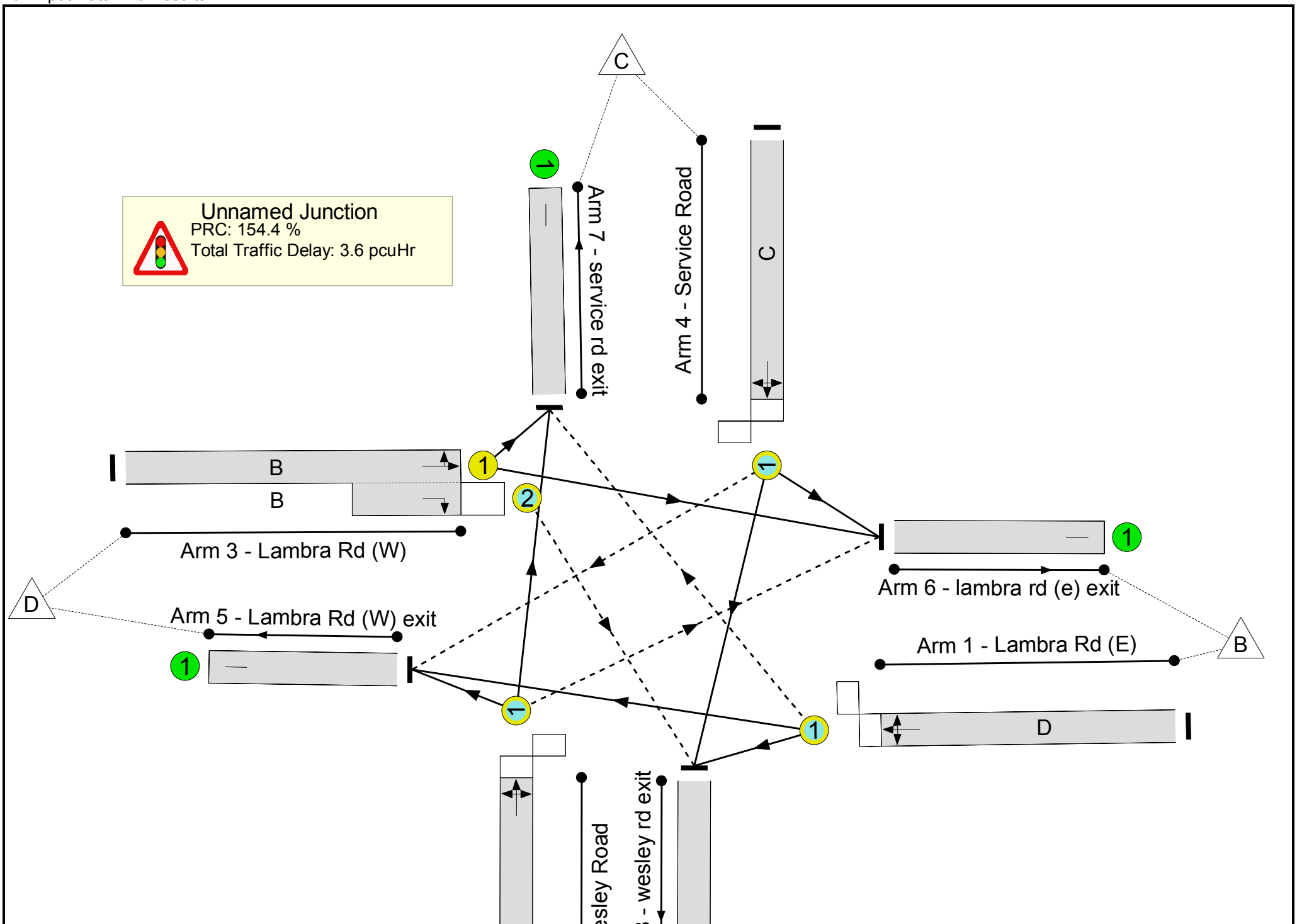
Stage	1	2
Duration	22	18
Change Point	0	27

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: 154.4 %
Total Traffic Delay: 3.6 pcuHr
C
Arm 7 - service rd exit
Arm 4 - Service Road
C
B
B
Arm 3 - Lambra Rd (W)
D
Arm 5 - Lambra Rd (W) exit
Arm 6 - lambra rd (e) exit
Arm 1 - Lambra Rd (E)
B
D
wesley Road
- wesley rd exit

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**35.4%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**35.4%**
1/1	Lambra Rd (E) Ahead Right Left	O	N/A	N/A	D		1	18	-	227	1742	662	34.3%
2/1	Wesley Road Left Right Ahead	O	N/A	N/A	A		1	22	-	254	1766	774	32.8%
3/1+3/2	Lambra Rd (W) Ahead Left Right	U+O	N/A	N/A	B		1	18	-	296	1980:1724	390+447	35.4 : 35.4%
4/1	Service Road Right Left Ahead	O	N/A	N/A	C		1	22	-	158	1762	811	19.5%
5/1	Lambra Rd (W) exit	U	N/A	N/A	-		-	-	-	98	Inf	Inf	0.0%
6/1	lambra rd (e) exit	U	N/A	N/A	-		-	-	-	392	Inf	Inf	0.0%
7/1	service rd exit	U	N/A	N/A	-		-	-	-	31	Inf	Inf	0.0%
8/1	wesley rd exit	U	N/A	N/A	-		-	-	-	414	Inf	Inf	0.0%

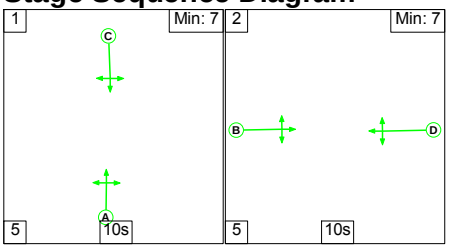
Full Input Data And Results

Item	Arriving (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 PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**356**	**0**	**4**	**2.5**	**0.9**	**0.2**	**3.6**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**356**	**0**	**4**	**2.5**	**0.9**	**0.2**	**3.6**	**-**	**-**	**-**	**-**
1/1	227	227	25	0	1	0.7	0.3	0.0	1.0	15.3	2.2	0.3	2.5
2/1	254	254	172	0	4	0.6	0.2	0.1	0.9	13.0	2.2	0.2	2.4
3/1+3/2	296	296	158	0	0	0.9	0.3	0.1	1.3	15.4	1.5	0.3	1.8
4/1	158	158	0	0	0	0.4	0.1	0.0	0.5	10.8	1.3	0.1	1.4
5/1	98	98	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	392	392	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	31	31	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	414	414	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 154.4 Total Delay for Signalled Lanes (pcuHr): 3.62 Cycle Time (s): 50
PRC Over All Lanes (%): 154.4 Total Delay Over All Lanes(pcuHr): 3.62

Full Input Data And Results
Scenario 4: '2020 SAT' (FG2: '2020 SAT base plus dev', Plan 2: 'no peds')

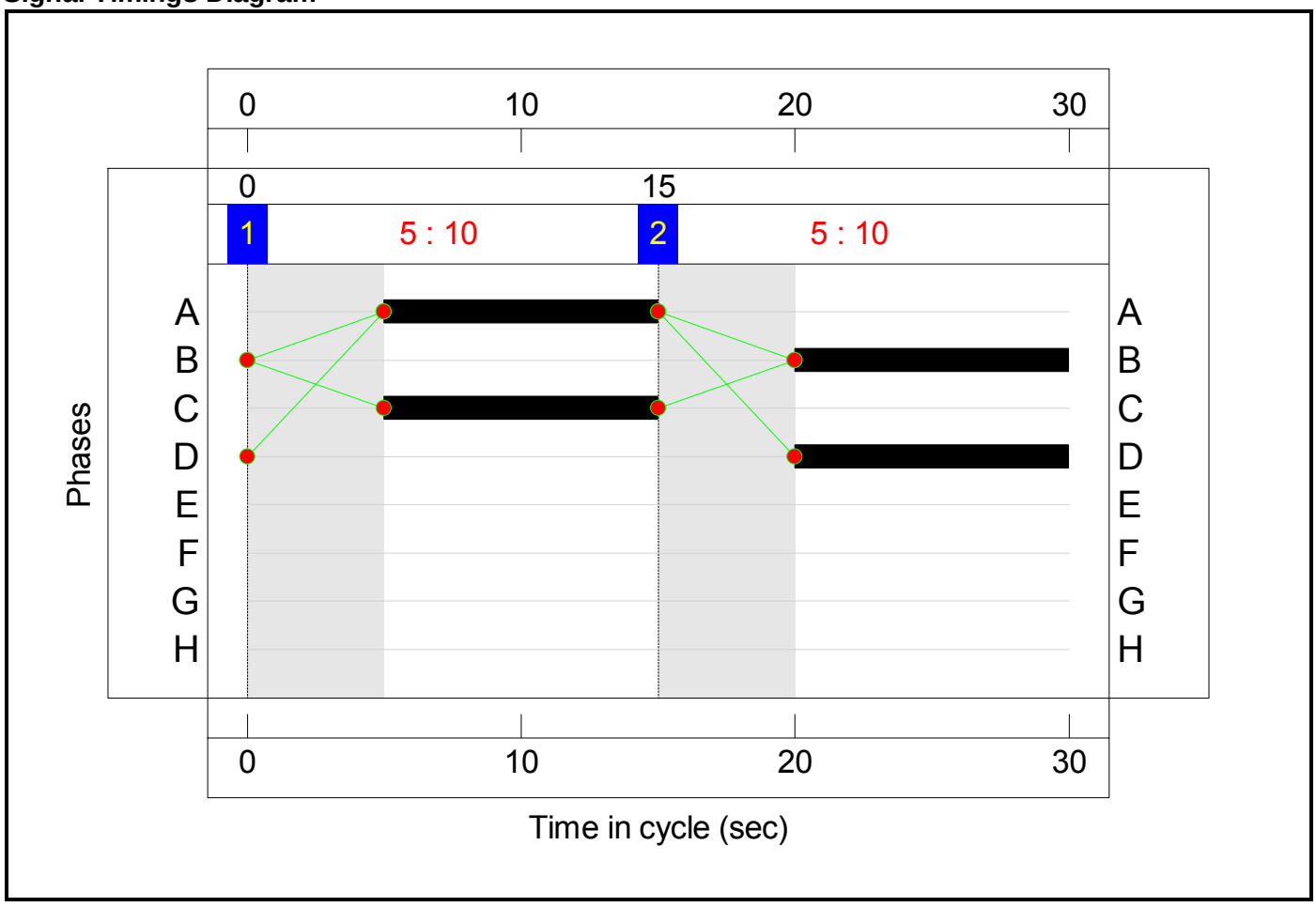
Stage Sequence Diagram



Stage Timings

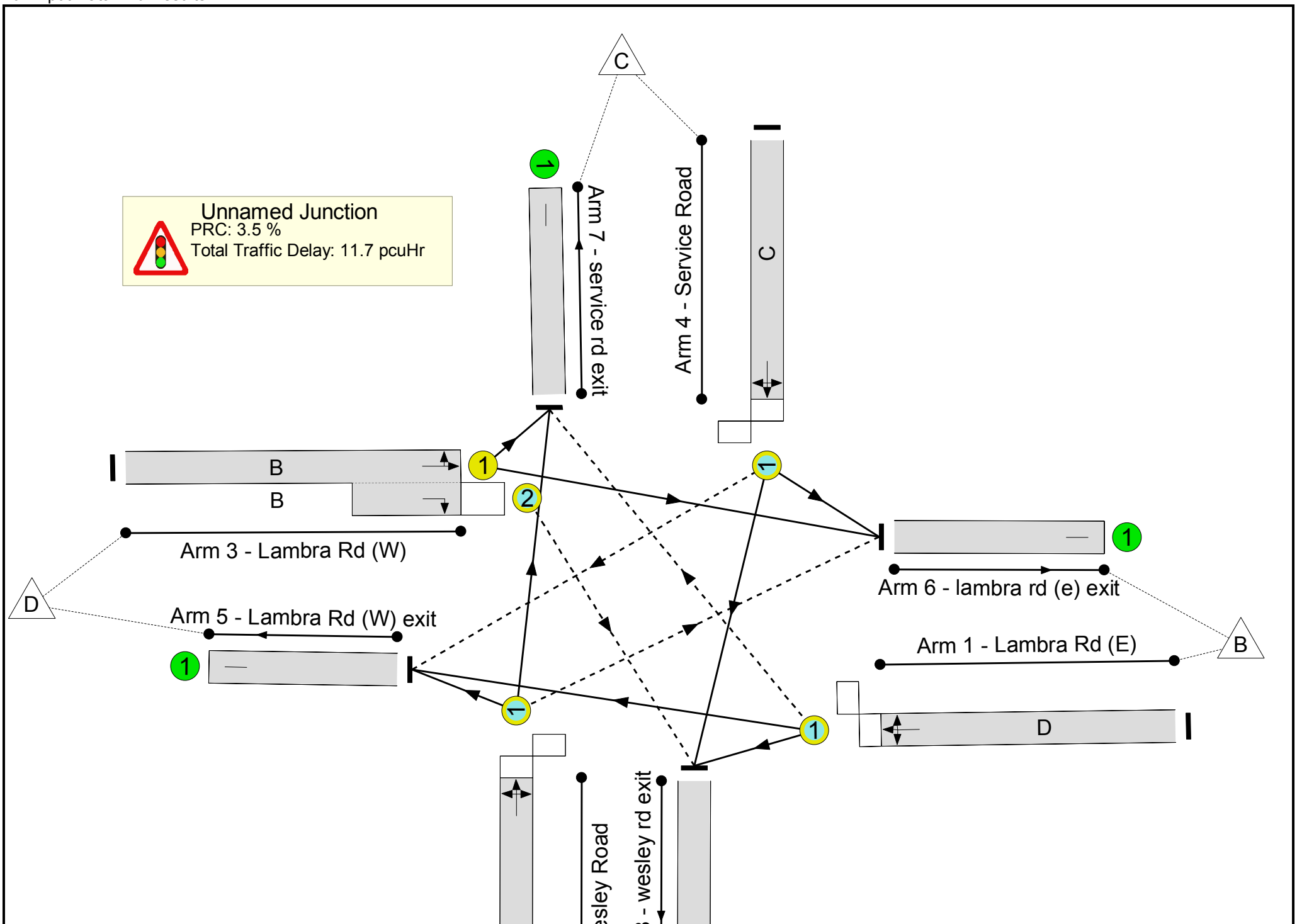
Stage	1	2
Duration	10	10
Change Point	0	15

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: 3.5 %
Total Traffic Delay: 11.7 pcuHr
C
Arm 7 - service rd exit
Arm 4 - Service Road
C
B
B
Arm 3 - Lambra Rd (W)
D
Arm 5 - Lambra Rd (W) exit
Arm 6 - lambra rd (e) exit
Arm 1 - Lambra Rd (E)
B
D
wesley Road
- wesley rd exit

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**87.0%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**87.0%**
1/1	Lambra Rd (E) Ahead Right Left	O	N/A	N/A	D		1	10	-	358	1823	668	53.6%
2/1	Wesley Road Left Right Ahead	O	N/A	N/A	A		1	10	-	552	1822	668	82.6%
3/1+3/2	Lambra Rd (W) Ahead Left Right	U+O	N/A	N/A	B		1	10	-	593	1980:1724	249+432	87.0 : 87.0%
4/1	Service Road Right Left Ahead	O	N/A	N/A	C		1	10	-	406	1657	608	66.8%
5/1	Lambra Rd (W) exit	U	N/A	N/A	-		-	-	-	318	Inf	Inf	0.0%
6/1	lambra rd (e) exit	U	N/A	N/A	-		-	-	-	647	Inf	Inf	0.0%
7/1	service rd exit	U	N/A	N/A	-		-	-	-	339	Inf	Inf	0.0%
8/1	wesley rd exit	U	N/A	N/A	-		-	-	-	605	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (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 PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**490**	**0**	**113**	**4.2**	**7.0**	**0.6**	**11.7**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**490**	**0**	**113**	**4.2**	**7.0**	**0.6**	**11.7**	**-**	**-**	**-**	**-**
1/1	358	358	110	0	4	0.7	0.6	0.0	1.4	13.6	2.3	0.6	2.9
2/1	552	552	109	0	4	1.3	2.3	0.1	3.7	24.0	4.1	2.3	6.4
3/1+3/2	593	593	271	0	105	1.2	3.1	0.4	4.8	29.1	2.8	3.1	5.9
4/1	406	406	0	0	0	0.9	1.0	0.0	1.9	16.8	2.8	1.0	3.8
5/1	318	318	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	647	647	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	339	339	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	605	605	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 3.5 Total Delay for Signalled Lanes (pcuHr): 11.74 Cycle Time (s): 30
PRC Over All Lanes (%): 3.5 Total Delay Over All Lanes(pcuHr): 11.74

Appendix E4: LAMBRA ROAD / PONTEFRACT ROAD PICADY Outputs

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE SALES
TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: software@trl.co.uk

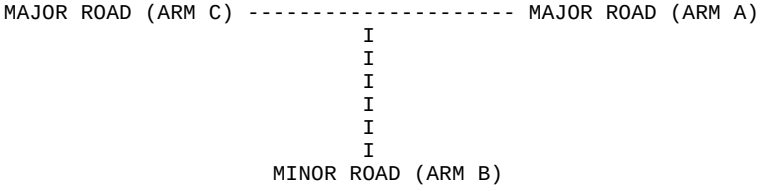
Run with file:-
"F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Modelling\PICADY\Lambra Ponte Priority.vpi"
(drive-on-the-left) at 08:13:16 on Wednesday, 17 June 2015

RUN INFORMATION

RUN TITLE	: Pontefract Road/Lamborough Road
LOCATION	: Barnsley
DATE	: 29/05/15
CLIENT	:
ENUMERATOR	: SmithsonN [UKLDS2PC32028]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Arm A
ARM B IS Arm B
ARM C IS Arm C

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) 8.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)150.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 30.0 M.
- VISIBILITY TO RIGHT	(VB-A) 200.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(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
899.99	0.31	0.12

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
702.90	0.29	0.11	0.18	0.41

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
660.83	0.23	0.23

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2020 Weekday PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	7.34	11.01	7.34
ARM B	15.00	45.00	75.00	3.67	5.51	3.67
ARM C	15.00	45.00	75.00	6.38	9.56	6.38

Demand set: 2020 Weekday PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.300	0.700
		0.0	176.0	411.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.759	0.000	0.241
		223.0	0.0	71.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.982	0.018	0.000
		501.0	9.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
16.45-17.00									
B-AC	3.69	8.42	0.438		0.00	0.76	10.7		0.21
C-A	6.29								
C-B	0.11	8.33	0.014		0.00	0.01	0.2		0.12
A-B	2.21								
A-C	5.16								

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)
17.00-17.15									
B-AC	4.40	7.86	0.560		0.76	1.22	17.2		0.28
C-A	7.51								
C-B	0.13	8.01	0.017		0.01	0.02	0.2		0.13
A-B	2.64								
A-C	6.16								

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)
17.15-17.30									
B-AC	5.39	7.08	0.762		1.22	2.80	36.4		0.53
C-A	9.19								
C-B	0.17	7.55	0.022		0.02	0.02	0.3		0.14
A-B	3.23								
A-C	7.54								

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)
17.30-17.45									
B-AC	5.39	7.08	0.762		2.80	2.97	43.6		0.58
C-A	9.19								
C-B	0.17	7.55	0.022		0.02	0.02	0.3		0.14
A-B	3.23								
A-C	7.54								

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)
17.45-18.00									
B-AC	4.40	7.86	0.560		2.97	1.33	22.0		0.31
C-A	7.51								
C-B	0.13	8.01	0.017		0.02	0.02	0.3		0.13
A-B	2.64								
A-C	6.16								

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)
18.00-18.15									
B-AC	3.69	8.42	0.438		1.33	0.80	12.7		0.21
C-A	6.29								
C-B	0.11	8.33	0.014		0.02	0.01	0.2		0.12
A-B	2.21								
A-C	5.16								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.2	*
17.30	2.8	***
17.45	3.0	***
18.00	1.3	*
18.15	0.8	*

QUEUE FOR STREAM C-B

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

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	404.7	269.8	142.4	0.35	142.5	0.35
C-A	689.6	459.7				
C-B	12.4	8.3	1.6	0.13	1.6	0.13
A-B	242.3	161.5				
A-C	565.7	377.1				
ALL	1914.6	1276.4	144.0	0.08	144.0	0.08

* 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 RUN*******

========== end of file ==========

Printed at 08:13:35 on 17/06/2015]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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EMAIL: software@trl.co.uk

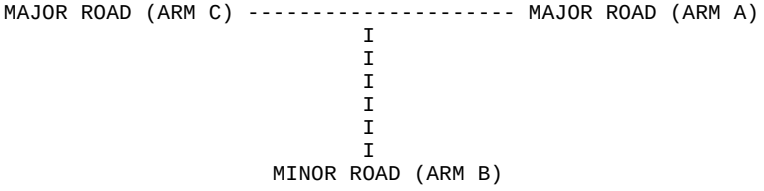
Run with file:-
"F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Modelling\PICADY\Lambra Ponte Priority.vpi"
(drive-on-the-left) at 10:40:42 on Friday, 19 June 2015

RUN INFORMATION

RUN TITLE	: Pontefract Road/Lamborough Road
LOCATION	: Barnsley
DATE	: 29/05/15
CLIENT	:
ENUMERATOR	: SmithsonN [UKLDS2PC32028]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Arm A
ARM B IS Arm B
ARM C IS Arm C

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) 8.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B) 80.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2020 Base + Dev Weekday PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	7.55	11.33	7.55
ARM B	15.00	45.00	75.00	3.89	5.83	3.89
ARM C	15.00	45.00	75.00	6.38	9.56	6.38

Demand set: 2020 Base + Dev Weekday PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.291	0.709
		0.0	176.0	428.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.772	0.000	0.228
		240.0	0.0	71.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.982	0.018	0.000
		501.0	9.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
16.45-17.00									
B-AC	3.90	7.35	0.531		0.00	1.09	14.9		0.28
C-A	6.29								
C-B	0.11	7.78	0.015		0.00	0.01	0.2		0.13
A-B	2.21								
A-C	5.37								

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)
17.00-17.15									
B-AC	4.66	6.84	0.681		1.09	1.97	26.6		0.43
C-A	7.51								
C-B	0.13	7.46	0.018		0.01	0.02	0.3		0.14
A-B	2.64								
A-C	6.41								

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)
17.15-17.30									
B-AC	5.71	6.14	0.930		1.97	6.43	72.4		1.08
C-A	9.19								
C-B	0.17	7.02	0.024		0.02	0.02	0.3		0.15
A-B	3.23								
A-C	7.85								

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)
17.30-17.45									
B-AC	5.71	6.14	0.930		6.43	7.97	109.2		1.49
C-A	9.19								
C-B	0.17	7.02	0.024		0.02	0.02	0.4		0.15
A-B	3.23								
A-C	7.85								

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)
17.45-18.00									
B-AC	4.66	6.84	0.681		7.97	2.34	48.5		0.64
C-A	7.51								
C-B	0.13	7.46	0.018		0.02	0.02	0.3		0.14
A-B	2.64								
A-C	6.41								

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)
18.00-18.15									
B-AC	3.90	7.35	0.531		2.34	1.18	19.2		0.30
C-A	6.29								
C-B	0.11	7.78	0.015		0.02	0.01	0.2		0.13
A-B	2.21								
A-C	5.37								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.1	*
17.15	2.0	**
17.30	6.4	******
17.45	8.0	********
18.00	2.3	**
18.15	1.2	*

QUEUE FOR STREAM C-B

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

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	428.1	285.4	290.8	0.68	290.9	0.68
C-A	689.6	459.7				
C-B	12.4	8.3	1.7	0.14	1.7	0.14
A-B	242.3	161.5				
A-C	589.1	392.7				
ALL	1961.4	1307.6	292.5	0.15	292.6	0.15

* 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 RUN*******

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2020 Base + Dev Saturday Peak

TIME PERIOD BEGINS 11.45 AND ENDS 13.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	9.52	14.29	9.52
ARM B	15.00	45.00	75.00	6.99	10.48	6.99
ARM C	15.00	45.00	75.00	4.78	7.16	4.78

Demand set: 2020 Base + Dev Saturday Peak

TIME	FROM/TO	ARM A	ARM B	ARM C
11.45 - 13.15				
	ARM A	0.000	0.416	0.584
		0.0	317.0	445.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.744	0.000	0.256
		416.0	0.0	143.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.937	0.063	0.000
		358.0	24.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 2

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)
11.45-12.00									
B-AC	7.01	7.38	0.951		0.00	7.53	78.5		0.90
C-A	4.49								
C-B	0.30	7.35	0.041		0.00	0.04	0.6		0.14
A-B	3.98								
A-C	5.58								

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)
12.00-12.15									
B-AC	8.38	6.87	1.220		7.53	31.43	295.5		3.31
C-A	5.36								
C-B	0.36	6.95	0.052		0.04	0.05	0.8		0.15
A-B	4.75								
A-C	6.67								

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)
12.15-12.30									
B-AC	10.26	6.15	1.667		31.43	93.08	934.1		10.39
C-A	6.57								
C-B	0.44	6.40	0.069		0.05	0.07	1.1		0.17
A-B	5.82								
A-C	8.17								

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)
12.30-12.45									
B-AC	10.26	6.15	1.667		93.08	154.69	1858.3		20.36
C-A	6.57								
C-B	0.44	6.40	0.069		0.07	0.07	1.1		0.17
A-B	5.82								
A-C	8.17								

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)
12.45-13.00									
B-AC	8.38	6.86	1.220		154.69	177.37	2490.4		23.73
C-A	5.36								
C-B	0.36	6.95	0.052		0.07	0.06	0.8		0.15
A-B	4.75								
A-C	6.67								

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)
13.00-13.15									
B-AC	7.01	7.38	0.951		177.37	172.57	2624.6		23.84
C-A	4.49								
C-B	0.30	7.35	0.041		0.06	0.04	0.7		0.14
A-B	3.98								
A-C	5.58								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
12.00	7.5	********
12.15	31.4	********************************
12.30	93.1	**********
12.45	154.7	**********
13.00	177.4	**********
13.15	172.6	**********

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
12.00	0.0
12.15	0.1
12.30	0.1
12.45	0.1
13.00	0.1
13.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	769.4	512.9	8281.4	10.76	10300.4	13.39
C-A	492.8	328.5				
C-B	33.0	22.0	5.1	0.15	5.1	0.15
A-B	436.3	290.9				
A-C	612.5	408.3				
ALL	2344.1	1562.7	8286.5	3.54	10305.5	4.40

* 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 RUN*******

========== end of file ==========

Printed at 10:40:48 on 19/06/2015]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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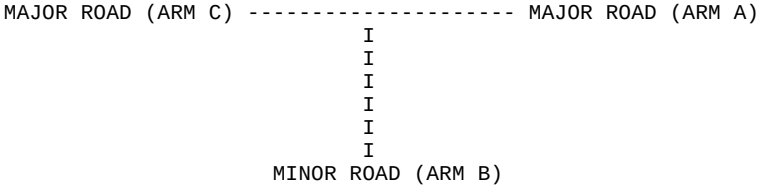
Run with file:-
"F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Modelling\PICADY\Lambra Ponte Priority.vpi"
(drive-on-the-left) at 10:39:26 on Friday, 19 June 2015

RUN INFORMATION

RUN TITLE	: Pontefract Road/Lamborough Road
LOCATION	: Barnsley
DATE	: 29/05/15
CLIENT	:
ENUMERATOR	: SmithsonN [UKLDS2PC32028]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Arm A
ARM B IS Arm B
ARM C IS Arm C

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)	8.50 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	2.20 M.
- VISIBILITY	(VC-B)	80.00 M.
- BLOCKS TRAFFIC (SPACES)		NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	50.0 M.
- VISIBILITY TO RIGHT	(VB-A)	50.0 M.
- LANE 1 WIDTH	(WB-C)	5.00 M.
- LANE 2 WIDTH	(WB-A)	0.00 M.

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2020 Weekday PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TO TOP OF PEAK TO RISE	FLOW STOPS IS REACHED	FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00		7.34	11.01	7.34
ARM B	15.00	45.00	75.00		3.67	5.51	3.67
ARM C	15.00	45.00	75.00		6.38	9.56	6.38

Demand set: 2020 Weekday PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.300	0.700
		0.0	176.0	411.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.759	0.000	0.241
		223.0	0.0	71.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.982	0.018	0.000
		501.0	9.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
16.45-17.00									
B-AC	3.69	7.44	0.496		0.00	0.95	13.1		0.26
C-A	6.29								
C-B	0.11	7.82	0.014		0.00	0.01	0.2		0.13
A-B	2.21								
A-C	5.16								

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)
17.00-17.15									
B-AC	4.40	6.95	0.634		0.95	1.63	22.4		0.38
C-A	7.51								
C-B	0.13	7.51	0.018		0.01	0.02	0.3		0.14
A-B	2.64								
A-C	6.16								

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)
17.15-17.30									
B-AC	5.39	6.26	0.862		1.63	4.49	54.0		0.83
C-A	9.19								
C-B	0.17	7.09	0.023		0.02	0.02	0.3		0.14
A-B	3.23								
A-C	7.54								

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)
17.30-17.45									
B-AC	5.39	6.26	0.862		4.49	5.10	72.6		1.02
C-A	9.19								
C-B	0.17	7.09	0.023		0.02	0.02	0.4		0.14
A-B	3.23								
A-C	7.54								

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)
17.45-18.00									
B-AC	4.40	6.95	0.634		5.10	1.85	33.4		0.46
C-A	7.51								
C-B	0.13	7.51	0.018		0.02	0.02	0.3		0.14
A-B	2.64								
A-C	6.16								

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)
18.00-18.15									
B-AC	3.69	7.44	0.496		1.85	1.02	16.4		0.27
C-A	6.29								
C-B	0.11	7.82	0.014		0.02	0.01	0.2		0.13
A-B	2.21								
A-C	5.16								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.6	**
17.30	4.5	****
17.45	5.1	*****
18.00	1.9	**
18.15	1.0	*

QUEUE FOR STREAM C-B

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

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	404.7	269.8	211.8	0.52	211.9	0.52
C-A	689.6	459.7				
C-B	12.4	8.3	1.7	0.14	1.7	0.14
A-B	242.3	161.5				
A-C	565.7	377.1				
ALL	1914.6	1276.4	213.5	0.11	213.6	0.11

* 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 RUN*******

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2020 Saturday Peak

TIME PERIOD BEGINS 11.45 AND ENDS 13.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	8.71	13.07	8.71
ARM B	15.00	45.00	75.00	5.51	8.27	5.51
ARM C	15.00	45.00	75.00	4.78	7.16	4.78

Demand set: 2020 Saturday Peak

TIME	FROM/TO	ARM A	ARM B	ARM C
11.45 - 13.15				
	ARM A	0.000	0.389	0.611
		0.0	271.0	426.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.676	0.000	0.324
		298.0	0.0	143.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.937	0.063	0.000
		358.0	24.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 2

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)
11.45-12.00									
B-AC	5.53	7.68	0.720		0.00	2.33	30.0		0.41
C-A	4.49								
C-B	0.30	7.53	0.040		0.00	0.04	0.6		0.14
A-B	3.40								
A-C	5.35								

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)
12.00-12.15									
B-AC	6.61	7.20	0.918		2.33	6.37	74.1		0.95
C-A	5.36								
C-B	0.36	7.16	0.050		0.04	0.05	0.8		0.15
A-B	4.06								
A-C	6.38								

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)
12.15-12.30									
B-AC	8.09	6.52	1.240		6.37	31.17	285.2		3.28
C-A	6.57								
C-B	0.44	6.66	0.066		0.05	0.07	1.0		0.16
A-B	4.97								
A-C	7.82								

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)
12.30-12.45									
B-AC	8.09	6.52	1.241		31.17	54.93	646.1		6.72
C-A	6.57								
C-B	0.44	6.66	0.066		0.07	0.07	1.1		0.16
A-B	4.97								
A-C	7.82								

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)
12.45-13.00									
B-AC	6.61	7.20	0.918		54.93	48.01	772.1		7.19
C-A	5.36								
C-B	0.36	7.16	0.050		0.07	0.05	0.8		0.15
A-B	4.06								
A-C	6.38								

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)
13.00-13.15									
B-AC	5.53	7.68	0.720		48.01	18.16	496.3		4.50
C-A	4.49								
C-B	0.30	7.53	0.040		0.05	0.04	0.6		0.14
A-B	3.40								
A-C	5.35								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
12.00	2.3	**
12.15	6.4	******
12.30	31.2	********************************
12.45	54.9	***
13.00	48.0	**
13.15	18.2	******************

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
12.00	0.0
12.15	0.1
12.30	0.1
12.45	0.1
13.00	0.1
13.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	607.0	404.7	2303.7	3.80	2325.2	3.83
C-A	492.8	328.5				
C-B	33.0	22.0	4.9	0.15	4.9	0.15
A-B	373.0	248.7				
A-C	586.4	390.9				
ALL	2092.2	1394.8	2308.6	1.10	2330.1	1.11

* 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 RUN*******

========== end of file ==========

Printed at 10:39:33 on 19/06/2015]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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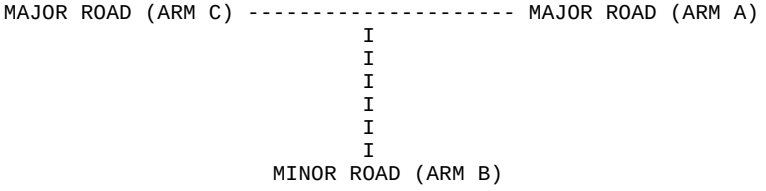
Run with file:-
"F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Modelling\PICADY\Lambra Ponte Priority.vpi"
(drive-on-the-left) at 08:48:04 on Friday, 19 June 2015

RUN INFORMATION

RUN TITLE	: Pontefract Road/Lamborough Road
LOCATION	: Barnsley
DATE	: 29/05/15
CLIENT	:
ENUMERATOR	: SmithsonN [UKLDS2PC32028]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Arm A
ARM B IS Arm B
ARM C IS Arm C

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) 8.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B) 80.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2020 Base + Dev Weekday PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	7.55	11.33	7.55
ARM B	15.00	45.00	75.00	3.89	5.83	3.89
ARM C	15.00	45.00	75.00	6.38	9.56	6.38

Demand set: 2020 Base + Dev Weekday PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.291	0.709
		0.0	176.0	428.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.772	0.000	0.228
		240.0	0.0	71.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.982	0.018	0.000
		501.0	9.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
16.45-17.00									
B-AC	3.90	7.35	0.531		0.00	1.09	14.9		0.28
C-A	6.29								
C-B	0.11	7.78	0.015		0.00	0.01	0.2		0.13
A-B	2.21								
A-C	5.37								

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)
17.00-17.15									
B-AC	4.66	6.84	0.681		1.09	1.97	26.6		0.43
C-A	7.51								
C-B	0.13	7.46	0.018		0.01	0.02	0.3		0.14
A-B	2.64								
A-C	6.41								

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)
17.15-17.30									
B-AC	5.71	6.14	0.930		1.97	6.43	72.4		1.08
C-A	9.19								
C-B	0.17	7.02	0.024		0.02	0.02	0.3		0.15
A-B	3.23								
A-C	7.85								

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)
17.30-17.45									
B-AC	5.71	6.14	0.930		6.43	7.97	109.2		1.49
C-A	9.19								
C-B	0.17	7.02	0.024		0.02	0.02	0.4		0.15
A-B	3.23								
A-C	7.85								

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)
17.45-18.00									
B-AC	4.66	6.84	0.681		7.97	2.34	48.5		0.64
C-A	7.51								
C-B	0.13	7.46	0.018		0.02	0.02	0.3		0.14
A-B	2.64								
A-C	6.41								

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)
18.00-18.15									
B-AC	3.90	7.35	0.531		2.34	1.18	19.2		0.30
C-A	6.29								
C-B	0.11	7.78	0.015		0.02	0.01	0.2		0.13
A-B	2.21								
A-C	5.37								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.1	*
17.15	2.0	**
17.30	6.4	******
17.45	8.0	********
18.00	2.3	**
18.15	1.2	*

QUEUE FOR STREAM C-B

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

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	428.1	285.4	290.8	0.68	290.9	0.68
C-A	689.6	459.7				
C-B	12.4	8.3	1.7	0.14	1.7	0.14
A-B	242.3	161.5				
A-C	589.1	392.7				
ALL	1961.4	1307.6	292.5	0.15	292.6	0.15

* 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 RUN*******

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2020 Base + Dev Saturday Peak

TIME PERIOD BEGINS 11.45 AND ENDS 13.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	9.52	14.29	9.52
ARM B	15.00	45.00	75.00	6.99	10.48	6.99
ARM C	15.00	45.00	75.00	4.78	7.16	4.78

Demand set: 2020 Base + Dev Saturday Peak

TIME	FROM/TO	ARM A	ARM B	ARM C
11.45 - 13.15				
	ARM A	0.000	0.416	0.584
		0.0	317.0	445.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.744	0.000	0.256
		416.0	0.0	143.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.937	0.063	0.000
		358.0	24.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 2

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)
11.45-12.00									
B-AC	7.01	7.38	0.951		0.00	7.53	78.5		0.90
C-A	4.49								
C-B	0.30	7.35	0.041		0.00	0.04	0.6		0.14
A-B	3.98								
A-C	5.58								

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)
12.00-12.15									
B-AC	8.38	6.87	1.220		7.53	31.43	295.5		3.31
C-A	5.36								
C-B	0.36	6.95	0.052		0.04	0.05	0.8		0.15
A-B	4.75								
A-C	6.67								

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)
12.15-12.30									
B-AC	10.26	6.15	1.667		31.43	93.08	934.1		10.39
C-A	6.57								
C-B	0.44	6.40	0.069		0.05	0.07	1.1		0.17
A-B	5.82								
A-C	8.17								

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)
12.30-12.45									
B-AC	10.26	6.15	1.667		93.08	154.69	1858.3		20.36
C-A	6.57								
C-B	0.44	6.40	0.069		0.07	0.07	1.1		0.17
A-B	5.82								
A-C	8.17								

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)
12.45-13.00									
B-AC	8.38	6.86	1.220		154.69	177.37	2490.4		23.73
C-A	5.36								
C-B	0.36	6.95	0.052		0.07	0.06	0.8		0.15
A-B	4.75								
A-C	6.67								

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)
13.00-13.15									
B-AC	7.01	7.38	0.951		177.37	172.57	2624.6		23.84
C-A	4.49								
C-B	0.30	7.35	0.041		0.06	0.04	0.7		0.14
A-B	3.98								
A-C	5.58								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
12.00	7.5	********
12.15	31.4	********************************
12.30	93.1	**********
12.45	154.7	**********
13.00	177.4	**********
13.15	172.6	**********

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
12.00	0.0
12.15	0.1
12.30	0.1
12.45	0.1
13.00	0.1
13.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	769.4	512.9	8281.4	10.76	10300.4	13.39
C-A	492.8	328.5				
C-B	33.0	22.0	5.1	0.15	5.1	0.15
A-B	436.3	290.9				
A-C	612.5	408.3				
ALL	2344.1	1562.7	8286.5	3.54	10305.5	4.40

* 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 RUN*******

========== end of file ==========

Printed at 08:49:25 on 19/06/2015]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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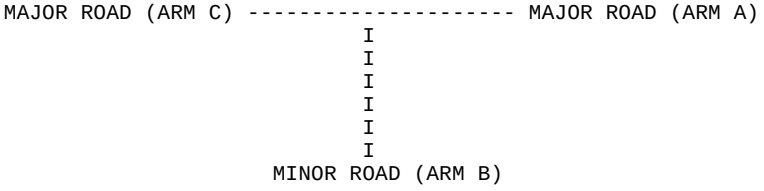
Run with file:-
"F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Modelling\PICADY\Lambra Ponte Priority.vpi"
(drive-on-the-left) at 10:40:13 on Friday, 19 June 2015

RUN INFORMATION

RUN TITLE	: Pontefract Road/Lamborough Road
LOCATION	: Barnsley
DATE	: 29/05/15
CLIENT	:
ENUMERATOR	: SmithsonN [UKLDS2PC32028]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Arm A
ARM B IS Arm B
ARM C IS Arm C

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) 8.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B) 80.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2015 Base Weekday PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	6.84	10.26	6.84
ARM B	15.00	45.00	75.00	3.41	5.12	3.41
ARM C	15.00	45.00	75.00	5.94	8.91	5.94

Demand set: 2015 Base Weekday PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.300	0.700
		0.0	164.0	383.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.758	0.000	0.242
		207.0	0.0	66.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.983	0.017	0.000
		467.0	8.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
16.45-17.00									
B-AC	3.43	7.61	0.450		0.00	0.80	11.1		0.23
C-A	5.86								
C-B	0.10	7.93	0.013		0.00	0.01	0.2		0.13
A-B	2.06								
A-C	4.81								

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)
17.00-17.15									
B-AC	4.09	7.16	0.572		0.80	1.27	17.8		0.32
C-A	7.00								
C-B	0.12	7.64	0.016		0.01	0.02	0.2		0.13
A-B	2.46								
A-C	5.74								

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)
17.15-17.30									
B-AC	5.01	6.52	0.769		1.27	2.86	37.0		0.58
C-A	8.57								
C-B	0.15	7.25	0.020		0.02	0.02	0.3		0.14
A-B	3.01								
A-C	7.03								

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)
17.30-17.45									
B-AC	5.01	6.52	0.769		2.86	3.06	44.7		0.64
C-A	8.57								
C-B	0.15	7.25	0.020		0.02	0.02	0.3		0.14
A-B	3.01								
A-C	7.03								

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)
17.45-18.00									
B-AC	4.09	7.16	0.572		3.06	1.40	23.3		0.35
C-A	7.00								
C-B	0.12	7.64	0.016		0.02	0.02	0.2		0.13
A-B	2.46								
A-C	5.74								

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)
18.00-18.15									
B-AC	3.43	7.61	0.450		1.40	0.84	13.4		0.24
C-A	5.86								
C-B	0.10	7.93	0.013		0.02	0.01	0.2		0.13
A-B	2.06								
A-C	4.81								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.3	*
17.30	2.9	***
17.45	3.1	***
18.00	1.4	*
18.15	0.8	*

QUEUE FOR STREAM C-B

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

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	375.8	250.5	147.2	0.39	147.3	0.39
C-A	642.8	428.5				
C-B	11.0	7.3	1.5	0.13	1.5	0.13
A-B	225.7	150.5				
A-C	527.2	351.4				
ALL	1782.5	1188.3	148.7	0.08	148.7	0.08

* 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 RUN*******

.SLOPES AND INTERCEPT

(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
786.65	0.27	0.11

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
622.33	0.26	0.10	0.16	0.36

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.29	0.21	0.21

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2015 Saturday Peak

TIME PERIOD BEGINS 11.45 AND ENDS 13.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	8.10	12.15	8.10
ARM B	15.00	45.00	75.00	5.14	7.71	5.14
ARM C	15.00	45.00	75.00	4.44	6.66	4.44

Demand set: 2015 Saturday Peak

TIME	FROM/TO	ARM A	ARM B	ARM C
11.45 - 13.15				
	ARM A	0.000	0.389	0.611
		0.0	252.0	396.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.676	0.000	0.324
		278.0	0.0	133.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.938	0.062	0.000
		333.0	22.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 2

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)
11.45-12.00									
B-AC	5.16	7.85	0.657		0.00	1.79	23.7		0.34
C-A	4.18								
C-B	0.28	7.66	0.036		0.00	0.04	0.5		0.14
A-B	3.16								
A-C	4.97								
12.00-12.15									
B-AC	6.16	7.41	0.831		1.79	3.96	50.0		0.65
C-A	4.99								
C-B	0.33	7.32	0.045		0.04	0.05	0.7		0.14
A-B	3.78								
A-C	5.93								
12.15-12.30									
B-AC	7.54	6.78	1.112		3.96	18.63	176.9		2.10
C-A	6.11								
C-B	0.40	6.85	0.059		0.05	0.06	0.9		0.16
A-B	4.62								
A-C	7.27								
12.30-12.45									
B-AC	7.54	6.78	1.112		18.63	30.95	372.7		3.95
C-A	6.11								
C-B	0.40	6.85	0.059		0.06	0.06	0.9		0.16
A-B	4.62								
A-C	7.27								

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)
12.45-13.00									
B-AC	6.16	7.41	0.831		30.95	15.70	349.9		3.34
C-A	4.99								
C-B	0.33	7.32	0.045		0.06	0.05	0.7		0.14
A-B	3.78								
A-C	5.93								

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)
13.00-13.15									
B-AC	5.16	7.85	0.657		15.70	2.09	74.8		0.78
C-A	4.18								
C-B	0.28	7.66	0.036		0.05	0.04	0.6		0.14
A-B	3.16								
A-C	4.97								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
12.00	1.8	**
12.15	4.0	****
12.30	18.6	******************
12.45	31.0	*******************************
13.00	15.7	***************
13.15	2.1	**

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
12.00	0.0
12.15	0.0
12.30	0.1
12.45	0.1
13.00	0.0
13.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	565.7	377.1	1048.0	1.85	1048.2	1.85
C-A	458.3	305.6				
C-B	30.3	20.2	4.4	0.14	4.4	0.14
A-B	346.9	231.2				
A-C	545.1	363.4				
ALL	1946.3	1297.5	1052.3	0.54	1052.6	0.54

* 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 RUN*******

========== end of file ==========

Printed at 10:40:19 on 19/06/2015]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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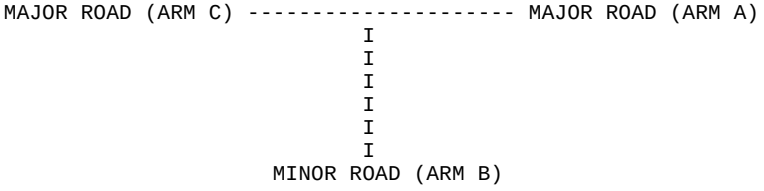
Run with file:-
"F:\PROJECTS\Development - BMBC Town Centre TA\03 EXECUTION\Modelling\PICADY\Lambra Ponte Priority.vpi"
(drive-on-the-left) at 10:34:45 on Tuesday, 16 June 2015

RUN INFORMATION

RUN TITLE	: Pontefract Road/Lamborough Road
LOCATION	: Barnsley
DATE	: 29/05/15
CLIENT	:
ENUMERATOR	: SmithsonN [UKLDS2PC32028]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Arm A
ARM B IS Arm B
ARM C IS Arm C

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) 8.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)150.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 30.0 M.
- VISIBILITY TO RIGHT	(VB-A) 200.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(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
899.99	0.31	0.12

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
702.90	0.29	0.11	0.18	0.41

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
660.83	0.23	0.23

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

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

Demand set: 2015 Base Weekday PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	6.84	10.26	6.84
ARM B	15.00	45.00	75.00	3.41	5.12	3.41
ARM C	15.00	45.00	75.00	5.94	8.91	5.94

Demand set: 2015 Base Weekday PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.300	0.700
		0.0	164.0	383.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.758	0.000	0.242
		207.0	0.0	66.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.983	0.017	0.000
		467.0	8.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
16.45-17.00									
B-AC	3.43	8.62	0.397		0.00	0.65	9.1		0.19
C-A	5.86								
C-B	0.10	8.45	0.012		0.00	0.01	0.2		0.12
A-B	2.06								
A-C	4.81								

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)
17.00-17.15									
B-AC	4.09	8.10	0.505		0.65	0.99	14.0		0.25
C-A	7.00								
C-B	0.12	8.14	0.015		0.01	0.01	0.2		0.12
A-B	2.46								
A-C	5.74								

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)
17.15-17.30									
B-AC	5.01	7.37	0.679		0.99	1.96	26.5		0.40
C-A	8.57								
C-B	0.15	7.72	0.019		0.01	0.02	0.3		0.13
A-B	3.01								
A-C	7.03								

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)
17.30-17.45									
B-AC	5.01	7.37	0.679		1.96	2.03	30.1		0.42
C-A	8.57								
C-B	0.15	7.72	0.019		0.02	0.02	0.3		0.13
A-B	3.01								
A-C	7.03								

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)
17.45-18.00									
B-AC	4.09	8.10	0.505		2.03	1.05	16.9		0.26
C-A	7.00								
C-B	0.12	8.14	0.015		0.02	0.02	0.2		0.12
A-B	2.46								
A-C	5.74								

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)
18.00-18.15									
B-AC	3.43	8.62	0.397		1.05	0.67	10.6		0.19
C-A	5.86								
C-B	0.10	8.45	0.012		0.02	0.01	0.2		0.12
A-B	2.06								
A-C	4.81								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	1.0	*
17.30	2.0	**
17.45	2.0	**
18.00	1.1	*
18.15	0.7	*

QUEUE FOR STREAM C-B

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

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	375.8	250.5	107.3	0.29	107.3	0.29
C-A	642.8	428.5				
C-B	11.0	7.3	1.4	0.13	1.4	0.13
A-B	225.7	150.5				
A-C	527.2	351.4				
ALL	1782.5	1188.3	108.7	0.06	108.7	0.06

* 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 RUN*******

========== end of file ==========

Printed at 10:35:53 on 16/06/2015]

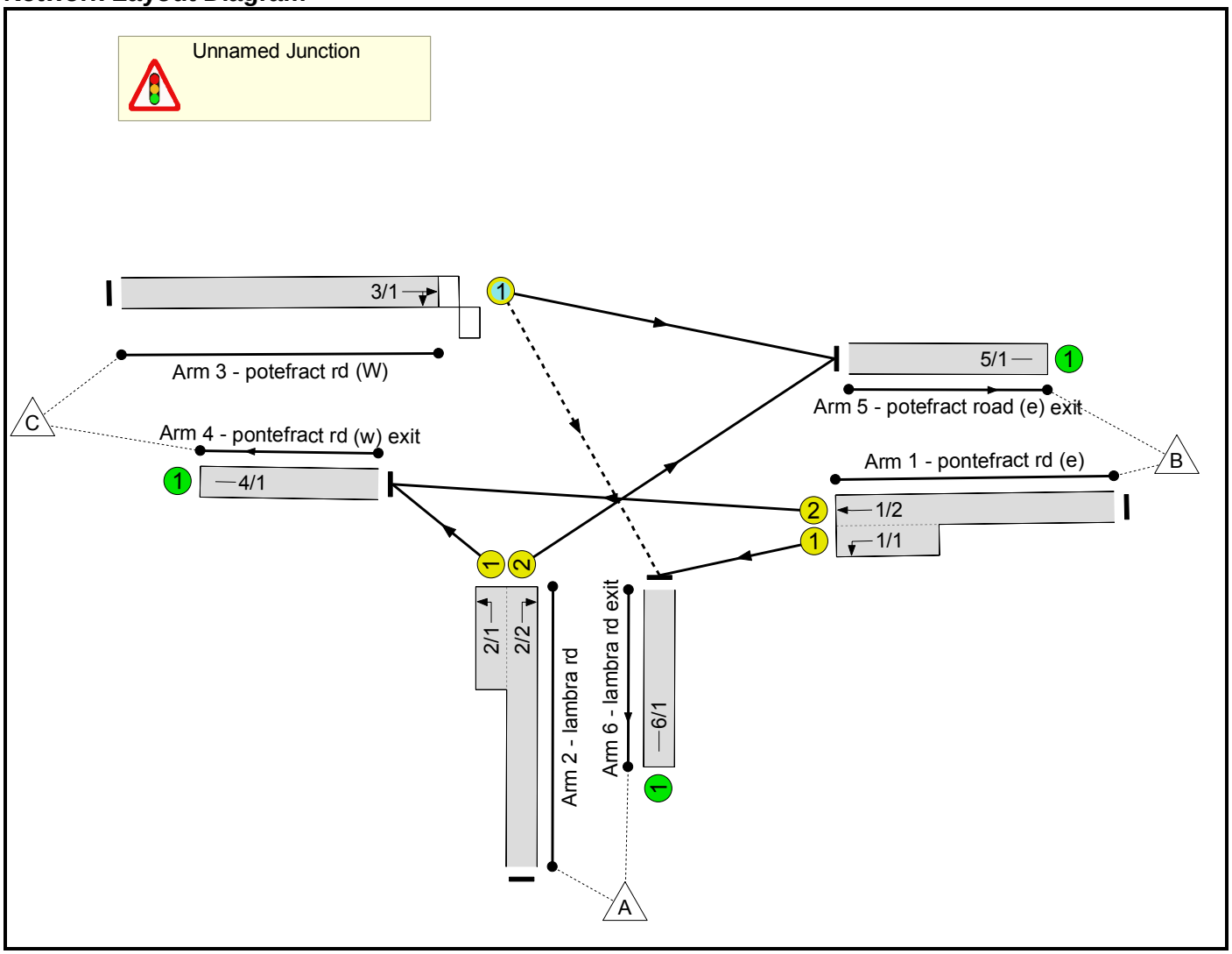
Appendix E5: LAMBRA ROAD / PONTEFRACT ROAD LINSIG Outputs

Full Input Data And Results

User and Project Details

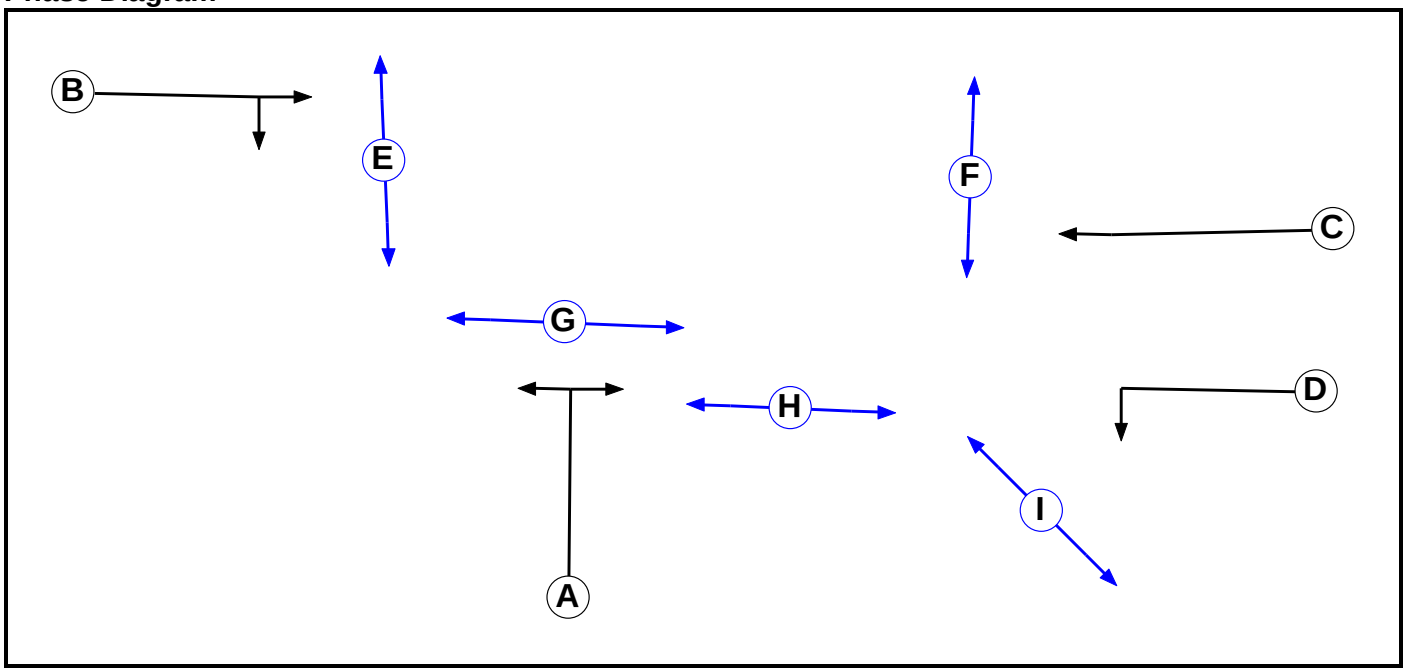
Project:	
Title:	
Location:	
File name:	Pontefract Road - Mittigation.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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	Pedestrian		7	7
F	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Pedestrian		7	7

Full Input Data And Results

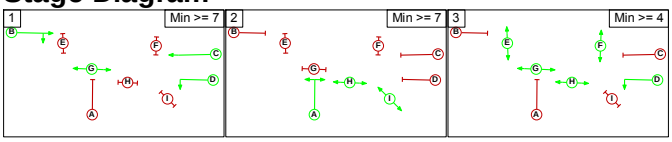
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I
A		5	5	-	7	7	5	-	-
B	5		-	-	5	7	-	7	-
C	5	-		-	7	5	-	-	-
D	-	-	-		-	-	-	-	5
E	10	10	10	-		-	-	-	-
F	10	10	10	-	-		-	-	-
G	10	-	-	-	-	-		-	-
H	-	10	-	-	-	-	-		-
I	-	-	-	10	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	B C D G
2	A H I
3	D E F G H

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage \ To Stage	1	2	3
1		10	7
2	10		10
3	10	10	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
3/1 (potefract rd (W))	6/1 (Right)	1439	0	1/1	1.09	All	2.00	1.00	0.50	2	2.00
				1/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (pontefract rd (e))	U	D	2	3	5.0	Geom	-	3.65	0.00	Y	Arm 6 Left	50.00
1/2 (pontefract rd (e))	U	C	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 4 Ahead	Inf
2/1 (lambra rd)	U	A	2	3	5.0	Geom	-	3.65	0.00	Y	Arm 4 Left	10.00
2/2 (lambra rd)	U	A	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 5 Right	15.00
3/1 (potefract rd (W))	O	B	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 5 Ahead Arm 6 Right	Inf 12.00
4/1 (pontefract rd (w) exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (potefract road (e) exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (lambra rd exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2020 PM base plus dev'	08:00	09:00	01:00	
2: '2020 SAT base plus dev'	08:00	09:00	01:00	

Scenario 1: '2020 PM' (FG1: '2020 PM base plus dev', Plan 1: 'with peds')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	282	71	353
	B	192	0	428	620
	C	9	501	0	510
	Tot.	201	783	499	1483

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2020 PM
Junction: Unnamed Junction	
1/1 (short)	192
1/2 (with short)	620(In) 428(Out)
2/1 (short)	71
2/2 (with short)	353(In) 282(Out)
3/1	510
4/1	499
5/1	783
6/1	201

Lane Saturation Flows

Junction: Unnamed Junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (pontefract rd (e))	3.65	0.00	Y	Arm 6 Left	50.00	100.0 %	1922	1922
1/2 (pontefract rd (e))	3.65	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1980	1980
2/1 (lambra rd)	3.65	0.00	Y	Arm 4 Left	10.00	100.0 %	1722	1722
2/2 (lambra rd)	3.65	0.00	Y	Arm 5 Right	15.00	100.0 %	1800	1800
3/1 (potefract rd (W))	3.65	0.00	Y	Arm 5 Ahead	Inf	98.2 %	1976	1976
				Arm 6 Right	12.00	1.8 %		
4/1 (pontefract rd (w) exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (potefract road (e) exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (lambra rd exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2020 SAT' (FG2: '2020 SAT base plus dev', Plan 1: 'with peds')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	466	143	609
	B	297	0	445	742
	C	24	358	0	382
	Tot.	321	824	588	1733

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2020 SAT
Junction: Unnamed Junction	
1/1 (short)	297
1/2 (with short)	742(In) 445(Out)
2/1 (short)	143
2/2 (with short)	609(In) 466(Out)
3/1	382
4/1	588
5/1	824
6/1	321

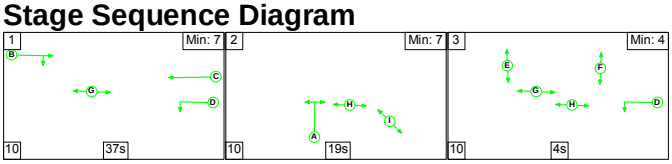
Lane Saturation Flows

Junction: Unnamed Junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (pontefract rd (e))	3.65	0.00	Y	Arm 6 Left	50.00	100.0 %	1922	1922
1/2 (pontefract rd (e))	3.65	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1980	1980
2/1 (lambra rd)	3.65	0.00	Y	Arm 4 Left	10.00	100.0 %	1722	1722
2/2 (lambra rd)	3.65	0.00	Y	Arm 5 Right	15.00	100.0 %	1800	1800
3/1 (potefract rd (W))	3.65	0.00	Y	Arm 5 Ahead	Inf	93.7 %	1965	1965
				Arm 6 Right	12.00	6.3 %		
4/1 (pontefract rd (w) exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (potefract road (e) exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (lambra rd exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2020 PM' (FG1: '2020 PM base plus dev', Plan 1: 'with peds')

Stage Sequence Diagram

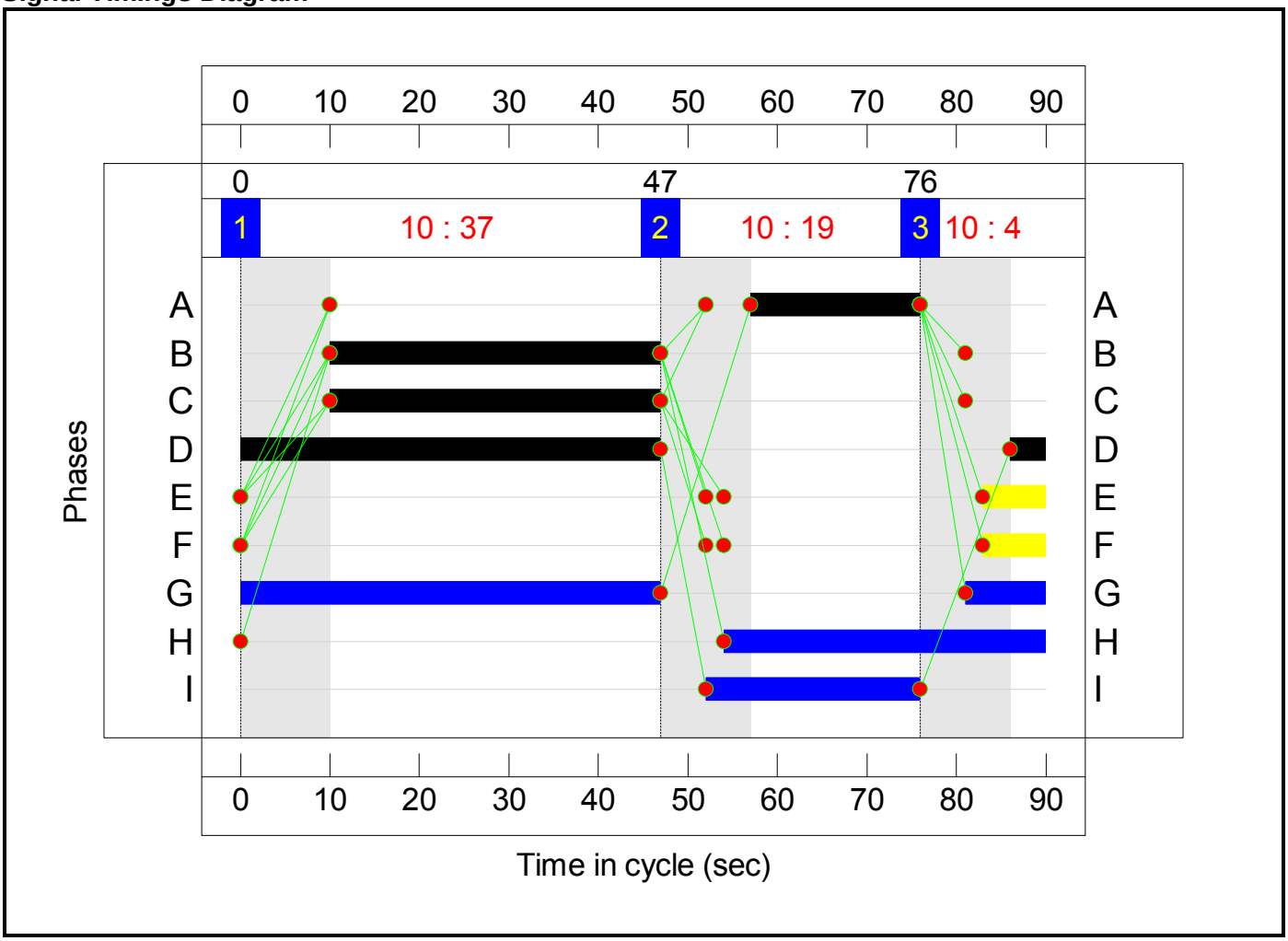


Stage Timings

Stage	1	2	3
Duration	37	19	4
Change Point	0	47	76

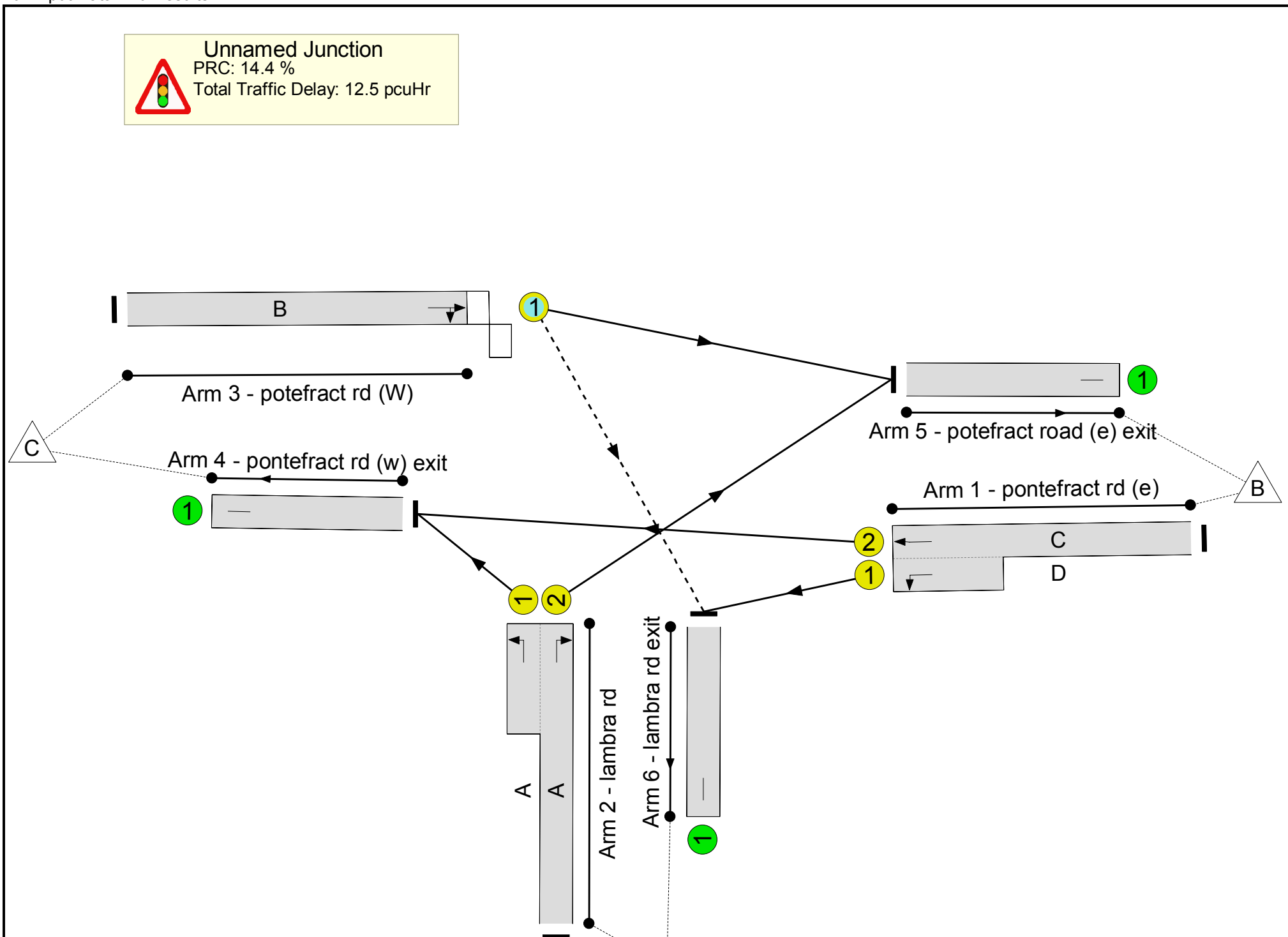
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: 14.4 %
Total Traffic Delay: 12.5 pcuHr
B
Arm 3 - potefract rd (W)
C
Arm 4 - pontefract rd (w) exit
Arm 5 - potefract road (e) exit
Arm 1 - pontefract rd (e)
B
C
D
A
A
Arm 2 - lambra rd
Arm 6 - lambra rd exit

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.7%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.7%**
1/2+1/1	pontefract rd (e) Ahead Left	U	N/A	N/A	C D		1	37:51	-	620	1980:1922	636+285	67.3 : 67.3%
2/2+2/1	lambra rd Left Right	U	N/A	N/A	A		1	19	-	353	1800:1722	358+90	78.7 : 78.7%
3/1	potefract rd (W) Ahead Right	O	N/A	N/A	B		1	37	-	510	1976	833	61.2%
4/1	pontefract rd (w) exit	U	N/A	N/A	-		-	-	-	499	Inf	Inf	0.0%
5/1	potefract road (e) exit	U	N/A	N/A	-		-	-	-	783	Inf	Inf	0.0%
6/1	lambra rd exit	U	N/A	N/A	-		-	-	-	201	Inf	Inf	0.0%

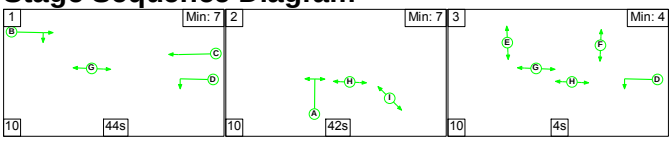
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**9**	**0**	**0**	**8.9**	**3.6**	**0.0**	**12.5**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**9**	**0**	**0**	**8.9**	**3.6**	**0.0**	**12.5**	**-**	**-**	**-**	**-**
1/2+1/1	620	620	-	-	-	3.0	1.0	-	4.0	23.1	9.7	1.0	10.7
2/2+2/1	353	353	-	-	-	3.1	1.8	-	4.9	50.0	6.9	1.8	8.7
3/1	510	510	9	0	0	2.9	0.8	0.0	3.7	25.9	9.9	0.8	10.7
4/1	499	499	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	783	783	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	201	201	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 14.4 Total Delay for Signalled Lanes (pcuHr): 12.55 Cycle Time (s): 90
PRC Over All Lanes (%): 14.4 Total Delay Over All Lanes(pcuHr): 12.55

Full Input Data And Results

Scenario 2: '2020 SAT' (FG2: '2020 SAT base plus dev', Plan 1: 'with peds')

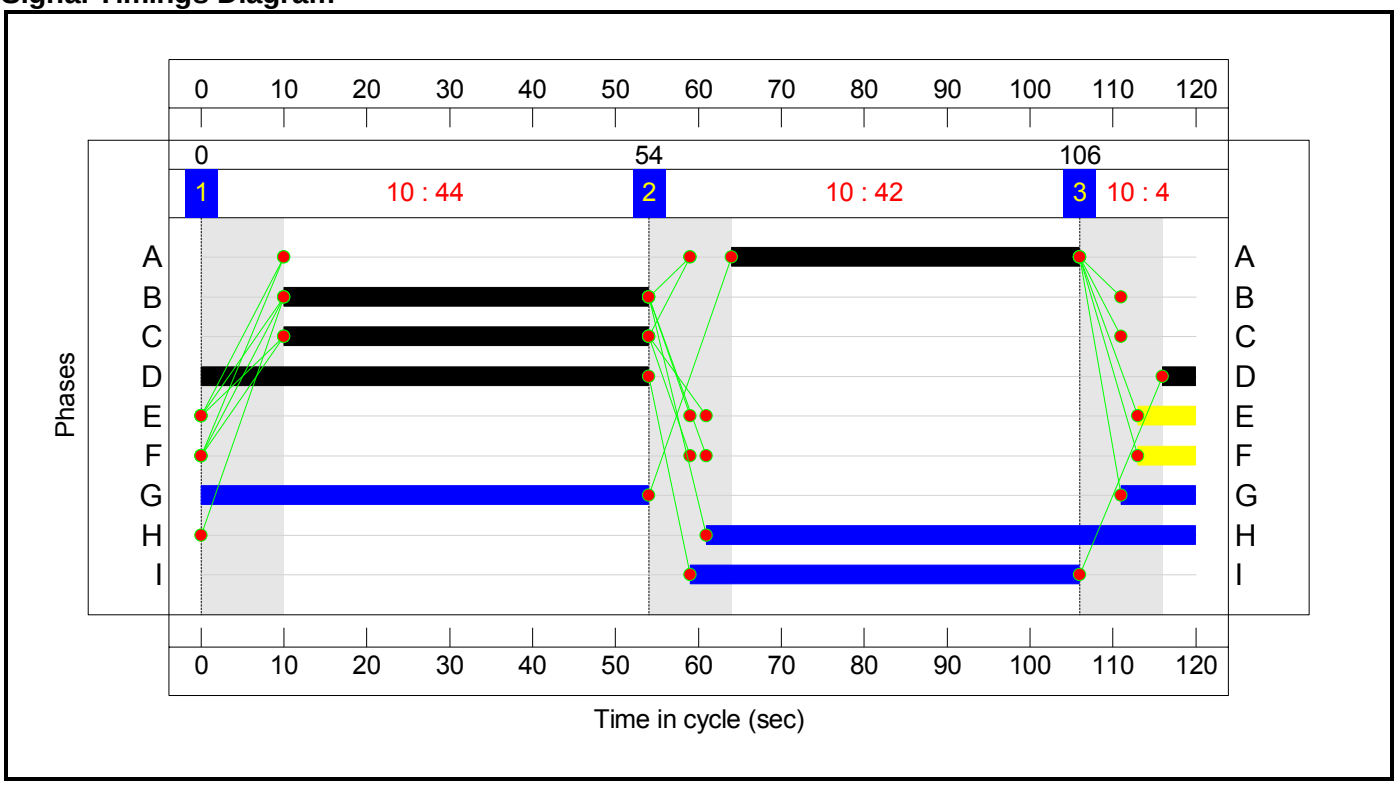
Stage Sequence Diagram



Stage Timings

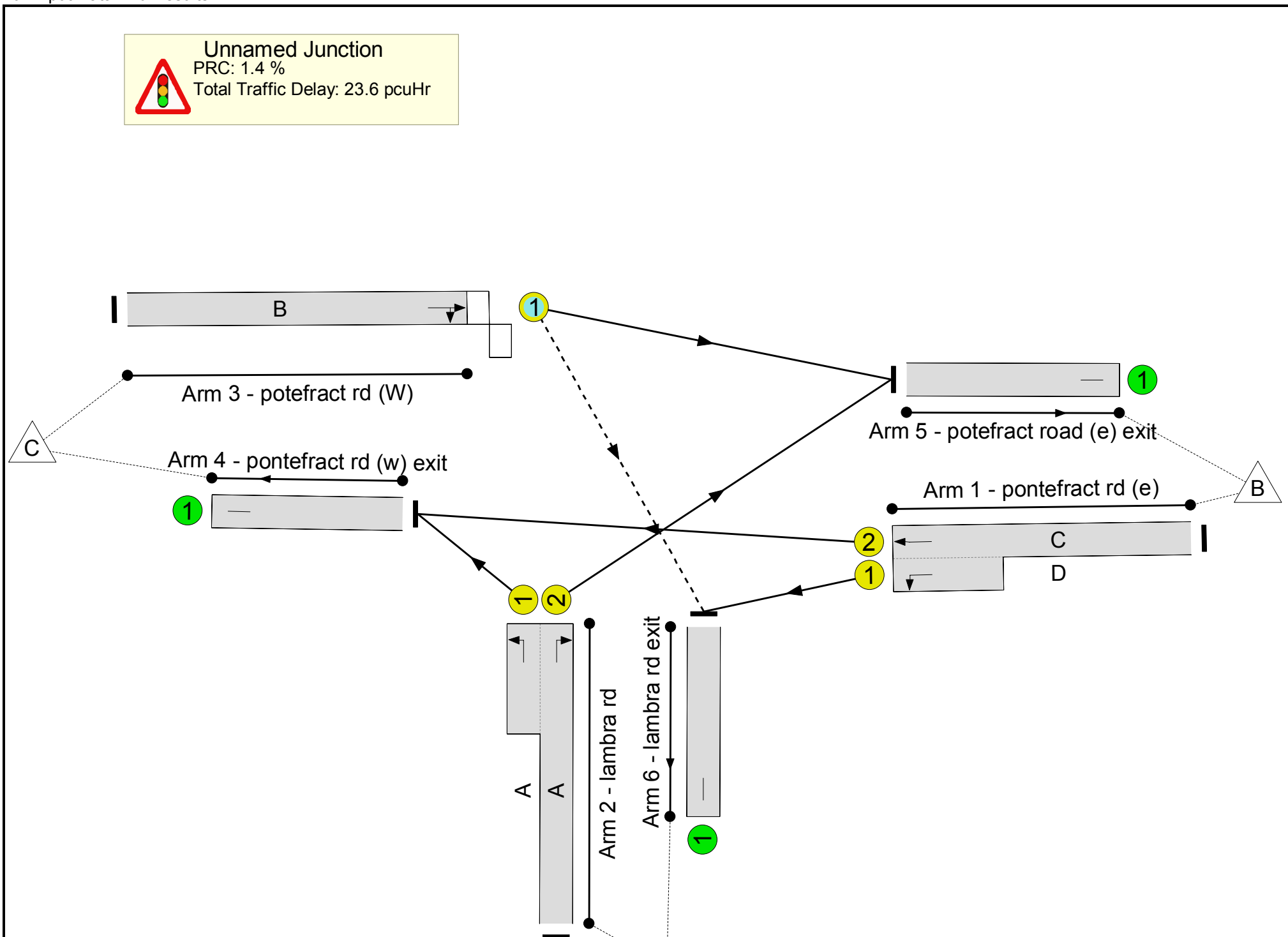
Stage	1	2	3
Duration	44	42	4
Change Point	0	54	106

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: 1.4 %
Total Traffic Delay: 23.6 pcuHr
B
Arm 3 - potefract rd (W)
C
Arm 4 - pontefract rd (w) exit
1
1
Arm 5 - potefract road (e) exit
B
Arm 1 - pontefract rd (e)
2
C
1
D
1
2
A
A
Arm 2 - lambra rd
Arm 6 - lambra rd exit
1

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**88.8%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**88.8%**
1/2+1/1	pontefract rd (e) Ahead Left	U	N/A	N/A	C D		1	44:58	-	742	1980:1922	502+335	88.6 : 88.6%
2/2+2/1	lambra rd Left Right	U	N/A	N/A	A		1	42	-	609	1800:1722	525+161	88.8 : 88.8%
3/1	potefract rd (W) Ahead Right	O	N/A	N/A	B		1	44	-	382	1965	589	64.8%
4/1	pontefract rd (w) exit	U	N/A	N/A	-		-	-	-	588	Inf	Inf	0.0%
5/1	potefract road (e) exit	U	N/A	N/A	-		-	-	-	824	Inf	Inf	0.0%
6/1	lambra rd exit	U	N/A	N/A	-		-	-	-	321	Inf	Inf	0.0%

Item	Arriving (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 PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**24**	**0**	**0**	**15.3**	**8.2**	**0.2**	**23.6**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**24**	**0**	**0**	**15.3**	**8.2**	**0.2**	**23.6**	**-**	**-**	**-**	**-**
1/2+1/1	742	742	-	-	-	6.3	3.6	-	9.9	48.3	19.3	3.6	23.0
2/2+2/1	609	609	-	-	-	5.9	3.6	-	9.5	56.2	17.4	3.6	21.0
3/1	382	382	24	0	0	3.1	0.9	0.2	4.2	39.2	9.9	0.9	10.8
4/1	588	588	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	824	824	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	321	321	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 1.4 Total Delay for Signalled Lanes (pcuHr): 23.61 Cycle Time (s): 120
PRC Over All Lanes (%): 1.4 Total Delay Over All Lanes(pcuHr): 23.61

Appendix E6: SCHWABISCH GMUND WAY LINSIG Outputs

Basic Results Summary

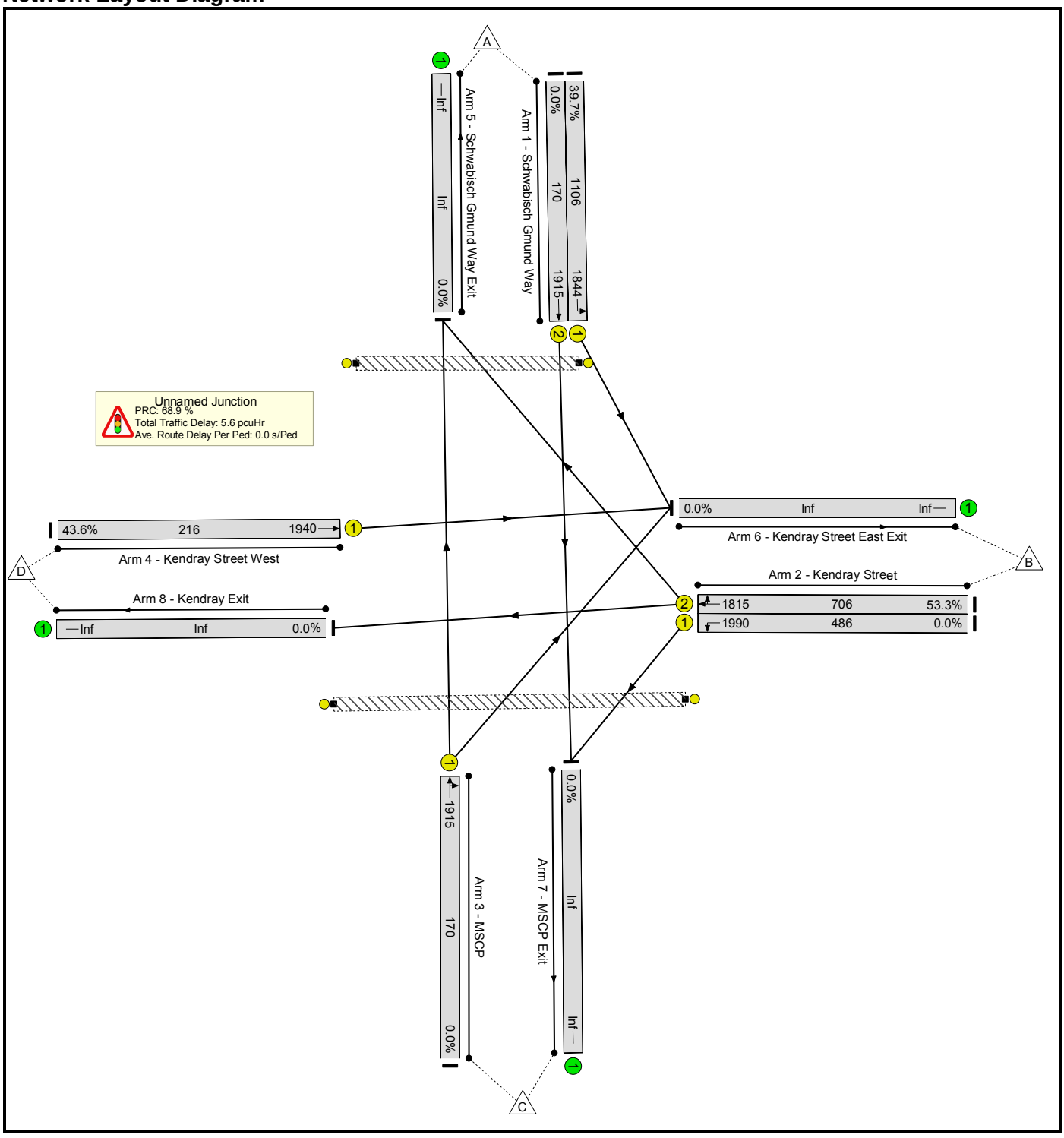
User and Project Details

Project:	
Title:	
Location:	
File name:	Schwabisch Gmund Way_Kendray St_PonteRd_MSCP_Jct.lsg3x
Author:	
Company:	
Address:	
Notes:	

Basic Results Summary

Scenario 1: '2015 PM base' (FG1: '2015 Base PM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**53.3%**	**0**	**0**	**0**	**5.6**	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**53.3%**	**0**	**0**	**0**	**5.6**	-	-
1/1	Schwabisch Gmund Way Left	U	B		1	53	-	439	1844	1106	39.7%	-	-	-	1.5	12.1	6.1
1/2	Schwabisch Gmund Way Ahead	U	A		1	7	-	0	1915	170	0.0%	-	-	-	0.0	0.0	0.0
2/1	Kendray Street Left	U	D		1	21	-	0	1990	486	0.0%	-	-	-	0.0	0.0	0.0
2/2	Kendray Street Right Ahead	U	C		1	34	-	376	1815	706	53.3%	-	-	-	2.8	26.6	7.8
3/1	MSCP Ahead Right	U	E		1	7	-	0	1915	170	0.0%	-	-	-	0.0	0.0	0.0
4/1	Kendray Street West Ahead	U	F		1	9	-	94	1940	216	43.6%	-	-	-	1.4	52.1	2.6
Ped Link: P1	Unnamed Ped Link	-	I		1	38	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-

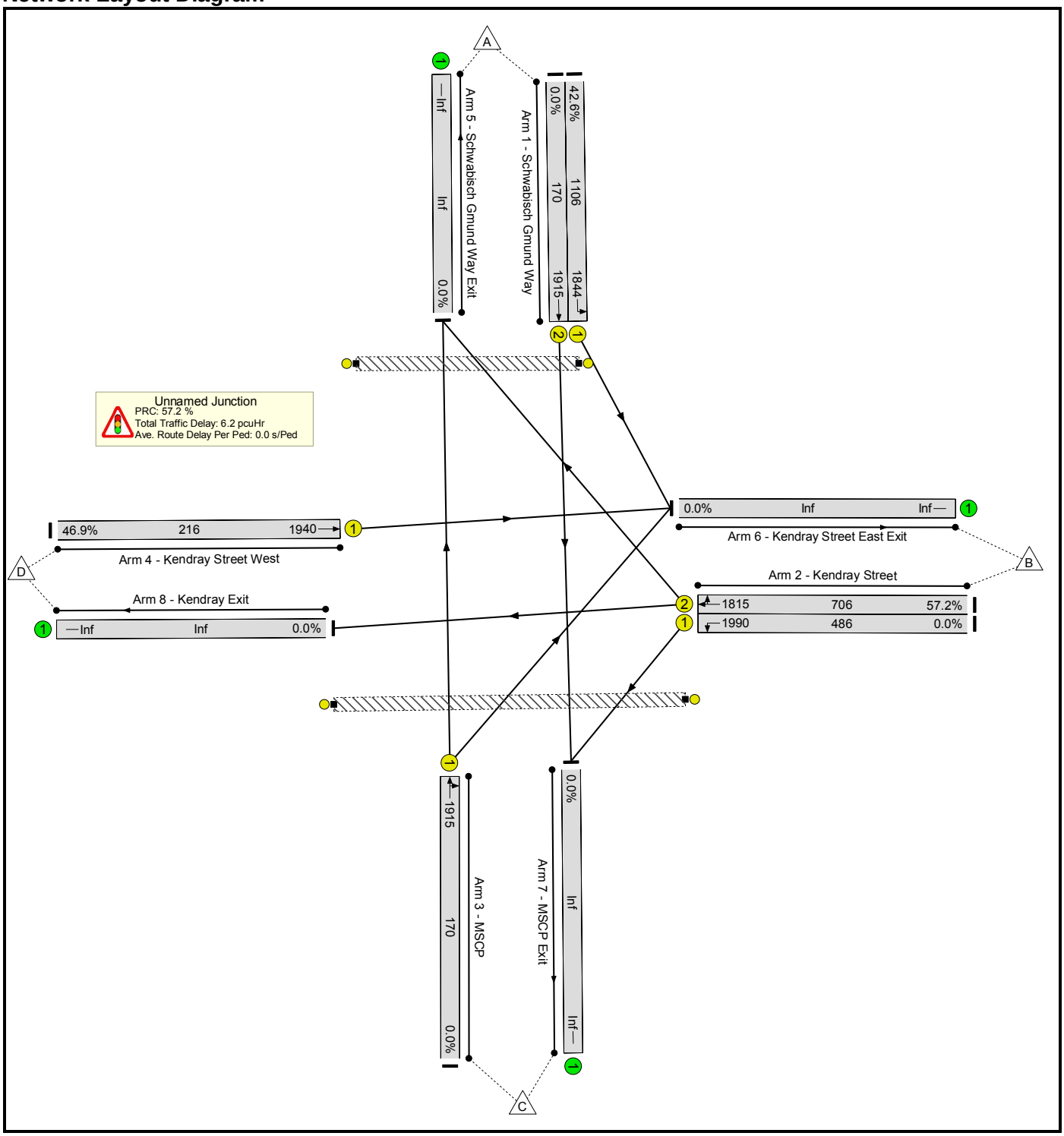
C1 PRC for Signalled Lanes (%): 68.9 Total Delay for Signalled Lanes (pcuHr): 5.62 Cycle Time (s): 90

PRC Over All Lanes (%): 68.9 Total Delay Over All Lanes(pcuHr): 5.62

Basic Results Summary

Scenario 2: '2020 PM base' (FG2: '2020 PM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**57.2%**	**0**	**0**	**0**	**6.2**	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**57.2%**	**0**	**0**	**0**	**6.2**	-	-
1/1	Schwabisch Gmund Way Left	U	B		1	53	-	471	1844	1106	42.6%	-	-	-	1.6	12.5	6.7
1/2	Schwabisch Gmund Way Ahead	U	A		1	7	-	0	1915	170	0.0%	-	-	-	0.0	0.0	0.0
2/1	Kendray Street Left	U	D		1	21	-	0	1990	486	0.0%	-	-	-	0.0	0.0	0.0
2/2	Kendray Street Right Ahead	U	C		1	34	-	404	1815	706	57.2%	-	-	-	3.1	27.6	8.5
3/1	MSCP Ahead Right	U	E		1	7	-	0	1915	170	0.0%	-	-	-	0.0	0.0	0.0
4/1	Kendray Street West Ahead	U	F		1	9	-	101	1940	216	46.9%	-	-	-	1.5	53.1	2.8
Ped Link: P1	Unnamed Ped Link	-	I		1	38	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-

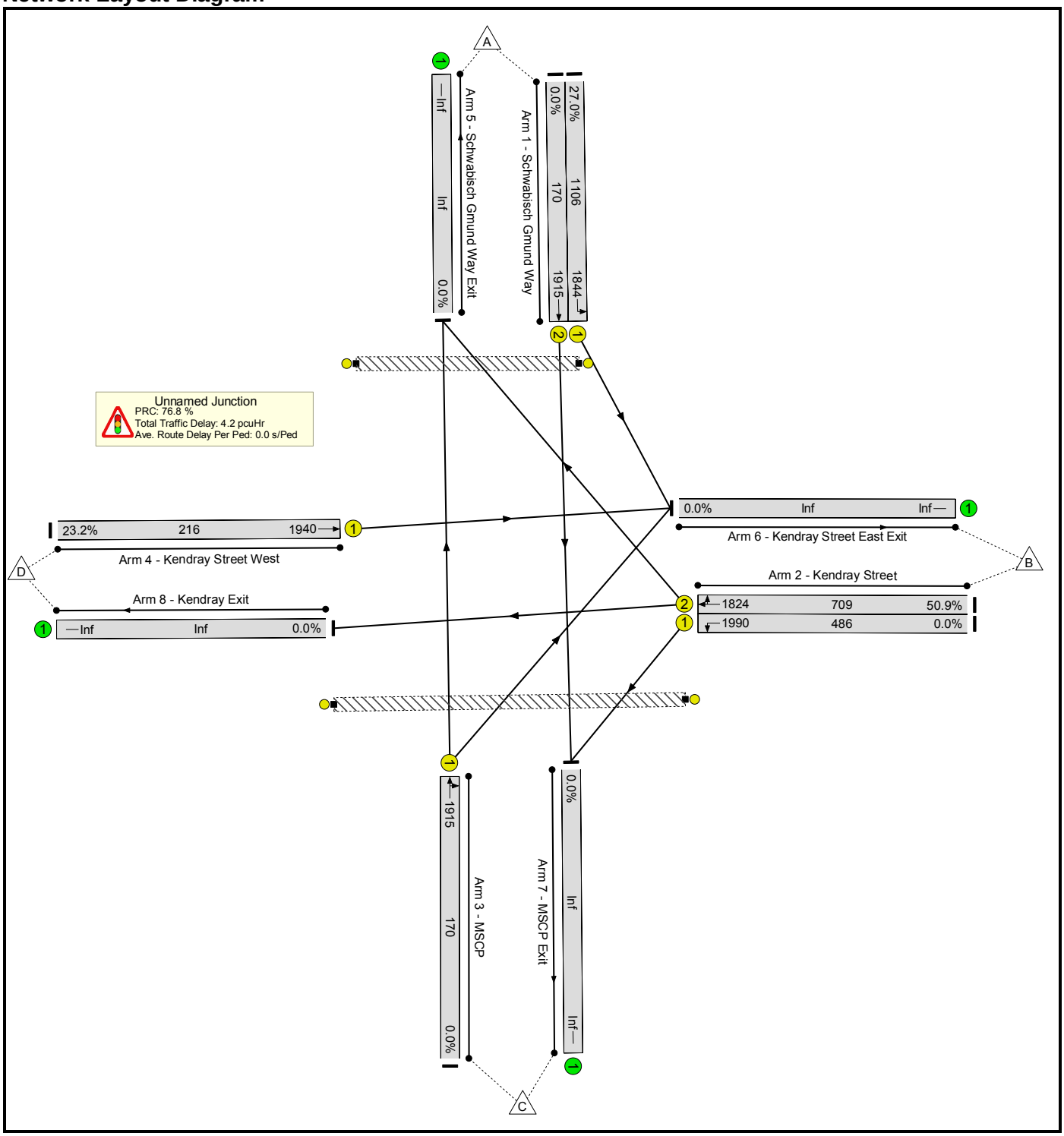
C1 PRC for Signalled Lanes (%): 57.2 Total Delay for Signalled Lanes (pcuHr): 6.22 Cycle Time (s): 90

PRC Over All Lanes (%): 57.2 Total Delay Over All Lanes(pcuHr): 6.22

Basic Results Summary

Scenario 3: '2015 Sat Base' (FG3: '2015 Saturday', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**50.9%**	**0**	**0**	**0**	**4.2**	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**50.9%**	**0**	**0**	**0**	**4.2**	-	-
1/1	Schwabisch Gmund Way Left	U	B		1	53	-	299	1844	1106	27.0%	-	-	-	0.9	10.8	3.7
1/2	Schwabisch Gmund Way Ahead	U	A		1	7	-	0	1915	170	0.0%	-	-	-	0.0	0.0	0.0
2/1	Kendray Street Left	U	D		1	21	-	0	1990	486	0.0%	-	-	-	0.0	0.0	0.0
2/2	Kendray Street Right Ahead	U	C		1	34	-	361	1824	709	50.9%	-	-	-	2.6	26.1	7.3
3/1	MSCP Ahead Right	U	E		1	7	-	0	1915	170	0.0%	-	-	-	0.0	0.0	0.0
4/1	Kendray Street West Ahead	U	F		1	9	-	50	1940	216	23.2%	-	-	-	0.7	47.4	1.3
Ped Link: P1	Unnamed Ped Link	-	I		1	38	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-

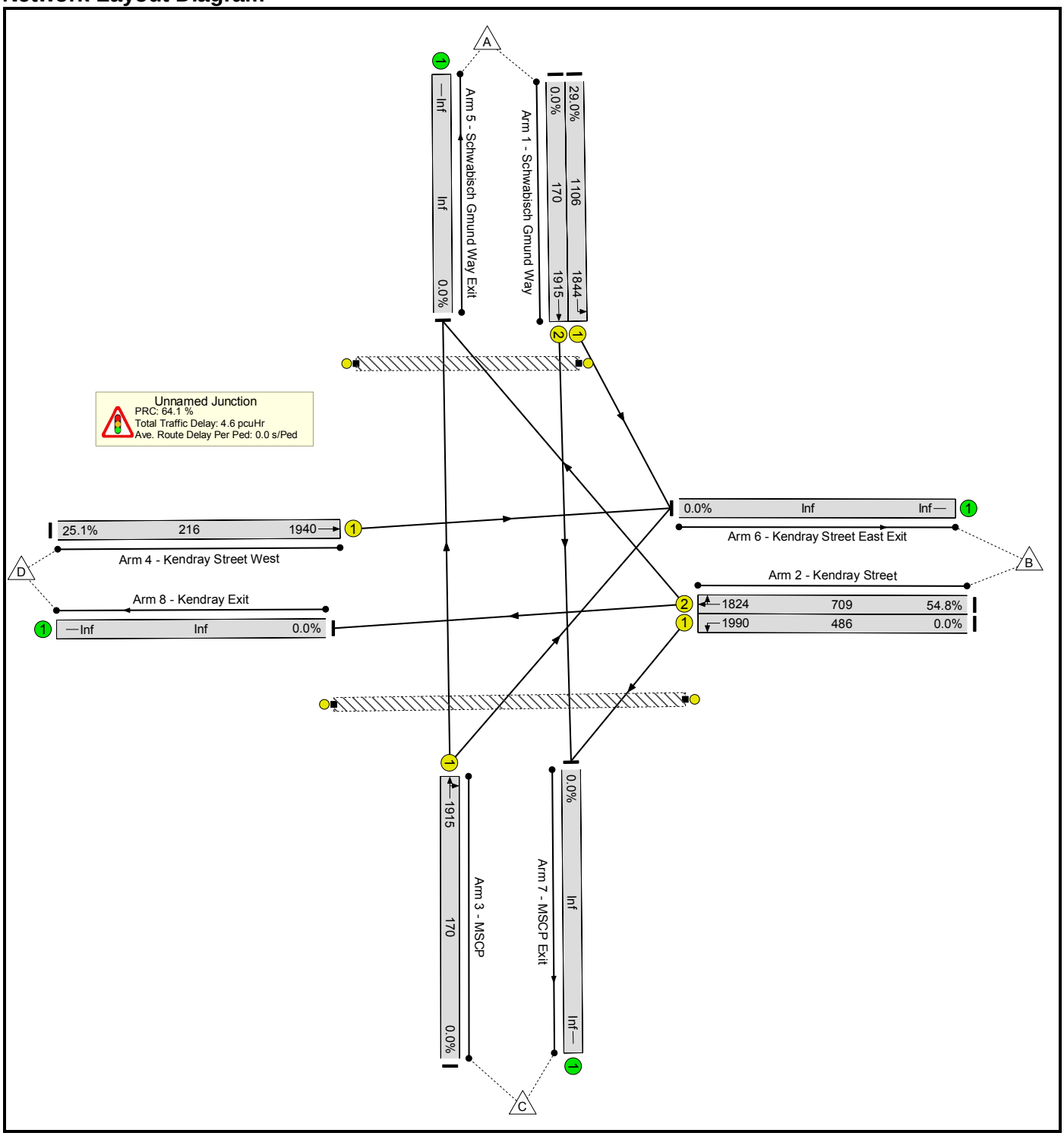
C1 PRC for Signalled Lanes (%): 76.8 Total Delay for Signalled Lanes (pcuHr): 4.18 Cycle Time (s): 90

PRC Over All Lanes (%): 76.8 Total Delay Over All Lanes(pcuHr): 4.18

Basic Results Summary

Scenario 4: '2020 Sat Base' (FG4: '2020 Saturday', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**54.8%**	**0**	**0**	**0**	**4.6**	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**54.8%**	**0**	**0**	**0**	**4.6**	-	-
1/1	Schwabisch Gmund Way Left	U	B		1	53	-	321	1844	1106	29.0%	-	-	-	1.0	11.0	4.0
1/2	Schwabisch Gmund Way Ahead	U	A		1	7	-	0	1915	170	0.0%	-	-	-	0.0	0.0	0.0
2/1	Kendray Street Left	U	D		1	21	-	0	1990	486	0.0%	-	-	-	0.0	0.0	0.0
2/2	Kendray Street Right Ahead	U	C		1	34	-	389	1824	709	54.8%	-	-	-	2.9	27.0	8.1
3/1	MSCP Ahead Right	U	E		1	7	-	0	1915	170	0.0%	-	-	-	0.0	0.0	0.0
4/1	Kendray Street West Ahead	U	F		1	9	-	54	1940	216	25.1%	-	-	-	0.7	47.7	1.4
Ped Link: P1	Unnamed Ped Link	-	I		1	38	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-

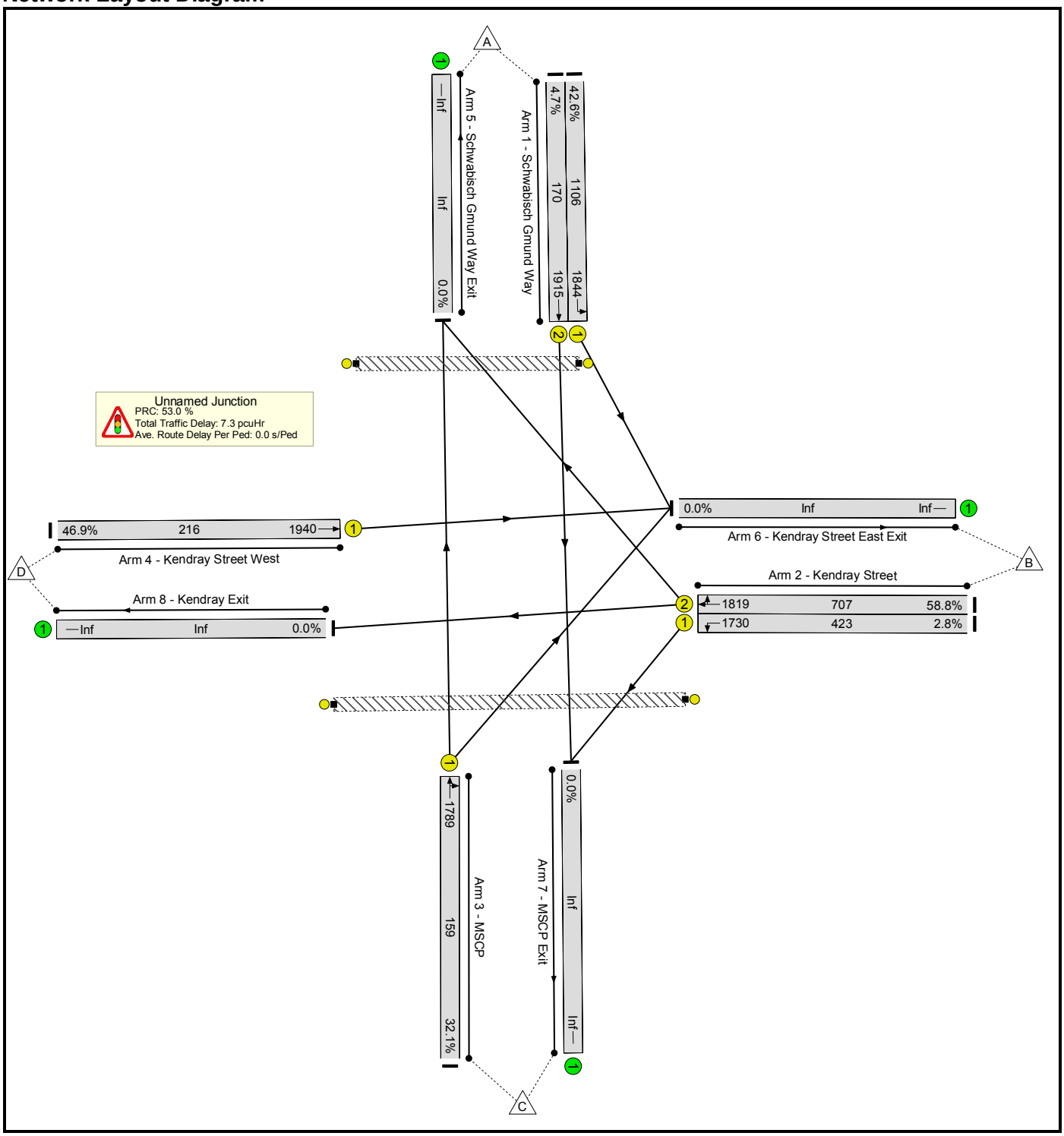
C1 PRC for Signalled Lanes (%): 64.1 Total Delay for Signalled Lanes (pcuHr): 4.61 Cycle Time (s): 90

PRC Over All Lanes (%): 64.1 Total Delay Over All Lanes(pcuHr): 4.61

Basic Results Summary

Scenario 5: '2020 B + D' (FG5: '2020 PM Base + Dev', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**58.8%**	**0**	**0**	**0**	**7.3**	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**58.8%**	**0**	**0**	**0**	**7.3**	-	-
1/1	Schwabisch Gmund Way Left	U	B		1	53	-	471	1844	1106	42.6%	-	-	-	1.6	12.5	6.7
1/2	Schwabisch Gmund Way Ahead	U	A		1	7	-	8	1915	170	4.7%	-	-	-	0.1	48.9	0.2
2/1	Kendray Street Left	U	D		1	21	-	12	1730	423	2.8%	-	-	-	0.1	30.4	0.2
2/2	Kendray Street Right Ahead	U	C		1	34	-	416	1819	707	58.8%	-	-	-	3.2	27.9	8.9
3/1	MSCP Ahead Right	U	E		1	7	-	51	1789	159	32.1%	-	-	-	0.8	55.1	1.4
4/1	Kendray Street West Ahead	U	F		1	9	-	101	1940	216	46.9%	-	-	-	1.5	53.1	2.8
Ped Link: P1	Unnamed Ped Link	-	I		1	38	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-

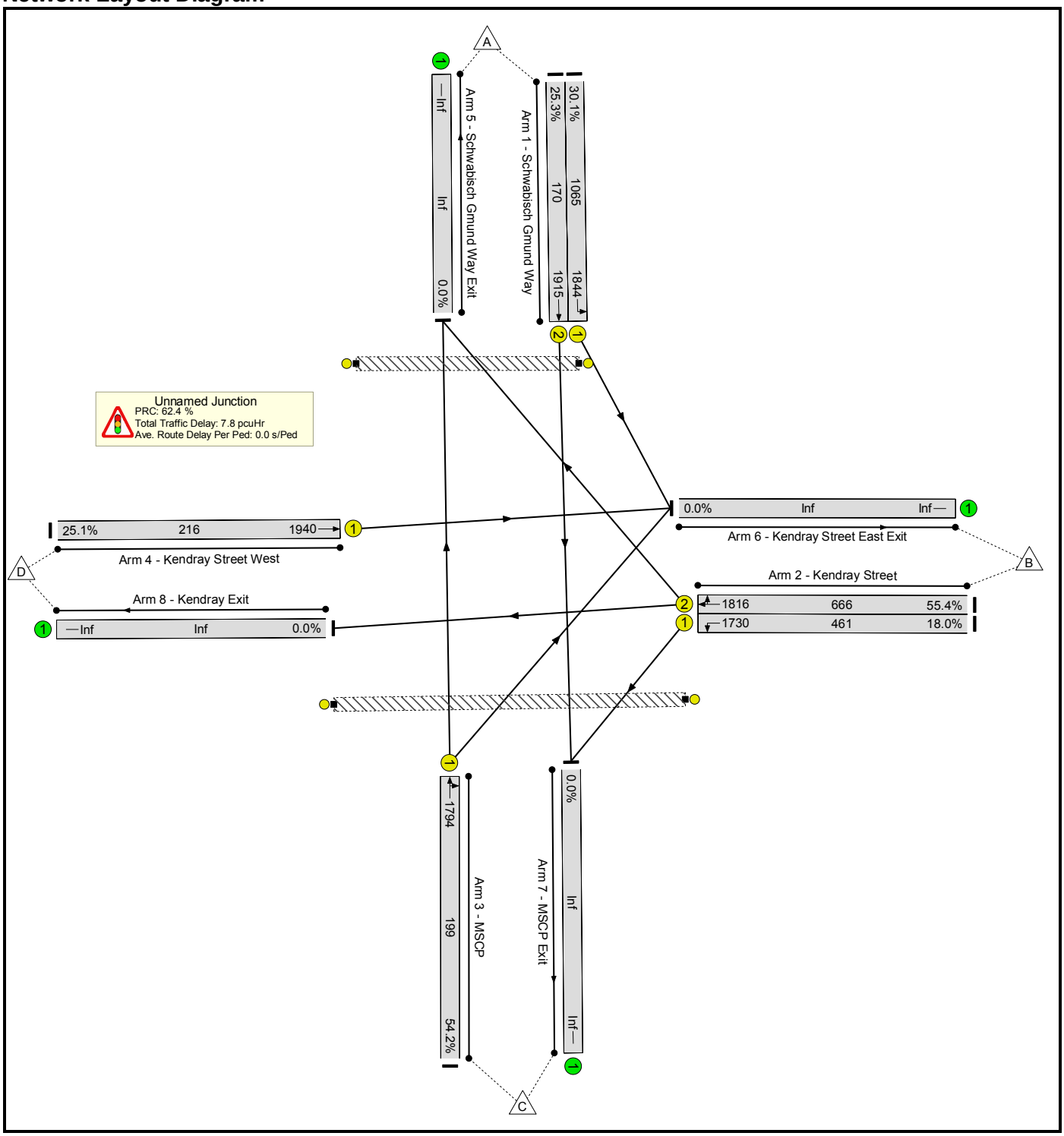
C1 PRC for Signalled Lanes (%): 53.0 Total Delay for Signalled Lanes (pcuHr): 7.35 Cycle Time (s): 90

PRC Over All Lanes (%): 53.0 Total Delay Over All Lanes(pcuHr): 7.35

Basic Results Summary

Scenario 6: '2020 Sat B + D' (FG6: '2020 Saturday Base + Dev', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**55.4%**	**0**	**0**	**0**	**7.8**	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**55.4%**	**0**	**0**	**0**	**7.8**	-	-
1/1	Schwabisch Gmund Way Left	U	B		1	51	-	321	1844	1065	30.1%	-	-	-	1.1	12.1	4.3
1/2	Schwabisch Gmund Way Ahead	U	A		1	7	-	43	1915	170	25.3%	-	-	-	0.6	52.3	1.2
2/1	Kendray Street Left	U	D		1	23	-	83	1730	461	18.0%	-	-	-	0.7	30.2	1.7
2/2	Kendray Street Right Ahead	U	C		1	32	-	369	1816	666	55.4%	-	-	-	2.9	28.7	7.9
3/1	MSCP Ahead Right	U	E		1	9	-	108	1794	199	54.2%	-	-	-	1.7	57.3	3.1
4/1	Kendray Street West Ahead	U	F		1	9	-	54	1940	216	25.1%	-	-	-	0.7	47.7	1.4
Ped Link: P1	Unnamed Ped Link	-	I		1	36	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 62.4 Total Delay for Signalled Lanes (pcuHr): 7.78 Cycle Time (s): 90

PRC Over All Lanes (%): 62.4 Total Delay Over All Lanes(pcuHr): 7.78