



**Proposed Lidl Foodstore,
Wakefield Road, Mapplewell.**

Transport Assessment

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1 Introduction

1.1 Background

Lidl UK GmbH have appointed EJS Associates (EJSA) to assess the transport and highway implications of a proposed Lidl Foodstore at Wakefield Road, Mapplewell. The site is bounded by Wakefield Road to the west, a dwelling to the south and open land to the east and north. A residential development is proposed on the land to the north of the site.

The site is the former location of a factory complex and associated buildings, now all demolished.

A planning application is to be submitted for a Lidl Foodstore with a Gross Internal Area (GIA) of 2,125m², a Retail Sales Area of 1,325m², and 139 car parking spaces (9 of which are for Disabled Users and 8 of which are for "Parent & Child" users, and 3 for Staff). Vehicular access is to be taken from Wakefield Road, via a new access. Direct pedestrian access will also be available from Wakefield Road.

This Transport Assessment has been produced in accordance with the guidance provided in "Guidance on Transport Assessment" (GTA), published by the Department for Transport in March 2007, which, although now withdrawn, still remains a source of much useful guidance. Appendix B of that guidance shows that a Transport Assessment is required for a Food Retail use (Use Class A1) of greater than 800m² Gross Floor Area (GFA). The proposed new Lidl Foodstore is to have a GIA of 2,125m². Hence, this report is in the form of a full Transport Assessment.

This report has been prepared to support the planning application for the proposed Lidl Foodstore. The purpose of this report is to comment on the accessibility of the site in terms of public transport, pedestrians and cyclists and to consider the feasibility of the proposals in traffic and highway terms. The report describes the proposed access arrangements and shows that changes to the existing road network, other than those proposed, are not required.

A Residential development is proposed by Pipestone of some 82 dwellings on the land immediately to the north of the Lidl site. It is to be served by its own access off Wakefield Road. However, to ensure compatibility, the residential development will be referred to in this report in detail, even though it does not form part of the Lidl planning application.

1.2 Structure of the Document

This report contains the following sections:

Section 2 – Policy Context - reviews the National and Local policies which are appropriate to this development.

Section 3 – Existing Conditions - describes the existing site and how it operates.

Section 4 – Public Transport Accessibility - reviews the current level of public transport in the vicinity of the development.

Section 5 – Walking / Cycling Accessibility & Inclusive Mobility - reviews the existing walking and cycling routes to the site as well as features designed to make the site available to all users.

Section 6 – Accident Analysis – investigates accidents around the site commenting on frequency, severity, and any causal issues.

Section 7 – Proposed Development - describes how the site will be laid out and operate.

Section 8 – Vehicular Access – looks at the access to the proposed Foodstore from the surrounding road network and details the impact it will have on the surrounding highway network and any mitigation measures required.

Section 9 – Conclusion - concludes the report and details the findings of the Transport Assessment.

Various Figures and Appendices referred to in this report are included at the end of this document.

2 Policy Context

2.1 Introduction

This chapter covers the planning policies relevant to the nature and location of the proposed development. It outlines the policies which have defined the design of the site and comments on how the proposed development fits within the guidelines set within the planning policies. The policies actually noted are those which refer to 'highways' and/or 'transportation' matters: those dealing with other issues will be dealt with by others.

2.2 National Planning Policy

2.2.1 *National Planning Policy Framework (NPPF).*

Published in March 2012 the NPPF abolished much of the national planning guidance. Instead, NPPF gives broad outlines of policy guidance and expects local authorities and local people to produce their own policies. NPPF replaced *PPG 13 Transport*, which is no longer cited, but not *Guidance on Transport Assessment (GTA)* which itself has been withdrawn even though its provisions remain the source of more detailed guidance.

NPPF promotes sustainable transport. It confirms that "all developments that generate significant amounts of movements should be supported by a Transport Statement or Transport Assessment." It notes that 'opportunities for sustainable transport modes should be taken up', and that 'safe and suitable access to the site should be achieved for all people'. Decisions should ensure that 'the need to travel will be minimised and the use of sustainable transport modes maximised'. Developments should 'give priority to pedestrians and cycle movements, and have access to high quality public transport facilities'.

However, NPPF notes that "development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe." This appears to 'raise the bar' on previous guidance – "significant" impacts are no longer to be viewed as fatal to proposed developments, they must be (at least) "severe".

2.2.2 *National Planning Policy Guidance (NPPG).*

NPPG was issued to supplement NPPF. It contains 15 paragraphs under the heading "Travel plans, transport assessments and statements in decision making".

Paragraph 002 of NPPG notes that Travel Plans, Transport Assessments and Statements are all ways of assessing and mitigating the negative transport impacts of development in order to promote sustainability, and that they are required for developments which generate significant amounts of movements.

Paragraph 006 of NPPG notes that Travel Plans, Transport Assessments and Statements can positively contribute to:

- encouraging sustainable travel;
- lessening traffic generation and its detrimental impacts;
- reducing carbon emissions and climate impacts;
- creating accessible, connected, inclusive communities;
- improving health outcomes and quality of life;
- improving road safety; and
- reducing the need for new development to increase existing road capacity or provide new roads.

Paragraph 007 of NPPG notes that Travel Plans, Transport Assessments and Statements should be:

- proportionate to the size and scope of the proposed development to which they relate and build on existing information wherever possible;
- established at the earliest practicable possible stage of a development proposal;
- be tailored to particular local circumstances (other locally-determined factors and information beyond those which are set out in this guidance may need to be considered in these studies provided there is robust evidence for doing so locally);
- be brought forward through collaborative ongoing working between the Local Planning Authority/ Transport Authority, transport operators, Rail Network Operators, Highways Agency where there may be implications for the **strategic road network** and other relevant bodies. Engaging communities and local businesses in Travel Plans, Transport Assessments and Statements can be beneficial in positively supporting higher levels of walking and cycling (which in turn can encourage greater social inclusion, community cohesion and healthier communities).

Paragraph 013 of NPPG notes that In determining whether a Transport Assessment or Statement will be needed for a proposed development local planning authorities should take into account the following considerations:

- the Transport Assessment and Statement policies (if any) of the Local Plan;

- the scale of the proposed development and its potential for additional trip generation (smaller applications with limited impacts may not need a Transport Assessment or Statement);
- existing intensity of transport use and the availability of public transport;
- proximity to nearby environmental designations or sensitive areas ;
- impact on other priorities/strategies (such as promoting walking and cycling);
- the cumulative impacts of multiple developments within a particular area; and
- whether there are particular types of impacts around which to focus the Transport Assessment or Statement (e.g. assessing traffic generated at peak times).

Paragraph 014 of NPPG notes that key issues to consider at the start of preparing a Transport Assessment or Statement may include:

- the planning context of the development proposal;
- appropriate study parameters (i.e. area, scope and duration of study);
- assessment of public transport capacity, walking/ cycling capacity and road network capacity;
- road trip generation and trip distribution methodologies and/or assumptions about the development proposal;
- measures to promote sustainable travel;
- safety implications of development; and
- mitigation measures (where applicable) – including scope and implementation strategy.

Paragraph 015 of NPPG notes that the scope and level of detail in a Transport Assessment or Statement will vary from site to site but the following should be considered when settling the scope of the proposed assessment:

- information about the proposed development, site layout, (particularly proposed transport access and layout across all modes of transport)
- information about neighbouring uses, amenity and character, existing functional classification of the nearby road network;

- data about existing public transport provision, including provision/frequency of services and proposed public transport changes;
- a qualitative and quantitative description of the travel characteristics of the proposed development, including movements across all modes of transport that would result from the development and in the vicinity of the site;
- an assessment of trips from all directly relevant committed development in the area (i.e. development that there is a reasonable degree of certainty will proceed within the next three years);
- data about current traffic flows on links and at junctions (including by different modes of transport and the volume and type of vehicles) within the study area and identification of critical links and junctions on the highways network;
- an analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent three-year period, or five-year period if the proposed site has been identified as within a high accident area;
- an assessment of the likely associated environmental impacts of transport related to the development, particularly in relation to proximity to environmentally sensitive areas (such as air quality management areas or noise sensitive areas);
- measures to improve the accessibility of the location (such as provision/enhancement of nearby footpath and cycle path linkages) where these are necessary to make the development acceptable in planning terms;
- a description of parking facilities in the area and the parking strategy of the development;
- ways of encouraging environmental sustainability by reducing the need to travel; and
- measures to mitigate the residual impacts of development (such as improvements to the public transport network, introducing walking and cycling facilities, physical improvements to existing roads etc.

2.3 Local Planning Policy

2.3.1 South Yorkshire Local Transport Plan 3.

The local authorities within South Yorkshire: Sheffield City Council, Doncaster Metropolitan Borough Council, Barnsley Metropolitan Borough Council, and Rotherham Metropolitan Borough Council make up the participating organisations which are responsible for the South Yorkshire Local Transport Plan. However, due to more recent Government Policy, a body called the "Sheffield City Region" is

recognised as the driving force behind the economic well-being of the South Yorkshire area, including the Councils covering Derbyshire Dales, North East Derbyshire, Chesterfield, Bolsover and Bassetlaw.

Therefore the Sheffield City Region Transport Strategy 2011 to 2026 is the document which forms the Policy background in this area.

The Strategy has 4 Goals:

Our Goals



To meet the 4 Goals, the Strategy has an A to Z of 26 Policies which summarise the highest priorities for transport improvements over the 15 year period.

They are expressed as:

To support economic growth		
A	To improve surface access to international gateways	
B	To improve the reliability and resilience of the national road network using a range of management measures	
C	To promote efficient and sustainable means of freight distribution, while growing SCR's logistics sector	
D	To improve rail services and access to stations, focusing on interventions that can be delivered in the short term	
E	To ensure SCR is served by High Speed Rail	
F	To improve connectivity between major settlements	
G	To deliver interventions required for development and regeneration	
H	To develop high-quality public places	
I	To focus new development along key public transport corridors and in places adjacent to existing shops and services	
J	To apply parking policies to promote efficient car use, while remaining sensitive to the vulnerability of urban economies	
K	To develop public transport that connects people to jobs and training in both urban and rural areas	
L	To reduce the amount of productive time lost on the strategic road network and improve its resilience and reliability	
M	To ensure our networks are well-maintained	
To enhance social inclusion and health		
N	To develop user-friendly public transport, covering all parts of SCR, with high quality of integration between different modes	
O	To ensure public transport is accessible to all	
P	To work with operators to keep fares affordable, especially for travellers in need	
Q	To provide efficient and sustainable access to our green and recreational spaces, so that they can be enjoyed by all residents and attract tourism	
To reduce emissions		
R	To work to improve the efficiency of all vehicles and reduce their carbon emissions	
S	To encourage active travel and develop high-quality cycling and walking networks	
T	To provide information and travel advice for the users of all modes of transport, so that they can make informed travel choices	
U	To support the generation of energy from renewable sources, and use energy in a responsible way	
V	To improve air quality, especially in designated AQMA areas	
To maximise safety		
W	To encourage safer road use and reduce casualties on our roads	
X	To work with the Police to enforce traffic laws	
Y	To focus safety efforts on vulnerable groups	
Z	To improve safety and the perception of safety on public transport	

The symbols to the right of each policy represent the cross-cutting topics as follows:

- Squeezing more from our existing assets*
- Ensuring our growth is sustainable*
- Giving people choice*
- Encouraging a cultural change*

To implement the Policies, the Strategy notes a number of Actions as follows:

OUR ACTIONS

The policies are designed so that they can be translated into actions. We have carried out work to forecast the likely impacts of these actions, and this has provided further justification to the full policy framework. The following are actions of a strategic nature that derive directly from our policies. Additional actions are presented in detail in the implementation plan and annual delivery programmes.

To support business growth in SCR, we will **improve interurban connectivity** by strengthening rail links to London, Manchester, Leeds and Nottingham on the Midland Main Line, East Coast Main Line and Trans Pennine routes. To facilitate employment opportunities we will also **create new links to major regeneration areas**, for example in East Doncaster, the Dearne Valley, Rossington, Waverley, the Lower Don Valley, Markham Vale and Junctions 36-37 of the M1.

Opening up opportunities for economic growth results in additional car trips and potentially increased levels of congestion. Enhanced activity on our transport networks is a welcome sign of economic vitality but might also give rise to levels of congestion that would thwart the efforts to make our area prosper.

A significant improvement to the performance of our networks will therefore be achieved via **active traffic management** on the motorways and the use of **intelligent traffic control systems** in both our road and rail networks. A **boost to the capacity and reliability** of these networks will be achieved through contingency planning and real-time event handling. As part of the effort to **relieve congestion hotspots**, we will also embark on a series of targeted improvements on routes such as the A57, A61 and Junction 34 on the M1.

There is clear evidence that the likely impact of population growth over the lifespan of the strategy, coupled with a considerable rise in car ownership, would be greater than the mitigating effect of these interventions. Extensive work to **provide a choice between car and other modes of travel**, especially for short-distance trips, would therefore be required in order to tackle further increase in congestion, loss of productive time, air pollution and high carbon emissions.

We will give people more travel options using a range of **public transport enhancements**, including the introduction of additional train and tram vehicles, improved links between Barnsley and Doncaster, the "tram-train" project between Sheffield and Rotherham, improved access to the redevelopment area around the Robin Hood Airport, and Park and Ride schemes on selected corridors.

We will also **design pedestrian-friendly streets and footpaths, create a continuous cycling network**, support car clubs and car sharing schemes, and make information about all these travel options easier to find and use. We will take action to **make a wiser use of energy** through assisting drivers in becoming more fuel-efficient, enforcing speed limits and encouraging the use of less polluting vehicles.

Our analysis indicates that even when all the measures listed above are combined, their joint effect is still not large enough to prevent the natural evolution of congestion and the associated risks to SCR's economy and environment. For our actions to become truly effective, we will seek to **influence land use planning processes** so that the location of new development **reduces the need to travel** long distances. This will allow people to undertake most of their activities in central places, such as Barnsley's Accessibility Improvement Zone, which are convenient for the users of all transport modes.

Our 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. Nevertheless, we will remain alert to increasing congestion in these centres, and will consider applying **measures to reduce congestion** over time.

There is strong evidence that the success of these actions depends on our ability to **apply them consistently and jointly as a combined package**. By introducing improvements to all travel modes, better management of our networks and an integrated spatial planning approach, transport will play a central role in helping SCR to thrive and flourish.

Certain policies of the Strategy are of particular relevance to these development proposals.

Policy 1:

To focus new development along key public transport corridors and in places adjacent to existing shops and services



This policy is supported by text

Transport and land use

- 4.89. Our analysis gives clear evidence⁷⁹ that improving connectivity through building new infrastructure alone is not sufficient to achieve our goals. The more we grow and prosper, the higher the risk of increased car use, congestion and pollution. To secure long-term gains we therefore need to ensure that SCR's spatial development is aligned with its capability to accommodate its own growth.
- 4.90. The most effective way for an area to experience growth without bearing consequences such as congestion and an increase in emissions is through prioritising development in areas that already have the capacity to contain this growth. Controlled growth along existing transport corridors and near transport interchanges can make SCR denser, with more intense activity in central locations. Such growth layout reduces the need to travel long distances, and as a result, it reduces traffic and further encourages travel by walking and cycling.
- 4.91. Concentrated growth also enables public transport operators to offer attractive high-frequency routes, serving high levels of demand at clearly-defined locations. It therefore also intensifies business activity in these locations and generates agglomeration benefits.
- 4.92. This long-established planning concept⁸⁰, which became formal guidance in the 1990's, also encourages the mixture of specific combinations of land uses in adjacent sites or in the same site. Mixing housing, office and light retail developments reduces the length and duration of commuting or shopping trips, and reduces traffic, especially during peak periods.

The location of the proposed Lidl Foodstore is along a route well served by public transport, and in a mixed use area.

Another document published by the South Yorkshire Local Plan Partnership, called the "South Yorkshire Strategic Network" (October 2010) shows the roads of major significance within this the area. Wakefield Road is not shown to be part of the Strategic Network.

Another document published by the South Yorkshire Local Plan Partnership, called the "South Yorkshire Cycle Action Plan" (April 2011) notes the current situation and the aspirations with regard to cycling in the area. It notes the situation in Barnsley as:

<p>BARNSELY</p> <p>3.3 BMBC is at present developing an Active Travel Strategy, which includes an action plan for cycling and one for walking. This strategy is accompanied by a joined up programme which illustrates the plans for Barnsley in terms of cycle routes that could be funded through the LTP; publicity and promotions; potential routes that are in the vicinity of development sites; and routes that are targeted at the communities in the Barnsley Dearne.</p> <p>3.4 NHS Barnsley have funded a specific post (Wider Determinants of Health Officer) to support the Transportation unit to develop active travel (including cycling) across Barnsley and strengthen the links with the authority's planning service.</p> <p>3.5 BMBC are the lead authority in the UK for the Trans Pennine Trail (TPT) hosting the co-ordination of the TPT partnership. The TPT has formed key element in the nurturing of active travel in the borough over the last 20 years and with over a million users annually, will provide a major supporting role in the development of the Active Travel Strategy.</p> <p>3.6 To date 3205 year 6 pupils have been trained to level 2 Bikeability since 2007. 70% of these pupils are year 5, giving them the opportunity to use the skills gained throughout year 6 and before starting secondary school. 97% of Schools have an active travel plan and 26 schools have safe, secure cycle parking.</p>	<p>3.7 Key cycle routes linking communities with the Town Centre have been developed e.g. a signed safe cycle route from Kingstone School to the Town Centre. Also, safe, secure and covered cycle parking has been put in at Dodworth, Silkstone, Barnsley Interchange, Bolton on Dearne and Elsecar rail stations.</p> <p>3.8 The Building Schools for the Future Programme for Barnsley is putting in place world class educational facilities namely Advanced Learning Centres (ALC). A total of 9 ALCs will be constructed in over the period 2010 to 2013. To encourage sustainable travel to school, Framework Travel Plans have been produced for all 9 ALCs all of which have identified a number of cycling/walking routes, highway infrastructure interventions and promotional material/incentives.</p> <p>3.9 The first ALC to be constructed as part of this programme was Carlton Community College ALC which brings together pupils from Royston High School and Edward Sheerien School. A successful bid through the Sustrans Safe Routes to school grant mechanism secured over £350k of funding for this ALC. The location of the ALC required new routes to be constructed to enable pupils to continue cycling and walking as safely as possible, and with minimal impact on other community users. The completed routes are:-</p> <ul style="list-style-type: none"> • Route 1 - Ollerton Road to Royston Lane • Route 2 - Laithes Lane, Carlton Road, Crookes Lane • Route 3 - Carlton Road to Royston Lane • Route 4 - Royston Lane • Route 5 - Pinfold Lane <p>3.10 Furthermore all Year 6 pupils from the surrounding feeder schools identified above have received Bikeability accredited cycle training to levels 1 and 2. To accommodate and encourage cycling Carlton Community College will have a total of 160 safe and secure cycle facilities, which will be available to students, staff and visitors.</p> <p>3.11 In addition BMBC is bidding for European Regional Development Funding (ERDF) to provide a suite of safe cycling and walking routes in the Dearne Valley. This will allow for sustainable travel to employment sites and the new Dearne ALC.</p>
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The provision of cycle parking as part of the proposals will help to achieve the wider use of cycling as a transport mode.

2.3.2 Barnsley MBC Statutory Development Plan

According to Barnsley MBC, the Statutory Development Plan for Barnsley consists of several elements. These are The Core Strategy, The Barnsley Education Sites DPD (both of which form part of the Local Development Framework - now called the Local Plan) the remaining saved policies of the Unitary Development Plan and the Joint Waste Plan. The Local Plan has been through its Examination in Public in 2017, and is expected to be Adopted in Spring 2018.

2.3.3 The Core Strategy.

This was adopted in September 2011. It has 8 Strategic Objectives:

1. To be the spatial interpretation of the Sustainable Community Strategy;
2. To improve access, movement and connectivity with sustainable travel;
3. To secure safe, healthy and inclusive communities and promote wellbeing;
4. To make efficient use of land and infrastructure;
5. To accelerate economic growth;
6. To ensure all new development is sustainably designed and built to the highest standards;
7. To deliver a sufficient supply of housing to provide balanced mixed communities and support economic growth; and
8. To protect and improve the countryside and natural environment.

There are 43 Core Policies. The Transport Strategy starts at paragraph 9.6 and includes the following Policies which relate to transport and development:

CSP 25 New Development and Sustainable Travel

New development will be expected to:

- be located and designed to reduce the need to travel, be accessible to public transport and meet the needs of pedestrians and cyclists
- provide at least the minimum levels of parking for cycles, motorbikes, scooters, mopeds and disabled people, and should not provide more than the maximum number of car parking spaces set out in a Supplementary Planning Document
- provide a transport statement or assessment in line with the thresholds and guidance set out in Department for Transport 'Guidance on Transport Assessments' as published March 2007 (or any subsequent version)
- provide a travel plan statement or a travel plan in accordance with the thresholds and guidance set out in Department for Transport 'Good Practice Guidelines: Delivering Travel Plans through the Planning Process' as published April 2009 (or any subsequent version).
Travel plans will be secured through a planning obligation or a planning condition

Where levels of accessibility through public transport, cycling and walking are unacceptable, we will expect developers to take action or make financial contributions in accordance with policy CSP 42.

If it is not possible or appropriate for the minimum amount of parking for cycles motorbikes, scooters and mopeds to be met on site, the developer must provide, or contribute towards, off-site parking, or improve or provide other forms of travel.

CSP 26 New Development and Highway Improvement

New development will be expected to be designed and built to provide safe, secure and convenient access for all road users.

If a development is not suitably served by the existing highway, or would create or add to highway safety problems or the efficiency of the highway for all road users, we will expect developers to take mitigating action or to make a financial contribution to make sure the necessary improvements go ahead. Any contributions will be secured through a planning obligation or planning condition.

CSP 27 Parking Strategy

We will develop a parking strategy that will help to influence people's travel choices in line with the challenges set out in 'Delivering a Sustainable Transport System' (Department for Transport, November 2008).

The strategy will include:

- a review of the number and location of short and long term car parking spaces, taking account of development proposals in Barnsley town centre
- an action plan to improve the management of new and existing car parks
- maximum car parking standards
- variable car parking charges dependant on location
- parking permits including residential parking schemes
- a programme for monitoring car park usage

And will consider:

- the potential contribution of park and ride, particularly at railway stations
- the potential for shared management of car parks between the council and the private sector
- the potential for dedicated car sharing spaces and other schemes to encourage change in travel behaviour
- developing parking strategies to cover the Principal Towns.

CSP 28 Reducing the Impact of Road Travel

We will reduce the impact of road travel by:

- developing and implementing robust, evidence based air quality action plans to improve air quality
- working with our sub regional partners, fleet and freight operators to improve the efficiency of vehicles and goods delivery, and reduce exhaust emissions
- implementing measures to ensure the current road system is used efficiently.

2.3.4 The Unitary Development Plan.

The following Policies saved from the UDP do not appear to have been superseded by the Core Strategy and hence, appear to be still in force:

T3 Existing Strategic Highway Network

T4 Strategic Highways Proposals

T5 Protected Highway Alignments

T8 Highways Maintenance

T10 Bus and Rail Infrastructure.

2.4 Travel Planning

The Government wish to raise awareness of the impacts of travel decisions, and to promote the widespread use of Travel Plans. Therefore, as part of this proposed development a bespoke Travel Plan has been developed and is contained in a stand-alone document. It covers in greater detail the issues of accessibility to the site by non-car modes of transport, and considers local, and national, policies with regard to the development of Objectives and the setting of Targets for modal shift for the proposed development.

NPPF notes the importance of Travel Plans at paragraph 32, and NPPG devotes 4 paragraphs to Travel Plans.

2.5 Compliance

This Transport Assessment document, and the associated Travel Plan document show that the proposed development fully complies with the current transport related Policies of National Government, and Local Government, where appropriate.

3 Existing Conditions

3.1 Existing Site and Location

The site is currently unoccupied. It is bounded to the west by Wakefield Road (A61), a dwelling to the south, and open land to the east and north. A residential development is proposed on the land to the north of the site.

The site is the former location of a factory complex and associated buildings, now all demolished. It is located between the townships of New Lodge and Athersley North, to the east of Mapplewell centre.

A plan of the location is shown at Figure 1.

3.2 Surrounding Highway Network

The M1 motorway runs north-south approximately 4km to the west of the site

The A61 runs generally north-west to south-east through the area connecting Wakefield to Barnsley. This was clearly once the major road through the area, but its functions have been taken over by the M1 etc. Although an "A-road" it is not a Primary Route, nor part of the South Yorkshire Strategic Route Network. Wakefield Road is a single carriageway road with a carriageway width of approximately 8m along the site frontage. There are footways on both sides, and a pedestrian crossing island (with dropped kerbs and tactile paving) approximately 100m to the south of the site. There are grassed verges on both sides at the back of the footways, and this is quite wide along the site frontage. There is street lighting in place. The speed limit is 30mph which changes to 40mph north of the site, approximately at the proposed access location.

South of the site, Wakefield Road joins Bar Lane (B6131) at a Y-shaped junction controlled by traffic signals. This junction has pedestrian facilities on all arms, and includes physical islands with dropped kerbs and tactile paving.

3.3 Existing Traffic Operations

Traffic counts were undertaken on behalf of Pipestone in the area, on Friday 10 November 2017 and Saturday 11 November 2017, to determine the current traffic flow characteristics in the area. The weather was wet on both days.

The assessment in this Transport Assessment has been carried out for a Friday evening peak hour and a Saturday peak hour - see Section 8.

4 Public Transport Accessibility

4.1 Introduction

Public Transport is useful in ensuring that social exclusion is minimised and that a choice of transport modes is available. The following sections give a brief summary of the public transport accessibility of the proposed development.

4.2 Buses

There are two bus stops on Bar Lane to the south of the site. Both bus stops are within 400m walking distance of the site.

All the Bus Stops have a flag and pole, and timetable information, together with raised kerbs and yellow Bus Box road markings. Table 4.1 below, details the bus services which use these bus stops, and their frequencies.

Table 4-1 – Bus Services

Service Number	Services From / To	Frequency Monday to Friday	Frequency Saturdays	Frequency Sundays
1	Barnsley - Smithies - New Lodge - Mapplewell - Staincross service run by Stagecoach.	Every 10 minutes.	Every 12 minutes.	Every 30 minutes.
X10	Barnsley - New Lodge - Mapplewell - Darton - Kexborough - Leeds service run by Stagecoach.	Every 60 minutes in each direction.	Every 60 minutes in each direction.	Every 60 minutes in each direction.

Hence, it can be seen that a minimum of 7 buses per hour are within easy walking distance of the site giving access to a wide area. Therefore, access by bus is readily available.

4.3 Railway Network

The nearest railway station is at Darton, some 3km away (as the crow flies). It is considered unlikely that rail borne travel will be a feature at this site.

4.4 Taxi Provision

Taxis operate throughout the area and will be a useful source of transport for most journeys.

4.5 Summary

Existing public transport to the proposed site is located close to the site – for both directions of travel, with a minimum of 7 buses per hour. Hence, good public transport facilities are available to serve the site.

5 Walking / Cycling Accessibility and Inclusive Mobility

5.1 Introduction

The provision of a new Lidl Foodstore provides the opportunity to promote sustainable travel patterns in the local area. The provision of improved accessibility to the site is intended to encourage customers to use sustainable transport modes, and even to alter their current travel patterns. This chapter reviews the proposed site's accessibility by both walking and cycling as well as for those with special needs to ensure inclusive mobility to the proposed development.

5.2 Multi-Modal Assessment

Although now withdrawn, the Department for Transport's "Guidance on Transport Assessments" stated that the initial step of assessing Trip Generation for a proposal is to provide an estimation of how many person trips are likely to be generated. These trips should be derived from industry standard databases such as TRICS, in which multi-modal assessments can be carried out to identify the number of person trips by mode and time period.

In line with this guidance, an interrogation of the TRICS database for all Discount Foodstores, has been carried out. (No Irish sites have been included as their characteristics are different from those of Great Britain.) The assessment has been carried out based on "Friday" and for "Saturday" only.

The results of this analysis (using only multi-modal counts) are noted below, at Tables 5-1 and 5-2.

Table 5.1 – Percentage of Person Trips by Mode – all day Friday.

Time Period 07.00 – 19.00	Car trips		Pedestrians		Cyclists		Public Transport	
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
Lidl store	70%	72%	24%	22%	1%	1%	5%	6%

Table 5.2 – Percentage of Person Trips by Mode – all day Saturday.

Time Period 07.00 – 19.00	Car trips		Pedestrians		Cyclists		Public Transport	
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
Lidl store	56%	55%	37%	38%	1%	1%	6%	7%

Many local Highway Authorities like to consider the transport effects of a development in the following order:

- Pedestrians (including those with restricted mobility);
- Cyclists;
- Public Transport/Taxis;
- Motorcycles;
- Commercial/Business Users;
- Car and Coach Borne Shoppers & Visitors; and
- Car Borne Commuters.

These categories of users are discussed in the following sections. (Public Transport and Taxis are already discussed at Section 4 above)

5.3 Access for Pedestrians

The proposed development site is easily accessed by pedestrians. There is a footway on both sides of all the roads in the vicinity. Dropped kerbs, some with tactile paving, occur at many junctions. There is a pedestrian island in Wakefield Road (with dropped kerbs and tactile paving) approximately 100m to the south of the site.

There will be a level pedestrian access to the store site off Wakefield Road.

Guidance, offered by the Chartered Institution of Highways and Transportation (CIHT), suggests a maximum acceptable walking distance of 400m (and preferable distance of less than 300m) to access the nearest bus stop (*'Planning for Public Transport in Developments 1999'*), as well as general figures as follows:

Table 5.3 – Walking Distances.

	Town Centres (m)	Commuting (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1000	800
Preferred	800	2000	1200

The 2 bus stops on Bar Lane are within 400m and are, therefore, well within the desirable walking distance.

Transport Statistics Great Britain (TSGB) provides an accurate, comprehensive and meaningful picture of transport patronage within Great Britain. The document includes data relating to the average distances people are prepared to travel by varying modes. TSGB shows that people are prepared to walk on average a distance of 1km. It is normally accepted 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 kilometers. It is clear that, the 1km walking catchment includes a large proportion of Mapplewell, New Lodge and Athersley North – see Figure 2,

which shows the 400m, 800m and 1,200m radii around the site, and the locations of the nearest bus stops.

Hence, it can be seen that pedestrian connectivity is good and walking distances reasonable. This will ensure that pedestrians will be able to use the new development, and that walking will form a substantial proportion of staff and customer trips.

5.4 Access for Cyclists

Whilst there are no specific cycle facilities in the area, access is available to all roads for cyclists.

It is normally accepted that cycling is a feasible alternative mode of transport particularly for journeys of up to 2km length, and that 5km is the normal maximum which might be expected for a cycle journey. Figure 3 shows the 2km and 5km radii from the site, and it can be seen that large proportions of the surrounding developed areas out to Wolley, Norton, Royston, Cudworth, Higham, Barugh Green, Darton, Wolley Grange and Haigh as well as much of northern Barnsley are within cycling distance of the site.

Cycle parking will be provided as part of the Foodstore development.

5.5 Inclusive Mobility

To conform to national guidance, and local plan policy, the development will provide sufficient and adequate accessibility for all users. Disabled parking will be provided at 9 spaces, and 8 further spaces are to be allocated for "Parent & Child" use. Pedestrian routes are to be clearly delineated within the site. Dropped kerbs will also be provided throughout the site on key pedestrian desire lines and at the site access.

5.6 Motorcycles

There are no specific provisions in the development for motorcycles, although of course, they are able to use all the facilities laid out for other vehicles.

5.7 Commercial/Business Users

There are no specific provisions in the development for other commercial or business users. .

5.8 Car and Coach Borne Shoppers and Visitors

Car borne shoppers are accommodated by the new access junction, road widening and the proposed car parking (see later at Sections 7 and 8). There are no specific provisions for coach borne customers.

5.9 Car Borne Commuters

There are no facilities for car borne commuters.

5.10 Summary

This section has demonstrated that the proposed development will provide excellent accessibility for pedestrians and cyclists. As shown, the site lies within 1,200m walking distance of a large catchment, and the surrounding settlements are also within cycling distance.

Additionally, the development will provide sufficient and adequate accessibility to all users. Disabled parking will be provided in accordance with both National and Local standards and key pedestrian routes will be clearly delineated and feature dropped kerbs.

6 Accident Analysis

6.1 Introduction

In order to determine whether the proposed development is likely to have any impact upon accident rates local to the site, an accident analysis has been undertaken. This analysis assesses 'Personal Injury Accidents' (PIAs) in the vicinity of the proposed development. Accident data for reported PIAs within this study area has been provided by Barnsley Metropolitan Borough Council for the latest 5 year period - 1 January 2012 to 31 December 2016.

This section summarises the results of the accident analysis, before examining in detail the PIAs by location. A number of conclusions are then made. The raw accident data and a plan are located within Appendix A, at the rear of this report.

6.2 Detailed Accident Analysis

The recorded accident details have been collated to identify any specific trends.

There has been a total of 6 accidents at the junction of Wakefield Road/Lee Lane/Shaw Lane. All of these accidents involved vehicles only. Four of them were attributable to drivers failing to look properly or mis-judging the path or speed of another vehicle; one was attributable to a poor manoeuvre; and one to a rear-end shunt into waiting traffic.

There has been only one accident on Wakefield Road itself in the vicinity of the site. This involved a rear-end shunt into the back of queuing traffic at the Bar Lane signalled junction.

There has been five accidents at the Bar Lane signalled junction. Three of these involved vehicles only, and were caused by drivers failing to look properly, or mis-judging the paths of oncoming traffic. Two accidents involved pedestrians walking into the carriageway and being struck by a vehicle.

There has been a cluster of accidents at the Wakefield Road/Laithes Lane junction. Four of them involved rear-end shunts (which are common at a heavily trafficked signal controlled junctions). Six accidents involved drivers failing to look properly or mis-judging the path of a vehicle or pedestrian. Two accidents involved pedestrians being struck when crossing the carriageway, and two further accidents involved pedestrians being struck when they ran out into the carriageway, with no fault attributable to the drivers.

There has been seven accidents at the mini-roundabout junction of Rotherham Road and Wakefield Road. Two of these were rear-end shunts (common at this type of junction). Four accidents were attributable to drivers failing to look properly or mis-judging the path of another vehicle. The final accident was caused by a driver being dazzled by the sun and colliding with another vehicle.

There has been 16 more accidents along Wakefield Road itself. Two were rear-end shunts into the back of vehicles waiting to turn right into minor access roads. Three further accidents involved drivers undertaking poor turns/manoeuvres and colliding with on-coming traffic.

The main cause of accidents along the remainder of Wakefield Road was drivers failing to look properly or mis-judging the path/speed of another vehicle. This was noted at 9 accidents, 3 involving vehicles only, 2 involving cyclists and 4 involving pedestrians.

6.3 Summary

The number of accidents which have occurred is not excessive given the extensive road network considered, and the number of junctions concerned.

There are no specific highway safety issues identified

There are no defects with the existing road network which can be said to have caused these accidents, and the proposed development will not have a detrimental impact on the number or severity of accidents in the area.

7 Proposed Development

7.1 Proposed site layout

The development proposals are to construct a new Lidl Foodstore with a Gross Internal Area (GIA) of 2,125m², a Retail Sales Area of 1,325m², and 139 car parking spaces (9 of which are for Disabled Users and 8 of which are for "Parent & Child" users, and 3 for Staff).

Parking is also to be provided for bicycles. The proposed layout of the site is shown attached, which includes indicatively the landscaping within and around the site which is to be incorporated in to the development.

7.2 Site Access

Vehicular access is to be taken from Wakefield Road. A ghost island layout will be developed, with minor road widening within the frontage. (Being mindful of the proposed residential development to the north, the Lidl boundary will be set back such that any necessary road widening to accommodate both developments can be created without disrupting the Lidl store.

The existing 30mph speed limit will be extended to beyond the boundary of the site.

7.3 Car Parking

Barnsley Metropolitan Borough Council Adopted its Supplementary Planning Document on Parking in March 2012. Table 1 gives the maximum levels of parking for a variety of uses. For food retail outside Barnsley town centre, it requires 1 space per 14 to 20m².

So, for this site, where the store GIA is 2,125m² a maximum of between 106 and 151 spaces are required. Hence, the proposed 139 spaces is considered appropriate.

8 Vehicular Access

8.1 Vehicular Accessibility to the Development

As detailed within Section 7 above, all vehicular access will be from Wakefield Road.

8.2 Traffic Flows and Peak Hours

To ascertain the level of vehicular activity in the area, Pipestone commissioned a traffic count. This took place on Friday 10 November 2017 and Saturday 11 November 2017. the counts were taken at the following junctions:

- A61 Wakefield Road/ A633 Rotherham Road, mini-roundabout junction;
- A61 Wakefield Road/Laithes Road three-way traffic signalled junction;
- A61/Wakefield Road/Bar Lane three-way traffic signalled junction;
- A61 Wakefield Road/Paddock Road priority junction; and
- A61 Wakefield Road/Lee Lane/Shaw Lane offset crossroads junction.

The peak hours identified across the network by the traffic counts were 08.45 - 09.45 in the morning, 16.45 - 17.45 in the evening, and 11.45 - 12.45 on the Saturday. Diagrams showing the flows on the network at these peak hours are shown at **Appendix B.**

The normal hours for assessing the effect of a food retail development are the Friday evening peak hour and the Saturday peak hour. However, due to the impending planning application for the residential site immediately to the north of the Lidl site, consideration has also been given to the Friday morning peak hour.

8.3 Operational Assessment against 2017 Existing Flows

The peak hour operational characteristics of the existing junctions within the extended area covered by this TA have been assessed. Full outputs are included in **Appendix C.**

8.3.1 A61 Wakefield Road/Rotherham Road mini-roundabout

	Friday am peak		Friday pm peak		Saturday peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
A61 north	0.5	1	0.47	1	0.52	1
A633 Rotherham Road	0.76	3	0.56	1	0.62	2
A61 south	0.49	1	0.73	3	0.64	2

The low RFC's and minimal queues show that this junction is operating well within its capacity.

8.3.2 A61 Wakefield Road/Laithes Lane

	Friday am peak		Friday pm peak		Saturday peak	
	DoS %	Queue (PCU)	DoS %	Queue (PCU)	DoS %	Queue (PCU)
Wakefield Road south	71.4	17	87.2	26	78.9	20
Wakefield Road north	88.0	25	87.4	24	79.6	18
Laithes Lane	87.1	16	87.6	17	79.2	13

None of the Degrees of Saturation are above 90% and so the junction can be seen to be operating within its capacity, although some queuing does occur.

8.3.3 A61 Wakefield Road/Bar Lane

	Friday am peak		Friday pm peak		Saturday peak	
	DoS %	Queue (PCU)	DoS %	Queue (PCU)	DoS %	Queue (PCU)
Wakefield Road southbound	49.6	8	58.6	11	49.1	8
Wakefield Road northbound	87.9	24	83.5	20	78.3	17
Bar Lane	88.6	16	82.1	12	79.2	12

None of the Degrees of Saturation are above 90% and so the junction can be seen to be operating within its capacity, although some queuing does occur.

8.3.4 A61 Wakefield Road/Paddock Road

	Friday am peak		Friday pm peak		Saturday peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Paddock Road left turn	0.09	0	0.49	1	0.03	0
Paddock Road right turn	0.48	1	0.83	4	0.50	1
Right turn to Paddock Road	0.01	0	0.05	0	0.02	0

The low RFC's and minimal queues show that this junction is operating well within its capacity.

8.3.5 A61 Wakefield Road/Lee Lane/Shaw Lane

	Friday am peak		Friday pm peak		Saturday peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Shaw Lane left turn	1.03	8	0.99	4	0.96	5
Shaw Lane right turn	1.05	15	0.98	11	0.99	11
Wakefield Road right turn to Lee Lane	0.17	0	0.44	1	0.22	0
Lee Lane left turn	1.14	7	0.33	0	0.31	0
Lee Lane right turn	1.14	30	0.84	4	0.78	3
Wakefield Road right turn to Shaw Lane	0.19	0	0.22	0	0.17	0

An RFC of over 0.85 is normally regarded as showing that the individual movement is operating over its practical capacity. Given the number of RFC's over 0.85 as shown, it is clear that this junction is currently operating over its capacity.

However, it is understood that there is a junction improvement to be undertaken at this location as part of one of the committed residential developments, and so it is the improved junction which will be assessed later in the report.

8.4 Traffic Growth

The 2017 traffic count data has been used for the Base flows. The Lidl Foodstore is due to open in 2018, and so the design year has been taken as 2023 (ie 5 years after opening). The counts have been growthed to 2023 using TEMPRO adjusted National Growth Model (NTM) factors of 1.0954, 1.0917 and 1.0938 for the Friday morning peak hour, the Friday evening peak hour, and the Saturday peak hour respectively. These are shown at **Appendix D.**

8.5 Committed Development

Barnsley MBC were unable to respond to requests about which potential developments should be regarded as "committed" for this TA. However, two sites within the Local Plan have been included nevertheless.

Housing Site H11 - Land off Lee Lane, Royston - indicative number of dwellings = 770. A planning permission (2013-0932) is extant for 200 dwellings;

Housing Site H14 - Site west of Wakefield Road, Mapplewell - indicative number of dwellings = 135. A planning permission (2014-0249) is extant for 300 dwellings.

The number of dwellings for which planning permission exists has been considered appropriate for inclusion in this TA.

As noted previously, Pipestone's intended planning application for 82 dwellings immediately to the north of the Lidl site is also included in the assessment below.

The traffic generated by the committed development has been added to the 2023 growthed flows to provide the 2023 Base Flows - **see Appendix E.**

8.6 Operational Assessment against 2023 Base Flows

The peak hour operational characteristics of the existing junctions within the extended area covered by this TA have been assessed. Full outputs are included in **Appendix F**.

8.6.1 A61 Wakefield Road/Rotherham Road mini-roundabout

	Friday am peak		Friday pm peak		Saturday peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
A61 north	0.57	1	0.53	1	0.58	1
A633 Rotherham Road	0.91	8	0.64	2	0.72	3
A61 south	0.56	1	0.86	6	0.75	3

Two of the RFC's exceed 0.85, but small queues form, showing that this junction is operating just about at its capacity.

8.6.2 Give Way from Rotherham Road to Wakefield Road

	Friday am peak		Friday pm peak		Saturday peak	
	DoS %	Queue (PCU)	DoS %	Queue (PCU)	DoS %	Queue (PCU)
Give Way left turn	0.28	0	0.1	0	0.13	0

This movement is operating well within its capacity.

8.6.3 A61 Wakefield Road/Laithes Lane

	Friday am peak		Friday pm peak		Saturday peak	
	DoS %	Queue (PCU)	DoS %	Queue (PCU)	DoS %	Queue (PCU)
Wakefield Road south	71.4	17	87.2	27	88.4	25
Wakefield Road north	88.0	25	87.4	24	87.8	26
Laithes Lane	87.1	16	87.6	17	87.7	17

None of the Degrees of Saturation are above 90% and so the junction can be seen to be operating (just) within its capacity, although some queuing does occur.

8.6.4 A61 Wakefield Road/Bar Lane

	Friday am peak		Friday pm peak		Saturday peak	
	DoS %	Queue (PCU)	DoS %	Queue (PCU)	DoS %	Queue (PCU)
Wakefield Road southbound	57.6	11	64.3	13	55.5	10
Wakefield Road northbound	97.4	37	92.5	29	88.6	24
Bar Lane	97.1	22	92.7	17	86.6	14

Some of the Degrees of Saturation are above 90% and so the junction can be seen to be operating over its capacity, and that some queuing occurs.

8.6.5 A61 Wakefield Road/Paddock Road

	Friday am peak		Friday pm peak		Saturday peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Paddock Road left turn	0.12	0	1.02	6	0.04	0
Paddock Road right turn	0.58	1	1.02	14	0.54	1
Right turn to Paddock Road	0.01	0	0.06	0	0.02	0

The results show that the junction is predicted to operate slightly above capacity with the additional traffic from background growth and committed development in the Friday evening peak. The Friday morning peak, and Saturday peak, operate well within practical capacity with minimal queuing on the Paddock Road approach.

8.6.6 A61 Wakefield Road/Lee Lane/Shaw Lane (after junction improvement)

	Friday am peak		Friday pm peak		Saturday peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Shaw Lane left turn	0.36	1	0.12	0	0.26	0
Shaw Lane right turn	1.29	38	1.24	39	1.15	32
Wakefield Road right turn to Lee Lane	0.22	0	0.61	1	0.33	0
Lee Lane left turn	0.26	0	0.23	0	0.28	0
Lee Lane right turn	1.60	111	1.23	30	1.06	17
Wakefield Road right turn to Shaw Lane	0.26	0	0.26	0	0.19	0

An RFC of over 0.85 is normally regarded as showing that the individual movement is operating over its practical capacity. Given the number of RFC's over 0.85 as shown, it is clear that this junction is currently operating over its capacity, even with the improvement scheme.

8.7 Trip Generation

The Department for Transport's Guidance on Transport Assessment identifies five different categories of trip:

8.7.1 New Trips

These are trips that do not appear anywhere on the road network prior to the opening of the development. For a new Foodstore, this element of generated trips is minimal (food shopping trips are all already on the network) as most additional trips will be generated by better/newer facilities than at existing sites. Most are more likely to be considered as Transferred Trips (see below).

8.7.2 Transferred Trips

These are trips that are already present on the local road network, accessing similar existing sites in the locality of the proposed development and will have the potential to transfer their destination to the proposed development. Slightly different to Diverted Trips, these wholly transfer from using an existing development, to a new development; e.g. users switching to a new supermarket from an existing one.

8.7.3 Linked Trips

These are trips that will have multiple destinations either within the proposed development site, (examples include trips to food and non-food retail); between both the development site and existing adjacent sites: or between the development site and an established town centre. Where there is a high probability that there will be a proportion of linked trips between two uses on a development, it is customary to only 'count' those trips once for the development as a whole, and not effectively double-count them by attributing two visits and departures affecting the sections of highway network being assessed. The proposed Lidl Foodstore will be used by customers who may also use other facilities within the area. . Therefore, some Linked Trips are expected. However, it is not possible to quantify these, and so no advantage has been taken of this by, for example, reducing the number of vehicle trips in the assessments.

8.7.4 Pass-by Trips

These are trips that are already present on the road network directly adjacent to the point(s) of access to the site, which will turn into the site.

8.7.5 Diverted Trips

These are trips that are already present on the local road network, but not the road(s) from which site access is taken, and will divert from their existing route to access the site. These are similar to Pass-by Trips, but they have to deviate to make use of the development under consideration. Diverted Trips will tend to return to their original route after visiting the development under consideration.

8.7.6 Existing Trips

In this particular case, the site is not currently used and so no allowance for any existing trips has been made.

8.7.7 Conclusion on Trips

In this particular case most, or perhaps all, trips are already on the network, Transferred Trips are likely, and there will be a proportion of Linked Trips. But, **to ensure a highly robust assessment, all the predicted trips generated by the proposed Foodstore will be considered to be "New"** to the network surrounding the site in the assessment below.

Hence, the assessment below will represent more than a "worst case" - such that where no detrimental impact is shown, there is a margin of additional comfort implicit in the assessment. Similarly, where an effect is shown, this is the overly robust effect of the method of assessment, and this will be considered in more detail at that point.

The trips generated by the residential development will all be "New".

The Lidl foodstore has been searched in TRICS category 01/C – "Retail – Discount Foodstores" for the full range of store size. All multi-modal surveys have been used, but no Irish sites.

The total number of vehicle trips generated by the proposed development at the Friday evening peak hour and the Saturday peak hour are as shown.

Table 8.3 – Vehicle Trips for a Discount Foodstore 15.00-16.00 Friday

Unit	Arrivals	Departures
Lidl Foodstore 1,325m ² RSA	90	93

Table 8.4 – Vehicle Trips for a Discount Foodstore 11.00-12.00 Saturday

Unit	Arrivals	Departures
Lidl Foodstore 1,325m ² RSA	77	70

The outputs from TRICS are attached at **Appendix G**, and the Trip Rates shown at **Appendix H**.

The trips from the residential development are shown at **Appendix I**.

8.8 Trip Distribution

It has been noted above that all the trips will be already on the network in some form or other. However, as it is not possible to determine how many trips will be "Diverting/Transferring" and how many will be "Pass By", the most robust method of assessment is to allow all the development related trips to be considered as "New". This is a very robust method, but if the analysis shows the junctions to operate adequately under these conditions, there is a certainty that they will perform even better in reality.

The likely distribution of generated trips has been determined based on 2011 Census Journey to Work Data for the middle super output area of Barnsley 004.

8.9 Junction Capacity Assessment 2023 with Lidl and Residential Development.

The 2023 Flows with Lidl and the residential development are shown at Appendix J. The outputs from the computer assessments are at Appendix K.

8.9.1 A61 Wakefield Road/Lidl Access

	Friday am peak		Friday pm peak		Saturday peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Wakefield Road (north)	0	0	0	0	0	0
Lidl Site Access	0.085	0	0.289	0	0.199	0
Wakefield Road (South)	0.18	0	0.141	0	0.111	0

This junction has been assessed as a simple T-junction with no ghost island. Right turning traffic is deemed to block straight head traffic when more than one vehicle is waiting.

The results clearly show that this simple junction will work very well indeed under all scenarios at 2023.

8.9.2 A61 Wakefield Road/Rotherham Road mini-roundabout

	Friday am peak		Friday pm peak		Saturday peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
A61 north	0.58	1	0.56	1	0.60	2
A633 Rotherham Road	0.94	9	0.68	2	0.77	3
A61 south	0.58	1	0.91	8	0.79	4

Two of the RFC's exceed 0.85, but only small queues still form, showing that this junction is continuing to operate just about at its capacity.

8.9.3 Give Way from Rotherham Road to Wakefield Road

	Friday am peak		Friday pm peak		Saturday peak	
	DoS %	Queue (PCU)	DoS %	Queue (PCU)	DoS %	Queue (PCU)
Give Way left turn	0.28	0	0.11	0	0.14	0

This movement continues to operate well within its capacity.

8.9.4 A61 Wakefield Road/Laithes Lane

	Friday am peak		Friday pm peak		Saturday peak	
	DoS %	Queue (PCU)	DoS %	Queue (PCU)	DoS %	Queue (PCU)
Wakefield Road south	79.4	22	100.7	57	91.1	28
Wakefield Road north	99.7	47	99.6	46	91.4	32
Laithes Lane	99.6	26	101.0	32	90.3	18

The addition of the development related traffic pushes several of the arms Degrees of Saturation over the 90% mark when compared to the 2023 Base situation. There are also consequent increase in queuing. However, the actual changes are still small, taking the junction from 'just under capacity' to 'just over capacity'.

8.9.5 A61 Wakefield Road/Bar Lane

	Friday am peak		Friday pm peak		Saturday peak	
	DoS %	Queue (PCU)	DoS %	Queue (PCU)	DoS %	Queue (PCU)
Wakefield Road southbound	60.4	11	70.9	15	60.8	12
Wakefield Road northbound	99.0	41	97.9	39	91.1	27
Bar Lane	98.0	23	96.2	20	92.0	17

Some of the Degrees of Saturation are above 90% and so the junction can be seen to be continuing to operate over its capacity, and that some queuing occurs. However, the increase in DoS and queuing over and above the 2023 Base situation are very small indeed. Thus indicating that the effect of the development proposals are minimal.

8.9.6 A61 Wakefield Road/Paddock Road

	Friday am peak		Friday pm peak		Saturday peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Paddock Road left turn	0.12	0	1.10	8	0.04	0
Paddock Road right turn	0.61	1	1.10	23	0.60	1
Right turn to Paddock Road	0.01	0	0.06	0	0.02	0

The results show that the junction is predicted to continue to operate slightly above capacity with the additional traffic from background growth and committed development in the Friday evening peak. The Friday morning peak, and Saturday peak, operate well within practical capacity with minimal queuing on the Paddock Road approach. However, the increase in RFC and queuing over and above the 2023 Base situation are very small indeed. Thus indicating that the effect of the development proposals are minimal.

8.9.7 A61 Wakefield Road/Lee Lane/Shaw Lane (after junction improvement)

	Friday am peak		Friday pm peak		Saturday peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Shaw Lane left turn	0.37	1	0.13	0	0.26	0
36Shaw Lane right turn	1.31	40	1.3	45	1.19	36
Wafield Road right turn to Lee Lane	0.22	0	0.63	2	0.34	1
Lee Lane left turn	0.27	0	0.24	0	0.29	0
Lee Lane right turn	1.62	115	1.31	37	1.11	21
Wakefield Road right turn to Shaw Lane	0.26	0	0.27	0	0.20	0

An RFC of over 0.85 is normally regarded as showing that the individual movement is operating over its practical capacity. Given the number of RFC's over 0.85 as shown, it is clear that this junction is currently operating over its capacity, even with the improvement scheme, but the increases in RFC and queuing over and above the 2023 Base situation are very small indeed. Thus indicating that the effect of the development proposals are minimal.

8.10 Conclusion on Vehicular Access

It can be clearly seen that, even though the assessment has been very robust by assuming all Lidl related trips are "new" to the network, and including the full effects of the adjacent residential development, the effects of the proposals are not "severe" in NPPF terms, and that there are no mitigation measures required, other than those already proposed (ie the access junction).

9 Conclusions

9.1 Conclusions

This report has assessed the impact of a new Lidl Foodstore at Wakefield Road, Mapplewell.

The site is well served by public transport, and walking and cycling are attractive alternative modes to the private car.

The local road network has experienced very few accidents in recent years, and the development will not increase them in terms of numbers or severity.

As assessment of the existing road network has shown that several junctions are already nearing their capacity at the design year of 2023.

A detailed, but very robust, numerical analysis of future traffic conditions with the Lidl and the adjacent residential development in place, has demonstrated that the proposed developments will have a minimal effect on existing junctions. Hence, no Highway Works are required other than to create the new accesses. There are no "severe" effects in terms of NPPF.

The Travel Plan supplied under separate cover will assist in providing advice to staff and customers on how to access the site in a more sustainable manner, therefore, reducing the carbon footprint of the development.

There are no Highways or Transportation grounds for refusing the planning application.

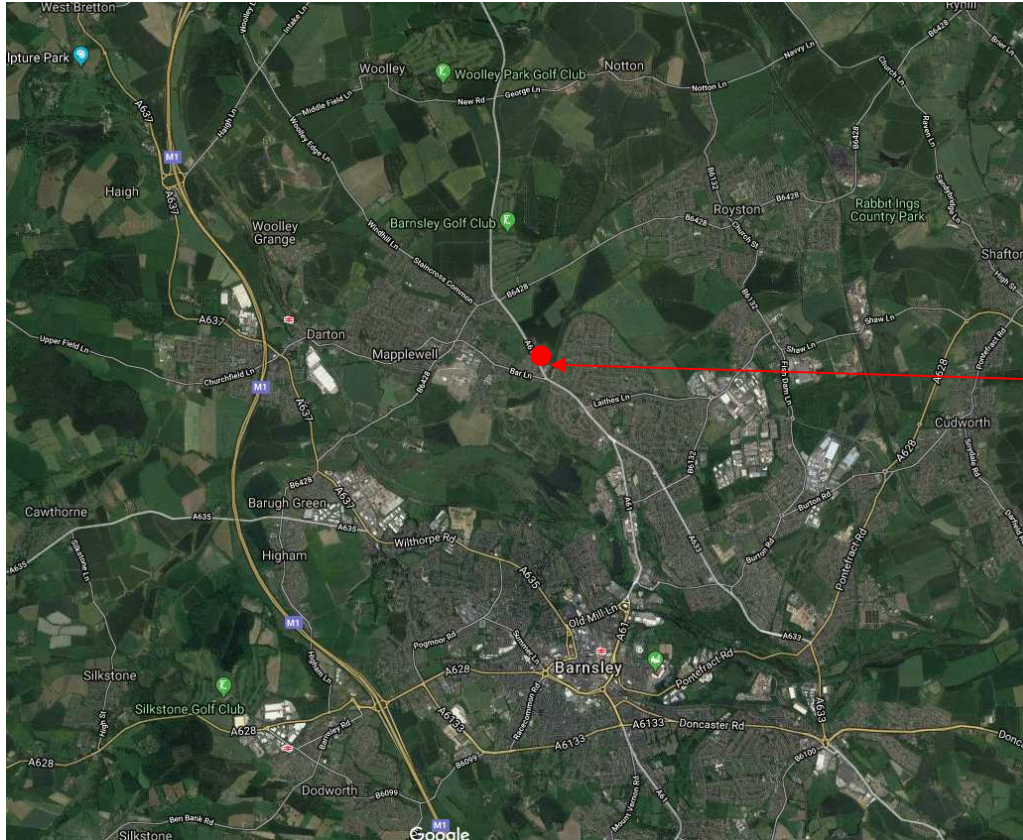
Figures

Figure 1- Location Plan.

Figure 2 – 400m, 800m and 1,200m walking radius.

Figure 3 – 2km and 5km cycling radius.

Site layout plan - 1744-400 rev E by HTC Architects.



Site
Location

Notes:

Project:

**Proposed Lidl Foodstore at
Wakefield Road,
Mapplewell.**

Client:



Lidl UK GmbH.

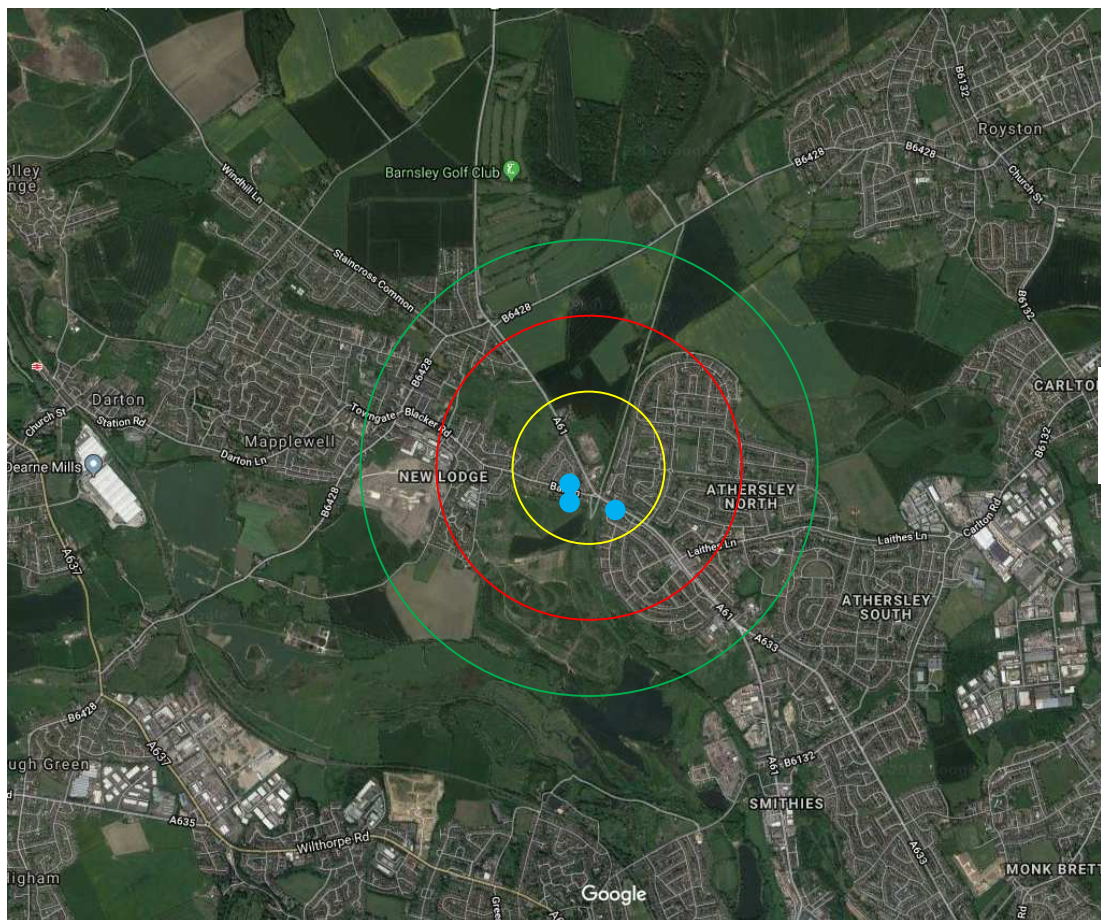
EJS Associates
Consulting Engineers

Leathley House
New Street
Clifton
Brighouse
HD6 4HN

Tel: 07841 870477

Email: spivey.edward@gmail.com

Figure 1 – Location Plan



Notes:

- 400m
- 800m
- 1,200m
- Bus Stop

Project:

**Proposed Lidl Foodstore at
Wakefield Road,
Mapplewell.**

Client:



Lidl UK GmbH.

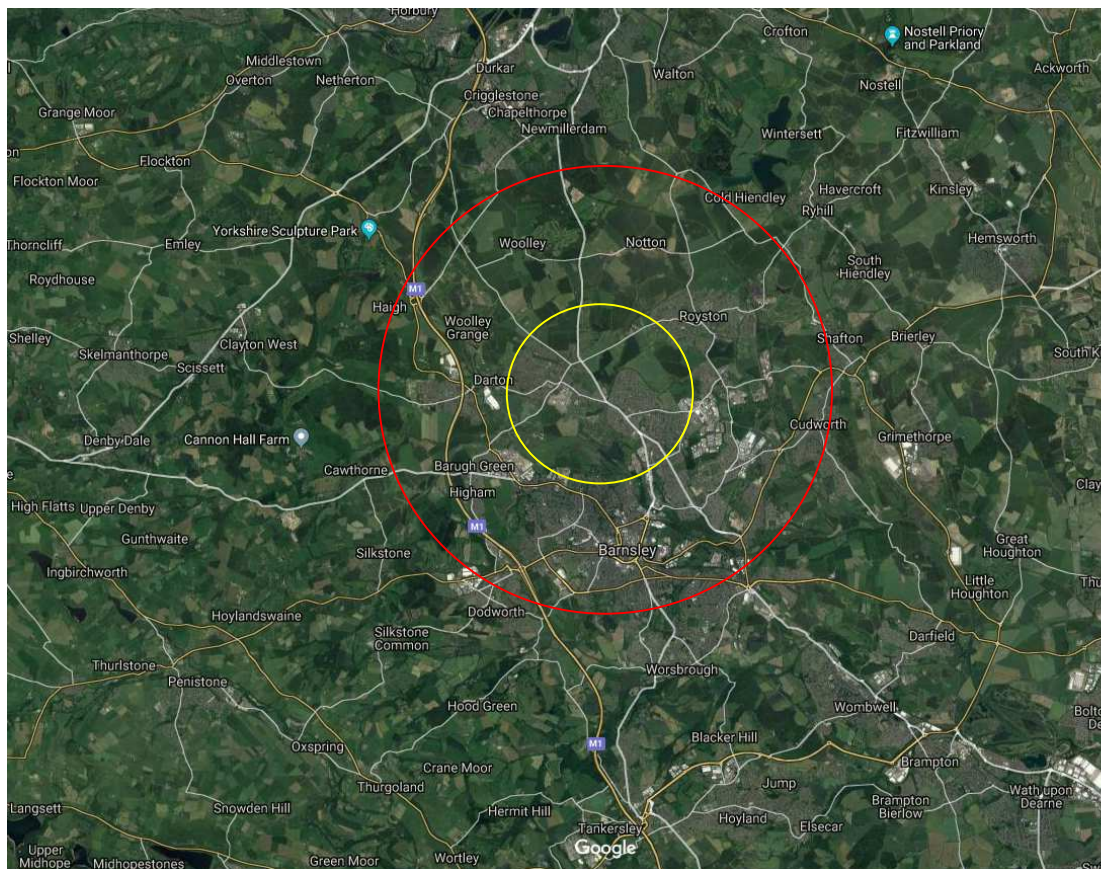
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Leathley House
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Brighouse
HD6 4HN

Tel: 07841 870477

Email: spivey.edward@gmail.com

**Figure 2 – Walking
Distances**



Notes:

— 2km
— 5km

Project:

**Proposed Lidl Foodstore at
Wakefield Road,
Mapplewell.**

Client:



Lidl UK GmbH.

EJS Associates
Consulting Engineers

Leathley House
New Street
Clifton
Brighouse
HD6 4HN

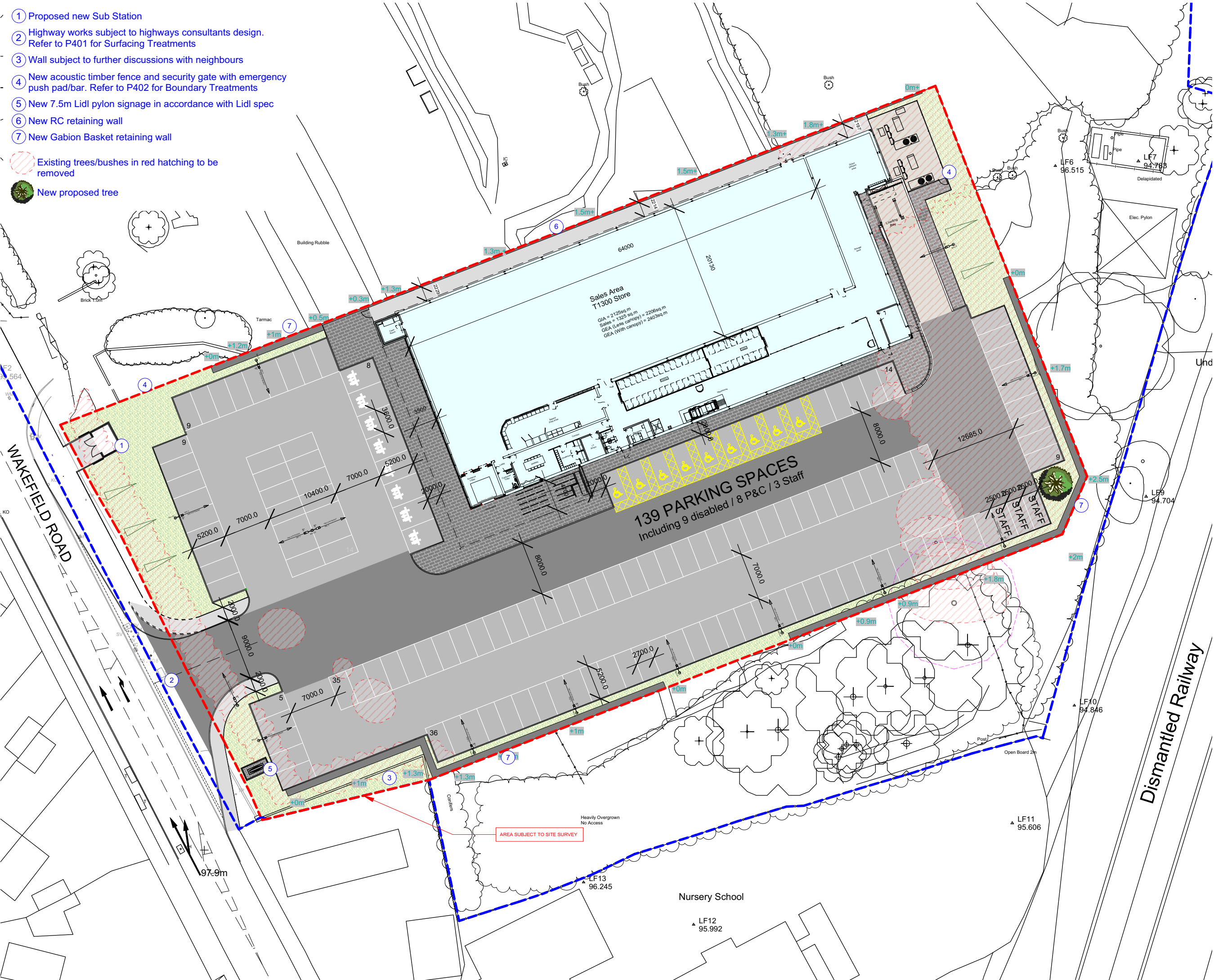
Tel: 07841 870477

Email: spivey.edward@gmail.com

**Figure 3 – Cycling
Distances**

- 1 Proposed new Sub Station
- 2 Highway works subject to highways consultants design. Refer to P401 for Surfacing Treatments
- 3 Wall subject to further discussions with neighbours
- 4 New acoustic timber fence and security gate with emergency push pad/bar. Refer to P402 for Boundary Treatments
- 5 New 7.5m Lidl pylon signage in accordance with Lidl spec
- 6 New RC retaining wall
- 7 New Gabion Basket retaining wall

- Existing trees/bushes in red hatching to be removed
- New proposed tree



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DO NOT SCALE!
ALL DIMENSIONS SHOULD BE CHECKED ON SITE BEFORE WORK COMMENCES

SUBJECT TO HGV TRACKING CHECK

INLINE WITH TOPOGRAPHICAL SURVEY, LANDFORM SURVEY DATED 03.07.15 DRAWING NUMBER 001.

SUBJECT TO REVIEW OF LEVELS AND FALLS

SUBJECT TO CONFIRMATION OF CAR CHARGING POINT REQUIREMENT

SUBJECT TO LIGHTING PLAN

BASED ON LIDL SPEC DRAWING LD(13)-GF-01 - Ground Floor - Setting Out Plan

SUBJECT TO HIGHWAYS CONSULTED DESIGN



Residual Hazard Register:			
HGV Tracking			
Vehicular movements within car park			
Pedestrian movements within car park.			
Development Site Area (sq m)	45,249 sq m		
Red Line Site Area (sq m)	9,098 sq m		
Store Type Reference	Type 1300 Store		
Sales Areas (sq m)	1325		
Number of Aisles	5 Aisle		
G/F GIA (sq m)	2125		
Building footprint (ex canopy) (sq m)	2206		
Building footprint (inc canopy) (sq m)	2403		
Lidl Car Park Spaces	139		
E.	21.12.17	Highways layout and site entrance updated	PC
D.	13.11.17	Floor Plan updated to latest spec	AB
C.	22.09.17	Level gradient symbols added to E and W boundary & latest lighting scheme added	AB
B.	11.09.17	Annotations and retaining heights updated	LS
A.	04.08.17	Development boundary shown in blue	AB
Rev.	Date	Description	Drawn

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E: info@htcarchitects.co.uk

client

Lidl UK GmbH

project

New Store
Wakefield Road,
Mapplewell

drawing title

Proposed Type 1300 Lidl Site Plan

date

July 2017

status

Planning Issue

scale

1:500 @ A3

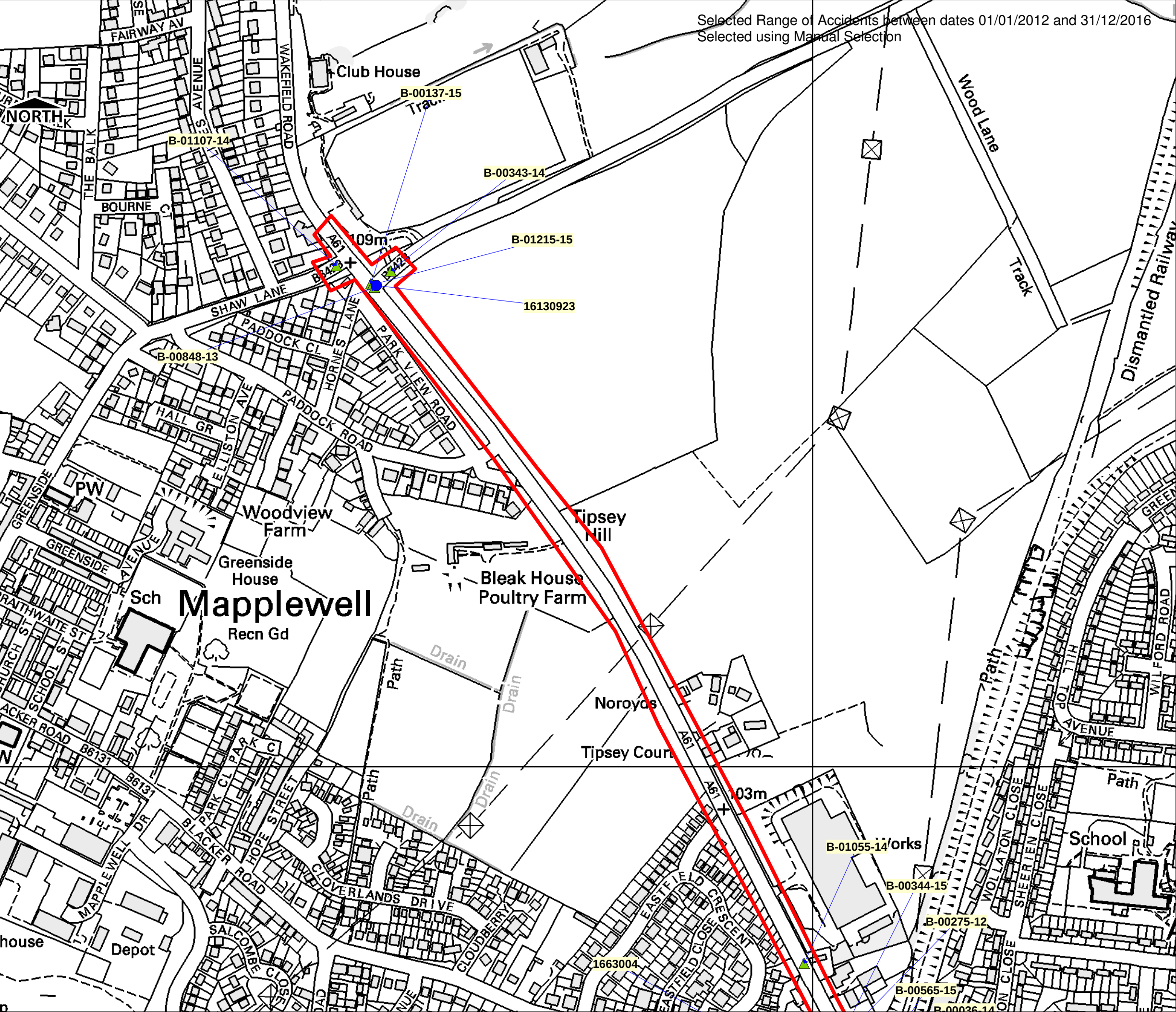
drawn

RT/AB checked LS

job no.

1744 dwg no. P400 rev. E

Appendix A – Accident Data.



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**MAKING SOUTH YORKSHIRE
ROADS SAFER**

DRAWING TITLE
Selected map area

SCALE	1 : 4000
DATE	12/12/2017
DWG No.	
DRAWN BY	

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles				Casualties		
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age / Sev
Road No.	Time								
2nd Road No.	D/L								
Grid Ref.	R.S.C								
	Weather								
	Speed								
	Account of Accident								
Causation Factor:									

B-00188-12 Friday WAKEFIELD RD BARNSELY AT J/W NEW LODGE CRES Veh 1 M/C < 50 cc Going ahead SE to NW Dri M 16 Serious
02/03/2012
R1: A 61 0847hrs Veh 2 Car Wait to turn left W to SE
R2: U Veh 3 Car Wait go ahead held up NW to SE
E 434,629 Dry
N 409,147 Fine without high winds
30 mph

Causation Factor:

1st: Poor turn or manoeuvre

2nd: Poor turn or manoeuvre

Participant:

Vehicle 1

Vehicle 2

Confidence:

Very Likely

Very Likely

V1 MOPED TR SE IN O/S/L OVTKING STATIONARY TF. V2 M/CAR WAS FLASHED OUT OF NEW LODGE CRES BY VEH IN STATIONARY TF, V2 TURNS R INTO PATH OF V1 THEN COLL REAR V3 M/CAR ALSO STAT IN QUE OF TRFC TRV SE TWDS BARNSELY.

B-00275-12 Tuesday WAKEFIELD RD BARNSELY Veh 1 Car Wait go ahead held up S to N
27/03/2012 Veh 2 Pedal cycle Stopping S to N Dri M 20 Slight
R1: A 61 1910hrs
E 434,031 Dry
N 409,699 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly

2nd: Distraction in vehicle

Participant:

Vehicle 2

Vehicle 2

Confidence:

Very Likely

Very Likely

VEH1 STAT IN TRAFFIC WHEN VEH2 COLL INTO REAR OF VEH1.

B-00556-12 Monday WAKEFIELD RD ATHERSLEY NORTH Veh 1 Car Going ahead NW to SE Ped F Slight
25/06/2012 200 MTS FROM J/W NEWSTEAD RD
R1: A 61 1855hrs
E 434,167 Dry
N 409,591 Fine without high winds
30 mph

Causation Factor:

1st: Crossed road masked by stationary veh

2nd: Failed to look properly

Participant:

Casualty 1

Casualty 1

Confidence:

Very Likely

Very Likely

V1 TV TW BARNSELY WHEN IT PASSES BUS AT BUS STOP & FEMALE RUNS OUT INTO RD. V1 SWERVED & BRAKED SHARPLY BUT WING MIRROR HIT PED ARM.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles					Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev	
Road No.	Time										
2nd Road No.	D/L										
Grid Ref.	R.S.C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											

B-00813-12 Tuesday LAITHES LN CAR PARK BARNSELY Veh 1 Car Turning right S to E Ped M 33 Slight
11/09/2012
R1: B 6132 1913hrs
E 434,549 Dry
N 409,329 Fine without high winds
30 mph

Causation Factor:

1st: Dazzling sun

Participant:

Vehicle 1

Confidence:

Very Likely

V1 PULLED OUT OF CAR PARK AND BLINDED BY SUN COLL WITH A PED.

B-00922-12 Thursday WAKEFIELD RD NEW LODGE Veh 1 Car Going ahead SE to NE Ped M 5 Slight
11/10/2012 BARNSELY J/W LAITHES LN
R1: A 61 0847hrs
R2: B 6132
E 434,514 Dry
N 409,286 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly

Participant:

Casualty 1

Confidence:

Very Likely

2nd: Wrong use of pedestrian crossing facility

Casualty 1

Very Likely

VEH1 TV WAKEFIELD RD TW JUNC WITH LAITHES LN . PEDN RUNS INTO PATH OF VEH1 SLOW IMPACT OCCURS.

B-00983-12 Wednesday WAKEFIELD RD BARNSELY Veh 1 Car Starting NWto SE
24/10/2012 Veh 2 Pedal cycle Going ahead NWto SE Dri M 21 Slight
R1: A 61 1650hrs
E 434,199 Wet/Damp
N 409,575 Raining without high winds
30 mph

Causation Factor:

1st: Vehicle travelling along pavement

Participant:

Vehicle 2

Confidence:

Very Likely

2nd: Rain, sleet, snow, or fog

Vehicle 2

Very Likely

V2 (PED CYC) RODE INTO F/O/S OF V1 AND COLL OCC.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles				Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

B-01099-12 Saturday WAKEFIELD ROAD 80 M NORTH Veh 1 Car Going ahead NW^{to} SE Ped F 49 Serious
01/12/2012 NEWSTEAD ROAD Veh 1 Car Going ahead NW^{to} SE Ped M 40 Serious
R1: A 61 1901hrs
Darkness: street lights present
E 434,254 Dry
N 409,541 Fine without high winds
30 mph

Causation Factor:

Participant:

Confidence:

1st: Careless/Reckless/In a hurry

Vehicle 1

Very Likely

VEH 1 MCAR TV ON WAKEFIELD ROAD 80 M NORTH OF JUNC WITH NEWSTEAD RD. HEADING TW BARNSELY. CAS 1 PED AND CAS PED BOTH XING RD FROM DRIVERS O/S. DRIVER VEH 1 FAILED TO SEE PED. VEH 1 COLL CAS 1 AND CAS 2.

B-01131-12 Friday WAKEFIELD ROAD BARNSELY J/W Veh 1 Car Starting NW^{to} SE
07/12/2012 ROTHERHAM ROAD Veh 2 M/C < 50 cc Going ahead NW^{to} SE Dri F 20 Slight
R1: A 61 1941hrs
Darkness: street lights present
E 434,825 Wet/Damp
N 408,951 Raining without high winds
30 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly

Vehicle 1

Very Likely

2nd: Vehicle blind spot

Vehicle 1

Possible

VEH 1 MCAR APPROACHING RNDBT JUNC WAKEFIELD RD AND ROTHERHAM RD. VEH 2 MOPED TV ON RNDBT. VEH 1 PULLED ONTO RNDBT AND COLL VEH 2.

B-00383-13 Wednesday WAKEFIELD RD BARNSELY J/W Veh 1 Car Going ahead SE ^{to} NW Dri F 26 Slight
19/06/2013 ROTHERHAM RD Veh 2 Car Going ahead NW^{to} SE Dri M 50 Slight
R1: A 633 2103hrs
Daylight:street lights present
E 434,832 Dry
N 408,947 Unknown
30 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to judge other persons path or speed

Vehicle 1

Very Likely

V1 TV FROM ROTHERHAM RD ONTO RNDBT. V2 TV FROM WAKIEFIELD RD. V1 PULLS ONTO RNDBT AND COLL OCCURS WITH V2.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles					Casualties		
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

B-00598-13 Saturday WAKEFIELD RD BARNSELY J/W NEW LODGE CRES
 28/09/2013 1935hrs
R1: A 61 Darkness: street lights present
R2: U Dry
E 434,271 Fine without high winds
N 409,529 30 mph

Causation Factor:

1st: Failed to look properly

Participant:

Casualty 1

Confidence:

Very Likely

PEDN XING C/WAY IN FRONT OF M/CYCLE TV TW DARTON. RIDER BRAKES AND FALLS FROM M/CYCLE WHICH SLIDES ALONG RD AND COLL WITH PEDN.

B-00848-13 Tuesday LEE LN BARNSELY AT J/W WAKEFIELD RD
 29/10/2013 1200hrs
R1: B 6428 Daylight:street lights present
R2: U Wet/Damp
E 433,516 Raining without high winds
N 410,529 60 mph

Causation Factor:

1st: Failed to look properly

2nd: Failed to judge other persons path or speed

3rd: Junction restart

4th: Junction restart

Participant:

Vehicle 2

Vehicle 1

Vehicle 2

Vehicle 1

Confidence:

Very Likely

Possible

Possible

Possible

V2 WAITING AT JCT ONCOMING VEH HAS FLASHED AND BELEIVING DRIVER WAS GIVING WAY V2 EMERGED FROM JCT INOT PATI VF V1 AND COLL OCC.

B-00829-13 Thursday WAKEFIELD RD BARNSELY
 05/12/2013 1629hrs
R1: A 61 Daylight:street lights present
R2: U Dry
E 434,618 Fine with high winds
N 409,162 30 mph

Causation Factor:

1st: Careless/Reckless/In a hurry

2nd: Failed to look properly

Participant:

Casualty 1

Casualty 1

Confidence:

Very Likely

Very Likely

VEH1 TRAV ALG C/WAY COLL CAS1 WHO RAN INTO C/WAY WITHOUT LOOKING

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles					Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev	
Road No.	Time										
2nd Road No.	D/L										
Grid Ref.	R.S.C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											

B-00036-14 Tuesday WAKEFIELD ROAD BARNSELEY 40 Veh 1 Car Going ahead NW^{to} SE Ped F 12 Slight
14/01/2014 MTS BAR LANE
R1: A 61 1850hrs
Darkness: street lights present
E 434,110 Wet/Damp
N 409,621 Fine without high winds
30 mph

Causation Factor:

1st: Dangerous action in carriageway
2nd: Careless/Reckless/In a hurry
3rd: Pedestrian wearing dark clothing at night
CHILD RAN OUT INTO PATH OF VEH AND COLL OCC.

Participant:

Casualty 1
Casualty 1
Casualty 1

Confidence:

Very Likely
Very Likely

B-00155-14 Monday WAKEFIELD ROAD BARNSELEY J/W Veh 1 Car Starting NW^{to} SE Ped M 14 Slight
17/02/2014 LAITHES LANE
R1: A 61 1745hrs
R2: B 6132 Daylight:street lights present
E 434,492 Wet/Damp
N 409,335 Raining without high winds
30 mph

Causation Factor:

1st: Stationary or parked vehicle
2nd: Failed to look properly
3rd: Careless/Reckless/In a hurry
4th: Failed to judge vehicles path or speed
5th: Pedestrian wearing dark clothing at night
6th: Stationary or parked vehicle
V1 APPRAOCHING JUNCTION WHEN C001 RAN INTO ROAD TO CROSS TO HIS FRIEND AND COLL WITH V1

Participant:

Vehicle 1
Casualty 1
Casualty 1
Casualty 1
Casualty 1
Casualty 1

Confidence:

Possible
Very Likely
Very Likely
Very Likely
Possible
Very Likely

B-00259-14 Monday WAKEFIELD ROAD BARNSELEY J/W Veh 1 Goods > 7.5t Turning left NW^{to} NE
17/03/2014 LAITHES LANE Veh 2 Going ahead NW^{to} SE Dri M 81 Slight
R1: A 61 0910hrs
R2: B 6132 Daylight:street lights present
E 434,516 Dry
N 409,320 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly
2nd: Failed to judge other persons path or speed
MOBILITY SCOOTER TV WAKEFIELD RD CROSSES JUNC TW THE CO-OP. VEH BEGINS TO TURN LT ALONG LAITHES LN AND FRONT OF TRAILER COLL WITH MOBILITY SCOOTER.

Participant:

Vehicle 2
Vehicle 2

Confidence:

Very Likely
Very Likely

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles					Casualties		
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

B-00343-14 Thursday LEE LANE BARNSELY 20 MTS Veh 1 Car Turning left NW^{to} NE Dri F 26 Slight
 10/04/2014 WAKEFIELD ROAD Veh 2 Car Wait go ahead held up NE ^{to} SW Dri F 29 Slight
R1: B 6106 1859hrs
R2: A 61 Daylight:street lights present
E 433,534 Dry
N 410,547 Fine without high winds
 60 mph

Causation Factor:

Participant:

Confidence:

1st: Junction overshoot

Vehicle 1

Possible

V2 STATIONARY IN TF ON ROYSTON LN WAITING TO JOIN WAKEFIELD RD, V1 ON WAKEFIELD RD TURNING INTO ROYSTON LN COLLIDED WITH F/O/S OF V2 CAUSING V1 TO TURN ONTO SIDE.

B-00345-14 Tuesday WAKEFIELD ROAD BARNSELY J/W Veh 1 Car Wait go ahead held up NW^{to} SE
 15/04/2014 LAITHES LANE Veh 2 Car Wait go ahead held up NW^{to} SE FSP F 11 Slight
R1: A 61 1120hrs Veh 2 Car Wait go ahead held up NW^{to} SE Dri F 37 Slight
R2: B 6132 Daylight:street lights present
E 434,522 Dry
N 409,295 Fine without high winds
 30 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly

Vehicle 1

Very Likely

2nd: Following too close

Vehicle 1

Very Likely

VEH1 TV WAKEFIELD RD. VEH2 AHEAD STOPS. VEH1 COLL INTO REAR OF VEH2.

B-00554-14 Friday WAKEFIELD ROAD BARNSELY J/W Veh 1 Car Going ahead SE ^{to} NW Ped M 9 Slight
 20/06/2014 NEWSTEAD ROAD
R1: A 61 1725hrs
R2: C 781 Daylight:street lights present
E 434,317 Dry
N 409,498 Fine without high winds
 30 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly

Casualty 1

Very Likely

2nd: Careless/Reckless/In a hurry

Casualty 1

Possible

3rd: Failed to judge vehicles path or speed

Casualty 1

C001 WAITING AT SIDE OF RD ON SCOOTER READY TO CROSS. V001 TRAVELLING ON THE ROAD. C001 NOT LOOKED PROPERLY AND STARTED TO CROSS, HITTING V001 ON THE SIDE.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles				Casualties		
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age / Sev
Road No.	Time								
2nd Road No.	D/L								
Grid Ref.	R.S.C								
	Weather								
	Speed								
	Account of Accident								
Causation Factor:									

B-00591-14 Friday LAITHES LANE BARNSELY 35 MTS Wakefield Road
27/06/2014
R1: B 6132 1720hrs
R2: U 61 Daylight:street lights present
E 434,548 Dry
N 409,333 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly

Participant:

Vehicle 1

Confidence:

Very Likely

V1 HAS DRIVEN FROM WAKEFIELD RD ONTO LAITHES RD INDICATING TO GO RIGHT INTO THE SMALL SHOPPING CENTRE, AS IT TURNED RIGHT V2 (BIKE) HAS COLLIDED WITH IT, RIDER INJURED AS WELL AS DRIVER IN V1 & PASSENGER

B-00703-14 Sunday WAKEFIELD ROAD BARNSELY J/W Rotherham Road
13/07/2014
R1: A 61 2055hrs
R2: A 633 Daylight:street lights present
E 434,835 Dry
N 408,945 Fine without high winds
30 mph

Causation Factor:

1st: Dazzling sun

2nd: Failed to look properly

3rd: Failed to judge other persons path or speed

4th: Disobeyed Give Way or Stop sign or markings

Participant:

Vehicle 1

Vehicle 1

Vehicle 1

Vehicle 1

Confidence:

Very Likely

Very Likely

Possible

Possible

VEH2 NEGOTIATING RNDBT, VEH1[DRIVERS VISION AFFECTED BY LOW SUN] ENTERS RNDBT COLLIDING WITH N/SIDE VEH2.

B-00969-14 Friday WAKEFIELD ROAD STAINCROSS J/W BAR Lane
12/09/2014
R1: A 61 1900hrs
R2: B 6131 Daylight:street lights present
E 434,054 Dry
N 409,658 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly

Participant:

Vehicle 1

Confidence:

Very Likely

VEH1 STAT ON BAR LN AT TRAFFIC LIGHT CONTROLLED JUNC SETS OFF INTENDING TO TURN RT ONTO WAKEFIELD RD AND COLLIDED WITH P/CYCLIST2.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles					Casualties		
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

B-00885-14 Monday LAITHES LANE BARNSELY 40 MTS Veh 1 M/C < 50 cc Going ahead NE to SW Dri M 17 Serious
22/09/2014 WAKEFIELD ROAD Veh 2 Car Wait go ahead held up NE to SW
R1: B 6132 1510hrs
Daylight:street lights present
E 434,552 Dry
N 409,335 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly

Participant:

Vehicle 1

Confidence:

Very Likely

VEH1 MOTOR SCOOTER COLL INTO REAR OF VEH2 WHICH WAS STAT IN TRAFFIC.

B-00881-14 Friday WAKEFIELD ROAD BARNSELY J/W Veh 1 Car Turning right SE to NE
26/09/2014 NEWSTEAD ROAD Veh 2 Car Going ahead NW to SE Dri F 50 Slight
R1: A 61 1030hrs
R2: U Daylight:street lights present
E 434,328 Dry
N 409,495 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly

Participant:

Vehicle 1

Confidence:

Very Likely

2nd: Failed to judge other persons path or speed

Vehicle 1

Very Likely

3rd: Passing too close to cyclist, horse rider or pedestrian

Vehicle 1

VEH1 BEGINS TO TURN RT INTO NEWSTEAD RD ACROSS PATH OF VEH2.

B-01055-14 Tuesday WAKEFIELD ROAD BARNSELY 135 Veh 1 Car Wait go ahead held up NW to SE RSP F 84 Slight
30/09/2014 MTS BAR LANE Veh 1 Car Wait go ahead held up NW to SE FSP F 63 Slight
R1: A 61 1130hrs Veh 1 Car Wait go ahead held up NW to SE Dri F 66 Slight
Daylight:street lights present Veh 2 Car Wait go ahead held up NW to SE
E 433,990 Dry
N 409,783 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly

Participant:

Vehicle 1

Confidence:

Very Likely

2nd: Swerved

Vehicle 1

Very Likely

V1 TRAVELLING ALONG WAKEFIELD RD T/W JUNC. WITH BAR LN. LONG QUEUE OF STATIONARY TRAFFIC WAITING AT LIGHTS . REAR VEHICLE OF QUEUE (V2). V1 HAS COLLIDED WITH REAR OF V2.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles				Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

B-01107-14 Monday SHAW LANE MAPPLEWELL J/W Wakefield Road Veh 1 Car Wait go ahead held up W to E FSP F 21 Slight
 17/11/2014 Wakefield Road Veh 1 Car Wait go ahead held up W to E Dri F 21 Slight
R1: B 6428 1745hrs Veh 2 Car Going ahead W to E
R2: A 61 Darkness: street lighting
E 433,474 Dry
N 410,553 Fog or mist
 40 mph

Causation Factor:

1st: Failed to look properly

Participant:

Vehicle 2

Confidence:

Possible

V1 STATIONARY AT JCT, V2 FOLLOWING FAILED TO REACT IN TIME AND COLL WITH REAR OF V1.

B-01240-14 Wednesday WAKEFIELD ROAD NEW LODGE J/W Wakefield Road Veh 1 Bus/coach Going ahead NW to SE
 10/12/2014 Rotherham Road Veh 2 Car Going ahead NW to SE Dri F 27 Slight
R1: A 61 0830hrs
R2: A 633 Daylight:street lights present
E 434,827 Wet/Damp
N 408,957 Fine with high winds
 30 mph

Causation Factor:

1st: Failed to judge other persons path or speed

Participant:

Vehicle 2

Confidence:

Very Likely

2nd: Failed to signal/Misleading signal

Vehicle 1

Very Likely

3rd: Failed to look properly

Vehicle 2

VEH1 TV WAKEFIELD RD TW TOWN CENTRE IN LT LN IN ORDER TO NEG MINI RNDBT. VEH2 APPROACHED RNDBT AND DRIVER PRESUMED VEH1 WAS TURNING LT. BOTH VEHS ENTERED RNDBT AND A COLL OCCURRED.

B-00137-15 Wednesday WAKEFIELD ROAD STAINCROSS J/W Wakefield Road Veh 1 Car Going ahead NW to SE Dri M 70 Slight
 11/02/2015 Lee Lane Veh 2 Car Turning right NE to NW
R1: A 61 1748hrs
R2: U Darkness: street lights present
E 433,512 Wet/Damp
N 410,533 Fine without high winds
 40 mph

Causation Factor:

1st: Disobeyed Give Way or Stop sign or markings

Participant:

Vehicle 2

Confidence:

Possible

2nd: Failed to look properly

Vehicle 2

Possible

3rd: Failed to look properly

Vehicle 1

Possible

4th: Junction restart

Vehicle 2

Possible

V1 TR ALONG CARR WHEN V2 EMERGED FROM JCT INTO PATH OF V1 AND COLL OCC.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles				Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

B-00217-15 Friday ROTHERHAM ROAD ATHERSLEY Veh 1 Car Stopping NW^{to} SE Dri F 18 Slight
06/03/2015 SOUTH J/W WAKEFIELD ROAD Veh 2 Car Stopping NW^{to} SE
R1: A 633 1230hrs Veh 3 Car Going ahead NW^{to} SE
R2: A 61 Daylight:street lights present
E 434,852 Dry
N 408,945 Unknown
30 mph

Causation Factor:

1st: Loss of control

Participant:

Vehicle 3

Confidence:

Possible

V1 EXITED R/ABOUT ON WAKEFIELD RD & BRAKED & STOPPED DUE TO VEHICLE IN FRONT STOPPING. V2 STOPPED BEHIND V1 HOWEVER V3 COLLIDED WITH V2, PUSHING V2 INTO V1.

B-00344-15 Saturday WAKEFIELD ROAD NEW LODGE 40 Veh 1 Car Wait go ahead held up NW^{to} SE FSP M 34 Slight
07/03/2015 MTS BAR LANE Veh 1 Car Wait go ahead held up NW^{to} SE Dri F 53 Slight
R1: A 61 1140hrs Veh 2 Car Going ahead NW^{to} SE
E 434,032 Dry
N 409,704 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly

Participant:

Vehicle 2

Confidence:

Very Likely

2nd: Failed to judge other persons path or speed

Vehicle 2

Very Likely

3rd: Sudden braking

Vehicle 2

VEH1 STAT IN TRAFFIC. VEH2 COLL INTO REAR OF VEH1.

B-00523-15 Monday LAITHES LANE ATHERSLEY NORTH Veh 1 Car Turning right SW^{to} SE
15/06/2015 35 MTS WAKEFIELD ROAD Veh 2 Car O/take on n/side NE^{to} SW Dri M 46 Slight
R1: B 6132 0835hrs
R2: U Daylight:street lights present
E 434,547 Dry
N 409,332 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly

Participant:

Vehicle 1

Confidence:

Possible

2nd: Stationary or parked vehicle

Vehicle 1

Very Likely

VEH1 TURNING RT FROM LAITHES LN INTO CAR PARK. TRAFFIC STOPPED TO ALLOW VEH1 TO TURN. VEH2 TV DOWN INSIDE OF STAT TRAFFIC AND COLL OCCURRED WITH VEH1.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

			Vehicles				Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class				Sex / Age / Sev		
	Date								
Road No.	Time								
2nd Road No.									
Grid Ref.	D/L								
	R.S.C								
	Weather								
	Speed								
	Account of Accident								
Causation Factor:									

B-00532-15 Friday WAKEFIELD ROAD ATHERSLEY J/W LAITHES LANE Veh 1 Car Going ahead SE to NW
19/06/2015 Veh 2 Pedal cycle Going ahead NE to SW Dri M 12 Slight
R1: A 61 1735hrs
R2: B 6132 Daylight:street lights present
E 434,513 Dry
N 409,289 Fine without high winds
30 mph

Causation Factor:

Participant:

Confidence:

1st: Careless/Reckless/In a hurry Vehicle 1 Very Likely
VEH TV WAKEFIELD RD TV THRO TRAFFIC LIGHTS ON AMBER. PCYCLIST XING ON PED XING POSS ON RED AND A COLL OCCURS.

B-00535-15 Sunday WAKEFIELD ROAD ATHERSLEY SOUTH J/W ROTHERHAM ROAD Veh 1 Car Going ahead NW to SE Dri F 33 Slight
21/06/2015 Veh 2 Car Going ahead E to NW Dri M 43 Slight
R1: A 61 1325hrs
R2: A 633 Daylight:street lights present
E 434,833 Dry
N 408,947 Fine without high winds
30 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly Vehicle 2 Very Likely
2nd: Failed to judge other persons path or speed Vehicle 2 Possible
VEH1 TV WAKEFIELD RD TW BARNSELY ENTERS RNDBT INTENDING TO CONT ON TO WAKEFIELD RD. VEH2 TV ROTHERHAM RD TW WAKEFIELD ALSO ENTERS RNDBT AND A COLL OCCURS WITH VEH1.

B-00565-15 Saturday WAKEFIELD ROAD STAINCROSS J/W BAR LANE Veh 1 Car Turning right NW to SW Dri M 21 Slight
27/06/2015 Veh 2 Car Going ahead SE to NW Dri F 34 Slight
R1: A 61 1308hrs
R2: B 6131 Daylight:street lights present
E 434,059 Dry
N 409,653 Fine without high winds
30 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly Vehicle 1 Very Likely
2nd: Failed to judge other persons path or speed Vehicle 1 Possible
VEH1 TV TW BARNSELY ATTEMPTS TO TURN RT INTO BAR LN ACROSS PATH OF VEH2 AND A COLL OCCURS.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles					Casualties		
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

B-00649-15 Friday NEWSTEAD ROAD ATHERSLEY Veh 1 Bus/coach Starting NE to SW
10/07/2015 NORTH J/W WAKEFIELD ROAD Veh 2 Car Wait to turn left NE to SE FSP M 56 Slight
R1: U 1855hrs Veh 2 Car Wait to turn left NE to SE RSP F 50 Slight
R2: A 61 Daylight:street lights present Veh 2 Car Wait to turn left NE to SE Dri M 22 Slight
E 434,335 Dry
N 409,499 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly

2nd: Failed to judge other persons path or speed

VEH2 STAT AT JUNC INTENDING TO TURN LT EDGES OUT BUT COLL OCCURS WITH VEH1. VEH1 IMPACTS WITH REAR OF VEH2.

Participant:

Vehicle 1

Vehicle 1

Confidence:

Very Likely

Very Likely

B-00674-15 Saturday WAKEFIELD ROAD BARNSELEY J/W Veh 1 Car Turning right SW to SE
25/07/2015 NEW LODGE CRESCENT Veh 2 M/C > 125 cc O/take m/veh o/side NW to SE Dri M 27 Serious
R1: A 61 1250hrs
R2: U Daylight:street lights present
E 434,630 Dry
N 409,147 Fine without high winds
30 mph

Causation Factor:

1st: Exceeding speed limit

2nd: Stationary or parked vehicle

VEH1 TURNS RT FROM NEW LODGE CRES ONTO WAKEFIELD RD. VEH2 OVTK SLOW MOVING TRAFFIC COLL WITH VEH1.

Participant:

Vehicle 2

Vehicle 1

Confidence:

Possible

Possible

B-00751-15 Wednesday WAKEFIELD ROAD BARNSELEY J/W Veh 1 Bus/coach Stopping SE to NW Seat F 64 Slight
26/08/2015 NEW LODGE CRESCENT
R1: A 61 2051hrs
R2: U Darkness: street lights present
E 434,633 Dry
N 409,138 Fine without high winds
30 mph

Causation Factor:

1st: Sudden braking

PSV TV IN BUS LN ON WAKEFIELD RD TW J/W NEW LODGE CRES. DRIVER BRAKES DUE TO UNKNOWN VEH AND PASS SUSTAINS II

Participant:

Vehicle 1

Confidence:

Very Likely

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles					Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev	
Road No.	Time										
2nd Road No.	D/L										
Grid Ref.	R.S.C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											

B-00767-15 Sunday BAR LANE STAINCROSS 60 MTS Veh 1 Pedal cycle Going ahead E to W Dri M 59 Serious
 30/08/2015 WAKEFIELD ROAD
R1: B 6131 1151hrs
 Daylight:street lights present
E 434,011 Dry
N 409,648 Fine without high winds
 30 mph

Causation Factor:

Participant:

Confidence:

1st: Illness or disability, mental or physical

Vehicle 1

Possible

PED/CYCLIST LOSES CONTROL AND FALLS OVER HANDLEBARS OF CYCLE.

B-00826-15 Friday WAKEFIELD RD BARNSELY Veh 1 Car Going ahead W to E FSP M 29 Slight
 18/09/2015 SMITHIES LN Veh 1 Car Going ahead W to E Dri M 28 Slight
R1: U 1225hrs Veh 2 Car Turning right E to N Dri M 57 Slight
R2: U Daylight:street lights present
E 434,509 Dry
N 409,312 Fine without high winds
 30 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly

Vehicle 1

Very Likely

2nd: Failed to judge other persons path or speed

Vehicle 1

Very Likely

VEH1 TV WAKEFIELD RD FROM DIRC OF TOWN TW JUNC WITH SMITHIES LN. VEH2 PULLS ACROSS FRONT OF VEH1 AND A COLL OCCURRED.

B-00877-15 Tuesday WAKEFIELD ROAD BARNSELY 30 Veh 1 Car Going ahead 0 to 0 Ped F 16 Slight
 29/09/2015 MTS NEWSTEAD ROAD
R1: A 61 0815hrs
 Daylight:street lights present
E 434,357 Dry
N 409,472 Fine without high winds
 30 mph

PEDESTRIAN CROSSING WHEN WHEN HIT BY VEH 1. VEH 1 FTS

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles					Casualties		
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

B-00982-15 Wednesday WAKEFIELD ROAD BARNSELY J/W 21/10/2015 NEWSTEAD ROAD
R1: A 61 1457hrs
R2: U Daylight:street lights present
E 434,330 Dry
N 409,497 Fine without high winds 30 mph

Veh 1 Car Turning right NE to NW
Veh 2 Pedal cycle Going ahead NW to SE Dri M 73 Slight

Causation Factor:

1st: Failed to look properly
2nd: Failed to judge other persons path or speed
3rd: Junction restart
4th: Poor turn or manoeuvre

Participant:

Vehicle 1
Vehicle 1
Vehicle 1
Vehicle 1

Confidence:

Very Likely
Very Likely
Very Likely
Very Likely

VEH1 AT JUNC OF NEWSTEAD RD AND WAKEFIELD RD. PEDCYCLIST2 TV WAKEFIELD RD TW NEW LODGE. VEH1 PULLS OUT ONT WAKEFIELD RD AND COLL OCCURS.

B-01007-15 Thursday LAITHES LANE BARNSELY J/W 05/11/2015 WAKEFIELD ROAD
R1: B 6132 1110hrs
R2: A 61 Daylight:street lights present
E 434,528 Wet/Damp
N 409,317 Fine without high winds 30 mph

Veh 1 Car Stopping NE to SW FSP F 66 Slight
Veh 2 Bus/coach Stopping NE to SW

Causation Factor:

1st: Sudden braking
2nd: Following too close
3rd: Slippery road (due to weather)

Participant:

Vehicle 1
Vehicle 2
Vehicle 2

Confidence:

Very Likely
Very Likely

VEH1 TV LAITHES LN AND STOPS. VEH2 COLL INTO REAR OF VEH1.

B-01057-15 Monday NEWSTEAD ROAD ATHERSLEY J/W 16/11/2015 WAKEFIELD ROAD
R1: U 1605hrs
R2: A 61 Daylight:street lights present
E 434,335 Dry
N 409,503 Fine without high winds 30 mph

Veh 1 Car Turning right SE to NE Ped F 15 Slight

Causation Factor:

1st: Failed to look properly
2nd: Careless/Reckless/In a hurry

Participant:

Casualty 1
Casualty 1

Confidence:

Very Likely
Very Likely

VEH TURNS ONTO NEWSTEAD RD FROM WAKEFIELD RD WHEN PEDN STEPS INTO RD AND A COLL OCCURRED.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles					Casualties		
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

B-01215-15 Thursday WAKEFIELD ROAD BARNSELY JW Veh 1 Car Turning right SE to NE RSP M 27 Slight
24/12/2015 LEE LANE Veh 2 Car Turning right NE to NW
R1: A 61 1530hrs
R2: B 6428 Daylight:street lights present
E 433,514 Dry
N 410,532 Fine without high winds
40 mph

Causation Factor:

1st: Failed to look properly
2nd: Poor turn or manoeuvre

Participant:

Vehicle 2
Vehicle 2

Confidence:

Very Likely
Very Likely

VEH 1 INDICATING TO TURN RIGHT ONTO LEES LANE. VEH 2 PULLS OUT OF LEES LANE AND COLLIDED WITH VEH 1.

1642696 Friday BAR LANE (B6131) BARNSELY Veh 1 Car Going ahead W to E Ped M 30 Serious
29/01/2016
R1: B 6131 2315hrs
Darkness: street lights present
E 434,005 Wet/Damp
N 409,654 Fine without high winds
30 mph

Causation Factor:

1st: Impaired by alcohol
2nd: Dangerous action in carriageway

Participant:

Casualty 1
Casualty 1

Confidence:

Very Likely
Very Likely

CAS001 HAS ALTERCATION IN PUB WITH ANOTHER MALE, CHASES THE MALE ACROSS THE ROAD INTO THE PATH OF V1

1663004 Friday BAR LANE (B6131) BARNSELY Veh 1 Bus/coach Stopping W to E Seat F 52 Slight
29/04/2016 Veh 1 Bus/coach Stopping W to E Seat F 15 Slight
R1: B 6131 1219hrs Veh 1 Bus/coach Stopping W to E Seat F 68 Slight
Daylight:street lights present Veh 1 Bus/coach Stopping W to E Seat F 80 Slight
E 434,017 Dry
N 409,650 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly
2nd: Sudden braking

Participant:

Vehicle 1
Vehicle 1

Confidence:

Possible
Very Likely

BUS TRAVELLING ALONG WHEN THE VEHICLE IN FRONT HAS COME TO A STOP CAUSING THE BUS TO BREAK SHARPLY, CAUSING INJURIES TO 4 PASSENGERS.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref. Road No. 2nd Road No. Grid Ref.	Day	Location	Description	Vehicles					Casualties				
	Date			Veh No	/ Type	/ Manv	/ Dir	/ Class	Sex	/ Age	/ Sev		
	Time												
	D/L												
	R.S.C												
	Weather												
	Speed												
	Account of Accident												
Causation Factor:													
1678726	Tuesday	WAKEFIELD ROAD (A61) BARNSELEY	Veh 1	Car		Going ahead		NW ^{to}	SE	Ped	M 2 Slight		
R1: A 61	14/06/2016	AT OR WITHIN 20 MTS OF LAITHES											
R2: B 6132	1159hrs	LANE (B6132)											
E 434,525	Daylight:	street lights present											
N 409,285	Dry												
	Fine without high winds												
	30 mph												
Causation Factor:				Participant:				Confidence:					
1st:	Other		Casualty 1				Very Likely						
CAS001 BROKE FREE FROM MOTHER AND INTO C/W INTO PATH OF V1													
1684614	Wednesday	WAKEFIELD ROAD (A61) BARNSELEY	Veh 1	Car		Wait go ahead held up		SE ^{to}	NW	Dri	F 40 Slight		
R1: A 61	06/07/2016	AT OR WITHIN 20 MTS OF LAITHES	Veh 2	Car		Going ahead		SE ^{to}	NW				
R2: B 6132	1750hrs	LANE (B6132)											
E 434,517	Daylight:	street lights present											
N 409,284	Dry												
	Fine without high winds												
	30 mph												
Causation Factor:				Participant:				Confidence:					
1st:	Sudden braking		Vehicle 2				Very Likely						
V1 STATIONARY AT TRAFFIC LIGHTS WHEN V2 COLL INTO REAR OF V1.													
1687710	Thursday	WAKEFIELD ROAD (A61) BARNSELEY	Veh 1	Bus/coach		Stopping		NW ^{to}	SE	Seat	F 74 Slight		
R1: A 61	14/07/2016	AT OR WITHIN 20 MTS OF NEW											
R2: U	1350hrs	LODGE CRESCENT											
E 434,640	Daylight:	street lights present											
N 409,141	Dry												
	Fine without high winds												
	30 mph												
Causation Factor:				Participant:				Confidence:					
1st:	Animal or object in carriageway		Vehicle 1				Very Likely						
V1 BRAKED HARD TO AVOID DOGS IN ROAD AND PED CAS001 FELL FROM SEAT BANGING HEAD													

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles					Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev	
Road No.	Time										
2nd Road No.	D/L										
Grid Ref.	R.S.C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											

1697363 Wednesday WAKEFIELD ROAD (A61) BARNSELY Veh 1 Car Wait go ahead held up N to S Dri M 62 Slight
 03/08/2016 AT OR WITHIN 20 MTS OF LAITHES Veh 2 Car Stopping N to S
 R1: A 61 1330hrs LANE (B6132)
 R2: B 6132 Daylight:street lights present
 E 434,499 Dry
 N 409,326 Unknown
 30 mph

Causation Factor:

1st: Failed to look properly

2nd: Sudden braking

3rd: Failed to judge other persons path or speed

Participant:

Vehicle 2

Vehicle 2

Vehicle 2

Confidence:

Very Likely

Very Likely

V1 TRAVELLING TOWARDS TOWN AND WAITING AT TRAFFIC LIGHT JUNCTION. V2 RUNS INTO BACK OF V1, MAKES A U-TURN AND FTS

16110892 Monday WAKEFIELD ROAD (A61) BARNSELY Veh 1 Car Wait go ahead held up NW to SE Dri F 47 Slight
 26/09/2016 AT OR WITHIN 20 MTS OF Veh 2 M/C < 50 cc Going ahead NW to SE
 R1: A 61 0900hrs ROTHERHAM ROAD (A633)
 R2: A 633 Daylight:street lights present
 E 434,812 Dry
 N 408,967 Fine without high winds
 30 mph

V1 STAT IN QUEUE TRAFFIC WHEN V2 COLL INTO REAR OF V1. NO DETAILS EXCHANGED.

16121898 Friday WAKEFIELD ROAD (A61) BARNSELY Veh 1 Bus/coach Stopping N to S Seat F Slight
 21/10/2016 Veh 1 Bus/coach Stopping N to S Seat F Slight
 R1: A 61 1021hrs
 Daylight:street lights present
 E 434,384 Dry
 N 409,455 Fine without high winds
 30 mph

Causation Factor:

1st: Sudden braking

Participant:

Vehicle 1

Confidence:

Very Likely

VEH BRAKED SUDDENLY CAUSING TWO PASS TO SUSTAIN INJURY.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Build Query : Local_auth = 'Barnsley'

Notes:

John Turner - Bryan G Hall

Police Ref.	Day	Location Description	Vehicles				Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

16130923 Sunday WAKEFIELD ROAD (A61) BARNSELY Veh 1 Car Going ahead NW^{to} SE Dri M 91 Serious
 13/11/2016 AT OR WITHIN 20 MTS OF LEE LANE Veh 2 Goods < 3.5t Turning left NE ^{to} SE
 1300hrs (B6428)
R1: A 61 Daylight:street lights present
R2: B 6428 Dry
E 433,518 Unknown
N 410,531 40 mph

Causation Factor:

1st: Disobeyed Give Way or Stop sign or markings
2nd: Failed to judge other persons path or speed
3rd: Failed to judge other persons path or speed
4th: Failed to look properly
5th: Illness or disability, mental or physical

Participant:

Vehicle 2
 Vehicle 2
 Vehicle 1
 Vehicle 2
 Vehicle 1

Confidence:

Very Likely
 Very Likely
 Very Likely
 Very Likely
 Very Likely

V1 TRAVELLED FROM DIRECTION OF SHAW LANE TURNING RIGHT INTO WAKEFIELD ROAD. V2 TRAVELLED FROM LEE LANE TURNING LEFT INTO WAKEFIELD ROAD AND A COLL OCCURRED.

16152244 Tuesday WAKEFIELD ROAD (A61) BARNSELY Veh 1 Car Turning right SW ^{to} SE
 20/12/2016 AT OR WITHIN 20 MTS OF NEW Veh 2 Car Going ahead SE ^{to} NW Dri M 43 Serious
 1612hrs LODGE CRESCENT
R1: A 61 Darkness: street lights present
R2: U Dry
E 434,271 Fine without high winds
N 409,530 30 mph

Causation Factor:

1st: Failed to look properly
2nd: Failed to judge other persons path or speed
3rd: Failed to signal/Misleading signal

Participant:

Vehicle 1
 Vehicle 1
 Vehicle 2

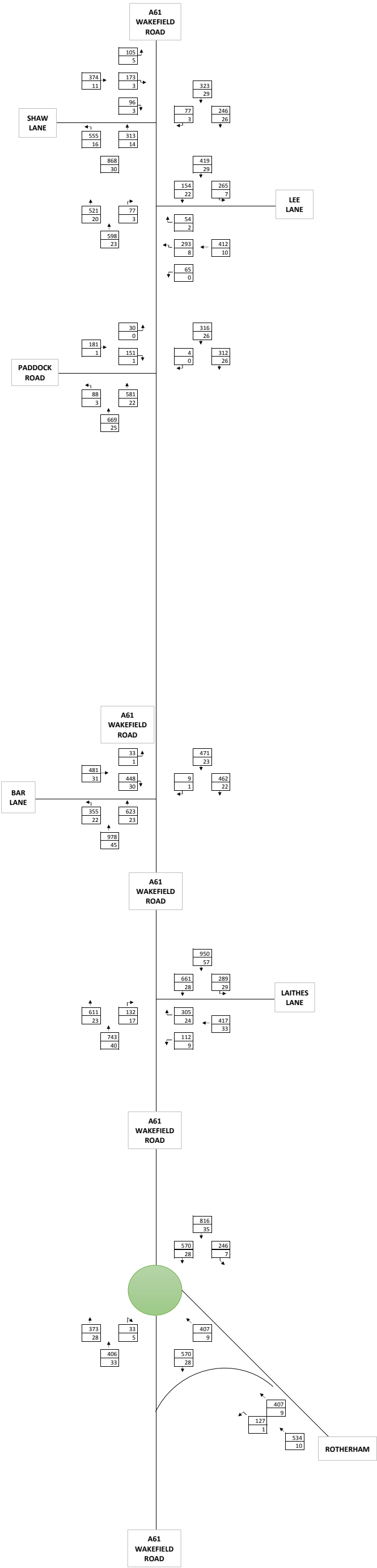
Confidence:

Very Likely
 Very Likely

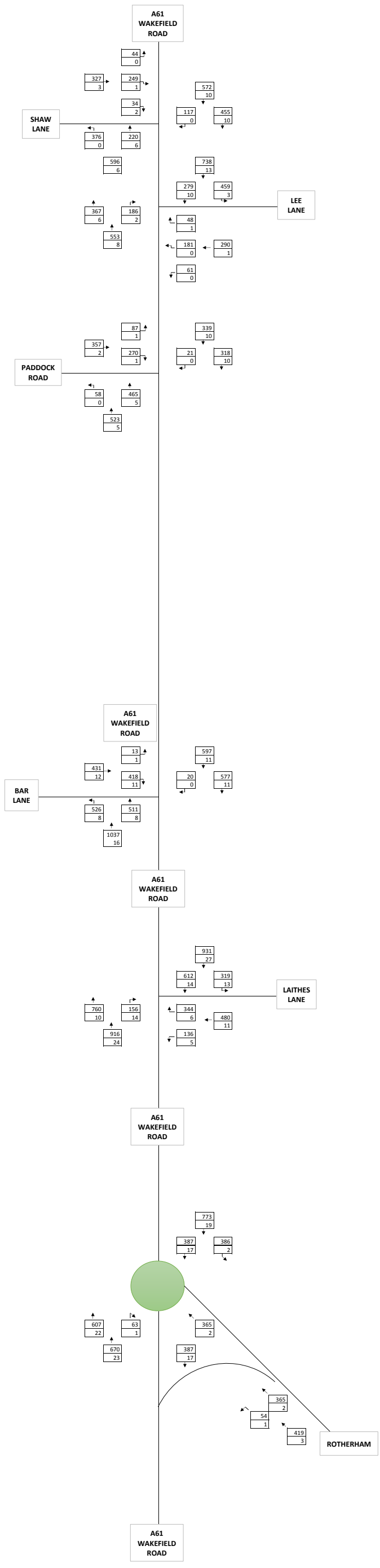
V1 WAITING TO TURN RIGHT ONTO A61 DRIVER BELIEVES V2 IS INDICATING TO TURN LEFT. V1 PULLS OUT AND COLL WITH V2.

Appendix B – Traffic Count Peak Hours.

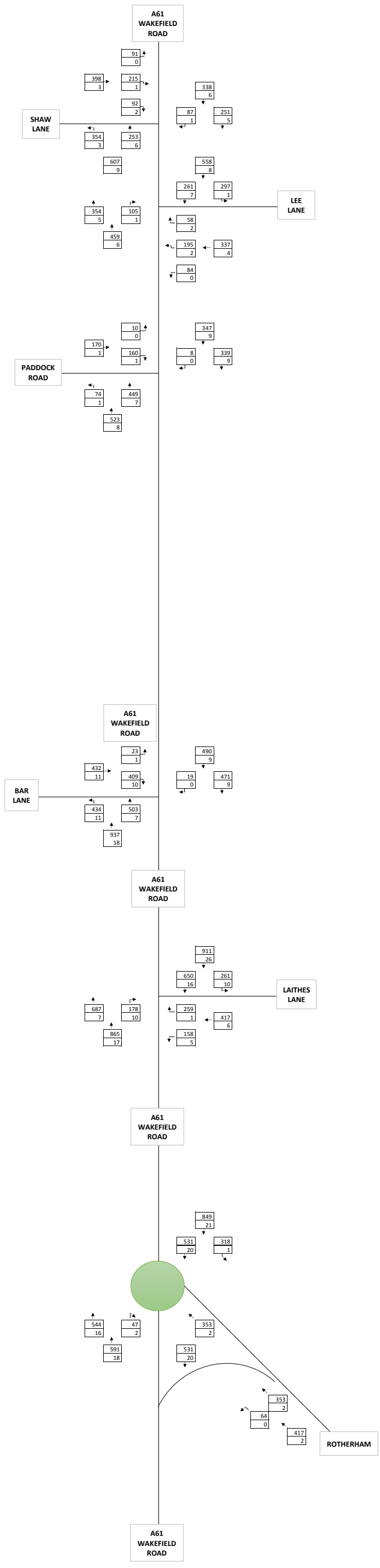
2017 SURVEYED FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
FRIDAY 10 NOVEMBER 2017
07:45 - 08:45
AM PEAK



2017 SURVEYED FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
FRIDAY 10 NOVEMBER 2017
16:45 - 17:45
PM PEAK



2017 SURVEYED FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
SATURDAY 11 NOVEMBER 2017
11:45 - 12:45
PM PEAK



Appendix C – 2017 Base Operational Assessments of Existing Junctions.

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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Filename: Wakefield Road - Lee Lane - Shaw Lane.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8

Report generation date: 15/12/2017 11:59:08

« Existing Layout - 2017 Existing, AM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2017 Existing				
Stream B-C	7.55	233.92	1.03	F
Stream B-AD	15.02	177.86	1.05	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.20	8.13	0.17	A
Stream D-A	6.96	386.54	1.14	F
Stream D-BC	30.02	264.22	1.14	F
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.23	9.64	0.19	A

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 11:59:07

File summary

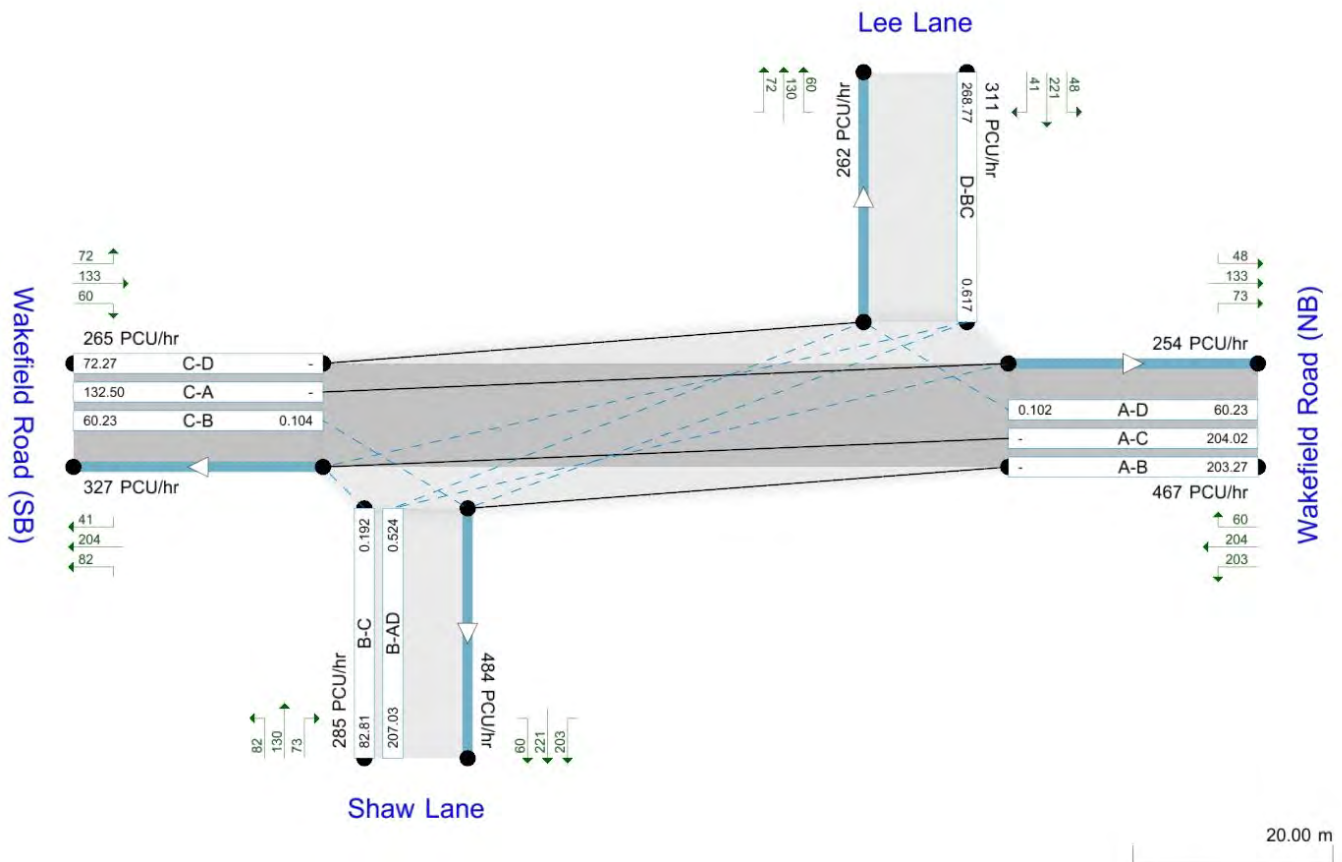
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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



Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFC (l)
Time Segment: (07:30-07:45)
Showing Analysis Set "A1 - Existing Layout", Demand Set "D1 - 2017 Existing, AM"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Existing, AM

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
Existing Layout	N/A			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
2017 Existing, AM	2017 Existing	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	202.19	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Shaw Lane	One lane plus flare				10.00	6.40	3.60	3.40	3.40	✓	1.00	55	35
Lee Lane	One lane plus flare				10.00	8.00	5.00	4.25	3.50	✓	2.00	40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	563.701	0.103	0.260	-	-	-	0.163	0.371	0.163	0.103	0.260
1	B-C	672.763	0.103	0.261	-	-	-	-	-	-	0.103	0.261
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	659.756	-	-	-	0.256	0.101	0.256	-	0.101	-	-
1	D-BC	613.834	0.178	0.178	0.404	0.283	0.112	0.283	-	0.112	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	621.00	100.000
Shaw Lane	ONE HOUR	✓	385.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	352.00	100.000
Lee Lane	ONE HOUR	✓	422.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

		To			
From		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
	Wakefield Road (NB)	0.000	270.000	271.000	80.000
	Shaw Lane	99.000	0.000	110.000	176.000
	Wakefield Road (SB)	176.000	80.000	0.000	96.000
	Lee Lane	65.000	301.000	56.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.43	0.44	0.13
	Shaw Lane	0.26	0.00	0.29	0.46
	Wakefield Road (SB)	0.50	0.23	0.00	0.27
	Lee Lane	0.15	0.71	0.13	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	1.03	233.92	7.55	F
B-AD	1.05	177.86	15.02	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.17	8.13	0.20	A
D-A	1.14	386.54	6.96	F
D-BC	1.14	264.22	30.02	F
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.19	9.64	0.23	A

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	82.81	81.88	0.00	431.27	0.192	0.23	10.276	B
B-AD	207.03	202.78	0.00	394.74	0.524	1.06	18.515	C
A-B	203.27	203.27	0.00	-	-	-	-	-
A-C	204.02	204.02	0.00	-	-	-	-	-
A-D	60.23	59.78	0.00	593.16	0.102	0.11	6.743	A
D-A	48.94	48.43	0.00	434.57	0.113	0.13	9.311	A
D-BC	268.77	262.64	0.00	435.49	0.617	1.53	20.355	C
C-D	72.27	72.27	0.00	-	-	-	-	-
C-A	132.50	132.50	0.00	-	-	-	-	-
C-B	60.23	59.77	0.00	576.66	0.104	0.12	6.959	A

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	98.89	98.10	0.00	322.41	0.307	0.43	15.986	C
B-AD	247.22	243.22	0.00	356.33	0.694	2.06	30.981	D
A-B	242.72	242.72	0.00	-	-	-	-	-
A-C	243.62	243.62	0.00	-	-	-	-	-
A-D	71.92	71.79	0.00	570.14	0.126	0.14	7.221	A
D-A	58.43	57.91	0.00	281.61	0.208	0.26	16.056	C
D-BC	320.94	313.46	0.00	399.69	0.803	3.40	39.005	E
C-D	86.30	86.30	0.00	-	-	-	-	-
C-A	158.22	158.22	0.00	-	-	-	-	-
C-B	71.92	71.77	0.00	535.08	0.134	0.15	7.767	A

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	121.11	100.90	0.00	117.77	1.028	5.48	148.352	F
B-AD	302.78	274.26	0.00	298.19	1.015	9.19	99.455	F
A-B	297.28	297.28	0.00	-	-	-	-	-
A-C	298.38	298.38	0.00	-	-	-	-	-
A-D	88.08	87.88	0.00	538.83	0.163	0.19	7.980	A
D-A	71.57	52.78	0.00	62.61	1.143	4.95	239.072	F
D-BC	393.06	338.03	0.00	350.75	1.121	17.16	134.564	F
C-D	105.70	105.70	0.00	-	-	-	-	-
C-A	193.78	193.78	0.00	-	-	-	-	-
C-B	88.08	87.80	0.00	477.89	0.184	0.22	9.222	A

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	121.11	112.85	0.00	121.62	0.996	7.55	233.921	F
B-AD	302.78	279.49	0.00	288.69	1.049	15.02	177.859	F
A-B	297.28	297.28	0.00	-	-	-	-	-
A-C	298.38	298.38	0.00	-	-	-	-	-
A-D	88.08	88.07	0.00	531.03	0.166	0.20	8.127	A
D-A	71.57	63.53	0.00	68.23	1.049	6.96	386.536	F
D-BC	393.06	341.63	0.00	344.76	1.140	30.02	264.218	F
C-D	105.70	105.70	0.00	-	-	-	-	-
C-A	193.78	193.78	0.00	-	-	-	-	-
C-B	88.08	88.04	0.00	461.23	0.191	0.23	9.645	A

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	98.89	122.76	0.00	171.26	0.577	1.58	92.187	F
B-AD	247.22	290.90	0.00	325.73	0.759	4.10	112.989	F
A-B	242.72	242.72	0.00	-	-	-	-	-
A-C	243.62	243.62	0.00	-	-	-	-	-
A-D	71.92	72.11	0.00	554.88	0.130	0.15	7.458	A
D-A	58.43	67.09	0.00	75.91	0.770	4.80	300.040	F
D-BC	320.94	375.39	0.00	388.00	0.827	16.41	226.853	F
C-D	86.30	86.30	0.00	-	-	-	-	-
C-A	158.22	158.22	0.00	-	-	-	-	-
C-B	71.92	72.17	0.00	500.58	0.144	0.17	8.407	A

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	82.81	88.08	0.00	398.43	0.208	0.27	11.787	B
B-AD	207.03	218.49	0.00	384.46	0.539	1.23	23.191	C
A-B	203.27	203.27	0.00	-	-	-	-	-
A-C	204.02	204.02	0.00	-	-	-	-	-
A-D	60.23	60.37	0.00	588.68	0.102	0.11	6.817	A
D-A	48.94	67.41	0.00	330.44	0.148	0.18	14.640	B
D-BC	268.77	327.10	0.00	430.86	0.624	1.83	50.826	F
C-D	72.27	72.27	0.00	-	-	-	-	-
C-A	132.50	132.50	0.00	-	-	-	-	-
C-B	60.23	60.42	0.00	556.79	0.108	0.12	7.257	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Wakefield Road - Lee Lane - Shaw Lane.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8

Report generation date: 15/12/2017 11:59:37

« Existing Layout - 2017 Existing, PM

» Junction Network

» Arms

» Traffic Flows

» Entry Flows

» Turning Proportions

» Vehicle Mix

» Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2017 Existing				
Stream B-C	3.51	259.88	0.99	F
Stream B-AD	10.92	129.73	0.98	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.77	13.62	0.44	B
Stream D-A	0.48	26.32	0.33	D
Stream D-BC	4.25	65.41	0.84	F
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.29	8.05	0.22	A

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 11:59:36

File summary

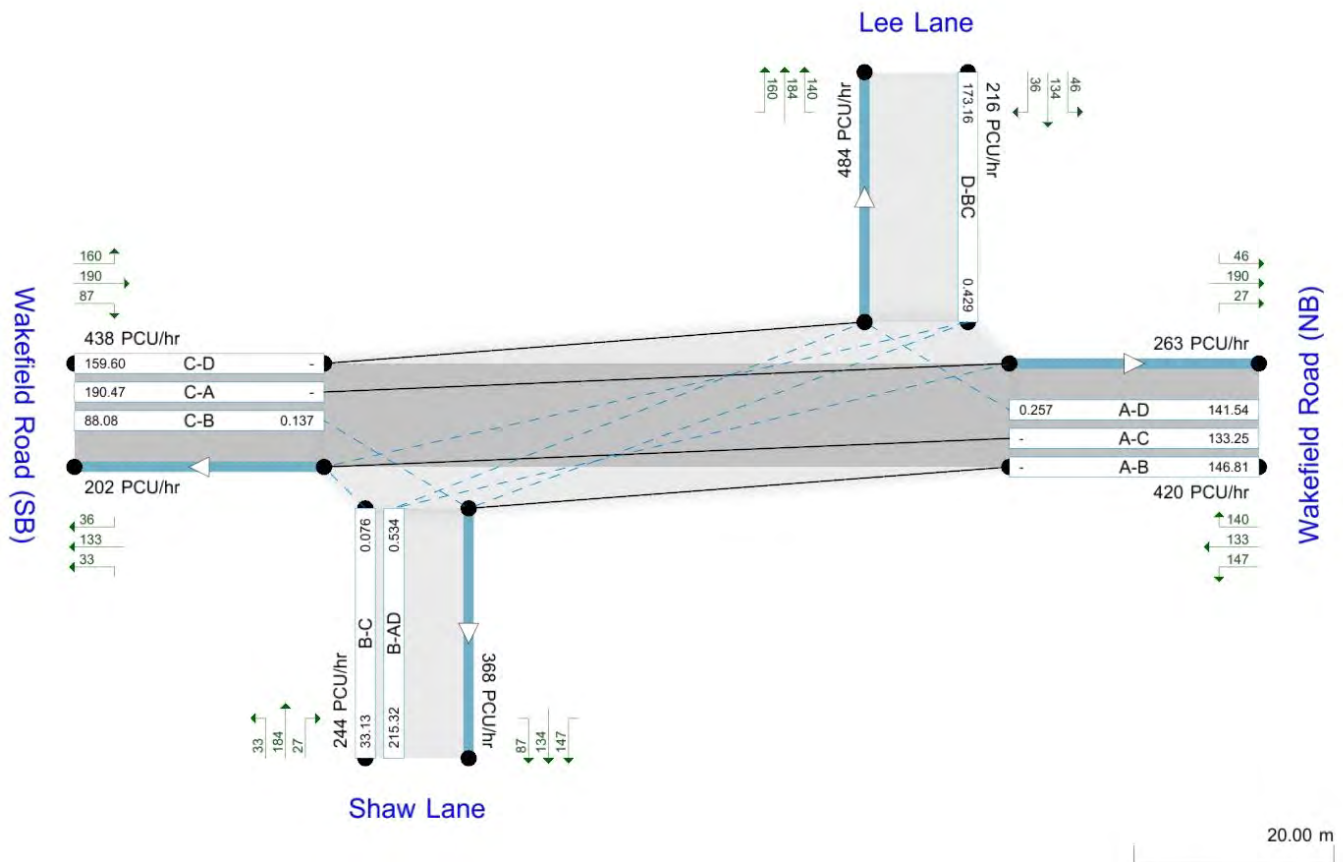
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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



Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RfC (l).
Time Segment: (16:30-16:45)
Showing Analysis Set "A1 - Existing Layout", Demand Set "D2 - 2017 Existing, PM"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Existing, 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
Existing Layout	N/A			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
2017 Existing, PM	2017 Existing	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	74.18	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Shaw Lane	One lane plus flare				10.00	6.40	3.60	3.40	3.40	✓	1.00	55	35
Lee Lane	One lane plus flare				10.00	8.00	5.00	4.25	3.50	✓	2.00	40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	568.100	0.103	0.262	-	-	-	0.165	0.374	0.165	0.103	0.262
1	B-C	658.905	0.101	0.255	-	-	-	-	-	-	0.101	0.255
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	665.924	-	-	-	0.258	0.102	0.258	-	0.102	-	-
1	D-BC	608.986	0.176	0.176	0.401	0.280	0.111	0.280	-	0.111	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	560.00	100.000
Shaw Lane	ONE HOUR	✓	330.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	582.00	100.000
Lee Lane	ONE HOUR	✓	291.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
From		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
	Wakefield Road (NB)	0.000	195.000	177.000	188.000
	Shaw Lane	36.000	0.000	44.000	250.000
	Wakefield Road (SB)	253.000	117.000	0.000	212.000
	Lee Lane	61.000	181.000	49.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.35	0.32	0.34
	Shaw Lane	0.11	0.00	0.13	0.76
	Wakefield Road (SB)	0.43	0.20	0.00	0.36
	Lee Lane	0.21	0.62	0.17	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.99	259.88	3.51	F
B-AD	0.98	129.73	10.92	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.44	13.62	0.77	B
D-A	0.33	26.32	0.48	D
D-BC	0.84	65.41	4.25	F
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.22	8.05	0.29	A

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	33.13	32.80	0.00	438.08	0.076	0.08	8.869	A
B-AD	215.32	210.90	0.00	402.97	0.534	1.11	18.473	C
A-B	146.81	146.81	0.00	-	-	-	-	-
A-C	133.25	133.25	0.00	-	-	-	-	-
A-D	141.54	140.17	0.00	551.17	0.257	0.34	8.731	A
D-A	45.92	45.52	0.00	498.43	0.092	0.10	7.942	A
D-BC	173.16	170.21	0.00	403.22	0.429	0.74	15.388	C
C-D	159.60	159.60	0.00	-	-	-	-	-
C-A	190.47	190.47	0.00	-	-	-	-	-
C-B	88.08	87.46	0.00	644.12	0.137	0.16	6.460	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	39.56	39.32	0.00	320.68	0.123	0.14	12.785	B
B-AD	257.11	253.18	0.00	369.56	0.696	2.09	30.120	D
A-B	175.30	175.30	0.00	-	-	-	-	-
A-C	159.12	159.12	0.00	-	-	-	-	-
A-D	169.01	168.48	0.00	519.95	0.325	0.47	10.227	B
D-A	54.84	54.66	0.00	431.59	0.127	0.14	9.547	A
D-BC	206.77	204.63	0.00	362.07	0.571	1.27	22.726	C
C-D	190.58	190.58	0.00	-	-	-	-	-
C-A	227.44	227.44	0.00	-	-	-	-	-
C-B	105.18	104.99	0.00	616.60	0.171	0.20	7.035	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	48.44	37.05	0.00	48.92	0.990	2.99	221.566	F
B-AD	314.89	291.88	0.00	322.73	0.976	7.84	83.877	F
A-B	214.70	214.70	0.00	-	-	-	-	-
A-C	194.88	194.88	0.00	-	-	-	-	-
A-D	206.99	205.90	0.00	477.38	0.434	0.75	13.206	B
D-A	67.16	66.26	0.00	243.73	0.276	0.37	20.185	C
D-BC	253.23	243.71	0.00	305.53	0.829	3.65	52.200	F
C-D	233.42	233.42	0.00	-	-	-	-	-
C-A	278.56	278.56	0.00	-	-	-	-	-
C-B	128.82	128.50	0.00	579.13	0.222	0.28	7.983	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	48.44	46.36	0.00	55.83	0.868	3.51	259.877	F
B-AD	314.89	302.55	0.00	320.10	0.984	10.92	129.727	F
A-B	214.70	214.70	0.00	-	-	-	-	-
A-C	194.88	194.88	0.00	-	-	-	-	-
A-D	206.99	206.90	0.00	471.09	0.439	0.77	13.617	B
D-A	67.16	66.74	0.00	203.01	0.331	0.48	26.321	D
D-BC	253.23	250.83	0.00	302.08	0.838	4.25	65.412	F
C-D	233.42	233.42	0.00	-	-	-	-	-
C-A	278.56	278.56	0.00	-	-	-	-	-
C-B	128.82	128.81	0.00	576.25	0.224	0.29	8.045	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	39.56	52.74	0.00	231.68	0.171	0.21	21.538	C
B-AD	257.11	289.89	0.00	365.36	0.704	2.73	59.384	F
A-B	175.30	175.30	0.00	-	-	-	-	-
A-C	159.12	159.12	0.00	-	-	-	-	-
A-D	169.01	170.07	0.00	509.21	0.332	0.51	10.647	B
D-A	54.84	56.11	0.00	404.85	0.135	0.16	10.360	B
D-BC	206.77	217.86	0.00	356.43	0.580	1.48	27.967	D
C-D	190.58	190.58	0.00	-	-	-	-	-
C-A	227.44	227.44	0.00	-	-	-	-	-
C-B	105.18	105.49	0.00	612.34	0.172	0.21	7.108	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	33.13	33.63	0.00	421.94	0.079	0.09	9.283	A
B-AD	215.32	221.38	0.00	401.74	0.536	1.21	20.703	C
A-B	146.81	146.81	0.00	-	-	-	-	-
A-C	133.25	133.25	0.00	-	-	-	-	-
A-D	141.54	142.15	0.00	548.18	0.258	0.35	8.881	A
D-A	45.92	46.14	0.00	492.23	0.093	0.10	8.073	A
D-BC	173.16	175.92	0.00	401.15	0.432	0.79	16.297	C
C-D	159.60	159.60	0.00	-	-	-	-	-
C-A	190.47	190.47	0.00	-	-	-	-	-
C-B	88.08	88.28	0.00	642.33	0.137	0.16	6.499	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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Filename: Wakefield Road - Lee Lane - Shaw Lane.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8

Report generation date: 15/12/2017 12:00:41

« Existing Layout - 2017 Existing, Saturday

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2017 Existing				
Stream B-C	5.25	195.22	0.96	F
Stream B-AD	11.34	123.90	0.99	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.28	8.78	0.22	A
Stream D-A	0.44	17.47	0.31	C
Stream D-BC	3.17	42.89	0.78	E
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.20	7.57	0.17	A

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday " model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 12:00:40

File summary

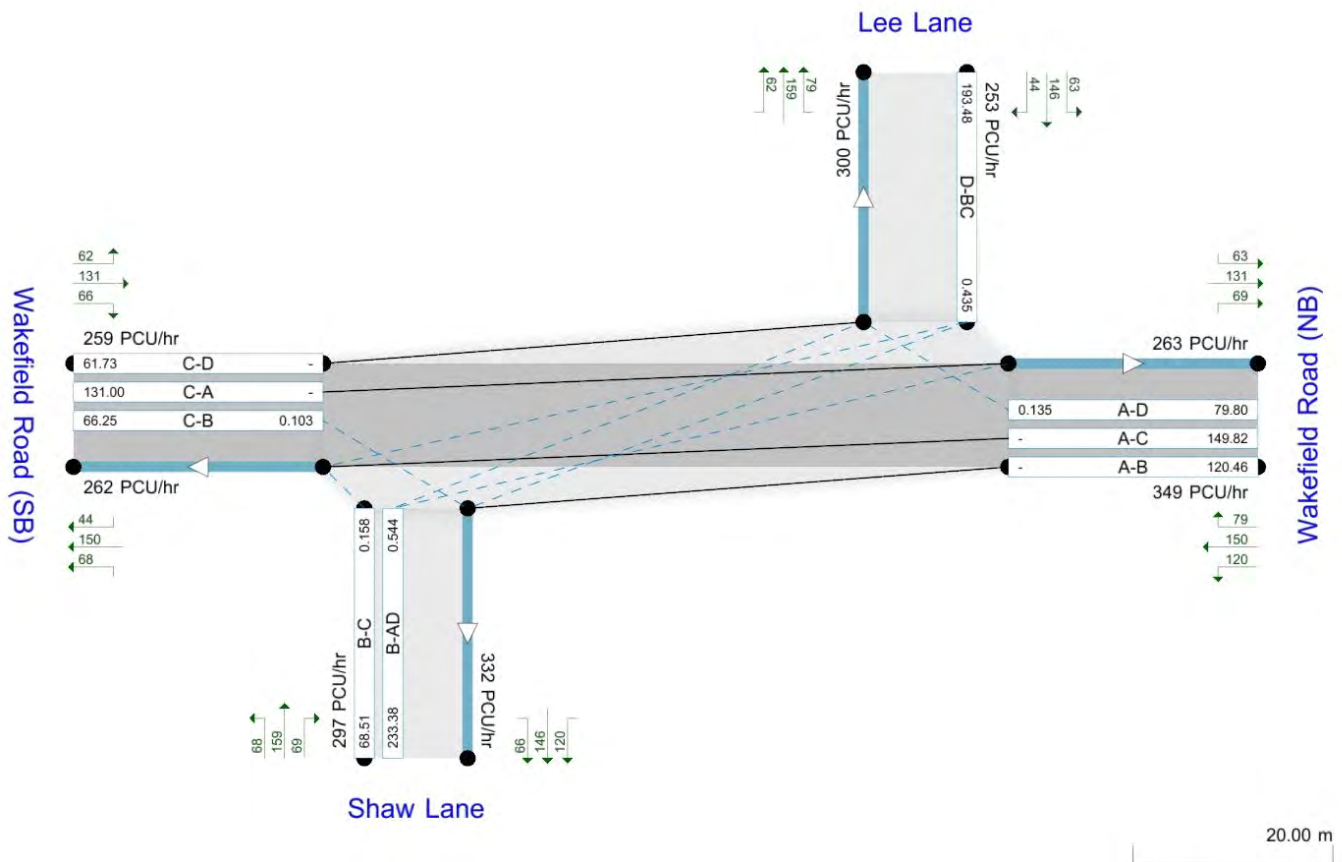
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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



Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFC (%).
Time Segment: (11:30-11:45)
Showing Analysis Set "A1 - Existing Layout", Demand Set "D3 - 2017 Existing, Saturday"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Existing, Saturday

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
Existing Layout	N/A			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
2017 Existing, Saturday	2017 Existing	Saturday		ONE HOUR	11:30	13:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	75.07	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Shaw Lane	One lane plus flare				10.00	6.40	3.60	3.40	3.40	✓	1.00	55	35
Lee Lane	One lane plus flare				10.00	8.00	5.00	4.25	3.50	✓	2.00	40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	567.562	0.103	0.261	-	-	-	0.164	0.373	0.164	0.103	0.261
1	B-C	660.598	0.101	0.256	-	-	-	-	-	-	0.101	0.256
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	669.997	-	-	-	0.260	0.103	0.260	-	0.103	-	-
1	D-BC	605.785	0.175	0.175	0.398	0.279	0.110	0.279	-	0.110	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	465.00	100.000
Shaw Lane	ONE HOUR	✓	401.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	344.00	100.000
Lee Lane	ONE HOUR	✓	341.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

		To			
From		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
	Wakefield Road (NB)	0.000	160.000	199.000	106.000
	Shaw Lane	94.000	0.000	91.000	216.000
	Wakefield Road (SB)	174.000	88.000	0.000	82.000
	Lee Lane	84.000	197.000	60.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.34	0.43	0.23
	Shaw Lane	0.23	0.00	0.23	0.54
	Wakefield Road (SB)	0.51	0.26	0.00	0.24
	Lee Lane	0.25	0.58	0.18	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.96	195.22	5.25	F
B-AD	0.99	123.90	11.34	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.22	8.78	0.28	A
D-A	0.31	17.47	0.44	C
D-BC	0.78	42.89	3.17	E
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.17	7.57	0.20	A

Main Results for each time segment

Main results: (11:30-11:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	68.51	67.77	0.00	434.77	0.158	0.18	9.790	A
B-AD	233.38	228.77	0.00	428.63	0.544	1.15	17.765	C
A-B	120.46	120.46	0.00	-	-	-	-	-
A-C	149.82	149.82	0.00	-	-	-	-	-
A-D	79.80	79.18	0.00	589.25	0.135	0.16	7.048	A
D-A	63.24	62.69	0.00	515.42	0.123	0.14	7.942	A
D-BC	193.48	190.47	0.00	445.29	0.435	0.75	14.078	B
C-D	61.73	61.73	0.00	-	-	-	-	-
C-A	131.00	131.00	0.00	-	-	-	-	-
C-B	66.25	65.79	0.00	640.93	0.103	0.11	6.250	A

Main results: (11:45-12:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	81.81	81.24	0.00	327.95	0.249	0.33	14.559	B
B-AD	278.68	274.72	0.00	397.91	0.700	2.14	28.516	D
A-B	143.84	143.84	0.00	-	-	-	-	-
A-C	178.90	178.90	0.00	-	-	-	-	-
A-D	95.29	95.11	0.00	565.38	0.169	0.20	7.649	A
D-A	75.51	75.29	0.00	457.52	0.165	0.20	9.412	A
D-BC	231.04	229.16	0.00	412.87	0.560	1.22	19.538	C
C-D	73.72	73.72	0.00	-	-	-	-	-
C-A	156.42	156.42	0.00	-	-	-	-	-
C-B	79.11	78.98	0.00	612.77	0.129	0.15	6.742	A

Main results: (12:00-12:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	100.19	84.86	0.00	103.99	0.963	4.16	139.819	F
B-AD	341.32	317.81	0.00	350.86	0.973	8.02	79.032	F
A-B	176.16	176.16	0.00	-	-	-	-	-
A-C	219.10	219.10	0.00	-	-	-	-	-
A-D	116.71	116.40	0.00	533.02	0.219	0.28	8.635	A
D-A	92.49	91.69	0.00	320.94	0.288	0.40	15.648	C
D-BC	282.96	276.39	0.00	367.83	0.769	2.87	37.226	E
C-D	90.28	90.28	0.00	-	-	-	-	-
C-A	191.58	191.58	0.00	-	-	-	-	-
C-B	96.89	96.67	0.00	574.52	0.169	0.20	7.530	A

Main results: (12:15-12:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	100.19	95.81	0.00	108.37	0.925	5.25	195.222	F
B-AD	341.32	328.03	0.00	346.36	0.985	11.34	123.903	F
A-B	176.16	176.16	0.00	-	-	-	-	-
A-C	219.10	219.10	0.00	-	-	-	-	-
A-D	116.71	116.69	0.00	526.59	0.222	0.28	8.782	A
D-A	92.49	92.31	0.00	298.13	0.310	0.44	17.471	C
D-BC	282.96	281.75	0.00	363.84	0.778	3.17	42.893	E
C-D	90.28	90.28	0.00	-	-	-	-	-
C-A	191.58	191.58	0.00	-	-	-	-	-
C-B	96.89	96.88	0.00	572.53	0.169	0.20	7.567	A

Main results: (12:30-12:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	81.81	100.77	0.00	247.55	0.330	0.51	27.512	D
B-AD	278.68	312.38	0.00	388.89	0.717	2.92	58.504	F
A-B	143.84	143.84	0.00	-	-	-	-	-
A-C	178.90	178.90	0.00	-	-	-	-	-
A-D	95.29	95.58	0.00	554.23	0.172	0.21	7.853	A
D-A	75.51	76.43	0.00	438.01	0.172	0.21	9.980	A
D-BC	231.04	238.13	0.00	406.24	0.569	1.40	22.392	C
C-D	73.72	73.72	0.00	-	-	-	-	-
C-A	156.42	156.42	0.00	-	-	-	-	-
C-B	79.11	79.32	0.00	609.84	0.130	0.15	6.787	A

Main results: (12:45-13:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	68.51	69.77	0.00	418.82	0.164	0.20	10.351	B
B-AD	233.38	239.99	0.00	427.27	0.546	1.27	19.982	C
A-B	120.46	120.46	0.00	-	-	-	-	-
A-C	149.82	149.82	0.00	-	-	-	-	-
A-D	79.80	80.01	0.00	586.06	0.136	0.16	7.118	A
D-A	63.24	63.51	0.00	509.47	0.124	0.14	8.078	A
D-BC	193.48	195.86	0.00	443.23	0.437	0.80	14.802	B
C-D	61.73	61.73	0.00	-	-	-	-	-
C-A	131.00	131.00	0.00	-	-	-	-	-
C-B	66.25	66.39	0.00	639.24	0.104	0.12	6.287	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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Filename: Wakefield Road - Paddock Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Paddock Road

Report generation date: 15/12/2017 13:13:21

« Existing Layout - 2017 Existing, AM

» Junction Network

» Arms

» Traffic Flows

» Entry Flows

» Turning Proportions

» Vehicle Mix

» Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2017 Existing				
Stream B-C	0.10	10.83	0.09	B
Stream B-A	0.92	20.20	0.48	C
Stream C-AB	0.01	4.84	0.01	A
Stream C-A	-	-	-	-
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 13:13:20

File summary

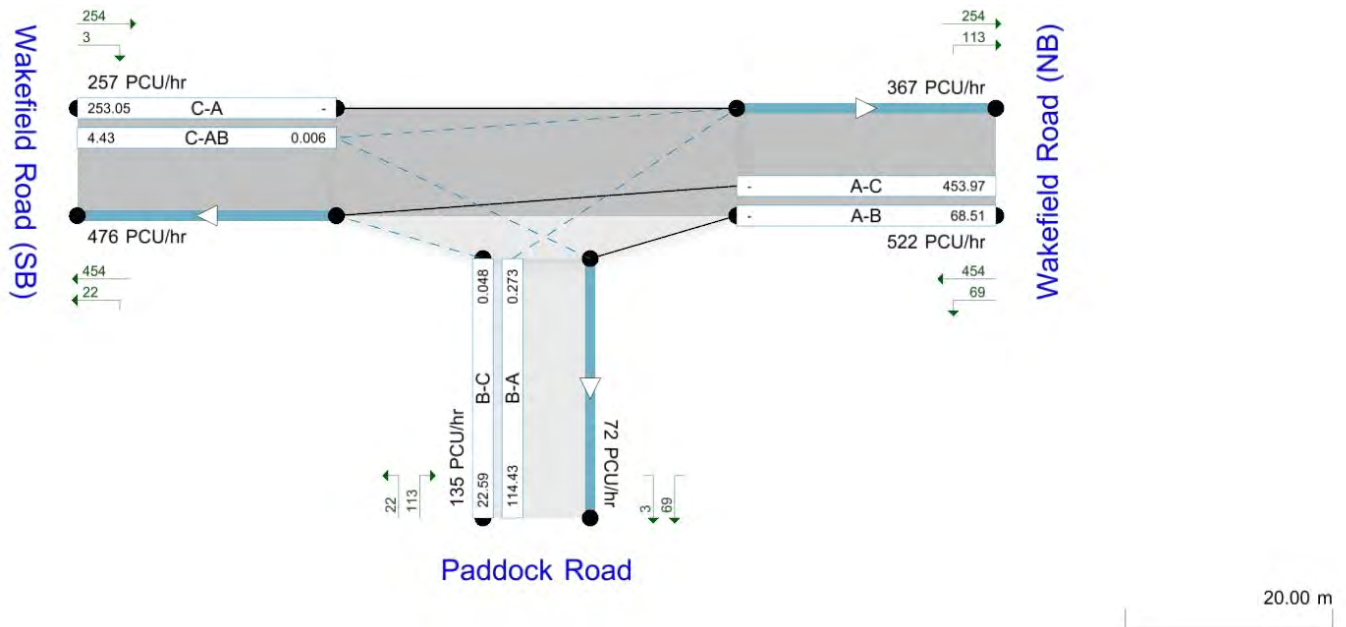
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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



Value Comparison Overlay Boxes Enabled
 Showing modelled flow through junction (PCU/hr).
 Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFC (i)
 Time Segment: (07:30-07:45)
 Showing Analysis Set "A1 - Existing Layout", Demand Set "D1 - 2017 Existing, AM"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Existing, AM

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
Existing Layout	N/A			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
2017 Existing, AM	2017 Existing	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	18.17	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	575.933	0.096	0.243	0.153	0.347
1	B-C	623.111	0.088	0.221	-	-
1	C-B	718.741	0.255	0.255	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	694.00	100.000
Paddock Road	ONE HOUR	✓	182.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	342.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	91.000	603.000
	Paddock Road	152.000	0.000	30.000
	Wakefield Road (SB)	338.000	4.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.13	0.87
	Paddock Road	0.84	0.00	0.16
	Wakefield Road (SB)	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

From	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.09	10.83	0.10	B
B-A	0.48	20.20	0.92	C
C-AB	0.01	4.84	0.01	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.59	22.39	0.00	472.50	0.048	0.05	7.995	A
B-A	114.43	112.96	0.00	418.71	0.273	0.37	11.719	B
C-AB	4.43	4.40	0.00	754.04	0.006	0.01	4.835	A
C-A	253.05	253.05	0.00	-	-	-	-	-
A-B	68.51	68.51	0.00	-	-	-	-	-
A-C	453.97	453.97	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	26.97	26.91	0.00	433.55	0.062	0.07	8.852	A
B-A	136.64	136.00	0.00	388.03	0.352	0.53	14.247	B
C-AB	5.75	5.74	0.00	763.81	0.008	0.01	4.784	A
C-A	301.70	301.70	0.00	-	-	-	-	-
A-B	81.81	81.81	0.00	-	-	-	-	-
A-C	542.08	542.08	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	33.03	32.90	0.00	366.90	0.090	0.10	10.778	B
B-A	167.36	165.87	0.00	345.34	0.485	0.90	19.890	C
C-AB	7.92	7.91	0.00	778.43	0.010	0.01	4.713	A
C-A	368.63	368.63	0.00	-	-	-	-	-
A-B	100.19	100.19	0.00	-	-	-	-	-
A-C	663.92	663.92	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	33.03	33.03	0.00	365.27	0.090	0.10	10.835	B
B-A	167.36	167.28	0.00	345.34	0.485	0.92	20.196	C
C-AB	7.92	7.92	0.00	778.43	0.010	0.01	4.716	A
C-A	368.63	368.63	0.00	-	-	-	-	-
A-B	100.19	100.19	0.00	-	-	-	-	-
A-C	663.92	663.92	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	26.97	27.09	0.00	431.91	0.062	0.07	8.895	A
B-A	136.64	138.10	0.00	388.04	0.352	0.56	14.484	B
C-AB	5.75	5.77	0.00	763.82	0.008	0.01	4.791	A
C-A	301.70	301.70	0.00	-	-	-	-	-
A-B	81.81	81.81	0.00	-	-	-	-	-
A-C	542.08	542.08	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.59	22.65	0.00	471.22	0.048	0.05	8.026	A
B-A	114.43	115.13	0.00	418.73	0.273	0.38	11.886	B
C-AB	4.44	4.45	0.00	754.05	0.006	0.01	4.838	A
C-A	253.04	253.04	0.00	-	-	-	-	-
A-B	68.51	68.51	0.00	-	-	-	-	-
A-C	453.97	453.97	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Wakefield Road - Paddock Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Paddock Road

Report generation date: 15/12/2017 13:13:48

« Existing Layout - 2017 Existing, PM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2017 Existing				
Stream B-C	0.89	34.74	0.49	D
Stream B-A	4.22	54.73	0.83	F
Stream C-AB	0.07	4.81	0.05	A
Stream C-A	-	-	-	-
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 13:13:47

File summary

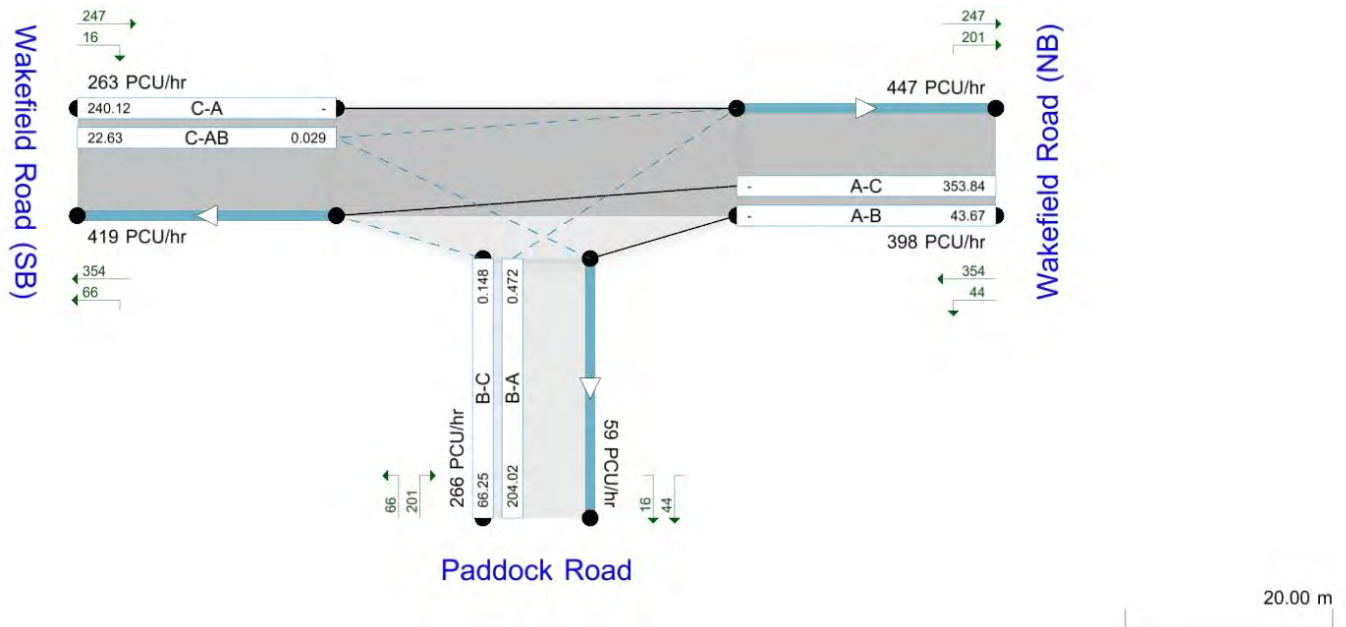
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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



The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Existing, 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
Existing Layout	N/A			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
2017 Existing, PM	2017 Existing	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	46.02	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	567.244	0.095	0.240	0.151	0.342
1	B-C	641.654	0.090	0.228	-	-
1	C-B	718.741	0.255	0.255	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	528.00	100.000
Paddock Road	ONE HOUR	✓	359.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	349.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	58.000	470.000
	Paddock Road	271.000	0.000	88.000
	Wakefield Road (SB)	328.000	21.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.11	0.89
	Paddock Road	0.75	0.00	0.25
	Wakefield Road (SB)	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

From	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.49	34.74	0.89	D
B-A	0.83	54.73	4.22	F
C-AB	0.05	4.81	0.07	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	66.25	65.56	0.00	447.40	0.148	0.17	9.411	A
B-A	204.02	200.56	0.00	432.46	0.472	0.86	15.309	C
C-AB	22.63	22.48	0.00	776.82	0.029	0.04	4.804	A
C-A	240.12	240.12	0.00	-	-	-	-	-
A-B	43.67	43.67	0.00	-	-	-	-	-
A-C	353.84	353.84	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	79.11	78.73	0.00	370.80	0.213	0.27	12.310	B
B-A	243.62	241.32	0.00	403.65	0.604	1.44	21.855	C
C-AB	29.11	29.06	0.00	790.06	0.037	0.05	4.764	A
C-A	284.64	284.64	0.00	-	-	-	-	-
A-B	52.14	52.14	0.00	-	-	-	-	-
A-C	422.52	422.52	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	96.89	94.95	0.00	218.94	0.443	0.75	28.604	D
B-A	298.38	289.09	0.00	359.87	0.829	3.76	45.801	E
C-AB	39.47	39.38	0.00	809.00	0.049	0.07	4.717	A
C-A	344.78	344.78	0.00	-	-	-	-	-
A-B	63.86	63.86	0.00	-	-	-	-	-
A-C	517.48	517.48	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	96.89	96.32	0.00	199.17	0.486	0.89	34.736	D
B-A	298.38	296.54	0.00	358.63	0.832	4.22	54.727	F
C-AB	39.50	39.50	0.00	809.03	0.049	0.07	4.720	A
C-A	344.75	344.75	0.00	-	-	-	-	-
A-B	63.86	63.86	0.00	-	-	-	-	-
A-C	517.48	517.48	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	79.11	81.51	0.00	351.98	0.225	0.30	13.423	B
B-A	243.62	254.01	0.00	402.84	0.605	1.62	25.641	D
C-AB	29.15	29.23	0.00	790.11	0.037	0.05	4.774	A
C-A	284.60	284.60	0.00	-	-	-	-	-
A-B	52.14	52.14	0.00	-	-	-	-	-
A-C	422.52	422.52	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	66.25	66.72	0.00	440.82	0.150	0.18	9.636	A
B-A	204.02	206.83	0.00	432.35	0.472	0.92	16.153	C
C-AB	22.69	22.74	0.00	776.86	0.029	0.04	4.810	A
C-A	240.06	240.06	0.00	-	-	-	-	-
A-B	43.67	43.67	0.00	-	-	-	-	-
A-C	353.84	353.84	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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Filename: Wakefield Road - Paddock Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Paddock Road

Report generation date: 15/12/2017 13:14:23

« Existing Layout - 2017 Existing, Saturday

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2017 Existing				
Stream B-C	0.03	9.84	0.03	A
Stream B-A	0.98	20.41	0.50	C
Stream C-AB	0.03	4.20	0.02	A
Stream C-A	-	-	-	-
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday " model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 13:14:22

File summary

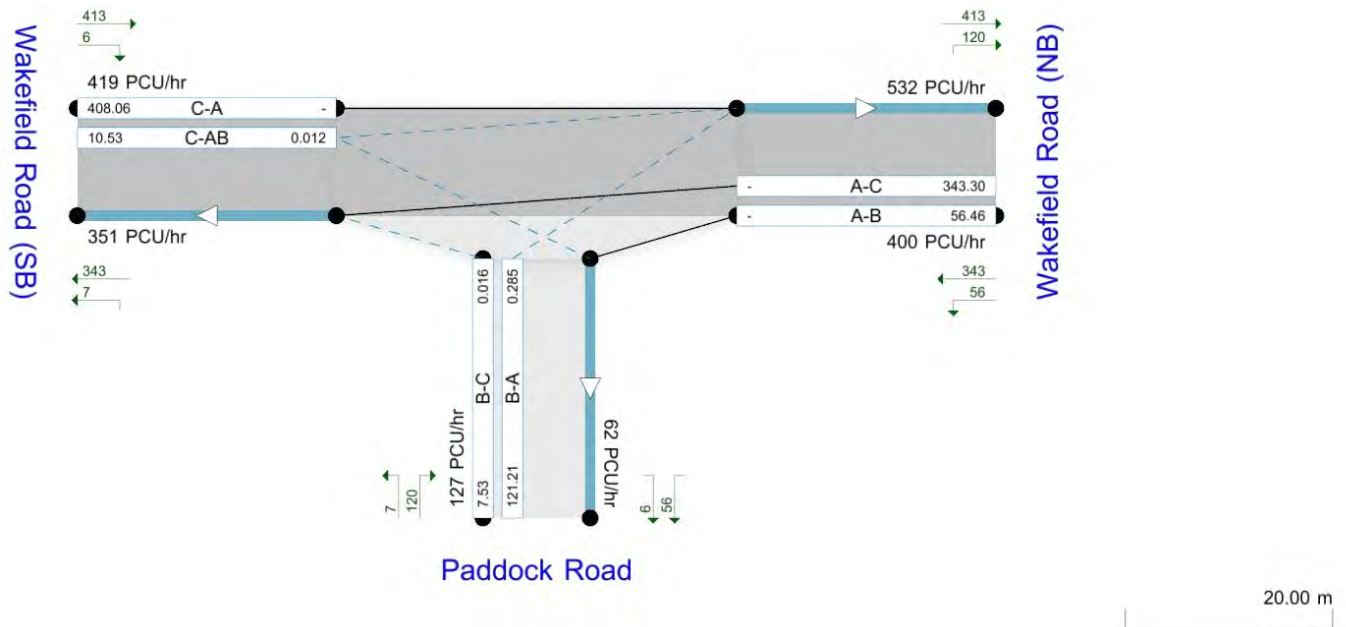
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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



Value Comparison Overlay Boxes Enabled
Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFC (i)
Time Segment: (11:30-11:45)
Showing Analysis Set "A1 - Existing Layout", Demand Set "D3 - 2017 Existing, Saturday"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Existing, Saturday

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
Existing Layout	N/A			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
2017 Existing, Saturday	2017 Existing	Saturday		ONE HOUR	11:30	13:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	18.45	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	580.868	0.097	0.245	0.154	0.350
1	B-C	612.581	0.086	0.218	-	-
1	C-B	718.741	0.255	0.255	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	531.00	100.000
Paddock Road	ONE HOUR	✓	171.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	556.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	75.000	456.000
	Paddock Road	161.000	0.000	10.000
	Wakefield Road (SB)	548.000	8.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.14	0.86
	Paddock Road	0.94	0.00	0.06
	Wakefield Road (SB)	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

From	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	9.84	0.03	A
B-A	0.50	20.41	0.98	C
C-AB	0.02	4.20	0.03	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (11:30-11:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.53	7.47	0.00	484.08	0.016	0.02	7.553	A
B-A	121.21	119.64	0.00	425.37	0.285	0.39	11.717	B
C-AB	10.53	10.47	0.00	876.73	0.012	0.01	4.194	A
C-A	408.06	408.06	0.00	-	-	-	-	-
A-B	56.46	56.46	0.00	-	-	-	-	-
A-C	343.30	343.30	0.00	-	-	-	-	-

Main results: (11:45-12:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.99	8.97	0.00	446.85	0.020	0.02	8.221	A
B-A	144.74	144.04	0.00	395.15	0.366	0.56	14.296	B
C-AB	13.96	13.94	0.00	907.82	0.015	0.02	4.067	A
C-A	485.87	485.87	0.00	-	-	-	-	-
A-B	67.42	67.42	0.00	-	-	-	-	-
A-C	409.93	409.93	0.00	-	-	-	-	-

Main results: (12:00-12:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	11.01	10.97	0.00	378.86	0.029	0.03	9.784	A
B-A	177.26	175.66	0.00	353.37	0.502	0.97	20.072	C
C-AB	19.66	19.63	0.00	949.89	0.021	0.03	3.913	A
C-A	592.50	592.50	0.00	-	-	-	-	-
A-B	82.58	82.58	0.00	-	-	-	-	-
A-C	502.07	502.07	0.00	-	-	-	-	-

Main results: (12:15-12:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	11.01	11.01	0.00	376.88	0.029	0.03	9.839	A
B-A	177.26	177.19	0.00	353.37	0.502	0.98	20.408	C
C-AB	19.67	19.67	0.00	949.90	0.021	0.03	3.917	A
C-A	592.49	592.49	0.00	-	-	-	-	-
A-B	82.58	82.58	0.00	-	-	-	-	-
A-C	502.07	502.07	0.00	-	-	-	-	-

Main results: (12:30-12:45)

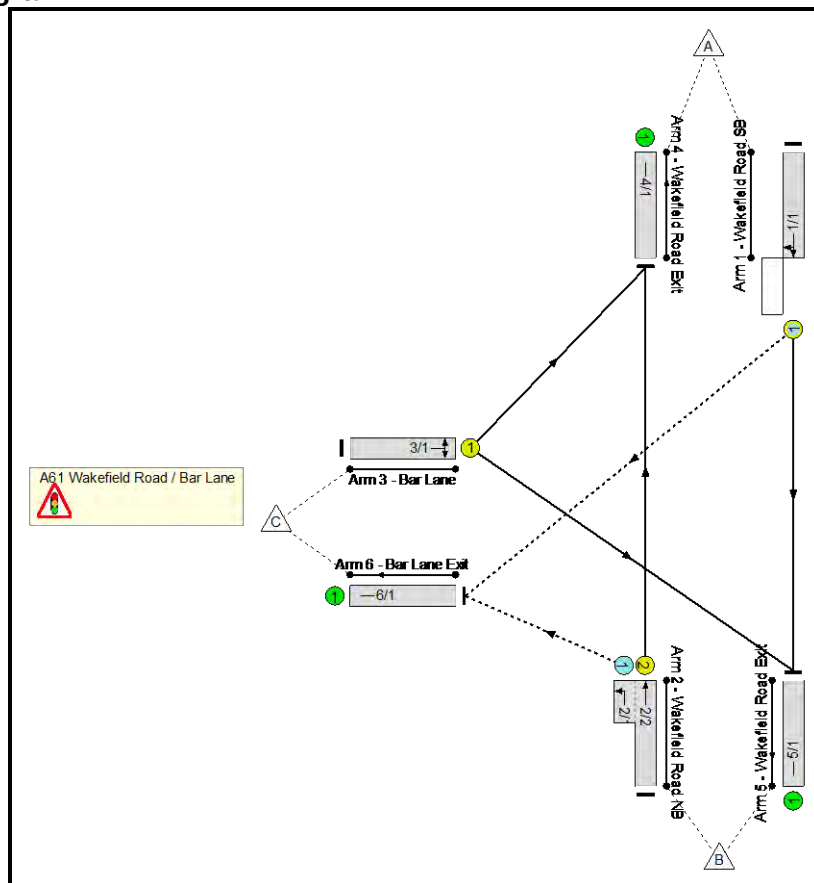
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.99	9.03	0.00	444.94	0.020	0.02	8.260	A
B-A	144.74	146.31	0.00	395.16	0.366	0.59	14.557	B
C-AB	13.98	14.00	0.00	907.84	0.015	0.02	4.073	A
C-A	485.86	485.86	0.00	-	-	-	-	-
A-B	67.42	67.42	0.00	-	-	-	-	-
A-C	409.93	409.93	0.00	-	-	-	-	-

Main results: (12:45-13:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.53	7.55	0.00	482.66	0.016	0.02	7.576	A
B-A	121.21	121.95	0.00	425.36	0.285	0.41	11.893	B
C-AB	10.55	10.57	0.00	876.75	0.012	0.01	4.199	A
C-A	408.03	408.03	0.00	-	-	-	-	-
A-B	56.46	56.46	0.00	-	-	-	-	-
A-C	343.30	343.30	0.00	-	-	-	-	-

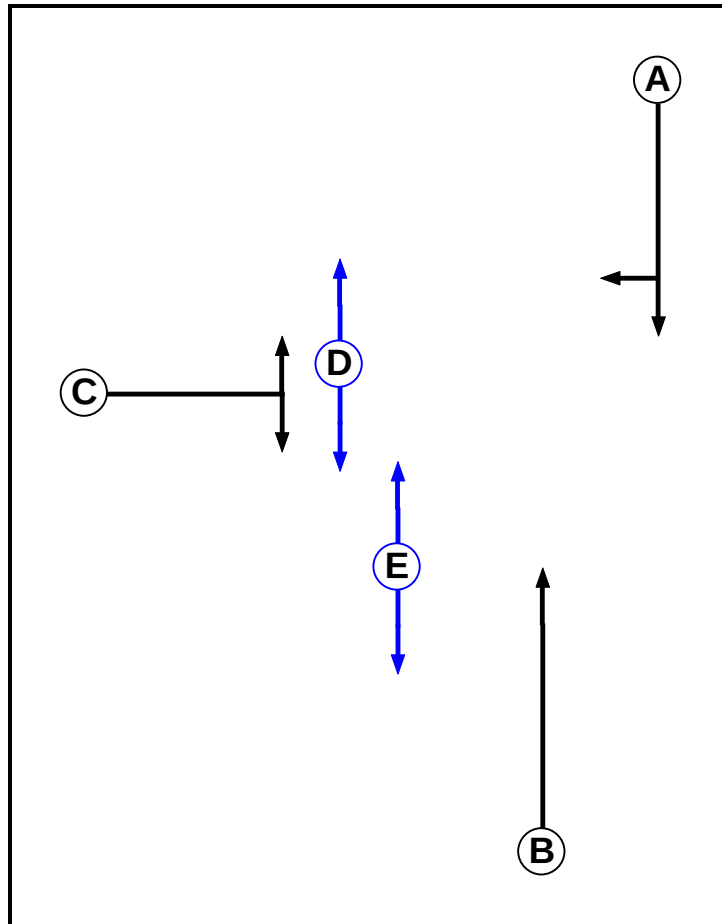
Full Input Data And Results**User and Project Details**

Project:	Wakefield Road, Mapplewell
Title:	2017 Existing
Location:	
File name:	Wakefield Road - Bar Lane.lsg3x
Author:	John Turner
Company:	Bryan G Hall
Address:	
Notes:	Wakefield Road/Bar Lane

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	Pedestrian		6	6
E	Pedestrian		6	6

Phase Intergreens Matrix

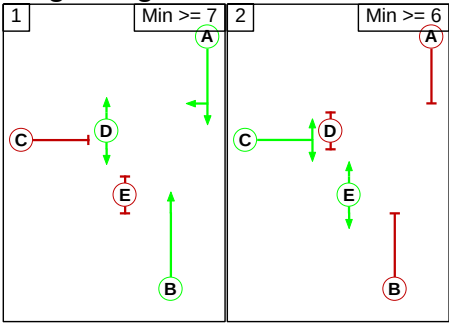
Terminating Phase	Starting Phase					
		A	B	C	D	E
	A		-	5	-	9
	B	-		6	-	-
	C	5	5		5	-
	D	-	-	7		-
	E	8	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B D
2	C E

Full Input Data And Results

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
	1	9
2	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A61 Wakefield Road / Bar Lane											
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 (Wakefield Road SB)	6/1 (Right)	1439	0	2/2	1.09	All	4.00	4.00	0.50	4	2.00
2/1 (Wakefield Road NB)	6/1 (Left)	1439	0	1/1	1.09	To 6/1 (Right)	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: A61 Wakefield Road / Bar Lane												
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 (Wakefield Road SB)	O	A	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 5 Ahead	Inf
2/1 (Wakefield Road NB)	O		2	3	3.0	Geom	-	4.00	0.00	Y	Arm 6 Right	12.50
											Arm 6 Left	100.00
2/2 (Wakefield Road NB)	U	B	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 4 Ahead	Inf
3/1 (Bar Lane)	U	C	2	3	60.0	Geom	-	3.70	0.00	Y	Arm 4 Left	12.50
											Arm 5 Right	8.00
4/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Bar Lane Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2017 Existing AM'	07:45	08:45	01:00	
2: '2017 Existing PM'	16:45	17:45	01:00	
3: '2017 Existing Saturday'	11:45	12:45	01:00	

Scenario 1: '2017 Existing AM' (FG1: '2017 Existing AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin	A	B	C	Tot.	
	A	0	484	10	494
	B	646	0	377	1023
	C	34	478	0	512
	Tot.	680	962	387	2029

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2017 Existing AM
Junction: A61 Wakefield Road / Bar Lane	
1/1	494
2/1 (short)	377
2/2 (with short)	1023(In) 646(Out)
3/1	512
4/1	680
5/1	962
6/1	387

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane								
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 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead Arm 6 Right	Inf 12.50	98.0 % 2.0 %	1950	1950
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left Arm 5 Right	12.50 8.00	6.6 % 93.4 %	1678	1678
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2017 Existing PM' (FG2: '2017 Existing PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
	A	B	C	Tot.	
Origin	A	0	588	20	608
	B	519	0	534	1053
	C	14	429	0	443
	Tot.	533	1017	554	2104

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2017 Existing PM
Junction: A61 Wakefield Road / Bar Lane	
1/1	608
2/1 (short)	534
2/2 (with short)	1053(In) 519(Out)
3/1	443
4/1	533
5/1	1017
6/1	554

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane								
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 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead Arm 6 Right	Inf 12.50	96.7 % 3.3 %	1947	1947
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left Arm 5 Right	12.50 8.00	3.2 % 96.8 %	1675	1675
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2017 Existing Saturday' (FG3: '2017 Existing Saturday', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
	A	B	C	Tot.	
Origin	A	0	480	19	499
	B	510	0	445	955
	C	24	419	0	443
	Tot.	534	899	464	1897

Full Input Data And Results

Traffic Lane Flows

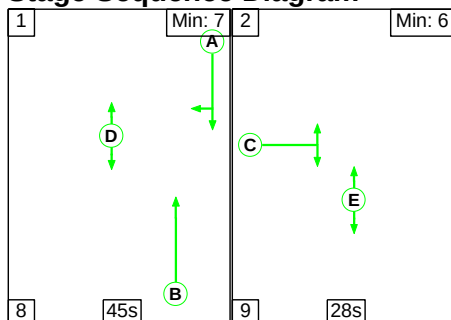
Lane	Scenario 3: 2017 Existing Saturday
Junction: A61 Wakefield Road / Bar Lane	
1/1	499
2/1 (short)	445
2/2 (with short)	955(In) 510(Out)
3/1	443
4/1	534
5/1	899
6/1	464

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane									
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 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead	Inf	96.2 %	1946	1946	
				Arm 6 Right	12.50	3.8 %			
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985	
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995	
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left	12.50	5.4 %	1677	1677	
				Arm 5 Right	8.00	94.6 %			
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow					Inf	Inf		
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow					Inf	Inf		
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow					Inf	Inf		

Scenario 1: '2017 Existing AM' (FG1: '2017 Existing AM', Plan 1: 'Network Control Plan 1')

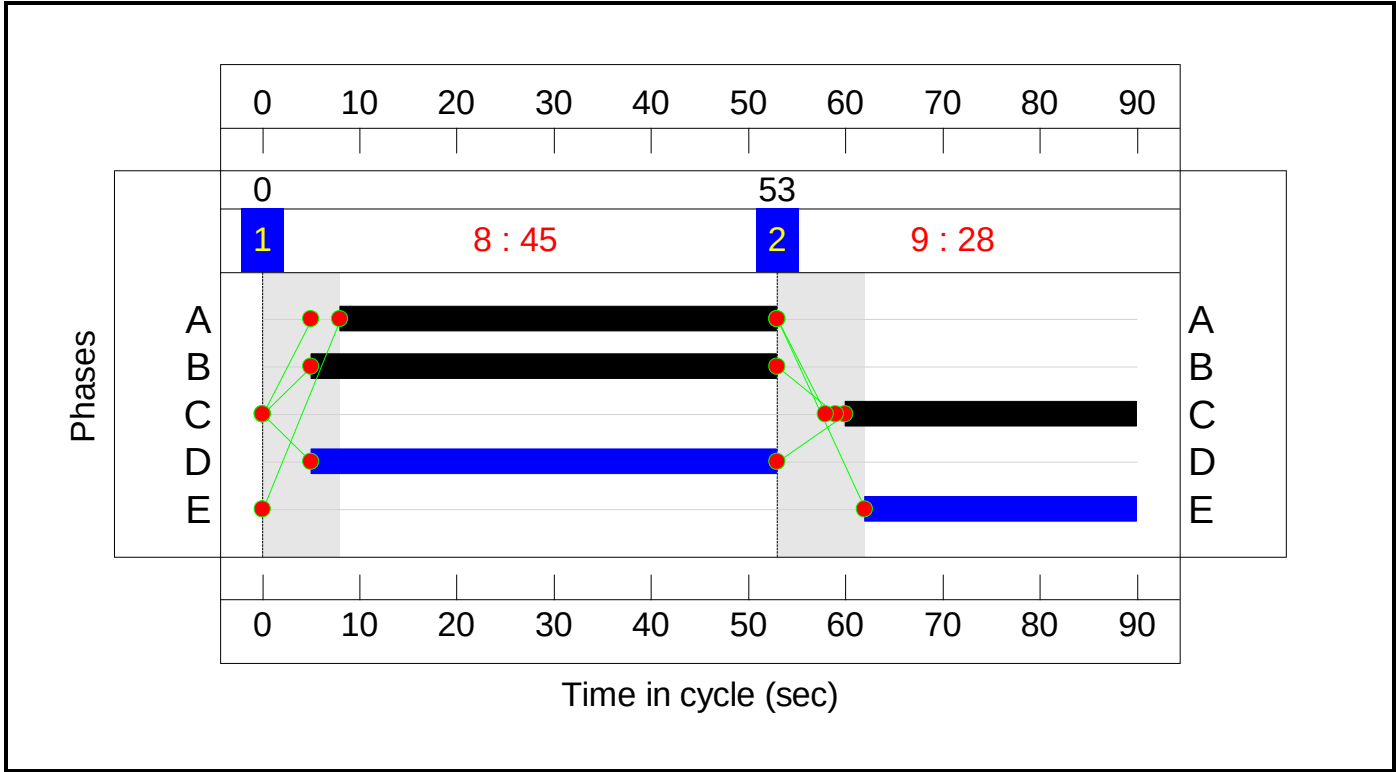
Stage Sequence Diagram



Stage Timings

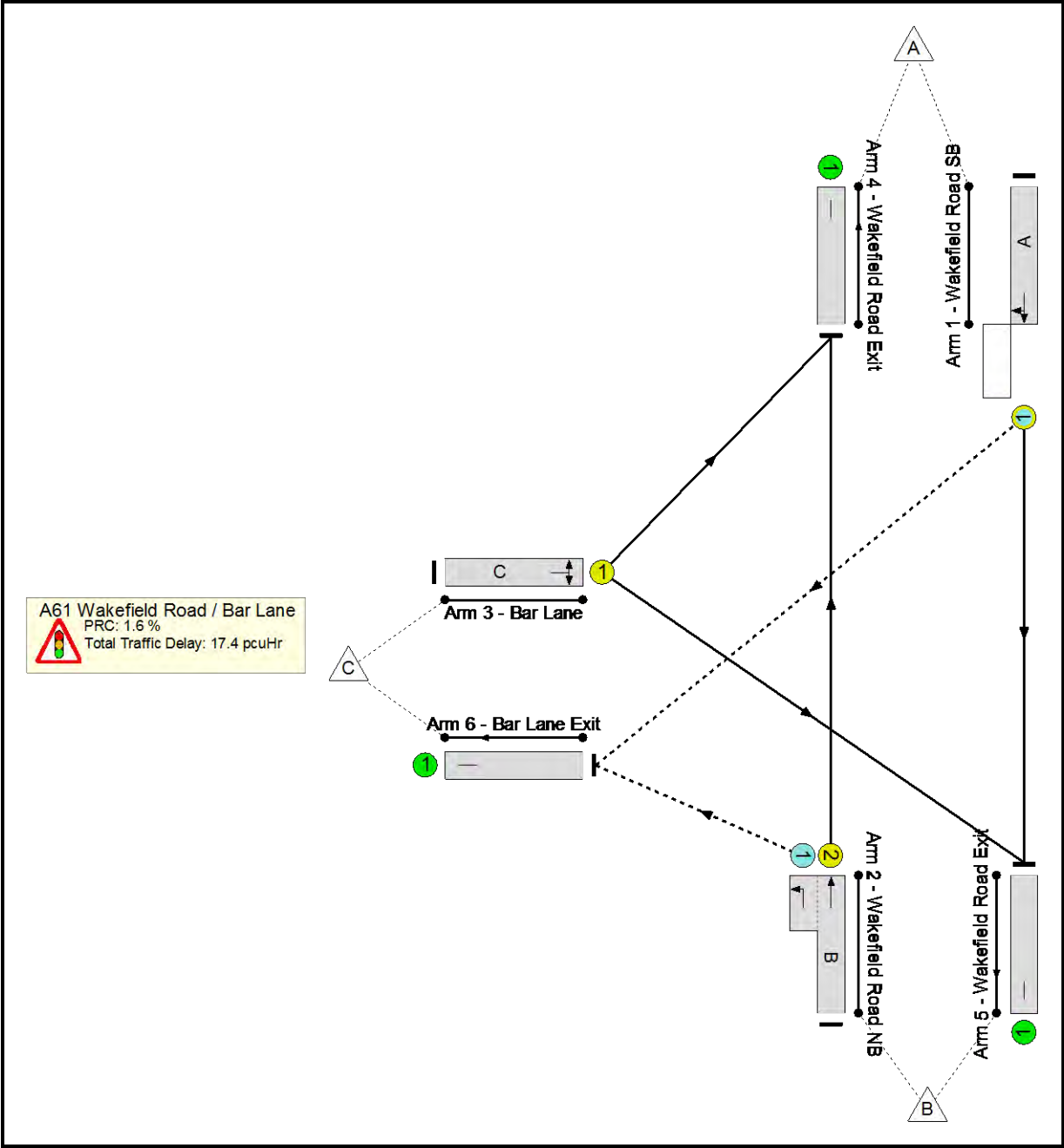
Stage	1	2
Duration	45	28
Change Point	0	53

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

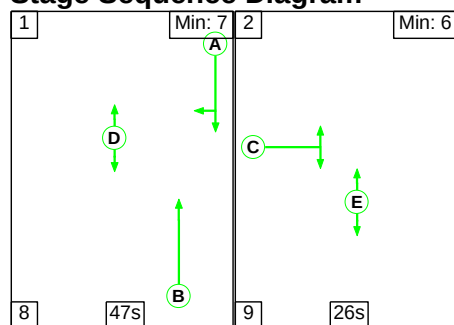
Network Results

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: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	88.6%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	88.6%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	45	-	494	1950	997	49.6%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	48	-	1023	1995:1985	1164	87.9%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	30	-	512	1678	578	88.6%
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: 2017 Existing	-	-	325	62	0	9.9	7.5	0.0	17.4	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	325	62	0	9.9	7.5	0.0	17.4	-	-	-	-
1/1	494	494	10	0	0	2.0	0.5	0.0	2.5	18.0	8.0	0.5	8.4
2/2+2/1	1023	1023	315	62	0	4.0	3.5	-	7.4	26.2	20.0	3.5	23.5
3/1	512	512	-	-	-	4.0	3.5	-	7.5	52.5	11.9	3.5	15.5
C1 PRC for Signalled Lanes (%): 1.6 Total Delay for Signalled Lanes (pcuHr): 17.36 Cycle Time (s): 90 PRC Over All Lanes (%): 1.6 Total Delay Over All Lanes(pcuHr): 17.36													

Full Input Data And Results

Scenario 2: '2017 Existing PM' (FG2: '2017 Existing PM', Plan 1: 'Network Control Plan 1')

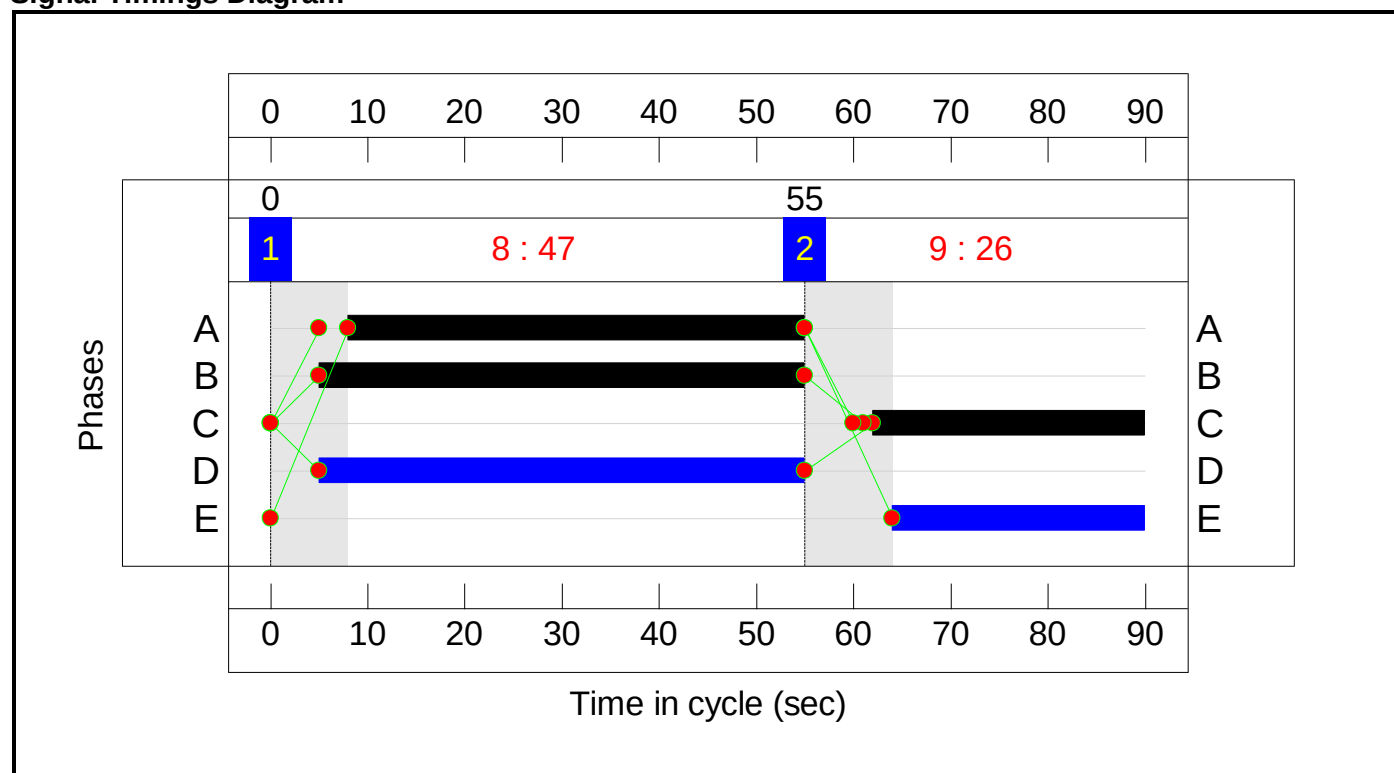
Stage Sequence Diagram



Stage Timings

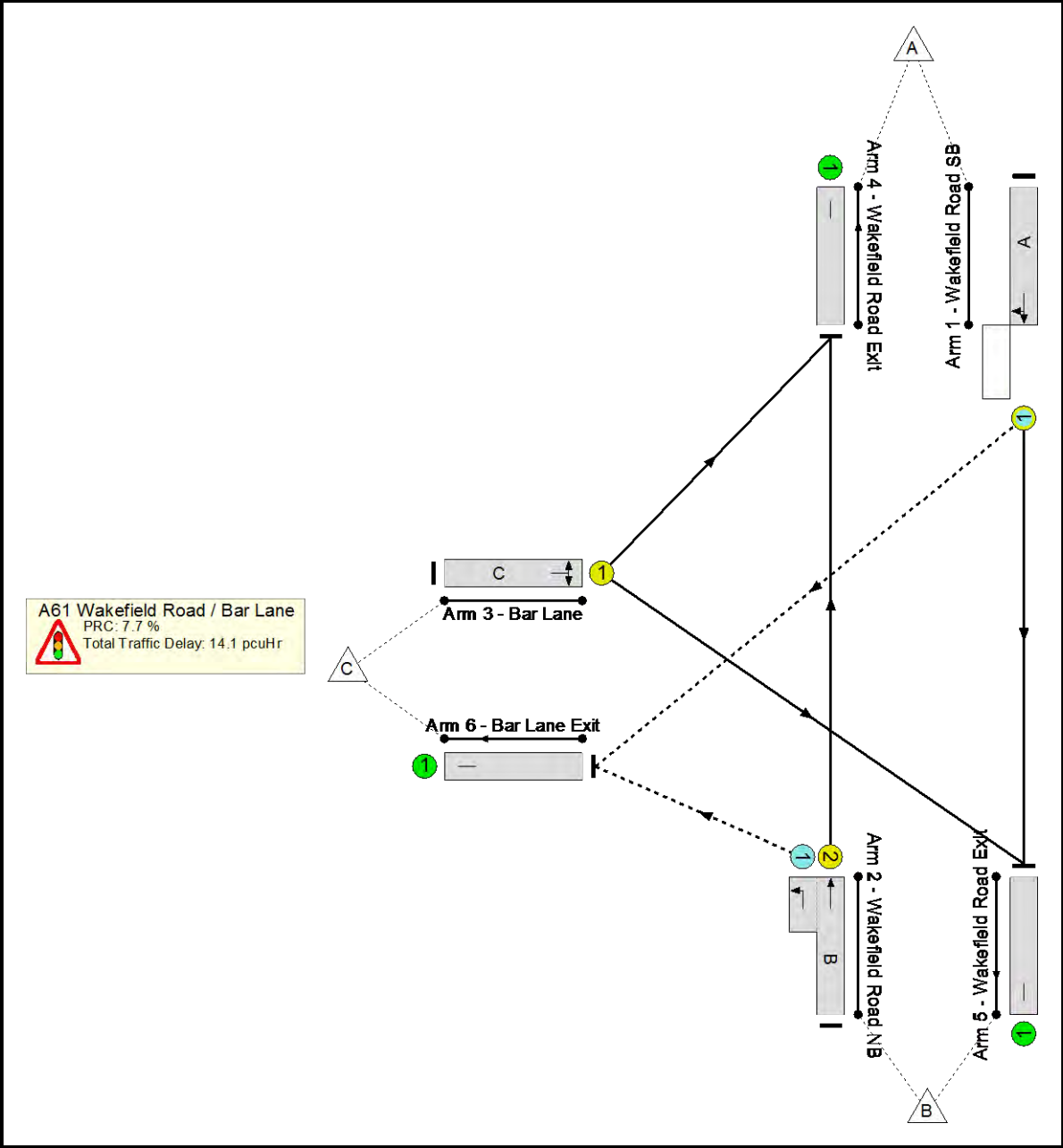
Stage	1	2
Duration	47	26
Change Point	0	55

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

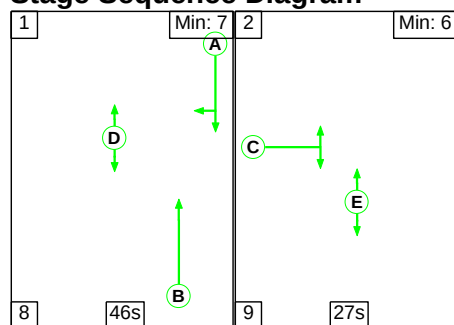


Full Input Data And Results

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: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	83.5%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	83.5%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	47	-	608	1947	1038	58.6%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	50	-	1053	1995:1985	1261	83.5%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	28	-	443	1675	540	82.1%
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: 2017 Existing	-	-	442	112	0	8.8	5.4	0.0	14.1	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	442	112	0	8.8	5.4	0.0	14.1	-	-	-	-
1/1	608	608	20	0	0	2.4	0.7	0.0	3.1	18.4	10.3	0.7	11.0
2/2+2/1	1053	1053	422	112	0	2.9	2.5	-	5.4	18.4	17.6	2.5	20.1
3/1	443	443	-	-	-	3.5	2.2	-	5.6	45.9	10.1	2.2	12.3
C1 PRC for Signalled Lanes (%): 7.7 Total Delay for Signalled Lanes (pcuHr): 14.14 Cycle Time (s): 90 PRC Over All Lanes (%): 7.7 Total Delay Over All Lanes(pcuHr): 14.14													

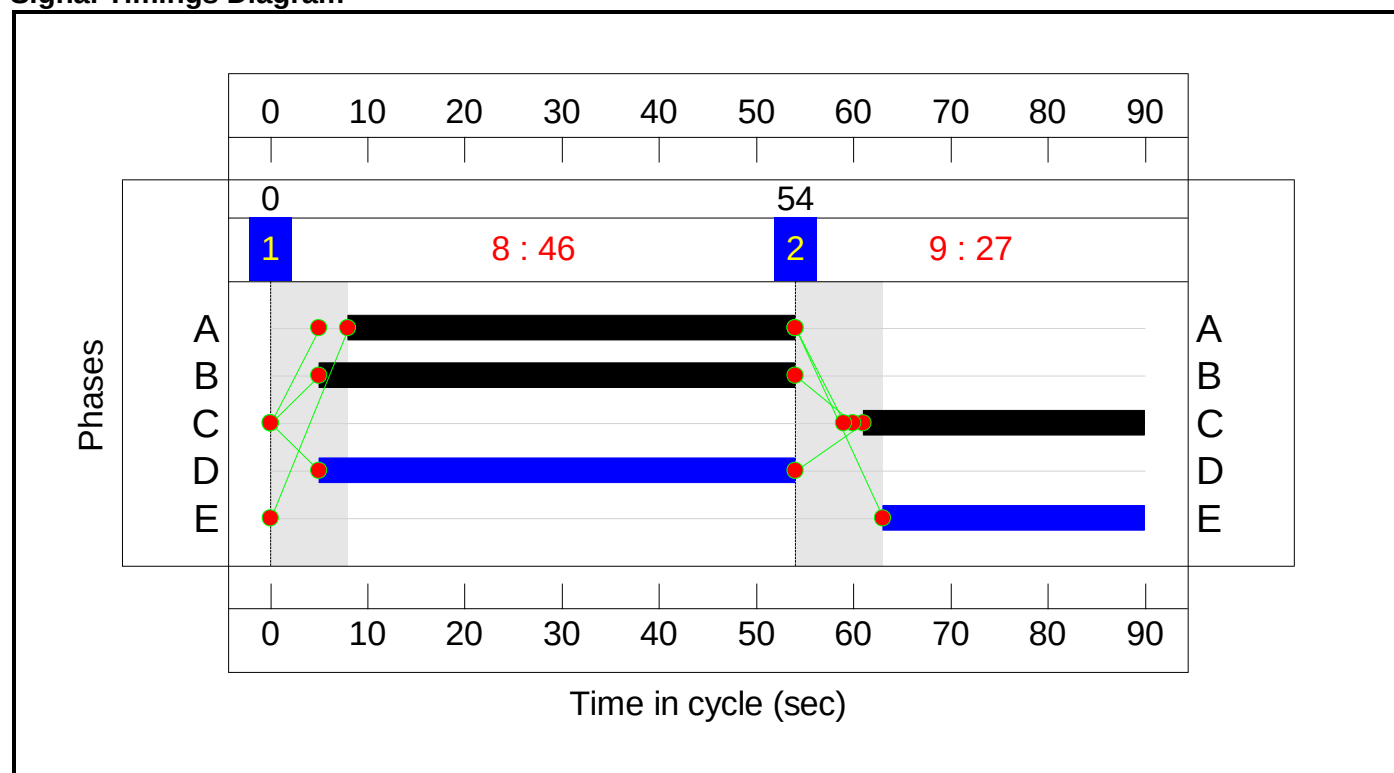
Stage Sequence Diagram



Stage Timings

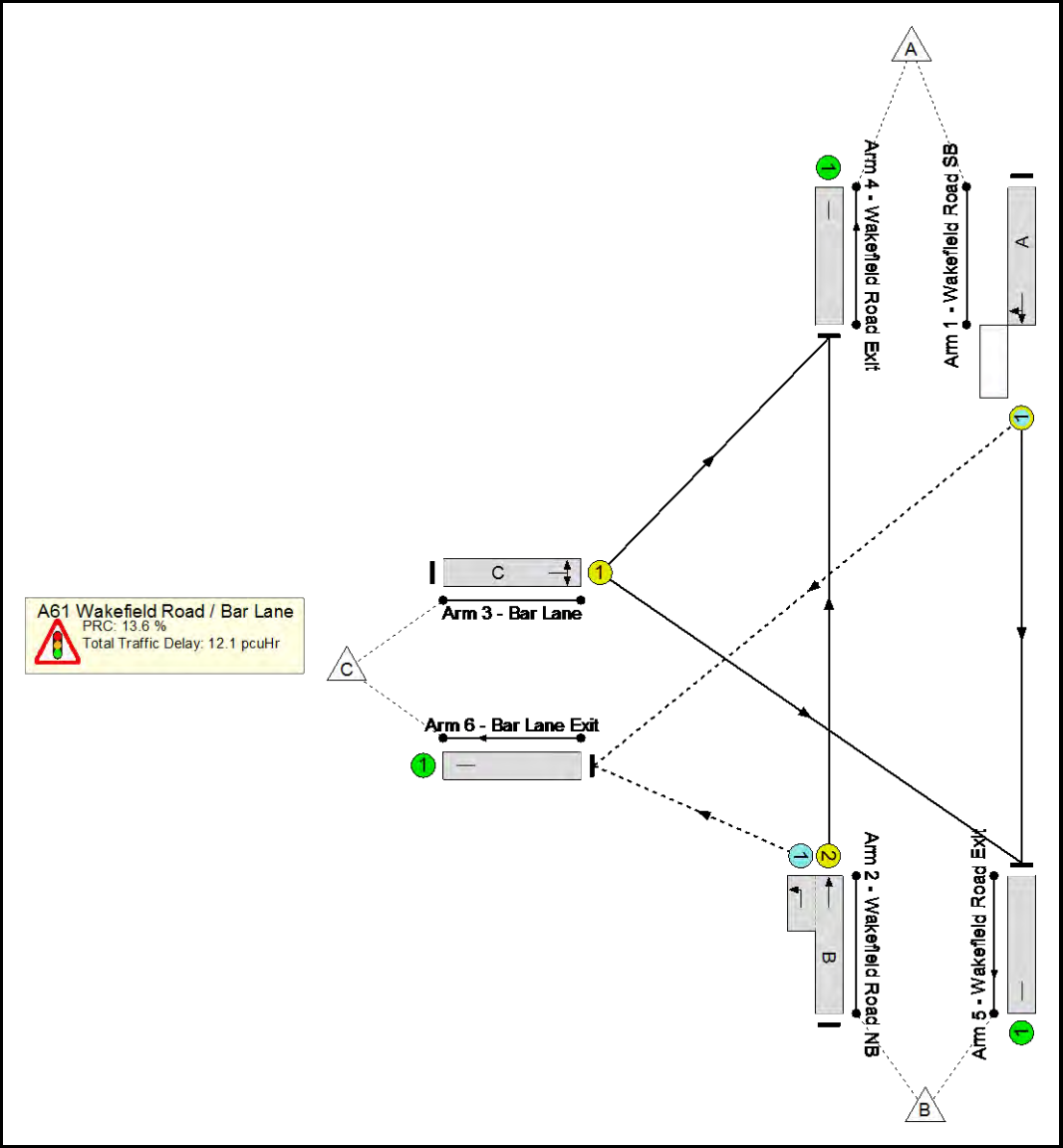
Stage	1	2
Duration	46	27
Change Point	0	54

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	79.2%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	79.2%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	46	-	499	1946	1016	49.1%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	49	-	955	1995:1985	1220	78.3%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	29	-	443	1677	559	79.2%
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: 2017 Existing	-	-	369	95	0	7.9	4.1	0.0	12.1	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	369	95	0	7.9	4.1	0.0	12.1	-	-	-	-
1/1	499	499	19	0	0	1.9	0.5	0.0	2.4	17.3	7.9	0.5	8.4
2/2+2/1	955	955	350	95	0	2.7	1.8	-	4.5	16.8	15.2	1.8	17.0
3/1	443	443	-	-	-	3.3	1.9	-	5.2	42.2	10.0	1.9	11.8
C1 PRC for Signalled Lanes (%): 13.6 Total Delay for Signalled Lanes (pcuHr): 12.05 Cycle Time (s): 90 PRC Over All Lanes (%): 13.6 Total Delay Over All Lanes(pcuHr): 12.05													

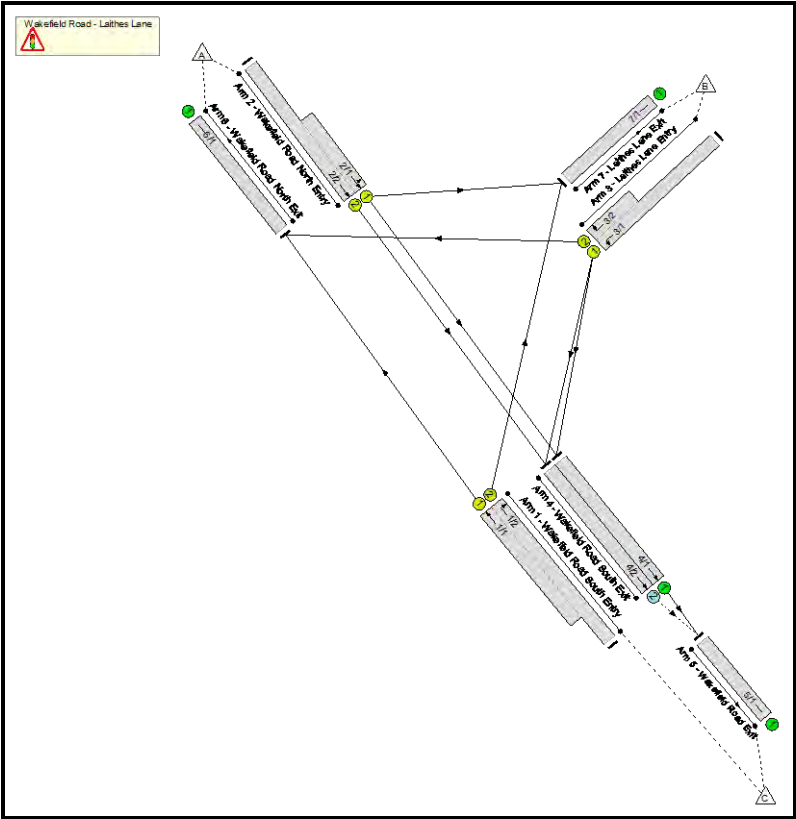
Full Input Data And Results

Full Input Data And Results

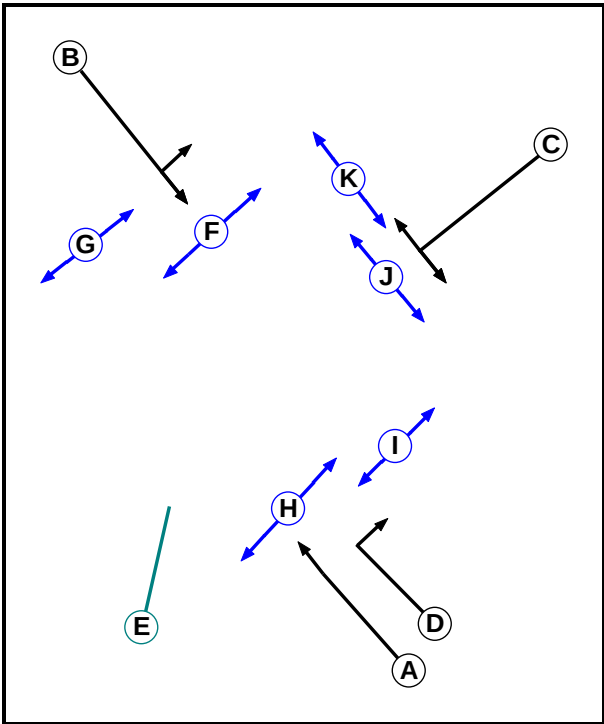
User and Project Details

Project:	Former William Freeman Works, Wakefield Road
Title:	Wakefield Road - Laithes Lane
Location:	
File name:	Wakefield Road - Laithes Lane.lsg3x
Author:	John Turner
Company:	Bryan G Hall
Address:	
Notes:	

Network Layout Diagram



Phase Diagram



Phase Input Data

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

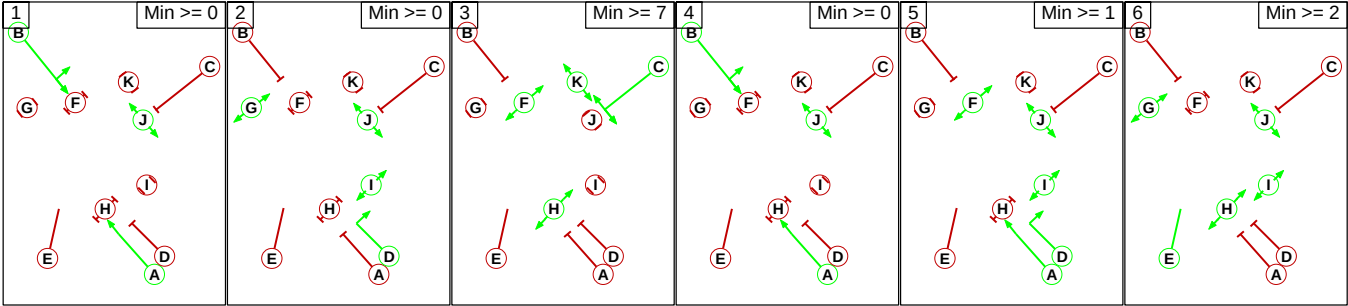
Phase Intergreens Matrix

Terminating Phase	Starting Phase											
		A	B	C	D	E	F	G	H	I	J	K
	A		-	6	-	5	-	8	5	-	-	-
	B	-		8	5	5	5	-	-	9	-	7
	C	5	5		5	5	-	8	-	7	5	-
	D	-	7	5		5	-	-	5	-	-	7
	E	5	5	5	5		-	-	-	-	-	6
	F	-	8	-	-	-		10	-	-	-	-
	G	6	-	6	-	-	-		-	-	-	-
	H	8	-	-	6	-	-	-		-	-	-
	I	-	7	7	-	-	-	-	-		-	-
	J	-	-	7	-	-	-	-	-	-		-
	K	-	7	-	7	7	-	-	-	-	-	

Phases in Stage

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

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	4	5	6
	1		9	8	0	9	9
	2	7		7	7	6	5
	3	8	10		8	8	10
	4	0	9	8		9	9
	5	8	10	7	8		10
	6	8	6	7	8	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Wakefield Road - Laithes Lane											
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)
4/2 (Wakefield Road South Exit)	5/1 (Ahead)	1439	0	4/1	1.09	All	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: Wakefield Road - Laithes Lane												
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 (Wakefield Road South Entry)	U	A	2	3	22.6	Geom	-	3.25	0.00	Y	Arm 6 Ahead	Inf
1/2 (Wakefield Road South Entry)	U	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 7 Right	17.00
2/1 (Wakefield Road North Entry)	U	B	2	3	9.6	Geom	-	3.50	0.00	Y	Arm 4 Ahead	Inf
											Arm 7 Left	20.00
2/2 (Wakefield Road North Entry)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 4 Ahead	Inf
3/1 (Laithes Lane Entry)	U	C	2	3	60.0	Geom	-	3.30	0.00	Y	Arm 4 Left	14.00
3/2 (Laithes Lane Entry)	U	C	2	3	6.1	Geom	-	3.30	0.00	Y	Arm 6 Right	18.00
4/1 (Wakefield Road South Exit)	U		2	3	17.4	Geom	-	3.20	0.00	Y	Arm 5 Ahead	Inf
4/2 (Wakefield Road South Exit)	O		2	3	17.4	Geom	-	3.20	0.00	Y	Arm 5 Ahead	Inf
5/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Wakefield Road North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Laithes Lane Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2017 Existing AM'	07:45	08:45	01:00	
2: '2017 Existing PM'	16:45	17:45	01:00	
3: '2017 Existing Saturday'	11:45	12:45	01:00	

Full Input Data And Results

Scenario 1: '2017 Existing AM' (FG1: '2017 Existing AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	318	689	1007
	B	329	0	121	450
	C	634	149	0	783
	Tot.	963	467	810	2240

Traffic Lane Flows

Lane	Scenario 1: 2017 Existing AM
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	634
1/2 (with short)	783(In) 149(Out)
2/1 (short)	504
2/2 (with short)	1007(In) 503(Out)
3/1 (with short)	450(In) 121(Out)
3/2 (short)	329
4/1	246
4/2	564
5/1	810
6/1	963
7/1	467

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane								
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 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	36.9 %	1876	1876
				Arm 7 Left	20.00	63.1 %		
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2017 Existing PM' (FG2: '2017 Existing PM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	332	626	958
	B	350	0	141	491
	C	770	170	0	940
	Tot.	1120	502	767	2389

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2017 Existing PM
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	770
1/2 (with short)	940(In) 170(Out)
2/1 (short)	479
2/2 (with short)	958(In) 479(Out)
3/1 (with short)	491(In) 141(Out)
3/2 (short)	350
4/1	217
4/2	550
5/1	767
6/1	1120
7/1	502

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane								
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 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	30.7 %	1868	1868
				Arm 7 Left	20.00	69.3 %		
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2017 Existing Saturday' (FG3: '2017 Existing Saturday', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	271	666	937
	B	260	0	163	423
	C	694	188	0	882
	Tot.	954	459	829	2242

Traffic Lane Flows

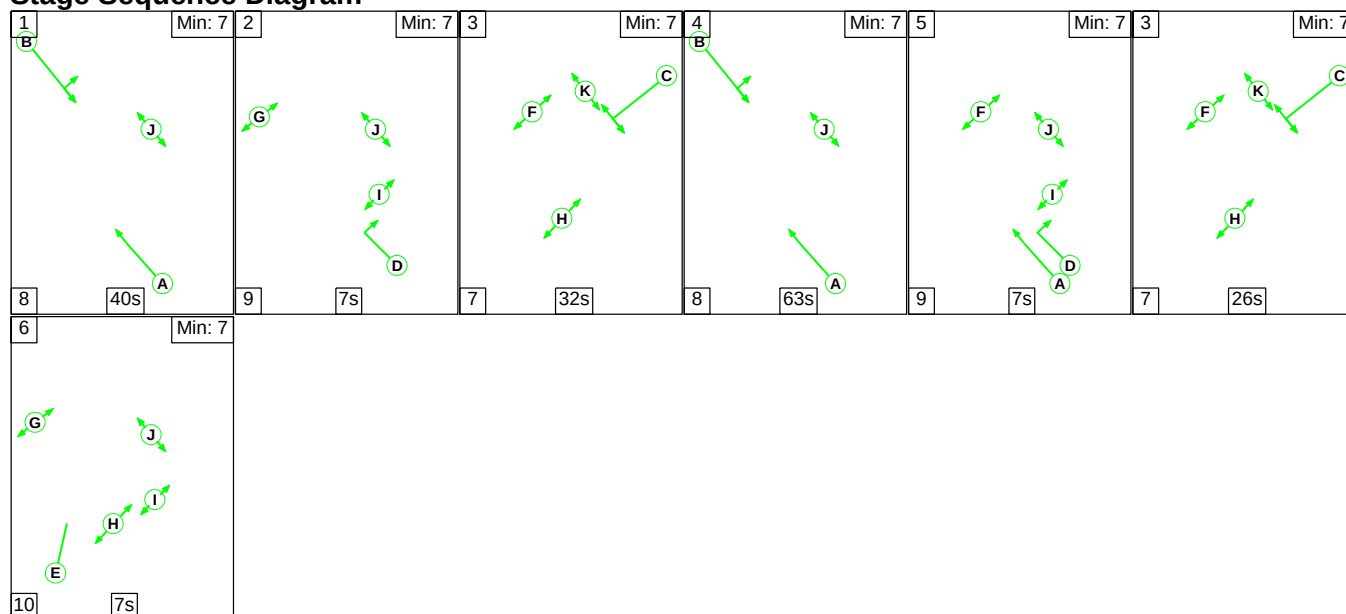
Lane	Scenario 3: 2017 Existing Saturday
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	694
1/2 (with short)	882(In) 188(Out)
2/1 (short)	469
2/2 (with short)	937(In) 468(Out)
3/1 (with short)	423(In) 163(Out)
3/2 (short)	260
4/1	279
4/2	550
5/1	829
6/1	954
7/1	459

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane								
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 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead Arm 7 Left	Inf 20.00	42.2 % 57.8 %	1883	1883
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2017 Existing AM' (FG1: '2017 Existing AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

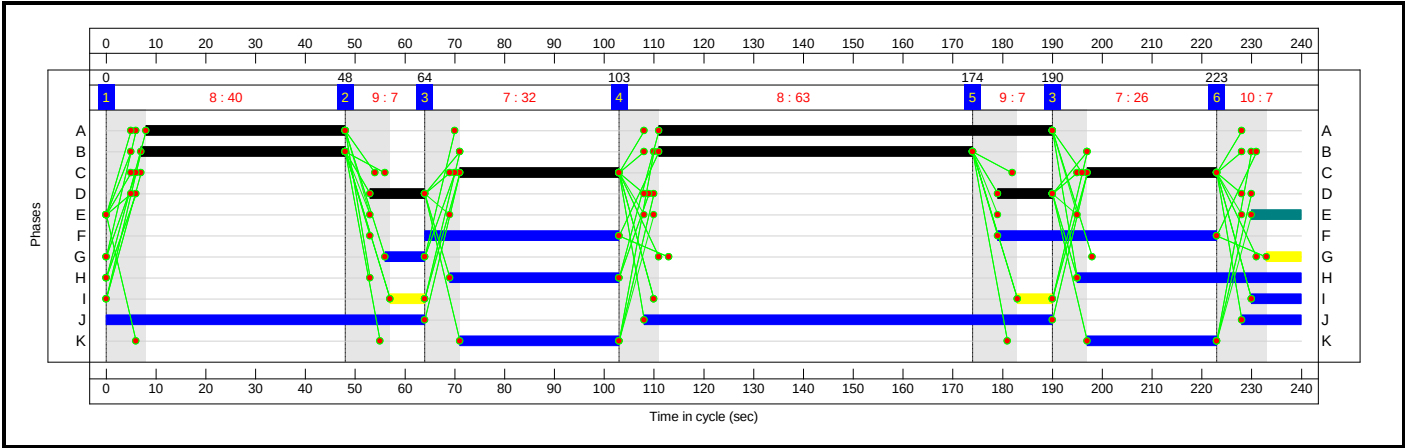


Full Input Data And Results

Stage Timings

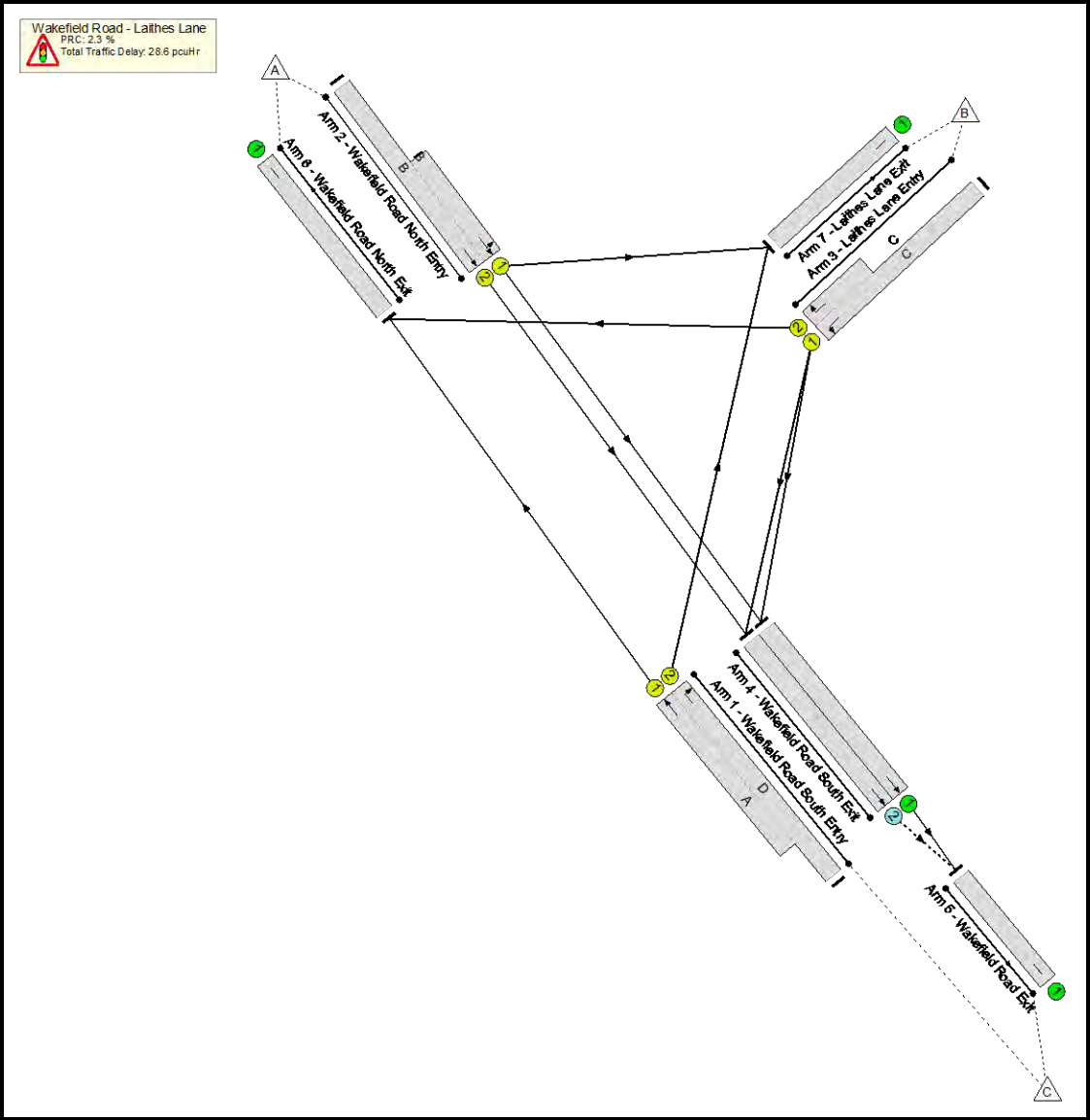
Stage	1	2	3	4	5	3	6
Duration	40	7	32	63	7	26	7
Change Point	0	48	64	103	174	190	223

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	88.0%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	88.0%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	22:119	-	783	1783:1940	1096	71.4%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	104	-	1007	1965:1876	1144	88.0%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	58	-	450	1757:1795	517	87.1%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	246	1935	1935	12.7%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	564	1935	1171	48.2%
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: Wakefield Road - Laithes Lane	-	-	564	0	0	20.3	8.3	0.0	28.6	-	-	-	-
Wakefield Road - Laithes Lane	-	-	564	0	0	20.3	8.3	0.0	28.6	-	-	-	-
1/2+1/1	783	783	-	-	-	6.1	1.2	-	7.3	33.6	16.2	1.2	17.4
2/2+2/1	1007	1007	-	-	-	7.3	3.5	-	10.8	38.7	21.7	3.5	25.2
3/1+3/2	450	450	-	-	-	5.2	3.1	-	8.2	66.0	12.4	3.1	15.5
4/1	246	246	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/2	564	564	564	0	0	1.7	0.5	-	2.1	13.7	16.0	0.5	16.4

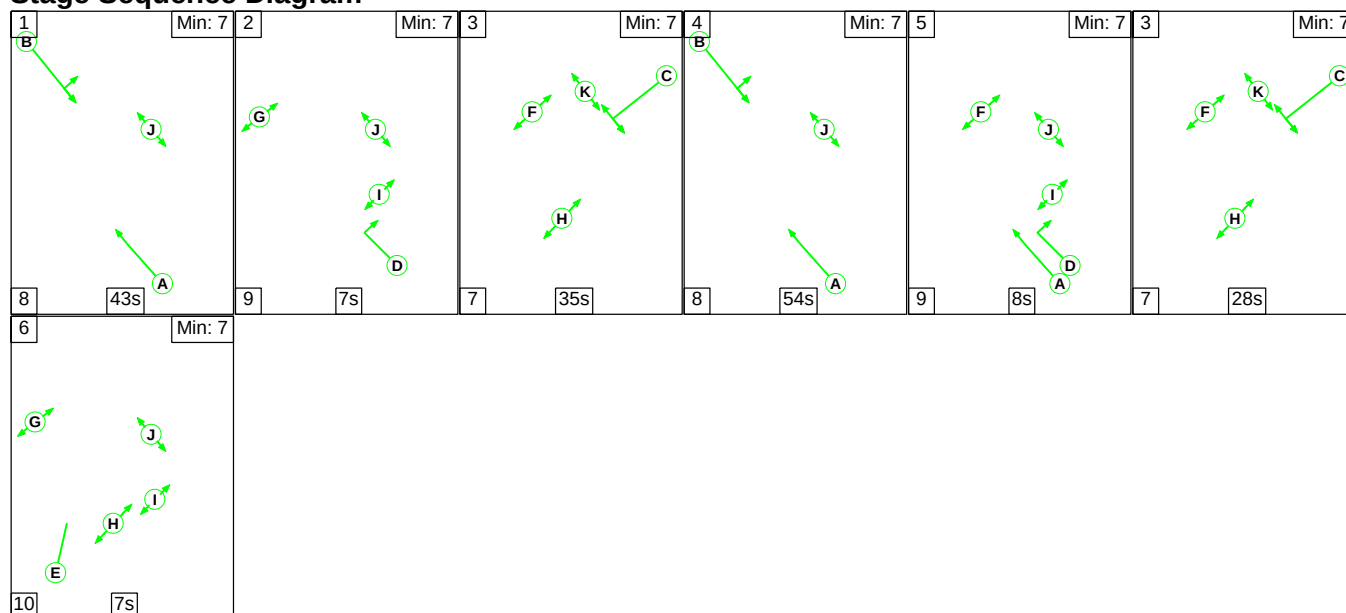
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	2.3	Total Delay for Signalled Lanes (pcuHr):	26.38	Cycle Time (s):	240
	PRC Over All Lanes (%):	2.3	Total Delay Over All Lanes(pcuHr):	28.60		

Full Input Data And Results

Scenario 2: '2017 Existing PM' (FG2: '2017 Existing PM', Plan 1: 'Network Control Plan 1')

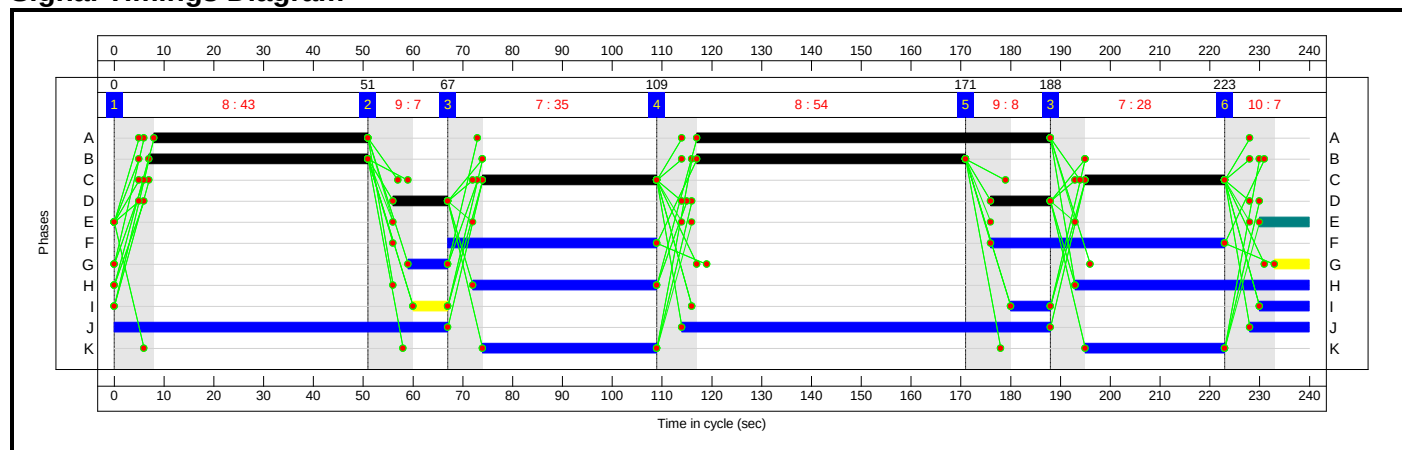
Stage Sequence Diagram



Stage Timings

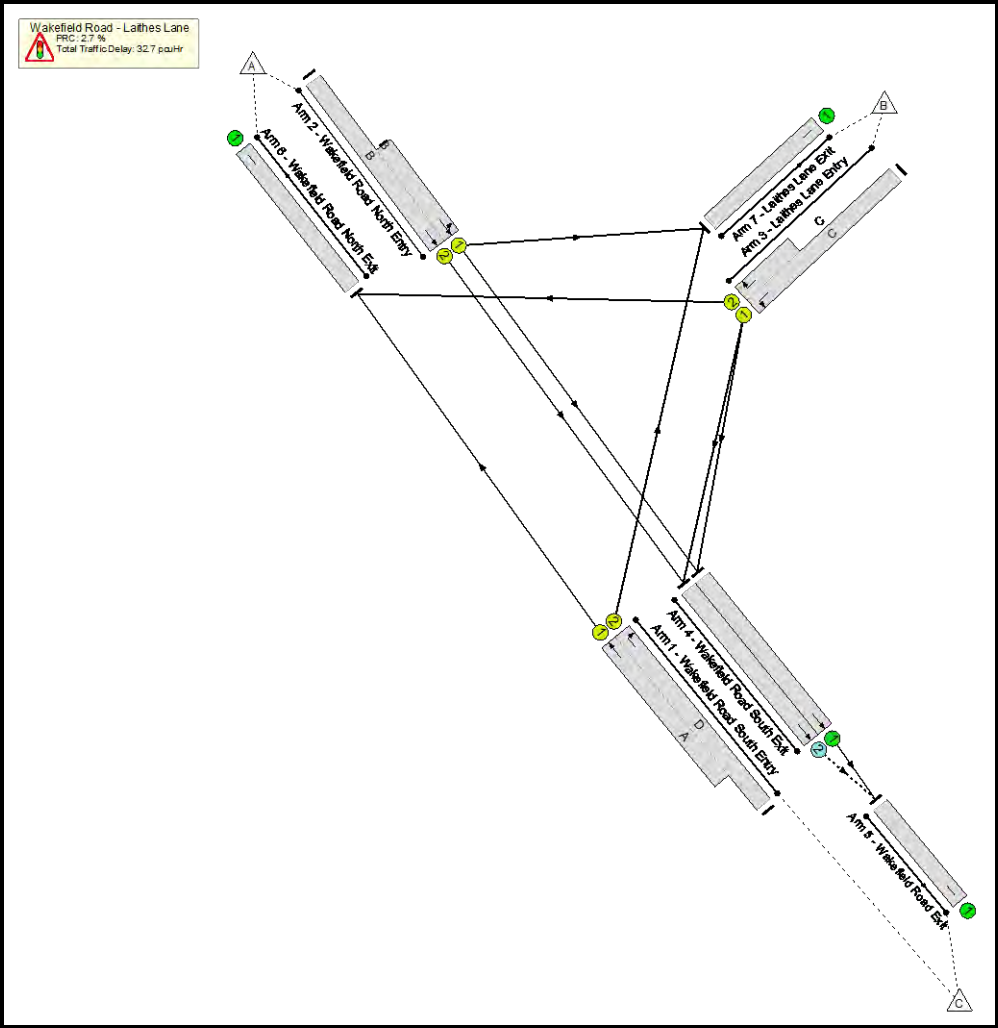
Stage	1	2	3	4	5	3	6
Duration	43	7	35	54	8	28	7
Change Point	0	51	67	109	171	188	223

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	87.6%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	87.6%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	23:114	-	940	1783:1940	1078	87.2%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	98	-	958	1965:1868	1096	87.4%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	63	-	491	1757:1795	560	87.6%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	217	1935	1935	11.2%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	550	1935	1202	45.7%
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: Wakefield Road - Laithes Lane	-	-	550	0	0	22.4	10.3	0.0	32.7	-	-	-	-
Wakefield Road - Laithes Lane	-	-	550	0	0	22.4	10.3	0.0	32.7	-	-	-	-
1/2+1/1	940	940	-	-	-	8.2	3.2	-	11.5	43.9	23.1	3.2	26.4
2/2+2/1	958	958	-	-	-	7.4	3.3	-	10.8	40.4	20.2	3.3	23.5
3/1+3/2	491	491	-	-	-	5.4	3.2	-	8.7	63.6	13.5	3.2	16.7
4/1	217	217	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
4/2	550	550	550	0	0	1.3	0.4	-	1.8	11.5	15.4	0.4	15.8

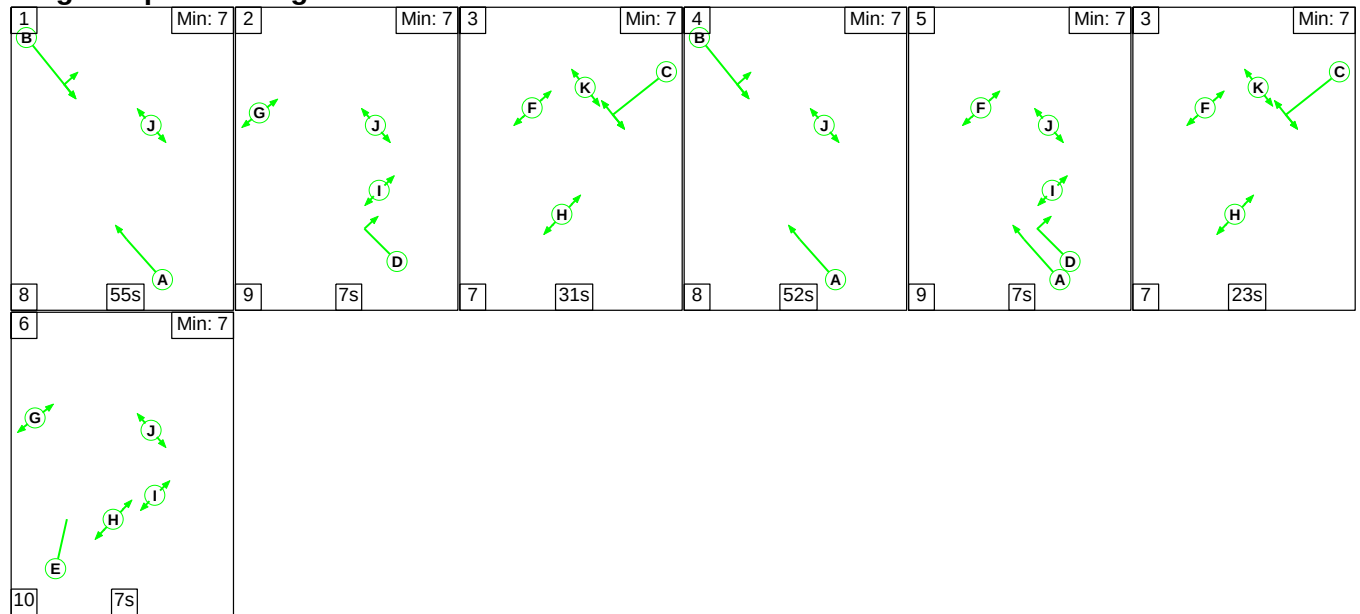
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	2.7	Total Delay for Signalled Lanes (pcuHr):	30.88	Cycle Time (s):	240
	PRC Over All Lanes (%):	2.7	Total Delay Over All Lanes(pcuHr):	32.69		

Full Input Data And Results

Scenario 3: '2017 Existing Saturday' (FG3: '2017 Existing Saturday', Plan 1: 'Network Control Plan 1')

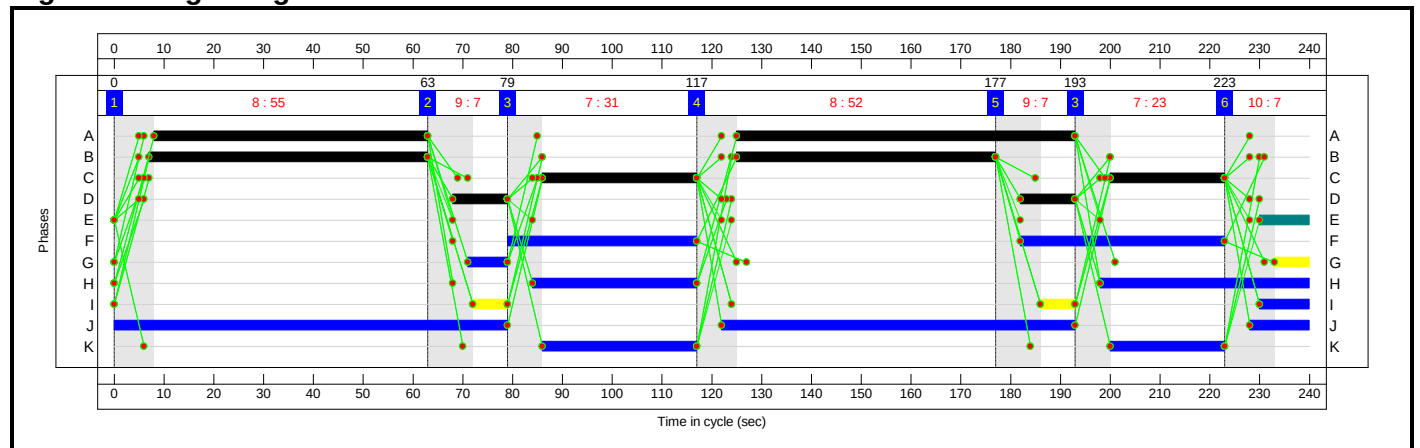
Stage Sequence Diagram



Stage Timings

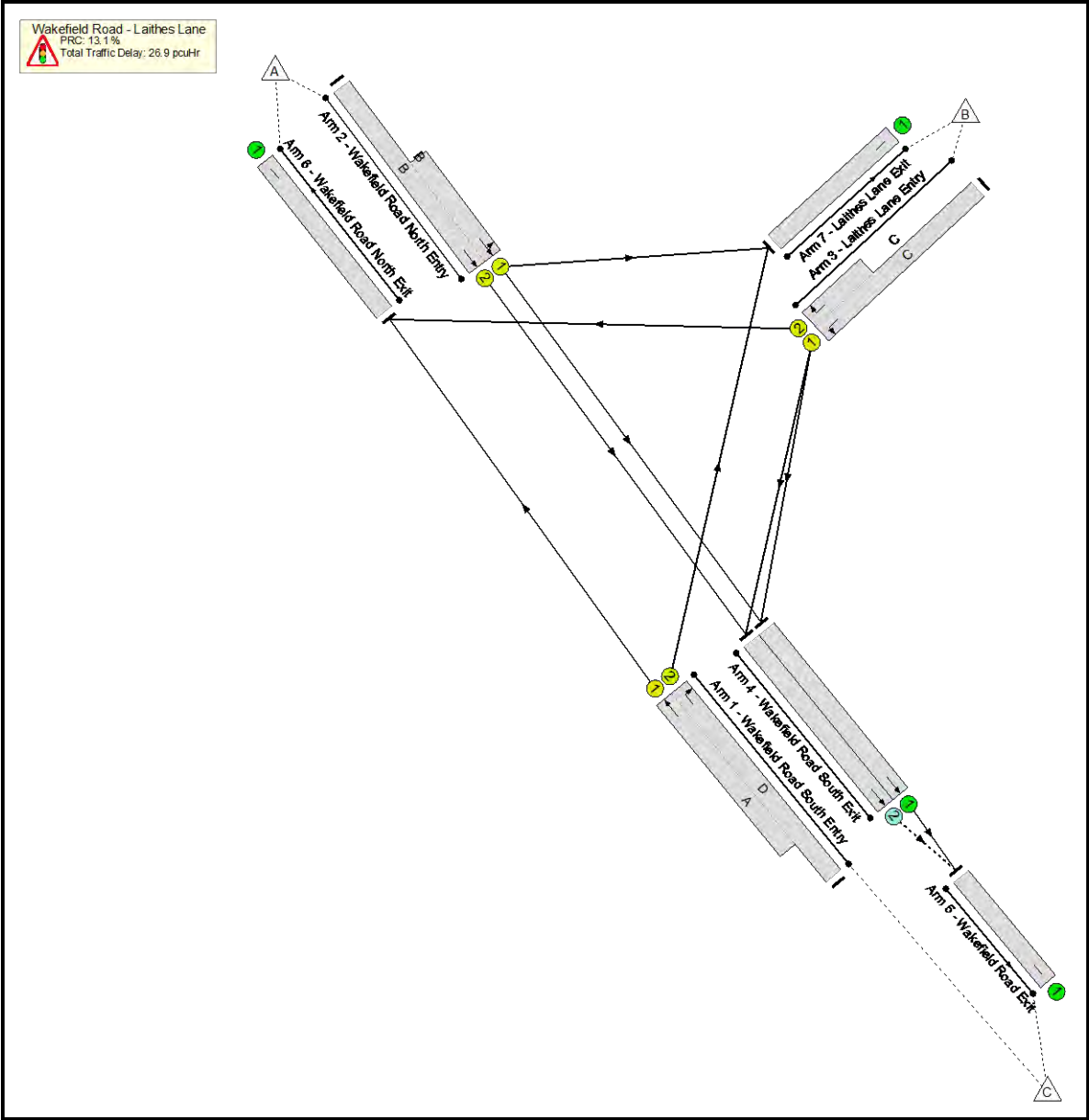
Stage	1	2	3	4	5	3	6
Duration	55	7	31	52	7	23	7
Change Point	0	63	79	117	177	193	223

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	79.6%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	79.6%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	22:123	-	882	1783:1940	1118	78.9%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	108	-	937	1965:1883	1177	79.6%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	54	-	423	1757:1795	534	79.2%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	279	1935	1935	14.4%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	550	1935	1135	48.5%
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: Wakefield Road - Laithes Lane	-	-	550	0	0	20.7	6.2	0.0	26.9	-	-	-	-
Wakefield Road - Laithes Lane	-	-	550	0	0	20.7	6.2	0.0	26.9	-	-	-	-
1/2+1/1	882	872	-	-	-	8.1	1.8	-	9.9	40.5	18.1	1.8	20.0
2/2+2/1	937	937	-	-	-	6.1	1.9	-	8.0	30.9	15.9	1.9	17.8
3/1+3/2	423	423	-	-	-	4.9	1.8	-	6.7	57.1	10.6	1.8	12.5
4/1	279	279	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/2	550	550	550	0	0	1.7	0.5	-	2.1	13.9	15.8	0.5	16.2

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	13.1	Total Delay for Signalled Lanes (pcuHr):	24.66	Cycle Time (s):	240
	PRC Over All Lanes (%):	13.1	Total Delay Over All Lanes(pcuHr):	26.87		

Junctions 9					
ARCADY 9 - Roundabout Module					
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2017					
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Filename: A61 Wakefield Road-A633 Rotherham Road mini-Roundabout.j9

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 9

Report generation date: 30/11/2017 12:01:43

- »2017 Existing, AM
- »2017 Existing, PM
- »2017 Existing, Saturday

Summary of junction performance

	AM				PM				Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2017 Existing												
1 - A61 North	1.0	3.87	0.50	A	0.9	3.71	0.47	A	1.1	4.01	0.52	A
2 - A633 Rotherham Road	3.0	24.32	0.76	C	1.3	11.29	0.56	B	1.6	14.85	0.62	B
3 - A61 South	0.9	7.02	0.49	A	2.7	12.89	0.73	B	1.7	9.42	0.64	A

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

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

File summary

File Description

Title	A61 Wakefield Road/A633 Rotherham Road
Location	Mapplewell, Barnsley
Site number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\design
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2017 Existing	AM	ONE HOUR	07:30	09:00	15
D2	2017 Existing	PM	ONE HOUR	16:30	18:00	15
D3	2017 Existing	Saturday	ONE HOUR	11:30	13:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2017 Existing, AM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	9.67	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	A61 North	
2	A633 Rotherham Road	
3	A61 South	

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 - A61 North	4.50	4.50	6.50	27.0	20.00	20.00	0.0	✓
2 - A633 Rotherham Road	4.00	4.00	6.20	6.0	9.70	2.00	0.0	✓
3 - A61 South	4.20	4.20	5.10	1.5	20.00	20.00	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A61 North	0.901	1905
2 - A633 Rotherham Road	0.556	970
3 - A61 South	0.840	1381

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2017 Existing	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	851	100.000
2 - A633 Rotherham Road		✓	416	100.000
3 - A61 South		✓	439	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From				
	1 - A61 North	0	253	598
	2 - A633 Rotherham Road	416	0	0
	3 - A61 South	401	38	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From				
	1 - A61 North	0	0	0
	2 - A633 Rotherham Road	0	0	0
	3 - A61 South	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.50	3.87	1.0	A
2 - A633 Rotherham Road	0.76	24.32	3.0	C
3 - A61 South	0.49	7.02	0.9	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	641	28	1880	0.341	639	0.5	2.896	A
2 - A633 Rotherham Road	313	449	721	0.435	310	0.8	8.711	A
3 - A61 South	331	310	1120	0.295	329	0.4	4.540	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	765	34	1874	0.408	764	0.7	3.241	A
2 - A633 Rotherham Road	374	537	671	0.557	372	1.2	11.949	B
3 - A61 South	395	372	1068	0.369	394	0.6	5.334	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	937	42	1868	0.502	936	1.0	3.859	A
2 - A633 Rotherham Road	458	658	605	0.758	452	2.8	22.620	C
3 - A61 South	483	452	1001	0.483	482	0.9	6.913	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	937	42	1867	0.502	937	1.0	3.868	A
2 - A633 Rotherham Road	458	658	604	0.758	457	3.0	24.324	C
3 - A61 South	483	457	996	0.485	483	0.9	7.016	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	765	34	1874	0.408	766	0.7	3.251	A
2 - A633 Rotherham Road	374	538	671	0.558	381	1.3	12.685	B
3 - A61 South	395	381	1061	0.372	396	0.6	5.426	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	641	29	1879	0.341	641	0.5	2.909	A
2 - A633 Rotherham Road	313	451	719	0.435	315	0.8	8.952	A
3 - A61 South	331	315	1116	0.296	331	0.4	4.591	A

2017 Existing, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	8.65	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2017 Existing	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	792	100.000
2 - A633 Rotherham Road		✓	367	100.000
3 - A61 South		✓	693	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	388	404
	2 - A633 Rotherham Road	367	0	0
	3 - A61 South	629	64	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	0	0
	2 - A633 Rotherham Road	0	0	0
	3 - A61 South	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.47	3.71	0.9	A
2 - A633 Rotherham Road	0.56	11.29	1.3	B
3 - A61 South	0.73	12.89	2.7	B

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	596	48	1862	0.320	594	0.5	2.836	A
2 - A633 Rotherham Road	276	303	801	0.345	274	0.5	6.804	A
3 - A61 South	522	274	1150	0.454	518	0.8	5.667	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	712	57	1853	0.384	711	0.6	3.150	A
2 - A633 Rotherham Road	330	363	768	0.429	329	0.7	8.180	A
3 - A61 South	623	329	1104	0.564	621	1.3	7.423	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	872	70	1842	0.473	871	0.9	3.704	A
2 - A633 Rotherham Road	404	444	723	0.559	402	1.2	11.147	B
3 - A61 South	763	402	1043	0.732	758	2.6	12.393	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	872	70	1842	0.473	872	0.9	3.711	A
2 - A633 Rotherham Road	404	445	723	0.559	404	1.3	11.288	B
3 - A61 South	763	404	1041	0.733	763	2.7	12.886	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	712	58	1853	0.384	713	0.6	3.163	A
2 - A633 Rotherham Road	330	364	768	0.430	332	0.8	8.294	A
3 - A61 South	623	332	1102	0.565	628	1.3	7.686	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	596	48	1862	0.320	597	0.5	2.849	A
2 - A633 Rotherham Road	276	304	801	0.345	277	0.5	6.888	A
3 - A61 South	522	277	1148	0.455	524	0.8	5.786	A

2017 Existing, Saturday

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	7.90	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2017 Existing	Saturday	ONE HOUR	11:30	13:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	870	100.000
2 - A633 Rotherham Road		✓	355	100.000
3 - A61 South		✓	609	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	319	551
	2 - A633 Rotherham Road	355	0	0
	3 - A61 South	560	49	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	0	0
	2 - A633 Rotherham Road	0	0	0
	3 - A61 South	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.52	4.01	1.1	A
2 - A633 Rotherham Road	0.62	14.85	1.6	B
3 - A61 South	0.64	9.42	1.7	A

Main Results for each time segment

11:30 - 11:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	655	37	1872	0.350	653	0.5	2.947	A
2 - A633 Rotherham Road	267	413	740	0.361	265	0.6	7.543	A
3 - A61 South	458	265	1158	0.396	456	0.6	5.109	A

11:45 - 12:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	782	44	1866	0.419	781	0.7	3.319	A
2 - A633 Rotherham Road	319	495	695	0.459	318	0.8	9.523	A
3 - A61 South	547	318	1114	0.492	546	1.0	6.331	A

12:00 - 12:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	958	54	1857	0.516	957	1.1	3.993	A
2 - A633 Rotherham Road	391	606	633	0.617	388	1.5	14.506	B
3 - A61 South	671	388	1055	0.636	668	1.7	9.226	A

12:15 - 12:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	958	54	1857	0.516	958	1.1	4.005	A
2 - A633 Rotherham Road	391	607	633	0.618	391	1.6	14.848	B
3 - A61 South	671	391	1052	0.637	670	1.7	9.415	A

12:30 - 12:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	782	44	1865	0.419	783	0.7	3.333	A
2 - A633 Rotherham Road	319	496	694	0.460	322	0.9	9.746	A
3 - A61 South	547	322	1110	0.493	550	1.0	6.466	A

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	655	37	1872	0.350	656	0.5	2.963	A
2 - A633 Rotherham Road	267	415	739	0.362	268	0.6	7.669	A
3 - A61 South	458	268	1155	0.397	460	0.7	5.185	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 19/12/2017 09:51:04

« (Default Analysis Set) - 2017 Existing, AM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Existing				
Stream B-AC	0.32	8.14	0.24	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	0.00	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 19/12/2017 09:51:03

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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) - 2017 Existing, AM

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)	N/A			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
2017 Existing, AM	2017 Existing	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	8.14	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A61 South	8.00		0.00		2.20	0.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Rotherham Road Left Turn	One lane	5.00										0	15

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A61 North	ONE HOUR	✓	598.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	128.00	100.000
A61 South	ONE HOUR	✓	439.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	598.000
	Rotherham Road Left Turn	0.000	0.000	128.000
	A61 South	439.000	0.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.24	8.14	0.32	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	96.37	95.66	0.00	639.14	0.151	0.18	6.616	A
C-A	330.50	330.50	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	482.56	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	450.21	450.21	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	115.07	114.86	0.00	615.64	0.187	0.23	7.185	A
C-A	394.65	394.65	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	464.81	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	537.59	537.59	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	140.93	140.58	0.00	583.15	0.242	0.32	8.127	A
C-A	483.35	483.35	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	440.28	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	658.41	658.41	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	140.93	140.92	0.00	583.15	0.242	0.32	8.140	A
C-A	483.35	483.35	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	440.28	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	658.41	658.41	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	115.07	115.41	0.00	615.64	0.187	0.23	7.203	A
C-A	394.65	394.65	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	464.81	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	537.59	537.59	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	96.37	96.58	0.00	639.14	0.151	0.18	6.639	A
C-A	330.50	330.50	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	482.56	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	450.21	450.21	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 19/12/2017 09:51:35

« (Default Analysis Set) - 2017 Existing, PM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Existing				
Stream B-AC	0.10	6.21	0.09	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	0.00	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 19/12/2017 09:51:34

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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) - 2017 Existing, 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)	N/A			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
2017 Existing, PM	2017 Existing	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.21	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A61 South	8.00		0.00		2.20	0.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Rotherham Road Left Turn	One lane	5.00										0	15

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A61 North	ONE HOUR	✓	404.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	55.00	100.000
A61 South	ONE HOUR	✓	693.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	404.000
	Rotherham Road Left Turn	0.000	0.000	55.000
	A61 South	693.000	0.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.09	6.21	0.10	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	41.41	41.15	0.00	678.41	0.061	0.06	5.646	A
C-A	521.73	521.73	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	512.21	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	304.15	304.15	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	49.44	49.38	0.00	662.54	0.075	0.08	5.871	A
C-A	622.99	622.99	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	500.22	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	363.19	363.19	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	60.56	60.46	0.00	640.59	0.095	0.10	6.205	A
C-A	763.01	763.01	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	483.65	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	444.81	444.81	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	60.56	60.55	0.00	640.59	0.095	0.10	6.205	A
C-A	763.01	763.01	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	483.65	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	444.81	444.81	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	49.44	49.54	0.00	662.54	0.075	0.08	5.875	A
C-A	622.99	622.99	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	500.22	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	363.19	363.19	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	41.41	41.47	0.00	678.41	0.061	0.07	5.651	A
C-A	521.73	521.73	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	512.21	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	304.15	304.15	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 19/12/2017 09:51:59

« (Default Analysis Set) - 2017 Existing, Saturday

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Existing				
Stream B-AC	0.13	6.83	0.12	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	0.00	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 19/12/2017 09:51:58

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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) - 2017 Existing, Saturday

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)	N/A			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
2017 Existing, Saturday	2017 Existing	Saturday		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.83	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A61 South	8.00		0.00		2.20	0.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Rotherham Road Left Turn	One lane	5.00										0	15

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A61 North	ONE HOUR	✓	551.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	64.00	100.000
A61 South	ONE HOUR	✓	609.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	551.000
	Rotherham Road Left Turn	0.000	0.000	64.000
	A61 South	609.000	0.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.12	6.83	0.13	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	48.18	47.86	0.00	648.65	0.074	0.08	5.989	A
C-A	458.49	458.49	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	489.74	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	414.82	414.82	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	57.53	57.45	0.00	627.00	0.092	0.10	6.320	A
C-A	547.48	547.48	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	473.39	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	495.34	495.34	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	70.47	70.34	0.00	597.06	0.118	0.13	6.832	A
C-A	670.52	670.52	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	450.79	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	606.66	606.66	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	70.47	70.46	0.00	597.06	0.118	0.13	6.835	A
C-A	670.52	670.52	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	450.79	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	606.66	606.66	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	57.53	57.66	0.00	627.00	0.092	0.10	6.326	A
C-A	547.48	547.48	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	473.39	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	495.34	495.34	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	48.18	48.27	0.00	648.65	0.074	0.08	5.998	A
C-A	458.49	458.49	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	489.74	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	414.82	414.82	0.00	-	-	-	-	-

Appendix D – Traffic Growth Factors.

Growth Factors

Weekday AM Peak 2017 -2023

Level	Area	Local Growth Figure
E02001512	Barnsley 004	1.0954

Weekday PM Peak 2017 - 2023

Level	Area	Local Growth Figure
E02001512	Barnsley 004	1.0917

Saturday 2017 - 2023

Level	Area	Local Growth Figure
E02001512	Barnsley 004	1.0938

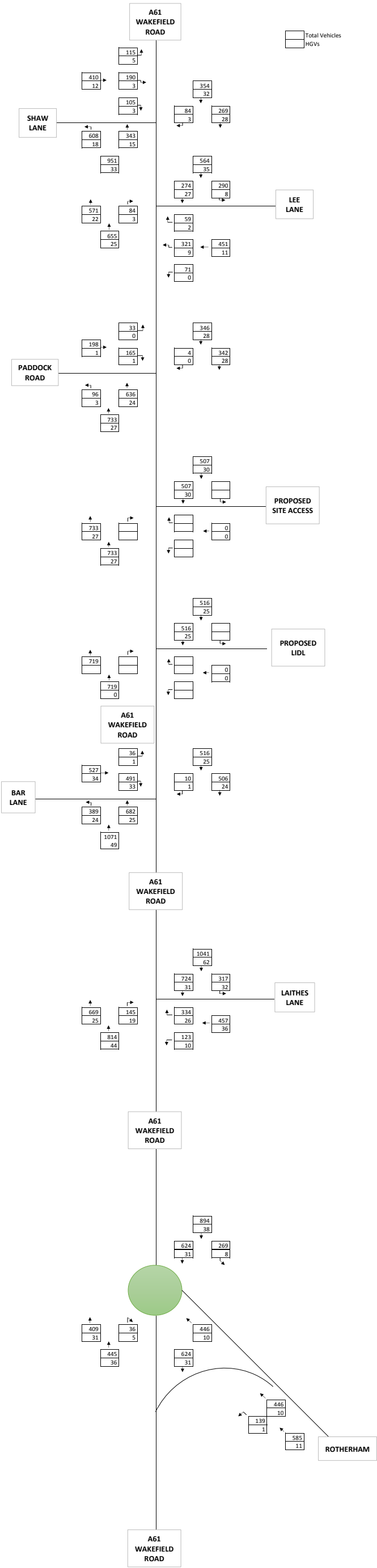
2023 GROWTHED FLOWS

PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL

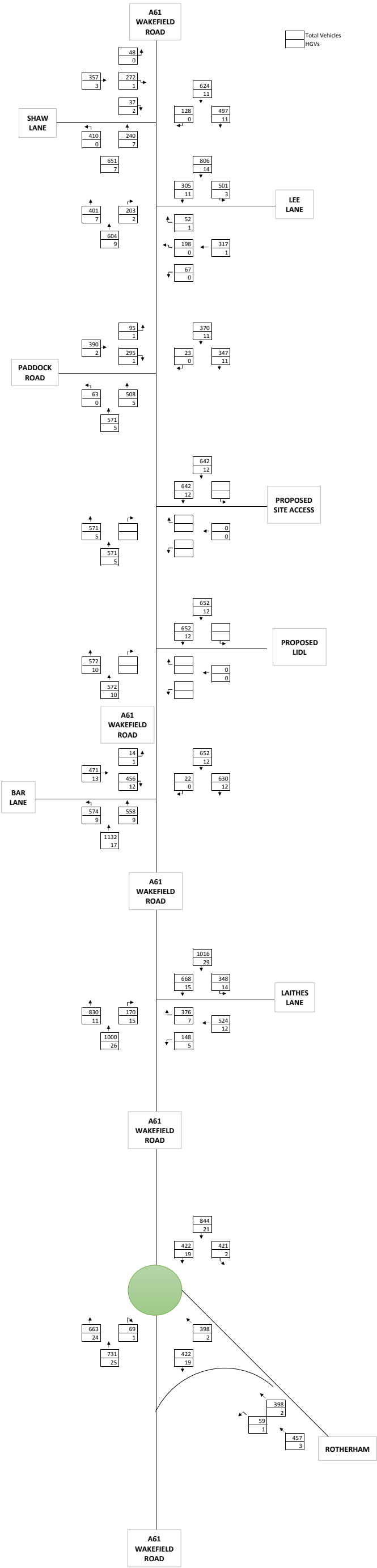
FRIDAY 10 NOVEMBER 2017

07:45 - 08:45

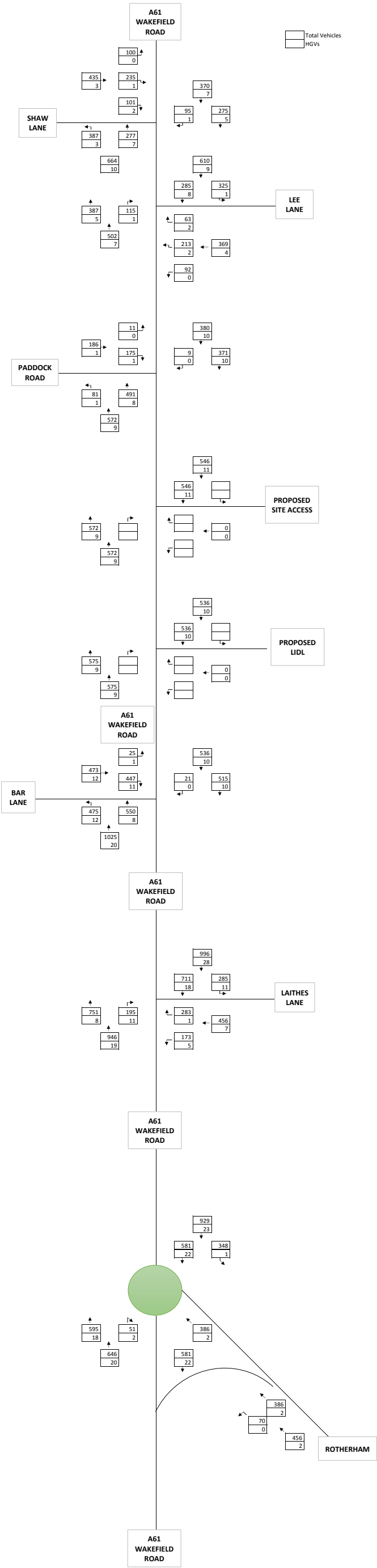
AM PEAK



2023 GROWTHED FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
FRIDAY 10 NOVEMBER 2017
16:45 - 17:45
PM PEAK

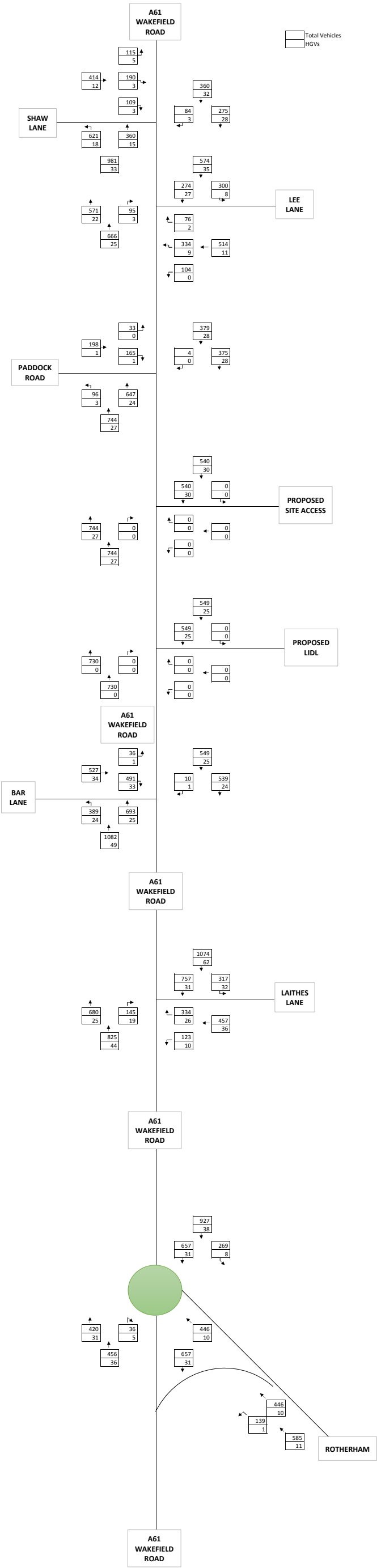


2023 GROWTHED FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
SATURDAY 11 NOVEMBER 2017
11:45 - 12:45
PM PEAK

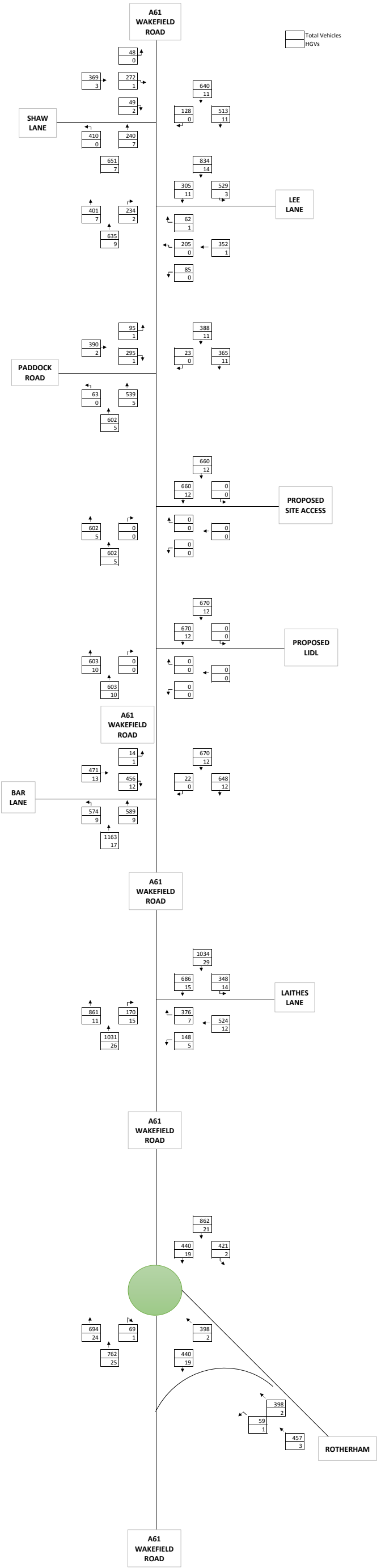


Appendix E – 2023 Base Flows.

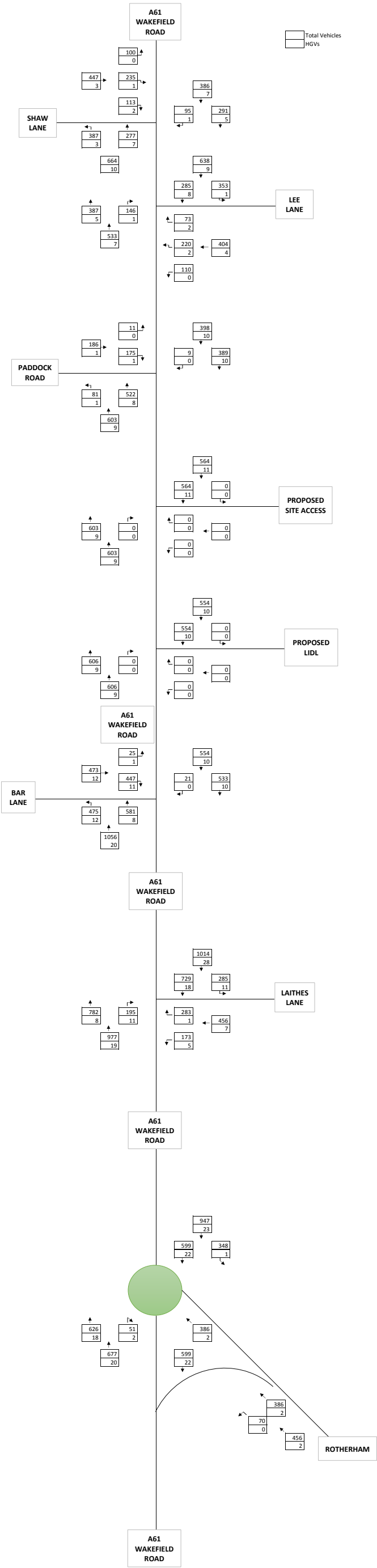
2023 BASE FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
AM PEAK



2023 BASE FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
PM PEAK



2023 BASE FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
SATURDAY PEAK



Appendix F – 2023 Operation Assessments of Existing Junctions.

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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Filename: Wakefield Road - Lee Lane - Shaw Lane - Committed Scheme.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Lee Lane - Shaw Lane Committed Scheme

Report generation date: 15/12/2017 13:00:42

« Committed Layout - 2023 Base, Saturday

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
Committed Layout - 2023 Base				
Stream B-C	0.35	11.44	0.26	B
Stream B-AD	31.68	285.73	1.15	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.48	10.93	0.33	B
Stream D-A	0.38	11.53	0.28	B
Stream D-BC	17.44	188.41	1.06	F
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.24	8.21	0.19	A

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

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 13:00:40

File summary

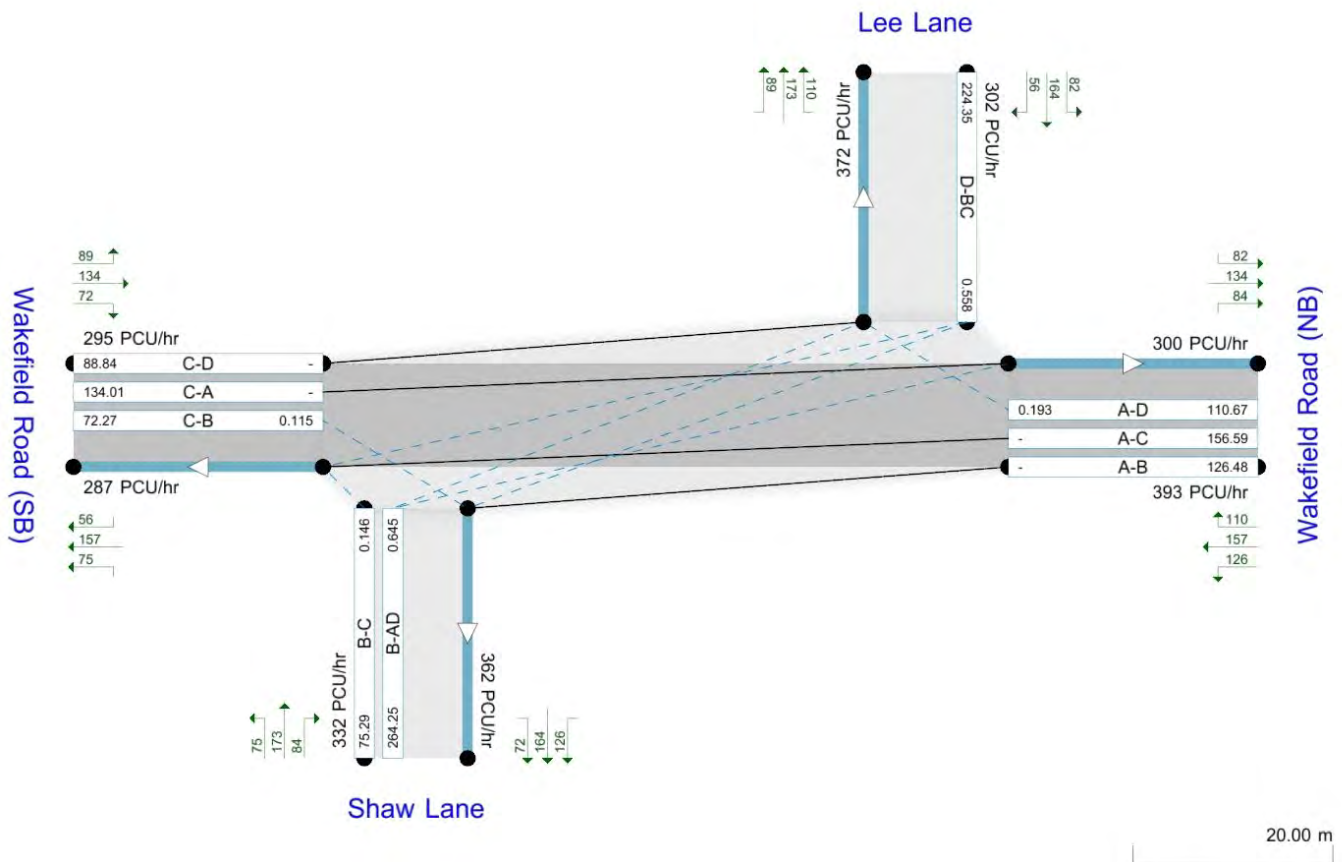
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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



Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFC (l)
Time Segment: (11:30-11:45)
Showing Analysis Set "A1 - Committed Layout"; Demand Set "D6 - 2023 Base, Saturday"

The junction diagram reflects the last run of ARCADY.

Committed Layout - 2023 Base, Saturday

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
Committed Layout	N/A			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
2023 Base, Saturday	2023 Base	Saturday		ONE HOUR	11:30	13:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	146.32	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Shaw Lane	Two lanes		3.90	3.85						✓		55	35
Lee Lane	Two lanes		3.88	4.06						✓		40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	556.295	0.101	0.256	-	-	-	0.161	0.366	0.161	0.101	0.256
1	B-C	704.176	0.108	0.273	-	-	-	-	-	-	0.108	0.273
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	723.432	-	-	-	0.280	0.111	0.280	-	0.111	-	-
1	D-BC	578.082	0.167	0.167	0.380	0.266	0.105	0.266	-	0.105	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	523.00	100.000
Shaw Lane	ONE HOUR	✓	451.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	392.00	100.000
Lee Lane	ONE HOUR	✓	408.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.000	168.000	208.000	147.000
	Shaw Lane	115.000	0.000	100.000	236.000
	Wakefield Road (SB)	178.000	96.000	0.000	118.000
	Lee Lane	110.000	222.000	76.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.32	0.40	0.28
	Shaw Lane	0.25	0.00	0.22	0.52
	Wakefield Road (SB)	0.45	0.24	0.00	0.30
	Lee Lane	0.27	0.54	0.19	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.26	11.44	0.35	B
B-AD	1.15	285.73	31.68	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.33	10.93	0.48	B
D-A	0.28	11.53	0.38	B
D-BC	1.06	188.41	17.44	F
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.19	8.21	0.24	A

Main Results for each time segment

Main results: (11:30-11:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	75.29	74.61	0.00	515.06	0.146	0.17	8.161	A
B-AD	264.25	257.43	0.00	409.44	0.645	1.71	22.950	C
A-B	126.48	126.48	0.00	-	-	-	-	-
A-C	156.59	156.59	0.00	-	-	-	-	-
A-D	110.67	109.72	0.00	572.58	0.193	0.24	7.763	A
D-A	82.81	82.10	0.00	543.83	0.152	0.18	7.785	A
D-BC	224.35	219.50	0.00	401.85	0.558	1.21	19.418	C
C-D	88.84	88.84	0.00	-	-	-	-	-
C-A	134.01	134.01	0.00	-	-	-	-	-
C-B	72.27	71.76	0.00	627.71	0.115	0.13	6.470	A

Main results: (11:45-12:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	89.90	89.64	0.00	469.58	0.191	0.23	9.468	A
B-AD	315.54	306.93	0.00	380.07	0.830	3.86	44.908	E
A-B	151.03	151.03	0.00	-	-	-	-	-
A-C	186.99	186.99	0.00	-	-	-	-	-
A-D	132.15	131.83	0.00	544.86	0.243	0.32	8.702	A
D-A	98.89	98.62	0.00	499.01	0.198	0.24	8.986	A
D-BC	267.90	263.03	0.00	366.20	0.732	2.43	33.612	D
C-D	106.08	106.08	0.00	-	-	-	-	-
C-A	160.02	160.02	0.00	-	-	-	-	-
C-B	86.30	86.15	0.00	596.43	0.145	0.17	7.053	A

Main results: (12:00-12:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	110.10	109.68	0.00	428.29	0.257	0.34	11.285	B
B-AD	386.46	329.04	0.00	339.92	1.137	18.21	146.314	F
A-B	184.97	184.97	0.00	-	-	-	-	-
A-C	229.01	229.01	0.00	-	-	-	-	-
A-D	161.85	161.27	0.00	506.76	0.319	0.46	10.402	B
D-A	121.11	120.60	0.00	440.42	0.275	0.37	11.238	B
D-BC	328.10	295.78	0.00	317.43	1.034	10.51	103.967	F
C-D	129.92	129.92	0.00	-	-	-	-	-
C-A	195.98	195.98	0.00	-	-	-	-	-
C-B	105.70	105.44	0.00	553.73	0.191	0.23	8.025	A

Main results: (12:15-12:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	110.10	110.08	0.00	424.66	0.259	0.35	11.441	B
B-AD	386.46	332.61	0.00	335.27	1.153	31.68	285.730	F
A-B	184.97	184.97	0.00	-	-	-	-	-
A-C	229.01	229.01	0.00	-	-	-	-	-
A-D	161.85	161.76	0.00	491.06	0.330	0.48	10.928	B
D-A	121.11	121.07	0.00	433.25	0.280	0.38	11.530	B
D-BC	328.10	300.38	0.00	308.14	1.065	17.44	188.414	F
C-D	129.92	129.92	0.00	-	-	-	-	-
C-A	195.98	195.98	0.00	-	-	-	-	-
C-B	105.70	105.67	0.00	543.95	0.194	0.24	8.214	A

Main results: (12:30-12:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	89.90	90.24	0.00	439.66	0.204	0.26	10.312	B
B-AD	315.54	359.34	0.00	370.77	0.851	20.73	264.366	F
A-B	151.03	151.03	0.00	-	-	-	-	-
A-C	186.99	186.99	0.00	-	-	-	-	-
A-D	132.15	132.68	0.00	512.08	0.258	0.35	9.501	A
D-A	98.89	99.27	0.00	448.87	0.220	0.29	10.310	B
D-BC	267.90	319.12	0.00	346.89	0.772	4.63	126.247	F
C-D	106.08	106.08	0.00	-	-	-	-	-
C-A	160.02	160.02	0.00	-	-	-	-	-
C-B	86.30	86.55	0.00	576.78	0.150	0.18	7.346	A

Main results: (12:45-13:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	75.29	75.58	0.00	480.87	0.157	0.19	8.888	A
B-AD	264.25	338.62	0.00	406.57	0.650	2.13	83.165	F
A-B	126.48	126.48	0.00	-	-	-	-	-
A-C	156.59	156.59	0.00	-	-	-	-	-
A-D	110.67	111.06	0.00	549.91	0.201	0.25	8.212	A
D-A	82.81	83.20	0.00	521.55	0.159	0.19	8.220	A
D-BC	224.35	237.05	0.00	388.22	0.578	1.46	25.735	D
C-D	88.84	88.84	0.00	-	-	-	-	-
C-A	134.01	134.01	0.00	-	-	-	-	-
C-B	72.27	72.45	0.00	622.10	0.116	0.13	6.551	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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Filename: Wakefield Road - Lee Lane - Shaw Lane - Committed Scheme.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Lee Lane - Shaw Lane Committed Scheme

Report generation date: 15/12/2017 12:09:32

« Committed Layout - 2023 Base, AM

» Junction Network

» Arms

» Traffic Flows

» Entry Flows

» Turning Proportions

» Vehicle Mix

» Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
Committed Layout - 2023 Base				
Stream B-C	0.56	15.51	0.36	C
Stream B-AD	37.98	468.82	1.29	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.27	9.16	0.22	A
Stream D-A	0.35	11.23	0.26	B
Stream D-BC	110.76	1132.95	1.60	F
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.34	12.85	0.26	B

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

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 12:09:31

File summary

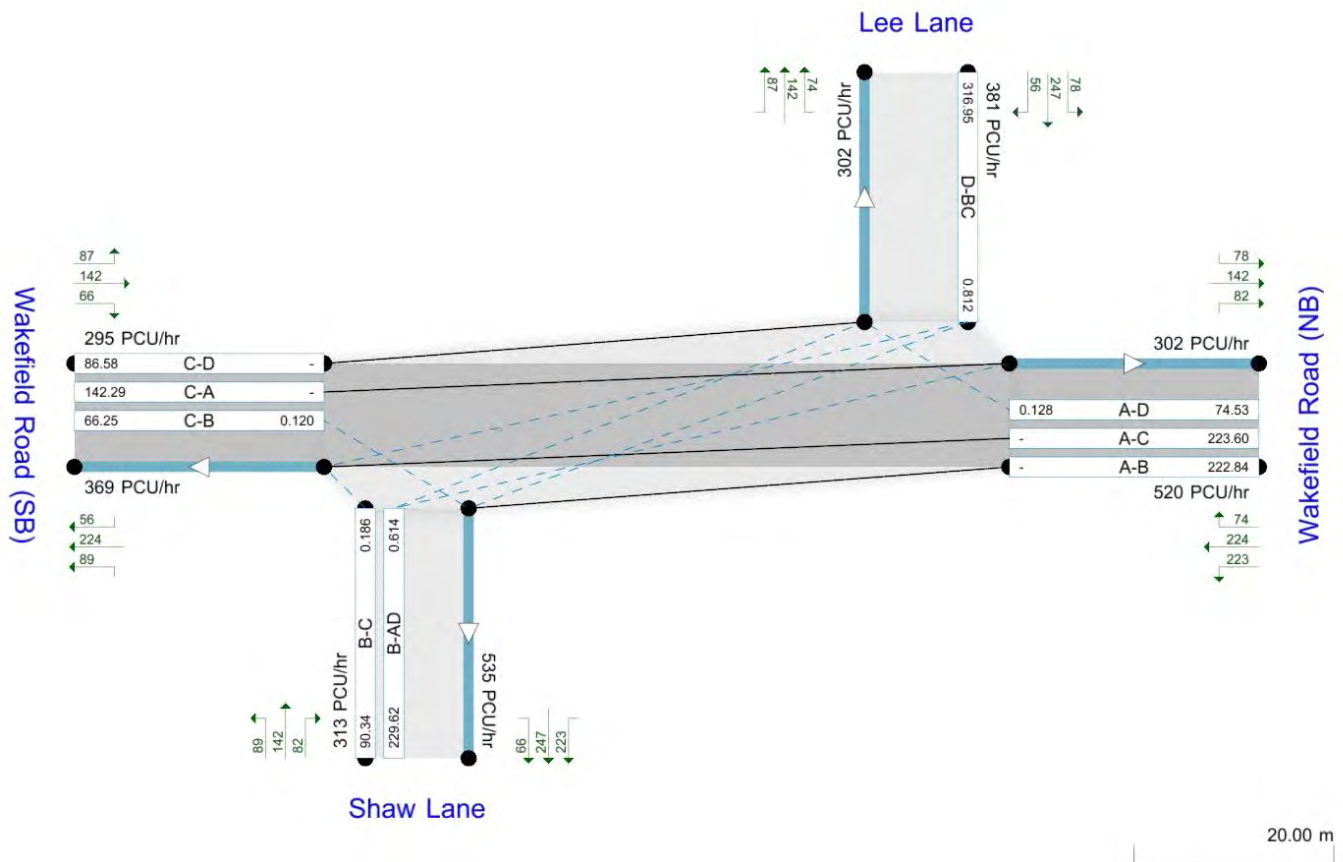
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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



Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RFC (s).
Time Segment: (07:30-07:45)
Showing Analysis Set "A1 - Committed Layout"; Demand Set "D4 - 2023 Base, AM"

The junction diagram reflects the last run of ARCADY.

Committed Layout - 2023 Base, AM

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
Committed Layout	N/A			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
2023 Base, AM	2023 Base	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	549.72	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Shaw Lane	Two lanes		3.90	3.85						✓		55	35
Lee Lane	Two lanes		3.88	4.06						✓		40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	556.295	0.101	0.256	-	-	-	0.161	0.366	0.161	0.101	0.256
1	B-C	704.176	0.108	0.273	-	-	-	-	-	-	0.108	0.273
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	723.432	-	-	-	0.280	0.111	0.280	-	0.111	-	-
1	D-BC	578.082	0.167	0.167	0.380	0.266	0.105	0.266	-	0.105	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	692.00	100.000
Shaw Lane	ONE HOUR	✓	425.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	392.00	100.000
Lee Lane	ONE HOUR	✓	525.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
From		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
	Wakefield Road (NB)	0.000	296.000	297.000	99.000
	Shaw Lane	112.000	0.000	120.000	193.000
	Wakefield Road (SB)	189.000	88.000	0.000	115.000
	Lee Lane	104.000	343.000	78.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.43	0.43	0.14
	Shaw Lane	0.26	0.00	0.28	0.45
	Wakefield Road (SB)	0.48	0.22	0.00	0.29
	Lee Lane	0.20	0.65	0.15	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.36	15.51	0.56	C
B-AD	1.29	468.82	37.98	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.22	9.16	0.27	A
D-A	0.26	11.23	0.35	B
D-BC	1.60	1132.95	110.76	F
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.26	12.85	0.34	B

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	90.34	89.44	0.00	486.97	0.186	0.23	9.037	A
B-AD	229.62	223.63	0.00	374.14	0.614	1.50	23.276	C
A-B	222.84	222.84	0.00	-	-	-	-	-
A-C	223.60	223.60	0.00	-	-	-	-	-
A-D	74.53	73.95	0.00	580.40	0.128	0.15	7.101	A
D-A	78.30	77.57	0.00	505.44	0.155	0.18	8.399	A
D-BC	316.95	302.96	0.00	390.28	0.812	3.50	37.211	E
C-D	86.58	86.58	0.00	-	-	-	-	-
C-A	142.29	142.29	0.00	-	-	-	-	-
C-B	66.25	65.71	0.00	550.22	0.120	0.14	7.422	A

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	107.88	107.48	0.00	434.23	0.248	0.33	11.004	B
B-AD	274.19	266.22	0.00	336.77	0.814	3.49	46.773	E
A-B	266.10	266.10	0.00	-	-	-	-	-
A-C	267.00	267.00	0.00	-	-	-	-	-
A-D	89.00	88.83	0.00	554.43	0.161	0.19	7.730	A
D-A	93.49	93.22	0.00	461.89	0.202	0.25	9.758	A
D-BC	378.47	336.36	0.00	352.62	1.073	14.03	120.402	F
C-D	103.38	103.38	0.00	-	-	-	-	-
C-A	169.91	169.91	0.00	-	-	-	-	-
C-B	79.11	78.91	0.00	501.13	0.158	0.19	8.523	A

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	132.12	131.35	0.00	380.86	0.347	0.52	14.381	B
B-AD	335.81	273.94	0.00	282.33	1.189	18.95	178.111	F
A-B	325.90	325.90	0.00	-	-	-	-	-
A-C	327.00	327.00	0.00	-	-	-	-	-
A-D	109.00	108.71	0.00	518.60	0.210	0.26	8.776	A
D-A	114.51	114.13	0.00	442.89	0.259	0.34	10.938	B
D-BC	463.53	299.95	0.00	300.84	1.541	54.92	441.534	F
C-D	126.62	126.62	0.00	-	-	-	-	-
C-A	208.09	208.09	0.00	-	-	-	-	-
C-B	96.89	96.47	0.00	426.36	0.227	0.29	10.898	B

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	132.12	131.97	0.00	363.87	0.363	0.56	15.507	C
B-AD	335.81	259.71	0.00	260.92	1.287	37.98	407.673	F
A-B	325.90	325.90	0.00	-	-	-	-	-
A-C	327.00	327.00	0.00	-	-	-	-	-
A-D	109.00	108.95	0.00	501.69	0.217	0.27	9.165	A
D-A	114.51	114.47	0.00	434.86	0.263	0.35	11.234	B
D-BC	463.53	290.43	0.00	290.56	1.595	98.20	904.106	F
C-D	126.62	126.62	0.00	-	-	-	-	-
C-A	208.09	208.09	0.00	-	-	-	-	-
C-B	96.89	96.69	0.00	376.84	0.257	0.34	12.849	B

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	107.88	108.44	0.00	371.85	0.290	0.42	13.699	B
B-AD	274.19	286.64	0.00	287.23	0.955	34.87	468.816	F
A-B	266.10	266.10	0.00	-	-	-	-	-
A-C	267.00	267.00	0.00	-	-	-	-	-
A-D	89.00	89.25	0.00	514.52	0.173	0.21	8.470	A
D-A	93.49	93.82	0.00	442.94	0.211	0.27	10.321	B
D-BC	378.47	328.24	0.00	328.44	1.152	110.76	1132.946	F
C-D	103.38	103.38	0.00	-	-	-	-	-
C-A	169.91	169.91	0.00	-	-	-	-	-
C-B	79.11	79.43	0.00	386.46	0.205	0.26	11.736	B

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	90.34	90.76	0.00	385.40	0.234	0.31	12.235	B
B-AD	229.62	307.29	0.00	316.17	0.726	15.45	302.388	F
A-B	222.84	222.84	0.00	-	-	-	-	-
A-C	223.60	223.60	0.00	-	-	-	-	-
A-D	74.53	74.73	0.00	542.26	0.137	0.16	7.704	A
D-A	78.30	78.55	0.00	457.55	0.171	0.21	9.506	A
D-BC	316.95	363.72	0.00	367.03	0.864	99.06	1039.094	F
C-D	86.58	86.58	0.00	-	-	-	-	-
C-A	142.29	142.29	0.00	-	-	-	-	-
C-B	66.25	66.53	0.00	416.11	0.159	0.19	10.307	B

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Wakefield Road - Lee Lane - Shaw Lane - Committed Scheme.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Lee Lane - Shaw Lane Committed Scheme

Report generation date: 15/12/2017 12:59:08

« Committed Layout - 2023 Base, PM

» Junction Network

» Arms

» Traffic Flows

» Entry Flows

» Turning Proportions

» Vehicle Mix

» Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
Committed Layout - 2023 Base				
Stream B-C	0.14	9.57	0.12	A
Stream B-AD	39.08	395.53	1.24	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	1.48	21.29	0.61	C
Stream D-A	0.29	11.30	0.23	B
Stream D-BC	30.45	361.97	1.23	F
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.35	8.96	0.26	A

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

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 12:59:07

File summary

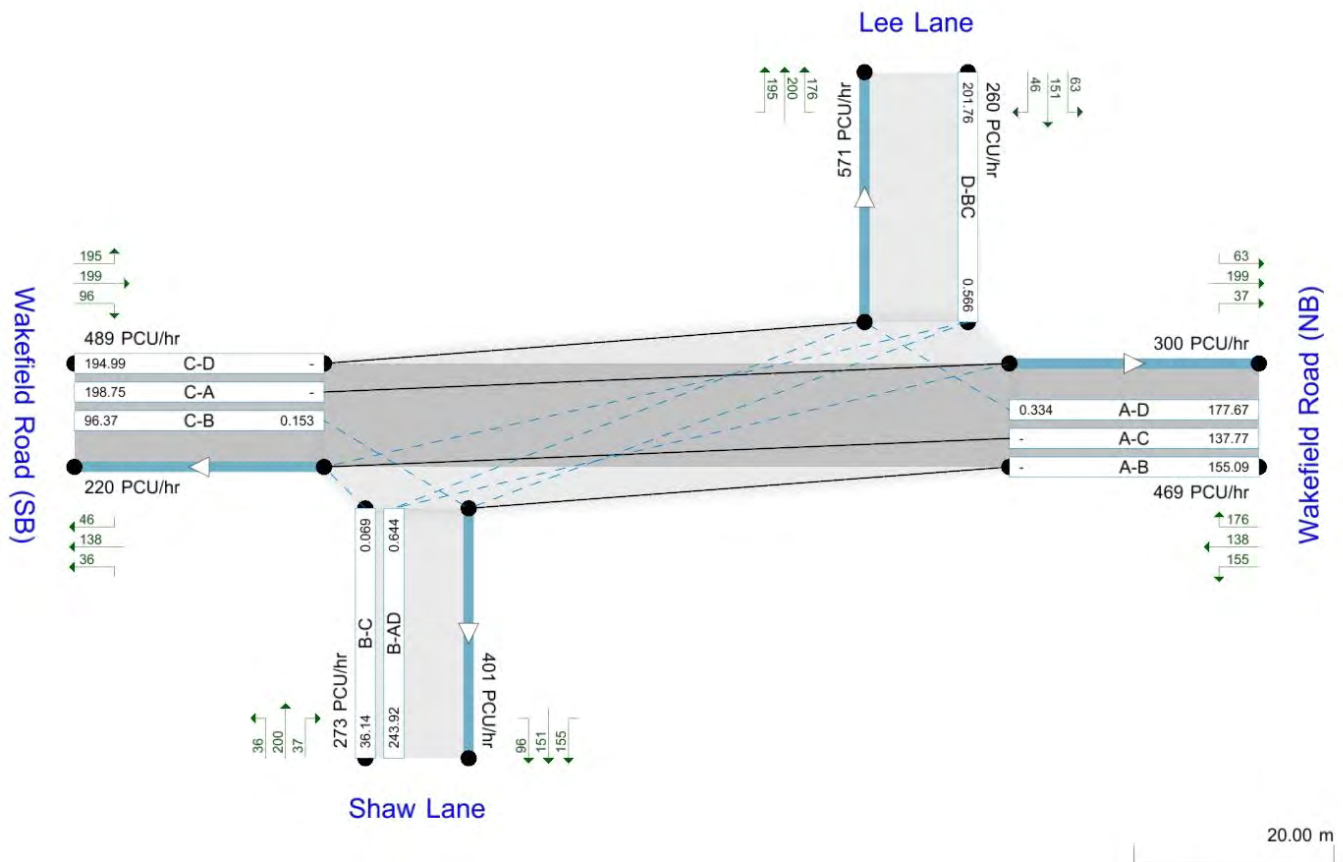
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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



Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RFC (l)
Time Segment: (16:30-16:45)
Showing Analysis Set "A1 - Committed Layout"; Demand Set "D5 - 2023 Base, PM"

The junction diagram reflects the last run of ARCADY.

Committed Layout - 2023 Base, 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
Committed Layout	N/A			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
2023 Base, PM	2023 Base	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	213.73	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Shaw Lane	Two lanes		3.90	3.85						✓		55	35
Lee Lane	Two lanes		3.88	4.06						✓		40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	556.295	0.101	0.256	-	-	-	0.161	0.366	0.161	0.101	0.256
1	B-C	704.176	0.108	0.273	-	-	-	-	-	-	0.108	0.273
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	723.432	-	-	-	0.280	0.111	0.280	-	0.111	-	-
1	D-BC	578.082	0.167	0.167	0.380	0.266	0.105	0.266	-	0.105	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	625.00	100.000
Shaw Lane	ONE HOUR	✓	372.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	651.00	100.000
Lee Lane	ONE HOUR	✓	353.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
From		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
	Wakefield Road (NB)	0.000	206.000	183.000	236.000
	Shaw Lane	51.000	0.000	48.000	273.000
	Wakefield Road (SB)	264.000	128.000	0.000	259.000
	Lee Lane	85.000	205.000	63.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.33	0.29	0.38
	Shaw Lane	0.14	0.00	0.13	0.73
	Wakefield Road (SB)	0.41	0.20	0.00	0.40
	Lee Lane	0.24	0.58	0.18	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.12	9.57	0.14	A
B-AD	1.24	395.53	39.08	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.61	21.29	1.48	C
D-A	0.23	11.30	0.29	B
D-BC	1.23	361.97	30.45	F
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.26	8.96	0.35	A

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	36.14	35.84	0.00	520.40	0.069	0.07	7.424	A
B-AD	243.92	237.18	0.00	378.82	0.644	1.69	24.565	C
A-B	155.09	155.09	0.00	-	-	-	-	-
A-C	137.77	137.77	0.00	-	-	-	-	-
A-D	177.67	175.70	0.00	531.40	0.334	0.49	10.067	B
D-A	63.99	63.44	0.00	525.81	0.122	0.14	7.774	A
D-BC	201.76	196.79	0.00	356.22	0.566	1.24	22.131	C
C-D	194.99	194.99	0.00	-	-	-	-	-
C-A	198.75	198.75	0.00	-	-	-	-	-
C-B	96.37	95.65	0.00	631.59	0.153	0.18	6.709	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	43.15	43.05	0.00	472.36	0.091	0.10	8.383	A
B-AD	291.27	281.50	0.00	343.43	0.848	4.13	51.709	F
A-B	185.19	185.19	0.00	-	-	-	-	-
A-C	164.51	164.51	0.00	-	-	-	-	-
A-D	212.16	211.21	0.00	495.71	0.428	0.73	12.610	B
D-A	76.41	76.20	0.00	473.65	0.161	0.19	9.053	A
D-BC	240.93	234.48	0.00	311.52	0.773	2.86	43.770	E
C-D	232.84	232.84	0.00	-	-	-	-	-
C-A	237.33	237.33	0.00	-	-	-	-	-
C-B	115.07	114.85	0.00	601.02	0.191	0.23	7.401	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	52.85	52.70	0.00	434.82	0.122	0.14	9.414	A
B-AD	356.73	287.72	0.00	294.83	1.210	21.38	187.746	F
A-B	226.81	226.81	0.00	-	-	-	-	-
A-C	201.49	201.49	0.00	-	-	-	-	-
A-D	259.84	257.44	0.00	446.25	0.582	1.33	18.825	C
D-A	93.59	93.22	0.00	419.25	0.223	0.28	11.030	B
D-BC	295.07	241.09	0.00	250.35	1.179	16.35	174.791	F
C-D	285.16	285.16	0.00	-	-	-	-	-
C-A	290.67	290.67	0.00	-	-	-	-	-
C-B	140.93	140.54	0.00	558.88	0.252	0.33	8.598	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	52.85	52.84	0.00	428.88	0.123	0.14	9.573	A
B-AD	356.73	285.95	0.00	287.25	1.242	39.08	389.240	F
A-B	226.81	226.81	0.00	-	-	-	-	-
A-C	201.49	201.49	0.00	-	-	-	-	-
A-D	259.84	259.22	0.00	427.37	0.608	1.48	21.288	C
D-A	93.59	93.56	0.00	412.13	0.227	0.29	11.298	B
D-BC	295.07	238.68	0.00	240.42	1.227	30.45	361.970	F
C-D	285.16	285.16	0.00	-	-	-	-	-
C-A	290.67	290.67	0.00	-	-	-	-	-
C-B	140.93	140.87	0.00	542.54	0.260	0.35	8.961	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	43.15	43.27	0.00	439.57	0.098	0.11	9.086	A
B-AD	291.27	318.88	0.00	327.09	0.890	32.17	395.527	F
A-B	185.19	185.19	0.00	-	-	-	-	-
A-C	164.51	164.51	0.00	-	-	-	-	-
A-D	212.16	214.50	0.00	454.82	0.466	0.90	15.124	C
D-A	76.41	76.69	0.00	427.14	0.179	0.22	10.282	B
D-BC	240.93	281.18	0.00	290.48	0.829	20.39	323.818	F
C-D	232.84	232.84	0.00	-	-	-	-	-
C-A	237.33	237.33	0.00	-	-	-	-	-
C-B	115.07	115.43	0.00	565.65	0.203	0.26	8.003	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	36.14	36.23	0.00	456.21	0.079	0.09	8.575	A
B-AD	243.92	356.07	0.00	367.21	0.664	4.14	196.765	F
A-B	155.09	155.09	0.00	-	-	-	-	-
A-C	137.77	137.77	0.00	-	-	-	-	-
A-D	177.67	179.00	0.00	496.21	0.358	0.57	11.395	B
D-A	63.99	64.24	0.00	470.21	0.136	0.16	8.872	A
D-BC	201.76	276.52	0.00	338.04	0.597	1.70	96.472	F
C-D	194.99	194.99	0.00	-	-	-	-	-
C-A	198.75	198.75	0.00	-	-	-	-	-
C-B	96.37	96.64	0.00	606.90	0.159	0.19	7.058	A

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Filename: Wakefield Road - Paddock Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Paddock Road

Report generation date: 15/12/2017 13:15:12

« Existing Layout - 2023 Base, AM

» Junction Network

» Arms

» Traffic Flows

» Entry Flows

» Turning Proportions

» Vehicle Mix

» Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2023 Base				
Stream B-C	0.13	13.14	0.12	B
Stream B-A	1.34	27.20	0.58	D
Stream C-AB	0.01	4.73	0.01	A
Stream C-A	-	-	-	-
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 13:15:11

File summary

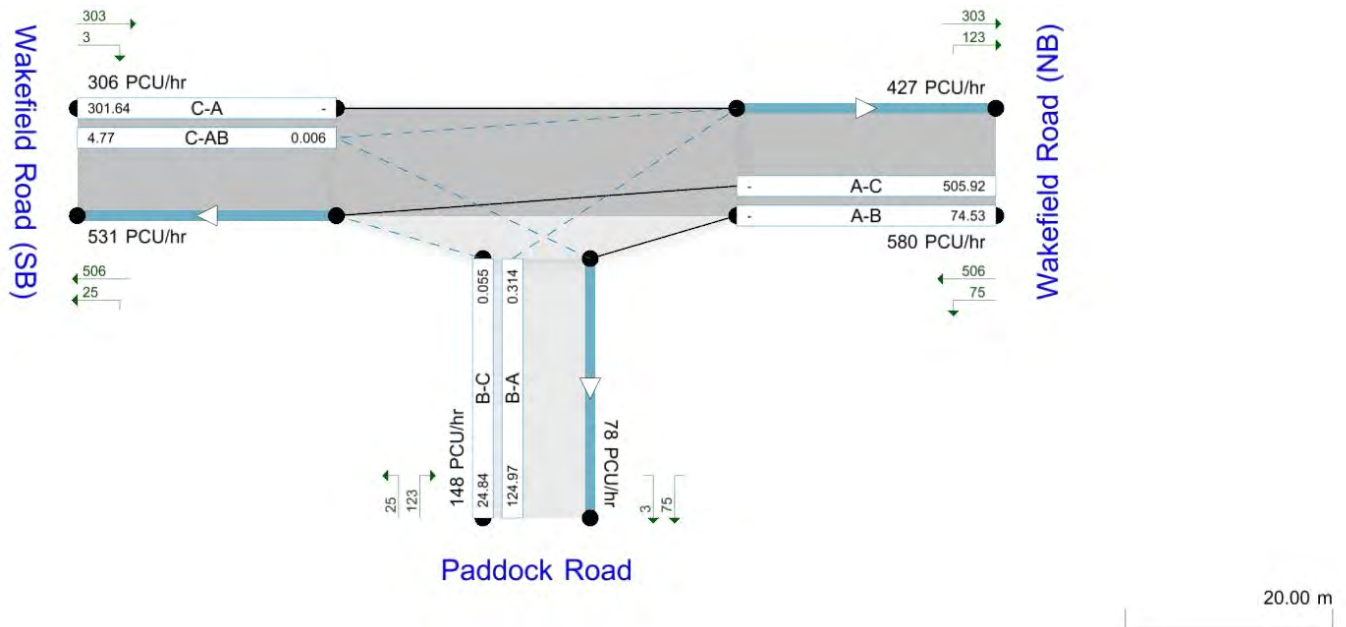
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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



The junction diagram reflects the last run of ARCADY.

Existing Layout - 2023 Base, AM

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
Existing Layout	N/A			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
2023 Base, AM	2023 Base	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	24.16	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	575.887	0.096	0.243	0.153	0.347
1	B-C	623.210	0.088	0.222	-	-
1	C-B	718.741	0.255	0.255	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	771.00	100.000
Paddock Road	ONE HOUR	✓	199.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	407.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	99.000	672.000
	Paddock Road	166.000	0.000	33.000
	Wakefield Road (SB)	403.000	4.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.13	0.87
	Paddock Road	0.83	0.00	0.17
	Wakefield Road (SB)	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

From	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.12	13.14	0.13	B
B-A	0.58	27.20	1.34	D
C-AB	0.01	4.73	0.01	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.84	24.61	0.00	452.12	0.055	0.06	8.416	A
B-A	124.97	123.18	0.00	397.89	0.314	0.45	13.022	B
C-AB	4.77	4.74	0.00	772.79	0.006	0.01	4.724	A
C-A	301.64	301.64	0.00	-	-	-	-	-
A-B	74.53	74.53	0.00	-	-	-	-	-
A-C	505.92	505.92	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	29.67	29.58	0.00	403.81	0.073	0.08	9.617	A
B-A	149.23	148.31	0.00	363.08	0.411	0.68	16.687	C
C-AB	6.29	6.28	0.00	786.69	0.008	0.01	4.652	A
C-A	359.60	359.60	0.00	-	-	-	-	-
A-B	89.00	89.00	0.00	-	-	-	-	-
A-C	604.11	604.11	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	36.33	36.13	0.00	313.95	0.116	0.13	12.949	B
B-A	182.77	180.28	0.00	314.52	0.581	1.30	26.327	D
C-AB	8.85	8.83	0.00	807.01	0.011	0.01	4.556	A
C-A	439.27	439.27	0.00	-	-	-	-	-
A-B	109.00	109.00	0.00	-	-	-	-	-
A-C	739.89	739.89	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	36.33	36.32	0.00	310.32	0.117	0.13	13.138	B
B-A	182.77	182.61	0.00	314.50	0.581	1.34	27.204	D
C-AB	8.85	8.85	0.00	807.02	0.011	0.01	4.561	A
C-A	439.26	439.26	0.00	-	-	-	-	-
A-B	109.00	109.00	0.00	-	-	-	-	-
A-C	739.89	739.89	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	29.67	29.87	0.00	400.58	0.074	0.08	9.717	A
B-A	149.23	151.72	0.00	363.09	0.411	0.72	17.221	C
C-AB	6.29	6.31	0.00	786.70	0.008	0.01	4.661	A
C-A	359.59	359.59	0.00	-	-	-	-	-
A-B	89.00	89.00	0.00	-	-	-	-	-
A-C	604.11	604.11	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.84	24.93	0.00	450.23	0.055	0.06	8.467	A
B-A	124.97	125.98	0.00	397.90	0.314	0.47	13.289	B
C-AB	4.78	4.79	0.00	772.80	0.006	0.01	4.729	A
C-A	301.63	301.63	0.00	-	-	-	-	-
A-B	74.53	74.53	0.00	-	-	-	-	-
A-C	505.92	505.92	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Wakefield Road - Paddock Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Paddock Road

Report generation date: 15/12/2017 13:15:39

« Existing Layout - 2023 Base, PM

» Junction Network

» Arms

» Traffic Flows

» Entry Flows

» Turning Proportions

» Vehicle Mix

» Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2023 Base				
Stream B-C	6.21	218.50	1.02	F
Stream B-A	13.53	151.51	1.02	F
Stream C-AB	0.10	4.77	0.06	A
Stream C-A	-	-	-	-
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 13:15:38

File summary

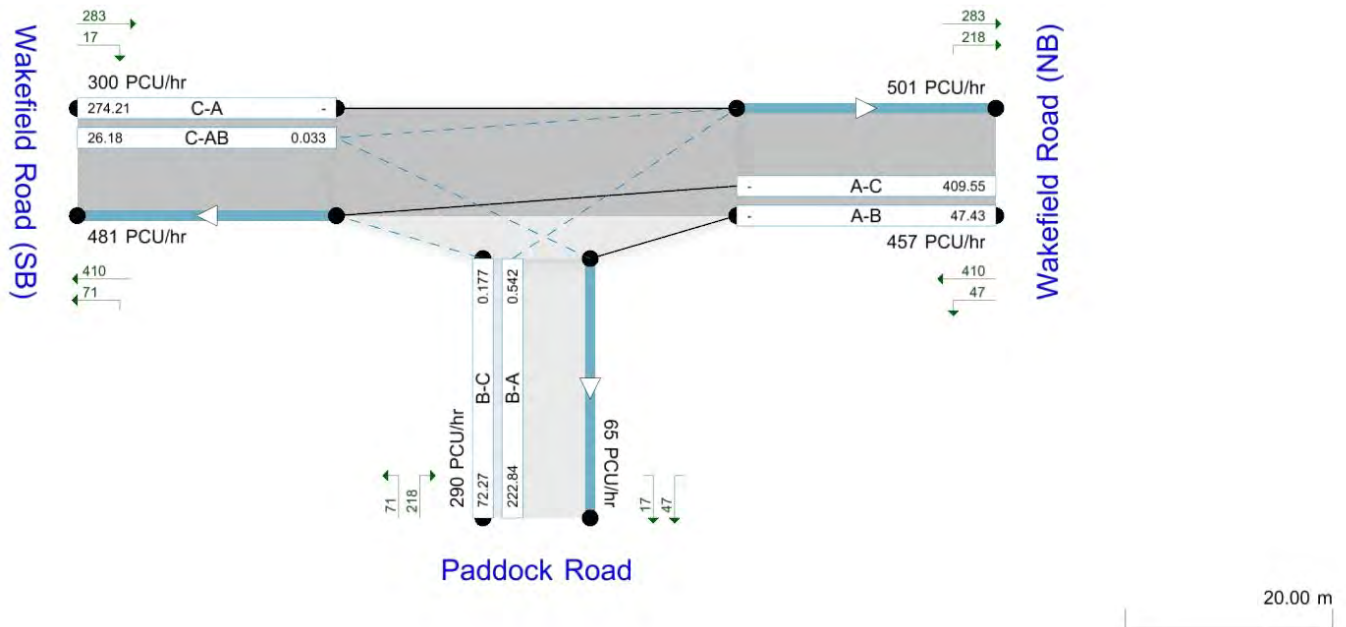
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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



The junction diagram reflects the last run of ARCADY.

Existing Layout - 2023 Base, 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
Existing Layout	N/A			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
2023 Base, PM	2023 Base	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	152.84	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	567.269	0.095	0.240	0.151	0.342
1	B-C	641.601	0.090	0.228	-	-
1	C-B	718.741	0.255	0.255	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	607.00	100.000
Paddock Road	ONE HOUR	✓	392.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	399.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	63.000	544.000
	Paddock Road	296.000	0.000	96.000
	Wakefield Road (SB)	376.000	23.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.10	0.90
	Paddock Road	0.76	0.00	0.24
	Wakefield Road (SB)	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

From	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	1.02	218.50	6.21	F
B-A	1.02	151.51	13.53	F
C-AB	0.06	4.77	0.10	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	72.27	71.42	0.00	407.43	0.177	0.21	10.688	B
B-A	222.84	218.32	0.00	411.46	0.542	1.13	18.247	C
C-AB	26.18	26.00	0.00	786.46	0.033	0.04	4.769	A
C-A	274.21	274.21	0.00	-	-	-	-	-
A-B	47.43	47.43	0.00	-	-	-	-	-
A-C	409.55	409.55	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	86.30	85.59	0.00	302.49	0.285	0.39	16.544	C
B-A	266.10	261.96	0.00	377.12	0.706	2.17	30.182	D
C-AB	34.07	34.01	0.00	801.99	0.042	0.06	4.725	A
C-A	324.62	324.62	0.00	-	-	-	-	-
A-B	56.64	56.64	0.00	-	-	-	-	-
A-C	489.04	489.04	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	105.70	87.62	0.00	104.06	1.016	4.91	154.193	F
B-A	325.90	298.25	0.00	324.59	1.004	9.08	91.572	F
C-AB	49.54	49.40	0.00	833.32	0.059	0.10	4.637	A
C-A	389.77	389.77	0.00	-	-	-	-	-
A-B	69.36	69.36	0.00	-	-	-	-	-
A-C	598.96	598.96	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	105.70	100.49	0.00	110.95	0.953	6.21	218.503	F
B-A	325.90	308.11	0.00	320.64	1.016	13.53	151.514	F
C-AB	49.59	49.58	0.00	833.38	0.060	0.10	4.644	A
C-A	389.72	389.72	0.00	-	-	-	-	-
A-B	69.36	69.36	0.00	-	-	-	-	-
A-C	598.96	598.96	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	86.30	108.12	0.00	207.52	0.416	0.76	43.154	E
B-A	266.10	307.55	0.00	365.75	0.728	3.17	77.521	F
C-AB	34.13	34.26	0.00	802.08	0.043	0.06	4.736	A
C-A	324.57	324.57	0.00	-	-	-	-	-
A-B	56.64	56.64	0.00	-	-	-	-	-
A-C	489.04	489.04	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	72.27	74.39	0.00	392.19	0.184	0.23	11.401	B
B-A	222.84	230.55	0.00	410.81	0.542	1.24	20.739	C
C-AB	26.26	26.32	0.00	786.52	0.033	0.05	4.774	A
C-A	274.13	274.13	0.00	-	-	-	-	-
A-B	47.43	47.43	0.00	-	-	-	-	-
A-C	409.55	409.55	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution				

Filename: Wakefield Road - Paddock Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Paddock Road

Report generation date: 15/12/2017 13:16:09

« Existing Layout - 2023 Base, Saturday

» Junction Network

» Arms

» Traffic Flows

» Entry Flows

» Turning Proportions

» Vehicle Mix

» Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2023 Base				
Stream B-C	0.04	10.83	0.04	B
Stream B-A	1.15	21.93	0.54	C
Stream C-AB	0.03	4.62	0.02	A
Stream C-A	-	-	-	-
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 13:16:08

File summary

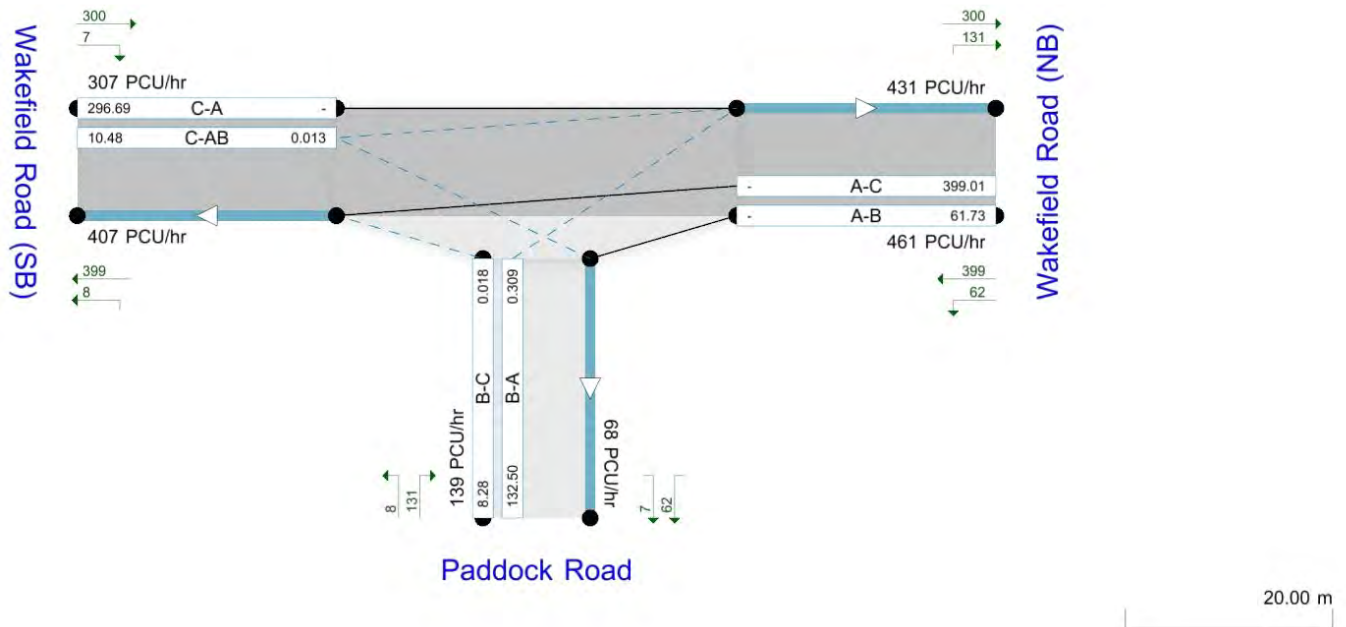
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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



The junction diagram reflects the last run of ARCADY.

Existing Layout - 2023 Base, Saturday

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
Existing Layout	N/A			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
2023 Base, Saturday	2023 Base	Saturday		ONE HOUR	11:30	13:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	19.99	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	580.852	0.097	0.245	0.154	0.350
1	B-C	612.615	0.086	0.218	-	-
1	C-B	718.741	0.255	0.255	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	612.00	100.000
Paddock Road	ONE HOUR	✓	187.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	408.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	82.000	530.000
	Paddock Road	176.000	0.000	11.000
	Wakefield Road (SB)	399.000	9.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.13	0.87
	Paddock Road	0.94	0.00	0.06
	Wakefield Road (SB)	0.98	0.02	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.04	10.83	0.04	B
B-A	0.54	21.93	1.15	C
C-AB	0.02	4.62	0.03	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (11:30-11:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.28	8.21	0.00	466.61	0.018	0.02	7.852	A
B-A	132.50	130.74	0.00	428.21	0.309	0.44	12.033	B
C-AB	10.48	10.42	0.00	796.46	0.013	0.01	4.614	A
C-A	296.69	296.69	0.00	-	-	-	-	-
A-B	61.73	61.73	0.00	-	-	-	-	-
A-C	399.01	399.01	0.00	-	-	-	-	-

Main results: (11:45-12:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	9.89	9.87	0.00	424.23	0.023	0.02	8.688	A
B-A	158.22	157.41	0.00	398.55	0.397	0.64	14.876	B
C-AB	13.68	13.66	0.00	813.88	0.017	0.02	4.536	A
C-A	353.10	353.10	0.00	-	-	-	-	-
A-B	73.72	73.72	0.00	-	-	-	-	-
A-C	476.46	476.46	0.00	-	-	-	-	-

Main results: (12:00-12:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	12.11	12.06	0.00	347.13	0.035	0.04	10.743	B
B-A	193.78	191.84	0.00	357.50	0.542	1.13	21.474	C
C-AB	18.95	18.92	0.00	838.55	0.023	0.03	4.434	A
C-A	430.26	430.26	0.00	-	-	-	-	-
A-B	90.28	90.28	0.00	-	-	-	-	-
A-C	583.54	583.54	0.00	-	-	-	-	-

Main results: (12:15-12:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	12.11	12.11	0.00	344.60	0.035	0.04	10.826	B
B-A	193.78	193.67	0.00	357.50	0.542	1.15	21.934	C
C-AB	18.96	18.96	0.00	838.56	0.023	0.03	4.439	A
C-A	430.25	430.25	0.00	-	-	-	-	-
A-B	90.28	90.28	0.00	-	-	-	-	-
A-C	583.54	583.54	0.00	-	-	-	-	-

Main results: (12:30-12:45)

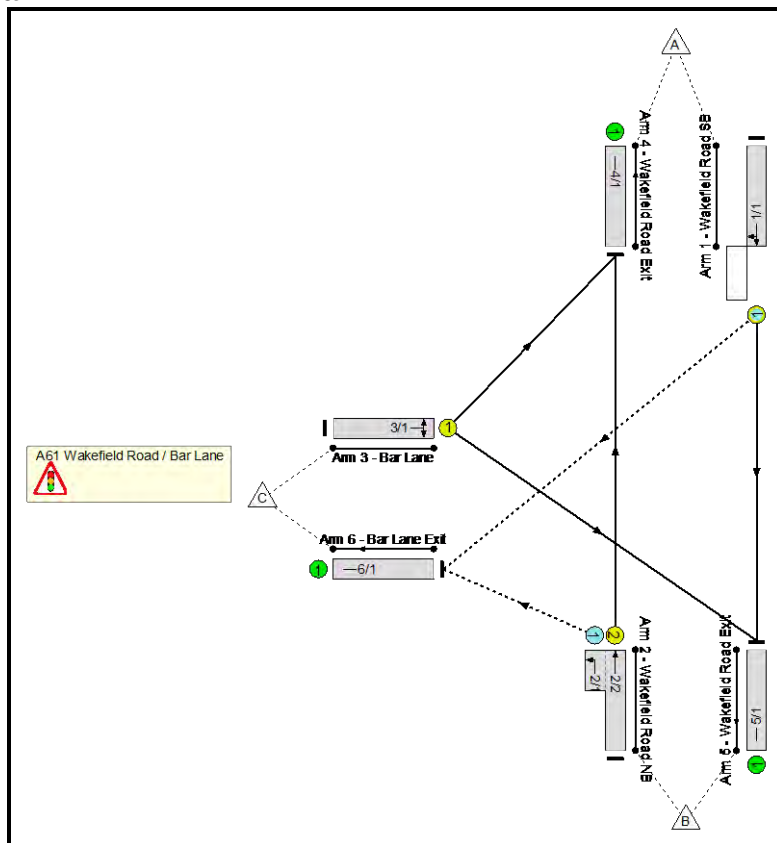
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	9.89	9.94	0.00	421.82	0.023	0.02	8.742	A
B-A	158.22	160.13	0.00	398.55	0.397	0.68	15.216	C
C-AB	13.70	13.73	0.00	813.90	0.017	0.02	4.542	A
C-A	353.09	353.09	0.00	-	-	-	-	-
A-B	73.72	73.72	0.00	-	-	-	-	-
A-C	476.46	476.46	0.00	-	-	-	-	-

Main results: (12:45-13:00)

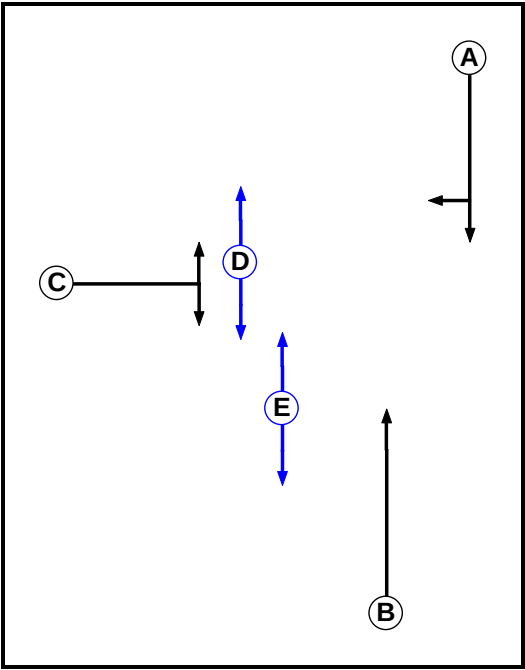
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.28	8.31	0.00	464.93	0.018	0.02	7.885	A
B-A	132.50	133.38	0.00	428.21	0.309	0.46	12.246	B
C-AB	10.50	10.52	0.00	796.48	0.013	0.02	4.618	A
C-A	296.66	296.66	0.00	-	-	-	-	-
A-B	61.73	61.73	0.00	-	-	-	-	-
A-C	399.01	399.01	0.00	-	-	-	-	-

Full Input Data And Results**User and Project Details**

Project:	Wakefield Road, Mapplewell
Title:	2017 Existing
Location:	
File name:	Wakefield Road - Bar Lane.lsg3x
Author:	John Turner
Company:	Bryan G Hall
Address:	
Notes:	Wakefield Road/Bar Lane

Network Layout Diagram

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Pedestrian		6	6
E	Pedestrian		6	6

Phase Intergreens Matrix

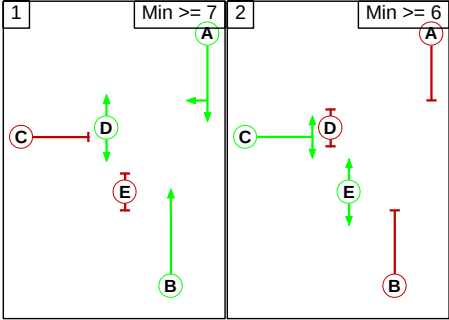
	Starting Phase					
Terminating Phase		A	B	C	D	E
	A		-	5	-	9
	B	-		6	-	-
	C	5	5		5	-
	D	-	-	7		-
	E	8	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B D
2	C E

Full Input Data And Results

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
	1	9
2	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A61 Wakefield Road / Bar Lane											
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 (Wakefield Road SB)	6/1 (Right)	1439	0	2/2	1.09	All	4.00	4.00	0.50	4	2.00
2/1 (Wakefield Road NB)	6/1 (Left)	1439	0	1/1	1.09	To 6/1 (Right)	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: A61 Wakefield Road / Bar Lane												
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 (Wakefield Road SB)	O	A	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	12.50
2/1 (Wakefield Road NB)	O		2	3	3.0	Geom	-	4.00	0.00	Y	Arm 6 Left	100.00
2/2 (Wakefield Road NB)	U	B	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 4 Ahead	Inf
3/1 (Bar Lane)	U	C	2	3	60.0	Geom	-	3.70	0.00	Y	Arm 4 Left	12.50
											Arm 5 Right	8.00
4/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Bar Lane Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
4: '2023 Base AM'	07:45	08:45	01:00	
5: '2023 Base PM'	16:45	17:45	01:00	
6: '2023 Base Saturday'	11:45	12:45	01:00	

Scenario 4: '2023 Base AM' (FG4: '2023 Base AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin	A	A	B	C	Tot.
	A	0	563	11	574
	B	719	0	413	1132
	C	37	524	0	561
	Tot.	756	1087	424	2267

Traffic Lane Flows

Lane	Scenario 4: 2023 Base AM
Junction: A61 Wakefield Road / Bar Lane	
1/1	574
2/1 (short)	413
2/2 (with short)	1132(In) 719(Out)
3/1	561
4/1	756
5/1	1087
6/1	424

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane								
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 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead Arm 6 Right	Inf 12.50	98.1 % 1.9 %	1951	1951
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left Arm 5 Right	12.50 8.00	6.6 % 93.4 %	1678	1678
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2023 Base PM' (FG5: '2023 Base PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	660	22	682
	B	598	0	583	1181
	C	15	468	0	483
	Tot.	613	1128	605	2346

Traffic Lane Flows

Lane	Scenario 5: 2023 Base PM
Junction: A61 Wakefield Road / Bar Lane	
1/1	682
2/1 (short)	583
2/2 (with short)	1181(In) 598(Out)
3/1	483
4/1	613
5/1	1128
6/1	605

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane								
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 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead Arm 6 Right	Inf 12.50	96.8 % 3.2 %	1947	1947
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left Arm 5 Right	12.50 8.00	3.1 % 96.9 %	1675	1675
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2023 Base Saturday' (FG6: '2023 Base Saturday', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	543	21	564
	B	589	0	487	1076
	C	26	458	0	484
	Tot.	615	1001	508	2124

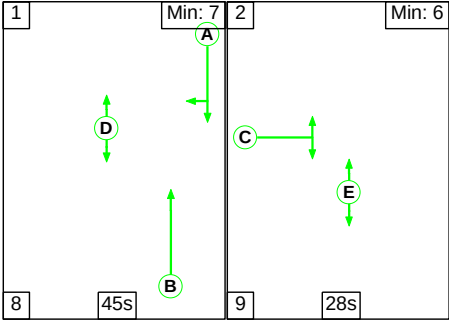
Traffic Lane Flows

Lane	Scenario 6: 2023 Base Saturday
Junction: A61 Wakefield Road / Bar Lane	
1/1	564
2/1 (short)	487
2/2 (with short)	1076(In) 589(Out)
3/1	484
4/1	615
5/1	1001
6/1	508

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane								
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 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead Arm 6 Right	Inf 12.50	96.3 % 3.7 %	1946	1946
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left Arm 5 Right	12.50 8.00	5.4 % 94.6 %	1677	1677
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

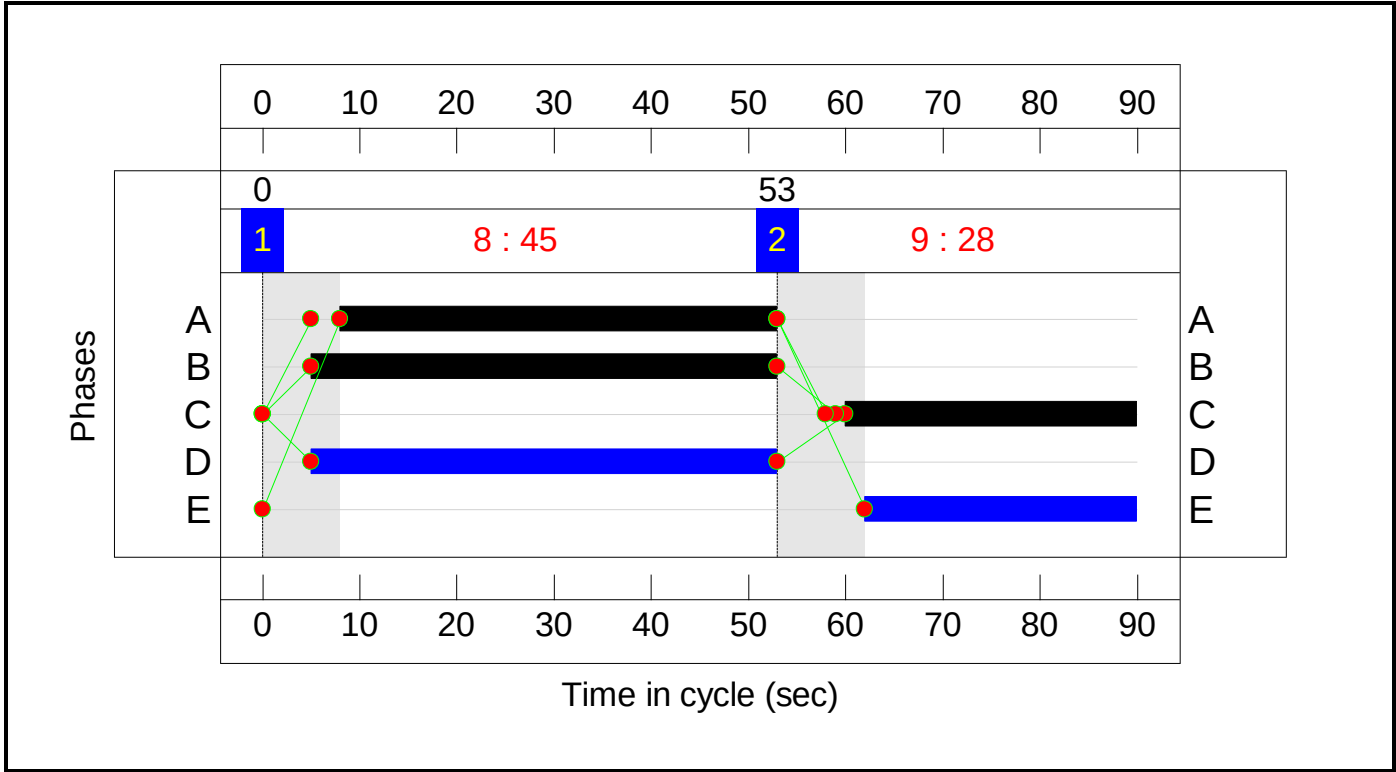
Scenario 4: '2023 Base AM' (FG4: '2023 Base AM', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram



Stage Timings

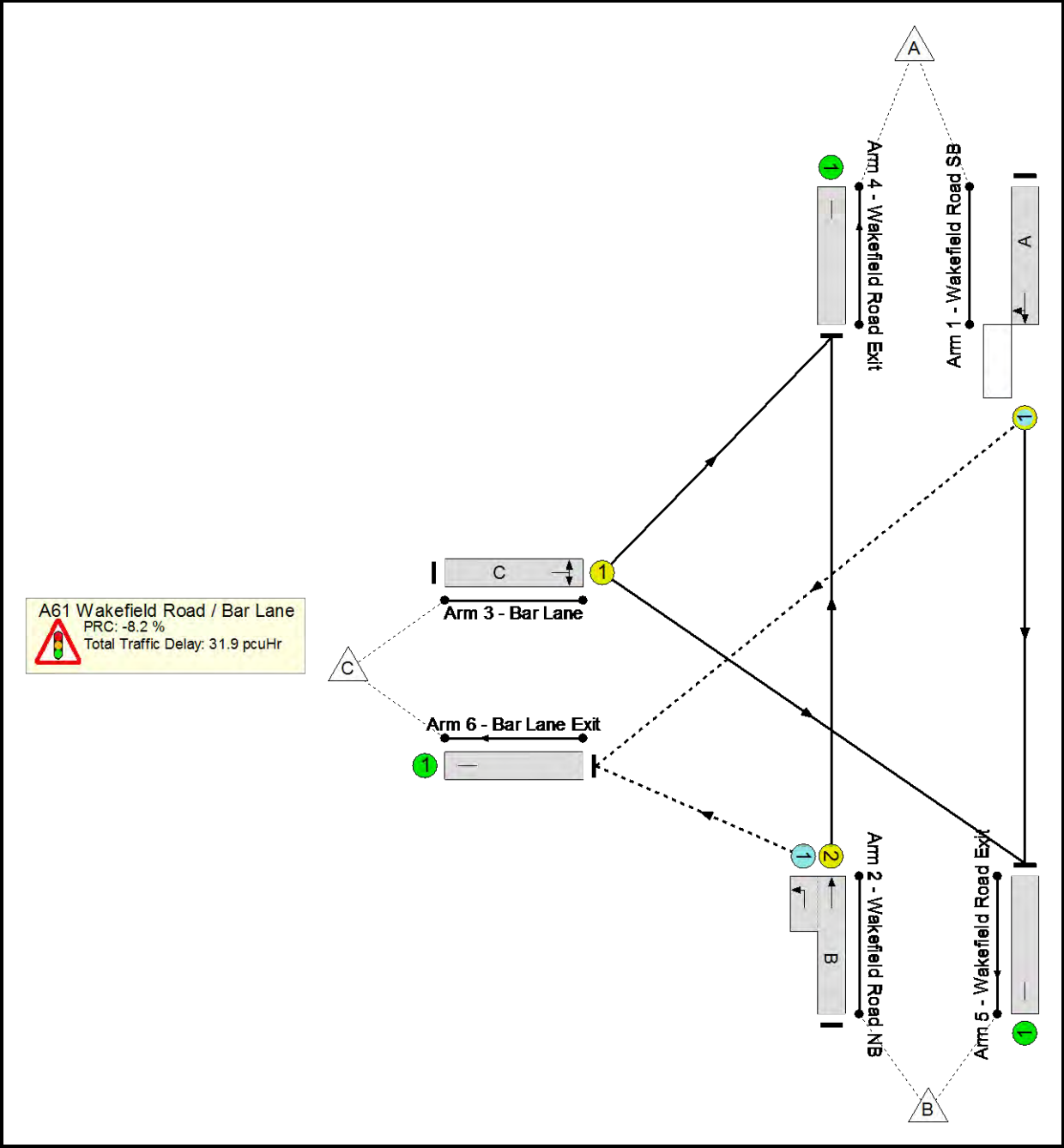
Stage	1	2
Duration	45	28
Change Point	0	53

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

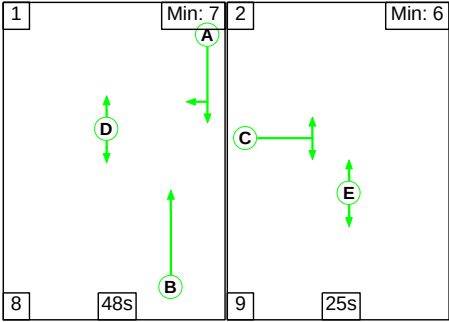


Full Input Data And Results

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: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	97.4%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	97.4%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	45	-	574	1951	997	57.6%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	48	-	1132	1995:1985	1162	97.4%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	30	-	561	1678	578	97.1%
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: 2017 Existing	-	-	364	60	0	12.1	19.9	0.0	31.9	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	364	60	0	12.1	19.9	0.0	31.9	-	-	-	-
1/1	574	574	11	0	0	2.4	0.7	0.0	3.1	19.5	9.9	0.7	10.6
2/2+2/1	1132	1132	353	60	0	5.1	10.8	-	15.9	50.7	25.6	10.8	36.5
3/1	561	561	-	-	-	4.5	8.3	-	12.9	82.5	13.7	8.3	22.0
C1			PRC for Signalled Lanes (%):		-8.2	Total Delay for Signalled Lanes (pcuHr):		31.91	Cycle Time (s): 90				
			PRC Over All Lanes (%):		-8.2	Total Delay Over All Lanes(pcuHr):		31.91					

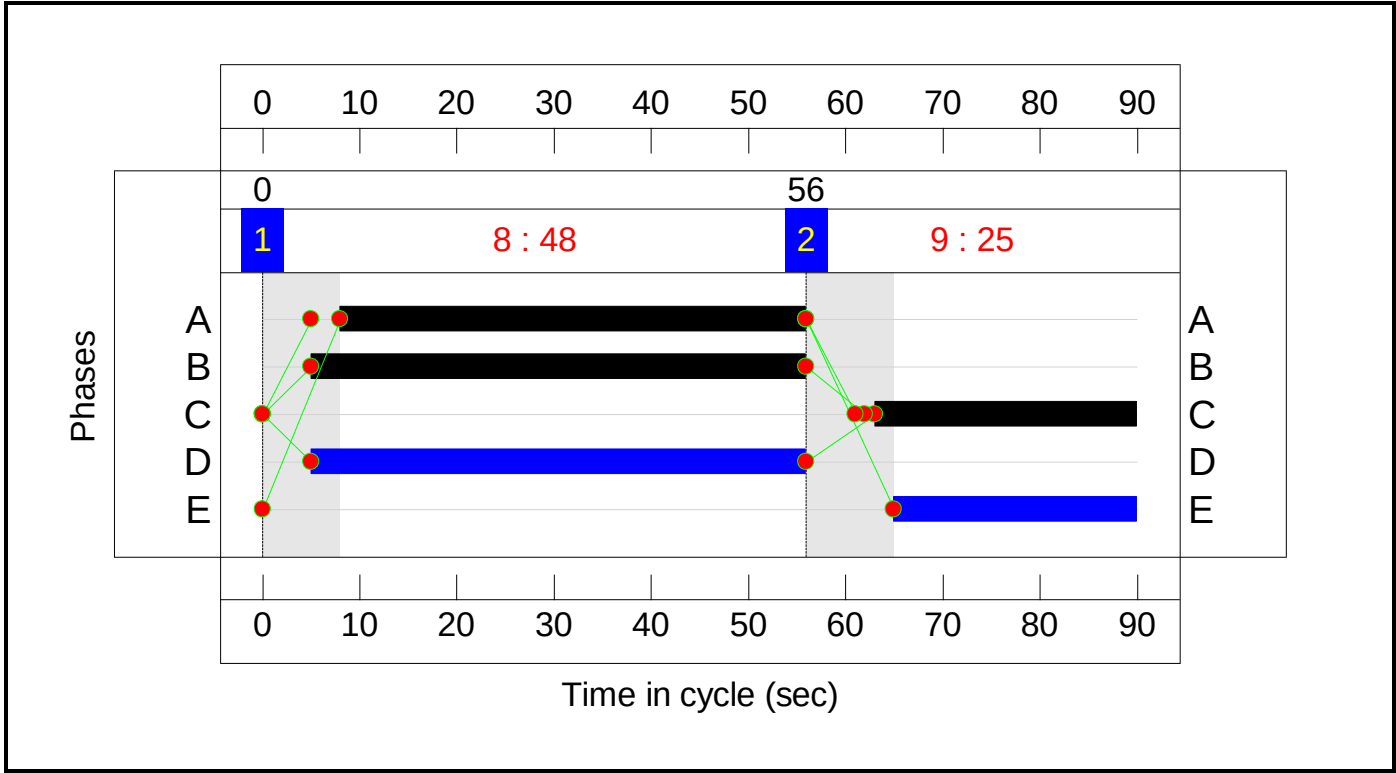
Stage Sequence Diagram



Stage Timings

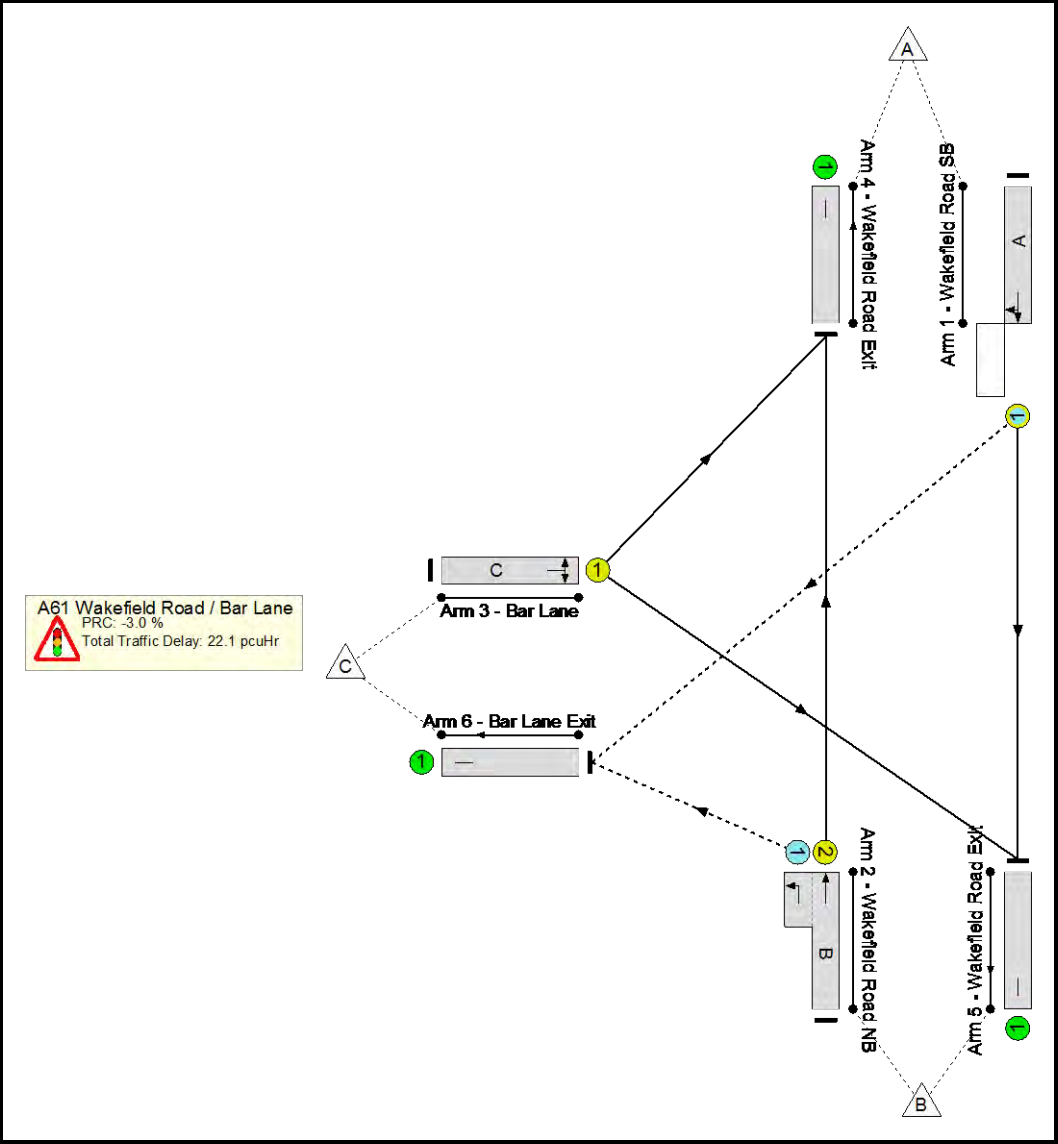
Stage	1	2
Duration	48	25
Change Point	0	56

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

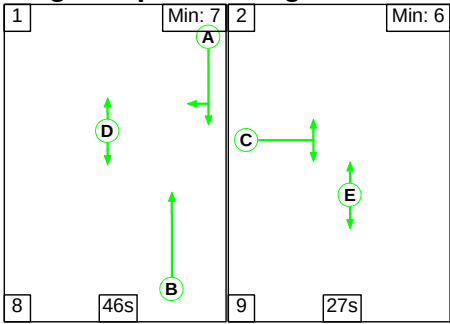
Network Results

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: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	92.7%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	92.7%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	48	-	682	1947	1060	64.3%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	51	-	1181	1995:1985	1276	92.5%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	27	-	483	1675	521	92.7%
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: 2017 Existing	-	-	500	104	0	10.6	11.5	0.0	22.1	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	500	104	0	10.6	11.5	0.0	22.1	-	-	-	-
1/1	682	682	22	0	0	2.7	0.9	0.0	3.6	19.1	11.9	0.9	12.8
2/2+2/1	1181	1181	479	104	0	3.8	5.6	-	9.4	28.6	23.3	5.6	28.9
3/1	483	483	-	-	-	4.0	5.0	-	9.0	67.4	11.7	5.0	16.7
C1 PRC for Signalled Lanes (%): -3.0 Total Delay for Signalled Lanes (pcuHr): 22.06 Cycle Time (s): 90 PRC Over All Lanes (%): -3.0 Total Delay Over All Lanes(pcuHr): 22.06													

Full Input Data And Results

Scenario 6: '2023 Base Saturday' (FG6: '2023 Base Saturday', Plan 1: 'Network Control Plan 1')

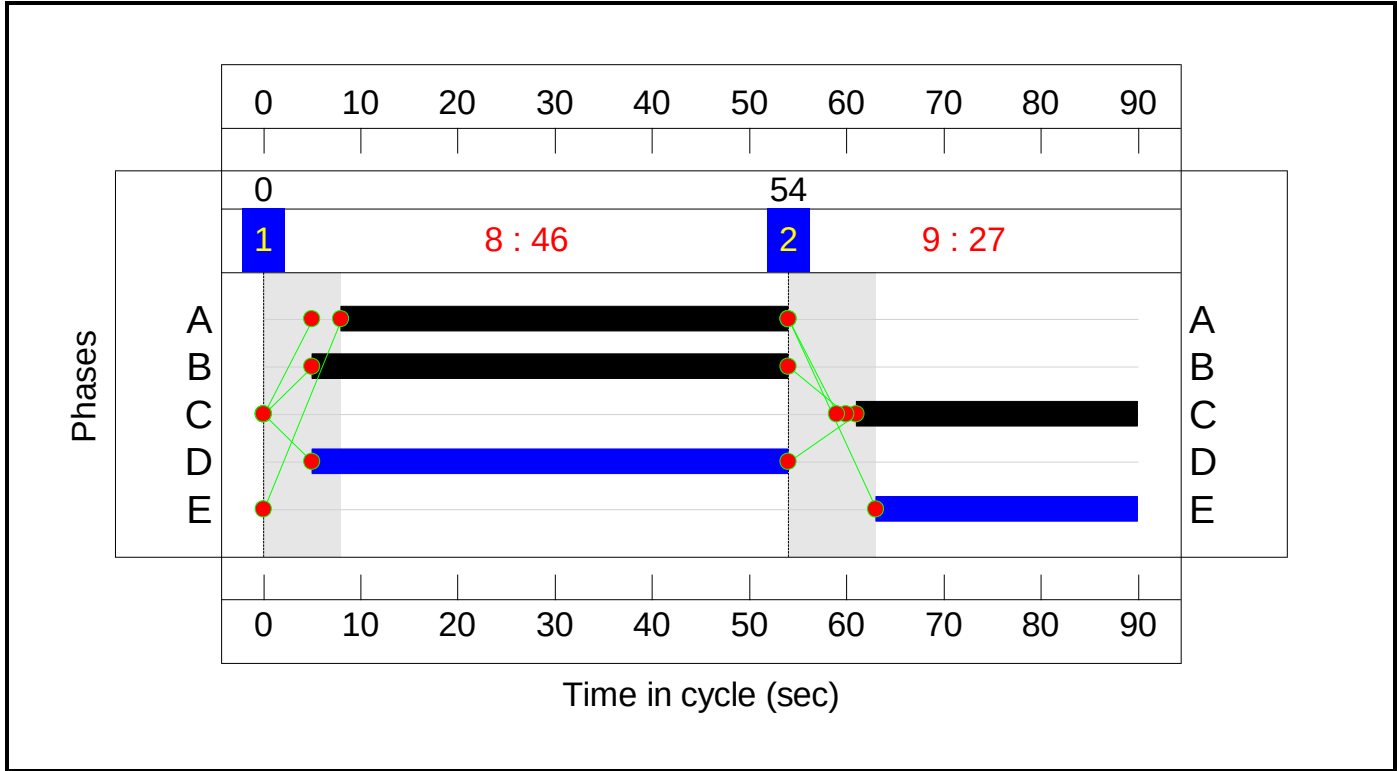
Stage Sequence Diagram



Stage Timings

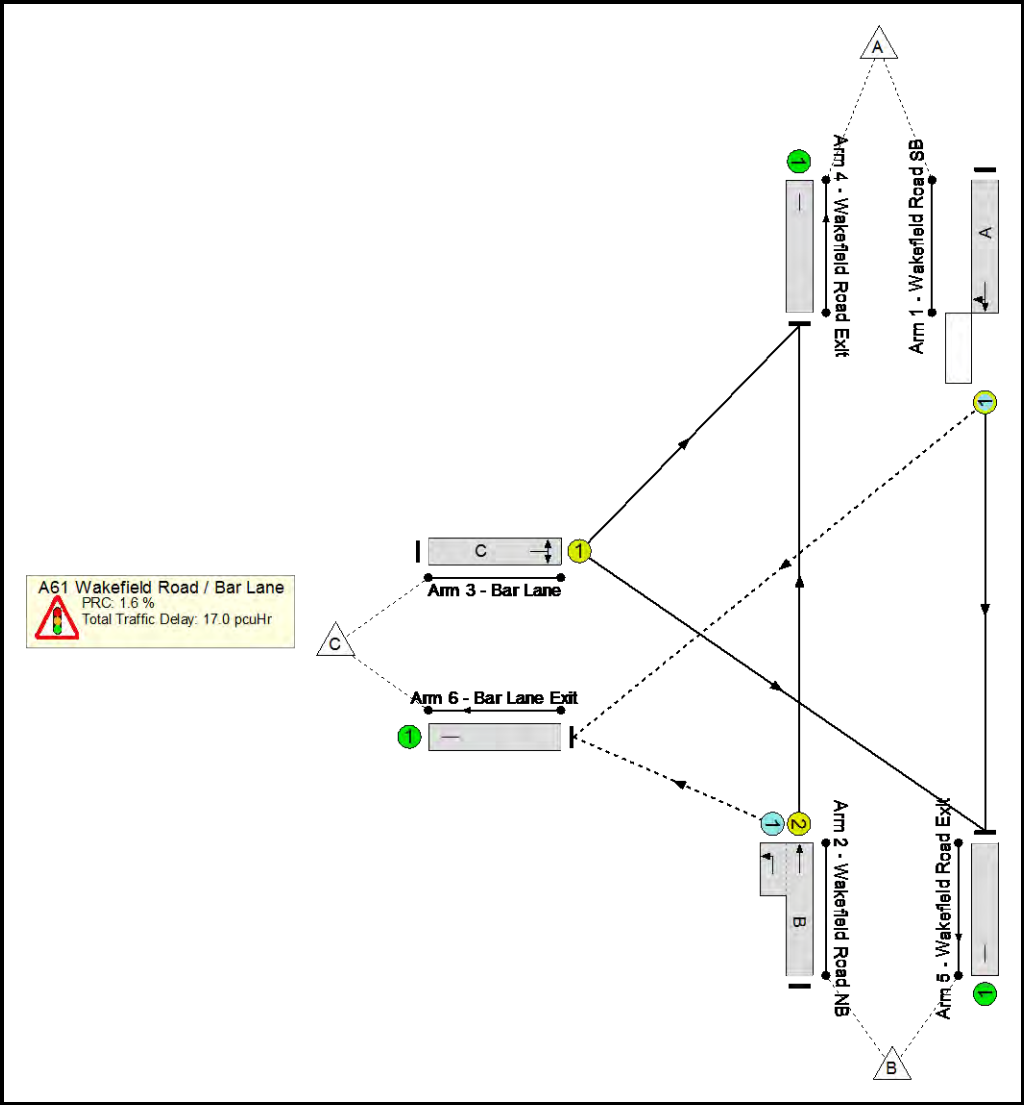
Stage	1	2
Duration	46	27
Change Point	0	54

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	88.6%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	88.6%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	46	-	564	1946	1016	55.5%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	49	-	1076	1995:1985	1214	88.6%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	29	-	484	1677	559	86.6%
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: 2017 Existing	-	-	419	88	0	9.7	7.3	0.0	17.0	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	419	88	0	9.7	7.3	0.0	17.0	-	-	-	-
1/1	564	564	21	0	0	2.3	0.6	0.0	2.9	18.4	9.4	0.6	10.0
2/2+2/1	1076	1076	399	88	0	3.7	3.7	-	7.4	24.7	20.3	3.7	24.0
3/1	484	484	-	-	-	3.8	3.0	-	6.8	50.3	11.3	3.0	14.3
C1 PRC for Signalled Lanes (%): 1.6 Total Delay for Signalled Lanes (pcuHr): 17.04 Cycle Time (s): 90 PRC Over All Lanes (%): 1.6 Total Delay Over All Lanes(pcuHr): 17.04													

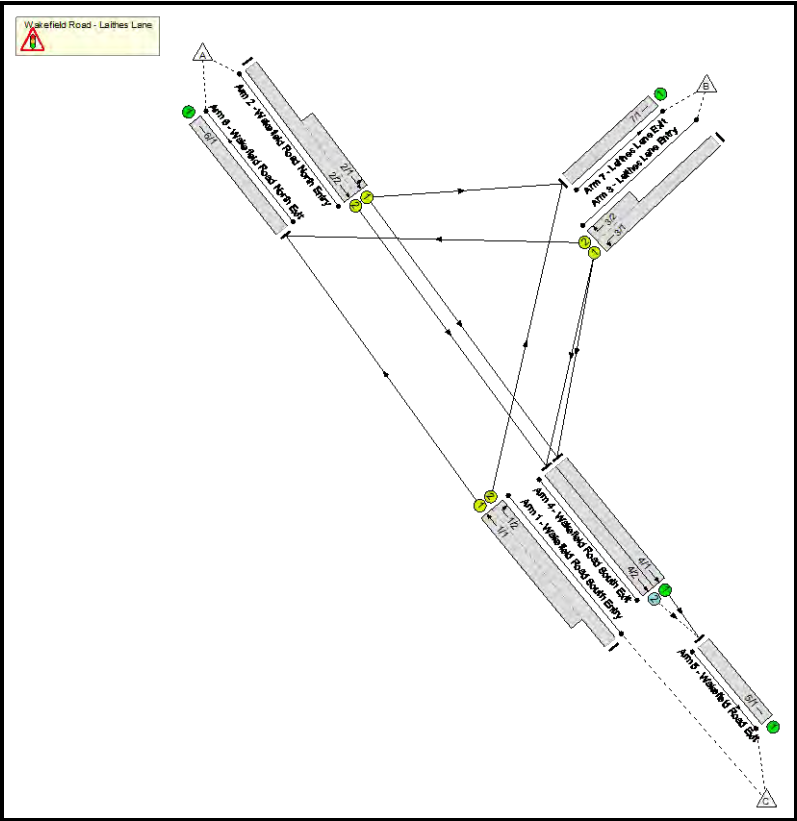
Full Input Data And Results

Full Input Data And Results

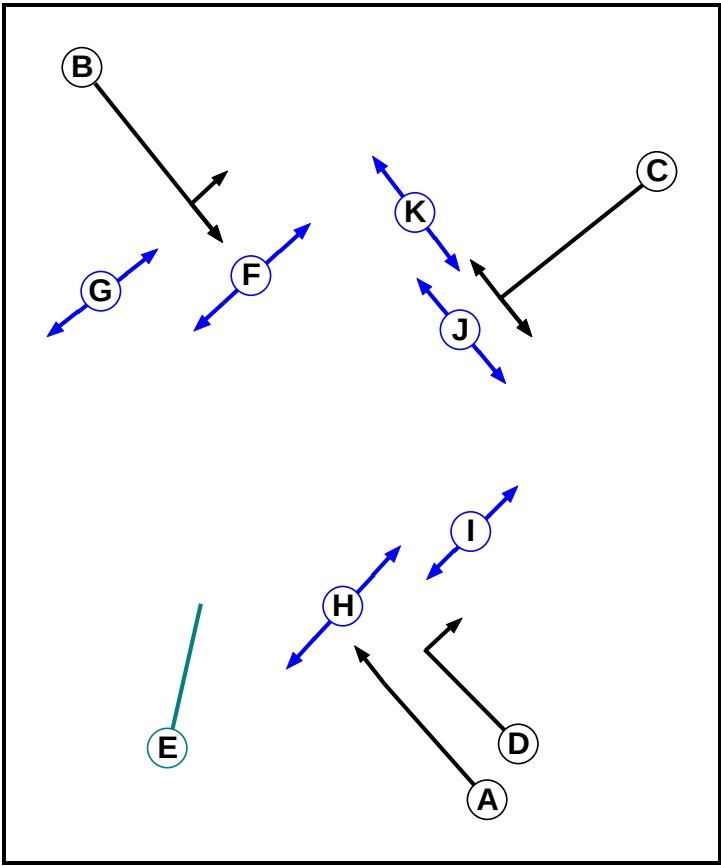
User and Project Details

Project:	Former William Freeman Works, Wakefield Road
Title:	Wakefield Road - Laithes Lane
Location:	
File name:	Wakefield Road - Laithes Lane.lsg3x
Author:	John Turner
Company:	Bryan G Hall
Address:	
Notes:	

Network Layout Diagram



Phase Diagram



Phase Input Data

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

Full Input Data And Results

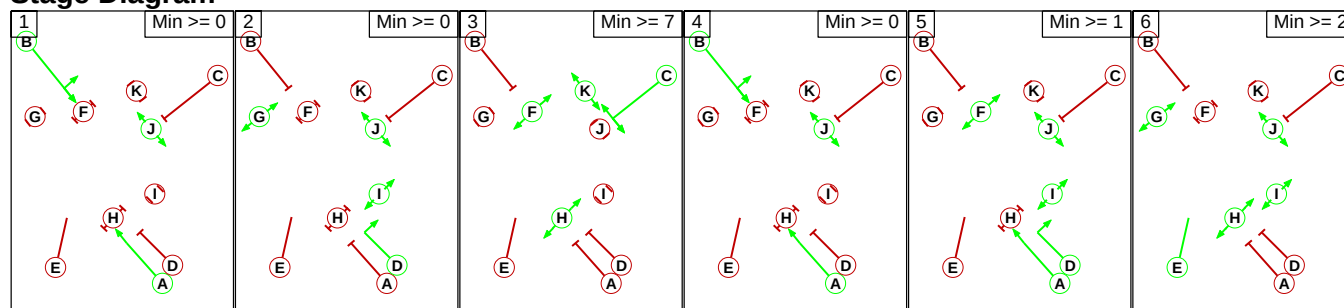
Phase Intergreens Matrix

Terminating Phase	Starting Phase											
		A	B	C	D	E	F	G	H	I	J	K
	A		-	6	-	5	-	8	5	-	-	-
	B	-		8	5	5	5	-	-	9	-	7
	C	5	5		5	5	-	8	-	7	5	-
	D	-	7	5		5	-	-	5	-	-	7
	E	5	5	5	5		-	-	-	-	-	6
	F	-	8	-	-	-		10	-	-	-	-
	G	6	-	6	-	-	-		-	-	-	-
	H	8	-	-	6	-	-	-		-	-	-
	I	-	7	7	-	-	-	-	-		-	-
	J	-	-	7	-	-	-	-	-	-		-
	K	-	7	-	7	7	-	-	-	-	-	

Phases in Stage

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

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	4	5	6
	1		9	8	0	9	9
	2	7		7	7	6	5
	3	8	10		8	8	10
	4	0	9	8		9	9
	5	8	10	7	8		10
	6	8	6	7	8	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Wakefield Road - Laithes Lane											
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)
4/2 (Wakefield Road South Exit)	5/1 (Ahead)	1439	0	4/1	1.09	All	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: Wakefield Road - Laithes Lane												
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 (Wakefield Road South Entry)	U	A	2	3	22.6	Geom	-	3.25	0.00	Y	Arm 6 Ahead	Inf
1/2 (Wakefield Road South Entry)	U	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 7 Right	17.00
2/1 (Wakefield Road North Entry)	U	B	2	3	9.6	Geom	-	3.50	0.00	Y	Arm 4 Ahead	Inf
											Arm 7 Left	20.00
2/2 (Wakefield Road North Entry)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 4 Ahead	Inf
3/1 (Laithes Lane Entry)	U	C	2	3	60.0	Geom	-	3.30	0.00	Y	Arm 4 Left	14.00
3/2 (Laithes Lane Entry)	U	C	2	3	6.1	Geom	-	3.30	0.00	Y	Arm 6 Right	18.00
4/1 (Wakefield Road South Exit)	U		2	3	17.4	Geom	-	3.20	0.00	Y	Arm 5 Ahead	Inf
4/2 (Wakefield Road South Exit)	O		2	3	17.4	Geom	-	3.20	0.00	Y	Arm 5 Ahead	Inf
5/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Wakefield Road North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Laithes Lane Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
4: '2023 Base AM'	07:45	08:45	01:00	
5: '2023 Base PM'	16:45	17:45	01:00	
6: '2023 Base Saturday'	11:45	12:45	01:00	

Scenario 4: '2023 Base AM' (FG4: '2023 Base AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	348	788	1136
	B	360	0	133	493
	C	705	163	0	868
	Tot.	1065	511	921	2497

Traffic Lane Flows

Lane	Scenario 4: 2023 Base AM
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	705
1/2 (with short)	868(In) 163(Out)
2/1 (short)	568
2/2 (with short)	1136(In) 568(Out)
3/1 (with short)	493(In) 133(Out)
3/2 (short)	360
4/1	286
4/2	635
5/1	921
6/1	1065
7/1	511

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane								
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 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	38.7 %	1879	1879
				Arm 7 Left	20.00	61.3 %		
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2023 Base PM' (FG5: '2023 Base PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	362	701	1063
	B	382	0	154	536
	C	872	186	0	1058
	Tot.	1254	548	855	2657

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2023 Base PM
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	872
1/2 (with short)	1058(In) 186(Out)
2/1 (short)	532
2/2 (with short)	1063(In) 531(Out)
3/1 (with short)	536(In) 154(Out)
3/2 (short)	382
4/1	247
4/2	608
5/1	855
6/1	1254
7/1	548

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane								
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 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	32.0 %	1870	1870
				Arm 7 Left	20.00	68.0 %		
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: '2023 Base Saturday' (FG6: '2023 Base Saturday', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	296	746	1042
	B	284	0	178	462
	C	790	206	0	996
	Tot.	1074	502	924	2500

Traffic Lane Flows

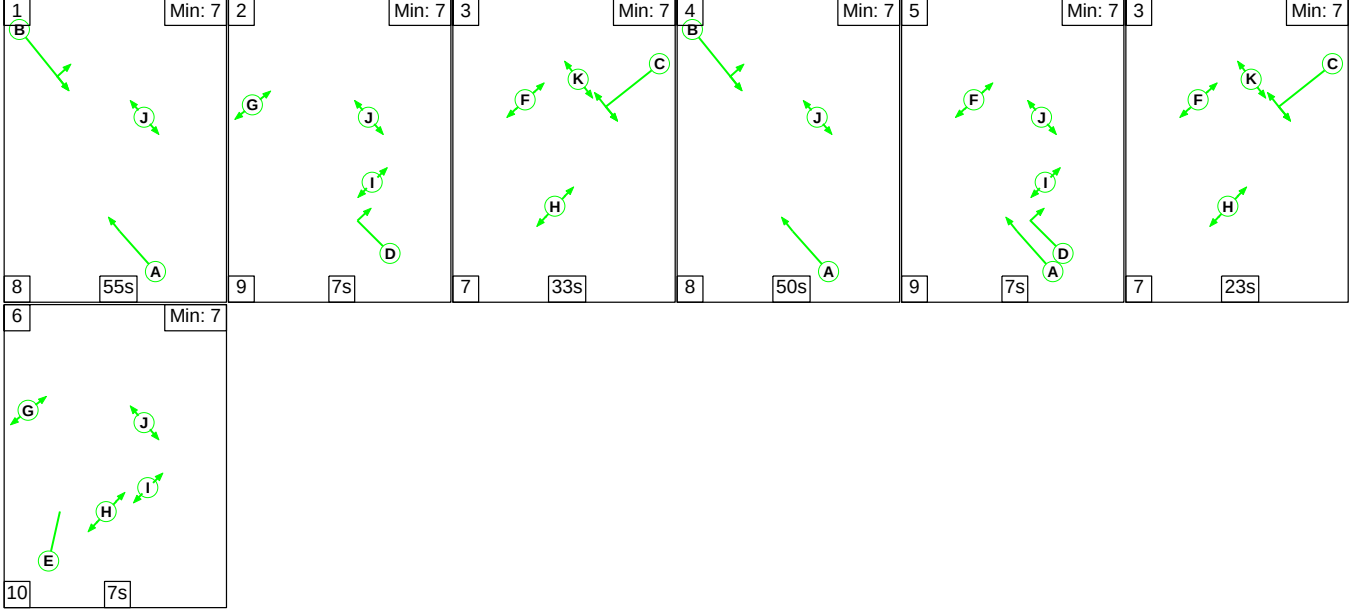
Lane	Scenario 6: 2023 Base Saturday
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	790
1/2 (with short)	996(In) 206(Out)
2/1 (short)	521
2/2 (with short)	1042(In) 521(Out)
3/1 (with short)	462(In) 178(Out)
3/2 (short)	284
4/1	314
4/2	610
5/1	924
6/1	1074
7/1	502

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane								
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 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	43.2 %	1885	1885
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 7 Left	20.00	56.8 %		
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2023 Base AM' (FG4: '2023 Base AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

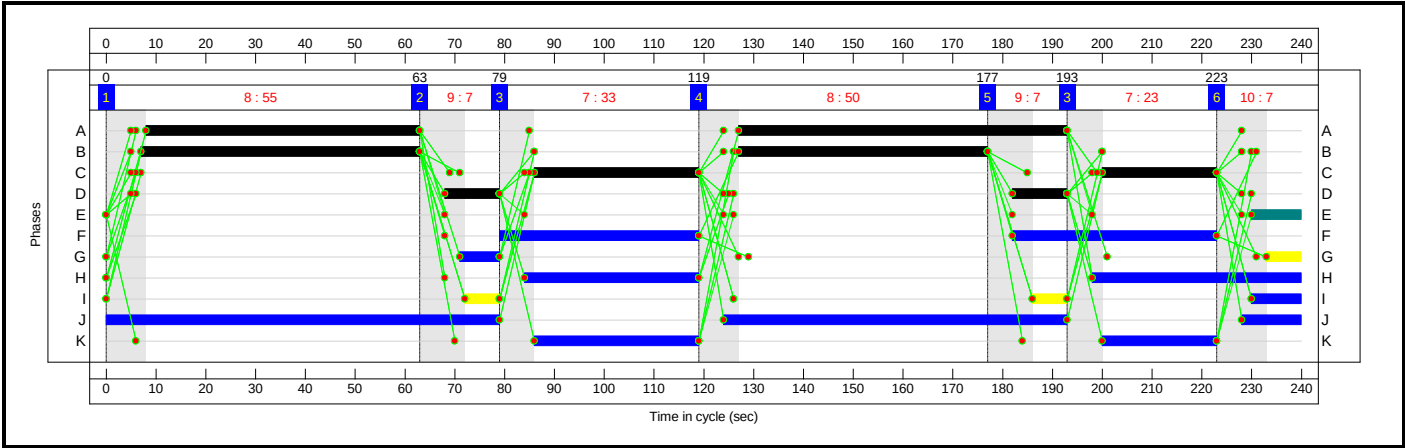


Full Input Data And Results

Stage Timings

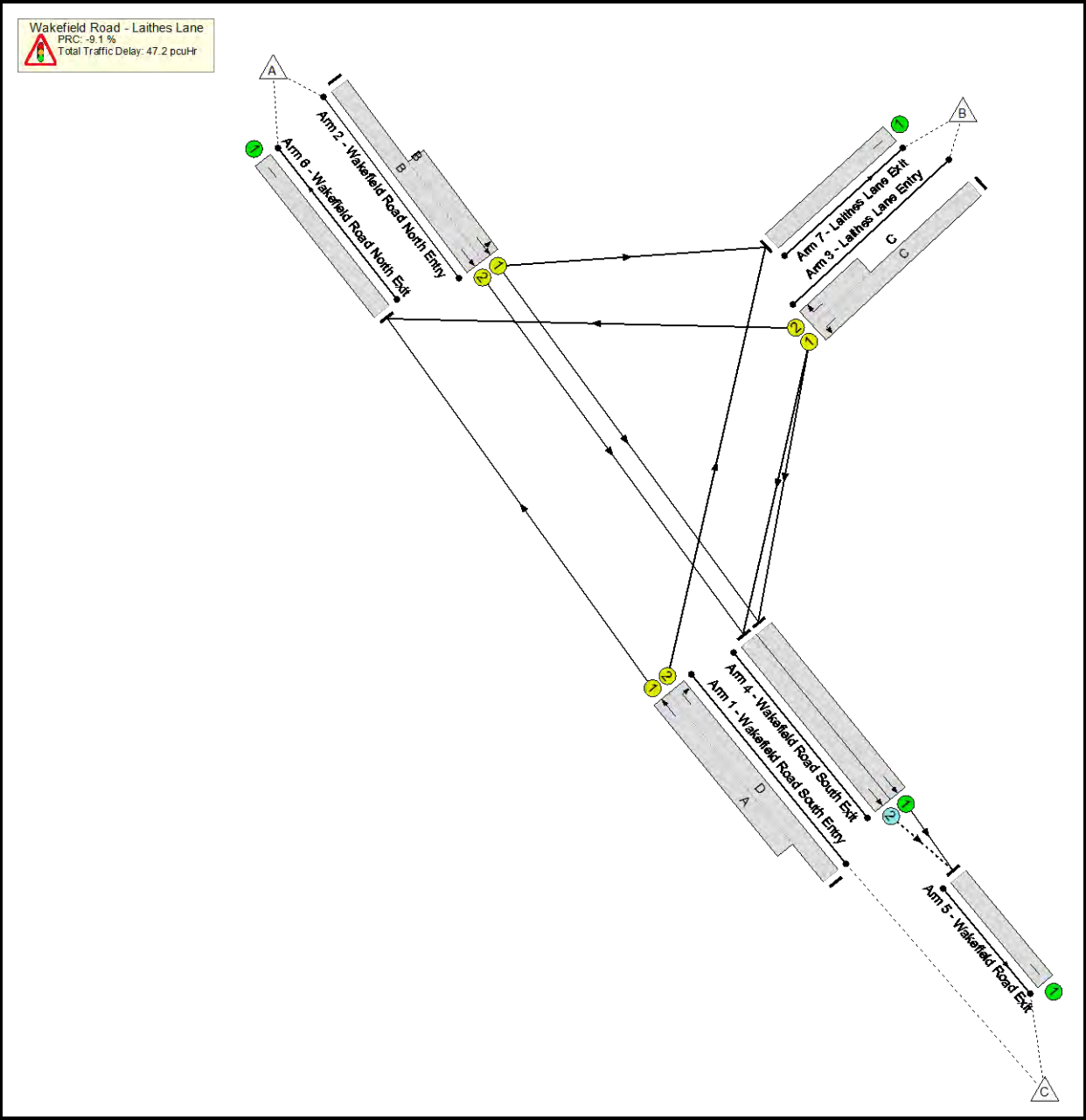
Stage	1	2	3	4	5	3	6
Duration	55	7	33	50	7	23	7
Change Point	0	63	79	119	177	193	223

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	98.1%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	98.1%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	22:121	-	868	1783:1940	1114	77.9%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	106	-	1136	1965:1879	1161	97.8%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	56	-	493	1757:1795	502	98.1%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	286	1935	1935	14.8%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	635	1935	1127	56.3%
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: Wakefield Road - Laithes Lane	-	-	635	0	0	24.0	23.1	0.0	47.2	-	-	-	-
Wakefield Road - Laithes Lane	-	-	635	0	0	24.0	23.1	0.0	47.2	-	-	-	-
1/2+1/1	868	868	-	-	-	6.8	1.7	-	8.6	35.6	19.2	1.7	20.9
2/2+2/1	1136	1136	-	-	-	8.8	11.7	-	20.4	64.8	29.2	11.7	40.9
3/1+3/2	493	493	-	-	-	6.1	9.0	-	15.1	110.1	16.1	9.0	25.1
4/1	286	286	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/2	635	635	635	0	0	2.4	0.6	-	3.0	17.1	19.3	0.6	19.9

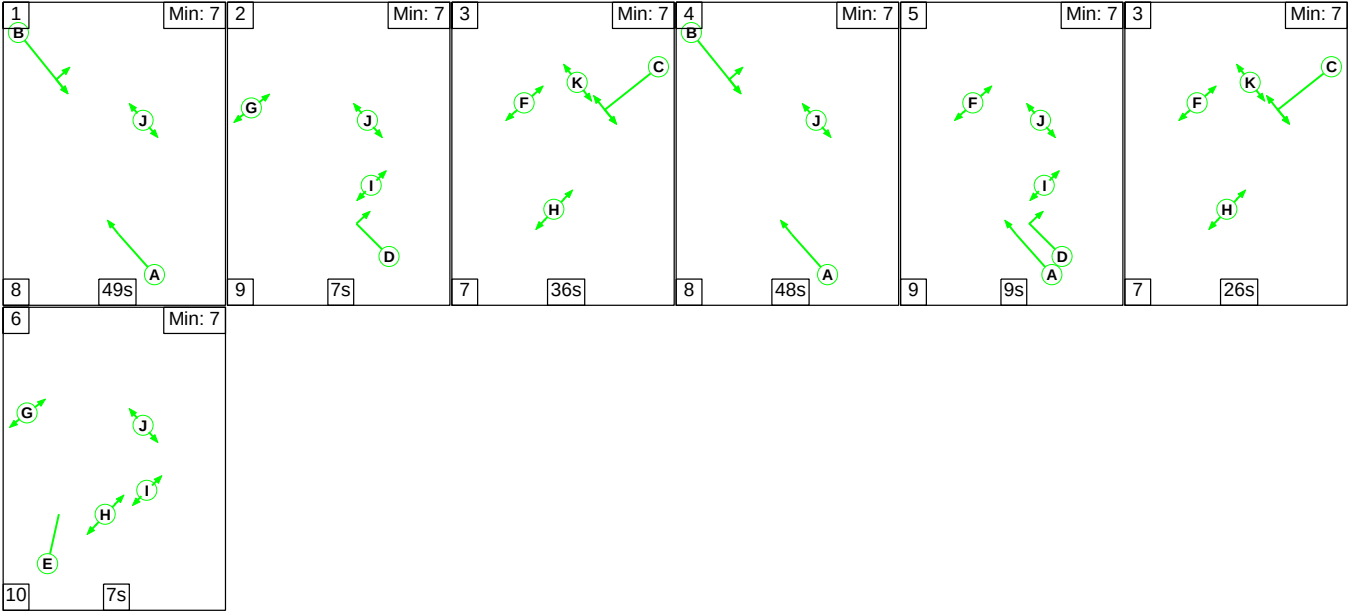
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-9.1	Total Delay for Signalled Lanes (pcuHr):	44.10	Cycle Time (s):	240
	PRC Over All Lanes (%):	-9.1	Total Delay Over All Lanes(pcuHr):	47.20		

Full Input Data And Results

Scenario 5: '2023 Base PM' (FG5: '2023 Base PM', Plan 1: 'Network Control Plan 1')

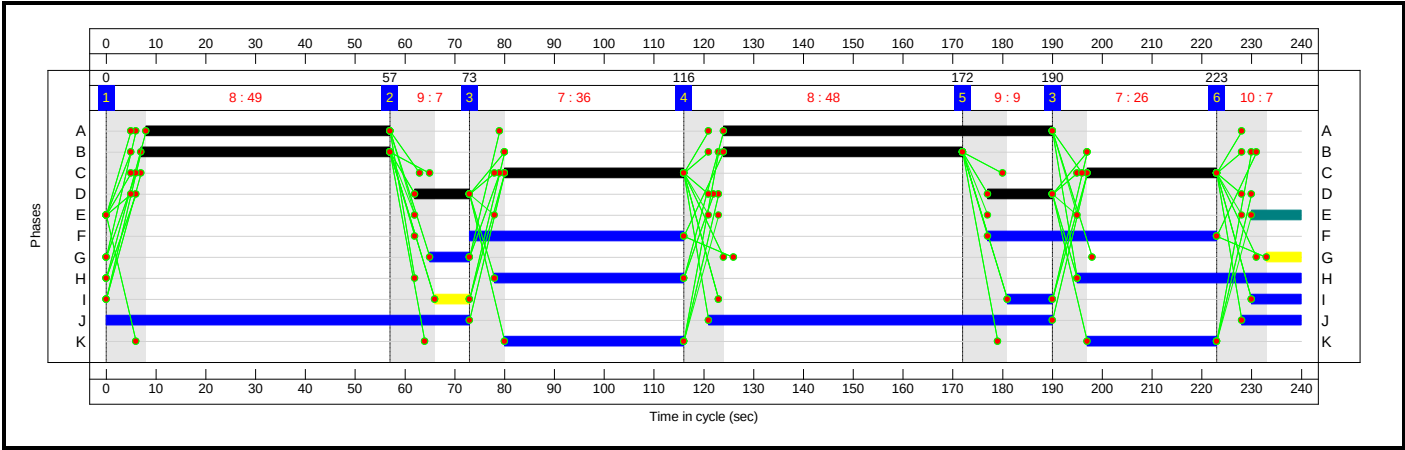
Stage Sequence Diagram



Stage Timings

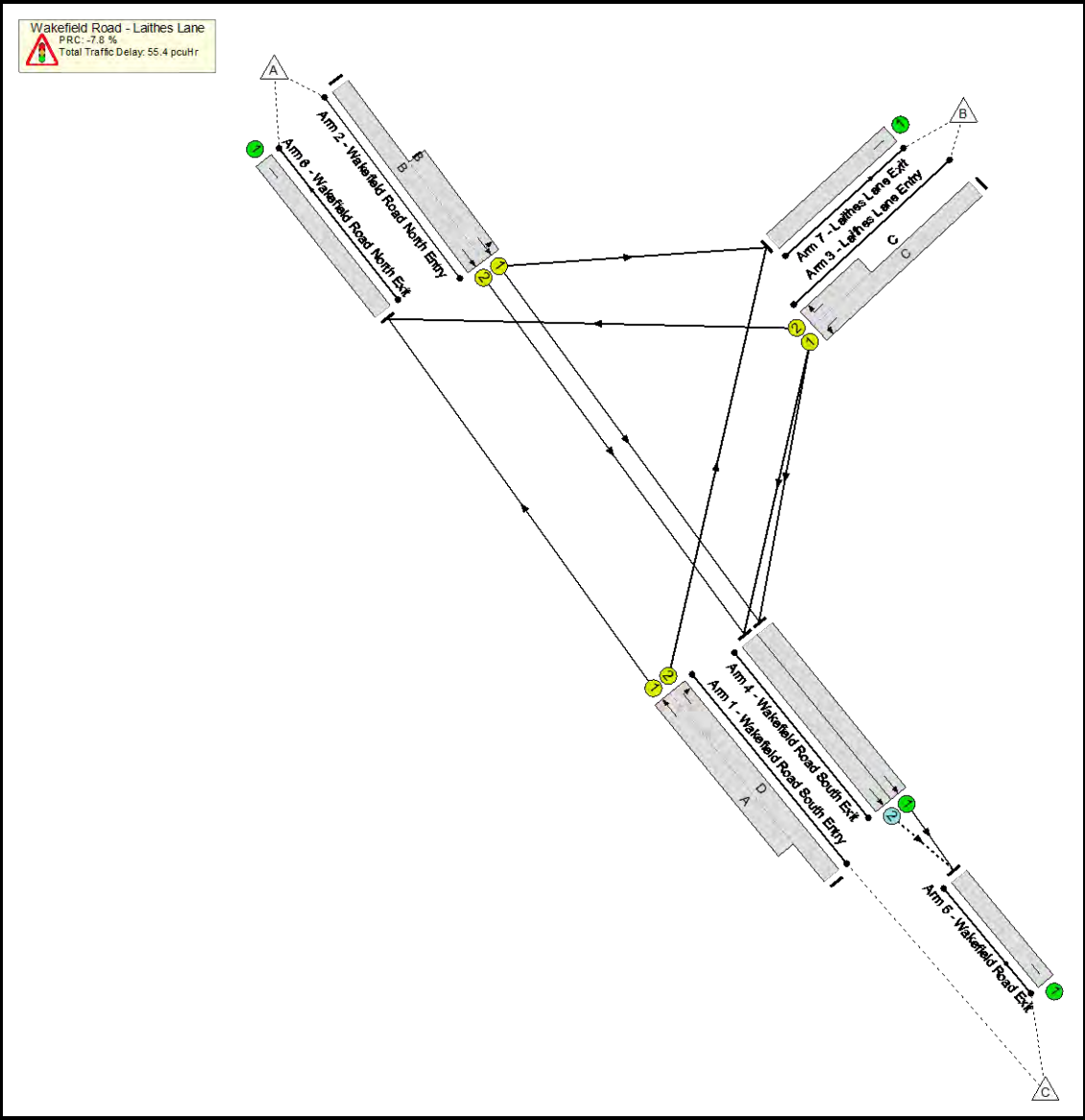
Stage	1	2	3	4	5	3	6
Duration	49	7	36	48	9	26	7
Change Point	0	57	73	116	172	190	223

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	97.0%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	97.0%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	24:115	-	1058	1783:1940	1092	96.8%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	98	-	1063	1965:1870	1095	97.0%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	62	-	536	1757:1795	553	96.9%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	247	1935	1935	12.8%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	608	1935	1170	52.0%
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: Wakefield Road - Laithes Lane	-	-	608	0	0	26.8	28.6	0.0	55.4	-	-	-	-
Wakefield Road - Laithes Lane	-	-	608	0	0	26.8	28.6	0.0	55.4	-	-	-	-
1/2+1/1	1058	1058	-	-	-	10.0	9.8	-	19.7	67.2	32.0	9.8	41.8
2/2+2/1	1063	1063	-	-	-	8.9	10.1	-	18.9	64.2	27.0	10.1	37.1
3/1+3/2	536	536	-	-	-	6.3	8.1	-	14.3	96.3	16.7	8.1	24.8
4/1	247	247	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/2	608	608	608	0	0	1.7	0.5	-	2.3	13.5	17.8	0.5	18.4

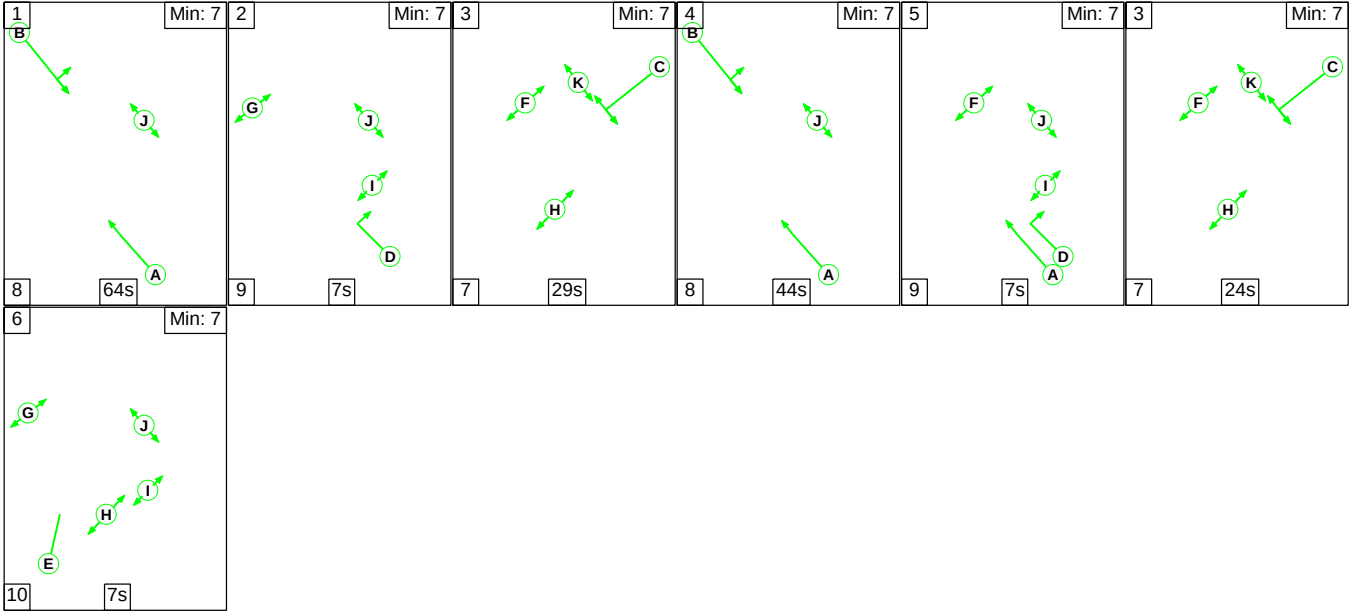
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-7.8	Total Delay for Signalled Lanes (pcuHr):	53.03	Cycle Time (s):	240
	PRC Over All Lanes (%):	-7.8	Total Delay Over All Lanes(pcuHr):	55.38		

Full Input Data And Results

Scenario 6: '2023 Base Saturday' (FG6: '2023 Base Saturday', Plan 1: 'Network Control Plan 1')

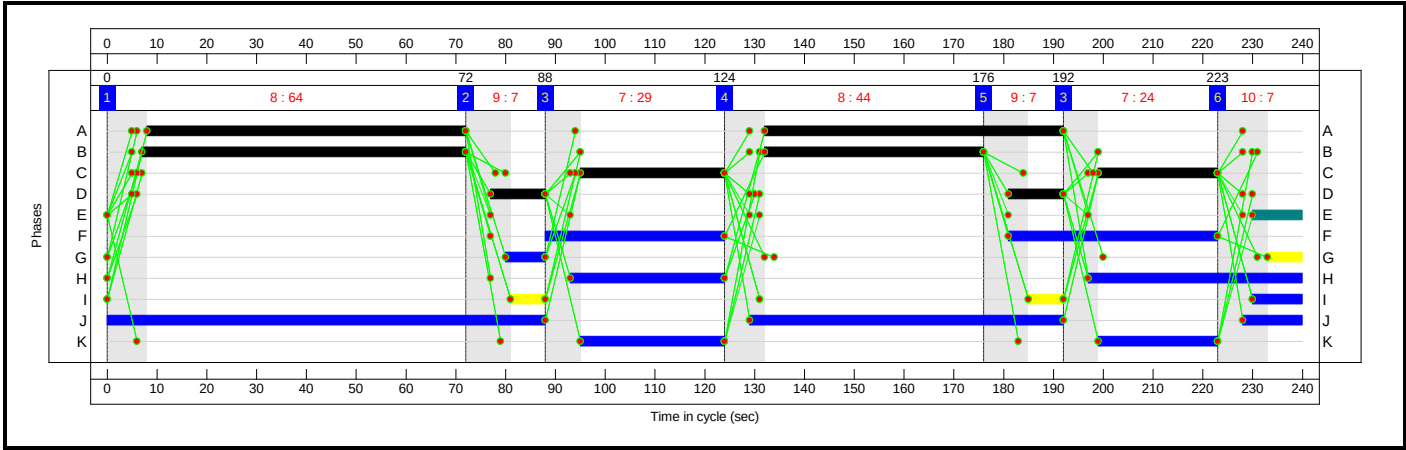
Stage Sequence Diagram



Stage Timings

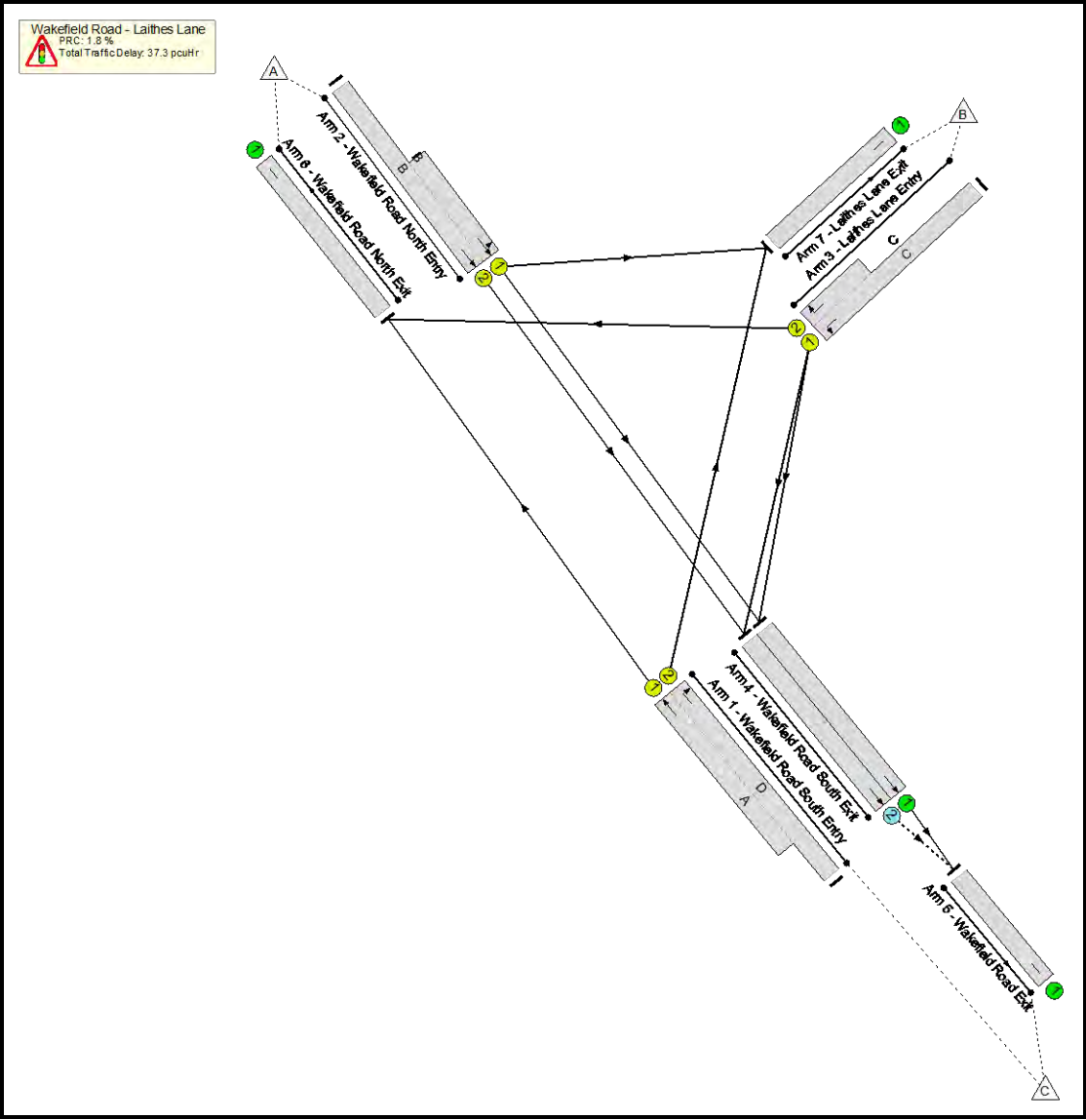
Stage	1	2	3	4	5	3	6
Duration	64	7	29	44	7	24	7
Change Point	0	72	88	124	176	192	223

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	88.4%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	88.4%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	22:124	-	996	1783:1940	1127	88.4%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	109	-	1042	1965:1885	1186	87.8%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	53	-	462	1757:1795	527	87.7%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	314	1935	1935	16.2%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	610	1935	1097	55.6%
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: Wakefield Road - Laithes Lane	-	-	610	0	0	26.3	11.0	0.0	37.3	-	-	-	-
Wakefield Road - Laithes Lane	-	-	610	0	0	26.3	11.0	0.0	37.3	-	-	-	-
1/2+1/1	996	968	-	-	-	11.2	3.6	-	14.8	53.6	21.7	3.6	25.3
2/2+2/1	1042	1042	-	-	-	7.2	3.4	-	10.6	36.6	22.8	3.4	26.3
3/1+3/2	462	462	-	-	-	5.7	3.2	-	8.9	69.5	14.0	3.2	17.3
4/1	314	314	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/2	610	610	610	0	0	2.2	0.6	-	2.9	16.9	19.1	0.6	19.7

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	1.8	Total Delay for Signalled Lanes (pcuHr):	34.35	Cycle Time (s):	240
	PRC Over All Lanes (%):	1.8	Total Delay Over All Lanes(pcuHr):	37.32		

Junctions 9			
ARCADY 9 - Roundabout Module			
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Filename: A61 Wakefield Road-A633 Rotherham Road mini-Roundabout.j9

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 9

Report generation date: 19/12/2017 10:34:35

«2023 Base, AM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
2023 Base				
1 - A61 North	1.3	4.49	0.57	A
2 - A633 Rotherham Road	7.8	60.14	0.91	F
3 - A61 South	1.3	8.53	0.56	A

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables.

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

File summary

File Description

Title	A61 Wakefield Road/A633 Rotherham Road
Location	Mapplewell, Barnsley
Site number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\design
Description	

Units

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

Analysis Options

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

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2023 Base	AM	ONE HOUR	07:30	09:00	15

2023 Base, AM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	18.79	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	A61 North	
2	A633 Rotherham Road	
3	A61 South	

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 - A61 North	4.50	4.50	6.50	27.0	20.00	20.00	0.0	✓
2 - A633 Rotherham Road	4.00	4.00	6.20	6.0	9.70	2.00	0.0	✓
3 - A61 South	4.20	4.20	5.10	1.5	20.00	20.00	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A61 North	0.901	1905
2 - A633 Rotherham Road	0.556	970
3 - A61 South	0.840	1381

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

Traffic Demand

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	965	100.000
2 - A633 Rotherham Road		✓	456	100.000
3 - A61 South		✓	492	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
1 - A61 North		0	277	688
2 - A633 Rotherham Road		456	0	0
3 - A61 South		451	41	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
1 - A61 North		0	0	0
2 - A633 Rotherham Road		0	0	0
3 - A61 South		0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.57	4.49	1.3	A
2 - A633 Rotherham Road	0.91	60.14	7.8	F
3 - A61 South	0.56	8.53	1.3	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	727	31	1878	0.387	724	0.6	3.114	A
2 - A633 Rotherham Road	343	516	683	0.503	339	1.0	10.360	B
3 - A61 South	370	339	1096	0.338	368	0.5	4.936	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	868	37	1872	0.463	867	0.9	3.577	A
2 - A633 Rotherham Road	410	618	627	0.654	407	1.8	16.127	C
3 - A61 South	442	407	1039	0.426	441	0.7	6.015	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	1062	45	1865	0.570	1061	1.3	4.468	A
2 - A633 Rotherham Road	502	756	550	0.913	483	6.6	44.923	E
3 - A61 South	542	483	975	0.556	540	1.2	8.235	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	1062	45	1864	0.570	1062	1.3	4.488	A
2 - A633 Rotherham Road	502	757	549	0.914	497	7.8	60.139	F
3 - A61 South	542	497	963	0.562	542	1.3	8.534	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	868	37	1872	0.463	869	0.9	3.596	A
2 - A633 Rotherham Road	410	620	626	0.655	433	2.0	20.694	C
3 - A61 South	442	433	1017	0.435	444	0.8	6.310	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	727	31	1877	0.387	727	0.6	3.135	A
2 - A633 Rotherham Road	343	519	682	0.504	347	1.0	10.880	B
3 - A61 South	370	347	1089	0.340	371	0.5	5.023	A

Junctions 9			
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Filename: A61 Wakefield Road-A633 Rotherham Road mini-Roundabout.j9

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 9

Report generation date: 19/12/2017 10:35:11

«2023 Base, PM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
2023 Base				
1 - A61 North	1.1	4.16	0.53	A
2 - A633 Rotherham Road	1.7	14.44	0.64	B
3 - A61 South	5.5	24.22	0.86	C

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables.

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

File summary

File Description

Title	A61 Wakefield Road/A633 Rotherham Road
Location	Mapplewell, Barnsley
Site number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\design
Description	

Units

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

Analysis Options

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

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2023 Base	PM	ONE HOUR	16:30	18:00	15

2023 Base, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	13.78	B

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	A61 North	
2	A633 Rotherham Road	
3	A61 South	

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 - A61 North	4.50	4.50	6.50	27.0	20.00	20.00	0.0	✓
2 - A633 Rotherham Road	4.00	4.00	6.20	6.0	9.70	2.00	0.0	✓
3 - A61 South	4.20	4.20	5.10	1.5	20.00	20.00	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A61 North	0.901	1905
2 - A633 Rotherham Road	0.556	970
3 - A61 South	0.840	1381

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

Traffic Demand

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	882	100.000
2 - A633 Rotherham Road		✓	400	100.000
3 - A61 South		✓	788	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
1 - A61 North		0	423	459
2 - A633 Rotherham Road		400	0	0
3 - A61 South		718	70	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
1 - A61 North		0	0	0
2 - A633 Rotherham Road		0	0	0
3 - A61 South		0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.53	4.16	1.1	A
2 - A633 Rotherham Road	0.64	14.44	1.7	B
3 - A61 South	0.86	24.22	5.5	C

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	664	52	1858	0.357	662	0.6	3.004	A
2 - A633 Rotherham Road	301	344	779	0.387	299	0.6	7.463	A
3 - A61 South	593	299	1130	0.525	589	1.1	6.603	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	793	63	1849	0.429	792	0.7	3.406	A
2 - A633 Rotherham Road	360	412	741	0.485	358	0.9	9.383	A
3 - A61 South	708	358	1080	0.656	705	1.9	9.539	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	971	76	1837	0.529	970	1.1	4.145	A
2 - A633 Rotherham Road	440	505	690	0.639	437	1.7	14.101	B
3 - A61 South	868	437	1013	0.856	855	5.1	21.120	C

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	971	77	1836	0.529	971	1.1	4.162	A
2 - A633 Rotherham Road	440	505	689	0.639	440	1.7	14.444	B
3 - A61 South	868	440	1011	0.858	866	5.5	24.217	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	793	64	1847	0.429	794	0.8	3.422	A
2 - A633 Rotherham Road	360	413	740	0.486	363	1.0	9.611	A
3 - A61 South	708	363	1076	0.658	723	2.0	10.567	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	664	53	1857	0.357	665	0.6	3.022	A
2 - A633 Rotherham Road	301	346	778	0.387	302	0.6	7.595	A
3 - A61 South	593	302	1127	0.527	597	1.1	6.835	A

Junctions 9			
ARCADY 9 - Roundabout Module			
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Filename: A61 Wakefield Road-A633 Rotherham Road mini-Roundabout.j9

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 9

Report generation date: 19/12/2017 10:35:34

«2023 Base, Saturday

»Junction Network

»Arms

»Traffic Demand

»Origin-Destination Data

»Vehicle Mix

»Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
2023 Base				
1 - A61 North	1.4	4.59	0.58	A
2 - A633 Rotherham Road	2.5	21.92	0.72	C
3 - A61 South	2.9	14.05	0.75	B

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables.

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

File summary

File Description

Title	A61 Wakefield Road/A633 Rotherham Road
Location	Mapplewell, Barnsley
Site number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\design
Description	

Units

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

Analysis Options

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

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2023 Base	Saturday	ONE HOUR	11:30	13:00	15

2023 Base, Saturday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 81% of the total flow for the roundabout for one or more time segments]
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	11.07	B

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	A61 North	
2	A633 Rotherham Road	
3	A61 South	

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 - A61 North	4.50	4.50	6.50	27.0	20.00	20.00	0.0	✓
2 - A633 Rotherham Road	4.00	4.00	6.20	6.0	9.70	2.00	0.0	✓
3 - A61 South	4.20	4.20	5.10	1.5	20.00	20.00	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A61 North	0.901	1905
2 - A633 Rotherham Road	0.556	970
3 - A61 South	0.840	1381

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

Traffic Demand

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	970	100.000
2 - A633 Rotherham Road		✓	388	100.000
3 - A61 South		✓	697	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	349	621
	2 - A633 Rotherham Road	388	0	0
	3 - A61 South	644	53	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	0	0
	2 - A633 Rotherham Road	0	0	0
	3 - A61 South	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.58	4.59	1.4	A
2 - A633 Rotherham Road	0.72	21.92	2.5	C
3 - A61 South	0.75	14.05	2.9	B

Main Results for each time segment

11:30 - 11:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	730	40	1869	0.391	728	0.6	3.147	A
2 - A633 Rotherham Road	292	466	711	0.411	289	0.7	8.484	A
3 - A61 South	525	289	1138	0.461	521	0.8	5.811	A

11:45 - 12:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	872	47	1862	0.468	871	0.9	3.628	A
2 - A633 Rotherham Road	349	558	660	0.528	347	1.1	11.446	B
3 - A61 South	627	347	1089	0.575	625	1.3	7.720	A

12:00 - 12:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	1068	58	1853	0.576	1066	1.3	4.564	A
2 - A633 Rotherham Road	427	683	591	0.723	422	2.4	20.700	C
3 - A61 South	767	422	1026	0.748	762	2.8	13.305	B

12:15 - 12:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	1068	58	1853	0.576	1068	1.4	4.587	A
2 - A633 Rotherham Road	427	684	590	0.724	427	2.5	21.921	C
3 - A61 South	767	427	1022	0.751	767	2.9	14.051	B

12:30 - 12:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	872	48	1862	0.468	874	0.9	3.652	A
2 - A633 Rotherham Road	349	559	659	0.529	354	1.2	12.010	B
3 - A61 South	627	354	1083	0.579	633	1.4	8.094	A

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	730	40	1869	0.391	731	0.6	3.165	A
2 - A633 Rotherham Road	292	468	710	0.412	294	0.7	8.692	A
3 - A61 South	525	294	1134	0.463	527	0.9	5.953	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 19/12/2017 09:52:25

« (Default Analysis Set) - 2023 Base, AM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2023 Base				
Stream B-AC	0.38	8.95	0.28	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	0.00	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM " model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 19/12/2017 09:52:25

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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) - 2023 Base, AM

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)	N/A			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
2023 Base, AM	2023 Base	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	8.95	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A61 South	8.00		0.00		2.20	0.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Rotherham Road Left Turn	One lane	5.00										0	15

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A61 North	ONE HOUR	✓	688.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	140.00	100.000
A61 South	ONE HOUR	✓	451.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	688.000
	Rotherham Road Left Turn	0.000	0.000	140.000
	A61 South	451.000	0.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.28	8.95	0.38	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	105.40	104.59	0.00	620.92	0.170	0.20	6.963	A
C-A	339.54	339.54	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	468.80	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	517.96	517.96	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	125.86	125.60	0.00	593.88	0.212	0.27	7.684	A
C-A	405.44	405.44	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	448.39	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	618.50	618.50	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	154.14	153.70	0.00	556.50	0.277	0.38	8.927	A
C-A	496.56	496.56	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	420.16	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	757.50	757.50	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	154.14	154.13	0.00	556.50	0.277	0.38	8.946	A
C-A	496.56	496.56	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	420.16	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	757.50	757.50	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	125.86	126.29	0.00	593.88	0.212	0.27	7.706	A
C-A	405.44	405.44	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	448.39	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	618.50	618.50	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	105.40	105.66	0.00	620.92	0.170	0.21	6.989	A
C-A	339.54	339.54	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	468.80	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	517.96	517.96	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 19/12/2017 09:56:19

« (Default Analysis Set) - 2023 Base, PM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2023 Base				
Stream B-AC	0.12	6.45	0.11	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	0.00	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM " model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 19/12/2017 09:56:19

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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) - 2023 Base, 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)	N/A			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
2023 Base, PM	2023 Base	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.45	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A61 South	8.00		0.00		2.20	0.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Rotherham Road Left Turn	One lane	5.00										0	15

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A61 North	ONE HOUR	✓	459.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	60.00	100.000
A61 South	ONE HOUR	✓	718.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	459.000
	Rotherham Road Left Turn	0.000	0.000	60.000
	A61 South	718.000	0.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.11	6.45	0.12	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	45.17	44.88	0.00	667.28	0.068	0.07	5.781	A
C-A	540.55	540.55	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	503.80	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	345.56	345.56	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	53.94	53.87	0.00	649.24	0.083	0.09	6.046	A
C-A	645.47	645.47	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	490.19	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	412.63	412.63	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	66.06	65.95	0.00	624.30	0.106	0.12	6.445	A
C-A	790.53	790.53	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	471.36	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	505.37	505.37	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	66.06	66.06	0.00	624.30	0.106	0.12	6.448	A
C-A	790.53	790.53	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	471.36	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	505.37	505.37	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	53.94	54.05	0.00	649.24	0.083	0.09	6.048	A
C-A	645.47	645.47	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	490.19	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	412.63	412.63	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	45.17	45.24	0.00	667.28	0.068	0.07	5.789	A
C-A	540.55	540.55	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	503.80	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	345.56	345.56	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 19/12/2017 09:56:58

« (Default Analysis Set) - 2023 Base, Saturday

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2023 Base				
Stream B-AC	0.15	7.21	0.13	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	0.00	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 19/12/2017 09:56:57

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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) - 2023 Base, Saturday

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)	N/A			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
2023 Base, Saturday	2023 Base	Saturday		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	7.21	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A61 South	8.00		0.00		2.20	0.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Rotherham Road Left Turn	One lane	5.00										0	15

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A61 North	ONE HOUR	✓	621.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	70.00	100.000
A61 South	ONE HOUR	✓	644.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	621.000
	Rotherham Road Left Turn	0.000	0.000	70.000
	A61 South	644.000	0.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.13	7.21	0.15	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	52.70	52.34	0.00	634.48	0.083	0.09	6.179	A
C-A	484.84	484.84	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	479.04	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	467.52	467.52	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	62.93	62.83	0.00	610.08	0.103	0.11	6.578	A
C-A	578.94	578.94	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	460.62	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	558.27	558.27	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	77.07	76.92	0.00	576.34	0.134	0.15	7.206	A
C-A	709.06	709.06	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	435.14	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	683.73	683.73	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	77.07	77.07	0.00	576.34	0.134	0.15	7.209	A
C-A	709.06	709.06	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	435.14	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	683.73	683.73	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	62.93	63.08	0.00	610.08	0.103	0.12	6.585	A
C-A	578.94	578.94	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	460.62	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	558.27	558.27	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	52.70	52.80	0.00	634.48	0.083	0.09	6.191	A
C-A	484.84	484.84	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	479.04	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	467.52	467.52	0.00	-	-	-	-	-

Appendix G – TRICS Data for Lidl.

TRICS 7.1.2

Trip Rate Parameter:

Retail floor area

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use

01 - RETAIL

Category

C - DISCOUNT FOOD STORES

MULTI-MODAL VEHICLES - Friday

Selected regions and areas:

10 WALES

GW

GWYNEDD

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: Retail floor area

Actual Range: 1100 to 1100 (units: sqm)

Range Selected by User: 649 to 1350 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/06 to 27/11/12

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

Selected survey days:

Friday 1 days

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

Selected survey types:

Manual count 1 days

Directional ATC Count 0 days

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

Selected Locations:

Town Centre	0
Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	0
Edge of Town	0
Neighbourhood Centre (PPS6 Local Centre)	0
Free Standing (PPS6 Out of Town)	0
Not Known	0

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, Edge of Town Centre

Selected Location Sub Categories:

Industrial Zone	0
Commercial Zone	0
Development Zone	0
Residential Zone	0
Retail Zone	0
Built-Up Zone	0
Village	0
Out of Town	0
High Street	0
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

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:

15,001 to 20,000 1 days

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

Population within 5 miles:

25,001 to 50,000 1 days

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

Car ownership within 5 miles:

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.

Petrol filling station:

Included in the survey count 0 days

Excluded from count or no filling station 1 days

This data displays the number of surveys within the selected set that include petrol filling station activity and the number of surveys that do not.

Travel Plan:

No 1 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	GW-01-C-01	LIDL	GWYNEDD
	HIGH STREET		
	BANGOR		
	Edge of Town Centre		
	No Sub Category		
	Total Retail floor area:	1100	sqm
	Survey date:	FRIDAY 10/07/2009	Survey Type: MANUAL

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

Manually Deselected Sites

Site Ref	Reason for Deselection
DO-01-C-01	Irish

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES

Calculation Factor: 100 sqm

Count Type: VEHICLES

Friday

Time Range			ARRIVALS				DEPARTURES		TOTALS	
	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	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	1100	0.545	1	1100	0	1	1100	0.545	
08:00-09:00	1	1100	1.727	1	1100	0.818	1	1100	2.545	
09:00-10:00	1	1100	3.182	1	1100	2.182	1	1100	5.364	
10:00-11:00	1	1100	6.091	1	1100	4.636	1	1100	10.727	
11:00-12:00	1	1100	6.818	1	1100	6.818	1	1100	13.636	
12:00-13:00	1	1100	6.091	1	1100	6.545	1	1100	12.636	
13:00-14:00	1	1100	4.545	1	1100	5.364	1	1100	9.909	
14:00-15:00	1	1100	7.364	1	1100	8	1	1100	15.364	
15:00-16:00	1	1100	5.545	1	1100	5.182	1	1100	10.727	
16:00-17:00	1	1100	5.091	1	1100	4.909	1	1100	10	
17:00-18:00	1	1100	6.818	1	1100	7	1	1100	13.818	
18:00-19:00	1	1100	3.545	1	1100	4.909	1	1100	8.454	
19:00-20:00	1	1100	2.727	1	1100	3.364	1	1100	6.091	
20:00-21:00	1	1100	0	1	1100	0.364	1	1100	0.364	
21:00-22:00										
22:00-23:00										
23:00-24:00										
Daily Trip Rates:			60.089			60.091			120.18	

TRICS 7.1.2**Trip Rate Parameter:****Retail floor area****TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES****Calculation Factor: 100 sqm****Count Type: PEDESTRIANS****Friday**

Time Range			ARRIVALS				DEPARTURES		TOTALS	
	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	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	1100	0	1	1100	0	1	1100	0	
08:00-09:00	1	1100	0.818	1	1100	0.545	1	1100	1.363	
09:00-10:00	1	1100	0.909	1	1100	0.818	1	1100	1.727	
10:00-11:00	1	1100	1.636	1	1100	0.909	1	1100	2.545	
11:00-12:00	1	1100	2	1	1100	1.727	1	1100	3.727	
12:00-13:00	1	1100	2	1	1100	2.636	1	1100	4.636	
13:00-14:00	1	1100	1.091	1	1100	1.091	1	1100	2.182	
14:00-15:00	1	1100	2.182	1	1100	2.273	1	1100	4.455	
15:00-16:00	1	1100	2	1	1100	1.727	1	1100	3.727	
16:00-17:00	1	1100	1.545	1	1100	1	1	1100	2.545	
17:00-18:00	1	1100	2.455	1	1100	1.909	1	1100	4.364	
18:00-19:00	1	1100	1.909	1	1100	2	1	1100	3.909	
19:00-20:00	1	1100	1.909	1	1100	1.909	1	1100	3.818	
20:00-21:00	1	1100	0	1	1100	0.091	1	1100	0.091	
21:00-22:00										
22:00-23:00										
23:00-24:00										
Daily Trip Rates:			20.454			18.635			39.089	

TRICS 7.1.2**Trip Rate Parameter: Retail floor area****TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES****Calculation Factor: 100 sqm****Count Type: CYCLISTS****Friday**

Time Range	ARRIVALS		DEPARTURES		TOTALS	
	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	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						
07:00-08:0	1	1100	0	1	1100	0
08:00-09:0	1	1100	0	1	1100	0
09:00-10:0	1	1100	0.182	1	1100	0.182
10:00-11:0	1	1100	0.091	1	1100	0.091
11:00-12:0	1	1100	0	1	1100	0
12:00-13:0	1	1100	0	1	1100	0
13:00-14:0	1	1100	0	1	1100	0
14:00-15:0	1	1100	0	1	1100	0
15:00-16:0	1	1100	0	1	1100	0
16:00-17:0	1	1100	0.182	1	1100	0.182
17:00-18:0	1	1100	0	1	1100	0
18:00-19:0	1	1100	0.091	1	1100	0.091
19:00-20:0	1	1100	0.182	1	1100	0.182
20:00-21:0	1	1100	0	1	1100	0.091
21:00-22:00						
22:00-23:00						
23:00-24:00						
Daily Trip Rates:			0.728			0.728
						1.456

TRICS 7.1.2**Trip Rate Parameter:****Retail floor area****TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES****Calculation Factor: 100 sqm****Count Type: PUBLIC TRANSPORT USERS****Friday**

Time Range			ARRIVALS				DEPARTURES		TOTALS	
	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	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	1100	0	1	1100	0	1	1100	0	
08:00-09:00	1	1100	1	1	1100	0.818	1	1100	1.818	
09:00-10:00	1	1100	0.273	1	1100	0.182	1	1100	0.455	
10:00-11:00	1	1100	0.364	1	1100	0.455	1	1100	0.819	
11:00-12:00	1	1100	0.364	1	1100	0.364	1	1100	0.728	
12:00-13:00	1	1100	1	1	1100	1.455	1	1100	2.455	
13:00-14:00	1	1100	0.273	1	1100	0.364	1	1100	0.637	
14:00-15:00	1	1100	0.091	1	1100	0	1	1100	0.091	
15:00-16:00	1	1100	0.727	1	1100	0.818	1	1100	1.545	
16:00-17:00	1	1100	0.091	1	1100	0.091	1	1100	0.182	
17:00-18:00	1	1100	0.091	1	1100	0.091	1	1100	0.182	
18:00-19:00	1	1100	0	1	1100	0	1	1100	0	
19:00-20:00	1	1100	0	1	1100	0	1	1100	0	
20:00-21:00	1	1100	0	1	1100	0	1	1100	0	
21:00-22:00										
22:00-23:00										
23:00-24:00										
Daily Trip Rates:			4.274			4.638			8.912	

Trip Rate Parameter: **Retail floor area**

Land Use 01 - RETAIL
Category C - DISCOUNT FOOD STORES
MULTI-MODAL VEHICLES Saturday

1	GREATER LONDON		
	HG	HARINGEY	1 days
6	WEST MIDLANDS		
	HE	HEREFORDSHIRE	1 days
7	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	1 days
10	WALES		
	CP	CAERPHILLY	1 days

Filtering Stage 2 selection:

Actual Range: 700 to 1050 (units: sqm)
Range Selected by User: 649 to 1404 (units: sqm)

Date Range: 01/01/05 to 19/04/15

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

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

Selected Locations:

Town Centre	1
Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	1
Edge of Town	1
Neighbourhood Centre (PPS6 Local Centre)	0
Free Standing (PPS6 Out of Town)	0
Not Known	0

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:

Industrial Zone	0
Commercial Zone	1
Development Zone	0
Residential Zone	0
Retail Zone	0
Built-Up Zone	2
Village	0
Out of Town	0
High Street	0
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:

A1 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:

1,001 to 5,000	1 days
10,001 to 15,000	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

50,001 to 75,000 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:

0.6 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.

Petrol filling station:

Included in the survey count 0 days

Excluded from count or no filling station 4 days

This data displays the number of surveys within the selected set that include petrol filling station activity and the number of surveys that do not.

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 | CP-01-C-01 | KWIK SAVE | CAERPHILLY |
| | FIELDS ROAD | | |
| | PONTYMINSTER | | |
| | RISCA | | |
| | Edge of Town | | |
| | No Sub Category | | |
| | Total Retail floor area: | | 700 sqm |
| | Survey date: | SATURDAY 03/09/2005 | Survey Type: MANUAL |
| 2 | HE-01-C-01 | ALDI | HEREFORDSHIRE |
| | EIGN STREET | | |
| | HEREFORD | | |
| | Edge of Town Centre | | |
| | Built-Up Zone | | |
| | Total Retail floor area: | | 750 sqm |
| | Survey date: | SATURDAY 04/03/2006 | Survey Type: MANUAL |

3	HG-01-C-01 MAYES ROAD WOOD GREEN Town Centre Built-Up Zone	ICELAND	HARINGEY	
	Total Retail floor area:		790	sqm
	Survey date:	SATURDAY	27/09/2014	Survey Type: MANUAL

4	NY-01-C-01 LAYERTHORPE YORK Suburban Area (PPS6 Out of Centre) Commercial Zone	NETTO	NORTH YORKSHIRE	
	Total Retail floor area:		1050	sqm
	Survey date:	SATURDAY	21/05/2005	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 01 - RETAIL/C - DISCOUNT FOOD STORES

Calculation Factor: 100 sqm

Count Type: VEHICLES

Saturday

Time Range	ARRIVALS		DEPARTURES		TOTALS	
	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	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	2	900	1.333	2	900	0.222
08:00-09:00	4	823	2.614	4	823	1.033
09:00-10:00	4	823	5.076	4	823	3.161
10:00-11:00	4	823	5.532	4	823	4.985
11:00-12:00	4	823	7.143	4	823	7.082
12:00-13:00	4	823	6.93	4	823	7.052
13:00-14:00	4	823	7.173	4	823	6.93
14:00-15:00	4	823	6.413	4	823	6.261
15:00-16:00	4	823	6.079	4	823	6.535
16:00-17:00	4	823	5.471	4	823	6.687
17:00-18:00	4	823	3.374	4	823	4.59
18:00-19:00	4	823	1.854	4	823	2.614
19:00-20:00	1	700	1.429	1	700	2.429
20:00-21:00						
21:00-22:00						
22:00-23:00						
23:00-24:00						
Daily Trip Rates:			60.421			59.581
						120.002

TRICS 7.2.4**Trip Rate Parameter: Retail floor area****TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES****Calculation Factor: 100 sqm****Count Type: PEDESTRIANS Saturday**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	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									
07:00-08:0	2	900	0.111	2	900	0.111	2	900	0.222
08:00-09:0	4	823	1.003	4	823	0.608	4	823	1.611
09:00-10:0	4	823	1.854	4	823	2.128	4	823	3.982
10:00-11:0	4	823	4.711	4	823	3.921	4	823	8.632
11:00-12:0	4	823	4.407	4	823	4.103	4	823	8.51
12:00-13:0	4	823	4.772	4	823	5.167	4	823	9.939
13:00-14:0	4	823	5.076	4	823	5.106	4	823	10.182
14:00-15:0	4	823	4.529	4	823	4.772	4	823	9.301
15:00-16:0	4	823	5.106	4	823	4.62	4	823	9.726
16:00-17:0	4	823	3.647	4	823	4.225	4	823	7.872
17:00-18:0	4	823	3.1	4	823	3.799	4	823	6.899
18:00-19:0	4	823	1.337	4	823	1.429	4	823	2.766
19:00-20:0	1	700	0.143	1	700	0.714	1	700	0.857
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			39.796			40.703			80.499

TRICS 7.2.4**Trip Rate Parameter: Retail floor area****TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES****Calculation Factor: 100 sqm****Count Type: CYCLISTS****Saturday**

Time Range	ARRIVALS			DEPARTURES			TOTALS	
	No. Days	Ave. Trip RFA	No. Days	Ave. Trip RFA	No. Days	Ave. Trip RFA	No. Days	Ave. Trip RFA
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								
07:00-08:0	2	900	0	2	900	0	2	900
08:00-09:0	4	823	0.03	4	823	0	4	823
09:00-10:0	4	823	0.091	4	823	0.03	4	823
10:00-11:0	4	823	0.122	4	823	0.091	4	823
11:00-12:0	4	823	0.03	4	823	0.091	4	823
12:00-13:0	4	823	0	4	823	0.03	4	823
13:00-14:0	4	823	0.213	4	823	0.182	4	823
14:00-15:0	4	823	0.122	4	823	0.091	4	823
15:00-16:0	4	823	0.304	4	823	0.182	4	823
16:00-17:0	4	823	0.061	4	823	0.182	4	823
17:00-18:0	4	823	0.091	4	823	0.213	4	823
18:00-19:0	4	823	0.091	4	823	0.091	4	823
19:00-20:0	1	700	0	1	700	0	1	700
20:00-21:00								
21:00-22:00								
22:00-23:00								
23:00-24:00								
Daily Trip Rates:			1.155			1.183		2.338

TRICS 7.2.4**Trip Rate Parameter: Retail floor area****TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES****Calculation Factor: 100 sqm****Count Type: PUBLIC TRANSPORT USERS Saturday**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	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									
07:00-08:0	2	900	0	2	900	0	2	900	0
08:00-09:0	4	823	0.152	4	823	0.061	4	823	0.213
09:00-10:0	4	823	0.365	4	823	0.456	4	823	0.821
10:00-11:0	4	823	0.578	4	823	0.395	4	823	0.973
11:00-12:0	4	823	0.456	4	823	0.638	4	823	1.094
12:00-13:0	4	823	0.729	4	823	0.79	4	823	1.519
13:00-14:0	4	823	1.003	4	823	1.003	4	823	2.006
14:00-15:0	4	823	0.638	4	823	1.307	4	823	1.945
15:00-16:0	4	823	0.76	4	823	0.821	4	823	1.581
16:00-17:0	4	823	0.942	4	823	0.912	4	823	1.854
17:00-18:0	4	823	0.669	4	823	0.365	4	823	1.034
18:00-19:0	4	823	0.061	4	823	0.365	4	823	0.426
19:00-20:0	1	700	0	1	700	0	1	700	0
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			6.353			7.113			13.466

Appendix H – Lidl Trip Distribution.



The proposed Lidl store is to have a Retail Sales Area of 1,325m²

Friday AM Peak:

TRICS data for 08.00 - 09.00 gives

Arrivals		Departures	
Trip Rate/100m ² RSA	Trips	Trip Rate/100m ² RSA	Trips
1.727	23	0.818	11

Friday PM Peak:

TRICS data for 17.00 - 18.00 gives

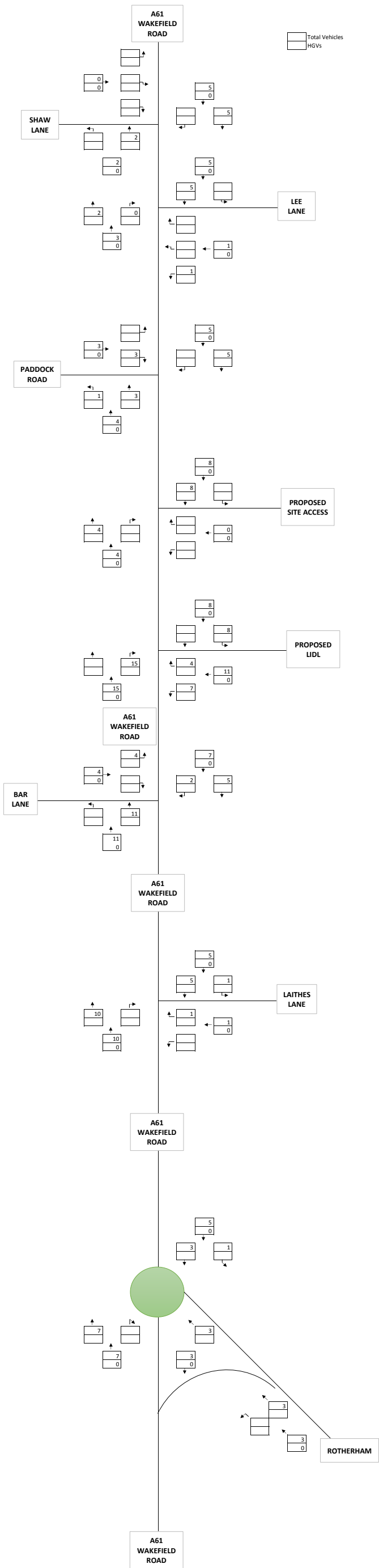
Arrivals		Departures	
Trip Rate/100m ² RSA	Trips	Trip Rate/100m ² RSA	Trips
6.818	90	7.000	93

Saturday Peak:

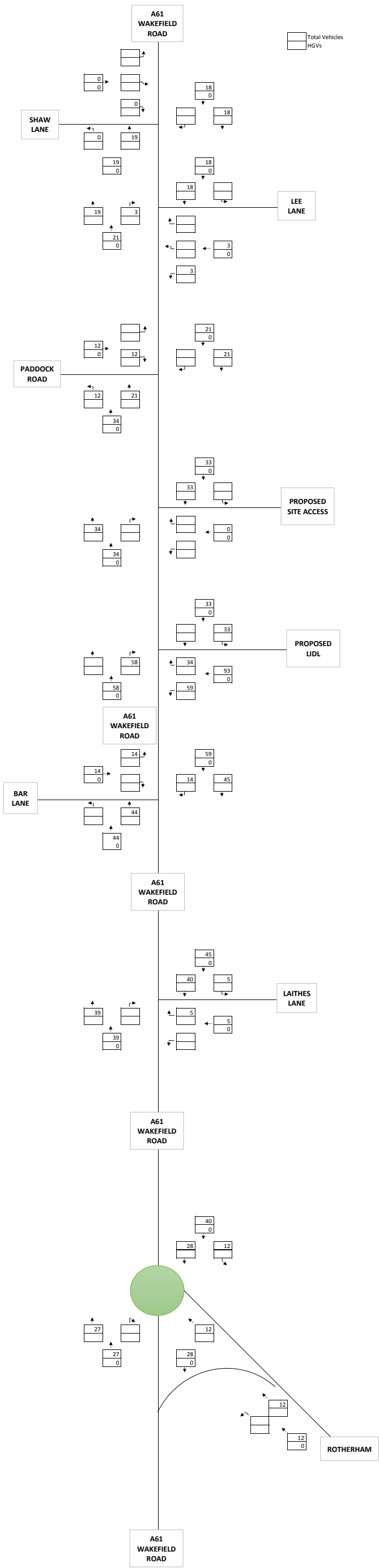
TRICS data for 12.00 - 13.00 gives

Arrivals		Departures	
Trip Rate/100m ² RSA	Trips	Trip Rate/100m ² RSA	Trips
5.823	77	5.316	70

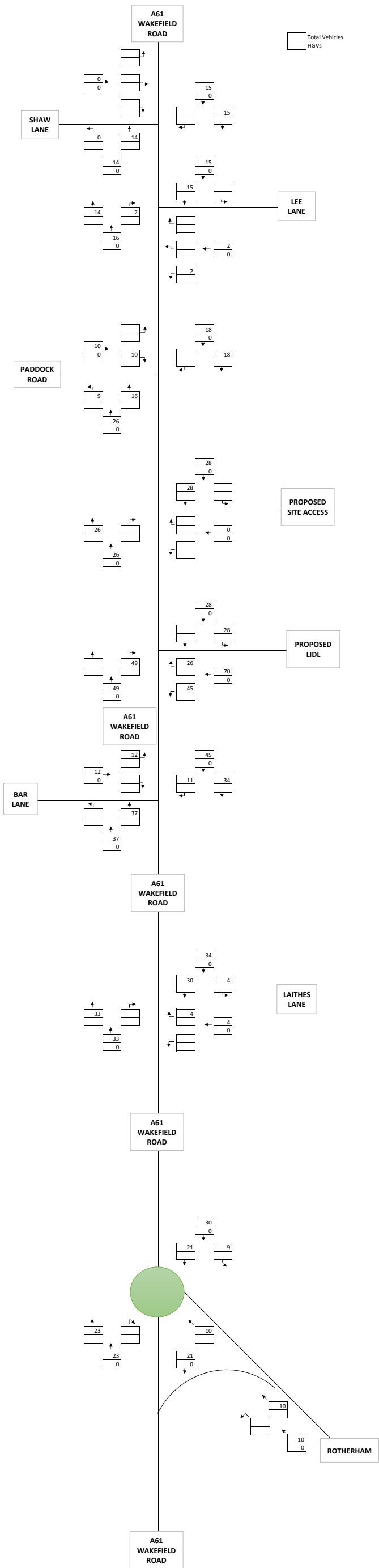
LIDL TRIP GENERATION
PROPOSED LIDL, WAKEFIELD ROAD, MAPPLEWELL
07:45 - 08:45
AM PEAK



LIDL TRIP GENERATION
PROPOSED LIDL, WAKEFIELD ROAD, MAPPLEWELL
16:45 - 17:45
PM PEAK

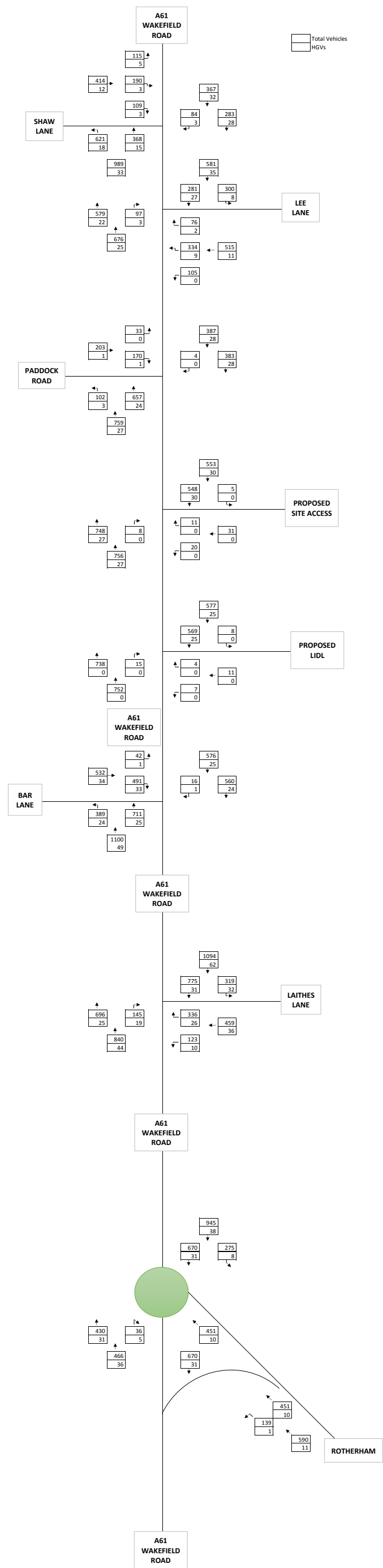


LIDL TRIP GENERATION
PROPOSED LIDL, WAKEFIELD ROAD, MAPPLEWELL
11:45 - 12:45
SATURDAY DAYTIME PEAK

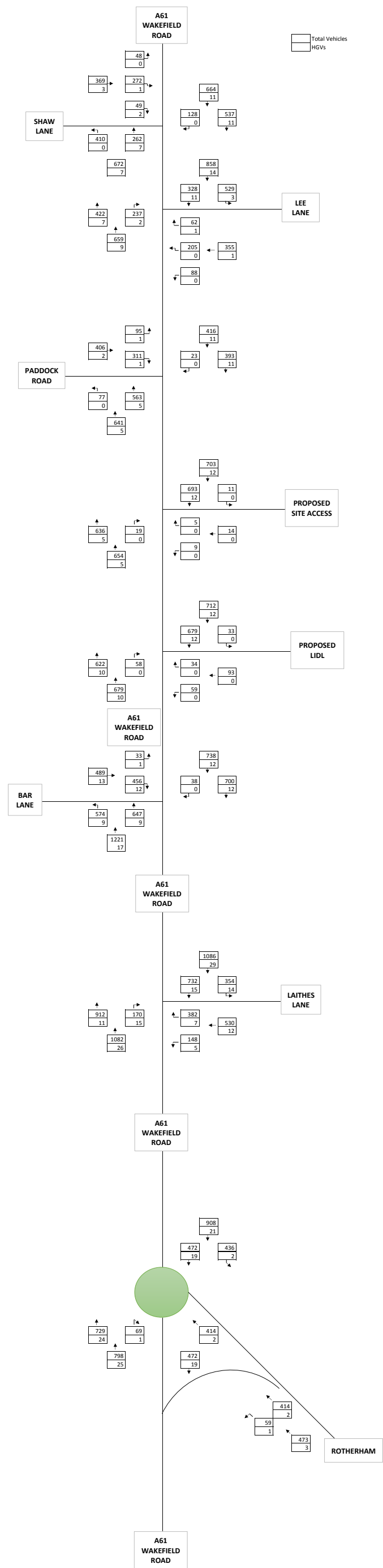


Appendix I – Residential Development Trip Rates.

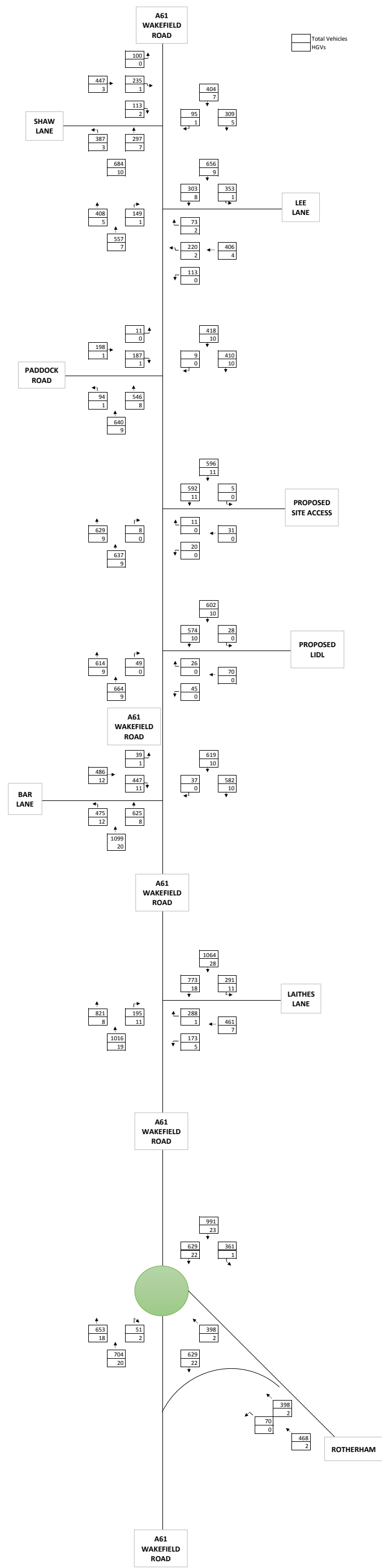
2023 PREDICTED FLOWS PLUS LIDL STORE - SENSITVITY TEST
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
AM PEAK



2023 PREDICTED FLOWS PLUS LIDL STORE - SENSITVITY TEST
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
PM PEAK



2023 PREDICTED FLOWS PLUS LIDL STORE - SENSITVITY TEST
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
SATURDAY PEAK



Appendix K – 2023 Operation Assessments with Lidl and Residential Development.

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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				
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution				

Filename: Wakefield Road - Lee Lane - Shaw Lane - Committed Scheme.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Lee Lane - Shaw Lane Committed Scheme

Report generation date: 15/12/2017 13:03:53

« Committed Layout - 2023 Predicted with Lidl, AM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
Committed Layout - 2023 Predicted with Lidl				
Stream B-C	0.56	15.68	0.37	C
Stream B-AD	39.92	504.47	1.31	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.28	9.26	0.22	A
Stream D-A	0.36	11.35	0.27	B
Stream D-BC	114.61	1180.73	1.62	F
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.35	13.05	0.26	B

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

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 13:03:52

File summary

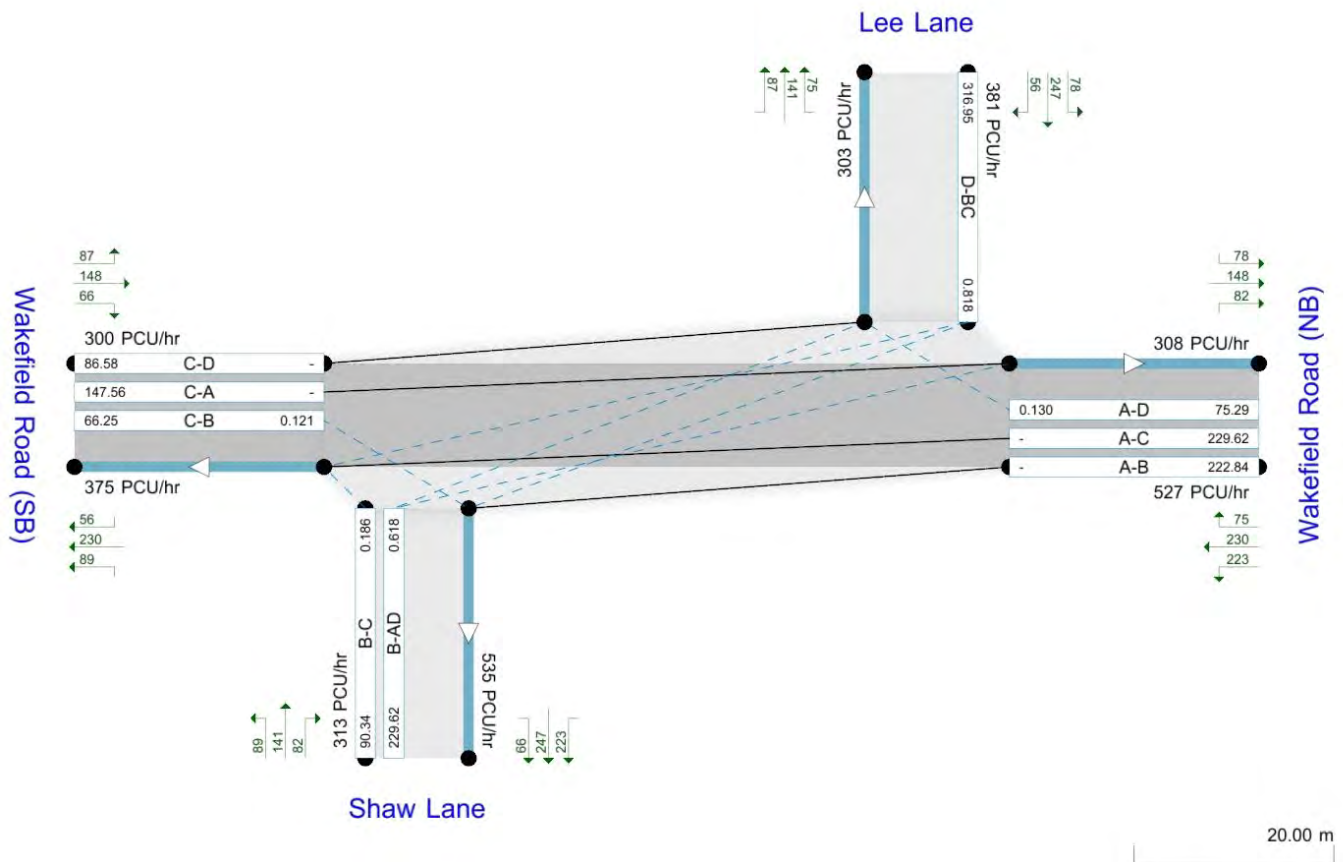
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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



Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RfC (l)
Time Segment: (07:30-07:45)
Showing Analysis Set "A1 - Committed Layout"; Demand Set "D10 - 2023 Predicted with Lidl, AM"

The junction diagram reflects the last run of ARCADY.

Committed Layout - 2023 Predicted with Lidl, AM

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
Committed Layout	N/A			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
2023 Predicted with Lidl, AM	2023 Predicted with Lidl	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	576.03	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Shaw Lane	Two lanes		3.90	3.85						✓		55	35
Lee Lane	Two lanes		3.88	4.06						✓		40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	556.295	0.101	0.256	-	-	-	0.161	0.366	0.161	0.101	0.256
1	B-C	704.176	0.108	0.273	-	-	-	-	-	-	0.108	0.273
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	723.432	-	-	-	0.280	0.111	0.280	-	0.111	-	-
1	D-BC	578.082	0.167	0.167	0.380	0.266	0.105	0.266	-	0.105	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	701.00	100.000
Shaw Lane	ONE HOUR	✓	425.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	399.00	100.000
Lee Lane	ONE HOUR	✓	526.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.000	296.000	305.000	100.000
	Shaw Lane	112.000	0.000	120.000	193.000
	Wakefield Road (SB)	196.000	88.000	0.000	115.000
	Lee Lane	105.000	343.000	78.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.42	0.44	0.14
	Shaw Lane	0.26	0.00	0.28	0.45
	Wakefield Road (SB)	0.49	0.22	0.00	0.29
	Lee Lane	0.20	0.65	0.15	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.37	15.68	0.56	C
B-AD	1.31	504.47	39.92	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.22	9.26	0.28	A
D-A	0.27	11.35	0.36	B
D-BC	1.62	1180.73	114.61	F
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.26	13.05	0.35	B

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	90.34	89.44	0.00	485.01	0.186	0.23	9.080	A
B-AD	229.62	223.54	0.00	371.75	0.618	1.52	23.616	C
A-B	222.84	222.84	0.00	-	-	-	-	-
A-C	229.62	229.62	0.00	-	-	-	-	-
A-D	75.29	74.69	0.00	578.96	0.130	0.15	7.134	A
D-A	79.05	78.31	0.00	503.37	0.157	0.18	8.455	A
D-BC	316.95	302.59	0.00	387.58	0.818	3.59	38.063	E
C-D	86.58	86.58	0.00	-	-	-	-	-
C-A	147.56	147.56	0.00	-	-	-	-	-
C-B	66.25	65.71	0.00	548.40	0.121	0.14	7.451	A

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	107.88	107.47	0.00	431.61	0.250	0.33	11.091	B
B-AD	274.19	265.86	0.00	333.86	0.821	3.60	48.212	E
A-B	266.10	266.10	0.00	-	-	-	-	-
A-C	274.19	274.19	0.00	-	-	-	-	-
A-D	89.90	89.72	0.00	552.68	0.163	0.19	7.776	A
D-A	94.39	94.11	0.00	460.55	0.205	0.25	9.824	A
D-BC	378.47	334.23	0.00	349.38	1.083	14.65	125.389	F
C-D	103.38	103.38	0.00	-	-	-	-	-
C-A	176.20	176.20	0.00	-	-	-	-	-
C-B	79.11	78.91	0.00	498.84	0.159	0.19	8.569	A

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	132.12	131.34	0.00	378.80	0.349	0.52	14.501	B
B-AD	335.81	270.84	0.00	278.51	1.206	19.85	187.010	F
A-B	325.90	325.90	0.00	-	-	-	-	-
A-C	335.81	335.81	0.00	-	-	-	-	-
A-D	110.10	109.80	0.00	516.37	0.213	0.27	8.848	A
D-A	115.61	115.23	0.00	441.21	0.262	0.35	11.029	B
D-BC	463.53	296.01	0.00	296.82	1.562	56.53	461.385	F
C-D	126.62	126.62	0.00	-	-	-	-	-
C-A	215.80	215.80	0.00	-	-	-	-	-
C-B	96.89	96.47	0.00	422.94	0.229	0.29	11.012	B

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	132.12	131.96	0.00	361.40	0.366	0.56	15.675	C
B-AD	335.81	255.53	0.00	256.58	1.309	39.92	432.363	F
A-B	325.90	325.90	0.00	-	-	-	-	-
A-C	335.81	335.81	0.00	-	-	-	-	-
A-D	110.10	110.05	0.00	498.60	0.221	0.28	9.264	A
D-A	115.61	115.56	0.00	432.78	0.267	0.36	11.347	B
D-BC	463.53	285.90	0.00	286.03	1.621	100.94	940.448	F
C-D	126.62	126.62	0.00	-	-	-	-	-
C-A	215.80	215.80	0.00	-	-	-	-	-
C-B	96.89	96.68	0.00	372.23	0.260	0.35	13.053	B

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	107.88	108.45	0.00	369.24	0.292	0.42	13.834	B
B-AD	274.19	274.81	0.00	282.94	0.969	39.76	504.469	F
A-B	266.10	266.10	0.00	-	-	-	-	-
A-C	274.19	274.19	0.00	-	-	-	-	-
A-D	89.90	90.16	0.00	510.68	0.176	0.22	8.567	A
D-A	94.39	94.73	0.00	440.61	0.214	0.28	10.420	B
D-BC	378.47	323.76	0.00	323.94	1.168	114.61	1180.726	F
C-D	103.38	103.38	0.00	-	-	-	-	-
C-A	176.20	176.20	0.00	-	-	-	-	-
C-B	79.11	79.43	0.00	380.97	0.208	0.27	11.951	B

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	90.34	90.77	0.00	382.57	0.236	0.31	12.357	B
B-AD	229.62	304.06	0.00	311.76	0.737	21.15	366.468	F
A-B	222.84	222.84	0.00	-	-	-	-	-
A-C	229.62	229.62	0.00	-	-	-	-	-
A-D	75.29	75.49	0.00	535.47	0.141	0.17	7.831	A
D-A	79.05	79.30	0.00	453.90	0.174	0.21	9.618	A
D-BC	316.95	357.97	0.00	361.11	0.878	104.36	1101.702	F
C-D	86.58	86.58	0.00	-	-	-	-	-
C-A	147.56	147.56	0.00	-	-	-	-	-
C-B	66.25	66.53	0.00	409.62	0.162	0.20	10.501	B

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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Filename: Wakefield Road - Lee Lane - Shaw Lane - Committed Scheme.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Lee Lane - Shaw Lane Committed Scheme

Report generation date: 15/12/2017 13:05:11

« Committed Layout - 2023 Predicted with Lidl, PM

» Junction Network

» Arms

» Traffic Flows

» Entry Flows

» Turning Proportions

» Vehicle Mix

» Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
Committed Layout - 2023 Predicted with Lidl				
Stream B-C	0.14	9.73	0.13	A
Stream B-AD	44.71	484.29	1.30	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	1.64	23.23	0.63	C
Stream D-A	0.31	11.66	0.24	B
Stream D-BC	36.83	447.06	1.31	F
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.36	9.21	0.27	A

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

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM " model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 13:05:10

File summary

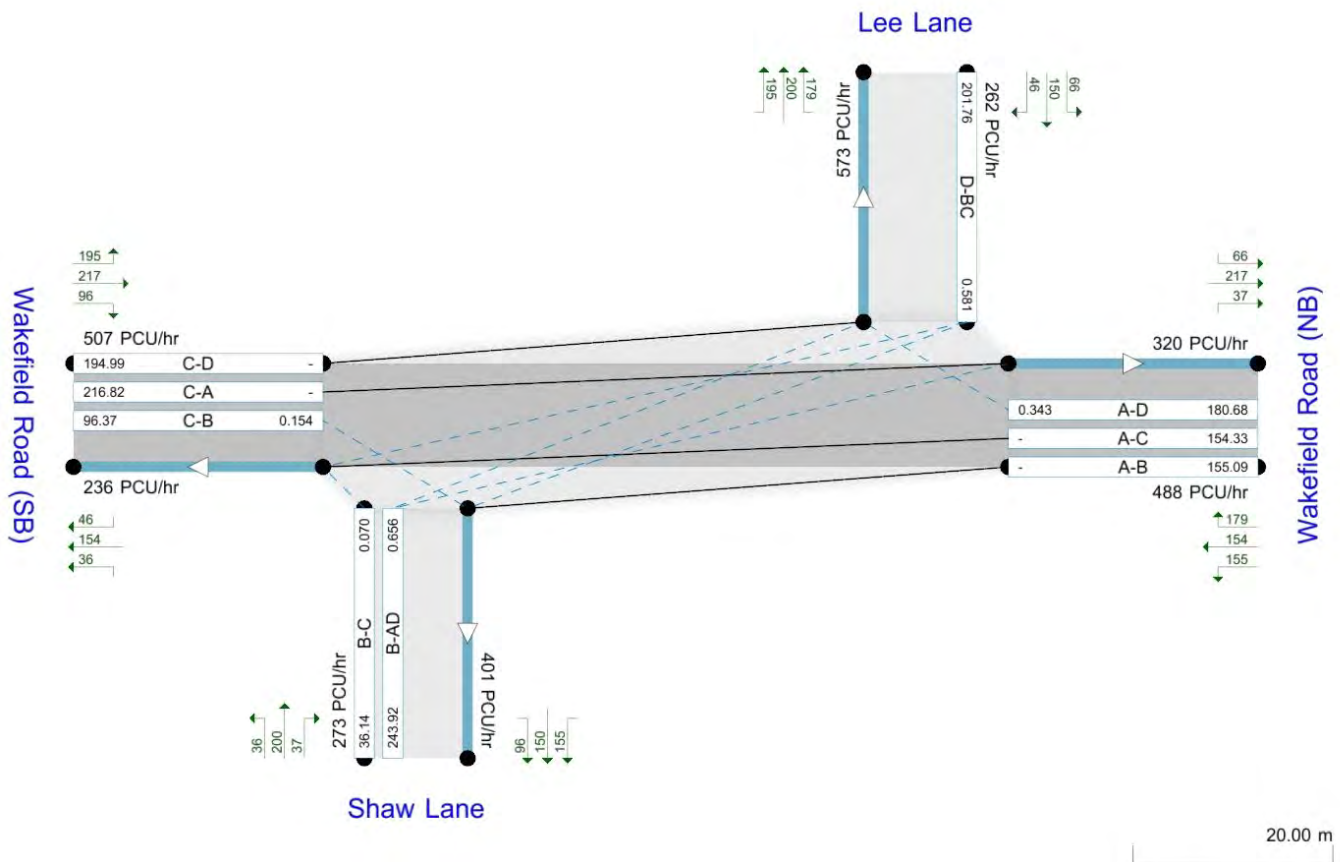
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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



Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RfC (%)
Time Segment: (16:30-16:45)
Showing Analysis Set "A1 - Committed Layout"; Demand Set "D11 - 2023 Predicted with Lidl, PM"

The junction diagram reflects the last run of ARCADY.

Committed Layout - 2023 Predicted with Lidl, 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
Committed Layout	N/A			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
2023 Predicted with Lidl, PM	2023 Predicted with Lidl	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	260.01	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Shaw Lane	Two lanes		3.90	3.85						✓		55	35
Lee Lane	Two lanes		3.88	4.06						✓		40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	556.295	0.101	0.256	-	-	-	0.161	0.366	0.161	0.101	0.256
1	B-C	704.176	0.108	0.273	-	-	-	-	-	-	0.108	0.273
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	723.432	-	-	-	0.280	0.111	0.280	-	0.111	-	-
1	D-BC	578.082	0.167	0.167	0.380	0.266	0.105	0.266	-	0.105	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	651.00	100.000
Shaw Lane	ONE HOUR	✓	372.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	675.00	100.000
Lee Lane	ONE HOUR	✓	356.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.000	206.000	205.000	240.000
	Shaw Lane	51.000	0.000	48.000	273.000
	Wakefield Road (SB)	288.000	128.000	0.000	259.000
	Lee Lane	88.000	205.000	63.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.32	0.31	0.37
	Shaw Lane	0.14	0.00	0.13	0.73
	Wakefield Road (SB)	0.43	0.19	0.00	0.38
	Lee Lane	0.25	0.58	0.18	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.13	9.73	0.14	A
B-AD	1.30	484.29	44.71	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.63	23.23	1.64	C
D-A	0.24	11.66	0.31	B
D-BC	1.31	447.06	36.83	F
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.27	9.21	0.36	A

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	36.14	35.84	0.00	514.70	0.070	0.07	7.512	A
B-AD	243.92	236.85	0.00	371.67	0.656	1.77	25.712	D
A-B	155.09	155.09	0.00	-	-	-	-	-
A-C	154.33	154.33	0.00	-	-	-	-	-
A-D	180.68	178.63	0.00	526.46	0.343	0.51	10.290	B
D-A	66.25	65.67	0.00	519.30	0.128	0.14	7.927	A
D-BC	201.76	196.52	0.00	347.49	0.581	1.31	23.303	C
C-D	194.99	194.99	0.00	-	-	-	-	-
C-A	216.82	216.82	0.00	-	-	-	-	-
C-B	96.37	95.64	0.00	626.57	0.154	0.18	6.773	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	43.15	43.04	0.00	464.64	0.093	0.10	8.537	A
B-AD	291.27	280.03	0.00	334.85	0.870	4.58	56.888	F
A-B	185.19	185.19	0.00	-	-	-	-	-
A-C	184.29	184.29	0.00	-	-	-	-	-
A-D	215.76	214.74	0.00	489.72	0.441	0.77	13.041	B
D-A	79.11	78.88	0.00	464.61	0.170	0.20	9.327	A
D-BC	240.93	233.36	0.00	301.03	0.800	3.20	48.861	E
C-D	232.84	232.84	0.00	-	-	-	-	-
C-A	258.91	258.91	0.00	-	-	-	-	-
C-B	115.07	114.84	0.00	594.95	0.193	0.24	7.495	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	52.85	52.70	0.00	429.71	0.123	0.14	9.544	A
B-AD	356.73	278.67	0.00	284.17	1.255	24.09	214.176	F
A-B	226.81	226.81	0.00	-	-	-	-	-
A-C	225.71	225.71	0.00	-	-	-	-	-
A-D	264.24	261.56	0.00	438.53	0.603	1.44	20.038	C
D-A	96.89	96.50	0.00	413.51	0.234	0.30	11.342	B
D-BC	295.07	230.57	0.00	237.29	1.244	19.33	208.930	F
C-D	285.16	285.16	0.00	-	-	-	-	-
C-A	317.09	317.09	0.00	-	-	-	-	-
C-B	140.93	140.52	0.00	551.13	0.256	0.34	8.758	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	52.85	52.84	0.00	422.61	0.125	0.14	9.735	A
B-AD	356.73	274.26	0.00	275.14	1.297	44.71	454.414	F
A-B	226.81	226.81	0.00	-	-	-	-	-
A-C	225.71	225.71	0.00	-	-	-	-	-
A-D	264.24	263.43	0.00	417.18	0.633	1.64	23.232	C
D-A	96.89	96.85	0.00	405.45	0.239	0.31	11.664	B
D-BC	295.07	225.05	0.00	226.08	1.305	36.83	447.065	F
C-D	285.16	285.16	0.00	-	-	-	-	-
C-A	317.09	317.09	0.00	-	-	-	-	-
C-B	140.93	140.86	0.00	531.60	0.265	0.36	9.210	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	43.15	43.27	0.00	432.71	0.100	0.11	9.248	A
B-AD	291.27	308.09	0.00	315.02	0.925	40.51	484.289	F
A-B	185.19	185.19	0.00	-	-	-	-	-
A-C	184.29	184.29	0.00	-	-	-	-	-
A-D	215.76	218.40	0.00	442.75	0.487	0.98	16.229	C
D-A	79.11	79.41	0.00	420.28	0.188	0.24	10.570	B
D-BC	240.93	269.51	0.00	276.88	0.870	29.69	432.453	F
C-D	232.84	232.84	0.00	-	-	-	-	-
C-A	258.91	258.91	0.00	-	-	-	-	-
C-B	115.07	115.43	0.00	551.93	0.208	0.27	8.254	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	36.14	36.23	0.00	448.73	0.081	0.09	8.730	A
B-AD	243.92	346.32	0.00	354.93	0.687	14.91	295.866	F
A-B	155.09	155.09	0.00	-	-	-	-	-
A-C	154.33	154.33	0.00	-	-	-	-	-
A-D	180.68	182.16	0.00	482.16	0.375	0.61	12.060	B
D-A	66.25	66.48	0.00	440.85	0.150	0.18	9.621	A
D-BC	201.76	310.64	0.00	324.84	0.621	2.47	195.400	F
C-D	194.99	194.99	0.00	-	-	-	-	-
C-A	216.82	216.82	0.00	-	-	-	-	-
C-B	96.37	96.64	0.00	590.62	0.163	0.20	7.291	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Wakefield Road - Lee Lane - Shaw Lane - Committed Scheme.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Lee Lane - Shaw Lane Committed Scheme

Report generation date: 15/12/2017 13:09:01

« Committed Layout - 2023 Predicted with Lidl, Saturday

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
Committed Layout - 2023 Predicted with Lidl				
Stream B-C	0.35	11.64	0.26	B
Stream B-AD	35.99	326.40	1.19	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.51	11.30	0.34	B
Stream D-A	0.40	11.85	0.29	B
Stream D-BC	21.35	227.32	1.11	F
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.24	8.38	0.20	A

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

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 13:09:00

File summary

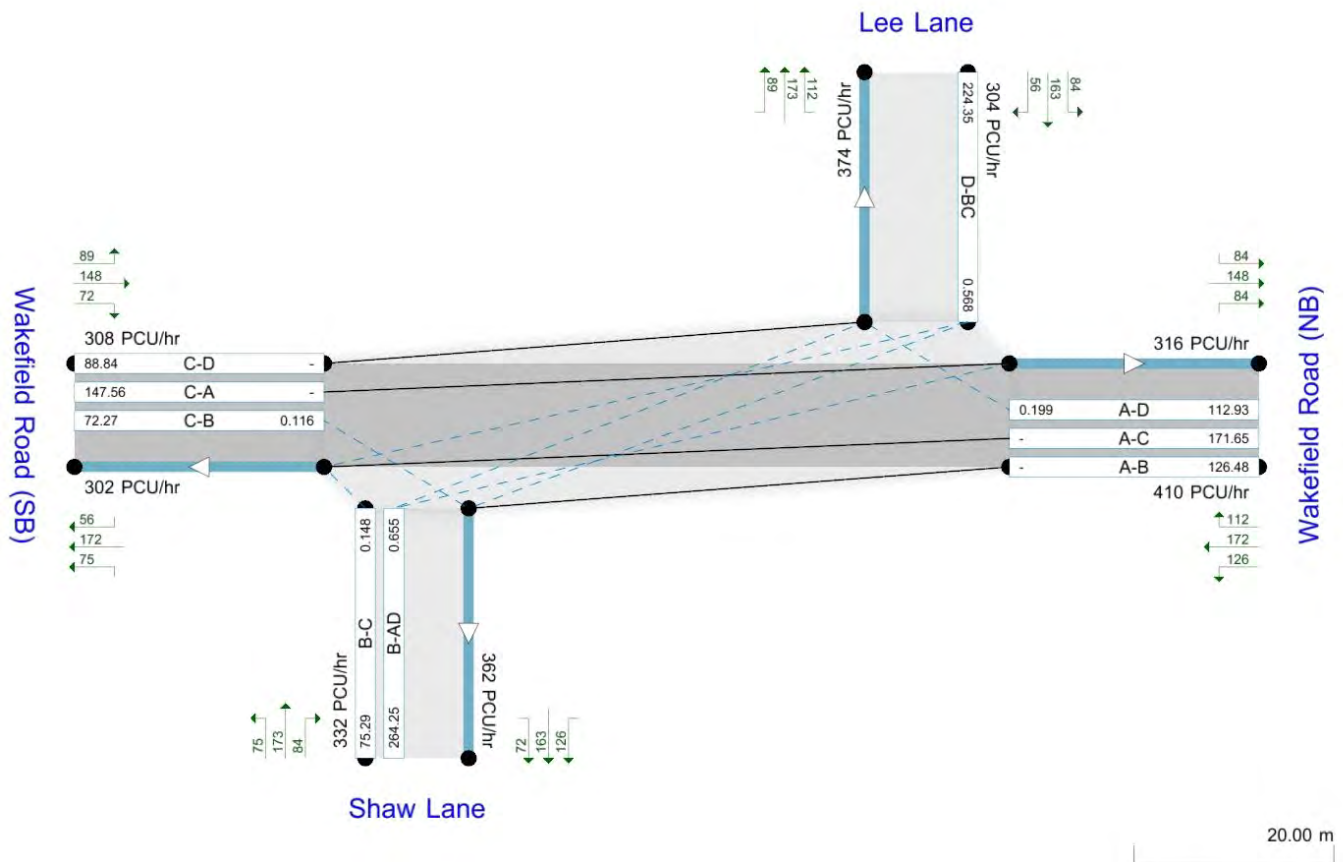
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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



Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFC (l).
Time Segment: (11:30-11:45)
Showing Analysis Set "A1 - Committed Layout"; Demand Set "D12 - 2023 Predicted with Lidl, Saturday"

The junction diagram reflects the last run of ARCADY.

Committed Layout - 2023 Predicted with Lidl, Saturday

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
Committed Layout	N/A			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
2023 Predicted with Lidl, Saturday	2023 Predicted with Lidl	Saturday		ONE HOUR	11:30	13:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	169.05	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Shaw Lane	Two lanes		3.90	3.85						✓		55	35
Lee Lane	Two lanes		3.88	4.06						✓		40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	556.295	0.101	0.256	-	-	-	0.161	0.366	0.161	0.101	0.256
1	B-C	704.176	0.108	0.273	-	-	-	-	-	-	0.108	0.273
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	723.432	-	-	-	0.280	0.111	0.280	-	0.111	-	-
1	D-BC	578.082	0.167	0.167	0.380	0.266	0.105	0.266	-	0.105	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	546.00	100.000
Shaw Lane	ONE HOUR	✓	451.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	410.00	100.000
Lee Lane	ONE HOUR	✓	411.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.000	168.000	228.000	150.000
	Shaw Lane	115.000	0.000	100.000	236.000
	Wakefield Road (SB)	196.000	96.000	0.000	118.000
	Lee Lane	113.000	222.000	76.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.31	0.42	0.27
	Shaw Lane	0.25	0.00	0.22	0.52
	Wakefield Road (SB)	0.48	0.23	0.00	0.29
	Lee Lane	0.27	0.54	0.18	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.26	11.64	0.35	B
B-AD	1.19	326.40	35.99	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.34	11.30	0.51	B
D-A	0.29	11.85	0.40	B
D-BC	1.11	227.32	21.35	F
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.20	8.38	0.24	A

Main Results for each time segment

Main results: (11:30-11:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	75.29	74.60	0.00	510.14	0.148	0.17	8.266	A
B-AD	264.25	257.17	0.00	403.40	0.655	1.77	23.791	C
A-B	126.48	126.48	0.00	-	-	-	-	-
A-C	171.65	171.65	0.00	-	-	-	-	-
A-D	112.93	111.95	0.00	568.87	0.199	0.25	7.863	A
D-A	85.07	84.33	0.00	539.01	0.158	0.19	7.905	A
D-BC	224.35	219.32	0.00	394.86	0.568	1.26	20.135	C
C-D	88.84	88.84	0.00	-	-	-	-	-
C-A	147.56	147.56	0.00	-	-	-	-	-
C-B	72.27	71.75	0.00	623.15	0.116	0.13	6.524	A

Main results: (11:45-12:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	89.90	89.63	0.00	463.16	0.194	0.24	9.631	A
B-AD	315.54	305.96	0.00	372.83	0.846	4.17	48.301	E
A-B	151.03	151.03	0.00	-	-	-	-	-
A-C	204.97	204.97	0.00	-	-	-	-	-
A-D	134.85	134.51	0.00	540.36	0.250	0.33	8.863	A
D-A	101.58	101.30	0.00	492.54	0.206	0.26	9.195	A
D-BC	267.90	262.49	0.00	357.81	0.749	2.61	36.093	E
C-D	106.08	106.08	0.00	-	-	-	-	-
C-A	176.20	176.20	0.00	-	-	-	-	-
C-B	86.30	86.14	0.00	590.93	0.146	0.17	7.130	A

Main results: (12:00-12:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	110.10	109.67	0.00	423.71	0.260	0.35	11.447	B
B-AD	386.46	322.08	0.00	330.98	1.168	20.26	162.586	F
A-B	184.97	184.97	0.00	-	-	-	-	-
A-C	251.03	251.03	0.00	-	-	-	-	-
A-D	165.15	164.53	0.00	501.00	0.330	0.48	10.678	B
D-A	124.42	123.87	0.00	436.10	0.285	0.39	11.507	B
D-BC	328.10	289.69	0.00	307.00	1.069	12.21	118.753	F
C-D	129.92	129.92	0.00	-	-	-	-	-
C-A	215.80	215.80	0.00	-	-	-	-	-
C-B	105.70	105.43	0.00	546.85	0.193	0.24	8.150	A

Main results: (12:15-12:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	110.10	110.08	0.00	419.39	0.263	0.35	11.636	B
B-AD	386.46	323.56	0.00	325.47	1.187	35.99	326.402	F
A-B	184.97	184.97	0.00	-	-	-	-	-
A-C	251.03	251.03	0.00	-	-	-	-	-
A-D	165.15	165.04	0.00	483.40	0.342	0.51	11.302	B
D-A	124.42	124.37	0.00	428.06	0.291	0.40	11.850	B
D-BC	328.10	291.56	0.00	296.59	1.106	21.35	227.319	F
C-D	129.92	129.92	0.00	-	-	-	-	-
C-A	215.80	215.80	0.00	-	-	-	-	-
C-B	105.70	105.67	0.00	535.22	0.197	0.24	8.381	A

Main results: (12:30-12:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	89.90	90.25	0.00	434.22	0.207	0.26	10.478	B
B-AD	315.54	351.51	0.00	361.35	0.873	26.99	320.995	F
A-B	151.03	151.03	0.00	-	-	-	-	-
A-C	204.97	204.97	0.00	-	-	-	-	-
A-D	134.85	135.41	0.00	502.94	0.268	0.37	9.811	A
D-A	101.58	101.98	0.00	439.37	0.231	0.31	10.682	B
D-BC	267.90	320.65	0.00	335.78	0.798	8.16	175.498	F
C-D	106.08	106.08	0.00	-	-	-	-	-
C-A	176.20	176.20	0.00	-	-	-	-	-
C-B	86.30	86.55	0.00	566.60	0.152	0.18	7.505	A

Main results: (12:45-13:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	75.29	75.56	0.00	463.85	0.162	0.20	9.279	A
B-AD	264.25	362.37	0.00	398.54	0.663	2.46	132.258	F
A-B	126.48	126.48	0.00	-	-	-	-	-
A-C	171.65	171.65	0.00	-	-	-	-	-
A-D	112.93	113.34	0.00	539.35	0.209	0.27	8.460	A
D-A	85.07	85.48	0.00	506.35	0.168	0.20	8.563	A
D-BC	224.35	250.66	0.00	377.24	0.595	1.58	33.656	D
C-D	88.84	88.84	0.00	-	-	-	-	-
C-A	147.56	147.56	0.00	-	-	-	-	-
C-B	72.27	72.46	0.00	613.27	0.118	0.13	6.658	A

Junctions 8				
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Report generation date: 19/12/2017 10:03:17

« Existing Layout - 2023 Predicted with Lidl, AM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2023 Predicted with Lidl				
Stream B-C	0.14	13.91	0.12	B
Stream B-A	1.49	29.37	0.61	D
Stream C-AB	0.01	4.72	0.01	A
Stream C-A	-	-	-	-
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM " model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 19/12/2017 10:03:16

File summary

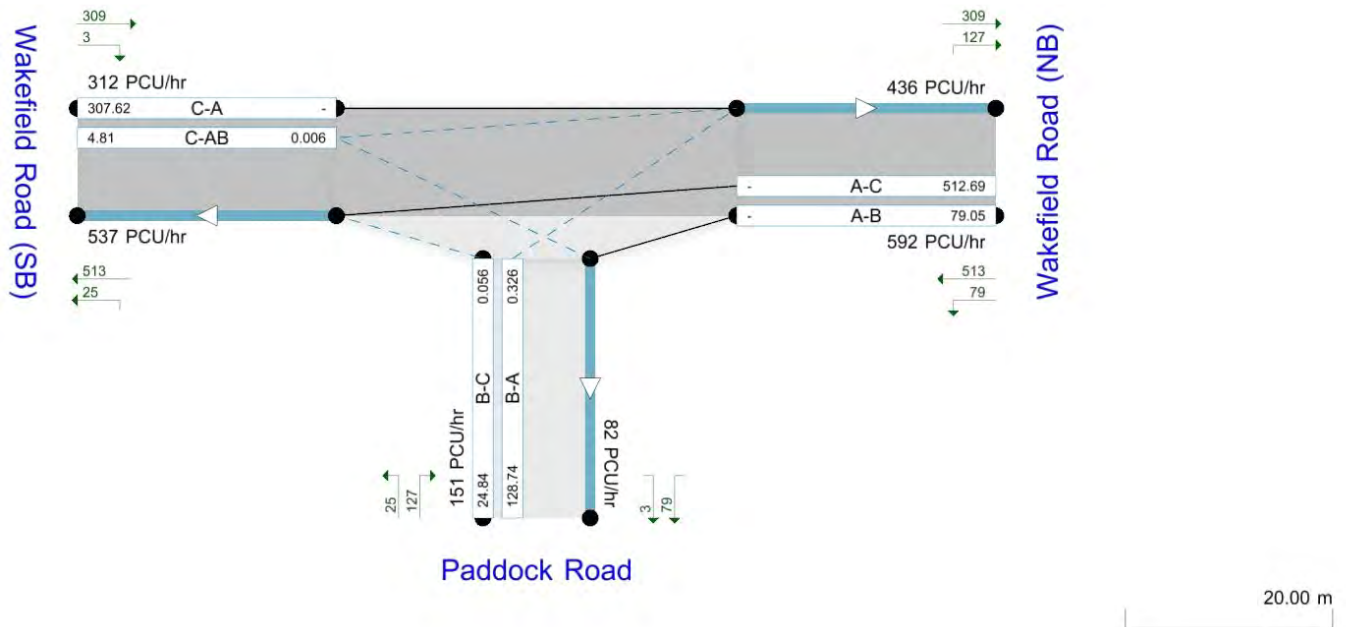
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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



Value Comparison Overlay Boxes Enabled
Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFC (i)
Time Segment: (07:30-07:45)
Showing Analysis Set "A1 - Existing Layout", Demand Set "D10 - 2023 Predicted with Lidl, AM"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2023 Predicted with Lidl, AM

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
Existing Layout	N/A			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
2023 Predicted with Lidl, AM	2023 Predicted with Lidl	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	26.10	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	576.076	0.096	0.243	0.153	0.348
1	B-C	622.807	0.088	0.221	-	-
1	C-B	718.741	0.255	0.255	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	786.00	100.000
Paddock Road	ONE HOUR	✓	204.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	415.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	105.000	681.000
	Paddock Road	171.000	0.000	33.000
	Wakefield Road (SB)	411.000	4.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.13	0.87
	Paddock Road	0.84	0.00	0.16
	Wakefield Road (SB)	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

From	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.12	13.91	0.14	B
B-A	0.61	29.37	1.49	D
C-AB	0.01	4.72	0.01	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.84	24.61	0.00	447.17	0.056	0.06	8.515	A
B-A	128.74	126.85	0.00	395.00	0.326	0.47	13.335	B
C-AB	4.81	4.79	0.00	774.22	0.006	0.01	4.716	A
C-A	307.62	307.62	0.00	-	-	-	-	-
A-B	79.05	79.05	0.00	-	-	-	-	-
A-C	512.69	512.69	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	29.67	29.58	0.00	396.26	0.075	0.08	9.815	A
B-A	153.73	152.72	0.00	359.57	0.428	0.72	17.315	C
C-AB	6.36	6.35	0.00	788.49	0.008	0.01	4.643	A
C-A	366.71	366.71	0.00	-	-	-	-	-
A-B	94.39	94.39	0.00	-	-	-	-	-
A-C	612.21	612.21	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	36.33	36.11	0.00	299.59	0.121	0.14	13.652	B
B-A	188.27	185.43	0.00	310.14	0.607	1.44	28.230	D
C-AB	8.98	8.97	0.00	809.34	0.011	0.01	4.544	A
C-A	447.94	447.94	0.00	-	-	-	-	-
A-B	115.61	115.61	0.00	-	-	-	-	-
A-C	749.79	749.79	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	36.33	36.32	0.00	295.18	0.123	0.14	13.907	B
B-A	188.27	188.07	0.00	310.11	0.607	1.49	29.368	D
C-AB	8.99	8.99	0.00	809.35	0.011	0.01	4.547	A
C-A	447.94	447.94	0.00	-	-	-	-	-
A-B	115.61	115.61	0.00	-	-	-	-	-
A-C	749.79	749.79	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	29.67	29.89	0.00	392.41	0.076	0.08	9.936	A
B-A	153.73	156.59	0.00	359.59	0.428	0.77	17.971	C
C-AB	6.37	6.38	0.00	788.50	0.008	0.01	4.650	A
C-A	366.71	366.71	0.00	-	-	-	-	-
A-B	94.39	94.39	0.00	-	-	-	-	-
A-C	612.21	612.21	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.84	24.94	0.00	445.07	0.056	0.06	8.570	A
B-A	128.74	129.85	0.00	395.01	0.326	0.49	13.634	B
C-AB	4.83	4.83	0.00	774.23	0.006	0.01	4.722	A
C-A	307.61	307.61	0.00	-	-	-	-	-
A-B	79.05	79.05	0.00	-	-	-	-	-
A-C	512.69	512.69	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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Filename: Wakefield Road - Paddock Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Paddock Road

Report generation date: 19/12/2017 10:03:51

« Existing Layout - 2023 Predicted with Lidl, PM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2023 Predicted with Lidl				
Stream B-C	8.45	309.29	1.10	F
Stream B-A	22.59	230.93	1.10	F
Stream C-AB	0.10	4.74	0.06	A
Stream C-A	-	-	-	-
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 19/12/2017 10:03:50

File summary

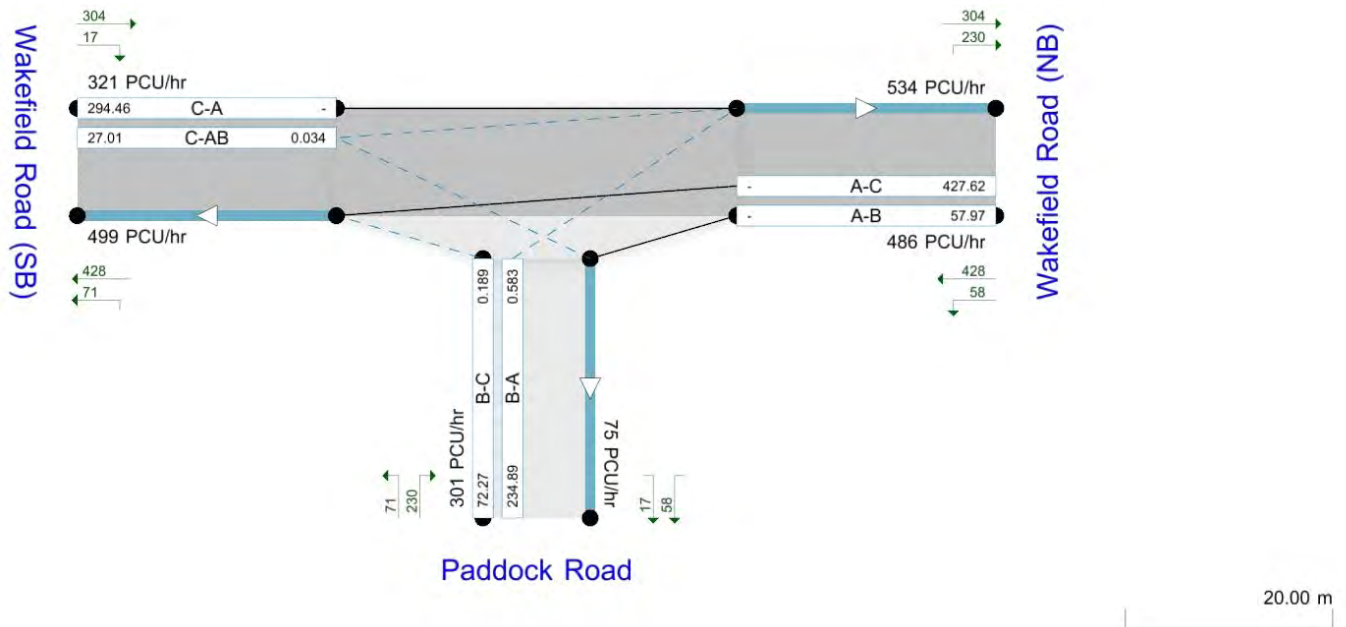
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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



Value Comparison Overlay Boxes Enabled
Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFC (i)
Time Segment: (16:30-16:45)
Showing Analysis Set "A1 - Existing Layout", Demand Set "D11 - 2023 Predicted with Lidl, PM"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2023 Predicted with Lidl, 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
Existing Layout	N/A			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
2023 Predicted with Lidl, PM	2023 Predicted with Lidl	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	226.68	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	568.322	0.095	0.240	0.151	0.343
1	B-C	639.353	0.090	0.227	-	-
1	C-B	718.741	0.255	0.255	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	645.00	100.000
Paddock Road	ONE HOUR	✓	408.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	427.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	77.000	568.000
	Paddock Road	312.000	0.000	96.000
	Wakefield Road (SB)	404.000	23.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.12	0.88
	Paddock Road	0.76	0.00	0.24
	Wakefield Road (SB)	0.95	0.05	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

From	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	1.10	309.29	8.45	F
B-A	1.10	230.93	22.59	F
C-AB	0.06	4.74	0.10	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	72.27	71.36	0.00	382.71	0.189	0.23	11.530	B
B-A	234.89	229.60	0.00	403.21	0.583	1.32	20.179	C
C-AB	27.01	26.82	0.00	793.50	0.034	0.05	4.732	A
C-A	294.46	294.46	0.00	-	-	-	-	-
A-B	57.97	57.97	0.00	-	-	-	-	-
A-C	427.62	427.62	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	86.30	85.28	0.00	258.77	0.334	0.48	20.630	C
B-A	280.48	274.56	0.00	366.42	0.765	2.80	36.945	E
C-AB	35.38	35.31	0.00	810.58	0.044	0.06	4.682	A
C-A	348.48	348.48	0.00	-	-	-	-	-
A-B	69.22	69.22	0.00	-	-	-	-	-
A-C	510.62	510.62	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	105.70	83.47	0.00	95.74	1.104	6.04	189.244	F
B-A	343.52	300.17	0.00	315.51	1.089	13.64	124.690	F
C-AB	52.30	52.15	0.00	845.87	0.062	0.10	4.582	A
C-A	417.83	417.83	0.00	-	-	-	-	-
A-B	84.78	84.78	0.00	-	-	-	-	-
A-C	625.38	625.38	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	105.70	96.06	0.00	101.95	1.037	8.45	309.294	F
B-A	343.52	307.71	0.00	312.52	1.099	22.59	230.928	F
C-AB	52.36	52.36	0.00	845.94	0.062	0.10	4.590	A
C-A	417.78	417.78	0.00	-	-	-	-	-
A-B	84.78	84.78	0.00	-	-	-	-	-
A-C	625.38	625.38	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	86.30	101.47	0.00	113.52	0.760	4.66	235.213	F
B-A	280.48	335.65	0.00	350.51	0.800	8.80	177.446	F
C-AB	35.44	35.59	0.00	810.67	0.044	0.07	4.694	A
C-A	348.43	348.43	0.00	-	-	-	-	-
A-B	69.22	69.22	0.00	-	-	-	-	-
A-C	510.62	510.62	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	72.27	89.79	0.00	334.75	0.216	0.28	15.727	C
B-A	234.89	263.91	0.00	397.28	0.591	1.54	32.058	D
C-AB	27.09	27.16	0.00	793.57	0.034	0.05	4.739	A
C-A	294.37	294.37	0.00	-	-	-	-	-
A-B	57.97	57.97	0.00	-	-	-	-	-
A-C	427.62	427.62	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution				

Filename: Wakefield Road - Paddock Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Paddock Road

Report generation date: 19/12/2017 10:04:21

« Existing Layout - 2023 Predicted with Lidl, Saturday

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2023 Predicted with Lidl				
Stream B-C	0.04	12.08	0.04	B
Stream B-A	1.44	25.76	0.60	D
Stream C-AB	0.03	4.60	0.02	A
Stream C-A	-	-	-	-
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00
 "D2 - 2017 Existing, PM" model duration: 16:30 - 18:00
 "D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00
 "D4 - 2023 Base, AM" model duration: 07:30 - 09:00
 "D5 - 2023 Base, PM" model duration: 16:30 - 18:00
 "D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00
 "D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00
 "D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00
 "D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00
 "D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00
 "D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00
 "D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 19/12/2017 10:04:20

File summary

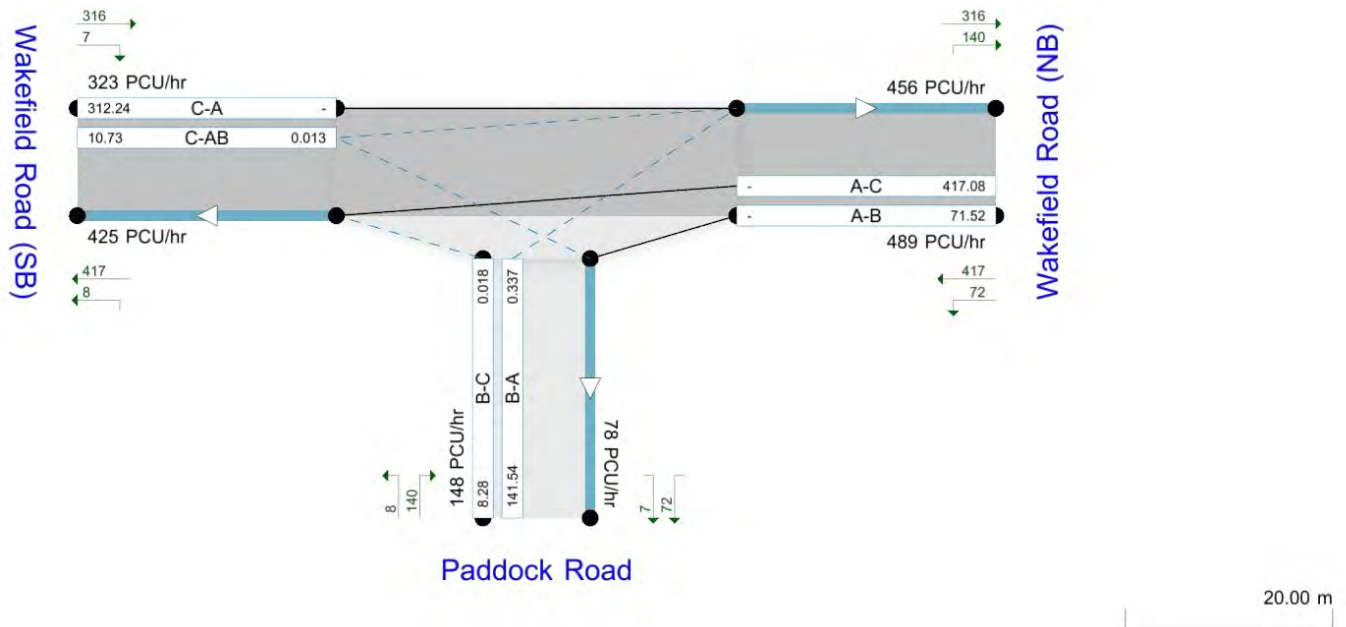
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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



The junction diagram reflects the last run of ARCADY.

Existing Layout - 2023 Predicted with Lidl, Saturday

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
Existing Layout	N/A			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
2023 Predicted with Lidl, Saturday	2023 Predicted with Lidl	Saturday		ONE HOUR	11:30	13:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	23.47	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	581.016	0.097	0.245	0.154	0.351
1	B-C	612.263	0.086	0.218	-	-
1	C-B	718.741	0.255	0.255	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road (NB)	ONE HOUR	✓	649.00	100.000
Paddock Road	ONE HOUR	✓	199.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	429.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	95.000	554.000
	Paddock Road	188.000	0.000	11.000
	Wakefield Road (SB)	420.000	9.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.15	0.85
	Paddock Road	0.94	0.00	0.06
	Wakefield Road (SB)	0.98	0.02	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

From	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.04	12.08	0.04	B
B-A	0.60	25.76	1.44	D
C-AB	0.02	4.60	0.03	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (11:30-11:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.28	8.21	0.00	454.79	0.018	0.02	8.060	A
B-A	141.54	139.55	0.00	420.51	0.337	0.50	12.727	B
C-AB	10.73	10.67	0.00	800.37	0.013	0.02	4.595	A
C-A	312.24	312.24	0.00	-	-	-	-	-
A-B	71.52	71.52	0.00	-	-	-	-	-
A-C	417.08	417.08	0.00	-	-	-	-	-

Main results: (11:45-12:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	9.89	9.86	0.00	406.22	0.024	0.02	9.082	A
B-A	169.01	168.02	0.00	389.31	0.434	0.74	16.192	C
C-AB	14.09	14.07	0.00	818.72	0.017	0.02	4.512	A
C-A	371.57	371.57	0.00	-	-	-	-	-
A-B	85.40	85.40	0.00	-	-	-	-	-
A-C	498.03	498.03	0.00	-	-	-	-	-

Main results: (12:00-12:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	12.11	12.05	0.00	314.08	0.039	0.04	11.915	B
B-A	206.99	204.39	0.00	346.14	0.598	1.40	24.936	C
C-AB	19.67	19.63	0.00	844.70	0.023	0.03	4.407	A
C-A	452.67	452.67	0.00	-	-	-	-	-
A-B	104.60	104.60	0.00	-	-	-	-	-
A-C	609.97	609.97	0.00	-	-	-	-	-

Main results: (12:15-12:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	12.11	12.11	0.00	310.15	0.039	0.04	12.078	B
B-A	206.99	206.82	0.00	346.13	0.598	1.44	25.755	D
C-AB	19.68	19.68	0.00	844.71	0.023	0.03	4.410	A
C-A	452.66	452.66	0.00	-	-	-	-	-
A-B	104.60	104.60	0.00	-	-	-	-	-
A-C	609.97	609.97	0.00	-	-	-	-	-

Main results: (12:30-12:45)

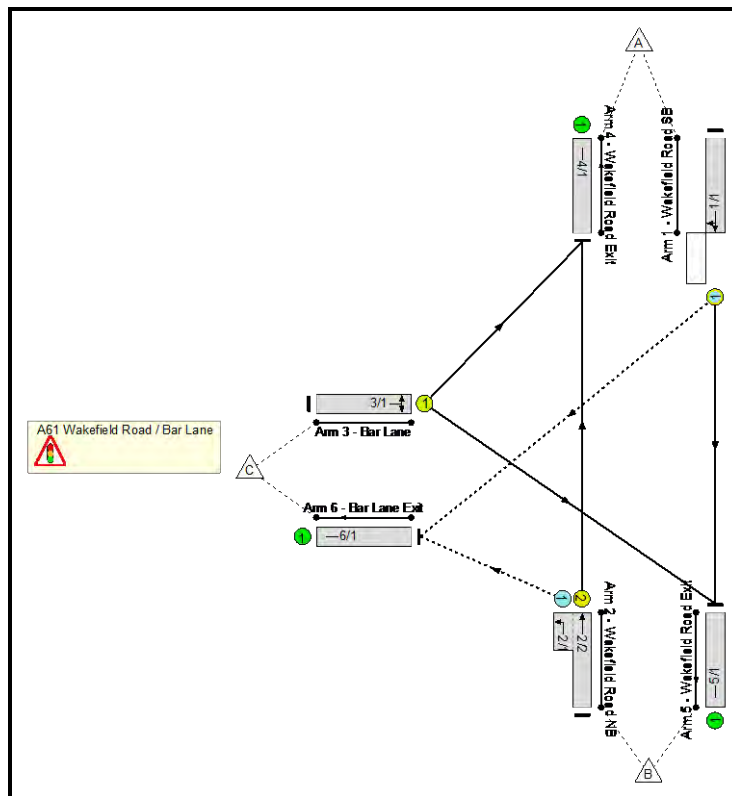
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	9.89	9.95	0.00	402.65	0.025	0.03	9.169	A
B-A	169.01	171.60	0.00	389.31	0.434	0.79	16.723	C
C-AB	14.11	14.14	0.00	818.75	0.017	0.02	4.519	A
C-A	371.55	371.55	0.00	-	-	-	-	-
A-B	85.40	85.40	0.00	-	-	-	-	-
A-C	498.03	498.03	0.00	-	-	-	-	-

Main results: (12:45-13:00)

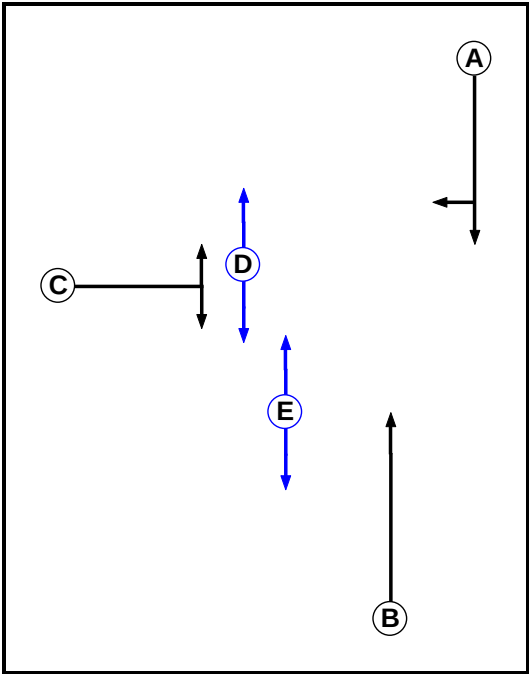
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.28	8.31	0.00	452.64	0.018	0.02	8.103	A
B-A	141.54	142.63	0.00	420.50	0.337	0.52	13.005	B
C-AB	10.76	10.78	0.00	800.39	0.013	0.02	4.600	A
C-A	312.21	312.21	0.00	-	-	-	-	-
A-B	71.52	71.52	0.00	-	-	-	-	-
A-C	417.08	417.08	0.00	-	-	-	-	-

Full Input Data And Results**User and Project Details**

Project:	Wakefield Road, Mapplewell
Title:	2017 Existing
Location:	
File name:	Wakefield Road - Bar Lane.lsg3x
Author:	John Turner
Company:	Bryan G Hall
Address:	
Notes:	Wakefield Road/Bar Lane

Network Layout Diagram

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Pedestrian		6	6
E	Pedestrian		6	6

Phase Intergreens Matrix

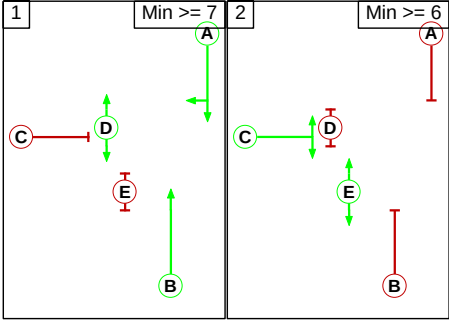
	Starting Phase					
Terminating Phase		A	B	C	D	E
	A		-	5	-	9
	B	-		6	-	-
	C	5	5		5	-
	D	-	-	7		-
	E	8	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B D
2	C E

Full Input Data And Results

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
	1	9
2	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A61 Wakefield Road / Bar Lane											
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 (Wakefield Road SB)	6/1 (Right)	1439	0	2/2	1.09	All	4.00	4.00	0.50	4	2.00
2/1 (Wakefield Road NB)	6/1 (Left)	1439	0	1/1	1.09	To 6/1 (Right)	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: A61 Wakefield Road / Bar Lane

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 (Wakefield Road SB)	O	A	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 5 Ahead	Inf
2/1 (Wakefield Road NB)	O		2	3	3.0	Geom	-	4.00	0.00	Y	Arm 6 Right	12.50
											Arm 6 Left	100.00
2/2 (Wakefield Road NB)	U	B	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 4 Ahead	Inf
3/1 (Bar Lane)	U	C	2	3	60.0	Geom	-	3.70	0.00	Y	Arm 4 Left	12.50
											Arm 5 Right	8.00
4/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Bar Lane Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
10: '2023 Predicted with Lidl AM'	07:45	08:45	01:00	
11: '2023 Predicted with Lidl PM'	16:45	17:45	01:00	
12: '2023 Predicted with Lidl Saturday'	11:45	12:45	01:00	

Scenario 10: '2023 Predicted with Lidl AM' (FG10: '2023 Predicted with Lidl AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin	A	B	C	Tot.	
	A	0	584	17	601
	B	736	0	413	1149
	C	43	524	0	567
	Tot.	779	1108	430	2317

Traffic Lane Flows

Lane	Scenario 10: 2023 Predicted with Lidl AM
Junction: A61 Wakefield Road / Bar Lane	
1/1	601
2/1 (short)	413
2/2 (with short)	1149(In) 736(Out)
3/1	567
4/1	779
5/1	1108
6/1	430

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane										
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 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead	Inf	97.2 %	1948	1948		
				Arm 6 Right	12.50	2.8 %				
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985		
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995		
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left	12.50	7.6 %	1679	1679		
				Arm 5 Right	8.00	92.4 %				
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf		
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf		
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf		

Scenario 11: '2023 Predicted with Lidl PM' (FG11: '2023 Predicted with Lidl PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
Origin	A	A	B	C	Tot.
	A	0	712	38	750
	B	656	0	583	1239
	C	34	468	0	502
	Tot.	690	1180	621	2491

Traffic Lane Flows

Lane	Scenario 11: 2023 Predicted with Lidl PM
Junction: A61 Wakefield Road / Bar Lane	
1/1	750
2/1 (short)	583
2/2 (with short)	1239(In) 656(Out)
3/1	502
4/1	690
5/1	1180
6/1	621

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane								
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 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead	Inf	94.9 %	1943	1943
				Arm 6 Right	12.50	5.1 %		
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left	12.50	6.8 %	1678	1678
				Arm 5 Right	8.00	93.2 %		
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 12: '2023 Predicted with Lidl Saturday' (FG12: '2023 Predicted with Lidl Saturday', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
Origin		A	B	C	Tot.
	A	0	592	37	629
	B	633	0	487	1120
	C	40	458	0	498
	Tot.	673	1050	524	2247

Traffic Lane Flows

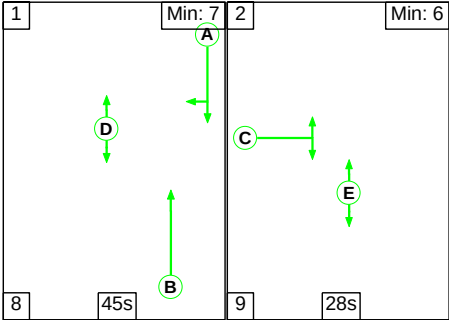
Lane	Scenario 12: 2023 Predicted with Lidl Saturday
Junction: A61 Wakefield Road / Bar Lane	
1/1	629
2/1 (short)	487
2/2 (with short)	1120(In) 633(Out)
3/1	498
4/1	673
5/1	1050
6/1	524

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane										
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 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead	Inf	94.1 %	1941	1941		
				Arm 6 Right	12.50	5.9 %				
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985		
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995		
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left	12.50	8.0 %	1679	1679		
				Arm 5 Right	8.00	92.0 %				
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf		
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf		
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf		

Scenario 7: '2023 Predicted AM' (FG7: '2023 Predicted AM', Plan 1: 'Network Control Plan 1')

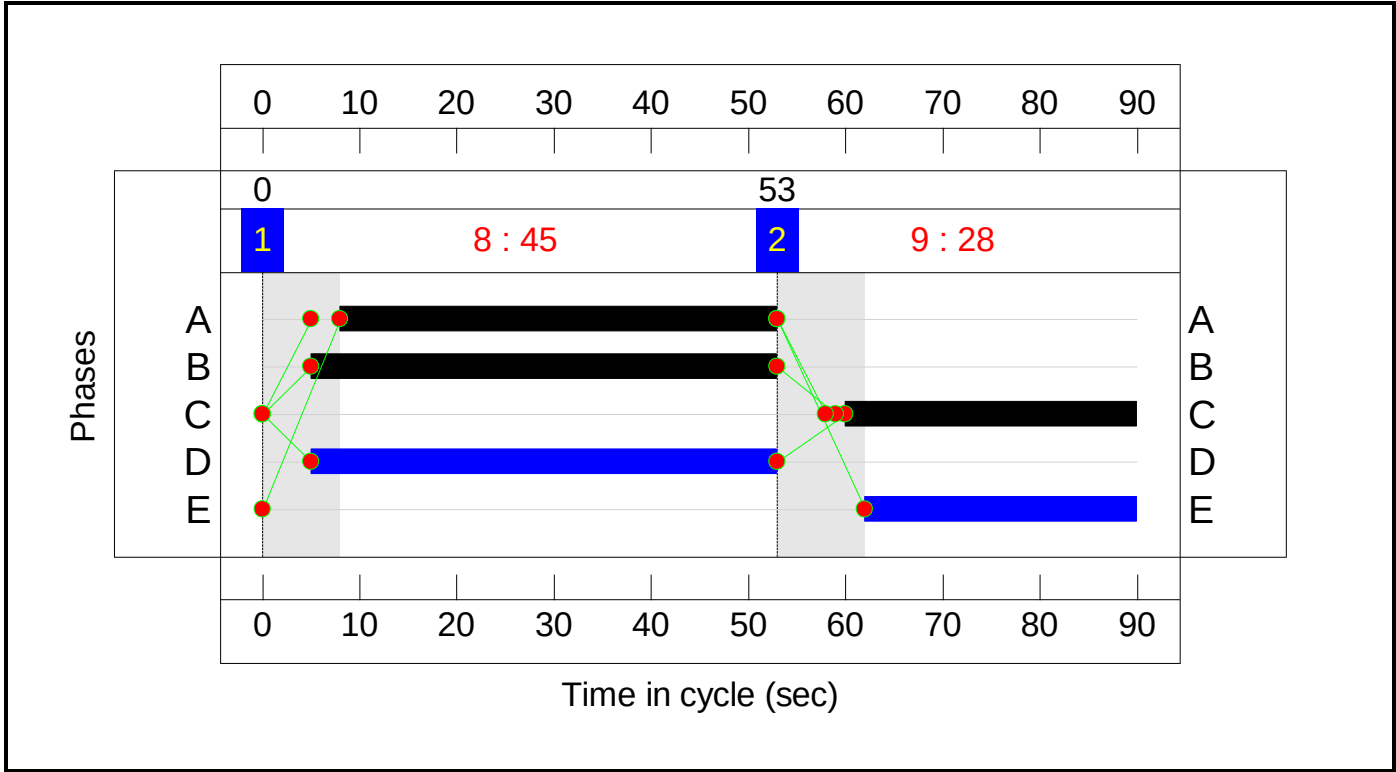
Stage Sequence Diagram



Stage Timings

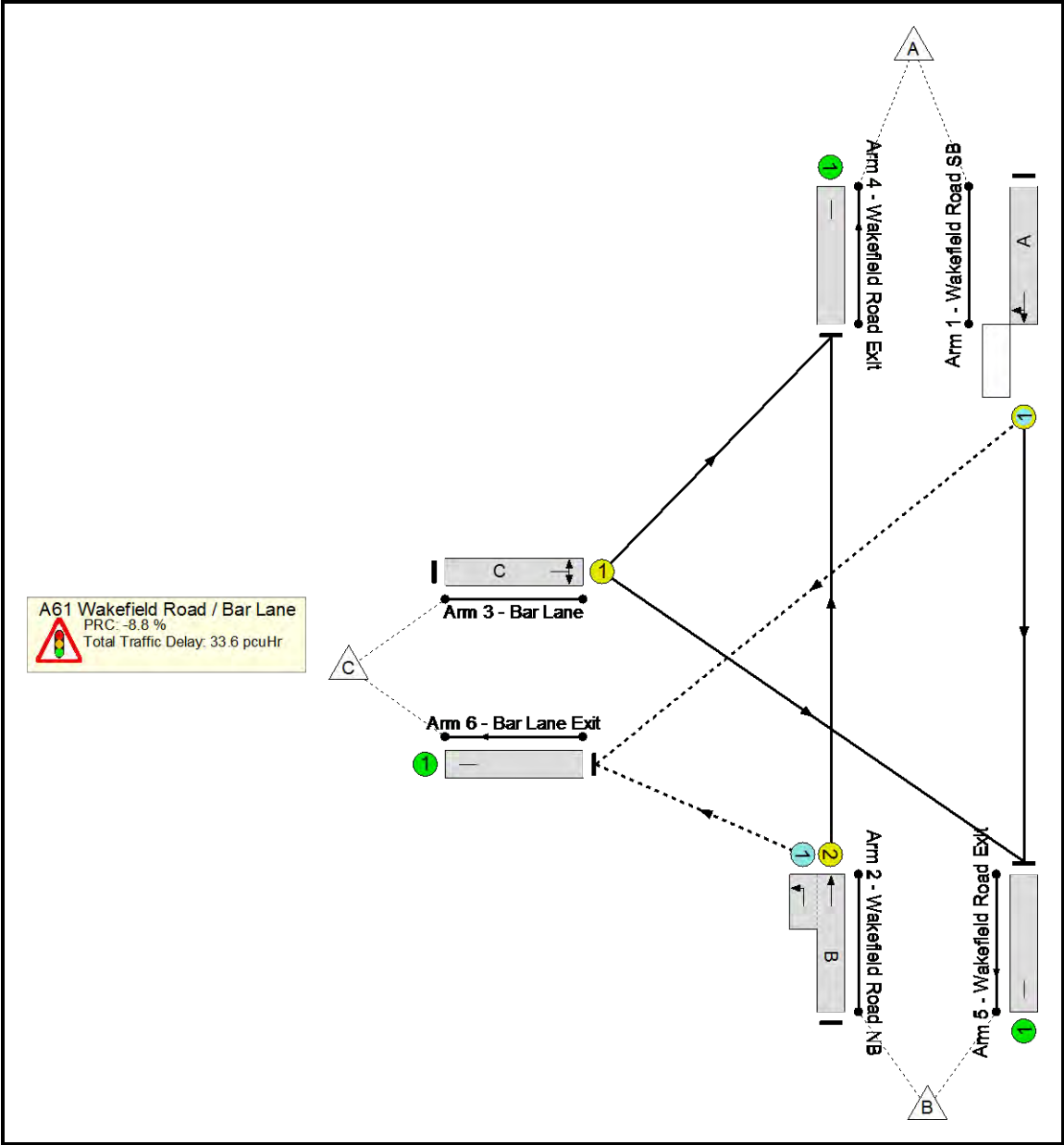
Stage	1	2
Duration	45	28
Change Point	0	53

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

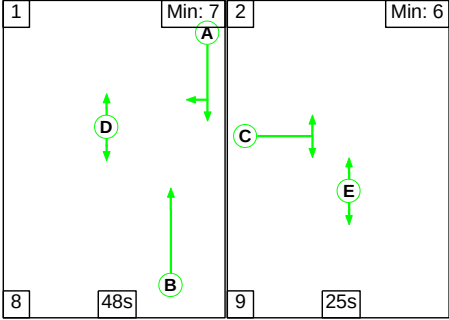


Full Input Data And Results

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: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	97.9%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	97.9%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	45	-	594	1949	996	59.6%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	48	-	1138	1995:1985	1162	97.9%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	30	-	563	1678	578	97.4%
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: 2017 Existing	-	-	369	59	0	12.3	21.3	0.0	33.6	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	369	59	0	12.3	21.3	0.0	33.6	-	-	-	-
1/1	594	594	16	0	0	2.6	0.7	0.0	3.3	20.0	10.4	0.7	11.1
2/2+2/1	1138	1138	354	59	0	5.2	11.9	-	17.1	54.1	26.1	11.9	38.0
3/1	563	563	-	-	-	4.6	8.7	-	13.2	84.7	13.8	8.7	22.5
C1 PRC for Signalled Lanes (%): -8.8 Total Delay for Signalled Lanes (pcuHr): 33.63 Cycle Time (s): 90 PRC Over All Lanes (%): -8.8 Total Delay Over All Lanes(pcuHr): 33.63													

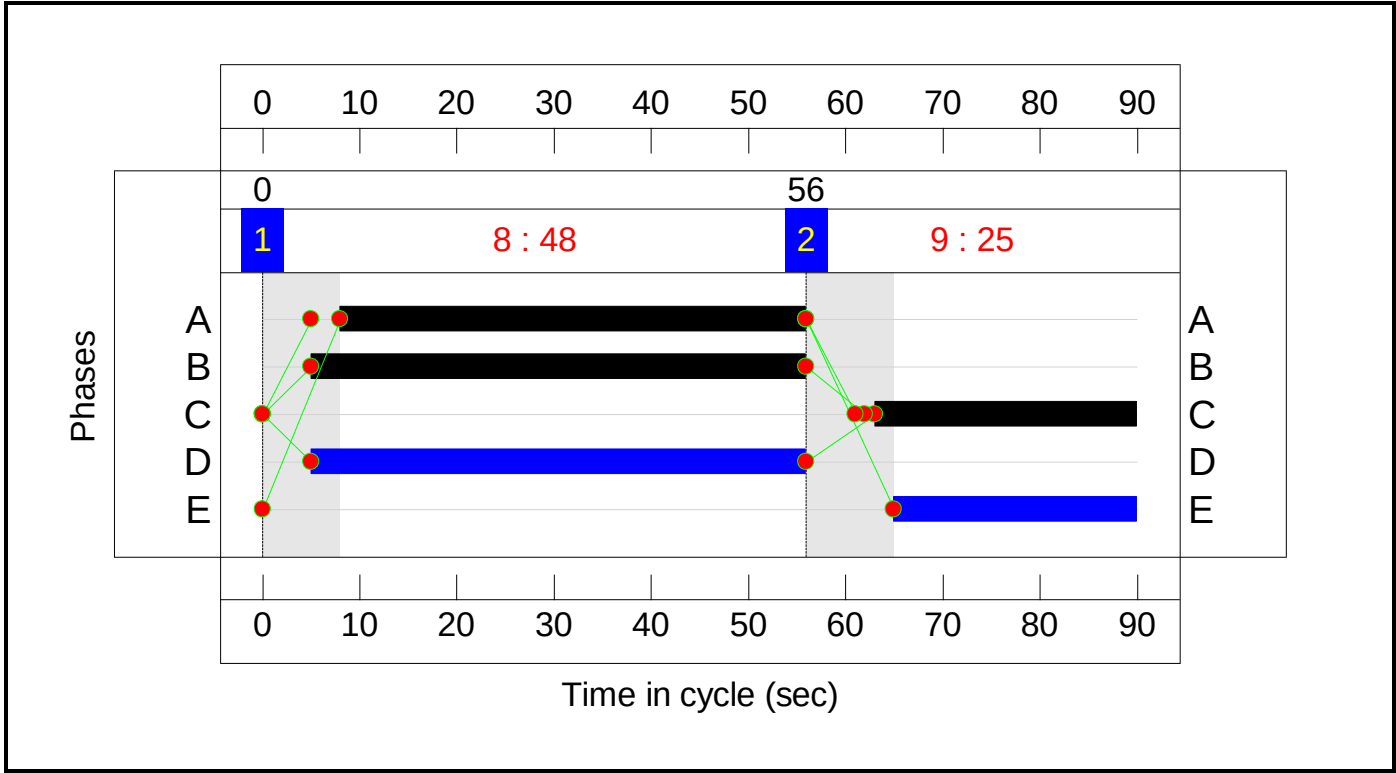
Stage Sequence Diagram



Stage Timings

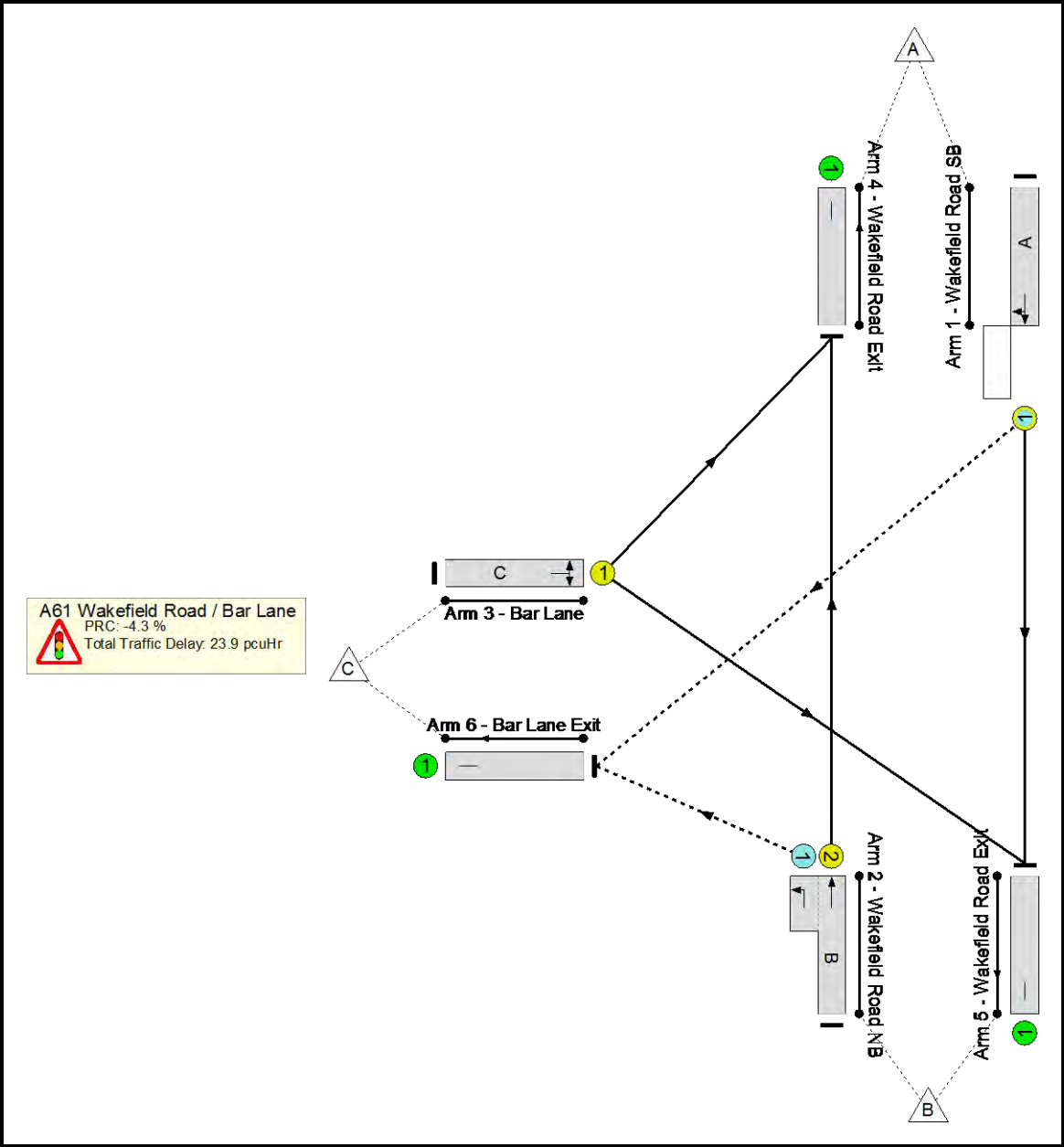
Stage	1	2
Duration	48	25
Change Point	0	56

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

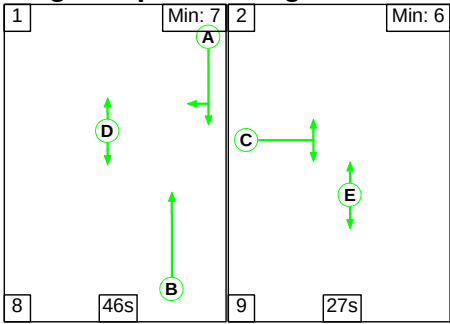
Network Results

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: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	93.8%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	93.8%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	48	-	691	1947	1060	65.2%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	51	-	1195	1995:1985	1274	93.8%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	27	-	488	1675	521	93.6%
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: 2017 Existing	-	-	505	101	1	10.9	13.0	0.0	23.9	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	505	101	1	10.9	13.0	0.0	23.9	-	-	-	-
1/1	691	691	23	0	1	2.8	0.9	0.0	3.7	19.3	12.1	0.9	13.0
2/2+2/1	1195	1195	482	101	0	4.0	6.5	-	10.6	31.8	24.2	6.5	30.8
3/1	488	488	-	-	-	4.1	5.5	-	9.6	70.9	11.8	5.5	17.3
C1 PRC for Signalled Lanes (%): -4.3 Total Delay for Signalled Lanes (pcuHr): 23.87 Cycle Time (s): 90 PRC Over All Lanes (%): -4.3 Total Delay Over All Lanes(pcuHr): 23.87													

Full Input Data And Results

Scenario 9: '2023 Predicted Saturday' (FG9: '2023 Predicted Saturday', Plan 1: 'Network Control Plan 1')

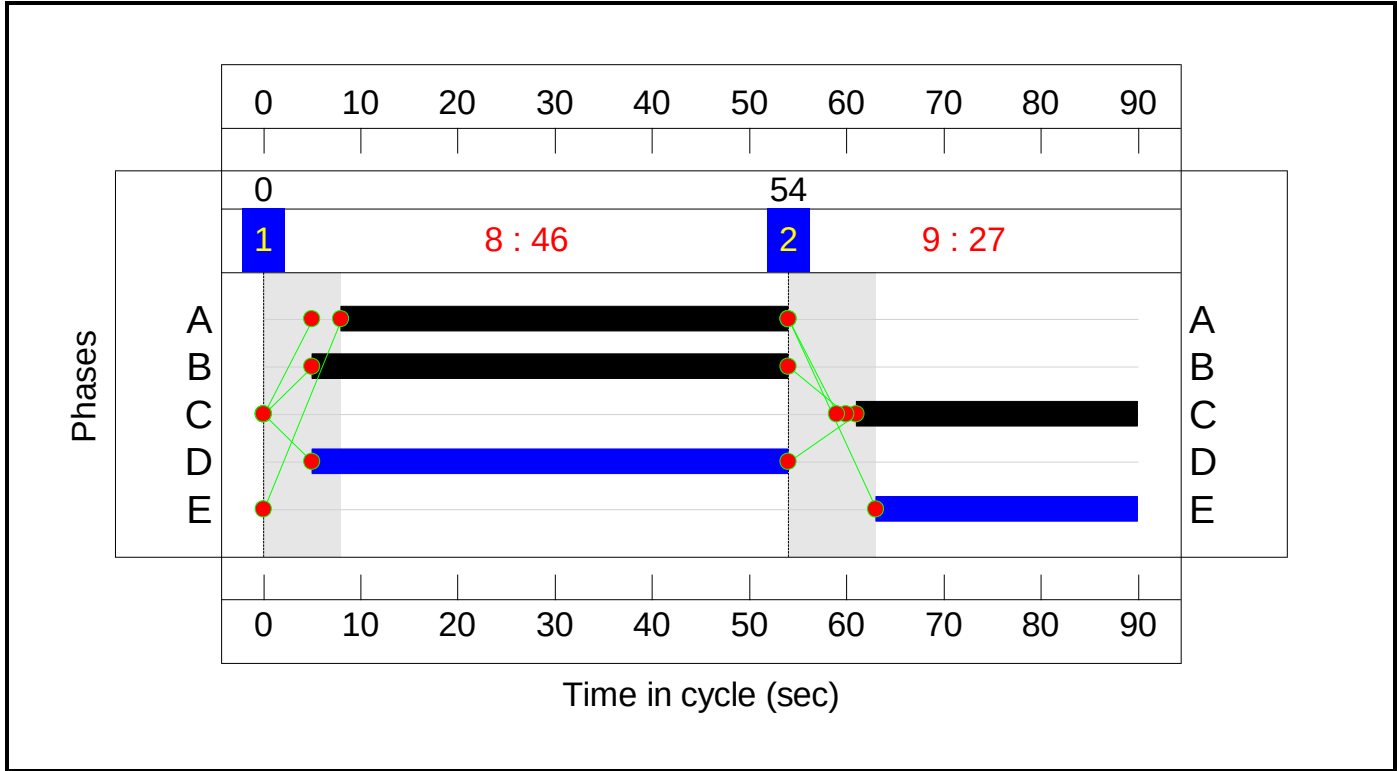
Stage Sequence Diagram



Stage Timings

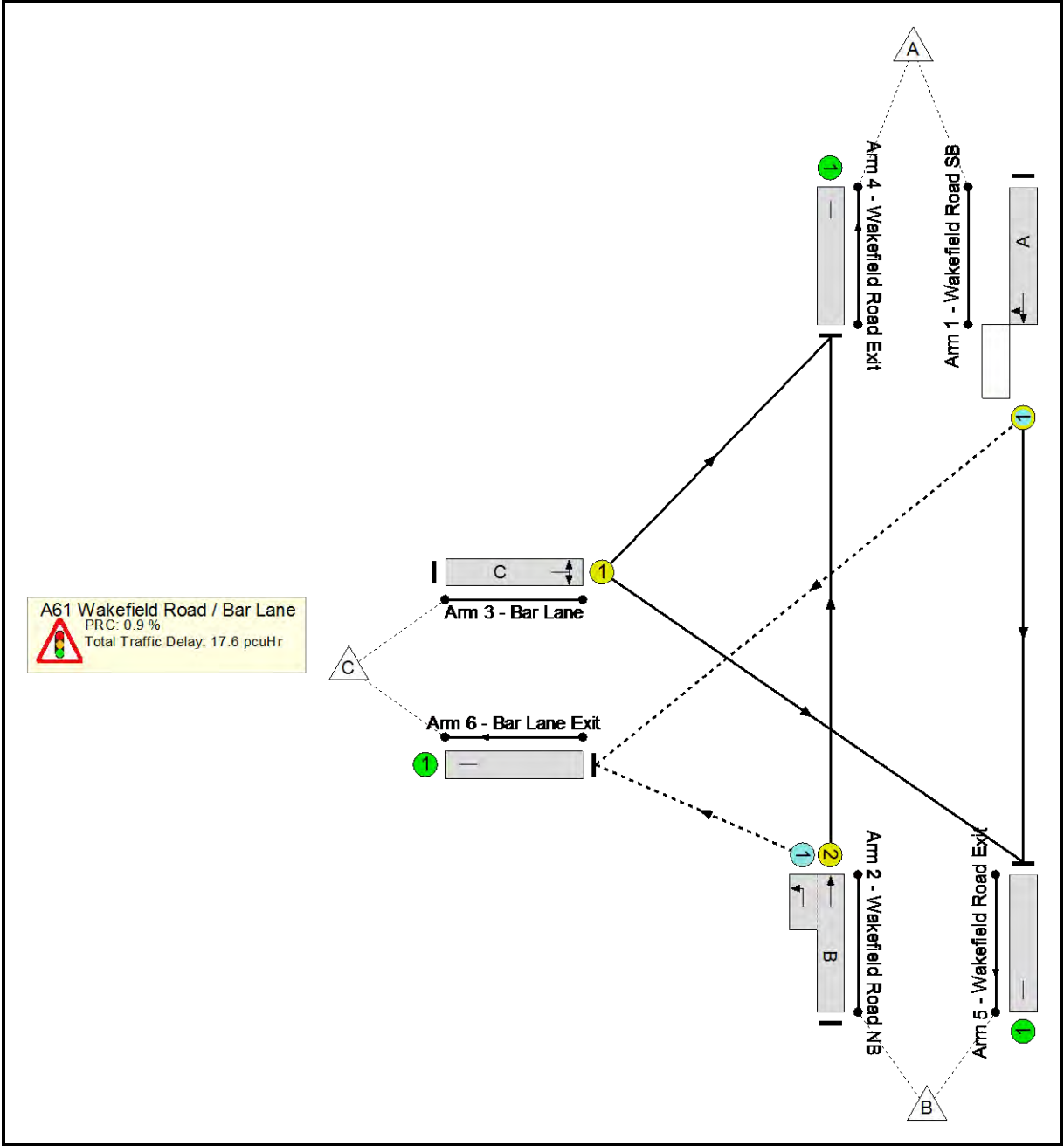
Stage	1	2
Duration	46	27
Change Point	0	54

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	89.2%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	89.2%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	46	-	584	1945	1016	57.5%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	49	-	1082	1995:1985	1213	89.2%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	29	-	486	1677	559	86.9%
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: 2017 Existing	-	-	425	87	1	9.9	7.6	0.0	17.6	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	425	87	1	9.9	7.6	0.0	17.6	-	-	-	-
1/1	584	584	25	0	1	2.4	0.7	0.0	3.1	18.8	9.9	0.7	10.6
2/2+2/1	1082	1082	400	87	0	3.8	3.9	-	7.6	25.4	20.7	3.9	24.6
3/1	486	486	-	-	-	3.8	3.1	-	6.9	50.9	11.3	3.1	14.4
C1 PRC for Signalled Lanes (%): 0.9 Total Delay for Signalled Lanes (pcuHr): 17.57 Cycle Time (s): 90 PRC Over All Lanes (%): 0.9 Total Delay Over All Lanes(pcuHr): 17.57													

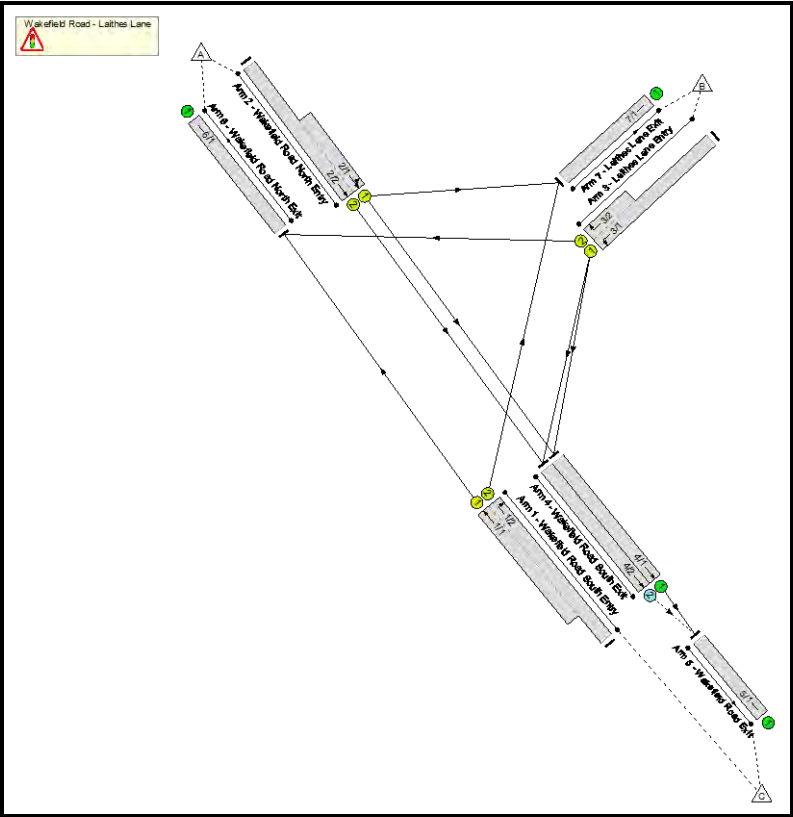
Full Input Data And Results

Full Input Data And Results

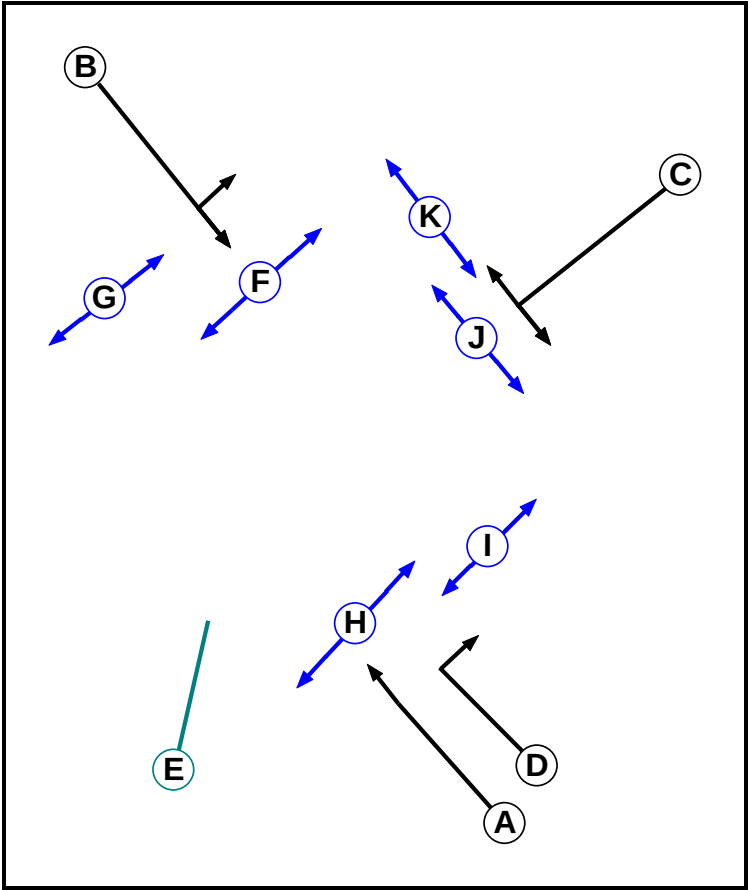
User and Project Details

Project:	Former William Freeman Works, Wakefield Road
Title:	Wakefield Road - Laithes Lane
Location:	
File name:	Wakefield Road - Laithes Lane.lsg3x
Author:	John Turner
Company:	Bryan G Hall
Address:	
Notes:	

Network Layout Diagram



Phase Diagram



Phase Input Data

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

Full Input Data And Results

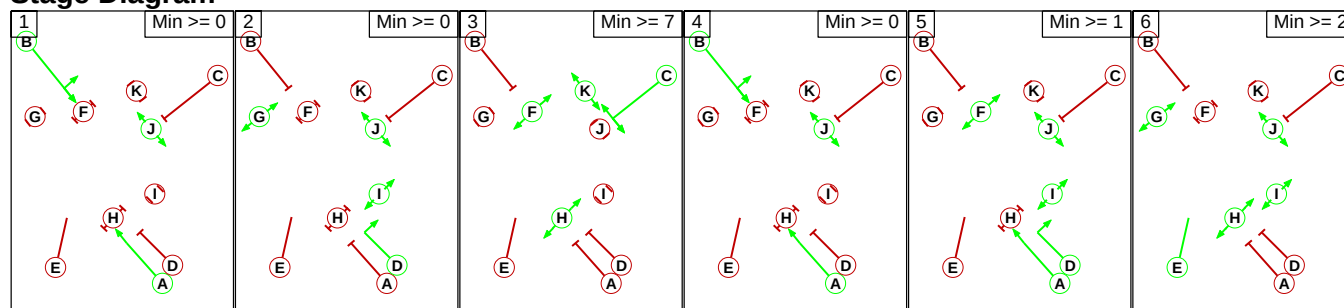
Phase Intergreens Matrix

Terminating Phase	Starting Phase											
		A	B	C	D	E	F	G	H	I	J	K
	A		-	6	-	5	-	8	5	-	-	-
	B	-		8	5	5	5	-	-	9	-	7
	C	5	5		5	5	-	8	-	7	5	-
	D	-	7	5		5	-	-	5	-	-	7
	E	5	5	5	5		-	-	-	-	-	6
	F	-	8	-	-	-		10	-	-	-	-
	G	6	-	6	-	-	-		-	-	-	-
	H	8	-	-	6	-	-	-		-	-	-
	I	-	7	7	-	-	-	-	-		-	-
	J	-	-	7	-	-	-	-	-	-		-
	K	-	7	-	7	7	-	-	-	-	-	

Phases in Stage

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

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	4	5	6
	1		9	8	0	9	9
	2	7		7	7	6	5
	3	8	10		8	8	10
	4	0	9	8		9	9
	5	8	10	7	8		10
	6	8	6	7	8	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Wakefield Road - Laithes Lane											
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)
4/2 (Wakefield Road South Exit)	5/1 (Ahead)	1439	0	4/1	1.09	All	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: Wakefield Road - Laithes Lane												
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 (Wakefield Road South Entry)	U	A	2	3	22.6	Geom	-	3.25	0.00	Y	Arm 6 Ahead	Inf
1/2 (Wakefield Road South Entry)	U	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 7 Right	17.00
2/1 (Wakefield Road North Entry)	U	B	2	3	9.6	Geom	-	3.50	0.00	Y	Arm 4 Ahead	Inf
											Arm 7 Left	20.00
2/2 (Wakefield Road North Entry)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 4 Ahead	Inf
3/1 (Laithes Lane Entry)	U	C	2	3	60.0	Geom	-	3.30	0.00	Y	Arm 4 Left	14.00
3/2 (Laithes Lane Entry)	U	C	2	3	6.1	Geom	-	3.30	0.00	Y	Arm 6 Right	18.00
4/1 (Wakefield Road South Exit)	U		2	3	17.4	Geom	-	3.20	0.00	Y	Arm 5 Ahead	Inf
4/2 (Wakefield Road South Exit)	O		2	3	17.4	Geom	-	3.20	0.00	Y	Arm 5 Ahead	Inf
5/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Wakefield Road North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Laithes Lane Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
10: '2023 Predicted with Lidl AM'	07:45	08:45	01:00	
11: '2023 Predicted with Lidl PM'	16:45	17:45	01:00	
12: '2023 Predicted with Lidl Saturday'	11:45	12:45	01:00	

Scenario 10: '2023 Predicted with Lidl AM' (FG10: '2023 Predicted with Lidl AM', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	351	806	1157
	B	362	0	133	495
	C	721	164	0	885
	Tot.	1083	515	939	2537

Traffic Lane Flows

Lane	Scenario 10: 2023 Predicted with Lidl AM
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	721
1/2 (with short)	885(In) 164(Out)
2/1 (short)	579
2/2 (with short)	1157(In) 578(Out)
3/1 (with short)	495(In) 133(Out)
3/2 (short)	362
4/1	294
4/2	645
5/1	939
6/1	1083
7/1	515

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane								
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 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	39.4 %	1880	1880
				Arm 7 Left	20.00	60.6 %		
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 11: '2023 Predicted with Lidl PM' (FG11: '2023 Predicted with Lidl PM', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	368	748	1116
	B	389	0	153	542
	C	923	185	0	1108
	Tot.	1312	553	901	2766

Traffic Lane Flows

Lane	Scenario 11: 2023 Predicted with Lidl PM
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	923
1/2 (with short)	1108(In) 185(Out)
2/1 (short)	558
2/2 (with short)	1116(In) 558(Out)
3/1 (with short)	542(In) 153(Out)
3/2 (short)	389
4/1	266
4/2	635
5/1	901
6/1	1312
7/1	553

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane								
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 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	34.1 %	1872	1872
				Arm 7 Left	20.00	65.9 %		
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 12: '2023 Predicted with Lidl Saturday' (FG12: '2023 Predicted with Lidl Saturday', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

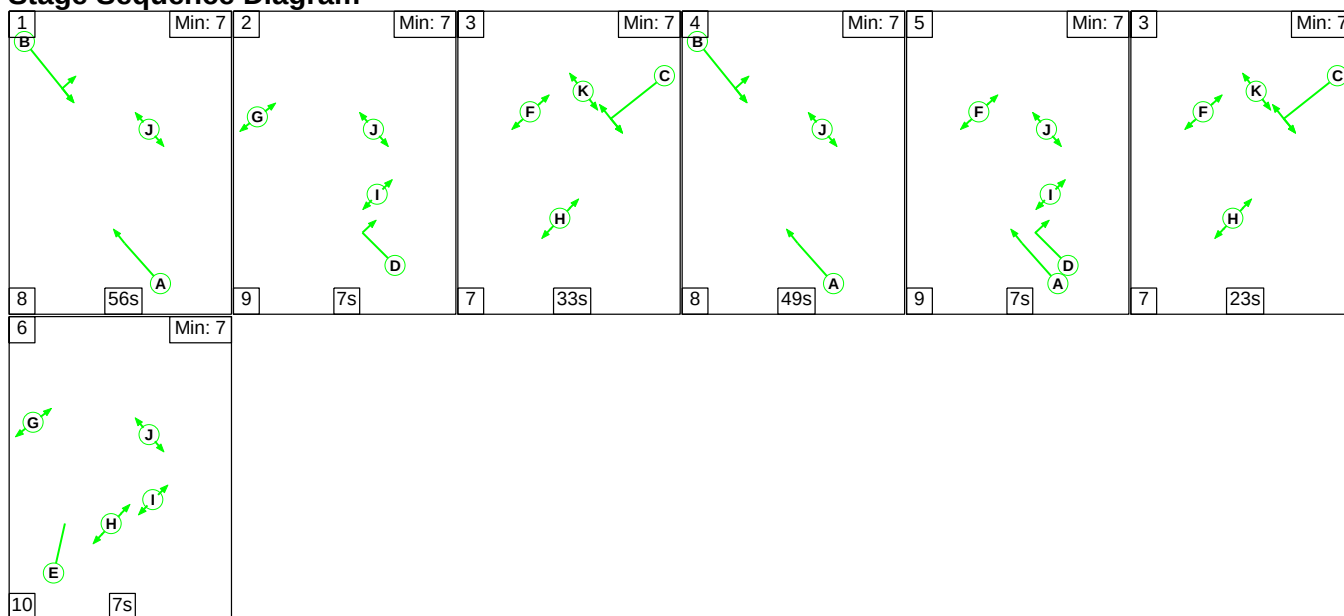
Origin	Destination				
		A	B	C	Tot.
	A	0	302	790	1092
	B	289	0	178	467
	C	829	206	0	1035
	Tot.	1118	508	968	2594

Traffic Lane Flows

Lane	Scenario 12: 2023 Predicted with Lidl Saturday
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	829
1/2 (with short)	1035(In) 206(Out)
2/1 (short)	546
2/2 (with short)	1092(In) 546(Out)
3/1 (with short)	467(In) 178(Out)
3/2 (short)	289
4/1	333
4/2	635
5/1	968
6/1	1118
7/1	508

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane								
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 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	44.7 %	1887	1887
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 7 Left	20.00	55.3 %	1887	1887
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

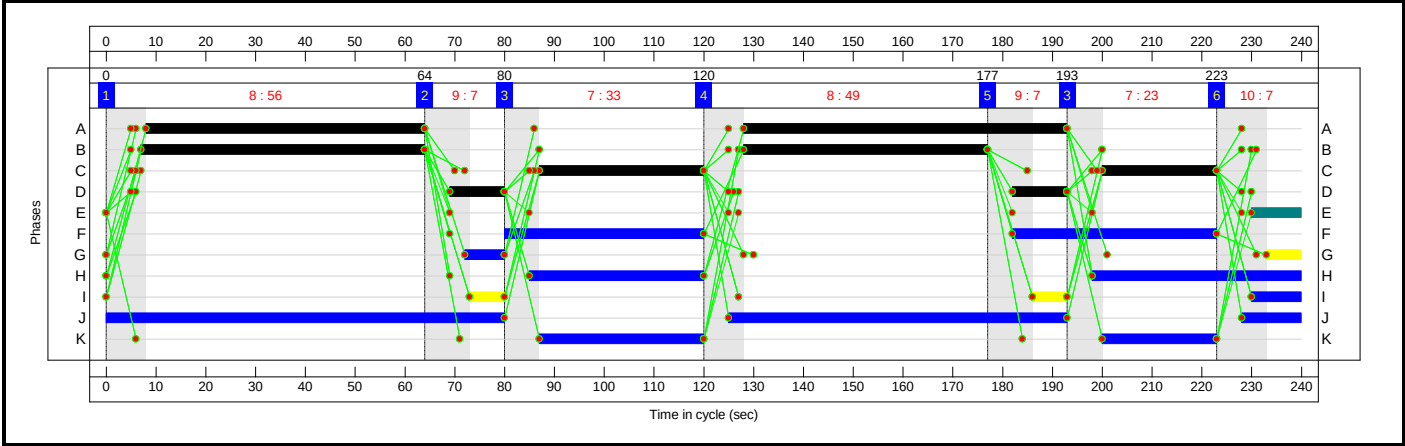
Scenario 10: '2023 Predicted with Lidl AM' (FG10: '2023 Predicted with Lidl AM', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram


Full Input Data And Results

Stage Timings

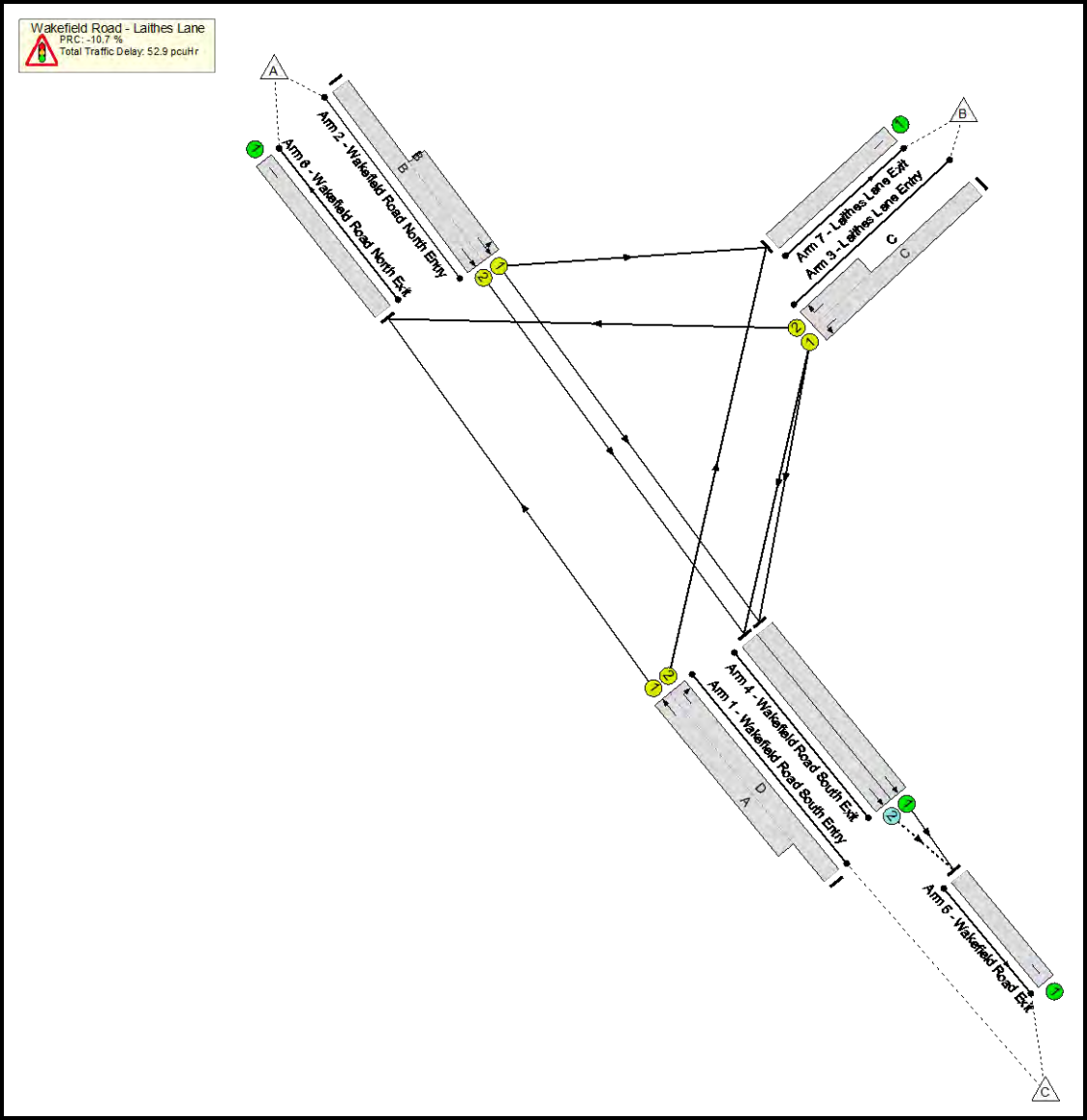
Stage	1	2	3	4	5	3	6
Duration	56	7	33	49	7	23	7
Change Point	0	64	80	120	177	193	223

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	99.7%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	99.7%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	22:121	-	885	1783:1940	1115	79.4%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	106	-	1157	1965:1880	1161	99.7%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	56	-	495	1757:1795	502	98.6%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	294	1935	1935	15.2%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	645	1935	1118	57.7%
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: Wakefield Road - Laithes Lane	-	-	645	0	0	24.7	28.2	0.0	52.9	-	-	-	-
Wakefield Road - Laithes Lane	-	-	645	0	0	24.7	28.2	0.0	52.9	-	-	-	-
1/2+1/1	885	885	-	-	-	7.0	1.9	-	8.9	36.3	20.0	1.9	21.9
2/2+2/1	1157	1157	-	-	-	9.1	16.0	-	25.1	78.2	30.9	16.0	46.9
3/1+3/2	495	495	-	-	-	6.1	9.5	-	15.6	113.7	16.3	9.5	25.8
4/1	294	294	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/2	645	645	645	0	0	2.5	0.7	-	3.2	17.6	19.8	0.7	20.5

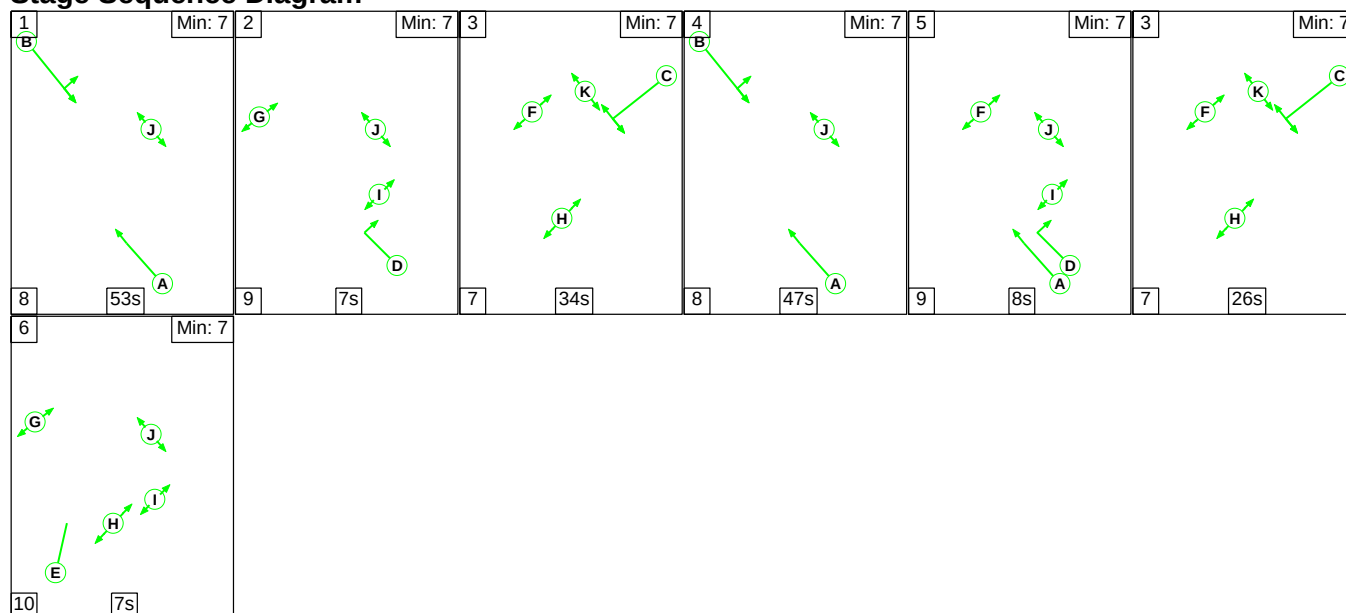
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-10.7	Total Delay for Signalled Lanes (pcuHr):	49.70	Cycle Time (s):	240
	PRC Over All Lanes (%):	-10.7	Total Delay Over All Lanes(pcuHr):	52.95		

Full Input Data And Results

Scenario 11: '2023 Predicted with Lidl PM' (FG11: '2023 Predicted with Lidl PM', Plan 1: 'Network Control Plan 1')

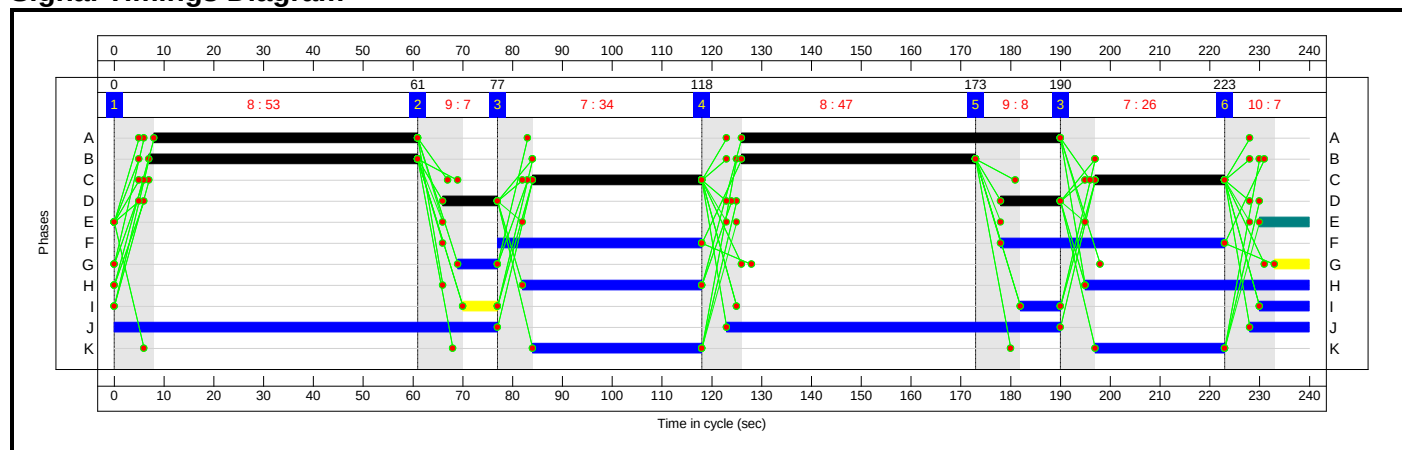
Stage Sequence Diagram



Stage Timings

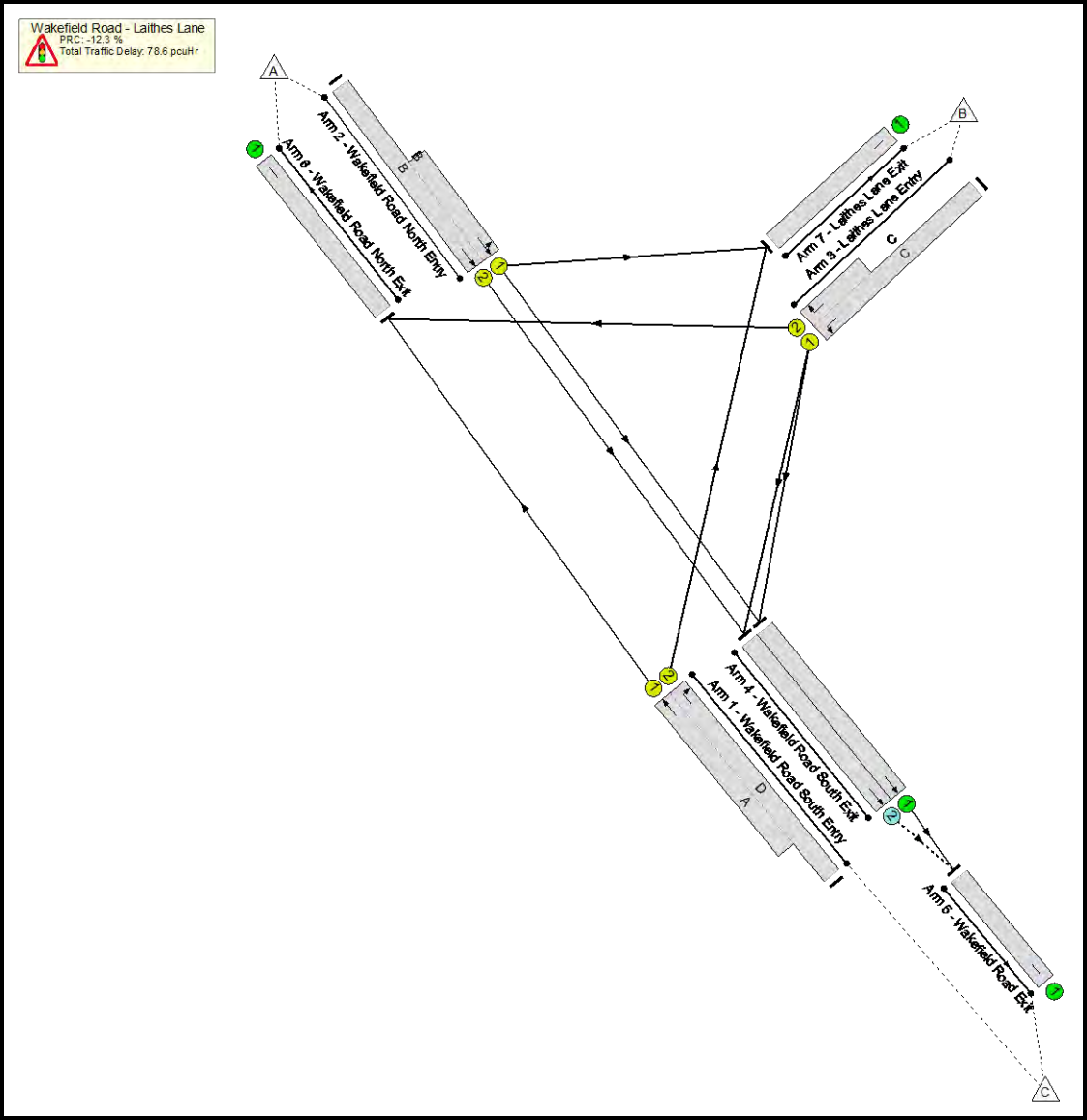
Stage	1	2	3	4	5	3	6
Duration	53	7	34	47	8	26	7
Change Point	0	61	77	118	173	190	223

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	101.0%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	101.0%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	23:117	-	1108	1783:1940	1100	100.7%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	101	-	1116	1965:1872	1120	99.6%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	60	-	542	1757:1795	536	101.0%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	266	1935	1935	13.7%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	635	1935	1150	55.2%
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: Wakefield Road - Laithes Lane	-	-	634	0	0	30.3	48.3	0.0	78.6	-	-	-	-
Wakefield Road - Laithes Lane	-	-	634	0	0	30.3	48.3	0.0	78.6	-	-	-	-
1/2+1/1	1108	1100	-	-	-	11.7	18.8	-	30.5	99.1	38.0	18.8	56.8
2/2+2/1	1116	1116	-	-	-	9.4	15.7	-	25.1	81.0	30.7	15.7	46.4
3/1+3/2	542	536	-	-	-	7.2	13.1	-	20.3	134.8	18.6	13.1	31.7
4/1	265	265	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/2	634	634	634	0	0	2.0	0.6	-	2.6	14.7	19.1	0.6	19.7

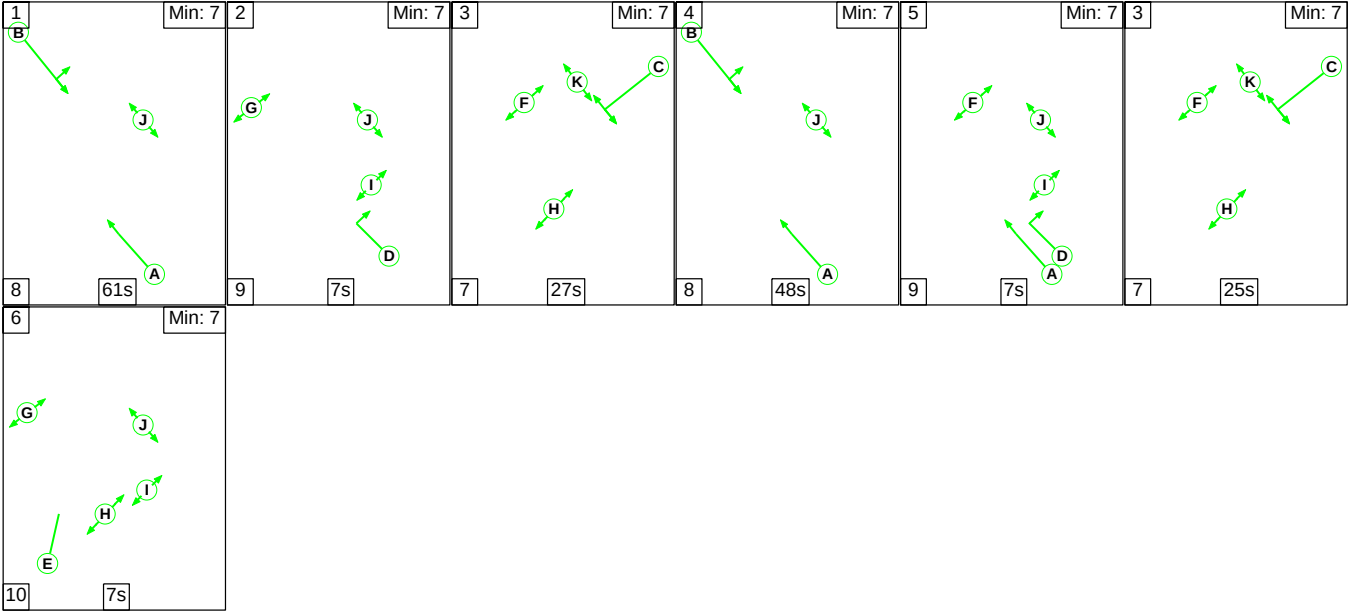
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-12.3	Total Delay for Signalled Lanes (pcuHr):	75.90	Cycle Time (s):	240
	PRC Over All Lanes (%):	-12.3	Total Delay Over All Lanes(pcuHr):	78.57		

Full Input Data And Results

Scenario 12: '2023 Predicted with Lidl Saturday' (FG12: '2023 Predicted with Lidl Saturday', Plan 1: 'Network Control Plan 1')

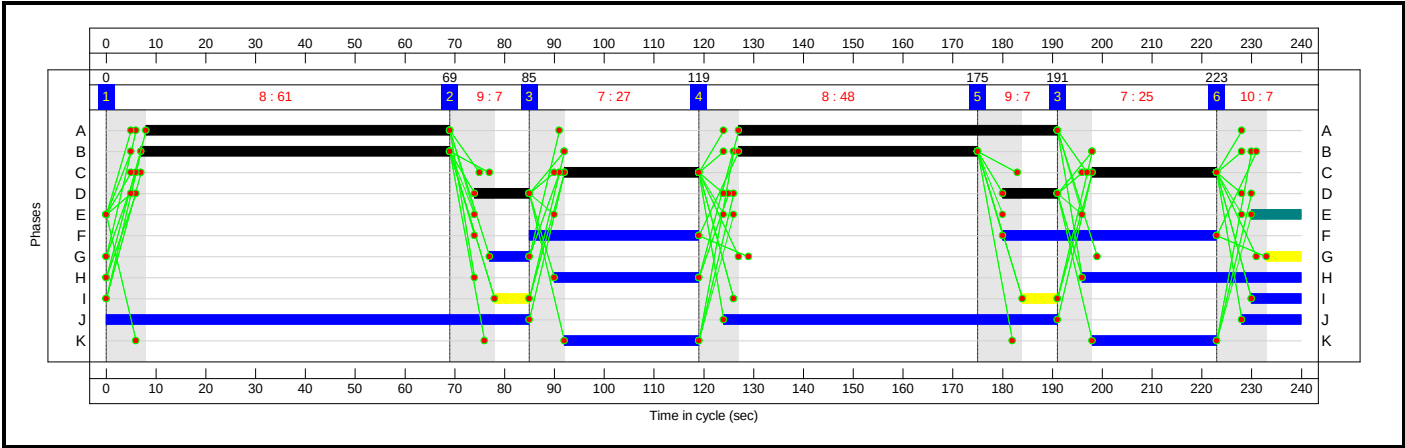
Stage Sequence Diagram



Stage Timings

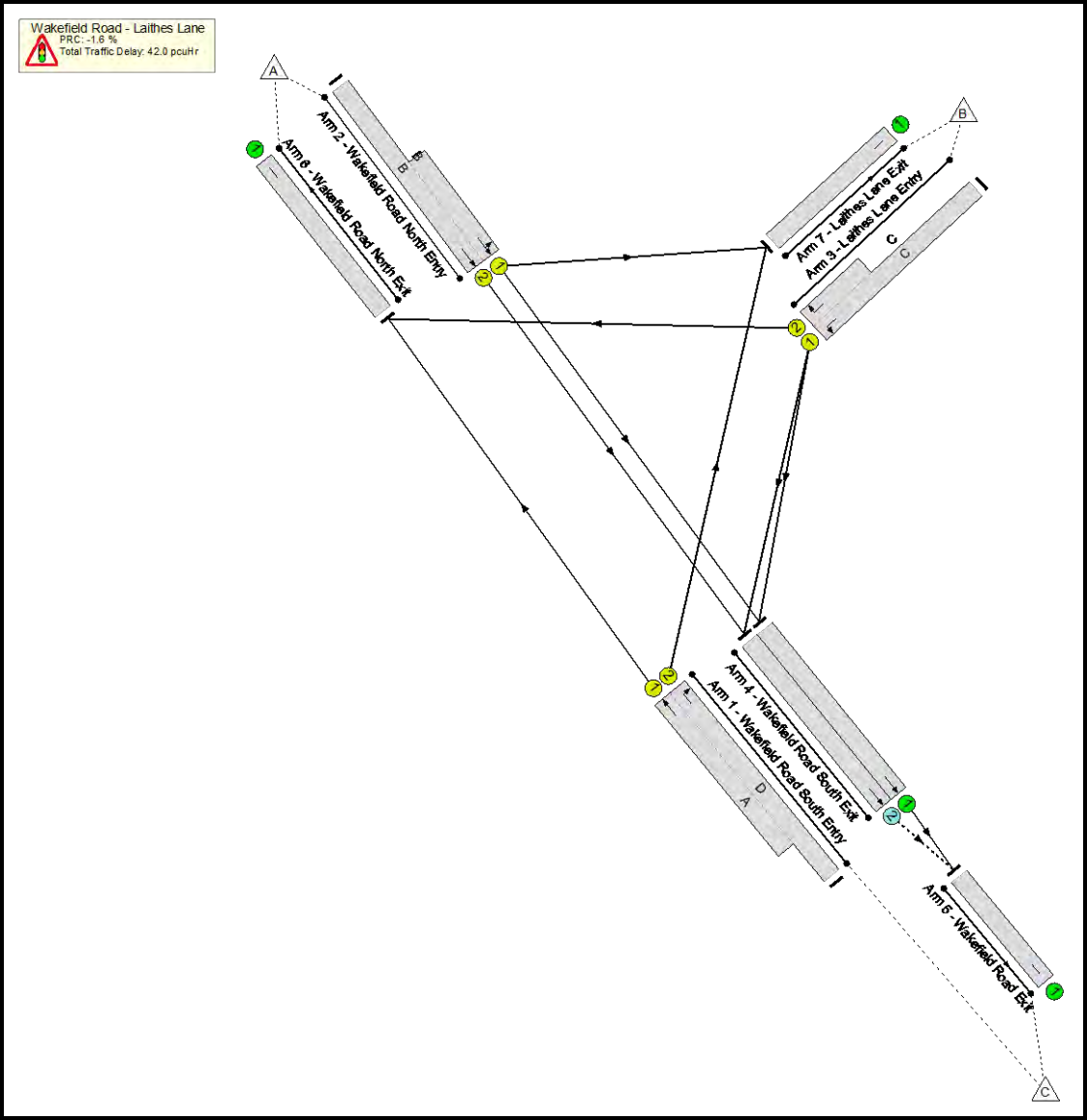
Stage	1	2	3	4	5	3	6
Duration	61	7	27	48	7	25	7
Change Point	0	69	85	119	175	191	223

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	91.4%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	91.4%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	22:125	-	1035	1783:1940	1136	91.1%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	110	-	1092	1965:1887	1195	91.4%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	52	-	467	1757:1795	517	90.3%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	333	1935	1935	17.2%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	635	1935	1076	59.0%
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: Wakefield Road - Laithes Lane	-	-	635	0	0	27.7	14.4	0.0	42.0	-	-	-	-
Wakefield Road - Laithes Lane	-	-	635	0	0	27.7	14.4	0.0	42.0	-	-	-	-
1/2+1/1	1035	1007	-	-	-	11.6	4.7	-	16.3	56.8	22.8	4.7	27.5
2/2+2/1	1092	1092	-	-	-	7.7	4.9	-	12.6	41.4	27.1	4.9	32.0
3/1+3/2	467	467	-	-	-	5.7	4.0	-	9.7	75.1	13.8	4.0	17.8
4/1	333	333	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/2	635	635	635	0	0	2.6	0.7	-	3.3	18.8	19.7	0.7	20.5

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-1.6	Total Delay for Signalled Lanes (pcuHr):	38.61	Cycle Time (s):	240
	PRC Over All Lanes (%):	-1.6	Total Delay Over All Lanes(pcuHr):	42.03		

Junctions 9			
ARCADY 9 - Roundabout Module			
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Filename: A61 Wakefield Road-A633 Rotherham Road mini-Roundabout.j9

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 9

Report generation date: 19/12/2017 10:38:10

«2023 Predicted with Lidl, AM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
2023 Predicted with Lidl				
1 - A61 North	1.4	4.61	0.58	A
2 - A633 Rotherham Road	9.4	70.93	0.94	F
3 - A61 South	1.3	8.82	0.58	A

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables.

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

File summary

File Description

Title	A61 Wakefield Road/A633 Rotherham Road
Location	Mapplewell, Barnsley
Site number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\design
Description	

Units

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

Analysis Options

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

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2023 Predicted with Lidl	AM	ONE HOUR	07:30	09:00	15

2023 Predicted with Lidl, AM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	21.40	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	A61 North	
2	A633 Rotherham Road	
3	A61 South	

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 - A61 North	4.50	4.50	6.50	27.0	20.00	20.00	0.0	✓
2 - A633 Rotherham Road	4.00	4.00	6.20	6.0	9.70	2.00	0.0	✓
3 - A61 South	4.20	4.20	5.10	1.5	20.00	20.00	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A61 North	0.901	1905
2 - A633 Rotherham Road	0.556	970
3 - A61 South	0.840	1381

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

Traffic Demand

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	984	100.000
2 - A633 Rotherham Road		✓	461	100.000
3 - A61 South		✓	502	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
1 - A61 North		0	283	701
2 - A633 Rotherham Road		461	0	0
3 - A61 South		461	41	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
1 - A61 North		0	0	0
2 - A633 Rotherham Road		0	0	0
3 - A61 South		0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.58	4.61	1.4	A
2 - A633 Rotherham Road	0.94	70.93	9.4	F
3 - A61 South	0.58	8.82	1.3	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	741	31	1878	0.395	738	0.6	3.153	A
2 - A633 Rotherham Road	347	526	678	0.512	343	1.0	10.630	B
3 - A61 South	378	343	1093	0.346	376	0.5	5.009	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	885	37	1872	0.473	884	0.9	3.639	A
2 - A633 Rotherham Road	414	629	620	0.668	411	1.9	16.915	C
3 - A61 South	451	411	1036	0.436	450	0.8	6.141	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	1083	45	1865	0.581	1081	1.4	4.586	A
2 - A633 Rotherham Road	508	770	542	0.937	485	7.6	50.310	F
3 - A61 South	553	485	973	0.568	551	1.3	8.474	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	1083	45	1865	0.581	1083	1.4	4.608	A
2 - A633 Rotherham Road	508	772	541	0.938	500	9.4	70.931	F
3 - A61 South	553	500	960	0.576	553	1.3	8.820	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	885	37	1872	0.473	886	0.9	3.659	A
2 - A633 Rotherham Road	414	632	619	0.670	443	2.2	23.429	C
3 - A61 South	451	443	1008	0.448	453	0.8	6.513	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	741	31	1877	0.395	742	0.7	3.175	A
2 - A633 Rotherham Road	347	528	676	0.513	351	1.1	11.219	B
3 - A61 South	378	351	1086	0.348	379	0.5	5.105	A

Junctions 9			
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Filename: A61 Wakefield Road-A633 Rotherham Road mini-Roundabout.j9

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 9

Report generation date: 19/12/2017 10:38:44

«2023 Predicted with Lidl, PM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
2023 Predicted with Lidl				
1 - A61 North	1.3	4.43	0.56	A
2 - A633 Rotherham Road	2.1	16.95	0.68	C
3 - A61 South	8.3	35.28	0.91	E

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables.

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

File summary

File Description

Title	A61 Wakefield Road/A633 Rotherham Road
Location	Mapplewell, Barnsley
Site number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\design
Description	

Units

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

Analysis Options

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

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2023 Predicted with Lidl	PM	ONE HOUR	16:30	18:00	15

2023 Predicted with Lidl, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	18.54	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	A61 North	
2	A633 Rotherham Road	
3	A61 South	

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 - A61 North	4.50	4.50	6.50	27.0	20.00	20.00	0.0	✓
2 - A633 Rotherham Road	4.00	4.00	6.20	6.0	9.70	2.00	0.0	✓
3 - A61 South	4.20	4.20	5.10	1.5	20.00	20.00	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A61 North	0.901	1905
2 - A633 Rotherham Road	0.556	970
3 - A61 South	0.840	1381

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

Traffic Demand

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	929	100.000
2 - A633 Rotherham Road		✓	416	100.000
3 - A61 South		✓	823	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
1 - A61 North		0	438	491
2 - A633 Rotherham Road		416	0	0
3 - A61 South		753	70	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
1 - A61 North		0	0	0
2 - A633 Rotherham Road		0	0	0
3 - A61 South		0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.56	4.43	1.3	A
2 - A633 Rotherham Road	0.68	16.95	2.1	C
3 - A61 South	0.91	35.28	8.3	E

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	699	52	1858	0.376	697	0.6	3.094	A
2 - A633 Rotherham Road	313	368	765	0.409	310	0.7	7.871	A
3 - A61 South	620	310	1120	0.553	615	1.2	7.059	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	835	63	1849	0.452	834	0.8	3.545	A
2 - A633 Rotherham Road	374	441	725	0.516	373	1.0	10.174	B
3 - A61 South	740	373	1068	0.693	736	2.2	10.727	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	1023	75	1837	0.557	1021	1.2	4.402	A
2 - A633 Rotherham Road	458	540	670	0.684	454	2.0	16.363	C
3 - A61 South	906	454	999	0.907	886	7.3	27.801	D

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	1023	77	1836	0.557	1023	1.3	4.426	A
2 - A633 Rotherham Road	458	541	670	0.684	458	2.1	16.954	C
3 - A61 South	906	458	996	0.910	902	8.3	35.282	E

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	835	65	1847	0.452	837	0.8	3.572	A
2 - A633 Rotherham Road	374	442	724	0.516	378	1.1	10.520	B
3 - A61 South	740	378	1063	0.696	764	2.4	12.888	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	699	53	1857	0.377	700	0.6	3.113	A
2 - A633 Rotherham Road	313	370	764	0.410	315	0.7	8.036	A
3 - A61 South	620	315	1116	0.555	624	1.3	7.379	A

Junctions 9			
ARCADY 9 - Roundabout Module			
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2017			
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Filename: A61 Wakefield Road-A633 Rotherham Road mini-Roundabout.j9

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 9

Report generation date: 19/12/2017 10:39:09

«2023 Predicted with Lidl, Saturday

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
2023 Predicted with Lidl				
1 - A61 North	1.5	4.88	0.60	A
2 - A633 Rotherham Road	3.2	26.95	0.77	D
3 - A61 South	3.6	16.63	0.79	C

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables.

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

File summary

File Description

Title	A61 Wakefield Road/A633 Rotherham Road
Location	Mapplewell, Barnsley
Site number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\design
Description	

Units

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

Analysis Options

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

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2023 Predicted with Lidl	Saturday	ONE HOUR	11:30	13:00	15

2023 Predicted with Lidl, Saturday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 81% of the total flow for the roundabout for one or more time segments]
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	12.99	B

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	A61 North	
2	A633 Rotherham Road	
3	A61 South	

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 - A61 North	4.50	4.50	6.50	27.0	20.00	20.00	0.0	✓
2 - A633 Rotherham Road	4.00	4.00	6.20	6.0	9.70	2.00	0.0	✓
3 - A61 South	4.20	4.20	5.10	1.5	20.00	20.00	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A61 North	0.901	1905
2 - A633 Rotherham Road	0.556	970
3 - A61 South	0.840	1381

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

Traffic Demand

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	1013	100.000
2 - A633 Rotherham Road		✓	400	100.000
3 - A61 South		✓	724	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	362	651
	2 - A633 Rotherham Road	400	0	0
	3 - A61 South	671	53	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	0	0
	2 - A633 Rotherham Road	0	0	0
	3 - A61 South	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.60	4.88	1.5	A
2 - A633 Rotherham Road	0.77	26.95	3.2	D
3 - A61 South	0.79	16.63	3.6	C

Main Results for each time segment

11:30 - 11:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	763	40	1869	0.408	760	0.7	3.236	A
2 - A633 Rotherham Road	301	488	699	0.431	298	0.7	8.927	A
3 - A61 South	545	298	1130	0.482	541	0.9	6.076	A

11:45 - 12:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	911	47	1862	0.489	910	0.9	3.775	A
2 - A633 Rotherham Road	360	585	645	0.557	358	1.2	12.440	B
3 - A61 South	651	358	1080	0.603	649	1.5	8.297	A

12:00 - 12:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	1115	58	1853	0.602	1113	1.5	4.850	A
2 - A633 Rotherham Road	440	715	572	0.769	433	3.0	24.713	C
3 - A61 South	797	433	1017	0.784	790	3.4	15.361	C

12:15 - 12:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	1115	58	1853	0.602	1115	1.5	4.882	A
2 - A633 Rotherham Road	440	717	572	0.770	440	3.2	26.948	D
3 - A61 South	797	440	1011	0.788	796	3.6	16.625	C

12:30 - 12:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	911	48	1862	0.489	913	1.0	3.801	A
2 - A633 Rotherham Road	360	587	644	0.558	367	1.3	13.325	B
3 - A61 South	651	367	1072	0.607	659	1.6	8.861	A

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	763	40	1869	0.408	764	0.7	3.259	A
2 - A633 Rotherham Road	301	491	697	0.432	303	0.8	9.187	A
3 - A61 South	545	303	1126	0.484	548	1.0	6.250	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 19/12/2017 09:59:01

« (Default Analysis Set) - 2023 Predicted with Lidl, AM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2023 Predicted with Lidl				
Stream B-AC	0.38	9.03	0.28	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	0.00	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 19/12/2017 09:59:00

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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) - 2023 Predicted with Lidl, AM

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)	N/A			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
2023 Predicted with Lidl, AM	2023 Predicted with Lidl	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	9.03	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A61 South	8.00		0.00		2.20	0.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Rotherham Road Left Turn	One lane	5.00										0	15

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A61 North	ONE HOUR	✓	701.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	140.00	100.000
A61 South	ONE HOUR	✓	461.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	701.000
	Rotherham Road Left Turn	0.000	0.000	140.000
	A61 South	461.000	0.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.28	9.03	0.38	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	105.40	104.58	0.00	618.28	0.170	0.20	6.986	A
C-A	347.06	347.06	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	466.81	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	527.75	527.75	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	125.86	125.60	0.00	590.74	0.213	0.27	7.736	A
C-A	414.43	414.43	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	446.01	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	630.18	630.18	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	154.14	153.69	0.00	552.65	0.279	0.38	9.013	A
C-A	507.57	507.57	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	417.26	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	771.82	771.82	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	154.14	154.13	0.00	552.65	0.279	0.38	9.033	A
C-A	507.57	507.57	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	417.26	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	771.82	771.82	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	125.86	126.30	0.00	590.74	0.213	0.27	7.758	A
C-A	414.43	414.43	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	446.01	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	630.18	630.18	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	105.40	105.66	0.00	618.28	0.170	0.21	7.028	A
C-A	347.06	347.06	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	466.81	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	527.75	527.75	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 19/12/2017 10:00:09

« (Default Analysis Set) - 2023 Predicted with Lidl, PM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2023 Predicted with Lidl				
Stream B-AC	0.12	6.56	0.11	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	0.00	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM " model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 19/12/2017 10:00:08

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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) - 2023 Predicted with Lidl, 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)	N/A			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
2023 Predicted with Lidl, PM	2023 Predicted with Lidl	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.56	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A61 South	8.00		0.00		2.20	0.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Rotherham Road Left Turn	One lane	5.00										0	15

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A61 North	ONE HOUR	✓	491.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	60.00	100.000
A61 South	ONE HOUR	✓	753.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	491.000
	Rotherham Road Left Turn	0.000	0.000	60.000
	A61 South	753.000	0.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.11	6.56	0.12	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	45.17	44.88	0.00	660.80	0.068	0.07	5.842	A
C-A	566.90	566.90	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	498.91	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	369.65	369.65	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	53.94	53.87	0.00	641.51	0.084	0.09	6.126	A
C-A	676.93	676.93	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	484.34	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	441.40	441.40	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	66.06	65.95	0.00	614.83	0.107	0.12	6.556	A
C-A	829.07	829.07	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	464.20	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	540.60	540.60	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	66.06	66.06	0.00	614.83	0.107	0.12	6.559	A
C-A	829.07	829.07	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	464.20	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	540.60	540.60	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	53.94	54.05	0.00	641.51	0.084	0.09	6.128	A
C-A	676.93	676.93	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	484.34	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	441.40	441.40	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	45.17	45.25	0.00	660.80	0.068	0.07	5.850	A
C-A	566.90	566.90	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	498.91	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	369.65	369.65	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 19/12/2017 10:00:36

« (Default Analysis Set) - 2023 Predicted with Lidl, Saturday

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2023 Predicted with Lidl				
Stream B-AC	0.16	7.34	0.14	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	0.00	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 19/12/2017 10:00:36

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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) - 2023 Predicted with Lidl, Saturday

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)	N/A			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
2023 Predicted with Lidl, Saturday	2023 Predicted with Lidl	Saturday		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	7.34	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A61 South	8.00		0.00		2.20	0.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Rotherham Road Left Turn	One lane	5.00										0	15

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A61 North	ONE HOUR	✓	651.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	70.00	100.000
A61 South	ONE HOUR	✓	671.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	651.000
	Rotherham Road Left Turn	0.000	0.000	70.000
	A61 South	671.000	0.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.14	7.34	0.16	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	52.70	52.34	0.00	628.41	0.084	0.09	6.245	A
C-A	505.16	505.16	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	474.46	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	490.11	490.11	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	62.93	62.83	0.00	602.83	0.104	0.12	6.667	A
C-A	603.22	603.22	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	455.14	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	585.24	585.24	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	77.07	76.91	0.00	567.46	0.136	0.16	7.337	A
C-A	738.78	738.78	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	428.44	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	716.76	716.76	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	77.07	77.07	0.00	567.46	0.136	0.16	7.340	A
C-A	738.78	738.78	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	428.44	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	716.76	716.76	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	62.93	63.08	0.00	602.83	0.104	0.12	6.673	A
C-A	603.22	603.22	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	455.14	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	585.24	585.24	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	52.70	52.80	0.00	628.41	0.084	0.09	6.254	A
C-A	505.16	505.16	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	474.46	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	490.11	490.11	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Site Access-Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Site Access - Wakefield Road

Report generation date: 19/12/2017 10:09:42

« (Default Analysis Set) - 2023 Predicted with Lidl, AM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2023 Predicted with Lidl				
Stream B-AC	0.11	11.55	0.10	B
Stream C-A	-	-	-	-
Stream C-B	0.02	7.10	0.02	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D2 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D3 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Predicted with Lidl, AM " model duration: 07:30 - 09:00

"D5 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D6 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 19/12/2017 10:09:42

File summary

Title	Site Access junction with Wakefield Road
Location	Wakefield Road, Mapplewell
Site Number	
Date	05/12/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	14-114
Enumerator	johnturner
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) - 2023 Predicted with Lidl, AM

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)	N/A			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
2023 Predicted with Lidl, AM	2023 Predicted with Lidl	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	10.63	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road North	A	Wakefield Road North		Major
Site Access	B	Site Access		Minor
Wakefield Road South	C	Wakefield Road South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road South	6.00		0.00	✓	3.00	100.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Site Access	One lane	2.75										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	505.529	0.092	0.233	0.146	0.332
1	B-C	639.009	0.098	0.248	-	-
1	C-B	686.890	0.266	0.266	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road North	ONE HOUR	✓	583.00	100.000
Site Access	ONE HOUR	✓	31.00	100.000
Wakefield Road South	ONE HOUR	✓	783.00	100.000

Turning Proportions

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

	To			
		Wakefield Road North	Site Access	Wakefield Road South
From	Wakefield Road North	0.000	5.000	578.000
	Site Access	11.000	0.000	20.000
	Wakefield Road South	775.000	8.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To			
		Wakefield Road North	Site Access	Wakefield Road South
From	Wakefield Road North	0.00	0.01	0.99
	Site Access	0.35	0.00	0.65
	Wakefield Road South	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To			
		Wakefield Road North	Site Access	Wakefield Road South
From	Wakefield Road North	1.000	1.000	1.000
	Site Access	1.000	1.000	1.000
	Wakefield Road South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
		Wakefield Road North	Site Access	Wakefield Road South
From	Wakefield Road North	0.0	0.0	0.0
	Site Access	0.0	0.0	0.0
	Wakefield Road South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.10	11.55	0.11	B
C-A	-	-	-	-
C-B	0.02	7.10	0.02	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	23.34	23.11	0.00	428.01	0.055	0.06	8.887	A
C-A	583.46	583.46	0.00	-	-	-	-	-
C-B	6.02	5.98	0.00	570.08	0.011	0.01	6.381	A
A-B	3.76	3.76	0.00	-	-	-	-	-
A-C	435.15	435.15	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	27.87	27.80	0.00	394.71	0.071	0.08	9.808	A
C-A	696.71	696.71	0.00	-	-	-	-	-
C-B	7.19	7.18	0.00	547.41	0.013	0.01	6.663	A
A-B	4.49	4.49	0.00	-	-	-	-	-
A-C	519.61	519.61	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	34.13	34.00	0.00	345.92	0.099	0.11	11.536	B
C-A	853.29	853.29	0.00	-	-	-	-	-
C-B	8.81	8.79	0.00	516.06	0.017	0.02	7.096	A
A-B	5.51	5.51	0.00	-	-	-	-	-
A-C	636.39	636.39	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	34.13	34.13	0.00	345.92	0.099	0.11	11.545	B
C-A	853.29	853.29	0.00	-	-	-	-	-
C-B	8.81	8.81	0.00	516.06	0.017	0.02	7.096	A
A-B	5.51	5.51	0.00	-	-	-	-	-
A-C	636.39	636.39	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	27.87	28.00	0.00	394.70	0.071	0.08	9.822	A
C-A	696.71	696.71	0.00	-	-	-	-	-
C-B	7.19	7.21	0.00	547.41	0.013	0.01	6.663	A
A-B	4.49	4.49	0.00	-	-	-	-	-
A-C	519.61	519.61	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	23.34	23.41	0.00	427.99	0.055	0.06	8.899	A
C-A	583.46	583.46	0.00	-	-	-	-	-
C-B	6.02	6.03	0.00	570.08	0.011	0.01	6.381	A
A-B	3.76	3.76	0.00	-	-	-	-	-
A-C	435.15	435.15	0.00	-	-	-	-	-

Junctions 8			
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Filename: Site Access-Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Site Access - Wakefield Road

Report generation date: 19/12/2017 10:10:04

« (Default Analysis Set) - 2023 Predicted with Lidl, PM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2023 Predicted with Lidl				
Stream B-AC	0.05	11.78	0.05	B
Stream C-A	-	-	-	-
Stream C-B	0.05	7.89	0.04	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D2 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D3 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D5 - 2023 Predicted with Lidl, PM " model duration: 16:30 - 18:00

"D6 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 19/12/2017 10:10:04

File summary

Title	Site Access junction with Wakefield Road
Location	Wakefield Road, Mapplewell
Site Number	
Date	05/12/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	14-114
Enumerator	johnturner
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) - 2023 Predicted with Lidl, 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)	N/A			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
2023 Predicted with Lidl, PM	2023 Predicted with Lidl	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	9.54	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road North	A	Wakefield Road North		Major
Site Access	B	Site Access		Minor
Wakefield Road South	C	Wakefield Road South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road South	6.00		0.00	✓	3.00	100.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Site Access	One lane	2.75										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	505.529	0.092	0.233	0.146	0.332
1	B-C	639.009	0.098	0.248	-	-
1	C-B	686.890	0.266	0.266	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road North	ONE HOUR	✓	716.00	100.000
Site Access	ONE HOUR	✓	14.00	100.000
Wakefield Road South	ONE HOUR	✓	660.00	100.000

Turning Proportions

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

	To			
		Wakefield Road North	Site Access	Wakefield Road South
From	Wakefield Road North	0.000	11.000	705.000
	Site Access	5.000	0.000	9.000
	Wakefield Road South	641.000	19.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To			
		Wakefield Road North	Site Access	Wakefield Road South
From	Wakefield Road North	0.00	0.02	0.98
	Site Access	0.36	0.00	0.64
	Wakefield Road South	0.97	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To			
		Wakefield Road North	Site Access	Wakefield Road South
From	Wakefield Road North	1.000	1.000	1.000
	Site Access	1.000	1.000	1.000
	Wakefield Road South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
		Wakefield Road North	Site Access	Wakefield Road South
From	Wakefield Road North	0.0	0.0	0.0
	Site Access	0.0	0.0	0.0
	Wakefield Road South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.05	11.78	0.05	B
C-A	-	-	-	-
C-B	0.04	7.89	0.05	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	10.54	10.44	0.00	410.46	0.026	0.03	8.997	A
C-A	482.58	482.58	0.00	-	-	-	-	-
C-B	14.30	14.20	0.00	543.43	0.026	0.03	6.800	A
A-B	8.28	8.28	0.00	-	-	-	-	-
A-C	530.76	530.76	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	12.59	12.55	0.00	374.03	0.034	0.03	9.959	A
C-A	576.25	576.25	0.00	-	-	-	-	-
C-B	17.08	17.05	0.00	515.59	0.033	0.03	7.220	A
A-B	9.89	9.89	0.00	-	-	-	-	-
A-C	633.78	633.78	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	15.41	15.35	0.00	320.94	0.048	0.05	11.776	B
C-A	705.75	705.75	0.00	-	-	-	-	-
C-B	20.92	20.87	0.00	477.09	0.044	0.05	7.890	A
A-B	12.11	12.11	0.00	-	-	-	-	-
A-C	776.22	776.22	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	15.41	15.41	0.00	320.92	0.048	0.05	11.782	B
C-A	705.75	705.75	0.00	-	-	-	-	-
C-B	20.92	20.92	0.00	477.09	0.044	0.05	7.891	A
A-B	12.11	12.11	0.00	-	-	-	-	-
A-C	776.22	776.22	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	12.59	12.65	0.00	374.01	0.034	0.04	9.963	A
C-A	576.25	576.25	0.00	-	-	-	-	-
C-B	17.08	17.13	0.00	515.59	0.033	0.03	7.224	A
A-B	9.89	9.89	0.00	-	-	-	-	-
A-C	633.78	633.78	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	10.54	10.57	0.00	410.43	0.026	0.03	9.005	A
C-A	482.58	482.58	0.00	-	-	-	-	-
C-B	14.30	14.33	0.00	543.43	0.026	0.03	6.803	A
A-B	8.28	8.28	0.00	-	-	-	-	-
A-C	530.76	530.76	0.00	-	-	-	-	-

Junctions 8				
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Report generation date: 19/12/2017 10:10:31

« (Default Analysis Set) - 2023 Predicted with Lidl, Saturday

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2023 Predicted with Lidl			
Stream B-AC	0.11	11.19	0.10	B
Stream C-A	-	-	-	-
Stream C-B	0.02	7.20	0.02	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D2 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D3 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D5 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D6 - 2023 Predicted with Lidl, Saturday " model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 19/12/2017 10:10:31

File summary

Title	Site Access junction with Wakefield Road
Location	Wakefield Road, Mapplewell
Site Number	
Date	05/12/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	14-114
Enumerator	johnturner
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) - 2023 Predicted with Lidl, Saturday

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)	N/A			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
2023 Predicted with Lidl, Saturday	2023 Predicted with Lidl	Saturday		ONE HOUR	11:30	13:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	10.37	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road North	A	Wakefield Road North		Major
Site Access	B	Site Access		Minor
Wakefield Road South	C	Wakefield Road South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Wakefield Road South	6.00		0.00	✓	3.00	100.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Site Access	One lane	2.75										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	505.529	0.092	0.233	0.146	0.332
1	B-C	639.009	0.098	0.248	-	-
1	C-B	686.890	0.266	0.266	-	-

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

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wakefield Road North	ONE HOUR	✓	608.00	100.000
Site Access	ONE HOUR	✓	31.00	100.000
Wakefield Road South	ONE HOUR	✓	646.00	100.000

Turning Proportions

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

	To			
		Wakefield Road North	Site Access	Wakefield Road South
From	Wakefield Road North	0.000	5.000	603.000
	Site Access	11.000	0.000	20.000
	Wakefield Road South	638.000	8.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To			
		Wakefield Road North	Site Access	Wakefield Road South
From	Wakefield Road North	0.00	0.01	0.99
	Site Access	0.35	0.00	0.65
	Wakefield Road South	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To			
		Wakefield Road North	Site Access	Wakefield Road South
From	Wakefield Road North	1.000	1.000	1.000
	Site Access	1.000	1.000	1.000
	Wakefield Road South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
		Wakefield Road North	Site Access	Wakefield Road South
From	Wakefield Road North	0.0	0.0	0.0
	Site Access	0.0	0.0	0.0
	Wakefield Road South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.10	11.19	0.11	B
C-A	-	-	-	-
C-B	0.02	7.20	0.02	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (11:30-11:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	23.34	23.11	0.00	432.82	0.054	0.06	8.782	A
C-A	480.32	480.32	0.00	-	-	-	-	-
C-B	6.02	5.98	0.00	565.07	0.011	0.01	6.438	A
A-B	3.76	3.76	0.00	-	-	-	-	-
A-C	453.97	453.97	0.00	-	-	-	-	-

Main results: (11:45-12:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	27.87	27.80	0.00	401.28	0.069	0.07	9.639	A
C-A	573.55	573.55	0.00	-	-	-	-	-
C-B	7.19	7.18	0.00	541.42	0.013	0.01	6.737	A
A-B	4.49	4.49	0.00	-	-	-	-	-
A-C	542.08	542.08	0.00	-	-	-	-	-

Main results: (12:00-12:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	34.13	34.01	0.00	355.76	0.096	0.10	11.180	B
C-A	702.45	702.45	0.00	-	-	-	-	-
C-B	8.81	8.79	0.00	508.73	0.017	0.02	7.200	A
A-B	5.51	5.51	0.00	-	-	-	-	-
A-C	663.92	663.92	0.00	-	-	-	-	-

Main results: (12:15-12:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	34.13	34.13	0.00	355.76	0.096	0.11	11.192	B
C-A	702.45	702.45	0.00	-	-	-	-	-
C-B	8.81	8.81	0.00	508.73	0.017	0.02	7.200	A
A-B	5.51	5.51	0.00	-	-	-	-	-
A-C	663.92	663.92	0.00	-	-	-	-	-

Main results: (12:30-12:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	27.87	27.99	0.00	401.28	0.069	0.08	9.646	A
C-A	573.55	573.55	0.00	-	-	-	-	-
C-B	7.19	7.21	0.00	541.42	0.013	0.01	6.738	A
A-B	4.49	4.49	0.00	-	-	-	-	-
A-C	542.08	542.08	0.00	-	-	-	-	-

Main results: (12:45-13:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	23.34	23.41	0.00	432.81	0.054	0.06	8.794	A
C-A	480.32	480.32	0.00	-	-	-	-	-
C-B	6.02	6.03	0.00	565.07	0.011	0.01	6.441	A
A-B	3.76	3.76	0.00	-	-	-	-	-
A-C	453.97	453.97	0.00	-	-	-	-	-