BRYAN G HALL

CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

Land West of Wakefield Road Mapplewell, Barnsley

Transport Assessment

August 2013

PROPOSED RESIDENTIAL DEVELOPMENT
LAND WEST OF WAKEFIELD ROAD
MAPPLEWELL
BARNSLEY

TRANSPORT ASSESSMENT

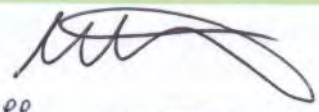
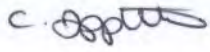
Report by: Martin Crabtree

Bryan G Hall
Consulting Civil & Transportation Planning Engineers
Suite E8, Joseph's Well, Hanover Walk, Leeds, LS3 1AB

Ref: 11-338-003.02

August 2013

Report Reference No: 11-338-003.02

	Name	Signed	Date
Report prepared by	Martin Crabtree		29/08/13
Report checked by	David Bell	pp 	29/08/13

CONTENTS

APPENDICES

Appendix BGH19	2017 Base Plus Committed Development Plus Development Flows
Appendix BGH20	2017 Base Plus Committed Development Plus Development Operational Assessments

1.0 INTRODUCTION

1.1 This Transport Assessment forms part of an outline planning application (with means of access agreed) submitted by Pipestone Limited to develop land off the A61 Wakefield Road, Mapplewell. The development proposals are for up to 300 residential dwellings. The application site is located approximately 500 metres to the east of the centre of Mapplewell and approximately 3.5 kilometres north west of Barnsley Town Centre.

1.2 This Assessment considers the transport issues associated with the proposed development and, in particular, the access and likely transport impact on the surrounding transport network in accordance with guidance given in the Department for Transport (DfT) publication 'Guidance on Transport Assessment', March 2007.

1.3 Vehicular access into the site will be gained via a right turn ghost island priority junction off A61 Wakefield Road. A loop road through the site will be provided with a number of spur arms providing access to all dwellings. A plan showing the location of the site in relation to the local highway network is attached at Appendix BGH1.

1.4 Prior to preparing this report, pre-application discussions have taken place with highway officers of Barnsley Metropolitan Borough Council to agree in principle the access points and the scope of study of this Assessment. Copies of the pre-application scoping correspondence are attached at Appendix BGH2.

1.5 In accordance with the current DfT guidance, a Transport Assessment should consider an assessment of the available vehicular capacity on the road network in the vicinity of the site and therefore, in addition to an examination of the adequacy of the site access, analyses of the existing and predicted operation of the following junctions have also been undertaken, as agreed:

- A61 Wakefield Road / B6131 Bar Lane – Signal Controlled Junction;
- A61 Wakefield Road / Paddock Road – Priority Junction; and
- A61 Wakefield Road / B6428 Lee Lane / Shaw Lane – Staggered Cross Road Junction.

1.6 A Framework Travel Plan has been produced in conjunction with this Transport Assessment and therefore the development will accord with Government advice contained in NPPF.

1.7 This report has been prepared having consideration of the access accessibility of the proposed development for non-car users against the objectives of the National Planning Policy Framework (NPPF). It also considers the impact of the development generated traffic movements upon the operation of the local highway network in the vicinity of the application site, together with an assessment of its adequacy. Following this introductory section, the report is split into the following further sections:

- **Section 2.0** Relevant Central and Local Government Policies;
- **Section 3.0** The Existing Situation;
- **Section 4.0** Existing Traffic Operating Conditions;
- **Section 5.0** Sustainable Transport And Accessibility;
- **Section 6.0** The Development Proposals;
- **Section 7.0** Traffic Generation and Distribution;
- **Section 8.0** Base Traffic Operating Conditions;
- **Section 9.0** Predicted Traffic Operating Conditions; and
- **Section 10.0** Conclusions.

2.0 RELEVANT CENTRAL AND LOCAL GOVERNMENT POLICIES

National Planning Policy Framework (NPPF)

2.1 The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how they are expected to be applied. At the heart of the NPPF is a presumption in favour of sustainable development which the document indicates should be seen as a 'golden thread' running through the decision making process.

2.2 Within the overarching roles that the planning system ought to play, the NPPF indicates that there are a set of core land use planning principles which should underpin the decision making process. Specifically in relation to transport these principles include actively managing patterns of growth to make the fullest possible use of public transport, walking and cycling, and focussing significant development in locations which are or can be made sustainable.

2.3 The NPPF indicates that all developments that generate significant amounts of movement should be supported by a Transport Assessment and the decision making process should take account of whether:

- The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
- Safe and suitable access to the site can be achieved for all people; and
- Improvements can be undertaken within the transport network that cost effectively limits the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.

This document forms the Transport Assessment for the site and has been developed in accordance with the Department for Transport's Guidance on Transport Assessment (March 2007).

2.4 The NPPF indicates that the decision making process should ensure that developments that generate significant movements are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised.

2.5 The NPPF further indicates that development should protect and exploit opportunities for the use of sustainable transport modes for the movement of

goods or people. Therefore, developments should be located and designed where practical to, inter alia:

- Give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;
- Create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones; and
- Consider the needs of people with disabilities by all modes of transport.

2.6 The NPPF indicates that a key tool to facilitate this will be a Travel Plan. All developments which generate significant amounts of movement should be required to provide a Travel Plan, and as indicated earlier the application for this site is accompanied by a Framework Travel Plan.

2.7 NPPF indicates that planning policies should aim for a balance of land uses within their area so that people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities.

2.8 Finally, NPPF indicates that where practical, particularly within large scale developments, key facilities should as primary schools and local shops should be located within walking distance of most properties, and as is demonstrated later on in this Transport Assessment, Mapplewell centre is within easy walking distance of the whole of the site.

Manual for Streets (MfS1)

2.9 Guidance for the design of residential roads set out in Design Bulletin 32 and its companion guide Places Streets and Movement was superseded in March 2007 by the publication of the Departments for Transport and Communities and Local Government publication 'Manual for Streets' (MfS1). The focus of this document is on 'lightly trafficked' residential streets but it also states that many of its principles are applicable elsewhere (e.g. high streets and lightly-trafficked lanes in rural areas). The document sets out that:

> *"It is therefore strongly recommended that local authorities review their standards and guidance to embrace the principles of MfS."*

2.10 The aims of the document are to bring about a transformation in the quality of streets and represent a fundamental culture change in the way streets are designed and adopted. MfS provides guidance in order that streets can be designed to:

- Help to build and strengthen the communities they serve;
- Meet the needs of all users, by embodying the principles of inclusive design;
- Form part of a well-connected network;
- Be attractive and have their own distinctive identity; and
- Be cost-effective to construct and maintain.

2.11 Manual for Streets advocates inclusive design and its principles which are to:

- Place people at the heart of the design process;
- Acknowledge diversity and difference;
- Offer choice where a single solution cannot accommodate all users;
- Provide for flexibility in use; and
- Provide buildings and environments that are convenient and enjoyable to use for everyone.

2.12 Manual for Streets defines a 'street' as a highway that has important public realm functions beyond the movement of traffic. Streets have a sense of place and are distinctive and are lined with and provide direct access to buildings and public spaces. Most highways in built-up areas can be considered as streets. The Manual does not define an upper limit in terms of traffic flow to define a 'street' as that was considered to be too prescriptive but as a general guide suggests a threshold of about 10,000 vehicles per day or about 1,000 vehicles per hour at peak times.

Manual for Streets 2 (MfS2)

2.13 The Chartered Institution of Highways and Transportation (CIHT) publication 'Manual for Streets 2: Wider Application of the Principles' (MfS2) was published in September 2010 and forms a companion guide to "Manual for Streets" (MfS1) which was published in 2007. MfS2 fills the perceived gap in design guidance between MfS1 and Design Manual for Roads and Bridges (DMRB) and has been endorsed by the Department for Transport (DfT).

2.14 The "Status and Application" section of MfS2 States:

> *"DMRB is the design standard for Trunk Roads and Motorways in England, Scotland, Wales and Northern Ireland. The strict application of DMRB to non-trunk routes is rarely appropriate for highway design in built up areas, regardless of traffic volume."*

2.15 MfS2 paragraph 1.3.3 states that:

> *"Where designers do refer to DMRB for detailed technical guidance on specific aspects, for example on strategic inter-urban non-trunk roads, it is recommended that they bear in mind the key principles of MfS, and apply DMRB in a way that respects local context. It is further recommended that DMRB or other standards and guidance is only used where the guidance contained in MfS is not sufficient or where particular evidence leads a designer to conclude that MfS is not applicable."*

2.16 MfS2 paragraph 1.3.4 goes on to state:

> *"The application of MfS advice to all 30mph speed limits as a starting point is in keeping with MfS1."*

Guidance on Transport Assessment

2.17 This document published by the Department for Communities and Local Government and the Department for Transport provides up to date guidance on the preparation of transport assessments to address the potential implications of development proposals on the entire transport system (buses, rail and trams), the Strategic Road Network (SRN), local highways and footways.

2.18 Paragraph 1.19 sets out that the following considerations are relevant in preparing a Transport Assessment.

Environmental sustainability

- Reducing the need to travel, especially by car – reducing the need for travel, reducing the length of trips and promoting multi-purpose or linked trips by promoting more sustainable patterns of development and more sustainable communities that reduce the physical separation of key land uses.
- Improving sustainable transport choices – by making it safer and easier for people to access jobs, shopping, leisure facilities and services by public transport, walking and cycling.
- The accessibility of the location – the extent to which a site is, or is capable of becoming accessible by non-car modes, particularly for large developments which involve major generators of travel demand.
- Other measures which may assist in influencing travel behaviour (ITB), achieving reductions in car usage (particularly single occupancy vehicles), by measures such as car sharing/pooling, High Occupancy Vehicle (HOV) lanes and parking control.

Managing the existing network

- Making best possible use of existing transport infrastructure – for instance by low cost improvements to the local public transport network and using advanced signal control systems, public transport priority measures (bus lanes), or other forms of Intelligent Transport Systems (ITS) to improve operations on the local highway network. It should be noted the capacity of existing public transport infrastructure and footpaths is finite and in some areas overcrowding already exists.
- Managing access to the highway network – taking steps to maximise the extent to which development can be made to 'fit' within the available capacity by managing access from developments onto the highway network.

Mitigating residual impacts

- Through improvements to the local public transport network and walking and cycling facilities – for example by extending bus routes and increasing bus frequencies and designing sites to facilitate walking and cycling.
- Through minor physical improvements to existing roads – it may be possible in some circumstances to improve the capacity of existing roads by relatively minor physical adjustments such as improving the geometry of junctions etc, within the existing highway boundary.
- Through provision of new or expanded roads – it is considered good transport planning practice to demonstrate that the other opportunities above have been fully explored before considering the provision of additional road space such as new roads or major junction upgrades.

2.19 Paragraph 4.3 states the assessment should address the following issues using an iterative approach to ensure that the stages of the Transport Assessment are not approached in isolation.

- Reducing the need to travel, especially by car – ensure, at the outset that thought is given to reducing the need to travel by a careful consideration of the types of uses (or mix of uses) and the scale of development to promote multipurpose or linked trips.
- Sustainable accessibility to promote accessibility by all modes of travel, in particular public transport, cycling and walking, assess the likely travel behaviour or travel patterns to and from the proposed site and develop appropriate measures to influence travel behaviour.
- Dealing with residual trips – provide accurate quantitative and qualitative analyses of the predicted impacts of residual trips from the proposed

development and ensure that sustainable measures are proposed to manage these impacts.

- Mitigation measures – ensure as much as possible that the proposed mitigation measures discourage avoidable physical improvements to highways and promote innovative and sustainable transport solutions.

2.20 The guidance states that when appraising the impact of the proposed development the impacts should be considered in the context of two alternative scenarios: 'with development' and 'without development' to enable a comparative analysis of the transport effects of allowing the development to take place.

2.21 Paragraphs 4.45 to 4.52 set out assessment years in respect of undertaking a capacity analysis of the transport network. The guidelines recommend that in addition to the opening year for the local transport network the development proposal should normally be assessed for a future year.

Barnsley Local Development Framework and its Core Strategy (LDF)

2.22 Barnsley Local Development Framework and its Core Strategy adopted in September 2011, includes a number of relevant Core Policies.

2.23 Core Strategy Policy CSP 25 New Development and Sustainable Travel states that

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 will be secured through a planning obligation or a Planning Condition.

2.24 The documents associated with this planning application will address the requirements of this Policy.

3.0 THE EXISTING SITUATION

The Application Site

3.1 The development site is located on land to the south west of the A61 Wakefield Road, north of the B6121 Bar Lane and B6428 Greenside. It is bounded by the A61 Wakefield Road to the north east, existing residential development to the north west, east and south and by Mapplewell Primary School playing fields to the west. The location of the application site in relation to the highway network is shown on the plan attached at Appendix BGH1.

3.2 The majority of the site currently comprises undeveloped land, with the exception of the northern extent which houses existing farm buildings (Bleak House Poultry Farm). The land which contains the existing farm buildings will be redeveloped.

3.3 The development proposals are for up to 300 residential dwellings. One point of vehicular access will be provided from the site onto the A61 Wakefield Road. These will be in the form of a right turn ghost island priority junction, shown in BGH3.

The Local Highway Network

3.4 A61 Wakefield Road is a single carriageway two-way road with a width of some 8.0 metres. The grass verge on the north side is of varying widths, however, a footway in the vicinity of the "light industrial property" commences with a width of approximately 2.0 metres and runs towards Barnsley. On the southern, site, side of Wakefield Road there is a footway of approximately 1.8 metres wide. Wakefield Road is lit and subject to a 40 mph speed limit along the site frontage, with an enforcement camera to the south east of the site. The speed limit reduces to 30 mph approximately 180 metres south east of the north eastern corner of the site boundary.

3.5 A61 meets Bar Lane some 360 metres south east of the north eastern corner of the site boundary by way of a signal controlled junction. Signalised pedestrian crossing facilities are provided over Bar Lane, however, pedestrians wishing to cross over A61 Wakefield Road have to do so without the benefit of signal control. There are however, pedestrian refuge islands on both arms of A61 Wakefield Road, with the crossing on the northern approach off set from the junction by approximately 25 metres. In the vicinity of the junction Bar Lane has a carriageway typically some 7.6 metres wide with 1.8 metre footways to both sides. A61 Wakefield Road to Bar Lane left turn is undertaken under priority

control. A61 Wakefield Road continues from this point towards the centre of Barnsley some 3.0 kilometres from its junction with Bar Lane.

3.6 Bar Lane runs in a westerly direction through New Lodge where it becomes Blacker Road and runs into the centre of Staincross. Bar Lane/Blacker Road is lit and subject to a 30 mph speed limit. Bar Lane serves a number of residential access roads and industrial accesses; it has a number of vertical traffic calming measures in the centre of Staincross together with a zebra crossing. Bar Lane then meets Greenside Hill by way of a priority controlled junction.

3.7 Greenside (changes name to Shaw Lane 450 metres from Blacker Road) connects with A61 Wakefield Road approximately 550 metres north-east Blacker Road, which is some 400 north of the northern boundary of the application site by way of staggered double right turn ghost island with Lee Lane. In the vicinity of the junction Greenside/Shaw Lane is lit and has a carriageway typically some 7.5 metres wide with a 1.8 metre wide footway to the western side along its length and a footway of similar width on the east but only for a short distance to the bus stop. A61 Wakefield Road in this proximity is still 40mph and lit.

3.8 A61 Wakefield Road is the priority movement of a simple priority junction with Paddock Road approximately 250 metres to the east of its junction with Shaw Lane. In the vicinity of the junction Paddock Road is lit and has a carriageway typically some 7.0 metres wide with a 1.8 metre wide either side of the carriageway.

3.9 The nearest existing bus stops to the site are located on both sides of Blacker Road to the south of the site. The majority of the site is within 400 metres walking distance of these stops via the Public Rights of Way detailed earlier in this section. There are further bus stops on Greenside to the West of the site approximately 800 walking distance that provide access to different services to those on Blacker Road.

Personal Injury Accident Data

3.10 The personal injury accident records for the most recent five year period commencing 01/01/2007 until 31/12/2011 within the study area are attached at Appendix BGH4.

3.11 The injury accident record identifies some thirteen personal injury accidents within the entire study area. Of the incidents twelve were slight and one was serious.

3.12 Three of the incidents occurred at the A61 Wakefield Road / B6428 Lee Lane / Shaw Lane junction. One of these was serious the other two slight. The serious incident at the junction of Wakefield Road and Shaw Lane. A vehicle pulled out of Shaw Lane but then, for an unknown reason, stopped in the middle of the junction, a vehicle travelling along Wakefield Road, collided with the stopped vehicle. The two other incidents in the vicinity of the junction were both slight. The first occurred when two vehicles were travelling along Shaw Lane away from Wakefield Road and a trailer that was being towed by a third vehicle travelling in the opposite direction collided with the first vehicle and then debris from the trailer hit the second vehicle. The vehicle towing the trailer failed to stop. The second incident occurred when a vehicle pulled out of Lee Lane and collided with a vehicle travelling along Wakefield Road.

3.13 Three of the incidents occurred at the A61 Wakefield Road Paddock Road junction all of which were slight in nature. The first incident occurred to the south of the junction and only involved one vehicle. A young driver (17years) was traveling southbound and lost control the car entered a field and collided with a fence post, this occurred in the hours of darkness (2220hrs). The second incident occurred at the junction, whereby a vehicle pulled out of Paddock Road (failed to look properly and failed to judge other vehicles speed) into the path of a vehicle travelling southbound on Wakefield Road. The other incident occurred at the junction, whereby a vehicle pulled out of Paddock Road (failed to look properly) into the path of a motorcycle travelling northbound on Wakefield Road.

3.14 One incident (slight) occurred approximately 200 metres to the south of the Paddock Road junction. One vehicle, travelling southbound skidded on a patch of black ice and turned in the road, a second vehicle following braked but also skidded on the ice and collided with the first vehicle.

3.15 There were a total of six incidents in the vicinity of the Wakefield Road / Bar Lane traffic signal controlled junction all of which were slight in nature. The first occurred at the junction whereby a vehicle was braking to turn right into Bar Lane but a motorcycle was following too close and misjudged the speed of the turning car and collided with the rear. A second incident occurred on the same approach whereby the first vehicle was slowing at the signals as was a further vehicle, but a third vehicle collided with the second which then shunted the first. The reason given was that the driver of the third vehicle was distracted by something within the vehicle, which prevented them from paying attention to the road. A third incident occurred on this approach when a motorcyclist drove through a red light and collided with a car negotiating the junction under a green signal. The motorcyclist fled the scene.

3.16 On the Bar Lane approach a stationary vehicle was involved in a rear end shunt as a further vehicle had defective brakes and collided with the rear of the stationary vehicle. A similar incident occurred whereby the foot of a driver of an approaching vehicle slipped off the brake pedal and as a result collided with a queuing vehicle, which in turn shunted a third vehicle. A further incident occurred on this approach when two vehicle were approaching the signals, the first vehicle slowed down but the second vehicle misjudged the speed of the first vehicle and swerved to avoid a collision but clipped the first vehicle and hit a boundary wall.

3.17 Further examination of all thirteen accidents concludes that they were caused as a result of driver error or disobeying traffic signals and there were no occurring nor as a consequence of the geometric layout of the highway.

4.0 EXISTING TRAFFIC OPERATING CONDITIONS

4.1 On Tuesday 7th February 2012 Road Data Services carried out weekday morning and evening peak period traffic surveys at the following junctions as agreed with Barbara Wilson at Barnsley Metropolitan Borough Council:

- A61 Wakefield Road / B6428 Lee Lane / Shaw Lane – Staggered Cross Road Junction.
- A61 Wakefield Road / Paddock Road – Priority Junction; and
- A61 Wakefield Road / B6131 Bar Lane – Signal Controlled Junction;

4.2 The surveys were carried out between 7:00am - 10:00am and 3:00pm - 6:00pm. The morning and evening peak hours have been found vary slightly depending upon junction location these are summarised below:

- A61 Wakefield Road / B6428 Lee Lane / Shaw Lane
  0745-0845 and 1615-1715

- A61 Wakefield Road / Paddock Road
  0800-0900 and 1615-1715

- A61 Wakefield Road / B6131 Bar Lane
  0800-0900 and 1615-1715

Therefore to ensure a robust assessment the individual junction peaks have been used in the subsequent assessments. The existing peak hour traffic flows are attached at Appendix BGH5.

4.3 A speed survey was carried out on Wednesday 12th September 2012 in the vicinity of the site frontage on A61 Wakefield Road. The surveys were undertaken between 10.30 and 12.00 in the morning and 13.30 and 15.00 in the afternoon. Full observed speeds are included in Appendix BGH6.

4.4 The results show that vehicles travelling north westbound towards Wakefield had an 85th percentile wet weather journey speed of 36.5 mph. The results show that vehicles travelling south eastbound towards Barnsley had an 85th percentile wet weather journey speed of 35.5 mph.

4.5 The operation of the junctions listed above in paragraph 4.1 has been analysed for the existing 2012 morning and evening peak hour traffic flows. The key results of

this analysis are given in the tables below with the full outputs contained at Appendix BGH7 to this report.

Table 4.1 - A61 Wakefield Road / B6428 Lee Lane / Shaw Lane – Staggered Cross Road Junction

Movement	Morning Peak Hour			Evening Peak Hour		
	RFC	Queue (veh)	Max. Delay (s)	RFC	Queue (veh)	Max. Delay (s)
A61 Wakefield Road right to Lee Lane	0.093	0.10	7.481	0.085	0.09	7.191
Shaw Lane	0.728	2.40	32.182	0.635	1.71	23.878
A61 Wakefield Road right to Shaw Lane	0.111	0.12	6.457	0.117	0.13	6.302
Lee Lane	0.378	0.60	15.064	0.288	0.40	12.829

4.6 From the results tabulated above it can be seen that the existing junction is operating satisfactorily during both the 2012 morning and evening peak traffic hours with RFC values well below the 0.85 threshold (i.e. the level of RFC above which regular queuing starts to develop).

Table 4.2 - A61 Wakefield Road / Paddock Road – Priority Junction

Movement	Morning Peak Hour			Evening Peak Hour		
	RFC	Queue (veh)	Max. Delay (s)	RFC	Queue (veh)	Max. Delay (s)
Paddock Road	0.186	0.23	10.807	0.111	0.12	9.676
Wakefield Road right to Paddock Road	0.005	0.00	4.094	0.029	0.04	4.160

4.7 From the results tabulated above it can be seen that the existing priority junction is operating satisfactorily during both the 2012 morning and evening peak traffic hours with RFC values well below the 0.85 threshold (i.e. the level of RFC above which regular queuing starts to develop).

Table 4.3 – A61 Wakefield Road / B6131 Bar Lane – Signal Controlled Junction

Movement	Morning Peak Hour		Evening Peak Hour	
	DoS	Queue (PCU)	DoS	Queue (PCU)
Wakefield Road (S) ahead	55.8	9.5	45.9	7.7
Wakefield Road (N) ahead	66.7	11.0	60.3	8.5
Bar Lane	65.3	9.9	59.4	7.8

4.8 From the results tabulated above it can be seen that the signal controlled junction is operating within capacity during both the 2012 morning and evening peak hours with DoS values well below 90%.

5.0 SUSTAINABLE TRANSPORT AND ACCESSIBILITY

General

5.1 As set out in Section 2 of this Transport Assessment, national transport policies through NPPF place significant emphasis for new development proposals on the availability and use of means of transport other than the private car.

Walking

5.2 With regard to pedestrian accessibility more specific advice is set out in 'Guidelines for Providing for Journeys on Foot', which was published in 2000 by the Chartered Institution of Highways and Transportation (CIHT). These guidelines note that walking accounts for over a quarter of all journeys and four-fifths of journeys less than one mile (1.6 kilometres).

5.3 The guidelines also provide 'ideal' walk distances for various trip types and advise that the 'desirable' walking distance for commuting or walking to and from school is 500 metres, the 'acceptable' walking distance for commuting or walking to and from schools is 1.0 kilometre and the 'preferred maximum' walking distance is 2.0 kilometres. In terms of walking within town centres, the Guidelines suggest a 'desirable' walking distance of 200 metres, an 'acceptable' distance of 400 metres and a 'preferred maximum' of 800 metres.

5.4 The advice contained within the CIHT Guidelines in relation to the preferred maximum walking distance in town centres is reflected in the Department for Transport, Local Government and the Regions in conjunction with CABE published 'Better places to live: By design – September 2001. This states that:

> *"Having established the site's broad setting in terms of its relationship to a city, town or village centre, a good starting point is to examine the area within 10 minutes' (about 800m) walking distance of the site. This can help to identify the range of facilities which residents may access comfortably on foot, as well as opportunities to reach more distant facilities by public transport."*

5.5 A number of employment, education and leisure facilities are present within 800 metres of the site. An accessibility study of the site has been carried out and the plan attached at Appendix BGH8 shows in detail the full range of facilities within the vicinity of the site.

5.6 There is an existing Public Right of Way to the east of the site that links the site to Blacker Road (to the south via Hope Street or Cloverlands Drive) and Paddock Road (to the north). A plan is also provided at Appendix BGH9 which shows the walking (i.e. via footways/footpaths) 800 metre, 1.6 kilometre and 2.0 kilometre isochrones from the site.

Cycling

5.7 Cycling has potential to substitute for short car trips, particularly those under 5.0 kilometre and up to 8.0 kilometre, and to form part of a longer journey by public transport.

5.8 Areas including Barnsley and its suburbs, as well as the whole of Mapplewell and its amenities (detailed in the earlier section) are within cycling distance of the site, providing employment opportunities for residents. A plan showing the 5 kilometre and 8 kilometre cycle isochrones is attached at Appendix BGH10.

5.9 Darton Train station is approximately 2.7 kilometres cycling distance of the western end of the site and Barnsley train station is approximately 4.5 kilometres cycling distance of the eastern end of the site and therefore both are well within the 5 kilometre cycling catchment area.

5.10 There are existing on and off road cycle routes to the south east of the site providing facilities through the Wakefield Road/Laithes Lane traffic signal junction. There are further off road routes in close proximity, to the north and east of the site for recreational use, including the West Yorkshire Cycle Route and National Cycle Network Route Number 67 (Derby to York).

Public Transport

5.11 It is recognised that for public transport to be an attractive alternative mode of transport to the private car it needs to be easily accessible on foot. The CIHT 1999 publication 'Guidelines for Planning for Public Transport in Developments' recommends that residents of major new housing developments should not have to walk more than 400m (¼ mile) to their nearest bus stop.

5.12 The nearest existing bus stops to the site are located on both sides of Blacker Road to the south of the site. The majority of the site is within 400 metres walking distance of these stops via the Public Rights of Way detailed earlier in this section. There are further bus stops on Greenside to the West of the site approximately 800 walking distance that provide access to different services to those on Blacker Road. Attached at Appendix BGH11 is a plan showing existing bus stops and services together with a summary of the local bus services.

5.13 The information shows that the bus stops on Blacker Road are served by bus numbers 1 and 4/4A the former of which provides a 10 minute frequency service to and from Barnsley, the principal local destination and the later provides a less frequent service between Barnsley and Darton (4) and Kexborough via Darton (4A) through the day and for school children.

5.14 The stops on Greenside are also served by bus numbers 93A and 97. The no. 93A service is hourly and runs from Barnsley to Mapplewell via Darton. The 97 has approximately 7 services a day in either direction and runs from Barnsley to Wakefield Bus Station.

5.15 The CIHT guidelines identify that there is a significant difference between rail and bus served developments in that people have been found to be willing to walk about twice as far to an office from a station as from a bus stop; up to at least 800m for rail, compared to about 400m for bus. It is assumed that this applies equally to residential development and the use by residents of rail services for travelling to work or for leisure purposes.

5.16 The nearest railway station to the development site is Darton Railway Station which is located on Station Road some 2.7 kilometres (walking distance via footways) from the western end of the site. The Darton station is in METRO Zone 5. A further station is located in Barnsley which is approximately 4.5 kilometres from the eastern end of the site. The station has in the order of 40 cycle parking spaces and is within acceptable cycling distance from the site. Both stations are served by the Hallam service between Leeds and Sheffield. Details of the rail services operating from Darton Railway Station are shown on the schedule attached at Appendix BGH12.

6.0 THE DEVELOPMENT PROPOSALS

The Form of Development

6.1 The proposed development consists of the erection of up to 300 residential units.

Means of Access

6.2 Vehicular access into the site will be gained via a right turn ghost island priority junction off A61 Wakefield Road. A loop road through the site will be provided with a number of spur arms providing access to all dwellings. A plan of the proposed access arrangements is attached at Appendix BGH3.

6.3 A pedestrian access is proposed from Wakefield Road to the north of the site. There are existing Public Right of Ways to the east of the site that links the site to Blacker Road (to the south via Hope Street or Cloverlands Drive) and Paddock Road (to the north). The proposals include pedestrian routes to connect to these Public Rights of Way. The provision for pedestrian access to the site will ensure maximum linkage between the site and the surrounding local facilities.

7.0 TRAFFIC GENERATION AND DISTRIBUTION

Traffic Generation

7.1 In line with the advice given in the DfT document 'Guidance on Transport Assessment' the TRICS 2012(b) database has been interrogated to obtain data from similar sites to the proposed mixed use development. The morning and evening peak hours of 8:00am - 9:00am and 5:00pm - 6:00pm have been utilised to ensure that a robust assessment is made.

Residential

7.2 The land-use category Residential – Houses Privately Owned has been assumed and the weekday peak hour average trip rates have been obtained for sites with between 150 and 237 units.

7.3 For the purpose of this assessment, 300 residential dwellings have been assumed. Average morning and evening trip rates and resultant vehicle trips are tabulated below with the full TRICS data contained at Appendix BGH13.

Table 7.1: Trip Rates and Generated Traffic for Residential land use

Assessment Period	Trip Rates per dwelling		Generated People Trips for 300 dwellings		
	Arrivals	Departures	Arrivals	Departures	Total
8:00am – 9:00am	0.151	0.454	45	136	181
5:00pm – 6:00pm	0.432	0.256	130	77	207

Traffic Distribution

7.4 Distribution of the development generated traffic will be based on existing two ways flows on the A61 Wakefield Road and the turning counts at existing junctions. As the area is predominantly residential it is likely the proposed residential development generated traffic will follow similar routes to the existing traffic on the highway network. A diagram showing the percentage distribution at the junctions analysed are attached at Appendix BGH14

7.5 Assuming similar trip distribution patterns, the corresponding generated traffic flows approaching and leaving the development on the surrounding highway

network, during the morning and evening peak traffic hours, is summarised at Appendix BGH15.

8.0 BASE TRAFFIC OPERATING CONDITIONS

Traffic Growth

8.1 In accordance with relevant guidance a Design Year of 2017 has been assumed, 5 years after the date of the existing surveys and assessments have been carried out for this year.

8.2 In order to assess the peak hour development impact during the Design Year of 2017 it has been assumed that the traffic on the local highway network will grow by Tempro adjusted National Transport Model (NTM) Central Forecast factors for the Darton Ward Applying the adjusted NTM growth factors to the existing traffic flows will ensure a robust assessment since there will be an element of double counting as the growth rates already include for elements such as future development forecasts such as the housing numbers associated with the application site.

8.3 The Tempro adjusted NTM central growth factors from 2012 - 2017 are 1.0414 (am peak factor) and 1.0433 (pm peak factor). These factors have been applied to the 2012 morning and evening peak hour flows summarised at Appendix BGH5 to provide the 2017 morning and evening peak hour 'Growthed' traffic flows summarised at Appendix BGH16.

8.4 There is one committed development to be considered in the Transport Assessment, which is the North Gawber Development that has been approved at appeal. The flows extracted from the AECOM Transport Assessment produced for the North Gawber development have been added to the baseline growthed traffic flows to provide a 2017 'growthed' morning and evening base plus committed development peak hour traffic flows for the appropriate junctions. These 2017 morning and evening base plus committed development peak hour 'Base' traffic flows are summarised at Appendix BGH17.

Base 2017 plus Committed Development Assessments

8.5 The operation of the junctions identified in paragraph 4.4 have been analysed for the Base plus committed development 2017 morning and evening peak hour traffic flows. The same assumptions as previously adopted for the existing 2012 peak hour analyses have again been adopted. The key results of the analysis are shown in the tables below with the full output contained at Appendix BGH18.

Table 8.1 - A61 Wakefield Road / B6428 Lee Lane / Shaw Lane – Staggered Cross Road Junction

Movement	Morning Peak Hour			Evening Peak Hour		
	RFC	Queue (veh)	Max. Delay (s)	RFC	Queue (veh)	Max. Delay (s)
A61 Wakefield Road right to Lee Lane	0.095	0.10	7.260	0.091	0.10	7.446
Shaw Lane	0.539	1.12	21.769	0.709	2.35	31.752
A61 Wakefield Road right to Shaw Lane	0.118	0.13	6.628	0.125	0.14	6.509
Lee Lane	0.397	0.64	15.680	0.321	0.47	14.284

8.6 From the results tabulated above it can be seen that the existing priority junction will continue to operate satisfactorily during both the 2017 'Base plus committed development' morning and evening peak traffic hours with RFC values below the 0.85 RFC threshold (i.e. the level of RFC above which regular queuing starts to develop).

Table 8.2 - A61 Wakefield Road / Paddock Road – Priority Junction

Movement	Morning Peak Hour			Evening Peak Hour		
	RFC	Queue (veh)	Max. Delay (s)	RFC	Queue (veh)	Max. Delay (s)
Paddock Road	0.202	0.25	11.467	0.120	0.14	10.165
Wakefield Road right to Paddock Road	0.005	0.00	4.062	0.032	0.04	4.076

8.7 From the results tabulated above it can be seen that the existing priority junction will continue to operate satisfactorily during both the 2017 'Base plus committed development' morning and evening peak traffic hours with RFC values below the 0.85 threshold (i.e. the level of RFC above which regular queuing starts to develop).

Table 8.3 – A61 Wakefield Road / B6131 Bar Lane – Signal Controlled Junction

Movement	Morning Peak Hour		Evening Peak Hour	
	DoS	Queue (PCU)	DoS	Queue (PCU)
Wakefield Road (S) ahead	64.0	11.0	52.3	9.0
Wakefield Road (N) ahead	75.3	13.6	67.7	11.0
Bar Lane	73.7	12.7	67.2	9.5

8.8 From the results tabulated above it can be seen that the signal controlled junction will continue to operate within practical capacity during the 2017 'Base plus committed development' morning and evening peak hour with a maximum DoS value of 75.3% and 67.7% respectively.

9.0 PREDICTED TRAFFIC OPERATING CONDITIONS

9.1 To assess the operation of the local highway network, the development generated flows at Appendix BGH15 have been added to the 2017 'Base plus committed development' (ie without development) traffic flows identified at Appendix BGH17 to establish 2017 morning and evening peak hour 'Predicted' (ie with development) traffic flows. These 'Predicted' traffic flows are identified at Appendix BGH19.

9.2 As previously identified, Vehicular access into the site will be gained via a right turn ghost island from Wakefield Road. A loop road through the site will be provided with a number of spur arms providing access to all dwellings.

9.3 The operation of the proposed access have been analysed for the 2017 'Predicted' morning and evening peak hour traffic demands, using the Junctions 8 computer program.

9.4 A summary of the results obtained by analysis of the operation of these junctions under the predicted traffic demands are given in Tables 10.1 and 10.2 with the full Junctions 8 outputs attached at Appendix BGH20.

Table 9.1: Proposed Junction Site Accesses onto Wakefield Road - Predicted 2017

	Morning Peak Hour			Evening Peak Hour		
	RFC	Queue (veh)	Max. Delay (s)	RFC	Queue (veh)	Max. Delay (s)
Left/Right out of the site	0.375	0.58	14.213	0.290	0.40	11.397
Right into the site	0.043	0.05	5.945	0.121	0.14	6.455

9.5 From the results tabulated above it can be seen that the proposed site access junction is predicted to operate satisfactorily. RFCs are well below the 0.85 practical capacity threshold and there is considerable spare capacity at 2017 to accommodate future traffic growth. The access will satisfy all current geometry requirements. There can therefore be no capacity or safety reasons why the access should not be acceptable.

9.6 The operation of the junctions identified in paragraph 8.4 have been analysed for the Predicted 2017 morning and evening peak hour traffic flows identified at

Appendix BGH19. The results for each junction analysis are tabulated below with the full output contained at Appendix BGH20.

Table 9.2 - A61 Wakefield Road / B6428 Lee Lane / Shaw Lane – Staggered Cross Road Junction

Movement	Morning Peak Hour			Evening Peak Hour		
	RFC	Queue (veh)	Max. Delay (s)	RFC	Queue (veh)	Max. Delay (s)
A61 Wakefield Road right to Lee Lane	0.116	0.13	7.964	0.103	0.11	7.822
Shaw Lane	0.844	4.52	60.137	0.781	3.30	42.652
A61 Wakefield Road right to Shaw Lane	0.122	0.14	6.854	0.127	0.15	6.612
Lee Lane	0.434	0.76	18.448	0.344	0.52	15.892

9.7 From the results tabulated above it can be seen that the existing priority junction will continue to operate satisfactorily during both the 2017 'Predicted' morning and evening peak traffic hours with RFC values below the 0.85 threshold in both AM and PM peak periods. The queues in the AM peak are less than 5 vehicles which in the following 15 minute period reduces to less than 2 vehicles.

Table 9.3 - A61 Wakefield Road / Paddock Road – Priority Junction

Movement	Morning Peak Hour			Evening Peak Hour		
	RFC	Queue (veh)	Max. Delay (s)	RFC	Queue (veh)	Max. Delay (s)
Paddock Road	0.221	0.28	12.369	0.144	0.17	10.976
Wakefield Road right to Paddock Road	0.005	0.01	4.064	0.034	0.05	3.954

9.8 From the results tabulated above it can be seen that the existing priority junction will continue to operate satisfactorily during both the 2017 'Predicted' morning and evening peak traffic hours with RFC values below the 0.85 threshold (i.e. the level of RFC above which regular queuing starts to develop).

Table 9.4 – A61 Wakefield Road / B6131 Bar Lane – Signal Controlled Junction

Movement	Morning Peak Hour		Evening Peak Hour	
	DoS	Queue (PCU)	DoS	Queue (PCU)
Wakefield Road (S) ahead	71.4	13.3	54.2	9.6
Wakefield Road (N) ahead	75.9	14.3	71.1	12.9
Bar Lane	75.6	13.0	72.0	10.0

9.9 From the results tabulated above it can be seen that the priority controlled junction will continue to operate within its practical capacity during the 2017 'Predicted' morning peak hour with a DoS value of less than 90% in both AM and PM peak periods. The impact of the development is to increase the queues minimally.

10.0 CONCLUSIONS

10.1 This Transport Assessment forms part of an outline planning application (with means of access agreed) submitted by Pipestone Limited to develop land off the A61 Wakefield Road, Mapplewell. The development proposals are for up to 300 residential dwellings. The application site is located approximately 500 metres to the east of the centre of Mapplewell and approximately 3.5 kilometres north west of Barnsley Town Centre.

10.2 Vehicular access into the site will be gained via a right turn ghost island priority junction off A61 Wakefield Road. A loop road through the site will be provided with a number of spur arms providing access to all dwellings.

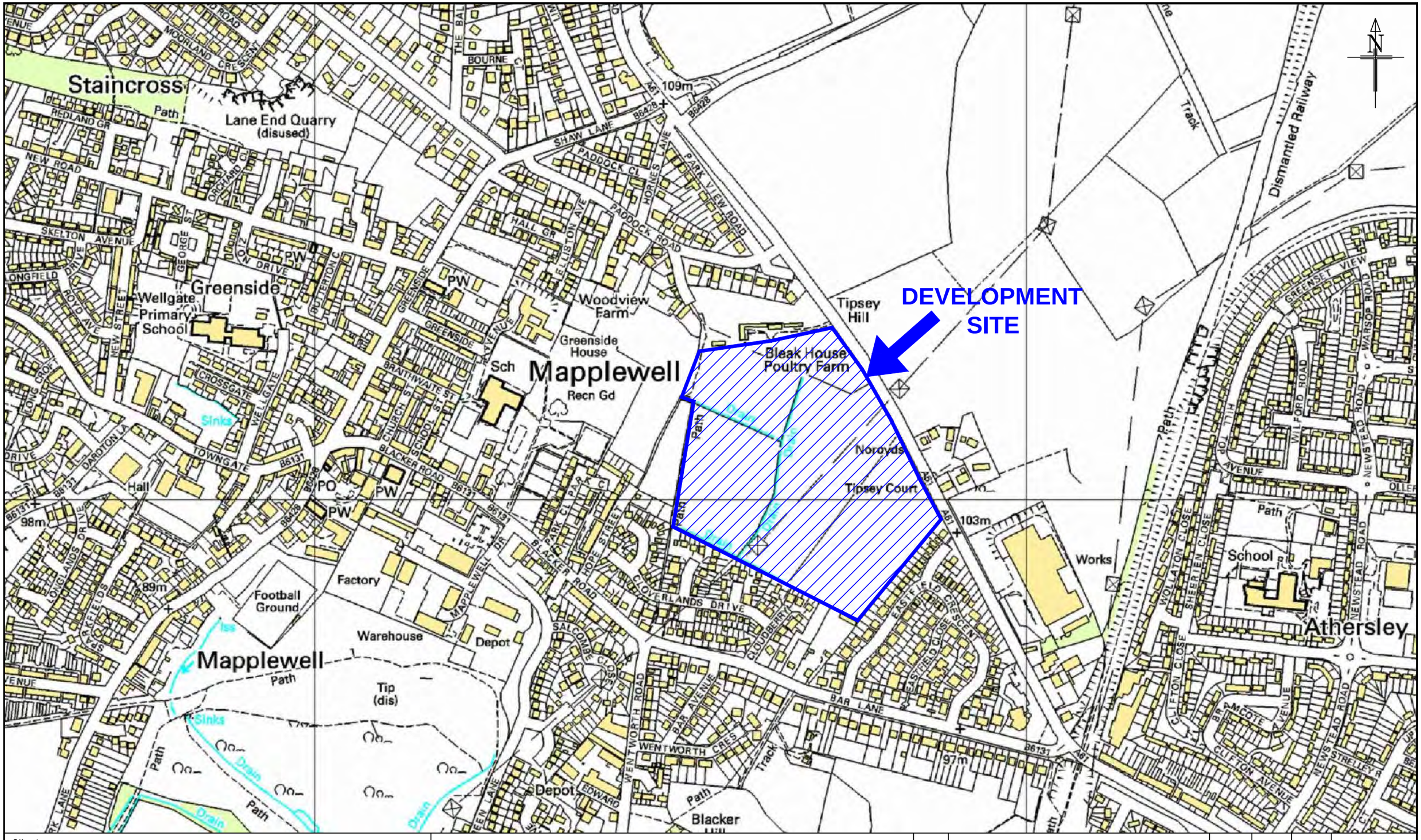
10.3 Prior to preparing this report, pre-application discussions have taken place with highway officers of Barnsley Metropolitan Borough Council to agree in principle the access points and the scope of study of this Assessment.

10.4 Analysis of the impact of the traffic likely to be generated by the development proposals has shown that the operation of the junctions in the vicinity of the site will not be materially affected by the development proposals. The increase in RFC's and DoS when comparing the 2017 'Base plus committed development' scenario with the 2017 'Base plus committed development plus development' scenario are minimal.

10.5 The site is well located to encourage trips other than by private car and it is assumed that it will be a condition of any planning approval that a residential Travel Plan is implemented. For this reason, a Framework Travel Plan has been produced in conjunction with this Transport Assessment. Development of the site therefore accords with sustainable transport policies promoted by the Government and the relevant Local Government departments.

10.6 It is concluded that there are no highway or transport related reasons why these development proposals should not be granted planning permission.

APPENDIX BGH 1



Client	Pipestone Limited				
Project	PROPOSED RESIDENTIAL DEVELOPMENT LAND WEST OF WAKEFIELD ROAD, MAPPLEWELL				
Title	SITE LOCATION IN RELATION TO THE HIGHWAY NETWORK				

Rev	Amendments	Drawn	Chkd	Appr	Date

Scale NTS	Date September 2012	Doc Sheet No
Drawn MC	Checked MC	Approved DB
Job No 11–338	Drawing No Appendix – BGH1	Rev

BRYAN · G · HALL
consulting civil & transportation planning engineers

Bryan G Hall Ltd.
Suite E8 Joseph's Well
Hanover Walk
Leeds,
LS3 1AB
Tel: +44(0)113 246 1555
Fax: +44(0)113 234 2201

APPENDIX BGH 2

PROPOSED RESDIDENTIAL DEVELOPMENT
LAND OFF A61 WAKEFIELD ROAD
MAPPLEWELL
BARNSLEY

SCOPING REPORT FOR TRANSPORT ASSESSMENT

Bryan G Hall
Consulting Civil & Transportation
Planning Engineers
Suite E8
Joseph's Well
Hanover Walk
Leeds
LS3 1AB

January 2012 Ref: 11-338-001.01

CONTENTS

1.0 INTRODUCTION

1.1 Background

Bryan G Hall Limited has been appointed by Dacres to prepare a Transport Assessment to accompany an outline planning application (with means of access agreed) by Pipestone Ltd, to develop land off the A61 Wakefield Road, Mapplewell. The development proposals are for up to 350 residential dwellings.

1.2 This Scoping Report seeks to define the scope and extent of the full Transport Assessment and has been discussed / agreed with Barbara Wilson at Barnsley Metropolitan Borough Council.

1.3 The Transport Assessment will deal comprehensively with all transport issues raised by the scheme and will be based on guidance set out in the DfT's document entitled 'Guidance on Transport Assessment' dated March 2007. It will provide the necessary information to assist the Local Planning and Highway Authority to assess the planning application. It will consider the transport implications of the proposals to achieve a sustainable development and identify any residual impacts together with appropriate mitigation measures.

2.0 TRANSPORT POLICY CONSIDERATIONS

2.1 The Transport Assessment will be based upon relevant national and local transport policies, including Planning Policy Guidance Note 13: Transport, Barnsley's Local Development Framework documents and South Yorkshire's Local Transport Plan 3.

3.0 DEVELOPMENT PROPOSALS

3.1 The development site is located on land to the south west of the A61 Wakefield Road, north of the B6121 Bar Lane and B6428 Greenside. It is bounded by the A61 Wakefield Road to the north east, existing residential development to the north west, east and south and by Mapplewell Primary School playing fields to the west.

3.2 The majority of the site currently comprises undeveloped land, with the exception of the northern extent which houses existing farm buildings (Bleak House Poultry Farm). The land which contains the existing farm buildings will be redeveloped.

3.3 The development proposals are for up to 350 residential dwellings. Two points off vehicular access will be provided from the north eastern extent of the site onto the A61 Wakefield Road. These will be in the form of simple priority junctions.

3.5 **Pedestrian Access**

Pedestrian access to the site is proposed to be gained by means of a continuation of the existing provisions on the A61 Wakefield Road and additional linkages will be provided from the north western extent of the site onto Paddock Road and from the southern extent of the site onto Cloverlands Drive and Hope Street to ensure maximum linkage between the site and the surrounding residential developments/local facilities.

3.6 **Public Transport**

Bus stops are currently located on the B6121 Bar Lane and B6428 Greenside, which are within 400 metres walking distance of the proposed development site boundary via the pedestrian linkages onto Paddock Road, Cloverlands Drive and Hope Street.

4.0 TRANSPORT ASSESMENT CRITERIA

4.1 The Transport Assessment will be based on guidance set out in the DfT's document entitled 'Guidance on Transport Assessment' dated March 2007.

4.2 **Public Transport**

The Transport Assessment will consider public transport provision in the vicinity of the development site to determine the likely proportion of trips by public transport.

4.3 **Accessibility for Pedestrians and Cyclists**

The Transport Assessment will consider pedestrian and cyclist access to the development.

4.4 **Study Area**

An assessment of the current usage of the local highway network in the vicinity of the development site will be based upon the results of traffic surveys undertaken on a weekday between the hours of 07:00-10:00 and 15:30-18:30 at the following locations;

- A61 Wakefield Road / B6131 Bar Lane – Signal Controlled Junction;
- A61 Wakefield Road / Paddock Road – Priority Junction; and
- A61 Wakefield Road / B6428 Lee Lane / Shaw Lane – Staggered Cross Road Junction.

4.5 **Accident Analysis**

BMBC have suggested there may be an accident problem on this section of the A61 Wakefield Road. The record of personal injury accidents that have occurred on the local highway network within the study area during the last five years will be obtained from Barnsley Metropolitan Borough Council. The record will be analysed to determine any relevant accident patterns.

4.6 Vehicle Speed Analysis

BMBC have suggested vehicle speeds are an issue on this section of the A61 Wakefield Road. A speed survey will be undertaken and the data will be analysed within the Transport Assessment.

4.7 Committed Developments

The Transport Assessment will include traffic likely to be generated by any committed development. Committed developments to be considered in the Transport Assessment are:

- N Gawber Development – Approved at appeal.

4.8 Assessment Years

The Transport Assessment will assess the transport impact at the design year 2017. Five years after submission of the planning application (2012).

4.9 Traffic Growth

Traffic growth will be based upon National Trip End Model (NTEM) factors adjusted by Tempro local growth factors.

4.10 Sustainable Transport Measures

The application will include a Travel Plan framework that will be developed and agreed with the Local Authority.

4.11 Hours of Assessment

The hours of assessment will be identified from the traffic surveys, however, it is considered likely at this stage that weekday morning and evening peak hours will be considered.

4.12 Traffic Generation / Distribution

The TRICS database will be used to establish the weekday morning and evening peak hour trips likely to be generated by the development proposal.

4.13 Distribution of the development generated traffic will be based on existing two ways flows on the A61 Wakefield Road and the turning counts at existing junctions. As the area is predominantly residential it is likely the proposed residential development generated traffic will follow similar routes to the existing traffic on the highway network.

4.14 **Assessment Methods**

The Transport Assessment will assess both the existing/base peak hour traffic demands on the local highway network and the predicted traffic generation of the proposed development. The impact of the proposed development will be based upon the net increase in traffic flows on the surrounding highway network. The impact will be assessed using industry recognised computer programs, in conjunction with specific DfT guidance.

4.15 **Mitigation Measures**

The Transport Assessment will consider the need for off-site mitigation measures and identify appropriate improvements if needed.

5.0 SUMMARY

5.1 The Transport Assessment will be prepared as part of an outline planning application by Pipestone Ltd, to develop land off the A61 Wakefield Road, Mapplewell.

5.2 The Transport Assessment will include the following:

- A description of Development Proposals.
- A summary of local and national planning and transportation policies.
- A description of the surrounding local highway network.
- Details of sustainable travel options currently available including public transport, walking and cycling, with particular reference to pedestrian linkages to local facilities and public transport provision.
- An assessment of the current usage of the local highway network.
- A summary of locally committed developments and their traffic generations.
- An assessment of the record of personal injury accidents.
- Traffic growth using National Trip End Model (NTEM) factors adjusted by Tempro local growth factors.
- Base Year traffic flows.
- A summary of proposed travel plan measures.
- Traffic generation of the proposed development derived using the TRICS database.
- Predicted traffic flows on the local highway network at the year of submission of the application and five years afterwards.
- An assessment of the impact of the net increase in traffic flow on the surrounding highway using industry recognised computer programs and DfT guidance.
- Consideration of the need for off-site mitigation and identification of appropriate measures.

APPENDIX BGH 3

Drawing Number	Revision
11/338/TR/001	

Rev	Date	Amendments	Drn	Chk	App

Do not scale this drawing

Title

PROPOSED RIGHT TURN GHOST ISLAND

Client

PIPESTONE GROUP LTD.

Project

WAKEFIELD ROAD,
MAPPLEWELL, BARNSLEY

BRYAN · G · HALL
consulting civil & transportation planning engineers

Suite E8 Joseph's Well
Hanover Walk Leeds LS3 1AB
Tel No: 0113 246 1555 Fax No: 0113 234 2201

Drg No.	11/338/TR/001			Revision	
Scale	1:250 @ A2	Job No.	11-338	Date	13/09/12
Drawn	CT	Checked	MC	Approved	

APPENDIX BGH 4

Accidents between dates **01/01/2007 and 31/12/2011** (60) months

Selection:

Selected using Build Query : Local_auth=210; Refined using Accidents within selected Polygons -Mick H's Polygons ("Bryan G Hall. Martin Crabtree")

Notes:

Police Ref.	Acc Class	Date	Time	Grid References	Casualties Ftl	Ser	Slt	Causation Factors/ Prob	Ped L M D	Light	Weather	Road Surface	Vehicle Types
Selected Polygon:Bryan G Hall. Martin Crabtree													
B-00349-07	Slight	11/03/2007	1240	434027 409649	0	0	2	406V1A 203V1B	0 0 0	Light	Fine without high winds	Dry	9 9
B-00540-07	Slight	20/04/2007	1750	433521 410527	0	0	1	405V2A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00008-08	Slight	05/01/2008	1500	434072 409654	0	0	1	308V2B	0 0 0	Light	Fine without high winds	Wet/Damp	5 9
B-00906-08	Slight	27/07/2008	1820	434054 409660	0	0	1	301V2B	0 0 0	Light	Fine without high winds	Dry	4 9
B-01626-08	Serious	28/12/2008	1255	433485 410561	0	1	5	402V2B 406V2B 306V1B	0 0 0	Light	Fine without high winds	Dry	9 9
B-00226-09	Slight	03/02/2009	0230	433773 410193	0	0	1	103V2A 410V2B 408V2B	0 0 0	Light	Fine without high winds	Frost/Ice	9 9
B-00244-09	Slight	25/02/2009	2220	433674 410329	0	0	1	410V1A	0 0 0	Dark	Fine without high winds	Dry	9
B-00891-09	Slight	23/08/2009	1435	434055 409665	0	0	4	509V1A	0 0 0	Light	Fine without high winds	Dry	9 9 9
B-01010-10	Slight	23/09/2010	1532	433984 409656	0	0	1	308V1A 405V1A	0 0 0	Light	Raining without high winds	Wet/Damp	9 9 9
B-01209-10	Slight	15/11/2010	1828	433413 410525	0	0	1	206V3A 999V3A	0 0 0	Dark	Other	Wet/Damp	9 9 9
B-00314-11	Slight	02/04/2011	2008	433652 410358	0	0	1	405V2A 406V2B	0 0 0	Dark	Fine without high winds	Dry	9 9
B-00480-11	Slight	24/05/2011	1740	433928 409673	0	0	3	403V2A 409V2A 410V2A	0 0 0	Light	Fine with high winds	Dry	9 9
B-00653-11	Slight	13/07/2011	1520	433654 410356	0	0	1	405V1A	0 0 0	Light	Fine without high winds	Dry	3 9
Column Totals													
No. of Accidents													

Total number of accidents listed: 13

Details of Personal Injury Accidents for Period - 01/01/2007 to 31/12/2011 (60) months

Selection:

Selected using Build Query : Local_auth=210; Refined using Accidents within selected Polygons "Mick H's Polygons ("Bryan G Hall. Martin Crabtree")

Notes:

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

Selected Polygon:Bryan G Hall. Martin Crabtree

B-00349-07	Sunday	BAR LANE BARNSLEY 10M	Veh 2	Car	Wait go ahead held up	S	to N	FSP	F	87	Slight
	11/03/2007	WAKEFIELD RD	Veh 2	Car	Wait go ahead held up	S	to N	Dri	M	20	Slight
U	1240hrs		Veh 1	Car	Going ahead	S	to N				
	Daylight:street lights present										
E 434,027	Dry										
N 409,649	Fine without high winds										
	30 mph										

V2 STATIONARY AT TRAFFIC LGHT WHEN V1 STRUCK V2 FROM BEHIND.

B-00540-07	Friday	WAKEFIELD RD STAINCROSS 3 MTS	Veh 2	Car	Starting	E	to N				
	20/04/2007	FROM J/W LEE LN	Veh 1	Car	Going ahead	N	to S	Dri	M	25	Slight
A 61	1750hrs										
	Daylight:street lights present										
E 433,521	Dry										
N 410,527	Fine without high winds										
	40 mph										

V1 TV A61 TW BARNSLEY . V2 ON LEE LN AT J/W A61. V2 FAILS TO SEE V1 & PULLS OUT OF JCT. V1 COLL WITH SIDE OF V2.

B-00008-08	Saturday	WAKEFIELD RD BARNSLEY	Veh 2	M/C > 500 cc	Going ahead	S	to N	Dri	M	26	Slight
	05/01/2008		Veh 1	Car	Wait to turn right	S	to N				
A 61	1500hrs										
	Daylight:street lights present										
E 434,072	Wet/Damp										
N 409,654	Fine without high winds										
	40 mph										

V1 TV ALONG A61 TW WAKEFIELD. V2 TV SAME DIRC. V1 SLOWED TO TURN R, V2 FAILED TO STOP IN TIME & COLL WITH REAR OF V1.

B-00906-08	Sunday	WAKEFIELD ROAD STAINCROSS AT	Veh 2	M/C > 125 cc	Turning right	S	to E				
	27/07/2008	J/W BAR LANE	Veh 1	Car	Going ahead	E	to W	Dri	F	40	Slight
A 61	1820hrs										
	Daylight: no street lighting										
E 434,054	Dry										
N 409,660	Fine without high winds										
	30 mph										

V1 TRAVELLING ALONG WAKEFIELD RAOD V2 GOES THROUGH RED TRAFFIC LIGHT AND COLLIDES WITH REAR OF V1 THEN LEAVES SCENE.

B-01626-08	Sunday	WAKEFIELD RD BARNSLEY J/W	Veh 2	Car	Turning right	0	to 0	RSP	F	45	Serious
	28/12/2008	SHAW LN	Veh 2	Car	Turning right	0	to 0	FSP	F	16	Slight
A 61	1255hrs		Veh 2	Car	Turning right	0	to 0	RSP	M	11	Slight
	Daylight:street lights present		Veh 2	Car	Turning right	0	to 0	Dri	M	49	Slight
E 433,485	Dry		Veh 1	Car	Going ahead	0	to 0	Dri	M	22	Slight
N 410,561	Fine without high winds		Veh 1	Car	Going ahead	0	to 0	FSP	F	0	Slight
	40 mph										

V1 TV A61 TW WAKEFIELD. V2 PULLING OUT OF JCT OF SHAW LN, TURNING R ONTO A61. FOR SOME REASON V2 STOPPED IN THE JCT & V1 THEN COLL WITH V2.

Details of Personal Injury Accidents for Period - 01/01/2007 to 31/12/2011 (60) months

Selection:

Selected using Build Query : Local_auth=210; Refined using Accidents within selected Polygons "Mick H's Polygons ("Bryan G Hall. Martin Crabtree")

Notes:

			Vehicles						Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class						Sex / Age / Sev			
Road No.	Date											
	Time											
Grid Ref.	D/L											
	R.S.C											
	Weather											
	Speed											
	Account of Accident											
B-00226-09	Tuesday	WAKEFIELD RD BARNSLEY 200 MTS	Veh 1	Car	Going ahead	N	to S	Dri	F	24	Slight	
	03/02/2009	FROM PADDOCK RD	Veh 2	Car	Going ahead	N	to S					
A 61	0230hrs											
	Daylight:street lights present											
E 433,773	Frost/Ice											
N 410,193	Fine without high winds											
	40 mph											
	V1 SKIDDED ON BLACK ICE CAUSING VEH TO TURN IN RD, V2 FOLLOWING BRAKED BUT ALSO SKIDDED AND COLL WITH V1.											
B-00244-09	Wednesday	WAKEFIELD RD BARNSLEY 30M	Veh 1	Car	Going ahead	N	to S	Dri	M	17	Slight	
	25/02/2009	SOUTH PADDOCK ROAD										
A 61	2220hrs											
	Darkness: street lights present a											
E 433,674	Dry											
N 410,329	Fine without high winds											
	40 mph											
	DRIVER LOST CONTROL LEAVING CARR, ENTERING FIELD, COLLIDING WITH FENCE POST AND OVERTURNS											
B-00891-09	Sunday	WAKEFIELD RD STAINCROSS J/W	Veh 3	Car	Wait go ahead held up	N	to S	Dri	F	34	Slight	
	23/08/2009	BAR LN	Veh 1	Car	Going ahead	N	to S	FSP	F	36	Slight	
A 61	1435hrs		Veh 2	Car	Stopping	N	to S	FSP	F	40	Slight	
	Daylight:street lights present		Veh 2	Car	Stopping	N	to S	Dri	M	40	Slight	
E 434,055	Dry											
N 409,665	Fine without high winds											
	30 mph											
	V3 STATIONARY AT ATS, V2 SLOWING TO A STOP BEHIND V3 WHEN V1 COLL WITH REAR OF V2, SHUNTING V2 INTO REAR OF V3.											
B-01010-10	Thursday	BAR LN STAINCROSS 30 MTS FROM	Veh 2	Car	Stopping	S	to N					
	23/09/2010	J/W WAKEFIELD RD	Veh 3	Car	Wait to turn right	0	to 0					
B 6131	1532hrs		Veh 1	Car	Going ahead	S	to N	Dri	F	79	Slight	
	Daylight:street lights present											
E 433,984	Wet/Damp											
N 409,656	Raining without high winds											
	30 mph											
	DRIVER OF V1 FAILED TO ANTICIPATE & OBSERVE VEHS IN FRONT. SHE ATTEMPTED TO BRAKE BUT HER FOOT SLIPPED OFF BRAKE PEDAL. AS A RESULT V1 COLL WITH REAR OF V2, V2 THEN SCUFFED REAR BUMPER OF V3. V3 WAS STATIONARY, INDICATING R, WAITING TO TURN INTO EASTFIEL D ARMS.											
B-01209-10	Monday	SHAW LN STAINCROSS 1 MT FROM	Veh 2	Car	Going ahead	S	to N					
	15/11/2010	J/W LIMES AVE	Veh 3	Car	Going ahead	N	to S					
B 6428	1828hrs		Veh 1	Car	Going ahead	S	to N	Dri	M	17	Slight	
	Darkness: street lights present a											
E 433,413	Wet/Damp											
N 410,525	Other											
	30 mph											
	V1 & V2 TV UP SHAW LN AWAY FROM WAKEFIELD RD WHEN A TRAILER COLL WITH V1 & DEBRIS FROM THE TRAILER HIT BONNET OF V2. IT IS BELIEVED THAT A JEEP(V3) WAS TOWING THE TRAILER, HOWEVER THE JEEP DROVE OFF IN DIRC OF WAKEFIELD.											

Details of Personal Injury Accidents for Period - 01/01/2007 to 31/12/2011 (60) months

Selection:

Selected using Build Query : Local_auth=210; Refined using Accidents within selected Polygons "Mick H's Polygons ("Bryan G Hall. Martin Crabtree")

Notes:

			Vehicles					Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev		
Road No.	Date									
	Time									
Grid Ref.	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									
B-00314-11	Saturday	WAKEFIELD RD STAINCROSS J/W	Veh 2	Car	Starting	W to E	Dri	M	81	Slight
	02/04/2011	PADDOCK RD	Veh 1	Car	Going ahead	NW to SE				
A 61	2008hrs									
	Darkness: street lights present a									
E 433,652	Dry									
N 410,358	Fine without high winds									
	40 mph									
	V1 TV ALONG A61 WAKEFIELD RD TW STAINCROSS WHEN V2 PULLED OUT OF JCT IN FRONT OF V1 & COLL OCCURRED.									
B-00480-11	Tuesday	BARR LN MAPPLEWELL	Veh 2	Car	Stopping	N to S	Dri	M	29	Slight
	24/05/2011		Veh 2	Car	Stopping	N to S	FSP	M	26	Slight
U	1740hrs		Veh 1	Car	Stopping	N to S	Dri	F	25	Slight
	Daylight:street lights present									
E 433,928	Dry									
N 409,673	Fine with high winds									
	30 mph									
	V2 APPROACHING TF, SLOWED BEHIND V1, TF STARTED TO MOVE BUT V2 MISJUDGED SPEED AND TO AVOID A COLL WITH V1 SWERVED BUT CLIPPED V1 THEN COLL WITH BOUNDARY WALL.									
B-00653-11	Wednesday	WAKEFIELD RD BARNSLEY AT J/W	Veh 2	M/C < 125 cc	Going ahead	S to N	Dri	M	34	Slight
	13/07/2011	PADDOCK RD	Veh 1	Car	Turning right	W to S				
A 61	1520hrs									
	Daylight:street lights present									
E 433,654	Dry									
N 410,356	Fine without high winds									
	40 mph									
	V1 EMERGED FROM JCT INTO PATH OF V2 AND COLL OCC.									

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac
Selected Polygon:Bryan G Hall, Martin Crabtre

B-00349-07 11/03/2007 Sunday Time:1240 Vehicles 2 Casualties 2 Slight
Easting: 434,027 Northing: 409,649
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Single carriageway Speed Limit: 30

Location: BAR LANE BARNSLEY 10M WAKEFIELD RD
Description:V2 STATIONARY AT TRAFFIC LGHT WHEN V1 STRUCK V2 FROM BEHIND.

Vehicle Reference:1 Car Going ahead
First point of impact:Front
Vehicle direction: S to N Journey: Other/Not known
Age of Driver : 23 Breath test:Not applicable

Contributory Factors : 406 203

Vehicle Reference:2 Car Waiting to go ahead but held up
First point of impact:Back
Vehicle direction: S to N Journey: Other/Not known
Age of Driver : 20 Breath test:Not applicable

Contributory Factors : 406 203

Casualty Reference 1 Age:20 Male Driver/rider Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference 2 Age:87 Female Passenger Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

B-00540-07 20/04/2007 Friday Time:1750 Vehicles 2 Casualties 1 Slight
Easting: 433,521 Northing: 410,527
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Single carriageway Speed Limit: 40

Location: WAKEFIELD RD STAINCROSS 3 MTS FROM J/W LEE LN
Description:V1 TV A61 TW BARNSLEY . V2 ON LEE LN AT J/W A61. V2 FAILS TO SEE V1 & PULLS OUT OF JCT. V1 COLL WITH SIDE OF V2.

Vehicle Reference:1 Car Going ahead
First point of impact:Front
Vehicle direction: N to S Journey: Other/Not known
Age of Driver : 25 Breath test:Not applicable

Contributory Factors : 405

Casualty Reference 1 Age:25 Male Driver/rider Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference:2 Car Moving off
First point of impact:Did not impact
Vehicle direction: E to N Journey: Other/Not known
Age of Driver : 18 Breath test:Not applicable

Contributory Factors : 405

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

B-00008-08 05/01/2008 Saturday Time:1500 Vehicles 2 Casualties 1 Slight
Easting: 434,072 Northing: 409,654
Fine without high winds Road Surface:Wet/Damp Daylight:street lights present
Road Type: Single carriageway Speed Limit: 40

Location: WAKEFIELD RD BARNSLEY
Description:V1 TV ALONG A61 TW WAKEFIELD. V2 TV SAME DIRC. V1 SLOWED TO TURN R, V2 FAILED TO STOP IN TIME & COLL WITH REAR OF V1.

Vehicle Reference:1 Car Waiting to turn right
First point of impact:Back
Vehicle direction: S to N Journey: Other/Not known
Age of Driver : 25 Breath test:Not applicable

Contributory Factors : 308

Vehicle Reference:2 Motorcycle over 500cc Going ahead
First point of impact:Front
Vehicle direction: S to N Journey: Other/Not known
Age of Driver : 26 Breath test:Not applicable

Contributory Factors : 308

Casualty Reference 1 Age:26 Male Driver/rider Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

B-00906-08 27/07/2008 Sunday Time:1820 Vehicles 2 Casualties 1 Slight
Easting: 434,054 Northing: 409,660
Fine without high winds Road Surface:Dry Daylight: no street lighting
Road Type: Single carriageway Speed Limit: 30

Location: WAKEFIELD ROAD STAINCROSS AT J/W BAR LANE
Description:V1 TRAVELLING ALONG WAKEFIELD RAOD V2 GOES THROUGH RED TRAFFIC LIGHT AND COLLIDES WITH REAR OF V1 THEN LEAVES SCENE.

Vehicle Reference:1 Car Going ahead
First point of impact:Back
Vehicle direction: E to W Journey: Other/Not known
Age of Driver : 40 Breath test:Not applicable

Contributory Factors : 301

Casualty Reference 1 Age:40 Female Driver/rider Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference:2 Motorcycle over 125cc and up Turning right
First point of impact:Front
Vehicle direction: S to E Journey: Other/Not known
Age of Driver : Breath test:Not applicable

Contributory Factors : 301

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

B-01626-08 28/12/2008 Sunday Time:1255 Vehicles 2 Casualties 6 Serious
Easting: 433,485 Northing: 410,561
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Single carriageway Speed Limit: 40

Location: WAKEFIELD RD BARNSLEY J/W SHAW LN
Description:V1 TV A61 TW WAKEFIELD. V2 PULLING OUT OF JCT OF SHAW LN, TURNING R ONTO A61. FOR SOME REASON V2 STOPPED IN THE JCT & V1 THEN COLL WITH V2.

Vehicle Reference:1 Car Going ahead
First point of impact:Front
Vehicle direction: Parked to Parked Journey: Other/Not known
Age of Driver : 22 Breath test:Not applicable

Contributory Factors : 402 406 306

Casualty Reference 1 Age:0 Female Passenger Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference 5 Age:22 Male Driver/rider Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

Vehicle Reference2 Car Turning right
First point of impact:Offside
Vehicle direction: Parked to Parked Journey: Other/Not known
Age of Driver : 49 Breath test:Not applicable

Contributory Factors : 402 406 306

Casualty Reference 2 Age:45 Female Passenger Severity:Serious
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference 3 Age:16 Female Passenger Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference 4 Age:11 Male Passenger Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference 6 Age:49 Male Driver/rider Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

B-00226-09 03/02/2009 Tuesday Time:0230 Vehicles 2 Casualties 1 Slight
Easting: 433,773 Northing: 410,193
Fine without high winds Road Surface:Frost/Ice Daylight:street lights present
Road Type: Single carriageway Speed Limit: 40

Location: WAKEFIELD RD BARNSLEY 200 MTS FROM PADDOCK RD
Description:V1 SKIDDED ON BLACK ICE CAUSING VEH TO TURN IN RD, V2 FOLLOWING BRAKED BUT ALSO SKIDDED AND COLL WITH V1.

Vehicle Reference:1 Car Going ahead
First point of impact:Nearside
Vehicle direction: N to S Journey: Commuting to/from work
Age of Driver : 24 Breath test:Not applicable

Contributory Factors : 103 410 408

Casualty Reference 1 Age:24 Female Driver/rider Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference:2 Car Going ahead
First point of impact:Nearside
Vehicle direction: N to S Journey: Commuting to/from work
Age of Driver : Breath test:Not applicable

Contributory Factors : 103 410 408

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

B-00244-09 25/02/2009 Wednesday Time: 2220 Vehicles 1 Casualties 1 Slight
Easting: 433,674 Northing: 410,329
Fine without high winds Road Surface: Dry Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 40

Location: WAKEFIELD RD BARNSLEY 30M SOUTH PADDOCK ROAD
Description: DRIVER LOST CONTROL LEAVING CARR, ENTERING FIELD, COLLIDING WITH FENCE POST AND OVERTURNS

Vehicle Reference: 1 Car Going ahead
First point of impact: Front
Vehicle direction: N to S Journey: Other/Not known
Age of Driver : 17 Breath test: Not applicable

Contributory Factors : 410

Casualty Reference 1 Age: 17 Male Driver/rider Severity: Slight
Ped Dir: Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

B-00891-09 23/08/2009 Sunday Time:1435 Vehicles 3 Casualties 4 Slight
Easting: 434,055 Northing: 409,665
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Single carriageway Speed Limit: 30

Location: WAKEFIELD RD STAINCROSS J/W BAR LN
Description:V3 STATIONARY AT ATS, V2 SLOWING TO A STOP BEHIND V3 WHEN V1 COLL WITH REAR OF V2, SHUNTING V2 INTO REAR OF V3.

Vehicle Reference:1 Car Going ahead
First point of impact:Front
Vehicle direction: N to S Journey: Other/Not known
Age of Driver : 36 Breath test:Not applicable

Contributory Factors : 509

Casualty Reference 4 Age:36 Female Passenger Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference:2 Car Slowing or Stopping
First point of impact:Back
Vehicle direction: N to S Journey: Other/Not known
Age of Driver : 40 Breath test:Not applicable

Contributory Factors : 509

Casualty Reference 1 Age:40 Male Driver/rider Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Casualty Reference 3 Age:40 Female Passenger Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

Vehicle Reference3 Car Waiting to go ahead but held up
First point of impact:Back
Vehicle direction: N to S Journey: Other/Not known
Age of Driver : 34 Breath test:Not applicable

Contributory Factors : 509

Casualty Reference 2 Age:34 Female Driver/rider Severity:Slight

Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

B-01010-10 23/09/2010 Thursday Time:1532 Vehicles 3 Casualties 1 Slight
Easting: 433,984 Northing: 409,656
Raining without high winds Road Surface:Wet/Damp Daylight:street lights present
Road Type: Single carriageway Speed Limit: 30

Location: BAR LN STAINCROSS 30 MTS FROM J/W WAKEFIELD RD
Description:DRIVER OF V1 FAILED TO ANTICIPATE & OBSERVE VEHS IN FRONT. SHE ATTEMPTED TO BRAKE BUT HER FOOT SLIPPED OFF BRAKE PEDAL. AS A RESULT V1 COLL WITH REAR OF V2, V2 THEN SCUFFED REAR BUMPER OF V3. V3 WAS STATIONARY, INDICATING R, WAITING TO TURN INTO EASTFIEL

Vehicle Reference:1 Car Going ahead
First point of impact:Front
Vehicle direction: S to N Journey: Other/Not known
Age of Driver : 79 Breath test:Not applicable

Contributory Factors : 308 405

Casualty Reference 1 Age:79 Female Driver/rider Severity:Slight

Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference:2 Car Slowing or Stopping
First point of impact:Did not impact
Vehicle direction: S to N Journey: Other/Not known
Age of Driver : 68 Breath test:Not applicable

Contributory Factors : 308 405

Vehicle Reference:3 Car Waiting to turn right
First point of impact:Back
Vehicle direction: Parked to Parked Journey: Other/Not known
Age of Driver : 72 Breath test:Not applicable

Contributory Factors : 308 405

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

B-01209-10 15/11/2010 Monday Time:1828 Vehicles 3 Casualties 1 Slight
Easting: 433,413 Northing: 410,525
Other Road Surface:Wet/Damp Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 30

Location: SHAW LN STAINCROSS 1 MT FROM J/W LIMES AVE
Description:V1 & V2 TV UP SHAW LN AWAY FROM WAKEFIELD RD WHEN A TRAILER COLL WITH V1 & DEBRIS FROM THE TRAILER HIT BONNET OF V2. IT IS BELIEVED THAT A JEEP(V3) WAS TOWING THE TRAILER, HOWEVER THE JEEP DROVE OFF IN DIRC OF WAKEFIELD.

Vehicle Reference:1 Car Going ahead
First point of impact:Did not impact
Vehicle direction: S to N Journey: Other/Not known
Age of Driver : 17 Breath test:Not applicable

Contributory Factors : 206 999

Casualty Reference 1 Age:17 Male Driver/rider Severity:Slight

Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference:2 Car Going ahead
First point of impact:Front
Vehicle direction: S to N Journey: Other/Not known
Age of Driver : 21 Breath test:Not applicable

Contributory Factors : 206 999

Vehicle Reference:3 Car Going ahead
First point of impact:Front
Vehicle direction: N to S Journey: Other/Not known
Age of Driver : Breath test:Not applicable

Contributory Factors : 206 999

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

B-00314-11 02/04/2011 Saturday Time:2008 Vehicles 2 Casualties 1 Slight
Easting: 433,652 Northing: 410,358
Fine without high winds Road Surface:Dry Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 40

Location: WAKEFIELD RD STAINCROSS J/W PADDOCK RD
Description:V1 TV ALONG A61 WAKEFIELD RD TW STAINCROSS WHEN V2 PULLED OUT OF JCT IN FRONT OF V1 & COLL OCCURRED.

Vehicle Reference:1 Car Going ahead
First point of impact:Front
Vehicle direction: NW to SE Journey: Commuting to/from work
Age of Driver : 28 Breath test:Negative

Contributory Factors : 405 406

Vehicle Reference:2 Car Moving off
First point of impact:Offside
Vehicle direction: W to E Journey: Other/Not known
Age of Driver : 81 Breath test:Negative

Contributory Factors : 405 406

Casualty Reference 1 Age:81 Male Driver/rider Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

B-00480-11 24/05/2011 Tuesday Time:1740 Vehicles 2 Casualties 3 Slight
Easting: 433,928 Northing: 409,673
Fine with high winds Road Surface:Dry Daylight:street lights present
Road Type: Single carriageway Speed Limit: 30

Location: BARR LN MAPPLEWELL
Description:V2 APPROACHING TF, SLOWED BEHIND V1, TF STARTED TO MOVE BUT V2 MISJUDGED SPEED AND TO AVOID A COLL WITH V1 SWERVED BUT CLIPPED V1 THEN COLL WITH BOUNDARY WALL.

Vehicle Reference:1 Car Slowing or Stopping
First point of impact:Front
Vehicle direction: N to S Journey: Commuting to/from work
Age of Driver : 25 Breath test:Negative

Contributory Factors : 403 409 410

Casualty Reference 1 Age:25 Female Driver/rider Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference:2 Car Slowing or Stopping
First point of impact:Front
Vehicle direction: N to S Journey: Journey as part of work
Age of Driver : 29 Breath test:Not requested

Contributory Factors : 403 409 410

Casualty Reference 2 Age:29 Male Driver/rider Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Casualty Reference 3 Age:26 Male Passenger Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

B-00653-11 13/07/2011 Wednesday Time:1520 Vehicles 2 Casualties 1 Slight
Easting: 433,654 Northing: 410,356
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Single carriageway Speed Limit: 40

Location: WAKEFIELD RD BARNSLEY AT J/W PADDOCK RD
Description:V1 EMERGED FROM JCT INTO PATH OF V2 AND COLL OCC.

Vehicle Reference:1 Car Turning right
First point of impact:Offside
Vehicle direction: W to S Journey: Commuting to/from work
Age of Driver : 57 Breath test:Negative

Contributory Factors : 405

Vehicle Reference:2 Motorcycle over 50cc and up to Going ahead
First point of impact:Front
Vehicle direction: S to N Journey: Commuting to/from work
Age of Driver : 34 Breath test:Not provided (medical)

Contributory Factors : 405

Casualty Reference 1 Age:34 Male Driver/rider Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

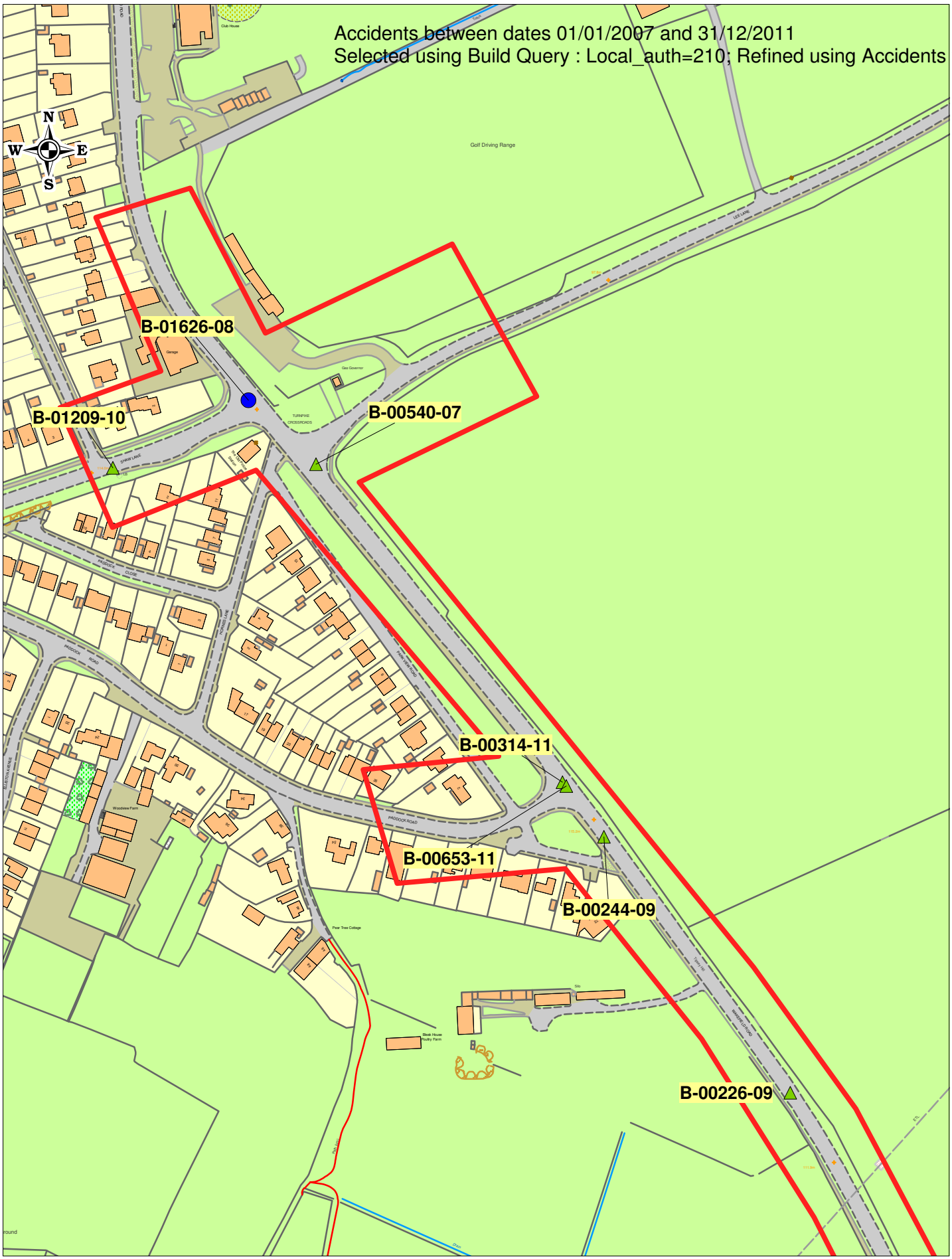
Accidents between dates 01/01/2007 and 31/12/2011 (60) months
Selection: **Notes:**
Selected using Build Query : Local_auth=210; Refined using Ac

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only excluding 2-wheels	0	1	9	10
2-wheeled motor vehicles	0	0	3	3
Pedal cycles	0	0	0	0
Horses & other	0	0	0	0
Total	0	1	12	13

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	0	14	14
Passenger	0	1	7	8
Motorcycle ride	0	0	2	2
Cyclist	0	0	0	0
Pedestrian	0	0	0	0
Other	0	0	0	0
Total	0	1	23	24

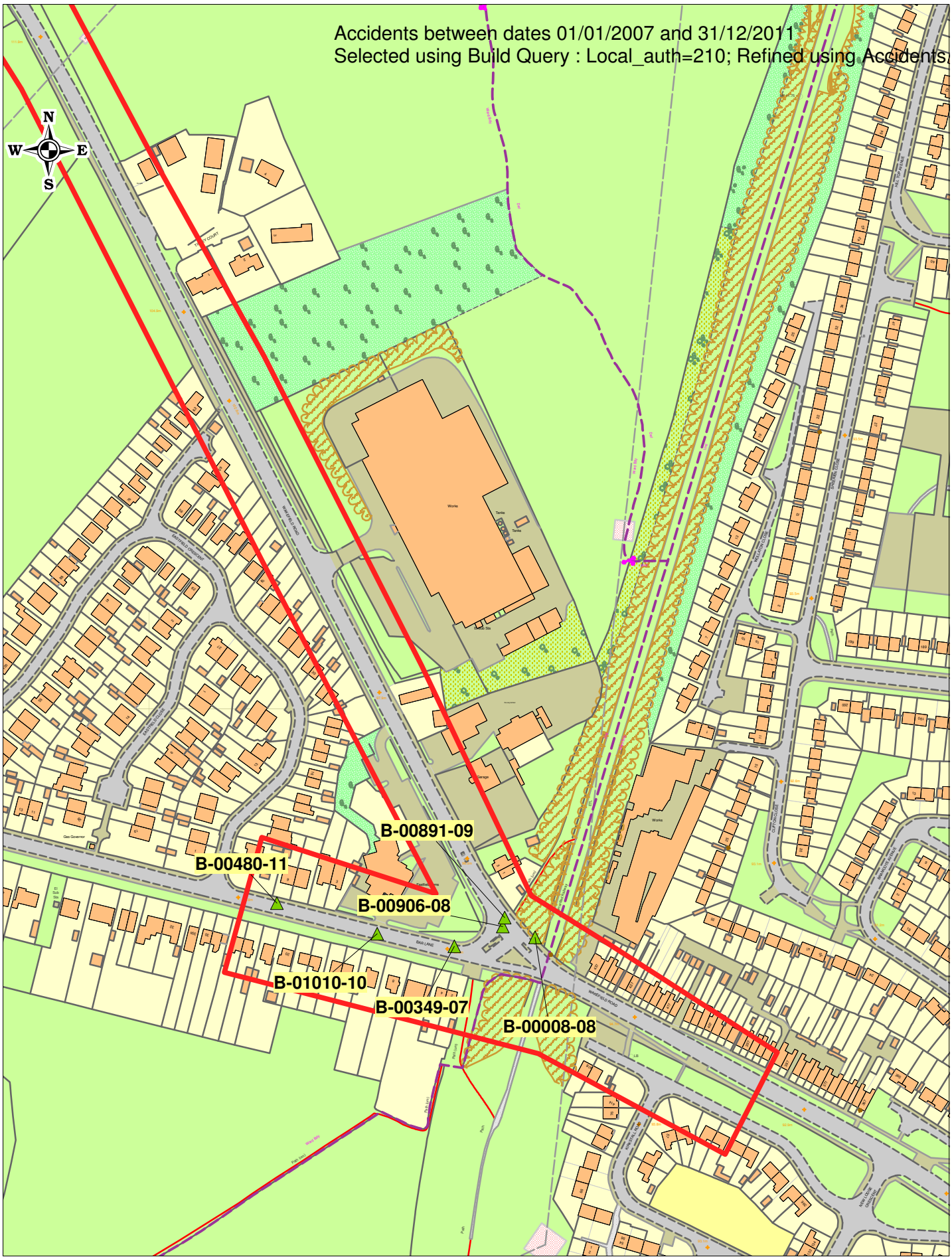


MAKING SOUTH YORKSHIRE ROADS SAFER

Selected map area

SCALE	1 : 2670
DATE	14/08/2012
DRWG No.	
DRN BY	

selected Polygons -Mick H's Polygons ("Bryan G Hall. Martin Crabtree")



MAKING SOUTH YORKSHIRE ROADS SAFER

Selected map area

SCALE	1 : 2800
DATE	14/08/2012
DRWG No.	
DRN BY	

selected Polygons -Mick H's Polygons ("Bryan G Hall. Martin Crabtree")

Accidents between dates **01/01/2007 and 31/12/2011** (60) months

Selection:

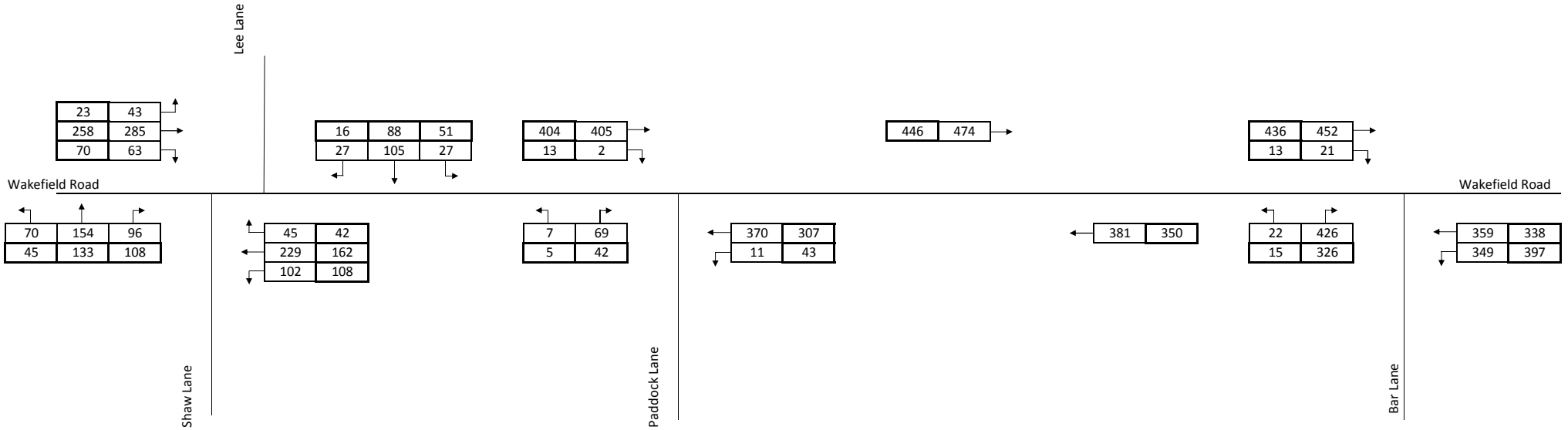
Selected using Build Query : Local_auth=210; Refined using Accidents within selected Polygons -Mick H's Polygons ("Bryan G Hall. Martin Crabtree")

Notes:

Police Ref.	Date	Cas.	Sev.	Cycs	Peds	Ch	OAPs	Vis.	Manv.	Road Cond.	Time	Location
Selected Polygon:Bryan G Hall. Martin Crabtree												
B-00349-07	11/03/2007	2	Slight	0	0	0	1	Light	No turn	Dry	1240	BAR LANE BARNSLEY 10M WAKEFIELD RD
B-00540-07	20/04/2007	1	Slight	0	0	0	0	Light	No turn	Dry	1750	WAKEFIELD RD STAINCROSS 3 MTS FROM J/W LEE LN
B-00008-08	05/01/2008	1	Slight	0	0	0	0	Light	Right	Wet/Damp	1500	WAKEFIELD RD BARNSLEY
B-00906-08	27/07/2008	1	Slight	0	0	0	0	Light	Right	Dry	1820	WAKEFIELD ROAD STAINCROSS AT J/W BAR LANE
B-01626-08	28/12/2008	6	Serious	0	0	2	0	Light	Right	Dry	1255	WAKEFIELD RD BARNSLEY J/W SHAW LN
B-00226-09	03/02/2009	1	Slight	0	0	0	0	Light	No turn	Frost/Ice	0230	WAKEFIELD RD BARNSLEY 200 MTS FROM PADDOCK RD
B-00244-09	25/02/2009	1	Slight	0	0	0	0	Dark	No turn	Dry	2220	WAKEFIELD RD BARNSLEY 30M SOUTH PADDOCK ROAD
B-00891-09	23/08/2009	4	Slight	0	0	0	0	Light	No turn	Dry	1435	WAKEFIELD RD STAINCROSS J/W BAR LN
B-01010-10	23/09/2010	1	Slight	0	0	0	1	Light	Right	Wet/Damp	1532	BAR LN STAINCROSS 30 MTS FROM J/W WAKEFIELD RD
B-01209-10	15/11/2010	1	Slight	0	0	0	0	Dark	No turn	Wet/Damp	1828	SHAW LN STAINCROSS 1 MT FROM J/W LIMES AVE
B-00314-11	02/04/2011	1	Slight	0	0	0	1	Dark	No turn	Dry	2008	WAKEFIELD RD STAINCROSS J/W PADDOCK RD
B-00480-11	24/05/2011	3	Slight	0	0	0	0	Light	No turn	Dry	1740	BARR LN MAPPLEWELL
B-00653-11	13/07/2011	1	Slight	0	0	0	0	Light	Right	Dry	1520	WAKEFIELD RD BARNSLEY AT J/W PADDOCK RD
Column Totals		24		0	0	2	3					
No. of Accidents				0	0	1	3					

Total number of accidents listed: 13

APPENDIX BGH 5



KEY

AM Peak

PM Peak

Client:	Project:	Title:		Number:	Revision:				
Pipestone Group Ltd	Wakefield Road, Mapplewell	2012 Base Traffic Flows	BRYAN G HALL CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS	BGH5	-	Date	Sep-12	Checked	MC
						Design	MC	Approved	DB

APPENDIX BGH 6

Speed Surveys

Location:	A61 Wakefield Road, Mapplewell
Direction:	South Eastbound
Weather:	Dry/Cloudy
Date:	12/09/2012

	mph
1	21
2	27
3	28
4	29
5	33
6	43
7	37
8	34
9	34
10	37
11	36
12	28
13	26
14	40
15	37
16	35
17	34
18	29
19	35
20	33
21	34
22	37
23	33
24	31
25	30
26	36
27	34
28	31
29	34
30	37
31	32
32	32
33	45
34	34
35	35
36	33
37	31
38	39
39	42
40	37
41	36
42	43
43	36
44	33
45	32
46	34
47	32
48	35
49	36
50	37

	mph
51	33
52	34
53	38
54	36
55	36
56	39
57	37
58	35
59	31
60	33
61	32
62	31
63	38
64	37
65	31
66	34
67	31
68	36
69	37
70	36
71	35
72	31
73	32
74	35
75	27
76	31
77	34
78	30
79	32
80	29
81	37
82	36
83	27
84	31
85	35
86	34
87	30
88	35
89	31
90	39
91	41
92	35
93	32
94	35
95	34
96	29
97	31
98	37
99	35
100	29

SEbound Morning

Speed Surveys

Location:	A61 Wakefield Road, Mapplewell
Direction:	South Eastbound
Weather:	Dry/Cloudy
Date:	12/09/2012

	mph
1	27
2	29
3	33
4	36
5	39
6	34
7	31
8	32
9	36
10	34
11	34
12	35
13	34
14	46
15	31
16	32
17	34
18	30
19	31
20	34
21	38
22	38
23	43
24	35
25	36
26	38
27	39
28	34
29	36
30	35
31	42
32	29
33	36
34	38
35	29
36	34
37	21
38	39
39	38
40	36
41	35
42	36
43	37
44	38
45	35
46	36
47	32
48	34
49	33
50	40

	mph
51	29
52	36
53	35
54	38
55	37
56	36
57	32
58	35
59	39
60	31
61	36
62	38
63	34
64	39
65	32
66	35
67	35
68	36
69	30
70	32
71	35
72	36
73	36
74	35
75	38
76	37
77	39
78	40
79	42
80	39
81	38
82	36
83	37
84	36
85	32
86	31
87	35
88	38
89	41
90	38
91	39
92	46
93	36
94	35
95	36
96	38
97	35
98	34
99	36
100	30

SEbound Afternoon

Speed Surveys

Location:	A61 Wakefield Road, Mapplewell
Direction:	North Westbound
Weather:	Dry/Cloudy
Date:	12/09/2012

	mph
1	26
2	17
3	37
4	19
5	25
6	35
7	28
8	27
9	40
10	39
11	34
12	35
13	37
14	31
15	40
16	34
17	39
18	44
19	34
20	45
21	34
22	33
23	34
24	31
25	35
26	39
27	38
28	35
29	38
30	31
31	32
32	39
33	38
34	34
35	39
36	37
37	34
38	33
39	30
40	30
41	33
42	37
43	31
44	35
45	34
46	33
47	32
48	37
49	39
50	42

	mph
51	36
52	32
53	38
54	30
55	33
56	32
57	33
58	32
59	34
60	32
61	31
62	34
63	36
64	43
65	41
66	29
67	33
68	31
69	33
70	27
71	29
72	37
73	34
74	32
75	37
76	34
77	36
78	29
79	31
80	38
81	40
82	47
83	39
84	40
85	31
86	39
87	36
88	25
89	34
90	32
91	31
92	34
93	32
94	36
95	37
96	27
97	31
98	34
99	37
100	35

Speed Surveys

Location:	A61 Wakefield Road, Mapplewell
Direction:	North Westbound
Weather:	Dry/Cloudy
Date:	12/09/2012

	mph
1	30
2	45
3	36
4	37
5	38
6	35
7	36
8	34
9	35
10	35
11	36
12	34
13	32
14	38
15	39
16	35
17	36
18	34
19	37
20	40
21	35
22	36
23	38
24	40
25	42
26	36
27	39
28	35
29	36
30	41
31	36
32	35
33	36
34	38
35	36
36	38
37	39
38	30
39	33
40	35
41	32
42	38
43	32
44	36
45	31
46	30
47	35
48	35
49	38
50	40

	mph
51	36
52	35
53	34
54	38
55	40
56	36
57	36
58	35
59	32
60	35
61	35
62	36
63	35
64	36
65	38
66	37
67	35
68	35
69	36
70	32
71	39
72	28
73	37
74	38
75	29
76	36
77	37
78	38
79	39
80	35
81	35
82	34
83	35
84	36
85	38
86	32
87	38
88	36
89	34
90	32
91	34
92	31
93	30
94	36
95	38
96	39
97	30
98	38
99	36
100	39

APPENDIX BGH 7

Junctions 8

PICADY 8 - Priority Intersection Module

Filename: (new file)
Path:
Report generation date: 24/09/2012 10:10:28

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Layout - 2012 Base			
Stream B-C	0.35	16.52	0.26	C
Stream B-AD	2.54	34.77	0.73	D
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.10	7.51	0.09	A
Stream D-A	0.07	8.17	0.06	A
Stream D-BC	0.61	15.23	0.38	C
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.12	6.46	0.11	A

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

"D1 - 2012 Base, AM" model duration: 07:30 - 09:00
"D4 - 2017 Base + CD, AM" model duration: 07:30 - 09:00
"D6 - 2017 Base + CD + D, AM" model duration: 07:30 - 09:00
"D7 - 2012 Base, PM" model duration: 16:00 - 17:30
"D10 - 2017 Base + CD, PM" model duration: 16:00 - 17:30
"D12 - 2017 Base + CD + D, PM" model duration: 16:00 - 17:30

Run using Junctions 8.0.1.305 at 24/09/2012 10:10:26

File summary

File Description

Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	15/08/2012
Version	

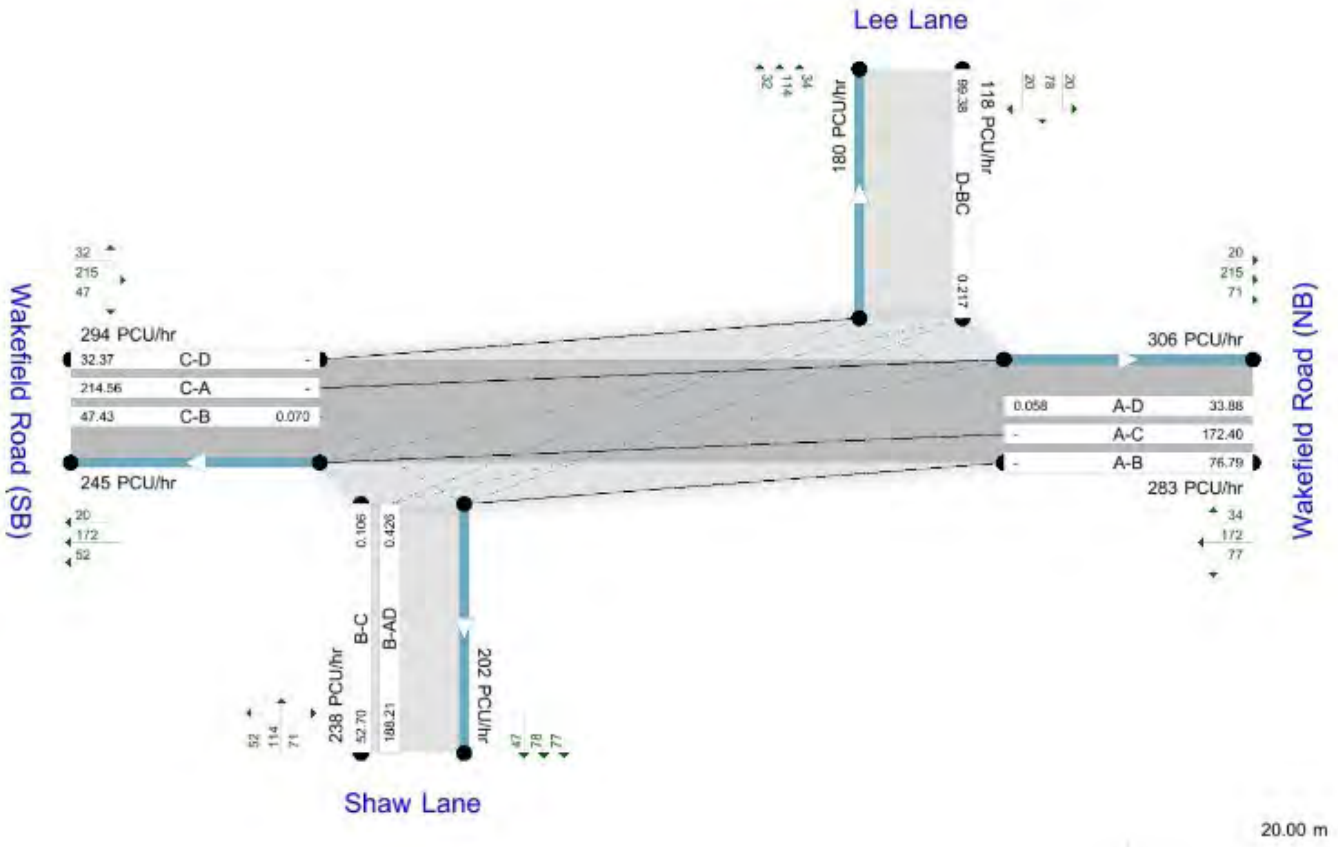
Status	(new file)
Identifier	
Client	Pipestone Limited
Jobnumber	11-338
Enumerator	BRYANGHALL\MCrabtree
Description	

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



Time Segment: (07:30-07:45)
Showing Analysis Set: "A1 - Existing Layout"; Demand Set: "D1 - 2012 Base, AM"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2012 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			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
2012 Base, AM	2012 Base	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	21.85	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description	Arm Type
Wakefield Road (NB)	Wakefield Road (NB)		Major
Shaw Lane	Shaw Lane		Minor
Wakefield Road (SB)	Wakefield Road (SB)		Major
Lee Lane	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
	One												

Lee Lane	lane plus flare				10.00	8.00	5.00	4.25	3.50	✓	2.00	40	65

Pedestrian Crossings

Name	Crossing Type
Wakefield Road (NB)	None
Shaw Lane	None
Wakefield Road (SB)	None
Lee Lane	None

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	661.507	-	-	-	0.256	0.101	0.256	-	0.101	-	-
1	D-BC	612.458	0.177	0.177	0.403	0.282	0.112	0.282	-	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	✓	376.00	100.000
Shaw Lane	ONE HOUR	✓	320.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	391.00	100.000
Lee Lane	ONE HOUR	✓	159.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - (untitled) (for whole period)

	To			
		A	B	C	D
	A	0.000	102.000	229.000	45.000

From	B	96.000	0.000	70.000	154.000
	C	285.000	63.000	0.000	43.000
	D	27.000	105.000	27.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.27	0.61	0.12
	B	0.30	0.00	0.22	0.48
	C	0.73	0.16	0.00	0.11
	D	0.17	0.66	0.17	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.010	1.022	1.000
	B	1.010	1.000	1.000	1.006
	C	1.028	1.000	1.000	1.000
	D	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	0.000	1.000	2.200	0.000
	B	1.000	0.000	0.000	0.600
	C	2.800	0.000	0.000	0.000
	D	0.000	1.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.26	16.52	0.35	C
B-AD	0.73	34.77	2.54	D
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.09	7.51	0.10	A
D-A	0.06	8.17	0.07	A
D-BC	0.38	15.23	0.61	C
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.11	6.46	0.12	A

Main Results for each time segment

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	52.70	52.23	0.00	494.97	0.106	0.12	8.123	A
B-AD	188.21	185.30	0.00	441.58	0.426	0.73	14.001	B
A-B	76.79	76.79	0.00	-	-	-	-	-
A-C	172.40	172.40	0.00	-	-	-	-	-
A-D	33.88	33.64	0.00	586.78	0.058	0.06	6.505	A
D-A	20.33	20.17	0.00	540.80	0.038	0.04	6.913	A
D-BC	99.38	98.27	0.00	457.19	0.217	0.28	10.081	B
C-D	32.37	32.37	0.00	-	-	-	-	-
C-A	214.56	214.56	0.00	-	-	-	-	-
C-B	47.43	47.13	0.00	675.80	0.070	0.07	5.724	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	62.93	62.72	0.00	430.84	0.146	0.17	9.774	A
B-AD	224.74	223.10	0.00	415.51	0.541	1.14	18.684	C
A-B	91.70	91.70	0.00	-	-	-	-	-
A-C	205.87	205.87	0.00	-	-	-	-	-
A-D	40.45	40.39	0.00	562.89	0.072	0.08	6.889	A
D-A	24.27	24.23	0.00	513.56	0.047	0.05	7.356	A
D-BC	118.67	118.24	0.00	426.45	0.278	0.38	11.756	B
C-D	38.66	38.66	0.00	-	-	-	-	-
C-A	256.21	256.21	0.00	-	-	-	-	-
C-B	56.64	56.56	0.00	654.98	0.086	0.09	6.015	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	77.07	76.42	0.00	304.89	0.253	0.33	15.714	C
B-AD	275.26	270.22	0.00	378.09	0.728	2.40	32.182	D
A-B	112.30	112.30	0.00	-	-	-	-	-
A-C	252.13	252.13	0.00	-	-	-	-	-
A-D	49.55	49.44	0.00	530.51	0.093	0.10	7.481	A
D-A	29.73	29.66	0.00	471.80	0.063	0.07	8.141	A
D-BC	145.33	144.47	0.00	384.45	0.378	0.60	15.064	C
C-D	47.34	47.34	0.00	-	-	-	-	-
C-A	313.79	313.79	0.00	-	-	-	-	-
C-B	69.36	69.25	0.00	626.54	0.111	0.12	6.457	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	77.07	77.00	0.00	294.78	0.261	0.35	16.522	C
B-AD	275.26	274.70	0.00	377.62	0.729	2.54	34.773	D
A-B	112.30	112.30	0.00	-	-	-	-	-
A-C	252.13	252.13	0.00	-	-	-	-	-
A-D	49.55	49.54	0.00	529.13	0.094	0.10	7.505	A
D-A	29.73	29.73	0.00	470.34	0.063	0.07	8.170	A
D-BC	145.33	145.30	0.00	383.55	0.379	0.61	15.225	C
C-D	47.34	47.34	0.00	-	-	-	-	-
C-A	313.79	313.79	0.00	-	-	-	-	-
C-B	69.36	69.36	0.00	626.28	0.111	0.12	6.463	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	62.93	63.61	0.00	421.37	0.149	0.18	10.082	B
B-AD	224.74	229.92	0.00	415.02	0.542	1.24	20.098	C
A-B	91.70	91.70	0.00	-	-	-	-	-
A-C	205.87	205.87	0.00	-	-	-	-	-
A-D	40.45	40.55	0.00	560.91	0.072	0.08	6.921	A
D-A	24.27	24.34	0.00	511.70	0.047	0.05	7.389	A
D-BC	118.67	119.50	0.00	425.16	0.279	0.40	11.903	B
C-D	38.66	38.66	0.00	-	-	-	-	-
C-A	256.21	256.21	0.00	-	-	-	-	-
C-B	56.64	56.75	0.00	654.58	0.087	0.10	6.022	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	52.70	52.92	0.00	490.18	0.108	0.12	8.238	A
B-AD	188.21	190.10	0.00	441.12	0.427	0.77	14.555	B
A-B	76.79	76.79	0.00	-	-	-	-	-
A-C	172.40	172.40	0.00	-	-	-	-	-
A-D	33.88	33.94	0.00	585.42	0.058	0.06	6.527	A
D-A	20.33	20.37	0.00	539.33	0.038	0.04	6.936	A
D-BC	99.38	99.83	0.00	456.23	0.218	0.28	10.195	B
C-D	32.37	32.37	0.00	-	-	-	-	-
C-A	214.56	214.56	0.00	-	-	-	-	-
C-B	47.43	47.51	0.00	675.32	0.070	0.08	5.736	A

Junctions 8

PICADY 8 - Priority Intersection Module

Filename: (new file)
Path:
Report generation date: 24/09/2012 10:13:00

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Layout - 2012 Base			
Stream B-C	0.25	11.73	0.20	B
Stream B-AD	1.71	23.88	0.64	C
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.09	7.19	0.08	A
Stream D-A	0.12	7.92	0.11	A
Stream D-BC	0.40	12.83	0.29	B
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.13	6.30	0.12	A

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

"D1 - 2012 Base, AM" model duration: 07:30 - 09:00
"D4 - 2017 Base + CD, AM" model duration: 07:30 - 09:00
"D6 - 2017 Base + CD + D, AM" model duration: 07:30 - 09:00
"D7 - 2012 Base, PM " model duration: 16:00 - 17:30
"D10 - 2017 Base + CD, PM" model duration: 16:00 - 17:30
"D12 - 2017 Base + CD + D, PM" model duration: 16:00 - 17:30

Run using Junctions 8.0.1.305 at 24/09/2012 10:12:58

File summary

File Description

Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	15/08/2012
Version	

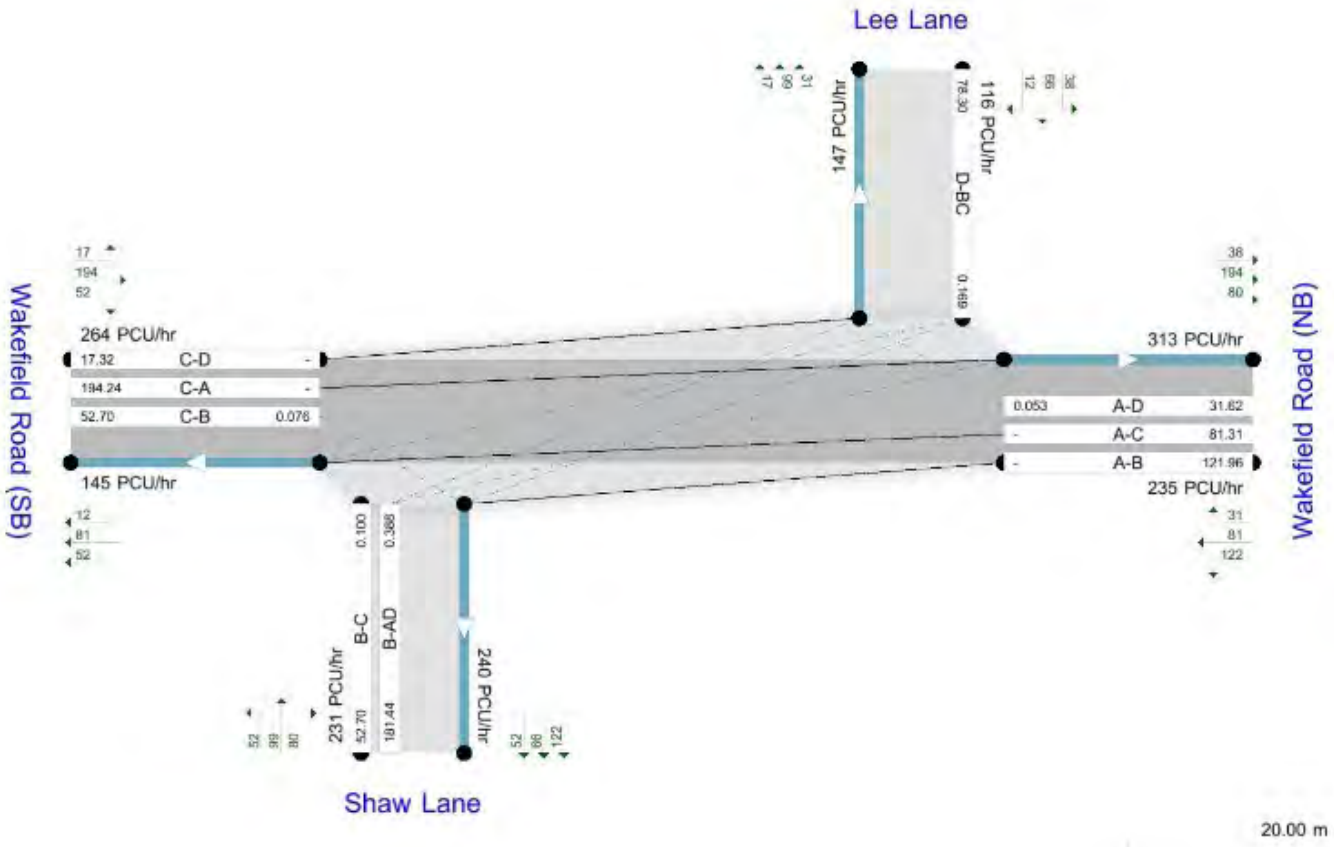
Status	(new file)
Identifier	
Client	Pipestone Limited
Jobnumber	11-338
Enumerator	BRYANGHALL\MCrabtree
Description	

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



Time Segment: (16:00-16:15)
Showing Analysis Set: "A1 - Existing Layout"; Demand Set: "D7 - 2012 Base, PM"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2012 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			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
2012 Base, PM	2012 Base	PM		ONE HOUR	16:00	17:30	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	15.67	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description	Arm Type
Wakefield Road (NB)	Wakefield Road (NB)		Major
Shaw Lane	Shaw Lane		Minor
Wakefield Road (SB)	Wakefield Road (SB)		Major
Lee Lane	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
	One												

Lee Lane	lane plus flare				10.00	8.00	5.00	4.25	3.50	✓	2.00	40	65

Pedestrian Crossings

Name	Crossing Type
Wakefield Road (NB)	None
Shaw Lane	None
Wakefield Road (SB)	None
Lee Lane	None

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	567.684	0.103	0.261	-	-	-	0.164	0.373	0.164	0.103	0.261
1	B-C	660.215	0.101	0.256	-	-	-	-	-	-	0.101	0.256
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	679.171	-	-	-	0.263	0.104	0.263	-	0.104	-	-
1	D-BC	598.573	0.173	0.173	0.394	0.276	0.109	0.276	-	0.109	-	-

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	✓	312.00	100.000
Shaw Lane	ONE HOUR	✓	311.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	351.00	100.000
Lee Lane	ONE HOUR	✓	155.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - (untitled) (for whole period)

	To			
		A	B	C	D
	A	0.000	162.000	108.000	42.000

From	B	108.000	0.000	70.000	133.000
	C	258.000	70.000	0.000	23.000
	D	51.000	88.000	16.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.52	0.35	0.13
	B	0.35	0.00	0.23	0.43
	C	0.74	0.20	0.00	0.07
	D	0.33	0.57	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.019	1.025	1.000
	B	1.037	1.000	1.000	1.000
	C	1.016	1.014	1.000	1.000
	D	1.000	1.011	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	0.000	1.900	2.500	0.000
	B	3.700	0.000	0.000	0.000
	C	1.600	1.400	0.000	0.000
	D	0.000	1.100	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.20	11.73	0.25	B
B-AD	0.64	23.88	1.71	C
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.08	7.19	0.09	A
D-A	0.11	7.92	0.12	A
D-BC	0.29	12.83	0.40	B
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.12	6.30	0.13	A

Main Results for each time segment

Main Results for each time segment

Main results: (16:00-16:15)

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	52.70	52.26	0.00	529.21	0.100	0.11	7.542	A
B-AD	181.44	178.92	0.00	467.94	0.388	0.63	12.554	B
A-B	121.96	121.96	0.00	-	-	-	-	-
A-C	81.31	81.31	0.00	-	-	-	-	-
A-D	31.62	31.40	0.00	598.31	0.053	0.06	6.350	A
D-A	38.40	38.11	0.00	568.92	0.067	0.07	6.779	A
D-BC	78.30	77.48	0.00	462.13	0.169	0.20	9.426	A
C-D	17.32	17.32	0.00	-	-	-	-	-
C-A	194.24	194.24	0.00	-	-	-	-	-
C-B	52.70	52.37	0.00	696.08	0.076	0.08	5.668	A

Main results: (16:15-16:30)

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	62.93	62.77	0.00	480.12	0.131	0.15	8.626	A
B-AD	216.65	215.47	0.00	447.38	0.484	0.92	15.690	C
A-B	145.63	145.63	0.00	-	-	-	-	-
A-C	97.09	97.09	0.00	-	-	-	-	-
A-D	37.76	37.70	0.00	576.76	0.065	0.07	6.678	A
D-A	45.85	45.77	0.00	545.33	0.084	0.09	7.206	A
D-BC	93.49	93.22	0.00	435.12	0.215	0.27	10.618	B
C-D	20.68	20.68	0.00	-	-	-	-	-
C-A	231.94	231.94	0.00	-	-	-	-	-
C-B	62.93	62.85	0.00	679.29	0.093	0.10	5.921	A

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	77.07	76.69	0.00	388.75	0.198	0.24	11.522	B
B-AD	265.35	262.42	0.00	417.98	0.635	1.66	23.076	C
A-B	178.37	178.37	0.00	-	-	-	-	-
A-C	118.91	118.91	0.00	-	-	-	-	-
A-D	46.24	46.16	0.00	547.60	0.084	0.09	7.179	A
D-A	56.15	56.03	0.00	511.64	0.110	0.12	7.900	A
D-BC	114.51	114.00	0.00	398.20	0.288	0.40	12.761	B
C-D	25.32	25.32	0.00	-	-	-	-	-
C-A	284.06	284.06	0.00	-	-	-	-	-
C-B	77.07	76.95	0.00	656.33	0.117	0.13	6.298	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	77.07	77.05	0.00	383.97	0.201	0.25	11.729	B
B-AD	265.35	265.14	0.00	417.78	0.635	1.71	23.878	C
A-B	178.37	178.37	0.00	-	-	-	-	-
A-C	118.91	118.91	0.00	-	-	-	-	-
A-D	46.24	46.24	0.00	546.80	0.085	0.09	7.191	A
D-A	56.15	56.15	0.00	510.84	0.110	0.12	7.917	A
D-BC	114.51	114.49	0.00	397.65	0.288	0.40	12.829	B
C-D	25.32	25.32	0.00	-	-	-	-	-
C-A	284.06	284.06	0.00	-	-	-	-	-
C-B	77.07	77.07	0.00	656.18	0.117	0.13	6.302	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	62.93	63.31	0.00	475.12	0.132	0.15	8.751	A
B-AD	216.65	219.55	0.00	447.18	0.484	0.99	16.267	C
A-B	145.63	145.63	0.00	-	-	-	-	-
A-C	97.09	97.09	0.00	-	-	-	-	-
A-D	37.76	37.84	0.00	575.58	0.066	0.07	6.694	A
D-A	45.85	45.97	0.00	544.18	0.084	0.09	7.229	A
D-BC	93.49	93.99	0.00	434.32	0.215	0.28	10.691	B
C-D	20.68	20.68	0.00	-	-	-	-	-
C-A	231.94	231.94	0.00	-	-	-	-	-
C-B	62.93	63.05	0.00	679.05	0.093	0.10	5.928	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	52.70	52.87	0.00	525.61	0.100	0.11	7.616	A
B-AD	181.44	182.75	0.00	467.66	0.388	0.66	12.901	B
A-B	121.96	121.96	0.00	-	-	-	-	-
A-C	81.31	81.31	0.00	-	-	-	-	-
A-D	31.62	31.68	0.00	597.23	0.053	0.06	6.367	A
D-A	38.40	38.47	0.00	567.74	0.068	0.07	6.804	A
D-BC	78.30	78.58	0.00	461.37	0.170	0.21	9.499	A
C-D	17.32	17.32	0.00	-	-	-	-	-
C-A	194.24	194.24	0.00	-	-	-	-	-
C-B	52.70	52.78	0.00	695.74	0.076	0.08	5.679	A

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.1.305 [25 May 2012]

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

Filename: (new file)
Path:
Report generation date: 21/09/2012 13:55:20

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Layout - 2012 Base			
Stream B-C	0.02	7.34	0.02	A
Stream B-A	0.23	10.81	0.19	B
Stream C-AB	0.00	4.35	0.00	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 - 2012 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base + CD, AM" model duration: 07:45 - 09:15
"D3 - 2017 Base + CD + D, AM" model duration: 07:45 - 09:15
"D4 - 2012 Base, PM" model duration: 16:00 - 17:30
"D5 - 2017 Base + CD, PM" model duration: 16:00 - 17:30
"D6 - 2017 Base + CD + D, PM" model duration: 16:00 - 17:30

Run using Junctions 8.0.1.305 at 21/09/2012 13:55:19

File summary

File Description

Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	14/08/2012
Version	
Status	(new file)
Identifier	
Client	Pipestone Limited

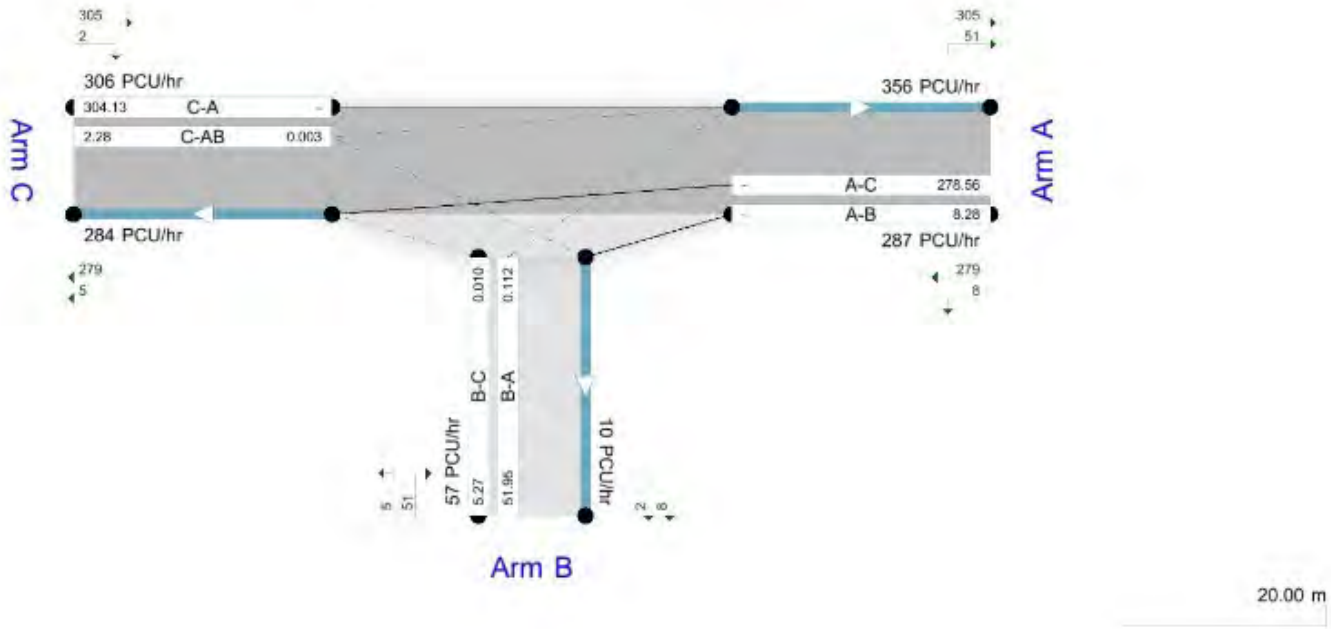
Jobnumber	11-338
Enumerator	BRYANGHALL\MCrabtree
Description	

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
Text overlays show modelled flow through the junction (entry and exit flows: PCU/hr).
Streams (upstream) show Total Demand (PCU/hr). Streams (downstream) show RFC ()
Time Segment: (07:45-08:00)
Showing Analysis Set: "A1 - Existing Layout ", Demand Set: "D1 - 2012 Base, AM "

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2012 Base, AM

Data Errors and Warnings

No errors or warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			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
2012 Base, AM	2012 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Site Access	T-Junction	Two-way	A,B,C	10.23	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Major Arm Geometry

Arm	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)
C	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

Arm	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)
B	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

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	579.308	0.097	0.245	0.154	0.350
1	B-C	615.910	0.087	0.219	-	-
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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	381.00	100.000
B	ONE HOUR	✓	76.00	100.000
C	ONE HOUR	✓	407.00	100.000

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	11.000	370.000
	B	69.000	0.000	7.000
	C	405.000	2.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.03	0.97
	B	0.91	0.00	0.09
	C	1.00	0.00	0.00

Vehicle Mix

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

	To			
		A	B	C

From	A	1.000	1.000	1.016
	B	1.000	1.000	1.000
	C	1.022	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	1.600
	B	0.000	0.000	0.000
	C	2.200	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.02	7.34	0.02	A
B-A	0.19	10.81	0.23	B
C-AB	0.00	4.35	0.00	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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	5.27	5.23	0.00	537.96	0.010	0.01	6.757	A
B-A	51.95	51.45	0.00	462.90	0.112	0.13	8.739	A
C-AB	2.28	2.27	0.00	836.35	0.003	0.00	4.347	A
C-A	304.13	304.13	0.00	-	-	-	-	-
A-B	8.28	8.28	0.00	-	-	-	-	-
A-C	278.56	278.56	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	6.29	6.28	0.00	521.58	0.012	0.01	6.985	A
B-A	62.03	61.88	0.00	440.30	0.141	0.16	9.509	A
C-AB	2.95	2.95	0.00	859.87	0.003	0.00	4.234	A
C-A	362.94	362.94	0.00	-	-	-	-	-
A-B	9.89	9.89	0.00	-	-	-	-	-
A-C	332.62	332.62	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	7.71	7.69	0.00	497.97	0.015	0.02	7.342	A
B-A	75.97	75.72	0.00	409.05	0.186	0.22	10.792	B
C-AB	4.02	4.01	0.00	892.19	0.005	0.00	4.090	A
C-A	444.19	444.19	0.00					

C-A	444.10	444.10	0.00	-	-	-	-	-
A-B	12.11	12.11	0.00	-	-	-	-	-
A-C	407.38	407.38	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	7.71	7.71	0.00	497.85	0.015	0.02	7.343	A
B-A	75.97	75.96	0.00	409.06	0.186	0.23	10.807	B
C-AB	4.02	4.02	0.00	892.19	0.005	0.00	4.094	A
C-A	444.10	444.10	0.00	-	-	-	-	-
A-B	12.11	12.11	0.00	-	-	-	-	-
A-C	407.38	407.38	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	6.29	6.31	0.00	521.41	0.012	0.01	6.988	A
B-A	62.03	62.27	0.00	440.31	0.141	0.17	9.528	A
C-AB	2.95	2.96	0.00	859.87	0.003	0.00	4.239	A
C-A	362.93	362.93	0.00	-	-	-	-	-
A-B	9.89	9.89	0.00	-	-	-	-	-
A-C	332.62	332.62	0.00	-	-	-	-	-

Main results: (09:00-09:15)

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	5.27	5.28	0.00	537.71	0.010	0.01	6.760	A
B-A	51.95	52.10	0.00	462.90	0.112	0.13	8.768	A
C-AB	2.29	2.29	0.00	836.35	0.003	0.00	4.350	A
C-A	304.12	304.12	0.00	-	-	-	-	-
A-B	8.28	8.28	0.00	-	-	-	-	-
A-C	278.56	278.56	0.00	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.1.305 [25 May 2012]

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

Filename: (new file)
Path:
Report generation date: 21/09/2012 13:55:52

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Layout - 2012 Base			
Stream B-C	0.01	6.95	0.01	A
Stream B-A	0.12	9.68	0.11	A
Stream C-AB	0.04	4.39	0.03	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 - 2012 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base + CD, AM" model duration: 07:45 - 09:15
"D3 - 2017 Base + CD + D, AM" model duration: 07:45 - 09:15
"D4 - 2012 Base, PM " model duration: 16:00 - 17:30
"D5 - 2017 Base + CD, PM" model duration: 16:00 - 17:30
"D6 - 2017 Base + CD + D, PM" model duration: 16:00 - 17:30

Run using Junctions 8.0.1.305 at 21/09/2012 13:55:51

File summary

File Description

Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	14/08/2012
Version	
Status	(new file)
Identifier	
Client	Pipestone Limited

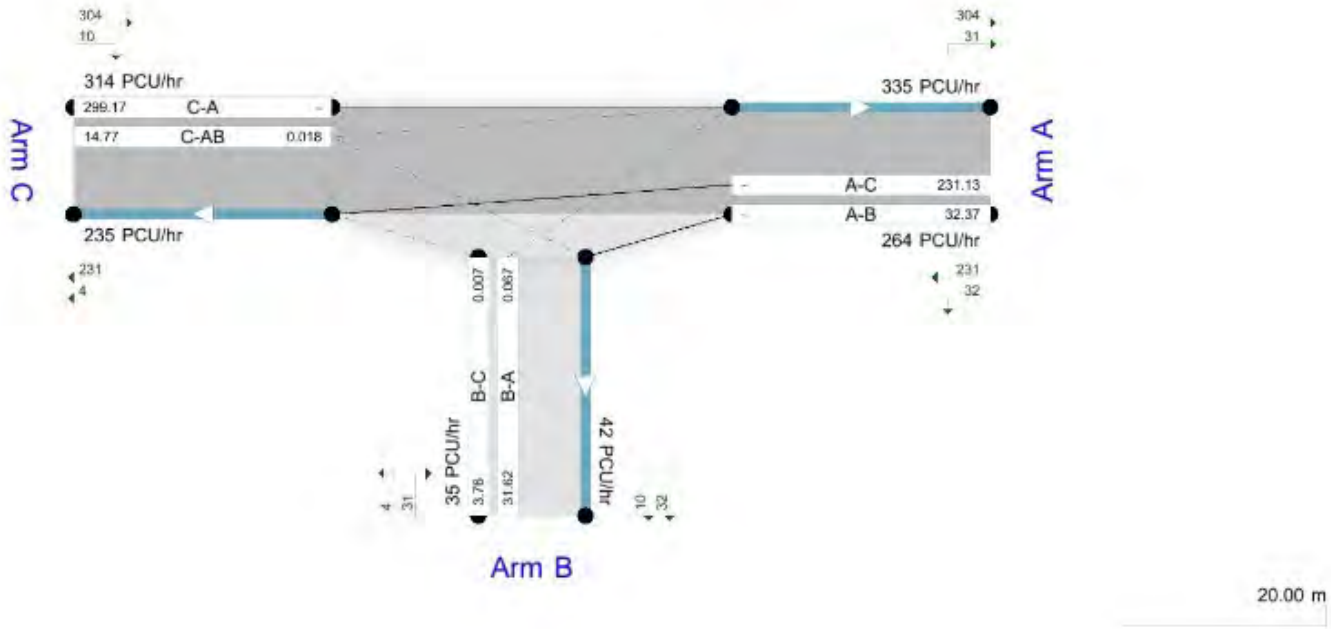
Jobnumber	11-338
Enumerator	BRYANGHALL\MCrabtree
Description	

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
Text overlays show modelled flow through the junction (entry and exit flows: PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RFC ()

Time Segment: (16:00-16:15)
Showing Analysis Set: "A1 - Existing Layout "; Demand Set: "D4 - 2012 Base, PM "

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2012 Base, PM

Data Errors and Warnings

No errors or warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			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
2012 Base, PM	2012 Base	PM		ONE HOUR	16:00	17:30	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Site Access	T-Junction	Two-way	A,B,C	7.81	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Major Arm Geometry

Arm	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)
C	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

Arm	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)
B	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

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	578.645	0.097	0.244	0.154	0.349
1	B-C	617.324	0.087	0.219	-	-
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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	350.00	100.000
B	ONE HOUR	✓	47.00	100.000
C	ONE HOUR	✓	417.00	100.000

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	43.000	307.000
	B	42.000	0.000	5.000
	C	404.000	13.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.12	0.88
	B	0.89	0.00	0.11
	C	0.97	0.03	0.00

Vehicle Mix

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

	To			
		A	B	C

From	A	1.000	1.000	1.020
	B	1.000	1.000	1.000
	C	1.020	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	2.000
	B	0.000	0.000	0.000
	C	2.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	6.95	0.01	A
B-A	0.11	9.68	0.12	A
C-AB	0.03	4.39	0.04	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:00-16:15)

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	3.76	3.74	0.00	554.14	0.007	0.01	6.540	A
B-A	31.62	31.33	0.00	468.86	0.067	0.07	8.223	A
C-AB	14.77	14.69	0.00	840.88	0.018	0.02	4.386	A
C-A	299.17	299.17	0.00	-	-	-	-	-
A-B	32.37	32.37	0.00	-	-	-	-	-
A-C	231.13	231.13	0.00	-	-	-	-	-

Main results: (16:15-16:30)

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	4.49	4.49	0.00	541.33	0.008	0.01	6.705	A
B-A	37.76	37.68	0.00	447.53	0.084	0.09	8.780	A
C-AB	19.07	19.04	0.00	865.08	0.022	0.03	4.285	A
C-A	355.81	355.81	0.00	-	-	-	-	-
A-B	38.66	38.66	0.00	-	-	-	-	-
A-C	275.99	275.99	0.00	-	-	-	-	-

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	5.51	5.50	0.00	523.34	0.011	0.01	6.951	A
B-A	46.24	46.12	0.00	418.06	0.111	0.12	9.676	A
C-AB	25.90	25.86	0.00	898.24	0.029	0.04	4.160	A

C-A	433.22	433.22	0.00	-	-	-	-	-
A-B	47.34	47.34	0.00	-	-	-	-	-
A-C	338.01	338.01	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	5.51	5.50	0.00	523.28	0.011	0.01	6.951	A
B-A	46.24	46.24	0.00	418.05	0.111	0.12	9.681	A
C-AB	25.91	25.91	0.00	898.25	0.029	0.04	4.164	A
C-A	433.21	433.21	0.00	-	-	-	-	-
A-B	47.34	47.34	0.00	-	-	-	-	-
A-C	338.01	338.01	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	4.49	4.50	0.00	541.24	0.008	0.01	6.706	A
B-A	37.76	37.88	0.00	447.52	0.084	0.09	8.790	A
C-AB	19.08	19.12	0.00	865.11	0.022	0.03	4.291	A
C-A	355.79	355.79	0.00	-	-	-	-	-
A-B	38.66	38.66	0.00	-	-	-	-	-
A-C	275.99	275.99	0.00	-	-	-	-	-

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

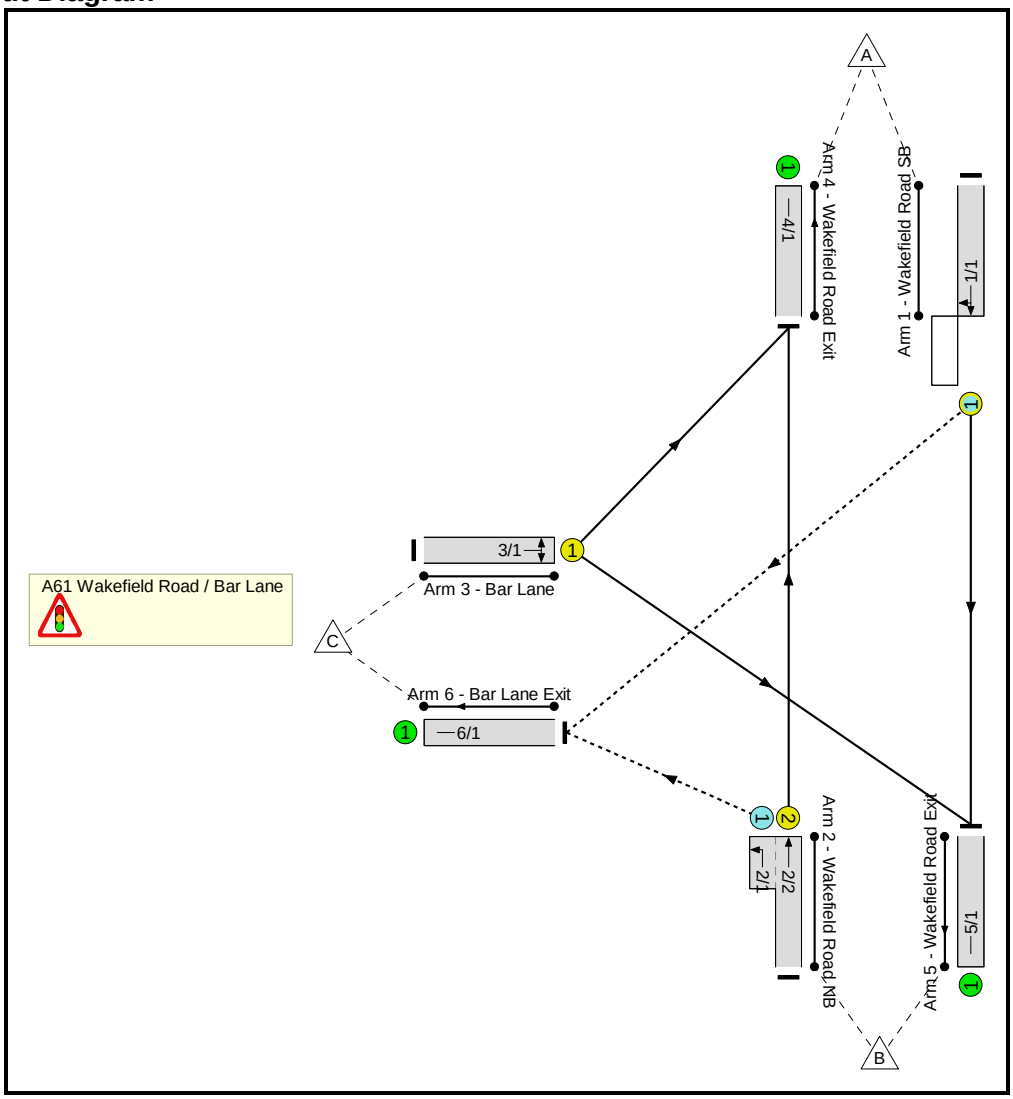
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.76	3.77	0.00	554.00	0.007	0.01	6.544	A
B-A	31.62	31.70	0.00	468.84	0.067	0.07	8.238	A
C-AB	14.80	14.83	0.00	840.90	0.018	0.02	4.389	A
C-A	299.14	299.14	0.00	-	-	-	-	-
A-B	32.37	32.37	0.00	-	-	-	-	-
A-C	231.13	231.13	0.00	-	-	-	-	-

LinSig V1 style report

User and Project Details

Project:	**Wakefield Road, Mapplewell**
Title:	**2012 Base**
Location:	
File name:	Wakefield Road - Bar Lane.lsg3x
Author:	crabtreemd
Company:	Bryan G Hall
Address:	
Notes:	Wakefield Road/Bar Lane

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

Phase Delays

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

Prohibited Stage Change

	To Stage		
		1	2
From Stage	1		9
	2	8	

Phases in Stage

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

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)	-	-	-	-	-

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	-	-	-	-	-	-

Lane Saturation Flows

Scenario 1: '2012 AM Base' (FG1: '2012 AM Base', Plan 1: 'Network Control Plan 1')

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	95.6 %	1945	1945
				Arm 6 Right	12.50	4.4 %		
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	4.9 %	1676	1676
				Arm 5 Right	8.00	95.1 %		
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: '2012 PM Base' (FG2: '2012 PM Base', Plan 1: 'Network Control Plan 1')

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	4.4 %	1676	1676
				Arm 5 Right	8.00	95.6 %		
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

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2012 AM Base'	08:00	09:00	01:00	
2: '2012 PM Base'	16:15	17:15	01:00	

Traffic Flows, Desired

FG1: '2012 AM Base'

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	461	21	482
	B	365	0	353	718
	C	22	428	0	450
	Tot.	387	889	374	1650

FG2: '2012 PM Base'

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	444	13	457
	B	344	0	399	743
	C	15	328	0	343
	Tot.	359	772	412	1543

Stage Timings

Scenario 1: '2012 AM Base' (FG1: '2012 AM Base', Plan 1: 'Network Control Plan 1')

Stage	1	2
Duration	39	34
Change Point	0	47

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: 2012 Base	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**66.7%**
A61 Wakefield Road / Bar Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**66.7%**
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	39	-	482	1945	864	55.8%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	42	-	718	1995:1985	1076	66.7%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	36	-	450	1676	689	65.3%
4/1	Wakefield Road Exit	U	N/A	N/A	-		-	-	-	387	Inf	Inf	0.0%
5/1	Wakefield Road Exit	U	N/A	N/A	-		-	-	-	889	Inf	Inf	0.0%
6/1	Bar Lane Exit	U	N/A	N/A	-		-	-	-	374	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: 2012 Base	**-**	**-**	**265**	**108**	**0**	**7.2**	**2.6**	**0.0**	**9.7**	**-**	**-**	**-**	**-**
A61 Wakefield Road / Bar Lane	**-**	**-**	**265**	**108**	**0**	**7.2**	**2.6**	**0.0**	**9.7**	**-**	**-**	**-**	**-**
1/1	482	482	21	0	0	2.5	0.6	0.0	3.1	23.2	8.8	0.6	9.5
2/2+2/1	718	718	245	108	0	2.0	1.0	-	3.0	15.2	10.0	1.0	11.0
3/1	450	450	-	-	-	2.7	0.9	-	3.6	28.8	9.0	0.9	9.9
4/1	387	387	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	889	889	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	374	374	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	PRC for Signalled Lanes (%):	34.9	Total Delay for Signalled Lanes (pcuHr):	9.73	Cycle Time (s):	90
	PRC Over All Lanes (%):	34.9	Total Delay Over All Lanes(pcuHr):	9.73		

Stage Timings

Scenario 2: '2012 PM Base' (FG2: '2012 PM Base', Plan 1: 'Network Control Plan 1')

Stage	1	2
Duration	45	28
Change Point	0	53

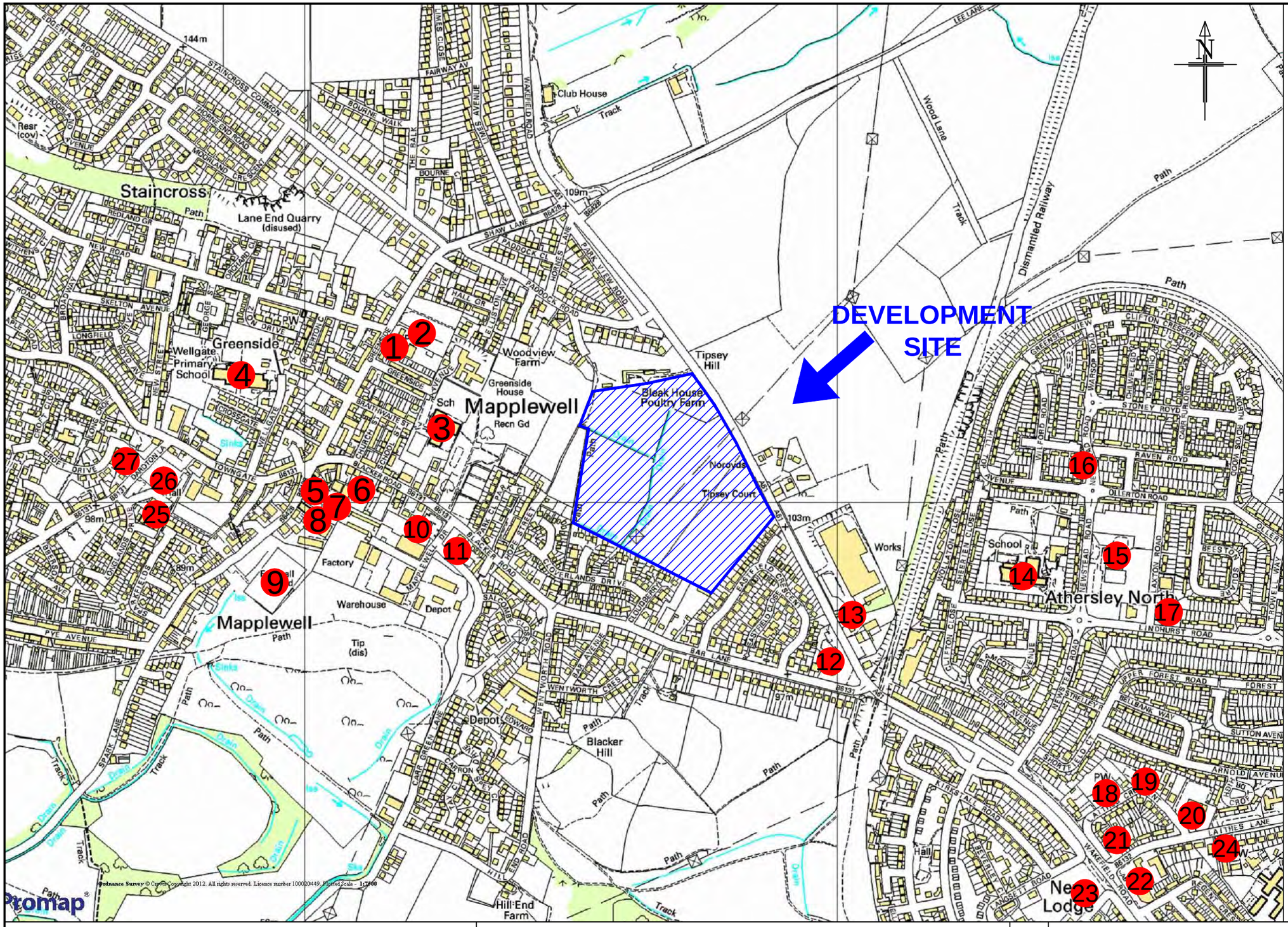
Network Results

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: 2012 Base	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**60.3%**
A61 Wakefield Road / Bar Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**60.3%**
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	45	-	457	1948	996	45.9%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	48	-	743	1995:1985	1232	60.3%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	30	-	343	1676	577	59.4%
4/1	Wakefield Road Exit	U	N/A	N/A	-		-	-	-	359	Inf	Inf	0.0%
5/1	Wakefield Road Exit	U	N/A	N/A	-		-	-	-	772	Inf	Inf	0.0%
6/1	Bar Lane Exit	U	N/A	N/A	-		-	-	-	412	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: 2012 Base	**-**	**-**	**281**	**130**	**0**	**5.4**	**1.9**	**0.0**	**7.3**	**-**	**-**	**-**	**-**
A61 Wakefield Road / Bar Lane	**-**	**-**	**281**	**130**	**0**	**5.4**	**1.9**	**0.0**	**7.3**	**-**	**-**	**-**	**-**
1/1	457	457	13	0	0	1.8	0.4	0.0	2.2	17.4	7.2	0.4	7.7
2/2+2/1	743	743	269	130	0	1.3	0.8	-	2.1	10.1	7.7	0.8	8.5
3/1	343	343	-	-	-	2.3	0.7	-	3.0	32.0	7.1	0.7	7.8
4/1	359	359	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	772	772	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	412	412	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	PRC for Signalled Lanes (%):	49.2	Total Delay for Signalled Lanes (pcuHr):	7.34	Cycle Time (s):	90
	PRC Over All Lanes (%):	49.2	Total Delay Over All Lanes(pcuHr):	7.34		

APPENDIX BGH 8



Local Facilities

1 -The Parish Church of St John

2 - St John The Evangelist CofE Church

3 - Mapplewell Primary School

4 - Wellgate Primary School

5 - Mapplewell Post Office

6 - Staincross Methodist Church

7 - Fountain Shopping Parade

8 - Staincross Christian Fellowship

9 - Football Pitch

10 - Co-op

11 - China Court Restaurant

12 - The Eastfield Arms PH

13 - Tandoori Hut Restaurant

14 - Athersley |North Primary School

15 - Athersley Leisure Centre

16 - Sainsburys Local

17 - The Acorn PH

18 - Church

19 - Roundhouse Lifelong Learning Centre

20 - Netto

21 - New Lodge Post Office

22 - Co-op and other shops

23 - The Athersley and New Lodge Medical Centre

24 - St Helens Church

25 - Mapplewell Health Centre

26 - Village Hall

27 - Pharmacy

Client: Pipestone Limited

Project: PROPOSED RESIDENTIAL DEVELOPMENT
LAND WEST OF WAKEFIELD ROAD, MAPPLEWELL

Title: SITE LOCATION IN RELATION TO LOCAL FACILITIES

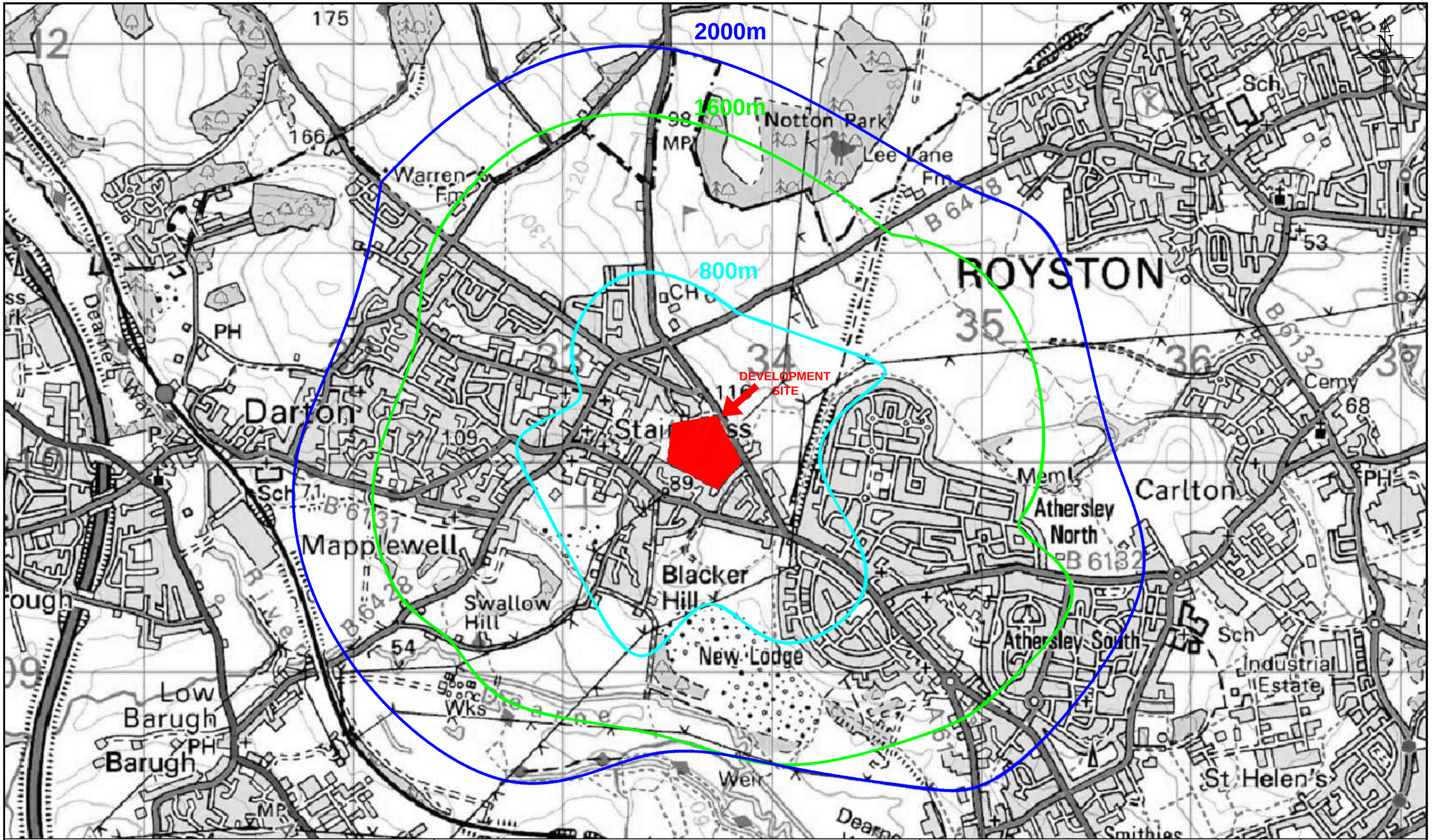
BRYAN · G · HALL
consulting civil & transportation planning engineers

Bryan G Hall Ltd.
Suite E8 Joseph's Well
Hanover Walk
Leeds,
LS3 1AB
Tel: +44(0)113 246 1555
Fax: +44(0)113 234 2201

Rev	Amendments	Drawn	Chkd	Appr	Date

Scale: NTS	Date: September 2012	Doc Sheet No
Drawn: MC	Checked: MC	Approved: DB
Job No: 11–338	Drawing No: Appendix – BGH8	Rev

APPENDIX BGH 9

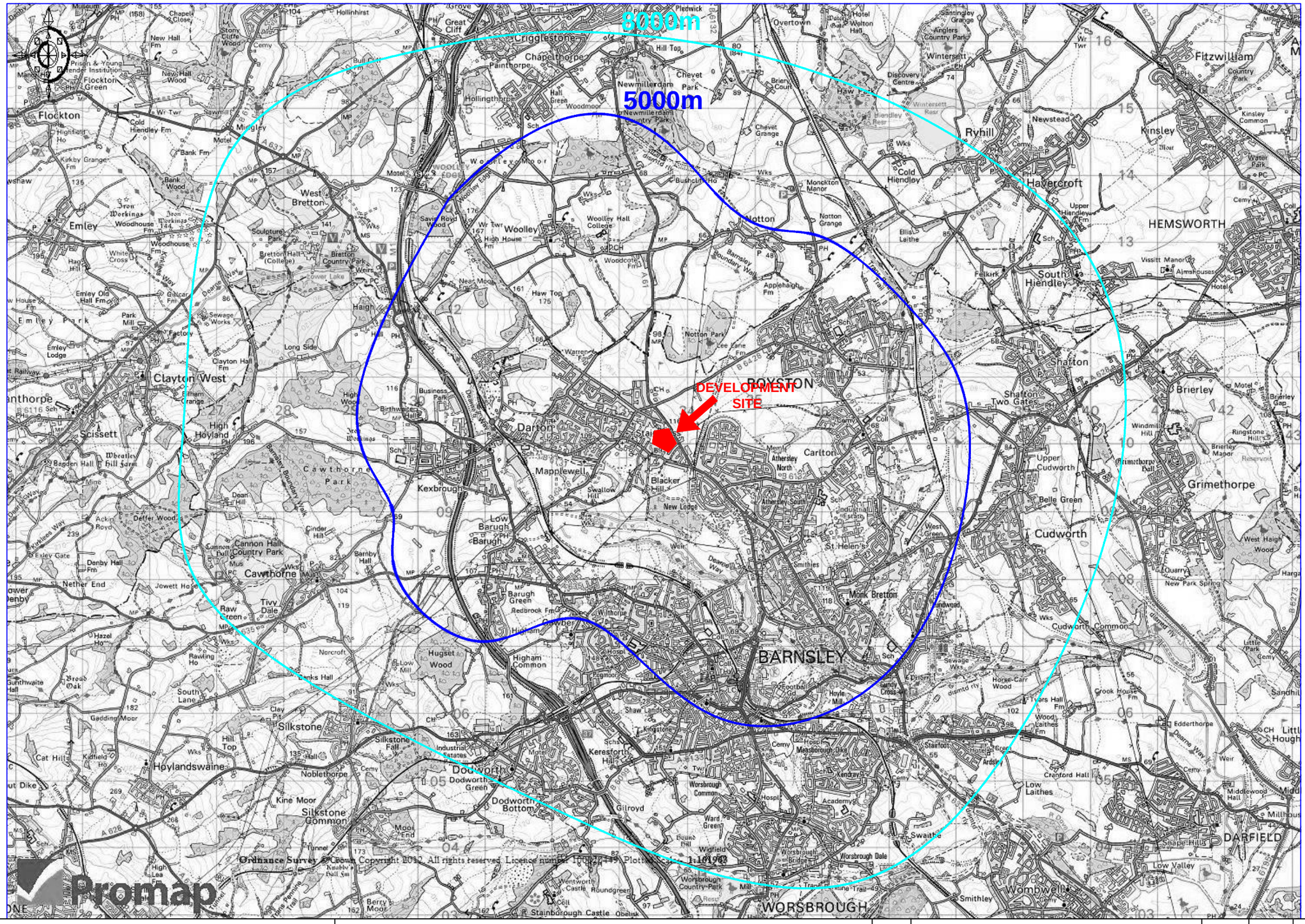


Client	Pipestone Limited					
Project	PROPOSED RESIDENTIAL DEVELOPMENT LAND WEST OF WAKEFIELD ROAD, MAPPLEWELL					
Title	WALKING ISOLINES					
Rev	Amendments		Drawn	Chkd	Appr	Date
Scale NTS	Date September 2012	Doc Sheet No				
Drawn MC	Checked MC	Approved DB				
Job No 11–338	Drawing No Appendix – BGH9	Rev				

BRYAN · G · HALL
consulting civil & transportation planning engineers

Bryan G Hall Ltd.
Suite E8 Joseph's Well
Hanover Walk
Leeds,
LS3 1AB
Tel: +44(0)113 246 1555
Fax: +44(0)113 234 2201

APPENDIX BGH 10

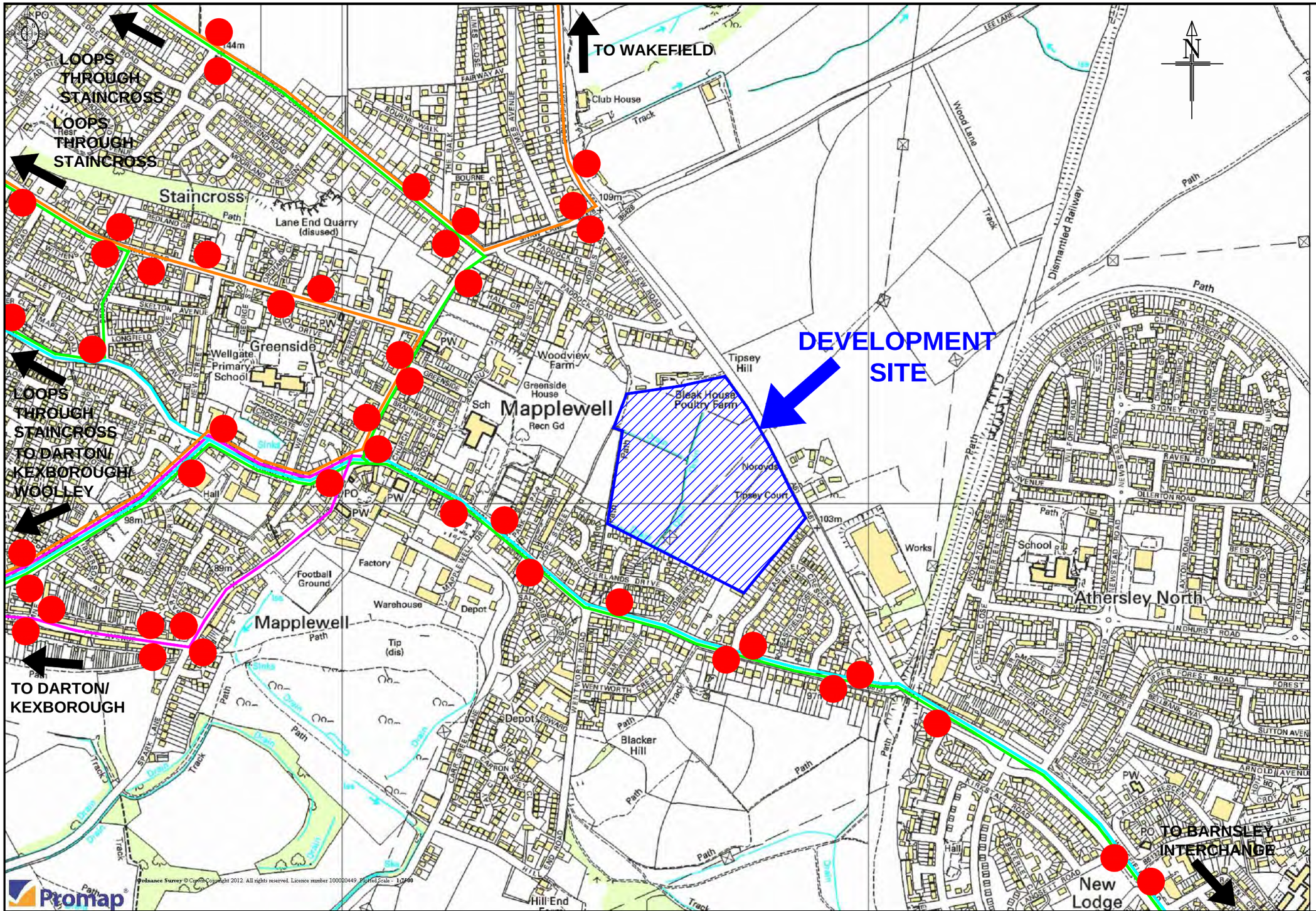


Client	Pipestone Limited	Project	PROPOSED RESIDENTIAL DEVELOPMENT LAND WEST OF WAKEFIELD ROAD, MAPPLEWELL		
BRYAN · G · HALL consulting civil & transportation planning engineers	Bryan G Hall Ltd. Suite E8 Joseph's Well Hanover Walk Leeds, LS3 1AB Tel: +44(0)113 246 1555 Fax: +44(0)113 234 2201	Title	CYCLING ISOLINES		

Rev	Amendments	Drawn	Chkd	Appr	Date

Scale NTS	Date September 2012	Doc Sheet No
Drawn MC	Checked MC	Approved DB
Job No 11–338	Drawing No Appendix – BGH10	Rev

APPENDIX BGH 11



Client	Pipestone Limited
Project	PROPOSED RESIDENTIAL DEVELOPMENT LAND WEST OF WAKEFIELD ROAD, MAPPLEWELL
Title	SITE LOCATION IN RELATION TO LOCAL FACILITIES

BRYAN · G · HALL
consulting civil & transportation planning engineers

Bryan G Hall Ltd.
Suite E8 Joseph's Well
Hanover Walk
Leeds,
LS3 1AB
Tel: +44(0)113 246 1555
Fax: +44(0)113 234 2201

Rev	Amendments	Drawn	Chkd	Appr	Date

Scale NTS	Date September 2012	Doc Sheet No
Drawn MC	Checked MC	Approved DB
Job No 11–338	Drawing No Appendix – BGH11	Rev

APPENDIX BGH 12

METRO

www.wymetro.com

14 May 2012 to 8 December 2012

Hallam
Train Times

- Free parking
- Non Metro station
- Staff in attendance
- Cycle storage

Includes improved express service

- **Leeds**
- Woodlesford
- **Castleford**
- Normanton
- **Wakefield Kirkgate**
- Darton
- **Barnsley**
- **Meadowhall**
- **Sheffield**

Including all trains between Leeds and Castleford

National Rail
Britain's train companies working together

Download your timetable from **www.wymetro.com**

METRO

Hallam Line Timetable

West Yorkshire local rail services between Leeds and Wakefield Kirkgate / Darton are operated by Northern on behalf of Metro.

This timetable shows all trains between Leeds and Sheffield via Barnsley and all trains between Leeds and Castleford. Additional trains run between Leeds and Sheffield via Moorthorpe (see Wakefield Line timetable). For a summary of all trains between Leeds and Sheffield / Derby / Nottingham (via both routes), see the Leeds - Sheffield composite timetable. Other trains also run between Barnsley and Sheffield.

Hallam Line

Mondays to Saturdays **Towards Leeds**

			SX	SX		SX	SX			SX		
						✦				▲	★	
Sheffield	d	0550		0606	0649			0706	0720	0751		
Meadowhall	d	0556		0612	0655			0712	0726	0757		
Chapeltown	d			0618				0718				
Elsecar	d			0623				0723				
Wombwell	d			0627				0727				
Barnsley	d	0610		0633	0712			0733	0742	0812		
Darton	d			0638				0738				
Wakefield Kirkgate	d	0628		0650	0728			0750	0758	0828		
Normanton	d	0633		0654	0733			0754				
Castleford	d		0641	0702		0738	0755	0801			0832	
Woodlesford	d		0650	0712		0747	0804	0811			0841	
Leeds	a	0650	0704	0728	0751	0801	0818	0825	0821	0849	0854	
			▲				▲				▲	
Sheffield	d	0806	0818	0851		0906	0918	0950		1006	1018	
Meadowhall	d	0812	0825	0857		0912	0924	0956		1012	1024	
Chapeltown	d	0818				0918				1018		
Elsecar	d	0823				0923				1023		
Wombwell	d	0827				0927				1027		
Barnsley	d	0833	0842	0912		0933	0942	1012		1033	1042	
Darton	d	0838				0938				1038		
Wakefield Kirkgate	d	0850	0858	0928		0950	0958	1028		1050	1058	
Normanton	d	0854				0954				1054		
Castleford	d	0902			0932	1002			1032	1102		
Woodlesford	d	0912			0941	1012			1041	1112		
Leeds	a	0925	0920	0949	0953	1025	1018	1048	1055	1125	1118	
					▲				▲			
Sheffield	d	1050		1106	1118	1150		1206	1218	1250		
Meadowhall	d	1056		1112	1124	1156		1212	1224	1256		
Chapeltown	d			1118				1218				
Elsecar	d			1123				1223				
Wombwell	d			1127				1227				
Barnsley	d	1112		1133	1141	1211		1233	1242	1312		
Darton	d			1138				1238				
Wakefield Kirkgate	d	1128		1150	1158	1228		1250	1258	1328		
Normanton	d			1154				1254				
Castleford	d		1132	1202			1232	1302			1332	
Woodlesford	d		1141	1212			1241	1312			1341	
Leeds	a	1148	1154	1225	1218	1248	1254	1325	1318	1349	1353	
			▲				▲				▲	
Sheffield	d	1306	1318	1350		1406	1418	1450		1506	1518	
Meadowhall	d	1312	1324	1356		1412	1424	1456		1512	1524	
Chapeltown	d	1318				1418				1518		
Elsecar	d	1323				1423				1523		
Wombwell	d	1327				1427				1527		
Barnsley	d	1333	1342	1412		1433	1442	1512		1533	1542	
Darton	d	1338				1438				1538		
Wakefield Kirkgate	d	1350	1358	1428		1450	1458	1528		1550	1558	
Normanton	d	1354				1454				1554		
Castleford	d	1402			1432	1502			1532	1602		
Woodlesford	d	1412			1441	1512			1541	1612		
Leeds	a	1425	1418	1448	1453	1525	1518	1549	1554	1625	1618	

Notes: appear at end.

Hallam Line

Mondays to Saturdays — Towards Leeds

					▲			▲		
Sheffield	d	1550		1606	1618	1650		1706	1718	1750
Meadowhall	d	1556		1612	1624	1656		1712	1724	1756
Chapeltown	d			1618				1718		
Elsecar	d			1623				1723		
Wombwell	d			1627				1727		
Barnsley	d	1612		1633	1642	1712		1733	1742	1812
Darton	d			1638				1738		
Wakefield Kirkgate	d	1628		1650	1658	1728		1750	1758	1832
Normanton	d			1654				1754		
Castleford	d		1632	1702			1731	1802		
Woodlesford	d		1641	1712			1741	1812		
Leeds	a	1649	1654	1725	1718	1748	1754	1825	1818	1851

							SO	SX			
			▲				▲	▲			
Sheffield	d	1806	1818	1850		1906	1916	1922	1951		2006
Meadowhall	d	1812	1824	1856		1912	1922	1928	1957		2012
Chapeltown	d	1818				1918					2018
Elsecar	d	1823				1923					2023
Wombwell	d	1827				1927					2027
Barnsley	d	1833	1842	1914		1933	1942	1942	2012		2033
Darton	d	1838				1938					2038
Wakefield Kirkgate	d	1850	1859	1932		1950	1958	1958	2028		2050
Normanton	d	1854				1954					2054
Castleford	d	1903			1937	2002				2032	2102
Woodlesford	d	1913			1946	2012				2044	2112
Leeds	a	1927	1923	1955	2000	2026	2020	2019	2048	2057	2126

						FSO	FSX		FSX	
		▲							◆	
Sheffield	d	2018		2106			2206		2324	
Meadowhall	d	2024		2112			2212		2330	
Chapeltown	d			2118			2218		2336	
Elsecar	d			2123			2223		2341	
Wombwell	d			2127			2227		2345	
Barnsley	d	2042		2133			2233		2351	
Darton	d			2138			2238		2356	
Wakefield Kirkgate	d	2058		2152		2251	2251		00s10	
Normanton	d			2157		2256	2256			
Castleford	d		2132	2205	2234	2304	2304	2321		
Woodlesford	d		2141	2215	2243	2314	2314	2330		
Leeds	a	2120	2153	2229	2257	2330	2330	2344		

Sundays

						▲	▲		▲	
Sheffield	d	0839	0917		1039	1117		1216	1239	1317
Meadowhall	d	0845	0923		1045	1123		1223	1245	1323
Chapeltown	d	0851			1051				1255	
Elsecar	d	0856			1056				1300	
Wombwell	d	0900			1100				1304	
Barnsley	a	0905	0937		1105	1137		1237	1309	1337
Barnsley	d	0910	0937		1110	1137		1237	1310	1337
Darton	d	0915			1115				1315	
Wakefield Kirkgate	d	0930	0955		1130	1153		1253	1330	1353
Normanton	d	0934			1134				1334	
Castleford	d	0942		1042	1141		1242		1342	
Woodlesford	d	0952		1051	1151		1252		1351	
Leeds	a	1004	1015	1104	1205	1219	1305	1318	1404	1418

Notes: appear at end.

Hallam Line

Sundays **Towards Leeds**

		▲		▲		▲	●	▲		▲	
Sheffield	d	1417	1439	1517		1617	1639	1717		1817	1839
Meadowhall	d	1423	1445	1523		1623	1645	1723		1823	1845
Chapeltown	d		1451				1651				1851
Elsecar	d		1456				1656				1856
Wombwell	d		1500				1700				1900
Barnsley	a	1437	1505	1537		1637	1705	1737		1837	1905
Barnsley	d	1437	1510	1537		1637	1710	1737		1837	1910
Darton	d		1515				1715				1915
Wakefield Kirkgate	d	1453	1530	1553		1653	1730	1753		1853	1930
Normanton	d		1534				1734				1934
Castleford	d		1541		1642		1742		1842		1944
Woodlesford	d		1551		1651		1751		1851		1953
Leeds	a	1518	1604	1618	1704	1718	1805	1818	1904	1918	2005

		▲		▲			▲
Sheffield	d	1916		2017	2039		2239
Meadowhall	d	1923		2023	2045		2245
Chapeltown	d				2051		2251
Elsecar	d				2056		2256
Wombwell	d				2100		2300
Barnsley	a	1937		2037	2106		2305
Barnsley	d	1937		2037	2110		2310
Darton	d				2115		2315
Wakefield Kirkgate	d	1953		2053	2130		2327
Normanton	d				2134		2334
Castleford	d		2042		2142	2242	2342
Woodlesford	d		2051		2151	2251	2353
Leeds	a	2018	2103	2116	2204	2304	0005

Mondays to Saturdays **Towards Sheffield**

		SX	**SX**	**SX**						**SO**	**SX**
				▲			▲				▲
Leeds	d	0546		0605	0638	0700	0705	0729	0735	0800	0802
Woodlesford	d	0554			0646	0708		0737		0808	
Castleford	d	06a03			0657	07e17		0748		08a17	
Normanton	d				0703			0754			
Wakefield Kirkgate	d		0604	0621	0708		0725	0804	0755		0823
Darton	d		0615		0719			0815			
Barnsley	a		0620	0637	0725		0740	0821	0811		0839
Wombwell	a		0626		0730			0829			
Elsecar	a		0629		0734			0832			
Chapeltown	a		0635		0739			0838			
Meadowhall	a		0641	0649	0748		0753	0845	0831		0852
Sheffield	a		0655	0700	0758		0805	0856	0839		0902

		SO	**SX**								
		▲					▲				▲
Leeds	d	0805	0805	0832	0837	0900	0905	0932	0937	1000	1005
Woodlesford	d		0815	0840		0908		0940		1008	
Castleford	d		08a24	0851		09a17		0951		10a17	
Normanton	d			0857				0957			
Wakefield Kirkgate	d	0823		0905	0855		0923	1004	0956		1023
Darton	d			0917				1015			
Barnsley	a	0839		0923	0911		0939	1021	1012		1039
Wombwell	a			0929				1029			
Elsecar	a			0932				1032			
Chapeltown	a			0938				1038			
Meadowhall	a	0852		0946	0927		0952	1046	1027		1052
Sheffield	a	0902		0956	0937		1002	1056	1037		1102

Notes: appear at end.

Hallam Line

Mondays to Saturdays **Towards Sheffield**

					▲				▲		
Leeds	d	1032	1037	1100	1105	1132	1137	1200	1205	1232	1237
Woodlesford	d	1040		1108		1140		1208		1240	
Castleford	d	1051		11a17		1151		12a17		1251	
Normanton	d	1057				1157				1257	
Wakefield Kirkgate	d	1104	1055		1123	1204	1155		1223	1304	1255
Darton	d	1115				1215				1317	
Barnsley	a	1121	1111		1139	1221	1211		1239	1322	1311
Wombwell	a	1129				1229				1329	
Elsecar	a	1132				1232				1332	
Chapeltown	a	1138				1238				1338	
Meadowhall	a	1146	1127		1152	1246	1227		1252	1346	1327
Sheffield	a	1157	1137		1202	1256	1237		1302	1356	1337

			▲				▲				▲
Leeds	d	1300	1305	1332	1337	1400	1405	1432	1437	1500	1505
Woodlesford	d	1308		1340		1408		1440		1508	
Castleford	d	13a17		1351		14a17		1451		15a17	
Normanton	d			1357				1457			
Wakefield Kirkgate	d		1323	1404	1355		1423	1504	1455		1523
Darton	d			1415				1515			
Barnsley	a		1338	1421	1411		1439	1521	1513		1539
Wombwell	a			1429				1529			
Elsecar	a			1432				1532			
Chapeltown	a			1438				1538			
Meadowhall	a		1352	1446	1427		1452	1546	1527		1551
Sheffield	a		1402	1456	1437		1502	1556	1537		1603

					▲			▲			
Leeds	d	1532	1537	1600	1605	1632	1637	1705	1716	1732	1737
Woodlesford	d	1540		1608		1640			1724	1740	
Castleford	d	1551		16a17		1651			17c34	1751	
Normanton	d	1557				1657		1718		1757	
Wakefield Kirkgate	d	1604	1555		1623	1704	1655	1723		1804	1755
Darton	d	1615				1715				1815	
Barnsley	a	1621	1611		1639	1721	1711	1739		1821	1811
Wombwell	a	1629				1729				1829	
Elsecar	a	1632				1732				1832	
Chapeltown	a	1638				1738				1838	
Meadowhall	a	1646	1627		1652	1746	1727	1751		1846	1827
Sheffield	a	1656	1637		1702	1756	1737	1803		1856	1838

					SO	**SX**					
			▲					▲			
Leeds	d	1800	1805	1832	1837	1843	1859	1905	1937	1943	2005
Woodlesford	d	1808		1840			1908		1945		2013
Castleford	d	18a17		1851			19c18		1956		20a22
Normanton	d			1900					2002		
Wakefield Kirkgate	d		1823	1905	1855	1859		1924	2007	2000	
Darton	d			1919					2019		
Barnsley	a		1839	1926	1911	1915		1940	2024	2016	
Wombwell	a			1931					2029		
Elsecar	a			1935					2033		
Chapeltown	a			1940					2038		
Meadowhall	a		1852	1947	1928	1933		1952	2045	2033	
Sheffield	a		1903	1956	1939	1943		2004	2058	2044	

Notes: appear at end.

Hallam Line

Mondays to Saturdays **Towards Sheffield**

							SX	SO			
Leeds	d	2030	2037	2105	2137	2208	2237	2237			
Woodlesford	d		2045	2113	2145	2216	2245	2245			
Castleford	d		2056	21a22	2156	22a27	2256	2256			
Normanton	d		2102		2202		2301	2301			
Wakefield Kirkgate	d	2046	2107		2207		2310	23a10			
Darton	d		2118		2221		2324				
Barnsley	a	2102	2124		2227		2331				
Wombwell	a		2129		2233		2336				
Elsecar	a		2133		2236		2340				
Chapeltown	a		2138		2242		2345				
Meadowhall	a	2119	2145		2247		2351				
Sheffield	a	2130	2157		2258		0002				

Sundays

			▲		▲		▲		▲	▲	
Leeds	d	0834	0905	0934	1002	1017	1057	1117	1129	1229	1234
Woodlesford	d	0842		0942		1025		1125			1242
Castleford	d	0853		09a50		1036		11a33			1253
Normanton	d	0858				1041					1258
Wakefield Kirkgate	d	0903	0921		1018	1046	1113		1146	1246	1304
Darton	d	0917				1100					1318
Barnsley	a	0924	0940		1037	1108	1132		1205	1305	1324
Wombwell	a	0929				1117					1329
Elsecar	a	0933				1120					1333
Chapeltown	a	0938				1126					1338
Meadowhall	a	0944	0957		1051	1132	1146		1217	1318	1348
Sheffield	a	0955	1004		1102	1144	1156		1229	1329	1358

			▲		▲		▲		▲		▲
Leeds	d	1317	1406	1417	1506	1517	1606	1617	1706	1717	1806
Woodlesford	d	1325		1425		1525		1625		1725	
Castleford	d	13a33		1436		15a33		1636		17a33	
Normanton	d			1441				1641			
Wakefield Kirkgate	d		1422	1446	1522		1622	1646	1722		1822
Darton	d			1500				1700			
Barnsley	a		1441	1507	1541		1641	1707	1741		1841
Wombwell	a			1517				1717			
Elsecar	a			1520				1720			
Chapeltown	a			1526				1726			
Meadowhall	a		1455	1535	1555		1656	1734	1755		1855
Sheffield	a		1506	1544	1605		1705	1744	1805		1905

			▲				
Leeds	d	1817	1906	1917	2017	2117	2217
Woodlesford	d	1825		1925	2025	2125	2225
Castleford	d	1836		19a35	2036	21a33	2236
Normanton	d	1840			2041		2241
Wakefield Kirkgate	d	1845	1922		2046		2246
Darton	d	1859			2100		2300
Barnsley	a	1905	1940		2107		2307
Wombwell	a	1917			2117		2317
Elsecar	a	1920			2120		2320
Chapeltown	a	1926			2126		2326
Meadowhall	a	1932	1954		2133		2330
Sheffield	a	1943	2004		2142		2343

Notes: appear at end.

Hallam Line

Notes:
a Arrive.
d Depart.
c 1 minute earlier on Saturdays.
e 2 minutes later on Saturdays.
s Stops to set down only.
▲ Through train to or from Nottingham.
✦ Through train from Chesterfield.
★ Through train from Retford.
◆ Through train to Wakefield Westgate.
● Through train from Lincoln.
SO Saturdays only.
SX Saturdays excepted.
FSO Fridays and Saturdays only.
FSX Fridays and Saturdays excepted.
For details of other trains between Barnsley, Meadowhall and Sheffield please see SYPTE timetable.
Passengers are advised to allow a minimum connecting time of 10 minutes between trains at Leeds station.

Train Operators

All train operators welcome comments on any aspect of your journey. For services on this line please contact:

Northern
Customer Relations
Northern Rail
Freepost (RLSL-ABEC-BGUU)
Leeds LS1 4DY
Customer Relations: **0845 00 00 125**
(Textphone: **0845 604 5608**)
Lost property: **0845 00 00 125**
or email lost.property@northernrail.org
Assistance helpline: **Freephone 08081 56 16 06**
or email assistance@northernrail.org
Website: www.northernrail.org
Email: customer.relations@northernrail.org

Changes to Train Services

Engineering work sometimes affects weekend services and passengers are advised to check with National Rail Enquiries on **08457 48 49 50** (24 hours) before travelling, or visit the web site at www.nationalrail.co.uk. The information shown in this timetable is subject to alteration, especially around public holidays.

The latest information on train running is available by phoning **TrainTrackerTM** from National Rail Enquiries on **0871 200 4915** or by texting **TrainTrackerTM**. Text to **84950**.

Tickets

Before you board the train

At staffed stations you must have a valid ticket or pass for your journey. This is a legal requirement which applies when the ticket office is open. When boarding at unstaffed stations, you must buy your ticket on the train unless you already have a valid ticket or pass.

Buying your ticket

You can buy your ticket from station ticket offices, quickfare ticket machines and some travel agents. If your journey starts at a station where no staff are in attendance, you can buy your ticket from the conductor on the train. Please purchase a ticket for the journey you are making as you risk prosecution if you travel without a valid ticket or pass. Through ticketing is available from the National Rail network to the **Keighley & Worth Valley Railway**, and to **Leeds Bradford International Airport** using bus service 757 from and to Leeds station.

Plusbus

You can buy a ticket for both your rail journey and bus travel in one simple go - it's called Plusbus.

Plusbus is a discount price bus pass that you buy with your train ticket. It gives you unlimited bus travel either at the start, the end, or both ends of your train travel on most local bus services where Plusbus is available.

For more information on Plusbus, where it is available and the areas it covers, pick up a leaflet from your local staffed rail station or visit www.plusbus.info

Disabled Travellers

The train operators will do all they can to assist with your journey. See contact details above.

Taxis from Stations

At all main stations there is a taxi rank outside the station from which taxis are normally available. At many other stations there is a taxi rank or cab office nearby. To find out more information to assist your journey you can download the Traintaxi guide from the Internet at www.traintaxi.co.uk This gives information for all stations on the national rail network, including names and contact details of cab firms to enable pre-booking.

Smoking Policy

All trains and stations are now designated as "no smoking" areas throughout. Please respect other passengers' rights to enjoy a smoke free environment.

Passenger Representation

If you have a complaint that has not been dealt with to your satisfaction, you can write to the national rail passenger watchdog Passenger Focus at:
Freepost (RRRE-ETTC-LEET), PO Box 4257,
Manchester, M60 3AR.
Tel: **0300 123 2350**. Fax: **0845 850 1392**
Email: info@passengerfocus.org.uk
Website: www.passengerfocus.org.uk

British Transport Police

British Transport Police are responsible for law and order on the railway network. If you notice any acts of vandalism, theft or trespass on the railway or see anything suspicious please contact the 24 hour helpline on **0800 40 50 40** or Crimestoppers on **0800 555 111**.

Network Rail National Helpline

A 24 hour service for taking reports on infrastructure issues: track and embankments, fencing, level crossings, trees, vegetation and litter. Tel: **08457 11 41 41**.

METRO

www.wymetro.com

KEEPINTOUCH

www.wymetro.com

Visit **www.wymetro.com** for the very latest public transport updates and news including timetables, tickets, journey planner & lots more.

Online

Messenger
www.wymetro.com/messenger

Twitter
twitter.com/metrotravelnews

Facebook
www.facebook.com/westyorkshiremetro

Text

yournextbus
Text your bus stop number to 63876*
wypte.acislive.com/mobile

Telephone

MetroLine (Local travel) **0113 245 7676**
Traveline (National travel) **0871 200 22 33****
National Rail Enquiries 08457 48 49 50

For timetables in large print, Braille, audio CD or tape, please contact us on 0113 245 7676 - Typetalk friendly.

*One standard outbound message rate + no more than 12p for our reply **10p per minute + any network provider charges

Published by Metro. 40-50 Wellington Street, Leeds LS1 2DE
Telephone 0113 251 7272

APPENDIX BGH 13

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	EX	ESSEX	1 days
04	EAST ANGLIA		
	SF	SUFFOLK	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	2 days
	NT	NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS		
	WO	WORCESTERSHIRE	1 days
08	NORTH WEST		
	CH	CHESHIRE	1 days
	LC	LANCASHIRE	1 days
09	NORTH		
	TV	TEES VALLEY	1 days
10	WALES		
	CF	CARDIFF	1 days
11	SCOTLAND		
	FI	FIFE	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
Actual Range: 150 to 237 (units:)
Range Selected by User: 150 to 600 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/04 to 14/10/08

Selected survey days:

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

Selected survey types:

Manual count	11 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	9

Selected Location Sub Categories:

Residential Zone	9
No Sub Category	2

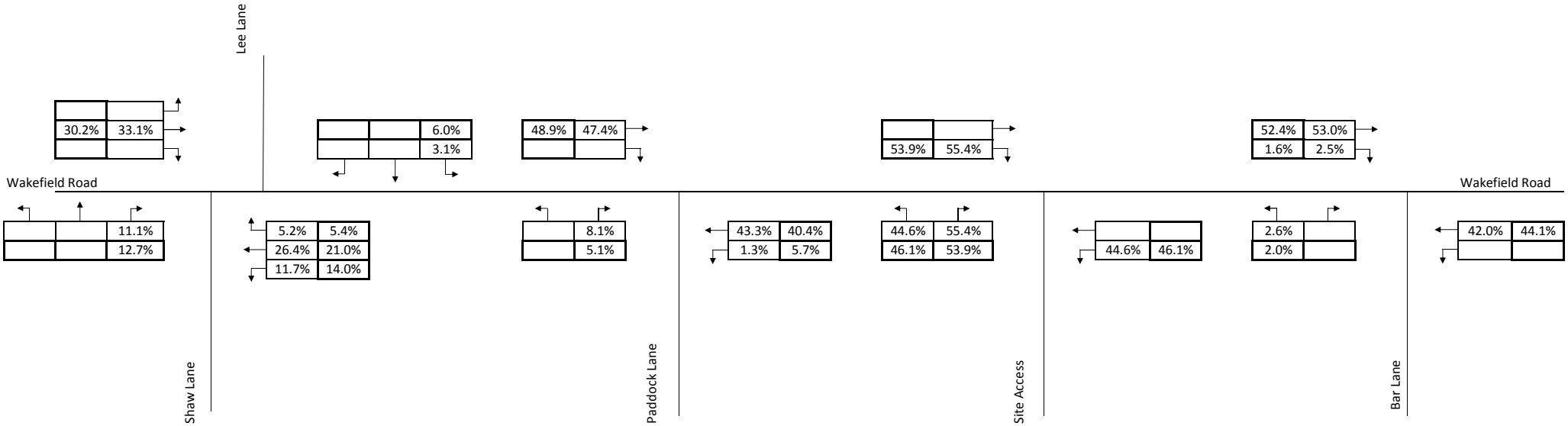
TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	11	194	0.085	11	194	0.309	11	194	0.394
08:00 - 09:00	11	194	0.151	11	194	0.454	11	194	0.605
09:00 - 10:00	11	194	0.158	11	194	0.210	11	194	0.368
10:00 - 11:00	11	194	0.148	11	194	0.193	11	194	0.341
11:00 - 12:00	11	194	0.182	11	194	0.171	11	194	0.353
12:00 - 13:00	11	194	0.205	11	194	0.194	11	194	0.399
13:00 - 14:00	11	194	0.185	11	194	0.171	11	194	0.356
14:00 - 15:00	11	194	0.187	11	194	0.183	11	194	0.370
15:00 - 16:00	11	194	0.302	11	194	0.198	11	194	0.500
16:00 - 17:00	11	194	0.349	11	194	0.220	11	194	0.569
17:00 - 18:00	11	194	0.432	11	194	0.256	11	194	0.688
18:00 - 19:00	11	194	0.300	11	194	0.243	11	194	0.543
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			2.684			2.802			5.486

Parameter summary

Trip rate parameter range selected:	150 - 237 (units:)
Survey date date range:	01/01/04 - 14/10/08
Number of weekdays (Monday-Friday):	11
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

APPENDIX BGH 14



KEY

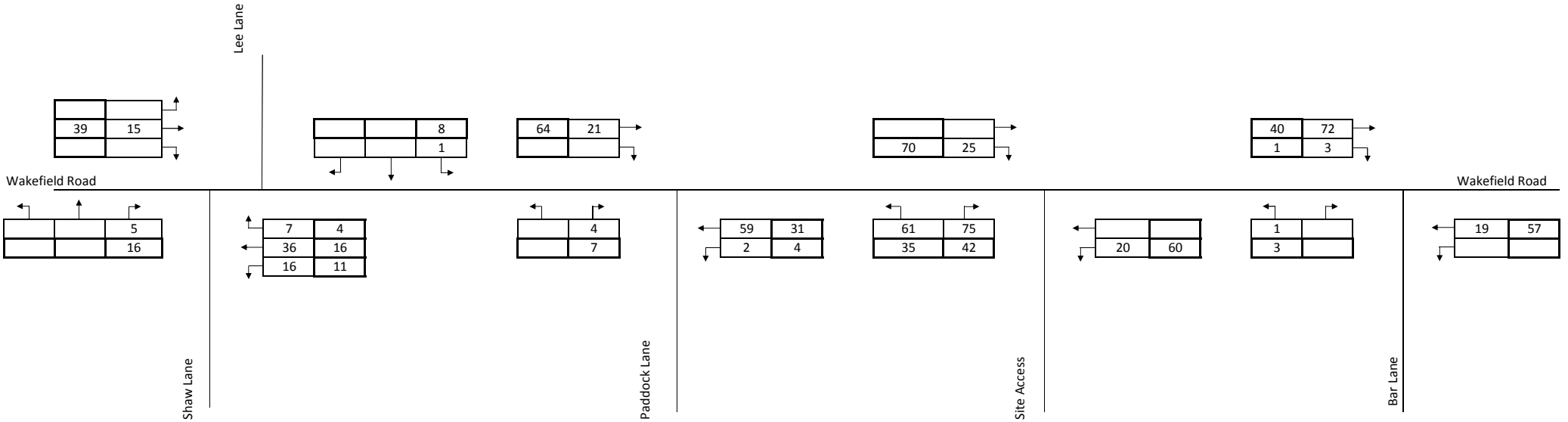
AM Peak

PM Peak

Client:	Project:	Title:		Number:	Revision:				
Pipestone Group Ltd	Wakefield Road, Mapplewell	Distribution	BRYAN G HALL CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS	BGH14	-	Date	Sep-12	Checked	MC
						Design	MC	Approved	DB

APPENDIX BGH 15

Trip Generation		Arrivals	Departures
	AM Peak	45	136
	PM Peak	130	77



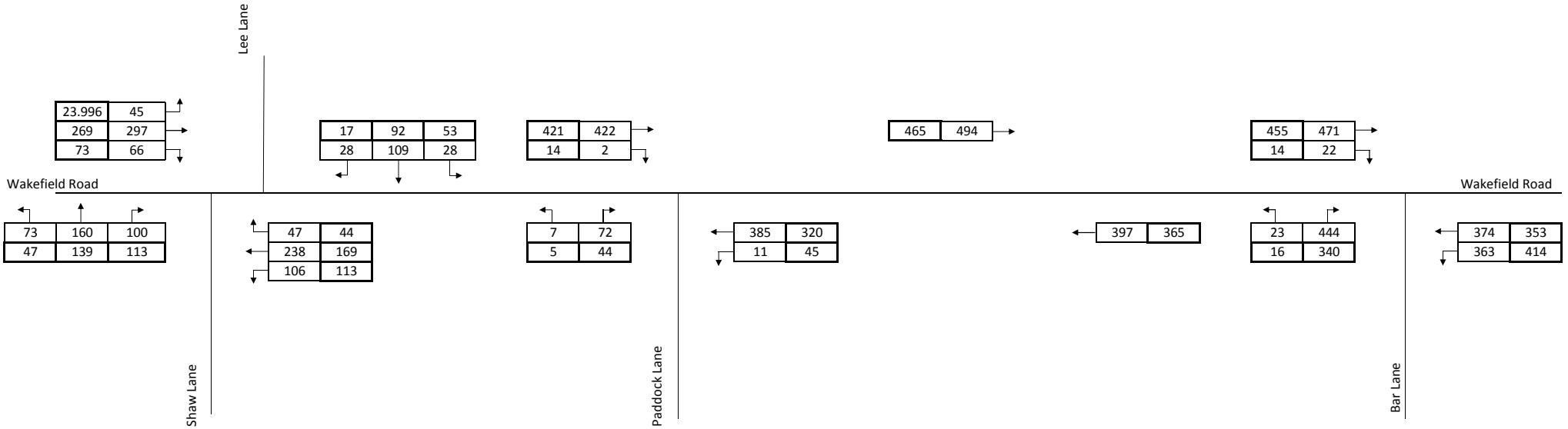
KEY

AM Peak
PM Peak

Client:	Project:	Title:		Number:	Revision:				
Pipestone Group Ltd	Wakefield Road, Mapplewell	Development Traffic Flows	BRYAN G HALL CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS	BGH15	-	Date	Sep-12	Checked	MC
						Design	MC	Approved	DB

APPENDIX BGH 16

Growth Factors	AM Peak	1.0414
	PM Peak	1.0433



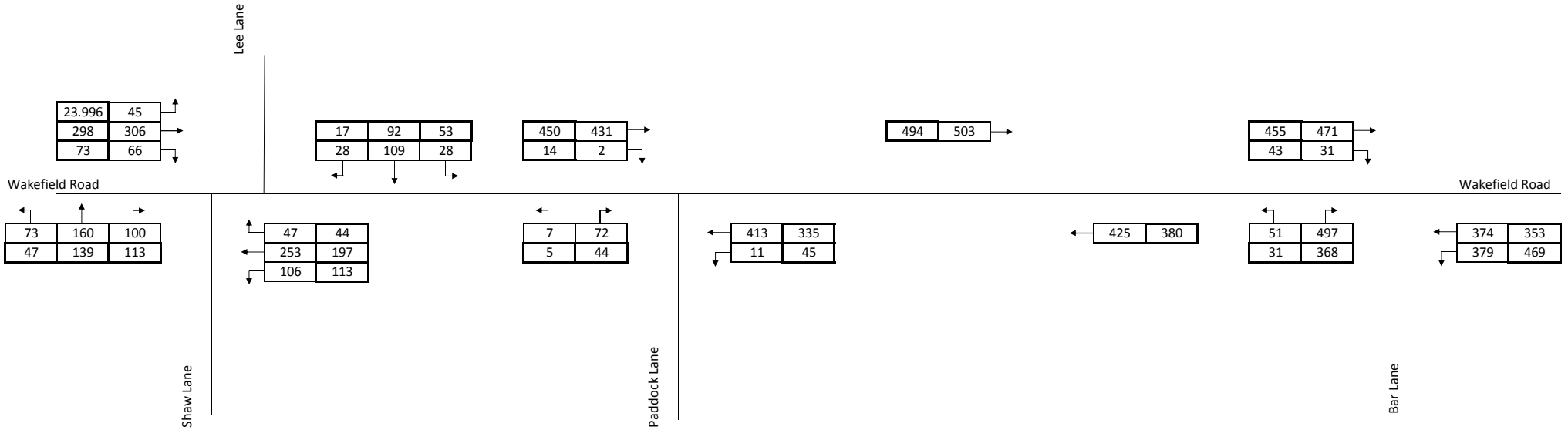
KEY

AM Peak

PM Peak

Client:	Project:	Title:		Number:	Revision:				
Pipestone Group Ltd	Wakefield Road, Mapplewell	2017 Base Traffic Flows	BRYAN G HALL CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS	BGH16	-	Date	Sep-12	Checked	MC
						Design	MC	Approved	DB

APPENDIX BGH 17



KEY

AM Peak

PM Peak

Client:	Project:	Title:		Number:	Revision:				
Pipestone Group Ltd	Wakefield Road, Mapplewell	2017 Base + Committed Development Traffic Flows	BRYAN G HALL CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS	BGH17	-	Date	Sep-12	Checked	MC
						Design	MC	Approved	DB

APPENDIX BGH 18

Junctions 8

PICADY 8 - Priority Intersection Module

Filename: (new file)
Path:
Report generation date: 24/09/2012 10:14:54

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Layout - 2017 Base + CD			
Stream B-C	0.63	13.05	0.39	B
Stream B-AD	1.15	22.33	0.54	C
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.10	7.27	0.09	A
Stream D-A	0.07	8.23	0.07	A
Stream D-BC	0.65	15.83	0.40	C
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.13	6.63	0.12	A

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

"D1 - 2012 Base, AM" model duration: 07:30 - 09:00
"D4 - 2017 Base + CD, AM " model duration: 07:30 - 09:00
"D6 - 2017 Base + CD + D, AM" model duration: 07:30 - 09:00
"D7 - 2012 Base, PM" model duration: 16:00 - 17:30
"D10 - 2017 Base + CD, PM" model duration: 16:00 - 17:30
"D12 - 2017 Base + CD + D, PM" model duration: 16:00 - 17:30

Run using Junctions 8.0.1.305 at 24/09/2012 10:14:53

File summary

File Description

Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	15/08/2012
Version	

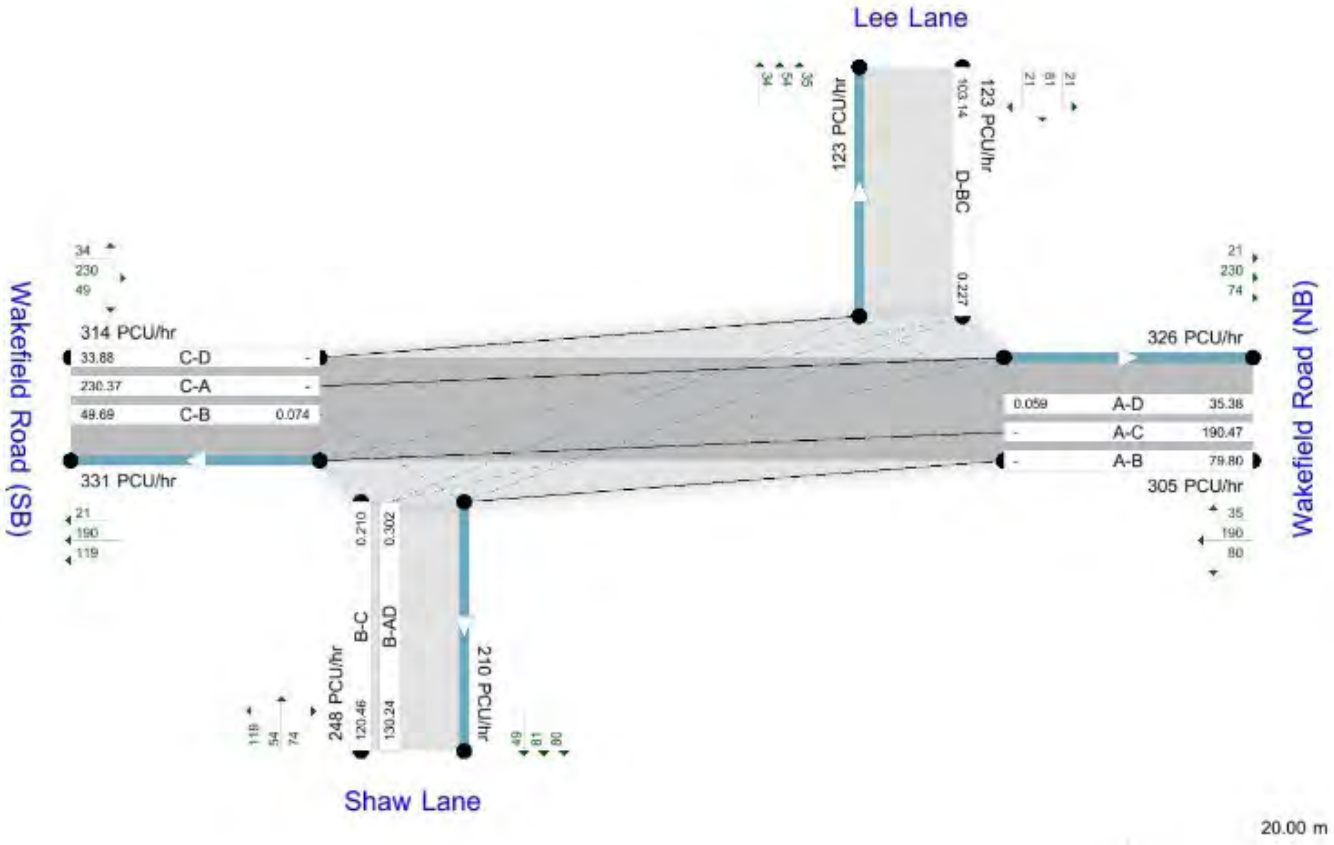
Status	(new file)
Identifier	
Client	Pipestone Limited
Jobnumber	11-338
Enumerator	BRYANGHALL\MCrabtree
Description	

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



Test overlays show modelled flow through the junction (entry and exit flows: PCU/hr).
Streams (upstream) show Total Demand (PCU/hr); Streams (downstream) show RFC ().

Time Segment: (07:30-07:45)
Showing Analysis Set: "A1 - Existing Layout "; Demand Set: "D4 - 2017 Base + CD, AM "

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Base + CD, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			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 Base + CD, AM	2017 Base + CD	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	14.94	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description	Arm Type
Wakefield Road (NB)	Wakefield Road (NB)		Major
Shaw Lane	Shaw Lane		Minor
Wakefield Road (SB)	Wakefield Road (SB)		Major
Lee Lane	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
	One												

Lee Lane	lane plus flare				10.00	8.00	5.00	4.25	3.50	✓	2.00	40	65

Pedestrian Crossings

Name	Crossing Type
Wakefield Road (NB)	None
Shaw Lane	None
Wakefield Road (SB)	None
Lee Lane	None

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	572.333	0.104	0.263	-	-	-	0.166	0.376	0.166	0.104	0.263
1	B-C	713.071	0.109	0.276	-	-	-	-	-	-	0.109	0.276
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	661.494	-	-	-	0.256	0.101	0.256	-	0.101	-	-
1	D-BC	612.468	0.177	0.177	0.403	0.282	0.112	0.282	-	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	✓	406.00	100.000
Shaw Lane	ONE HOUR	✓	333.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	417.00	100.000
Lee Lane	ONE HOUR	✓	165.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - (untitled) (for whole period)

	To			
		A	B	C	D
	A	0.000	106.000	253.000	47.000

From	B	100.000	0.000	160.000	73.000
	C	306.000	66.000	0.000	45.000
	D	28.000	109.000	28.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.26	0.62	0.12
	B	0.30	0.00	0.48	0.22
	C	0.73	0.16	0.00	0.11
	D	0.17	0.66	0.17	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.010	1.022	1.000
	B	1.010	1.000	1.000	1.006
	C	1.028	1.000	1.000	1.000
	D	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	0.000	1.000	2.200	0.000
	B	1.000	0.000	0.000	0.600
	C	2.800	0.000	0.000	0.000
	D	0.000	1.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.39	13.05	0.63	B
B-AD	0.54	22.33	1.15	C
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.09	7.27	0.10	A
D-A	0.07	8.23	0.07	A
D-BC	0.40	15.83	0.65	C
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.12	6.63	0.13	A

Main Results for each time segment

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	120.46	119.41	0.00	574.37	0.210	0.26	7.895	A
B-AD	130.24	128.53	0.00	431.94	0.302	0.43	11.899	B
A-B	79.80	79.80	0.00	-	-	-	-	-
A-C	190.47	190.47	0.00	-	-	-	-	-
A-D	35.38	35.13	0.00	597.90	0.059	0.06	6.394	A
D-A	21.08	20.92	0.00	540.34	0.039	0.04	6.929	A
D-BC	103.14	101.97	0.00	454.17	0.227	0.29	10.269	B
C-D	33.88	33.88	0.00	-	-	-	-	-
C-A	230.37	230.37	0.00	-	-	-	-	-
C-B	49.69	49.37	0.00	668.28	0.074	0.08	5.814	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	143.84	143.42	0.00	531.89	0.270	0.37	9.256	A
B-AD	155.52	154.74	0.00	400.74	0.388	0.62	14.706	B
A-B	95.29	95.29	0.00	-	-	-	-	-
A-C	227.44	227.44	0.00	-	-	-	-	-
A-D	42.25	42.19	0.00	576.49	0.073	0.08	6.737	A
D-A	25.17	25.13	0.00	512.66	0.049	0.05	7.383	A
D-BC	123.16	122.70	0.00	423.01	0.291	0.41	12.045	B
C-D	40.45	40.45	0.00	-	-	-	-	-
C-A	275.09	275.09	0.00	-	-	-	-	-
C-B	59.33	59.25	0.00	645.98	0.092	0.10	6.135	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	176.16	175.16	0.00	455.06	0.387	0.62	12.813	B
B-AD	190.48	188.47	0.00	353.19	0.539	1.12	21.769	C
A-B	116.71	116.71	0.00	-	-	-	-	-
A-C	278.56	278.56	0.00	-	-	-	-	-
A-D	51.75	51.65	0.00	547.33	0.095	0.10	7.260	A
D-A	30.83	30.75	0.00	469.25	0.066	0.07	8.209	A
D-BC	150.84	149.89	0.00	380.32	0.397	0.64	15.680	C
C-D	49.55	49.55	0.00	-	-	-	-	-
C-A	336.91	336.91	0.00	-	-	-	-	-
C-B	72.67	72.54	0.00	615.51	0.118	0.13	6.628	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	176.16	176.11	0.00	451.96	0.390	0.63	13.047	B
B-AD	190.48	190.36	0.00	352.60	0.540	1.15	22.330	C
A-B	116.71	116.71	0.00	-	-	-	-	-
A-C	278.56	278.56	0.00	-	-	-	-	-
A-D	51.75	51.75	0.00	546.78	0.095	0.10	7.271	A
D-A	30.83	30.83	0.00	468.16	0.066	0.07	8.231	A
D-BC	150.84	150.80	0.00	379.89	0.397	0.65	15.832	C
C-D	49.55	49.55	0.00	-	-	-	-	-
C-A	336.91	336.91	0.00	-	-	-	-	-
C-B	72.67	72.67	0.00	615.22	0.118	0.13	6.634	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	143.84	144.84	0.00	528.68	0.272	0.38	9.404	A
B-AD	155.52	157.51	0.00	400.26	0.389	0.66	15.073	C
A-B	95.29	95.29	0.00	-	-	-	-	-
A-C	227.44	227.44	0.00	-	-	-	-	-
A-D	42.25	42.35	0.00	575.70	0.073	0.08	6.752	A
D-A	25.17	25.24	0.00	511.35	0.049	0.05	7.405	A
D-BC	123.16	124.09	0.00	422.39	0.292	0.42	12.200	B
C-D	40.45	40.45	0.00	-	-	-	-	-
C-A	275.09	275.09	0.00	-	-	-	-	-
C-B	59.33	59.46	0.00	645.54	0.092	0.10	6.143	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	120.46	120.89	0.00	571.97	0.211	0.27	7.989	A
B-AD	130.24	131.10	0.00	431.52	0.302	0.44	12.116	B
A-B	79.80	79.80	0.00	-	-	-	-	-
A-C	190.47	190.47	0.00	-	-	-	-	-
A-D	35.38	35.45	0.00	597.18	0.059	0.06	6.411	A
D-A	21.08	21.12	0.00	539.12	0.039	0.04	6.952	A
D-BC	103.14	103.63	0.00	453.55	0.227	0.30	10.383	B
C-D	33.88	33.88	0.00	-	-	-	-	-
C-A	230.37	230.37	0.00	-	-	-	-	-
C-B	49.69	49.77	0.00	667.77	0.074	0.08	5.825	A

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.1.305 [25 May 2012]

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

Filename: (new file)
Path:
Report generation date: 24/09/2012 10:16:22

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Layout - 2017 Base + CD			
Stream B-C	0.20	14.03	0.17	B
Stream B-AD	2.35	31.75	0.71	D
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.10	7.47	0.09	A
Stream D-A	0.13	8.31	0.12	A
Stream D-BC	0.47	14.28	0.32	B
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.14	6.51	0.13	A

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

"D1 - 2012 Base, AM" model duration: 07:30 - 09:00
"D4 - 2017 Base + CD, AM" model duration: 07:30 - 09:00
"D6 - 2017 Base + CD + D, AM" model duration: 07:30 - 09:00
"D7 - 2012 Base, PM" model duration: 16:00 - 17:30
"D10 - 2017 Base + CD, PM " model duration: 16:00 - 17:30
"D12 - 2017 Base + CD + D, PM" model duration: 16:00 - 17:30

Run using Junctions 8.0.1.305 at 24/09/2012 10:16:20

File summary

File Description

Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	15/08/2012
Version	

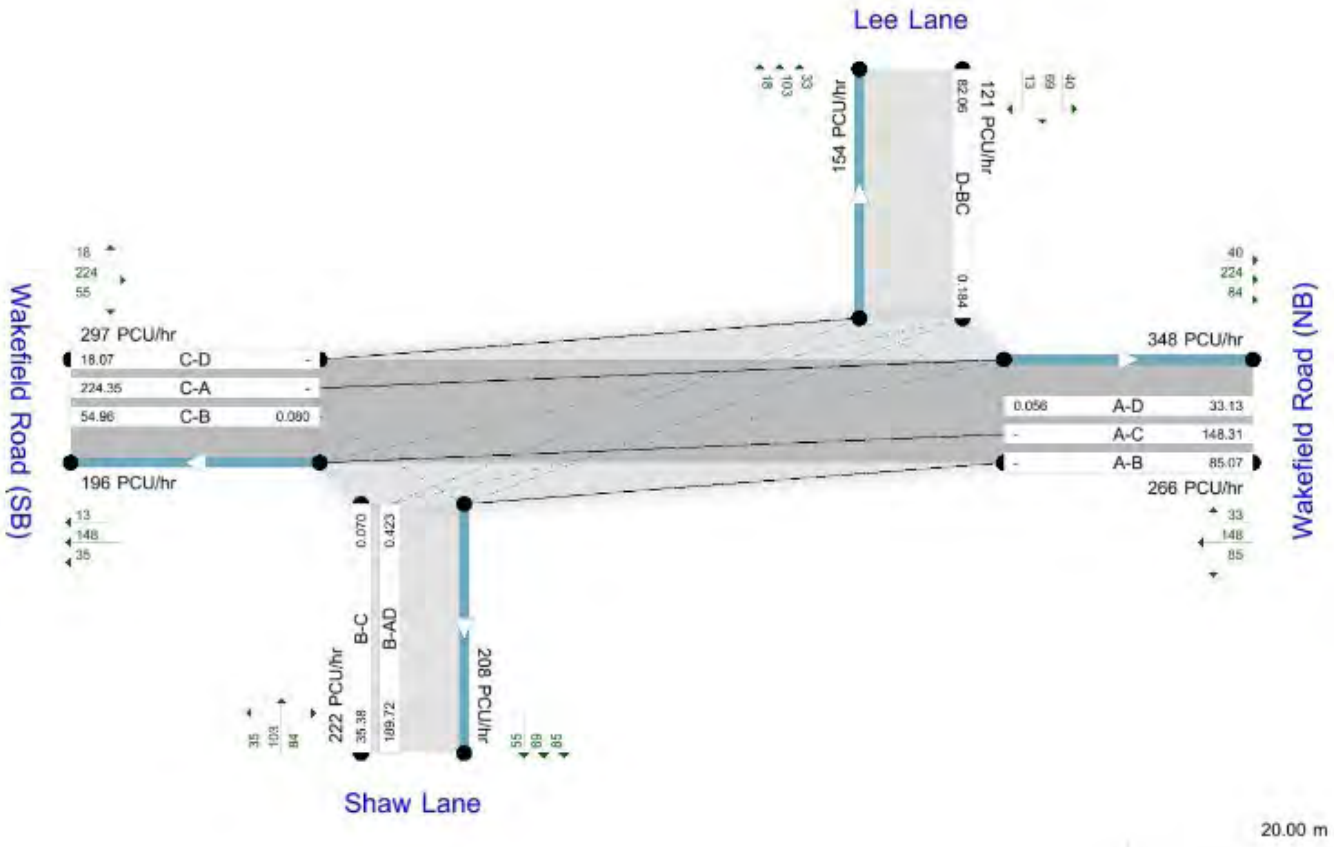
Status	(new file)
Identifier	
Client	Pipestone Limited
Jobnumber	11-338
Enumerator	BRYANGHALL\MCrabtree
Description	

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



Time Segment: (16:00-16:15)
Showing Analysis Set: "A1 - Existing Layout ", Demand Set: "D10 - 2017 Base + CD, PM "

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Base + CD, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			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 Base + CD, PM	2017 Base + CD	PM		ONE HOUR	16:00	17:30	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	19.83	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description	Arm Type
Wakefield Road (NB)	Wakefield Road (NB)		Major
Shaw Lane	Shaw Lane		Minor
Wakefield Road (SB)	Wakefield Road (SB)		Major
Lee Lane	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
	One												

Lee Lane	lane plus flare				10.00	8.00	5.00	4.25	3.50	✓	2.00	40	65

Pedestrian Crossings

Name	Crossing Type
Wakefield Road (NB)	None
Shaw Lane	None
Wakefield Road (SB)	None
Lee Lane	None

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	678.963	-	-	-	0.263	0.104	0.263	-	0.104	-	-
1	D-BC	598.736	0.173	0.173	0.394	0.276	0.109	0.276	-	0.109	-	-

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	✓	354.00	100.000
Shaw Lane	ONE HOUR	✓	299.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	395.00	100.000
Lee Lane	ONE HOUR	✓	162.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - (untitled) (for whole period)

	To			
		A	B	C	D
	A	0.000	113.000	197.000	44.000

From	B	113.000	0.000	47.000	139.000
	C	298.000	73.000	0.000	24.000
	D	53.000	92.000	17.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.32	0.56	0.12
	B	0.38	0.00	0.16	0.46
	C	0.75	0.18	0.00	0.06
	D	0.33	0.57	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.019	1.025	1.000
	B	1.037	1.000	1.000	1.000
	C	1.016	1.014	1.000	1.000
	D	1.000	1.011	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	0.000	1.900	2.500	0.000
	B	3.700	0.000	0.000	0.000
	C	1.600	1.400	0.000	0.000
	D	0.000	1.100	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.17	14.03	0.20	B
B-AD	0.71	31.75	2.35	D
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.09	7.47	0.10	A
D-A	0.12	8.31	0.13	A
D-BC	0.32	14.28	0.47	B
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.13	6.51	0.14	A

Main Results for each time segment

Main Results for each time segment

Main results: (16:00-16:15)

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	35.38	35.08	0.00	502.15	0.070	0.08	7.703	A
B-AD	189.72	186.82	0.00	448.84	0.423	0.72	13.817	B
A-B	85.07	85.07	0.00	-	-	-	-	-
A-C	148.31	148.31	0.00	-	-	-	-	-
A-D	33.13	32.89	0.00	587.61	0.056	0.06	6.486	A
D-A	39.90	39.60	0.00	557.47	0.072	0.08	6.949	A
D-BC	82.06	81.16	0.00	446.53	0.184	0.22	9.921	A
C-D	18.07	18.07	0.00	-	-	-	-	-
C-A	224.35	224.35	0.00	-	-	-	-	-
C-B	54.96	54.61	0.00	685.83	0.080	0.09	5.781	A

Main results: (16:15-16:30)

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	42.25	42.13	0.00	439.59	0.096	0.11	9.054	A
B-AD	226.54	224.98	0.00	424.89	0.533	1.12	18.151	C
A-B	101.58	101.58	0.00	-	-	-	-	-
A-C	177.10	177.10	0.00	-	-	-	-	-
A-D	39.56	39.49	0.00	563.88	0.070	0.07	6.865	A
D-A	47.65	47.56	0.00	531.12	0.090	0.10	7.445	A
D-BC	97.99	97.66	0.00	416.37	0.235	0.31	11.389	B
C-D	21.58	21.58	0.00	-	-	-	-	-
C-A	267.90	267.90	0.00	-	-	-	-	-
C-B	65.63	65.54	0.00	667.02	0.098	0.11	6.069	A

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	51.75	51.40	0.00	317.10	0.163	0.19	13.531	B
B-AD	277.46	272.98	0.00	391.34	0.709	2.24	29.803	D
A-B	124.42	124.42	0.00	-	-	-	-	-
A-C	216.90	216.90	0.00	-	-	-	-	-
A-D	48.44	48.35	0.00	531.74	0.091	0.10	7.445	A
D-A	58.35	58.21	0.00	492.78	0.118	0.13	8.281	A
D-BC	120.01	119.38	0.00	375.13	0.320	0.46	14.171	B
C-D	26.42	26.42	0.00	-	-	-	-	-
C-A	328.10	328.10	0.00	-	-	-	-	-
C-B	80.37	80.24	0.00	641.29	0.125	0.14	6.504	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	51.75	51.72	0.00	308.20	0.168	0.20	14.034	B
B-AD	277.46	277.02	0.00	391.10	0.709	2.35	31.752	D
A-B	124.42	124.42	0.00	-	-	-	-	-
A-C	216.90	216.90	0.00	-	-	-	-	-
A-D	48.44	48.44	0.00	530.51	0.091	0.10	7.466	A
D-A	58.35	58.35	0.00	491.57	0.119	0.13	8.309	A
D-BC	120.01	119.99	0.00	374.30	0.321	0.47	14.284	B
C-D	26.42	26.42	0.00	-	-	-	-	-
C-A	328.10	328.10	0.00	-	-	-	-	-
C-B	80.37	80.37	0.00	641.10	0.125	0.14	6.509	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	42.25	42.61	0.00	431.12	0.098	0.11	9.275	A
B-AD	226.54	231.08	0.00	424.59	0.534	1.21	19.319	C
A-B	101.58	101.58	0.00	-	-	-	-	-
A-C	177.10	177.10	0.00	-	-	-	-	-
A-D	39.56	39.65	0.00	562.10	0.070	0.08	6.893	A
D-A	47.65	47.78	0.00	529.46	0.090	0.10	7.475	A
D-BC	97.99	98.60	0.00	415.18	0.236	0.32	11.498	B
C-D	21.58	21.58	0.00	-	-	-	-	-
C-A	267.90	267.90	0.00	-	-	-	-	-
C-B	65.63	65.76	0.00	666.72	0.098	0.11	6.074	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	35.38	35.51	0.00	497.49	0.071	0.08	7.794	A
B-AD	189.72	191.50	0.00	448.46	0.423	0.76	14.334	B
A-B	85.07	85.07	0.00	-	-	-	-	-
A-C	148.31	148.31	0.00	-	-	-	-	-
A-D	33.13	33.19	0.00	586.28	0.057	0.06	6.508	A
D-A	39.90	39.99	0.00	556.04	0.072	0.08	6.976	A
D-BC	82.06	82.40	0.00	445.59	0.184	0.23	10.013	B
C-D	18.07	18.07	0.00	-	-	-	-	-
C-A	224.35	224.35	0.00	-	-	-	-	-
C-B	54.96	55.05	0.00	685.44	0.080	0.09	5.793	A

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.1.305 [25 May 2012]

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

Filename: (new file)
Path:
Report generation date: 21/09/2012 13:56:24

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Layout - 2017 Base + CD			
Stream B-C	0.02	7.54	0.02	A
Stream B-A	0.25	11.47	0.20	B
Stream C-AB	0.00	4.33	0.00	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 - 2012 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base + CD, AM " model duration: 07:45 - 09:15
"D3 - 2017 Base + CD + D, AM" model duration: 07:45 - 09:15
"D4 - 2012 Base, PM" model duration: 16:00 - 17:30
"D5 - 2017 Base + CD, PM" model duration: 16:00 - 17:30
"D6 - 2017 Base + CD + D, PM" model duration: 16:00 - 17:30

Run using Junctions 8.0.1.305 at 21/09/2012 13:56:23

File summary

File Description

Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	14/08/2012
Version	
Status	(new file)
Identifier	
Client	Pipestone Limited

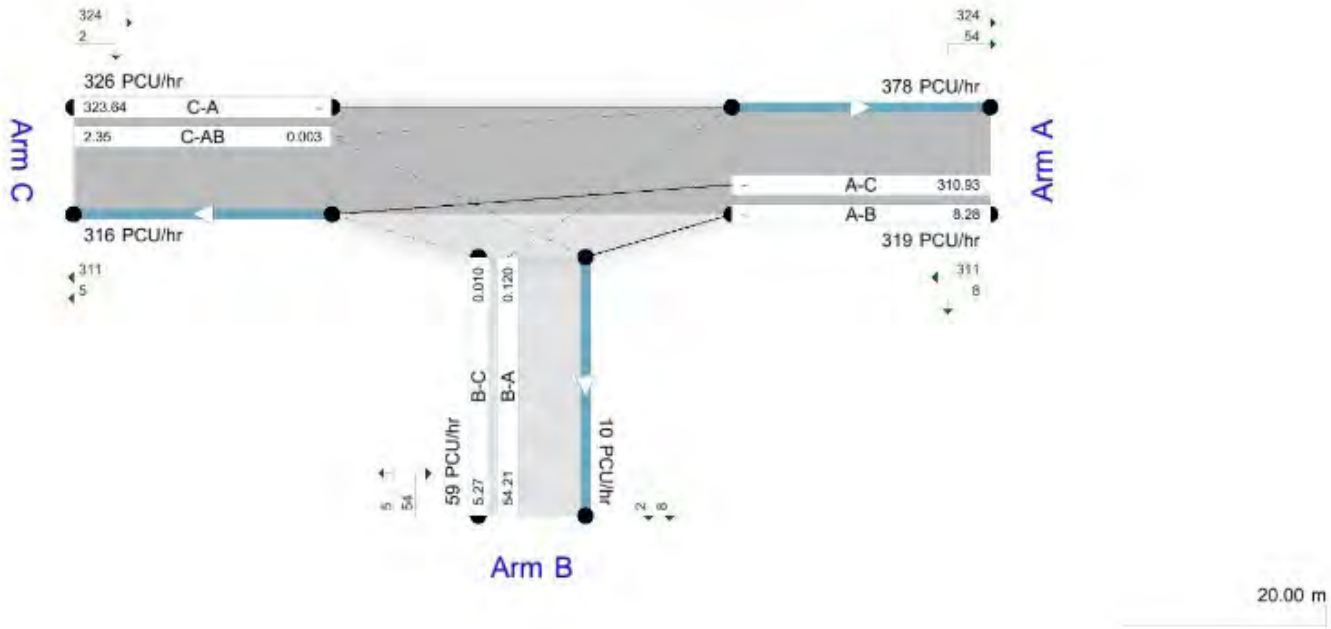
Jobnumber	11-338
Enumerator	BRYANGHALL\MCrabtree
Description	

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
Text overlays show modelled flow through the junction (entry and exit flows PCU/hr).
Streams (upstream) show Total Demand (PCU/hr). Streams (downstream) show RFC ()
Time Segment: (07:45-08:00)
Showing Analysis Set "A1 - Existing Layout ", Demand Set "D2 - 2017 Base + CD, AM "

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Base + CD, AM

Data Errors and Warnings

No errors or warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			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 Base + CD, AM	2017 Base + CD	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Site Access	T-Junction	Two-way	A,B,C	10.83	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Major Arm Geometry

Arm	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)
C	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

Arm	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)
B	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

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	579.470	0.097	0.245	0.154	0.350
1	B-C	615.564	0.087	0.219	-	-
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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	424.00	100.000
B	ONE HOUR	✓	79.00	100.000
C	ONE HOUR	✓	433.00	100.000

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	11.000	413.000
	B	72.000	0.000	7.000
	C	431.000	2.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.03	0.97
	B	0.91	0.00	0.09
	C	1.00	0.00	0.00

Vehicle Mix

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

	To			
		A	B	C

From	A	1.000	1.000	1.016
	B	1.000	1.000	1.000
	C	1.022	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	1.600
	B	0.000	0.000	0.000
	C	2.200	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.02	7.54	0.02	A
B-A	0.20	11.47	0.25	B
C-AB	0.00	4.33	0.00	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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	5.27	5.23	0.00	529.57	0.010	0.01	6.865	A
B-A	54.21	53.67	0.00	452.09	0.120	0.13	9.024	A
C-AB	2.35	2.33	0.00	841.19	0.003	0.00	4.324	A
C-A	323.64	323.64	0.00	-	-	-	-	-
A-B	8.28	8.28	0.00	-	-	-	-	-
A-C	310.93	310.93	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	6.29	6.28	0.00	511.39	0.012	0.01	7.126	A
B-A	64.73	64.56	0.00	427.37	0.151	0.18	9.919	A
C-AB	3.05	3.05	0.00	865.76	0.004	0.00	4.207	A
C-A	386.21	386.21	0.00	-	-	-	-	-
A-B	9.89	9.89	0.00	-	-	-	-	-
A-C	371.28	371.28	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	7.71	7.69	0.00	484.96	0.016	0.02	7.542	A
B-A	79.27	78.98	0.00	393.17	0.202	0.25	11.447	B
C-AB	4.18	4.18	0.00	899.48	0.005	0.00	4.059	A

C-A	472.56	472.56	0.00	-	-	-	-	-
A-B	12.11	12.11	0.00	-	-	-	-	-
A-C	454.72	454.72	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	7.71	7.71	0.00	484.82	0.016	0.02	7.544	A
B-A	79.27	79.27	0.00	393.18	0.202	0.25	11.467	B
C-AB	4.18	4.18	0.00	899.49	0.005	0.00	4.062	A
C-A	472.56	472.56	0.00	-	-	-	-	-
A-B	12.11	12.11	0.00	-	-	-	-	-
A-C	454.72	454.72	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	6.29	6.31	0.00	511.18	0.012	0.01	7.132	A
B-A	64.73	65.01	0.00	427.37	0.151	0.18	9.943	A
C-AB	3.05	3.06	0.00	865.76	0.004	0.00	4.213	A
C-A	386.21	386.21	0.00	-	-	-	-	-
A-B	9.89	9.89	0.00	-	-	-	-	-
A-C	371.28	371.28	0.00	-	-	-	-	-

Main results: (09:00-09:15)

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	5.27	5.28	0.00	529.30	0.010	0.01	6.869	A
B-A	54.21	54.38	0.00	452.10	0.120	0.14	9.056	A
C-AB	2.35	2.35	0.00	841.20	0.003	0.00	4.327	A
C-A	323.63	323.63	0.00	-	-	-	-	-
A-B	8.28	8.28	0.00	-	-	-	-	-
A-C	310.93	310.93	0.00	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.1.305 [25 May 2012]

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

Filename: (new file)
Path:
Report generation date: 21/09/2012 13:57:29

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Layout - 2017 Base + CD			
Stream B-C	0.01	7.07	0.01	A
Stream B-A	0.14	10.17	0.12	B
Stream C-AB	0.04	4.32	0.03	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 - 2012 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base + CD, AM" model duration: 07:45 - 09:15
"D3 - 2017 Base + CD + D, AM" model duration: 07:45 - 09:15
"D4 - 2012 Base, PM" model duration: 16:00 - 17:30
"D5 - 2017 Base + CD, PM " model duration: 16:00 - 17:30
"D6 - 2017 Base + CD + D, PM" model duration: 16:00 - 17:30

Run using Junctions 8.0.1.305 at 21/09/2012 13:57:28

File summary

File Description

Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	14/08/2012
Version	
Status	(new file)
Identifier	
Client	Pipestone Limited

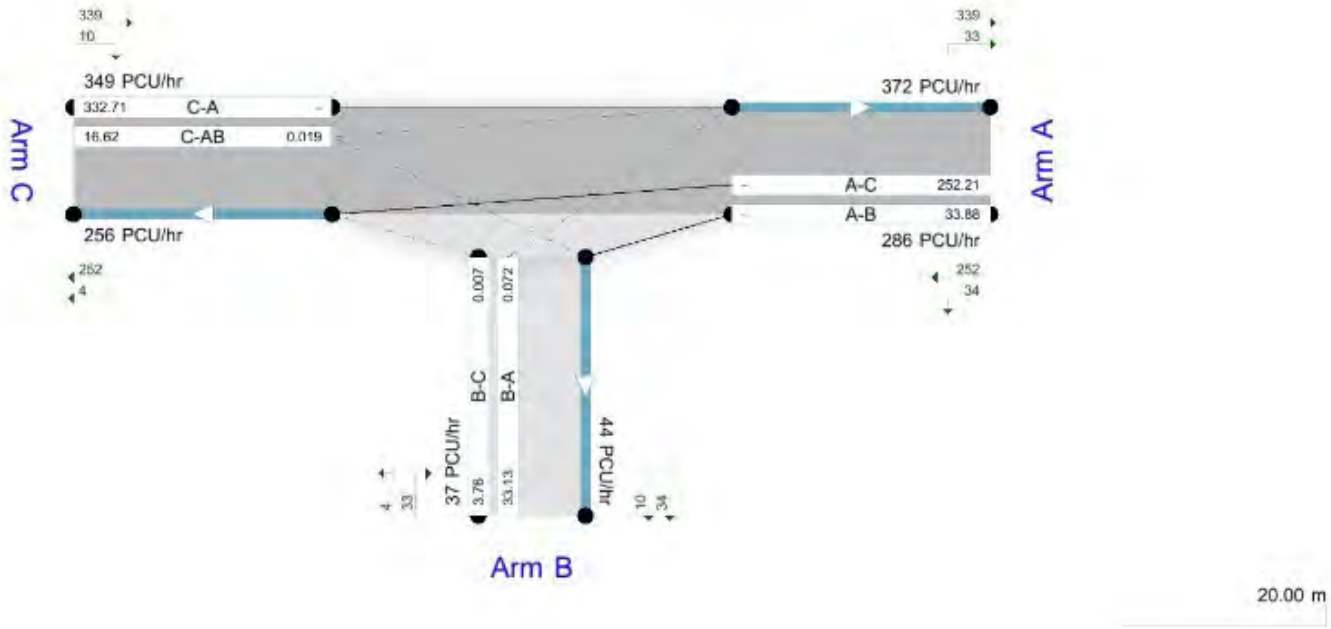
Jobnumber	11-338
Enumerator	BRYANGHALL\MCrabtree
Description	

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
Text overlays show modelled flow through the junction (entry and exit flows: PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RFC ()

Time Segment: (16:00-16:15)
Showing Analysis Set: "A1 - Existing Layout "; Demand Set: "D5 - 2017 Base + CD, PM "

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Base + CD, PM

Data Errors and Warnings

No errors or warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			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 Base + CD, PM	2017 Base + CD	PM		ONE HOUR	16:00	17:30	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Site Access	T-Junction	Two-way	A,B,C	8.00	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Major Arm Geometry

Arm	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)
C	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

Arm	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)
B	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

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	578.847	0.097	0.244	0.154	0.349
1	B-C	616.894	0.087	0.219	-	-
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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	380.00	100.000
B	ONE HOUR	✓	49.00	100.000
C	ONE HOUR	✓	464.00	100.000

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	45.000	335.000
	B	44.000	0.000	5.000
	C	450.000	14.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.12	0.88
	B	0.90	0.00	0.10
	C	0.97	0.03	0.00

Vehicle Mix

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

	To			
		A	B	C

From	A	1.000	1.000	1.020
	B	1.000	1.000	1.000
	C	1.020	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	2.000
	B	0.000	0.000	0.000
	C	2.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	7.07	0.01	A
B-A	0.12	10.17	0.14	B
C-AB	0.03	4.32	0.04	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:00-16:15)

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	3.76	3.74	0.00	548.37	0.007	0.01	6.609	A
B-A	33.13	32.82	0.00	458.13	0.072	0.08	8.458	A
C-AB	16.62	16.52	0.00	856.63	0.019	0.02	4.316	A
C-A	332.71	332.71	0.00	-	-	-	-	-
A-B	33.88	33.88	0.00	-	-	-	-	-
A-C	252.21	252.21	0.00	-	-	-	-	-

Main results: (16:15-16:30)

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	4.49	4.49	0.00	534.41	0.008	0.01	6.792	A
B-A	39.56	39.47	0.00	434.68	0.091	0.10	9.107	A
C-AB	21.61	21.58	0.00	883.71	0.024	0.03	4.208	A
C-A	395.51	395.51	0.00	-	-	-	-	-
A-B	40.45	40.45	0.00	-	-	-	-	-
A-C	301.16	301.16	0.00	-	-	-	-	-

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	5.51	5.50	0.00	514.71	0.011	0.01	7.068	A
B-A	48.44	48.30	0.00	402.28	0.120	0.14	10.165	B
C-AB	29.64	29.59	0.00	920.59	0.032	0.04	4.076	A

C-A	481.23	481.23	0.00	-	-	-	-	-
A-B	49.55	49.55	0.00	-	-	-	-	-
A-C	368.84	368.84	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	5.51	5.50	0.00	514.64	0.011	0.01	7.069	A
B-A	48.44	48.44	0.00	402.27	0.120	0.14	10.174	B
C-AB	29.66	29.66	0.00	920.61	0.032	0.04	4.079	A
C-A	481.22	481.22	0.00	-	-	-	-	-
A-B	49.55	49.55	0.00	-	-	-	-	-
A-C	368.84	368.84	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	4.49	4.50	0.00	534.31	0.008	0.01	6.794	A
B-A	39.56	39.69	0.00	434.67	0.091	0.10	9.117	A
C-AB	21.63	21.68	0.00	883.74	0.024	0.03	4.213	A
C-A	395.49	395.49	0.00	-	-	-	-	-
A-B	40.45	40.45	0.00	-	-	-	-	-
A-C	301.16	301.16	0.00	-	-	-	-	-

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

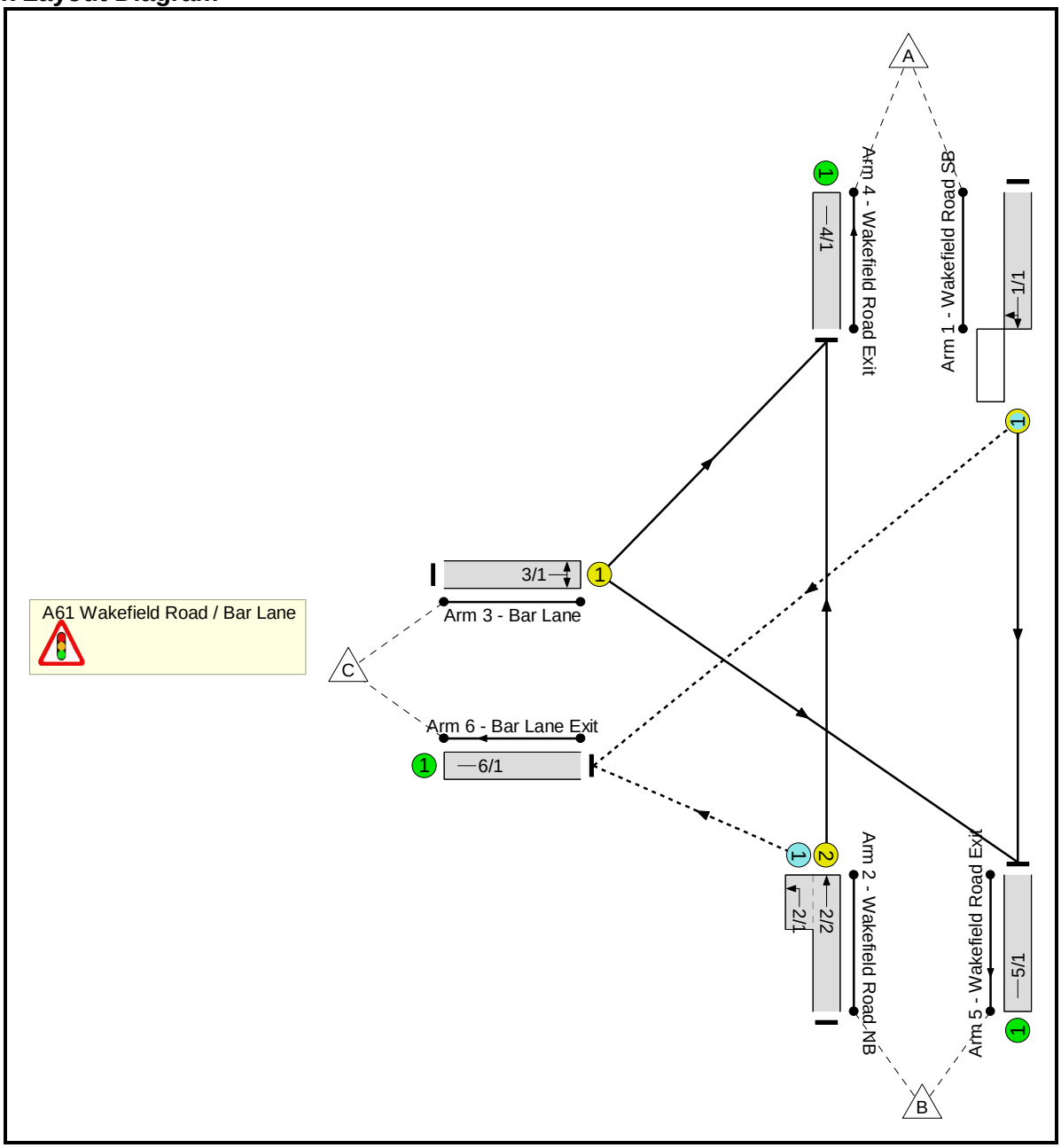
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.76	3.77	0.00	548.21	0.007	0.01	6.611	A
B-A	33.13	33.22	0.00	458.11	0.072	0.08	8.475	A
C-AB	16.66	16.69	0.00	856.66	0.019	0.02	4.319	A
C-A	332.67	332.67	0.00	-	-	-	-	-
A-B	33.88	33.88	0.00	-	-	-	-	-
A-C	252.21	252.21	0.00	-	-	-	-	-

LinSig V1 style report

User and Project Details

Project:	**Wakefield Road, Mapplewell**
Title:	**2017 Base + Committed Development**
Location:	
File name:	Wakefield Road - Bar Lane.lsg3x
Author:	crabtreemd
Company:	Bryan G Hall
Address:	
Notes:	Wakefield Road/Bar Lane

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

Phase Delays

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

Prohibited Stage Change

		To Stage	
		1	2
From Stage	1		9
	2	8	

Phases in Stage

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

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)	-	-	-	-	-

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	-	-	-	-	-	-

Lane Saturation Flows

Scenario 3: '2017 AM Base + CD' (FG3: '2017 AM Base + CD', Plan 1: 'Network Control Plan 1')

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	93.9 %	1941	1941
				Arm 6 Right	12.50	6.1 %		
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	9.3 %	1680	1680
				Arm 5 Right	8.00	90.7 %		
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: '2017 PM Base + CD' (FG4: '2017 PM Base + CD', Plan 1: 'Network Control Plan 1')

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	91.5 %	1935	1935
				Arm 6 Right	12.50	8.5 %		
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	7.7 %	1679	1679
				Arm 5 Right	8.00	92.3 %		
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

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
3: '2017 AM Base + CD'	08:00	09:00	01:00	
4: '2017 PM Base + CD'	16:15	17:15	01:00	
5: '2017 AM Base + CD + D'	08:00	09:00	01:00	

Traffic Flows, Desired

FG3: '2017 AM Base + CD'

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	480	31	511
	B	380	0	384	764
	C	51	499	0	550
	Tot.	431	979	415	1825

FG4: '2017 PM Base + CD'

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	463	43	506
	B	359	0	472	831
	C	31	370	0	401
	Tot.	390	833	515	1738

Stage Timings

Scenario 3: '2017 AM Base + CD' (FG3: '2017 AM Base + CD', Plan 1: 'Network Control Plan 1')

Stage	1	2
Duration	36	37
Change Point	0	44

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: 2012 Base	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.3%**
A61 Wakefield Road / Bar Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.3%**
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	36	-	511	1941	798	64.0%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	39	-	764	1995:1985	1015	75.3%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	39	-	550	1680	747	73.7%
4/1	Wakefield Road Exit	U	N/A	N/A	-		-	-	-	431	Inf	Inf	0.0%
5/1	Wakefield Road Exit	U	N/A	N/A	-		-	-	-	979	Inf	Inf	0.0%
6/1	Bar Lane Exit	U	N/A	N/A	-		-	-	-	415	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: 2012 Base	**-**	**-**	**302**	**113**	**1**	**8.8**	**3.8**	**0.0**	**12.6**	**-**	**-**	**-**	**-**
A61 Wakefield Road / Bar Lane	**-**	**-**	**302**	**113**	**1**	**8.8**	**3.8**	**0.0**	**12.6**	**-**	**-**	**-**	**-**
1/1	511	511	30	0	1	3.0	0.9	0.0	3.9	27.4	10.1	0.9	11.0
2/2+2/1	764	764	271	113	0	2.6	1.5	-	4.1	19.5	12.1	1.5	13.6
3/1	550	550	-	-	-	3.2	1.4	-	4.5	29.7	11.3	1.4	12.7
4/1	431	431	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	979	979	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	415	415	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	PRC for Signalled Lanes (%):	19.6	Total Delay for Signalled Lanes (pcuHr):	12.57	Cycle Time (s):	90
	PRC Over All Lanes (%):	19.6	Total Delay Over All Lanes(pcuHr):	12.57		

Stage Timings

Scenario 4: '2017 PM Base + CD' (FG4: '2017 PM Base + CD', Plan 1: 'Network Control Plan 1')

Stage	1	2
Duration	44	29
Change Point	0	52

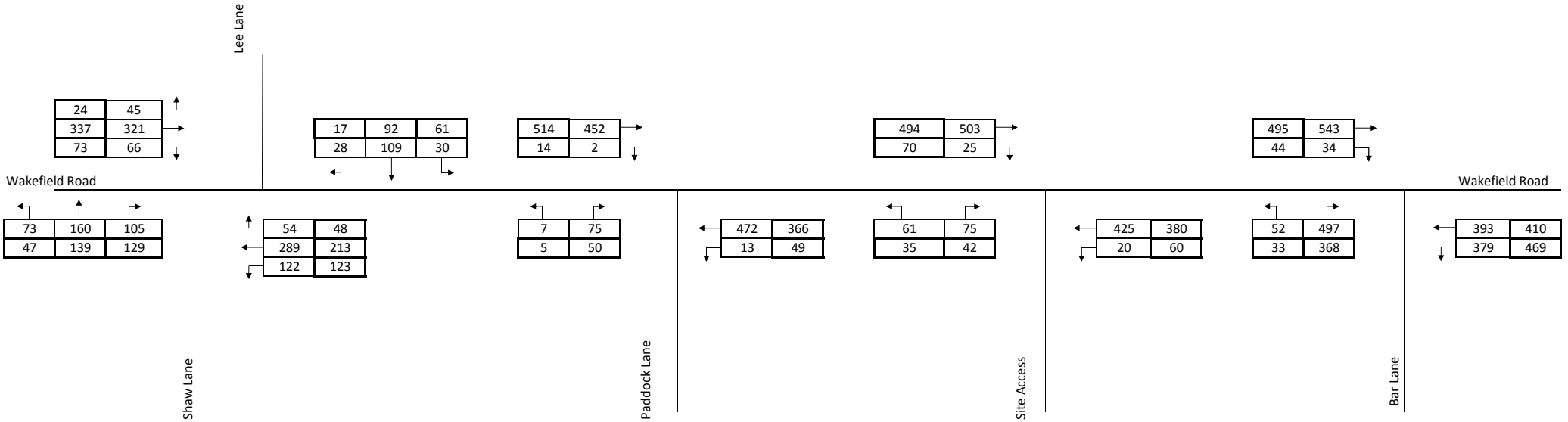
Network Results

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: 2012 Base	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**67.7%**
A61 Wakefield Road / Bar Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**67.7%**
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	44	-	506	1935	968	52.3%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	47	-	831	1995:1985	1228	67.7%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	31	-	401	1679	597	67.2%
4/1	Wakefield Road Exit	U	N/A	N/A	-		-	-	-	390	Inf	Inf	0.0%
5/1	Wakefield Road Exit	U	N/A	N/A	-		-	-	-	833	Inf	Inf	0.0%
6/1	Bar Lane Exit	U	N/A	N/A	-		-	-	-	515	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: 2012 Base	**-**	**-**	**367**	**147**	**1**	**6.5**	**2.6**	**0.0**	**9.1**	**-**	**-**	**-**	**-**
A61 Wakefield Road / Bar Lane	**-**	**-**	**367**	**147**	**1**	**6.5**	**2.6**	**0.0**	**9.1**	**-**	**-**	**-**	**-**
1/1	506	506	42	0	1	2.1	0.5	0.0	2.7	19.1	8.4	0.5	9.0
2/2+2/1	831	831	325	147	0	1.6	1.0	-	2.7	11.5	9.9	1.0	11.0
3/1	401	401	-	-	-	2.7	1.0	-	3.7	33.6	8.5	1.0	9.5
4/1	390	390	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	833	833	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	515	515	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	PRC for Signalled Lanes (%):	33.0	Total Delay for Signalled Lanes (pcuHr):	9.10	Cycle Time (s):	90
	PRC Over All Lanes (%):	33.0	Total Delay Over All Lanes(pcuHr):	9.10		

APPENDIX BGH 19



KEY

AM Peak
PM Peak

Client: Pipestone Group Ltd	Project: Wakefield Road, Mapplewell	Title: 2017 Base + Committed Development + Development Traffic Flows	BRYAN G HALL CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS	Number: BGH19	Revision: -	Date	Sep-12	Checked	MC
						Design	MC	Approved	DB

APPENDIX BGH 20

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.1.305 [25 May 2012]

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

Filename: (new file)
Path:
Report generation date: 24/09/2012 10:18:50

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Layout - 2017 Base + CD + D			
Stream B-C	0.76	35.63	0.44	E
Stream B-AD	4.52	60.14	0.84	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.13	7.96	0.12	A
Stream D-A	0.08	8.75	0.07	A
Stream D-BC	0.76	18.45	0.43	C
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.14	6.85	0.12	A

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

"D1 - 2012 Base, AM" model duration: 07:30 - 09:00
"D4 - 2017 Base + CD, AM" model duration: 07:30 - 09:00
"D6 - 2017 Base + CD + D, AM " model duration: 07:30 - 09:00
"D7 - 2012 Base, PM" model duration: 16:00 - 17:30
"D10 - 2017 Base + CD, PM" model duration: 16:00 - 17:30
"D12 - 2017 Base + CD + D, PM" model duration: 16:00 - 17:30

Run using Junctions 8.0.1.305 at 24/09/2012 10:18:48

File summary

File Description

Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	15/08/2012
Version	

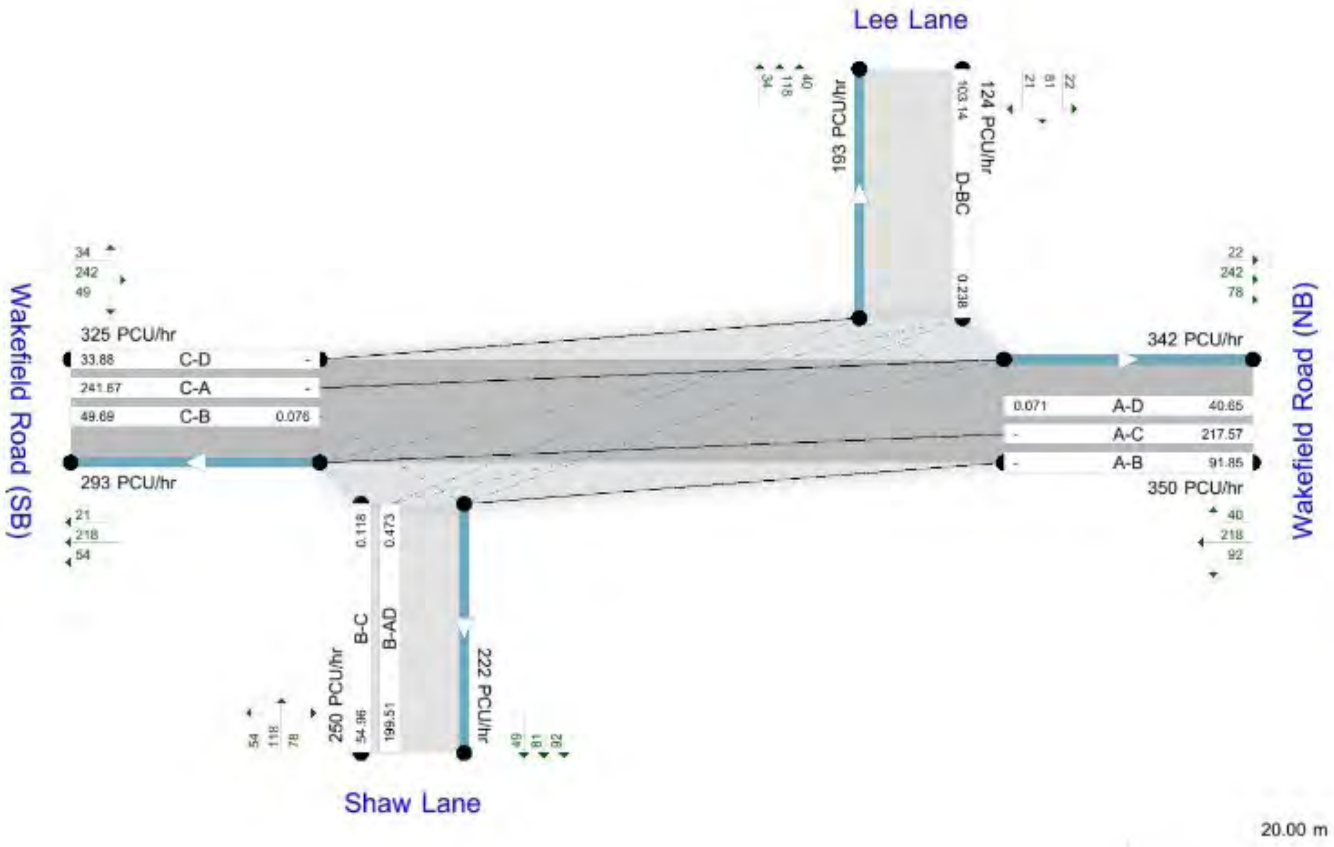
Status	(new file)
Identifier	
Client	Pipestone Limited
Jobnumber	11-338
Enumerator	BRYANGHALL\MCrabtree
Description	

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



Time Segment: (07:30-07:45)
Showing Analysis Set: "A1 - Existing Layout"; Demand Set: "D6 - 2017 Base + CD + D, AM"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Base + CD + D, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			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 Base + CD + D, AM	2017 Base + CD + D	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	35.54	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description	Arm Type
Wakefield Road (NB)	Wakefield Road (NB)		Major
Shaw Lane	Shaw Lane		Minor
Wakefield Road (SB)	Wakefield Road (SB)		Major
Lee Lane	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

Pedestrian Crossings

Name	Crossing Type
Wakefield Road (NB)	None
Shaw Lane	None
Wakefield Road (SB)	None
Lee Lane	None

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	662.598	-	-	-	0.257	0.102	0.257	-	0.102	-	-
1	D-BC	611.601	0.177	0.177	0.402	0.282	0.111	0.282	-	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	✓	465.00	100.000
Shaw Lane	ONE HOUR	✓	338.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	432.00	100.000
Lee Lane	ONE HOUR	✓	167.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - (untitled) (for whole period)

		To			
		A	B	C	D

From	A	0.000	122.000	289.000	54.000
	B	105.000	0.000	73.000	160.000
	C	321.000	66.000	0.000	45.000
	D	30.000	109.000	28.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.26	0.62	0.12
	B	0.31	0.00	0.22	0.47
	C	0.74	0.15	0.00	0.10
	D	0.18	0.65	0.17	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.010	1.022	1.000
	B	1.010	1.000	1.020	1.006
	C	1.028	1.000	1.000	1.000
	D	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	0.000	1.000	2.200	0.000
	B	1.000	0.000	2.000	0.600
	C	2.800	0.000	0.000	0.000
	D	0.000	1.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.44	35.63	0.76	E
B-AD	0.84	60.14	4.52	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.12	7.96	0.13	A
D-A	0.07	8.75	0.08	A
D-BC	0.43	18.45	0.76	C
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.12	6.85	0.14	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	54.96	54.42	0.00	463.97	0.118	0.14	8.954	A
B-AD	199.51	196.01	0.00	421.66	0.473	0.88	15.844	C
A-B	91.85	91.85	0.00	-	-	-	-	-
A-C	217.57	217.57	0.00	-	-	-	-	-
A-D	40.65	40.35	0.00	575.87	0.071	0.08	6.720	A
D-A	22.59	22.41	0.00	529.53	0.043	0.04	7.097	A
D-BC	103.14	101.90	0.00	432.94	0.238	0.31	10.922	B
C-D	33.88	33.88	0.00	-	-	-	-	-
C-A	241.67	241.67	0.00	-	-	-	-	-
C-B	49.69	49.36	0.00	656.43	0.076	0.08	5.928	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	65.63	65.33	0.00	380.68	0.172	0.21	11.633	B
B-AD	238.23	235.82	0.00	391.22	0.609	1.48	22.971	C
A-B	109.68	109.68	0.00	-	-	-	-	-
A-C	259.81	259.81	0.00	-	-	-	-	-
A-D	48.54	48.46	0.00	549.70	0.088	0.10	7.182	A
D-A	26.97	26.92	0.00	498.26	0.054	0.06	7.637	A
D-BC	123.16	122.63	0.00	397.53	0.310	0.44	13.172	B
C-D	40.45	40.45	0.00	-	-	-	-	-
C-A	288.57	288.57	0.00	-	-	-	-	-
C-B	59.33	59.25	0.00	631.81	0.094	0.10	6.287	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	80.37	78.75	0.00	207.39	0.388	0.61	28.208	D
B-AD	291.77	281.76	0.00	346.93	0.841	3.98	49.430	E
A-B	134.32	134.32	0.00	-	-	-	-	-
A-C	318.19	318.19	0.00	-	-	-	-	-
A-D	59.46	59.32	0.00	514.18	0.116	0.13	7.912	A
D-A	33.03	32.94	0.00	447.31	0.074	0.08	8.686	A
D-BC	150.84	149.65	0.00	349.10	0.432	0.74	18.081	C
C-D	49.55	49.55	0.00	-	-	-	-	-
C-A	353.43	353.43	0.00	-	-	-	-	-
C-B	72.67	72.53	0.00	598.13	0.121	0.14	6.847	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	80.37	79.78	0.00	182.09	0.441	0.76	35.632	E
B-AD	291.77	289.62	0.00	345.79	0.844	4.52	60.137	F
A-B	134.32	134.32	0.00	-	-	-	-	-
A-C	318.19	318.19	0.00	-	-	-	-	-
A-D	59.46	59.45	0.00	511.44	0.116	0.13	7.964	A
D-A	33.03	33.03	0.00	444.36	0.074	0.08	8.751	A
D-BC	150.84	150.77	0.00	347.29	0.434	0.76	18.448	C
C-D	49.55	49.55	0.00	-	-	-	-	-
C-A	353.43	353.43	0.00	-	-	-	-	-
C-B	72.67	72.66	0.00	597.77	0.122	0.14	6.854	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	65.63	67.74	0.00	357.52	0.184	0.23	12.759	B
B-AD	238.23	249.58	0.00	390.18	0.611	1.68	27.560	D
A-B	109.68	109.68	0.00	-	-	-	-	-
A-C	259.81	259.81	0.00	-	-	-	-	-
A-D	48.54	48.67	0.00	545.71	0.089	0.10	7.243	A
D-A	26.97	27.06	0.00	494.73	0.055	0.06	7.698	A
D-BC	123.16	124.33	0.00	394.91	0.312	0.47	13.469	B
C-D	40.45	40.45	0.00	-	-	-	-	-
C-A	288.57	288.57	0.00	-	-	-	-	-
C-B	59.33	59.47	0.00	631.27	0.094	0.10	6.299	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	54.96	55.33	0.00	456.47	0.120	0.14	9.163	A
B-AD	199.51	202.49	0.00	421.08	0.474	0.94	16.810	C
A-B	91.85	91.85	0.00	-	-	-	-	-
A-C	217.57	217.57	0.00	-	-	-	-	-
A-D	40.65	40.74	0.00	574.03	0.071	0.08	6.753	A
D-A	22.59	22.64	0.00	527.57	0.043	0.05	7.132	A
D-BC	103.14	103.72	0.00	431.65	0.239	0.32	11.086	B
C-D	33.88	33.88	0.00	-	-	-	-	-
C-A	241.67	241.67	0.00	-	-	-	-	-
C-B	49.69	49.78	0.00	655.86	0.076	0.08	5.942	A

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.1.305 [25 May 2012]

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

Filename: (new file)
Path:
Report generation date: 24/09/2012 10:20:06

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Layout - 2017 Base + CD + D			
Stream B-C	0.27	19.14	0.22	C
Stream B-AD	3.30	42.65	0.78	E
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.11	7.82	0.10	A
Stream D-A	0.16	8.84	0.14	A
Stream D-BC	0.52	15.89	0.34	C
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.15	6.61	0.13	A

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

"D1 - 2012 Base, AM" model duration: 07:30 - 09:00
"D4 - 2017 Base + CD, AM" model duration: 07:30 - 09:00
"D6 - 2017 Base + CD + D, AM" model duration: 07:30 - 09:00
"D7 - 2012 Base, PM" model duration: 16:00 - 17:30
"D10 - 2017 Base + CD, PM" model duration: 16:00 - 17:30
"D12 - 2017 Base + CD + D, PM " model duration: 16:00 - 17:30

Run using Junctions 8.0.1.305 at 24/09/2012 10:20:05

File summary

File Description

Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	15/08/2012
Version	

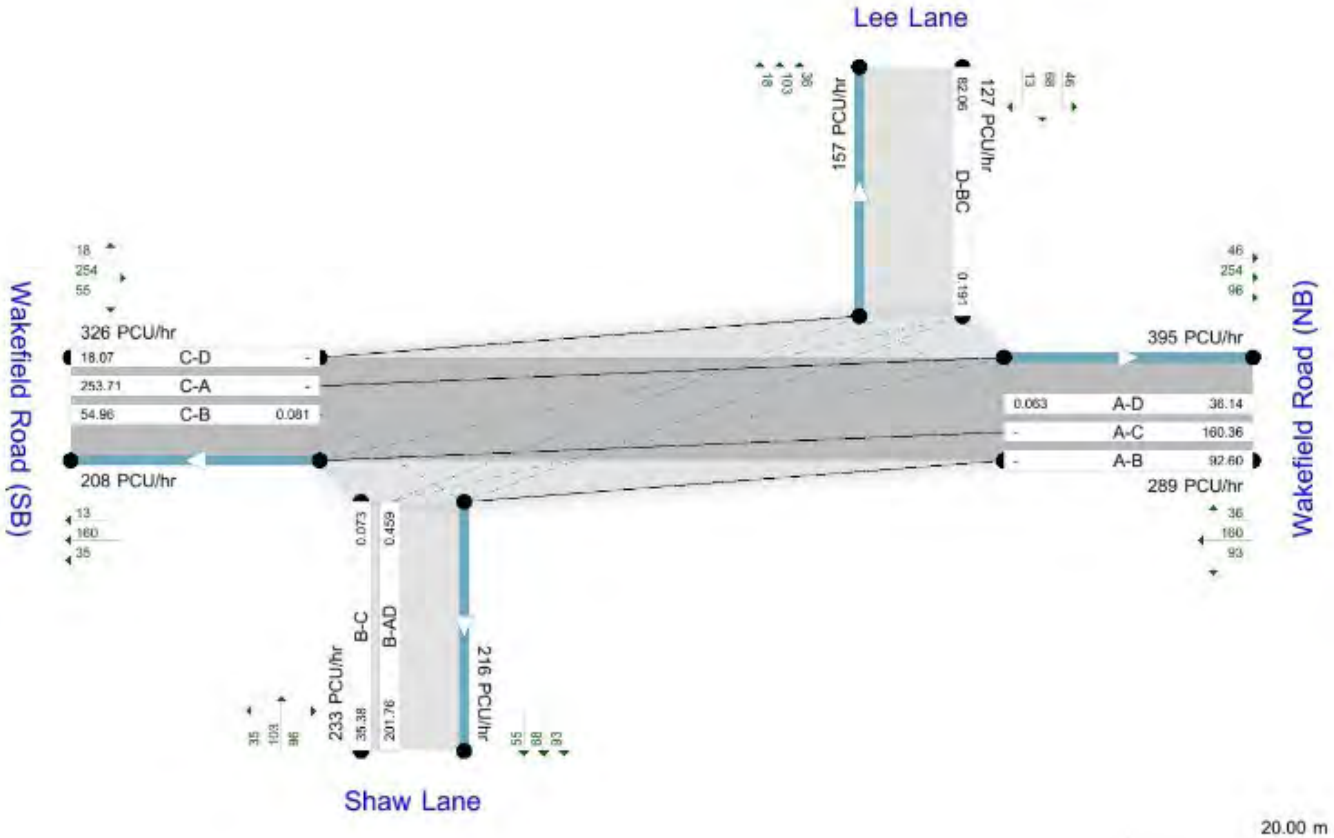
Status	(new file)
Identifier	
Client	Pipestone Limited
Jobnumber	11-338
Enumerator	BRYANGHALL\MCrabtree
Description	

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



Time Segment: (16:00-16:15)
Showing Analysis Set: "A1 - Existing Layout ", Demand Set: "D12 - 2017 Base + CD + D, PM "

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Base + CD + D, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			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 Base + CD + D, PM	2017 Base + CD + D	PM		ONE HOUR	16:00	17:30	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	25.51	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description	Arm Type
Wakefield Road (NB)	Wakefield Road (NB)		Major
Shaw Lane	Shaw Lane		Minor
Wakefield Road (SB)	Wakefield Road (SB)		Major
Lee Lane	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

Pedestrian Crossings

Name	Crossing Type
Wakefield Road (NB)	None
Shaw Lane	None
Wakefield Road (SB)	None
Lee Lane	None

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	682.476	-	-	-	0.264	0.105	0.264	-	0.105	-	-
1	D-BC	595.975	0.173	0.173	0.392	0.274	0.109	0.274	-	0.109	-	-

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	✓	384.00	100.000
Shaw Lane	ONE HOUR	✓	315.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	434.00	100.000
Lee Lane	ONE HOUR	✓	170.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - (untitled) (for whole period)

		To			
		A	B	C	D

From	A	0.000	123.000	213.000	48.000
	B	129.000	0.000	47.000	139.000
	C	337.000	73.000	0.000	24.000
	D	61.000	92.000	17.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.32	0.55	0.13
	B	0.41	0.00	0.15	0.44
	C	0.78	0.17	0.00	0.06
	D	0.36	0.54	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.019	1.025	1.000
	B	1.037	1.000	1.000	1.000
	C	1.016	1.014	1.000	1.000
	D	1.000	1.011	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To			
		A	B	C	D
From	A	0.000	1.900	2.500	0.000
	B	3.700	0.000	0.000	0.000
	C	1.600	1.400	0.000	0.000
	D	0.000	1.100	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.22	19.14	0.27	C
B-AD	0.78	42.65	3.30	E
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.10	7.82	0.11	A
D-A	0.14	8.84	0.16	A
D-BC	0.34	15.89	0.52	C
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.13	6.61	0.15	A

Main Results for each time segment

Main results: (16:00-16:15)

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	35.38	35.07	0.00	483.88	0.073	0.08	8.015	A
B-AD	201.76	198.42	0.00	440.00	0.459	0.84	14.968	B
A-B	92.60	92.60	0.00	-	-	-	-	-
A-C	160.36	160.36	0.00	-	-	-	-	-
A-D	36.14	35.87	0.00	576.28	0.063	0.07	6.658	A
D-A	45.92	45.56	0.00	548.73	0.084	0.09	7.150	A
D-BC	82.06	81.12	0.00	428.54	0.191	0.24	10.430	B
C-D	18.07	18.07	0.00	-	-	-	-	-
C-A	253.71	253.71	0.00	-	-	-	-	-
C-B	54.96	54.60	0.00	679.90	0.081	0.09	5.835	A

Main results: (16:15-16:30)

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	42.25	42.11	0.00	408.51	0.103	0.11	9.818	A
B-AD	240.93	238.89	0.00	414.25	0.582	1.35	20.636	C
A-B	110.57	110.57	0.00	-	-	-	-	-
A-C	191.48	191.48	0.00	-	-	-	-	-
A-D	43.15	43.08	0.00	550.23	0.078	0.08	7.098	A
D-A	54.84	54.73	0.00	519.48	0.106	0.12	7.744	A
D-BC	97.99	97.62	0.00	395.30	0.248	0.33	12.191	B
C-D	21.58	21.58	0.00	-	-	-	-	-
C-A	302.96	302.96	0.00	-	-	-	-	-
C-B	65.63	65.54	0.00	659.93	0.099	0.11	6.141	A

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	51.75	51.21	0.00	255.51	0.203	0.25	17.576	C
B-AD	295.07	288.23	0.00	378.08	0.780	3.06	38.107	E
A-B	135.43	135.43	0.00	-	-	-	-	-
A-C	234.52	234.52	0.00	-	-	-	-	-
A-D	52.85	52.73	0.00	514.93	0.103	0.11	7.787	A
D-A	67.16	66.98	0.00	476.31	0.141	0.16	8.791	A
D-BC	120.01	119.26	0.00	349.81	0.343	0.51	15.707	C
C-D	26.42	26.42	0.00	-	-	-	-	-
C-A	371.04	371.04	0.00	-	-	-	-	-
C-B	80.37	80.23	0.00	632.60	0.127	0.15	6.606	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	51.75	51.66	0.00	239.61	0.216	0.27	19.141	C
B-AD	295.07	294.11	0.00	377.73	0.781	3.30	42.652	E
A-B	135.43	135.43	0.00	-	-	-	-	-
A-C	234.52	234.52	0.00	-	-	-	-	-
A-D	52.85	52.85	0.00	513.06	0.103	0.11	7.822	A
D-A	67.16	67.16	0.00	474.47	0.142	0.16	8.838	A
D-BC	120.01	119.98	0.00	348.51	0.344	0.52	15.892	C
C-D	26.42	26.42	0.00	-	-	-	-	-
C-A	371.04	371.04	0.00	-	-	-	-	-
C-B	80.37	80.37	0.00	632.38	0.127	0.15	6.612	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	42.25	42.84	0.00	393.80	0.107	0.12	10.275	B
B-AD	240.93	248.14	0.00	413.87	0.582	1.49	22.959	C
A-B	110.57	110.57	0.00	-	-	-	-	-
A-C	191.48	191.48	0.00	-	-	-	-	-
A-D	43.15	43.26	0.00	547.54	0.079	0.09	7.142	A
D-A	54.84	55.01	0.00	517.02	0.106	0.12	7.796	A
D-BC	97.99	98.72	0.00	393.45	0.249	0.34	12.357	B
C-D	21.58	21.58	0.00	-	-	-	-	-
C-A	302.96	302.96	0.00	-	-	-	-	-
C-B	65.63	65.76	0.00	659.58	0.100	0.11	6.148	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	35.38	35.55	0.00	477.50	0.074	0.08	8.149	A
B-AD	201.76	204.18	0.00	439.60	0.459	0.89	15.713	C
A-B	92.60	92.60	0.00	-	-	-	-	-
A-C	160.36	160.36	0.00	-	-	-	-	-
A-D	36.14	36.21	0.00	574.65	0.063	0.07	6.688	A
D-A	45.92	46.03	0.00	547.00	0.084	0.09	7.189	A
D-BC	82.06	82.45	0.00	427.36	0.192	0.24	10.547	B
C-D	18.07	18.07	0.00	-	-	-	-	-
C-A	253.71	253.71	0.00	-	-	-	-	-
C-B	54.96	55.05	0.00	679.49	0.081	0.09	5.846	A

Junctions 8

PICADY 8 - Priority Intersection Module

Filename: (new file)
Path:
Report generation date: 21/09/2012 13:57:56

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Layout - 2017 Base + CD + D			
Stream B-C	0.02	7.83	0.02	A
Stream B-A	0.28	12.37	0.22	B
Stream C-AB	0.01	4.33	0.00	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 - 2012 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base + CD, AM" model duration: 07:45 - 09:15
"D3 - 2017 Base + CD + D, AM " model duration: 07:45 - 09:15
"D4 - 2012 Base, PM" model duration: 16:00 - 17:30
"D5 - 2017 Base + CD, PM" model duration: 16:00 - 17:30
"D6 - 2017 Base + CD + D, PM" model duration: 16:00 - 17:30

Run using Junctions 8.0.1.305 at 21/09/2012 13:57:55

File summary

File Description

Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	14/08/2012
Version	
Status	(new file)
Identifier	
Client	Pipestone Limited

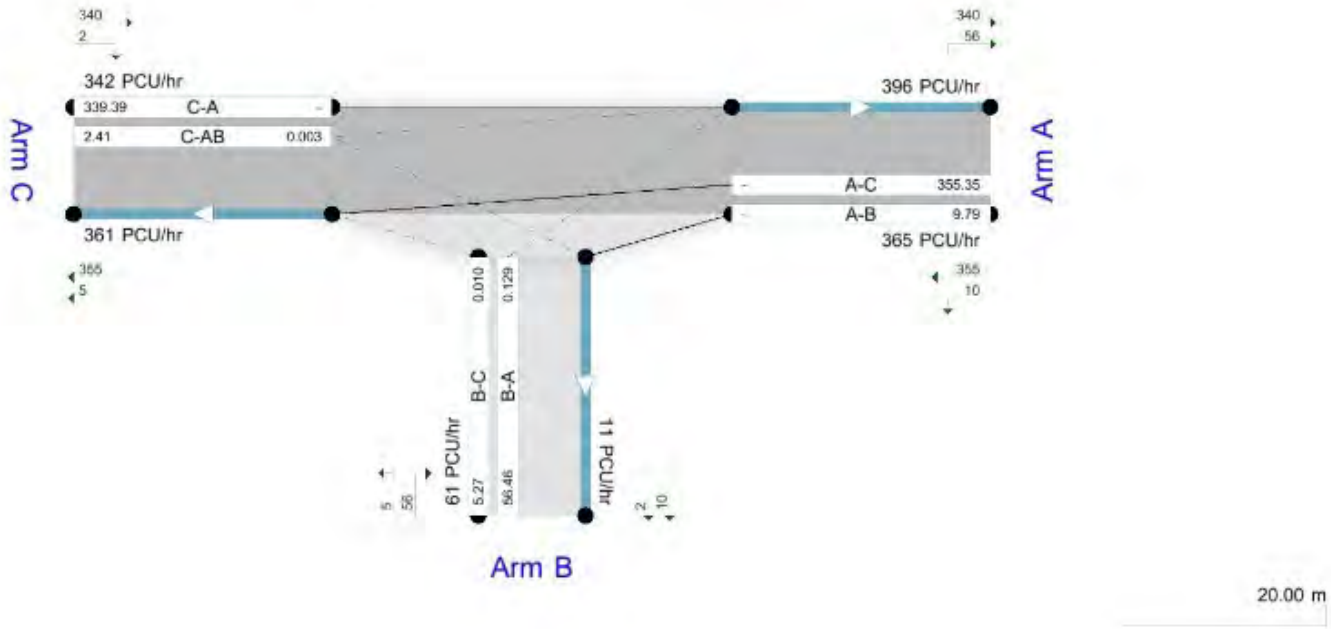
Jobnumber	11-338
Enumerator	BRYANGHALL\MCrabtree
Description	

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
Text overlays show modelled flow through the junction (entry and exit flows: PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFC ()
Time Segment: (07:45-08:00)
Showing Analysis Set: "A1 - Existing Layout ", Demand Set: "D3 - 2017 Base + CD + D, AM "

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Base + CD + D, AM

Data Errors and Warnings

No errors or warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			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 Base + CD + D, AM	2017 Base + CD + D	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Site Access	T-Junction	Two-way	A,B,C	11.66	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Major Arm Geometry

Arm	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)
C	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

Arm	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)
B	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

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	579.620	0.097	0.245	0.154	0.350
1	B-C	615.243	0.087	0.219	-	-
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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	485.00	100.000
B	ONE HOUR	✓	82.00	100.000
C	ONE HOUR	✓	454.00	100.000

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	13.000	472.000
	B	75.000	0.000	7.000
	C	452.000	2.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.03	0.97
	B	0.91	0.00	0.09
	C	1.00	0.00	0.00

Vehicle Mix

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

	To

		A	B	C
From	A	1.000	1.000	1.016
	B	1.000	1.000	1.000
	C	1.022	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	1.600
	B	0.000	0.000	0.000
	C	2.200	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.02	7.83	0.02	A
B-A	0.22	12.37	0.28	B
C-AB	0.00	4.33	0.01	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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	5.27	5.23	0.00	518.39	0.010	0.01	7.015	A
B-A	56.46	55.88	0.00	438.75	0.129	0.15	9.388	A
C-AB	2.41	2.40	0.00	841.03	0.003	0.00	4.327	A
C-A	339.39	339.39	0.00	-	-	-	-	-
A-B	9.79	9.79	0.00	-	-	-	-	-
A-C	355.35	355.35	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	6.29	6.28	0.00	497.76	0.013	0.01	7.324	A
B-A	67.42	67.23	0.00	411.41	0.164	0.19	10.454	B
C-AB	3.15	3.14	0.00	865.85	0.004	0.00	4.209	A
C-A	404.99	404.99	0.00	-	-	-	-	-
A-B	11.69	11.69	0.00	-	-	-	-	-
A-C	424.32	424.32	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	7.71	7.69	0.00	467.51	0.016	0.02	7.829	A
B-A	82.58	82.23	0.00	373.60	0.221	0.28	12.340	B
C-AB	4.35	4.35	0.00	899.97	0.005	0.01	4.060	A

C-A	495.51	495.51	0.00	-	-	-	-	-
A-B	14.31	14.31	0.00	-	-	-	-	-
A-C	519.68	519.68	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	7.71	7.71	0.00	467.32	0.016	0.02	7.832	A
B-A	82.58	82.57	0.00	373.60	0.221	0.28	12.369	B
C-AB	4.35	4.35	0.00	899.97	0.005	0.01	4.064	A
C-A	495.51	495.51	0.00	-	-	-	-	-
A-B	14.31	14.31	0.00	-	-	-	-	-
A-C	519.68	519.68	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	6.29	6.31	0.00	497.52	0.013	0.01	7.331	A
B-A	67.42	67.75	0.00	411.42	0.164	0.20	10.487	B
C-AB	3.15	3.15	0.00	865.85	0.004	0.00	4.215	A
C-A	404.99	404.99	0.00	-	-	-	-	-
A-B	11.69	11.69	0.00	-	-	-	-	-
A-C	424.32	424.32	0.00	-	-	-	-	-

Main results: (09:00-09:15)

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	5.27	5.28	0.00	518.07	0.010	0.01	7.022	A
B-A	56.46	56.66	0.00	438.76	0.129	0.15	9.426	A
C-AB	2.41	2.42	0.00	841.03	0.003	0.00	4.332	A
C-A	339.38	339.38	0.00	-	-	-	-	-
A-B	9.79	9.79	0.00	-	-	-	-	-
A-C	355.35	355.35	0.00	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.1.305 [25 May 2012]

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

Filename: (new file)
Path:
Report generation date: 21/09/2012 13:58:40

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Layout - 2017 Base + CD + D			
Stream B-C	0.01	7.24	0.01	A
Stream B-A	0.17	10.98	0.14	B
Stream C-AB	0.05	4.21	0.03	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 - 2012 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base + CD, AM" model duration: 07:45 - 09:15
"D3 - 2017 Base + CD + D, AM" model duration: 07:45 - 09:15
"D4 - 2012 Base, PM" model duration: 16:00 - 17:30
"D5 - 2017 Base + CD, PM" model duration: 16:00 - 17:30
"D6 - 2017 Base + CD + D, PM " model duration: 16:00 - 17:30

Run using Junctions 8.0.1.305 at 21/09/2012 13:58:39

File summary

File Description

Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	14/08/2012
Version	
Status	(new file)
Identifier	
Client	Pipestone Limited

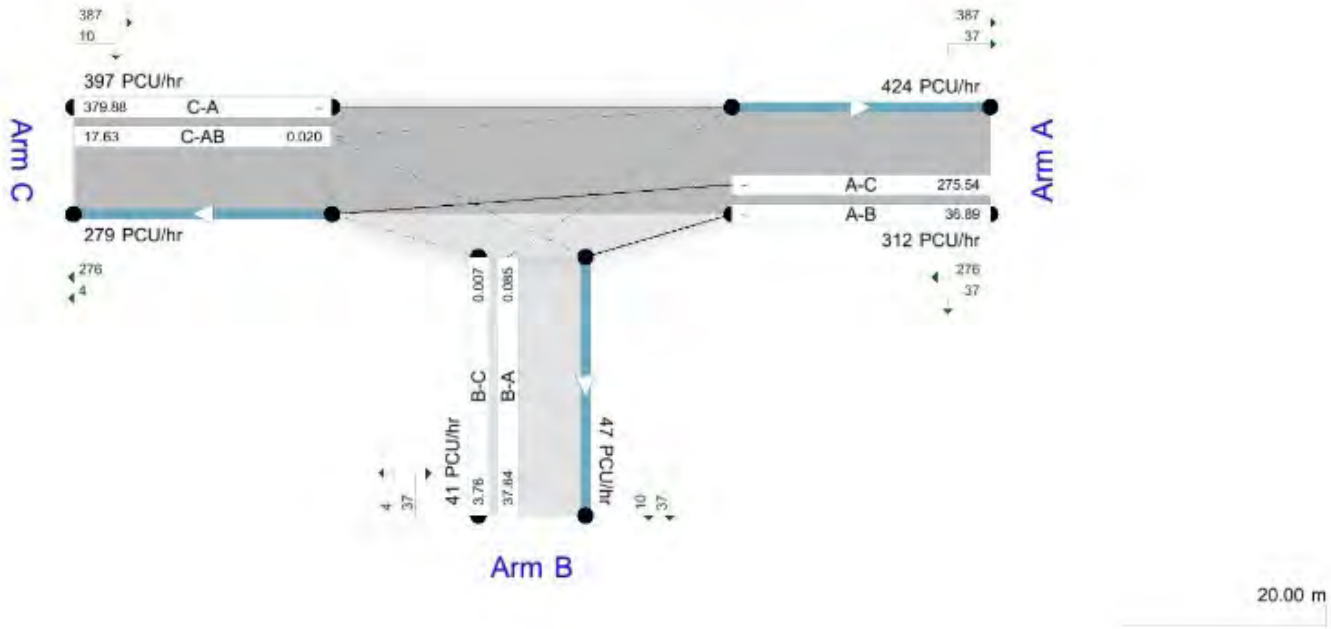
Jobnumber	11-338
Enumerator	BRYANGHALL\MCrabtree
Description	

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
Text overlays show modelled flow through the junction (entry and exit flows: PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RFC ()

Time Segment: (16:00-16:15)
Showing Analysis Set: "A1 - Existing Layout "; Demand Set: "D6 - 2017 Base + CD + D, PM "

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Base + CD + D, PM

Data Errors and Warnings

No errors or warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			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 Base + CD + D, PM	2017 Base + CD + D	PM		ONE HOUR	16:00	17:30	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Site Access	T-Junction	Two-way	A,B,C	8.55	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Major Arm Geometry

Arm	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)
C	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

Arm	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)
B	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

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	579.363	0.097	0.245	0.154	0.350
1	B-C	615.791	0.087	0.219	-	-
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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	415.00	100.000
B	ONE HOUR	✓	55.00	100.000
C	ONE HOUR	✓	528.00	100.000

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	49.000	366.000
	B	50.000	0.000	5.000
	C	514.000	14.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.12	0.88
	B	0.91	0.00	0.09
	C	0.97	0.03	0.00

Vehicle Mix

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

	To

		A	B	C
From	A	1.000	1.000	1.020
	B	1.000	1.000	1.000
	C	1.020	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	2.000
	B	0.000	0.000	0.000
	C	2.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	7.24	0.01	A
B-A	0.14	10.98	0.17	B
C-AB	0.03	4.21	0.05	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:00-16:15)

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	3.76	3.74	0.00	540.31	0.007	0.01	6.708	A
B-A	37.64	37.28	0.00	445.12	0.085	0.09	8.818	A
C-AB	17.63	17.53	0.00	879.39	0.020	0.02	4.210	A
C-A	379.88	379.88	0.00	-	-	-	-	-
A-B	36.89	36.89	0.00	-	-	-	-	-
A-C	275.54	275.54	0.00	-	-	-	-	-

Main results: (16:15-16:30)

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	4.49	4.49	0.00	524.73	0.009	0.01	6.919	A
B-A	44.95	44.84	0.00	419.05	0.107	0.12	9.617	A
C-AB	23.15	23.11	0.00	910.44	0.025	0.03	4.091	A
C-A	451.52	451.52	0.00	-	-	-	-	-
A-B	44.05	44.05	0.00	-	-	-	-	-
A-C	329.03	329.03	0.00	-	-	-	-	-

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	5.51	5.50	0.00	502.51	0.011	0.01	7.242	A
B-A	55.05	54.86	0.00	383.01	0.144	0.17	10.966	B
C-AB	32.13	32.07	0.00	952.35	0.034	0.05	3.949	A

C-A	549.21	549.21	0.00	-	-	-	-	-
A-B	53.95	53.95	0.00	-	-	-	-	-
A-C	402.97	402.97	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	5.51	5.50	0.00	502.42	0.011	0.01	7.243	A
B-A	55.05	55.05	0.00	383.00	0.144	0.17	10.976	B
C-AB	32.14	32.14	0.00	952.37	0.034	0.05	3.954	A
C-A	549.19	549.19	0.00	-	-	-	-	-
A-B	53.95	53.95	0.00	-	-	-	-	-
A-C	402.97	402.97	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	4.49	4.50	0.00	524.60	0.009	0.01	6.923	A
B-A	44.95	45.13	0.00	419.03	0.107	0.12	9.632	A
C-AB	23.17	23.22	0.00	910.47	0.025	0.03	4.097	A
C-A	451.49	451.49	0.00	-	-	-	-	-
A-B	44.05	44.05	0.00	-	-	-	-	-
A-C	329.03	329.03	0.00	-	-	-	-	-

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

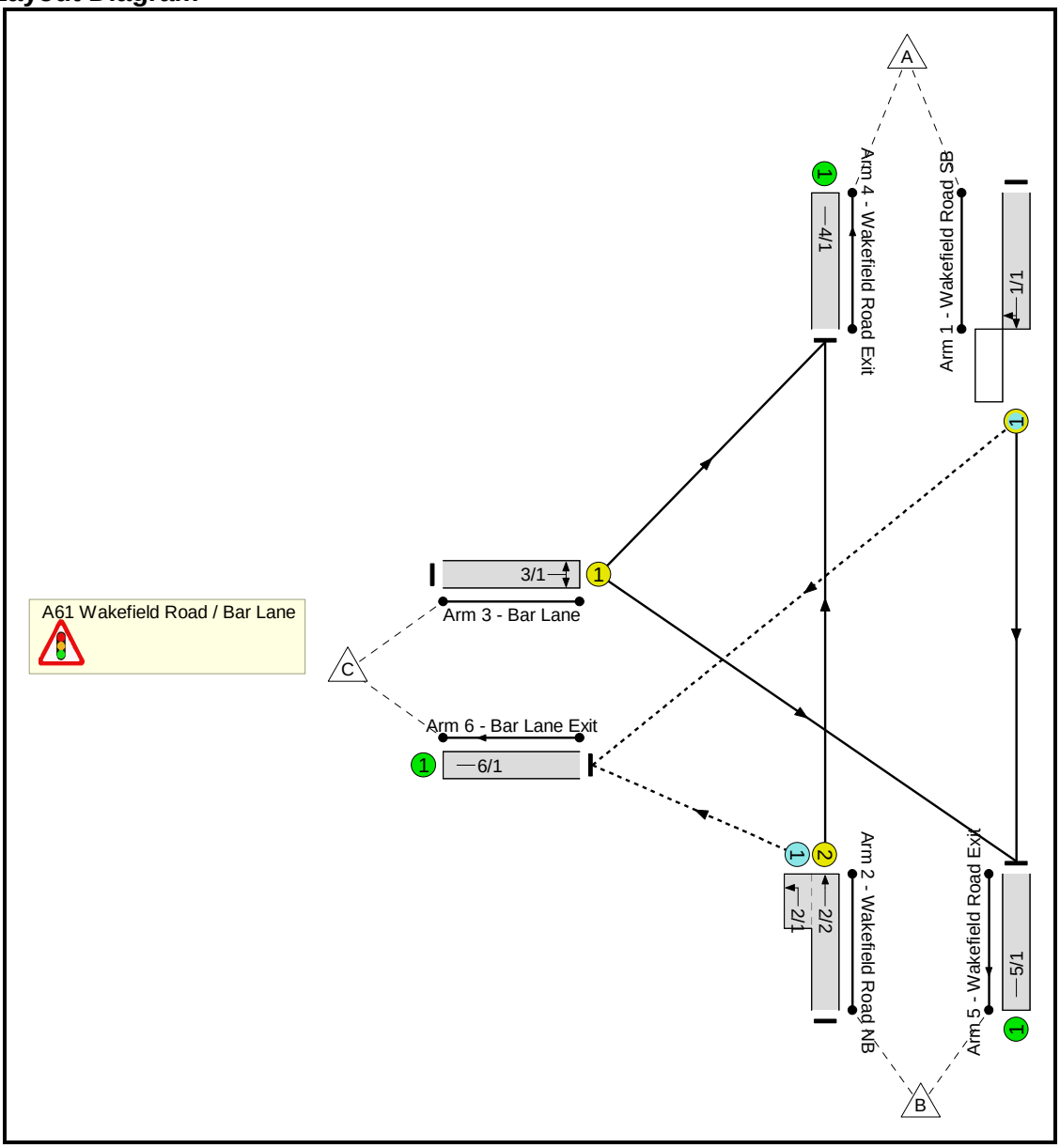
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.76	3.77	0.00	540.12	0.007	0.01	6.713	A
B-A	37.64	37.76	0.00	445.10	0.085	0.09	8.841	A
C-AB	17.67	17.70	0.00	879.42	0.020	0.02	4.215	A
C-A	379.83	379.83	0.00	-	-	-	-	-
A-B	36.89	36.89	0.00	-	-	-	-	-
A-C	275.54	275.54	0.00	-	-	-	-	-

LinSig V1 style report

User and Project Details

Project:	**Wakefield Road, Mapplewell**
Title:	**2017 Base + Committed Development + Development**
Location:	
File name:	Wakefield Road - Bar Lane.lsg3x
Author:	crabtreemd
Company:	Bryan G Hall
Address:	
Notes:	Wakefield Road/Bar Lane

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

Phase Delays

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

Prohibited Stage Change

	To Stage		
		1	2
From Stage	1		9
	2	8	

Phases in Stage

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

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)	-	-	-	-	-

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	-	-	-	-	-	-

Lane Saturation Flows

Scenario 5: '2017 AM Base + CD + D' (FG5: '2017 AM Base + CD + D', Plan 1: 'Network Control Plan 1')

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	94.2 %	1941	1941
				Arm 6 Right	12.50	5.8 %		
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	9.4 %	1681	1681
				Arm 5 Right	8.00	90.6 %		
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 6: '2017 PM Base + CD + D' (FG6: '2017 PM Base + CD + D', Plan 1: 'Network Control Plan 1')

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	92.0 %	1936	1936
				Arm 6 Right	12.50	8.0 %		
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	8.2 %	1679	1679
				Arm 5 Right	8.00	91.8 %		
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

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
5: '2017 AM Base + CD + D'	08:00	09:00	01:00	
6: '2017 PM Base + CD + D'	16:15	17:15	01:00	

Traffic Flows, Desired

FG5: '2017 AM Base + CD + D'
Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	551	34	585
	B	399	0	384	783
	C	52	499	0	551
	Tot.	451	1050	418	1919

FG6: '2017 PM Base + CD + D'
Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	504	44	548
	B	417	0	472	889
	C	33	370	0	403
	Tot.	450	874	516	1840

Stage Timings

Scenario 5: '2017 AM Base + CD + D' (FG5: '2017 AM Base + CD + D', Plan 1: 'Network Control Plan 1')

Stage	1	2
Duration	37	36
Change Point	0	45

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: 2012 Base	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.9%**
A61 Wakefield Road / Bar Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.9%**
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	37	-	585	1941	820	71.4%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	40	-	783	1995:1985	1032	75.9%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	38	-	551	1681	728	75.6%
4/1	Wakefield Road Exit	U	N/A	N/A	-		-	-	-	451	Inf	Inf	0.0%
5/1	Wakefield Road Exit	U	N/A	N/A	-		-	-	-	1050	Inf	Inf	0.0%
6/1	Bar Lane Exit	U	N/A	N/A	-		-	-	-	418	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: 2012 Base	**-**	**-**	**310**	**107**	**1**	**9.5**	**4.3**	**0.0**	**13.8**	**-**	**-**	**-**	**-**
A61 Wakefield Road / Bar Lane	**-**	**-**	**310**	**107**	**1**	**9.5**	**4.3**	**0.0**	**13.8**	**-**	**-**	**-**	**-**
1/1	585	585	33	0	1	3.5	1.2	0.0	4.7	29.1	12.0	1.2	13.3
2/2+2/1	783	783	277	107	0	2.7	1.6	-	4.3	19.7	12.8	1.6	14.3
3/1	551	551	-	-	-	3.3	1.5	-	4.8	31.5	11.5	1.5	13.0
4/1	451	451	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1050	1050	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	418	418	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	PRC for Signalled Lanes (%):	18.6	Total Delay for Signalled Lanes (pcuHr):	13.82	Cycle Time (s):	90
	PRC Over All Lanes (%):	18.6	Total Delay Over All Lanes(pcuHr):	13.82		

Stage Timings

Scenario 6: '2017 PM Base + CD + D' (FG6: '2017 PM Base + CD + D', Plan 1: 'Network Control Plan 1')

Stage	1	2
Duration	46	27
Change Point	0	54

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: 2012 Base	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.0%**
A61 Wakefield Road / Bar Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.0%**
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	46	-	548	1936	1011	54.2%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	49	-	889	1995:1985	1251	71.1%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	29	-	403	1679	560	72.0%
4/1	Wakefield Road Exit	U	N/A	N/A	-		-	-	-	450	Inf	Inf	0.0%
5/1	Wakefield Road Exit	U	N/A	N/A	-		-	-	-	874	Inf	Inf	0.0%
6/1	Bar Lane Exit	U	N/A	N/A	-		-	-	-	516	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: 2012 Base	**-**	**-**	**390**	**125**	**1**	**7.0**	**3.1**	**0.0**	**10.1**	**-**	**-**	**-**	**-**
A61 Wakefield Road / Bar Lane	**-**	**-**	**390**	**125**	**1**	**7.0**	**3.1**	**0.0**	**10.1**	**-**	**-**	**-**	**-**
1/1	548	548	43	0	1	2.2	0.6	0.0	2.8	18.2	9.0	0.6	9.6
2/2+2/1	889	889	347	125	0	1.9	1.2	-	3.1	12.6	11.6	1.2	12.9
3/1	403	403	-	-	-	2.9	1.3	-	4.2	37.6	8.7	1.3	10.0
4/1	450	450	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	874	874	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	516	516	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	PRC for Signalled Lanes (%):	25.0	Total Delay for Signalled Lanes (pcuHr):	10.10	Cycle Time (s):	90
	PRC Over All Lanes (%):	25.0	Total Delay Over All Lanes(pcuHr):	10.10		

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.1.305 [25 May 2012]

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

Filename: (new file)
Path:
Report generation date: 21/09/2012 14:22:15

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Site Access Layout - 2017 B + CD + D			
Stream B-AC	0.58	14.21	0.37	B
Stream C-A	-	-	-	-
Stream C-B	0.05	5.94	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 - 2017 B + CD + D, AM" model duration: 07:45 - 09:15
"D2 - 2017 B + CD + D, PM" model duration: 16:00 - 17:30

Run using Junctions 8.0.1.305 at 21/09/2012 14:22:14

File summary

File Description

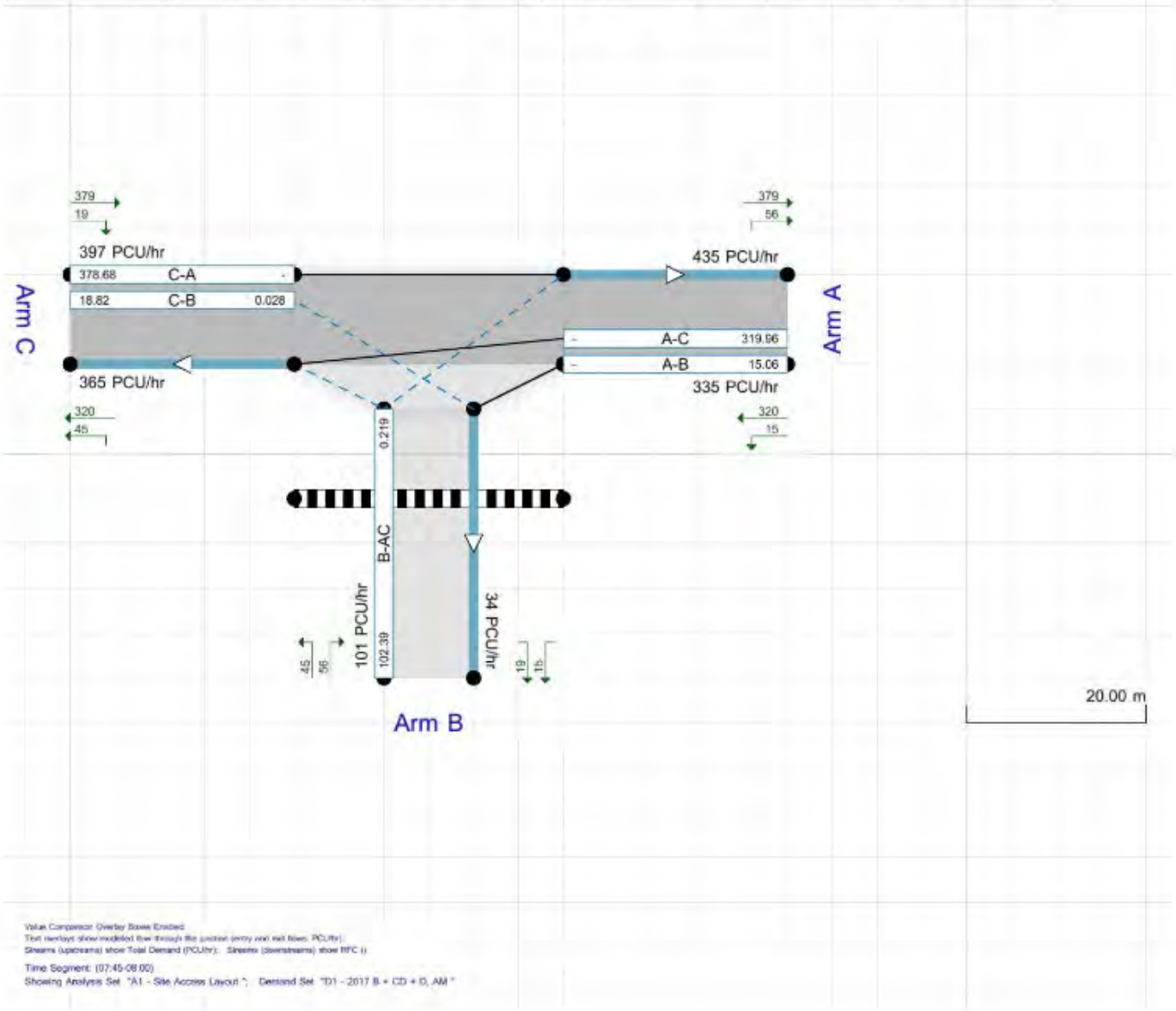
Title	Mapplewell, Barnsley
Location	Site Access
Site Number	
Date	14/08/2012
Version	
Status	(new file)
Identifier	
Client	Pipestone Limited
Jobnumber	11-338
Enumerator	BRYANGHALL\MCrabtree
Description	

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.

Site Access Layout - 2017 B + CD + D, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Site Access Layout			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 B + CD + D, AM	2017 B + CD + D	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Site Access	T-Junction	Two-way	A,B,C	12.93	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Major Arm Geometry

Arm	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)
C	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

Arm	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)
B	One lane	3.50										50	50

Pedestrian Crossings

Arm	Crossing Type
A	None
B	Zebra
C	None

Zebra Crossings

Arm	Space between crossing and junction entry (Left) (PCU)	Space between crossing and junction entry (Right) (PCU)	Vehicles queueing on exit (PCU)	Central Refuge	Crossing Data Type	Crossing length (m)	Crossing time (s)	Crossing length (entry side) (m)	Crossing time (entry side) (s)	Crossing length (exit side) (m)	Crossing time (exit side) (s)
B	2.00		2.00		Distance	10.00	7.14				

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	544.462	0.099	0.251	0.158	0.358
1	B-C	688.222	0.105	0.267	-	-
1	C-B	781.320	0.303	0.303	-	-

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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	445.00	100.000
B	ONE HOUR	✓	136.00	100.000
C	ONE HOUR	✓	528.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
A	-	-
B	ONE HOUR	10.00
C	-	-

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	20.000	425.000
	B	75.000	0.000	61.000
	C	503.000	25.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.04	0.96
	B	0.55	0.00	0.45
	C	0.95	0.05	0.00

Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.016
	B	1.000	1.000	1.000
	C	1.019	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	1.600
	B	0.000	0.000	0.000
	C	1.900	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.37	14.21	0.58	B
C-A	-	-	-	-
C-B	0.04	5.94	0.05	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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-AC	102.39	101.28	7.53	467.86	0.219	0.28	9.792	A
C-A	378.68	378.68	0.00	-	-	-	-	-
C-B	18.82	18.71	0.00	679.90	0.028	0.03	5.445	A
A-B	15.06	15.06	0.00	-	-	-	-	-
A-C	319.96	319.96	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-AC	122.26	121.86	8.99	440.92	0.277	0.38	11.267	B

C-A	452.19	452.19	0.00	-	-	-	-	-
C-B	22.47	22.45	0.00	660.22	0.034	0.04	5.644	A
A-B	17.98	17.98	0.00	-	-	-	-	-
A-C	382.07	382.07	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-AC	149.74	148.94	11.01	402.91	0.372	0.58	14.129	B
C-A	553.81	553.81	0.00	-	-	-	-	-
C-B	27.53	27.48	0.00	633.00	0.043	0.05	5.945	A
A-B	22.02	22.02	0.00	-	-	-	-	-
A-C	467.93	467.93	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	149.74	149.71	11.01	402.90	0.372	0.58	14.213	B
C-A	553.81	553.81	0.00	-	-	-	-	-
C-B	27.53	27.52	0.00	633.00	0.043	0.05	5.945	A
A-B	22.02	22.02	0.00	-	-	-	-	-
A-C	467.93	467.93	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	122.26	123.04	8.99	440.90	0.277	0.39	11.354	B
C-A	452.19	452.19	0.00	-	-	-	-	-
C-B	22.47	22.51	0.00	660.22	0.034	0.04	5.645	A
A-B	17.98	17.98	0.00	-	-	-	-	-
A-C	382.07	382.07	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	102.39	102.81	7.53	467.82	0.219	0.28	9.874	A
C-A	378.68	378.68	0.00	-	-	-	-	-
C-B	18.82	18.85	0.00	679.90	0.028	0.03	5.445	A
A-B	15.06	15.06	0.00	-	-	-	-	-
A-C	319.96	319.96	0.00	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Filename: (new file)
Path:
Report generation date: 21/09/2012 14:23:04

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Site Access Layout - 2017 B + CD + D			
Stream B-AC	0.40	11.40	0.29	B
Stream C-A	-	-	-	-
Stream C-B	0.14	6.46	0.12	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 B + CD + D, AM" model duration: 07:45 - 09:15
"D2 - 2017 B + CD + D, PM " model duration: 16:00 - 17:30

Run using Junctions 8.0.1.305 at 21/09/2012 14:23:02

File summary

File Description

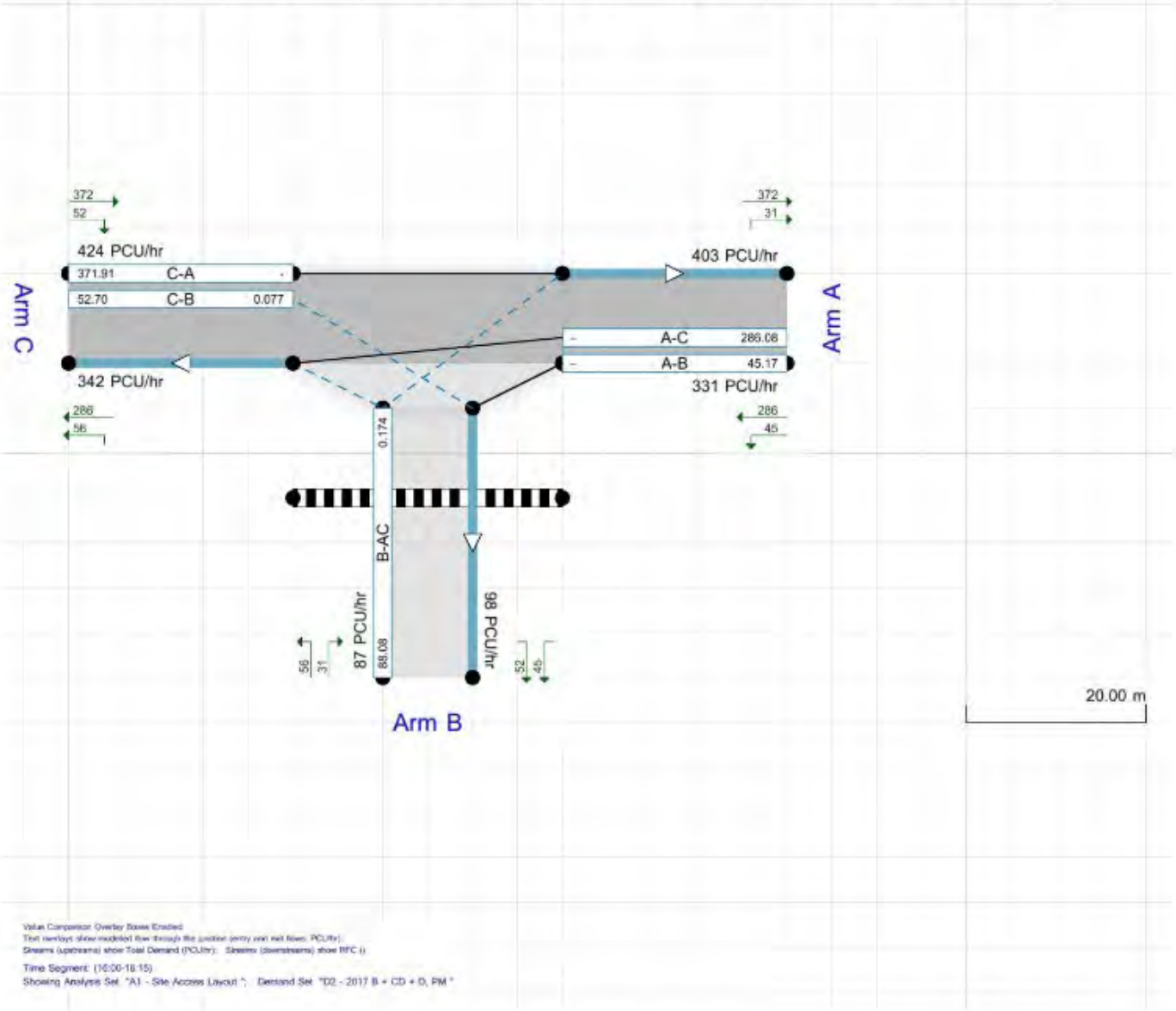
Title	Mapplewell, Barnsley
Location	Site Access
Site Number	
Date	14/08/2012
Version	
Status	(new file)
Identifier	
Client	Pipestone Limited
Jobnumber	11-338
Enumerator	BRYANGHALL\MCrabtree
Description	

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.

Site Access Layout - 2017 B + CD + D, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	Arm B - Zebra Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Site Access Layout			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 B + CD + D, PM	2017 B + CD + D	PM		ONE HOUR	16:00	17:30	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Site Access	T-Junction	Two-way	A,B,C	9.55	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Major Arm Geometry

Arm	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)
C	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

Arm	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)
B	One lane	3.50										50	50

Pedestrian Crossings

Arm	Crossing Type
A	None
B	Zebra
C	None

Zebra Crossings

Arm	Space between crossing and junction entry	Space between crossing and junction entry	Vehicles queueing on	Central Refuge	Crossing Data Type	Crossing length (m)	Crossing time (s)	Crossing length (entry	Crossing time (entry	Crossing length (exit	Crossing time (exit

	(Left) (PCU)	(Right) (PCU)	exit (PCU)					side) (m)	side) (s)	side) (m)	side) (s)
B	2.00		2.00		Distance	10.00	7.14				

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	544.462	0.099	0.251	0.158	0.358
1	B-C	688.222	0.105	0.267	-	-
1	C-B	781.320	0.303	0.303	-	-

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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	440.00	100.000
B	ONE HOUR	✓	117.00	100.000
C	ONE HOUR	✓	564.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
A	-	-
B	ONE HOUR	0.00
C	-	-

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	60.000	380.000
	B	42.000	0.000	75.000
	C	494.000	70.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.14	0.86
	B	0.36	0.00	0.64
	C	0.88	0.12	0.00

Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.017
	B	1.000	1.000	1.000
	C	1.018	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	1.700
	B	0.000	0.000	0.000
	C	1.800	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.29	11.40	0.40	B
C-A	-	-	-	-
C-B	0.12	6.46	0.14	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:00-16:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	88.08	87.25	0.00	506.48	0.174	0.21	8.567	A
C-A	371.91	371.91	0.00	-	-	-	-	-
C-B	52.70	52.37	0.00	681.04	0.077	0.08	5.724	A
A-B	45.17	45.17	0.00	-	-	-	-	-
A-C	286.08	286.08	0.00	-	-	-	-	-

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	105.18	104.91	0.00	481.05	0.219	0.28	9.564	A
C-A	444.10	444.10	0.00	-	-	-	-	-
C-B	62.93	62.84	0.00	661.58	0.095	0.10	6.012	A
A-B	53.94	53.94	0.00	-	-	-	-	-
A-C	341.61	341.61	0.00	-	-	-	-	-

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-AC	128.82	128.32	0.00	444.70	0.290	0.40	11.360	B
C-A	543.90	543.90	0.00	-	-	-	-	-
C-B	77.07	76.94	0.00	634.67	0.121	0.14	6.453	A
A-B	66.06	66.06	0.00	-	-	-	-	-
A-C	418.39	418.39	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-AC	128.82	128.81	0.00	444.67	0.290	0.40	11.397	B
C-A	543.90	543.90	0.00	-	-	-	-	-
C-B	77.07	77.07	0.00	634.67	0.121	0.14	6.455	A
A-B	66.06	66.06	0.00	-	-	-	-	-
A-C	418.39	418.39	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-AC	105.18	105.66	0.00	481.00	0.219	0.28	9.605	A
C-A	444.10	444.10	0.00	-	-	-	-	-
C-B	62.93	63.06	0.00	661.58	0.095	0.11	6.015	A
A-B	53.94	53.94	0.00	-	-	-	-	-
A-C	341.61	341.61	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-AC	88.08	88.37	0.00	506.39	0.174	0.21	8.617	A
C-A	371.91	371.91	0.00	-	-	-	-	-
C-B	52.70	52.79	0.00	681.04	0.077	0.08	5.732	A
A-B	45.17	45.17	0.00	-	-	-	-	-
A-C	286.08	286.08	0.00	-	-	-	-	-

BRYAN G HALL

Registered in England & Wales
Co No: 4104802

VAT No: 399 4601 07

Registered Office

Suite E8 Joseph's Well
Hanover Walk
Leeds LS3 1AB

Telephone: 0113 246 1555

Email: highways@bryanghall.co.uk

London Office

Suites 17 & 18 Lighterman House
26-36 Wharfdale Road
London N1 9RY

Telephone: 0203 077 2162

Website: www.bryanghall.co.uk