



Homes England

**Colt International, New Lane,
Havant**

Transport Assessment

March 2018

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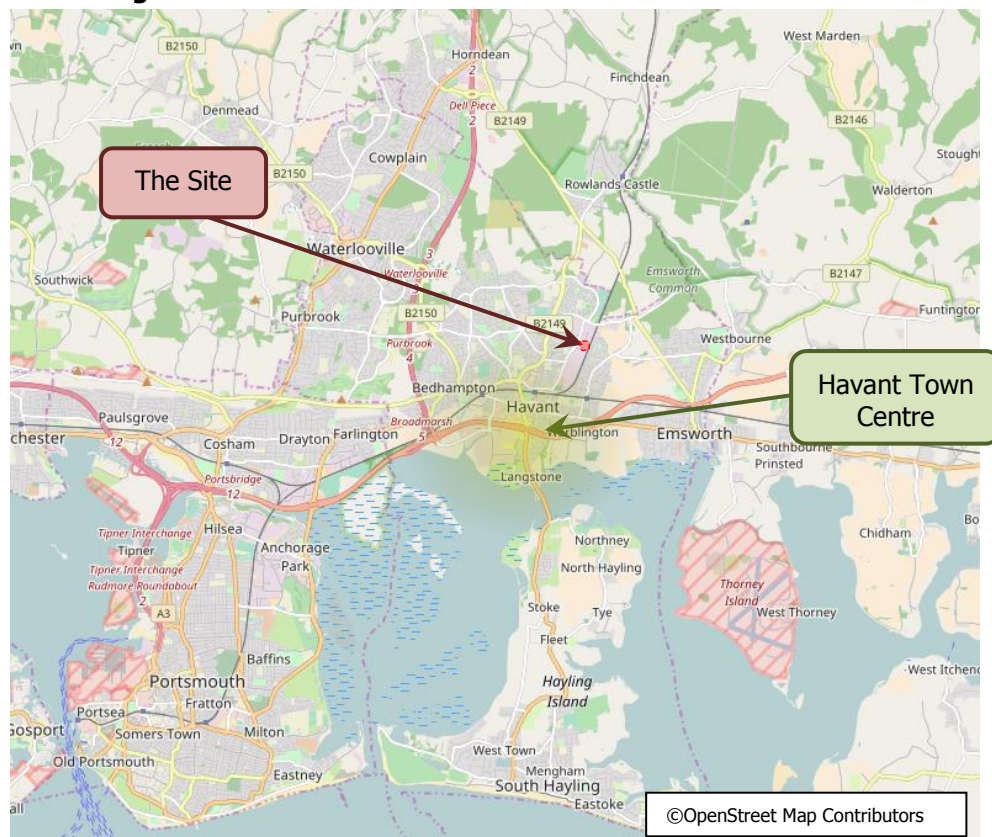
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1 Introduction

Background and Site Location

- 1.1 WYG Transport has been appointed by Homes England (the 'Applicant') to prepare a Transport Assessment (TA) to support an outline planning application for the proposed development of the former Colt International Site (the 'Site').
- 1.2 The Site is located in north east Havant and lies approximately 2.1km north east of Havant town Centre. The site currently consists of industrial units and associated car parks.
- 1.3 The site comprises of a broadly rectangular parcel of land bordered to the north by Bartons Road, New Lane to the east and Martin Road to the west. The south side of the site is bordered by industrial units and associated car parks.
- 1.4 A Strategic Site Location plan, showing the location of the Site in relation to the wider surrounding area, is shown in **Figure 1.1** below.

Figure 1.1 Strategic Site Location



- 1.5 This TA considered the traffic and transportation implications of the proposals, which include the creation of a mix use development comprising of up to 100 dwellings, 2,860m² of employment use



comprising B1 and B2 commercial space, as well as supporting access and infrastructure and associated on-site parking provisions.

- 1.6 Havant Borough Council is the Local Planning Authority and Hampshire County Council is the Local Highways Authority.
- 1.7 The TA has been prepared in accordance with the previous '*Guidance on Transport Assessments*' (DfT, 2007) and the current '*Transport Evidence Bases in Plan Making*' (DfT, 2014).

Development Proposal

- 1.8 The development proposal is for an outline planning application for a mixed-use development of up to 100 dwellings, at least 30% of which will be affordable homes, 2,860m² of mixed-use commercial space, hard and soft landscaping and associated infrastructure.

Report Structure

- 1.9 Following this introductory chapter, the remainder of this TA is structured as follows:
- **Chapter 2: Policy Review** – provides a review of national and local development and transport planning policy relevant to the location, scale and type of the proposal.
 - **Chapter 3: Existing Conditions** – provides an outline review of the existing transport conditions prevailing at the development Site and in the immediate surrounding area, including a review of the most recently available Personal Injury Accident (PIA) data statistics;
 - **Chapter 4: Development Proposals** – sets out the development proposals including existing and proposed land uses, access arrangements and parking provision;
 - **Chapter 5: Multi-Modal Trip Assessment and Distribution** – presents the results of the trip generation assessment and mode split relative to the proposal;
 - **Chapter 6: Committed Development** – presents a summary of the committed development sites which have been taken into consideration in this assessment;
 - **Chapter 7: Highway Impact Assessment** – presents capacity testing of highway junction models in close vicinity of the site and whether they have sufficient capacity with the additional development traffic flows;
 - **Chapter 8: Sustainable Transport Strategy** – consideration is given to how the site is accessed by public transport and other non-car mode's; and
 - **Chapter 9: Summary and Conclusions** – Provides a summary and conclusion by highlighting the key points raised within the report.
- 1.10 All technical Appendices are included at the end of this TA for information.



2 Policy Review

Introduction

- 2.1 This chapter of the TA examines the context of the site and how this relates to relevant planning policies and guidelines. It provides an overall spatial and planning context for the development proposal.
- 2.2 The current agenda regarding transport and development is moving away from one of providing significant new highway capacity, through 'predict and provide' schemes. Instead, policies have been adopted in national guidelines such as the most recent Transport White Paper (2011) that seeks to encourage more sustainable modes than the car and a planning system which places more emphasis on the link between transport and land use planning policies.
- 2.3 The following planning documents have been reviewed:

National Policy

- The Transport White Paper (2011);
- The National Planning Policy Framework (NPPF) (2012); and
- National Planning Practice Guidance (NPPG) (2014).

Local Policy

- Hampshire Local Transport Plan (2011-2031);
- Havant Borough Core Strategy (2011 – 2026);
- Havant Borough Residential Parking and Cycle Provision SPD (March 2010);
- Havant Borough Local Plan (Allocations); and
- Emerging Havant Local Plan 2036

National Policy

The Transport White Paper (2011)

- 2.4 The government's vision for the local transport system is set out in the January 2011 Transport White Paper "*Creating Growth, Cutting Carbon – Making Sustainable Local Transport Happen*".
- 2.5 The White Paper acknowledges that transport provision is essential for economic growth if the Government is to improve the economic deficit that it is currently facing. However, the Paper also recognises that the current levels of carbon emissions from transport cannot be sustained if the nation is to meet its national commitment on climate change as well as creating a safer and cleaner environment in which to live. With this in mind, the Government highlights sustainable transport



solutions as a means by which the economy can grow which will also see a positive impact on the local environs.

- 2.6 Whilst the Paper outlines the funding options which will be available for sustainable transport schemes, it also recognises that investment alone will not be enough and that help needs to be given to people to ensure that the transport choices they make are good for society as a whole. The Paper recognises that it is at the local level where most can be done to encourage sustainable transport modes and implement sustainable transport schemes. Solutions should be developed for the places they serve, tailored for the specific needs and behaviour patterns of individual communities.
- 2.7 Within the Paper, sustainable transport considers more than just public transport, walking and cycling schemes and acknowledges that it is not feasible for some trips to be undertaken by these modes. There is therefore a realisation that the car will continue to be an important mode of transport and focus should be given to making car travel greener through electric and other low emission vehicles.

The National Planning Policy Framework (2012)

- 2.8 The Government's National Planning Policy Framework (NPPF) replaced the majority of previous Planning Policy Statement (PPS) and Planning Policy Guidance Note (PPG) documents on 27 March 2012. It sets out the Government's expectations and requirements from the planning system. It is meant as high level guidance for local councils to use when defining their own personal local and neighbourhood plans. This approach allows the planning system to be customised to reflect the needs and priorities of individual communities.
- 2.9 The NPPF defines the delivery of sustainable development through three roles:
1. Planning for prosperity (an economic role);
 2. Planning for people (a social role); and
 3. Planning for places (an environmental role).
- 2.10 It notes that to achieve sustainable development, these roles should be sought jointly and simultaneously through the planning system.
- 2.11 At the heart of the NPPF is a presumption in favour of sustainable development which '*should be seen as a golden thread running through both plan-making and decision-taking.*' (para. 14). In paragraph 15, it goes on to say that: '*Policies in Local Plans should follow the approach of the presumption in favour of sustainable development so that it is clear that development which is sustainable can be approved without delay.*'



Transport - Promoting Sustainable Transport

- 2.12 The NPPF recognises that transport policies have an important role to play in wider sustainability and health objectives as well as their direct influence on development. In paragraph 29 it states that *'the transport system needs to be balanced in favour of sustainable transport modes giving people a real choice about how they travel.'*
- 2.13 Paragraph 32 states that, 'All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:
- *'the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major 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 limit 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.'*
- 2.14 Paragraph 34 seeks to ensure that, 'developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised.'
- 2.15 It notes, however, that this needs to take account of policies set out elsewhere in this Framework. It goes on to mention that: *'Plans 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:
- *'accommodate the efficient delivery of goods and supplies;*
 - *give priority to pedestrian and cycle movements, and have access to high quality public transport facilities; and*
 - *create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter.*
 - *incorporate facilities for charging plug-in and other ultra-low emission vehicles; and*
 - *consider the needs of people with disabilities by all modes of transport.'*

The National Planning Policy Guidance (2014)

- 2.16 The Government's National Planning Practice Guidance (NPPG) was launched on 6th March 2014 by the Department for Communities and Local Government (DCLG) as a web-based resource.



- 2.17 Within the NPPG, the 'Travel Plans, Transport Assessments and Statements in Decisions-Taking' guidance provides advice on when transport assessments and transport statements are required, what they are and what they should contain.
- 2.18 Paragraph 6 sets the importance of the Travel Plans (TPs), Transport Assessments (TAs) and Transport Statements (TSs) saying that they can positively contribute to:
- *"encouraging sustainable travel;*
 - *lessening traffic generation and its detrimental impacts;*
 - *reducing carbon emissions and climate impacts;*
 - *creating accessible, connected, inclusive communities;*
 - *improving health outcomes and quality of life;*
 - *improving road safety; and*
 - *reducing the need for new development to increase existing road capacity or provide new roads."*
- 2.19 The NPPG then goes on saying that the key principles that should be taken into account in preparing a TP, TA or TS should be:
- *"proportionate to the size and scope of the proposed development to which they relate and build on existing information wherever possible;*
 - *established at the earliest practicable possible stage of a development proposal;*
 - *be tailored to particular local circumstances (other locally-determined factors and information beyond those which are set out in this guidance may need to be considered in these studies provided there is robust evidence for doing so locally);*
 - *be brought forward through collaborative ongoing working between the Local Planning Authority/ Transport Authority, transport operators, Rail Network Operators, Highways Agency where there may be implications for the strategic road network and other relevant bodies. Engaging communities and local businesses in Travel Plans, Transport Assessments and Statements can be beneficial in positively supporting higher levels of walking and cycling (which in turn can encourage greater social inclusion, community cohesion and healthier communities)."*
- 2.20 In determining whether a TA or TS will be needed for a proposed development, the NPPG states on Paragraph 13 that:
- "Local planning authorities should take into account the following considerations:*
- *the Transport Assessment and Statement policies (if any) of the Local Plan;*



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

Local Policy

Hampshire Local Transport Plan (2011-2031)

- 2.21 The Hampshire Local Transport Plan 2011-2031 was formally approved for use on 24th February 2011 and sets out a long term strategy and vision for how the transport network of Hampshire will be developed over the next 20 years.
- 2.22 The Local Transport Plan has 3 main priorities:
- *To support economic growth by ensuring safety, soundness and efficiency of the transport network;*
 - *To provide a safe, well maintained and more resilient road network as the basic transport infrastructure of the County on which all forms of transport directly and indirectly depend and the key to continued casualty reduction; and,*
 - *To manage traffic to maximise efficiency of the existing network capacity, improving journey time reliability and reducing emissions thereby supporting the efficient and sustainable movement of people and goods.*
- 2.23 The following policies are relevant in the context of the proposed development:
- *Policy Objective 7: Ensure that travel from home to school affordably serves changing curriculum needs, underpins sustainable schools and maximises individual opportunities for education and training;*
 - *Policy Objective 11 – Reduce the need to travel through encouragement of a high-speed broadband network, supporting the local delivery of services and in urban areas the application of 'Smarter Choices' initiatives.*
 - *Policy Objective 14 – Outline and implement a long-term transport strategy to enable sustainable development in major growth areas.*



Havant Borough Core Strategy (2011-2026)

- 2.24 The Havant Borough Core Strategy is a document within the Havant Borough Local Development Framework. The core strategy is the principle document which sets out the broad detail and direction of development in the borough. Following the Core Strategy will be the Development Delivery (Allocations) Plan which will detail where development will occur. The core strategy is the overarching document which will set the overall policy framework for all the other local development documents.
- 2.25 Policy DM 11 in the Havant Borough Core Strategy sets out planning for more sustainable travel. It states that *'the council will seek to ensure that every opportunity is taken to increase integration of sustainable travel modes and availability of non-motorised modes by appropriate ensure.'* These include the following five objectives.
- 2.26 The first objective is to secure on site and/or off site interventions that promote integrated travel and access by non-motorised modes.
- 2.27 The second objective requires safe and secure vehicular and cycle parking on the site and have turning facilities which are to an adopted standard.
- 2.28 The securing of appropriate improvements to public and community transport is the third objective. These improvements include infrastructure requirements. This will be in accordance with the Hampshire Local Transport Plan and if applicable, the relevant sub-regional transport strategy.
- 2.29 The fourth objective outlines the proposals for reducing opportunities for informal parking in the area surrounding the development where this would impact on the capacity, operation and safety of the local highway network.
- 2.30 New developments need to ensure that they are located and designed from the outset to encourage lower vehicle speeds. The layouts need to be inclusive, safe and permeable which integrate with existing pedestrian, cycle and public transport routes. These measures will facilitate and encourage walking and cycling for short distance trips including trips to public transport interchanges.
- 2.31 Policy DM12 sets out the Mitigating the Impacts of Travel. The policy sets out *'new development will be required to mitigate their travel impact, including the environmental impact of travel (such as noise, air and visual pollution) and impacts on amenity, health and climate change by ensuring that, where relevant, the following criteria is met.'*
- 2.32 The first point of the criteria is that adequate provision for integrated and improved transport infrastructure or appropriate mitigation measures are made. This is to be done through direct improvements and S106 contributions which are in accordance with the Hampshire County Council Transport Contributions Policy.



- 2.33 The second criteria is the requirement for a transport assessment or travel plan to be submitted alongside any planning application on proposals for major developments. These reports are also required for developments which will have significant transport implications.
- 2.34 The third criteria is the "*submission of a transport statement must accompany planning applications to explain changes to travel demand.*"
- 2.35 The forth criteria is for a bond to be provided which will be used to mitigate negative travel impacts of the development. This is in case a travel plan fails to achieve its targets. This bond will be held by the relevant local transport authority.
- 2.36 The fifth criteria is for a framework to be submitted in relation to outline planning applications. The framework will be for the preparation of travel assessments and travel plans will be submitted with the planning application proposals.
- 2.37 Policy DM13 sets out the car and cycle parking on residential development. it states that '*residential development will only be permitted where it provides car parking and cycle storage in accordance with the standards set out in the Residential Car Parking and Cycle Provision Supplementary Planning Document.*'
- 2.38 Policy DM14 sets the Car and Cycle Parking on Development which excludes residential developments. The '*development will only be permitted where it provides parking for cars, motor cycles and cycles in accordance with the relevant standards. Such parking provision must be appropriately located in relation to the development and be practical for its intended use.*'
- 2.39 Policy DM15 sets out the Safeguarding Transport Infrastructure. It states that '*development will not be permitted where it is prejudicial to the future provision of strategic transport infrastructure.*' It sets out that land that is to be safeguarded will be identified in the Development Delivery (Allocations) Plan or other local development documents which are appropriate. This is to be agreed with the appropriate delivery body.

Draft Havant Borough Local Plan 2036

- 2.40 The site is identified as site H35 in the draft Havant Borough Local Plan as being suitable for mixed use development. The Local Plan identifies that a Transport Assessment would be required as part of a planning application.

Havant Borough Residential Parking and Cycle Provision SPD (March 2010)

- 2.41 The Havant Borough Residential Parking and Cycle Provision SPD (March 2010) supplements and updates the requirements for residential car parking.



- 2.42 This Supplementary Planning Document (SPD) sets out guidance to developers, householders and others on the provision of car parking and cycle space on residential developments in the borough.
- 2.43 Vehicle parking is provided for by two means. These are allocated parking and shared / communal parking which is unallocated.
- 2.44 The allocated parking is provided in curtilage parking or parking courts where spaces are marked or belong to individual properties. This is for parking spaces available for the use of specific properties.
- 2.45 The allocated standards are relevant for new development, change of use and domestic proposals such as households. This is where car parking provision is provided within individual dwelling curtilages or where it will be labelled or attributed to individual properties.
- 2.46 The standards are sets out in **Table 2.1**.

Table 2.1 Allocated Vehicle Parking

Size of Dwelling	Standard	Havant Town Centre	Waterlooville Town Centre
1 Bed Unit	1 space	Max 1 space	1 space
2 Bed Unit	2 spaces	Max 1 space	1 space
3 Bed Unit	2 spaces	Max 1 space	1-2 spaces
4+ Bed Unit	3 spaces	Max 2 spaces	1-2 spaces

- 2.47 The shared / communal parking which is unallocated is available for general use. The parking spaces are not owned or attributed to a specific property.
- 2.48 The parking space *'available for shared / communal use are relevant for new developments and the change of use proposals where parking spaces will not be marked or specifically allocated to individual properties.'* This type of parking allows for flexible use.
- 2.49 The shared parking facilities are a more flexible and efficient use of available space. The spaces *'enable a reduced number of spaces to be provided to meet the same demand.'*
- 2.50 **Table 2.2** sets out the unallocated standards.



Table 2.2 Unallocated Parking Standards

Size of Dwelling	Standard	Havant Town Centre	Waterlooville Town Centre
1 Bed Unit	0.9 spaces	Max 0.5 spaces	0.6 spaces
2 Bed Unit	1.3 spaces	Max 0.8 spaces	1 space
3 Bed Unit	1.9 spaces	Max 1 spaces	1.4 spaces
4+ Bed Unit	2.4 spaces	Max 1.2 spaces	1.8 spaces

2.51 The cycle parking and storage provision is required in provided in **Table 2.3**.

Table 2.3 Cycle Parking / Storage Provision

Size of Dwelling	Long Stay	Short Stay
1 Bed Unit	1 space per unit	1 loop/ hoop per unit
2 Bed Unit	2 spaces per unit	1 loop/ hoop per unit
3 Bed Unit	2 spaces per unit	1 loop/ hoop per unit
4+ Bed Unit	2 spaces per unit	1 loop/ hoop per unit



3 Existing Conditions

Introduction

- 3.1 The previous chapter of the report sets out the relevant policy background in which the development will be considered. In this chapter the existing transport conditions are considered, including public transport, walking, cycling, highways and traffic.
- 3.2 A review of road safety along links and at key junctions in the vicinity of the site has also been undertaken and is included further within this chapter.
- 3.3 It is important that baseline conditions are accurately established so that the context of any potential future development at the site, and its potential impact on the surrounding transport and highway networks, can be fully understood.
- 3.4 This baseline study was informed by site visits undertaken by WYG as well as a detailed desktop research exercise.

Site Location and Description

- 3.5 The site is located in north east Havant and lies approximately 2.1km north east of Havant town Centre.
- 3.6 The site comprises of a broadly rectangular parcel of land bordered to the north by Bartons Road, New Lane borders the site to the East and Martin Road is to the West. The south of the site is bordered by industrial units and associated car parks.
- 3.7 A Strategic Site Location plan, showing the Site in the context of the wider surrounding area, is provided within **Chapter 1** of this report.
- 3.8 A detailed site location plan is provided in **Figure 3.1** below.

Figure 3.1 Site Location Plan



- 3.9 The site currently consists of industrial buildings and associated car parks which gain access via priority junctions on Martin Road and New Lane. It is anticipated that the new residential aspect of the development will access via Martin Road whilst the commercial aspect will access the site via New Lane.

Public Transport

Bus Services

- 3.10 The nearest bus stops to the site are located on Barton Road to the north of the site and are within 400m of the entrance on both New Lane and Martin Drive. Both the eastbound and westbound stops have a pole and flag arrangement.
- 3.11 The stops are served by the 20, 21, 28, 621, and 727 services provided by Stagecoach Buses and Emsworth and District busses. The services provide connections to Horndean Technical College,



Havant College, Portsmouth College, Portsmouth and Havant centres. **Table 3.1** shows their service summary.

Table 3.1 Local Bus Services

Route	Route Description	Frequency	
		Weekday (Daytime)	Saturday
20/21	Portsmouth Interchange – Cosham – Queen Alexandra Hospital - Havant	2 per hour	2 per hour
621	Havant – Purbrook – Portsmouth College	1 in AM & 1 in PM term time only	-
727	Chichester – Havant – Purbrook South Downs College	1 in AM & 1 in PM term time only	-
28	Southbourne – Emsworth - Havant	1 per hour	1 per hour

3.12 The review of bus services and frequency highlights weekday, Saturday and Sunday services are of a volume that helps to promote the accessibility of the site.

3.13 A Stagecoach bus plan is provided in Appendix A.

Rail Services

3.14 The closest rail station is Havant which is within 1.9km of the site. Warblington is a similar distance away and is on the same line as Havant.

3.15 Havant Station is located on the Portsmouth Direct Line which runs between London Waterloo and Portsmouth Harbour. Chichester, Hove and Brighton are also accessible from Havant station to the east with Fareham and Southampton Centre to the west.

3.16 Havant station provides car parking spaces, and secure cycle parking spaces which are available at the front of the station.



3.17 The train service available from Havant can be seen in **Table 3.2**.

Table 3.2 Railway Services at Havant

Direction	Journey Time (min)	Frequency	
		Weekday (Daytime)	Saturday
London Waterloo	90	3 per hour	2 per hour
Portsmouth Harbour	22	4 per hour	4 per hour
Chichester	14	5 per hour	5 per hour
Brighton	65	2 per hour	2 per hour
Southampton Central	42	2 per hour	2 per hour

3.18 The review of rail services from the station confirms the site is highly accessible with trains departing from the station on a weekday; Saturday and Sunday services are also available.

3.19 The site is considered to be very well positioned for future residents choosing public transport as a main mode of travel.

Walking and Cycling

Walking

3.20 Good quality footways are in place along all roads within the vicinity of the site. Street lighting and speed limit of 30mph is considered conducive for walking.

3.21 New Lane provides pedestrian footway from the Site to the centre of Havant and Havant train station.

3.22 According to guidelines issued by the Institute of Highways and Transportation (IHT), 2km is considered to be a sensible walking distance of the Site. The CIHT document 'Planning for Walking', April 2015 states that across Britain approximately 80% of journeys shorter than a mile (1.6km) are made wholly on foot. For journeys that are 1 to 2 miles long, 26% of journeys are made on foot.

3.23 As assessment of all facilities within 2km of the site has been undertaken taking into consideration the range of services that should be available to a residential development.

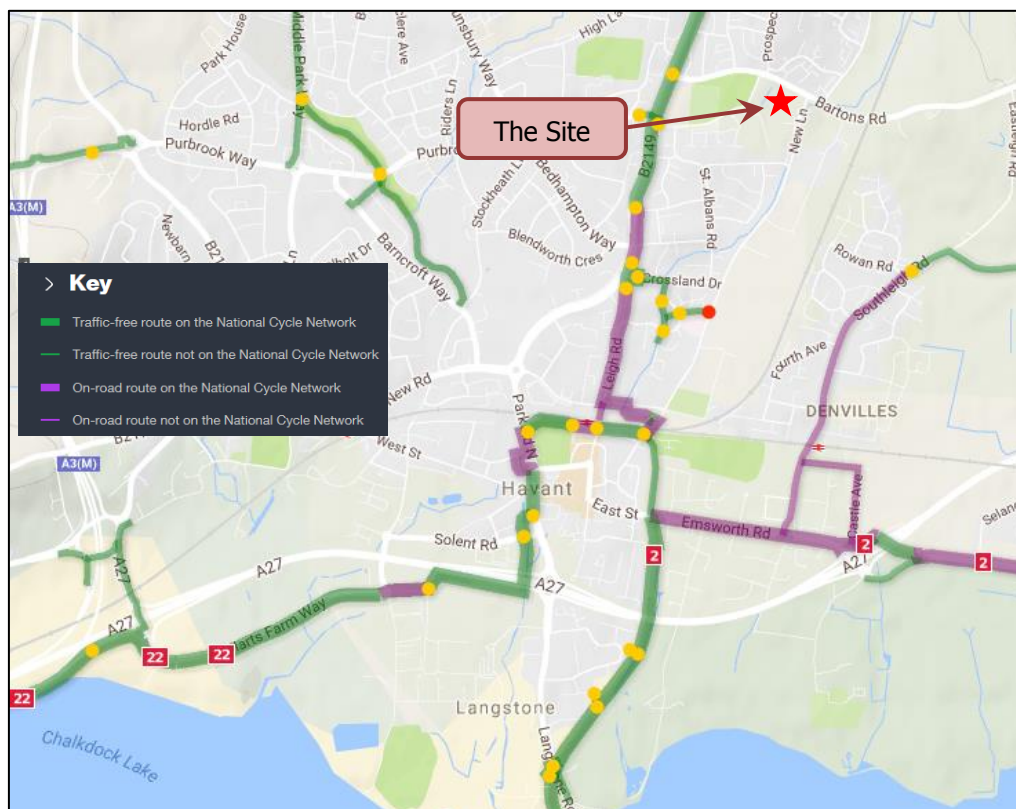
3.24 **Table 3.3** identifies the proximity of the site to key facilities with all distances measured from the centre of the site. An average walking speed of 1.4 m/s has been assumed as per IHT guidance.

- 3.25 The table includes approximate journey times based on travel on foot or by bicycle. The data in the table demonstrates that the site is geographically well positioned to connect future residents with employment opportunities, medical facilities, leisure facilities, schools and shops.

Cycling

- 3.26 The Sustrans website identifies one National Cycle Route in the vicinity of the Site. The National Route 22 connects London with Portsmouth then Brockenhurst via the Isle of Wight. This route can be accessed via Bartons Road and provides access to the centre of Havant and connection onto National Cycle Route 2 which allows access to Hayling Island. Additional routes are available including a partial traffic-free route between Havant and Waterlooville which gains access to the National Cycle Route 22.
- 3.27 The cycle routes within close proximity to the site are shown in **Figure 3.2**.

Figure 3.2: Cycle Routes





Accessibility to Local Services and Facilities

- 3.28 There are a number of key services and facilities that exist within walking and / or cycling distance of the proposed residential development site in order to minimise car journeys and promote sustainable travel.
- 3.29 As set out above, 2km is considered to be within a sensible walking distance of the site. With regards to cycling, relevant guidance states that cycling has the potential to substitute car journeys under 5km. For the purposes of this assessment, a distance of 2km has been used for both walking and cycling accessibility, which is well within relevant guidelines.
- 3.30 Services within a reasonable walking and / or cycling distance of a residential development should include:
- community buildings / local meeting places;
 - education and library services;
 - leisure and sports facilities;
 - health and social care services;
 - shop / market selling food and fresh groceries;
 - communication services, such as public internet access and post office;
 - bank and / or cash machine;
 - public house;
 - places of worship; and
 - access to public transport, pedestrian walkways and cycle networks.
- 3.31 A summary of services and facilities located within an accessible distance from the Site is provided in **Table 3.3**.

Table 3.3 Accessible Public Services and Facilities

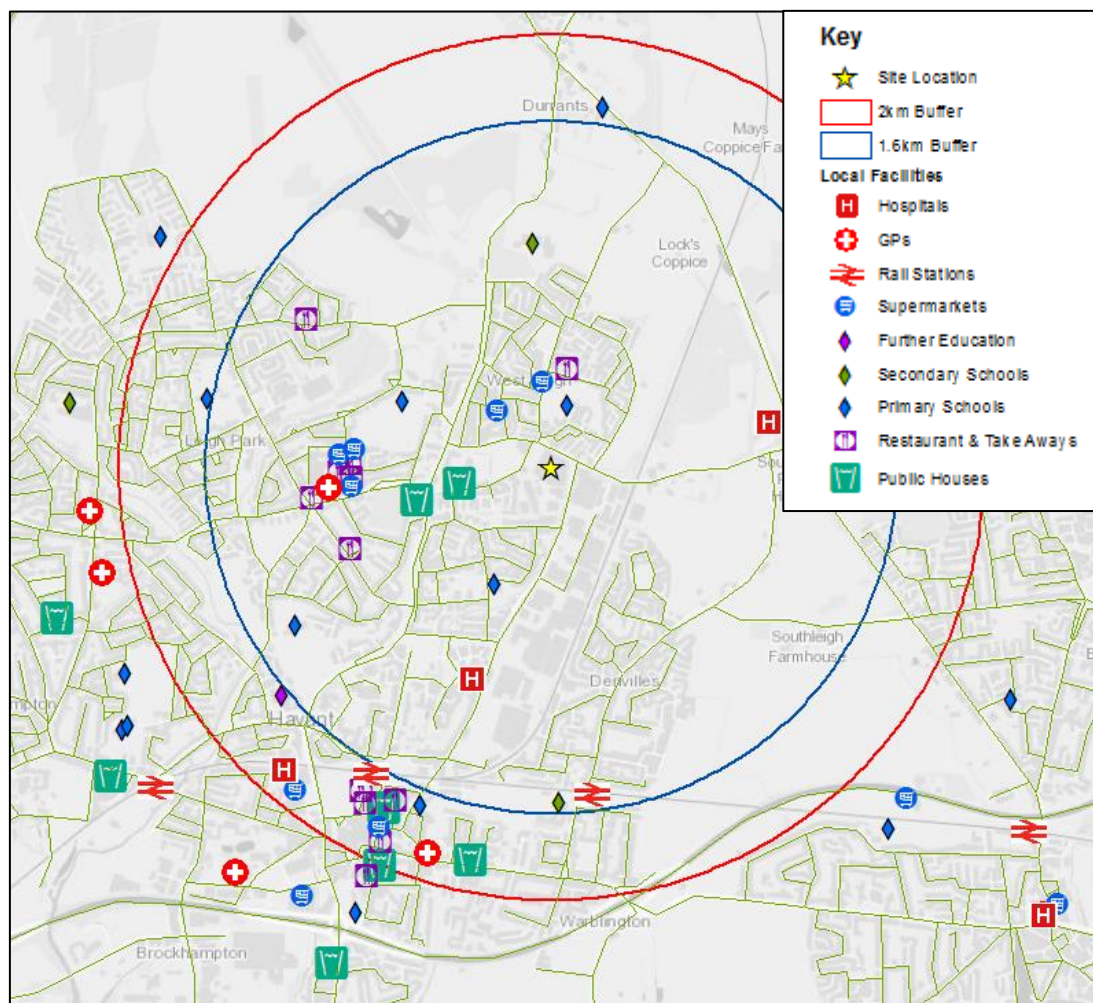
Service / Facility		Distance from Site (m)	Walking Time (min)	Cycling Time (min)
Education and Childcare Service	Sharps Copse Primary School	643	10	3
	St Alban's Primary School	956	12	3
	Havant Academy	970	12	3
Healthcare Services	Staunton Surgery	1,931	23	6
	Practice in the Park (Dental)	1,448	17	5
	Saint Alban's Church	150	2	1

Community Services	Post Office	1,287	17	6
Food and Groceries	The Cooperative Supermarket	482	7	2
	Tesco Metro	1,290	17	6
	Lidl	1,120	14	4
Transport	Railway Station	2,100	25	7
	Bartons Road Bus Stops	160	2	1
Leisure	Havant Leisure Centre	1,900	23	5
	The Westerleigh Public House	480	7	2
	Wyevale Garden Centre	470	6	2

Note: Distances have been measured from the centre of the site.

3.32 **Figure 3.4** shows the services around the site with a 1.6km and 2km buffer showing appropriate walking and cycling distances based on the IHT guidance.

Figure 3.3: Local Facilities



Local Highway Network

3.33 All roads described in detail in this section are identified in **Figure 3.4** overleaf.

Figure 3.4 Local Highway Network



Bartons Road

- 3.34 Bartons Road connects to the B2149 (Petersfield Road) to the west which allows access to the A27 in the south and the A3 in the north west. The east of Bartons Road connects to Comley Hill which provides access onto Horndean Road connecting to the A27 and Emsworth.
- 3.35 Bartons Road has a 30mph speed limit past the site, changing to 40mph approximately 190m to the east. Bartons Road provides footways on along its entirety with footways on both sides of the road between the site and Petersfield Road in the west. The road has regular street lighting along its length.



Martin Road

- 3.36 Martin Road runs from a priority junction with Bartons Road to the north past the Havant and Waterlooville Football Club and ends as a dead end. Residential roads connect to Martin Road to provide access to housing and St Albans Road allows access further south.
- 3.37 Martin Road is a single carriageway road, with a 30mph speed limit. Pedestrian footways are provided on both sides of the road and the road has regular street lights.

New Lane

- 3.38 New Lane runs from a priority junction with Bartons Road to the north to Fairfield Road in the south, New Lane provides access to the Havant Train Station car park as well as Oak Park Health Centre.
- 3.39 New Lane is a single carriageway road, with a 30mph speed limit. Pedestrian footways are provided along the length although these are not always on both sides of the road. Regular street lighting is also provided for the length of the road.

Traffic Survey Data

Traffic Flows

- 3.40 It is anticipated that the majority of the traffic from the site will head north onto Barton Road using the two accesses off Martin Road and New Lane. Therefore, manual classified counts (MCCs) were undertaken at the junctions of Barton Road / Martin Road and Barton Road / New Lane.
- 3.41 MCCs have also been undertaken at the existing entrance and exits to the site so that the existing traffic movements can be fully understood and analysed.

Traffic Speeds

- 3.42 ATC surveys were carried out over seven consecutive days to show average traffic speeds on Bartons Road, Martin Road and New Lane within the Site's surrounding area. **Table 3.4** shows the weekly average and 85th percentile speed for each ATC location.

Table 3.4 ATC Traffic Speed Results

ATC Location	Direction	7 Day	
		Average Speed (mph)	85 th Percentile Speed (mph)
Bartons Road, between junctions with Martin Road and New Lane	Eastbound	30.2	33.8
	Westbound	30.1	33.9
New Lane	Northbound	25.8	29.6
	Southbound	26.0	28.9
Martin Road	Northbound	27.2	31.3
	Southbound	27.1	32.2

- 3.43 The ATC speeds show that the average weekday speeds (between 10:00 and 16:00) are within or at the 30mph speed limit posted on all roads.
- 3.44 The 85th percentile along Bartons Road shows the speeds slight above the 30mph posted limit with 33.8mph in the eastbound and 33.9mph in the westbound.
- 3.45 The 85th percentile speeds along Martins Road are also slightly higher than the 30mph posted limit with 31.3 and 32.2 in the north and southbound respectively.

CCTV Traffic Turning Count Survey

- 3.46 WYG commissioned an independent traffic survey company, MHC Traffic, to carry out turning count surveys at three junctions within the site's surrounding area. The results of these surveys have been used as part of a junction capacity assessment included in **Section 6** of this report.

CCTV 30-Second Queue Length Survey

- 3.47 WYG commissioned an independent traffic survey company, MHC Traffic, to carry out 30-second queue length surveys at three junctions within the site's surrounding area. The results of these surveys have been used as part of a junction capacity assessment included in **Section 6** of this report.

Road Accident Analysis

- 3.48 The road collision data for the highway network within the site's vicinity was requested from Hampshire Police for the most recently available five-year period. The data obtained covered the period from 01/11/2011 to 31/10/2016 and is provided in full in **Appendix B**. According to Crashmap, no accidents have subsequently occurred in the study area in 2017.
- 3.49 The information provided by Hampshire Police is based on STATS19 police accident reports and refers to four categories of accidents:



- A fatal accident is an accident in which at least one person is fatally injured;
- A serious accident is one in which at least one person is seriously injured, but no-one suffers a fatal injury, and which is in one (or more) of the following categories:
 - an injury for which a person is detained in hospital as an in-patient; or
 - any or the following injuries (whether or not the person is detained in hospital): fractures, concussion, internal injuries, crushing, severe cuts and lacerations, severe general shock requiring treatment.
- A slight accident is one in which at least one person suffers slight injuries (for example: a sprain, bruise or cut which is not judged to be severe, or slight shock requiring roadside attention), but no-one is seriously injured, or fatally injured;
- A damage only accident is one in which zero people suffer an injury but there is still notable damage to property as a result of the collision.

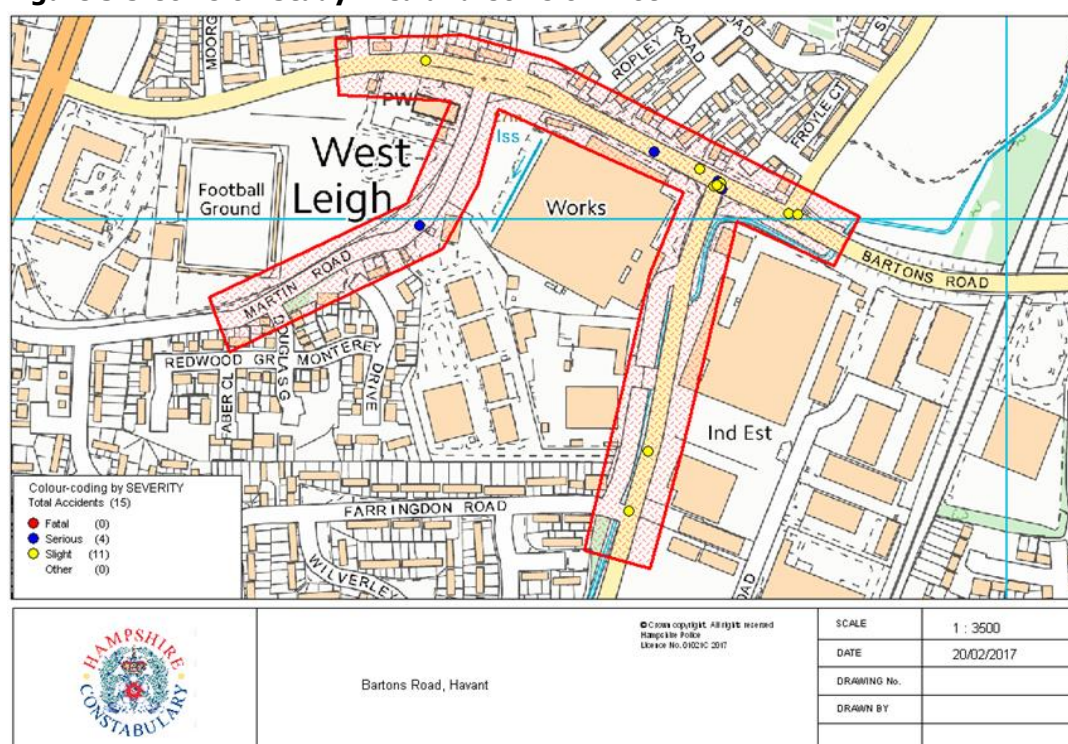
3.50 Over the review period a total of 15 accidents have been recorded of which 4 were classified as serious and the remaining 11 as slight. These accidents resulted in total of 4 serious casualties and 15 slight ones. No fatal injuries have occurred in the study area in the most recent 5-year time period.

3.51 All recorded accidents occurred at the following junctions or on the approach:

- Bartons Road / New Lane;
- Bartons Road / Wakefords Way;
- Bartons Road; and
- Martin Road.

3.52 **Figure 3.5** shows the locations of collisions within the study area.

Figure 3.5 Collision Study Area and Collision Plot



Area 1: Barton's Road / New Lane;

3.53 A total of ten accidents were recorded on the approach to the Barton's Road and New Lane junction. Three of these accidents was classified as serious and remaining seven as slight. A detailed analysis of the accidents at this location shows that:

- All accidents at this location occurred in daylight;
- Nine accidents occurred in dry weather conditions and one on the wet road surface;
- One accident was a result of a cyclist losing control of their bicycle on the road surface causing the rider to fall.
- In total the ten accidents resulted in nine casualties in vehicles (including motorcycles) and three casualties on bicycles.

3.54 In view of the above, it is considered that there are no specific issues with the design of the highway network that would appear to contribute to the recorded accidents at this location.

Area 2: Barton's Road / Wakefords Way;

3.55 A detailed analysis of the two accidents recorded at this location shows that:

- Both accidents at this location were classified as slight;
- Both accidents occurred during the daytime with one in dry conditions and the other in wet conditions;



- The first incident occurred due to a car attempting to overtake another vehicle and collides with oncoming vehicle. This resulted in three casualties with slight injuries.
- The second incident occurred when a car was travelling along Bartons Road when a bus turned left onto Bartons Road which resulted in the bus colliding with the rear of the car.

3.56 After a detailed review of the accidents causes, it is considered that there are no major deficiencies with the highway network in this area. All of the accidents were a direct result of driver error and as such cannot be attributed to any specific shortcoming in the highway network.

Area 3: Bartons Road;

3.57 A detailed analysis of the accident recorded at this location shows that:

- The accident occurred in the daytime on dry roads;
- The incident was classified as slight;
- One pedestrian was injured in the incident;
- The incident occurred due to a child letting go of parents hand and stepping into the road whilst the crossing was green for vehicles, the vehicle hit the child and caused slight injuries.

3.58 In view of the above, it is considered that there are no specific issues with the design of the highway network that would appear to contribute to the recorded accident at this location.

Area 4: Martin Road;

3.59 A detailed analysis of the accident recorded at this location shows that:

- The accident occurred in the dark on a dry road;
- The incident was classified as serious;
- The driver was the sole casualty in the incident;
- The incident occurred due to the driver swerving to avoid a cat in the road causing the vehicle to lose control and collide with metal railings.

3.60 In view of the above, it is considered that there are no specific issues with the design of the highway network that would appear to contribute to the recorded accident at this location.

Area 5: New Lane;

3.61 A detailed analysis of the accident recorded at this location shows that:

- The accident occurred in the daytime on a dry road;
- The incident was classified as slight;
- The driver was the sole casualty in the incident;



- The incident occurred as the rear of the vehicle kicks out causing the vehicle to veer and leave the carriageway, across the grass entering a ditch which resulted in the vehicle overturning. It is understood that the vehicle slipped on deposits in the road (eg oil, mud etc).

3.62 In view of the above, it is considered that there are no specific issues with the design of the highway network that would appear to contribute to the recorded accident at this location.

Accident / Collision Summary

3.63 The detailed analysis of the accident records outlined above has examined the various contributory causes of each of the accidents identified within four distinct clusters and has shown that the area examined does not contain any significant highway deficiencies which contribute significantly to the accidents recorded.

3.64 As such, it is considered that there are no existing highway safety issues that would prevent development of the site as currently proposed and that no specific off-site highway safety improvement measures are required.

Summary of Baseline Conditions

3.65 The site is located to the north east of Havant approximately 2.1km from the town centre. The site comprises of a broadly rectangular parcel of land bordered to the north by Bartons Road, New Lane borders the site to the East and Martin Road is to the West. The south of the site is bordered by industrial units and associated car parks.

3.66 The nearest bus stops are located on Bartons Road within 150m of the site accesses. Both the eastbound and westbound stops are a pole and flag arrangement.

3.67 The review of bus services and frequency highlights weekday, Saturday and Sunday services are of a volume that helps to promote the accessibility of the site.

3.68 The site is approximately 1.9km from Havant train station which provides services to London Waterloo, Portsmouth, Chichester and Southampton.

3.69 Good quality footways are in place along all roads within the vicinity of the site. Street lighting and speed limit of 30mph is considered conducive for walking.

3.70 There are few defined cycle routes provided within close proximity of the site however given the 30 mph speed limit on roads within the site's vicinity and that many of the roads are residential in nature it is considered reasonable that cyclists would be comfortable cycling in the carriageway.

3.71 The site is accessed via New Lane and Martin Road, both of these roads connect into Bartons Road to the north which is anticipated to take the majority of the traffic produced by the site.



- 3.72 Given the location of the site, it is considered likely that its principal traffic effects will occur at three key junctions, these have been surveyed to understand the existing traffic conditions.
- 3.73 The road collision data for the highway network within the site's vicinity was requested from Hampshire Police for the most recently available five-year period. The data obtained covered the period from 01/11/2011 to 31/10/2016.
- 3.74 The detailed analysis of the accident records has examined the various contributory causes of each of the accidents identified within four distinct clusters and shows that the area examined does not contain any significant highway deficiencies which contribute significantly to the accidents recorded.
- 3.75 As such, it is considered that there are no existing highway safety issues that would prevent development of the site as currently proposed and that no specific off-site highway safety improvement measures are required.



4 Development Proposals

Introduction

- 4.1 This section of the TA introduces and outlines the development proposals for the Site. It includes a description of the proposed land use and proposed access arrangements by all modes.

Development Details

- 4.2 An application for the Site is being submitted for a mixed-use development, including up to 100 new residential dwellings, of which at least 30% will be affordable homes; 2,860sqm of commercial space and all associated development including accesses and car parks.
- 4.3 The residential quantum of the development can be seen in **Table 4.1**.

Table 4.1: Residential Quantum

Unit Size and Type	Number of Units
1-bedroom Apartment	29
2-bedroom Apartment	30
2-bedroom House	17
3-bedroom House	19
4-bedroom House	4

- 4.4 The commercial aspect of the development is approximately 2,860sqm.

Vehicle Access

- 4.5 Three vehicle accesses are being proposed. The accesses for the residential aspect of the development will be via Martin Road whilst the commercial traffic will use an access onto New Lane.
- 4.6 Both the Martin Road and New Lane accesses will provide adequate space for refuse and emergency vehicles.

Pedestrians and Cycle Access

- 4.7 The Martin Road and New Lane will both have provisions for pedestrians and cyclists to allow safe access in and out of the site.



Car & Cycle Parking Standards

- 4.8 There will be separate car parks for the residential and commercial areas of the development. The car parking will be created in line with the SPD adopted by HBC.

Recommended Parking Provision

- 4.9 The provision of car and cycle parking for the proposed development will be provided in accordance with the parking standards detailed in **Section 2**.
- 4.10 The residential development quantum can be seen in **Table 4.1** and the resulting required number of spaces in addition to the required commercial spaces can be seen in **Table 4.2**.

Table 4.2: Number of Parking Spaces

Development Type	Number of Units/Floor space	Minimum Spaces per unit	Minimum Number of Spaces	Number of Spaces Provided
1 Bed units – unallocated space	29	0.9 spaces	26.1	154
2 Bed units – unallocated space	30	1.3 spaces	39	
2 Bed units – allocated space	17	2 spaces	34	
3 Bed units – allocated space	19	2 spaces	38	
4 Bed units – allocated space	4	3 spaces	12	
Residential Space	99	-	150	
Commercial Space	2,860sqm	1 space per 45 sqm	64	74
Total				228

- 4.11 The residential parking will be situated in suitable locations adjacent or close to dwellings and will be designed in line with MfS and DMRB guidelines.
- 4.12 The parking for the commercial aspect of the development will be located in close proximity to the commercial units. Disabled people's car parking spaces should be provided in a ratio of 5% of the total allocation, resulting in a total of 4 spaces.
- 4.13 Cycle parking will also be provided for both land uses based on the guidance set out in the SPD. **Table 4.3** shows the requirements for the cycle parking.



Table 4.3: Cycle Parking Provisions

Development Type	Number of Units/Floor space	Recommended Spaces	Number of Spaces
1 Bed units – unallocated space	29	1	29
2 Bed units – unallocated space	30	2	60
2 Bed units – allocated space	17	2	34
3 Bed units – allocated space	19	2	38
4 Bed units – allocated space	4	2	8
Residential (Visitor)		20% of long-term cycle parking	34
Residential Space	99		203
Commercial	2,860sqm	1 stand per 350 sqm GEA note	9
Commercial (Visitor)		1 stand per 500 sqm GEA	6
Commercial			15
Total			218

- 4.14 The cycle parking standards for houses with 2 or more bedrooms is 2 spaces per dwelling. However this can be accommodated by adequately sized garages or lockable sheds within the property boundary. The masterplan includes garages for the four bedroom properties and suitably sized gardens for the other houses which has space for a shed large enough to fit bicycles within.
- 4.15 All cycle parking will be sheltered and secure and will be designed in accordance with current guidance. The commercial cycle parking will be located close to the entrance of the building and will be of suitable design similar to that of a Sheffield Stand.

5 Multi-Modal Trip Assessment and Traffic Distribution

Introduction

- 5.1 A multi-modal trip generation assessment has been undertaken to assess the potential impact of the proposed development and demonstrate that it can be accommodated on the existing highway network. The trip generation for the proposed residential development has been calculated using trip rates from the industry standard TRICS trip rate database for the UK.

Assessment Approach and Methodology

- 5.2 For the purposes of assessing the likely trip generation characteristics of the proposed development, potential vehicle trip rates have been identified to be applied to the proposed development described in **Chapter 4**, to identify trip generation characteristics.
- 5.3 Owing to the residential nature (Use Class C3) of the proposal, WYG has undertaken a review of the industry-standard TRICS trip rate database in order to derive trip rates from survey sites with similar characteristics (e.g. sites excluding Greater London and those with similar numbers of units/beds). This review was in accordance with TRICS Good Practice Guide 2013.
- 5.4 A review of the commercial trips has also been undertaken, the reason for this is two-fold. Firstly, to remove any existing trips from the existing land use. Secondly, to calculate the number of trips being produced by the proposed commercial element of the site. As with the residential aspect, the latest available TRICS database was used and survey sites with similar characteristics were chosen in accordance with TRICS Good Practice Guide 2013.
- 5.5 The approach and methodology followed in the multi-modal trip assessment is consistent with the DfT / DCLG *Guidance on Transport Assessment (GTA)*, revised version, published in April 2010.

TRICS Survey Site Selection

- 5.6 WYG has undertaken a review of the TRICS database for the following uses:
- Affordable/Local Authority Houses
 - Houses Privately Owned
 - Employment – Office
- 5.7 For Affordable/Local Authority Houses the following criteria have been used:
- Sites of 20 to 100 units only;



- Surveys from 01/01/2008 to 21/10/2015 only;
- Weekdays only; and
- Sites within Edge of Town Centre and Suburban Area only.

5.8 The following 'Affordable/Local Authority Houses' survey sites were selected:

- CH-03-B-01, Wordsworth Crescent, Blacon, Chester (80 units);
- GM-03-B-01, Newbold, Rochdale (43 units);
- NB-03-B-01, Westlea, Bedlington (97 units);
- WM-03-B-01, Yorkminter Drive, Chelmsley Wood, Birmingham (97 units);
- WY-03-B-02, Whiteacre Street, Deighton, Huddersfield (54 units); and
- WY-03-B-03, Lincoln Green Road, Leeds (29 units).

5.9 For Houses Privately Owned the following criteria have been used:

- Sites in England and Scotland only;
- Sites of 20 to 100 units;
- Surveys from 01/01/2008 to 13/11/2015;
- Weekdays only; and
- Sites within Edge of Town Centre, Neighbourhood Centre and Suburban Area only.

5.10 Using these criteria, the following 'Houses Private Owned' survey sites were selected:

- CB-03-A-03, Hawkeshead Avenue, Workington (49 units);
- CB-03-A-04, Moorclose Road, Workington (82 units);
- CH-03-A-09, Greystoke Road, Hurdsfield, Macclesfield (24 units);
- DC-03-A-01, Isaacs Close, Poole (51 units);
- DC-03-A-08, Hurstdene Road, Castle Lane West, Bournemouth (28 units);
- DV-03-A-01, Bronshill Road, Torquay (37 units);
- DV-03-A-03, Lower Brand Lane, Honiton (70 units);
- EA-03-A-01, Talisker Avenue, Kilmarnock (39 units);
- ES-03-A-02, South Coast Road, Peacehaven (37 units);
- FA-03-A-01, Mandela Avenue, Falkirk (37 units);
- GM-03-A-10, Butt Hill Drive, Prestwich, Manchester (29 units);
- HC-03-A-17, Canada Way, Liphook (36 units);
- LN-03-A-03, Rookery Lane, Boultham, Lincoln (22 units);
- NF-03-A-01, Yarmouth Road, Caister-on-Sea (27 units);
- NF-03-A-02, Dereham Road, Norwich (98 units);
- NY-03-A-07, Craven Way, Boroughbridge (23 units);



- NY-03-A-08, Nicholas Street, York (21 units);
- NY-03-A-09, Grammar School Lane, Northallerton (52 units);
- NY-03-A-10, Boroughbridge Road, Ripon (71 units);
- NY-03-A-11, Horsefair, Boroughbridge (23 units);
- PK-03-A-01, Tullylumb Terrance, Gornhill, Perth (36 units);
- PS-03-A-02, Gunrog Road, Welshpool (28 units);
- SC-03-A-04, High Road, Byfleet (71 units);
- SH-03-A-05, Sandcroft, Sutton Hill, Telford (54 units);
- SM-03-A-01, Wembdon Road, Northfield, Bridgwater (33 units);
- SY-03-A-01, A19 Bentley Road, Bentley Rise, Doncaster (54 units);
- TW-03-A-03, Station Road, Backworth, Newcastle (33 units); and
- WS-03-A-05, Upper Shoreham Road, Shoreham By Sea (48 units).

5.11 For Employment – Office the following criteria have been used:

- Sites in England and Scotland only;
- Sites of 500 to 5000sqm only;
- Surveys from 01/01/2008 to 26/11/2015 only;
- Weekdays only; and
- Sites within Edge of Town Centre and Suburban Area only.

5.12 Using these criteria, the following 'Flats Privately Owned' survey sites were selected:

- DH-02-A-01, Brinkburn Road, Darlington (3372sqm);
- DH-02-A-02, Durham Road, Bowburn, Durham (2000sqm);
- HI-02-A-01, Highlander Way, Inverness (804sqm);
- KC-02-A-07, Kavelin Way, Henwood Ind. Estate, Ashford (2525sqm);
- KC-02-A-08, St Michael's Close, Clay Wood, Aylesford (3168sqm);
- LC-02-A-09, Furthergate, Blackburn (2600sqm);
- SC-02-A-15, Boxgrove Road, Guildford (1896sqm);
- TW-02-A-04, Earlesway, Team Valley Trad. Est., Gateshead (2500sqm);
- TW-02-A-05, Delta Bank Road, Metro Riverside Park, Gateshead (1500sqm);
- WM-02-A-04, Bournville Lane, Birmingham (1800sqm); and
- WY-02-A-03, Victoria Road, Headingley, Leeds (2696sqm).

5.13 Additional survey site selection information is included in the TRICS outputs in **Appendix C** of this report.



TRICS Multi Modal Trip Generation

- 5.14 Multi-modal trip generation was completed using the sites listed above for the two residential uses as well as the commercial usage.
- 5.15 The trip generation that was obtained covered the AM peak (08:00-09:00) and the PM peak (17:00-1800). The vehicle trip rates can be seen in **Table 5.1** below.

Table 5.1: Vehicle Trip Rates

Development Type	AM Peak (0800-0900)		PM Peak (1700-1800)	
	Arrival	Departure	Arrival	Departure
Affordable/Local Authority Houses (per dwelling)	0.16	0.28	0.29	0.207
Houses Privately Owned (per dwelling)	0.159	0.4	0.366	0.172
Employment – Office (per 100sqm)	2.132	0.286	0.181	2.027

- 5.16 The resultant vehicular trips for the development in the peak hours can be seen in **Table 5.2** below:

Table 5.2: Vehicle Trip Generation

Development Type	Number of Units/SQM	AM Peak (0800-0900)		PM Peak (1700-1800)	
		Arrival	Departure	Arrival	Departure
Affordable/Local Authority Houses	30	5	8	9	6
Houses Privately Owned	70	11	28	26	12
Employment – Office	2860	61	8	5	56
Total		77	44	40	74

- 5.17 The above shows that there will be 121 two-way trips in the AM peak and 114 two-way trips in the PM peak.

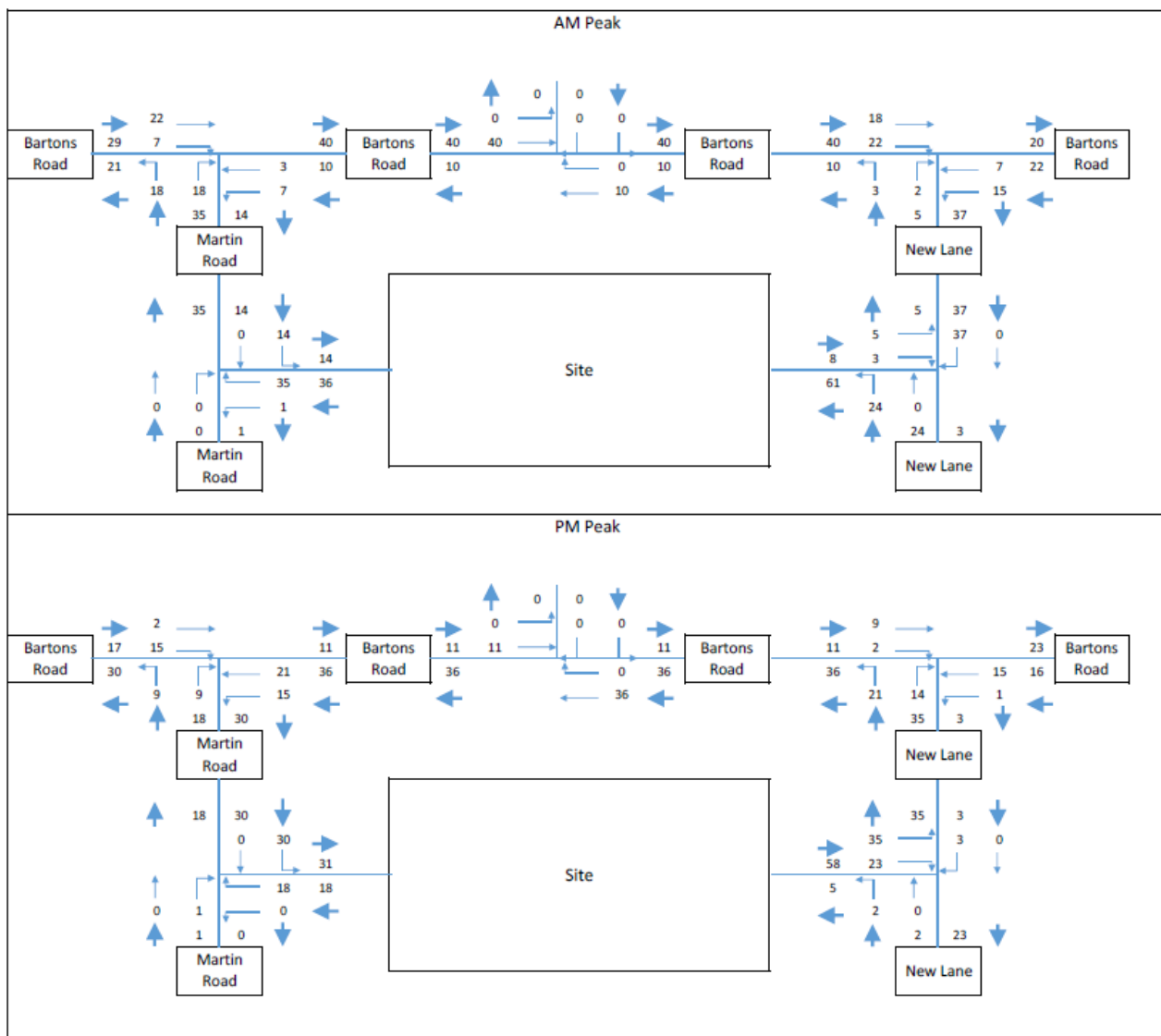
Development Traffic Distribution and Assignment

- 5.18 This section of the report describes the methodology used to determine the distribution of development traffic across the local road network study area, which comprises the proposed accesses on Martin Road and New Lane as well as the east to west link of Bartons Road.

Methodology

- 5.19 The level of trips being produced by the site is relatively low and therefore the existing flow proportions have been used to calculate the development flows.
- 5.20 This used the manual classified counts to produce a flow diagram and based on the turn proportion at each junction the development traffic was assigned based on the total trip generation from each site access.
- 5.21 The flow diagram showing the proposed development flow for the AM and PM peak can be seen in **Figure 5.1**.

Figure 5.1: Development Trip Distribution





6 Highway Impact Assessment

Introduction

- 6.1 As part of the highway capacity assessment, four junctions have been modelled to identify the potential future traffic impact of the proposed mixed-use development in the future year of 2023.
- 6.2 The following junctions have been assessed:
- Junction 1: Martin Road / Bartons Road
 - Junction 2: New Lane / Bartons Road
 - Junction 3: Martin Road / Site Access
 - Junction 4: New Lane / Site Access

Assessment Periods

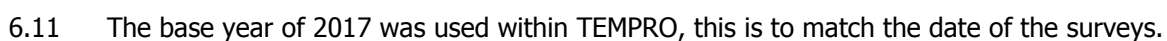
- 6.3 The junction models have been developed for both morning (AM) and evening (PM) peak hours for a neutral weekday.
- 6.4 The traffic survey data was used to identify the current peak hours of the local road network.
- 6.5 The peak periods identified for the junction assessments are:
- Weekday (AM network peak) – 08:00-09:00; and
 - Weekday (PM network peak) – 16:00-17:00.

Base Year Traffic Data

- 6.6 As outlined in **Chapter 3**, a series of traffic surveys were carried out by independent third party surveyor companies. A concise description of these along with the time periods recorded is included in the following:
- A CCTV survey of classified vehicle turning movements at four junctions on Wednesday 8th March 2017. This provided data between 07:00 and 10:00 in the AM and 16:00 and 19:00 in the PM.
 - A 30-second queue length survey on all arms of each of the four surveyed junctions for same periods specified above; and
 - Three Automatic Traffic Count (ATC) two-way surveys where located within the study area, which recorded volume and speed traffic for a period of seven days starting Wednesday 8th March 2017.

- ## Traffic Growth

- ### Figure 6.1: MSOA Areas





6.12 **Table 6.1** below presents the average growth factors taken from the MSOA area for the two forecast years.

Table 6.1: TEMPRO Growth Factors

Time Period		Growth Factor
2017 - 2023	AM Peak Hour	1.0792
	PM Peak Hour	1.07215

6.13 The growth factors represent a robust assessment method in terms of future traffic levels.

Assessment Scenarios

6.14 In view of the above, the following traffic scenarios were developed for junction capacity testing:

- 2017 Base
- 2023 Do Minimum (without development)
- 2023 Do Something (with development)

6.15 These test scenarios provide an adequate method which to assess the traffic impacts of the masterplan in isolation at key junctions within the study area, and to provide a comparative assessment of the likely traffic situation when the proposed development has been fully built out. Traffic flow diagrams for each scenario are provided in **Appendix D**.

Junction Validation

6.16 In order to ensure that the 2017 Base models were an accurate reflection of the existing situation a comparison was made between the modelled queues and the observed average queue survey. Where required adjustments have been made to ensure that the models are reflective of the surveyed data.

6.17 **Table 6.2** summarises a comparative assessment of the observed 30-second queue averages and maximums across the peak hours and the modelled queues from Junctions 9 after models had been corrected. As can be observed, the average modelled queues are broadly consistent with the observed average queues.

Table 6.2: Junctions 9 Results Comparison

Junction 1: Martin Road / Bartons Road / Prospect Lane							
Arm No.	Arm	AM Peak (0800-0900)			PM Peak (1600-1700)		
		Observed – 30 Sec		Modelled	Observed – 30 Sec		Modelled
		Average	Maximum		Average	Maximum	
1	Barton Road (W)	2.1	6	0.5	0.9	2	0.5
2	Prospect Lane	2.7	9	1.8	1.8	3	1.0
3	Barton Road (E)	1.7	3	0.5	1.5	2	0.5



4	Martin Road	2.2	4	1.0	1.9	4	1.0
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Junction 2: New Lane / Bartons Road							
Arm No.	Arm	AM Peak (0800-0900)			PM Peak (1700-1800)		
		Observed – 30 Sec		Modelled	Observed – 30 Sec		Modelled
		Average	Maximum		Average	Maximum	
1	Barton Rd (E)	0	0	0	0	0	0
2	New Lane	4.5	7	2.7	4.3	8	6.7
3	Barton Rd (W)	5.7	9	3.1	1.4	4	1.3

Junction 3: Martin Road / Site Access							
Arm No.	Arm	AM Peak (0800-0900)			PM Peak (1700-1800)		
		Observed – 30 Sec		Modelled	Observed – 30 Sec		Modelled
		Average	Maximum		Average	Maximum	
1	Martin Rd (N)	0	0	0	0	0	0
2	Site Access	0	0	0	0.3	1	0
3	Martin Rd (S)	0	0	0	0	0	0

Junction 4: New Lane / Site Access							
Arm No.	Arm	AM Peak (0800-0900)			PM Peak (1700-1800)		
		Observed – 30 Sec		Modelled	Observed – 30 Sec		Modelled
		Average	Maximum		Average	Maximum	
1	New Lane (S)	0	0	0	0	0	0
2	Site Access	0.3	1	0.5	0.3	1	0.5
3	New Lane (N)	0.3	1	0.5	0.1	1	0

6.18 It can be observed that throughout all the models across both the peak hours the modelled queues are broadly consistent with the observed average queues and therefore the models are fit for purpose.

Junction Assessment Results

6.19 This section of the TA considers the off-site junction implications of the proposed mixed use development at the site of the Colt Industrial Site. The following junctions were assessed:

- Junction 1: Martin Road / Bartons Road Priority Junction
- Junction 2: New Lane / Bartons Road Priority Junction
- Junction 3: Martin Road / Site Access Priority Junction
- Junction 4: New Lane / Site Access Priority Junction



6.20 Junction capacity assessments were undertaken under the loading of current traffic flows (2017), 2023 do minimum and 2023 do something scenarios. The forecast years have been applied growth factors as extracted from TEMPRO v7.2.

6.21 As outlined previously, the scenarios that were tested are:

- 2017 Base
- 2023 Do Minimum (without development)
- 2023 Do Something (with development)

Junction 1

6.22 The Martin Road and Bartons Road priority junction has been modelled using Junctions 9. The full output results are contained in **Appendix E** and are summarised in the following **Table 6.3**.

Table 6.3 Model Results for Junction 1

Scenario	Arm	AM			PM		
		Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2017 Base	Martin Lane (left turn)	0.1	7	0.11	0.2	7	0.13
	Martin Lane (right turn)	0.1	10	0.13	0.1	10	0.10
	Bartons Rd (E)	0.1	6	0.13	0.1	6	0.09
	Prospect Ln (left turn)	0.1	8	0.09	0.1	7	0.07
	Prospect Ln (right turn)	0.3	11	0.22	0.2	10	0.16
	Barons Rd (W)	0.2	5	0.13	0.1	5	0.10
2023 DM	Martin Lane (left turn)	0.1	7	0.12	0.2	7	0.15
	Martin Lane (right turn)	0.2	10	0.14	0.1	11	0.12
	Bartons Rd (E)	0.2	7	0.14	0.1	6	0.10
	Prospect Ln (left turn)	0.1	8	0.10	0.1	7	0.07
	Prospect Ln (right turn)	0.3	12	0.25	0.2	11	0.18
	Barons Rd (W)	0.2	5	0.15	0.1	6	0.11
2023 DS	Martin Lane (left turn)	0.2	7	0.15	0.2	8	0.17
	Martin Lane (right turn)	0.2	11	0.19	0.2	12	0.14
	Bartons Rd (E)	0.2	7	0.14	0.1	6	0.10
	Prospect Ln (left turn)	0.1	9	0.10	0.1	7	0.07
	Prospect Ln (right turn)	0.3	12	0.26	0.2	11	0.18
	Barons Rd (W)	0.2	6	0.16	0.2	6	0.13

6.23 **Table 6.3** shows that the priority junction of Martin Road and Bartons Road is adequate to accommodate all expected traffic growth up to 2023 and including the proposed development. The junction has adequate spare capacity with the highest RFC being on Prospect Lane at 0.26.



Junction 2

6.24 The New Lane and Bartons Road priority junction has been modelled using Junctions 9. The full output results are contained in **Appendix F** and are summarised in the following **Table 6.4**.

Table 6.4 Model Results for Junction 2

Scenario	Arm	AM			PM		
		Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2017 Base	New Lane (left turn)	0.2	8	0.18	0.5	11	0.33
	New Lane (right turn)	0.4	12	0.29	1.2	17	0.54
	Barton Rd (W)	0.8	7	0.34	0.4	7	0.18
2023 DM	New Lane (left turn)	0.3	8	0.20	0.6	12	0.37
	New Lane (right turn)	0.5	13	0.33	1.5	21	0.60
	Barton Rd (W)	1.0	8	0.38	0.4	7	0.20
2023 DS	New Lane (left turn)	0.3	8	0.21	0.8	14	0.44
	New Lane (right turn)	0.6	15	0.36	1.9	24	0.66
	Barton Rd (W)	1.3	9	0.45	0.4	7	0.21

6.25 **Table 6.4** shows that the priority junction of New Lane and Bartons Road is adequate to accommodate all traffic including the proposed development. The junction has spare capacity in all arms in both peaks with the highest RFC on New Lane in the PM peak at 0.66 resulting in a 24 second delay.

Junction 3

6.26 The Martin Road and proposed site access priority junction has been modelled using Junctions 9. The full output results are contained in **Appendix G** and are summarised in the following **Table 6.5**.

Table 6.5 Model Results for Junction 3

Scenario	Arm	AM			PM		
		Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2017 Base	Site Access	0.0	0	0.00	0.0	6	0.03
	Martin Rd (S)	0.0	6	0.01	0.0	0	0.00
2023 DM	Site Access	0.0	0	0.00	0.0	7	0.03
	Martin Rd (S)	0.0	6	0.01	0.0	0	0.00
2023 DS	Site Access	0.1	7	0.07	0.1	7	0.04
	Martin Rd (S)	0.0	0	0.00	0.0	6	0.00



6.27 **Table 6.5** shows that the junction is operating with a large amount of spare capacity with the RFC reaching a high of 0.07.

Junction 4

6.28 The New Lane and the proposed site access priority junction has been modelled using Junctions 9. The full output results are contained in **Appendix H** and are summarised in the following **Table 6.6**.

Table 6.6 Model Results for Junction 4

Scenario	Arm	AM			PM		
		Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2017 Base	Site Access	0.0	7	0.01	0.0	7	0.02
	New Lane (N)	0.1	4	0.04	0.0	5	0.00
2023 DM	Site Access	0.0	7	0.02	0.0	7	0.03
	New Lane (N)	0.1	4	0.05	0.0	5	0.00
2023 DS	Site Access	0.0	6	0.01	0.1	7	0.11
	New Lane (N)	0.2	5	0.09	0.0	5	0.01

6.29 **Table 7.6** shows that the junction of New Lane and the site access has adequate capacity with the highest RFC being in the Do Something PM Peak with 0.11 on the Site Access. This equates to a 7 second delay.

Modelling Conclusions

6.30 The local highway junctions in the vicinity of the proposed development have been tested for capacity and impact on delay under the loading of the following traffic scenarios:

- 2017 Base
- 2023 Do Minimum (without development)
- 2023 Do Something (with development)

6.31 The assessment concludes that all the junctions have spare capacity in both the do minimum and do something scenarios therefore the impact of the development is minimal on the wider road network.

6.32 The site accesses both show additional capacity and are therefore more than adequate to accommodate the expected development trips.



7 Sustainability and Connectivity Overview

- 7.1 This section of the report outlines the sustainable transport strategy ('the Strategy') for the proposed development which will help ensure the safe, efficient and sustainable movement of people. The Strategy ensures that the site is connected to existing facilities and the surrounding area by modes other than the private car.
- 7.2 It seeks to promote safe, convenient and feasible access to and from the Site and to encourage the use of more sustainable modes of travel in order to reduce private car usage. It also seeks to create a safe environment within the Site and minimise conflict between road users and pedestrians.
- 7.3 The Strategy recognises the opportunity and the importance for Site users to benefit from the Site's proximity to key services in Havant.
- 7.4 Key measures to increase the uptake of sustainable travel modes will include:
- Adequate and secure space for the storage of pedal cycles in dwellings or garages associated with dwellings;
 - Provision of an uncontrolled pedestrian crossing facility incorporating a traffic island on at the proposed site access junction to facilitate pedestrian desire lines to the bus stops;
 - Operation of long term travel management strategy in the form of a Travel Plan.

The Sustainable Transport Strategy

Public Transport Users

- 7.5 The Strategy includes the following 'hard' and 'soft' measures to encourage residents to use local public transport services:
- Provision of direct pedestrian routes to existing bus stops;
 - Promotion of public transport usage and awareness of the accessibility of the Site by public transport through marketing material distributed to new residents on occupation; and
 - Promotion of the benefits of public transport usage in comparison to private car use in terms of financial and environmental benefits.

Pedestrians

- 7.6 The proposed development includes the following interventions and measures to promote safe and convenient access to the Site by walking:



- Provision of dropped kerbs and tactile paving to form an uncontrolled crossing across the proposed site access junction;
- Provision of high quality, safe pedestrian routes throughout the internal layout of the development, including good quality materials for footway construction, lighting columns and tactile paving;
- Promotion of walking and awareness of pedestrian routes through and close to the Site through information packs distributed to residents on occupation; and
- Promotion of the health and environmental benefits of walking compared with other modes of transport.

Cyclists

7.7 The proposed development includes the following interventions and measures to promote safe and convenient access to the Site by cycling:

- Provision of adequate space for the storage of cycles within dwellings or provision of space within garages;
- Promotion of cycling and awareness of cycle routes close to the Site through information packs distributed to residents on occupation; and
- Promotion of the health and environmental benefits of cycling compared to private car usage.

Car Users

7.8 The strategy caters for safe and efficient car and vehicle access to and from the Site. It is recognised that for disabled residents, who may find it difficult to access bus services, car travel will remain the most viable option for certain trips. The Strategy, while promoting and supporting sustainable modes, also takes into account the needs of a car owner.

7.9 The Strategy includes the following measures for car based travel:

- Site access and internal road network which is suitable for accommodating general traffic movements;
- Providing secure car parking in the form of small parking courts for flats or driveways and garages for larger homes; and
- Provide an appropriate number of disabled parking spaces where required.



Travel Awareness & Marketing

- 7.10 The physical measures used to provide for different means of transport will be underpinned and supported by a number of “soft” measures aimed at increasing awareness of more sustainable modes of travel. This information will be available to all residents at the site. These will include:
- Provision of up-to-date information regarding public transport facilities, including route maps, timetables and pricing information; and
 - Provision of up-to-date information on cycling and pedestrian facilities at the Site, including maps and destinations within reasonable walking distance.

Summary

- 7.11 This section of the TA shows that there are sustainable travel modes on offer for residents at the site. The site will be designed with sustainable travel modes in mind, including walking and cycling through the site.
- 7.12 Travel awareness and marketing will be promoted at the proposed development to ensure that residents are fully informed about sustainable travel in the local area.



8 Summary and Conclusions

Summary

- 8.1 WYG Transport has been appointed by the Homes England (the 'Applicant') to prepare a Transport Assessment (TA) to support an outline planning application for the proposed development of the former Colt International Site (the 'Site').
- 8.2 The site is located in north east Havant and lies approximately 2.1km north east of Havant town Centre. The site currently consists of industrial units and associated car parks.
- 8.3 The site currently consists of industrial buildings and associated car parks which gain access via priority junctions on Martin Road and New Lane. It is anticipated that the new residential aspect of the development will access via Martin Road whilst the commercial aspect will access the site via New Lane.
- 8.4 The site is highly accessible from a pedestrian perspective with good quality footways in place along all roads within the vicinity of the site. Street lighting and speed limit of 30mph is considered conducive for walking.
- 8.5 The nearest bus stops to the site are located on Bartons Road to the north of the site and are within 400m of the entrance on both New Lane and Martin Drive.
- 8.6 The closest rail station is Havant which is within 1.9km. Warblington is a similar distance away and is on the same line as Havant.
- 8.7 There are few defined cycle routes provided within close proximity of the site however given the 30 mph speed limit on roads within the site's vicinity and that many of the roads are residential in nature it is considered reasonable that cyclists would be comfortable cycling in the carriageway.
- 8.8 An application for the site is being submitted for a mixed-use development, including up to 100 new residential houses including at least 30% affordable, 2,860sqm of commercial space and all associated development including accesses and car parks.
- 8.9 Three vehicle accesses are being proposed. The accesses for the residential aspect of the development will be via Martin Road whilst the commercial traffic will use an access onto New Lane.
- 8.10 Both the Martin Road and New Lane accesses will provide adequate space for refuse and emergency vehicles.



- 8.11 The Martin Road and New Lane will both have provisions for pedestrians and cyclists to allow safe access in and out of the site.
- 8.12 There will be separate car parks for the residential and commercial areas of the development. The car parking will be created in line with the SPD adopted by HBC.
- 8.13 The residential parking will be situated in suitable locations adjacent or close to dwellings and will be designed in line with MfS and DMRB guidelines.
- 8.14 A multi-modal trip generation assessment has been undertaken to assess the potential impact of the proposed development and demonstrate that it can be accommodated on the existing highway network.
- 8.15 As part of the highway capacity assessment, four junctions have been modelled to identify the potential future traffic impact of the proposed mixed-use development in the future year of 2023.

Conclusions

- 8.16 Through the course of the preparation of the Transport Assessment, WYG has demonstrated that the proposed development at Colt International, Havant is consistent with sustainable objectives of national transport planning policy guidance and with local policy requirements.
- 8.17 The Site is well connected to local facilities and public transport and is within walking and cycling distance of key services including schools, retail and leisure facilities.
- 8.18 No highway capacity issues have been raised in this report and a robust assessment has demonstrated that development traffic will have a negligible impact on existing junctions in the vicinity of the Site.
- 8.19 It is concluded that the proposed development at the former Colt International site, Havant will present a negligible impact on the local highway network, and is therefore acceptable on highways and transport terms.



Appendices



Appendix A

Stagecoach Bus Route Map

Welcome to your
Portsmouth,
Havant and
Waterlooville
network





Appendix B

Road Collision Data

Accidents between dates **01/11/2011 and 31/10/2016** (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents
within selected Polygons -HC - RPU Statistics Request ("AW
BARTON ROAD")

Selected Polygon:AW BARTON ROAD

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW BARTON ROAD")

120195659 23/05/2012 Time 0800 Vehicles 2 Casualties 2 Slight
E:472731 N: 108030 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 2	Possible
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING W ALONG BARTONS ROAD COLLIDED WITH THE OFFSIDE OF VEH 2 (VAN) WHICH TURNED RIGHT FROM NEW LANE INTO BARTONS ROAD INTO THE PATH OF VEH 1.

Occurred on BARTONS ROAD AT JUNCTION WITH NEW LANE, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 52 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Car Turning right
Vehicle movement from S to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering main road First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 32 Female
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 15 Female Passenger Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist
Front seat

Casualty Reference: 2 Vehicle: 2 Age: 7 Male Passenger Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist
Back seat

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents
within selected Polygons -HC - RPU Statistics Request ("AW
BARTON ROAD")

130186397 23/05/2013 Time 1312 Vehicles 2 Casualties 1 Serious
E:472739 N: 108028 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING N ALONG NEW LANE PULLS OUT ONTO BARTONS ROAD AND COLLIDES WITH
VEH 2 (P/CYCLE) TRAVELLING NW ALONG BARTONS ROAD.

Occurred on BARTONS ROAD AT JUNCTION WITH NEW LANE, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Starting
Vehicle movement from S to N No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 66 Male
Not hit and run Breath test Driver not contacted
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Going ahead other
Vehicle movement from SE to NW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 54 Female
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 54 Female Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not known

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW BARTON ROAD")

130235464 27/06/2013 Time 2043 Vehicles 2 Casualties 3 Slight
E:472800 N: 108005 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Daylight Raining without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Loss of control	Vehicle 1	Possible
2nd:	Failed to look properly	Vehicle 1	Possible
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING NW ALONG BARTONS ROAD EITHER ATTEMPTS TO OVERTAKE A VEH IN FRONT OR FAILS TO SLOW FOR ONCOMING VEH 2 (CAR) AND COLLIDES WITH VEH 2.

Occurred on BARTONS ROAD AT JUNCTION WITH WAKEFORDS WAY, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Overtaking moving vehicle O/S
Vehicle movement from SE to NW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 31 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 31 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW BARTON ROAD")

Vehicle Reference	2	Car	Going ahead other
Vehicle movement from	NW to SE	No tow / articulation	Leaving the main road
On main carriageway		No skidding, jack-knifing or overturning	
Location at impact	Mid Junction - on roundabout or i	First impact	Front
Hit object in road	None	Off road:	None
Did not leave carr		Age of Driver	22
Not hit and run	Breath test	Negative	Female
		Left hand drive:	No

Casualty Reference:	2	Vehicle:	2	Age:	22	Female	Driver/rider	Severity:	Slight
Not a pupil									
Seatbelt		Not Applicable		Cycle helmet: Not a cyclist					

Casualty Reference:	3	Vehicle:	2	Age:	19	Female	Passenger	Severity:	Slight
Not a pupil									
Seatbelt		Not Applicable		Cycle helmet: Not a cyclist					

Front seat

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents
within selected Polygons -HC - RPU Statistics Request ("AW
BARTON ROAD")

130461568 08/12/2013 Time 1505 Vehicles 1 Casualties 1 Slight
E:472671 N: 107788 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: Not within 20m of junction
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Distraction in vehicle	Vehicle 1	Possible
2nd:	Deposit on road (eg oil, mud, chippings)	Vehicle 1	Possible
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING NE ALONG NEW LANE, THE REAR END OF KICKS OUT CAUSING VEH 1 TO
VEER AND LEAVE THE CARRIAGEWAY TO THE NEARSIDE, ACROSS THE GRASS ENTERING A
DITCH/SMALL STREAM, CAUSING VEH 1 TO OVERTURN

Occurred on NEW LANE 61 METRES NORTH EAST OF FARRINGDON ROAD, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from SW to NE No tow / articulation Leaving the main road
On main carriageway Overturned
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: Entered ditch
Nearside Age of Driver 22 Male
Not hit and run Breath test Not requested
Left hand drive: No
Casualty Reference: 1 Vehicle: 1 Age: 22 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW BARTON ROAD")

130474100 18/12/2013 Time 1315 Vehicles 1 Casualties 1 Slight
E:472468 N: 108145 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: Not within 20m of junction
Crossing: Control None Facilities: Pelican, puffin, toucan etc. Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Casualty 1	Very Likely
2nd:	Wrong use of pedestrian crossing facility	Casualty 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING E ALONG BARTONS ROAD THROUGH PEDESTRIAN CROSSING THAT WAS GREEN FOR VEHS WHEN CAS 1 (PEDESTRIAN) STOOD ON NORTH KERB LET GO OF MOTHERS HAND, STEPPED INTO ROAD AND WAS HIT BY VEH 1.

Occurred on BARTONS ROAD OUTSIDE NUMBER 25 TO 31, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver Female
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 3 Male Pedestrian Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

On Ped Crossing S bound
Driver's nearside

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents
within selected Polygons -HC - RPU Statistics Request ("AW
BARTON ROAD")

140065817 24/02/2014 Time 0835 Vehicles 1 Casualties 1 Serious
E:472677 N: 108062 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: Not within 20m of junction
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Illness or disability, mental or physical	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING NW ALONG BARTONS ROADLEFT THE CARRIAGEWAY TO THE NEARSIDE AND COLLIDED WITH A BUS STOP.

Occurred on BARTONS ROAD 60 METRES NORTH-WEST OF NEW LANE, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from SE to NW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: Bus stop / shelter
Nearside Age of Driver 33 Female
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 33 Female Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW BARTON ROAD")

140096410 19/03/2014 Time 1010 Vehicles 2 Casualties 1 Slight
E:472808 N: 108004 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) WAS TRAVELLING SE ALONG BARTONS ROAD WHEN VEH 2 (BUS) TRAVELLING SW ALONG WAKEFORDS WAY TURNED LEFT INTO BARTONS ROAD AND COLLIDED WITH THE REAR OF VEH 1.

Occurred on BARTONS ROAD AT JUNCTION WITH WAKEFORDS WAY, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from NW to SE No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Cleared junction or waiting/park First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 77 Male
Not hit and run Breath test Driver not contacted
Left hand drive: No
Casualty Reference: 1 Vehicle: 1 Age: 77 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Vehicle Reference 2 Bus or coach Going ahead other
Vehicle movement from NE to SE No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering main road First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver Not traced
Not hit and run Breath test Driver not contacted
Left hand drive: No

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW BARTON ROAD")

140226812 26/06/2014 Time 1605 Vehicles 2 Casualties 1 Slight
E:472718 N: 108046 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Daylight Raining without high winds
Special Conditions at Site None Carriageway Hazards: Pedestrian in carriageway - not injur
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Slippery road (due to weather)	Vehicle 2	Very Likely
2nd:	Following too close	Vehicle 2	Possible
3rd:	Sudden braking	Vehicle 1	
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING SE ALONG BARTONS ROAD BRAKED TO ALLOW A PEDESTRIAN TO CROSS.

VEH 2 (VAN) FAILED TO REACT IN TIME AND COLLIDED WITH THE REAR OF VEH 1.

Occurred on BARTONS ROAD AT JUNCTION WITH NEW LANE, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Stopping
Vehicle movement from NW to SE No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 50 Male
Not hit and run Breath test Driver not contacted
Left hand drive: No
Casualty Reference: 1 Vehicle: 1 Age: 50 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Vehicle Reference 2 Van or Goods 3.5 tonnes mgw and under Going ahead other
Vehicle movement from NW to SE No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 50 Male
Not hit and run Breath test Driver not contacted
Left hand drive: No

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW BARTON ROAD")

140227194 27/06/2014 Time 0950 Vehicles 2 Casualties 1 Serious
E:472735 N: 108035 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 1	Possible
3rd:			
4th:			
5th:			
6th:			

VEH 2 (P/CYCLE) TRAVELLING SE ALONG BARTONS ROAD SLOWED TO TURN RIGHT INTO NEW LANE WHEN VEH 1 (CAR) TRAELLING NE ALONG NEW LANE TURNED RIGHT ONTO BARTONS ROAD IN FRONT OF VEH 2. VEH 2 BRAKED HARD AND RIDER FELL OFF.

Occurred on BARTONS ROAD AT JUNCTION WITH NEW LANE, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from SW to SE No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Did not impact Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 51 Female
Not hit and run Breath test Driver not contacted
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Turning right
Vehicle movement from NW to SW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Did not impact Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 48 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 48 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: No

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW BARTON ROAD")

140230057 29/06/2014 Time 1120 Vehicles 2 Casualties 1 Slight
E:472736 N: 108031 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Poor turn or manoeuvre	Vehicle 1	Very Likely
3rd:	Junction restart	Vehicle 1	
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING NE ALONG NEW LANE GIVES WAY TO A M/CYCLE TRAVELLING NW ALONG BARTONS ROAD AND THEN TURNS RIGHT ONTO BARTONS ROAD FAILING TO NOTICE VEH 2 (M/CYCLE) TRAVELLING NW ALONG BARTONS ROAD CAUSING COLLISION.

Occurred on NEW LANE AT JUNCTION WITH BARTONS ROAD, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from S to SE No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 69 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Motorcycle over 500cc Going ahead other
Vehicle movement from SE to NW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 59 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 59 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW BARTON ROAD")

150190780 06/06/2015 Time 1045 Vehicles 2 Casualties 2 Slight
E:472738 N: 108033 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Careless/Reckless/In a hurry	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING SE ALONG BARTONS ROAD, FAILS TO NOTICE AND COLLIDES WITH THE REAR OF VEH 2 (CAR) STATIONARY AT JUNCTION WAITING TO TURN RIGHT ONTO NEW LANE, CAUSING VEH 2 TO SPIN AND COME TO REST ON THE OPPOSITE SIDE OF THE ROAD.

Occurred on NEW LANE AT JUNCTION WITH BARTONS ROAD, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from NW to SE No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 43 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Car Waiting to turn right
Vehicle movement from NW to SW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 26 Female
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 26 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Casualty Reference: 2 Vehicle: 2 Age: 26 Male Passenger Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist
Front seat

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW BARTON ROAD")

150194571 09/06/2015 Time 1339 Vehicles 2 Casualties 1 Slight
E:472654 N: 107733 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 2	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 2 (CAR) TRAVELLING E ALONG FARRINGTON ROAD OVERSHOT THE JUNCTION AND COLLIDED WITH THE NEARSIDE OF VEH 1 (LORRY) TRAVELLING N ALONG NEW LANE.

Occurred on NEW LANE AT JUNCTION WITH FARRINGDON ROAD, HAVANT, HAMPSHIRE

Vehicle Reference 1 Goods over 3.5 tonnes and under 7.5 to Going ahead other
Vehicle movement from S to N No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 28 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Car Turning right
Vehicle movement from W to S No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 32 Female
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 32 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents
within selected Polygons -HC - RPU Statistics Request ("AW
BARTON ROAD")

150269070 05/08/2015 Time 0840 Vehicles 1 Casualties 1 Slight
E:472737 N: 108029 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site Road surface defective Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Poor or defective road surface	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 (P/CYCLE) TRAVELLING SE ALONG BARTONS ROAD, TURNS RIGHT INTO NEW LANE BUT FRONT
WHEEL SLIPS ON THE NEW SUPAGRIP ROAD SURFACE TAKING VEH 1 FROM UNDER THE RIDER, CAUSING
THE RIDER TO FALL OFF.

Occurred on NEW LANE AT JUNCTION WITH BARTONS ROAD, HAVANT, HAMPSHIRE

Vehicle Reference 1 Pedal Cycle Turning right
Vehicle movement from NW to SW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Did not impact Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 61 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 61 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Yes

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW BARTON ROAD")

150362748 19/10/2015 Time 0745 Vehicles 2 Casualties 1 Slight
E:472734 N: 108031 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING NE ALONG NEW LANE, TURNS RIGHT ONTO BARTONS ROAD AFTER FAILING TO SEE VEH 2 (CAR) TRAVELLING NW ALONG BARTONS ROAD BEHIND VEH THAT TURNED LEFT INTO NEW LANE AND COLLIDES.

Occurred on NEW LANE AT JUNCTION WITH BARTONS ROAD, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from SW to SE No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 51 Female
Not hit and run Breath test Negative
Left hand drive: No
Casualty Reference: 1 Vehicle: 1 Age: 51 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Vehicle Reference 2 Car Going ahead other
Vehicle movement from SE to NW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 71 Female
Not hit and run Breath test Negative
Left hand drive: No

Accidents between dates 01/11/2011 and 31/10/2016 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW BARTON ROAD")

150391920 11/11/2015 Time 0700 Vehicles 1 Casualties 1 Serious
E:472462 N: 107994 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: Not within 20m of junction
Crossing: Control None Facilities: None within 50m Road surface Dry
Darkness: street lighting unknown Fine without high winds
Special Conditions at Site None Carriageway Hazards: Any animal in carriageway (except r
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Travelling too fast for conditions	Vehicle 1	Possible
2nd:	Poor turn or manoeuvre	Vehicle 1	Possible
3rd:	Sudden braking	Vehicle 1	Possible
4th:	Swerved	Vehicle 1	Possible
5th:	Inexperienced or learner driver/rider	Vehicle 1	Very Likely
6th:	Animal or object in carriageway	Vehicle 1	Possible

VEH 1 (M/CYCLE) TRAVELLING NE ALONG MARTIN ROAD AROUND LEFT HAND BEND WHEN RIDER STATES THEY SWERVED TO AVOID A CAT CAUSING VEH TO LOSE CONTROL AND LEAVE THE ROAD TO THE OFFSIDE COLLIDING WITH METAL RAILINGS.

Occurred on MARTIN ROAD OUTSIDE NEST INDUSTRIAL ESTATE, HAVANT, HAMPSHIRE

Vehicle Reference 1 Motor Cycle over 50 cc and up to 125cc Going ahead left bend
Vehicle movement from SW to NE No tow / articulation Leaving the main road
On main carriageway Skidded
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: Wall or fence
O/S Age of Driver 23 Male
Not hit and run Breath test Not applicable Left hand drive: No
Casualty Reference: 1 Vehicle: 1 Age: 23 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates **01/11/2011 and 31/10/2016** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW BARTON ROAD")

Notes:

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	1	9	10
2-wheeled motor vehicles	0	1	1	2
Pedal cycles	0	2	1	3
Horses & other	0	0	0	0
Total	0	4	11	15

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	1	8	9
Passenger	0	0	4	4
Motorcycle rider	0	1	1	2
Cyclist	0	2	1	3
Pedestrian	0	0	1	1
Other	0	0	0	0
Total	0	4	15	19



Appendix C

TRICS Output

Calculation Reference: AUDIT-705116-170221-0244

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : B - AFFORDABLE/LOCAL AUTHORITY HOUSES
 VEHICLES

Selected regions and areas:

06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	2 days
08	NORTH WEST	
	CH CHESHIRE	1 days
	GM GREATER MANCHESTER	1 days
09	NORTH	
	NB NORTHUMBERLAND	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
 Actual Range: 29 to 97 (units:)
 Range Selected by User: 20 to 100 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/08 to 21/10/15

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

Selected survey days:

Monday	3 days
Tuesday	1 days
Wednesday	1 days
Thursday	1 days

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

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

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

Selected Locations:

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

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

Selected Location Sub Categories:

Residential Zone	4
Built-Up Zone	1
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

C3

6 days

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

Population within 1 mile:

5,001 to 10,000

1 days

10,001 to 15,000

1 days

15,001 to 20,000

2 days

25,001 to 50,000

2 days

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

Population within 5 miles:

75,001 to 100,000

2 days

125,001 to 250,000

2 days

250,001 to 500,000

2 days

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

Car ownership within 5 miles:

0.6 to 1.0

5 days

1.1 to 1.5

1 days

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

Travel Plan:

No

6 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present

6 days

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

LIST OF SITES relevant to selection parameters

1	CH-03-B-01	HOUSES & FLATS			CESHIRE
		WORDSWORTH CRES.			
		BLACON			
		CHESTER			
		Edge of Town			
		Residential Zone			
		Total Number of dwellings:	80		
		Survey date: MONDAY	17/11/14		Survey Type: MANUAL
2	GM-03-B-01	TERRACED HOUSES			GREATER MANCHESTER
		NEWBOLD			
		ROCHDALE			
		Suburban Area (PPS6 Out of Centre)			
		No Sub Category			
		Total Number of dwellings:	43		
		Survey date: WEDNESDAY	21/10/15		Survey Type: MANUAL
3	NB-03-B-01	SEMI DET. & TERRACED			NORTHUMBERLAND
		WESTLEA			
		BEDLINGTON			
		Edge of Town			
		Residential Zone			
		Total Number of dwellings:	97		
		Survey date: MONDAY	19/11/12		Survey Type: MANUAL
4	WM-03-B-01	SEMI DET./TERRACED			WEST MIDLANDS
		YORKMINSTER DRIVE			
		CHELMSLEY WOOD			
		BIRMINGHAM			
		Edge of Town			
		Residential Zone			
		Total Number of dwellings:	97		
		Survey date: MONDAY	17/10/11		Survey Type: MANUAL
5	WY-03-B-02	MIXED HOUSES			WEST YORKSHIRE
		WHITEACRE STREET			
		DEIGHTON			
		HUDDERSFIELD			
		Edge of Town			
		Residential Zone			
		Total Number of dwellings:	54		
		Survey date: TUESDAY	17/09/13		Survey Type: MANUAL
6	WY-03-B-03	TERRACED HOUSES			WEST YORKSHIRE
		LINCOLN GREEN ROAD			
		LEEDS			
		Suburban Area (PPS6 Out of Centre)			
		Built-Up Zone			
		Total Number of dwellings:	29		
		Survey date: THURSDAY	19/09/13		Survey Type: MANUAL

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

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES
VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	67	0.068	6	67	0.175	6	67	0.243
08:00 - 09:00	6	67	0.160	6	67	0.280	6	67	0.440
09:00 - 10:00	6	67	0.158	6	67	0.220	6	67	0.378
10:00 - 11:00	6	67	0.182	6	67	0.188	6	67	0.370
11:00 - 12:00	6	67	0.163	6	67	0.168	6	67	0.331
12:00 - 13:00	6	67	0.195	6	67	0.152	6	67	0.347
13:00 - 14:00	6	67	0.170	6	67	0.158	6	67	0.328
14:00 - 15:00	6	67	0.210	6	67	0.200	6	67	0.410
15:00 - 16:00	6	67	0.253	6	67	0.210	6	67	0.463
16:00 - 17:00	6	67	0.275	6	67	0.168	6	67	0.443
17:00 - 18:00	6	67	0.290	6	67	0.207	6	67	0.497
18:00 - 19:00	6	67	0.193	6	67	0.147	6	67	0.340
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.317			2.273			4.590

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

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

Parameter summary

Trip rate parameter range selected: 29 - 97 (units:)
 Survey date range: 01/01/08 - 21/10/15
 Number of weekdays (Monday-Friday): 6
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

Calculation Reference: AUDIT-705116-170221-0237

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : C - INDUSTRIAL UNIT
 VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	DC DORSET	1 days
	DV DEVON	1 days
05	EAST MIDLANDS	
	NR NORTHAMPTONSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
11	SCOTLAND	
	EB CITY OF EDINBURGH	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 5070 to 20000 (units: sqm)
 Range Selected by User: 5000 to 50000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/08 to 19/10/15

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

Selected survey days:

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

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

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

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

Selected Locations:

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

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

Selected Location Sub Categories:

Industrial Zone	6
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out

Secondary Filtering selection:

Use Class:

B1	3 days
B2	3 days

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

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	1 days
10,001 to 15,000	3 days
25,001 to 50,000	1 days
50,001 to 100,000	1 days

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

Population within 5 miles:

50,001 to 75,000	1 days
125,001 to 250,000	4 days
250,001 to 500,000	1 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	4 days

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

Travel Plan:

No	7 days
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This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	7 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CH-02-C-02	INDUSTRIAL MATERIALS	CESHIRE
	JUPITER DRIVE		
	CHESTER W. EMP. PARK		
	CHESTER		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	8100 sqm	
	Survey date: WEDNESDAY	19/11/14	Survey Type: MANUAL
2	DC-02-C-07	NEW LOOK	DORSET
	MERCERY ROAD		
	WEYMOUTH		
	Edge of Town		
	No Sub Category		
	Total Gross floor area:	5467 sqm	
	Survey date: MONDAY	07/07/08	Survey Type: MANUAL
3	DV-02-C-01	TUBE MANUFACTURE	DEVON
	PLYMBRIDGE ROAD		
	ESTOVER		
	PLYMOUTH		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	20000 sqm	
	Survey date: TUESDAY	17/07/12	Survey Type: MANUAL
4	EB-02-C-02	FOOD PRODUCTION	CITY OF EDINBURGH
	CALDER ROAD		
	SIGHTHILL		
	EDINBURGH		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	19805 sqm	
	Survey date: MONDAY	25/10/10	Survey Type: MANUAL
5	NR-02-C-01	PAPER COMPANY	NORTHAMPTONSHIRE
	RHOSILI ROAD		
	BRACKMILLS		
	NORTHAMPTON		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	11500 sqm	
	Survey date: THURSDAY	27/11/08	Survey Type: MANUAL
6	WM-02-C-03	INDUSTRIAL GLASS	WEST MIDLANDS
	DOWNING STREET		
	SMETHWICK		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	5070 sqm	
	Survey date: TUESDAY	06/11/12	Survey Type: MANUAL
7	WY-02-C-02	FLUID SYSTEMS	WEST YORKSHIRE
	BROWN LANE WEST		
	HOLBECK		
	LEEDS		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	13350 sqm	
	Survey date: MONDAY	19/10/15	Survey Type: MANUAL

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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	13350	0.457	1	13350	0.000	1	13350	0.457
07:00 - 08:00	7	11899	0.271	7	11899	0.036	7	11899	0.307
08:00 - 09:00	7	11899	0.492	7	11899	0.076	7	11899	0.568
09:00 - 10:00	7	11899	0.148	7	11899	0.082	7	11899	0.230
10:00 - 11:00	7	11899	0.078	7	11899	0.055	7	11899	0.133
11:00 - 12:00	7	11899	0.058	7	11899	0.066	7	11899	0.124
12:00 - 13:00	7	11899	0.091	7	11899	0.125	7	11899	0.216
13:00 - 14:00	7	11899	0.198	7	11899	0.142	7	11899	0.340
14:00 - 15:00	7	11899	0.126	7	11899	0.167	7	11899	0.293
15:00 - 16:00	7	11899	0.067	7	11899	0.155	7	11899	0.222
16:00 - 17:00	7	11899	0.044	7	11899	0.264	7	11899	0.308
17:00 - 18:00	7	11899	0.040	7	11899	0.349	7	11899	0.389
18:00 - 19:00	7	11899	0.025	7	11899	0.188	7	11899	0.213
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.095			1.705			3.800

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

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

Parameter summary

Trip rate parameter range selected:	5070 - 20000 (units: sqm)
Survey date range:	01/01/08 - 19/10/15
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

Calculation Reference: AUDIT-705116-170221-0258

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT

Category : A - OFFICE

VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	KC KENT	2 days
	SC SURREY	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	LC LANCASHIRE	1 days
09	NORTH	
	DH DURHAM	2 days
	TW TYNE & WEAR	2 days
11	SCOTLAND	
	HI HIGHLAND	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 804 to 3372 (units: sqm)
 Range Selected by User: 500 to 5000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/08 to 26/11/15

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

Selected survey days:

Monday	2 days
Tuesday	6 days
Wednesday	1 days
Thursday	1 days
Friday	1 days

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

Selected survey types:

Manual count	11 days
Directional ATC Count	0 days

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

Selected Locations:

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

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

Selected Location Sub Categories:

Industrial Zone	3
Commercial Zone	2
Development Zone	1

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

Secondary Filtering selection:

Use Class:

B1

11 days

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

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	4 days
10,001 to 15,000	2 days
15,001 to 20,000	1 days
25,001 to 50,000	3 days

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

Population within 5 miles:

75,001 to 100,000	3 days
100,001 to 125,000	1 days
125,001 to 250,000	3 days
250,001 to 500,000	2 days
500,001 or More	2 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	6 days
1.1 to 1.5	4 days

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

Travel Plan:

Yes	2 days
No	9 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	11 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	DH-02-A-01	RPMI OFFICES	DURHAM
	BRINKBURN ROAD		
	DARLINGTON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Gross floor area:	3372 sqm	
	Survey date: FRIDAY	05/11/10	Survey Type: MANUAL
2	DH-02-A-02	CONSTRUCTION COMPANY	DURHAM
	DURHAM ROAD		
	BOWBURN		
	NEAR DURHAM		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	2000 sqm	
	Survey date: TUESDAY	27/11/12	Survey Type: MANUAL
3	HI-02-A-01	OFFICE	HIGHLAND
	HIGHLANDER WAY		
	INVERNESS		
	Edge of Town		
	Development Zone		
	Total Gross floor area:	804 sqm	
	Survey date: WEDNESDAY	20/05/09	Survey Type: MANUAL
4	KC-02-A-07	KCC HIGHWAYS REG.	KENT
	KAVELIN WAY		
	HENWOOD IND. ESTATE		
	ASHFORD		
	Edge of Town		
	Commercial Zone		
	Total Gross floor area:	2525 sqm	
	Survey date: MONDAY	05/12/11	Survey Type: MANUAL
5	KC-02-A-08	KCC HIGHWAYS REG. OFFICE	KENT
	ST MICHAEL'S CLOSE		
	CLAY WOOD		
	AYLESFORD		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	3168 sqm	
	Survey date: MONDAY	28/11/11	Survey Type: MANUAL
6	LC-02-A-09	OFFICES	LANCASHIRE
	FURTHERGATE		
	BLACKBURN		
	Suburban Area (PPS6 Out of Centre)		
	Built-Up Zone		
	Total Gross floor area:	2600 sqm	
	Survey date: TUESDAY	04/06/13	Survey Type: MANUAL
7	SC-02-A-15	ACCOUNTANTS	SURREY
	BOXGROVE ROAD		
	GUILDFORD		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Gross floor area:	1896 sqm	
	Survey date: TUESDAY	05/10/10	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	TW-02-A-04	HOUSING CO.		TYNE & WEAR
	EARLSWAY			
	TEAM VALLEY TRAD. EST.			
	GATESHEAD			
	Edge of Town			
	Industrial Zone			
	Total Gross floor area:	2500 sqm		
	Survey date: TUESDAY	29/09/09		Survey Type: MANUAL
9	TW-02-A-05	TELEVISION CO.		TYNE & WEAR
	DELTA BANK ROAD			
	METRO RIVERSIDE PARK			
	GATESHEAD			
	Suburban Area (PPS6 Out of Centre)			
	Commercial Zone			
	Total Gross floor area:	1500 sqm		
	Survey date: TUESDAY	29/09/09		Survey Type: MANUAL
10	WM-02-A-04	OFFICE		WEST MIDLANDS
	BOURNVILLE LANE			
	BIRMINGHAM			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	1800 sqm		
	Survey date: TUESDAY	10/11/15		Survey Type: MANUAL
11	WY-02-A-03	OFFICE		WEST YORKSHIRE
	VICTORIA ROAD			
	HEADINGLEY			
	LEEDS			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	2696 sqm		
	Survey date: THURSDAY	17/06/10		Survey Type: MANUAL

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	2260	0.849	11	2260	0.137	11	2260	0.986
08:00 - 09:00	11	2260	2.132	11	2260	0.286	11	2260	2.418
09:00 - 10:00	11	2260	1.255	11	2260	0.394	11	2260	1.649
10:00 - 11:00	11	2260	0.519	11	2260	0.386	11	2260	0.905
11:00 - 12:00	11	2260	0.390	11	2260	0.366	11	2260	0.756
12:00 - 13:00	11	2260	0.672	11	2260	0.736	11	2260	1.408
13:00 - 14:00	11	2260	0.796	11	2260	0.551	11	2260	1.347
14:00 - 15:00	11	2260	0.455	11	2260	0.495	11	2260	0.950
15:00 - 16:00	11	2260	0.322	11	2260	0.567	11	2260	0.889
16:00 - 17:00	11	2260	0.346	11	2260	1.593	11	2260	1.939
17:00 - 18:00	11	2260	0.181	11	2260	2.027	11	2260	2.208
18:00 - 19:00	11	2260	0.048	11	2260	0.652	11	2260	0.700
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			7.965			8.190			16.155

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

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

Parameter summary

Trip rate parameter range selected: 804 - 3372 (units: sqm)
 Survey date range: 01/01/08 - 26/11/15
 Number of weekdays (Monday-Friday): 11
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

Calculation Reference: AUDIT-705116-170221-0257

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	1 days
	HC HAMPSHIRE	1 days
	SC SURREY	1 days
	WS WEST SUSSEX	1 days
03	SOUTH WEST	
	DC DORSET	2 days
	DV DEVON	2 days
	SM SOMERSET	1 days
04	EAST ANGLIA	
	NF NORFOLK	2 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	5 days
	SY SOUTH YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
	GM GREATER MANCHESTER	1 days
09	NORTH	
	CB CUMBRIA	2 days
	TW TYNE & WEAR	1 days
10	WALES	
	PS POWYS	1 days
11	SCOTLAND	
	EA EAST AYRSHIRE	1 days
	FA FALKIRK	1 days
	PK PERTH & KINROSS	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
 Actual Range: 21 to 98 (units:)
 Range Selected by User: 20 to 100 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/08 to 13/11/15

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

Selected survey days:

Monday	7 days
Tuesday	4 days
Wednesday	7 days
Thursday	7 days
Friday	3 days

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

Selected survey types:

Manual count	28 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	14
Edge of Town	13
Neighbourhood Centre (PPS6 Local Centre)	1

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

Selected Location Sub Categories:

Residential Zone	24
Village	1
No Sub Category	3

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

Secondary Filtering selection:

Use Class:

C1	1 days
C3	27 days

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	4 days
5,001 to 10,000	8 days
10,001 to 15,000	6 days
15,001 to 20,000	5 days
20,001 to 25,000	2 days
25,001 to 50,000	3 days

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

Population within 5 miles:

5,001 to 25,000	4 days
25,001 to 50,000	4 days
50,001 to 75,000	2 days
75,001 to 100,000	8 days
100,001 to 125,000	1 days
125,001 to 250,000	4 days
250,001 to 500,000	4 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	7 days
1.1 to 1.5	21 days

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

Travel Plan:

Yes	3 days
No	25 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	28 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CB-03-A-03 SEMI DETACHED HAWKSHEAD AVENUE WORKINGTON Edge of Town Residential Zone Total Number of dwellings: 40 Survey date: THURSDAY 20/11/08	CUMBRIA	Survey Type: MANUAL
2	CB-03-A-04 SEMI DETACHED MOORCLOSE ROAD SALTERBACK WORKINGTON Edge of Town No Sub Category Total Number of dwellings: 82 Survey date: FRIDAY 24/04/09	CUMBRIA	Survey Type: MANUAL
3	CH-03-A-09 TERRACED HOUSES GREYSTOKE ROAD HURDSFIELD MACCLESFIELD Edge of Town Residential Zone Total Number of dwellings: 24 Survey date: MONDAY 24/11/14	CHESHIRE	Survey Type: MANUAL
4	DC-03-A-01 DETACHED ISAACS CLOSE POOLE Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 51 Survey date: WEDNESDAY 16/07/08	DORSET	Survey Type: MANUAL
5	DC-03-A-08 BUNGALOWS HURSTDENE ROAD CASTLE LANE WEST BOURNEMOUTH Edge of Town Residential Zone Total Number of dwellings: 28 Survey date: MONDAY 24/03/14	DORSET	Survey Type: MANUAL
6	DV-03-A-01 TERRACED HOUSES BRONSHILL ROAD TORQUAY Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 37 Survey date: WEDNESDAY 30/09/15	DEVON	Survey Type: MANUAL
7	DV-03-A-03 TERRACED & SEMI DETACHED LOWER BRAND LANE HONITON Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 70 Survey date: MONDAY 28/09/15	DEVON	Survey Type: MANUAL
8	EA-03-A-01 DETACHED TALISKER AVENUE KILMARNOCK Edge of Town Residential Zone Total Number of dwellings: 39 Survey date: THURSDAY 05/06/08	EAST AYRSHIRE	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	ES-03-A-02	PRIVATE HOUSING	EAST SUSSEX
	SOUTH COAST ROAD		
	PEACEHAVEN		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	37	
	Survey date: FRIDAY	18/11/11	Survey Type: MANUAL
10	FA-03-A-01	SEMI-DETACHED/TERRACED	FALKIRK
	MANDELA AVENUE		
	FALKIRK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	37	
	Survey date: THURSDAY	30/05/13	Survey Type: MANUAL
11	GM-03-A-10	DETACHED/SEMI	GREATER MANCHESTER
	BUTT HILL DRIVE		
	PRESTWICH		
	MANCHESTER		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	29	
	Survey date: WEDNESDAY	12/10/11	Survey Type: MANUAL
12	HC-03-A-17	HOUSES & FLATS	HAMPSHIRE
	CANADA WAY		
	LIPHOOK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	36	
	Survey date: THURSDAY	12/11/15	Survey Type: MANUAL
13	LN-03-A-03	SEMI DETACHED	LINCOLNSHIRE
	ROOKERY LANE		
	BOULTHAM		
	LINCOLN		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	22	
	Survey date: TUESDAY	18/09/12	Survey Type: MANUAL
14	NF-03-A-01	SEMI DET. & BUNGALOWS	NORFOLK
	YARMOUTH ROAD		
	CAISTER-ON-SEA		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	27	
	Survey date: TUESDAY	16/10/12	Survey Type: MANUAL
15	NF-03-A-02	HOUSES & FLATS	NORFOLK
	DEREHAM ROAD		
	NORWICH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	98	
	Survey date: MONDAY	22/10/12	Survey Type: MANUAL
16	NY-03-A-07	DETACHED & SEMI DET.	NORTH YORKSHIRE
	CRAVEN WAY		
	BOROUGHBRIDGE		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	23	
	Survey date: TUESDAY	18/10/11	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

17	NY-03-A-08	TERRACED HOUSES		NORTH YORKSHIRE
	NICHOLAS STREET			
	YORK			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	21		
	Survey date: MONDAY	16/09/13		Survey Type: MANUAL
18	NY-03-A-09	MIXED HOUSING		NORTH YORKSHIRE
	GRAMMAR SCHOOL LANE			
	NORTHALLERTON			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	52		
	Survey date: MONDAY	16/09/13		Survey Type: MANUAL
19	NY-03-A-10	HOUSES AND FLATS		NORTH YORKSHIRE
	BOROUGHBRIDGE ROAD			
	RIPON			
	Edge of Town			
	No Sub Category			
	Total Number of dwellings:	71		
	Survey date: TUESDAY	17/09/13		Survey Type: MANUAL
20	NY-03-A-11	PRIVATE HOUSING		NORTH YORKSHIRE
	HORSEFAIR			
	BOROUGHBRIDGE			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	23		
	Survey date: WEDNESDAY	18/09/13		Survey Type: MANUAL
21	PK-03-A-01	DETAC. & BUNGALOWS		PERTH & KINROSS
	TULLYLUMB TERRACE			
	GORNHILL			
	PERTH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	36		
	Survey date: WEDNESDAY	11/05/11		Survey Type: MANUAL
22	PS-03-A-02	DETACHED / SEMI-DETACHED		POWYS
	GUNROG ROAD			
	WELSHPOOL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	28		
	Survey date: MONDAY	11/05/15		Survey Type: MANUAL
23	SC-03-A-04	DETACHED & TERRACED		SURREY
	HIGH ROAD			
	BYFLEET			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	71		
	Survey date: THURSDAY	23/01/14		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

24	SH-03-A-05 SANDCROFT SUTTON HILL TELFORD Edge of Town Residential Zone Total Number of dwellings: 54 Survey date: THURSDAY 24/10/13	SEMI-DETACHED / TERRACED	SHROPSHIRE	Survey Type: MANUAL
25	SM-03-A-01 WEMBDON ROAD NORTHFIELD BRIDGWATER Edge of Town Residential Zone Total Number of dwellings: 33 Survey date: THURSDAY 24/09/15	DETACHED & SEMI	SOMERSET	Survey Type: MANUAL
26	SY-03-A-01 A19 BENTLEY ROAD BENTLEY RISE DONCASTER Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 54 Survey date: WEDNESDAY 18/09/13	SEMI DETACHED HOUSES	SOUTH YORKSHIRE	Survey Type: MANUAL
27	TW-03-A-03 STATION ROAD BACKWORTH NEAR NEWCASTLE Neighbourhood Centre (PPS6 Local Centre) Village Total Number of dwellings: 33 Survey date: FRIDAY 13/11/15	MIXED HOUSES	TYNE & WEAR	Survey Type: MANUAL
28	WS-03-A-05 UPPER SHOREHAM ROAD SHOREHAM BY SEA Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 48 Survey date: WEDNESDAY 18/04/12	TERRACED & FLATS	WEST SUSSEX	Survey Type: MANUAL

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

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

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	28	43	0.085	28	43	0.299	28	43	0.384
08:00 - 09:00	28	43	0.159	28	43	0.400	28	43	0.559
09:00 - 10:00	28	43	0.152	28	43	0.177	28	43	0.329
10:00 - 11:00	28	43	0.133	28	43	0.141	28	43	0.274
11:00 - 12:00	28	43	0.155	28	43	0.156	28	43	0.311
12:00 - 13:00	28	43	0.155	28	43	0.145	28	43	0.300
13:00 - 14:00	28	43	0.166	28	43	0.177	28	43	0.343
14:00 - 15:00	28	43	0.169	28	43	0.187	28	43	0.356
15:00 - 16:00	28	43	0.239	28	43	0.159	28	43	0.398
16:00 - 17:00	28	43	0.311	28	43	0.188	28	43	0.499
17:00 - 18:00	28	43	0.366	28	43	0.172	28	43	0.538
18:00 - 19:00	28	43	0.235	28	43	0.140	28	43	0.375
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.325			2.341			4.666

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

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

Parameter summary

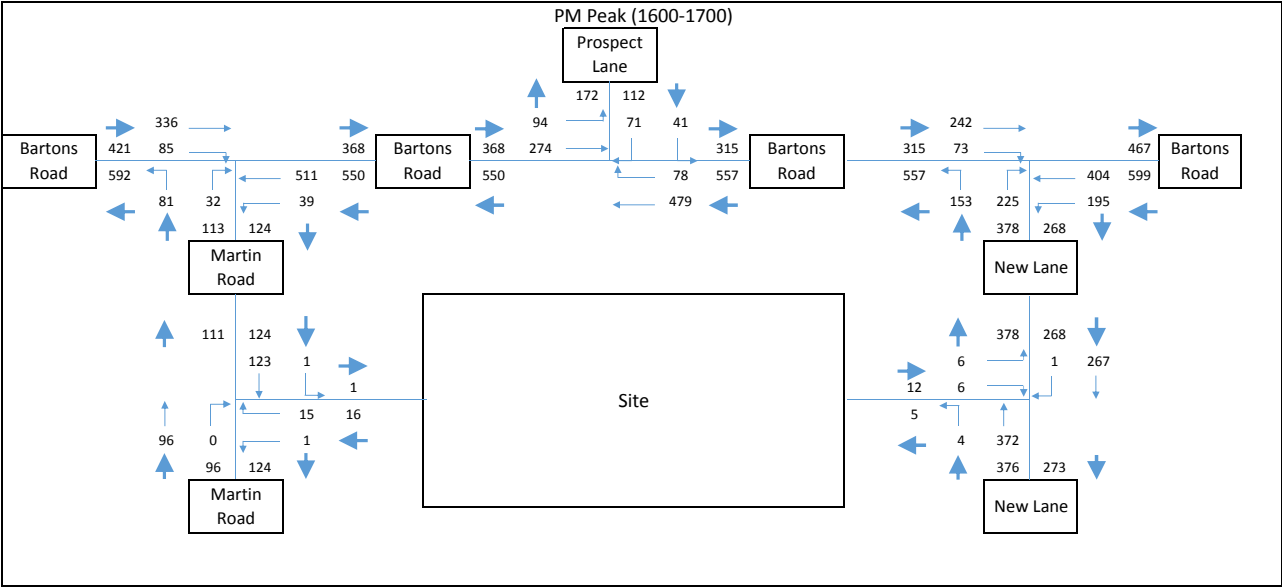
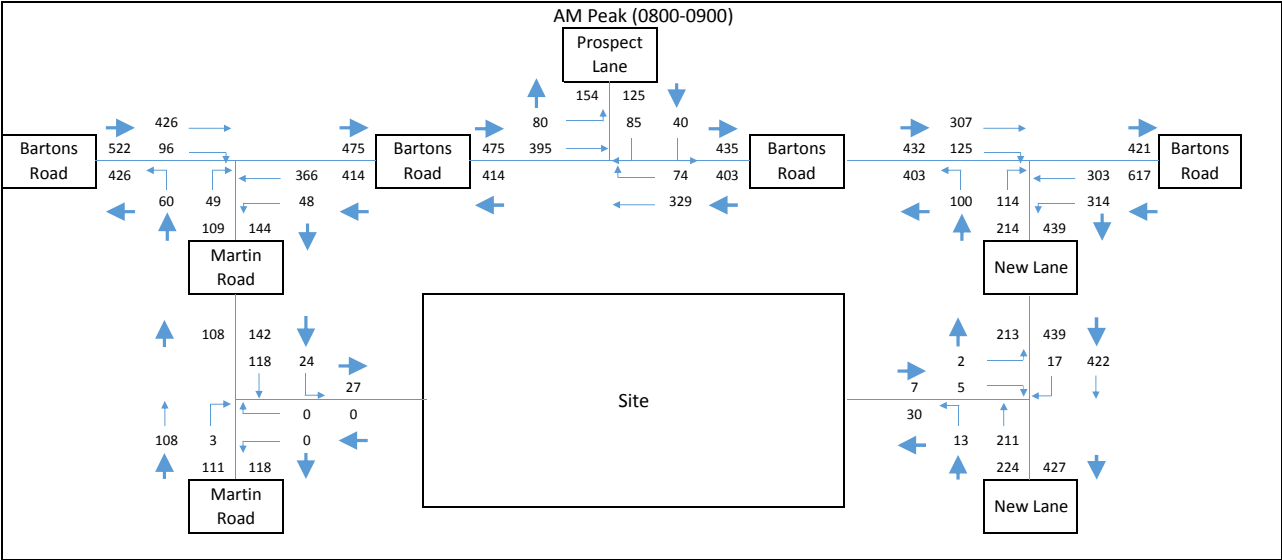
Trip rate parameter range selected: 21 - 98 (units:)
 Survey date range: 01/01/08 - 13/11/15
 Number of weekdays (Monday-Friday): 28
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 1
 Surveys manually removed from selection: 0

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

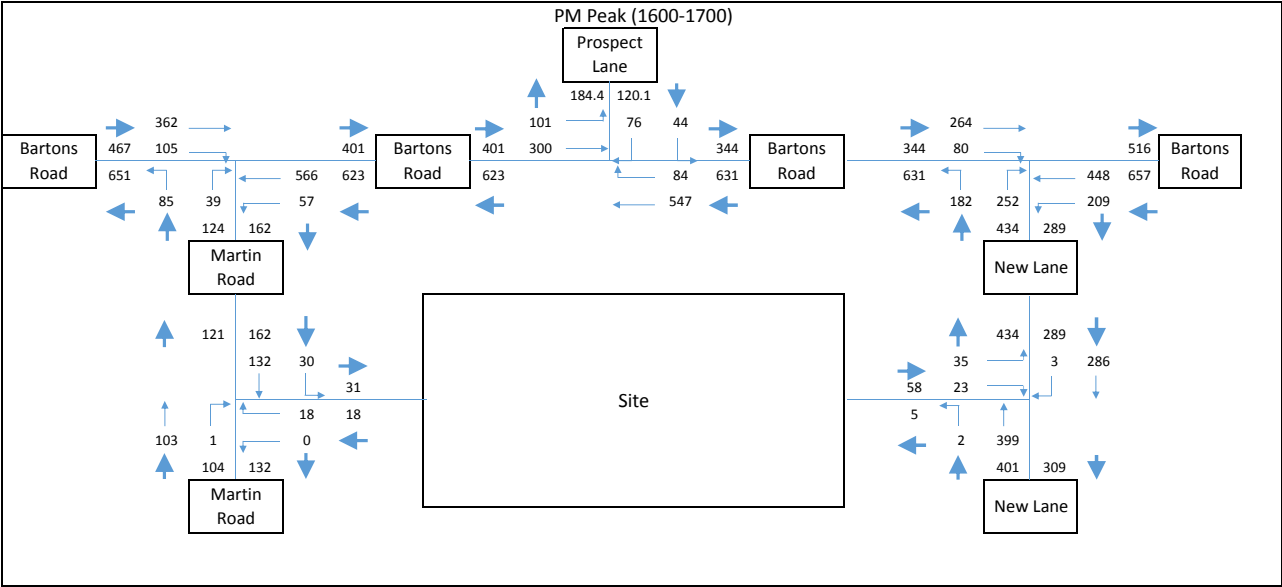
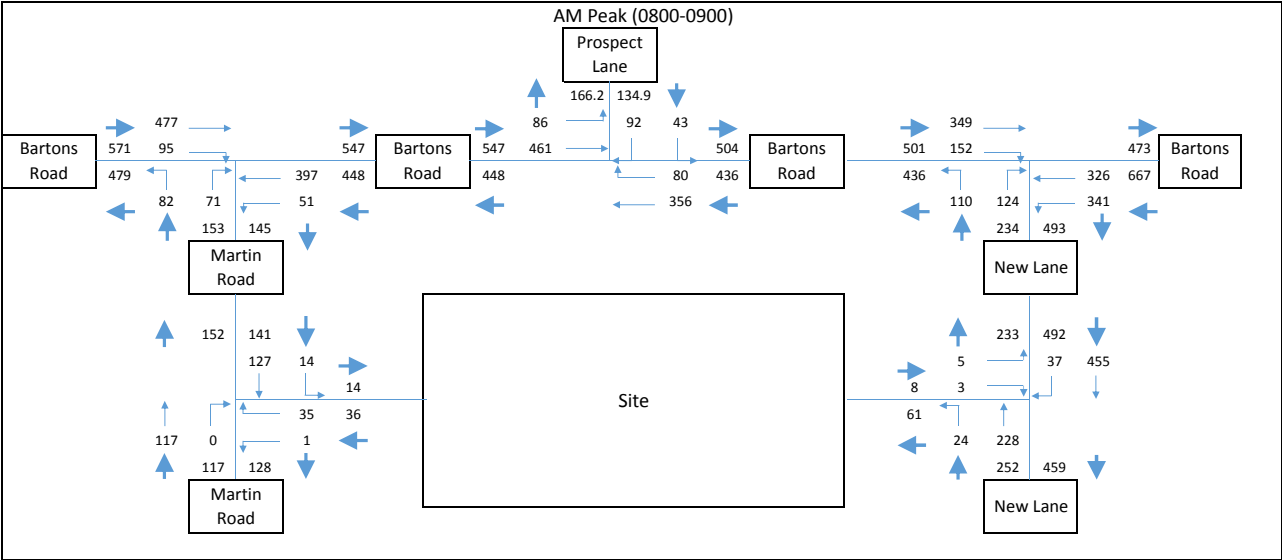


Appendix D

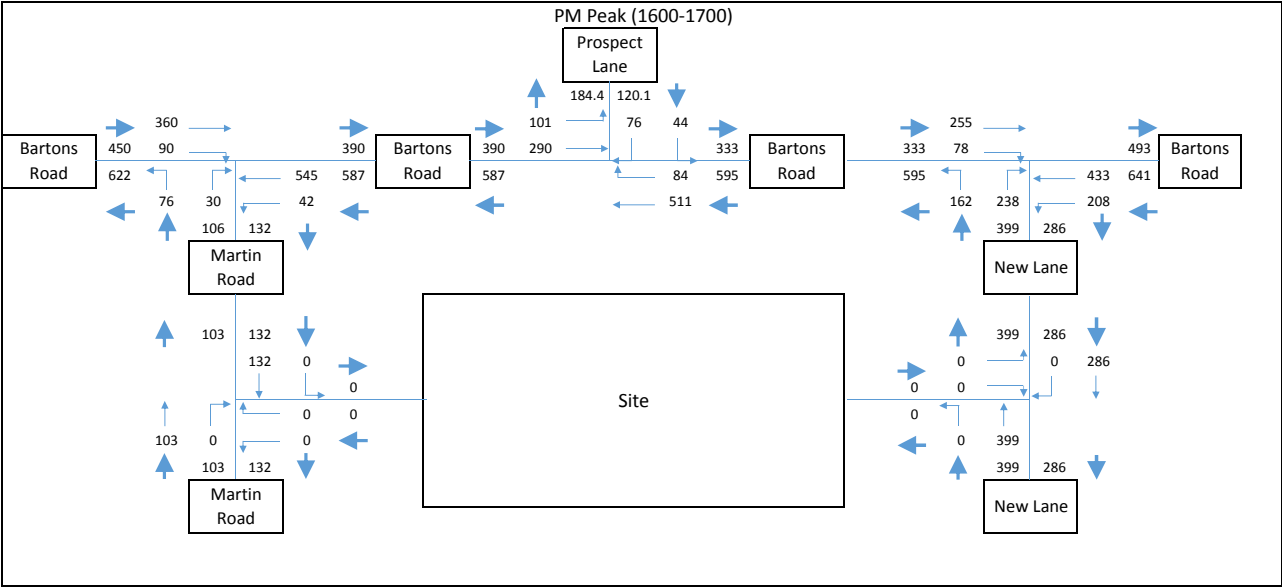
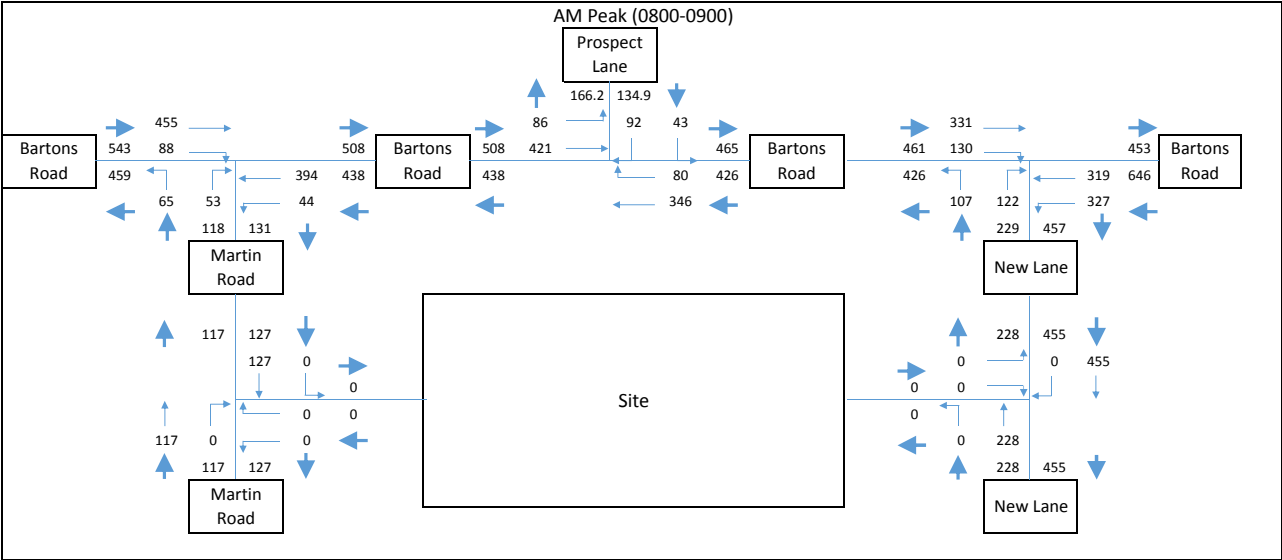
Traffic Flow Diagrams



2017 Base



2023 Flow with Development



2023 Total Flow (WO Site Trips)



Appendix E

Junction 1 – Results

Junctions 9											
PICADY 9 - Priority Intersection Module											
Version: 9.0.2.5947											
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+44 (0)1344 770558 software@trl.co.uk www.trlsoftware.co.uk											
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Filename: Bartons Road - Martins Rd - Prospect Lane Staggered Crossroads.j9

Path: X:\Projects\2012\A090000\A090070-182 - Colt Industrial, New Lane, Havant\30 Technical\31 Modelling\Bartons Rd-Martin Rd-Prospect Lane Junction

Report generation date: 08/03/2018 17:20:47

»2017, AM

»2017, PM

»2023 - DM, AM

»2023 - DM, PM

»2023 - DS, AM

»2023 - DS, PM

Summary of junction performance

	AM						PM					
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2017											
Stream B-C	0.1	0.5	6.77	0.11	A	70 % [Stream D-BC]	0.2	0.5	6.92	0.13	A	88 % [Stream D-BC]
Stream B-AD	0.1	0.5	9.88	0.13	A		0.1	0.5	10.33	0.10	B	
Stream A-BCD	0.1	0.5	6.43	0.13	A		0.1	0.5	5.89	0.09	A	
Stream D-A	0.1	0.5	8.02	0.09	A		0.1	0.5	7.04	0.07	A	
Stream D-BC	0.3	1.3	10.98	0.22	B		0.2	0.5	9.98	0.16	A	
Stream C-ABD	0.2	0.5	5.29	0.13	A		0.1	0.5	5.42	0.10	A	
	2023 - DM											
Stream B-C	0.1	0.5	6.98	0.12	A	57 % [Stream D-BC]	0.2	0.5	7.19	0.15	A	75 % [Stream D-BC]
Stream B-AD	0.2	0.5	10.48	0.14	B		0.1	0.5	10.91	0.12	B	
Stream A-BCD	0.2	0.5	6.65	0.14	A		0.1	0.5	6.02	0.10	A	
Stream D-A	0.1	0.5	8.34	0.10	A		0.1	0.5	7.24	0.07	A	
Stream D-BC	0.3	1.5	11.91	0.25	B		0.2	0.9	10.61	0.18	B	
Stream C-ABD	0.2	0.5	5.45	0.15	A		0.1	0.5	5.59	0.11	A	
	2023 - DS											
Stream B-C	0.2	0.5	7.42	0.15	A	51 % [Stream D-BC]	0.2	0.5	7.57	0.17	A	69 % [Stream D-BC]
Stream B-AD	0.2	1.1	11.30	0.19	B		0.2	0.5	11.58	0.14	B	
Stream A-BCD	0.2	0.5	6.81	0.14	A		0.1	0.5	6.05	0.10	A	
Stream D-A	0.1	0.5	8.56	0.10	A		0.1	0.5	7.29	0.07	A	
Stream D-BC	0.3	1.0	12.48	0.26	B		0.2	1.0	10.93	0.18	B	
Stream C-ABD	0.2	0.5	5.55	0.16	A		0.2	0.5	5.86	0.13	A	

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

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	20/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WYG\philip.eveleigh
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2017	AM	ONE HOUR	07:45	09:15	15
D2	2017	PM	ONE HOUR	15:45	17:15	15
D3	2023 - DM	AM	ONE HOUR	07:45	09:15	15
D4	2023 - DM	PM	ONE HOUR	15:45	17:15	15
D5	2023 - DS	AM	ONE HOUR	07:45	09:15	15
D6	2023 - DS	PM	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2017, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	D - Prospect Ln - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bartons Rd/Martins Rd/Prospect Ln	Right-Left Stagger	Two-way	2.70	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	70	Stream D-BC

Arms

Arms

Arm	Name	Description	Arm type
A	Bartons Rd (E)		Major
B	Martin Rd		Minor
C	Bartons Rd (W)		Major
D	Prospect Ln		Minor

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)
A - Bartons Rd (E)	7.05	✓	1.20	✓	4.71	97.0	✓	4.80
C - Bartons Rd (W)	8.02	✓	4.42	✓	5.00	250.0	✓	4.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Martin Rd	One lane plus flare	10.00	8.27	6.43	5.85	5.43	✓	3.00	101	92
D - Prospect Ln	One lane plus flare	7.47	3.05	2.96	2.92	2.77	✓	1.00	250	109

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	802	-	-	-	0.297	0.297	0.297	-	0.297	-	-
1	B-AD	632	0.096	0.242	-	-	-	0.152	0.345	0.152	0.096	0.242
1	B-C	740	0.104	0.262	-	-	-	-	-	-	0.104	0.262
1	C-B	938	0.331	0.331	-	-	-	-	-	-	0.331	0.331
1	D-A	656	-	-	-	0.243	0.096	0.243	-	0.096	-	-
1	D-BC	656	0.177	0.177	0.401	0.281	0.111	0.281	-	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 Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2017	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Bartons Rd (E)		✓	403	100.000
B - Martin Rd		✓	109	100.000
C - Bartons Rd (W)		✓	522	100.000
D - Prospect Ln		✓	125	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		A - Bartons Rd (E)	B - Martin Rd	C - Bartons Rd (W)	D - Prospect Ln
	A - Bartons Rd (E)	0	27	302	74
	B - Martin Rd	23	0	60	26
	C - Bartons Rd (W)	372	96	0	54
	D - Prospect Ln	40	21	64	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - Bartons Rd (E)	B - Martin Rd	C - Bartons Rd (W)	D - Prospect Ln
	A - Bartons Rd (E)	0	0	3	1
	B - Martin Rd	2	0	2	0
	C - Bartons Rd (W)	4	0	0	0
	D - Prospect Ln	3	0	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.11	6.77	0.1	0.5	A
B-AD	0.13	9.88	0.1	0.5	A
A-BCD	0.13	6.43	0.1	0.5	A
A-B					
A-C					
D-A	0.09	8.02	0.1	0.5	A
D-BC	0.22	10.98	0.3	1.3	B
C-ABD	0.13	5.29	0.2	0.5	A
C-D					
C-A					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	45	652	0.069	45	0.1	6.046	A
B-AD	37	489	0.076	37	0.1	8.032	A
A-BCD	56	696	0.080	55	0.1	5.671	A
A-B	20			20			
A-C	227			227			
D-A	30	558	0.054	30	0.1	7.013	A
D-BC	64	499	0.128	63	0.1	8.370	A
C-ABD	72	834	0.087	72	0.1	4.718	A
C-D	41			41			
C-A	280			280			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	54	634	0.085	54	0.1	6.331	A
B-AD	44	461	0.096	44	0.1	8.720	A
A-BCD	67	676	0.098	66	0.1	5.969	A
A-B	24			24			
A-C	271			271			
D-A	36	537	0.067	36	0.1	7.393	A
D-BC	76	469	0.163	76	0.2	9.304	A
C-ABD	86	814	0.106	86	0.1	4.944	A
C-D	49			49			
C-A	334			334			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	66	609	0.109	66	0.1	6.761	A
B-AD	54	422	0.128	54	0.1	9.867	A
A-BCD	81	647	0.126	81	0.1	6.425	A
A-B	30			30			
A-C	333			333			
D-A	44	507	0.087	44	0.1	8.009	A
D-BC	94	426	0.219	93	0.3	10.956	B
C-ABD	106	787	0.134	106	0.2	5.284	A
C-D	59			59			
C-A	410			410			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	66	609	0.109	66	0.1	6.767	A
B-AD	54	422	0.128	54	0.1	9.876	A
A-BCD	81	647	0.126	81	0.1	6.428	A
A-B	30			30			
A-C	333			333			
D-A	44	507	0.087	44	0.1	8.016	A
D-BC	94	426	0.220	94	0.3	10.980	B
C-ABD	106	786	0.134	106	0.2	5.287	A
C-D	59			59			
C-A	410			410			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	54	633	0.085	54	0.1	6.337	A
B-AD	44	460	0.096	44	0.1	8.733	A
A-BCD	67	675	0.098	67	0.1	5.975	A
A-B	24			24			
A-C	271			271			
D-A	36	537	0.067	36	0.1	7.402	A
D-BC	76	469	0.163	77	0.2	9.334	A
C-ABD	86	814	0.106	86	0.1	4.949	A
C-D	49			49			
C-A	334			334			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	45	651	0.069	45	0.1	6.060	A
B-AD	37	488	0.076	37	0.1	8.049	A
A-BCD	56	696	0.080	56	0.1	5.681	A
A-B	20			20			
A-C	227			227			
D-A	30	558	0.054	30	0.1	7.028	A
D-BC	64	499	0.128	64	0.2	8.404	A
C-ABD	72	834	0.087	72	0.1	4.725	A
C-D	41			41			
C-A	280			280			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.08	0.00	0.00	0.08	0.08			N/A	N/A
B-AD	0.08	0.00	0.00	0.08	0.08			N/A	N/A
ABCD	0.09	0.00	0.00	0.09	0.09			N/A	N/A
D-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
D-BC	0.15	0.00	0.00	0.15	0.15			N/A	N/A
C-ABD	0.09	0.00	0.00	0.09	0.09			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.09	0.03	0.26	0.46	0.49			N/A	N/A
B-AD	0.11	0.00	0.00	0.11	0.11			N/A	N/A
ABCD	0.11	0.00	0.00	0.11	0.11			N/A	N/A
D-A	0.07	0.03	0.26	0.47	0.49			N/A	N/A
D-BC	0.20	0.00	0.00	0.20	0.20			N/A	N/A
C-ABD	0.12	0.00	0.00	0.12	0.12			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.12	0.03	0.26	0.47	0.50			N/A	N/A
B-AD	0.15	0.03	0.26	0.47	0.50			N/A	N/A
ABCD	0.14	0.03	0.26	0.47	0.49			N/A	N/A
D-A	0.10	0.03	0.27	0.48	0.51			N/A	N/A
D-BC	0.28	0.03	0.26	0.47	0.50			N/A	N/A
C-ABD	0.15	0.03	0.26	0.46	0.49			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.12	0.03	0.26	0.46	0.48			N/A	N/A
B-AD	0.15	0.03	0.25	0.45	0.48			N/A	N/A
ABCD	0.14	0.03	0.25	0.45	0.48			N/A	N/A
D-A	0.10	0.03	0.26	0.46	0.49			N/A	N/A
D-BC	0.28	0.03	0.31	1.00	1.31			N/A	N/A
C-ABD	0.15	0.03	0.25	0.45	0.48			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.10	0.00	0.00	0.10	0.10			N/A	N/A
B-AD	0.11	0.00	0.00	0.11	0.11			N/A	N/A
ABCD	0.11	0.00	0.00	0.11	0.11			N/A	N/A
D-A	0.07	0.00	0.00	0.07	0.07			N/A	N/A
D-BC	0.20	0.00	0.00	0.20	0.20			N/A	N/A
C-ABD	0.12	0.00	0.00	0.12	0.12			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.08	0.00	0.00	0.08	0.08			N/A	N/A
B-AD	0.08	0.00	0.00	0.08	0.08			N/A	N/A
A-BCD	0.09	0.00	0.00	0.09	0.09			N/A	N/A
D-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
D-BC	0.15	0.00	0.00	0.15	0.15			N/A	N/A
C-ABD	0.10	0.00	0.00	0.10	0.10			N/A	N/A

2017, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	D - Prospect Ln - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bartons Rd/Martins Rd/Prospect Ln	Right-Left Stagger	Two-way	2.07	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	88	Stream D-BC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2017	PM	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Bartons Rd (E)		✓	548	100.000
B - Martin Rd		✓	109	100.000
C - Bartons Rd (W)		✓	418	100.000
D - Prospect Ln		✓	95	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A - Bartons Rd (E)	B - Martin Rd	C - Bartons Rd (W)	D - Prospect Ln
From	A - Bartons Rd (E)	0	31	459	58
	B - Martin Rd	22	0	73	14
	C - Bartons Rd (W)	283	66	0	69
	D - Prospect Ln	33	13	49	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - Bartons Rd (E)	B - Martin Rd	C - Bartons Rd (W)	D - Prospect Ln
	A - Bartons Rd (E)	0	3	0	0
	B - Martin Rd	0	0	0	0
	C - Bartons Rd (W)	4	0	0	2
	D - Prospect Ln	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.13	6.92	0.2	0.5	A
B-AD	0.10	10.33	0.1	0.5	B
A-BCD	0.09	5.89	0.1	0.5	A
A-B					
A-C					
D-A	0.07	7.04	0.1	0.5	A
D-BC	0.16	9.98	0.2	0.5	A
C-ABD	0.10	5.42	0.1	0.5	A
C-D					
C-A					

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	55	657	0.084	55	0.1	5.972	A
B-AD	27	456	0.060	27	0.1	8.395	A
A-BCD	44	716	0.061	43	0.1	5.355	A
A-B	23			23			
A-C	346			346			
D-A	25	587	0.042	25	0.0	6.396	A
D-BC	47	501	0.093	46	0.1	7.918	A
C-ABD	50	800	0.062	49	0.1	4.795	A
C-D	52			52			
C-A	213			213			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	66	633	0.104	66	0.1	6.340	A
B-AD	32	427	0.076	32	0.1	9.116	A
A-BCD	52	699	0.075	52	0.1	5.567	A
A-B	28			28			
A-C	413			413			
D-A	30	571	0.052	30	0.1	6.648	A
D-BC	56	470	0.118	56	0.1	8.674	A
C-ABD	59	773	0.077	59	0.1	5.042	A
C-D	62			62			
C-A	254			254			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	80	601	0.134	80	0.2	6.915	A
B-AD	40	388	0.102	40	0.1	10.324	B
A-BCD	64	675	0.095	64	0.1	5.885	A
A-B	34			34			
A-C	505			505			
D-A	36	548	0.066	36	0.1	7.038	A
D-BC	68	429	0.159	68	0.2	9.964	A
C-ABD	73	736	0.099	73	0.1	5.424	A
C-D	76			76			
C-A	312			312			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	80	601	0.134	80	0.2	6.920	A
B-AD	40	388	0.102	40	0.1	10.331	B
A-BCD	64	675	0.095	64	0.1	5.885	A
A-B	34			34			
A-C	505			505			
D-A	36	548	0.066	36	0.1	7.041	A
D-BC	68	429	0.159	68	0.2	9.977	A
C-ABD	73	736	0.099	73	0.1	5.425	A
C-D	76			76			
C-A	312			312			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	66	633	0.104	66	0.1	6.346	A
B-AD	32	427	0.076	32	0.1	9.125	A
A-BCD	52	699	0.075	52	0.1	5.571	A
A-B	28			28			
A-C	413			413			
D-A	30	571	0.052	30	0.1	6.655	A
D-BC	56	470	0.118	56	0.1	8.689	A
C-ABD	59	773	0.077	59	0.1	5.046	A
C-D	62			62			
C-A	254			254			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	55	657	0.084	55	0.1	5.987	A
B-AD	27	455	0.060	27	0.1	8.407	A
ABCD	44	716	0.061	44	0.1	5.360	A
A-B	23			23			
A-C	346			346			
D-A	25	587	0.042	25	0.0	6.408	A
D-BC	47	500	0.093	47	0.1	7.939	A
C-ABD	50	800	0.062	50	0.1	4.799	A
C-D	52			52			
C-A	213			213			

Queue Variation Results for each time segment

15:45 - 16:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.09	0.00	0.00	0.09	0.09			N/A	N/A
B-AD	0.06	0.00	0.00	0.06	0.06			N/A	N/A
ABCD	0.06	0.00	0.00	0.06	0.06			N/A	N/A
D-A	0.04	0.00	0.00	0.04	0.04			N/A	N/A
D-BC	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-ABD	0.07	0.00	0.00	0.07	0.07			N/A	N/A

16:00 - 16:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.11	0.00	0.00	0.11	0.11			N/A	N/A
B-AD	0.08	0.03	0.26	0.47	0.50			N/A	N/A
ABCD	0.08	0.03	0.25	0.46	0.48			N/A	N/A
D-A	0.05	0.03	0.25	0.45	0.48			N/A	N/A
D-BC	0.13	0.00	0.00	0.13	0.13			N/A	N/A
C-ABD	0.08	0.03	0.26	0.47	0.49			N/A	N/A

16:15 - 16:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.15	0.03	0.26	0.46	0.49			N/A	N/A
B-AD	0.11	0.03	0.26	0.47	0.49			N/A	N/A
ABCD	0.10	0.03	0.26	0.47	0.49			N/A	N/A
D-A	0.07	0.03	0.26	0.47	0.49			N/A	N/A
D-BC	0.19	0.03	0.26	0.46	0.49			N/A	N/A
C-ABD	0.11	0.03	0.26	0.47	0.49			N/A	N/A

16:30 - 16:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.15	0.03	0.25	0.45	0.48			N/A	N/A
B-AD	0.11	0.03	0.25	0.45	0.48			N/A	N/A
ABCD	0.10	0.00	0.00	0.10	0.10			N/A	N/A
D-A	0.07	0.00	0.00	0.07	0.07			N/A	N/A
D-BC	0.19	0.03	0.26	0.46	0.49			N/A	N/A
C-ABD	0.11	0.00	0.00	0.11	0.11			N/A	N/A

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.12	0.00	0.00	0.12	0.12			N/A	N/A
B-AD	0.08	0.00	0.00	0.08	0.08			N/A	N/A
A-BCD	0.08	0.00	0.00	0.08	0.08			N/A	N/A
D-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
D-BC	0.14	0.00	0.00	0.14	0.14			N/A	N/A
C-ABD	0.08	0.00	0.00	0.08	0.08			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.09	0.00	0.00	0.09	0.09			N/A	N/A
B-AD	0.06	0.00	0.00	0.06	0.06			N/A	N/A
A-BCD	0.07	0.00	0.00	0.07	0.07			N/A	N/A
D-A	0.04	0.00	0.00	0.04	0.04			N/A	N/A
D-BC	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-ABD	0.07	0.00	0.00	0.07	0.07			N/A	N/A

2023 - DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	D - Prospect Ln - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bartons Rd/Martins Rd/Prospect Ln	Right-Left Stagger	Two-way	2.85	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	57	Stream D-BC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2023 - DM	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Bartons Rd (E)		✓	435	100.000
B - Martin Rd		✓	118	100.000
C - Bartons Rd (W)		✓	563	100.000
D - Prospect Ln		✓	135	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A - Bartons Rd (E)	B - Martin Rd	C - Bartons Rd (W)	D - Prospect Ln
From	A - Bartons Rd (E)	0	29	326	80
	B - Martin Rd	25	0	65	28
	C - Bartons Rd (W)	401	104	0	58
	D - Prospect Ln	43	23	69	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - Bartons Rd (E)	B - Martin Rd	C - Bartons Rd (W)	D - Prospect Ln
	A - Bartons Rd (E)	0	0	3	1
	B - Martin Rd	2	0	2	0
	C - Bartons Rd (W)	4	0	0	0
	D - Prospect Ln	3	0	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.12	6.98	0.1	0.5	A
B-AD	0.14	10.48	0.2	0.5	B
A-BCD	0.14	6.65	0.2	0.5	A
A-B					
A-C					
D-A	0.10	8.34	0.1	0.5	A
D-BC	0.25	11.91	0.3	1.5	B
C-ABD	0.15	5.45	0.2	0.5	A
C-D					
C-A					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	49	645	0.076	49	0.1	6.156	A
B-AD	40	477	0.084	40	0.1	8.298	A
A-BCD	60	688	0.088	60	0.1	5.785	A
A-B	22			22			
A-C	245			245			
D-A	32	550	0.059	32	0.1	7.156	A
D-BC	69	487	0.142	69	0.2	8.705	A
C-ABD	78	826	0.095	78	0.1	4.808	A
C-D	44			44			
C-A	302			302			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	58	625	0.093	58	0.1	6.478	A
B-AD	48	447	0.107	48	0.1	9.099	A
A-BCD	72	666	0.108	72	0.1	6.123	A
A-B	26			26			
A-C	293			293			
D-A	39	527	0.073	39	0.1	7.592	A
D-BC	83	454	0.182	82	0.2	9.831	A
C-ABD	94	804	0.116	93	0.1	5.063	A
C-D	52			52			
C-A	360			360			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	72	598	0.120	71	0.1	6.973	A
B-AD	58	405	0.144	58	0.2	10.469	B
A-BCD	88	635	0.139	88	0.2	6.645	A
A-B	32			32			
A-C	359			359			
D-A	47	492	0.096	47	0.1	8.327	A
D-BC	101	408	0.248	101	0.3	11.872	B
C-ABD	115	775	0.148	114	0.2	5.451	A
C-D	64			64			
C-A	441			441			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	72	598	0.120	72	0.1	6.980	A
B-AD	58	405	0.144	58	0.2	10.482	B
A-BCD	88	635	0.139	88	0.2	6.648	A
A-B	32			32			
A-C	359			359			
D-A	47	492	0.096	47	0.1	8.335	A
D-BC	101	408	0.248	101	0.3	11.909	B
C-ABD	115	774	0.148	115	0.2	5.454	A
C-D	64			64			
C-A	441			441			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	58	625	0.094	59	0.1	6.486	A
B-AD	48	447	0.107	48	0.1	9.115	A
A-BCD	72	666	0.108	72	0.1	6.130	A
A-B	26			26			
A-C	293			293			
D-A	39	527	0.073	39	0.1	7.604	A
D-BC	83	454	0.182	83	0.2	9.870	A
C-ABD	94	804	0.116	94	0.1	5.067	A
C-D	52			52			
C-A	360			360			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	49	644	0.076	49	0.1	6.172	A
B-AD	40	477	0.084	40	0.1	8.320	A
ABCD	60	688	0.088	60	0.1	5.795	A
A-B	22			22			
A-C	245			245			
D-A	32	550	0.059	32	0.1	7.172	A
D-BC	69	487	0.142	69	0.2	8.763	A
C-ABD	78	826	0.095	78	0.1	4.817	A
C-D	44			44			
C-A	302			302			

Queue Variation Results for each time segment
07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.08	0.00	0.00	0.08	0.08			N/A	N/A
B-AD	0.09	0.00	0.00	0.09	0.09			N/A	N/A
ABCD	0.10	0.00	0.00	0.10	0.10			N/A	N/A
D-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
D-BC	0.17	0.00	0.00	0.17	0.17			N/A	N/A
C-ABD	0.10	0.00	0.00	0.10	0.10			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.10	0.00	0.00	0.10	0.10			N/A	N/A
B-AD	0.12	0.00	0.00	0.12	0.12			N/A	N/A
ABCD	0.12	0.00	0.00	0.12	0.12			N/A	N/A
D-A	0.08	0.03	0.26	0.48	0.50			N/A	N/A
D-BC	0.22	0.00	0.00	0.22	0.22			N/A	N/A
C-ABD	0.13	0.00	0.00	0.13	0.13			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.14	0.03	0.26	0.47	0.50			N/A	N/A
B-AD	0.17	0.03	0.26	0.47	0.50			N/A	N/A
ABCD	0.16	0.03	0.26	0.47	0.49			N/A	N/A
D-A	0.11	0.03	0.27	0.48	0.51			N/A	N/A
D-BC	0.33	0.03	0.26	0.47	0.50			N/A	N/A
C-ABD	0.17	0.03	0.26	0.46	0.49			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.14	0.03	0.26	0.46	0.48			N/A	N/A
B-AD	0.17	0.03	0.25	0.46	0.48			N/A	N/A
ABCD	0.16	0.03	0.25	0.45	0.48			N/A	N/A
D-A	0.11	0.03	0.26	0.46	0.49			N/A	N/A
D-BC	0.33	0.03	0.32	1.16	1.48			N/A	N/A
C-ABD	0.17	0.03	0.25	0.45	0.48			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.11	0.00	0.00	0.11	0.11			N/A	N/A
B-AD	0.12	0.00	0.00	0.12	0.12			N/A	N/A
A-BCD	0.12	0.00	0.00	0.12	0.12			N/A	N/A
D-A	0.08	0.00	0.00	0.08	0.08			N/A	N/A
D-BC	0.23	0.00	0.00	0.23	0.23			N/A	N/A
C-ABD	0.13	0.00	0.00	0.13	0.13			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.08	0.00	0.00	0.08	0.08			N/A	N/A
B-AD	0.09	0.00	0.00	0.09	0.09			N/A	N/A
A-BCD	0.10	0.00	0.00	0.10	0.10			N/A	N/A
D-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
D-BC	0.17	0.00	0.00	0.17	0.17			N/A	N/A
C-ABD	0.11	0.00	0.00	0.11	0.11			N/A	N/A

2023 - DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	D - Prospect Ln - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bartons Rd/Martins Rd/Prospect Ln	Right-Left Stagger	Two-way	2.17	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	75	Stream D-BC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2023 - DM	PM	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Bartons Rd (E)		✓	587	100.000
B - Martin Rd		✓	117	100.000
C - Bartons Rd (W)		✓	448	100.000
D - Prospect Ln		✓	102	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A - Bartons Rd (E)	B - Martin Rd	C - Bartons Rd (W)	D - Prospect Ln
From	A - Bartons Rd (E)	0	33	492	62
	B - Martin Rd	24	0	78	15
	C - Bartons Rd (W)	303	71	0	74
	D - Prospect Ln	35	14	53	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - Bartons Rd (E)	B - Martin Rd	C - Bartons Rd (W)	D - Prospect Ln
	A - Bartons Rd (E)	0	3	0	0
	B - Martin Rd	0	0	0	0
	C - Bartons Rd (W)	4	0	0	2
	D - Prospect Ln	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.15	7.19	0.2	0.5	A
B-AD	0.12	10.91	0.1	0.5	B
A-BCD	0.10	6.02	0.1	0.5	A
A-B					
A-C					
D-A	0.07	7.24	0.1	0.5	A
D-BC	0.18	10.61	0.2	0.9	B
C-ABD	0.11	5.59	0.1	0.5	A
C-D					
C-A					

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	59	648	0.091	58	0.1	6.105	A
B-AD	29	445	0.066	29	0.1	8.641	A
A-BCD	47	709	0.066	46	0.1	5.427	A
A-B	25			25			
A-C	370			370			
D-A	26	579	0.045	26	0.0	6.505	A
D-BC	50	490	0.103	50	0.1	8.177	A
C-ABD	53	790	0.068	53	0.1	4.885	A
C-D	56			56			
C-A	228			228			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	70	622	0.113	70	0.1	6.518	A
B-AD	35	415	0.084	35	0.1	9.470	A
A-BCD	56	691	0.081	56	0.1	5.664	A
A-B	30			30			
A-C	442			442			
D-A	31	562	0.056	31	0.1	6.788	A
D-BC	60	458	0.132	60	0.1	9.053	A
C-ABD	64	761	0.084	64	0.1	5.161	A
C-D	67			67			
C-A	272			272			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	86	587	0.146	86	0.2	7.181	A
B-AD	43	373	0.115	43	0.1	10.896	B
A-BCD	68	666	0.102	68	0.1	6.018	A
A-B	36			36			
A-C	542			542			
D-A	39	536	0.072	38	0.1	7.234	A
D-BC	74	413	0.179	74	0.2	10.590	B
C-ABD	78	722	0.108	78	0.1	5.594	A
C-D	81			81			
C-A	334			334			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	86	587	0.146	86	0.2	7.187	A
B-AD	43	373	0.115	43	0.1	10.906	B
A-BCD	68	666	0.102	68	0.1	6.019	A
A-B	36			36			
A-C	542			542			
D-A	39	536	0.072	39	0.1	7.238	A
D-BC	74	413	0.179	74	0.2	10.606	B
C-ABD	78	722	0.108	78	0.1	5.595	A
C-D	81			81			
C-A	334			334			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	70	622	0.113	70	0.1	6.528	A
B-AD	35	415	0.084	35	0.1	9.484	A
A-BCD	56	691	0.081	56	0.1	5.666	A
A-B	30			30			
A-C	442			442			
D-A	31	561	0.056	32	0.1	6.796	A
D-BC	60	458	0.132	60	0.2	9.072	A
C-ABD	64	761	0.084	64	0.1	5.164	A
C-D	67			67			
C-A	272			272			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	59	647	0.091	59	0.1	6.120	A
B-AD	29	445	0.066	29	0.1	8.659	A
ABCD	47	709	0.066	47	0.1	5.436	A
A-B	25			25			
A-C	370			370			
D-A	26	579	0.046	26	0.0	6.518	A
D-BC	50	490	0.103	51	0.1	8.203	A
C-ABD	53	790	0.068	54	0.1	4.889	A
C-D	56			56			
C-A	228			228			

Queue Variation Results for each time segment

15:45 - 16:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.10	0.00	0.00	0.10	0.10			N/A	N/A
B-AD	0.07	0.00	0.00	0.07	0.07			N/A	N/A
ABCD	0.07	0.00	0.00	0.07	0.07			N/A	N/A
D-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
D-BC	0.11	0.00	0.00	0.11	0.11			N/A	N/A
C-ABD	0.07	0.00	0.00	0.07	0.07			N/A	N/A

16:00 - 16:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.13	0.00	0.00	0.13	0.13			N/A	N/A
B-AD	0.09	0.03	0.25	0.45	0.48			N/A	N/A
ABCD	0.09	0.03	0.26	0.47	0.50			N/A	N/A
D-A	0.06	0.03	0.25	0.45	0.48			N/A	N/A
D-BC	0.15	0.00	0.00	0.15	0.15			N/A	N/A
C-ABD	0.09	0.03	0.25	0.45	0.48			N/A	N/A

16:15 - 16:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.17	0.03	0.26	0.46	0.49			N/A	N/A
B-AD	0.13	0.03	0.26	0.47	0.49			N/A	N/A
ABCD	0.11	0.03	0.26	0.47	0.49			N/A	N/A
D-A	0.08	0.03	0.26	0.47	0.49			N/A	N/A
D-BC	0.21	0.03	0.26	0.46	0.49			N/A	N/A
C-ABD	0.12	0.03	0.26	0.46	0.49			N/A	N/A

16:30 - 16:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.17	0.03	0.25	0.45	0.48			N/A	N/A
B-AD	0.13	0.03	0.25	0.45	0.48			N/A	N/A
ABCD	0.11	0.03	0.25	0.45	0.48			N/A	N/A
D-A	0.08	0.00	0.00	0.08	0.08			N/A	N/A
D-BC	0.22	0.03	0.27	0.49	0.91			N/A	N/A
C-ABD	0.12	0.03	0.25	0.45	0.48			N/A	N/A

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.13	0.00	0.00	0.13	0.13			N/A	N/A
B-AD	0.09	0.00	0.00	0.09	0.09			N/A	N/A
A-BCD	0.09	0.00	0.00	0.09	0.09			N/A	N/A
D-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
D-BC	0.15	0.00	0.00	0.15	0.15			N/A	N/A
C-ABD	0.09	0.00	0.00	0.09	0.09			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.10	0.00	0.00	0.10	0.10			N/A	N/A
B-AD	0.07	0.00	0.00	0.07	0.07			N/A	N/A
A-BCD	0.07	0.00	0.00	0.07	0.07			N/A	N/A
D-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
D-BC	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-ABD	0.07	0.00	0.00	0.07	0.07			N/A	N/A

2023 - DS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	D - Prospect Ln - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bartons Rd/Martins Rd/Prospect Ln	Right-Left Stagger	Two-way	3.08	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	51	Stream D-BC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2023 - DS	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Bartons Rd (E)		✓	445	100.000
B - Martin Rd		✓	152	100.000
C - Bartons Rd (W)		✓	592	100.000
D - Prospect Ln		✓	135	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A - Bartons Rd (E)	B - Martin Rd	C - Bartons Rd (W)	D - Prospect Ln
From	A - Bartons Rd (E)	0	36	329	80
	B - Martin Rd	42	0	82	28
	C - Bartons Rd (W)	423	111	0	58
	D - Prospect Ln	43	23	69	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - Bartons Rd (E)	B - Martin Rd	C - Bartons Rd (W)	D - Prospect Ln
	A - Bartons Rd (E)	0	0	3	1
	B - Martin Rd	2	0	2	0
	C - Bartons Rd (W)	4	0	0	0
	D - Prospect Ln	3	0	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.15	7.42	0.2	0.5	A
B-AD	0.19	11.30	0.2	1.1	B
A-BCD	0.14	6.81	0.2	0.5	A
A-B					
A-C					
D-A	0.10	8.56	0.1	0.5	A
D-BC	0.26	12.48	0.3	1.0	B
C-ABD	0.16	5.55	0.2	0.5	A
C-D					
C-A					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	62	636	0.097	61	0.1	6.389	A
B-AD	53	474	0.111	52	0.1	8.622	A
A-BCD	60	679	0.089	60	0.1	5.866	A
A-B	27			27			
A-C	248			248			
D-A	32	543	0.060	32	0.1	7.259	A
D-BC	69	477	0.145	69	0.2	8.922	A
C-ABD	84	824	0.101	83	0.1	4.857	A
C-D	44			44			
C-A	318			318			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	74	615	0.120	74	0.1	6.784	A
B-AD	63	443	0.142	63	0.2	9.580	A
A-BCD	72	655	0.110	72	0.1	6.233	A
A-B	32			32			
A-C	296			296			
D-A	39	518	0.075	39	0.1	7.734	A
D-BC	83	442	0.187	82	0.2	10.144	B
C-ABD	100	801	0.125	100	0.1	5.129	A
C-D	52			52			
C-A	380			380			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	90	585	0.154	90	0.2	7.415	A
B-AD	77	399	0.193	77	0.2	11.280	B
A-BCD	88	622	0.142	88	0.2	6.804	A
A-B	40			40			
A-C	362			362			
D-A	47	481	0.098	47	0.1	8.550	A
D-BC	101	394	0.257	101	0.3	12.439	B
C-ABD	122	771	0.159	122	0.2	5.546	A
C-D	64			64			
C-A	466			466			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	90	585	0.154	90	0.2	7.422	A
B-AD	77	399	0.193	77	0.2	11.303	B
A-BCD	88	622	0.142	88	0.2	6.808	A
A-B	40			40			
A-C	362			362			
D-A	47	481	0.099	47	0.1	8.559	A
D-BC	101	394	0.257	101	0.3	12.484	B
C-ABD	122	771	0.159	122	0.2	5.549	A
C-D	64			64			
C-A	466			466			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	74	614	0.120	74	0.1	6.798	A
B-AD	63	443	0.142	63	0.2	9.606	A
A-BCD	72	655	0.110	72	0.1	6.237	A
A-B	32			32			
A-C	296			296			
D-A	39	518	0.075	39	0.1	7.747	A
D-BC	83	442	0.187	83	0.2	10.189	B
C-ABD	100	801	0.125	100	0.1	5.136	A
C-D	52			52			
C-A	380			380			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	62	635	0.097	62	0.1	6.407	A
B-AD	53	474	0.111	53	0.1	8.650	A
ABCD	60	679	0.089	60	0.1	5.879	A
A-B	27			27			
A-C	248			248			
D-A	32	542	0.060	32	0.1	7.276	A
D-BC	69	477	0.145	70	0.2	8.969	A
C-ABD	84	823	0.101	84	0.1	4.868	A
C-D	44			44			
C-A	318			318			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.11	0.00	0.00	0.11	0.11			N/A	N/A
B-AD	0.13	0.00	0.00	0.13	0.13			N/A	N/A
ABCD	0.10	0.00	0.00	0.10	0.10			N/A	N/A
D-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
D-BC	0.17	0.00	0.00	0.17	0.17			N/A	N/A
C-ABD	0.11	0.00	0.00	0.11	0.11			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.14	0.00	0.00	0.14	0.14			N/A	N/A
B-AD	0.17	0.00	0.00	0.17	0.17			N/A	N/A
ABCD	0.12	0.00	0.00	0.12	0.12			N/A	N/A
D-A	0.08	0.03	0.27	0.48	0.51			N/A	N/A
D-BC	0.23	0.00	0.00	0.23	0.23			N/A	N/A
C-ABD	0.14	0.00	0.00	0.14	0.14			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.18	0.03	0.26	0.47	0.50			N/A	N/A
B-AD	0.24	0.03	0.26	0.47	0.50			N/A	N/A
ABCD	0.17	0.03	0.26	0.47	0.49			N/A	N/A
D-A	0.11	0.03	0.27	0.48	0.51			N/A	N/A
D-BC	0.34	0.03	0.26	0.47	0.50			N/A	N/A
C-ABD	0.19	0.03	0.26	0.46	0.49			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.19	0.03	0.26	0.46	0.49			N/A	N/A
B-AD	0.24	0.03	0.29	0.73	1.13			N/A	N/A
ABCD	0.17	0.03	0.25	0.45	0.48			N/A	N/A
D-A	0.11	0.03	0.26	0.46	0.49			N/A	N/A
D-BC	0.35	0.03	0.32	1.03	1.03			N/A	N/A
C-ABD	0.19	0.03	0.25	0.45	0.48			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.14	0.00	0.00	0.14	0.14			N/A	N/A
B-AD	0.17	0.00	0.00	0.17	0.17			N/A	N/A
A-BCD	0.13	0.00	0.00	0.13	0.13			N/A	N/A
D-A	0.08	0.00	0.00	0.08	0.08			N/A	N/A
D-BC	0.24	0.00	0.00	0.24	0.24			N/A	N/A
C-ABD	0.14	0.00	0.00	0.14	0.14			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.11	0.00	0.00	0.11	0.11			N/A	N/A
B-AD	0.13	0.00	0.00	0.13	0.13			N/A	N/A
A-BCD	0.10	0.00	0.00	0.10	0.10			N/A	N/A
D-A	0.07	0.00	0.00	0.07	0.07			N/A	N/A
D-BC	0.17	0.00	0.00	0.17	0.17			N/A	N/A
C-ABD	0.11	0.00	0.00	0.11	0.11			N/A	N/A

2023 - DS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	D - Prospect Ln - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bartons Rd/Martins Rd/Prospect Ln	Right-Left Stagger	Two-way	2.32	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	69	Stream D-BC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2023 - DS	PM	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Bartons Rd (E)		✓	623	100.000
B - Martin Rd		✓	134	100.000
C - Bartons Rd (W)		✓	465	100.000
D - Prospect Ln		✓	102	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A - Bartons Rd (E)	B - Martin Rd	C - Bartons Rd (W)	D - Prospect Ln
From	A - Bartons Rd (E)	0	48	513	62
	B - Martin Rd	32	0	87	15
	C - Bartons Rd (W)	305	86	0	74
	D - Prospect Ln	35	14	53	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A - Bartons Rd (E)	B - Martin Rd	C - Bartons Rd (W)	D - Prospect Ln
	A - Bartons Rd (E)	0	3	0	0
	B - Martin Rd	0	0	0	0
	C - Bartons Rd (W)	4	0	0	2
	D - Prospect Ln	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.17	7.57	0.2	0.5	A
B-AD	0.14	11.58	0.2	0.5	B
A-BCD	0.10	6.05	0.1	0.5	A
A-B					
A-C					
D-A	0.07	7.29	0.1	0.5	A
D-BC	0.18	10.93	0.2	1.0	B
C-ABD	0.13	5.86	0.2	0.5	A
C-D					
C-A					

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	65	636	0.103	65	0.1	6.293	A
B-AD	35	440	0.080	35	0.1	8.891	A
A-BCD	47	707	0.066	46	0.1	5.445	A
A-B	36			36			
A-C	386			386			
D-A	26	577	0.046	26	0.0	6.529	A
D-BC	50	483	0.104	50	0.1	8.307	A
C-ABD	65	781	0.083	64	0.1	5.021	A
C-D	56			56			
C-A	230			230			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	78	609	0.128	78	0.1	6.775	A
B-AD	42	407	0.104	42	0.1	9.855	A
A-BCD	56	689	0.081	56	0.1	5.688	A
A-B	43			43			
A-C	461			461			
D-A	31	559	0.056	31	0.1	6.821	A
D-BC	60	449	0.134	60	0.2	9.240	A
C-ABD	77	751	0.103	77	0.1	5.346	A
C-D	67			67			
C-A	274			274			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	96	572	0.168	96	0.2	7.557	A
B-AD	52	363	0.143	52	0.2	11.562	B
A-BCD	68	663	0.103	68	0.1	6.052	A
A-B	53			53			
A-C	565			565			
D-A	39	533	0.072	38	0.1	7.284	A
D-BC	74	403	0.183	73	0.2	10.913	B
C-ABD	95	709	0.134	95	0.2	5.861	A
C-D	81			81			
C-A	336			336			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	96	571	0.168	96	0.2	7.566	A
B-AD	52	363	0.143	52	0.2	11.578	B
A-BCD	68	663	0.103	68	0.1	6.052	A
A-B	53			53			
A-C	565			565			
D-A	39	532	0.072	39	0.1	7.289	A
D-BC	74	403	0.183	74	0.2	10.932	B
C-ABD	95	708	0.134	95	0.2	5.864	A
C-D	81			81			
C-A	336			336			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	78	609	0.128	78	0.1	6.790	A
B-AD	42	407	0.104	42	0.1	9.875	A
A-BCD	56	688	0.081	56	0.1	5.690	A
A-B	43			43			
A-C	461			461			
D-A	31	559	0.056	32	0.1	6.832	A
D-BC	60	449	0.134	60	0.2	9.267	A
C-ABD	77	750	0.103	77	0.1	5.350	A
C-D	67			67			
C-A	274			274			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	65	636	0.103	66	0.1	6.315	A
B-AD	35	439	0.081	35	0.1	8.913	A
ABCD	47	707	0.066	47	0.1	5.454	A
A-B	36			36			
A-C	386			386			
D-A	26	577	0.046	26	0.0	6.542	A
D-BC	50	483	0.104	51	0.1	8.333	A
C-ABD	65	781	0.083	65	0.1	5.027	A
C-D	56			56			
C-A	230			230			

Queue Variation Results for each time segment

15:45 - 16:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.11	0.00	0.00	0.11	0.11			N/A	N/A
B-AD	0.09	0.00	0.00	0.09	0.09			N/A	N/A
ABCD	0.07	0.00	0.00	0.07	0.07			N/A	N/A
D-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
D-BC	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-ABD	0.09	0.00	0.00	0.09	0.09			N/A	N/A

16:00 - 16:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.15	0.00	0.00	0.15	0.15			N/A	N/A
B-AD	0.11	0.00	0.00	0.11	0.11			N/A	N/A
ABCD	0.09	0.03	0.26	0.47	0.49			N/A	N/A
D-A	0.06	0.03	0.25	0.45	0.48			N/A	N/A
D-BC	0.15	0.00	0.00	0.15	0.15			N/A	N/A
C-ABD	0.11	0.00	0.00	0.11	0.11			N/A	N/A

16:15 - 16:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.20	0.03	0.26	0.46	0.49			N/A	N/A
B-AD	0.16	0.03	0.26	0.47	0.49			N/A	N/A
ABCD	0.11	0.03	0.26	0.47	0.49			N/A	N/A
D-A	0.08	0.03	0.26	0.47	0.49			N/A	N/A
D-BC	0.22	0.03	0.26	0.46	0.49			N/A	N/A
C-ABD	0.15	0.03	0.26	0.46	0.49			N/A	N/A

16:30 - 16:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.20	0.03	0.26	0.47	0.49			N/A	N/A
B-AD	0.17	0.03	0.25	0.45	0.48			N/A	N/A
ABCD	0.11	0.03	0.25	0.45	0.48			N/A	N/A
D-A	0.08	0.00	0.00	0.08	0.08			N/A	N/A
D-BC	0.22	0.03	0.28	0.50	0.99			N/A	N/A
C-ABD	0.15	0.03	0.25	0.45	0.48			N/A	N/A

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.15	0.00	0.00	0.15	0.15			N/A	N/A
B-AD	0.12	0.00	0.00	0.12	0.12			N/A	N/A
A-BCD	0.09	0.00	0.00	0.09	0.09			N/A	N/A
D-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
D-BC	0.16	0.00	0.00	0.16	0.16			N/A	N/A
C-ABD	0.12	0.00	0.00	0.12	0.12			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.12	0.00	0.00	0.12	0.12			N/A	N/A
B-AD	0.09	0.00	0.00	0.09	0.09			N/A	N/A
A-BCD	0.07	0.00	0.00	0.07	0.07			N/A	N/A
D-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
D-BC	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-ABD	0.09	0.00	0.00	0.09	0.09			N/A	N/A



Appendix F

Junction 2 - Results

Junctions 9											
PICADY 9 - Priority Intersection Module											
Version: 9.0.2.5947											
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Filename: Bartons Rd - New Lane Junction.j9

Path: X:\Projects\2012\A090000\A090070-182 - Colt Industrial, New Lane, Havant\30 Technical\31 Modelling\Bartons Rd - New Lane Junction

Report generation date: 08/03/2018 17:25:35

»2017, AM

»2017, PM

»2023 - DM, AM

»2023 - DM, PM

»2023 - DS, AM

»2023 - DS, PM

Summary of junction performance

	AM						PM					
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2017											
Stream B-C	0.2	1.0	7.59	0.18	A	50 % [Stream B-A]	0.5	2.2	10.78	0.33	B	21 % [Stream B-A]
Stream B-A	0.4	1.7	12.05	0.29	B		1.2	4.5	17.05	0.54	C	
Stream C-AB	0.8	3.1	7.48	0.34	A		0.4	1.3	6.52	0.18	A	
	2023 - DM											
Stream B-C	0.3	1.2	8.02	0.20	A	39 % [Stream B-A]	0.6	2.9	12.27	0.37	B	13 % [Stream B-A]
Stream B-A	0.5	2.2	13.43	0.33	B		1.5	5.9	20.59	0.60	C	
Stream C-AB	1.0	4.5	7.94	0.38	A		0.4	1.4	6.65	0.20	A	
	2023 - DS											
Stream B-C	0.3	1.3	8.20	0.21	A	32 % [Stream B-A]	0.8	3.8	14.40	0.44	B	7 % [Stream B-A]
Stream B-A	0.6	2.6	14.59	0.36	B		1.9	8.6	24.49	0.66	C	
Stream C-AB	1.3	6.8	8.92	0.45	A		0.4	1.4	6.68	0.21	A	

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

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	20/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WYG\philip.eveleigh
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2017	AM	ONE HOUR	07:45	09:15	15
D2	2017	PM	ONE HOUR	15:45	17:15	15
D3	2023 - DM	AM	ONE HOUR	07:45	09:15	15
D4	2023 - DM	PM	ONE HOUR	15:45	17:15	15
D5	2023 - DS	AM	ONE HOUR	07:45	09:15	15
D6	2023 - DS	PM	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2017, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bartons Rd/New Lane	T-Junction	Two-way	2.92	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	50	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	Bartons Rd (E)		Major
B	New Lane		Minor
C	Bartons Rd (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Bartons Rd (W)	7.37			173.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - New Lane	One lane plus flare	10.00	8.80	8.33	5.58	5.30	✓	3.00	175	179

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	691	0.118	0.299	0.188	0.427
1	B-C	782	0.113	0.285	-	-
1	C-B	674	0.246	0.246	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2017	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Bartons Rd (E)		✓	617	100.000
B - New Lane		✓	214	100.000
C - Bartons Rd (W)		✓	432	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Bartons Rd (E)	B - New Lane	C - Bartons Rd (W)
From	A - Bartons Rd (E)	0	314	303
	B - New Lane	114	0	100
	C - Bartons Rd (W)	307	125	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Bartons Rd (E)	B - New Lane	C - Bartons Rd (W)
From	A - Bartons Rd (E)	0	1	2
	B - New Lane	1	0	3
	C - Bartons Rd (W)	5	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.18	7.59	0.2	1.0	A
B-A	0.29	12.05	0.4	1.7	B
C-AB	0.34	7.48	0.8	3.1	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	75	661	0.114	75	0.1	6.317	A
B-A	86	511	0.168	85	0.2	8.515	A
C-AB	139	719	0.193	137	0.3	6.362	A
C-A	187			187			
A-B	236			236			
A-C	228			228			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	90	636	0.141	90	0.2	6.790	A
B-A	102	476	0.215	102	0.3	9.715	A
C-AB	181	732	0.247	180	0.5	6.733	A
C-A	207			207			
A-B	282			282			
A-C	272			272			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	110	599	0.184	110	0.2	7.579	A
B-A	126	427	0.294	125	0.4	12.000	B
C-AB	252	751	0.335	250	0.8	7.441	A
C-A	224			224			
A-B	346			346			
A-C	334			334			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	110	598	0.184	110	0.2	7.592	A
B-A	126	427	0.294	126	0.4	12.052	B
C-AB	252	751	0.336	252	0.8	7.484	A
C-A	224			224			
A-B	346			346			
A-C	334			334			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	90	635	0.142	90	0.2	6.810	A
B-A	102	476	0.215	103	0.3	9.773	A
C-AB	182	732	0.248	183	0.5	6.793	A
C-A	207			207			
A-B	282			282			
A-C	272			272			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	75	661	0.114	75	0.1	6.338	A
B-A	86	511	0.168	86	0.2	8.569	A
C-AB	139	720	0.193	140	0.4	6.415	A
C-A	186			186			
A-B	236			236			
A-C	228			228			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.13	0.00	0.00	0.13	0.13			N/A	N/A
B-A	0.20	0.00	0.00	0.20	0.20			N/A	N/A
C-AB	0.34	0.00	0.00	0.34	0.34			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.17	0.00	0.00	0.17	0.17			N/A	N/A
B-A	0.27	0.00	0.00	0.27	0.27			N/A	N/A
C-AB	0.49	0.00	0.00	0.49	0.49			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.23	0.03	0.26	0.47	0.50			N/A	N/A
B-A	0.41	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.78	0.03	0.27	0.78	0.78			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.23	0.03	0.28	0.51	0.97			N/A	N/A
B-A	0.42	0.03	0.32	1.33	1.68			N/A	N/A
C-AB	0.79	0.04	0.39	1.87	3.11			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.17	0.00	0.00	0.17	0.17			N/A	N/A
B-A	0.28	0.00	0.00	0.28	0.28			N/A	N/A
C-AB	0.51	0.00	0.00	0.51	0.51			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.13	0.00	0.00	0.13	0.13			N/A	N/A
B-A	0.21	0.00	0.00	0.21	0.21			N/A	N/A
C-AB	0.35	0.00	0.00	0.35	0.35			N/A	N/A

2017, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bartons Rd/New Lane	T-Junction	Two-way	4.80	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	21	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2017	PM	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Bartons Rd (E)		✓	599	100.000
B - New Lane		✓	378	100.000
C - Bartons Rd (W)		✓	315	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Bartons Rd (E)	B - New Lane	C - Bartons Rd (W)
From	A - Bartons Rd (E)	0	195	404
	B - New Lane	225	0	153
	C - Bartons Rd (W)	242	73	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Bartons Rd (E)	B - New Lane	C - Bartons Rd (W)
From	A - Bartons Rd (E)	0	1	3
	B - New Lane	0	0	3
	C - Bartons Rd (W)	3	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.33	10.78	0.5	2.2	B
B-A	0.54	17.05	1.2	4.5	C
C-AB	0.18	6.52	0.4	1.3	A
C-A					
A-B					
A-C					

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	115	606	0.190	114	0.2	7.521	A
B-A	169	539	0.314	168	0.5	9.639	A
C-AB	75	689	0.109	74	0.2	6.073	A
C-A	162			162			
A-B	147			147			
A-C	304			304			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	138	571	0.241	137	0.3	8.526	A
B-A	202	506	0.400	201	0.7	11.800	B
C-AB	96	694	0.138	96	0.2	6.240	A
C-A	187			187			
A-B	175			175			
A-C	363			363			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	168	514	0.328	168	0.5	10.692	B
B-A	248	459	0.540	246	1.1	16.768	C
C-AB	130	703	0.185	129	0.4	6.509	A
C-A	217			217			
A-B	215			215			
A-C	445			445			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	168	512	0.329	168	0.5	10.775	B
B-A	248	458	0.540	248	1.2	17.055	C
C-AB	130	703	0.185	130	0.4	6.517	A
C-A	217			217			
A-B	215			215			
A-C	445			445			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	138	570	0.241	138	0.3	8.603	A
B-A	202	506	0.400	204	0.7	12.010	B
C-AB	96	694	0.138	96	0.2	6.253	A
C-A	187			187			
A-B	175			175			
A-C	363			363			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	115	605	0.190	116	0.2	7.576	A
B-A	169	539	0.314	170	0.5	9.782	A
C-AB	75	689	0.109	75	0.2	6.090	A
C-A	162			162			
A-B	147			147			
A-C	304			304			

Queue Variation Results for each time segment

15:45 - 16:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.24	0.00	0.00	0.24	0.24			N/A	N/A
B-A	0.45	0.00	0.00	0.45	0.45			N/A	N/A
C-AB	0.17	0.00	0.00	0.17	0.17			N/A	N/A

16:00 - 16:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.32	0.00	0.00	0.32	0.32			N/A	N/A
B-A	0.65	0.15	0.90	1.38	1.44			N/A	N/A
C-AB	0.24	0.00	0.00	0.24	0.24			N/A	N/A

16:15 - 16:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.49	0.03	0.26	0.49	0.50			N/A	N/A
B-A	1.13	0.03	0.27	1.13	2.22			N/A	N/A
C-AB	0.35	0.03	0.27	0.49	0.52			N/A	N/A

16:30 - 16:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.50	0.03	0.32	1.45	2.19			N/A	N/A
B-A	1.15	0.03	0.28	1.15	4.47			N/A	N/A
C-AB	0.36	0.03	0.31	0.95	1.25			N/A	N/A

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.33	0.00	0.00	0.33	0.33			N/A	N/A
B-A	0.68	0.06	0.67	1.06	1.06			N/A	N/A
C-AB	0.24	0.00	0.00	0.24	0.24			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.24	0.00	0.00	0.24	0.24			N/A	N/A
B-A	0.47	0.04	0.39	1.27	1.42			N/A	N/A
C-AB	0.18	0.00	0.00	0.18	0.18			N/A	N/A

2023 - DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bartons Rd/New Lane	T-Junction	Two-way	3.22	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	39	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2023 - DM	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Bartons Rd (E)		✓	666	100.000
B - New Lane		✓	231	100.000
C - Bartons Rd (W)		✓	466	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Bartons Rd (E)	B - New Lane	C - Bartons Rd (W)
From	A - Bartons Rd (E)	0	339	327
	B - New Lane	123	0	108
	C - Bartons Rd (W)	331	135	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Bartons Rd (E)	B - New Lane	C - Bartons Rd (W)
From	A - Bartons Rd (E)	0	1	2
	B - New Lane	1	0	3
	C - Bartons Rd (W)	5	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.20	8.02	0.3	1.2	A
B-A	0.33	13.43	0.5	2.2	B
C-AB	0.38	7.94	1.0	4.5	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	81	651	0.125	81	0.1	6.493	A
B-A	93	497	0.186	92	0.2	8.954	A
C-AB	155	724	0.214	153	0.4	6.494	A
C-A	196			196			
A-B	255			255			
A-C	246			246			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	97	623	0.156	97	0.2	7.046	A
B-A	111	459	0.241	110	0.3	10.422	B
C-AB	204	738	0.277	203	0.6	6.952	A
C-A	215			215			
A-B	305			305			
A-C	294			294			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	119	582	0.204	119	0.3	7.998	A
B-A	135	406	0.333	135	0.5	13.351	B
C-AB	287	759	0.379	286	1.0	7.875	A
C-A	226			226			
A-B	373			373			
A-C	360			360			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	119	581	0.205	119	0.3	8.017	A
B-A	135	406	0.334	135	0.5	13.434	B
C-AB	288	760	0.379	288	1.0	7.937	A
C-A	225			225			
A-B	373			373			
A-C	360			360			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	97	622	0.156	97	0.2	7.068	A
B-A	111	458	0.241	111	0.3	10.498	B
C-AB	205	739	0.277	206	0.6	7.032	A
C-A	214			214			
A-B	305			305			
A-C	294			294			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	81	650	0.125	81	0.1	6.522	A
B-A	93	496	0.187	93	0.2	9.023	A
C-AB	156	725	0.215	157	0.4	6.556	A
C-A	195			195			
A-B	255			255			
A-C	246			246			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.15	0.00	0.00	0.15	0.15			N/A	N/A
B-A	0.23	0.00	0.00	0.23	0.23			N/A	N/A
C-AB	0.40	0.00	0.00	0.40	0.40			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.19	0.00	0.00	0.19	0.19			N/A	N/A
B-A	0.32	0.00	0.00	0.32	0.32			N/A	N/A
C-AB	0.58	0.57	1.03	1.44	1.50			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.26	0.03	0.26	0.47	0.50			N/A	N/A
B-A	0.49	0.03	0.26	0.49	0.49			N/A	N/A
C-AB	0.97	0.03	0.27	0.97	0.97			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.26	0.03	0.30	0.86	1.22			N/A	N/A
B-A	0.50	0.03	0.31	1.43	2.22			N/A	N/A
C-AB	0.98	0.04	0.37	2.41	4.47			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.19	0.00	0.00	0.19	0.19			N/A	N/A
B-A	0.33	0.00	0.00	0.33	0.33			N/A	N/A
C-AB	0.60	0.57	1.03	1.44	1.50			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.15	0.00	0.00	0.15	0.15			N/A	N/A
B-A	0.23	0.00	0.00	0.23	0.23			N/A	N/A
C-AB	0.41	0.00	0.00	0.41	0.41			N/A	N/A

2023 - DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bartons Rd/New Lane	T-Junction	Two-way	5.62	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	13	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2023 - DM	PM	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Bartons Rd (E)		✓	642	100.000
B - New Lane		✓	405	100.000
C - Bartons Rd (W)		✓	337	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Bartons Rd (E)	B - New Lane	C - Bartons Rd (W)
From	A - Bartons Rd (E)	0	209	433
	B - New Lane	241	0	164
	C - Bartons Rd (W)	259	78	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Bartons Rd (E)	B - New Lane	C - Bartons Rd (W)
From	A - Bartons Rd (E)	0	1	3
	B - New Lane	0	0	3
	C - Bartons Rd (W)	3	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.37	12.27	0.6	2.9	B
B-A	0.60	20.59	1.5	5.9	C
C-AB	0.20	6.65	0.4	1.4	A
C-A					
A-B					
A-C					

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	123	594	0.208	122	0.3	7.841	A
B-A	181	527	0.344	179	0.5	10.294	B
C-AB	82	690	0.119	81	0.2	6.126	A
C-A	172			172			
A-B	157			157			
A-C	326			326			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	147	555	0.266	147	0.4	9.082	A
B-A	217	491	0.441	216	0.8	13.027	B
C-AB	106	697	0.152	105	0.3	6.317	A
C-A	197			197			
A-B	188			188			
A-C	389			389			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	181	485	0.372	180	0.6	12.100	B
B-A	265	440	0.603	263	1.4	20.027	C
C-AB	145	707	0.205	144	0.4	6.638	A
C-A	227			227			
A-B	230			230			
A-C	477			477			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	181	483	0.374	181	0.6	12.265	B
B-A	265	440	0.604	265	1.5	20.592	C
C-AB	145	707	0.205	145	0.4	6.646	A
C-A	226			226			
A-B	230			230			
A-C	477			477			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	147	553	0.267	148	0.4	9.192	A
B-A	217	491	0.441	219	0.8	13.382	B
C-AB	106	697	0.152	106	0.3	6.332	A
C-A	197			197			
A-B	188			188			
A-C	389			389			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	123	593	0.208	124	0.3	7.914	A
B-A	181	527	0.344	183	0.5	10.488	B
C-AB	82	691	0.119	82	0.2	6.147	A
C-A	172			172			
A-B	157			157			
A-C	326			326			

Queue Variation Results for each time segment

15:45 - 16:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.27	0.00	0.00	0.27	0.27			N/A	N/A
B-A	0.52	0.52	1.00	1.40	1.45			N/A	N/A
C-AB	0.20	0.00	0.00	0.20	0.20			N/A	N/A

16:00 - 16:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.37	0.00	0.00	0.37	0.37			N/A	N/A
B-A	0.77	0.14	0.90	1.40	1.46			N/A	N/A
C-AB	0.27	0.00	0.00	0.27	0.27			N/A	N/A

16:15 - 16:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.60	0.03	0.27	0.60	0.60			N/A	N/A
B-A	1.44	0.03	0.29	1.44	5.55			N/A	N/A
C-AB	0.41	0.03	0.27	0.49	0.51			N/A	N/A

16:30 - 16:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.61	0.03	0.31	1.50	2.86			N/A	N/A
B-A	1.48	0.03	0.29	1.48	5.89			N/A	N/A
C-AB	0.41	0.04	0.36	1.19	1.38			N/A	N/A

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.38	0.00	0.00	0.38	0.38			N/A	N/A
B-A	0.81	0.06	0.64	1.46	1.91			N/A	N/A
C-AB	0.28	0.00	0.00	0.28	0.28			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.27	0.03	0.26	0.46	0.49			N/A	N/A
B-A	0.53	0.04	0.39	1.43	1.51			N/A	N/A
C-AB	0.20	0.00	0.00	0.20	0.20			N/A	N/A

2023 - DS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bartons Rd/New Lane	T-Junction	Two-way	3.68	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	32	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2023 - DS	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Bartons Rd (E)		✓	688	100.000
B - New Lane		✓	236	100.000
C - Bartons Rd (W)		✓	506	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Bartons Rd (E)	B - New Lane	C - Bartons Rd (W)
From	A - Bartons Rd (E)	0	354	334
	B - New Lane	125	0	111
	C - Bartons Rd (W)	349	157	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Bartons Rd (E)	B - New Lane	C - Bartons Rd (W)
From	A - Bartons Rd (E)	0	1	2
	B - New Lane	1	0	3
	C - Bartons Rd (W)	5	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.21	8.20	0.3	1.3	A
B-A	0.36	14.59	0.6	2.6	B
C-AB	0.45	8.92	1.3	6.8	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	84	648	0.129	83	0.2	6.554	A
B-A	94	484	0.195	93	0.2	9.290	A
C-AB	185	730	0.253	183	0.5	6.772	A
C-A	196			196			
A-B	267			267			
A-C	251			251			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	100	619	0.161	100	0.2	7.142	A
B-A	112	443	0.254	112	0.3	10.971	B
C-AB	245	745	0.328	244	0.7	7.414	A
C-A	210			210			
A-B	318			318			
A-C	300			300			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	122	575	0.213	122	0.3	8.179	A
B-A	138	387	0.355	137	0.5	14.470	B
C-AB	348	769	0.452	345	1.3	8.809	A
C-A	209			209			
A-B	390			390			
A-C	368			368			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	122	574	0.213	122	0.3	8.204	A
B-A	138	387	0.356	138	0.6	14.591	B
C-AB	349	770	0.453	349	1.3	8.917	A
C-A	208			208			
A-B	390			390			
A-C	368			368			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	100	618	0.162	100	0.2	7.168	A
B-A	112	442	0.254	113	0.3	11.071	B
C-AB	246	747	0.329	248	0.8	7.530	A
C-A	209			209			
A-B	318			318			
A-C	300			300			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	84	647	0.129	84	0.2	6.586	A
B-A	94	483	0.195	95	0.2	9.370	A
C-AB	186	731	0.254	187	0.5	6.860	A
C-A	195			195			
A-B	267			267			
A-C	251			251			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.15	0.00	0.00	0.15	0.15			N/A	N/A
B-A	0.24	0.00	0.00	0.24	0.24			N/A	N/A
C-AB	0.49	0.00	0.00	0.49	0.49			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.20	0.00	0.00	0.20	0.20			N/A	N/A
B-A	0.34	0.00	0.00	0.34	0.34			N/A	N/A
C-AB	0.73	0.57	1.03	1.45	1.50			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.27	0.03	0.26	0.47	0.50			N/A	N/A
B-A	0.54	0.03	0.26	0.54	0.54			N/A	N/A
C-AB	1.30	0.03	0.28	1.30	1.37			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.28	0.03	0.31	0.95	1.27			N/A	N/A
B-A	0.55	0.03	0.31	1.47	2.56			N/A	N/A
C-AB	1.32	0.03	0.34	2.94	6.76			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.20	0.00	0.00	0.20	0.20			N/A	N/A
B-A	0.35	0.00	0.00	0.35	0.35			N/A	N/A
C-AB	0.77	0.57	1.03	1.45	1.50			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.15	0.00	0.00	0.15	0.15			N/A	N/A
B-A	0.25	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.51	0.05	0.47	1.32	1.43			N/A	N/A

2023 - DS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bartons Rd/New Lane	T-Junction	Two-way	6.74	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	7	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2023 - DS	PM	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Bartons Rd (E)		✓	658	100.000
B - New Lane		✓	440	100.000
C - Bartons Rd (W)		✓	348	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Bartons Rd (E)	B - New Lane	C - Bartons Rd (W)
From	A - Bartons Rd (E)	0	210	448
	B - New Lane	255	0	185
	C - Bartons Rd (W)	268	80	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Bartons Rd (E)	B - New Lane	C - Bartons Rd (W)
From	A - Bartons Rd (E)	0	1	3
	B - New Lane	0	0	3
	C - Bartons Rd (W)	3	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.44	14.40	0.8	3.8	B
B-A	0.66	24.49	1.9	8.6	C
C-AB	0.21	6.68	0.4	1.4	A
C-A					
A-B					
A-C					

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	139	590	0.236	138	0.3	8.185	A
B-A	192	519	0.370	190	0.6	10.872	B
C-AB	85	692	0.123	84	0.2	6.137	A
C-A	177			177			
A-B	158			158			
A-C	337			337			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	166	547	0.304	166	0.4	9.725	A
B-A	229	481	0.476	228	0.9	14.146	B
C-AB	110	699	0.157	110	0.3	6.338	A
C-A	203			203			
A-B	189			189			
A-C	403			403			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	204	465	0.438	202	0.8	14.059	B
B-A	281	427	0.657	277	1.8	23.453	C
C-AB	151	710	0.213	151	0.4	6.673	A
C-A	232			232			
A-B	231			231			
A-C	493			493			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	204	461	0.442	204	0.8	14.402	B
B-A	281	427	0.658	281	1.9	24.488	C
C-AB	151	710	0.213	151	0.4	6.684	A
C-A	232			232			
A-B	231			231			
A-C	493			493			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	166	543	0.306	168	0.5	9.903	A
B-A	229	481	0.476	233	0.9	14.698	B
C-AB	110	700	0.158	111	0.3	6.352	A
C-A	203			203			
A-B	189			189			
A-C	403			403			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	139	588	0.237	140	0.3	8.283	A
B-A	192	518	0.370	193	0.6	11.119	B
C-AB	85	693	0.123	86	0.2	6.159	A
C-A	177			177			
A-B	158			158			
A-C	337			337			

Queue Variation Results for each time segment

15:45 - 16:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.31	0.00	0.00	0.31	0.31			N/A	N/A
B-A	0.58	0.55	1.00	1.40	1.45			N/A	N/A
C-AB	0.20	0.00	0.00	0.20	0.20			N/A	N/A

16:00 - 16:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.44	0.00	0.00	0.44	0.44			N/A	N/A
B-A	0.88	0.12	0.92	1.03	1.54			N/A	N/A
C-AB	0.28	0.00	0.00	0.28	0.28			N/A	N/A

16:15 - 16:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.78	0.03	0.27	0.78	0.78			N/A	N/A
B-A	1.79	0.03	0.30	2.29	8.61			N/A	N/A
C-AB	0.44	0.03	0.27	0.49	0.51			N/A	N/A

16:30 - 16:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.80	0.03	0.30	1.51	3.80			N/A	N/A
B-A	1.85	0.03	0.29	1.85	7.95			N/A	N/A
C-AB	0.44	0.04	0.38	1.24	1.41			N/A	N/A

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.46	0.04	0.37	1.21	1.38			N/A	N/A
B-A	0.94	0.05	0.54	1.92	2.82			N/A	N/A
C-AB	0.29	0.00	0.00	0.29	0.29			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.32	0.03	0.27	0.49	0.67			N/A	N/A
B-A	0.60	0.04	0.37	1.27	2.00			N/A	N/A
C-AB	0.21	0.00	0.00	0.21	0.21			N/A	N/A



Appendix G

Junction 3 - Results

Junctions 9										
PICADY 9 - Priority Intersection Module										
Version: 9.0.2.5947										
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Filename: Martins Rd - Site Access Junction.j9
Path: C:\Users\alvaro.guzman\Desktop
Report generation date: 08/03/2018 17:28:42

- »2017, AM
- »2017, PM
- »2023 - DM, AM
- »2023 - DM, PM
- »2023 - DS, AM
- »2023 - DS, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
2017										
Stream B-AC	0.0	0.00	0.00	A	900 %	0.0	6.45	0.03	A	603 %
Stream C-AB	0.0	5.69	0.01	A	[]	0.0	0.00	0.00	A	[Stream B-AC]
2023 - DM										
Stream B-AC	0.0	0.00	0.00	A	900 %	0.0	6.52	0.03	A	556 %
Stream C-AB	0.0	5.66	0.01	A	[]	0.0	0.00	0.00	A	[Stream B-AC]
2023 - DS										
Stream B-AC	0.1	6.87	0.07	A	405 %	0.0	6.68	0.04	A	508 %
Stream C-AB	0.0	0.00	0.00	A	[Stream B-AC]	0.0	5.71	0.00	A	[Stream B-AC]

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	20/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WYG\philip.eveleigh
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2017	AM	ONE HOUR	07:45	09:15	15
D2	2017	PM	ONE HOUR	15:45	17:15	15
D3	2023 - DM	AM	ONE HOUR	07:45	09:15	15
D4	2023 - DM	PM	ONE HOUR	15:45	17:15	15
D5	2023 - DS	AM	ONE HOUR	07:45	09:15	15
D6	2023 - DS	PM	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2017, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Martins Rd - Site Access	T-Junction	Two-way	0.08	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	900	

Arms

Arms

Arm	Name	Description	Arm type
A	Martins Rd (N)		Major
B	Site Access		Minor
C	Martins Rd (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Martins Rd (S)	6.00			58.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane	5.00	45	58

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	625	0.114	0.288	0.181	0.411
1	B-C	793	0.122	0.307	-	-
1	C-B	608	0.235	0.235	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2017	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Martins Rd (N)		✓	142	100.000
B - Site Access		✓	0	100.000
C - Martins Rd (S)		✓	111	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Martins Rd (N)	B - Site Access	C - Martins Rd (S)
A - Martins Rd (N)		0	24	118
B - Site Access		0	0	0
C - Martins Rd (S)		108	3	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - Martins Rd (N)	B - Site Access	C - Martins Rd (S)
A - Martins Rd (N)		0	0	0
B - Site Access		0	0	0
C - Martins Rd (S)		2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.01	5.69	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	660	0.000	0	0.0	0.000	A
C-AB	3	637	0.004	3	0.0	5.684	A
C-A	81			81			
A-B	18			18			
A-C	89			89			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	653	0.000	0	0.0	0.000	A
C-AB	3	643	0.005	3	0.0	5.637	A
C-A	97			97			
A-B	22			22			
A-C	106			106			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	642	0.000	0	0.0	0.000	A
C-AB	4	652	0.006	4	0.0	5.574	A
C-A	118			118			
A-B	26			26			
A-C	130			130			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	642	0.000	0	0.0	0.000	A
C-AB	4	652	0.006	4	0.0	5.577	A
C-A	118			118			
A-B	26			26			
A-C	130			130			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	653	0.000	0	0.0	0.000	A
C-AB	3	643	0.005	3	0.0	5.643	A
C-A	97			97			
A-B	22			22			
A-C	106			106			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	660	0.000	0	0.0	0.000	A
C-AB	3	637	0.004	3	0.0	5.688	A
C-A	81			81			
A-B	18			18			
A-C	89			89			

2017, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Martins Rd - Site Access	T-Junction	Two-way	0.44	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	603	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2017	PM	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Martins Rd (N)		✓	124	100.000
B - Site Access		✓	16	100.000
C - Martins Rd (S)		✓	96	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - Martins Rd (N)	B - Site Access	C - Martins Rd (S)
	A - Martins Rd (N)	0	1	123
	B - Site Access	15	0	1
	C - Martins Rd (S)	96	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - Martins Rd (N)	B - Site Access	C - Martins Rd (S)
	A - Martins Rd (N)	0	0	1
	B - Site Access	0	0	0
	C - Martins Rd (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.03	6.45	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	12	594	0.020	12	0.0	6.185	A
C-AB	0	586	0.000	0	0.0	0.000	A
C-A	72			72			
A-B	0.75			0.75			
A-C	93			93			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	14	586	0.025	14	0.0	6.293	A
C-AB	0	581	0.000	0	0.0	0.000	A
C-A	86			86			
A-B	0.90			0.90			
A-C	111			111			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	18	576	0.031	18	0.0	6.449	A
C-AB	0	575	0.000	0	0.0	0.000	A
C-A	106			106			
A-B	1			1			
A-C	135			135			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	18	576	0.031	18	0.0	6.449	A
C-AB	0	575	0.000	0	0.0	0.000	A
C-A	106			106			
A-B	1			1			
A-C	135			135			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	14	586	0.025	14	0.0	6.294	A
C-AB	0	581	0.000	0	0.0	0.000	A
C-A	86			86			
A-B	0.90			0.90			
A-C	111			111			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	12	594	0.020	12	0.0	6.185	A
C-AB	0	586	0.000	0	0.0	0.000	A
C-A	72			72			
A-B	0.75			0.75			
A-C	93			93			

2023 - DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Martins Rd - Site Access	T-Junction	Two-way	0.08	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	900	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2023 - DM	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Martins Rd (N)		✓	153	100.000
B - Site Access		✓	0	100.000
C - Martins Rd (S)		✓	120	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - Martins Rd (N)	B - Site Access	C - Martins Rd (S)
	A - Martins Rd (N)	0	26	127
	B - Site Access	0	0	0
	C - Martins Rd (S)	117	3	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - Martins Rd (N)	B - Site Access	C - Martins Rd (S)
	A - Martins Rd (N)	0	0	0
	B - Site Access	0	0	0
	C - Martins Rd (S)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.01	5.66	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	657	0.000	0	0.0	0.000	A
C-AB	3	640	0.004	3	0.0	5.661	A
C-A	88			88			
A-B	20			20			
A-C	96			96			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	649	0.000	0	0.0	0.000	A
C-AB	3	647	0.005	3	0.0	5.610	A
C-A	105			105			
A-B	23			23			
A-C	114			114			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	638	0.000	0	0.0	0.000	A
C-AB	4	656	0.006	4	0.0	5.541	A
C-A	128			128			
A-B	29			29			
A-C	140			140			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	638	0.000	0	0.0	0.000	A
C-AB	4	656	0.006	4	0.0	5.542	A
C-A	128			128			
A-B	29			29			
A-C	140			140			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	649	0.000	0	0.0	0.000	A
C-AB	3	647	0.005	3	0.0	5.616	A
C-A	105			105			
A-B	23			23			
A-C	114			114			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	657	0.000	0	0.0	0.000	A
C-AB	3	640	0.004	3	0.0	5.663	A
C-A	88			88			
A-B	20			20			
A-C	96			96			

2023 - DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Martins Rd - Site Access	T-Junction	Two-way	0.44	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	556	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2023 - DM	PM	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Martins Rd (N)		✓	133	100.000
B - Site Access		✓	17	100.000
C - Martins Rd (S)		✓	103	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - Martins Rd (N)	B - Site Access	C - Martins Rd (S)
	A - Martins Rd (N)	0	1	132
	B - Site Access	16	0	1
	C - Martins Rd (S)	103	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - Martins Rd (N)	B - Site Access	C - Martins Rd (S)
	A - Martins Rd (N)	0	0	1
	B - Site Access	0	0	0
	C - Martins Rd (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.03	6.52	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	13	591	0.022	13	0.0	6.230	A
C-AB	0	584	0.000	0	0.0	0.000	A
C-A	78			78			
A-B	0.75			0.75			
A-C	99			99			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	15	582	0.026	15	0.0	6.347	A
C-AB	0	579	0.000	0	0.0	0.000	A
C-A	93			93			
A-B	0.90			0.90			
A-C	119			119			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	19	571	0.033	19	0.0	6.518	A
C-AB	0	573	0.000	0	0.0	0.000	A
C-A	113			113			
A-B	1			1			
A-C	145			145			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	19	571	0.033	19	0.0	6.518	A
C-AB	0	573	0.000	0	0.0	0.000	A
C-A	113			113			
A-B	1			1			
A-C	145			145			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	15	582	0.026	15	0.0	6.350	A
C-AB	0	579	0.000	0	0.0	0.000	A
C-A	93			93			
A-B	0.90			0.90			
A-C	119			119			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	13	591	0.022	13	0.0	6.230	A
C-AB	0	584	0.000	0	0.0	0.000	A
C-A	78			78			
A-B	0.75			0.75			
A-C	99			99			

2023 - DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Martins Rd - Site Access	T-Junction	Two-way	0.84	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	405	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2023 - DS	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Martins Rd (N)		✓	141	100.000
B - Site Access		✓	36	100.000
C - Martins Rd (S)		✓	117	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - Martins Rd (N)	B - Site Access	C - Martins Rd (S)
	A - Martins Rd (N)	0	14	127
	B - Site Access	35	0	1
	C - Martins Rd (S)	117	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - Martins Rd (N)	B - Site Access	C - Martins Rd (S)
	A - Martins Rd (N)	0	0	0
	B - Site Access	0	0	0
	C - Martins Rd (S)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.07	6.87	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	27	584	0.046	27	0.0	6.457	A
C-AB	0	583	0.000	0	0.0	0.000	A
C-A	88			88			
A-B	11			11			
A-C	96			96			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	32	576	0.056	32	0.1	6.625	A
C-AB	0	578	0.000	0	0.0	0.000	A
C-A	105			105			
A-B	13			13			
A-C	114			114			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	40	564	0.070	40	0.1	6.868	A
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	129			129			
A-B	15			15			
A-C	140			140			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	40	564	0.070	40	0.1	6.868	A
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	129			129			
A-B	15			15			
A-C	140			140			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	32	576	0.056	32	0.1	6.626	A
C-AB	0	578	0.000	0	0.0	0.000	A
C-A	105			105			
A-B	13			13			
A-C	114			114			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	27	584	0.046	27	0.0	6.463	A
C-AB	0	583	0.000	0	0.0	0.000	A
C-A	88			88			
A-B	11			11			
A-C	96			96			

2023 - DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Martins Rd - Site Access	T-Junction	Two-way	0.45	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	508	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2023 - DS	PM	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Martins Rd (N)		✓	162	100.000
B - Site Access		✓	18	100.000
C - Martins Rd (S)		✓	104	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - Martins Rd (N)	B - Site Access	C - Martins Rd (S)
	A - Martins Rd (N)	0	30	132
	B - Site Access	18	0	0
	C - Martins Rd (S)	103	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - Martins Rd (N)	B - Site Access	C - Martins Rd (S)
	A - Martins Rd (N)	0	0	1
	B - Site Access	0	0	0
	C - Martins Rd (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.04	6.68	0.0	A
C-AB	0.00	5.71	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	14	580	0.023	13	0.0	6.359	A
C-AB	0.86	631	0.001	0.85	0.0	5.708	A
C-A	77			77			
A-B	23			23			
A-C	99			99			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	16	571	0.028	16	0.0	6.490	A
C-AB	1	636	0.002	1	0.0	5.665	A
C-A	92			92			
A-B	27			27			
A-C	119			119			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	20	559	0.035	20	0.0	6.681	A
C-AB	1	643	0.002	1	0.0	5.606	A
C-A	113			113			
A-B	33			33			
A-C	145			145			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	20	559	0.035	20	0.0	6.681	A
C-AB	1	643	0.002	1	0.0	5.606	A
C-A	113			113			
A-B	33			33			
A-C	145			145			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	16	571	0.028	16	0.0	6.493	A
C-AB	1	636	0.002	1	0.0	5.665	A
C-A	92			92			
A-B	27			27			
A-C	119			119			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	14	580	0.023	14	0.0	6.362	A
C-AB	0.86	631	0.001	0.86	0.0	5.708	A
C-A	77			77			
A-B	23			23			
A-C	99			99			



Appendix H

Junction 4 - Results

Junctions 9									
PICADY 9 - Priority Intersection Module									
Version: 9.0.2.5947 © Copyright TRL Limited, 2017									
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Filename: New Lane - Site Access Junction.j9

Path: X:\Projects\2012\A090000\A090070-182 - Colt Industrial, New Lane, Havant\30 Technical\31 Modelling\New Lane - Site Access Junction

Report generation date: 08/03/2018 17:30:36

»2017, AM

»2017, PM

»2023 - DM, AM

»2023 - DM, PM

»2023 - DS, AM

»2023 - DS, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
2017										
Stream B-AC	0.0	6.74	0.01	A	225 %	0.0	6.56	0.02	A	220 %
Stream C-AB	0.1	4.37	0.04	A	[Stream C-AB]	0.0	4.85	0.00	A	[Stream B-AC]
2023 - DM										
Stream B-AC	0.0	6.91	0.02	A	201 %	0.0	6.71	0.03	A	199 %
Stream C-AB	0.1	4.32	0.05	A	[Stream C-AB]	0.0	4.82	0.00	A	[Stream B-AC]
2023 - DS										
Stream B-AC	0.0	6.07	0.01	A	165 %	0.1	7.09	0.11	A	159 %
Stream C-AB	0.2	4.46	0.09	A	[Stream C-AB]	0.0	4.83	0.01	A	[Stream B-AC]

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	20/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WYG\philip.eveleigh
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2017	AM	ONE HOUR	07:45	09:15	15
D2	2017	PM	ONE HOUR	15:45	17:15	15
D3	2023 - DM	AM	ONE HOUR	07:45	09:15	15
D4	2023 - DM	PM	ONE HOUR	15:45	17:15	15
D5	2023 - DS	AM	ONE HOUR	07:45	09:15	15
D6	2023 - DS	PM	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2017, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	New Lane/Site Access	T-Junction	Two-way	0.27	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	225	Stream C-AB

Arms

Arms

Arm	Name	Description	Arm type
A	New Lane (S)		Major
B	Site Access		Minor
C	New Lane (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - New Lane (N)	6.40			195.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane	5.00	86	80

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	655	0.117	0.296	0.186	0.423
1	B-C	809	0.122	0.308	-	-
1	C-B	687	0.262	0.262	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2017	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - New Lane (S)		✓	224	100.000
B - Site Access		✓	7	100.000
C - New Lane (N)		✓	439	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - New Lane (S)	B - Site Access	C - New Lane (N)
From	A - New Lane (S)	0	13	211
	B - Site Access	5	0	2
	C - New Lane (N)	422	17	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - New Lane (S)	B - Site Access	C - New Lane (N)
From	A - New Lane (S)	0	8	2
	B - Site Access	0	0	0
	C - New Lane (N)	1	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	A - New Lane (S)	169	169
	B - Site Access	5	5
	C - New Lane (N)	331	331
08:00-08:15	A - New Lane (S)	201	201
	B - Site Access	6	6
	C - New Lane (N)	395	395
08:15-08:30	A - New Lane (S)	247	247
	B - Site Access	8	8
	C - New Lane (N)	483	483
08:30-08:45	A - New Lane (S)	247	247
	B - Site Access	8	8
	C - New Lane (N)	483	483
08:45-09:00	A - New Lane (S)	201	201
	B - Site Access	6	6
	C - New Lane (N)	395	395
09:00-09:15	A - New Lane (S)	169	169
	B - Site Access	5	5
	C - New Lane (N)	331	331

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	6.74	0.0	A
C-AB	0.04	4.37	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	5	590	0.009	5	0.0	6.152	A
C-AB	20	847	0.024	20	0.0	4.371	A
C-A	310			310			
A-B	10			10			
A-C	159			159			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	6	570	0.011	6	0.0	6.385	A
C-AB	27	880	0.031	27	0.0	4.236	A
C-A	368			368			
A-B	12			12			
A-C	190			190			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	8	542	0.014	8	0.0	6.741	A
C-AB	38	926	0.041	38	0.1	4.069	A
C-A	446			446			
A-B	14			14			
A-C	232			232			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	8	542	0.014	8	0.0	6.741	A
C-AB	38	926	0.041	38	0.1	4.071	A
C-A	446			446			
A-B	14			14			
A-C	232			232			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	6	570	0.011	6	0.0	6.386	A
C-AB	27	880	0.031	27	0.0	4.242	A
C-A	368			368			
A-B	12			12			
A-C	190			190			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	5	590	0.009	5	0.0	6.155	A
C-AB	21	847	0.024	21	0.0	4.375	A
C-A	310			310			
A-B	10			10			
A-C	159			159			

2017, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	New Lane/Site Access	T-Junction	Two-way	0.13	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	220	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2017	PM	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - New Lane (S)		✓	376	100.000
B - Site Access		✓	12	100.000
C - New Lane (N)		✓	268	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - New Lane (S)	B - Site Access	C - New Lane (N)
	A - New Lane (S)	0	4	372
	B - Site Access	6	0	6
	C - New Lane (N)	267	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - New Lane (S)	B - Site Access	C - New Lane (N)
	A - New Lane (S)	0	25	1
	B - Site Access	0	0	0
	C - New Lane (N)	1	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
15:45-16:00	A - New Lane (S)	283	283
	B - Site Access	9	9
	C - New Lane (N)	202	202
16:00-16:15	A - New Lane (S)	338	338
	B - Site Access	11	11
	C - New Lane (N)	241	241
16:15-16:30	A - New Lane (S)	414	414
	B - Site Access	13	13
	C - New Lane (N)	295	295
16:30-16:45	A - New Lane (S)	414	414
	B - Site Access	13	13
	C - New Lane (N)	295	295
16:45-17:00	A - New Lane (S)	338	338
	B - Site Access	11	11
	C - New Lane (N)	241	241
17:00-17:15	A - New Lane (S)	283	283
	B - Site Access	9	9
	C - New Lane (N)	202	202

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.02	6.56	0.0	A
C-AB	0.00	4.85	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	9	614	0.015	9	0.0	5.949	A
C-AB	1	745	0.001	1	0.0	4.848	A
C-A	201			201			
A-B	3			3			
A-C	280			280			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	11	592	0.018	11	0.0	6.189	A
C-AB	1	759	0.002	1	0.0	4.766	A
C-A	240			240			
A-B	4			4			
A-C	334			334			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	13	562	0.024	13	0.0	6.557	A
C-AB	2	778	0.002	2	0.0	4.653	A
C-A	293			293			
A-B	4			4			
A-C	410			410			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	13	562	0.024	13	0.0	6.557	A
C-AB	2	778	0.002	2	0.0	4.654	A
C-A	293			293			
A-B	4			4			
A-C	410			410			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	11	592	0.018	11	0.0	6.189	A
C-AB	1	759	0.002	1	0.0	4.771	A
C-A	240			240			
A-B	4			4			
A-C	334			334			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	9	614	0.015	9	0.0	5.951	A
C-AB	1	745	0.001	1	0.0	4.851	A
C-A	201			201			
A-B	3			3			
A-C	280			280			

2023 - DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	New Lane/Site Access	T-Junction	Two-way	0.28	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	201	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2023 - DM	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - New Lane (S)		✓	242	100.000
B - Site Access		✓	8	100.000
C - New Lane (N)		✓	474	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - New Lane (S)	B - Site Access	C - New Lane (N)
From	A - New Lane (S)	0	14	228
	B - Site Access	5	0	2
	C - New Lane (N)	455	18	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - New Lane (S)	B - Site Access	C - New Lane (N)
From	A - New Lane (S)	0	8	2
	B - Site Access	0	0	0
	C - New Lane (N)	1	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	A - New Lane (S)	182	182
	B - Site Access	6	6
	C - New Lane (N)	357	357
08:00-08:15	A - New Lane (S)	217	217
	B - Site Access	7	7
	C - New Lane (N)	426	426
08:15-08:30	A - New Lane (S)	266	266
	B - Site Access	8	8
	C - New Lane (N)	522	522
08:30-08:45	A - New Lane (S)	266	266
	B - Site Access	8	8
	C - New Lane (N)	522	522
08:45-09:00	A - New Lane (S)	217	217
	B - Site Access	7	7
	C - New Lane (N)	426	426
09:00-09:15	A - New Lane (S)	182	182
	B - Site Access	6	6
	C - New Lane (N)	357	357

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.02	6.91	0.0	A
C-AB	0.05	4.32	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	6	582	0.010	6	0.0	6.245	A
C-AB	23	860	0.027	23	0.0	4.315	A
C-A	334			334			
A-B	11			11			
A-C	171			171			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	7	560	0.012	7	0.0	6.506	A
C-AB	30	896	0.034	30	0.0	4.175	A
C-A	395			395			
A-B	13			13			
A-C	205			205			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	8	529	0.016	8	0.0	6.909	A
C-AB	43	947	0.045	43	0.1	4.002	A
C-A	479			479			
A-B	15			15			
A-C	251			251			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	8	529	0.016	8	0.0	6.909	A
C-AB	43	947	0.046	43	0.1	4.004	A
C-A	479			479			
A-B	15			15			
A-C	251			251			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	7	560	0.012	7	0.0	6.506	A
C-AB	30	896	0.034	31	0.0	4.179	A
C-A	395			395			
A-B	13			13			
A-C	205			205			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	6	582	0.010	6	0.0	6.248	A
C-AB	23	860	0.027	23	0.0	4.319	A
C-A	334			334			
A-B	11			11			
A-C	171			171			

2023 - DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	New Lane/Site Access	T-Junction	Two-way	0.13	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	199	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2023 - DM	PM	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - New Lane (S)		✓	403	100.000
B - Site Access		✓	13	100.000
C - New Lane (N)		✓	287	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - New Lane (S)	B - Site Access	C - New Lane (N)
	A - New Lane (S)	0	4	399
	B - Site Access	6	0	6
	C - New Lane (N)	286	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - New Lane (S)	B - Site Access	C - New Lane (N)
	A - New Lane (S)	0	25	1
	B - Site Access	0	0	0
	C - New Lane (N)	1	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
15:45-16:00	A - New Lane (S)	303	303
	B - Site Access	10	10
	C - New Lane (N)	216	216
16:00-16:15	A - New Lane (S)	362	362
	B - Site Access	12	12
	C - New Lane (N)	258	258
16:15-16:30	A - New Lane (S)	444	444
	B - Site Access	14	14
	C - New Lane (N)	316	316
16:30-16:45	A - New Lane (S)	444	444
	B - Site Access	14	14
	C - New Lane (N)	316	316
16:45-17:00	A - New Lane (S)	362	362
	B - Site Access	12	12
	C - New Lane (N)	258	258
17:00-17:15	A - New Lane (S)	303	303
	B - Site Access	10	10
	C - New Lane (N)	216	216

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.03	6.71	0.0	A
C-AB	0.00	4.82	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	10	606	0.016	10	0.0	6.036	A
C-AB	1	750	0.002	1	0.0	4.818	A
C-A	215			215			
A-B	3			3			
A-C	300			300			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	12	583	0.020	12	0.0	6.302	A
C-AB	1	765	0.002	1	0.0	4.730	A
C-A	257			257			
A-B	4			4			
A-C	359			359			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	14	550	0.026	14	0.0	6.715	A
C-AB	2	786	0.003	2	0.0	4.608	A
C-A	314			314			
A-B	5			5			
A-C	439			439			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	14	550	0.026	14	0.0	6.715	A
C-AB	2	786	0.003	2	0.0	4.609	A
C-A	314			314			
A-B	5			5			
A-C	439			439			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	12	583	0.020	12	0.0	6.302	A
C-AB	1	765	0.002	1	0.0	4.733	A
C-A	257			257			
A-B	4			4			
A-C	359			359			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	10	606	0.016	10	0.0	6.038	A
C-AB	1	750	0.002	1	0.0	4.821	A
C-A	215			215			
A-B	3			3			
A-C	300			300			

2023 - DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	New Lane/Site Access	T-Junction	Two-way	0.48	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	165	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2023 - DS	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - New Lane (S)		✓	252	100.000
B - Site Access		✓	8	100.000
C - New Lane (N)		✓	492	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - New Lane (S)	B - Site Access	C - New Lane (N)
From	A - New Lane (S)	0	24	228
	B - Site Access	3	0	5
	C - New Lane (N)	455	37	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - New Lane (S)	B - Site Access	C - New Lane (N)
From	A - New Lane (S)	0	8	2
	B - Site Access	0	0	0
	C - New Lane (N)	1	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	A - New Lane (S)	190	190
	B - Site Access	6	6
	C - New Lane (N)	370	370
08:00-08:15	A - New Lane (S)	227	227
	B - Site Access	7	7
	C - New Lane (N)	442	442
08:15-08:30	A - New Lane (S)	277	277
	B - Site Access	9	9
	C - New Lane (N)	542	542
08:30-08:45	A - New Lane (S)	277	277
	B - Site Access	9	9
	C - New Lane (N)	542	542
08:45-09:00	A - New Lane (S)	227	227
	B - Site Access	7	7
	C - New Lane (N)	442	442
09:00-09:15	A - New Lane (S)	190	190
	B - Site Access	6	6
	C - New Lane (N)	370	370

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	6.07	0.0	A
C-AB	0.09	4.46	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	6	649	0.009	6	0.0	5.599	A
C-AB	46	859	0.054	46	0.1	4.447	A
C-A	324			324			
A-B	18			18			
A-C	172			172			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	7	629	0.011	7	0.0	5.784	A
C-AB	61	894	0.069	61	0.1	4.342	A
C-A	381			381			
A-B	22			22			
A-C	205			205			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	9	602	0.015	9	0.0	6.068	A
C-AB	87	944	0.092	87	0.2	4.221	A
C-A	455			455			
A-B	26			26			
A-C	251			251			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	9	602	0.015	9	0.0	6.068	A
C-AB	87	945	0.092	87	0.2	4.225	A
C-A	455			455			
A-B	26			26			
A-C	251			251			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	7	629	0.011	7	0.0	5.787	A
C-AB	62	894	0.069	62	0.1	4.349	A
C-A	381			381			
A-B	22			22			
A-C	205			205			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	6	649	0.009	6	0.0	5.602	A
C-AB	47	859	0.054	47	0.1	4.455	A
C-A	324			324			
A-B	18			18			
A-C	172			172			

2023 - DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	New Lane/Site Access	T-Junction	Two-way	0.58	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	159	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2023 - DS	PM	ONE HOUR	15:45	17:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - New Lane (S)		✓	401	100.000
B - Site Access		✓	58	100.000
C - New Lane (N)		✓	289	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - New Lane (S)	B - Site Access	C - New Lane (N)
From	A - New Lane (S)	0	2	399
	B - Site Access	23	0	35
	C - New Lane (N)	286	3	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - New Lane (S)	B - Site Access	C - New Lane (N)
From	A - New Lane (S)	0	25	1
	B - Site Access	0	0	0
	C - New Lane (N)	1	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
15:45-16:00	A - New Lane (S)	302	302
	B - Site Access	44	44
	C - New Lane (N)	218	218
16:00-16:15	A - New Lane (S)	360	360
	B - Site Access	52	52
	C - New Lane (N)	260	260
16:15-16:30	A - New Lane (S)	442	442
	B - Site Access	64	64
	C - New Lane (N)	318	318
16:30-16:45	A - New Lane (S)	442	442
	B - Site Access	64	64
	C - New Lane (N)	318	318
16:45-17:00	A - New Lane (S)	360	360
	B - Site Access	52	52
	C - New Lane (N)	260	260
17:00-17:15	A - New Lane (S)	302	302
	B - Site Access	44	44
	C - New Lane (N)	218	218

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.11	7.09	0.1	A
C-AB	0.01	4.83	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	44	626	0.070	43	0.1	6.178	A
C-AB	3	751	0.004	3	0.0	4.830	A
C-A	214			214			
A-B	2			2			
A-C	300			300			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	52	603	0.086	52	0.1	6.532	A
C-AB	4	765	0.005	4	0.0	4.744	A
C-A	256			256			
A-B	2			2			
A-C	359			359			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	64	572	0.112	64	0.1	7.086	A
C-AB	6	786	0.007	6	0.0	4.627	A
C-A	313			313			
A-B	2			2			
A-C	439			439			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	64	572	0.112	64	0.1	7.089	A
C-AB	6	786	0.007	6	0.0	4.628	A
C-A	313			313			
A-B	2			2			
A-C	439			439			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	52	603	0.086	52	0.1	6.535	A
C-AB	4	765	0.005	4	0.0	4.749	A
C-A	256			256			
A-B	2			2			
A-C	359			359			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	44	626	0.070	44	0.1	6.184	A
C-AB	3	751	0.004	3	0.0	4.833	A
C-A	214			214			
A-B	2			2			
A-C	300			300			