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TRANSPORT



Barlestone Road, Newbold Verdon, Leicestershire
Transport Assessment
October 2024

Report Ref: 24832-TRAN-0803 Rev B

Barlestone Road, Newbold Verdon, Leicestershire

Transport Assessment

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REPORT REF: 24832-TRAN-0803 Rev B

CLIENT: David Wilson Homes East Midlands

ENGINEER: MEC Consulting Group Ltd
The Old Chapel
Station Road
Hugglescote
Leicestershire
LE67 2GB

Tel: 01530 264 753
Email group@m-ec.co.uk

REGISTRATION OF AMENDMENTS

Date	Rev	Comment	Prepared By	Checked By	Approved By
March 2024	-	First issue	James Wright BSc (Hons) Graduate Transport Planner	Dave Godber MCIHT Senior Transport Planner	Alexander Bennett BSc (Hons) MCIHT MTPS Managing Director
April 2024	A	Updated parameter plan	Alexander Bennett BSc (Hons) MCIHT MTPS Managing Director		
October 2024	B	Updated for new layout	James Wright BSc (Hons) Graduate Transport Planner	Dave Godber MCIHT Senior Transport Planner	Alexander Bennett BSc (Hons) MCIHT MTPS Managing Director

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1.0 INTRODUCTION

1.1 MEC Consulting Group Ltd (MEC) has been commissioned by David Wilson Homes East Midlands (hereafter referred to as ‘the Client’) to undertake a Transport Assessment (TA) in support of a proposed development at Barlestone Road, Newbold Verdon, Leicestershire (hereafter referred to as ‘the Site’). A regional site location plan can be found below in **Figure 1.1**, with an indicative masterplan contained in **Appendix A**.

1.2 The development comprises:

Outline planning application (all matters reserved except vehicular access) for the erection of up to 240 residential dwellings (Use Class C3), retention of the existing accesses off Barlestone Road and the creation of new accesses off Barlestone Road, land safeguarded for a cemetery and a health centre (Use Classes E(e)), public open space and associated infrastructure.

Figure 1.1: Regional Site Location Plan



Source: Google Earth

- 1.3 The site is located within the authority of Hinckley and Bosworth Borough Council (HBBC) who act as the Local Planning Authority, while Leicestershire County Council (LCC) act as the Highway Authority for the area.
- 1.4 LCC provided highways pre-application comments dated 24th November 2023. The pre-application comments are contained within **Appendix B** of this report for ease of reference.

Methodology

- 1.5 This TA has been prepared in accordance with the National Planning Policy Framework (NPPF) and seeks to demonstrate that:
- Safe and suitable access to the site can be achieved for all users;
 - Sustainable travel both into the site and to local amenities is plausible and a genuine alternative to private car journeys, and;
 - Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.
- 1.6 Furthermore, this report has been prepared with reference to the following national & local policy/guidance documents:
- National Planning Policy Framework (December 2023);
 - National Planning Practice Guidance (NPPG) (November 2016);
 - Guidelines for Providing for Journeys on Foot (CIHT, 2000);
 - PPG13 – A Guide to Better Practice' (March 2001);
 - Manual for Streets / Manual for Streets 2;
 - Guidance on the Use of Tactile Paving Surfaces (DfT, December 2021)
 - LTN 1/20 – Cycle Design Infrastructure (DfT, July 2020)
 - Hinckley and Bosworth Local Plan 2006-2026;
 - Core Strategy DPD 2009 – HBBC
 - Site Allocations and Development Management Policies DPD (Local Plan 2006 – 2026) – HBBC
 - Appendix D: Parking Standards Review (HBBC Local Plan 2006-2026);
 - Approved Document S (June 2022).
- 1.7 This TA will review all existing and proposed highway elements, taking into consideration the advice from LCC, providing appropriate conclusions to assess the impact of proposed development upon the local highway network. The structure of this report is as follows:
- A review of the relevant national and local planning policy;
 - A review of historic accident data (5-year period) in the immediate vicinity of the site, so as to assess the developments impact, if any, on any known or emerging issues;
 - A review of sustainable transport opportunities and accessibility in the vicinity of the site;
 - A detailed overview of the development proposals;
 - Undertake an Active Travel site review;
 - Design site access junctions in accordance with Highway Authority guidelines, including appropriate visibility splays;
 - Undertake swept path analysis of the site access;
 - Comment upon the level of parking required;
 - A review of the trip rates generated by the proposed development,

- Capacity assessment analysis of the extent of impact all traffic generated by the proposals will have on the surrounding highway network, and;
- Details of any proposed mitigation to make the development acceptable to planning, with regards to transport.

Disclaimer

- 1.8 MEC has completed this report for the benefit of the individuals referred to in paragraph 1.1 and any relevant statutory authority which may require reference in relation to approvals for the proposed development. Other third parties should not use or rely upon the contents of this report unless explicit written approval has been gained from MEC.
- 1.9 MEC accepts no responsibility or liability for:
- a) The consequence of this documentation being used for any purpose or project other than that for which it was commissioned;
 - b) The issue of this document to any third party with whom approval for use has not been agreed.

2.0 PLANNING POLICY

National Policy

National Planning Framework (Dec 2023) (NPPF)

- 2.1 The NPPF sets out the governments planning policies for England and details how these are expected to be applied. The revised document is in presumption of sustainable development and the transport policy has an important role to play in facilitating sustainable development, giving people real choices about how they travel.
- 2.2 Paragraph 108 states transport issues should be considered from the earliest stages of plan-making and development proposals to ensure the sustainability of development and allow for amendments to be made before the consultation and implementation phases.
- 2.3 The following policies from the NPPF are relevant to Transport Assessments, and have been taken into consideration when preparing this report:
- **Paragraph 109** – *‘The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.’*
 - **Paragraph 114** – *‘In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*
 - (a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
 - (b) safe and suitable access to the site can be achieved for all users;*
 - (c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46, and;*
 - (d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.’*
 - **Paragraph 117** – *‘All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.’*

Active Travel England (ATE)

- 2.4 As the development exceeds one or more of the thresholds (>150 dwellings / >7,500 m² floorspace / >5 hectares), ATE will be a statutory consultee for the development.
- 2.5 ATE are an executive agency of the Department for Transport (DfT) set up by the National UK Government to target the DfT’s objective of increasing active travel (walking, cycling, and wheeling) in urban areas by 50% by 2030.

2.6 This is proposed to be achieved through tighter building regulations, funding for schemes committed to enhancing active travel, and education and training campaigns focused on best practice and the benefits of active travel itself. As a result, the following aims have been derived:

- *Creating better streets and networks for cycling and walking that are built to the ‘key design principles’ as set out in Gear Change and Local Transport Note 1/20;*
- *Putting walking and cycling at the heart of transport, place-making, and health policy so travelling without a car is easy and accessible utilising a long-term walking and cycling programme and budget;*
- *Empowering and encouraging local authorities who manage their roads to incorporate active travel improvements into all aspects of their functions. This includes access to new powers to manage the highway effectively for active travel and training on all aspects of active travel best practice;*
- *Enabling people to cycle and protecting them when they do by reducing road danger through the creation of safe infrastructure based on the key design principles and working with the department and relevant bodies to ensure that the rules of the road work to protect people travelling actively.*

Cycle Infrastructure Design – Local Transport Note 1/20 (July 2020)

2.7 The Department for Transport’s LTN 1/20 sets out the responsibility for local authorities to demonstrate they have considered the cycle design principles outlined within the publication when designing new cycling schemes and developments. The guidance outlines the benefits of cycling:

- *‘Enabling more people to cycle will help local authorities to achieve a broad range of positive transport outcomes and wider environment and public health goals;*
- *Cycling brings many economic benefits, reducing some of the external costs of congestion and pollution associated with motor traffic, and reducing the healthcare costs associated with physical inactivity and poor air quality;*
- *Cycling improves physical and mental health, reducing healthcare costs and costs of absenteeism;*
- *There is a growing body of evidence to suggest that cycle and pedestrian-friendly streets can boost footfall and retail sales, and;*
- *As an affordable mode of transport, cycling can be an important way for people to access local services, education and employment.’*

Local Policy

Core Strategy DPD 2009 – HBBC

2.8 The core strategy forms 1 of the Development Plan Documents forming the Hinckley & Bosworth Local Development Framework.

2.9 The Core Strategy sets out the overarching strategy and core policies to guide the future development of the borough up to 2026, with the other Development Plan Documents implementing the strategy and vision contained within the Core Strategy.

2.10 The relevant transport policies are:

- Policy 7: Key Rural Centres;
- Policy 11: Key Rural Centres Stand Alone;

- Policy 14: Rural Areas: Transport

Site Allocations and Development Management Policies DPD (Local Plan 2006 – 2026) – HBBC

- 2.11 HBBC's 'Site Allocations and Development Management Policies DPD' document, adopted July 2016, details allocated sites and includes development management policies which apply across the borough and which will be used when determining planning applications. The document forms one of a series of documents making up the boroughs Local Plan.
- 2.12 It is noted that the Site Allocations and Development Management Policies document facilitates the delivery of HBBC's Core Strategy (2009), its vision of which states:

Our vision for Hinckley & Bosworth is not one of wholesale change. Rather, it is one of keeping and improving what's good about the area and embracing the positive things that development can bring, helping the entire borough's communities share in the good quality of life it offers...

...in 2026 Hinckley & Bosworth will be a thriving, successful borough exemplifying green sustainable development across the East Midlands...

...High quality services and facilities along with quality jobs will have been provided to ensure these developments are true sustainable communities. Improved, more frequent public transport will be provided with improved facilities along with well-connected walking and cycling networks to enable residents to travel by alternatives to the private car...

- 2.13 In order to achieve the vision from a transport perspective, Policy DM17 'Highways and Transportation' contained in HBBC's 'Site Allocations and Development Management Policies DPD', sets out the transport requirements for developments to supported. They are as follows:
- A) *Seek to make the best use of existing public transport services and, where appropriate, provide opportunities for improving and sustaining the viability of those services; and cycling to services and facilities; significant movement;*
 - B) *Seek to ensure that there is convenient and safe access for walking;*
 - C) *Demonstrate that there is not a significant adverse impact upon highway safety; and in the case of development that generates;*
 - D) *That the development is located where the need to travel will be minimised and the use of sustainable transport modes can be maximised; of development on the transport network are not severe;*
 - E) *Where it can be demonstrated that the residual cumulative impacts.*

Where appropriate, improvements will be required to be undertaken to the highways and transportation network to limit any significant impacts arising from the development (taking into account cost effectiveness).

All proposals for new development and changes of use should reflect the highway design standards that are set out in the most up to date guidance adopted by the relevant highways authority.

2.14 The relevant Core Strategy Spatial Objectives are:

- Spatial Objective 9: Identity, Distinctiveness and Quality of Design;
- Spatial Objective 13: Transportation and Need to Travel.

2.15 Other relevant policies under 'Built Environment' are:

- DM10: Development and Design;
- DM18: Vehicle Parking Standards.

Leicester & Leicestershire 2050: Strategic Growth Plan - Our Vision for Growth

2.16 The Strategic Growth Plan has been prepared by the ten partner organisations in Leicester & Leicestershire to provide a long-term vision that will address local challenges and opportunities. It is a non-statutory plan, but it sets out the agreed strategy until 2050. The strategy is carried forth by the delivery of Local Plans.

2.17 In relation to transport the strategic plan outlines consideration to improving public transport, cycling and walking; it considers a partnered approach with developers, land owners and parish councils to ensure the delivery of local needs towards new development.

2.18 The plan recognises the focus of development surrounding many locational criteria; development could be accepted along transportation corridors near employment centres or at a more local level the expansion of existing settlements may be beneficial for development.

2.19 The strategic plan among local plans seeks to demonstrate a commitment to future growth and infrastructure investment.

3.0 EXISTING SITE AND HIGHWAY CONDITIONS

- 3.1 The application site is situated on the north edge of the village of Newbold Verdon, circa 550m from the Village Centre. The villages of Barlestone and Desford are situated 2.4km northwest and 3.2km east from the site respectively. In terms of major settlements, the site is located equidistant to both Hinckley and Leicester, which are situated circa 14km south and east respectively. **Figure 3.1** illustrates the site.

Figure 3.1: Site Location Plan



- 3.2 The site is approximately 14 hectares and currently comprises agricultural land. The site is bound by Barlestone Road (B582) and the village of Newbold Verdon to the south, and agricultural fields and farm buildings (including the equestrian centre) to the north, east and west.

Existing Vehicular Access

- 3.3 The site can be accessed via two points; a byway (known as Harry's Lane) off Barlestone Road, and the Newbold Verdon Equestrian Centre access road, as highlighted on **Figure 3.1**.
- 3.4 The byway forms a minor arm of a priority-controlled crossroads with the B582 Barlestone Road and Mill Lane as demonstrated by **Figure 3.2**.

Figure 3.2: Byway Access Arm

Source: Site Visit 12/10/2023

- 3.5 The byway, orientated north to south, is a single access track ranging from approximately 2.5m – 4.5m in width, currently serving two dwellings and a farm, as well as providing multiple points of vehicular access onto the surrounding agricultural fields (the application site).
- 3.6 The Newbold Verdon Equestrian Centre access road, orientated northeast – southwest is between 6.5m and 7.5m wide. Access to the Equestrian Centre is granted via a priority-controlled junction as demonstrated in **Figure 3.3** below.

Figure 3.3: Newbold Verdon Equestrian Centre Access

Source: Site Visit 12/10/2023

- 3.7 Both access points are served off Barlestone Road. Barlestone Road a single two-way carriageway with a width of approximately 6.5m, orientated northwest to southeast and subject to a 40mph speed limit. Barlestone Road (B582) links directly to the villages of Barlestone to the northwest, and Desford to the East.

- 3.8 Barlestone Road provides a continuous footway approximately 1.5m in width along the southern side of the carriageway lit by street lighting.

Road Collision Data

- 3.9 When assessing the proposed development, Paragraph 015 (ref: 42-015-20140306) of the NPPG recommends:

‘An analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent three-year period, or five-year period’

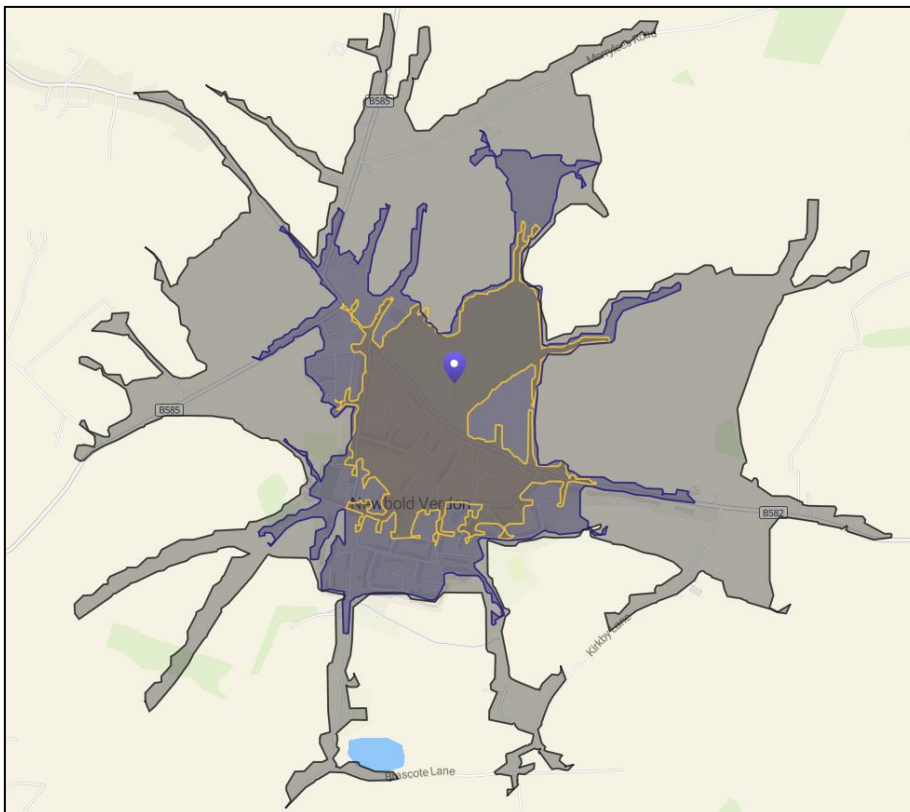
- 3.10 Consequently, Personal Injury Collision (PIC) data was obtained from LCC within a 500m radius on the site, for the most recent 5-year period (01/01/2018 – 25/09/2023), as defined by the pre-application response. The review identified 6 collisions, 3 slight accidents, and 3 serious accidents, occurred within 500m of the application site.
- 3.11 3 PICs (2 slight, 1 serious) were recorded on the residential streets of Newbold Verdon and occurred in isolation from one another both in location and time. Therefore, it is not considered necessary to review these collisions further as it is evident there is not a highway safety issue associated with them.
- 3.12 It is noted the remaining 3 collisions are located around the Barlestone Road / Dragon Lane junction. Of the 3 collisions, one injury was a result of a car and pedestrian colliding, one resulting from a vehicle failing to give way while performing a right turn manoeuvre, and the 3rd a result of a van / goods vehicle (<3.5 tonnes) and car colliding when both vehicles were travelling ahead (details of the collision from the report are unclear). The full collision reports and information are contained in **Appendix C**.
- 3.13 Collisions at the Barlestone Road / Dragon Lane junction occurred for varying reasons with no clear patterns or safety issues apparent. Moreover, 6 PICs over a 5-year period is not a significant amount. Hence, it is considered there is not a highway safety issue associated with the junction.

4.0 SITE SUSTAINABILITY AND ACCESSABILITY ASSESSMENT

Pedestrians

- 4.1 The Chartered Institution of Highways and Transportation (CIHT) publication [2000] 'Guidelines for Providing for Journeys on Foot' notes that walking accounts for over a quarter of all journeys and four-fifths of journeys less than one mile (1600m). In transport planning terms, the most suitable sites for development are those that generate fewest private car trips, which is achieved by enabling a greater proportion of walking, cycling, and public transport trips.
- 4.2 The CIHT Guidelines suggests acceptable walking distances to various services. 'Acceptable' distances may vary from person to person depending on their age and general fitness, but the guidelines suggest:
- Maximum distances of 800 metres to town / retail centres, 2000 metres for work / education, leisure and 1200 metres elsewhere
 - Acceptable distances of 400 metres to town / retail centres, 1000 metres for work / education, leisure and 1200 metres elsewhere
 - Desirable distances of 400 metres to town / retail centres, 800 metres for work / education, leisure and 800 metres elsewhere
- 4.3 The average walking speed suggested by the CIHT is 3mph, or 5 minutes for every 400 metres. To provide an approximate guide to how far it is possible to walk within 800m, 1200m, and 2000m (10-, 15-, and 25-minute intervals), indicative walking isochrones have been produced, as shown in **Figure 4.1**.

Figure 4.1: 2km Walking Accessibility Map shown in 800m, 1200m, and 2000m Isochrones



Source: Smappen.com/

- 4.4 As demonstrated by the above map, the entirety of Newbold Verdon can be accessed within a 1.2km walk, with the Village Centre located within 800m of the centre of the site.
- 4.5 As part of the residential development currently being built out along Bosworth Lane (application 20/00143/FUL), significant upgrades have been carried out on the Barlestone Road / Bosworth Lane junction, upgrading it to a signalised T-junction. Signalised pedestrian crossing points are present on the Barlestone Road (east) and Bosworth Lane arms. The crossing benefits from tactile paving and dropped kerbs, as well as a guarded central refuge between lanes on the Barlestone Road (east) arm crossing.
- 4.6 Approximately 100m east of the Barlestone Road / Mill Lane / Byway crossroads, a pedestrian link, as shown on **Figure 4.2**, provides link Sparkenhoe. Approximately 250m southeast along Sparkenhoe, a second pedestrian link is present.

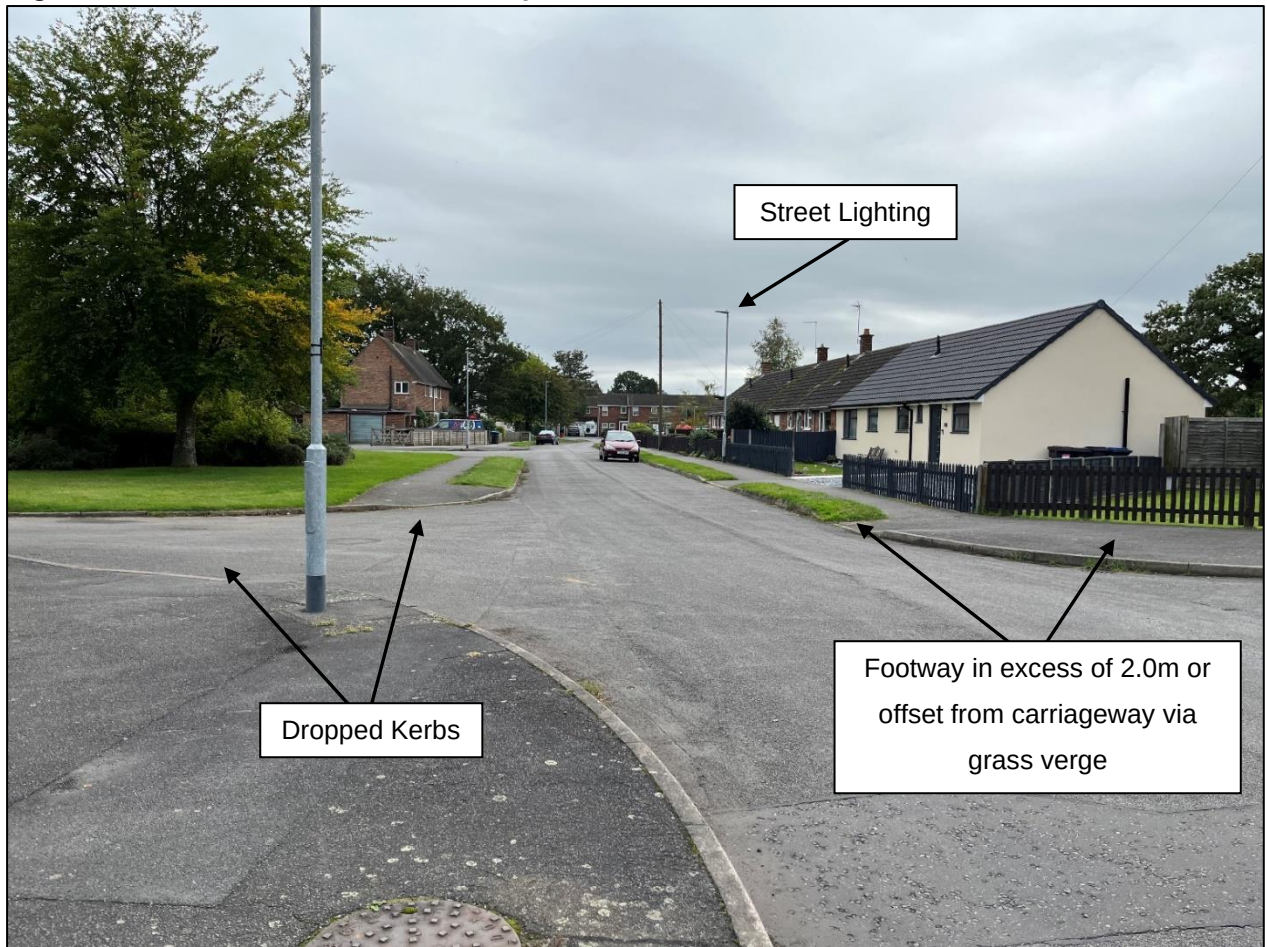
Figure 4.2: Pedestrian Link from Barlestone Road to Sparkenhoe



Source: Site Visit 12/10/2023

- 4.7 To fully assess the level of the existing pedestrian infrastructure, it is necessary to review the existing pedestrian provision along the major pedestrian desire lines to and from the site.
- 4.8 It is considered the major pedestrian desire line would be south towards the centre of Newbold Verdon whereby amenities such as a Co-op Food, Newbold Verdon Primary School, and a pharmacy are present.
- 4.9 Hornbeam Road, Sparkenhoe, and Mill Lane would be the main routes taken by pedestrians when accessing the Village Centre, and Dragon Lane would be the main pedestrian route when accessing Newbold Verdon Primary School.
- 4.10 Sparkenhoe, Hornbeam Road, and Mill Lane benefit from footways on either side measuring 2.0m in width and are lit by street lighting; dropped kerbs are present at junctions to aid crossing movements. **Figure 4.3** illustrates the local pedestrian environment and infrastructure on Sparkenhoe (towards Main Street), which is representative for the surrounding streets.

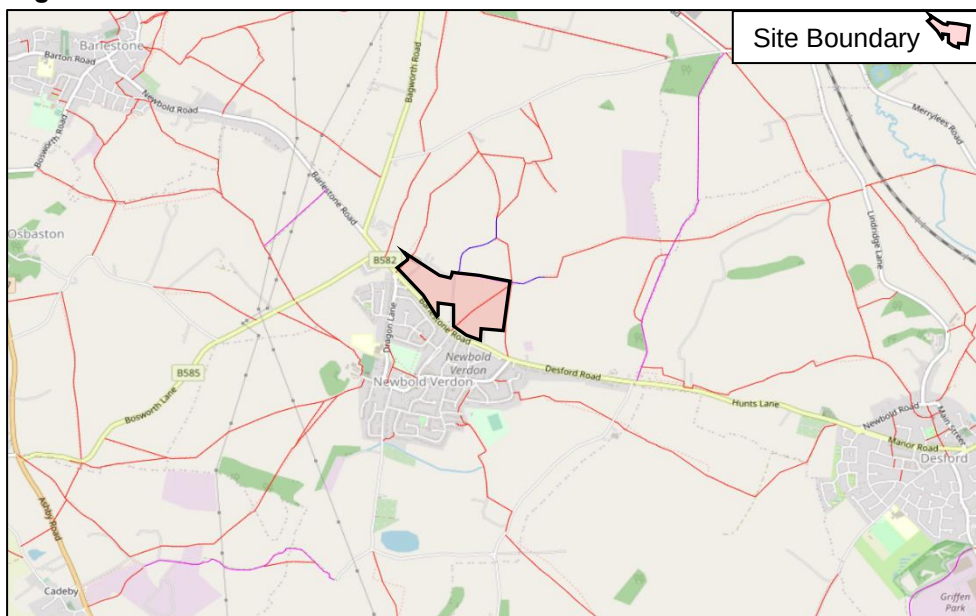
Figure 4.3: Pedestrian Infrastructure on Sparkenhoe



Source: Site Visit 12/10/2023

- 4.11 Dragon Lane benefits from a 2.0m wide, street lit footways on both sides of the carriageway. Yellow zigzag markings and 'No Waiting' restrictions (between 8am – 4pm Mon-Fri) are present outside the primary school, with the road operating at a 20mph speed restriction during school times.
- 4.12 The above residential roads all operate under a 30mph speed restriction except for the 20mph school zone mentioned.
- 4.13 **Figure 4.4** showcases public rights of way (PRoW) within the site's locality; the red 'X' indicates the site's location, with the red, pink, and blue lines denoting PRoW, bridleways, and byways respectively.
- 4.14 As shown, the local area has an extensive PRoW network, most notably providing off-carriageway walking routes to the villages of Desford and Barlestone.
- 4.15 As shown, 3 PRoW cross the site. The proposals will see these retained and incorporated into the site design, with improvements made to them where necessary.
- 4.16 Collating the above, it is evident the site is supported by a good level of existing pedestrian infrastructure, which facilitates movements towards the village centre and the major amenities and services local to the site.

Figure 4.4: PRow Network Local to the Site

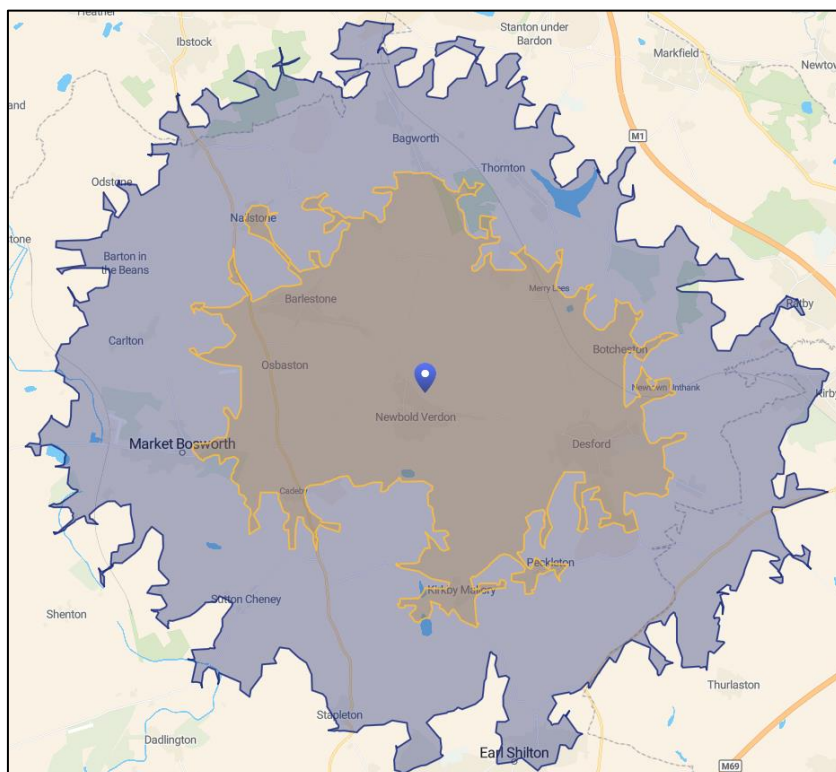


Source: FootPathMap.co.uk/

Cycling

- 4.17 The Department for the Environment publication 'PPG13 – A Guide to Better Practice' (March 2001) states that the bicycle is the ideal mode of transport for journeys under 8km and that cycling *“has clear potential to substitute for short car trips, particularly those under 5km, and to form part of a longer journey by public transport”*. **Figure 4.5** provides indicative cycling isochrones demonstrating a 5km and 8km reach from the site via cycle.

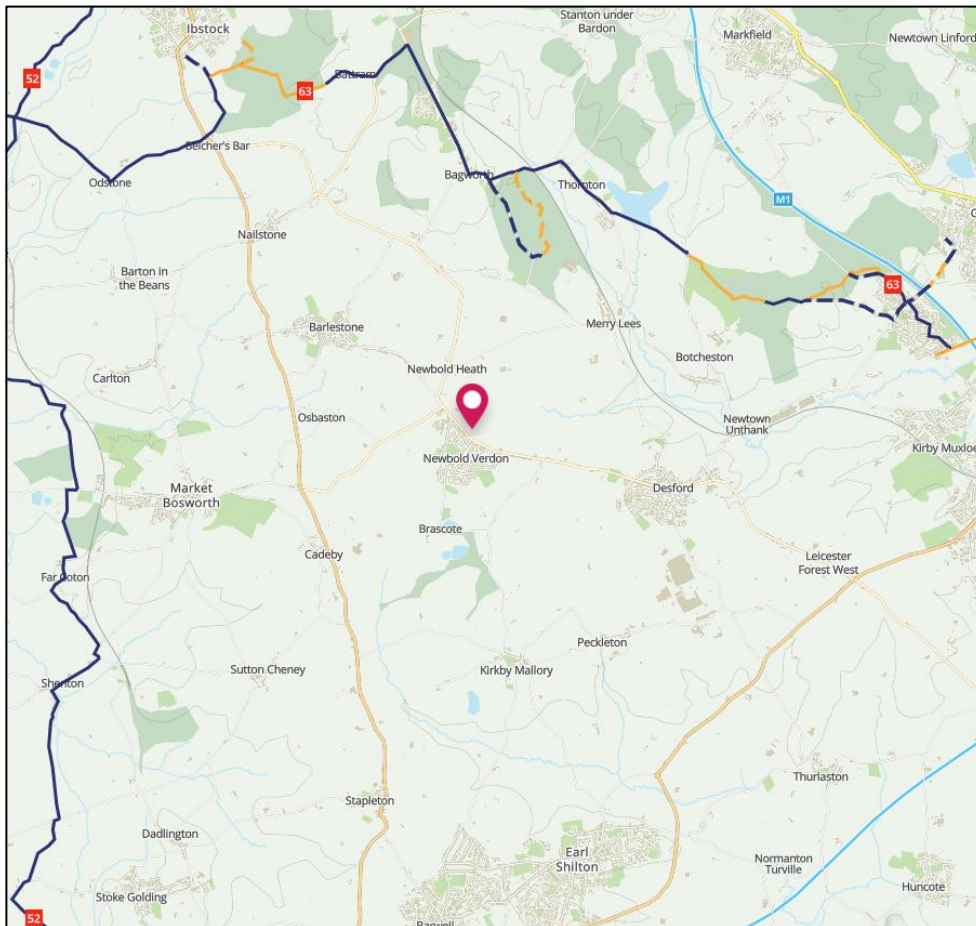
Figure 4.5: Cycling Accessibility Map shown in 5km and 8km Isochrones



Source: Smappen.com/

- 4.18 As **Figure 4.5** demonstrates, the villages of Barlestone, Desford, and Market Bosworth, the three largest villages nearest to the application site, are accessible within a 5km cycle. Multiple smaller villages/hamlets are accessible within an 8km cycle of the site.
- 4.19 Analysis of Sustrans.org found the site is within an 8km proximity to National Cycle Routes (NCR) 52 and 63 as shown on **Figure 4.6**.

Figure 4.6: The National Cycle Network Local to the Site



Source: [Sustrans.org/ExploreOSmaps/](https://sustrans.org/ExploreOSmaps/)

- 4.20 NCR 63 is located approximately 4.5km to the north of the site. The route originates in Swadlincote, Derbyshire, and passing closest to the site where it loops through Bagworth Heath Woods via Heath Road. NCR 63 extends to Wisbech, passing through Ibstock, Leicester, Oakham, and Peterborough on route.
- 4.21 NCR 52 is located approximately 6.5km west from the site. Originating in Warwick, NCR extends to north via Coventry, Nuneaton, and Coalville.
- 4.22 The cycle map in **Figure 4.7** outlines recommended cycle routes for Leicestershire, specifically focused in on the Hinckley and Bosworth area.

Figure 4.7: Hinckley and Bosworth Cycle Map

Source: choosehowyoumove.co.uk/

- 4.23 As demonstrated, the roads surrounding Newbold Verdon including Barlestone Road, are considered 'Quieter Routes', with connections to Desford and Market Bosworth solely via quieter routes, leisure routes, and/or cycle routes.
- 4.24 Core Strategy Policy 11, states the council will "Deliver safe cycle routes as detailed in Policy 14, in particular from Newbold Verdon to Bosworth Community College".
- 4.25 Policy 14 says the council will "Deliver safe cycle paths as detailed in the Hinckley & Bosworth Council's Rural Parishes Cycling Network Plan. This will deliver safe routes to school, to residential and employment areas, Key Rural Centres/urban areas, community and leisure facilities and into the countryside". The policy says developers will be required to contribute towards these initiatives.

Bus

- 4.26 The closest bus stops are situated a 300m walk west of the proposed site access on Dragon Lane, which are known as the 'Health Centre' stops. The northbound stop comprises a flag mounted on a streetlight, with the southbound stop comprising a flag and post design with timetable information and brick shelter. Both stops benefit from raised kerbs.
- 4.27 A second set of bus stops are situated on Main Street circa 30m from its juncture with Barlestone Road, the stops comprise a flag and post design, and is located 300m from the Sparkenhoe pedestrian link opposite the unregistered land.
- 4.28 Both stops are served by the 153 service (confirmed via a site visit dated 12/10/2023); a summary of this service is provided below in **Table 4.1**.

Table 4.1: 153 Service Summary

Service	Operating Days	First Bus	Frequency (Minutes)			Last Bus	Route	Provider
			Morning	Midday	Evening			
153	Mon - Fri	06:40	60	60	60	20:15	Leicester - Market Bosworth	Arriva Midlands
	Saturday	06:50	60	60	60	19:50		
	Sunday	-	-	-	-	-		

- 4.29 The above table demonstrates the closest bus stops to the site are served by 1 bus per hour during daylight hours on weekdays and Saturdays. Journey times to market Bosworth and Leicester are typically 10 minutes, and 45 minutes respectively.
- 4.30 The bus service provision provides future residents with a choice of transport when carrying out everyday trips beyond Newbold Verdon.
- 4.31 The majority of the site would be situated within 400m of a bus stop; **Figure 4.8** demonstrates indicative 400m isochrones from both mentioned bus stops overlayed onto the masterplan.

Figure 4.8: Indicitive 400m Isochrones from Bus Stops



Accessibility Assessment

- 4.32 To place the above sections into context, it is important to consider the locality of amenities, facilities, and services in relation to the site and subsequently pedestrian travel and public transport methods available to reach them. **Table 4.2** provides an extensive, but not exhaustive list of local amenities within Newbold Verdon.

Table 4.2: Accessibility Assessment

Facility	Approx Distance (m)	Approx Journey Time (minutes)*	
		Walking	Cycling
Education			
Newbold Verdon Primary School	750	3	9
De Verdun Nursery & Preschool	850	10	4
Health			
Newbold Verdon Medical Practice	300	4	1
Heartbrook Pharmacy	850	10	4
Retail			
Nisa Local	750	3	9
Newbold Verdon post Office	750	3	9
Liberteas Coffee Shop	650	8	3
Co-op Food	850	10	4
Public transport			
Health Centre' Bus Stop	300	4	1
Leisure			
Newbold Verdon Sports & Social Club	850	10	4
Newbold Verdon Cricket Club / Playing Fields	1100	13	5

*Assumes a walking speed of 1.4m/s (3.2mph or 5.0kph) taken from the Guidance for Providing for Journeys on Foot (IHT, 2000) and cycling speed of 4m/s (9mph or 14.4kph), taken from Local Transport Note 1/86.

- 4.33 The accessibility assessment identifies numerous key amenities and services within suitable walking distances. The site is deemed to be situated within a 'walkable neighbourhood' as described by Manual for Streets as:

'Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800 m) walking distance of residential areas which residents may access comfortably on foot'

Accessible Amenities in Wider Network

- 4.34 The 153-bus service provides an hourly, 10-minute connection into both Desford and Market Bosworth where key amenities and facilities are available, which include (but not limited to):

- Supermarkets
- Desford Community Primary School
- St Peters CE Primary Academy
- Bosworth Academy

- The Market Bosworth School
- Desford Medical Centre
- Desford Dental Care (NHS)
- Market Bosworth Surgery

- 4.35 The 153-bus route passes through Desford stopping at multiple locations. The bus route to Market Bosworth loops through ‘The Square’ (village Centre). All stops reside within appropriate walking distances to the listed amenities.
- 4.36 The 153 service also provides a 45-minute connection into the City of Leicester, where multiple key amenities and services are located including Leicester Rail Station.

Accessibility Assessment Summary

- 4.37 The application site is therefore considered to be in a sustainable location, specifically taking in into consideration paragraph 109 of the NPPF:

‘Opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.’

It is demonstrated that Newbold Verdon can offer genuine choice of transport modes to a variety of amenities both within the village and in the wider network and thus is considered to be sustainable.

Active Travel England

- 4.38 As mentioned, the site exceeds one or more of the thresholds (>150 dwellings / >7,500 m² floorspace / >5 hectares), meaning ATE will be a statutory consultee for the development. Consequently, the application site has been assessed using ATE’s ‘Planning Application Assessment Toolkit: Checklist User Manual’ published May 2023. The Planning Application Assessment Toolkit Checklist outlines the degree to which the site complies with ATE guidance through 50 relevant categories, scored through a ‘Pass (1)’ or ‘Fail (0)’ system for each individual element of the checklist.
- 4.39 The application site scored 19 out of 22 applicable points; as the internal site layout is to be confirmed for a future full application, multiple aspects of the checklist are unable to be assessed at outline application stage, although, the site will be designed in accordance to LTN 1/20. The full ATE checklist output is contained in **Appendix D**.
- 4.40 The three failures were:
- ATEPAF_103 – Local Amenities;
 - ATEPAF_108 – Cycle Routes to Key Destinations, and;
 - ATEPAF_115 – Access and Provision of Public Transport

- 4.41 ATEPAF_103: Not all parts of the development are within 800m of key facilities based on actual walking distances, albeit the majority of the site does fall in this distance. It should be noted the development does meet this criteria based on distances measured 'as the crow flies'.
- 4.42 ATEPAF_108: The site is not providing off-site LTN 1/20 compliant routes to all key amenities. It is not considered appropriate or possible, without the acquisition of third-party land, to provide off-site cycle routes to all key amenities.
- 4.43 ATEPAF_115: Not all parts of the site are within 400m of a bus stop, albeit a significant proportion of the site is. Discussions with LCC have indicated no desire to divert the services into or closer to the site and so the distances are considered to be acceptable.

5.0 ACCESS STRATEGY

Proposed Vehicular Access

- 5.1 The site will be served by a single point of access in the form of a T-junction with a dedicated right turn lane on Barlestone Road, circa 90m southeast of the Newbold Verdon Equestrian Centre access, as shown on drawing 24832_08_020_03b contained in **Appendix E**. The main access road will be sized to 6.75m in line with a 'major residential access road' as stated in Table DG1 of Leicestershire Highway Design Guide. This road category enables up to 400 dwellings to be served from a single point of access.
- 5.2 The proposed junction would see widening of the carriageway on the northern side to 10.5m, with 2 x 3.5m wide opposing lanes, and a 3.5m wide, 45.0m long right turn lane serving the development. The junction has been designed in accordance with the Leicestershire Highway Design Guide and CD123.
- 5.3 The proposals will also incorporate a new toucan crossing to provide safe access for pedestrians and cycles across Barlestone Road. Footway improvements between the crossing and Dragon Lane will be provided on the southern side and a pedestrian/cycleway will be provided on the northern side between the existing PRow and site access. Crossing points as part of the Newbold Verdon Equestrian Centre and proposed site access will be provided.
- 5.4 Guidance relating to appropriate visibility splays is published within Table DG4 of the Leicestershire Highway Design Guide (Part 3), and recommends that the 'Y' distance is based on the Sight Stopping Distance (SSD) for vehicles travelling along the major road, in this case Barlestone Road, and commensurate with 85% percentile vehicular speeds.
- 5.5 Two Automatic Traffic Count (ATC) speed surveys were carried out north and south of the proposed site access to establish the 85th percentile speeds. The surveys were undertaken by Road Data Services Ltd (RDS) from the 27th October to the 2nd November 2023; the full ATC results as provided by RDS, including a location plan, are contained in **Appendix F**.
- 5.6 The northern ATC results show 85th percentile vehicular speeds of 42.5mph were recorded for both northbound and southbound traffic, and the results of the southern ATC showed 85th percentile vehicular speeds of 42.1mph for both northwest bound and southeast bound traffic. Therefore, in accordance to Table DG4 of the LCC highway design guide. A 'Y' distance of 120m is required.
- 5.7 Junction visibility splays of 2.4m x 120m in both directions are shown on drawing number 24832_08_020_03b along with pedestrian visibility splays of 1.0m x 120m. It is noted that any vegetation within any splays (both vehicular or pedestrian) would be cut down to 0.6m or removed entirely.
- 5.8 A swept path analysis has been undertaken for the proposed access using the most up to date version of the computer software Causeway Drive. The swept paths are based upon a Phoenix 2-23W (with Elite 2 6x4 chassis) refuse vehicle measuring 2.53m by 10.52m. The results are illustrated on Drawing 24832_08_020_05 in **Appendix G**.

Equestrian Centre Access

- 5.9 Access to the Newbold Verdon Equestrian Centre is gained via a priority-controlled T-junction off Barlestone Road. This access will be retained to serve the centre and a proposed cemetery.
- 5.10 The proposals would reduce the overall size of the equestrian centre, with the cemetery itself generating limited peak hour trips (Section 6.0 provides more details). The cemetery would not intensify traffic at the access, and so the existing junction is considered suitable to serve both the equestrian centre and proposed cemetery.
- 5.11 Junction visibility splays of 2.4 x 120m as per the site access junction can be achieved as shown on drawing number 24832_08_020_03b
- 5.12 Pedestrian visibility splays of 1m x 25m from the Equestrian Centre crossing up the access road are also shown on drawing number 24832_08_020_03b.

Policy IN5

- 5.13 LCC noted in their pre-application comments that Policy IN5 is applicable to this location. Policy IN5 sets out LCC's policy for accessing the road network and seeks to discourage new accesses onto A and B class roads and avoid increasing the use of existing access.
- 5.14 The policy states:

We will normally apply restrictions on new accesses for vehicles and the increased use of existing accesses on:

- *roads with a speed limit above 40 mph (that is 50mph, 60mph or 70mph) or where measured vehicle speeds are in excess of 40mph;*
- *roads with a speed limit of 40mph or less which are essentially rural in nature;*
- *routes where the access would affect bus-corridor or bus-priority measures being put in place;*
- *roads that are at or near capacity (cannot carry more traffic); and;*
- *roads where there is an existing problem with road safety."*

- 5.15 It is not considered the development proposals are contrary to IN5 for 1.the following reasons:

Roads with a speed limit above 40 mph (that is 50mph, 60mph or 70mph) or where measured vehicle speeds are in excess of 40mph

85th percentile speeds are only a maximum of 2.5mph above the subject speed limit and therefore additional reinforcement of the speed limit would ensure speeds are more consistently in line with the subject speed limit. This approach has been accepted by LCC elsewhere and will be considered further in Section 7.0 of this report

Roads with a speed limit of 40mph or less which are essentially rural in nature

This is not applicable to this location

Routes where the access would affect bus-corridor or bus-priority measures being put in place

Whilst bus services do operate on the B582 they do not operate past the site and so the access proposals will not impact any existing provision.

Roads that are at or near capacity (cannot carry more traffic)

This is not applicable in this location

Roads where there is an existing problem with road safety

Based on the accident review completed in Section 3.0, no safety issues have been identified.

- 5.16 Subject to enforcement of the subject speed limit, the provision of access on the Barlestone Road should not be subject to restriction under Policy IN5.

Byway

- 5.17 The byway (Harry's Lane) is an adopted highway and is therefore to be retained to maintain the existing rights of access to existing dwellings. As shown on the masterplan, the byway will cross the proposed internal primary road.
- 5.18 As the byway will need to be retained, drawing 24832_08_020_08 in **Appendix H** outlines a proposed design where the byway will cross the access road. The byway is not a development access and its junction with the spine road has been designed to deter movements and ensure the access is conspicuous.
- 5.19 The byway will not be widened and vegetation is proposed to be placed on the corners of the junction to reduce its visual prominence and make the byway appear more like a pedestrian / cycle route. Visibility splays of 2.4m x 43m have been shown albeit the design speed of the access road likely to be lower reducing visibility requirements.

Additional Pedestrian/Cycle Provision Improvements

- 5.20 As well as the measures outlined as part of the access proposals, the following additional elements are included as part of the wider access strategy:
- 1 x Toucan crossing to link into the central part of Sparkenhoe via the existing pedestrian link.
 - Within the site, a 3.5m footway/cycleway will extend circa 100m from the crossing to the byway ProW to discourage pedestrians from crossing Barlestone Road at the Barlestone Road / Byway / Mill Lane crossroads junction. The PRoW running through the site from this point will be upgraded to a 'Green Avenue'.
- 5.21 These proposals are outlined on both drawing 24832_08_020_07 in **Appendix I** and the site masterplan in **Appendix A**.

Stage 1 Road Safety Audit

- 5.22 A Stage 1 RSA for the access proposals has been carried out by Midlands Road Safety Ltd (MRS). The prepared RSA (MRS report reference: 24-1597-RSA1) and associated designers response are contained in **Appendix J**.
- 5.23 The designers response details the changes made to the layout in response to the RSA. It is deemed that the layout has been amended accordingly where necessary to address the issues raised in the RSA.

Parking

Car Parking

- 5.24 Car parking within the site will be provided in accordance with DCLG calculation as per stated in the Leicestershire Highways Design Guide (LHDG).
- 5.25 As this is an outline application, suitable space will be made available in the layout to accommodate the required parking provision, including appropriate provisions for the health care building and cemetery.
- 5.26 All dwellings will include Electric Vehicle Charging Points (EVCP) in accordance to guidance set out in Approved Document S (June 2022).

Cycle Parking

- 5.27 Cycle parking will follow standards set out by Leicestershire Highway Design Guide:

‘For developments with common facilities, such as flats, one space for every five dwellings. Parking to be under cover and secure.

Where spaces are allocated, there should be one space for each dwelling.’

- 5.28 The development will provide cycle parking in line with the above standards. It is also noted that for dwellings provided with a private garden (and shed) and/or garage, cycles can be securely stored within the bounds of the property.

6.0 HIGHWAY IMPACT

Trip Generation

- 6.1 To ascertain the number of vehicle movements likely to be generated from the proposed residential development, LCC have advised the use of the trip rates generated from a traffic count at the Dragon Lane/Old Farm Lane junction as part of the Bosworth Lane application (ref: 11/00489/FUL). The trip rates and resulting trip generation for 240 dwellings is presented in **Table 6.1**.

Table 6.1: Development Vehicle Trip Rates and Trip Generation (From 20/00143/FUL)

Time Period	Trip Rates (per unit)		Trip Generation (240 units)		
	Arrive	Depart	Arrive	Depart	Total
AM Peak (08:00-09:00)	0.074	0.606	18	145	163
PM Peak (17:00-18:00)	0.521	0.17	125	41	166

Rounding errors may occur

- 6.2 The residential development is estimated to generate 163 vehicle movements during the AM peak hour, and 166 during the PM peak hour.

Health Centre Trip Generation

- 6.3 The Trip Rates for a Doctors Surgery have been derived from interrogation of the TRICS software category 'Health – GP Surgeries', and based on a comparison of gross floor area (GFA), with the geographic areas of Ireland, Northern Ireland, Scotland, Wales, and Greater London being excluded from the search. **Table 6.2** provides a summary of the derived trip rates for the development, with the full TRICS outputs contained in **Appendix K**.

Table 6.2: Derived Doctors Surgery Trip Rates and Trip Generation

Time Period	Trip Rates (100sqm)		Trip Generation (1100sqm)		
	Arrive	Depart	Arrive	Depart	Total
AM Peak (08:00-09:00)	2.759	1.463	30	16	46
PM Peak (17:00-18:00)	1.314	2.136	14	23	38

**Rounding errors may occur*

- 6.4 The doctors surgery is estimated to generate 46 vehicle movements during the AM peak hour, and 38 during the PM peak hour.

Cemetery Trip Generation

- 6.5 Given the size of the cemetery, it is likely to be a Garden of Rest with no on-site facilities beyond a small car park. Although it is noted services would still occur, these are unlikely to be carried out during the traditional peak hours; general visiting would likely occur sporadically with no set time required, with peak hours for a Garden of Rest typically occurring on weekends, notably Sundays.
- 6.6 It is understood gardeners or maintenance workers would be required to visit the site; however, it is unlikely more than 1 or 2 workers would be regularly required on site at any given time.

- 6.7 Moreover, the development proposes reduce the overall size of the equestrian centre, therefore reducing the number of trips to and from the centre. This would offset the trips generated by the cemetery.
- 6.8 It is therefore considered that the cemetery would generate negligible levels of traffic within the peak hours, specifically considering the reduction in the size of the equestrian centre, and therefore, omitting them from the capacity assessments would not impact the robustness of this assessment.
- 6.9 The cemetery design would include appropriate car parking provision that would be determined at reserve matters stage.

Total Trip Generation

- 6.10 The development is estimated to generate 209 vehicle movements during the AM peak hour, and 204 during the PM peak hour.

Junction Capacity Analysis

Leicestershire Pan Regional Transport Model (PRTM)

- 6.11 The scoping response outlined that the PRTM is to be used for any junction assessment work. The PRTM is a strategic traffic model covering the highway network in Leicestershire and Leicester. It is a platform for strategic analysis that provides consistent travel forecast evidence to the transport planning process across Leicestershire with a regional capability, built using current industry best practice based on Government (Department for Transport's (DfT)) Transport Appraisal Guidance (TAG) and engagement/consultation with relevant stakeholders, such as National Highways (NH) and the Local Planning Authorities (LPA's).
- 6.12 The PRTM covers a period of 2014 – 2051 using the latest planning data, infrastructure and economic assumptions, and aims to forecast the impact of changes in transport policy, land-use and infrastructure on travel decisions, the environment, and the economy. The PRTM can help in providing a robust and auditable evidence base to mitigate the impacts of all new developments to the transport network and is a key tool in development control, as with this application.
- 6.13 At the time of writing, the PRTM has been commissioned but the data is not available. The following section will present an overview of the capacity assessments within Newbold Verdon as conducted by MEC, with an aim to inform the need for any mitigation. It is acknowledged that the PRTM data, including assessments of the wider area of influence (AoI) will be presented at a later date upon its availability.

Methodology

Assessment Years and Scenarios

- 6.14 Junction capacity assessments have been undertaken to determine the impact of 240 dwellings and doctors surgery on the local highway network. The following major junctions have been identified, using the census data presented in 20/00143/FUL, as ones receiving >30 two-way trips because of the development, and as such, require further capacity assessments.

- Junction 1: Site Access (Barlestone Road / New Site Access);
- Junction 2: Barlestone Road / B585 Bosworth Lane Signalised T-Junction;
- Junction 3: Bosworth Lane / Bosworth Road / A447 Staggered Crossroads;
- Junction 4: B582 Hunts Lane / B582 manor Road / Newbold Road / Lockeymead Drive Roundabout
- Junction 5: Barlestone Road / Dragon Lane T-junction;
- Junction 6: Balrestone Road / Mill Lane T-junction, and;
- Junction 7: Barlestone Road / Main Street T-junction;

6.15 Junctions beyond the immediate vicinity of Newbold Verdon will be considered further once the results of the PRTM are made available.

6.16 The assessments will consider junction operation at the present year (2024) and at a future year of 2033 (with and without proposed development traffic). The following assessment scenarios have been completed:

- 2024 Base Flows (AM/PM);
- 2033 Do Nothing AM/PM (2024 Base + Background traffic growth);
- 2033 Do Minimum AM/PM (2033 Do Nothing + Committed Development Flows)
- 2033 Do Something AM/PM (2033 Do Minimum + Proposed Development Flows).

Base Traffic Count Data

6.17 Weekday AM (0730 – 0930) and PM (1630 – 1830) peak period traffic count data has been obtained for all identified Junctions. Fully classified traffic turning counts were undertaken by RDS on Thursday 25th May 2023. The traffic survey data as provided by RDS is provided in **Appendix L**.

6.18 Base traffic flows for the residential streets of Newbold Verdon that juncture with Barlestone Road (Dragon Lane, Mill Lane, and Main Street) have been obtained from the TA associated with the 23/01037/OUT application. The base data was collected in 2021 and have been subject to Covid Uplift factors to produce a 2021 base combined proxy. This data has then been growth to a base year of 2023 to match the RDS data. Both the RDS and 23/01037/OUT data has then been growthed up to 2024

6.19 To achieve a 2033 future year, the 2024 base data have been growthed using rates obtained from TEMpro 7.2/NTM dataset AF15 for Hinckley and Bosworth Area 005 (E02005381). The base traffic flows for the identified junctions have been growthed from 2024 – 2033. All growth rates are shown below in **Table 6.3**.

Table 6.3: Adjusted TEMpro Growth Rates

Type	Area	Dataset Code	Period	AM Peak	PM Peak
Vehicular	Hinckley and Bosworth 005	E02005381	2021 - 2023	1.0280	1.0279

Vehicular	Hinckley and Bosworth 005	E02005381	2023 - 2024	1.0083	1.0060
Vehicular	Hinckley and Bosworth 005	E02005381	2024 - 2033	1.0772	1.0779

Committed Developments

- 6.20 Committed developments can be defined as proposed development schemes with planning permission that, upon their completion, will result in material changes to the existing traffic conditions recorded in the base surveys. Such developments may not yet be commenced and/or are currently under construction but not yet complete or fully occupied.
- 6.21 It is considered appropriate to incorporate any local developments that have highways consent and are deemed to generate traffic through the assessment junctions. The Brascote Lane, Newbold Verdon Development (23/01037/OUT- outline application for 239 dwellings), and Land off Bosworth Lane, Newbold Verdon (20/00143/FUL – full planning application for 116 dwellings), have been identified as committed developments.
- 6.22 It is noted that 20/00143/FUL has been partially built out, however, as the development is not complete, the proposed full vehicular movements have been taken into consideration for this assessment for robustness.

Trip Distribution

- 6.23 Using the methodology set out in the previously mentioned approved TA (20/00143/FUL TA), development trips have been distributed using origin/destination statistics from the 2011 census data from the Hinckley and Bosworth 005 Super Output Area.
- 6.24 The census data percentages have been analysed to calculate route choices using a gravity model approach via Google Maps. The local trip distribution and flow diagrams are contained in **Appendix M**, with a summary of the distributed of trips as follows:
- Hinckley and Bosworth: 29%
 - Leicester: 24%
 - Blaby: 15%
 - North West Leicester: 7%
 - Charnwood: 5%
 - Harborough: 3%
 - Coventry: 2%
 - Oadby and Wigstone: 2%
 - Birmingham: 1%
 - Rugby: 1%
 - Melton: 1%
 - Nottingham: 1%
 - Warwick: 1%

- Other: 6%

6.25 The 'Other' percentage is compiled of all destinations whereby less than 0.5% (1%) travelled to. It should be noted the 6% classed as 'Other', have been split evenly from the development access point (3% west / 3% east), with 100% of the 'other' trips (3%) exiting/entering the development from the west, doing so to/from the B585 Bosworth Lane, as the percentage split without those trips is 36% / 8% in favour of the B585 Bosworth Lane. The remaining 3% classed as 'Other' entering/exiting the development from the East has been carried through along the B582.

6.26 The distribution is proposed to be reversed for trips coming to the development.

6.27 The distribution of the doctors surgery trips has been assumed the same as the residential distribution.

Modelling Software

6.28 The capacity of the junctions within the Transport Assessment study area has been undertaken using the Department of Transport TRL program JUNCTIONS 9 and the JCT Consultancy program LinSig 3. These programs are recognised as "industry standard" traffic modelling software packages used for assessing the capacity of roundabout junctions and T- junctions.

6.29 For both priority roundabouts and priority T-junctions a Ratio of Flow to Capacity (RFC) value of 0.85 or less typically demonstrate that a junction arm or turning movement is operating "within capacity" and is therefore unlikely to experience regular queuing. RFC values greater than 0.85 represent increased levels of queues and congestion i.e., the junction operates "over capacity" as essentially, 85% of the theoretical capacity is the maximum flow rate. The consequences of a high RFC depend on the flow. An RFC value of 1.2 might not matter with a very low flow whereas a value of 0.85 might be disastrous with a high flow. Therefore, it is important to review delay alongside RFC, in order to determine a junctions overall operation capacity.

6.30 For signalised junctions a Max Degree of Saturation (DOS) value of 0.90 (90%) or less typically demonstrate that a junction arm is operating "within capacity" and is therefore unlikely to experience regular queuing. The Practical Reserve Capacity (PRC) of the whole junction is measured as a percentage, with a positive percentage illustrating that the junction is able to accept further traffic. A negative percentage states that the junction is operating over capacity and that it is suffering from congestion.

6.31 The geometric parameters entered into the models have been measured using Ordnance Survey mapping and Google Earth.

6.32 The full input data and results report for the assessed junctions are contained in **Appendix N**.

Capacity Assessments

Junction 1: Site Access

6.33 **Table 6.4** provides a summary of the capacity results of the proposed site access junction on Barlestone Road.

Table 6.4: Junction 1 Modelling Results

Barlestone Road / New Site Access						
Arm	Morning Peak Hour (08:00-09:00)			Evening Peak Hour (17:00-18:00)		
	Queue (PCUs)	Delay (s)	RFC	Queue (PCUs)	Delay (s)	RFC
2033 Do Something						
Stream B-AC	0.60	11.71	0.37	0.20	8.51	0.14
Stream C-AB	0.10	6.62	0.05	0.20	6.99	0.14

- 6.34 As demonstrated, the proposed site access junction will operate well within theoretical capacity upon construction, and thus is considered more than acceptable in terms of serving the site.

Junction 2: Barlestone Road / Bosworth Lane

- 6.35 **Table 6.5** provides a summary of the capacity results of the Barlestone Road / Bosworth Lane signal junction.

Table 6.5: Junction 2 Modelling Results

Barlestone Road - Bosworth Lane			
Junction/Arm/ Lane Movement	Peak	Max. DOS	Max Queue
2024 Base Flows			
1/1 + 1/2	AM	45.0 :45.0%	6.9
	PM	28.1 : 28.1%	3.5
2/1	AM	64.10%	11.2
	PM	69.30%	12.8
3/1	AM	63.80%	7.6
	PM	70.20%	9.0
PRC: AM = 40.3% PM = 28.2%			
Cycle Time AM = 180 Seconds		Cycle Time AM = 180 Seconds	
2033 Do Minimum			
1/1 + 1/2	AM	49.5: 49.5%	8.0
	PM	32.5 : 32.5%	4.2
2/1	AM	76.10%	14.4
	PM	80.20%	16.8
3/1	AM	74.50%	10.1
	PM	80.80%	11.7
PRC: AM = 18.3% PM = 11.5%			
Cycle Time AM = 180 Seconds		Cycle Time AM = 180 Seconds	
2033 Do Something			
1/1 + 1/2	AM	48.1 : 48.1%	8.3
	PM	34.6 : 34.6%	4.8
2/1	AM	80.50%	17.2
	PM	87.40%	20.3
3/1	AM	81.00%	11.0
	PM	86.80%	13.6
PRC: AM = 11.1% PM = 3.0%			
Cycle Time AM = 180 Seconds		Cycle Time AM = 180 Seconds	

- 6.36 The assessment results illustrate the junction operates within capacity during all scenarios. LCC provided the model for the Barlestone Road - Bosworth Lane junction ensuring its accuracy.

- 6.37 It is noted that capacity can be further increased by reducing the number of pedestrian stages (pedestrian stage 4 is double cycled within the LCC model). As LCC provided the model and it operates within capacity at its current configuration, it is deemed unnecessary to alter the stages to maximise capacity at this time.

Junction 3: Bosworth Lane / Bosworth Road / A447 Staggered Crossroads

- 6.38 **Table 6.6** provides a summary of the capacity results of the Bosworth Lane / Bosworth Road / A447 Staggered Crossroads.

Table 6.6: Junction 3 Modelling Results

Bosworth Lane - Bosworth Road - A447						
Arm	Morning Peak Hour (08:00-09:00)			Evening Peak Hour (17:00-18:00)		
	Queue (PCUs)	Delay (s)	RFC	Queue (PCUs)	Delay (s)	RFC
2024 Base Flows						
Stream B-C	0.40	9.54	0.28	0.20	7.53	0.18
Stream B-AD	0.90	19.13	0.48	0.70	14.99	0.40
Stream A-BCD	0.20	7.54	0.15	0.10	7.20	0.12
Stream D-A	0.40	25.28	0.28	1.50	83.73	0.64
Stream D-BC	3.70	57.81	0.81	6.30	83.21	0.90
Stream C-ABD	0.40	9.94	0.28	0.40	9.17	0.29
2033 Do Minimum						
Stream B-C	0.50	12.44	0.35	0.30	8.37	0.21
Stream B-AD	1.60	28.73	0.63	0.90	18.45	0.48
Stream A-BCD	0.20	7.91	0.16	0.20	7.48	0.13
Stream D-A	3.30	188.00	0.95	6.10	333.42	1.10
Stream D-BC	7.50	106.92	0.93	20.80	217.45	1.08
Stream C-ABD	0.50	10.71	0.31	0.50	9.98	0.32
2033 Do Something						
Stream B-C	1.60	36.21	0.64	0.30	9.42	0.23
Stream B-AD	4.70	69.01	0.86	1.20	22.52	0.56
Stream A-BCD	0.20	8.15	0.16	0.20	7.55	0.13
Stream D-A	4.40	262.84	1.02	9.40	521.74	1.26
Stream D-BC	12.40	159.66	1.01	44.50	434.19	1.24
Stream C-ABD	0.50	10.99	0.32	0.50	10.78	0.35

- 6.39 The junction is shown to be over capacity on Bosworth Lane (Stream B-AD, '2033 Do Something' AM Peak) and on Bosworth Road (Streams D-A, D-BC, '2033 Do Minimum' and '2033 Do Something').
- 6.40 In terms of vehicles exiting the Bosworth Lane arm in the AM peak, the development contributes 63 vehicles.
- 6.41 In terms of vehicles exiting the Bosworth Road arm, the development contributes 16 vehicles in the AM peak and 46 vehicles in the PM Peak to the Bosworth Road arm.
- 6.42 The modelling results shows the A447 arms (Streams A-BCD, C-ABD) operate within capacity during all scenarios.

- 6.43 Market Bosworth Parish Council held a meeting on the 9th January 2024, and published a Public Information Pack (see **Appendix O**). LCC were invited to comment on the Parish Councils concerns regarding the A447 / Bosworth Lane / Bosworth Road junction (Bull in Oak Junction). LCC stated:

'It is fully appreciated that at times drivers will need to wait and be patient before egressing onto the A447...

...Regrettably there are no improvements that can be made to improve egress times onto the A447 as the A447 is the busier route, and therefore priority must remain with the main route'

- 6.44 Observations of this junction show the Bosworth Road and Bosworth Lane arms are constrained by third party land.
- 6.45 Given the comments from LCC and the relatively low impact of the proposed development on this junction, the impact is not considered to be severe and no improvements are proposed. Mitigation measures will instead be focused on contributions to local public transport and cycle improvements to encourage modal shift.

Junction 4: B582 / Newbold Road / Lockymead Drive Roundabout

- 6.46 **Table 6.7** provides a summary of the capacity results of the B582 / Newbold Road / Lockymead Drive Roundabout.

Table 6.7: Junction 4 Modelling Results

B582 - Newbold Road - Lockymead Drive Roundabout						
Arm	Morning Peak Hour (08:00-09:00)			Evening Peak Hour (17:00-18:00)		
	Queue (PCUs)	Delay (s)	RFC	Queue (PCUs)	Delay (s)	RFC
2024 Base Flows						
Arm 1	1.60	7.55	0.61	0.50	4.34	0.34
Arm 2	0.10	10.34	0.08	0.10	8.08	0.11
Arm 3	0.60	4.65	0.39	1.20	6.23	0.54
Arm 4	0.10	4.56	0.12	0.10	4.74	0.06
2033 Do Minimum						
Arm 1	3.40	13.13	0.78	0.70	4.77	0.40
Arm 2	0.10	12.93	0.11	0.20	8.66	0.13
Arm 3	0.80	4.99	0.43	2.10	9.03	0.68
Arm 4	0.10	4.76	0.13	0.10	5.42	0.07
2033 Do Something						
Arm 1	7.60	27.70	0.90	0.80	5.46	0.45
Arm 2	0.10	12.47	0.11	0.10	7.79	0.12
Arm 3	0.70	4.36	0.41	2.10	8.01	0.68
Arm 4	0.20	4.93	0.13	0.10	5.87	0.08

- 6.47 The junction is shown to be over capacity on the B582 Hunts Lane arm (Arm 1) in the AM peak in the '2033 Do Something' scenario.

- 6.48 Observations on this junction indicate that this arm is not typically congested at present due to low flows to / from the minor arms. The relatively low queue length and delay at Arm 1 in all scenarios evidences this observation, with low flows to / from the minor arms seen from the turning count data.
- 6.49 The observations also highlighted that vehicles travelling between the B582 arms (Arms 1 & 3) often drive over the painted roundabout island, reducing the deflection and increasing circulatory speeds. This is exacerbated by the low minor arm flows.
- 6.50 This is significant as the model is built as if the painted island is a physical one, which results in modelled slower entry / exit speeds for all the arms due to the greater deflection angle and more acute conflict angle. This represents the worst-case scenario as the modelled speed of vehicles travelling through the junction is reduced compared to reality.
- 6.51 The impact of the development is not considered to be severe when taking into consideration the relatively low queue lengths and delay, minor arm flows, and limitations of the modelling software. No improvements are proposed and mitigation measures will instead be focused on contributions to local public transport and cycle improvements to encourage modal shift.

Junction 5: Dragon Lane – Barlestone Road T Junction

- 6.52 **Table 6.8** provides a summary of the capacity results of the Dragon Lane – Barlestone Road T-junction.

Table 6.8: Junction 5 Modelling Results

Barlestone Road / Dragon Lane						
Arm	Morning Peak Hour (08:00-09:00)			Evening Peak Hour (17:00-18:00)		
	Queue (PCUs)	Delay (s)	RFC	Queue (PCUs)	Delay (s)	RFC
2024 Base						
Stream B-C	0.40	8.72	0.28	0.20	8.35	0.20
Stream B-A	0.20	13.22	0.15	0.10	14.07	0.08
Stream C-AB	0.80	5.59	0.30	1.20	7.57	0.42
2033 Do Minimum						
Stream B-C	0.60	10.33	0.38	0.30	9.31	0.25
Stream B-A	0.20	14.86	0.18	0.10	17.30	0.10
Stream C-AB	1.10	5.82	0.36	2.50	10.74	0.60
2033 Do Something						
Stream B-C	0.60	11.10	0.39	0.30	9.56	0.25
Stream B-A	0.20	16.61	0.19	0.10	19.19	0.11
Stream C-AB	1.30	6.02	0.39	3.20	11.63	0.65

- 6.53 The assessment results illustrate the junction operates within capacity during all scenarios.

Junction 6: Mill Lane – Barlestone Road T Junction

- 6.54 **Table 6.9** provides a summary of the capacity results of the Mill Lane – Barlestone Road T-junction.

Table 6.9: Junction 6 Modelling Results

Barlestone Road / Mill Lane						
Arm	Morning Peak Hour (08:00-09:00)			Evening Peak Hour (17:00-18:00)		
	Queue (PCUs)	Delay (s)	RFC	Queue (PCUs)	Delay (s)	RFC
2024 Base						
Stream B-AC	0.2	8.19	0.15	0.2	9.24	0.17
Stream C-AB	0.3	4.96	0.13	0.4	5.78	0.18
2033 Do Minimum						
Stream B-AC	0.2	8.6	0.17	0.2	10.08	0.2
Stream C-AB	0.4	4.81	0.15	0.5	5.87	0.2
2033 Do Something						
Stream B-AC	0.2	8.98	0.17	0.3	10.94	0.21
Stream C-AB	0.5	4.61	0.17	0.5	5.89	0.22

6.55 The assessment results illustrate the junction operates within capacity during all scenarios.

Junction 7: Main Street – Barlestone Road T Junction

6.56 **Table 6.10** provides a summary of the capacity results of the Main Street – Barlestone Road T-junction.

Table 6.10: Junction 7 Modelling Results

Barlestone Road / Dragon Lane						
Arm	Morning Peak Hour (08:00-09:00)			Evening Peak Hour (17:00-18:00)		
	Queue (PCUs)	Delay (s)	RFC	Queue (PCUs)	Delay (s)	RFC
2024 Base						
Stream B-C	0.10	6.93	0.06	0.00	7.42	0.04
Stream B-A	0.30	11.87	0.25	0.30	12.98	0.26
Stream C-AB	0.00	4.66	0.02	0.10	5.21	0.07
2033 Do Minimum						
Stream B-C	0.10	9.51	0.08	0.10	8.67	0.05
Stream B-A	1.20	20.81	0.55	0.60	17.61	0.39
Stream C-AB	0.00	4.50	0.03	0.20	5.28	0.09
2033 Do Minimum						
Stream B-C	0.10	10.27	0.09	0.10	9.37	0.05
Stream B-A	1.40	24.16	0.59	0.70	20.50	0.43
Stream C-AB	0.00	4.29	0.03	0.20	5.24	0.10

6.57 The assessment results illustrate the junction operates within capacity during all scenarios.

Toucan Crossing Modelling

6.58 As the proposed Toucan Crossings would temporarily stop traffic on Barlestone Road, it is necessary to assess the extent of any queues / delay caused. The crossing has been modelled in LINSIG, where it has been assumed the pedestrian crossing would be called once every 5 signal ‘cycles’. This is considered an overestimation as it is unlikely the crossing in practice would be called that often. The assessment is therefore robust.

6.59 The traffic flows for Barlestone Road at the crossings have been taken from the 2033 Do Something Traffic flows at the relevant locations. Pedestrian flows of 1 per cycle have been inputted to mimic the crossing being called.

6.60 A summary of the modelling is presented below, with the full output for both crossings contained in **Appendix P**.

Site Access

6.61 **Table 6.11** provides a summary of the modelling results of the Toucan Crossing located 35m northwest of the site access.

Table 6.11: Site Access Toucan Crossing Modelling Results

Barlestone Road Toucan Crossing		
Arm	Queue (PCUs)	Delay (s)
2033 Do Something AM		
Barlestone Road NW	5.7	2.3
Barlestone Road SE	3.2	2.0
2033 Do Something PM		
Barlestone Road NW	5.1	2.2
Barlestone Road SE	6.2	2.4

6.62 The results show queues of 6 vehicles would be the maximum seen at the crossing, with hourly delays averaging 2-3 seconds per vehicle. This is not deemed a significant, and there is sufficient space between the crossing and the site access for vehicles to queue without impacting right turn movements at the site access junction.

Sparkenhoe Crossing

6.63 **Table 6.12** provides a summary of the modelling results of the Sparkenhoe Toucan Crossing.

Table 6.12: Sparkenhoe Toucan Crossing Modelling Results

Barlestone Road Toucan Crossing		
Arm	Queue (PCUs)	Delay (s/pcu)
2033 Do Something AM		
Barlestone Road NW	5.7	2.3
Barlestone Road SE	3.6	2.0
2033 Do Something PM		
Barlestone Road NW	3.5	2.0
Barlestone Road SE	6.1	2.4

6.64 The results show queues of 6 vehicles would be the maximum seen at the crossing, with delays averaging 2-3 seconds per vehicle. This is not deemed a significant, and demonstrates the crossing would not have an adverse impact on congestion on Barlestone Road.

7.0 MITIGATION

- 7.1 Having assessed the impact of the proposed development and considered sustainability in the local area along with the junction capacity assessments, the following mitigation measures are proposed.

Travel Plan

- 7.2 A Framework Travel Plan for the site has been prepared by MEC (ref. 27346-TRAN-0803). The plan focuses on a 10% reduction in single occupancy trips with a range of measures outlined which are summarised below:

- Travel Plan Coordinator – A Travel Plan Coordinator will be active on site prior to 1st occupation and offer Personalised Travel Planning to all residents to help plan journeys and encourage a reduced need to travel.
- Steering Group – The TPC would seek to set up a resident steering group to discuss travel issues associated with the site once a year, who will help ensure the site targets are representative and in line with the on-site travel conditions and allow any barriers/concerns regarding sustainable travel to be discussed, helping to identify possible additional measures to help certain users to adopt more sustainable travel choices.
- Sales Staff Training – Members of the sales team will be educated on the principles of sustainable travel prior to 1st occupation to ensure the residents and future users of the site are made fully aware of alternative travel means to and from the site area.
- Welcome Packs – To be provided to all new dwellings from 1st occupation and to include key information of walking, cycling and public transport along with offers and discount vouchers.
- Sustainable Travel Offers and Awareness – the TPC would liaise with the local bus operator to obtain discounted bus pass tickets and make residents aware of useful sustainable travel related smartphone apps
- Promotion of Car Share Websites/Datasets – Residents will be encouraged to register with websites such as <https://liftshare.com/uk>.
- Pedestrian and Cycle infrastructure, Groups, & Events – Pedestrian and cycle improvements proposed as part of the development along with creating links to nearby walking and cycle groups.
- Provision of High-Level Broadband, Internet Access, and Home Working Infrastructure - All dwellings to be provided with high-speed broadband where feasible, will deliver high quality, suitable space for home working to support flexible working patterns and reduce the need to travel.
- EV Charging Points – To be provided for all dwellings.
- Cycle Parking – To be provided in line with Local Plan requirements.

Pedestrian / Cycle Improvements

- 7.3 The site will provide high quality pedestrian and cycle links along the main desire lines into Newbold Verdon. The improvements have been centred around the existing pedestrian links/infrastructure along Barlestone Road and the PRow in and around the site. The proposed pedestrian / cycle Improvements are as follows:

- 3.5m wide segregated footway / cycleway along northern side of Barlestone Road
- Footway improvements to create 2m wide footway along southern side of Barlestone Road
- 2 x Toucan Crossings;
- New footway / cycleway linking byway, existing public rights of way, Spakenhoe and development proposals

- 1 x uncontrolled crossing points;
- Upgrading of existing Public Rights of Ways;

7.4 The development will also make a contribution via the Section 106 Agreement towards cycle improvements as outlined in Core Strategy Policies 11 and 14. The exact sum will be discussed with LCC in due course.

Speed Limit Change

7.5 The scheme seeks to reduce the speed limit on Barlestone Road from 40mph to 30mph from north of the Barlestone Road / Bosworth Lane signal junction, to west of the Barlestone Road / Main Street junction, under a new Traffic Regulation Order (TRO).

7.6 A proposed scheme is shown on drawing 24832_08_020_09 in **Appendix Q**, the 30mph gateway will be reinforced with new speed signs, dragons teeth, and relevant road markings indicating the speed limit change. These proposals are consistent with the gateway features at Desford, located to the east of Newbold Verdon. The speed limit will be further reinforced through the use of Vehicle Activated Signs (VAS). Street lighting along this section will also be reviewed with additional lighting provided as required.

7.7 Should the proposed speed change not be accepted, the proposal should revert to reinforcement of the current 40mph speed limit to ensure compliance with Policy IN5. Such proposals can be agreed with LCC at the appropriate time.

Public Transport

7.8 MEC has explored the possibility of re-routing the 153 service to ensure all the development site is situated within 400m of a bus stop and maximise sustainability. MEC have had discussions with LCC and Arriva regarding the re-routing of the 153 service which currently serves the village via Main Street and Dragon Lane at an hourly frequency as detailed in Section 4.0.

7.9 Arriva commented they do not want to re-route the service based on the following:

“On the assumption that 153 continues to operate an hourly frequency at the point this development comes to fruition we would not be minded to re-route journeys as per your proposal, which would significantly increase the walking distance from the established demand from the existing residential area and reduce the frequency on the established routing to two-hourly. We also note that the bus stops adjacent the Co-Op are located approximately equidistant between Arnold’s Crescent and the Northern boundary of the development site, essentially maximising the catchment area of the existing routing incorporating both established and new residential areas of the village.”

7.10 The full correspondence is contained in **Appendix R**.

7.11 It is noted that at this point no amendments will be made to the 153-bus service, however, if required a contribution towards service enhancement can be secured through the Section 106 Agreement. It is noted

the 159 service was recently removed and therefore further consideration of this service and as part of any contribution strategy will be discussed with LCC.

8.0 SUMMARY AND CONCLUSIONS

- 8.1 This report has been prepared by MEC on behalf of David Wilson Homes East Midlands to advise on the transport elements associated with a proposed development on Barlestone Road, Newbold Verdon, Leicestershire. This Transport Assessment has been prepared in support of the forthcoming outline planning application.
- 8.2 A review of local collision data, as provided by LCC, identified 6 collisions occurred 500m of the site, within the most recent 5-year period. 3 of these collisions are deemed to be isolated events on the residential roads of Newbold Verdon, differing in time and nature. A further 3 collisions were recorded within the vicinity of the Barlestone Road – Dragon Lane Junction; a detailed review found no trends with the collisions. It is evident there is not a highway safety issue within the vicinity of the site.
- 8.3 It has been demonstrated that the site is located in a sustainable location with key amenities and services located with ‘maximum’ distances from the application site as outlined by the CHIT. Moreover, the site is supported by a good level of bus provision, especially facilitating movements into Desford and Market Bosworth.
- 8.4 The site assessment against the ATE Checklist Tool detailed that the outline scheme complies with national sustainability guidelines, with the three failures not considered significant.
- 8.5 Access for the site is proposed to be taken from Barlestone Road a new priority control ghost island T-junction with a dedicated right turn lane (RTL) on Barlestone Road. Visibility splays of 2.4m x 120m can be achieved at both access points within land under the control of either the Highway Authority or the applicant.
- 8.6 The Newbold Verdon Equestrian Centre access road would be retained and remaining serving the existing centre and proposed cemetery.
- 8.7 The byway (Harry’s Lane) would be retained for access to the existing dwellings and designed in such a way to deter any movements from the proposed development.
- 8.8 Significant pedestrian and cycle improvements are proposed, which would tie into / upgrade the existing infrastructure.
- 8.9 Parking on site will comply to local standards, and EVCP parking will comply to national standards.
- 8.10 The development is estimated to generate 209 vehicle movements during the AM peak hour, and 204 during the PM peak hour.
- 8.11 All junctions, including both proposed site accesses, operate within theoretical capacity except for Junction 3 (Bosworth Lane / Bosworth Road / A447 Staggered Crossroads) and Junction 4 (B582 - Newbold Road - Lockymead Drive Roundabout):

- In regards to Junction 3, given the land constraints and LCCs comments at the Parish Council Meeting (9 January 2024), stating no improvements can be made to reduce waiting times at the minor arms, it is deemed no appropriate mitigation can be proposed.
- In regards to Junction 4, the development impact is not considered severe and therefore no mitigation has been proposed.

8.12 Both proposed Toucan Crossings would not result in significant queues or delay on Barlestone Road.

8.13 The development proposes the following mitigation measures:

- Implementation of site-specific Travel Plan
- Improve local Pedestrian / Cycle infrastructure
- Contribution towards local cycle routes as defined in the Core Strategy
- Speed limit changes along Barlestone Road
- Contribution towards local public transport services

8.14 In conclusion, the site is located in a sustainable location, meets relevant highway design standards, and the level of trips generated by the proposals would not impact upon the safe operation of the local highway network. It is considered that the proposed development is acceptable in transport terms.



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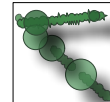
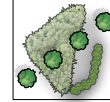
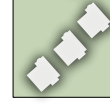
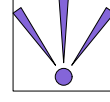
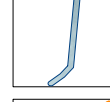
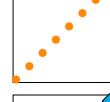
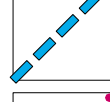
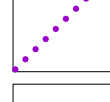
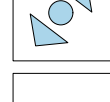
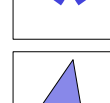
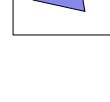
APPENDICES

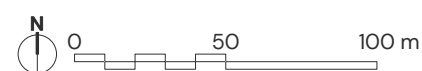


APPENDIX A



KEY

-  SITE BOUNDARY
-  INDICATIVE PUBLIC OPEN SPACE
-  RETAINED EXISTING VEGETATION
-  INDICATIVE PROPOSED TREES AND PLANTING
-  INDICATIVE BUILT FORM
-  CORRECTED VIEWPOINT 5 (DRAFT REGULATION 16 NEIGHBOURHOOD PLAN)
-  INDICATIVE SWALES
-  EXISTING BYWAY OPEN TO ALL TRAFFIC
-  UNCLASSIFIED ADOPTED ROAD
-  EXISTING FOOTPATH
-  POTENTIAL PEDESTRIAN CYCLE CONNECTION
-  RETAINED VEHICULAR ACCESS ROUTE TO EQUESTRIAN CENTRE/ PROPOSED ACCESS TO CEMETERY
-  PROPOSED PEDESTRIAN ACCESS POINT
-  RETAINED PROW ACCESS POINTS
-  PRIMARY VEHICULAR ACCESS POINT
-  EXISTING BARLESTONE ROAD CROSSING POINTS
-  NEW BARLESTONE ROAD CROSSING POINTS
-  INDICATIVE FOUL PUMPING STATION
-  AGRICULTURAL ACCESS
-  PRIVATE DRIVE ACCESS TO (EXISTING) WILLOWBROOK COTTAGE
-  DRAINAGE OUTFALL



BARLESTONE ROAD, NEWBOLD VERDON – INDICATIVE MASTERPLAN

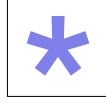
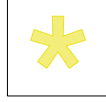
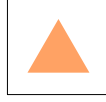
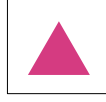
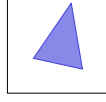
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KEY

-  SITE BOUNDARY
-  PROPOSED OPEN SPACE
including sustainable urban drainage basins
-  PROPOSED DEVELOPMENT PARCELS
including roads/ footpaths/ infrastructure
-  LOCATION OF PROPOSED LAND
SET ASIDE FOR CEMETERY
-  SAFEGUARDED COMMUNITY
FACILITY LAND
-  INDICATIVE AREA REQUIRED FOR
INTERNAL ACCESS ROADS
not within the residential land use
-  INDICATIVE AREA REQUIRED FOR
PROPOSED ACCESS ROADS
not within the residential land use
-  PRIMARY VEHICULAR
ACCESS POINT
-  LOCATION OF INDICATIVE
PROPOSED BASINS
-  LOCATION OF EXISTING WATER
FEATURE
-  AGRICULTURAL ACCESS
-  PRIVATE DRIVE ACCESS TO (EXISTING)
WILLOWBROOK COTTAGE
-  PROPOSED INDICATIVE AREA OF PLAY
-  PROPOSED ACCESS TO CEMETERY
-  PROPOSED PEDESTRIAN/ CYCLE
ACCESS
-  RETAINED PROW ACCESS POINTS
-  DRAINAGE OUTFALL

*All features and areas shown to a tolerance of 10m

BARLESTONE ROAD, NEWBOLD VERDON – PARAMETER PLAN

PEGASUS
GROUP



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APPENDICES



APPENDIX B

PRE-APPLICATION DETAILS:

District Reference Number:

Highway Reference Number: 2023/4653/04/P/HEN

Location: Land at Barlestone Road, Newbold Verdon

Enquiry. Proposed 370 dwellings.

GENERAL DETAILS

Planning Case Officer:

Applicant: James Wright MEC

Parish: Newbold Verdon

Road Classification: Class B

Please note that the contents of this report including any attachments are offered as my officer opinion and will not prejudice any future decision the Highway Authority may make in relation to this matter.

The following comments are based on a desktop exercise; no site visit is undertaken for pre-application advice.

The Local Highway Authority (LHA) is in receipt of a request for pre-application advice for a proposed development of 370 dwellings to be located on Land at Barlestone Road, Newbold Verdon.

These highway comments are in response to the following document which has been submitted.

- Transport Scoping Note (TSN) prepared by ME-C consulting dated October 2023

Site Access

Typically, to assist the LHA in determining whether a safe and suitable site access can be achieved at a location, a Stage 1 Road Safety Audit (RSA) should be undertaken and submitted for review with an accompanying Designer's Response and amended design if required. Swept Path Analysis should also be undertaken which should demonstrate that a Phoenix P2-23W (Elite 2 6x4 chassis) refuse wagon can enter and egress the site in a forward gear.

The TSN details two potential access arrangements as mentioned below.

Option 1 - New Site Access

One access option would be a new priority control ghost island T-junction with a dedicated right turn lane on Barlestone Road, approximately 90m southeast of the Newbold Verdon Equestrian Centre Access. This proposed access arrangement is demonstrated on drawing

24832_08_020_03 which is contained in Appendix A of the TSN and shows a 6.75m wide access road with a junction radius of 6.0m, serving the development and Equestrian centre. The LHA would only comment on the suitability of the site access once in receipt of the findings of the RSA1.

Option 2 - Equestrian Centre Access

The second access option would be to upgrade the existing Newbold Verdon Equestrian Centre access junction to a priority control ghost island T-junction with a dedicated right turn lane. This option is demonstrated on drawing 24832_08_020_02 contained in Appendix B of the TSN. The access junction will serve a 6.75m wide access road with a junction radius of 6.0m, serving the development and Equestrian centre. The LHA would only comment on the suitability of the site access once in receipt of the findings of the RSA1.

The Applicant is also proposing to reduce the speed limit along Barlestone Road to 30mph as part of a Traffic Regulation Order (TRO). The Applicant should note that there is no guarantee that a TRO would be accepted and therefore the LHA would refer the Applicant to Leicestershire County Council's Policy IN5 and highlight that any access off the B582 Barlestone Road may be contrary to Policy IN5 as outlined in Part 1 of the Leicestershire Highway Design Guide (LHDG (available at <https://resources.leicestershire.gov.uk/sites/resource/files/field/pdf/faq/2018/6/5/Part-1-introduction.pdf>)). Policy IN5 seeks to restrict access onto A & B Class high speed roads.

The LHA note that speed surveys at two locations were undertaken in July 2023 (Results shown in Appendix C of the TSN). The recorded speeds were 40.3mph and 44.8mph. The LHA would need confirmation that the surveys obtained a S50 permit from the LHA. The LHA would also request for the locations of the surveys to be demonstrated on a map.

The LHA advises at this stage that if a planning application is to be submitted, the LHA would be likely to advise refusal if it proposed a new or intensified access from the B582 as recorded speeds are in excess of 40mph.

Sustainability and Highway Safety

The LHA understand that a Travel Plan would be submitted and is welcome as it would be required for this quantum of development. Personal Injury Collision (PIC) data should be obtained for the most recently available five-year period and the study area should cover 500m either side of the site access.

Proposed Trip Rates and Distribution

Trip Rates

Whilst the precise development split between flats / houses and affordable / privately owned is still to be determined for the assessment work, a development quantum of 370 privately owned units has been assumed as a worst-case scenario. Trip rates have been taken from the TA of the recently constructed residential development at the land south of Barlestone Road, off Bosworth Lane (application reference: 20/00143/FUL), described as a 'Residential Development of 116 Dwellings | Land South of Bosworth Lane Newbold Verdon Leicestershire'.

The Trip rates are demonstrated in Table 1 below which has been extracted from the TSN.

Table 1: Development Vehicle Trip Rates and Trip Generation

Time Period	Trip Rates (per unit)		Trip Generation (370 units)		
	Arrive	Depart	Arrive	Depart	Total
AM Peak (08:00-09:00)	0.212	0.353	78	131	209
PM Peak (17:00-18:00)	0.329	0.212	122	78	200

The LHA have reviewed the trip rates and note that the LHA did not accept the TRICS trip rates for 20/00143/FUL, instead accepted trip rates which were obtained from a traffic count at the Dragon Lane/ Old Farm Lane junction as part of the phase 1 development for 94 dwellings. The trip rates are shown below and extracted from the LHA's consultation response dated 28 April 2020.

AM Peak Hour			PM Peak Hour		
Arrivals	Departures	Total	Arrivals	Departures	Total
Phase 1 Trip Rates					
0.074	0.606	0.681	0.521	0.170	0.691
TRICS Trip Rates					
0.212	0.353	0.565	0.329	0.212	0.541
Difference					
-0.138	+0.253	+0.116	+0.192	-0.042	+0.15

The LHA would therefore request for the Phase 1 trip rates to be used as part of the assessment for any future planning application as they are considered more robust.

The LHA have not commented on the distribution or study area set out in the TSN at this stage. This is on the basis that the Applicant should note that due to the quantum of the proposed development and possible impact on multiple junctions, the LHA would require the applicant to use the Leicestershire Pan Regional Transport Model (PRTM) to assess the highway impact of this application. PRTM has the benefit of assigning and distributing trips onto the network and taking into account committed development as a part of the model run. Further general information be found at:

<https://www.leicestershire.gov.uk/roads-and-travel/road-maintenance/leicestershires-pan-regional-transport-model-prtm>

The PRTM can be commissioned through the Environment and Transport Commissioning Framework (ETC-Framework or ETCF). The LHA would advise the applicant to contact etcf@leics.gov.uk for more information. The LHA would welcome and required involvement in the scope of any PRTM commission (including agreeing the necessary inputs) at an early stage. Once an Area of Influence is established from a PRTM model run, traffic surveys can then be commissioned at the junctions where a significant impact has been identified. These can then be used alongside the PRTM base and forecasting results to develop junction turning counts for detailed capacity assessment.

Date Received
9 October 2023

Case Officer
Suraj Dave

Reviewer
AW

Date issued
24 November 2023



MEC
Consulting Group

APPENDICES



APPENDIX C

Accidents between dates 01/01/2018 and 25/09/2023 (69) months

Selection: Notes:

; Refined using Accidents within selected Polygons -Data
Requests 2023 ("M-EC Newbold Verdon 02.11.2023")

Selected Polygon:M-EC Newbold Verdon 02.11.2023

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201800665	24/06/2018	444685	303980	Fine without high winds	Dry	Daylight	Serious

Location: MILL LANE NEWBOLD VERDON JW ENSTON STREET.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving main road	Turning left	NE	SE

Casualties:

Class	Severity
Vehicle	Serious
Passenger Vehicle	Slight
Passenger	

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201801309	11/12/2018	444444	303935	Fine without high winds	Wet/Damp	Daylight	Slight

Location: C5103 DRAGON LANE NEWBOLD VERDON EXACT LOCATION NOT KNOWN

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Parked	Parked	Parked
Car	Not at, or within 20M of Jct	Reversing	N	S

Casualties:

Class	Severity
Vehicle	Slight
Passenger Vehicle	Slight
Passenger	

Accidents between dates 01/01/2018 and 25/09/2023 (69) months

Selection: Notes:

; Refined using Accidents within selected Polygons -Data
Requests 2023 ("M-EC Newbold Verdon 02.11.2023")

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201900378	19/04/2019	444475	304420	Fine without high winds	Dry	Daylight	Serious

Location: B582 BARLESTONE ROAD NEWBOLD VERDON 10M NW DRAGON LANE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Cleared junction or waiting/parked at junction exit	Going ahead other	SE	NW

Casualties:

Class	Severity
Pedestrian	Serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201901559	11/06/2019	444500	304395	Fine without high winds	Dry	Daylight	Slight

Location: B582 NEWBOLD VERDON JW DRAGON LANE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Van / Goods 3.5 tonnes mgw and under	Mid Junction - on roundabout or main road	Going ahead other	SE	NW
Car	Mid Junction - on roundabout or main road	Going ahead other	SE	NW

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates 01/01/2018 and 25/09/2023 (69) months

Selection: Notes:

; Refined using Accidents within selected Polygons -Data Requests 2023 ("M-EC Newbold Verdon 02.11.2023")

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202201101	19/12/2022	444490	304405	Fine without high winds	Dry	Daylight	Serious

Location: B582 BARLESTON ROAD NEWBOLD VERSION JW DRAGON LANE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering main road	Turning right	S	SE
Car	Mid Junction - on roundabout or main road	Going ahead other	SE	NW

Casualties:

Class	Severity
Vehicle Passenger	Serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300785	06/05/2023	444475	304195	Raining without high winds	Wet/Damp	Daylight	Slight

Location: C5103 DRAGON LANE NEWBOLD VERDON EXACT LOCATION UNKNOWN..

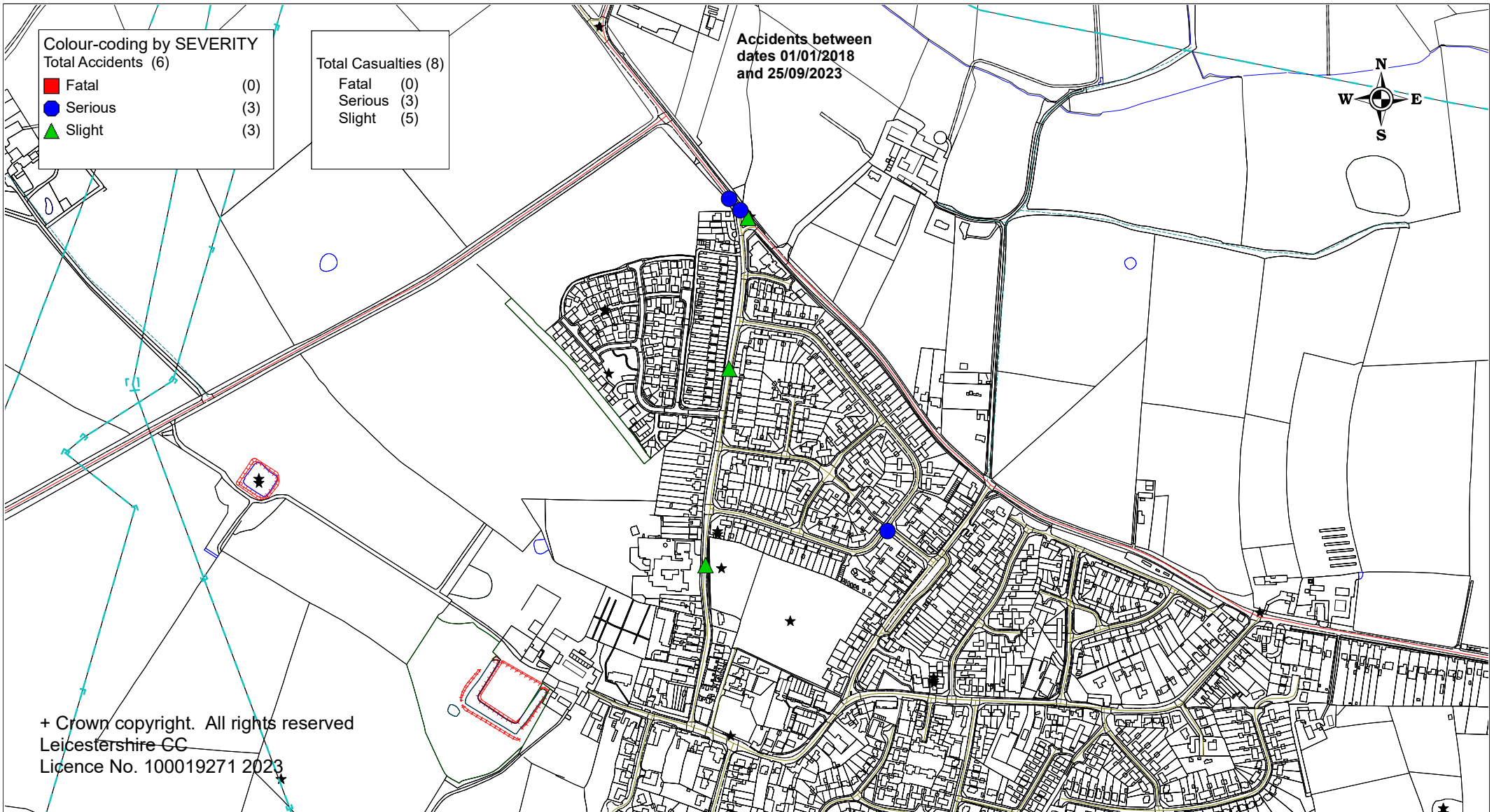
Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead other	N	S

Casualties:

Class	Severity
Pedestrian	Slight

Number of records in selection: 6



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M-EC Newbold Verdon

SCALE	1 : 7000
DATE	02/11/2023
DRAWING No.	
DRAWN BY	

Accidents between dates 01/01/2018 and 25/09/2023 (69) months

Selection: Notes:

; Refined using Accidents within selected Polygons -Data

Requests 2023 ("M-EC Newbold Verdon 02.11.2023")

Table 1 - Accidents by Month

	2018	2019	2020	2021	2022	2023	Total
January	-	-	-	-	-	-	0
February	-	-	-	-	-	-	0
March	-	-	-	-	-	-	0
April	-	1	-	-	-	-	1
May	-	-	-	-	-	1	1
June	1	1	-	-	-	-	2
July	-	-	-	-	-	-	0
August	-	-	-	-	-	-	0
September	-	-	-	-	-	-	0
October	-	-	-	-	-	-	0
November	-	-	-	-	-	-	0
December	1	-	-	-	1	-	2
TOTAL	2	2	0	0	1	1	6

Table 2 - Casualties by Month

	2018	2019	2020	2021	2022	2023	Total
January	-	-	-	-	-	-	0
February	-	-	-	-	-	-	0
March	-	-	-	-	-	-	0
April	-	1	-	-	-	-	1
May	-	-	-	-	-	1	1
June	2	1	-	-	-	-	3
July	-	-	-	-	-	-	0
August	-	-	-	-	-	-	0
September	-	-	-	-	-	-	0
October	-	-	-	-	-	-	0
November	-	-	-	-	-	-	0
December	2	-	-	-	1	-	3
TOTAL	4	2	0	0	1	1	8

Table 3 - All Accidents by Severity

	2018	2019	2020	2021	2022	2023	Total
Fatal	0	0	0	0	0	0	0
Serious	1	1	0	0	1	0	3
Slight	1	1	0	0	0	1	3
TOTAL	2	2	0	0	1	1	6

Table 4 - Casualties by Severity

	2018	2019	2020	2021	2022	2023	Total
Fatal	0	0	0	0	0	0	0
Serious	1	1	0	0	1	0	3
Slight	3	1	0	0	0	1	5
TOTAL	4	2	0	0	1	1	8

Accidents between dates 01/01/2018 and 25/09/2023 (69) months

Selection: Notes:

; Refined using Accidents within selected Polygons -Data
Requests 2023 ("M-EC Newbold Verdon 02.11.2023")

Police Ref.	Date	Cas.	Sev.	P2W	Cycs	Peds	Ch	60+	Vis.	Manv.	Road Cond.	Time	Location
Selected Polygon:M-EC Newbold Verdon 02.11.2023													
201800665	24/06/2018	2	Serious	0	0	0	0	0	Light	Left	Dry	1825	MILL LANE NEWBOLD VERDON JW ENSTON STREET.
201801309	11/12/2018	2	Slight	0	0	0	2	0	Light	No turn	Wet/Damp	1530	C5103 DRAGON LANE NEWBOLD VERDON EXACT LOCATION NOT K
201900378	19/04/2019	1	Serious	0	0	1	1	0	Light	No turn	Dry	1225	B582 BARLESTONE ROAD NEWBOLD VERDON 10M NW DRAGON LAN
201901559	11/06/2019	1	Slight	0	0	0	0	1	Light	No turn	Dry	1955	B582 NEWBOLD VERDON JW DRAGON LANE.
202201101	19/12/2022	1	Serious	0	0	0	0	1	Light	Right	Dry	1415	B582 BARLESTON ROAD NEWBOLD VERNON JW DRAGON LANE.
202300785	06/05/2023	1	Slight	0	0	1	1	0	Light	No turn	Wet/Damp	1610	C5103 DRAGON LANE NEWBOLD VERDON EXACT LOCATION UNKNC
Column Totals		8		0	0	2	4	2					
No. of Accidents				0	0	2	3	2					
Total number of accidents listed:		6											



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APPENDICES



APPENDIX D

Active Travel England Planning Application Assessment Tool

ATE Scheme Reference	Barlestone Road (B582), Newbold Verdon, Leicestershire
Site address	Barlestone Road, Newbold Verdon, LE9 9NE
Local authority reference	Hinkley and Bosworth District Council (Leicestershire County Council - Highways)
Above ATE Statutory Threshold?	Yes
Local Planning Authority	Hinckley and Bosworth
Local Highway Authority	Leicestershire County Council
Completed by - name	James Wright
Date (DD/MM/YY)	16 February 2024
Application stage	Application
Application type	Outline
No of Residential units / GFA / Area	up to 300
Is the development allocated or part of an emerging local plan / Has ATE commented on it previously / does it relate to an ATF scheme or other bid for govt funding / does it relate to neighbouring sites	No
Planning policy background (Local plan, LCWIP, site allocations, AAP, spatial framework, SPDs, neighbourhood plans, infrastructure delivery plans) other relevant planning docs)	
Recommended assessment	
Model version	1.5
Outcome	Please indicate recommended assessment

About this tool and how to use it

> This tool helps appraise development proposals based on existing national and local active travel policy requirements
 > For detailed instructions, please refer to the User Manual. >
 Additional guidance notes are provided throughout the tool, as indicated by red triangles in the top right corner of the cell. Hover over the cell to read the notes

Assessment guide

> Complete all the cells above, to ensure the assessment is tailored to the site characteristics
 > Once the "Cover & Triage" sheet is complete, please move to the "User input" sheet, completing the unlocked cells
 > Once the "User input" sheet is complete, please move to the "Appraiser report" sheet, completing the unlocked cells and (for the checklist assessment) selecting a decision
 > Where row heights do not auto-adjust, you can do so manually by selecting the cells in question and using the toolbar command: Format>AutoFit Row Height

ID	Criterion	Description	(FAIL)	(PASS)	Rating	Appraiser Comments	Relevant policy / guidance
ATEPaf_101	TRANSPORT ASSESSMENT: Quantitative analysis	Transport Assessments should forecast the multi-modal movements generated by a development, quantifying the additional trip generation and the distribution and assignment	No Transport Assessment submitted, or the submitted Transport Assessment has failed to provide a suitable analysis upon which to consider movement to and from the site by active modes	Transport Assessment provides a quantitative analysis of the multi-modal trip generation of the development, considering the routing of those trips to inform further considerations about the impacts and quality of existing routes within and outside of the development	1	TA is being provided, and distribution of vehicular trips is considered to assess the impact of the development on the highway network. Multi-modal trips are not provided	
ATEPaf_102	TRANSPORT ASSESSMENT: Qualitative analysis	Transport Assessments must provide a qualitative analysis of the current infrastructure of the surrounding area, taking into account how additional movements across all modes of transport will impact upon the capacity of public transport, walking & wheeling & cycling networks	The submitted Transport Assessment has failed to provide a sufficient evaluation of the quality of the walking, wheeling and cycling infrastructure of the surrounding area which will be impacted by the development	The Transport Assessment provides a qualitative analysis of the accessibility of the site and highlights deficiencies in surrounding infrastructure in line with policy and guidance provided in LTN 1/20	1	TA includes a comprehensive assessment of the local highway conditions and provides an accessibility assessment	
ATEPaf_103	Local Amenities	A mix of local amenities is provided within an 800m walking distance of all properties (either within the site or outside but accessed via an accessible walking network). Examples of local amenities include: - A food shop which sells fresh fruit and vegetables - A park or green space - An indoor meeting place (pub, cafe, community centre, place of worship) - A primary school - A post office or bank - A GP surgery	There are few or no useful amenities (i.e. such as those listed in the description) within an 800m (10 minute) walking distance of the whole site via an accessible walking route.	There are a sufficient number and range of essential local facilities (as listed in the description) within an 800m (10 minute) walking distance all areas of the site via an accessible walking route.	0	There is a range of facilities within 800m of the site frontage, however, the distances increase further into the site	
ATEPaf_104	Walking routes to a primary school	A high-quality walking connection should be provided (or already exist) from the site to a primary school. Refer to Manual for Streets and CHT Designing for Walking for details but, as a minimum, routes must be: - 2m wide (with limited pinch points of 1.5m due to street furniture) and localised widening to accommodate peak usage - step-free - has a smooth, even surface - has street lighting - includes appropriate crossings in compliance with LTN 1/20 Table 10-2 N/A for sites which do not include residential land uses	A section of the route does not meet the minimum criteria	100% of the route meets the minimum criteria along its entire length	1	Walking route to school meets all criteria - provision of safe crossing points over Barlestone Road (Toucan Crossing) will further enhance the walking experience	
ATEPaf_105	Walking routes to a food shop	A high-quality walking connection should be provided from the site to a food shop selling fresh fruit & veg or services which benefit the community e.g. medical services. Refer to Manual for Streets and CHT Designing for Walking for details but, as a minimum, routes must be: - 2m wide (with limited pinch points of 1.5m due to street furniture) - step-free - has a smooth, even surface - has street lighting - includes appropriate crossings in compliance with LTN 1/20 Table 10-2	A section of the route does not meet the minimum criteria	100% of the route meets the minimum criteria along its entire length	1	Walking route to necessary amenities meets all criteria - provision of safe crossing points over Barlestone Road (inc. Toucan Crossing) will further enhance the walking experience	
ATEPaf_106	Suitability for walking and wheeling (external to the site)	All walking routes surrounding the site must be accessible to all users (access control, widths, steps, ramps, materials)	Some or all external pedestrian routes are not accessible or do not have adjacent accessible alternatives (i.e. ramps alongside steps, bound paths next to unbound paths etc)	All external pedestrian routes are accessible or have adjacent accessible alternatives such as ramps alongside steps, bound paths next to unbound paths in accordance with Inclusive Mobility section 4.2 - 4.4	1	Walking routes to necessary amenities are accessible - provision of two toucan crossings will further ensure the desire lines are appropriate for disabled users.	
ATEPaf_107	Safety at junctions (off-site)	All new or improved off-site junctions should be designed in line with the movement hierarchy: pedestrians, followed by cyclists, public transport users and private motor vehicles. The Junction Assessment Tool from LTN 1/20 should be used for the design of all junctions except priority junctions between minor roads with flows below 500pcph	Any of - Some side roads are not treated - Priority junctions have radii that is inappropriate. - Signalised junctions do not have pedestrian aspects on some arms - There are red movements (0 scores) in the JAT	All side roads are treated Priority junctions have appropriate radii as recommended in MfS 2 paragraphs 9.4.10 - 9.4.16 Signalised junctions have pedestrian aspects on all arms There are no red movements (0 scores) in the JAT	N/A - exclude	No Proposed new or improved off-site junctions	
ATEPaf_108	Cycle routes to key destinations	The development should provide off-site LTN 1/20 compliant routes to relevant destinations such as schools, local centres, employment centres, railway stations, and the existing cycling network	The development does not propose to deliver or benefit from existing LTN 1/20 compliant off-site cycle routes to key destinations proportionate to its size and impacts	The development either proposes to deliver or benefits from existing LTN 1/20 compliant off-site cycle routes to key destinations proportionate to its size and impacts	0	The development does not provide off-site LTN 1/20 compliant routes to necessary amenities.	
ATEPaf_109	Cycle Safety on links (off-site)	All new or improved infrastructure off-site should conform to the 5 Core Design Principles in addition to the criteria outlined in Figure 4.1 and geometry requirements as required by LTN1/20	One or more of the new or improved streets off-site are "not suitable for all people and will exclude some potential users and/or have safety concerns" (i.e. orange and pink criteria from Figure 4.1) OR The geometry of proposed cycle lanes does not meet minimum requirements (Table 5-2) OR Where people cycling are mixing with motor vehicles, traffic lane widths are 3.2-3.3m wide	All new or improved streets off-site are safe for cyclists of all abilities, ages and mobility needs, satisfying the criteria of LTN 1/20 in relation to the type of provision (Fig. 4.1) geometry requirements (Table 5.2), avoiding traffic lanes between 3.2m and 4m in width. All new or improved streets must be in alignment with the 5 'Core' Design Principles as stated in LTN 1/20, being demonstrably Coherent, Direct, Safe, Comfortable and Attractive.	1	Improved crossing facilities on Barlestone Road are designed in accordance to LTN 1/20, and new footways along the site frontage included shared footway / cycleways - in accordance to LTN 1/20. There are no 'new or improved' off-site streets within the local area	
ATEPaf_110	Crossings (external to the site)	Where appropriate, the provision of crossings to an appropriate type and specification (signalised / zebra / uncontrolled / continuous footway) must be provided along forecasted desire lines, including away from vehicular or junctions Crossings should be evenly spaced and at regular intervals and provided on most streets in accordance with the movement patterns of the development Crossings must be accessible to all and comply with standards set out in LTN 1/20 and Inclusive Mobility	Insufficient or infrequent crossings have been provided and / or fail to match desire lines outside of the development and towards key external routes and facilities Crossings fail to meet standards set out in design guidance contained in MfS and Inclusive Mobility	The appropriate crossing type (see LTN 1/20 Table 10-2) is provided on predicted desire lines. All crossings are designed to meet highway standards	1	3x Toucan Crossings are proposed along Barlestone Road. The crossings are appropriate for the location and facilities the main pedestrian desire lines.	
ATEPaf_111	Shared use routes (external to the site)	Shared use routes (i.e. a path or surface which is available for use by both pedestrians and cyclists) must be avoided along all new or improved off-site streets, unless they fit within the limited acceptable situations listed in LTN 1/20	Any of - Shared use paths are provided in areas of medium/high pedestrian or cyclist flows - Shared use paths are below 3m wide (<300 cyclists per hour), or below 4.5m elsewhere, as per Table 6-3 of LTN1/20 - Pedestrians and cycle users are separated, but only by a painted line	Shared use routes are only provided in the situations listed at para 6.5.6 and section 1.6 (2) of LTN 1/20 and meet the recommended minimum widths set out in Table 6-3 of LTN 1/20 (3m when <300 cyclists per hour, 4.5m elsewhere. Flows take account of future generated by nearby growth proposals and allocations).	1	Most proposed footway/cycleways around the access (outline application stage) are segregated, however, some shared surfaces are proposed on the approach to the proposed crossing points, para 6.5.6 of LTN 1/20 states: "At and around junctions where cyclists are generally moving at a slow speed), including in association with Toucan facilities," the cycleways meet the recommended minimum width of 3.0m for a route with <300 cycle flows / hour.	
ATEPaf_112	Physical barriers for cycle users (on and off-site)	All new or improved cycle routes (within the site or outside it) must be fully accessible	The presence of steps or barriers on-site or within a reasonable distance off-site that would reduce the ease of access for a Cycle Design Vehicle (as per LTN 1/20) or the presence of situations that would require users to dismount.	No steps or barriers within the site which would reduce ease of access for Cycle Design Vehicle (as per LTN 1/20). No requirement for users to dismount at any point.	1	Internal layout will be designed in accordance to LTN 1/20	
ATEPaf_113	Lighting (on and off-site)	Streets, footways and cycle routes are adequately lit at night to provide safety and security for all users	Not all routes within the boundary of the site or externally where appropriate to the users of the site are lit	All routes within the boundary of the site and off-site externally where appropriate to the users of the site are lit in accordance with LTN 1/20 paragraphs 8.7 and 15.3 (Urban lighting) & paragraph 8.7 (traffic free routes)	1	Internal layout will be designed in accordance to LTN 1/20	
ATEPaf_114	Walking routes to nearest transport nodes	A high-quality walking connection should be provided from the site to a transport node in regular public transport service which enables people to carry out daily duties such as employment and education). Refer to Manual for Streets and CHT Designing for Walking for details but, as a minimum, they must be: - 2m wide (with limited pinch points of 1.5m due to street furniture) - step-free - has a smooth, even surface - has street lighting - includes appropriate crossings in compliance with LTN 1/20 Table 10-2	A section of the route does not meet the minimum criteria	100% of the route meets the minimum criteria along its entire length	1	Walking routes to bus stops meet the criteria - provision of crossing points over Barlestone Road will further enhance the walking experience	
ATEPaf_115	Access and provision of public transport	Effective and convenient public transport should be available either through proximity to existing routes or through the provision of new or extended routes	There are locations, within the site for which pedestrian access is in excess of a 400m walking distance of a public transport station or stop, and / or none of the public transport routes to serve the site are secured or proposed to be fully operational upon first occupation of the development (including demand-responsive public transport as development is phased).	All locations within the site are within a 400m walking distance of a public transport station or stop and on larger sites then at least one public transport route is secured or proposed to be fully operational on the first day of occupation or in accordance with the phasing of the development (including demand responsive or shuttle bus services).	0	Local bus stops are not located within 400m walking distance of the whole site, only a large proportion.	
ATEPaf_116	Active Travel infrastructure enabling use of public transport	Bus stop and rail station (where applicable) facilities that enable ease of access to active travel modes including secure and overlooked cycle parking and facilities, seating provision, lighting, adequate shelter to accommodate likely demand, service information (including RTI) & raised kerbs at bus stops.	either streets are wide and straight, encouraging high speeds, or they are signed above the 30mph and 30mph thresholds	Bus stop and rail station (where applicable) facilities already exist or are provided that enable ease of access to public transport by active travel modes, including secure and overlooked cycle parking and facilities, seating, lighting, adequate shelter to accommodate likely demand, raised kerb access for wheelchair users, service information (including RTI), dropped kerbs for accessing bus stops and an identified bus bay / layby (where applicable).	1	Two Bus stops located within close proximity to the site access / pedestrian link (Spaenheol) - Bus stop on Dragon Lane is sheltered, has a raised kerb and is highlighted by yellow zigzag markings - provision is appropriate for the size of the village	
ATEPaf_117	TRANSPORT ASSESSMENT: Proposed infrastructure	Transport Assessments must provide detail (and justification) of proposed improvements to infrastructure and any other supporting strategies which seek to enable an increase in walking and cycling rates.	The submitted Transport Assessments have not proposed improvements to infrastructure and/or not explained how the proposed development will enable an increase in walking and cycling rates.	The Transport Assessment clearly proposes improvements to infrastructure and details how they will enable an increase in walking and cycling rates.	1	details of improved provision and their use regarding walking/cycling is provided in the TA	
ATEPaf_118	Site permeability	Within the site, routes for walking and cycling should be shorter and more direct than the equivalent by car. This could be achieved, for example, through filtered permeability and the provision of car-free routes.	Journeys within the site by walking, wheeling and cycling are equal to or longer than by car	Journeys within the site by walking, wheeling and cycling are demonstrably shorter than those used by motor vehicles (excluding emergency accesses)	More info needed	Internal Layout to be confirmed	
ATEPaf_119	Walking and cycling access	All opportunities for safe, step-free, fully-accessible walking and cycling site access points have been maximised AND are greater in number than the number of access points for motor vehicles (except where additional accesses would provide no benefit to people walking and cycling). A motor vehicle access point with safe provision for both walking and cycling counts as a walking and cycling access point	There are fewer or the same number of accessible walking and cycling access points as access points for motor vehicles and/or not all opportunities have been taken to provide high quality and convenient access points for walking and cycling.	There are more accessible walking and cycling access points than motor vehicle access points and/or all reasonable opportunities have been taken to provide a greater number of high quality and convenient access points for walking and cycling.	More info needed	Internal Layout to be confirmed	
ATEPaf_120	Future-proofing and safeguarding	The proposals should not prejudice existing and future development and connectivity to and from adjoining sites. Where such potential may exist, development should progress within a comprehensive masterplan framework or enable a co-ordinated approach to be adopted towards the development of adjoining sites in the future	Development makes no attempt to enable, provide or safeguard walking and cycling connections to adjoining sites up to the site boundary where adjoining sites are either anticipated, planned, proposed or allocated in the local plan	Development enables and proposes the adoption of walking and cycling routes up to the site boundary to provide direct connections to existing or future development where sites are either anticipated, planned, proposed or allocated through the local plan.	1	No proposed local sites on the site border - the site does encourage walking and cycling to the boundary with the enhancement of existing 'Phone and Barlestone Road. If future development were to come forward, it could be easily linked to the application site.	
ATEPaf_121	Through traffic	The site accesses must be arranged to prevent private vehicle drivers from using the site as a shortcut while undertaking longer journeys. This is best achieved through filtered permeability, or by ensuring all general traffic accesses are taken from the same main road	It is convenient for car drivers to cut through the site while undertaking longer journeys	It is either impossible or of considerable inconvenience for car drivers to cut through the site while undertaking longer journeys	1	Although technically possible to 'cut through' the site using the main access and byway, it is illogical given the site layout and measures proposed to discourage use of the byway.	
ATEPaf_122	Safety at junctions (internal to the site, including site accesses)	All new or improved on-site junctions (including the site access) should be designed in line with the movement hierarchy: pedestrians, followed by cyclists, public transport users and private motor vehicles The Junction Assessment Tool from LTN 1/20 should be used for the design of all junctions except priority junctions between minor roads with flows below 500pcph	Any of - Some side roads are not treated - Priority junctions have radii that is inappropriate. - Signalised junctions do not have pedestrian aspects on some arms - There are red movements (0 scores) in the JAT	All side roads are treated Priority junctions have appropriate radii as recommended in MfS 2 paragraphs 9.4.10 - 9.4.16 Signalised junctions have pedestrian aspects on all arms There are no red movements (0 scores) in the JAT	More info needed	Internal Layout to be confirmed	
ATEPaf_123	Design speed of new streets	Within the red line boundary - Any new or improved residential/local streets should be designed (no centre line, horizontal deflection, narrow width) and signed for vehicles to travel at a speed of max 30mph. - No new or improved streets should be designed and signed for speeds above 30mph	Either streets are wide and straight, encouraging high speeds, or they are signed above the 30mph and 30mph thresholds	The geometry of the streets ensures drivers will not exceed 30mph on residential / local streets and will not exceed 30mph anywhere within the site	More info needed	Internal Layout to be confirmed	
ATEPaf_124	Crossings (internal to the site)	Within the red line boundary of the proposed development, the appropriate crossing type (signalised / zebra / uncontrolled / continuous footway) must be provided along forecasted desire lines, including away from vehicular junctions Crossings should be evenly spaced and at regular intervals and provided on most streets Crossings must be accessible to all and comply with standards set out in LTN 1/20 and Inclusive Mobility	Insufficient or infrequent crossings have been provided and / or fail to match desire lines within the development and towards key external routes and facilities Crossings fail to meet standards set out in design guidance contained in MfS and Inclusive Mobility	The appropriate crossing type (see LTN 1/20 Table 10-2) is provided on predicted desire lines. All crossings are designed to meet highway standards	More info needed	Internal Layout to be confirmed	
ATEPaf_125	Suitability for walking and wheeling (internal to the site)	All walking routes within the red line boundary must be accessible to all users (access control, widths, steps, ramps, materials)	Some or all internal pedestrian routes are not accessible or do not have adjacent accessible alternatives (i.e. ramps alongside steps, bound paths next to unbound paths etc)	All internal pedestrian routes are accessible or have adjacent accessible alternatives such as ramps alongside steps, bound paths next to unbound paths in accordance with Inclusive Mobility section 4.2 - 4.4	More info needed	Internal Layout to be confirmed	
ATEPaf_126	Cycle safety on links (internal to the site)	Cycle infrastructure should be provided on site in compliance with the 5 Core Design Principles and the criteria outlined in Table 4.1 and accompanying geometry requirements as confirmed in LTN1/20 OR The geometry of proposed cycle lanes does not meet minimum requirements (Table 5-2) OR Where people cycling are mixing with motor vehicles, traffic lane widths are 3.2-3.3m wide	One or more of the new or improved streets are "not suitable for all people and will exclude some potential users and/or have safety concerns" (i.e. as shown orange and pink in LTN Figure 4.1) OR The geometry of proposed cycle lanes does not meet minimum requirements (Table 5-2) OR Where people cycling are mixing with motor vehicles, traffic lane widths are 3.2-3.3m wide	All internal streets are safe for all users to cycle along, satisfying the criteria of LTN 1/20 (ref. Fig. 4.1), geometry requirements (Table 5.2) and are in alignment with the 5 'Core' Design Principles as stated in LTN 1/20 and therefore must be demonstrably Coherent, Direct, Safe, Comfortable and Attractive for cyclists of all abilities, ages and mobility needs.	1	Most proposed footway/cycleways around the access (outline application stage) are segregated, however, some shared surfaces are proposed on the approach to the proposed crossing points, para 6.5.6 of LTN 1/20 states: "At and around junctions where cyclists are generally moving at a slow speed), including in association with Toucan facilities," the cycleways meet the recommended minimum width of 3.0m for a route with <300 cycle flows / hour.	
ATEPaf_127	Shared use routes (internal to the site)	Shared use routes (i.e. a path or surface which is available for use by both pedestrians and cyclists) must be avoided along all new or improved streets within the site, unless they fit in the limited acceptable situations listed in LTN 1/20	Any of - Shared use paths are provided in areas of medium/high pedestrian or cyclist flows - Shared use paths are below 3m wide (<300 cyclists per hour), or below 4.5m elsewhere, as per Table 6-3 of LTN1/20 - Pedestrians and cycle users are separated, but only by a painted line	Shared use routes are only provided in the situations listed at para 6.5.6 and section 1.6 (2) of LTN 1/20 and meet the recommended minimum widths set out in Table 6-3 of LTN 1/20 (3m when <300 cyclists per hour, 4.5m elsewhere. Flows take account of future generated by nearby growth proposals and allocations).	More info needed	Internal Layout to be confirmed	
ATEPaf_128	Car parking layout	The proposed street design should remove opportunities for indiscriminate and obstructive parking that would cause safety hazards and prevent access by active modes of travel by either designing or protected or marked parking bays and accompanying street furniture, planting or other features and restrictions that prevent footway parking, the mounting of kerbs, damage to green infrastructure and blockage of crossing points and sightlines.	There is no parking management strategy or contribution. The proposed layout may lead to parked vehicles blocking footways, crossing points or cycle routes either on or off-site	The site layout, parking management strategy or contribution demonstrably and physically discourage the blockage of footways, crossing points and cycle routes on or off-site	More info needed	Internal Layout to be confirmed	
ATEPaf_129	Cycle Parking	Cycle parking should be secure, covered and provided in line with Table 11.1/ Table 11.2 of LTN 1/20 (and requirement of 5% of spaces to be accessible for larger cycles) or local planning policy, where the local plan is more onerous. Where appropriate, secure external cycle parking should be provided where off-street parking does not exist. Facilities must also be suitable for a range of cycle types including cargo bikes, tandems and tri-cycles.	Development fails to meet the criteria set out either in LTN1/20 or meet the local Plan minimum standards, if those are more onerous	Cycle parking exceeds the suggested minimum from LTN1/20 or meet the local Plan minimum standards of local policies, if those are more onerous	1	cycles will be stored securely within the curbs of each dwelling, either in a garage or garden shed	
ATEPaf_130	Trips and facilities for cycling (Destinations)	High-quality facilities including showers, lockers, changing facilities and drying areas should be provided to facilitate use of active travel modes	Development fails to propose at least one of the facilities referenced in pass criteria	Development proposes all of the following: 1 shower per 10 (long-term) cycle parking spaces, 2 lockers for 3 (long-term) cycle parking spaces, changing facilities and a drying area	1	Dwellings will have bathrooms - no on-site facilities including heating	
ATEPaf_131	TRAVEL PLAN	Travel Plan / Framework. Travel Plans must clearly outline the mode share targets, proposed measures, monitoring strategy and the remedial measures in the event that these are not met	No Travel Plan submitted or TP submitted fails to sufficiently identify measures, targets and monitoring	Travel Plan includes mode share targets, monitoring and remedial measures / actions in the event that modal share targets are not met	1	Travel Plan to be provided as part of the application	

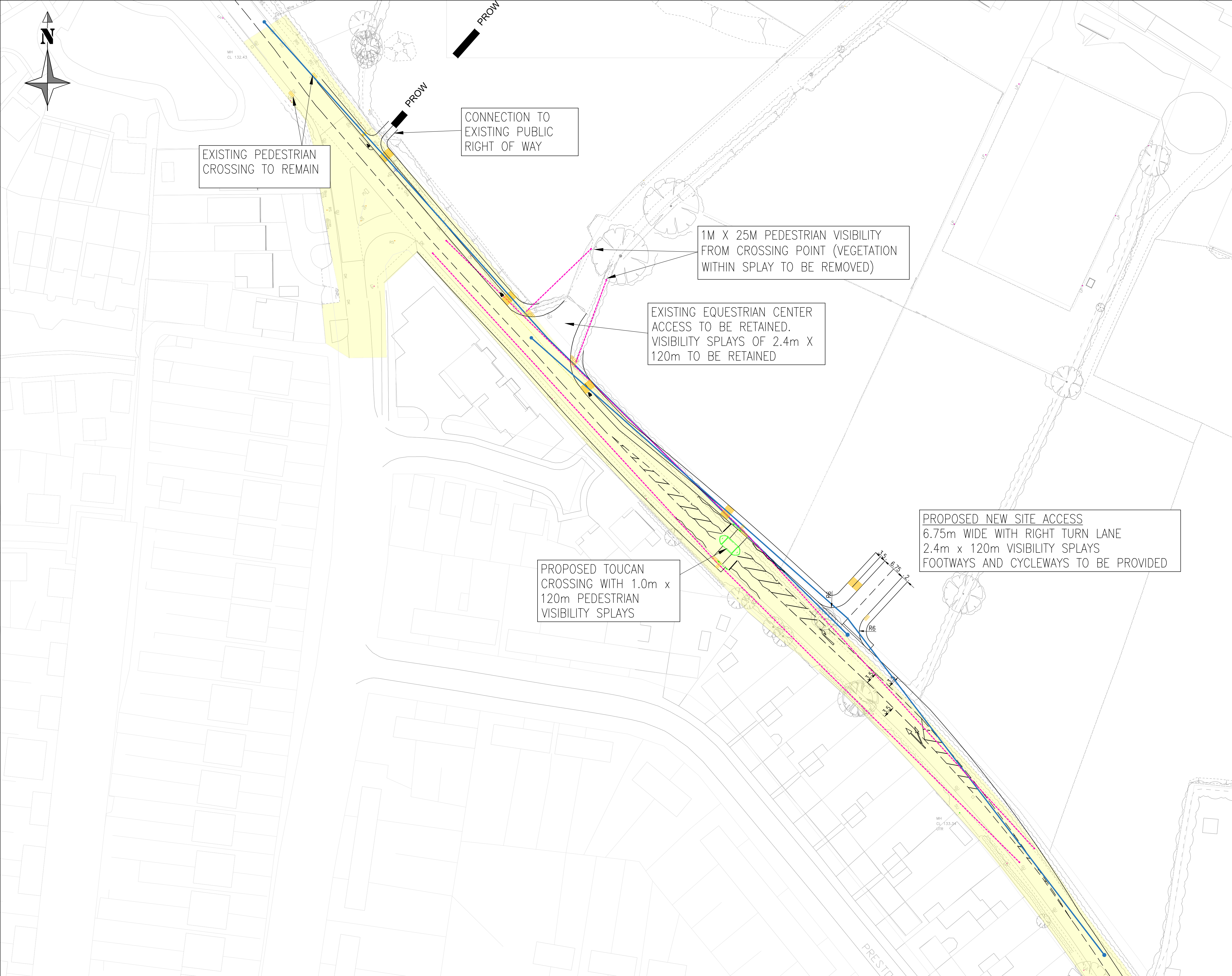


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APPENDICES



APPENDIX E



- NOTES:
- DO NOT SCALE THIS DRAWING.
 - VISIBILITY SPLAYS ON MEASURED 85TH%ILE SPEEDS OF 42.5MPH (NORTHBOUND AND SOUTHBOUND)
- PEDESTRIAN VISIBILITY SPLAYS (1.0m x 120m)
- JUNCTION VISIBILITY SPLAYS (2.4m x 120m) WITH 1m OFFSET
- HIGHWAY BOUNDARY EXTENTS (APPROXIMATE) AS TAKEN FROM HIGHWAY RECORDS

B	AMEND FOR NEW LAYOUT	JW	DG	AB	01.03.24
A	ADDITIONAL INFO ADDED	JW	DG	AB	27.11.23
-	FIRST ISSUE	DG	AB	AB	13.08.23
REV:	AMENDMENTS:	DRN:	CHK:	APP:	DATE:
PROJECT: BARLESTONE ROAD, NEWBOLD VERDON					
DRAWING TITLE: PROPOSED ACCESS STRATEGY					
CLIENT: DAVID WILSON HOMES EAST MIDLANDS					
DRAWING NUMBER: 24832_08_020_03					
REVISION: B		SHEET SIZE: A1		SCALE: 1:500	
STATUS: FOR INFORMATION / APPROVAL					
MEC Consulting Group Birmingham Brighton Leicester		Telephone: 01530 264 753 Email: group@mec.co.uk Website: www.mec.co.uk ORDNANCE SURVEY © CROWN COPYRIGHT 2015. ALL RIGHTS RESERVED. LICENCE NUMBER 100055865.			



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APPENDICES

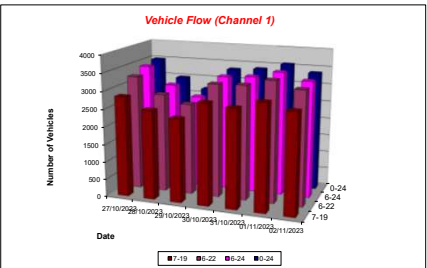


APPENDIX F

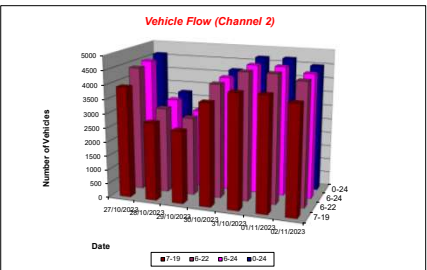
Newbold Verdon ATC, B582 Barlestone Road (Northern Site)

Produced by Road Data Services Ltd.

Channel 1 - Northbound										Vehicle Flow		Week 1	
Hr Ending	27/10/2023 Friday	28/10/2023 Saturday	29/10/2023 Sunday	30/10/2023 Monday	31/10/2023 Tuesday	01/11/2023 Wednesday	02/11/2023 Thursday	Weekly Average	Average		Average		
1	11	21	24	5	10	7	7	8	12	1	11	21	
2	6	15	14	1	3	6	5	6	7	2	6	15	
3	5	5	5	6	4	7	3	5	5	3	5	5	
4	4	4	4	2	8	8	5	5	5	4	4	4	
5	15	3	3	9	7	10	16	11	9	5	15	3	
6	37	18	13	41	42	43	41	41	34	1	37	18	
7	34	28	30	30	124	109	113	105	85	7	34	28	
8	238	74	30	265	285	260	265	256	231	8	238	74	
9	292	69	307	301	316	299	295	292	248	9	292	69	
10	206	206	215	176	196	232	207	197	207	10	206	206	
11	203	203	201	193	186	185	206	190	210	11	203	203	
12	210	205	206	206	195	192	177	198	213	12	210	205	
13	244	200	210	233	218	211	213	226	243	13	244	200	
14	218	204	237	235	190	225	183	210	229	14	218	204	
15	251	203	216	251	251	277	210	250	276	15	251	203	
16	282	284	197	272	259	283	269	277	281	16	282	284	
17	317	229	195	305	331	333	303	317	287	17	317	229	
18	241	232	198	278	281	308	294	290	293	18	241	232	
19	148	163	152	148	142	162	152	152	154	19	148	163	
20	137	114	88	110	119	132	112	122	116	20	137	114	
21	13	76	48	75	152	146	150	150	146	21	13	76	
22	18	47	42	63	52	84	60	67	67	22	18	47	
23	87	84	30	42	54	50	60	61	60	23	87	84	
24	74	28	13	26	20	21	14	36	29	24	74	28	
7-19	2940	2921	2395	2893	3277	2995	2908	2959	2738	7-19	2940	2921	2395
6-24	3252	3236	2581	3238	3227	3112	3216	3208	3208	6-24	3252	3236	2581
0-24	3491	3284	2691	3338	3385	3568	3367	3427	3209	0-24	3491	3284	2691



Channel 2 - Southbound								Vehicle Flow			Week 1					
Hr Ending	27/10/2023 Friday	28/10/2023 Saturday	29/10/2023 Sunday	30/10/2023 Monday	31/10/2023 Tuesday	01/11/2023 Wednesday	02/11/2023 Thursday	Weekly Average	Average		Average					
1	16	26	28	4	8	14	5	8	10	1	16	26				
2	6	15	14	1	3	6	5	6	7	2	6	15				
3	5	5	5	2	3	3	6	4	4	3	5	5				
4	7	5	5	3	7	18	13	14	12	4	7	5				
5	14	9	9	7	17	18	13	14	12	5	14	9				
6	74	26	14	71	75	72	69	69	66	6	74	26				
7	179	36	24	197	195	203	224	199	190	7	179	36				
8	373	74	45	467	501	509	462	474	395	8	373	74				
9	449	162	124	502	552	582	554	526	418	9	449	162				
10	340	256	222	231	239	385	254	261	234	10	340	256				
11	217	234	240	214	221	206	235	219	224	11	217	234				
12	210	266	236	198	212	211	217	210	221	12	210	266				
13	292	317	346	202	198	220	204	221	243	13	292	317				
14	285	259	305	175	232	226	213	227	244	14	285	259				
15	170	267	288	248	264	264	264	264	264	15	170	267				
16	385	253	267	265	355	353	357	355	355	16	385	253				
17	465	264	218	453	452	463	451	459	459	17	465	264				
18	459	202	177	399	409	433	402	420	354	18	459	202				
19	383	210	159	252	248	220	245	222	245	19	383	210				
20	198	117	82	159	137	138	142	136	136	20	198	117				
21	80	64	72	67	93	93	79	95	75	21	80	64				
22	83	81	36	51	83	67	54	64	60	22	83	81				
23	56	94	23	26	47	41	36	51	43	23	56	94				
24	34	44	12	23	23	14	22	19	24	24	34	44				
7-19	3918	2754	2598	3611	4016	4018	3892	3877	3598	7-19	3918	2754				
6-24	4458	4351	2722	4335	4511	4519	4317	4363	4079	6-24	4458	4351				
0-24	4608	4351	2819	4372	4695	4702	4464	4352	4197	0-24	4608	4351				



Newbold Verdon ATC, B582 Barlestone Road (Northern Site)

Produced by Road Data Services Ltd.

Channel 1 - Northbound								Average Speed		Week 1		
Hr Ending	27/10/2023 Friday	28/10/2023 Saturday	29/10/2023 Sunday	30/10/2023 Monday	31/10/2023 Tuesday	01/11/2023 Wednesday	02/11/2023 Thursday	Weekly Average	Average		Average	
1	42.5	40.9	40.2	41.4	42.2	38.7	41.1	40.5	1	42.5	40.9	40.2
2	35.8	40.3	38.9	38.9	38.9	38.9	38.9	38.9	2	35.8	40.3	38.9
3	38.8	40.9	39.1	39.3	41.4	37.1	42.0	40.5	3	38.8	40.9	39.1
4	38.8	40.3	37.4	42.7	40.9	43.3	37.2	40.5	4	38.8	40.3	37.4
5	41.8	44.4	44.0	44.2	37.3	38.7	40.5	40.5	5	41.8	44.4	44.0
6	41.1	45.6	41.7	41.3	38.9	40.9	40.9	40.9	6	41.1	45.6	41.7
7	38.9	38.9	37.3	38.7	38.9	38.9	38.9	38.9	7	38.9	38.9	37.3
8	37.0	40.2	38.9	38.9	37.1	38.7	38.9	38.9	8	37.0	40.2	38.9
9	36.7	36.5	34.8	37.4	36.6	37.4	36.4	36.4	9	36.7	36.5	34.8
10	36.9	36.5	36.5	36.5	36.9	36.9	36.9	36.9	10	36.9	36.5	36.5
11	36.7	36.4	35.5	36.8	36.4	36.4	36.4	36.4	11	36.7	36.4	35.5
12	36.9	37.5	36.9	36.9	36.4	36.4	36.4	36.4	12	36.9	37.5	36.9
13	37.4	37.5	37.8	38.7	37.0	37.5	38.5	38.5	13	37.4	37.5	37.8
14	37.9	38.7	37.8	38.5	36.3	36.4	38.3	38.3	14	37.9	38.7	37.8
15	37.4	37.5	37.8	38.7	37.0	37.5	38.5	38.5	15	37.4	37.5	37.8
16	38.4	37.6	38.7	38.4	38.7	38.3	38.7	38.7	16	38.4	37.6	38.7
17	38.9	37.7	38.7	38.4	38.7	38.9	38.9	38.9	17	38.9	37.7	38.7
18	38.9	37.8	37.4	34.4	35.8	34.9	31.3	31.3	18	38.9	37.8	37.4
19	38.8	38.5	37.5	37.5	36.5	36.1	35.8	34.9	19	38.8	38.5	37.5
20	38.0	38.0	37.5	37.5	36.5	36.1	35.8	34.9	20	38.0	38.0	37.5
21	42.4	37.7	38.7	40.1	40.1	38.3	38.6	38.6	21	42.4	37.7	38.7
22	40.4	37.7	38.7	40.1	40.1	38.3	38.6	38.6	22	40.4	37.7	38.7
23	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	23	39.5	36.4	37.8
24	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	24	39.6	36.8	39.9
25	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	25	39.5	36.4	37.8
26	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	26	39.6	36.8	39.9
27	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	27	39.5	36.4	37.8
28	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	28	39.6	36.8	39.9
29	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	29	39.5	36.4	37.8
30	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	30	39.6	36.8	39.9
31	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	31	39.5	36.4	37.8
32	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	32	39.6	36.8	39.9
33	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	33	39.5	36.4	37.8
34	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	34	39.6	36.8	39.9
35	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	35	39.5	36.4	37.8
36	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	36	39.6	36.8	39.9
37	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	37	39.5	36.4	37.8
38	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	38	39.6	36.8	39.9
39	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	39	39.5	36.4	37.8
40	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	40	39.6	36.8	39.9
41	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	41	39.5	36.4	37.8
42	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	42	39.6	36.8	39.9
43	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	43	39.5	36.4	37.8
44	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	44	39.6	36.8	39.9
45	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	45	39.5	36.4	37.8
46	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	46	39.6	36.8	39.9
47	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	47	39.5	36.4	37.8
48	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	48	39.6	36.8	39.9
49	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	49	39.5	36.4	37.8
50	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	50	39.6	36.8	39.9
51	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	51	39.5	36.4	37.8
52	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	52	39.6	36.8	39.9
53	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	53	39.5	36.4	37.8
54	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	54	39.6	36.8	39.9
55	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	55	39.5	36.4	37.8
56	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	56	39.6	36.8	39.9
57	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	57	39.5	36.4	37.8
58	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	58	39.6	36.8	39.9
59	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	59	39.5	36.4	37.8
60	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	60	39.6	36.8	39.9
61	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	61	39.5	36.4	37.8
62	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	62	39.6	36.8	39.9
63	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	63	39.5	36.4	37.8
64	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	64	39.6	36.8	39.9
65	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	65	39.5	36.4	37.8
66	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	66	39.6	36.8	39.9
67	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	67	39.5	36.4	37.8
68	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	68	39.6	36.8	39.9
69	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	69	39.5	36.4	37.8
70	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	70	39.6	36.8	39.9
71	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	71	39.5	36.4	37.8
72	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	72	39.6	36.8	39.9
73	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	73	39.5	36.4	37.8
74	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	74	39.6	36.8	39.9
75	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	75	39.5	36.4	37.8
76	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	76	39.6	36.8	39.9
77	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	77	39.5	36.4	37.8
78	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	78	39.6	36.8	39.9
79	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	79	39.5	36.4	37.8
80	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	80	39.6	36.8	39.9
81	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	81	39.5	36.4	37.8
82	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	82	39.6	36.8	39.9
83	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	83	39.5	36.4	37.8
84	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	84	39.6	36.8	39.9
85	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	85	39.5	36.4	37.8
86	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	86	39.6	36.8	39.9
87	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	87	39.5	36.4	37.8
88	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	88	39.6	36.8	39.9
89	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	89	39.5	36.4	37.8
90	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	90	39.6	36.8	39.9
91	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	91	39.5	36.4	37.8
92	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	92	39.6	36.8	39.9
93	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	93	39.5	36.4	37.8
94	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	94	39.6	36.8	39.9
95	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	95	39.5	36.4	37.8
96	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	96	39.6	36.8	39.9
97	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	97	39.5	36.4	37.8
98	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	98	39.6	36.8	39.9
99	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	99	39.5	36.4	37.8
100	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	100	39.6	36.8	39.9
101	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	101	39.5	36.4	37.8
102	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	102	39.6	36.8	39.9
103	39.5	36.4	37.8	41.8	38.2	37.3	39.9	39.9	103	39.5	36.4	37.8
104	39.6	36.8	39.9	42.0	41.4	38.0	39.2	39.2	104	39.6	36.8	39.9
105	39.5											

Produced by Road Data Services Ltd.

Vehicle Flow (Channel 1)

Date	7-19	6-22	5-24	0-24
27/10/2023	2900	3400	3600	3800
28/10/2023	2500	3000	3200	3400
29/10/2023	2300	2800	3000	3200
30/10/2023	2400	2900	3100	3300
31/10/2023	2500	3000	3200	3400
01/11/2023	2600	3100	3300	3500
02/11/2023	2400	2900	3100	3300
03/11/2023	2500	3000	3200	3400

Channel 2 - Southbound

Vehicle Flow (Channel 2)

Date	7-19	8-22	9-24	10-24
27/10/2021	4000	4500	4800	4200
28/10/2021	3000	3500	3800	3200
29/10/2021	2800	3200	3500	2800
30/10/2021	2500	3000	3200	2500
31/10/2021	2200	2800	3000	2200
01/11/2021	2000	2500	2800	2000
02/11/2021	1800	2200	2500	1800
03/11/2021	1500	2000	2200	1500
04/11/2021	1200	1800	2000	1200
05/11/2021	1000	1500	1800	1000
06/11/2021	800	1200	1500	800
07/11/2021	600	1000	1200	600
08/11/2021	400	800	1000	400
09/11/2021	200	600	800	200
10/11/2021	100	400	600	100
11/02/23	50	200	400	50

Produced by Road Data Services Ltd.

Channel 1 - Northbound									
85th Percentile									
IS Ending	2/10/2023 Saturday	2/10/2023 Saturday	2/10/2023 Sunday	3/10/2023 Monday	4/10/2023 Tuesday	5/10/2023 Wednesday	6/10/2023 Thursday	7/10/2023 Thursday	8/10/2023 Friday
1	50.1	48.3	51.9	50.1	41.0	45.8	38.8	45.8	45.8
2	47.2	47.2	49.0	49.1	50.3	47.2	47.2	38.8	41.0
4	48.7	47.4	47.2	44.9	48.9	52.5	45.4	45.4	45.4
5	45.8	47.7	45.8	45.8	45.8	45.8	45.4	45.4	45.4
6	45.4	45.6	47.1	46.5	46.8	46.8	45.4	45.4	45.4
7	45.4	45.6	47.1	46.5	46.8	46.8	45.4	45.4	45.4
8	41.2	43.7	41.6	42.7	41.3	41.2	41.2	41.6	41.6
9	41.7	42.4	42.6	42.1	41.1	42.0	41.6	41.6	41.6
10	42.6	42.6	42.6	42.8	42.2	42.2	41.6	41.6	41.6
11	40.6	41.8	40.8	41.2	40.6	42.2	41.3	41.3	41.3
12	41.2	41.2	41.2	41.2	41.2	41.2	41.3	41.3	41.3
13	41.4	41.9	41.2	42.4	41.3	42.2	41.3	41.3	41.3
14	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
15	41.8	43.6	43.1	41.6	41.3	42.7	41.2	41.2	41.2
16	43.0	43.0	43.0	43.1	43.1	43.1	43.1	43.1	43.1
17	42.4	40.8	41.4	41.3	41.3	41.3	41.0	39.4	41.0
18	41.4	41.4	41.9	41.2	41.2	41.2	41.2	41.2	41.2
19	41.4	41.4	41.9	41.2	41.2	41.2	41.2	41.2	41.2
20	43.3	41.3	41.3	41.9	42.3	41.6	40.7	40.7	40.7
21	40.6	39.4	41.3	41.4	41.4	41.4	41.4	41.4	41.4
22	42.2	41.3	40.0	40.3	42.4	44.0	43.5	43.5	43.5
23	44.0	44.0	44.2	47.3	47.3	47.3	47.3	47.3	47.3
24	45.6	42.7	46.0	48.9	50.6	46.1	44.9	44.9	44.9
10-12	45.7	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6
13-15	45.7	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6
0-24	42.6	41.6	42.3	42.3	41.8	42.2	41.6	41.6	41.6

Channel 2 - Southbound

Is Ending	7/1/2023	10/1/2023	30/1/2023	30/10/2023	1/1/2024	1/10/2023	01/11/2023	01/12/2023
	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Thursday
1	47.9	40.2	47.2	44.2	50.6	45.1	44.7	
2	47.8	36.4	41.7	44.6	50.0	42.6	47.7	
3	45.1	36.1	47.3	44.4	47.7	44.2	44.2	44.2
4	49.6	45.1	39.1	50.9	46.9	49.2	47.8	
5	43.6	45.1	40.2	44.2	47.7	44.2	44.2	44.2
6	46.2	45.3	40.9	46.0	44.2	44.2	44.2	44.2
7	42.3	42.3	44.2	44.2	44.2	44.2	44.2	44.2
8	41.6	43.1	43.5	42.1	41.0	41.8	42.9	
9	41.8	42.5	43.7	42.6	41.2	40.9	41.8	
10	41.8	41.8	42.6	42.4	41.1	41.9	41.9	41.9
12	42.0	42.5	40.9	41.4	40.9	41.0	41.9	
13	40.6	42.5	40.9	41.4	40.9	41.0	41.9	
14	41.4	42.4	41.9	41.6	40.9	42.4	41.1	
15	41.7	41.9	41.9	41.9	41.9	41.9	41.9	41.9
16	41.5	41.6	40.4	41.2	40.6	41.7	39.5	
17	42.7	42.6	42.1	40.9	40.7	41.4	38.1	
18	42.7	42.9	41.9	41.5	40.5	40.8	38.8	
19	42.1	45.5	42.9	43.0	41.3	41.6	41.4	
20	42.1	41.8	44.3	42.3	41.4	41.6	41.2	
21	45.4	40.8	44.4	42.3	44.7	43.8	42.6	
22	45.9	41.1	43.5	43.0	44.4	44.4	43.4	
23	43.9	41.6	40.9	43.0	44.4	44.4	44.4	44.4
24	47.9	42.5	45.6	42.8	45.4	45.1	44.5	
10-32	42.1	42.3	41.7	42.0	41.0	41.5	41.5	
0-24	42.1	42.4	42.4	42.4	41.6	42.0	41.1	

Produced by Road Data Services Ltd.

Speed Summary (MPH)

Date	0-30	30-40	40-50	50+
27/10/2023	~8%	~72%	~18%	~2%
28/10/2023	~10%	~68%	~20%	~2%
29/10/2023	~10%	~70%	~18%	~2%
30/10/2023	~8%	~72%	~18%	~2%
31/10/2023	~8%	~74%	~16%	~2%
01/11/2023	~9%	~71%	~17%	~3%
02/11/2023	~9%	~78%	~12%	~1%

Speed Summary (MPH)

A stacked bar chart showing the percentage of respondents by age group for each date from 27/10/2023 to 02/11/2023. The y-axis represents the percentage from 0% to 100% in 10% increments. The x-axis lists the dates. The legend indicates four age groups: 0-30 (dark blue), 30-40 (orange), 40-50 (yellow), and 50+ (light blue). The 30-40 age group is the largest in all bars, followed by 40-50, 50+, and 0-30.

Date	0-30	30-40	40-50	50+
27/10/2023	~6%	~72%	~18%	~2%
28/10/2023	~7%	~71%	~18%	~4%
29/10/2023	~10%	~69%	~18%	~3%
30/10/2023	~7%	~71%	~18%	~4%
31/10/2023	~6%	~76%	~16%	~2%
01/11/2023	~7%	~73%	~17%	~3%
02/11/2023	~10%	~73%	~15%	~2%

Produced by Road Data Services Ltd.

Total Vehicle Class Distribution

Vehicle Class	Percentage
Class 1 (Blue)	96%
Class 2 (Gold)	18%
Class 3 (Grey)	3%

0.22	4186	157	18	7	4328
0.24	4468	178	18	7	4386
0.24	4301	110	18	8	4487
Average					
7.39	2414	82	13	13	2621
0.22	3113	92	14	13	3021
0.24	3085	96	14	15	3092
0.24	3970				4094

Total Vehicle Class Distribution

97%

2%

0%



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Consulting Group

APPENDICES



APPENDIX G

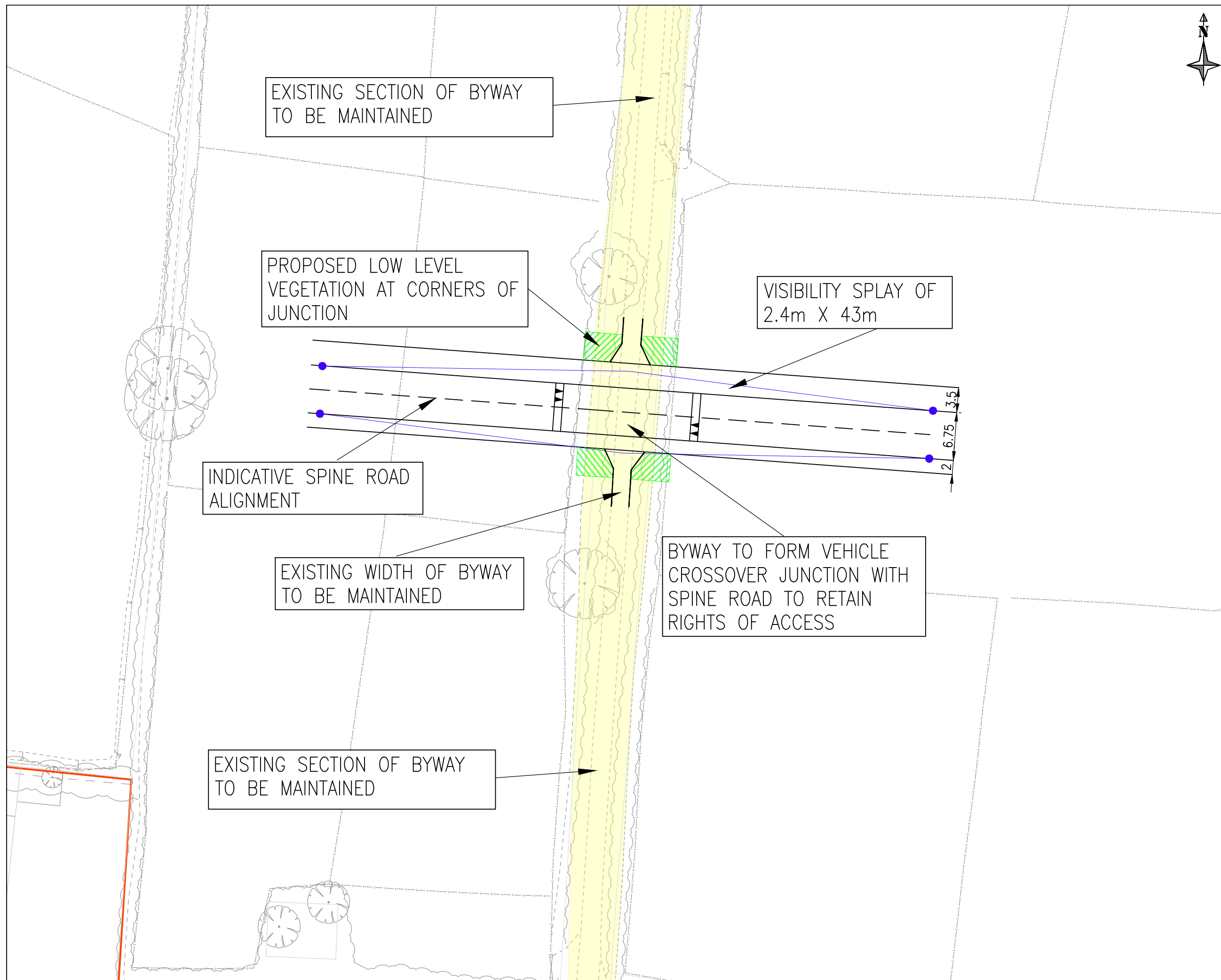


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APPENDICES



APPENDIX H



NOTES:

- DO NOT SCALE THIS DRAWING.
- VEHICLE CROSSOVER TAPERS DESIGNED TO LCC STANDARD
DRAWING SD/11/5A

KEY:

HIGHWAY BOUNDARY EXTENTS (APPROXIMATE) AS TAKEN FROM HIGHWAY RECORDS

REV:	FIRST ISSUE	JW	DG	AB	01/03/24
REV:	AMENDMENTS:	DRN	CHK	APP	DATE:
PROJECT: BARLESTONE ROAD, NEWBOLD VERDON					
DRAWING TITLE: BYWAY CROSSING					
CLIENT: DAVID WILSON HOMES EAST MIDLANDS					
DRAWING NUMBER: 24832_08_020_08					
REVISION: -	SHEET SIZE: A3		SCALE: 1:500		
STATUS: FOR INFORMATION / APPROVAL					
MEC Consulting Group Birmingham Brighton Leicester			Telephone: 01530 264 753 Email: group@mec.co.uk Website: www.m-ec.co.uk ORDNANCE SURVEY © CROWN COPYRIGHT 2015. ALL RIGHTS RESERVED. LICENCE NUMBER 100055865.		

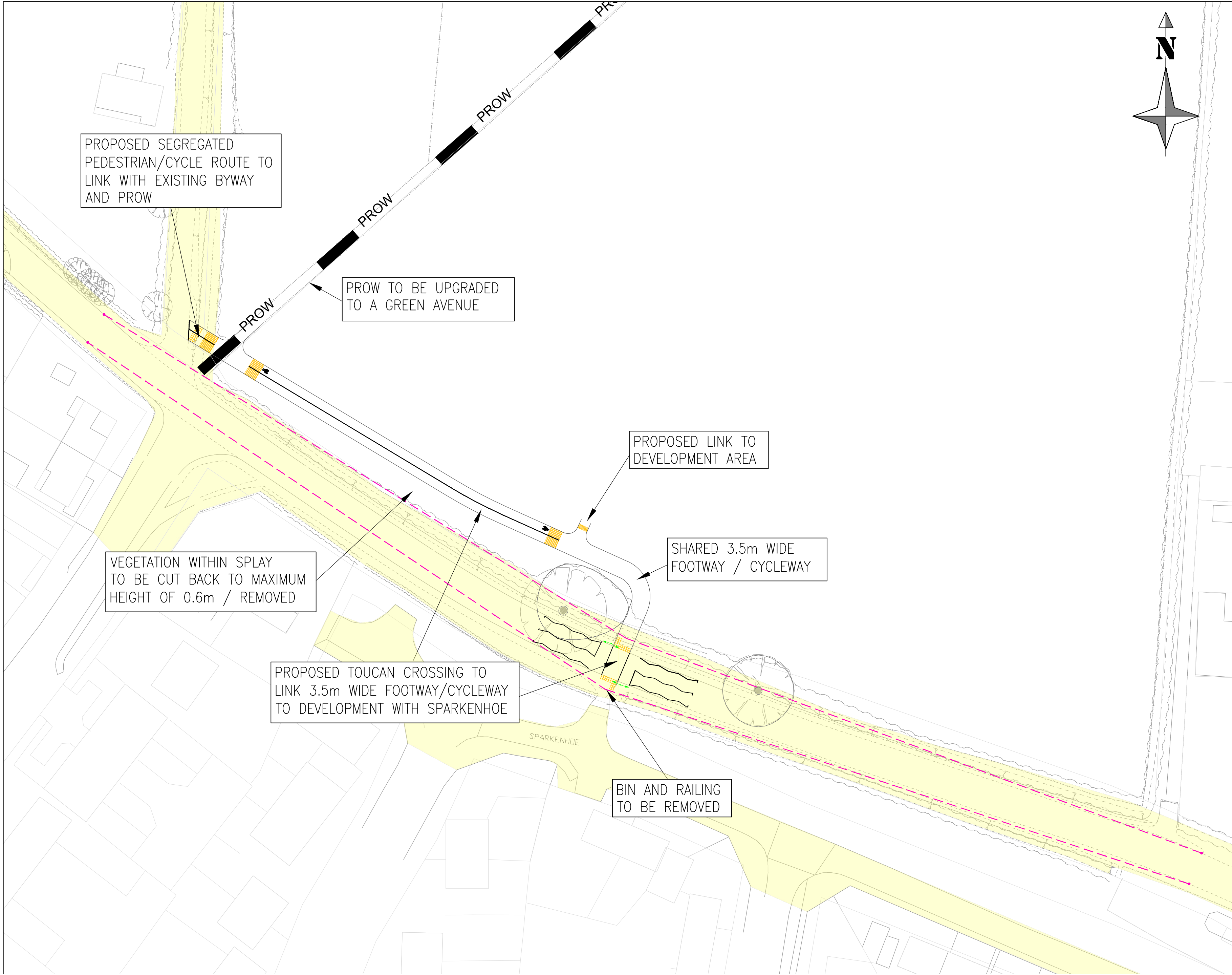


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APPENDICES



APPENDIX I



PROPOSED SEGREGATED PEDESTRIAN/CYCLE ROUTE TO LINK WITH EXISTING BYWAY AND PROW

PROW TO BE UPGRADED TO A GREEN AVENUE

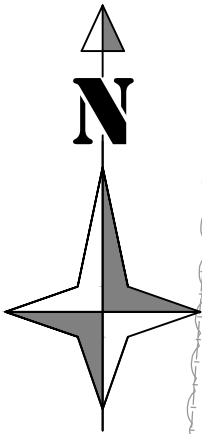
PROPOSED LINK TO DEVELOPMENT AREA

SHARED 3.5m WIDE FOOTWAY / CYCLEWAY

VEGETATION WITHIN SPLAY TO BE CUT BACK TO MAXIMUM HEIGHT OF 0.6m / REMOVED

PROPOSED TOUCAN CROSSING TO LINK 3.5m WIDE FOOTWAY/CYCLEWAY TO DEVELOPMENT WITH SPARKENHOE

BIN AND RAILING TO BE REMOVED



NOTES:

- DO NOT SCALE THIS DRAWING.
- ALL TACTILE PAVING TO BE DESIGNED IN ACCORDANCE TO LTN 1/20

PEDESTRIAN VISIBILITY SPLAYS (1.0m x 120m)

HIGHWAY BOUNDARY EXTENTS (APPROXIMATE) AS TAKEN FROM HIGHWAY RECORDS

A	AMEND FOR NEW LAYOUT	JW	DG	AB	22/07/24
REV	FIRST ISSUE	JW	DG	AB	01/03/24
REV	AMENDMENTS	DRN	CHK	APP	DATE

PROJECT: BARLESTONE ROAD, NEWBOLD VERDON

DRAWING TITLE: PEDESTRIAN / CYCLE IMPROVEMENTS

CLIENT: DAVID WILSON HOMES EAST MIDLANDS

DRAWING NUMBER: 24832_08_020_07

REVISION: A SHEET SIZE: A2 SCALE: 1:500

STATUS: FOR INFORMATION / APPROVAL

MEC
Consulting Group
Birmingham | Brighton | Leicester

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Email: group@m-ec.co.uk
Website: www.m-ec.co.uk
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100055865.

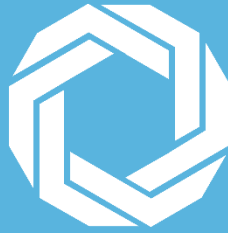


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APPENDICES



APPENDIX J



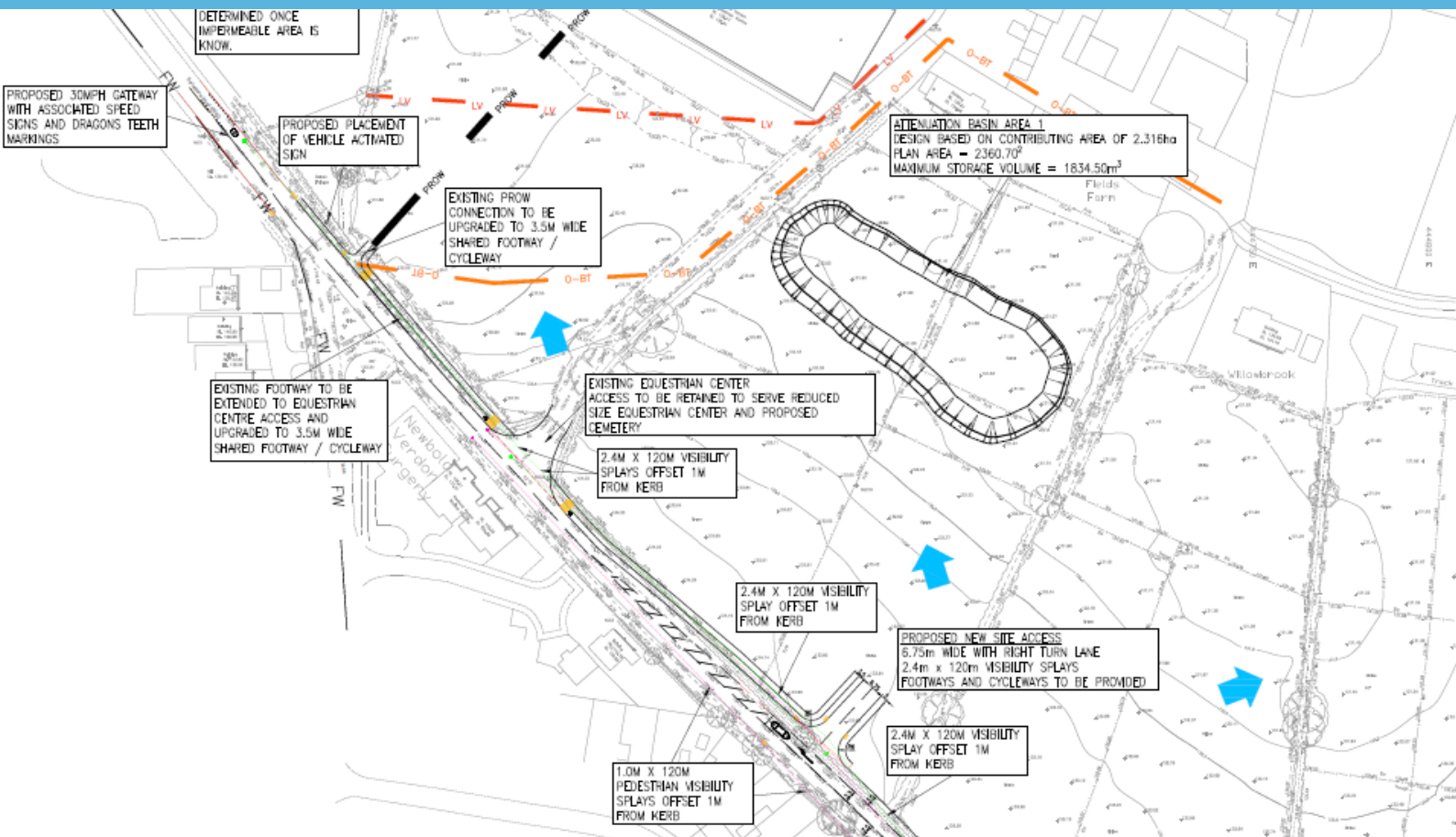
Midlands Road Safety Ltd

PROPOSED RESIDENTIAL DEVELOPMENT ACCESS AND TOUCAN CROSSING BARLESTONE ROAD, NEWBOLD VERDON

STAGE 1 – ROAD SAFETY AUDIT

JANUARY 2024

REPORT REF: 24-1597-RSA1



PROPOSED RESIDENTIAL DEVELOPMENT ACCESS AND TOUCAN CROSSING

BARLESTONE ROAD, NEWBOLD VERDON

STAGE 1 ROAD SAFETY AUDIT

JANUARY 2024

REPORT REF: 24-1597-RSA1

CLIENT: MEC Consulting Group Ltd

ENGINEER: Midlands Road Safety Ltd

TEL: 0779 112 1104

EMAIL: chris.berry@midlandsroadsafety.co.uk

Revision	Date of Issue	Author	Checked
First Issue	30.01.2024	CB	JW
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3.	SAFETY PROBLEMS RAISED IN THIS ROAD SAFETY AUDIT	4
4.	ADDITIONAL CONSIDERATIONS	12
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A.	DRAWINGS AND DOCUMENTS REVIEWED
B.	SITE LOCATION AND PROBLEM IDENTIFICATION PLANS

1. INTRODUCTION

- 1.1 This report comprises a Stage 1 Road Safety Audit (RSA) on a proposed new priority access junction, ghost right turn lane, Toucan crossing and segregated footway and cycleway on Barlestone Road in Newbold Verdon, Leicestershire. The works are arising from a proposed residential development of 210 dwellings on land to the north of Barlestone Road and include the creation of a new 30mph speed limit supported by vehicle activated signs on each approach. The report was requested by MEC Consulting Group Ltd on behalf of David Wilson Homes. The Overseeing Organisation is Leicestershire County Council.
- 1.2 The Audit Team Membership was as follows:
- Audit Team Leader
Chris Berry, MSc Transport Planning, MSoRSA, NH RSA Certificate of Competency
- Audit Team Member
Jennifer Williams, BA (Hons), Prof. Cert. in Highway & Traffic Engineering
- 1.3 A site inspection was carried out by the Audit Team together on Thursday 25th January 2024 between the hours of 11:30 and 12:15. During the site visit the weather conditions were overcast and the road surface was damp. Traffic flows were observed as being light, with occasional pedestrians and no cycle movements being observed.
- 1.4 The audit also comprised of a desk-top study where all documents and plans provided by the Design Team were reviewed. A list of these can be found in Appendix A. The auditors have not been made aware of any departures from design standards.
- 1.5 The audit has been carried out in accordance with the principles of the National Highways document GG 119 'Road Safety Audit'. A formal Road Safety Audit Brief was not provided to the Audit Team. However, information regarding the site was provided via email alongside the relevant scheme documents and drawings. This was considered by the Audit Team to provide sufficient detail to undertake the appropriate stage of audit.
- 1.6 The Audit Team have examined and reported solely on the road safety implications of the scheme as presented and not examined or verified the compliance to any alternate criteria.

- 1.7 All comments and recommendations in this report are referenced to the Audit Brief where provided, and detailed drawings supplied. Where appropriate a list of “Additional Considerations” will follow from any safety problems raised. These are not identified safety problems but generalised observations, outside of the scope of the relevant stage of audit, that may highlight potential safety problems that may arise at future stages of the safety audit process.
- 1.8 Midlands Road Safety Ltd has ensured that this report has been carried out independently with no member of the Audit Team membership directly linked to the scheme design.

2. SAFETY PROBLEMS RAISED IN PREVIOUS ROAD SAFETY AUDITS

- 2.1. It is understood that no previous Road Safety Audits have been undertaken for the proposals subject to this report.

3. SAFETY PROBLEMS RAISED IN THIS ROAD SAFETY AUDIT

3.1. The Audit Team has identified eight safety problems to be addressed.

3.2. **Problem 1**

Location: Barlestone Road – general.

Summary: Large traffic speed differentials risk shunt type collisions.

A 40mph speed limit is currently in place along this section of Barlestone Road. As part of the proposals, it is intended to create a new section of 30mph speed limit, supported by 30mph gateways and vehicle activated signs that are to be placed close to the start of the proposed 30mph speed limit on each approach. Given the section to the north is subject to the national speed limit and the lack of direct frontage development both present currently and arising from the proposals, it is unclear whether the proposed 30mph speed limit represents a realistic and likely speed for drivers exiting from the development. Should drivers leaving the residential area be travelling at substantially lower speeds than those travelling on Barlestone Road, there is a risk of shunt type collisions.



Recommendation:

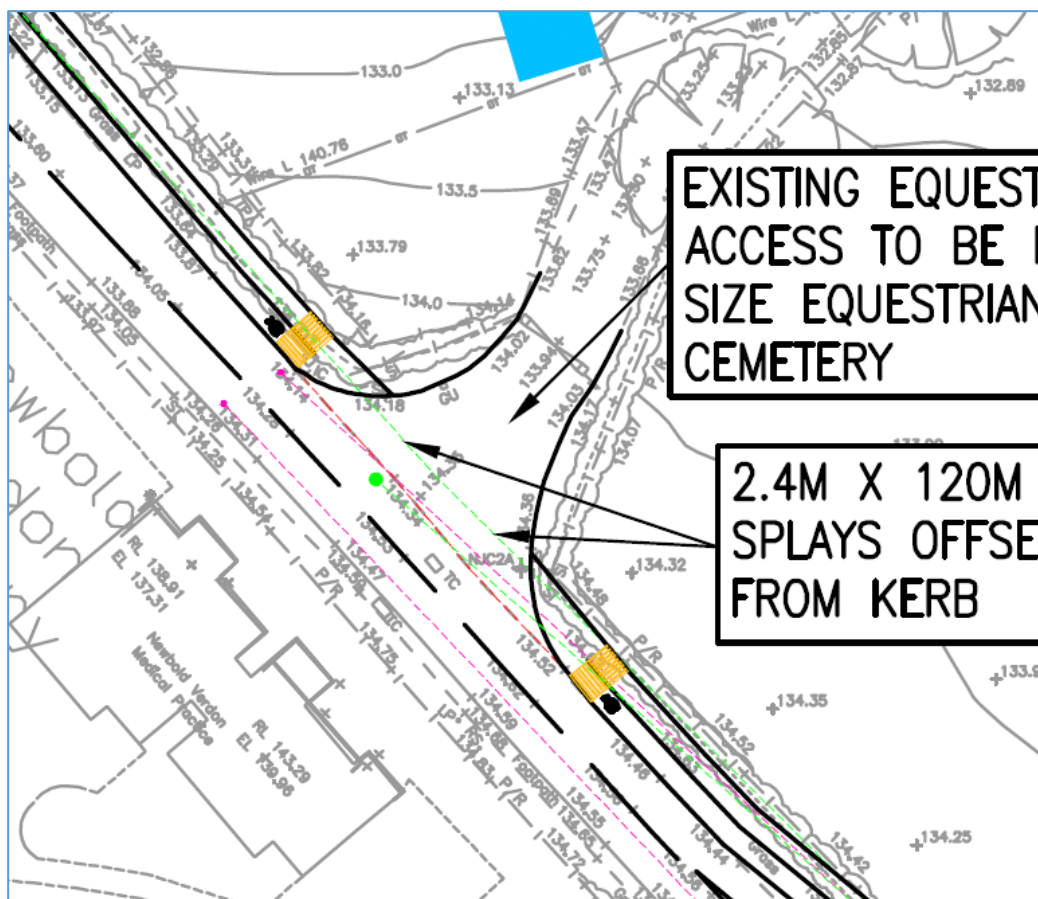
It is recommended that exiting speeds are surveyed and that, should it be considered that the proposed measures and changes are unlikely to result in compliance with the lower limit, that additional measures are proposed to support the 30mph limit.

3.4. Problem 3

Location: Barlestone Road, Equestrian centre / cemetery access.

Summary: Restricted visibility at the pedestrian / cycle crossing risks vehicle to pedestrian / cycle collisions.

It is proposed to provide a footway / cycleway across the northeastern side of Barlestone Road at this location. There are concerns that the alignment of the crossing point at the junction will mean that pedestrians and cyclists will have to cross with limited visibility of vehicles approaching the junction from within the site. This could lead to vehicle to pedestrian / cycle collisions.

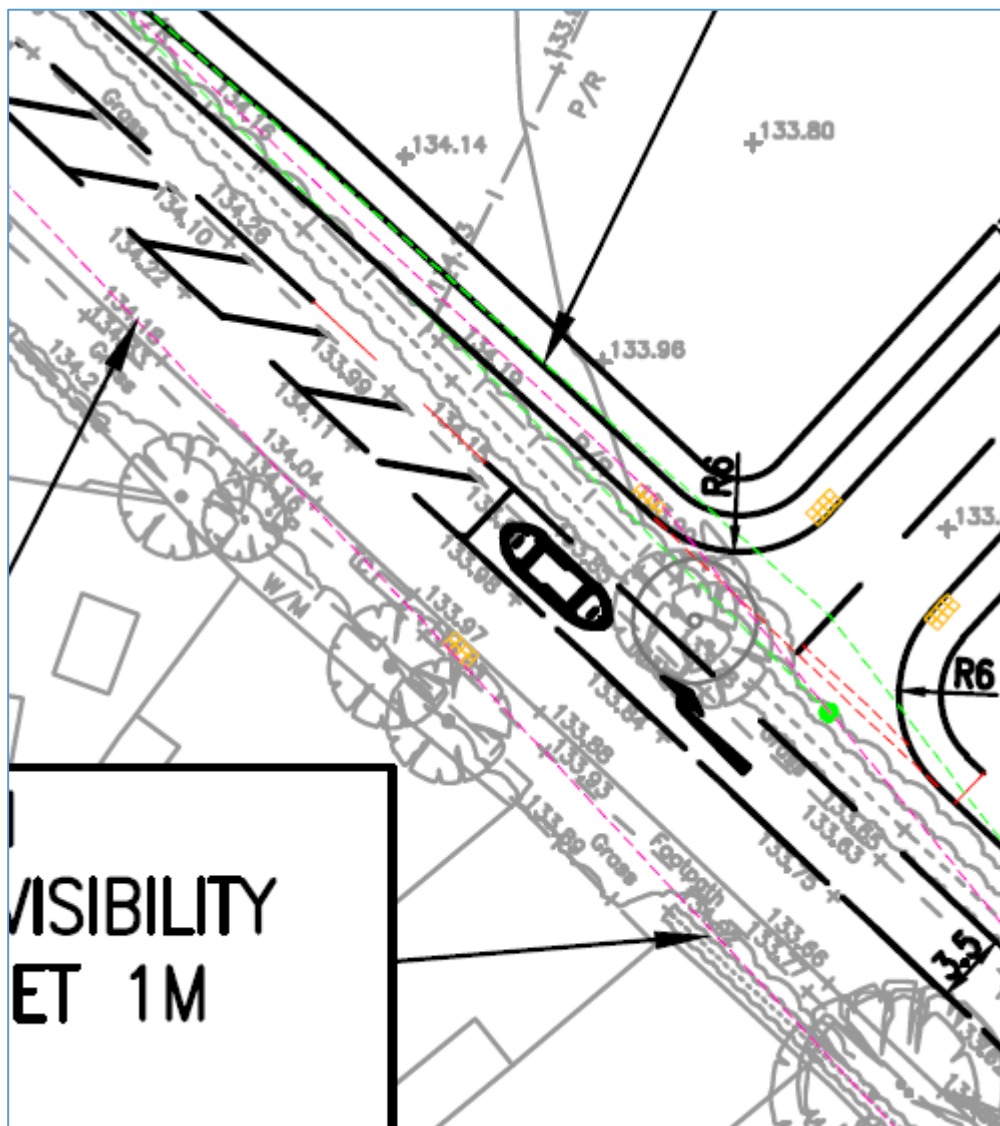


3.5. Problem 4

Location: Proposed pedestrian refuge – to the north of the proposed site access.

Summary: Lack of width of the refuge risks vehicle to pedestrian collisions.

The width of the proposed pedestrian refuge was unclear from the information provided. As this is a key link into the onward routes for pedestrians exiting via the site access there is a concern that, should the feature be too narrow, there is an increased risk of vehicle to pedestrian collisions here.

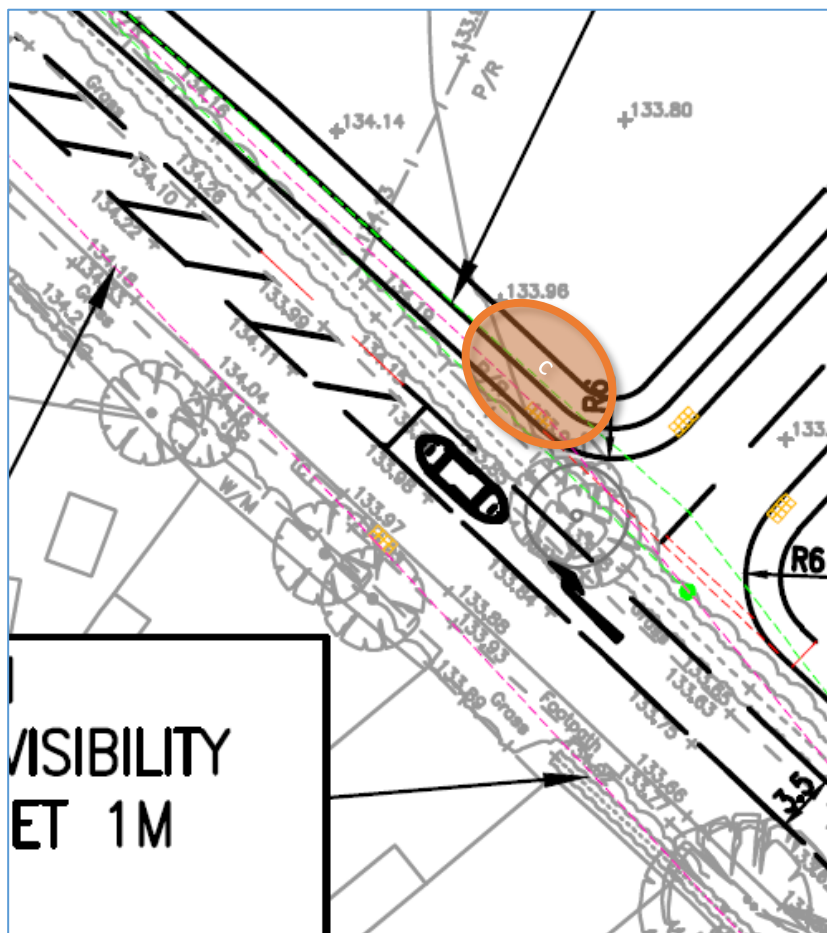


Recommendation:

It is recommended that a refuge of appropriate width for pedestrian use is provided here.

Summary: Lack of pedestrian link to the crossing point risks cycle to pedestrian collisions.

At the point where the pedestrian refuge crossing point is located the kerbside facility is segregated and for cycle use only. This means that pedestrian waiting to cross will be standing within or crossing into the cycle part of the facility, risking cycle to pedestrian collisions.



It is recommended that amendments are made to the footway / cycleway to ensure safe access for pedestrians. As part of the detailed design, it is further recommended that appropriate signing and tactile paving is provided to alert pedestrians that they are entering a segregated facility.

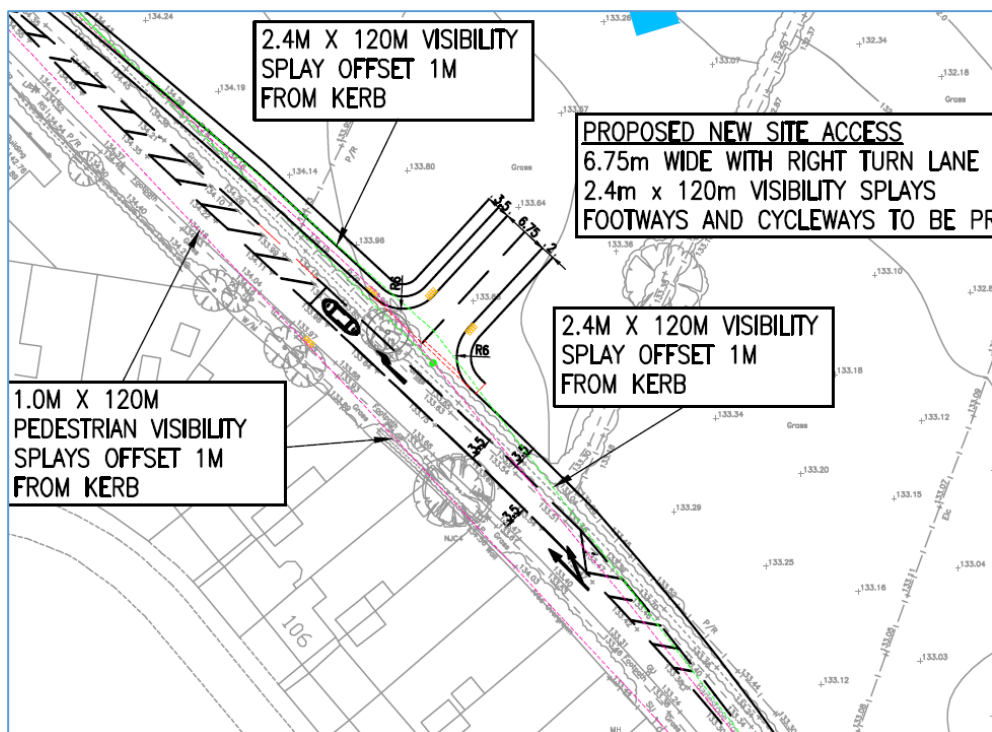
3.7. Problem 6

Location: Proposed new site access.

Summary: Lack of capacity / gap acceptance risks collisions involving vehicles entering / exiting from the site.

The proposed development is for 210 dwellings, with a right turn lane proposed for the vehicular access point. The right turn lane is approximately 40m in length. It is unclear whether this will provide sufficient length for queuing vehicles at peak times. Should vehicles waiting to enter the site overhang the northbound lane there is a risk of shunt type collisions. Equally, should right turners experience long delays they may turn right when it is unsafe to do so, risking side impact collisions.

Similarly, it is unclear whether vehicle flows on Barlestone Road in morning peak times will allow sufficient gaps to ensure that long delays are not experienced by drivers exiting the site. Should drivers become impatient there is a risk of them exiting onto Barlestone Road when it is unsafe to do so, resulting in side impact and shunt type collisions.



Recommendation:

It is recommended that the junction is analysed and layout amended if necessary to account for likely flows on Barlestone Road as well as traffic generation and queue lengths within the site.

3.8. Problem 7

Location: Proposed Toucan crossing – northeast side of Barlestone Road.

Summary: Restricted visibility risks vehicle to pedestrian / cycle collisions.

Visibility for cyclists and pedestrians at the crossing point is restricted by a large tree to the northwest of the crossing. This also limits forward visibility of the nearside crossing signals. Should insufficient visibility be provided there is a risk of pedestrians and cyclists entering the carriageway when it is unsafe to do so, resulting in vehicle to pedestrian and/or cycle collisions.



Recommendation:

It is recommended that unobstructed visibility commensurate with likely vehicle speeds, both at the crossing point and on the approach to the signals, is provided.

Summary: Lack of an onward route risks cycle to pedestrian collisions.



It is recommended that an onward route is provided for cyclists and that a link for northwest bound on-carriageway cyclists to access the southern side of the crossing is provided.

End of the 'Safety Problems' in this Section of the Report

5. AUDIT STATEMENT

- 5.1. We certify that the terms of reference of the audit are as described in GG 119 and that no member of the Audit Team was directly linked to the scheme design.

5.2. **AUDIT TEAM LEADER:**

Chris Berry – MSc, MSoRSA, NH RSA Certificate of Competency

Director

Midlands Road Safety Ltd



Signed: _____

Date: 30.01.2024

5.3. **AUDIT TEAM MEMBER:**

Jennifer Williams, BA (Hons), Prof. Cert. in Highway & Traffic Engineering

Road Safety Consultant working on behalf of Midlands Road Safety Ltd



Signed: _____

Date: 30.01.2024

APPENDIX A

The following documents and drawings were provided for the purposes of this road safety audit.

Drawings

Number	Title	Rev
24832_00_010_01	Constraints Plan	A
P22-3085_DE_10_A_01	Illustrative Framework Plan	Draft
24832	Site Location Plan	-

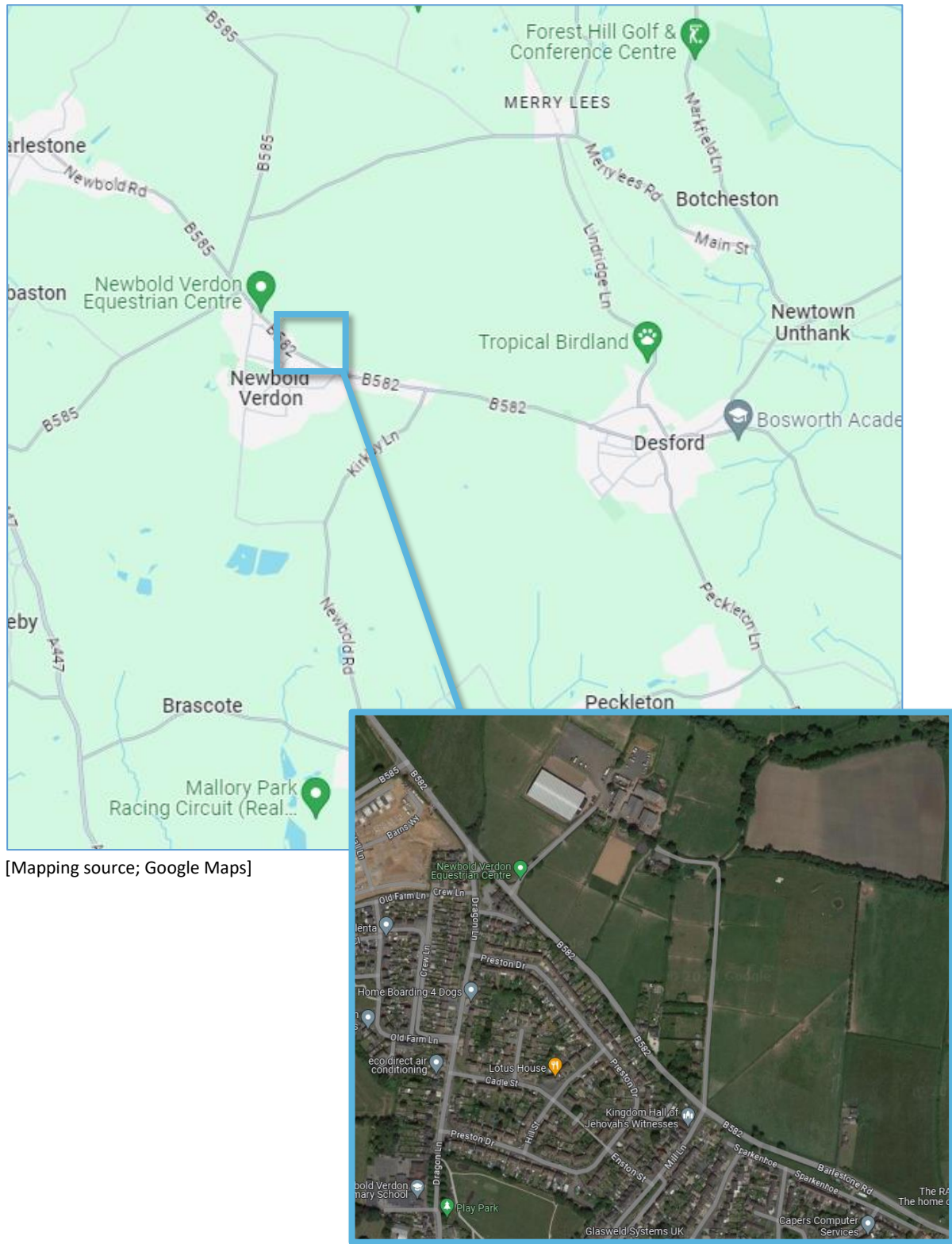
Documents

Author	Title	Rev	Date
MEC	Road Safety Audit Brief (by email)	-	23.01.2024

APPENDIX B

The location of any problems/observations that have been identified in Section 3 of this report can be seen on the extracts of the drawings supplied to the Audit Team, as listed in Appendix A.

Figure 1 – Site Location



[Mapping source; Google Maps]

Figure 2 – Site Overview

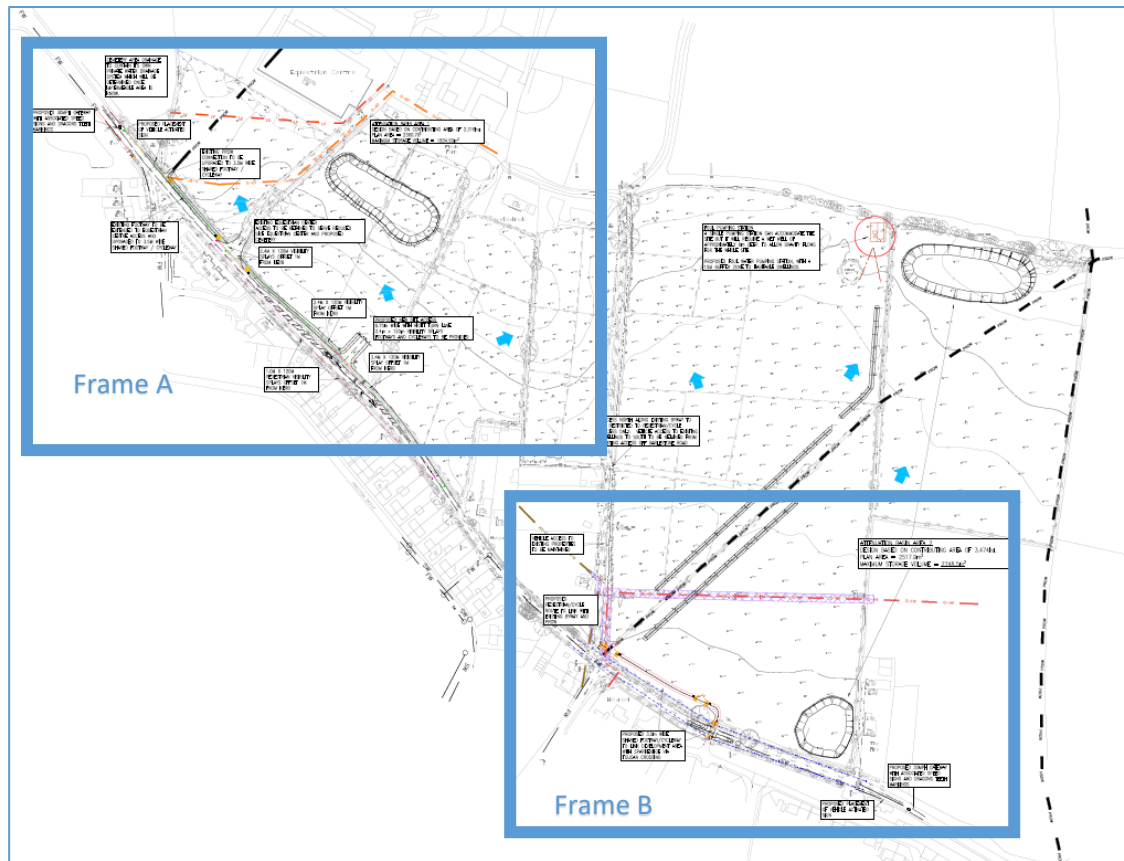
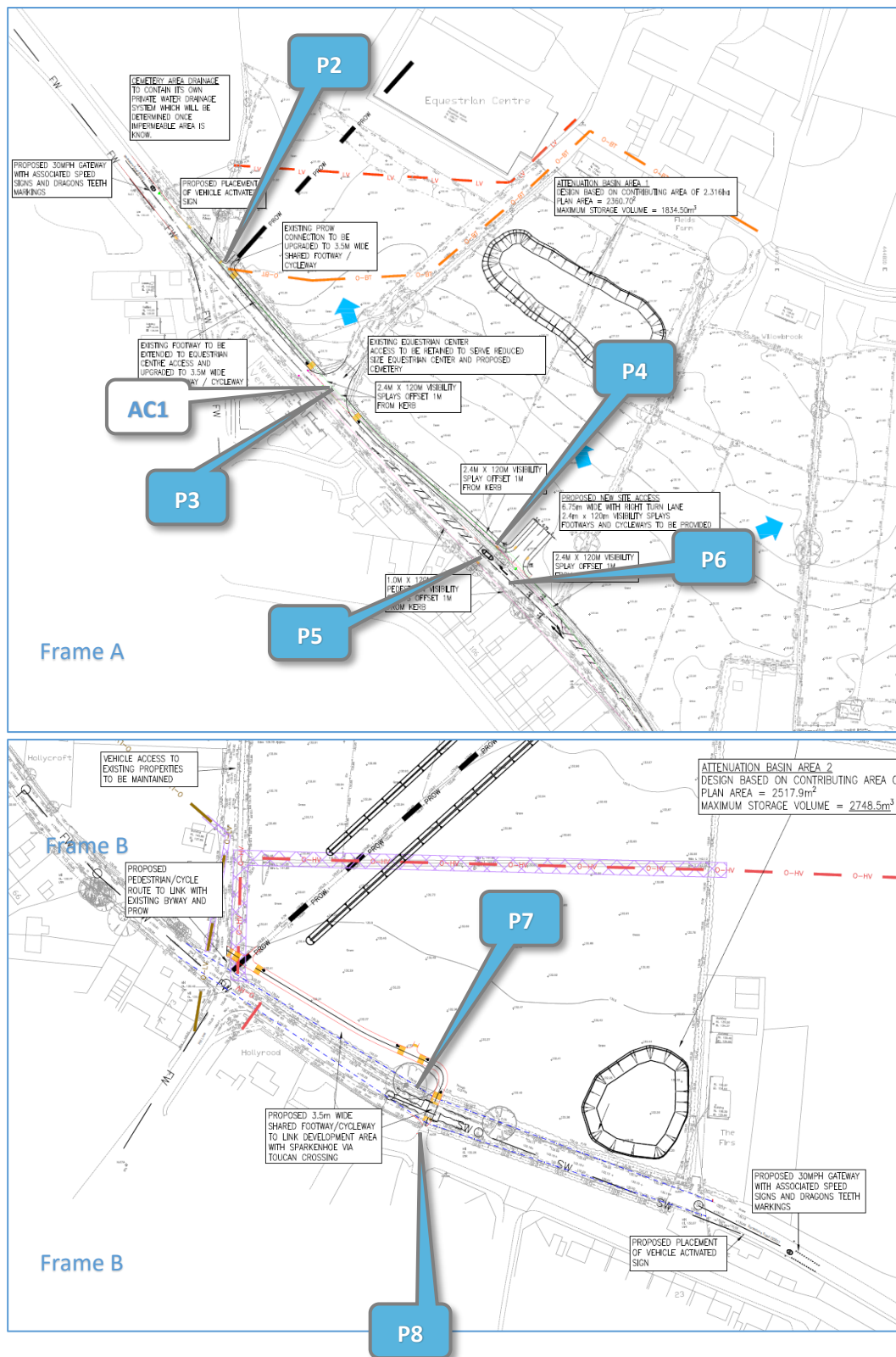


Figure 3 – Problem Location Plans





Midlands Road Safety Ltd

29 Arboretum Street, Nottingham NG1 4JA

T: +44 (0) 7791121104

E: enquiries@midlandsroadsafety.co.uk

W: www.midlandsroadsafety.co.uk

Road Safety Audit Response Report Template

D1 Project details

Table D.1 Project details

Report title:	PROPOSED RESIDENTIAL DEVELOPMENT ACCESS AND TOUCAN CROSSING BARLESTONE ROAD, NEWBOLD VERDON – STAGE 1 RSA
Date:	31/01/2024
Document Reference and revision:	24-1597-RSA1
Prepared by:	Midlands Road Safety
On behalf of:	MEC

Table D.2 Authorisation sheet

Project:	Barlestone Road, Newbold Verdon
Report title:	PROPOSED RESIDENTIAL DEVELOPMENT ACCESS AND TOUCAN CROSSING – STAGE 1 RSA
Prepared by:	James Wright
	Graduate Transport Planner
	MEC
	January 2024
	<i>James Wright</i>
Approved by:	Name
	Position
	Organisation
	Date
	Signature

D2 Introduction

Include a summary of the scheme, the stage of the RSA and the date or reference of the RSA report it relates to.
Provide details of the representatives from the design organisation who prepared the RSA response report.

D3 Key personnel

Table D.3 Key personnel

Overseeing Organisation's Representative(s):	Insert details of the personnel from the Overseeing Organisation responsible for agreeing the actions
Overseeing Organisation's RSA Audit Team Reviewer(s)*:	Insert details of the personnel from the Overseeing Organisation RSA Audit Team responsible for reviewing the response report and advising the OO's Representative
RSA Team:	Chris Berry (MSc Transport Planning, MSoRSA, NH RSA Certificate of Competency); Jennifer Williams, BA (Hons), Prof. Cert. in Highway & Traffic Engineering
Design organisation:	MEC

* Delete if not applicable

D4 Road Safety Audit Decision Log

Table D.3 Road Safety Audit decision log

RSA Problem	RSA recommendation	Design organisation response	Overseeing Organisation's RSA Audit Team review*	Overseeing Organisation's Representative's response	Agreed RSA action
Barlestone Road – general. Large traffic speed differentials risk shunt type collisions.	It is recommended that exiting speeds are surveyed and that, should it be considered that the proposed measures and changes are unlikely to result in compliance with the lower limit, that additional measures are proposed to support the 30mph limit.	As demonstrated on Drawing 24832_08_020_09 contained as an Appendix N of the site Transport Assessment (MEC Ref: 24832-TRAN-0803), red surfacing is to be placed at the 30mph gateway to further emphasis the change in speed limit.	Insert the Overseeing Organisation's RSA Audit Team review response	Insert the Overseeing Organisation's Representative's response	Insert the design organisation's and Overseeing Organisation's agreed action to address the problem
Northern extents of the scheme – end of the proposed segregated footway / cycleway. Lack of an onward route link for cyclists risks cycle to pedestrian collisions.	It is recommended that a link with the carriageway for cyclists to enter / leave the facility is provided at the northwestern extent of the facility.	As demonstrated on Drawing 24832_08_020_07 in Appendix G of the TA, provision of a dropped kerb and carriageway cycle markings are to be installed to allow for safe entering and exiting of the cycleway from the carriageway.			
Barlestone Road, Equestrian centre / cemetery access - Restricted visibility at the pedestrian / cycle crossing risks vehicle to pedestrian / cycle collisions.	It is recommended that the crossing point is located such that adequate visibility of approaching vehicles can be provided and that measures to alert	As shown on Drawing 24832_08_020_03b, the crossing point over the equestrian access has been moved north so as pedestrians can achieve 2.4m x 25m visibility looking			

	approaching drivers of the likely present of pedestrian and specifically cyclists crossing are provided.	towards the cemetery/equestrian centre.			
Proposed pedestrian refuge – Lack of width of the refuge risks vehicle to pedestrian collisions	It is recommended that a refuge of appropriate width for pedestrian use is provided here.	Drawing 24832_08_020_03b demonstrates a second toucan crossing has been installed instead of the uncontrolled crossing, with a 3.0m wide pedestrian refuge			
Proposed pedestrian refuge - Lack of pedestrian link to the crossing point risks cycle to pedestrian collisions.	It is recommended that amendments are made to the footway / cycleway to ensure safe access for pedestrians. As part of the detailed design, it is further recommended that appropriate signing and tactile paving is provided to alert pedestrians that they are entering a segregated facility.	Drawing 24832_08_020_03b demonstrates the shared footway / cycleway has been ended and turned into a shared space where the crossing points are located. Appropriate signage and bollards are to be installed as part of the detailed design process.			
Proposed new site access - Lack of capacity / gap acceptance risks collisions involving vehicles entering / exiting from the site.	It is recommended that the junction is analysed and layout amended if necessary to account for likely flows on Barlestone Road as well as traffic	Capacity analysis of the site access has been undertaken, with the results illustrating no arm would exceed a queue length of 0.5 PCUs during peak hours. The results of			

	generation and queue lengths within the site	the site access assessment is contained in Appendix M of the site Transport Assessment ((MEC Ref: 24832-TRAN-0803).			
Proposed Toucan crossing (northeast side of Barlestone Road) - Restricted visibility risks vehicle to pedestrian / cycle collisions	It is recommended that unobstructed visibility commensurate with likely vehicle speeds, both at the crossing point and on the approach to the signals, is provided.	All vegetation and trees within the visibility splay is to be cut down to 0.6m / removed to ensure appropriated visibility splays are achievable. This is noted on drawing 24832_08_020_07 in Appendix G of the TA.			
Proposed Toucan crossing (southern side of Barlestone Road) - Lack of an onward route risks cycle to pedestrian collisions.	It is recommended that an onward route is provided for cyclists and that a link for northwest bound on-carriageway cyclists to access the southern side of the crossing is provided.	Drawing 24832_08_020_07 demonstrates amendments have been made to the footway / cycle way. The space north of the toucan crossing has been amended to be a shared space. It is proposed that the bin and railing on the southern side of the crossing be removed to increase cycling connectivity onto Sparkenhoe			

* Delete if not applicable

D5 Other matters considered relevant by the overseeing organisation

Table D.4 Other matters

MATTER	
Location:	Insert the location of the problem and provide reference to a scheme drawing
Summary:	Provide a summary of the matter of concern
RECOMMENDATION	
Provide a proportionate and viable recommendation to eliminate or mitigate the identified matter. This could include further scheme development to a subsequent RSA stage of further monitoring where insufficient information can be gathered from the available data.	

D6 Design organisation and Overseeing Organisation statements

Table D.5 Design organisation statement

On behalf of the design organisation I certify that:	
1) The RSA actions and other matters identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation; or	☒
2) The RSA actions and other matters identified in response to the road safety audit problems in this road safety audit cannot be agreed and I wish to proceed to an exception report	☐
Name:	James Wright
Signed:	Graduate Transport Planner
Position:	MEC
Organisation:	January 2024
Date:	<i>James Wright</i>

Table D.6 Overseeing Organisation statement

On behalf of the Overseeing Organisation I certify that:	
1) The RSA actions and other matters identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation and will be progressed; or	☐
2) The RSA actions and other matters identified in response to the road safety audit problems in this road safety audit cannot be agreed and I wish to proceed to an exception report	☐
Name:	
Signed:	
Position:	
Organisation:	
Date:	



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Consulting Group

APPENDICES



APPENDIX K

Calculation Reference: AUDIT-350901-240717-0758

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 05 - HEALTH
 Category : G - GP SURGERIES
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	HF HERTFORDSHIRE	1 days
	IW ISLE OF WIGHT	1 days
	SC SURREY	1 days
03	SOUTH WEST	
	SD SWINDON	1 days
	SM SOMERSET	1 days
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
05	EAST MIDLANDS	
	DY DERBY	1 days
	LE LEICESTERSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	DR DONCASTER	1 days
08	NORTH WEST	
	AC CHESHIRE WEST & CHESTER	1 days
	GM GREATER MANCHESTER	1 days
	LC LANCASHIRE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days

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

M-EC Wellington House Ibstock

Licence No: 350901

Primary 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: 300 to 2150 (units: sqm)
 Range Selected by User: 300 to 2200 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/16 to 11/10/23

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:

Tuesday	3 days
Wednesday	4 days
Thursday	3 days
Friday	6 days

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

Selected survey types:

Manual count	16 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)	4
Edge of Town	3
Neighbourhood Centre (PPS6 Local Centre)	9

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	14
Village	2

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.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	8 days - Selected
Servicing vehicles Excluded	8 days - Selected

Secondary Filtering selection:

Use Class:

E(e)	16 days
------	---------

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	1 days
5,001 to 10,000	2 days
10,001 to 15,000	1 days
15,001 to 20,000	2 days
20,001 to 25,000	3 days
25,001 to 50,000	5 days
50,001 to 100,000	1 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	3 days
125,001 to 250,000	6 days
250,001 to 500,000	3 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:

0.6 to 1.0	4 days
1.1 to 1.5	12 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	16 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	16 days
-----------------	---------

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

LIST OF SITES relevant to selection parameters

1	AC-05-G-04	GP SURGERY		CESHIRE WEST & CHESTER
	KINGSMEAD SQUARE			
	NORTHWICH			
	KINGSMEAD			
	Neighbourhood Centre (PPS6 Local Centre)			
	Residential Zone			
	Total Gross floor area:	650 sqm		
	Survey date: FRIDAY	07/06/19	Survey Type: MANUAL	
2	CA-05-G-01	MEDICAL CENTRE		CAMBRIDGESHIRE
	NUFFIELD ROAD			
	CAMBRIDGE			
	CHESTERTON			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	1046 sqm		
	Survey date: FRIDAY	23/06/23	Survey Type: MANUAL	
3	DR-05-G-01	GP SURGERY		DONCASTER
	GOODISON BOULEVARD			
	DONCASTER			
	CANTLEY			
	Neighbourhood Centre (PPS6 Local Centre)			
	Residential Zone			
	Total Gross floor area:	1050 sqm		
	Survey date: THURSDAY	23/09/21	Survey Type: MANUAL	
4	DY-05-G-02	GP SURGERY		DERBY
	ST THOMAS ROAD			
	DERBY			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	2000 sqm		
	Survey date: WEDNESDAY	11/10/23	Survey Type: MANUAL	
5	GM-05-G-02	GP SURGERY		GREATER MANCHESTER
	MOORSIDE ROAD			
	SALFORD			
	SWINTON			
	Neighbourhood Centre (PPS6 Local Centre)			
	Residential Zone			
	Total Gross floor area:	1160 sqm		
	Survey date: FRIDAY	21/06/19	Survey Type: MANUAL	
6	HF-05-G-01	GP SURGERY		HERTFORDSHIRE
	CHELLS WAY			
	STEVENAGE			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	830 sqm		
	Survey date: FRIDAY	28/06/19	Survey Type: MANUAL	
7	IW-05-G-01	GP SURGERY		ISLE OF WIGHT
	NEWPORT ROAD			
	COWES			
	Edge of Town			
	Residential Zone			
	Total Gross floor area:	1400 sqm		
	Survey date: WEDNESDAY	26/06/19	Survey Type: MANUAL	
8	LC-05-G-01	GP SURGERY		LANCASHIRE
	DOCTORS LANE			
	ECCLESTON			
	Neighbourhood Centre (PPS6 Local Centre)			
	Village			
	Total Gross floor area:	700 sqm		
	Survey date: WEDNESDAY	20/04/22	Survey Type: MANUAL	

LIST OF SITES relevant to selection parameters (Cont.)

9	LE-05-G-02	GP SURGERY	LEICESTERSHIRE
	THE SANDS		
	NEAR MELTON MOWBRAY		
	LONG CLAWSON		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total Gross floor area:	363 sqm	
	Survey date: TUESDAY	29/11/16	Survey Type: MANUAL
10	NF-05-G-03	GP SURGERY	NORFOLK
	MILE END ROAD		
	NORWICH		
	MOUNT PLEASANT		
	Neighbourhood Centre (PPS6 Local Centre)		
	Residential Zone		
	Total Gross floor area:	600 sqm	
	Survey date: FRIDAY	08/11/19	Survey Type: MANUAL
11	SC-05-G-02	GP SURGERY	SURREY
	ESHER GREEN DRIVE		
	ESHER		
	SANDOWN PARK		
	Edge of Town		
	Residential Zone		
	Total Gross floor area:	310 sqm	
	Survey date: WEDNESDAY	22/06/16	Survey Type: MANUAL
12	SD-05-G-01	GP SURGERY	SWINDON
	CRICKDALE ROAD		
	SWINDON		
	Neighbourhood Centre (PPS6 Local Centre)		
	Residential Zone		
	Total Gross floor area:	300 sqm	
	Survey date: FRIDAY	23/09/16	Survey Type: MANUAL
13	SM-05-G-03	GP SURGERY	SOMERSET
	FEVERSHAM LANE		
	GLASTONBURY		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Gross floor area:	1500 sqm	
	Survey date: TUESDAY	20/09/22	Survey Type: MANUAL
14	TW-05-G-04	GP SURGERY	TYNE & WEAR
	MANOR WALK		
	NEWCASTLE UPON TYNE		
	BENTON		
	Neighbourhood Centre (PPS6 Local Centre)		
	Residential Zone		
	Total Gross floor area:	1400 sqm	
	Survey date: THURSDAY	18/10/18	Survey Type: MANUAL
15	WL-05-G-01	MEDICAL CENTRE	WILTSHIRE
	MIDDLEFIELD ROAD		
	CHIPPENHAM		
	Edge of Town		
	Residential Zone		
	Total Gross floor area:	2150 sqm	
	Survey date: THURSDAY	11/05/23	Survey Type: MANUAL
16	WM-05-G-04	GP SURGERY	WEST MIDLANDS
	STOURBRIDGE ROAD		
	DUDLEY		
	Neighbourhood Centre (PPS6 Local Centre)		
	Residential Zone		
	Total Gross floor area:	600 sqm	
	Survey date: TUESDAY	21/11/17	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 05 - HEALTH/G - GP SURGERIES

TOTAL 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	2	1115	0.538	2	1115	0.000	2	1115	0.538
07:00 - 08:00	15	1001	1.132	15	1001	0.266	15	1001	1.398
08:00 - 09:00	16	1004	2.759	16	1004	1.463	16	1004	4.222
09:00 - 10:00	16	1004	2.896	16	1004	2.590	16	1004	5.486
10:00 - 11:00	16	1004	2.790	16	1004	2.553	16	1004	5.343
11:00 - 12:00	16	1004	2.485	16	1004	2.634	16	1004	5.119
12:00 - 13:00	16	1004	2.267	16	1004	2.603	16	1004	4.870
13:00 - 14:00	16	1004	2.080	16	1004	2.142	16	1004	4.222
14:00 - 15:00	16	1004	2.553	16	1004	2.391	16	1004	4.944
15:00 - 16:00	16	1004	2.410	16	1004	2.485	16	1004	4.895
16:00 - 17:00	16	1004	2.099	16	1004	2.553	16	1004	4.652
17:00 - 18:00	16	1004	1.314	16	1004	2.136	16	1004	3.450
18:00 - 19:00	15	1027	0.519	15	1027	1.207	15	1027	1.726
19:00 - 20:00	1	1400	0.143	1	1400	0.143	1	1400	0.286
20:00 - 21:00	1	1400	0.000	1	1400	0.000	1	1400	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			25.985			25.166			51.151

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

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

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Parameter summary

Trip rate parameter range selected: 300 - 2150 (units: sqm)
 Survey date range: 01/01/16 - 11/10/23
 Number of weekdays (Monday-Friday): 16
 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.



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APPENDICES



APPENDIX L

Newbold Verdon

Tuesday 31st October 2023

Junction: 1

Approach: B585 Barlestone Road

TIME	Ahead to B582 Barlestone Road									Right to B585 Bosworth Lane								
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	45	12	1	0	0	58	58.5	0	0	11	5	0	0	0	16	16.0
07:15 - 07:30	0	1	79	11	1	2	0	94	96.5	0	0	13	9	1	2	0	25	28.1
07:30 - 07:45	0	0	90	21	3	0	1	115	117.5	0	0	15	6	1	0	0	22	22.5
07:45 - 08:00	0	0	74	14	3	1	1	93	96.8	0	0	21	5	2	2	0	30	33.6
Hourly Total	0	1	288	58	8	3	2	360	369.3	0	0	60	25	4	4	0	93	100.2
08:00 - 08:15	0	0	84	9	2	1	0	96	98.3	0	0	10	1	1	2	0	14	17.1
08:15 - 08:30	0	0	66	14	2	0	1	83	85.0	0	0	4	2	0	0	0	6	6.0
08:30 - 08:45	0	2	67	4	1	2	0	76	77.9	0	0	12	2	0	0	0	14	14.0
08:45 - 09:00	0	0	62	14	2	2	0	80	83.6	0	0	9	3	1	0	0	13	13.5
Hourly Total	0	2	279	41	7	5	1	335	344.8	0	0	35	8	2	2	0	47	50.6
09:00 - 09:15	0	0	33	6	4	0	1	44	47.0	0	0	8	4	1	0	0	13	13.5
09:15 - 09:30	0	0	34	7	0	0	0	41	41.0	0	0	7	2	0	0	0	9	9.0
09:30 - 09:45	0	0	35	5	0	0	0	40	40.0	0	0	11	2	1	0	0	14	14.5
09:45 - 10:00	0	0	37	3	0	0	1	41	42.0	0	0	3	1	1	0	0	5	5.5
Hourly Total	0	0	139	21	4	0	2	166	170.0	0	0	29	9	3	0	0	41	42.5

TOTAL	0	3	706	120	19	8	5	861	884.1	0	0	124	42	9	6	0	181	193.3
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16:00 - 16:15	0	0	57	9	0	0	0	66	66.0	0	0	13	4	0	0	0	17	17.0
16:15 - 16:30	0	0	41	11	0	0	0	52	52.0	0	0	7	4	0	0	0	11	11.0
16:30 - 16:45	0	0	40	12	1	0	0	53	53.5	0	0	14	4	2	0	0	20	21.0
16:45 - 17:00	0	0	66	7	2	0	0	75	76.0	0	0	9	2	0	0	0	11	11.0
Hourly Total	0	0	204	39	3	0	0	246	247.5	0	0	43	14	2	0	0	59	60.0
17:00 - 17:15	1	0	36	11	1	0	0	49	48.7	0	0	12	4	0	0	0	16	16.0
17:15 - 17:30	1	0	57	9	0	0	0	67	66.2	0	0	16	4	0	0	0	20	20.0
17:30 - 17:45	0	0	35	5	1	0	1	42	43.5	0	0	13	0	0	0	0	13	13.0
17:45 - 18:00	1	0	43	5	0	0	0	49	48.2	0	0	14	1	1	0	0	16	16.5
Hourly Total	3	0	171	30	2	0	1	207	206.6	0	0	55	9	1	0	0	65	65.5
18:00 - 18:15	0	0	32	4	0	0	0	36	36.0	0	0	4	1	0	0	0	5	5.0
18:15 - 18:30	2	0	32	4	0	0	0	38	36.4	0	0	11	2	0	0	0	13	13.0
18:30 - 18:45	0	0	36	3	0	0	1	40	41.0	0	0	8	1	1	0	0	10	10.5
18:45 - 19:00	0	0	28	3	0	0	0	31	31.0	0	0	7	0	0	1	0	8	9.3
Hourly Total	2	0	128	14	0	0	1	145	144.4	0	0	30	4	1	1	0	36	37.8

TOTAL	5	0	503	83	5	0	2	598	598.5	0	0	128	27	4	1	0	160	163.3
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PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

Newbold Verdon

Tuesday 31st October 2023

Junction: 1

Approach: B582 Barlestone Road

TIME	Left to B585 Bosworth Lane									Ahead to B585 Barlestone Road								
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	35	16	1	0	0	52	52.5	1	0	23	5	0	0	0	29	28.2
07:15 - 07:30	0	0	37	12	3	0	1	53	55.5	0	0	29	15	0	0	0	44	44.0
07:30 - 07:45	0	0	53	12	0	0	0	65	65.0	0	0	38	12	0	1	0	51	52.3
07:45 - 08:00	0	0	60	12	1	1	0	74	75.8	0	0	36	11	4	0	0	51	53.0
Hourly Total	0	0	185	52	5	1	1	244	248.8	1	0	126	43	4	1	0	175	177.5
08:00 - 08:15	0	0	48	14	2	0	0	64	65.0	0	0	49	13	2	0	2	66	69.0
08:15 - 08:30	0	0	38	7	3	1	1	50	53.8	0	0	50	11	2	2	0	65	68.6
08:30 - 08:45	0	0	31	5	0	0	3	39	42.0	0	0	44	13	2	1	1	61	64.3
08:45 - 09:00	0	0	33	7	0	0	0	40	40.0	0	0	44	3	1	0	0	48	48.5
Hourly Total	0	0	150	33	5	1	4	193	200.8	0	0	187	40	7	3	3	240	250.4
09:00 - 09:15	0	0	27	3	1	0	0	31	31.5	0	0	20	6	4	1	0	31	34.3
09:15 - 09:30	0	1	19	6	0	0	0	26	25.4	0	0	32	3	1	0	1	37	38.5
09:30 - 09:45	0	0	27	7	3	0	1	38	40.5	1	0	25	3	0	0	0	29	28.2
09:45 - 10:00	0	0	24	5	1	0	1	31	32.5	0	0	24	2	2	0	0	28	29.0
Hourly Total	0	1	97	21	5	0	2	126	129.9	1	0	101	14	7	1	1	125	130.0

TOTAL	0	1	432	106	15	2	7	563	579.5	2	0	414	97	18	5	4	540	557.9
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16:00 - 16:15	0	1	41	10	0	1	0	53	53.7	0	0	60	12	1	0	0	73	73.5
16:15 - 16:30	0	0	42	8	0	0	0	50	50.0	0	3	66	13	0	0	0	82	80.2
16:30 - 16:45	0	0	49	8	0	0	0	57	57.0	1	0	75	10	1	0	0	87	86.7
16:45 - 17:00	0	0	40	8	0	0	0	48	48.0	0	1	78	9	1	1	0	90	91.2
Hourly Total	0	1	172	34	0	1	0	208	208.7	1	4	279	44	3	1	0	332	331.6
17:00 - 17:15	0	0	42	3	0	0	1	46	47.0	0	0	83	10	1	0	0	94	94.5
17:15 - 17:30	0	0	50	8	4	0	0	62	64.0	0	1	68	16	1	0	0	86	85.9
17:30 - 17:45	0	0	51	4	0	0	0	55	55.0	0	2	52	8	0	0	0	62	60.8
17:45 - 18:00	0	1	34	6	0	0	0	41	40.4	0	0	56	5	0	0	0	61	61.0
Hourly Total	0	1	177	21	4	0	1	204	206.4	0	3	259	39	2	0	0	303	302.2
18:00 - 18:15	0	0	29	4	0	0	1	34	35.0	1	0	47	4	0	0	0	52	51.2
18:15 - 18:30	0	0	30	2	0	0	0	32	32.0	0	0	42	4	0	0	0	46	46.0
18:30 - 18:45	0	1	19	5	0	0	0	25	24.4	0	0	32	1	0	0	0	33	33.0
18:45 - 19:00	0	0	27	6	0	0	0	33	33.0	0	0	15	0	0	0	0	15	15.0
Hourly Total	0	1	105	17	0	0	1	124	124.4	1	0	136	9	0	0	0	146	145.2

TOTAL	0	3	454	72	4	1	2	536	539.5	2	7	674	92	5	1	0	781	779.0
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PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

Newbold Verdon

Tuesday 31st October 2023

Junction: 1

Approach: B585 Bosworth Lane

TIME	Left to B585 Barlestone Road									Right to B582 Barlestone Road								
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	11	2	2	0	0	15	16.0	0	1	30	9	2	0	0	42	42.4
07:15 - 07:30	0	0	7	1	1	0	0	9	9.5	0	0	45	13	1	0	0	59	59.5
07:30 - 07:45	0	0	8	8	0	0	0	16	16.0	0	0	44	10	1	0	0	55	55.5
07:45 - 08:00	0	0	9	4	1	1	0	15	16.8	0	2	44	8	0	0	0	54	52.8
Hourly Total	0	0	35	15	4	1	0	55	58.3	0	3	163	40	4	0	0	210	210.2
08:00 - 08:15	0	0	16	8	0	0	0	24	24.0	0	0	44	10	3	0	0	57	58.5
08:15 - 08:30	0	0	24	2	0	0	0	26	26.0	0	1	48	5	1	0	0	55	54.9
08:30 - 08:45	0	0	9	6	0	1	0	16	17.3	0	0	51	9	0	1	0	61	62.3
08:45 - 09:00	0	0	7	7	1	0	0	15	15.5	0	0	45	4	0	0	0	49	49.0
Hourly Total	0	0	56	23	1	1	0	81	82.8	0	1	188	28	4	1	0	222	224.7
09:00 - 09:15	0	0	10	3	0	0	0	13	13.0	0	0	33	6	1	0	0	40	40.5
09:15 - 09:30	0	0	11	4	0	0	0	15	15.0	0	1	22	9	2	0	0	34	34.4
09:30 - 09:45	0	0	7	2	0	0	0	9	9.0	0	1	23	3	1	1	0	29	30.2
09:45 - 10:00	0	0	2	1	0	0	0	3	3.0	0	0	25	4	2	0	0	31	32.0
Hourly Total	0	0	30	10	0	0	0	40	40.0	0	2	103	22	6	1	0	134	137.1

TOTAL	0	0	121	48	5	2	0	176	181.1	0	6	454	90	14	2	0	566	572.0
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16:00 - 16:15	0	0	16	5	2	0	0	23	24.0	0	0	40	13	1	0	0	54	54.5
16:15 - 16:30	0	0	20	3	0	0	0	23	23.0	0	0	46	11	0	0	1	58	59.0
16:30 - 16:45	0	0	13	4	0	0	0	17	17.0	0	0	51	18	1	0	2	72	74.5
16:45 - 17:00	0	0	14	5	0	0	0	19	19.0	0	0	49	8	0	0	0	57	57.0
Hourly Total	0	0	63	17	2	0	0	82	83.0	0	0	186	50	2	0	3	241	245.0
17:00 - 17:15	0	0	16	2	0	0	0	18	18.0	0	0	52	11	0	0	0	63	63.0
17:15 - 17:30	0	0	16	4	0	0	0	20	20.0	0	0	44	4	0	0	0	48	48.0
17:30 - 17:45	0	0	22	2	0	0	0	24	24.0	0	0	42	6	1	0	0	49	49.5
17:45 - 18:00	0	0	12	0	0	0	0	12	12.0	0	0	44	4	0	0	0	48	48.0
Hourly Total	0	0	66	8	0	0	0	74	74.0	0	0	182	25	1	0	0	208	208.5
18:00 - 18:15	0	0	10	1	0	0	0	11	11.0	0	0	30	2	0	0	0	32	32.0
18:15 - 18:30	0	0	11	0	1	0	0	12	12.5	0	0	31	1	0	0	0	32	32.0
18:30 - 18:45	0	0	8	0	0	0	0	8	8.0	0	0	17	2	0	0	0	19	19.0
18:45 - 19:00	0	0	5	0	0	0	0	5	5.0	0	0	22	2	0	0	0	24	24.0
Hourly Total	0	0	34	1	1	0	0	36	36.5	0	0	100	7	0	0	0	107	107.0

TOTAL	0	0	163	26	3	0	0	192	193.5	0	0	468	82	3	0	3	556	560.5
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PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0



Tuesday 31st October 2023

PCUs

From: 1) 07:30

To: 1) 08:30

Class: All Vehicles

Show Peak Hour: ☒

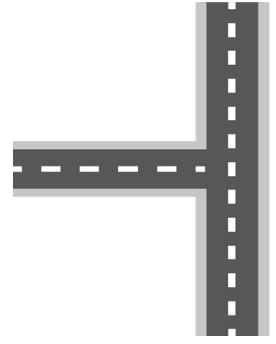
Show PCUs: ☒

Show Session 2

B585 Bosworth Lane	81	82.8	
	221	221.7	

B585 Barlestone Road	
72	387
79.2	397.6



	
259.6	242.9
253	233
B582 Barlestone Road	



Newbold Verdon
 Tuesday 31st October 2023
 Junction: 2
 Approach: A447 North

TIME	Left to B585 Bosworth Lane									Ahead to A447 (S)									Right to Bosworth Road								
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	3	0	0	0	0	3	3.0	0	0	89	19	2	2	1	113	117.6	0	0	5	0	0	0	0	5	5.0
07:15 - 07:30	0	0	4	0	0	0	0	4	4.0	0	5	114	28	0	6	0	153	157.8	0	0	10	3	0	0	0	13	13.0
07:30 - 07:45	0	0	5	0	0	0	0	5	5.0	0	1	148	30	2	5	0	186	192.9	0	0	8	1	0	0	0	9	9.0
07:45 - 08:00	0	0	3	1	0	0	0	4	4.0	0	0	142	35	7	12	0	196	215.1	0	0	10	3	1	0	0	14	14.5
Hourly Total	0	0	15	1	0	0	0	16	16.0	0	6	493	112	11	25	1	648	683.4	0	0	33	7	1	0	0	41	41.5
08:00 - 08:15	0	0	3	0	0	0	0	3	3.0	0	2	122	36	3	9	0	172	184.0	0	0	20	2	3	1	1	27	30.8
08:15 - 08:30	0	0	0	0	0	0	0	0	0.0	0	0	136	26	7	5	0	174	184.0	0	0	16	1	0	0	1	18	19.0
08:30 - 08:45	0	0	1	0	0	0	0	1	1.0	0	2	124	27	3	7	0	163	172.4	0	0	13	2	0	0	0	15	15.0
08:45 - 09:00	0	0	1	0	0	0	0	1	1.0	0	0	92	20	1	6	0	119	127.3	0	0	18	4	1	0	0	23	23.5
Hourly Total	0	0	5	0	0	0	0	5	5.0	0	4	474	109	14	27	0	628	667.7	0	0	67	9	4	1	2	83	88.3
09:00 - 09:15	0	0	1	0	0	0	0	1	1.0	0	0	62	17	2	2	0	83	86.6	0	0	13	0	0	0	0	13	13.0
09:15 - 09:30	0	0	1	1	1	0	0	3	3.5	0	0	41	12	4	4	0	61	68.2	0	0	11	3	0	0	0	14	14.0
09:30 - 09:45	0	0	1	0	0	1	0	2	3.3	0	0	38	15	4	4	0	61	68.2	0	0	10	1	3	1	0	15	17.8
09:45 - 10:00	0	0	0	1	0	0	0	1	1.0	0	1	39	13	3	7	0	63	73.0	0	0	11	2	0	0	0	13	13.0
Hourly Total	0	0	3	2	1	1	0	7	8.8	0	1	180	57	13	17	0	268	296.0	0	0	45	6	3	1	0	55	57.8
TOTAL	0	0	23	3	1	1	0	28	29.8	0	11	1147	278	38	69	1	1544	1647.1	0	0	145	22	8	2	2	179	187.6
16:00 - 16:15	0	0	1	2	0	0	0	3	3.0	0	0	78	9	0	0	0	87	87.0	0	0	9	4	0	0	0	13	13.0
16:15 - 16:30	0	0	0	0	0	0	0	0	0.0	0	1	69	23	2	1	0	96	97.7	0	0	6	1	0	0	0	7	7.0
16:30 - 16:45	0	0	4	0	0	0	1	5	6.0	0	0	96	18	3	1	0	118	120.8	0	0	9	0	1	0	0	10	10.5
16:45 - 17:00	0	0	1	0	0	0	0	1	1.0	0	0	95	10	2	0	0	107	108.0	0	0	12	5	0	0	0	17	17.0
Hourly Total	0	0	6	2	0	0	1	9	10.0	0	1	338	60	7	2	0	408	413.5	0	0	36	10	1	0	0	47	47.5
17:00 - 17:15	0	0	1	0	0	0	0	1	1.0	0	0	53	4	0	1	0	58	59.3	0	0	14	1	1	0	0	16	16.5
17:15 - 17:30	0	0	1	0	0	0	0	1	1.0	0	0	107	95	11	1	2	216	224.8	0	0	14	1	1	0	0	16	16.5
17:30 - 17:45	0	0	3	0	0	0	0	3	3.0	0	1	95	10	2	0	0	108	108.4	0	0	13	2	0	0	0	15	15.0
17:45 - 18:00	0	0	2	0	0	0	0	2	2.0	0	0	70	9	1	0	0	80	80.5	0	0	8	0	0	0	0	8	8.0
Hourly Total	0	0	7	0	0	0	0	7	7.0	0	1	325	118	14	2	2	462	473.0	0	0	49	4	2	0	0	55	56.0
18:00 - 18:15	0	0	0	0	0	0	0	0	0.0	0	0	51	7	0	0	0	58	58.0	0	0	8	1	0	0	0	9	9.0
18:15 - 18:30	0	0	1	0	0	0	0	1	1.0	0	0	53	2	0	2	0	57	59.6	0	0	10	0	0	0	0	10	10.0
18:30 - 18:45	0	0	0	0	0	0	0	0	0.0	0	0	43	1	1	1	0	46	47.8	0	0	4	1	0	0	0	5	5.0
18:45 - 19:00	0	0	1	0	0	0	0	1	1.0	0	0	30	2	0	1	0	33	34.3	0	0	10	0	0	0	0	10	10.0
Hourly Total	0	0	2	0	0	0	0	2	2.0	0	0	177	12	1	4	0	194	199.7	0	0	32	2	0	0	0	34	34.0
TOTAL	0	0	15	2	0	0	1	18	19.0	0	2	840	190	22	8	2	1064	1086.2	0	0	117	16	3	0	0	136	137.5

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

Newbold Verdon
 Tuesday 31st October 2023
 Junction: 2
 Approach: B585 Bosworth Lane

TIME	Left to A447 (S)									Ahead to Bosworth Road									Right to A447 (N)								
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	22	7	1	0	0	30	30.5	0	0	20	13	1	0	0	34	34.5	0	0	1	0	0	0	0	1	1.0
07:15 - 07:30	1	0	18	3	1	1	0	24	25.0	0	0	17	11	0	0	1	29	30.0	0	0	3	2	0	0	0	5	5.0
07:30 - 07:45	0	0	33	8	4	1	0	46	49.3	0	0	33	5	0	0	0	38	38.0	0	0	2	1	0	0	0	3	3.0
07:45 - 08:00	0	0	16	5	1	2	0	24	27.1	0	0	32	5	0	0	0	37	37.0	0	0	1	0	0	0	0	1	1.0
Hourly Total	1	0	89	23	7	4	0	124	131.9	0	0	102	34	1	0	1	138	139.5	0	0	7	3	0	0	0	10	10.0
08:00 - 08:15	0	0	28	5	1	1	0	35	36.8	0	0	33	5	1	0	0	39	39.5	0	0	1	0	0	0	0	1	1.0
08:15 - 08:30	0	0	14	0	1	2	0	17	20.1	0	0	23	9	1	0	0	33	33.5	0	0	0	1	0	0	0	1	1.0
08:30 - 08:45	0	0	32	6	0	1	0	39	40.3	0	0	45	3	3	0	3	54	58.5	0	0	1	0	1	0	0	2	2.5
08:45 - 09:00	0	0	15	6	0	0	0	21	21.0	0	0	32	4	0	0	1	37	38.0	0	0	0	0	1	0	0	1	1.5
Hourly Total	0	0	89	17	2	4	0	112	118.2	0	0	133	21	5	0	4	163	169.5	0	0	2	1	2	0	0	5	6.0
09:00 - 09:15	0	0	21	4	2	0	0	27	28.0	0	0	17	2	0	0	0	19	19.0	0	0	0	0	0	0	0	0	0.0
09:15 - 09:30	0	0	16	4	0	0	0	20	20.0	0	0	12	2	0	0	0	14	14.0	0	0	0	0	0	0	0	0	0.0
09:30 - 09:45	0	0	20	3	3	0	0	26	27.5	0	0	12	5	0	0	1	18	19.0	0	0	0	0	0	0	0	0	0.0
09:45 - 10:00	0	0	16	2	1	0	0	19	19.5	0	0	12	6	0	0	1	19	20.0	0	0	1	0	0	0	0	1	1.0
Hourly Total	0	0	73	13	6	0	0	92	95.0	0	0	53	15	0	0	2	70	72.0	0	0	1	0	0	0	0	1	1.0
TOTAL	1	0	251	53	15	8	0	328	345.1	0	0	288	70	6	0	7	371	381.0	0	0	10	4	2	0	0	16	17.0
16:00 - 16:15	1	0	21	3	0	0	0	25	24.2	0	0	20	6	0	0	0	26	26.0	0	0	0	1	0	0	0	1	1.0
16:15 - 16:30	0	0	21	4	0	1	0	26	27.3	0	0	28	7	0	0	0	35	35.0	0	0	3	1	0	0	0	4	4.0
16:30 - 16:45	0	0	14	3	1	0	0	18	18.5	0	0	25	9	0	0	0	34	34.0	0	0	2	1	0	0	0	3	3.0
16:45 - 17:00	0	0	17	4	0	0	0	21	21.0	0	0	32	8	1	0	0	41	41.5	0	0	1	0	0	0	0	1	1.0
Hourly Total	1	0	73	14	1	1	0	90	91.0	0	0	105	30	1	0	0	136	136.5	0	0	6	3	0	0	0	9	9.0
17:00 - 17:15	0	0	22	2	0	0	0	24	24.0	0	0	29	3	0	0	1	33	34.0	0	0	0	0	0	0	0	0	0.0
17:15 - 17:30	0	0	28	2	1	0	0	31	31.5	0	0	26	6	0	0	0	32	32.0	0	0	0	0	0	0	0	0	0.0
17:30 - 17:45	0	0	24	3	0	0	0	27	27.0	0	0	37	4	1	0	0	42	42.5	0	0	2	0	0	0	0	2	2.0
17:45 - 18:00	0	0	17	0	0	0	0	17	17.0	0	0	25	4	0	0	0	29	29.0	0	0	3	0	0	0	0	3	3.0
Hourly Total	0	0	91	7	1	0	0	99	99.5	0	0	117	17	1	0	1	136	137.5	0	0	5	0	0	0	0	5	5.0
18:00 - 18:15	0	0	12	0	1	0	0	13	13.5	0	0	16	2	0	0	0	18	18.0	0	0	0	0	0	0	0	0	0.0
18:15 - 18:30	0	0	9	2	0	0	0	11	11.0	0	0	21	1	0	0	1	23	24.0	0	0	3	0	0	0	0	3	3.0
18:30 - 18:45	0	0	10	2	0	0	0	12	12.0	0	0	19	1	1	0	0	21	21.5	0	1	0	0	0	0	0	1	0.4
18:45 - 19:00	0	0	13	0	0	0	0	13	13.0	0	0	20	4	0	1	0	25	26.3	0	0	0	0	0	0	0	0	0.0
Hourly Total	0	0	44	4	1	0	0	49	49.5	0	0	76	8	1	1	1	87	89.8	0	1	3	0	0	0	0	4	3.4
TOTAL	1	0	208	25	3	1	0	238	240.0	0	0	298	55	3	1	2	359	363.8	0	1	14	3	0	0	0	18	17.4

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

Newbold Verdon
Tuesday 31st October 2023
Junction: 2
Approach: A447 South

	Left to Bosworth Road									Ahead to A447 (N)									Right to B585 Bosworth Lane								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	10	4	1	0	0	15	15.5	0	0	46	12	4	0	0	62	64.0	0	0	14	3	2	0	0	19	20.0
07:15 - 07:30	0	0	13	5	0	0	0	18	18.0	0	1	57	11	4	1	0	74	76.7	0	0	9	2	1	0	0	12	12.5
07:30 - 07:45	0	0	36	2	1	1	0	40	41.8	0	0	83	11	3	1	0	98	100.8	0	0	16	4	0	0	0	20	20.0
07:45 - 08:00	0	0	42	8	1	0	0	51	51.5	0	0	60	20	4	4	0	88	95.2	0	0	22	6	1	1	1	31	33.8
Hourly Total	0	0	101	19	3	1	0	124	126.8	0	1	246	54	15	6	0	322	336.7	0	0	61	15	4	1	1	82	86.3
08:00 - 08:15	0	0	63	9	0	0	0	72	72.0	0	0	62	10	4	2	0	78	82.6	0	0	21	9	1	0	0	31	31.5
08:15 - 08:30	0	0	59	7	1	0	0	67	67.5	0	0	83	9	0	2	0	94	96.6	0	1	37	6	1	0	0	45	44.9
08:30 - 08:45	0	0	38	1	2	0	1	42	44.0	0	0	45	14	1	0	0	60	60.5	0	0	5	6	3	0	0	14	15.5
08:45 - 09:00	0	0	26	8	0	0	0	34	34.0	0	0	61	13	6	2	0	82	87.6	0	0	16	2	0	0	0	18	18.0
Hourly Total	0	0	186	25	3	0	1	215	217.5	0	0	251	46	11	6	0	314	327.3	0	1	79	23	5	0	0	108	109.9
09:00 - 09:15	0	0	14	3	0	0	0	17	17.0	0	0	53	14	2	2	0	71	74.6	0	0	15	4	0	0	0	19	19.0
09:15 - 09:30	0	0	15	2	1	0	0	18	18.5	0	0	39	9	2	3	0	53	57.9	0	0	13	4	1	0	0	18	18.5
09:30 - 09:45	0	0	26	4	0	0	0	30	30.0	0	0	27	7	3	2	0	39	43.1	0	0	13	1	0	0	0	14	14.0
09:45 - 10:00	0	0	14	4	1	0	0	19	19.5	0	0	32	6	3	1	0	42	44.8	0	0	4	1	1	0	0	6	6.5
Hourly Total	0	0	69	13	2	0	0	84	85.0	0	0	151	36	10	8	0	205	220.4	0	0	45	10	2	0	0	57	58.0
TOTAL	0	0	356	57	8	1	1	423	429.3	0	1	648	136	36	20	0	841	884.4	0	1	185	48	11	1	1	247	254.2
16:00 - 16:15	0	0	33	5	1	0	0	39	39.5	1	2	82	29	2	1	0	117	117.3	0	0	25	8	2	0	0	35	36.0
16:15 - 16:30	0	0	36	6	0	1	0	43	44.3	1	1	88	21	3	4	1	119	125.3	0	0	32	5	0	0	0	37	37.0
16:30 - 16:45	0	0	20	2	0	0	0	22	22.0	0	1	95	13	1	1	0	111	112.2	0	0	27	8	0	0	0	35	35.0
16:45 - 17:00	0	0	24	5	0	0	0	29	29.0	0	0	102	20	3	0	0	125	126.5	0	0	34	4	0	0	0	38	38.0
Hourly Total	0	0	113	18	1	1	0	133	134.8	2	4	367	83	9	6	1	472	481.3	0	0	118	25	2	0	0	145	146.0
17:00 - 17:15	0	0	16	7	1	0	0	24	24.5	0	1	113	10	4	0	0	128	129.4	0	0	35	4	0	0	0	39	39.0
17:15 - 17:30	0	0	15	4	0	0	0	19	19.0	0	3	102	12	0	1	0	118	117.5	0	0	26	4	0	0	0	30	30.0
17:30 - 17:45	0	0	31	1	0	0	0	32	32.0	0	1	83	7	1	1	0	93	94.2	0	0	28	3	1	0	0	32	32.5
17:45 - 18:00	0	0	27	2	0	0	0	29	29.0	0	1	72	7	1	0	0	81	80.9	0	0	30	2	0	0	0	32	32.0
Hourly Total	0	0	89	14	1	0	0	104	104.5	0	6	370	36	6	2	0	420	422.0	0	0	119	13	1	0	0	133	133.5
18:00 - 18:15	0	0	22	0	0	0	0	22	22.0	0	2	63	2	1	1	0	69	69.6	0	0	19	1	0	1	0	21	22.3
18:15 - 18:30	0	1	11	1	0	0	0	13	12.4	0	1	52	4	0	0	0	57	56.4	0	0	20	1	0	0	0	21	21.0
18:30 - 18:45	0	0	17	0	0	0	0	17	17.0	0	0	35	6	1	0	0	42	42.5	0	0	11	0	0	0	0	11	11.0
18:45 - 19:00	0	0	19	0	0	0	0	19	19.0	0	1	31	2	0	1	0	35	35.7	0	0	7	1	0	0	0	8	8.0
Hourly Total	0	1	69	1	0	0	0	71	70.4	0	4	181	14	2	2	0	203	204.2	0	0	57	3	0	1	0	61	62.3
TOTAL	0	1	271	33	2	1	0	308	309.7	2	14	918	133	17	10	1	1095	1107.5	0	0	294	41	3	1	0	339	341.8

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

Newbold Verdon
 Tuesday 31st October 2023
 Junction: 2
 Approach: Bosworth Road

	Left to A447 (N)										Ahead to B585 Bosworth Lane										Right to A447 (S)									
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs			
07:00 - 07:15	0	0	7	0	1	0	0	8	8.5	0	1	29	9	1	0	0	40	39.9	0	0	11	4	0	0	0	15	15.0			
07:15 - 07:30	0	0	5	2	0	0	0	7	7.0	0	0	21	13	0	0	0	34	34.0	0	0	12	3	0	0	0	15	15.0			
07:30 - 07:45	0	0	5	1	1	0	1	8	9.5	0	0	26	10	1	0	0	37	37.5	0	0	15	6	1	0	0	22	22.5			
07:45 - 08:00	0	0	12	1	0	0	0	13	13.0	0	1	22	7	0	0	0	30	29.4	0	0	14	0	1	0	0	15	15.5			
Hourly Total	0	0	29	4	2	0	1	36	38.0	0	2	98	39	2	0	0	141	140.8	0	0	52	13	2	0	0	67	68.0			
08:00 - 08:15	0	0	5	6	0	1	0	12	13.3	0	0	29	5	2	0	0	36	37.0	0	0	16	3	1	0	0	20	20.5			
08:15 - 08:30	0	0	10	1	0	0	2	13	15.0	0	0	31	6	0	0	0	37	37.0	0	0	19	4	1	0	0	24	24.5			
08:30 - 08:45	0	0	8	1	0	0	2	11	13.0	0	0	36	6	0	0	0	42	42.0	0	0	24	6	0	0	1	31	32.0			
08:45 - 09:00	0	0	8	1	0	0	1	10	11.0	0	0	39	7	1	0	0	47	47.5	0	0	29	4	0	0	1	34	35.0			
Hourly Total	0	0	31	9	0	1	5	46	52.3	0	0	135	24	3	0	0	162	163.5	0	0	88	17	2	0	2	109	112.0			
09:00 - 09:15	0	0	12	3	0	0	0	15	15.0	0	0	24	3	1	0	0	28	28.5	0	0	16	3	0	0	2	21	23.0			
09:15 - 09:30	0	0	12	2	1	0	0	15	15.5	0	0	17	6	1	0	0	24	24.5	0	0	19	5	2	0	0	26	27.0			
09:30 - 09:45	0	0	9	4	0	0	0	13	13.0	0	0	10	4	0	0	0	14	14.0	0	0	13	4	1	0	0	18	18.5			
09:45 - 10:00	0	0	7	1	0	0	1	9	10.0	0	0	20	3	1	0	0	24	24.5	0	0	14	5	0	0	0	19	19.0			
Hourly Total	0	0	40	10	1	0	1	52	53.5	0	0	71	16	3	0	0	90	91.5	0	0	62	17	3	0	2	84	87.5			
TOTAL	0	0	100	23	3	1	7	134	143.8	0	2	304	79	8	0	0	393	395.8	0	0	202	47	7	0	4	260	267.5			
16:00 - 16:15	0	0	10	1	0	0	0	11	11.0	0	0	26	6	0	0	0	32	32.0	0	0	28	4	0	0	1	33	34.0			
16:15 - 16:30	0	0	10	2	0	0	0	12	12.0	0	0	32	10	0	0	1	43	44.0	0	0	25	4	1	0	0	30	30.5			
16:30 - 16:45	0	0	16	0	0	0	0	16	16.0	0	0	31	9	0	0	1	41	42.0	0	0	19	6	1	0	0	26	26.5			
16:45 - 17:00	0	0	7	3	0	0	0	10	10.0	0	0	29	4	0	0	0	33	33.0	0	0	28	4	0	0	0	32	32.0			
Hourly Total	0	0	43	6	0	0	0	49	49.0	0	0	118	29	0	0	2	149	151.0	0	0	100	18	2	0	1	121	123.0			
17:00 - 17:15	0	0	14	2	0	0	0	16	16.0	0	0	35	6	0	0	0	41	41.0	0	0	29	4	1	0	0	34	34.5			
17:15 - 17:30	0	0	16	1	0	0	1	18	19.0	0	0	29	1	0	0	0	30	30.0	0	0	25	2	0	0	0	27	27.0			
17:30 - 17:45	0	0	15	1	1	0	0	17	17.5	0	0	26	6	0	0	0	32	32.0	0	0	25	0	0	0	0	25	25.0			
17:45 - 18:00	0	0	11	3	1	0	0	15	15.5	0	0	20	1	0	0	0	21	21.0	0	0	19	1	0	0	0	20	20.0			
Hourly Total	0	0	56	7	2	0	1	66	68.0	0	0	110	14	0	0	0	124	124.0	0	0	98	7	1	0	0	106	106.5			
18:00 - 18:15	0	0	13	0	0	0	0	13	13.0	0	0	18	1	0	0	0	19	19.0	0	0	16	2	0	0	0	18	18.0			
18:15 - 18:30	0	0	8	2	0	0	1	11	12.0	0	0	16	1	0	0	0	17	17.0	0	0	10	2	0	0	0	12	12.0			
18:30 - 18:45	0	0	6	0	0	0	0	6	6.0	0	0	15	3	0	0	0	18	18.0	0	0	8	1	0	0	0	9	9.0			
18:45 - 19:00	0	0	10	0	0	0	0	10	10.0	0	0	10	0	1	0	0	11	11.5	0	0	15	0	0	0	0	15	15.0			
Hourly Total	0	0	37	2	0	0	1	40	41.0	0	0	59	5	1	0	0	65	65.5	0	0	49	5	0	0	0	54	54.0			
TOTAL	0	0	136	15	2	0	2	155	158.0	0	0	287	48	1	0	2	338	340.5	0	0	247	30	3	0	1	281	283.0			

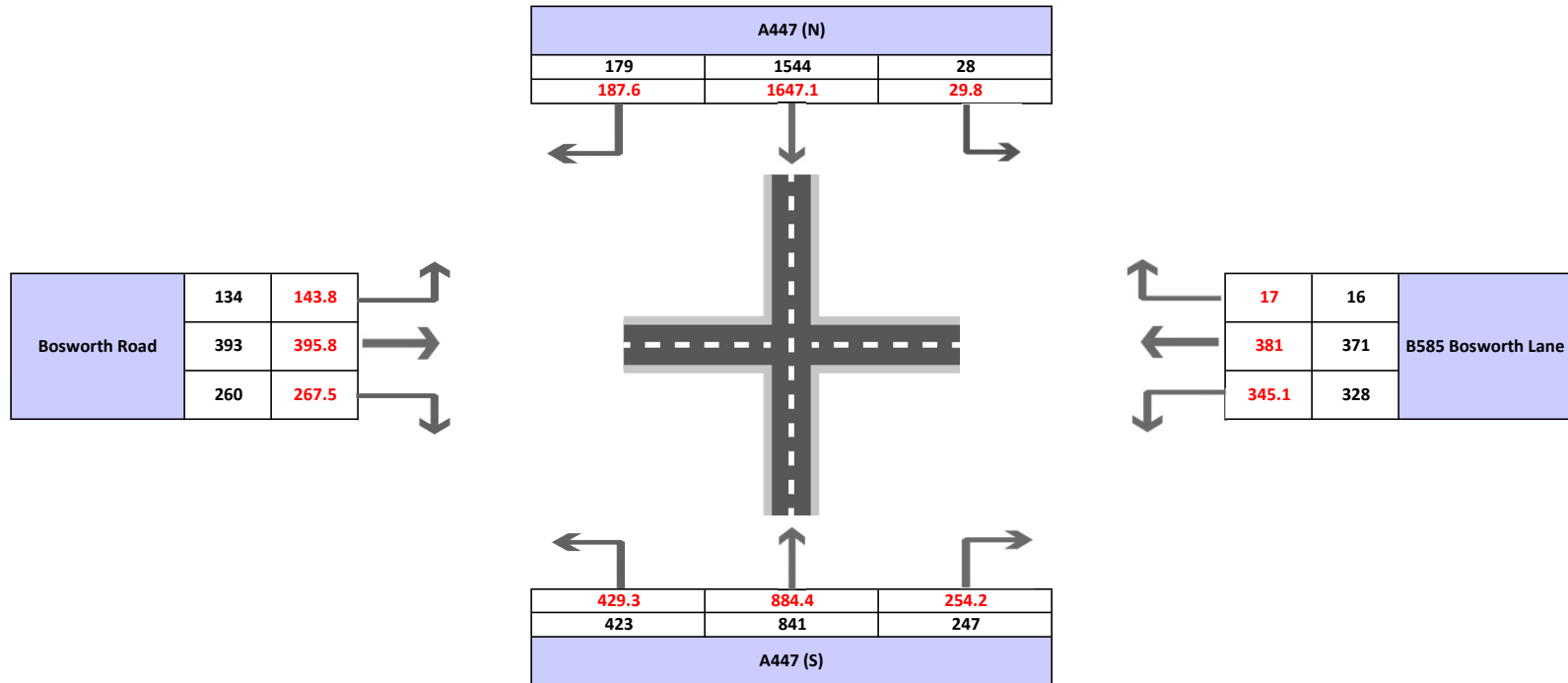
PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

Tuesday 31st October 2023
PCUs

From: 1) 07:00 Show Peak Hour: ☐

To: 1) 10:00 Show PCUs: ☒

Class: All Vehicles Show Session 2



Newbold Verdon
 Tuesday 31st October 2023
 Junction: 3
 Approach: Newbold Road

TIME	Left to B582 Manor Road									Ahead to Lockeymead Drive									Right to B582 Hunts Lane								
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	0	2	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	5	0	0	0	0	5	5.0
07:15 - 07:30	0	0	2	0	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	1	1	0	0	0	2	2.0
07:30 - 07:45	0	0	3	0	0	0	0	3	3.0	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0
07:45 - 08:00	0	0	4	0	0	0	0	4	4.0	0	0	0	0	0	0	0	0	0.0	0	0	6	0	0	0	0	6	6.0
Hourly Total	0	0	9	2	0	0	0	11	11.0	0	0	0	0	0	0	0	0	0.0	0	0	13	1	0	0	0	14	14.0
08:00 - 08:15	0	0	4	0	0	0	0	4	4.0	0	0	0	0	0	0	0	0	0.0	0	0	4	2	0	0	0	6	6.0
08:15 - 08:30	0	0	3	1	0	0	0	4	4.0	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0
08:30 - 08:45	0	0	12	0	0	0	0	12	12.0	0	0	0	0	0	0	0	0	0.0	0	0	4	0	0	0	0	4	4.0
08:45 - 09:00	0	0	4	0	0	0	0	4	4.0	0	0	1	0	0	0	0	0	1.0	0	0	2	0	0	0	0	2	2.0
Hourly Total	0	0	23	1	0	0	0	24	24.0	0	0	1	0	0	0	0	1	1.0	0	0	11	2	0	0	0	13	13.0
09:00 - 09:15	0	0	4	1	0	0	0	5	5.0	0	0	0	0	0	0	0	0	0.0	0	0	2	1	0	0	0	3	3.0
09:15 - 09:30	0	0	2	0	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0
09:30 - 09:45	0	0	4	0	0	0	0	4	4.0	0	0	1	0	0	0	0	0	1.0	0	0	3	2	0	0	0	5	5.0
09:45 - 10:00	0	0	4	0	0	0	0	4	4.0	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0
Hourly Total	0	0	14	1	0	0	0	15	15.0	0	0	1	0	0	0	0	1	1.0	0	0	8	3	0	0	0	11	11.0
TOTAL	0	0	46	4	0	0	0	50	50.0	0	0	2	0	0	0	0	2	2.0	0	0	32	6	0	0	0	38	38.0
16:00 - 16:15	0	0	6	0	0	0	0	6	6.0	0	0	2	0	0	0	0	2	2.0	0	0	6	2	0	0	0	8	8.0
16:15 - 16:30	0	0	5	0	0	0	0	5	5.0	0	0	0	0	0	0	0	0	0.0	0	0	7	0	1	0	0	8	8.5
16:30 - 16:45	0	0	3	1	0	0	0	4	4.0	0	0	2	0	0	0	0	2	2.0	0	0	1	1	0	0	0	2	2.0
16:45 - 17:00	0	0	3	2	0	0	0	5	5.0	0	0	0	0	0	0	0	0	0.0	0	0	2	1	0	0	0	3	3.0
Hourly Total	0	0	17	3	0	0	0	20	20.0	0	0	4	0	0	0	0	4	4.0	0	0	16	4	1	0	0	21	21.5
17:00 - 17:15	0	0	6	0	0	0	0	6	6.0	0	0	1	1	0	0	0	2	2.0	0	0	7	0	0	0	0	7	7.0
17:15 - 17:30	0	0	5	1	0	0	0	6	6.0	0	0	5	0	0	0	0	5	5.0	0	0	6	1	2	0	0	9	10.0
17:30 - 17:45	0	0	7	1	0	0	0	8	8.0	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0
17:45 - 18:00	0	0	5	1	0	0	0	6	6.0	0	0	1	0	0	0	0	1	1.0	0	0	2	0	0	0	0	2	2.0
Hourly Total	0	0	23	3	0	0	0	26	26.0	0	0	8	1	0	0	0	9	9.0	0	0	15	1	2	0	0	18	19.0
18:00 - 18:15	0	0	4	2	0	0	0	6	6.0	0	0	0	0	0	0	0	0	0.0	0	0	5	2	0	0	0	7	7.0
18:15 - 18:30	0	0	4	0	0	0	0	4	4.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0
18:30 - 18:45	0	0	3	0	0	0	0	3	3.0	0	0	3	0	0	0	0	3	3.0	0	0	2	0	0	0	0	2	2.0
18:45 - 19:00	1	0	8	0	0	0	0	9	8.2	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0
Hourly Total	1	0	19	2	0	0	0	22	21.2	0	0	4	0	0	0	0	4	4.0	0	0	10	2	0	0	0	12	12.0
TOTAL	1	0	59	8	0	0	0	68	67.2	0	0	16	1	0	0	0	17	17.0	0	0	41	7	3	0	0	51	52.5

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

Newbold Verdon
 Tuesday 31st October 2023
 Junction: 3
 Approach: B582 Manor Road

	Left to Lockeymead Drive										Ahead to B582 Hunts Lane										Right to Newbold Road									
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs			
07:00 - 07:15	0	0	3	0	0	0	0	3	3.0	0	0	43	18	5	0	1	67	70.5	0	0	1	0	0	0	0	1	1.0			
07:15 - 07:30	0	0	1	0	0	0	0	1	1.0	0	0	47	22	1	0	0	70	70.5	0	0	0	0	0	0	0	0	0.0			
07:30 - 07:45	0	0	4	0	0	0	0	4	4.0	0	0	57	21	3	1	0	82	84.8	0	0	2	0	1	0	0	3	3.5			
07:45 - 08:00	0	0	3	1	0	0	0	4	4.0	0	0	76	22	5	0	1	104	107.5	0	0	6	0	0	0	0	6	6.0			
Hourly Total	0	0	11	1	0	0	0	12	12.0	0	0	223	83	14	1	2	323	333.3	0	0	9	0	1	0	0	10	10.5			
08:00 - 08:15	0	0	7	0	0	0	0	7	7.0	0	0	85	16	6	1	1	109	114.3	0	0	4	0	0	0	0	4	4.0			
08:15 - 08:30	0	0	5	0	0	0	0	5	5.0	0	0	67	16	6	3	1	93	100.9	0	0	2	0	0	0	0	2	2.0			
08:30 - 08:45	0	0	3	1	1	0	0	5	5.5	0	0	68	14	3	0	3	88	92.5	0	0	3	0	0	0	0	3	3.0			
08:45 - 09:00	0	0	6	1	0	0	0	7	7.0	0	0	63	5	4	0	0	72	74.0	0	0	8	0	0	0	0	8	8.0			
Hourly Total	0	0	21	2	1	0	0	24	24.5	0	0	283	51	19	4	5	362	381.7	0	0	17	0	0	0	0	17	17.0			
09:00 - 09:15	0	0	4	1	0	0	0	5	5.0	0	0	40	3	6	0	0	49	52.0	0	0	2	0	1	0	0	3	3.5			
09:15 - 09:30	0	0	3	1	1	0	0	5	5.5	0	0	46	13	3	0	1	63	65.5	0	0	2	1	0	0	0	3	3.0			
09:30 - 09:45	0	0	1	0	0	0	0	1	1.0	0	0	46	12	2	0	1	61	63.0	0	0	2	0	0	0	0	2	2.0			
09:45 - 10:00	0	0	4	1	0	0	0	5	5.0	0	0	33	11	5	0	1	50	53.5	0	0	2	0	0	0	0	2	2.0			
Hourly Total	0	0	12	3	1	0	0	16	16.5	0	0	165	39	16	0	3	223	234.0	0	0	8	1	1	0	0	10	10.5			
TOTAL	0	0	44	6	2	0	0	52	53.0	0	0	671	173	49	5	10	908	949.0	0	0	34	1	2	0	0	37	38.0			
16:00 - 16:15	0	0	11	1	0	0	0	12	12.0	0	2	105	24	2	0	0	133	132.8	0	0	2	1	0	0	0	3	3.0			
16:15 - 16:30	0	0	12	2	0	0	0	14	14.0	0	1	107	19	1	0	0	128	127.9	0	0	7	0	0	0	0	7	7.0			
16:30 - 16:45	0	0	6	5	0	0	0	11	11.0	0	0	115	18	1	0	0	134	134.5	0	0	4	3	0	0	0	7	7.0			
16:45 - 17:00	0	0	14	1	0	0	0	15	15.0	0	0	101	15	0	1	0	117	118.3	0	0	4	1	0	0	0	5	5.0			
Hourly Total	0	0	43	9	0	0	0	52	52.0	0	3	428	76	4	1	0	512	513.5	0	0	17	5	0	0	0	22	22.0			
17:00 - 17:15	0	0	14	0	0	0	0	14	14.0	0	0	122	16	2	0	1	141	143.0	0	0	7	1	0	0	0	8	8.0			
17:15 - 17:30	0	0	6	1	0	0	0	7	7.0	0	1	126	15	2	0	0	144	144.4	0	0	4	0	0	0	0	4	4.0			
17:30 - 17:45	0	0	18	1	0	0	0	19	19.0	0	2	111	7	0	0	0	120	118.8	0	0	1	1	0	0	0	2	2.0			
17:45 - 18:00	0	0	10	1	0	0	0	11	11.0	0	1	79	8	0	0	0	88	87.4	0	0	2	0	0	0	0	2	2.0			
Hourly Total	0	0	48	3	0	0	0	51	51.0	0	4	438	46	4	0	1	493	493.6	0	0	14	2	0	0	0	16	16.0			
18:00 - 18:15	0	0	16	1	0	0	0	17	17.0	0	0	96	3	0	0	1	100	101.0	0	0	3	0	0	0	0	3	3.0			
18:15 - 18:30	0	0	9	0	0	0	0	9	9.0	0	0	58	1	0	0	0	59	59.0	0	0	3	0	0	0	0	3	3.0			
18:30 - 18:45	0	0	6	1	0	0	0	7	7.0	0	1	69	2	0	0	0	72	71.4	0	1	1	0	0	0	0	2	1.4			
18:45 - 19:00	0	0	10	0	0	0	0	10	10.0	0	0	38	7	0	0	1	46	47.0	0	0	4	0	0	0	0	4	4.0			
Hourly Total	0	0	41	2	0	0	0	43	43.0	0	1	261	13	0	0	2	277	278.4	0	1	11	0	0	0	0	12	11.4			
TOTAL	0	0	132	14	0	0	0	146	146.0	0	8	1127	135	8	1	3	1282	1285.5	0	1	42	7	0	0	0	50	49.4			

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

Newbold Verdon
 Tuesday 31st October 2023
 Junction: 3
 Approach: Lockymead Drive

	Left to B582 Hunts Lane									Ahead to Newbold Road									Right to B582 Manor Road									
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	
07:00 - 07:15	0	0	5	0	0	0	0	5	5.0	0	1	1	1	0	0	0	3	2.4	0	0	6	2	0	0	0	8	8.0	
07:15 - 07:30	0	0	1	0	0	0	0	1	1.0	0	0	4	0	0	0	0	4	4.0	0	0	16	1	0	0	0	17	17.0	
07:30 - 07:45	0	0	6	0	0	0	0	6	6.0	0	0	3	0	0	0	0	3	3.0	0	0	15	2	0	0	0	17	17.0	
07:45 - 08:00	0	0	2	0	0	0	0	2	2.0	0	0	1	0	0	0	0	1	1.0	0	0	12	1	0	0	0	13	13.0	
Hourly Total	0	0	14	0	0	0	0	14	14.0	0	1	9	1	0	0	0	11	10.4	0	0	49	6	0	0	0	55	55.0	
08:00 - 08:15	0	0	4	1	0	0	0	5	5.0	0	0	2	0	0	0	0	2	2.0	0	0	16	1	0	0	0	17	17.0	
08:15 - 08:30	0	0	2	0	0	0	0	2	2.0	0	0	3	0	0	0	0	3	3.0	0	0	23	0	0	0	0	23	23.0	
08:30 - 08:45	0	0	3	0	0	0	0	3	3.0	0	0	1	0	0	0	0	1	1.0	0	0	9	3	0	0	0	12	12.0	
08:45 - 09:00	0	0	2	1	0	0	0	3	3.0	0	0	1	0	0	0	0	1	1.0	0	0	7	0	0	0	0	7	7.0	
Hourly Total	0	0	11	2	0	0	0	13	13.0	0	0	7	0	0	0	0	7	7.0	0	0	55	4	0	0	0	59	59.0	
09:00 - 09:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	7	1	0	0	0	8	8.0	
09:15 - 09:30	0	0	2	0	0	0	0	2	2.0	0	0	3	1	0	0	0	4	4.0	0	0	7	0	0	0	0	7	7.0	
09:30 - 09:45	0	0	2	1	0	0	0	3	3.0	0	0	1	2	0	0	0	3	3.0	0	0	6	0	1	0	0	7	7.5	
09:45 - 10:00	0	0	3	0	0	0	0	3	3.0	0	0	0	1	0	0	0	1	1.0	0	0	4	1	0	0	0	5	5.0	
Hourly Total	0	0	7	1	0	0	0	8	8.0	0	0	4	4	0	0	0	8	8.0	0	0	24	2	1	0	0	0	27	27.5
TOTAL	0	0	32	3	0	0	0	35	35.0	0	1	20	5	0	0	0	26	25.4	0	0	128	12	1	0	0	0	141	141.5
16:00 - 16:15	0	0	2	0	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	1	1	0	0	0	2	2.0	
16:15 - 16:30	0	0	4	0	0	0	0	4	4.0	0	0	1	0	0	0	0	1	1.0	0	0	12	1	0	0	0	13	13.0	
16:30 - 16:45	0	0	5	0	0	0	0	5	5.0	0	0	0	0	0	0	0	0	0.0	0	0	7	0	0	0	0	7	7.0	
16:45 - 17:00	0	0	1	1	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	7	1	0	0	0	8	8.0	
Hourly Total	0	0	12	1	0	0	0	13	13.0	0	0	1	0	0	0	0	1	1.0	0	0	27	3	0	0	0	30	30.0	
17:00 - 17:15	0	0	1	0	0	0	0	1	1.0	0	0	2	0	0	0	0	2	2.0	0	0	6	0	0	0	0	6	6.0	
17:15 - 17:30	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0	0	0	9	1	0	0	0	10	10.0	
17:30 - 17:45	0	0	3	0	0	0	0	3	3.0	0	0	0	1	0	0	0	1	1.0	0	0	4	1	0	0	0	5	5.0	
17:45 - 18:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	10	2	0	0	0	12	12.0	
Hourly Total	0	0	5	0	0	0	0	5	5.0	0	0	3	1	0	0	0	4	4.0	0	0	29	4	0	0	0	33	33.0	
18:00 - 18:15	0	0	4	1	0	0	0	5	5.0	0	0	0	0	0	0	0	0	0.0	0	0	4	1	0	0	0	5	5.0	
18:15 - 18:30	0	0	1	0	0	0	0	1	1.0	0	0	4	0	0	0	0	4	4.0	0	0	7	0	0	0	0	7	7.0	
18:30 - 18:45	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0	0	1	7	1	0	0	0	9	8.4	
18:45 - 19:00	0	0	3	1	0	0	0	4	4.0	0	0	0	0	0	0	0	0	0.0	0	0	9	1	0	0	0	10	10.0	
Hourly Total	0	0	9	2	0	0	0	11	11.0	0	0	4	0	0	0	0	4	4.0	0	1	27	3	0	0	0	0	31	30.4
TOTAL	0	0	26	3	0	0	0	29	29.0	0	0	8	1	0	0	0	9	9.0	0	1	83	10	0	0	0	0	94	93.4

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

Newbold Verdon
 Tuesday 31st October 2023
 Junction: 3
 Approach: B582 Hunts Lane

	Left to Newbold Road										Ahead to B582 Manor Road										Right to Lockeymead Drive									
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs			
07:00 - 07:15	0	0	1	0	1	0	0	2	2.5	0	0	91	27	1	0	0	119	119.5	0	0	0	0	0	0	0	0	0.0			
07:15 - 07:30	0	0	1	0	2	0	0	3	4.0	0	1	138	25	4	1	0	169	171.7	0	0	0	0	0	0	0	0	0.0			
07:30 - 07:45	0	0	3	1	0	0	0	4	4.0	0	0	140	20	3	1	0	164	166.8	0	0	0	0	0	1	0	1	2.3			
07:45 - 08:00	0	0	3	0	0	0	0	3	3.0	0	1	137	21	5	1	2	167	172.2	0	0	2	1	0	0	0	3	3.0			
Hourly Total	0	0	8	1	3	0	0	12	13.5	0	2	506	93	13	3	2	619	630.2	0	0	2	1	0	1	0	4	5.3			
08:00 - 08:15	0	0	0	0	0	0	0	0	0.0	0	1	98	23	0	1	0	123	123.7	0	0	2	0	0	0	0	2	2.0			
08:15 - 08:30	0	0	7	2	0	1	0	10	11.3	0	0	160	20	3	0	1	184	186.5	0	0	3	0	0	0	0	3	3.0			
08:30 - 08:45	0	0	3	1	0	0	0	4	4.0	0	2	119	14	2	2	0	139	141.4	0	0	0	0	0	0	0	0	0.0			
08:45 - 09:00	0	0	0	0	0	0	0	0	0.0	0	0	83	14	1	2	0	100	103.1	0	0	0	0	0	0	0	0	0.0			
Hourly Total	0	0	10	3	0	1	0	14	15.3	0	3	460	71	6	5	1	546	554.7	0	0	5	0	0	0	0	5	5.0			
09:00 - 09:15	0	0	2	0	0	0	0	2	2.0	0	0	88	12	7	0	0	107	110.5	0	0	0	0	0	0	0	0	0.0			
09:15 - 09:30	0	0	0	2	0	0	0	2	2.0	0	0	51	18	2	0	1	72	74.0	0	0	1	0	0	0	0	1	1.0			
09:30 - 09:45	0	0	1	0	0	0	0	1	1.0	0	2	45	6	2	0	0	55	54.8	0	0	0	1	0	0	0	1	1.0			
09:45 - 10:00	0	0	0	0	0	0	0	0	0.0	0	0	46	5	1	0	0	52	52.5	0	0	2	0	0	0	0	2	2.0			
Hourly Total	0	0	3	2	0	0	0	5	5.0	0	2	230	41	12	0	1	286	291.8	0	0	3	1	0	0	0	4	4.0			
TOTAL	0	0	21	6	3	1	0	31	33.8	0	7	1196	205	31	8	4	1451	1476.7	0	0	10	2	0	1	0	13	14.3			
16:00 - 16:15	0	0	1	0	0	0	0	1	1.0	0	0	59	14	0	0	0	73	73.0	0	0	0	0	0	0	0	0	0.0			
16:15 - 16:30	0	0	2	0	0	0	0	2	2.0	0	0	80	17	1	0	2	100	102.5	0	0	2	0	0	0	0	2	2.0			
16:30 - 16:45	0	0	2	1	0	0	0	3	3.0	0	0	70	24	2	0	0	98	101.0	0	0	2	0	0	0	0	2	2.0			
16:45 - 17:00	0	0	3	0	0	0	0	3	3.0	0	0	73	13	0	0	0	86	86.0	0	0	5	1	0	0	0	6	6.0			
Hourly Total	0	0	8	1	0	0	0	9	9.0	0	0	282	68	3	0	4	357	362.5	0	0	9	1	0	0	0	10	10.0			
17:00 - 17:15	0	0	4	1	0	0	0	5	5.0	1	0	54	11	1	0	0	67	66.7	0	0	4	0	0	0	0	4	4.0			
17:15 - 17:30	0	0	3	0	0	0	0	3	3.0	0	0	97	2	0	0	0	99	99.0	0	0	2	0	0	0	0	2	2.0			
17:30 - 17:45	0	0	5	0	0	0	0	5	5.0	0	0	75	6	1	0	1	83	84.5	0	0	1	0	0	0	0	1	1.0			
17:45 - 18:00	0	0	3	0	0	0	0	3	3.0	0	0	78	3	0	0	0	81	81.0	0	0	1	1	1	0	0	3	3.5			
Hourly Total	0	0	15	1	0	0	0	16	16.0	1	0	304	22	2	0	1	330	331.2	0	0	8	1	1	0	0	10	10.5			
18:00 - 18:15	0	0	3	1	0	0	0	4	4.0	0	0	54	1	1	0	0	56	56.5	0	0	0	0	0	0	0	0	0.0			
18:15 - 18:30	0	0	2	0	0	0	0	2	2.0	0	0	55	4	0	0	0	59	59.0	0	0	2	0	0	0	0	2	2.0			
18:30 - 18:45	0	0	2	0	0	0	0	2	2.0	0	0	43	3	0	0	1	47	48.0	0	0	4	0	0	0	0	4	4.0			
18:45 - 19:00	0	0	2	1	0	0	0	3	3.0	0	0	46	4	0	0	0	50	50.0	0	0	2	0	0	0	0	2	2.0			
Hourly Total	0	0	9	2	0	0	0	11	11.0	0	0	198	12	1	0	1	212	213.5	0	0	8	0	0	0	0	8	8.0			
TOTAL	0	0	32	4	0	0	0	36	36.0	1	0	784	102	6	0	6	899	907.2	0	0	25	2	1	0	0	28	28.5			

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

Tuesday 31st October 2023
PCUs

From: 1) 07:00

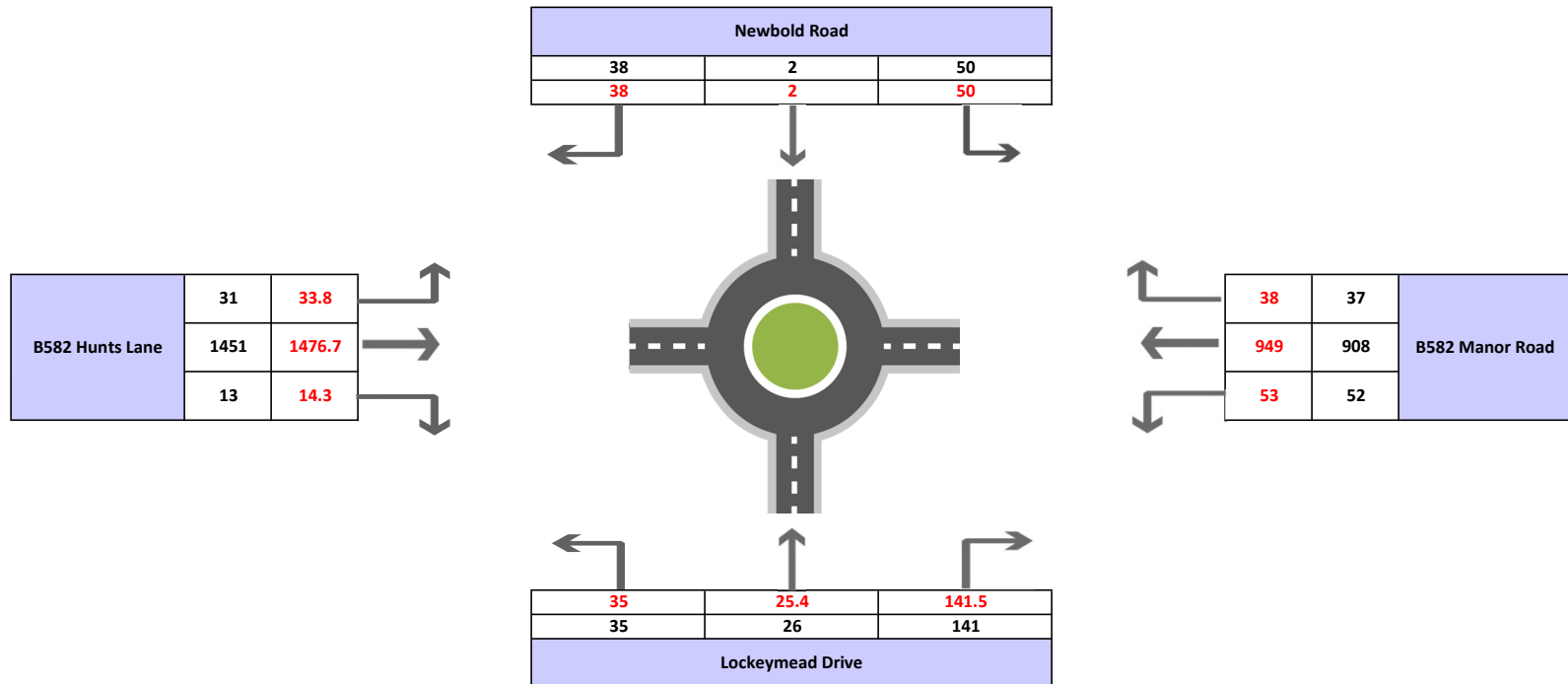
Show Peak Hour: ☐

To: 1) 10:00

Show PCUs: ☒

Class: All Vehicles

Show Session 2





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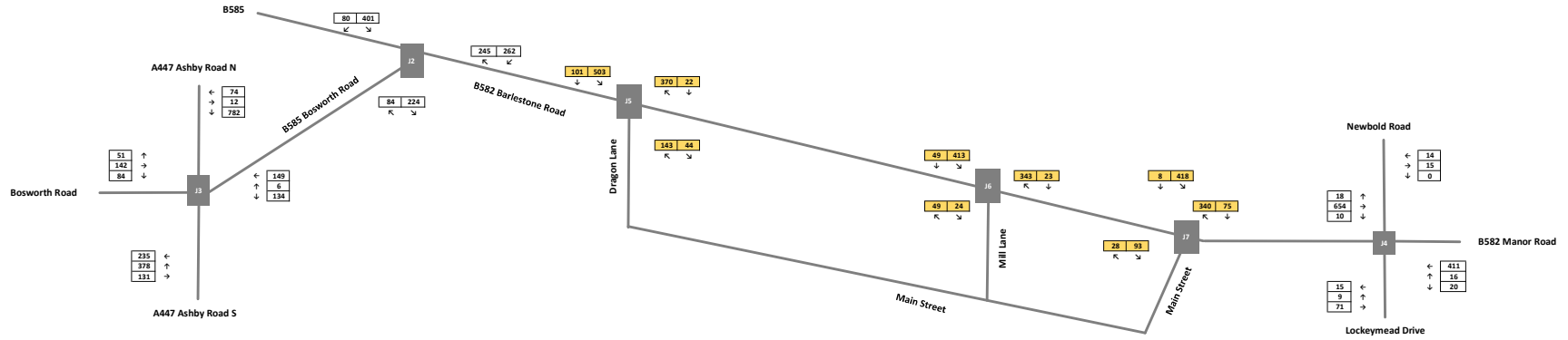
APPENDICES



APPENDIX M

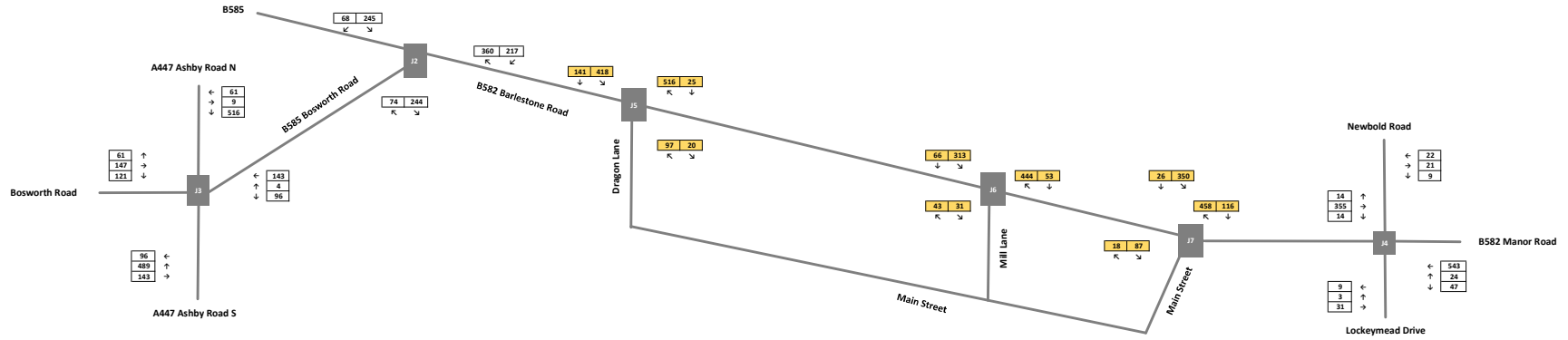


Flows from 23/01037/OUT TA



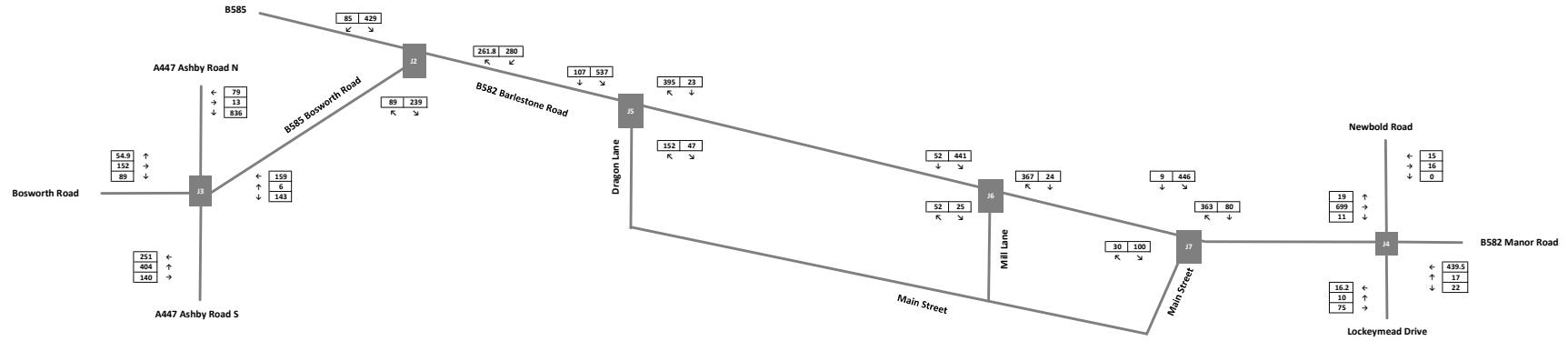


Flows from 23/01037/OUT TA



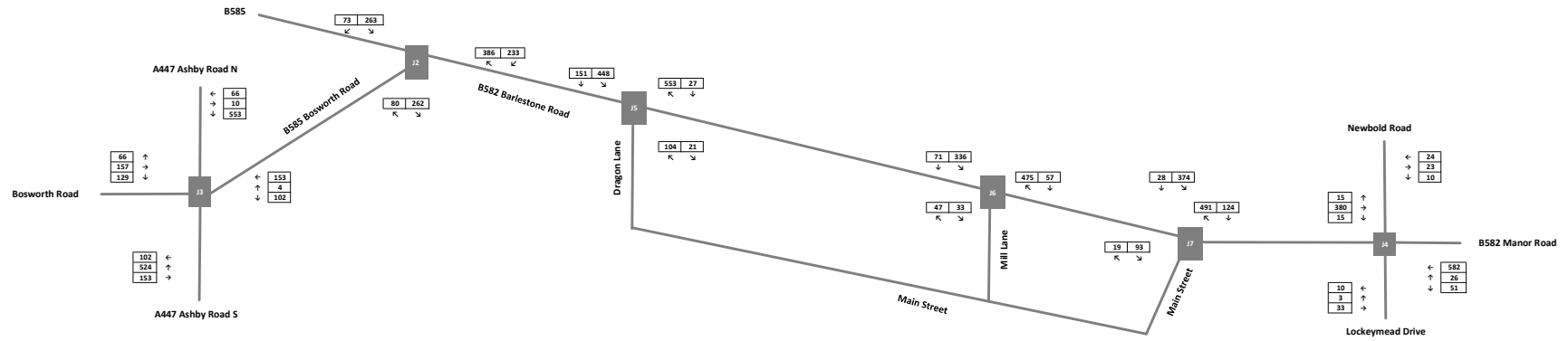


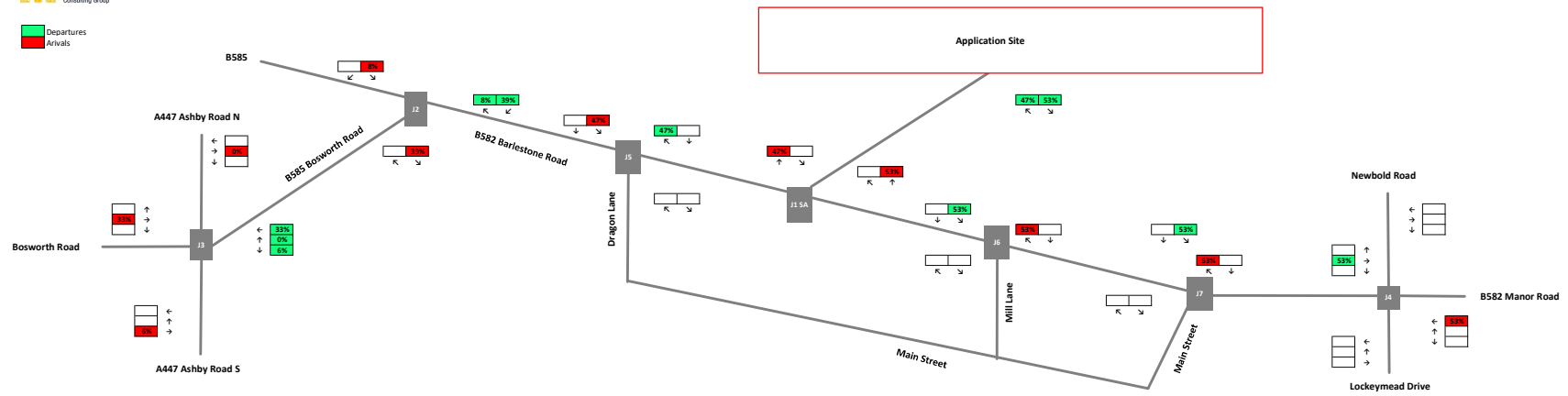
Flows from 23/01037/OUT TA

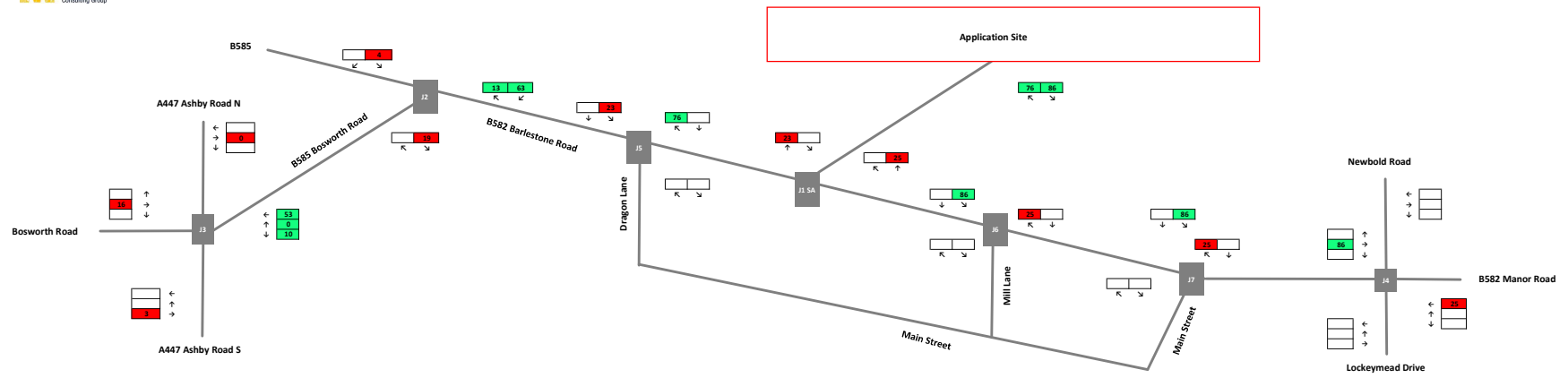


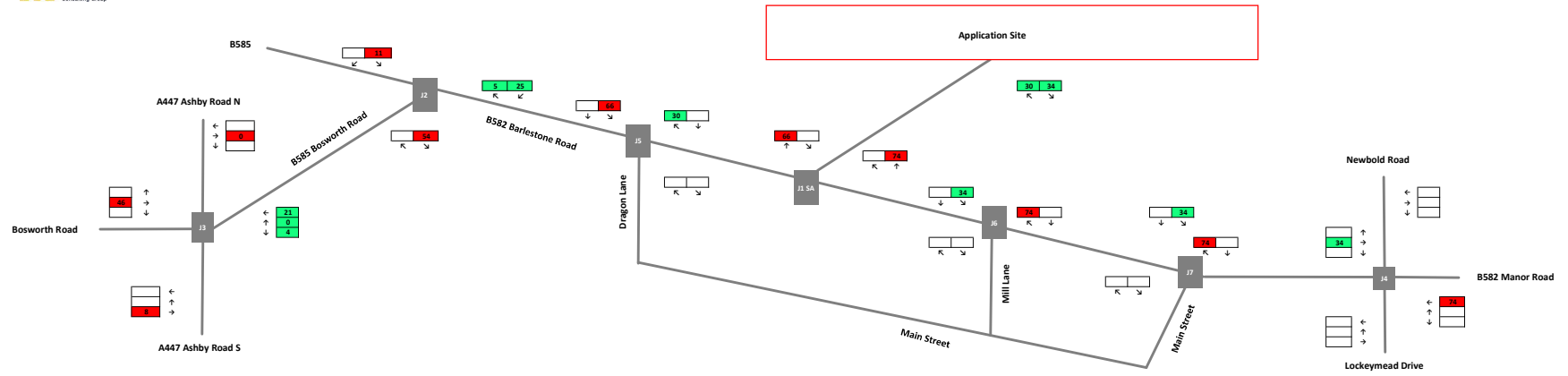


Flows from 23/01037/OUT TA



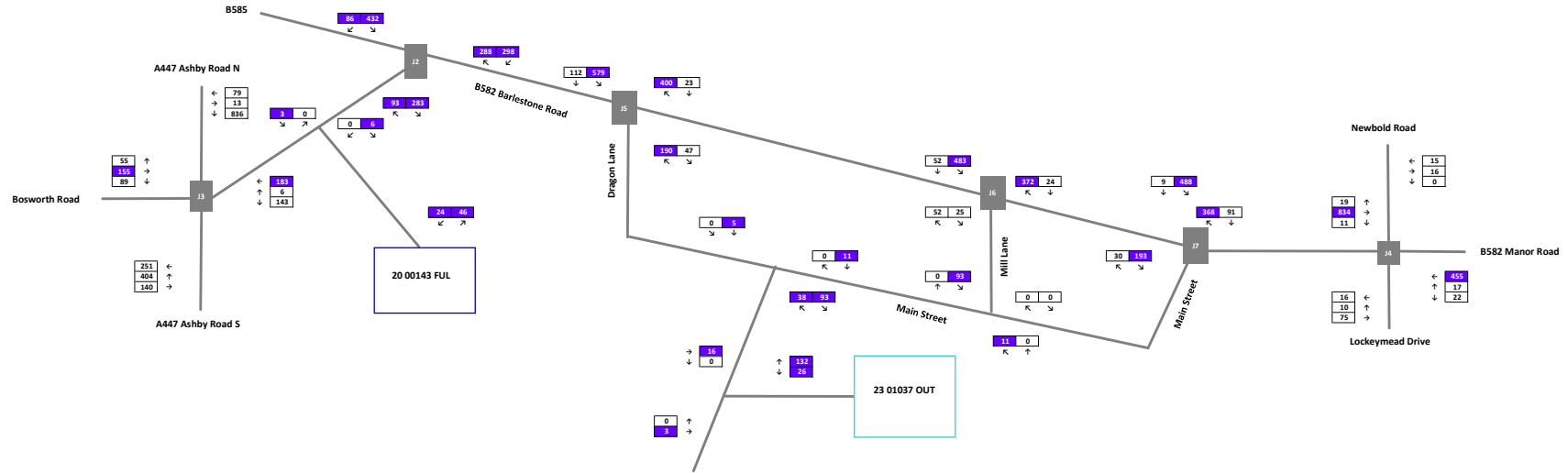




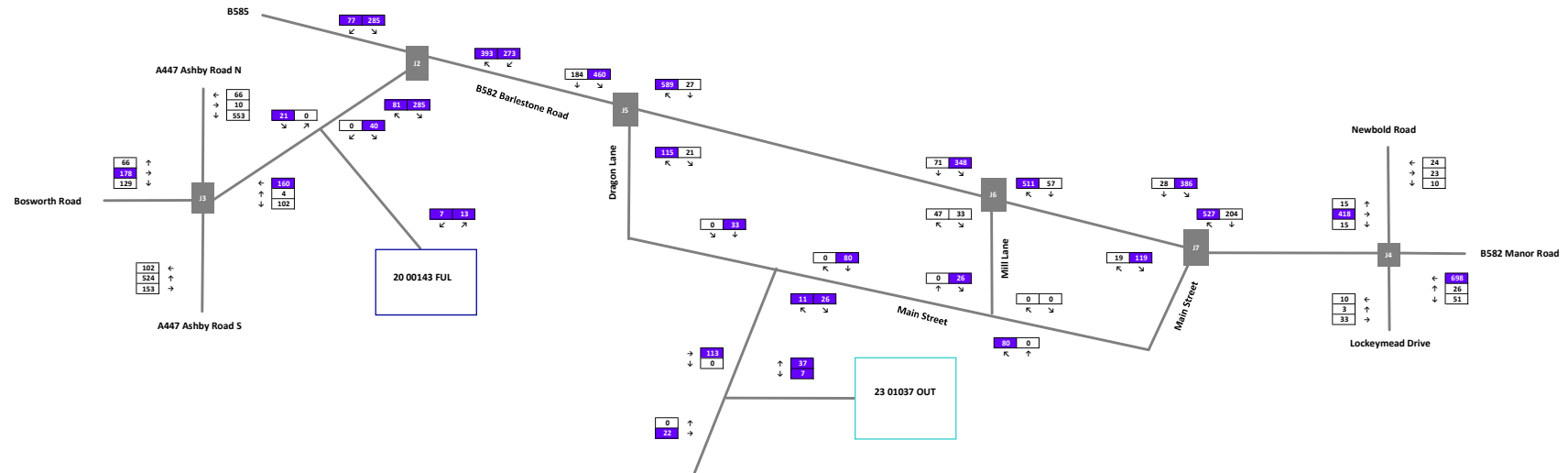


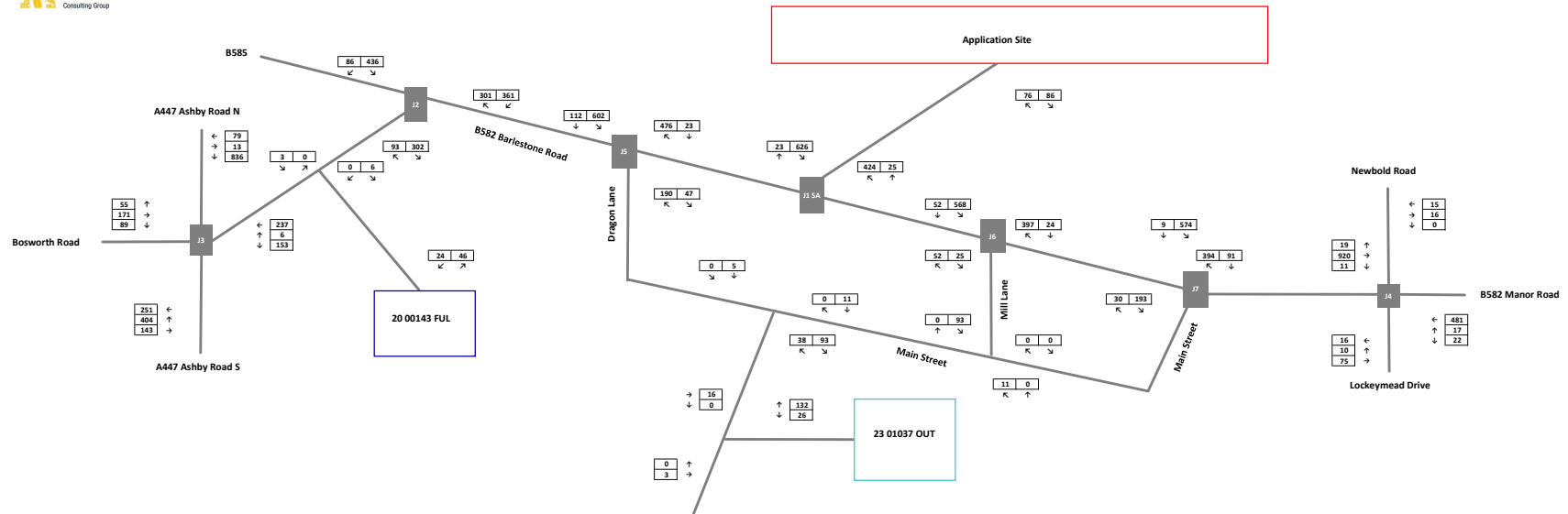


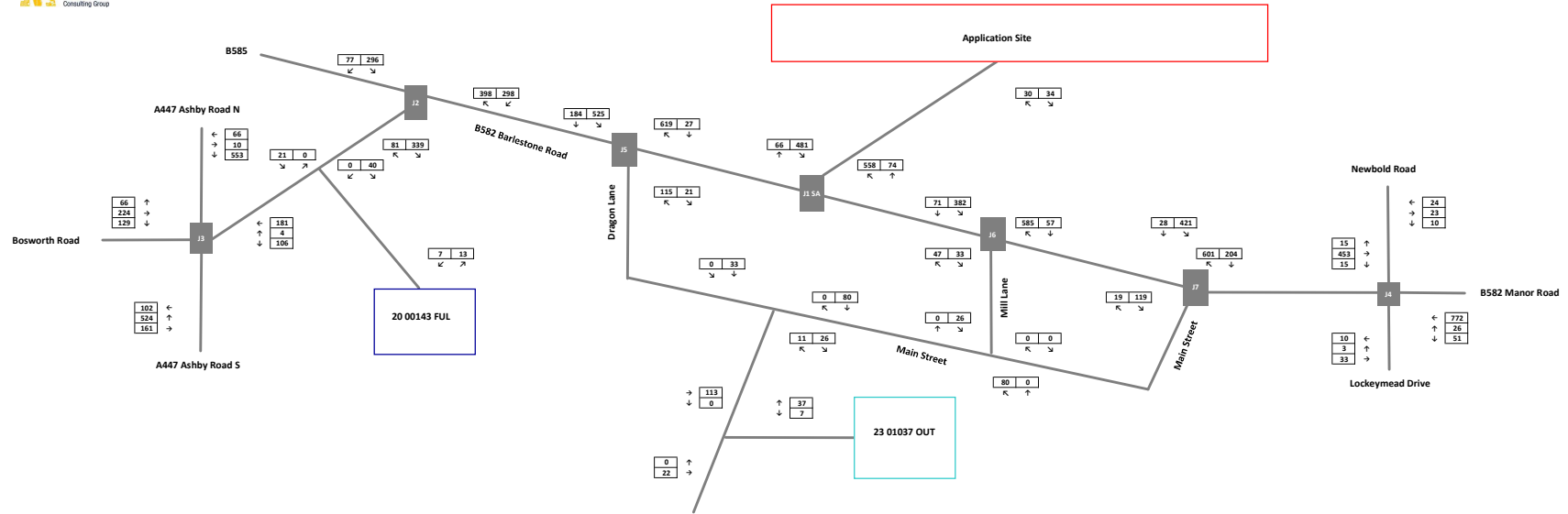
Flows Influenced by Committed



 Flows Influenced by Committed









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APPENDICES



APPENDIX N

Junctions 9									
PICADY 9 - Priority Intersection Module									
Version: 9.5.1.7462 © Copyright TRL Limited, 2019									
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Filename: Junction 1 Model - New Site Access.j9

Path: R:\24832\calculations\Transport\Models\Junction 1 - New Site Access (Barlestone Road)

Report generation date: 19/07/2024 11:32:13

»Barlestone Road / New Site Access - 2033 Do Something, AM

»Barlestone Road / New Site Access - 2033 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
Barlestone Road / New Site Access - 2033 Do Something										
Stream B-AC	D5	0.6	11.71	0.37	B	D6	0.2	8.51	0.14	A
Stream C-AB		0.1	6.62	0.05	A		0.2	6.99	0.14	A

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

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

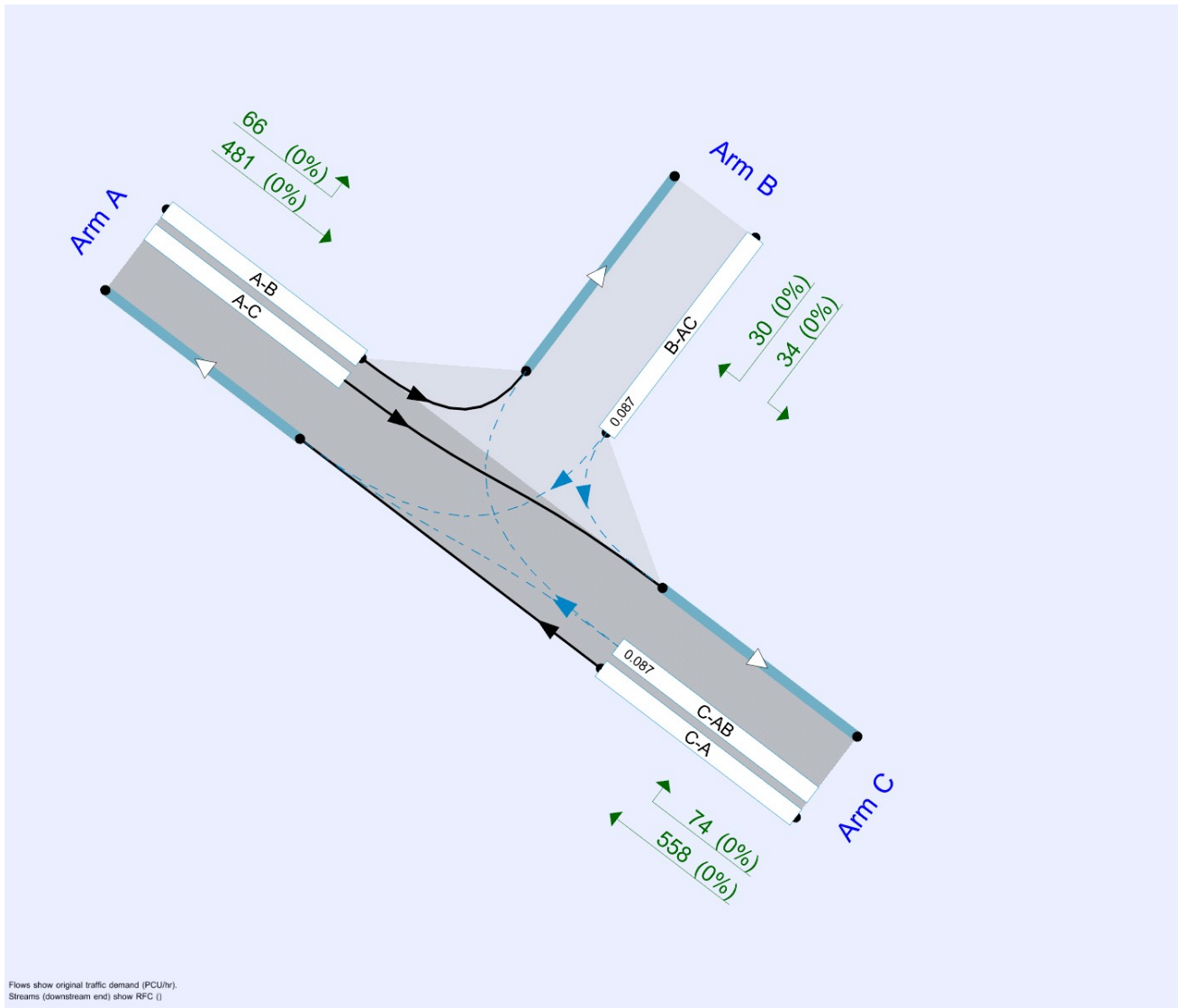
File summary

File Description

Title	
Location	
Site number	
Date	26/10/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	M-EC\james.wright
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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)
D5	2033 Do Something	AM	ONE HOUR	08:00	09:30	15
D6	2033 Do Something	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Barlestone Road / New Site Access	100.000

Barlestone Road / New Site Access - 2033 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.64	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Barlestone Road NW		Major
B	New Access Road		Minor
C	Barlestone Road SE		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	10.50	✓	3.50	✓	3.50	120.0	✓	7.00

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	One lane	3.38	120	120

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	647	0.088	0.222	0.140	0.317
B-C	726	0.089	0.226	-	-
C-B	734	0.229	0.229	-	-

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)
D5	2033 Do Something	AM	ONE HOUR	08:00	09:30	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		✓	649	100.000
B		✓	162	100.000
C		✓	449	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	23	626
	B	76	0	86
	C	424	25	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.37	11.71	0.6	B
C-AB	0.05	6.62	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	122	550	0.222	121	0.3	8.361	A
C-AB	19	623	0.030	19	0.0	5.958	A
C-A	319			319			
A-B	17			17			
A-C	471			471			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	146	523	0.278	145	0.4	9.512	A
C-AB	22	601	0.037	22	0.0	6.222	A
C-A	381			381			
A-B	21			21			
A-C	563			563			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	178	486	0.367	178	0.6	11.658	B
C-AB	28	571	0.048	27	0.1	6.623	A
C-A	467			467			
A-B	25			25			
A-C	689			689			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	178	486	0.367	178	0.6	11.714	B
C-AB	28	571	0.048	28	0.1	6.623	A
C-A	467			467			
A-B	25			25			
A-C	689			689			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	146	523	0.278	146	0.4	9.568	A
C-AB	22	601	0.037	23	0.0	6.225	A
C-A	381			381			
A-B	21			21			
A-C	563			563			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	122	550	0.222	122	0.3	8.420	A
C-AB	19	623	0.030	19	0.0	5.961	A
C-A	319			319			
A-B	17			17			
A-C	471			471			

Barlestone Road / New Site Access - 2033 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.85	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2033 Do Something	PM	ONE HOUR	17:00	18:30	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		✓	547	100.000
B		✓	64	100.000
C		✓	632	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	66	481
	B	30	0	34
	C	558	74	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.14	8.51	0.2	A
C-AB	0.14	6.99	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	557	0.087	48	0.1	7.070	A
C-AB	56	640	0.087	55	0.1	6.150	A
C-A	420			420			
A-B	50			50			
A-C	362			362			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	530	0.108	57	0.1	7.609	A
C-AB	67	622	0.107	66	0.1	6.480	A
C-A	502			502			
A-B	59			59			
A-C	432			432			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	70	493	0.143	70	0.2	8.506	A
C-AB	81	597	0.137	81	0.2	6.984	A
C-A	614			614			
A-B	73			73			
A-C	530			530			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	70	493	0.143	70	0.2	8.514	A
C-AB	81	597	0.137	81	0.2	6.986	A
C-A	614			614			
A-B	73			73			
A-C	530			530			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	530	0.108	58	0.1	7.618	A
C-AB	67	622	0.107	67	0.1	6.484	A
C-A	502			502			
A-B	59			59			
A-C	432			432			

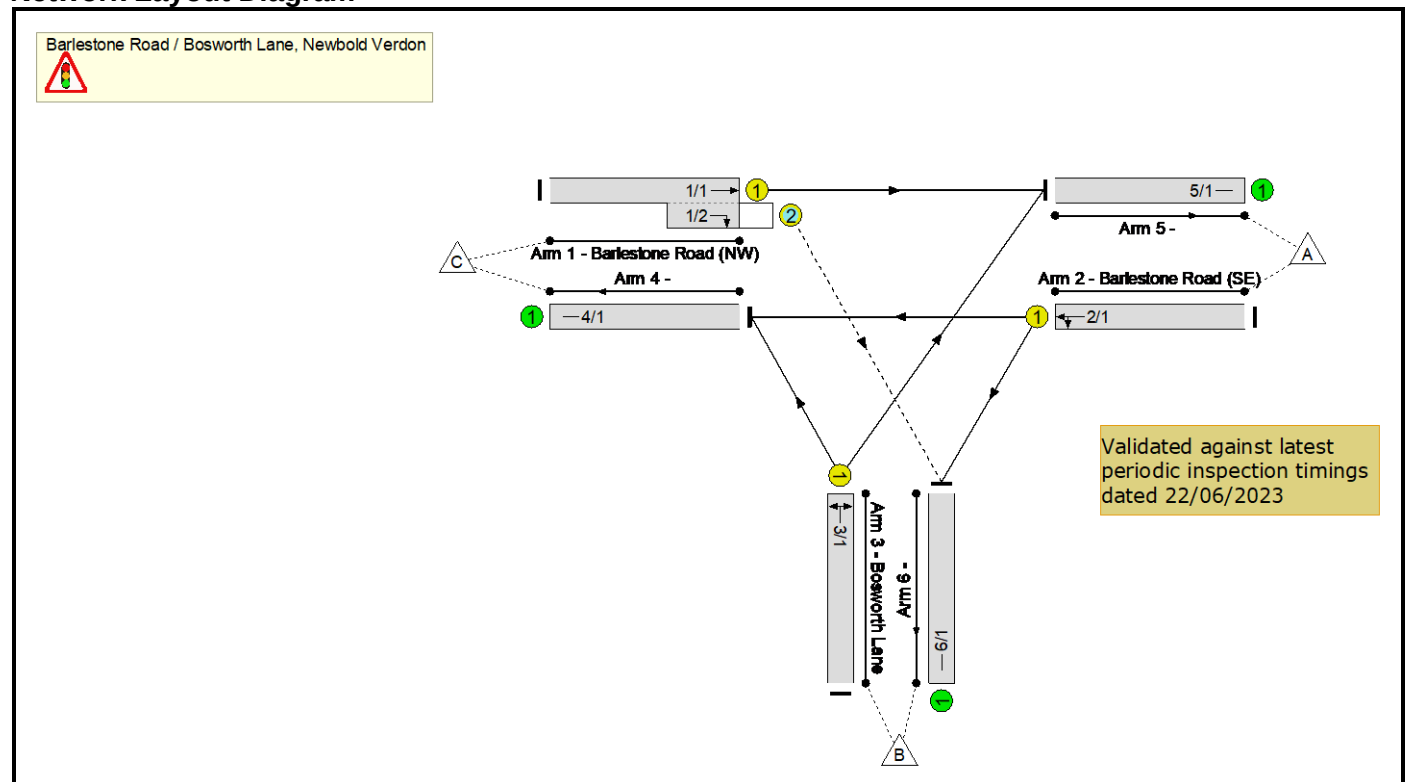
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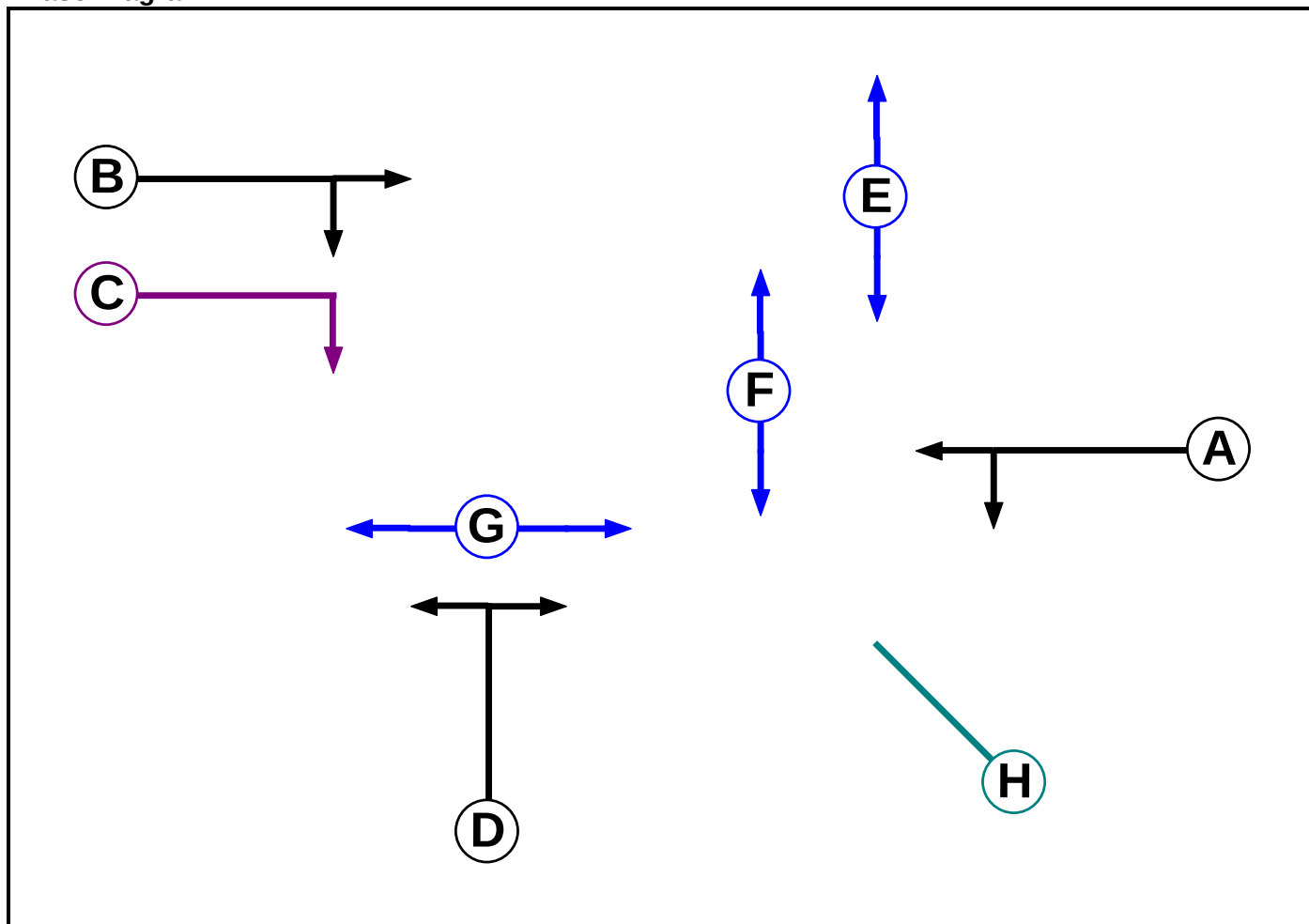
Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	557	0.087	48	0.1	7.082	A
C-AB	56	640	0.087	56	0.1	6.160	A
C-A	420			420			
A-B	50			50			
A-C	362			362			

User and Project Details

Project:	Newbold Verdon
Title:	
Location:	
Additional detail:	
File name:	Barlestone Road_Bosworth Lane.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram**Phase Input Data**

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Ind. Arrow	B	4	4
D	Traffic		7	7
E	Pedestrian		6	6
F	Pedestrian		6	6
G	Pedestrian		6	6
H	Dummy		4	4

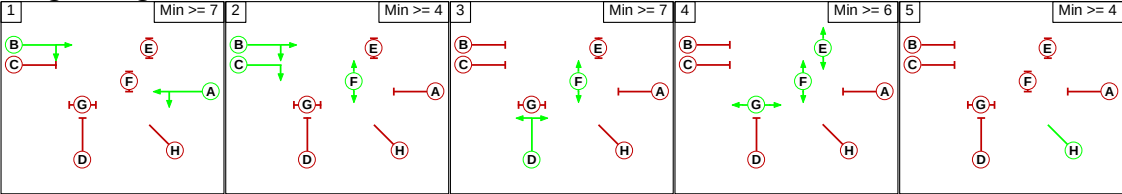
Phase Intergreens Matrix

Terminating Phase	Starting Phase								
		A	B	C	D	E	F	G	H
	A		-	6	6	-	6	9	3
	B	-		-	6	9	-	9	3
	C	6	-		6	-	-	9	3
	D	6	6	6		10	-	6	3
	E	-	6	-	6		-	-	3
	F	6	-	-	-	-		-	3
	G	8	8	8	8	-	-		3
	H	2	2	2	2	2	2	2	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

	To Stage					
From Stage		1	2	3	4	5
	1		6	6	9	3
	2	X		6	9	X
	3	6	X		10	3
	4	8	X	8		3
	5	2	X	2	2	

Give-Way Lane Input Data

Junction: Barlestone Road / Bosworth Lane, Newbold Verdon											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (Barlestone Road (NW))	6/1 (Right)	1439	0	2/1	1.09	All	2.00	-	0.50	2	2.00

Lane Input Data

Junction: Barlestone Road / Bosworth Lane, Newbold Verdon												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Barlestone Road (NW))	U	B	2	3	60.0	Geom	-	3.43	0.00	Y	Arm 5 Ahead	Inf
1/2 (Barlestone Road (NW))	O	B C	2	3	4.3	Geom	-	3.23	0.00	N	Arm 6 Right	20.50
2/1 (Barlestone Road (SE))	U	A	2	3	60.0	Geom	-	3.96	0.00	Y	Arm 4 Ahead	Inf
											Arm 6 Left	17.00
3/1 (Bosworth Lane)	U	D	2	3	60.0	Geom	-	3.35	0.00	Y	Arm 4 Left	13.80
											Arm 5 Right	22.60
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2024 Base AM'	08:00	09:00	01:00	
2: '2024 Base PM'	17:00	18:00	01:00	
3: '2033Do Minimum AM'	08:00	09:00	01:00	
4: '2033 Do Minimum PM'	17:00	18:00	01:00	
5: '2033 Do Something AM'	08:00	09:00	01:00	
6: '2033 Do Something PM'	17:00	18:00	01:00	

Scenario 1: '2024 Base AM' (FG1: '2024 Base AM', Plan 1: 'Ped Stage 4 Double Cycled')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin	A	B	C	Tot.	
	A	0	262	245	507
	B	224	0	84	308
	C	401	80	0	481
	Tot.	625	342	329	1296

Traffic Lane Flows

Lane	Scenario 1: 2024 Base AM
Junction: Barlestone Road / Bosworth Lane, Newbold Verdon	
1/1 (with short)	481(In) 401(Out)
1/2 (short)	80
2/1	507
3/1	308
4/1	329
5/1	625
6/1	342

Lane Saturation Flows

Junction: Barlestone Road / Bosworth Lane, Newbold Verdon								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Barlestone Road (NW))	3.43	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1958	1958
1/2 (Barlestone Road (NW))	3.23	0.00	N	Arm 6 Right	20.50	100.0 %	1936	1936
2/1 (Barlestone Road (SE))	3.96	0.00	Y	Arm 4 Ahead	Inf	48.3 %	1923	1923
				Arm 6 Left	17.00	51.7 %		
3/1 (Bosworth Lane)	3.35	0.00	Y	Arm 4 Left	13.80	27.3 %	1809	1809
				Arm 5 Right	22.60	72.7 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2024 Base PM' (FG2: '2024 Base PM', Plan 1: 'Ped Stage 4 Double Cycled')**Traffic Flows, Desired****Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	217	360	577
	B	244	0	74	318
	C	245	68	0	313
	Tot.	489	285	434	1208

Traffic Lane Flows

Lane	Scenario 2: 2024 Base PM
Junction: Barlestone Road / Bosworth Lane, Newbold Verdon	
1/1 (with short)	313(In) 245(Out)
1/2 (short)	68
2/1	577
3/1	318
4/1	434
5/1	489
6/1	285

Lane Saturation Flows

Junction: Barlestone Road / Bosworth Lane, Newbold Verdon								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Barlestone Road (NW))	3.43	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1958	1958
1/2 (Barlestone Road (NW))	3.23	0.00	N	Arm 6 Right	20.50	100.0 %	1936	1936
2/1 (Barlestone Road (SE))	3.96	0.00	Y	Arm 4 Ahead	Inf	62.4 %	1946	1946
				Arm 6 Left	17.00	37.6 %		
3/1 (Bosworth Lane)	3.35	0.00	Y	Arm 4 Left	13.80	23.3 %	1812	1812
				Arm 5 Right	22.60	76.7 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2033 DM AM' (FG3: '2033Do Minimum AM', Plan 1: 'Ped Stage 4 Double Cycled')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	298	288	586
	B	283	0	93	376
	C	432	86	0	518
	Tot.	715	384	381	1480

Traffic Lane Flows

Lane	Scenario 3: 2033 DM AM
Junction: Barlestone Road / Bosworth Lane, Newbold Verdon	
1/1 (with short)	518(In) 432(Out)
1/2 (short)	86
2/1	586
3/1	376
4/1	381
5/1	715
6/1	384

Lane Saturation Flows

Junction: Barlestone Road / Bosworth Lane, Newbold Verdon								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Barlestone Road (NW))	3.43	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1958	1958
1/2 (Barlestone Road (NW))	3.23	0.00	N	Arm 6 Right	20.50	100.0 %	1936	1936
2/1 (Barlestone Road (SE))	3.96	0.00	Y	Arm 4 Ahead	Inf	49.1 %	1925	1925
				Arm 6 Left	17.00	50.9 %		
3/1 (Bosworth Lane)	3.35	0.00	Y	Arm 4 Left	13.80	24.7 %	1811	1811
				Arm 5 Right	22.60	75.3 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2033 DM PM' (FG4: '2033 Do Minimum PM', Plan 1: 'Ped Stage 4 Double Cycled')

Traffic Flows, Desired**Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	273	393	666
	B	285	0	81	366
	C	285	77	0	362
	Tot.	570	350	474	1394

Traffic Lane Flows

Lane	Scenario 4: 2033 DM PM
Junction: Barlestone Road / Bosworth Lane, Newbold Verdon	
1/1 (with short)	362(In) 285(Out)
1/2 (short)	77
2/1	666
3/1	366
4/1	474
5/1	570
6/1	350

Lane Saturation Flows

Junction: Barlestone Road / Bosworth Lane, Newbold Verdon								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Barlestone Road (NW))	3.43	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1958	1958
1/2 (Barlestone Road (NW))	3.23	0.00	N	Arm 6 Right	20.50	100.0 %	1936	1936
2/1 (Barlestone Road (SE))	3.96	0.00	Y	Arm 4 Ahead	Inf	59.0 %	1941	1941
				Arm 6 Left	17.00	41.0 %		
3/1 (Bosworth Lane)	3.35	0.00	Y	Arm 4 Left	13.80	22.1 %	1813	1813
				Arm 5 Right	22.60	77.9 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2033 DS AM' (FG5: '2033 Do Something AM', Plan 1: 'Ped Stage 4 Double Cycled')

Traffic Flows, Desired**Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	361	301	662
	B	302	0	93	395
	C	436	86	0	522
	Tot.	738	447	394	1579

Traffic Lane Flows

Lane	Scenario 5: 2033 DS AM
Junction: Barlestone Road / Bosworth Lane, Newbold Verdon	
1/1 (with short)	519(In) 433(Out)
1/2 (short)	86
2/1	643
3/1	383
4/1	381
5/1	723
6/1	441

Lane Saturation Flows

Junction: Barlestone Road / Bosworth Lane, Newbold Verdon								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Barlestone Road (NW))	3.43	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1958	1958
1/2 (Barlestone Road (NW))	3.23	0.00	N	Arm 6 Right	20.50	100.0 %	1936	1936
2/1 (Barlestone Road (SE))	3.96	0.00	Y	Arm 4 Ahead	Inf	44.8 %	1918	1918
				Arm 6 Left	17.00	55.2 %		
3/1 (Bosworth Lane)	3.35	0.00	Y	Arm 4 Left	13.80	24.3 %	1811	1811
				Arm 5 Right	22.60	75.7 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2033 DS PM' (FG6: '2033 Do Something PM', Plan 1: 'Ped Stage 4 Double Cycled')

Traffic Flows, Desired**Desired Flow :**

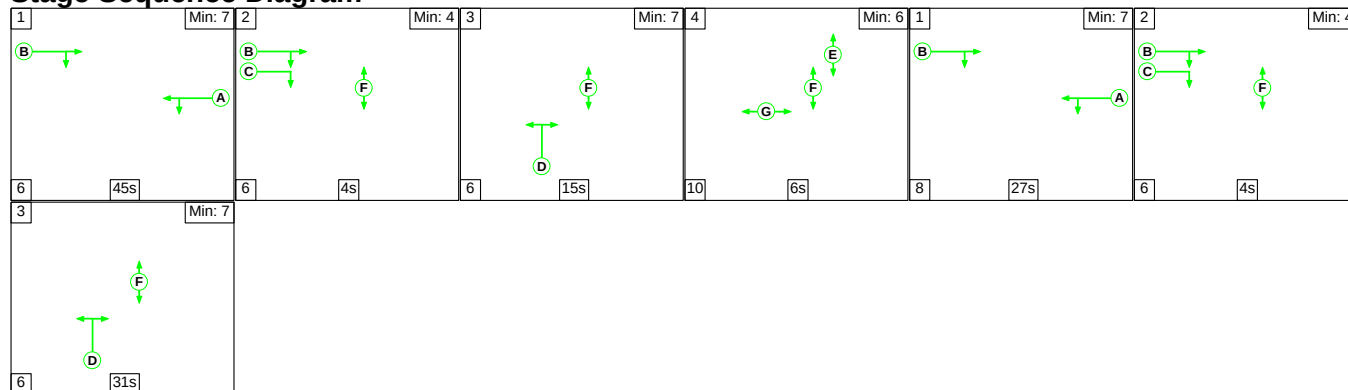
	Destination				
		A	B	C	Tot.
Origin	A	0	298	398	696
	B	339	0	81	420
	C	296	77	0	373
	Tot.	635	375	479	1489

Traffic Lane Flows

Lane	Scenario 6: 2033 DS PM
Junction: Barlestone Road / Bosworth Lane, Newbold Verdon	
1/1 (with short)	373(In) 296(Out)
1/2 (short)	77
2/1	696
3/1	420
4/1	479
5/1	635
6/1	375

Lane Saturation Flows

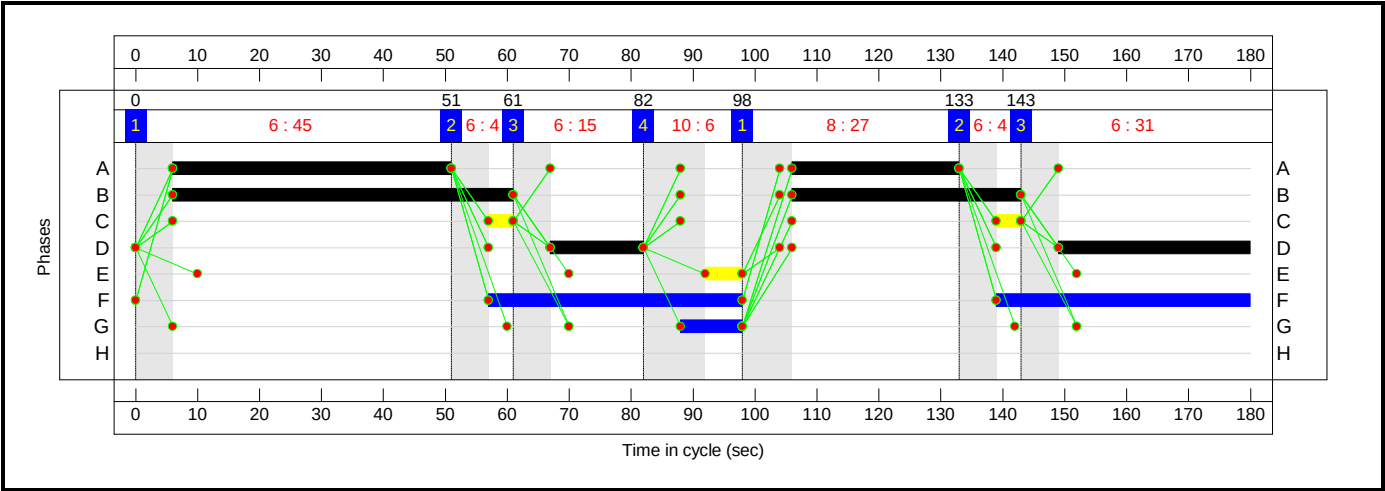
Junction: Barlestone Road / Bosworth Lane, Newbold Verdon								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Barlestone Road (NW))	3.43	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1958	1958
1/2 (Barlestone Road (NW))	3.23	0.00	N	Arm 6 Right	20.50	100.0 %	1936	1936
2/1 (Barlestone Road (SE))	3.96	0.00	Y	Arm 4 Ahead	Inf	57.2 %	1938	1938
				Arm 6 Left	17.00	42.8 %		
3/1 (Bosworth Lane)	3.35	0.00	Y	Arm 4 Left	13.80	19.3 %	1815	1815
				Arm 5 Right	22.60	80.7 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2024 Base AM' (FG1: '2024 Base AM', Plan 1: 'Ped Stage 4 Double Cycled')**Stage Sequence Diagram**

Stage Timings

Stage	1	2	3	4	1	2	3
Duration	45	4	15	6	27	4	31
Change Point	0	51	61	82	98	133	143

Signal Timings Diagram

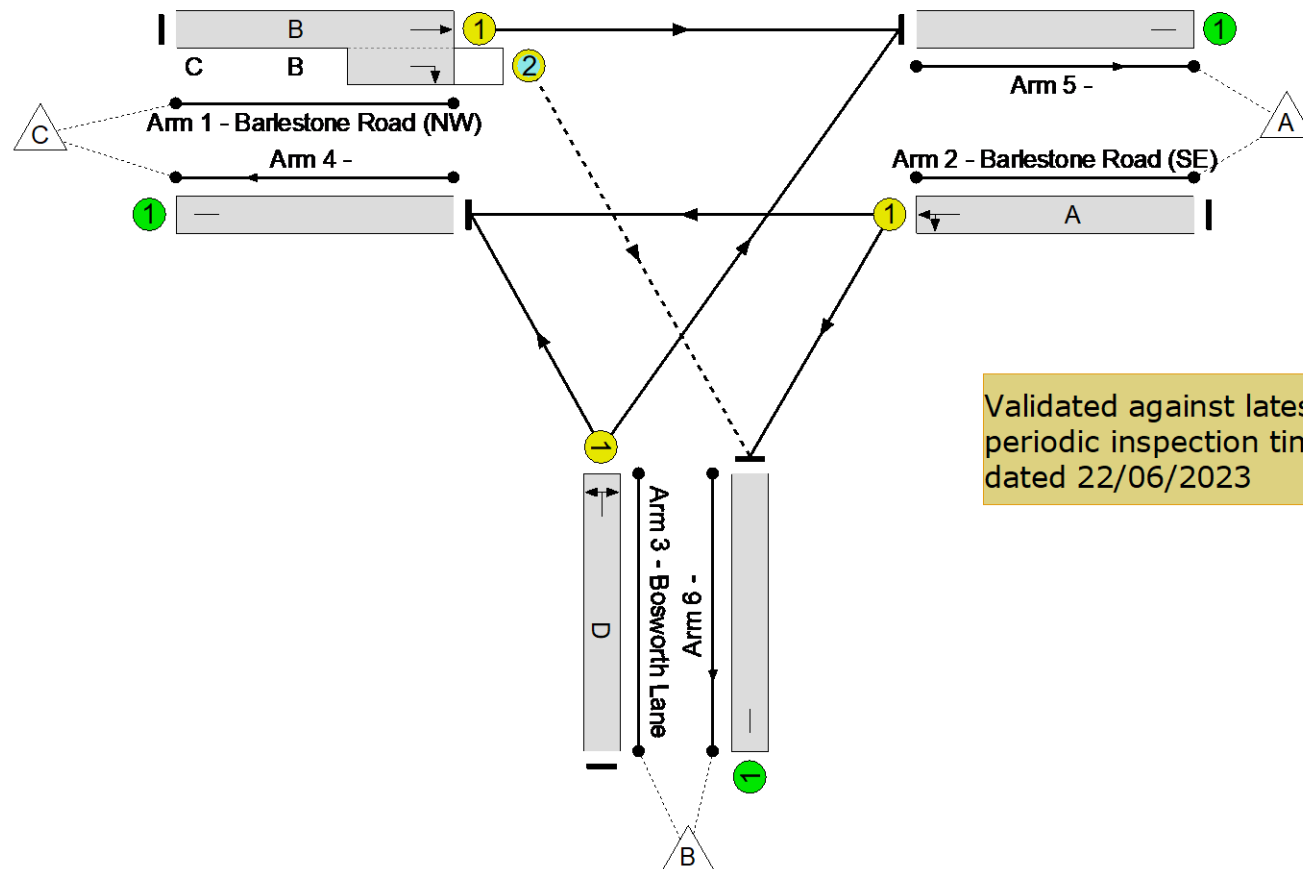


Barlestone Road / Bosworth Lane, Newbold Verdon



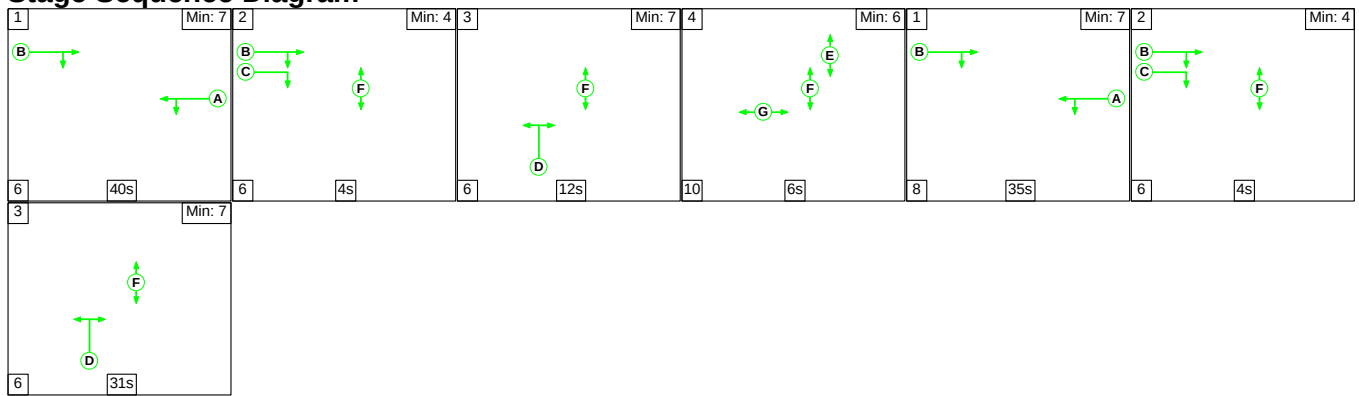
PRC: 40.3 %

Total Traffic Delay: 9.6 pcuHr

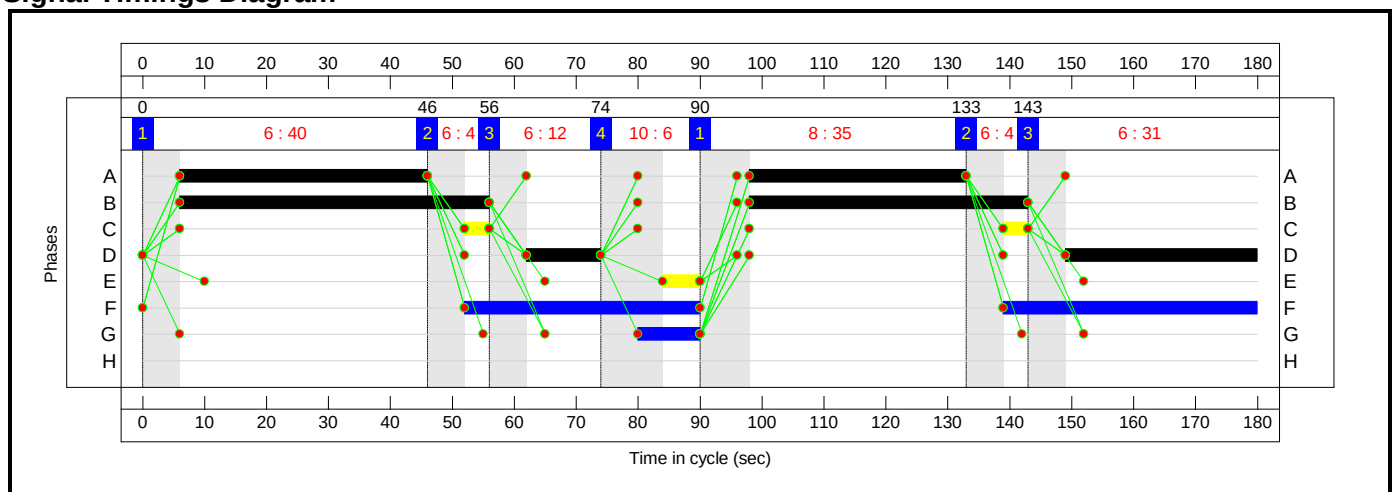


Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	64.1%
Barlestone Road / Bosworth Lane, Newbold Verdon	-	-	N/A	-	-		-	-	-	-	-	-	64.1%
1/1+1/2	Barlestone Road (NW) Ahead Right	U+O	N/A	N/A	B	C	2	92	8	481	1958:1936	891+178	45.0 : 45.0%
2/1	Barlestone Road (SE) Ahead Left	U	N/A	N/A	A		2	72	-	507	1923	791	64.1%
3/1	Bosworth Lane Left Right	U	N/A	N/A	D		2	46	-	308	1809	482	63.8%
4/1		U	N/A	N/A	-		-	-	-	329	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	625	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	342	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	71	7	2	7.2	2.2	0.3	9.6	-	-	-	-
Barlestone Road / Bosworth Lane, Newbold Verdon	-	-	71	7	2	7.2	2.2	0.3	9.6	-	-	-	-
1/1+1/2	481	481	71	7	2	1.7	0.4	0.3	2.4	17.8	6.5	0.4	6.9
2/1	507	507	-	-	-	3.0	0.9	-	3.9	27.5	10.3	0.9	11.2
3/1	308	308	-	-	-	2.5	0.9	-	3.4	39.4	6.8	0.9	7.6
4/1	329	329	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	625	625	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	342	342	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 40.3 Total Delay for Signalled Lanes (pcuHr): 9.62 Cycle Time (s): 180 PRC Over All Lanes (%): 40.3 Total Delay Over All Lanes(pcuHr): 9.62													

Scenario 2: '2024 Base PM' (FG2: '2024 Base PM', Plan 1: 'Ped Stage 4 Double Cycled')**Stage Sequence Diagram****Stage Timings**

Stage	1	2	3	4	1	2	3
Duration	40	4	12	6	35	4	31
Change Point	0	46	56	74	90	133	143

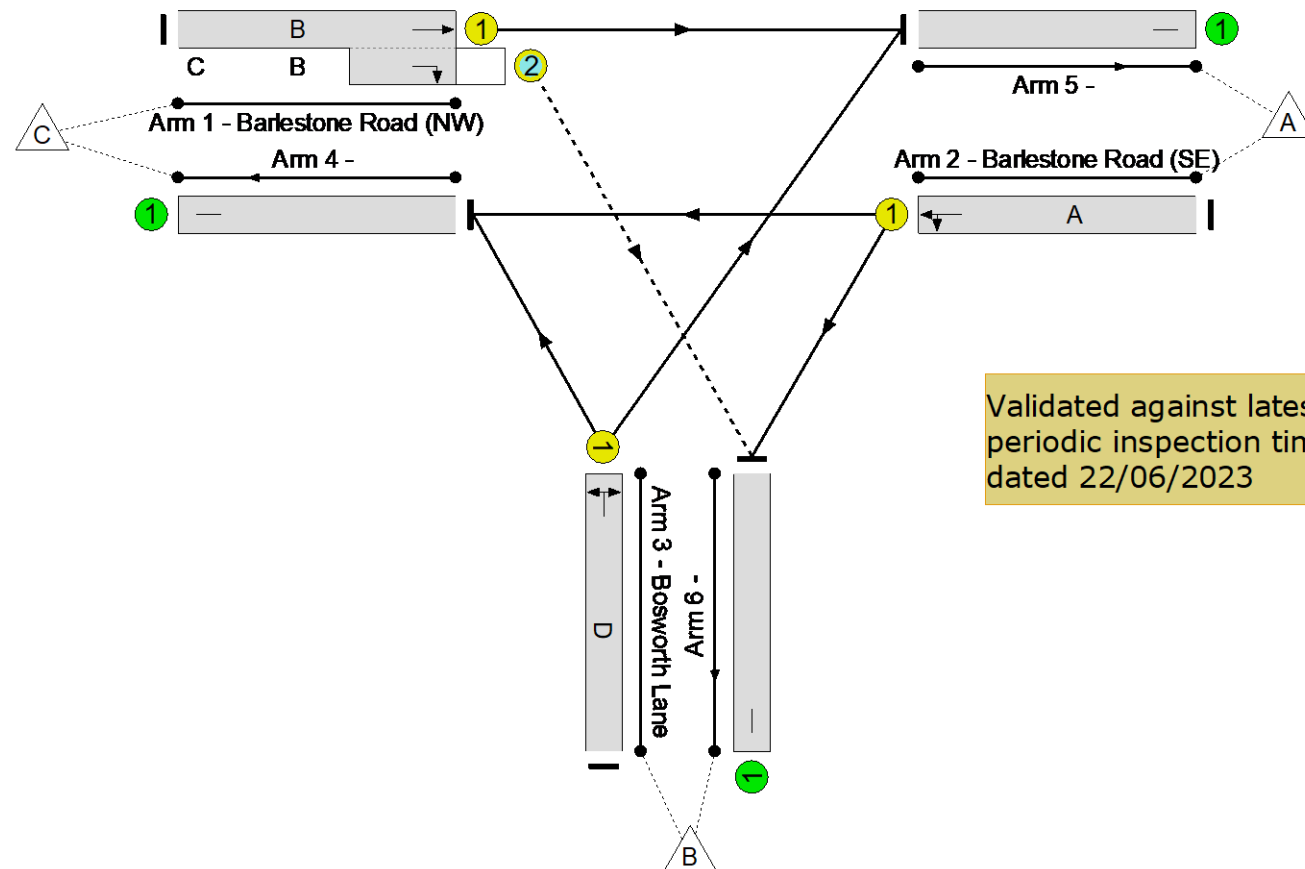
Signal Timings Diagram

Barlestone Road / Bosworth Lane, Newbold Verdon



PRC: 28.2 %

Total Traffic Delay: 9.8 pcuHr

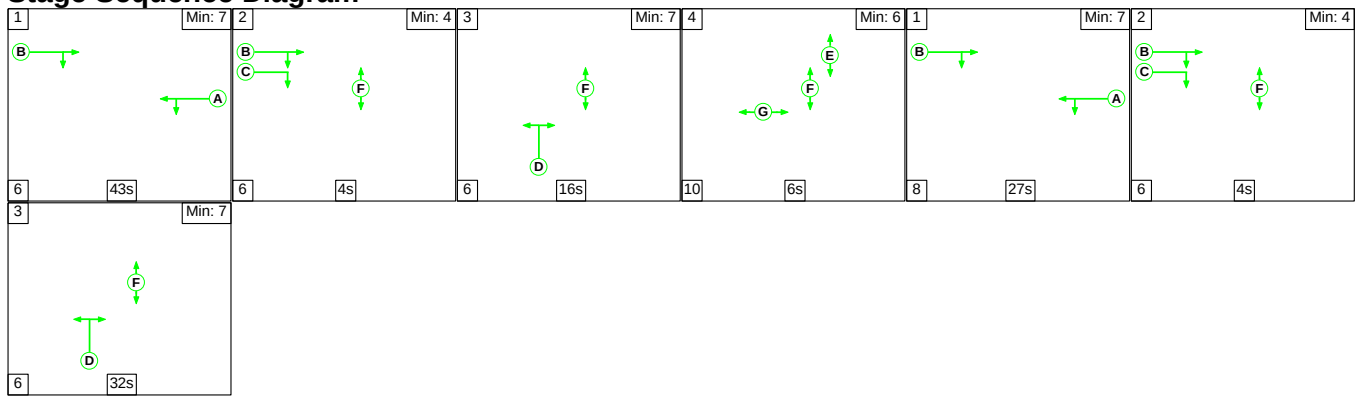


Network Results

Network Results													
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	70.2%
Barlestone Road / Bosworth Lane, Newbold Verdon	-	-	N/A	-	-		-	-	-	-	-	-	70.2%
1/1+1/2	Barlestone Road (NW) Ahead Right	U+O	N/A	N/A	B	C	2	95	8	313	1958:1936	873+242	28.1 : 28.1%
2/1	Barlestone Road (SE) Ahead Left	U	N/A	N/A	A		2	75	-	577	1946	832	69.3%
3/1	Bosworth Lane Left Right	U	N/A	N/A	D		2	43	-	318	1812	453	70.2%
4/1		U	N/A	N/A	-		-	-	-	434	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	489	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	285	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	60	6	2	7.0	2.5	0.3	9.8	-	-	-	-
Barlestone Road / Bosworth Lane, Newbold Verdon	-	-	60	6	2	7.0	2.5	0.3	9.8	-	-	-	-
1/1+1/2	313	313	60	6	2	0.9	0.2	0.3	1.4	16.1	3.3	0.2	3.5
2/1	577	577	-	-	-	3.4	1.1	-	4.5	27.9	11.7	1.1	12.8
3/1	318	318	-	-	-	2.7	1.2	-	3.9	44.1	7.9	1.2	9.0
4/1	434	434	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	489	489	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	285	285	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 28.2 PRC Over All Lanes (%): 28.2 Total Delay for Signalled Lanes (pcuHr): 9.77 Total Delay Over All Lanes(pcuHr): 9.77 Cycle Time (s): 180													

Scenario 3: '2033 DM AM' (FG3: '2033Do Minimum AM', Plan 1: 'Ped Stage 4 Double Cycled')

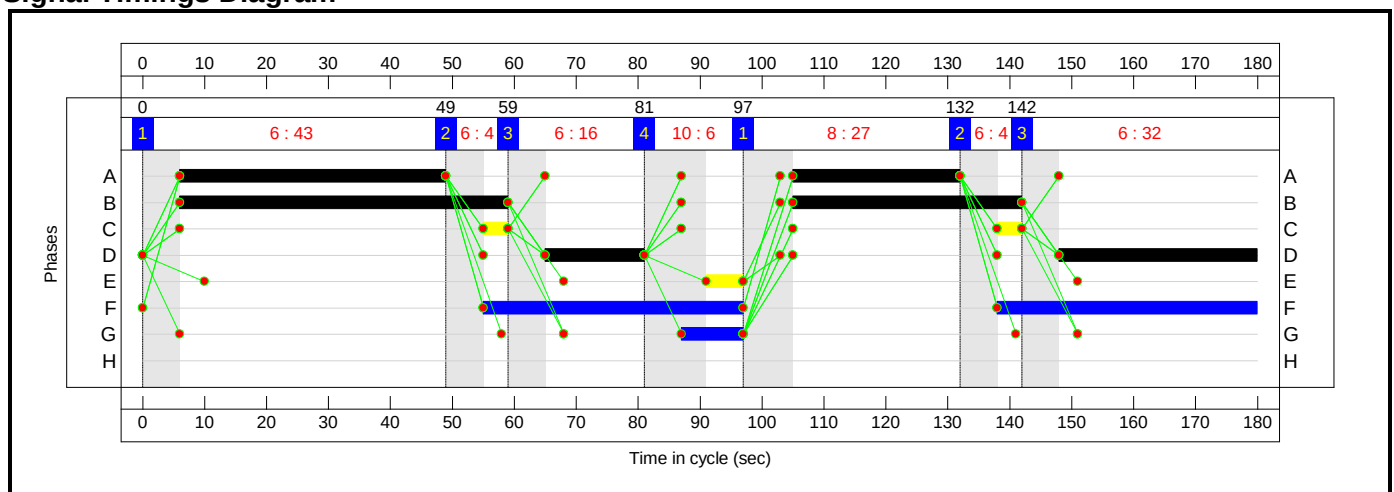
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	1	2	3
Duration	43	4	16	6	27	4	32
Change Point	0	49	59	81	97	132	142

Signal Timings Diagram

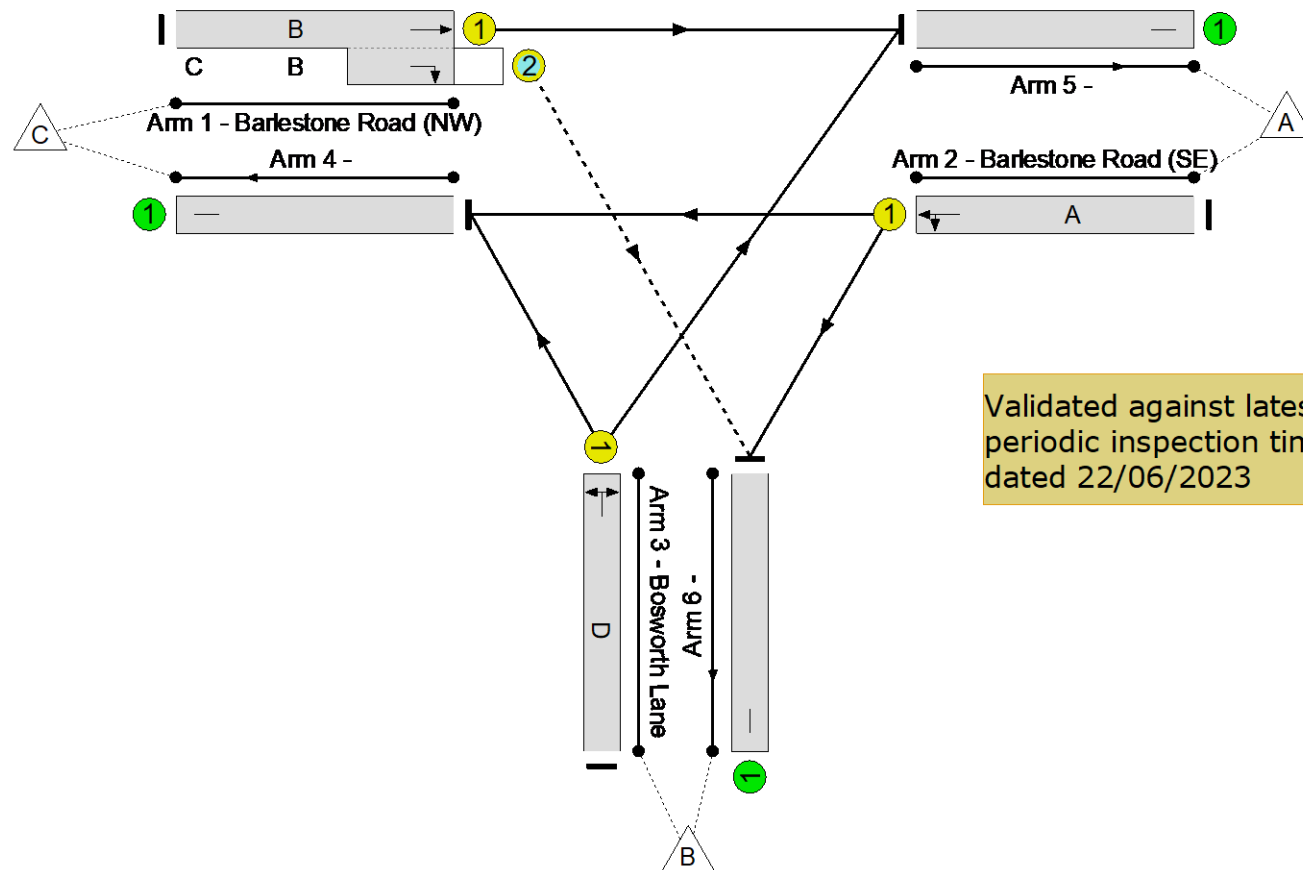


Barlestone Road / Bosworth Lane, Newbold Verdon



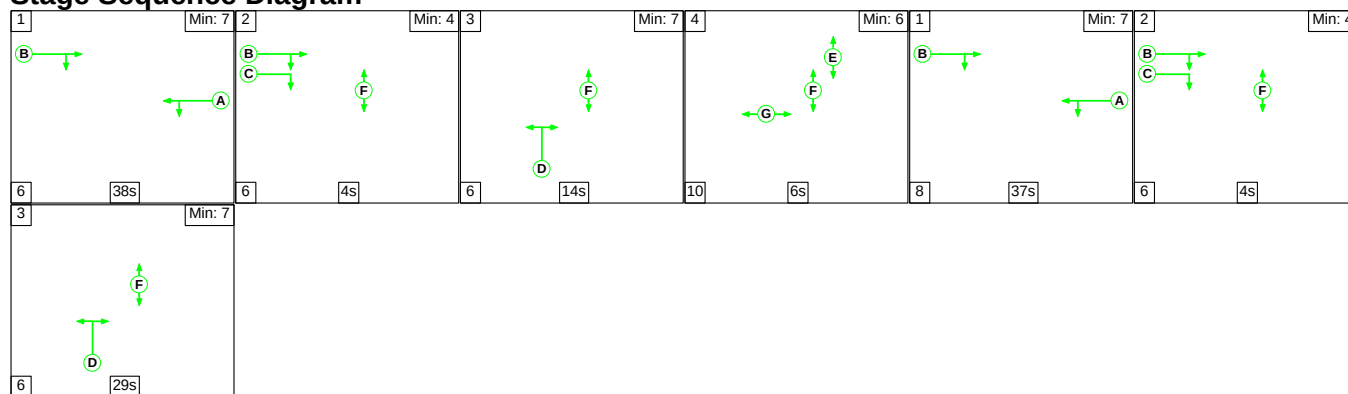
PRC: 18.3 %

Total Traffic Delay: 12.7 pcuHr

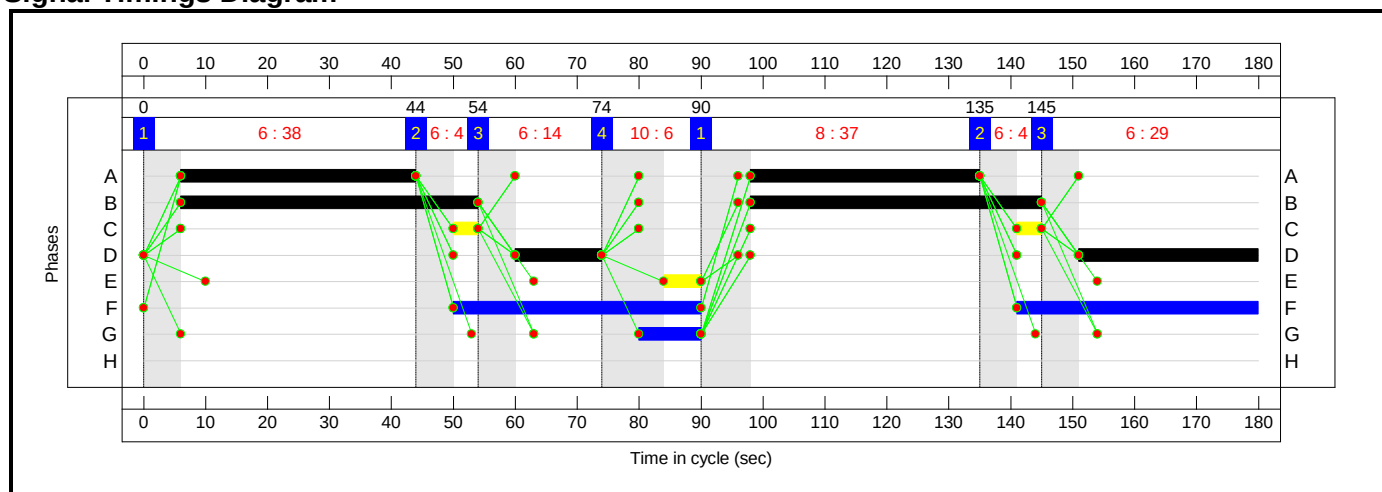


Network Results

Network Results													
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	76.1%
Barlestone Road / Bosworth Lane, Newbold Verdon	-	-	N/A	-	-		-	-	-	-	-	-	76.1%
1/1+1/2	Barlestone Road (NW) Ahead Right	U+O	N/A	N/A	B	C	2	90	8	518	1958:1936	874+174	49.5 : 49.5%
2/1	Barlestone Road (SE) Ahead Left	U	N/A	N/A	A		2	70	-	586	1925	770	76.1%
3/1	Bosworth Lane Left Right	U	N/A	N/A	D		2	48	-	376	1811	503	74.7%
4/1		U	N/A	N/A	-		-	-	-	381	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	715	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	384	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	59	25	2	8.8	3.5	0.4	12.7	-	-	-	-
Barlestone Road / Bosworth Lane, Newbold Verdon	-	-	59	25	2	8.8	3.5	0.4	12.7	-	-	-	-
1/1+1/2	518	518	59	25	2	2.0	0.5	0.4	2.8	19.6	7.5	0.5	8.0
2/1	586	586	-	-	-	3.8	1.6	-	5.4	32.9	12.9	1.6	14.4
3/1	376	376	-	-	-	3.1	1.4	-	4.5	43.5	8.7	1.4	10.1
4/1	381	381	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	715	715	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	384	384	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 18.3 PRC Over All Lanes (%): 18.3 Total Delay for Signalled Lanes (pcuHr): 12.72 Total Delay Over All Lanes(pcuHr): 12.72 Cycle Time (s): 180													

Scenario 4: '2033 DM PM' (FG4: '2033 Do Minimum PM', Plan 1: 'Ped Stage 4 Double Cycled')**Stage Sequence Diagram****Stage Timings**

Stage	1	2	3	4	1	2	3
Duration	38	4	14	6	37	4	29
Change Point	0	44	54	74	90	135	145

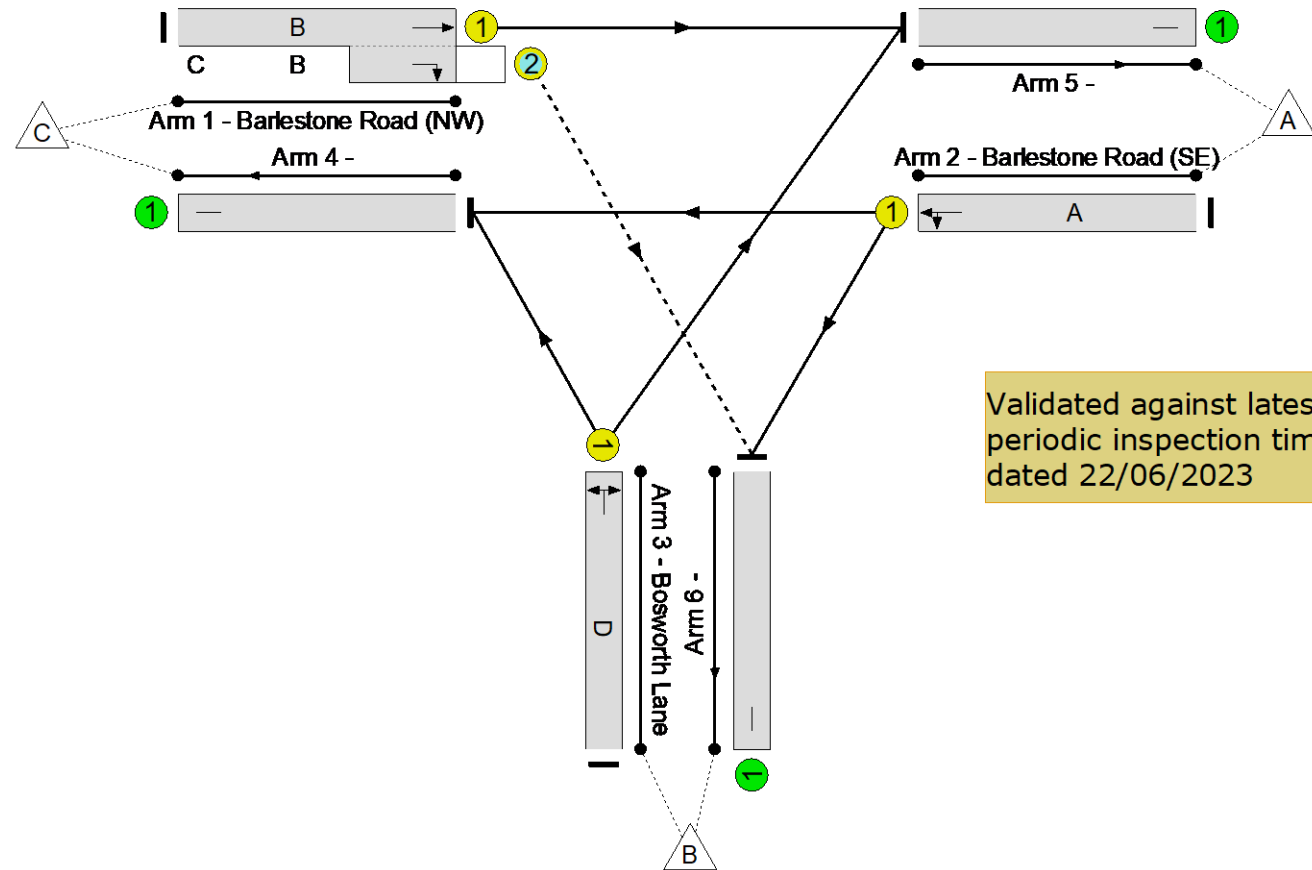
Signal Timings Diagram

Barlestone Road / Bosworth Lane, Newbold Verdon



PRC: 11.5 %

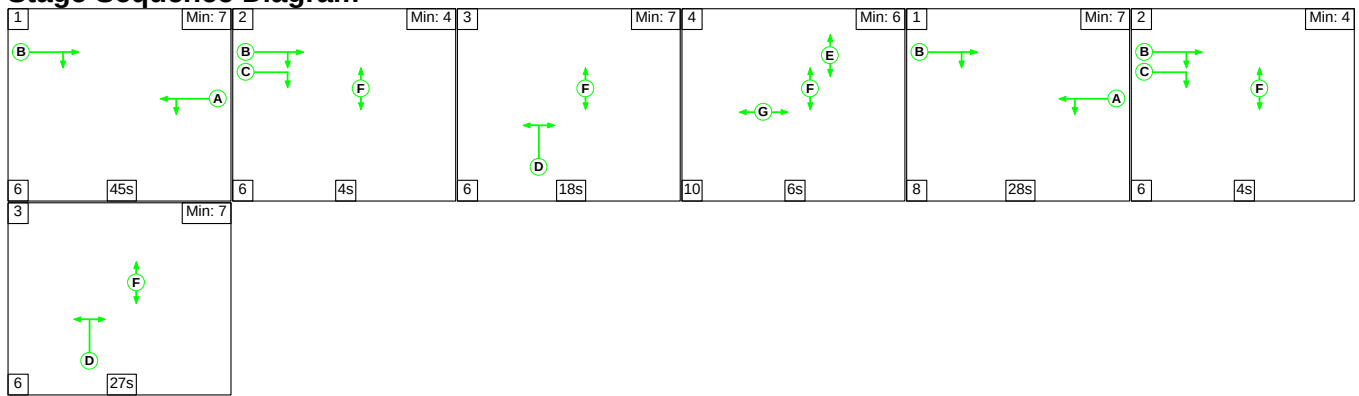
Total Traffic Delay: 13.2 pcuHr



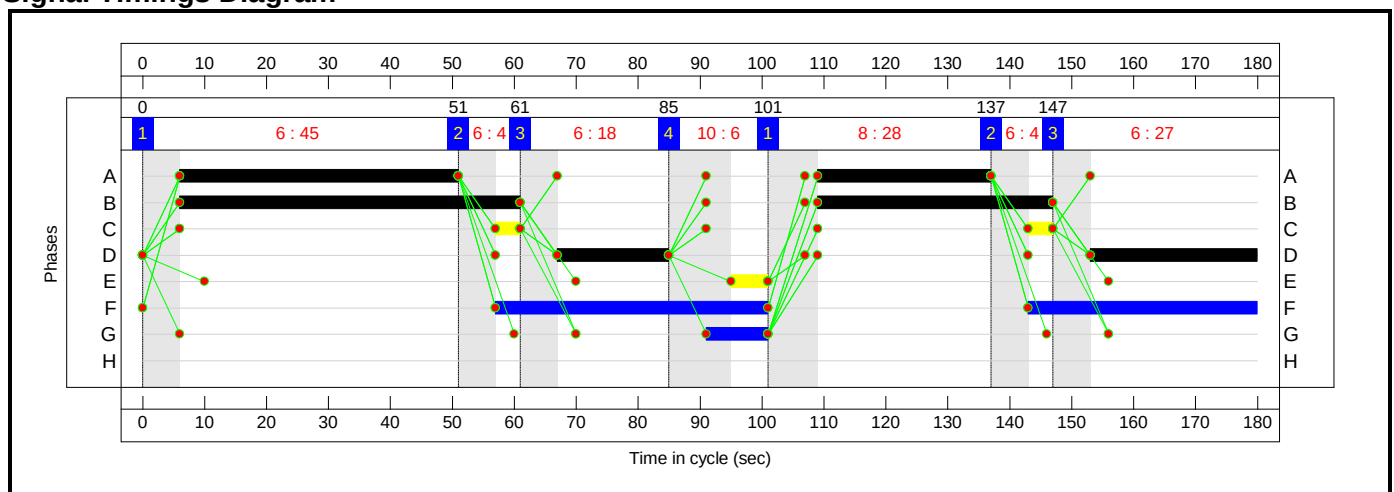
Validated against latest
periodic inspection timings
dated 22/06/2023

Network Results

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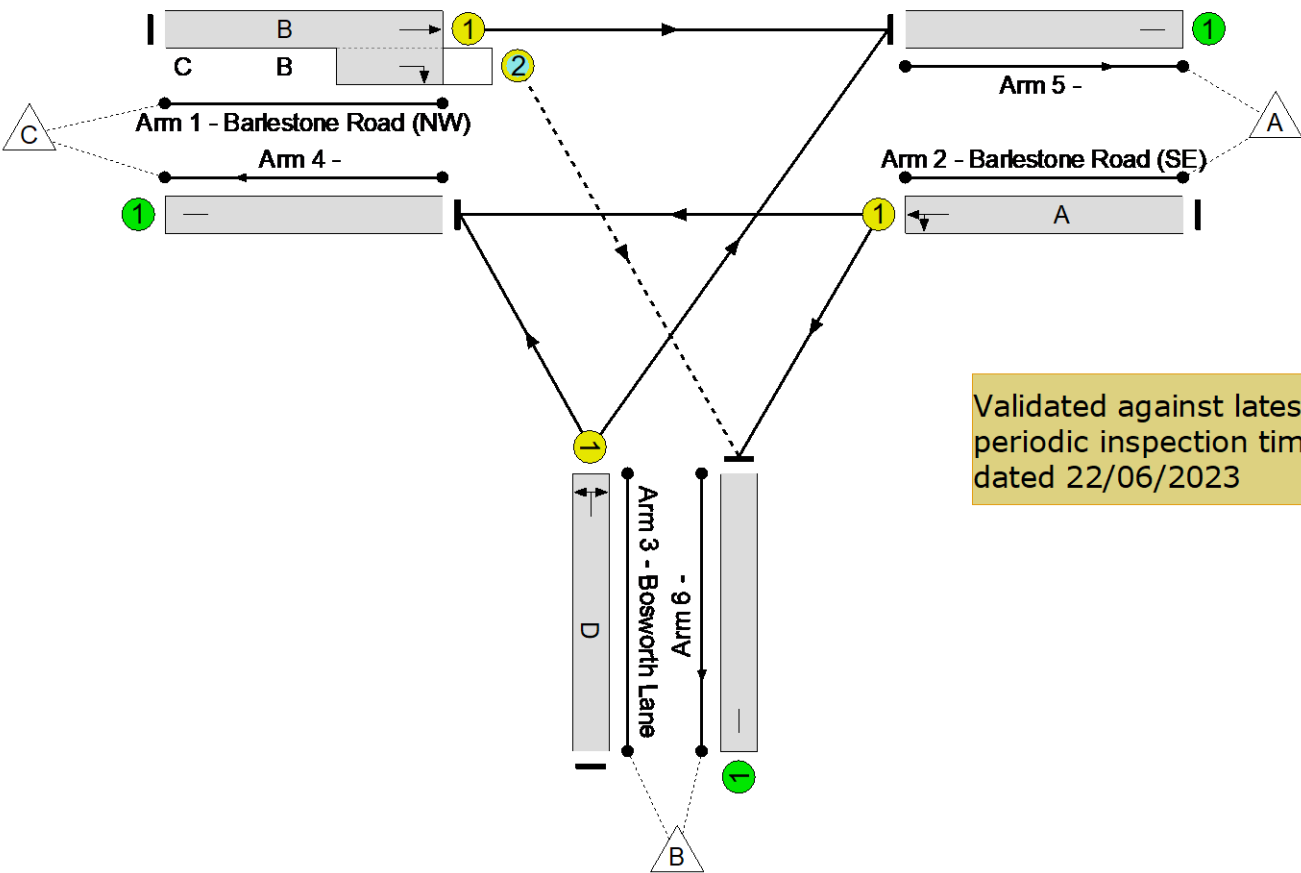
Scenario 5: '2033 DS AM' (FG5: '2033 Do Something AM', Plan 1: 'Ped Stage 4 Double Cycled')**Stage Sequence Diagram****Stage Timings**

Stage	1	2	3	4	1	2	3
Duration	45	4	18	6	28	4	27
Change Point	0	51	61	85	101	137	147

Signal Timings Diagram

Barlestone Road / Bosworth Lane, Newbold Verdon

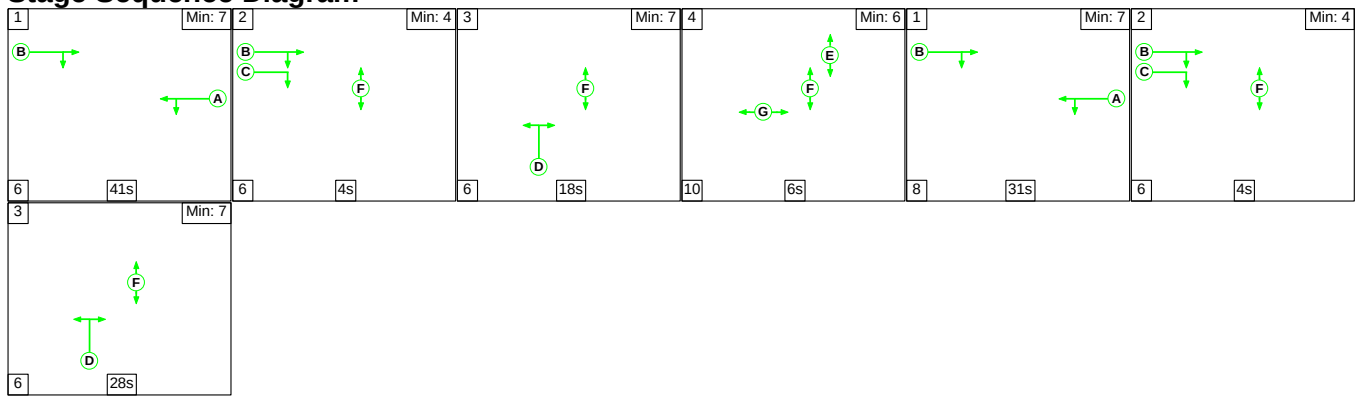
PRC: 11.1 %
Total Traffic Delay: 14.2 pcuHr



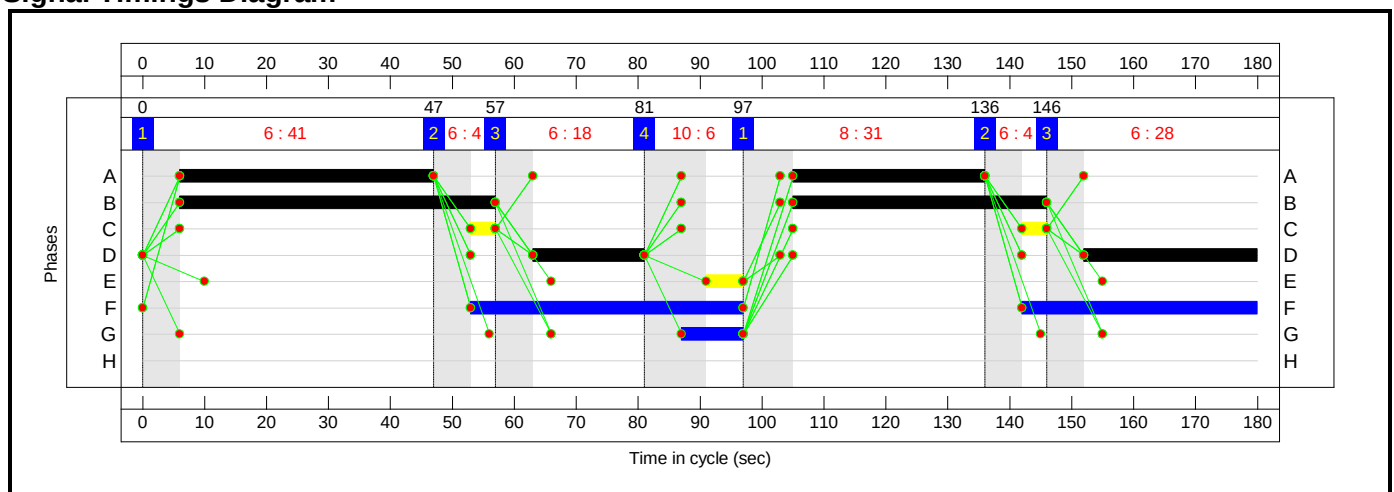
Validated against latest
periodic inspection timings
dated 22/06/2023

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	81.0%
Barlestone Road / Bosworth Lane, Newbold Verdon	-	-	N/A	-	-		-	-	-	-	-	-	81.0%
1/1+1/2	Barlestone Road (NW) Ahead Right	U+O	N/A	N/A	B	C	2	93	8	519	1958:1936	901+179	48.1 : 48.1%
2/1	Barlestone Road (SE) Ahead Left	U	N/A	N/A	A		2	73	-	643	1918	799	80.5%
3/1	Bosworth Lane Left Right	U	N/A	N/A	D		2	45	-	383	1811	473	81.0%
4/1		U	N/A	N/A	-		-	-	-	381	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	723	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	441	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	40	44	2	9.3	4.5	0.4	14.2	-	-	-	-
Barlestone Road / Bosworth Lane, Newbold Verdon	-	-	40	44	2	9.3	4.5	0.4	14.2	-	-	-	-
1/1+1/2	519	519	40	44	2	1.8	0.5	0.4	2.7	18.9	7.8	0.5	8.3
2/1	643	643	-	-	-	4.1	2.0	-	6.2	34.4	15.2	2.0	17.2
3/1	383	383	-	-	-	3.3	2.0	-	5.4	50.3	8.9	2.0	11.0
4/1	381	381	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	723	723	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	441	441	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1				PRC for Signalled Lanes (%):		11.1	Total Delay for Signalled Lanes (pcuHr):		14.23	Cycle Time (s): 180			
				PRC Over All Lanes (%):		11.1	Total Delay Over All Lanes(pcuHr):		14.23				

Scenario 6: '2033 DS PM' (FG6: '2033 Do Something PM', Plan 1: 'Ped Stage 4 Double Cycled')**Stage Sequence Diagram****Stage Timings**

Stage	1	2	3	4	1	2	3
Duration	41	4	18	6	31	4	28
Change Point	0	47	57	81	97	136	146

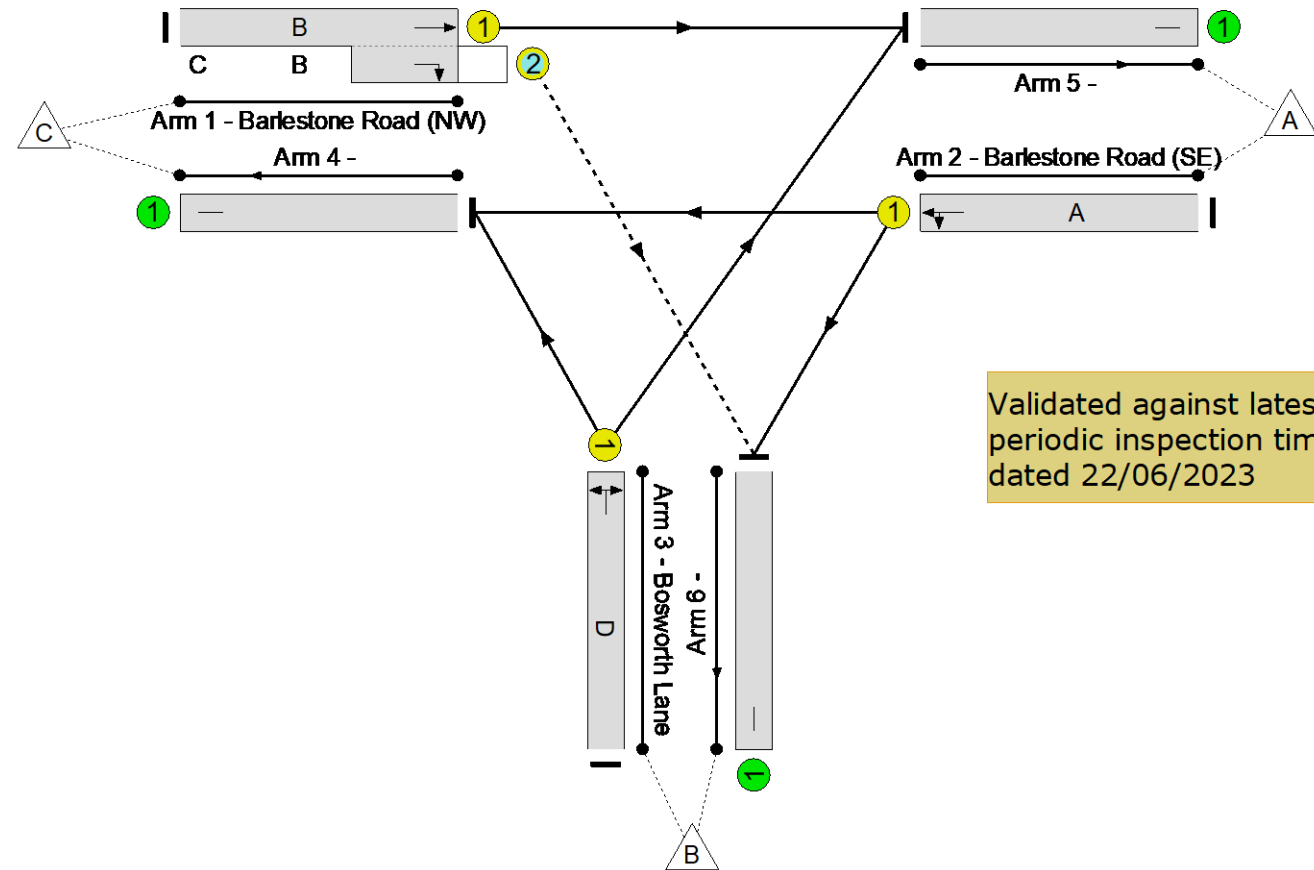
Signal Timings Diagram

Barlestone Road / Bosworth Lane, Newbold Verdon



PRC: 3.0 %

Total Traffic Delay: 16.6 pcuHr



Validated against latest
periodic inspection timings
dated 22/06/2023

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	87.4%
Barlestone Road / Bosworth Lane, Newbold Verdon	-	-	N/A	-	-		-	-	-	-	-	-	87.4%
1/1+1/2	Barlestone Road (NW) Ahead Right	U+O	N/A	N/A	B	C	2	92	8	373	1958:1936	857+223	34.6 : 34.6%
2/1	Barlestone Road (SE) Ahead Left	U	N/A	N/A	A		2	72	-	696	1938	797	87.4%
3/1	Bosworth Lane Left Right	U	N/A	N/A	D		2	46	-	420	1815	484	86.8%
4/1		U	N/A	N/A	-		-	-	-	479	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	635	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	375	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	35	41	2	9.7	6.5	0.5	16.6	-	-	-	-
Barlestone Road / Bosworth Lane, Newbold Verdon	-	-	35	41	2	9.7	6.5	0.5	16.6	-	-	-	-
1/1+1/2	373	373	35	41	2	1.2	0.3	0.5	2.0	18.9	4.5	0.3	4.8
2/1	696	696	-	-	-	4.7	3.2	-	8.0	41.3	17.0	3.2	20.3
3/1	420	420	-	-	-	3.7	3.0	-	6.7	57.3	10.6	3.0	13.6
4/1	479	479	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	635	635	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	375	375	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 3.0 Total Delay for Signalled Lanes (pcuHr): 16.62 Cycle Time (s): 180 PRC Over All Lanes (%): 3.0 Total Delay Over All Lanes(pcuHr): 16.62													

Junctions 9										
PICADY 9 - Priority Intersection Module										
Version: 9.5.1.7462 © Copyright TRL Limited, 2019										
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk										
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution										

Filename: Junction 3 Model.j9

Path: R:\24832\calculations\Transport\Models\Junction 3 - Bosworth Lane Bosworth Road A447 Staggered Crossroads

Report generation date: 19/07/2024 12:01:53

- »2024 Base, AM
- »2024 Base, PM
- »2033 Do Minimum, AM
- »2033 Do Minimum, PM
- »2033 Do Something, AM
- »2033 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2024 Base									
Stream B-C	D1	0.4	9.54	0.28	A	D2	0.2	7.53	0.18	A
Stream B-AD		0.9	19.13	0.48	C		0.7	14.99	0.40	B
Stream A-BCD		0.2	7.54	0.15	A		0.1	7.20	0.12	A
Stream D-A		0.4	25.28	0.28	D		1.5	83.73	0.64	F
Stream D-BC		3.7	57.81	0.81	F		6.3	83.21	0.90	F
Stream C-ABD		0.4	9.94	0.28	A		0.4	9.17	0.29	A
	2033 Do Minimum									
Stream B-C	D3	0.5	12.44	0.35	B	D4	0.3	8.37	0.21	A
Stream B-AD		1.6	28.73	0.63	D		0.9	18.45	0.48	C
Stream A-BCD		0.2	7.91	0.16	A		0.2	7.48	0.13	A
Stream D-A		3.3	188.00	0.95	F		6.1	333.42	1.10	F
Stream D-BC		7.5	106.92	0.93	F		20.8	217.45	1.08	F
Stream C-ABD		0.5	10.71	0.31	B		0.5	9.98	0.32	A
	2033 Do Something									
Stream B-C	D5	1.6	36.21	0.64	E	D6	0.3	9.42	0.23	A
Stream B-AD		4.7	69.01	0.86	F		1.2	22.52	0.56	C
Stream A-BCD		0.2	8.15	0.16	A		0.2	7.55	0.13	A
Stream D-A		4.4	262.84	1.02	F		9.4	521.74	1.26	F
Stream D-BC		12.4	159.66	1.01	F		44.5	434.19	1.24	F
Stream C-ABD		0.5	10.99	0.32	B		0.5	10.78	0.35	B

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

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

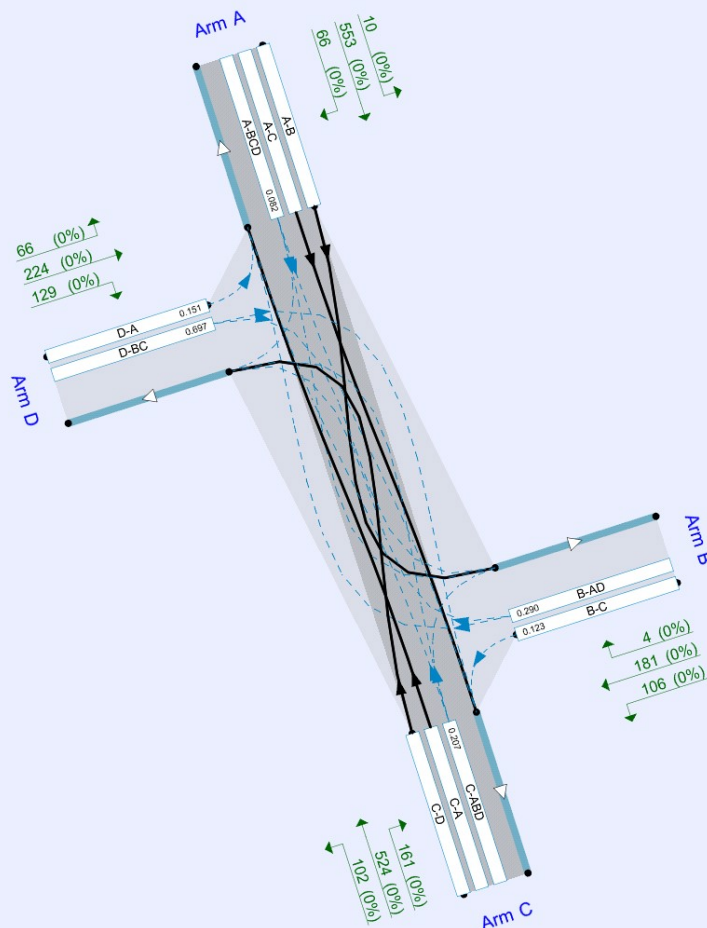
File summary

File Description

Title	
Location	
Site number	
Date	06/11/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	M-ECjames.wright
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



Flows show original traffic demand (PCU/hr).
Streams (downstream end) show RFC (l)

The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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	2024 Base	AM	ONE HOUR	08:00	09:30	15
D2	2024 Base	PM	ONE HOUR	17:00	18:30	15
D3	2033 Do Minimum	AM	ONE HOUR	08:00	09:30	15
D4	2033 Do Minimum	PM	ONE HOUR	17:00	18:30	15
D5	2033 Do Something	AM	ONE HOUR	08:00	09:30	15
D6	2033 Do Something	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Right-Left Stagger	Two-way		9.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major
D	untitled		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	13.00		✓	3.00	160.0	✓	24.00
C	14.00		✓	2.80	160.0	✓	15.00

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	One lane plus flare	10.00	10.00	6.70	4.00	3.00	✓	2.00	160	180
D	One lane plus flare	10.00	6.90	3.80	2.90	2.75	✓	1.00	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

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
A-D	725	-	-	-	0.195	0.195	0.195	-	0.195	-	-
B-AD	720	0.085	0.216	-	-	-	0.136	0.309	0.136	0.085	0.216
B-C	838	0.084	0.212	-	-	-	-	-	-	0.084	0.212
C-B	710	0.179	0.179	-	-	-	-	-	-	0.179	0.179
D-A	652	-	-	-	0.176	0.070	0.176	-	0.070	-	-
D-BC	520	0.105	0.105	0.238	0.167	0.066	0.167	-	0.066	-	-

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	2024 Base	AM	ONE HOUR	08:00	09:30	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		✓	868	100.000
B		✓	289	100.000
C		✓	744	100.000
D		✓	277	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	12	782	74
	B	6	0	134	149
	C	378	131	0	235
	D	51	142	84	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.28	9.54	0.4	A
B-AD	0.48	19.13	0.9	C
ABCD	0.15	7.54	0.2	A
A-B				
A-C				
D-A	0.28	25.28	0.4	D
D-BC	0.81	57.81	3.7	F
C-ABD	0.28	9.94	0.4	A
C-D				
C-A				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	101	647	0.156	100	0.2	6.581	A
B-AD	117	476	0.245	115	0.3	9.960	A
ABCD	56	612	0.091	55	0.1	6.465	A
A-B	9			9			
A-C	589			589			
D-A	38	473	0.081	38	0.1	8.267	A
D-BC	170	376	0.452	167	0.8	16.944	C
C-ABD	99	572	0.172	98	0.2	7.573	A
C-D	177			177			
C-A	285			285			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	120	602	0.200	120	0.2	7.468	A
B-AD	139	427	0.326	139	0.5	12.452	B
ABCD	67	590	0.113	66	0.1	6.878	A
A-B	11			11			
A-C	703			703			
D-A	46	394	0.116	46	0.1	10.335	B
D-BC	203	348	0.584	201	1.3	24.199	C
C-ABD	118	545	0.216	118	0.3	8.414	A
C-D	211			211			
C-A	340			340			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	148	528	0.280	147	0.4	9.444	A
B-AD	171	360	0.474	169	0.9	18.727	C
ABCD	81	559	0.146	81	0.2	7.532	A
A-B	13			13			
A-C	861			861			
D-A	56	221	0.254	55	0.3	21.580	C
D-BC	249	307	0.811	241	3.3	49.242	E
C-ABD	144	508	0.284	144	0.4	9.877	A
C-D	259			259			
C-A	416			416			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	148	525	0.281	148	0.4	9.543	A
B-AD	171	359	0.476	171	0.9	19.133	C
ABCD	81	559	0.146	81	0.2	7.539	A
A-B	13			13			
A-C	861			861			
D-A	56	198	0.283	56	0.4	25.277	D
D-BC	249	306	0.812	247	3.7	57.811	F
C-ABD	144	506	0.285	144	0.4	9.942	A
C-D	259			259			
C-A	416			416			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	120	599	0.201	121	0.3	7.543	A
B-AD	139	426	0.327	141	0.5	12.717	B
ABCD	67	589	0.113	67	0.1	6.891	A
A-B	11			11			
A-C	703			703			
D-A	46	373	0.123	47	0.1	11.050	B
D-BC	203	347	0.585	212	1.5	28.136	D
C-ABD	118	543	0.217	118	0.3	8.484	A
C-D	211			211			
C-A	340			340			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	101	645	0.156	101	0.2	6.628	A
B-AD	117	475	0.246	117	0.3	10.094	B
ABCD	56	611	0.091	56	0.1	6.483	A
A-B	9			9			
A-C	589			589			
D-A	38	466	0.082	39	0.1	8.427	A
D-BC	170	376	0.452	173	0.9	17.918	C
C-ABD	99	571	0.173	99	0.2	7.626	A
C-D	177			177			
C-A	285			285			

2024 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Right-Left Stagger	Two-way		17.01	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2024 Base	PM	ONE HOUR	17:00	18:30	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		✓	586	100.000
B		✓	243	100.000
C		✓	728	100.000
D		✓	329	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	9	516	61
	B	4	0	96	143
	C	489	143	0	96
	D	61	147	121	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		A	B	C	D
	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.18	7.53	0.2	A
B-AD	0.40	14.99	0.7	B
ABCD	0.12	7.20	0.1	A
A-B				
A-C				
D-A	0.64	83.73	1.5	F
D-BC	0.90	83.21	6.3	F
C-ABD	0.29	9.17	0.4	A
C-D				
C-A				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	72	676	0.107	72	0.1	5.957	A
B-AD	111	499	0.222	110	0.3	9.223	A
ABCD	46	617	0.074	46	0.1	6.297	A
A-B	7			7			
A-C	388			388			
D-A	46	441	0.104	45	0.1	9.095	A
D-BC	202	393	0.514	198	1.0	18.102	C
C-ABD	108	603	0.179	107	0.2	7.243	A
C-D	72			72			
C-A	368			368			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	86	641	0.135	86	0.2	6.481	A
B-AD	132	459	0.288	132	0.4	10.989	B
ABCD	55	596	0.092	55	0.1	6.652	A
A-B	8			8			
A-C	464			464			
D-A	55	345	0.159	55	0.2	12.376	B
D-BC	241	367	0.657	238	1.8	27.300	D
C-ABD	129	582	0.221	128	0.3	7.936	A
C-D	86			86			
C-A	440			440			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	106	587	0.180	105	0.2	7.478	A
B-AD	162	404	0.401	161	0.7	14.743	B
ABCD	67	567	0.118	67	0.1	7.198	A
A-B	10			10			
A-C	568			568			
D-A	67	145	0.462	65	0.8	43.438	E
D-BC	295	329	0.898	281	5.2	62.800	F
C-ABD	157	552	0.285	157	0.4	9.098	A
C-D	106			106			
C-A	538			538			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	106	584	0.181	106	0.2	7.532	A
B-AD	162	402	0.403	162	0.7	14.986	B
ABCD	67	567	0.119	67	0.1	7.204	A
A-B	10			10			
A-C	568			568			
D-A	67	105	0.640	65	1.5	83.728	F
D-BC	295	328	0.901	291	6.3	83.207	F
C-ABD	157	550	0.286	157	0.4	9.175	A
C-D	106			106			
C-A	538			538			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	86	637	0.135	87	0.2	6.541	A
B-AD	132	456	0.290	133	0.4	11.196	B
ABCD	55	596	0.092	55	0.1	6.659	A
A-B	8			8			
A-C	464			464			
D-A	55	305	0.180	60	0.2	14.931	B
D-BC	241	365	0.659	258	2.1	37.345	E
C-ABD	129	578	0.223	129	0.3	8.031	A
C-D	86			86			
C-A	440			440			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	72	674	0.107	72	0.1	5.984	A
B-AD	111	497	0.223	111	0.3	9.334	A
ABCD	46	617	0.074	46	0.1	6.310	A
A-B	7			7			
A-C	388			388			
D-A	46	430	0.107	46	0.1	9.391	A
D-BC	202	392	0.514	206	1.1	19.675	C
C-ABD	108	602	0.179	108	0.2	7.299	A
C-D	72			72			
C-A	368			368			

2033 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Right-Left Stagger	Two-way		19.44	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2033 Do Minimum	AM	ONE HOUR	08:00	09:30	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		✓	928	100.000
B		✓	332	100.000
C		✓	795	100.000
D		✓	299	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	13	836	79
	B	6	0	143	183
	C	404	140	0	251
	D	55	155	89	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		A	B	C	D
	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.35	12.44	0.5	B
B-AD	0.63	28.73	1.6	D
ABCD	0.16	7.91	0.2	A
A-B				
A-C				
D-A	0.95	188.00	3.3	F
D-BC	0.93	106.92	7.5	F
C-ABD	0.31	10.71	0.5	B
C-D				
C-A				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	108	620	0.174	107	0.2	7.005	A
B-AD	142	461	0.308	141	0.4	11.159	B
ABCD	59	601	0.099	59	0.1	6.641	A
A-B	10			10			
A-C	629			629			
D-A	41	446	0.093	41	0.1	8.881	A
D-BC	184	365	0.503	180	1.0	19.053	C
C-ABD	105	563	0.187	104	0.2	7.843	A
C-D	189			189			
C-A	304			304			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	129	565	0.228	128	0.3	8.238	A
B-AD	170	409	0.415	169	0.7	14.932	B
ABCD	71	576	0.123	71	0.1	7.122	A
A-B	12			12			
A-C	752			752			
D-A	49	344	0.144	49	0.2	12.205	B
D-BC	219	334	0.657	216	1.8	29.787	D
C-ABD	126	533	0.236	126	0.3	8.831	A
C-D	226			226			
C-A	363			363			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	157	455	0.346	157	0.5	12.011	B
B-AD	208	335	0.621	205	1.5	27.003	D
A-BCD	87	543	0.160	87	0.2	7.893	A
A-B	14			14			
A-C	920			920			
D-A	61	108	0.559	57	1.1	66.111	F
D-BC	269	289	0.929	252	5.9	75.986	F
C-ABD	154	493	0.313	154	0.4	10.587	B
C-D	276			276			
C-A	445			445			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	157	447	0.352	157	0.5	12.439	B
B-AD	208	332	0.626	208	1.6	28.730	D
A-BCD	87	542	0.160	87	0.2	7.911	A
A-B	14			14			
A-C	920			920			
D-A	61	64	0.947	52	3.3	188.001	F
D-BC	269	288	0.933	262	7.5	106.920	F
C-ABD	154	490	0.315	154	0.5	10.713	B
C-D	276			276			
C-A	445			445			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	129	557	0.231	129	0.3	8.432	A
B-AD	170	405	0.419	173	0.7	15.733	C
A-BCD	71	575	0.123	71	0.1	7.146	A
A-B	12			12			
A-C	752			752			
D-A	49	289	0.171	62	0.2	16.657	C
D-BC	219	332	0.662	241	2.2	45.955	E
C-ABD	126	529	0.238	126	0.3	8.964	A
C-D	226			226			
C-A	363			363			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	108	617	0.175	108	0.2	7.077	A
B-AD	142	460	0.309	143	0.5	11.411	B
A-BCD	59	600	0.099	60	0.1	6.662	A
A-B	10			10			
A-C	629			629			
D-A	41	434	0.095	42	0.1	9.189	A
D-BC	184	365	0.504	188	1.1	20.857	C
C-ABD	105	561	0.188	106	0.2	7.913	A
C-D	189			189			
C-A	304			304			

2033 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Right-Left Stagger	Two-way		46.24	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2033 Do Minimum	PM	ONE HOUR	17:00	18:30	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		✓	629	100.000
B		✓	266	100.000
C		✓	779	100.000
D		✓	373	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	10	553	66
	B	4	0	102	160
	C	524	153	0	102
	D	66	178	129	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A	B	C	D
	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.21	8.37	0.3	A
B-AD	0.48	18.45	0.9	C
ABCD	0.13	7.48	0.2	A
A-B				
A-C				
D-A	1.10	333.42	6.1	F
D-BC	1.08	217.45	20.8	F
C-ABD	0.32	9.98	0.5	A
C-D				
C-A				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	77	659	0.116	76	0.1	6.169	A
B-AD	123	484	0.255	122	0.3	9.914	A
ABCD	50	609	0.082	49	0.1	6.433	A
A-B	8			8			
A-C	416			416			
D-A	50	389	0.128	49	0.1	10.563	B
D-BC	231	383	0.604	225	1.4	22.159	C
C-ABD	115	593	0.194	114	0.2	7.509	A
C-D	77			77			
C-A	394			394			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	92	619	0.148	92	0.2	6.822	A
B-AD	147	441	0.335	147	0.5	12.225	B
ABCD	59	586	0.101	59	0.1	6.838	A
A-B	9			9			
A-C	497			497			
D-A	59	251	0.237	59	0.3	18.706	C
D-BC	276	354	0.780	270	3.0	40.047	E
C-ABD	138	569	0.242	137	0.3	8.335	A
C-D	92			92			
C-A	471			471			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	112	551	0.204	112	0.3	8.202	A
B-AD	181	381	0.474	179	0.9	17.705	C
ABCD	73	554	0.131	73	0.1	7.468	A
A-B	11			11			
A-C	609			609			
D-A	73	66	1.096	55	4.6	219.485	F
D-BC	338	314	1.076	298	12.9	122.105	F
C-ABD	168	536	0.314	168	0.5	9.760	A
C-D	112			112			
C-A	577			577			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	112	542	0.207	112	0.3	8.375	A
B-AD	181	375	0.481	180	0.9	18.451	C
ABCD	73	554	0.131	73	0.2	7.476	A
A-B	11			11			
A-C	609			609			
D-A	73	73	0.994	67	6.1	333.419	F
D-BC	338	312	1.082	307	20.8	217.450	F
C-ABD	168	529	0.318	168	0.5	9.981	A
C-D	112			112			
C-A	577			577			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	92	606	0.151	92	0.2	7.006	A
B-AD	147	430	0.343	149	0.5	12.878	B
ABCD	59	585	0.101	59	0.1	6.850	A
A-B	9			9			
A-C	497			497			
D-A	59	81	0.734	68	3.8	250.432	F
D-BC	276	346	0.797	332	6.7	162.587	F
C-ABD	138	555	0.248	138	0.3	8.645	A
C-D	92			92			
C-A	471			471			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	77	654	0.117	77	0.1	6.238	A
B-AD	123	480	0.257	124	0.4	10.138	B
ABCD	50	608	0.082	50	0.1	6.450	A
A-B	8			8			
A-C	416			416			
D-A	50	347	0.143	64	0.2	13.404	B
D-BC	231	380	0.608	251	1.7	31.425	D
C-ABD	115	588	0.196	116	0.2	7.626	A
C-D	77			77			
C-A	394			394			

2033 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Right-Left Stagger	Two-way		33.03	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2033 Do Something	AM	ONE HOUR	08:00	09:30	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		✓	928	100.000
B		✓	396	100.000
C		✓	798	100.000
D		✓	315	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	13	836	79
	B	6	0	153	237
	C	404	143	0	251
	D	55	171	89	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
	A	B	C	D	
	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.64	36.21	1.6	E
B-AD	0.86	69.01	4.7	F
ABCD	0.16	8.15	0.2	A
A-B				
A-C				
D-A	1.02	262.84	4.4	F
D-BC	1.01	159.66	12.4	F
C-ABD	0.32	10.99	0.5	B
C-D				
C-A				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	115	588	0.196	114	0.2	7.582	A
B-AD	183	444	0.412	180	0.7	13.507	B
ABCD	59	593	0.100	59	0.1	6.740	A
A-B	10			10			
A-C	629			629			
D-A	41	426	0.097	41	0.1	9.350	A
D-BC	196	362	0.540	191	1.1	20.549	C
C-ABD	108	560	0.192	107	0.2	7.920	A
C-D	189			189			
C-A	304			304			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	138	510	0.270	137	0.4	9.641	A
B-AD	218	392	0.557	216	1.2	20.240	C
ABCD	71	566	0.125	71	0.1	7.262	A
A-B	12			12			
A-C	752			752			
D-A	49	306	0.162	49	0.2	14.005	B
D-BC	234	330	0.708	230	2.2	34.333	D
C-ABD	129	531	0.242	128	0.3	8.941	A
C-D	226			226			
C-A	363			363			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	168	306	0.551	165	1.2	25.104	D
B-AD	268	316	0.846	257	4.0	52.739	F
ABCD	87	531	0.164	87	0.2	8.107	A
A-B	14			14			
A-C	920			920			
D-A	61	59	1.022	47	3.6	207.971	F
D-BC	286	285	1.004	261	8.5	99.223	F
C-ABD	157	490	0.322	157	0.5	10.800	B
C-D	276			276			
C-A	445			445			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	168	264	0.638	167	1.6	36.207	E
B-AD	268	312	0.859	264	4.7	69.014	F
ABCD	87	529	0.165	87	0.2	8.153	A
A-B	14			14			
A-C	920			920			
D-A	61	66	0.915	57	4.4	262.838	F
D-BC	286	283	1.012	271	12.4	159.656	F
C-ABD	157	485	0.325	157	0.5	10.987	B
C-D	276			276			
C-A	445			445			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	138	482	0.285	142	0.4	10.744	B
B-AD	218	386	0.566	232	1.4	25.185	D
ABCD	71	563	0.126	71	0.1	7.317	A
A-B	12			12			
A-C	752			752			
D-A	49	193	0.256	66	0.4	31.574	D
D-BC	234	326	0.718	271	3.0	81.905	F
C-ABD	129	522	0.246	129	0.3	9.168	A
C-D	226			226			
C-A	363			363			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	115	582	0.198	116	0.2	7.730	A
B-AD	183	442	0.414	186	0.7	14.157	B
ABCD	59	592	0.101	60	0.1	6.770	A
A-B	10			10			
A-C	629			629			
D-A	41	407	0.102	42	0.1	9.896	A
D-BC	196	362	0.541	203	1.2	23.578	C
C-ABD	108	558	0.193	108	0.2	8.004	A
C-D	189			189			
C-A	304			304			

2033 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Right-Left Stagger	Two-way		91.77	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2033 Do Something	PM	ONE HOUR	17:00	18:30	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		✓	629	100.000
B		✓	291	100.000
C		✓	787	100.000
D		✓	419	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	10	553	66
	B	4	0	106	181
	C	524	161	0	102
	D	66	224	129	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A	B	C	D
	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.23	9.42	0.3	A
B-AD	0.56	22.52	1.2	C
ABCD	0.13	7.55	0.2	A
A-B				
A-C				
D-A	1.26	521.74	9.4	F
D-BC	1.24	434.19	44.5	F
C-ABD	0.35	10.78	0.5	B
C-D				
C-A				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	80	647	0.123	79	0.1	6.339	A
B-AD	139	480	0.290	138	0.4	10.459	B
ABCD	50	605	0.082	49	0.1	6.469	A
A-B	8			8			
A-C	416			416			
D-A	50	329	0.151	49	0.2	12.841	B
D-BC	266	381	0.697	257	2.1	27.530	D
C-ABD	121	586	0.207	120	0.3	7.704	A
C-D	77			77			
C-A	394			394			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	95	601	0.158	95	0.2	7.109	A
B-AD	166	436	0.382	166	0.6	13.287	B
ABCD	59	582	0.102	59	0.1	6.887	A
A-B	9			9			
A-C	497			497			
D-A	59	134	0.441	57	0.7	45.382	E
D-BC	317	351	0.903	304	5.5	62.173	F
C-ABD	145	561	0.258	144	0.3	8.635	A
C-D	92			92			
C-A	471			471			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	117	517	0.226	116	0.3	8.982	A
B-AD	204	373	0.546	202	1.1	20.711	C
ABCD	73	550	0.132	73	0.2	7.540	A
AB	11			11			
AC	609			609			
D-A	73	58	1.256	51	6.1	306.907	F
D-BC	389	314	1.236	309	25.4	205.988	F
C-ABD	177	525	0.337	177	0.5	10.307	B
C-D	112			112			
C-A	577			577			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	117	499	0.234	117	0.3	9.415	A
B-AD	204	363	0.562	203	1.2	22.520	C
ABCD	73	549	0.132	73	0.2	7.550	A
AB	11			11			
AC	609			609			
D-A	73	62	1.172	60	9.4	521.738	F
D-BC	389	313	1.240	312	44.5	411.045	F
C-ABD	177	511	0.347	177	0.5	10.780	B
C-D	112			112			
C-A	577			577			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	95	574	0.166	96	0.2	7.533	A
B-AD	166	413	0.402	168	0.7	14.834	B
ABCD	59	581	0.102	59	0.1	6.902	A
AB	9			9			
AC	497			497			
D-A	59	68	0.871	60	9.1	519.413	F
D-BC	317	348	0.911	341	38.7	434.189	F
C-ABD	145	530	0.273	145	0.4	9.361	A
C-D	92			92			
C-A	471			471			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	80	624	0.128	80	0.1	6.621	A
B-AD	139	460	0.303	140	0.4	11.302	B
ABCD	50	605	0.082	50	0.1	6.488	A
AB	8			8			
AC	416			416			
D-A	50	76	0.651	69	4.3	375.391	F
D-BC	266	373	0.713	363	14.2	269.689	F
C-ABD	121	559	0.217	122	0.3	8.245	A
C-D	77			77			
C-A	394			394			

Junctions 9				
ARCADY 9 - Roundabout Module				
Version: 9.5.1.7462 © Copyright TRL Limited, 2019				
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Filename: Junction 4 Model.j9

Path: R:\24832\calculations\Transport\Models\Junction 4 - B582 - Newbold Road - Lockymead Drive Roundabout

Report generation date: 19/07/2024 15:45:54

- »B582 / B582 / Newbold Road / Lockymead Drive Roundabout - 2024 Base, AM
- »B582 / B582 / Newbold Road / Lockymead Drive Roundabout - 2024 Base, PM
- »B582 / B582 / Newbold Road / Lockymead Drive Roundabout - 2033 Do Minimum, AM
- »B582 / B582 / Newbold Road / Lockymead Drive Roundabout - 2033 Do Minimum, PM
- »B582 / B582 / Newbold Road / Lockymead Drive Roundabout - 2033 Do Something, AM
- »B582 / B582 / Newbold Road / Lockymead Drive Roundabout - 2033 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	B582 / B582 / Newbold Road / Lockymead Drive Roundabout - 2024 Base									
Arm 1	D1	1.8	8.56	0.64	A	D2	0.5	4.66	0.35	A
Arm 2		0.1	9.03	0.07	A		0.1	7.09	0.10	A
Arm 3		0.5	3.97	0.35	A		0.9	5.07	0.49	A
Arm 4		0.1	4.62	0.12	A		0.1	4.79	0.06	A
	B582 / B582 / Newbold Road / Lockymead Drive Roundabout - 2033 Do Minimum									
Arm 1	D3	4.2	16.48	0.81	C	D4	0.7	5.16	0.41	A
Arm 2		0.1	11.16	0.10	B		0.1	7.56	0.12	A
Arm 3		0.6	4.21	0.39	A		1.6	6.78	0.62	A
Arm 4		0.1	4.83	0.13	A		0.1	5.49	0.07	A
	B582 / B582 / Newbold Road / Lockymead Drive Roundabout - 2033 Do Something									
Arm 1	D5	7.6	27.70	0.90	D	D6	0.8	5.46	0.45	A
Arm 2		0.1	12.47	0.11	B		0.1	7.79	0.12	A
Arm 3		0.7	4.36	0.41	A		2.1	8.01	0.68	A
Arm 4		0.2	4.93	0.13	A		0.1	5.87	0.08	A

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

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

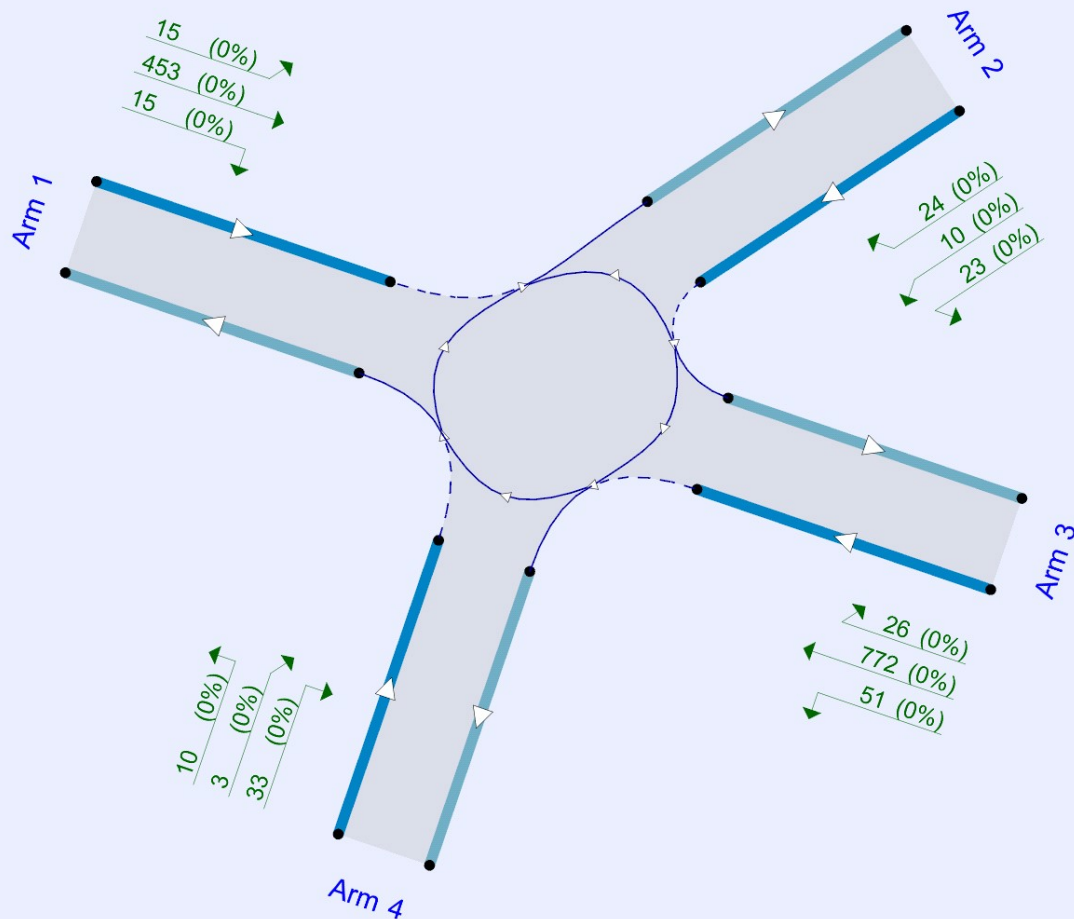
File summary

File Description

Title	
Location	
Site number	
Date	06/11/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	M-EC\james.wright
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



Flows show original traffic demand (PCU/hr).

The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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	2024 Base	AM	ONE HOUR	08:00	09:30	15
D2	2024 Base	PM	ONE HOUR	17:00	18:30	15
D3	2033 Do Minimum	AM	ONE HOUR	08:00	09:30	15
D4	2033 Do Minimum	PM	ONE HOUR	17:00	18:30	15
D5	2033 Do Something	AM	ONE HOUR	08:00	09:30	15
D6	2033 Do Something	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A4	B582 / B582 / Newbold Road / Lockymead Drive Roundabout	100.000

B582 / B582 / Newbold Road / Lockeymead Drive Roundabout - 2024 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.64	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	B582 Hunts Lane	
2	Newbold Road	
3	B582 Manor Road	
4	Lockeymead Drive	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.57	4.51	9.1	13.4	28.5	38.0	
2	3.17	4.30	1.2	4.2	28.5	65.0	
3	4.91	4.91	0.0	27.8	28.9	48.0	
4	2.90	4.98	8.8	15.3	14.3	49.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.547	1229
2	0.365	726
3	0.585	1415
4	0.524	1138

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024 Base	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	682	100.000
2		✓	29	100.000
3		✓	447	100.000
4		✓	95	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	0	18	654	10
	2	14	0	15	0
	3	411	16	0	20
	4	15	9	71	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.64	8.56	1.8	A
2	0.07	9.03	0.1	A
3	0.35	3.97	0.5	A
4	0.12	4.62	0.1	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	513	72	1189	0.432	510	0.8	5.280	A
2	22	550	525	0.042	22	0.0	7.149	A
3	337	18	1405	0.240	335	0.3	3.364	A
4	72	331	965	0.074	71	0.1	4.029	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	613	86	1182	0.519	612	1.1	6.305	A
2	26	659	485	0.054	26	0.1	7.838	A
3	402	22	1403	0.287	402	0.4	3.596	A
4	85	396	930	0.092	85	0.1	4.260	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	751	106	1171	0.641	748	1.7	8.459	A
2	32	807	432	0.074	32	0.1	9.002	A
3	492	26	1400	0.352	492	0.5	3.961	A
4	105	485	884	0.118	104	0.1	4.620	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	751	106	1171	0.641	751	1.8	8.564	A
2	32	809	431	0.074	32	0.1	9.028	A
3	492	26	1400	0.352	492	0.5	3.966	A
4	105	486	883	0.118	105	0.1	4.621	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	613	86	1181	0.519	616	1.1	6.393	A
2	26	663	484	0.054	26	0.1	7.868	A
3	402	22	1403	0.287	402	0.4	3.600	A
4	85	397	930	0.092	86	0.1	4.264	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	513	72	1189	0.432	515	0.8	5.348	A
2	22	555	523	0.042	22	0.0	7.177	A
3	337	18	1405	0.240	337	0.3	3.374	A
4	72	332	964	0.074	72	0.1	4.035	A

B582 / B582 / Newbold Road / Lockkeymead Drive Roundabout - 2024 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2024 Base	PM	ONE HOUR	17:00	18:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	383	100.000
2		✓	52	100.000
3		✓	614	100.000
4		✓	43	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	14	355	14
	2	22	0	21	9
	3	543	24	0	47
	4	9	3	31	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.35	4.66	0.5	A
2	0.10	7.09	0.1	A
3	0.49	5.07	0.9	A
4	0.06	4.79	0.1	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	288	43	1205	0.239	287	0.3	3.918	A
2	39	300	616	0.064	39	0.1	6.231	A
3	462	34	1396	0.331	460	0.5	3.842	A
4	32	441	907	0.036	32	0.0	4.118	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	344	52	1200	0.287	344	0.4	4.202	A
2	47	359	595	0.079	47	0.1	6.569	A
3	552	40	1392	0.397	551	0.7	4.282	A
4	39	529	861	0.045	39	0.0	4.379	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	422	64	1194	0.353	421	0.5	4.656	A
2	57	440	565	0.101	57	0.1	7.082	A
3	676	49	1386	0.488	675	0.9	5.052	A
4	47	647	799	0.059	47	0.1	4.791	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	422	64	1194	0.353	422	0.5	4.662	A
2	57	440	565	0.101	57	0.1	7.087	A
3	676	50	1386	0.488	676	0.9	5.068	A
4	47	648	798	0.059	47	0.1	4.795	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	344	52	1200	0.287	345	0.4	4.211	A
2	47	360	594	0.079	47	0.1	6.578	A
3	552	41	1391	0.397	553	0.7	4.299	A
4	39	531	860	0.045	39	0.0	4.386	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	288	44	1205	0.239	289	0.3	3.932	A
2	39	302	616	0.064	39	0.1	6.244	A
3	462	34	1395	0.331	463	0.5	3.864	A
4	32	444	905	0.036	32	0.0	4.126	A

B582 / B582 / Newbold Road / Lockkeymead Drive Roundabout - 2033 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	11.51	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2033 Do Minimum	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	864	100.000
2		✓	31	100.000
3		✓	494	100.000
4		✓	101	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	19	834	11
	2	15	0	16	0
	3	455	17	0	22
	4	16	10	75	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
From	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.81	16.48	4.2	C
2	0.10	11.16	0.1	B
3	0.39	4.21	0.6	A
4	0.13	4.83	0.1	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	650	76	1187	0.548	646	1.2	6.595	A
2	23	688	475	0.049	23	0.1	7.965	A
3	372	19	1404	0.265	370	0.4	3.479	A
4	76	365	947	0.080	76	0.1	4.131	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	777	92	1179	0.659	774	1.9	8.835	A
2	28	824	425	0.066	28	0.1	9.060	A
3	444	23	1402	0.317	444	0.5	3.755	A
4	91	437	909	0.100	91	0.1	4.401	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	951	112	1167	0.815	943	4.0	15.445	C
2	34	1004	359	0.095	34	0.1	11.055	B
3	544	28	1399	0.389	543	0.6	4.205	A
4	111	535	857	0.130	111	0.1	4.823	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	951	112	1167	0.815	951	4.2	16.480	C
2	34	1012	357	0.096	34	0.1	11.163	B
3	544	29	1398	0.389	544	0.6	4.212	A
4	111	536	857	0.130	111	0.1	4.827	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	777	92	1178	0.659	786	2.0	9.361	A
2	28	836	421	0.066	28	0.1	9.166	A
3	444	24	1401	0.317	445	0.5	3.764	A
4	91	439	908	0.100	91	0.1	4.407	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	650	77	1187	0.548	653	1.2	6.789	A
2	23	696	472	0.049	23	0.1	8.027	A
3	372	20	1404	0.265	372	0.4	3.491	A
4	76	367	946	0.080	76	0.1	4.142	A

B582 / B582 / Newbold Road / Lockkeymead Drive Roundabout - 2033 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2033 Do Minimum	PM	ONE HOUR	17:00	18:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	448	100.000
2		✓	57	100.000
3		✓	775	100.000
4		✓	46	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	15	418	15
	2	24	0	23	10
	3	698	26	0	51
	4	10	3	33	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.41	5.16	0.7	A
2	0.12	7.56	0.1	A
3	0.62	6.78	1.6	A
4	0.07	5.49	0.1	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	337	46	1203	0.280	336	0.4	4.142	A
2	43	349	598	0.072	43	0.1	6.475	A
3	583	37	1394	0.419	581	0.7	4.412	A
4	35	560	844	0.041	34	0.0	4.444	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	403	56	1198	0.336	402	0.5	4.519	A
2	51	418	573	0.089	51	0.1	6.897	A
3	697	44	1389	0.501	696	1.0	5.179	A
4	41	671	786	0.053	41	0.1	4.834	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	493	68	1191	0.414	492	0.7	5.145	A
2	63	512	539	0.116	63	0.1	7.556	A
3	853	54	1384	0.617	851	1.6	6.728	A
4	51	821	707	0.072	51	0.1	5.481	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	493	68	1191	0.414	493	0.7	5.156	A
2	63	513	539	0.117	63	0.1	7.564	A
3	853	54	1384	0.617	853	1.6	6.784	A
4	51	824	706	0.072	51	0.1	5.490	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	403	56	1198	0.336	404	0.5	4.534	A
2	51	420	573	0.089	51	0.1	6.909	A
3	697	44	1389	0.501	699	1.0	5.231	A
4	41	675	784	0.053	41	0.1	4.846	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	337	47	1203	0.280	338	0.4	4.163	A
2	43	351	598	0.072	43	0.1	6.494	A
3	583	37	1394	0.419	585	0.7	4.458	A
4	35	564	842	0.041	35	0.0	4.458	A

B582 / B582 / Newbold Road / Lockkeymead Drive Roundabout - 2033 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	18.39	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2033 Do Something	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	950	100.000
2		✓	31	100.000
3		✓	520	100.000
4		✓	101	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	19	920	11
	2	15	0	16	0
	3	481	17	0	22
	4	16	10	75	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.90	27.70	7.6	D
2	0.11	12.47	0.1	B
3	0.41	4.36	0.7	A
4	0.13	4.93	0.2	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	715	76	1187	0.603	709	1.5	7.449	A
2	23	751	452	0.052	23	0.1	8.394	A
3	391	19	1404	0.279	390	0.4	3.546	A
4	76	385	936	0.081	76	0.1	4.181	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	854	92	1179	0.725	850	2.5	10.811	B
2	28	900	397	0.070	28	0.1	9.736	A
3	467	23	1402	0.334	467	0.5	3.850	A
4	91	461	896	0.101	91	0.1	4.468	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1046	112	1167	0.896	1028	6.9	23.397	C
2	34	1090	328	0.104	34	0.1	12.232	B
3	573	28	1399	0.409	572	0.7	4.350	A
4	111	564	842	0.132	111	0.2	4.921	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1046	112	1167	0.896	1043	7.6	27.702	D
2	34	1105	323	0.106	34	0.1	12.470	B
3	573	29	1398	0.409	573	0.7	4.358	A
4	111	565	842	0.132	111	0.2	4.926	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	854	92	1178	0.725	873	2.7	12.477	B
2	28	923	389	0.072	28	0.1	9.978	A
3	467	24	1401	0.334	468	0.5	3.862	A
4	91	462	896	0.101	91	0.1	4.473	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	715	77	1187	0.603	720	1.5	7.793	A
2	23	762	448	0.052	23	0.1	8.484	A
3	391	20	1404	0.279	392	0.4	3.561	A
4	76	387	935	0.081	76	0.1	4.192	A

B582 / B582 / Newbold Road / Lockkeymead Drive Roundabout - 2033 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	7.08	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2033 Do Something	PM	ONE HOUR	17:00	18:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	483	100.000
2		✓	57	100.000
3		✓	849	100.000
4		✓	46	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	15	453	15
	2	24	0	23	10
	3	772	26	0	51
	4	10	3	33	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.45	5.46	0.8	A
2	0.12	7.79	0.1	A
3	0.68	8.01	2.1	A
4	0.08	5.87	0.1	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	364	46	1203	0.302	362	0.4	4.270	A
2	43	375	589	0.073	43	0.1	6.588	A
3	639	37	1394	0.459	636	0.8	4.729	A
4	35	616	815	0.042	34	0.0	4.609	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	434	56	1198	0.362	434	0.6	4.705	A
2	51	450	562	0.091	51	0.1	7.052	A
3	763	44	1389	0.549	762	1.2	5.721	A
4	41	738	751	0.055	41	0.1	5.070	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	532	68	1191	0.446	531	0.8	5.441	A
2	63	551	525	0.120	63	0.1	7.784	A
3	935	54	1384	0.676	931	2.0	7.901	A
4	51	902	665	0.076	51	0.1	5.857	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	532	68	1191	0.446	532	0.8	5.457	A
2	63	552	525	0.120	63	0.1	7.795	A
3	935	54	1384	0.676	935	2.1	8.013	A
4	51	905	664	0.076	51	0.1	5.873	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	434	56	1198	0.362	435	0.6	4.725	A
2	51	451	561	0.091	51	0.1	7.066	A
3	763	44	1389	0.549	767	1.2	5.811	A
4	41	742	749	0.055	41	0.1	5.088	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	364	47	1203	0.302	364	0.4	4.293	A
2	43	378	588	0.073	43	0.1	6.606	A
3	639	37	1394	0.459	641	0.9	4.792	A
4	35	620	813	0.043	35	0.0	4.628	A

Junctions 9										
PICADY 9 - Priority Intersection Module										
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Filename: J5 Dragon lane - Barlestone Road Model.j9
Path: R:\24832\calculations\Transport\Models\Junction 5 - Dragon Lane
Report generation date: 19/07/2024 12:09:48

«2033 Do Something, PM
 »Junction Network
 »Arms
 »Traffic Demand
 »Origin-Destination Data
 »Vehicle Mix
 »Results

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2024 Base									
Stream B-C	D1	0.4	8.72	0.28	A	D2	0.2	8.35	0.20	A
Stream B-A		0.2	13.22	0.15	B		0.1	14.07	0.08	B
Stream C-AB		0.8	5.59	0.30	A		1.2	7.57	0.42	A
	2033 Do Minimum									
Stream B-C	D3	0.6	10.33	0.38	B	D4	0.3	9.31	0.25	A
Stream B-A		0.2	14.86	0.18	B		0.1	17.30	0.10	C
Stream C-AB		1.1	5.82	0.36	A		2.5	10.74	0.60	B
	2033 Do Something									
Stream B-C	D5	0.6	11.10	0.39	B	D6	0.3	9.56	0.25	A
Stream B-A		0.2	16.61	0.19	C		0.1	19.19	0.11	C
Stream C-AB		1.3	6.02	0.39	A		3.2	11.63	0.65	B

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

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

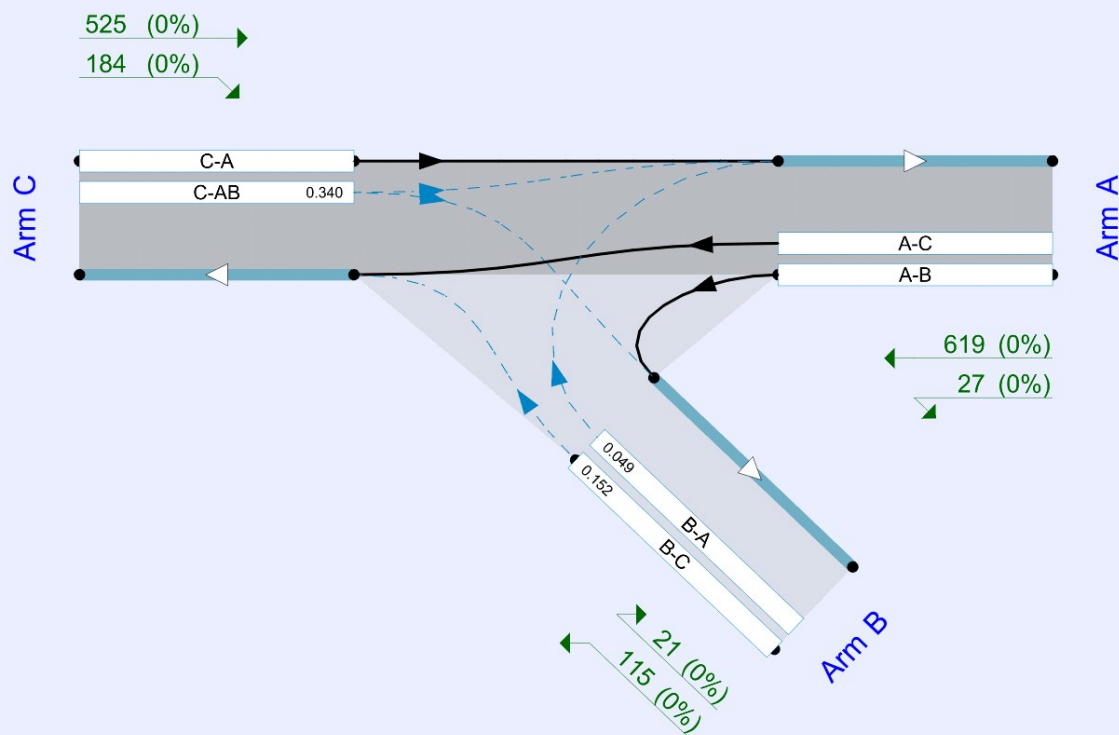
File summary

File Description

Title	
Location	
Site number	
Date	29/02/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	M-EC\james.wright
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



Flows show original traffic demand (PCU/hr).
Streams (downstream end) show RFC (l)

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2033 Do Something	PM	ONE HOUR	17:00	18:30	15

2033 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.51	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		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	6.10			120.0	✓	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 (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B	Two lanes	3.10	2.65	120	120

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	558	0.101	0.256	0.161	0.365
B-C	706	0.108	0.273	-	-
C-B	643	0.248	0.248	-	-

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

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		✓	646	100.000
B		✓	136	100.000
C		✓	709	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	27	619
	B	21	0	115
	C	525	184	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.25	9.56	0.3	A
B-A	0.11	19.19	0.1	C
C-AB	0.65	11.63	3.2	B
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	87	570	0.152	86	0.2	7.422	A
B-A	16	322	0.049	16	0.1	11.726	B
C-AB	273	803	0.340	269	0.8	6.735	A
C-A	261			261			
A-B	20			20			
A-C	466			466			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	103	543	0.191	103	0.2	8.186	A
B-A	19	276	0.068	19	0.1	13.997	B
C-AB	380	842	0.451	378	1.4	7.795	A
C-A	258			258			
A-B	24			24			
A-C	556			556			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	127	503	0.252	126	0.3	9.538	A
B-A	23	212	0.109	23	0.1	18.999	C
C-AB	577	897	0.643	570	3.1	11.133	B
C-A	203			203			
A-B	30			30			
A-C	682			682			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	127	503	0.252	127	0.3	9.563	A
B-A	23	211	0.110	23	0.1	19.185	C
C-AB	582	901	0.646	582	3.2	11.634	B
C-A	198			198			
A-B	30			30			
A-C	682			682			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	103	542	0.191	104	0.2	8.215	A
B-A	19	274	0.069	19	0.1	14.143	B
C-AB	384	846	0.454	391	1.5	8.112	A
C-A	253			253			
A-B	24			24			
A-C	556			556			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	87	570	0.152	87	0.2	7.455	A
B-A	16	321	0.049	16	0.1	11.804	B
C-AB	275	806	0.342	278	0.9	6.888	A
C-A	258			258			
A-B	20			20			
A-C	466			466			

Junctions 9										
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Filename: J6 - Mill lane - Barlestone Road Model.j9
Path: R:\24832\calculations\Transport\Models\Junction 6 - Mill Lane
Report generation date: 19/07/2024 12:12:14

«2033 Do Something, PM
»Junction Network
»Arms
»Traffic Demand
»Origin-Destination Data
»Vehicle Mix
»Results

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2024 Base									
Stream B-AC	D1	0.2	8.19	0.15	A	D2	0.2	9.24	0.17	A
Stream C-AB		0.3	4.96	0.13	A		0.4	5.78	0.18	A
	2033 Do Minimum									
Stream B-AC	D3	0.2	8.60	0.17	A	D4	0.2	10.08	0.20	B
Stream C-AB		0.4	4.81	0.15	A		0.5	5.87	0.20	A
	2033 Do Something									
Stream B-AC	D5	0.2	8.98	0.17	A	D6	0.3	10.94	0.21	B
Stream C-AB		0.5	4.61	0.17	A		0.5	5.89	0.22	A

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

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

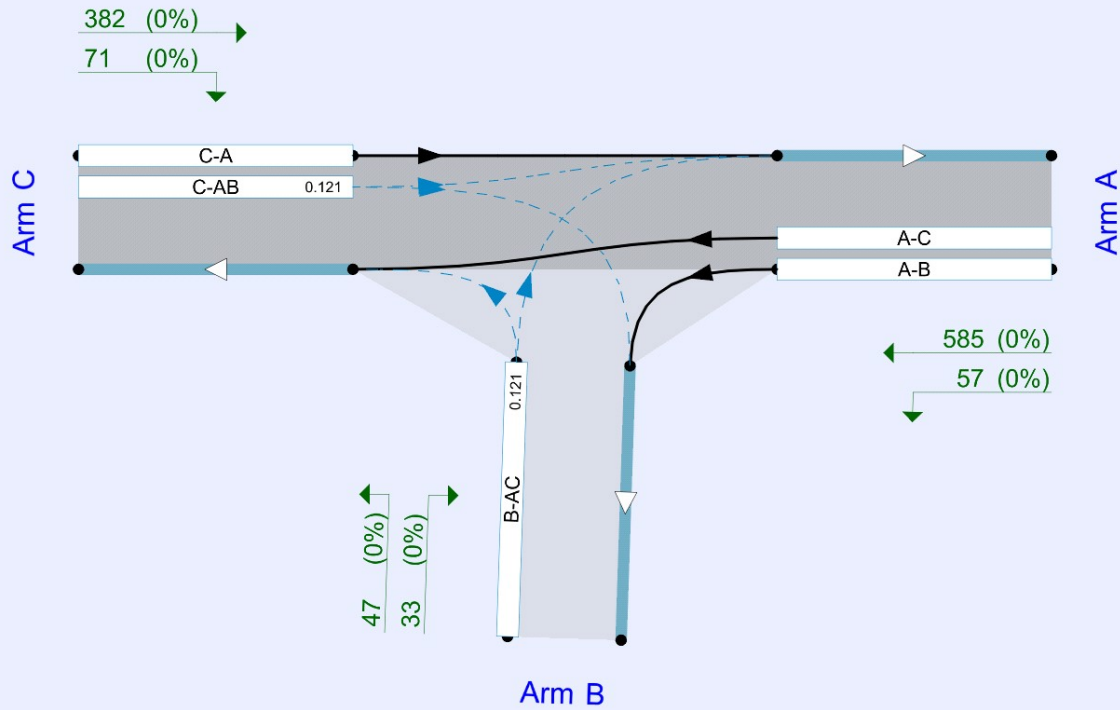
File summary

File Description

Title	
Location	
Site number	
Date	29/02/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	M-EC\james.wright
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	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2033 Do Something	PM	ONE HOUR	17:00	18:30	15

2033 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.43	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		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	6.60			120.0	✓	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	One lane	3.30	120	120

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	595	0.106	0.267	0.168	0.381
B-C	720	0.108	0.272	-	-
C-B	643	0.243	0.243	-	-

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

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		✓	642	100.000
B		✓	80	100.000
C		✓	453	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	57	585
	B	33	0	47
	C	382	71	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.21	10.94	0.3	B
C-AB	0.22	5.89	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	60	499	0.121	60	0.1	8.189	A
C-AB	88	730	0.121	87	0.2	5.603	A
C-A	253			253			
A-B	43			43			
A-C	440			440			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	465	0.155	72	0.2	9.148	A
C-AB	118	751	0.157	118	0.3	5.692	A
C-A	289			289			
A-B	51			51			
A-C	526			526			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	88	417	0.211	88	0.3	10.910	B
C-AB	170	783	0.217	169	0.5	5.881	A
C-A	329			329			
A-B	63			63			
A-C	644			644			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	88	417	0.211	88	0.3	10.936	B
C-AB	170	783	0.217	170	0.5	5.894	A
C-A	328			328			
A-B	63			63			
A-C	644			644			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	465	0.155	72	0.2	9.176	A
C-AB	118	752	0.158	119	0.3	5.712	A
C-A	289			289			
A-B	51			51			
A-C	526			526			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	60	499	0.121	60	0.1	8.220	A
C-AB	89	730	0.122	89	0.2	5.626	A
C-A	252			252			
A-B	43			43			
A-C	440			440			

Junctions 9									
PICADY 9 - Priority Intersection Module									
Version: 9.5.1.7462 © Copyright TRL Limited, 2019									
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk									
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution									

Filename: J7 - Main Street - Barlestone Road Model.j9
Path: R:\24832\calculations\Transport\Models\Junction 7 - Main Street
Report generation date: 19/07/2024 12:14:53

«2033 Do Something, PM
 »Junction Network
 »Arms
 »Traffic Demand
 »Origin-Destination Data
 »Vehicle Mix
 »Results

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2024 Base									
Stream B-C	D1	0.1	6.93	0.06	A	D2	0.0	7.42	0.04	A
Stream B-A		0.3	11.87	0.25	B		0.3	12.98	0.26	B
Stream C-AB		0.0	4.66	0.02	A		0.1	5.21	0.07	A
	2033 Do Minimum									
Stream B-C	D3	0.1	9.51	0.08	A	D4	0.1	8.67	0.05	A
Stream B-A		1.2	20.81	0.55	C		0.6	17.61	0.39	C
Stream C-AB		0.0	4.50	0.03	A		0.2	5.28	0.09	A
	2033 Do Something									
Stream B-C	D5	0.1	10.27	0.09	B	D6	0.1	9.37	0.05	A
Stream B-A		1.4	24.16	0.59	C		0.7	20.50	0.43	C
Stream C-AB		0.0	4.29	0.03	A		0.2	5.24	0.10	A

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

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

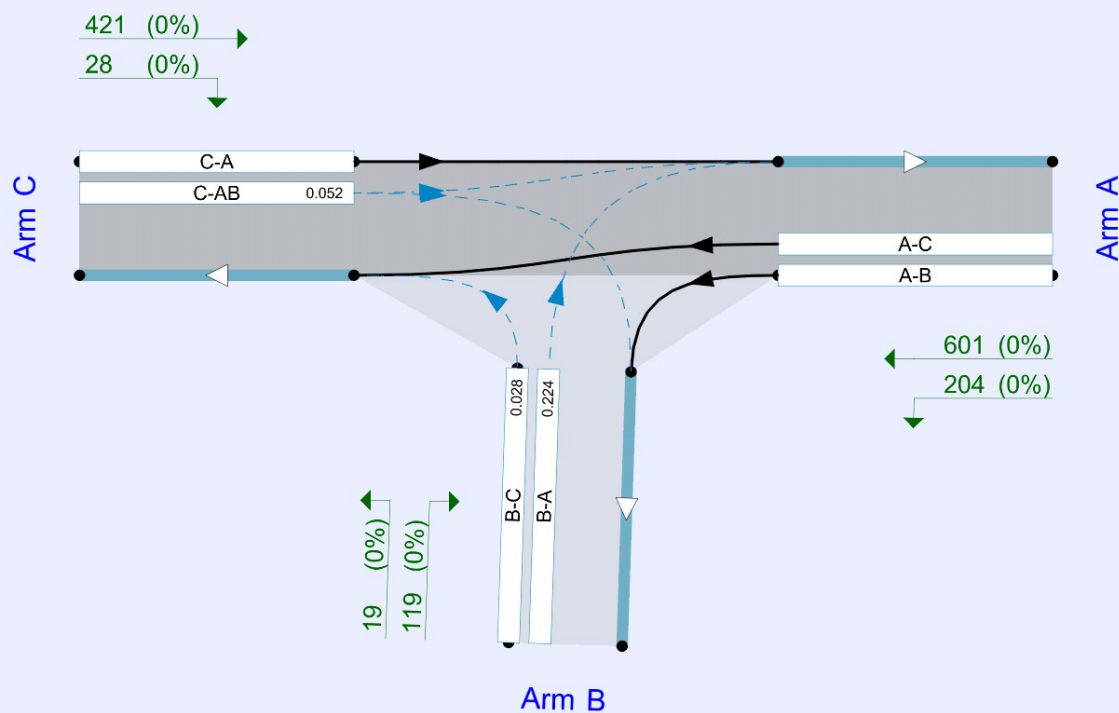
File summary

File Description

Title	
Location	
Site number	
Date	29/02/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	M-EC\james.wright
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



Flows show original traffic demand (PCU/hr).
Streams (downstream end) show RFC (l)

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2033 Do Something	PM	ONE HOUR	17:00	18:30	15

2033 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		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	6.40			120.0	✓	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	One lane plus flare	10.00	5.20	3.10	2.30	2.30	✓	1.00	120	120

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	603	0.108	0.273	0.172	0.390
B-C	690	0.104	0.263	-	-
C-B	643	0.245	0.245	-	-

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

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		✓	805	100.000
B		✓	138	100.000
C		✓	449	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	204	601
	B	119	0	19
	C	421	28	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.05	9.37	0.1	A
B-A	0.43	20.50	0.7	C
C-AB	0.10	5.24	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	14	518	0.028	14	0.0	7.137	A
B-A	90	401	0.224	88	0.3	11.493	B
C-AB	37	725	0.052	37	0.1	5.235	A
C-A	301			301			
A-B	154			154			
A-C	452			452			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	17	477	0.036	17	0.0	7.826	A
B-A	107	361	0.296	106	0.4	14.107	B
C-AB	51	747	0.069	51	0.1	5.177	A
C-A	352			352			
A-B	183			183			
A-C	540			540			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	21	406	0.051	21	0.1	9.334	A
B-A	131	307	0.427	130	0.7	20.229	C
C-AB	76	780	0.098	76	0.2	5.116	A
C-A	418			418			
A-B	225			225			
A-C	662			662			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	21	405	0.052	21	0.1	9.372	A
B-A	131	306	0.428	131	0.7	20.499	C
C-AB	76	780	0.098	76	0.2	5.118	A
C-A	418			418			
A-B	225			225			
A-C	662			662			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	17	476	0.036	17	0.0	7.855	A
B-A	107	361	0.296	108	0.4	14.306	B
C-AB	51	747	0.069	52	0.1	5.182	A
C-A	352			352			
A-B	183			183			
A-C	540			540			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	14	517	0.028	14	0.0	7.156	A
B-A	90	400	0.224	90	0.3	11.621	B
C-AB	38	725	0.052	38	0.1	5.241	A
C-A	300			300			
A-B	154			154			
A-C	452			452			



MEC
Consulting Group

APPENDICES



APPENDIX O

Market Bosworth Parish Council
Public Information Pack
Parish Council Meeting 9 January 2024

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C M Monkman

Catherine Monkman, Parish Clerk, 2 January 2024

1. PC Meeting item 4 (reports)

4(a) Parish Clerk – situation report

Heath Road play area: order placed with D Whitfield for a new pedestrian gate and repairs to the second pedestrian gate at a cost of £220.00.

Toilet block: Wallgate carried out their 6-monthly inspection of the handwash units in the public toilet block on 19.12.23. A new air heater was fitted to one of the units because it was blowing only cold air.

Christmas lights switch on event 2024: will take place on Sunday 1 December 2024. HBBC already have the relevant road closure order in hand.

Bull in the Oak junction A447: item 5 pp612-613 refers. Highways have responded in detail about traffic monitoring, traffic movement, traffic volume and the technicalities of 'A' and 'B' roads, and have assured the Parish Council its "comments are fully noted and we would seek to assure you that officers are satisfied no intervention is necessary at this junction at the present moment in time". The full response from LCC Highways sent on 6.12.23 is produced below. There is mention of Fenny Drayton which is actually on the A444.

Thank you for your enquiry regarding the volume of traffic at the Ashby Road (A447)/Bosworth Road/Bosworth Lane junction.

Leicestershire County Council have been working extensively with the Police to tackle the concerns of all speeding vehicles along the A447. The A447 has since become a core enforced route to enable mobile enforcement operations to take place on a regular basis. We have installed multiple hard standing areas along the A447 in order for Leicestershire Police to site a mobile camera van. In addition to this, officers have been reviewing the route as a whole including reviewing junctions in between as part of further plans to reduce the speed limit near to Fenny Drayton, I can confirm this has included the Bull in the Oak junction.

With regards to the volume of traffic at the 'Bull in the oak' junction, Bosworth Lane is a 'B' road and Bosworth Road is a 'C' road which are both adjacent to the A447. As the Parish will be aware, the A447 is a major route which connects multiple towns across Hinckley and Bosworth. All A & B roads form part as Leicestershire's key strategic road network as these type of roads are designed and maintained to facilitate a large volumes of traffic that in turn connect Leicestershire to the rest of the country. These roads will be busy as the roads are open to all types of vehicles to ensure they are kept off lower class roads and not generally travelling through smaller residential villages. There is very little the County Council to reduce the volume as it is a national standard that A roads are not restricted on vehicle types or movements, however your comments are fully noted and we would seek to assure you that officers are satisfied no intervention is necessary at this junction at the present moment in time.

Following our detailed investigations, the junction benefits from street lighting and illuminated signs. These include the two give way signs on both Bosworth Lane and Bosworth Road on the approach to the A447. It also important to note that these signs have been yellow backed so they remain visible in all weather conditions and makes the road safety message abundantly clear. There is also give way carriageway markings on both approaches to the A447 to further indicate the junctions presence. I can confirm the existing signage and road markings are appropriate and correct as per Department of Transport guidelines and all measures we would expect to be in situ, are indeed present. It is fully appreciated that at times drivers will need to wait and be patient before egressing onto the A447, however as above this is because it is a busy A-road with a classified B-road also connecting to it, something not commonly found within many villages within our county.

Regrettably there are no improvements that can be made to improve egress times onto the A447 as the A447 is the busier route, and therefore priority must remain with the main route as any priority change would have very real and adverse effects on the route itself and nearby villages. The A447 carries at least 70,000 vehicles through this junction per week, and when reviewing those statistics against the locations collision history, I can confirm there is one reported personal injury collision having occurred at the junction within the past 5 years. Whilst one collision is certainly one too many, the location is of a generally good record when considering the substantial numbers travelling through it, however please be assured officers note the Parish comments, and will continue to monitor the junction inclusive of reviewing any development proposals that may seek to push further traffic through the location which in turn may require further review at a later date.

Flooded road outside the Dental Surgery: chased as a matter of urgency. County Councillor copied into the correspondence.

Blocked gully on Back Lane: reported to Highways to be cleared.

Leaking drain cover on Station Road opposite the junction with Heath Road: reported to Highways for attention.

4(f) Hinckley & Bosworth Borough Council Parish Forum 07.12.23

This event was attended by Cllr N Palmer and the Clerk, and was hosted by Borough Councillor Martin Cartwright. The report below is by the Clerk.

Attendance was poor: 14 attended in person, these being 2 x Police, 1 x LRALC, 5 x HBBC personnel, 6 x parish representatives. The 6 parish representatives were 2 x Mkt Bos, 1 x Sheepy, 1 x Desford and 2 x Witherley. Some had cancelled on the night due to poor weather, whilst others attended via Zoom.

Police – report presented by the Beat Sargeant for the Bosworth Beat. There is a new Commander for the Hinckley & Blaby Neighbourhood Policing Area, Inspector Neil Whittle. Fortunately, crime is at present comparatively low when compared with other areas. However, there are lots of incidents of stolen numberplates, items being stolen from vans, and of vans themselves being stolen. Number of Police is up from 1,600 to 2,200 but there is a need to get them ‘in the right place’ depending on priorities. Police themselves are frustrated that certain powers they used to have in relation to parking on zig zag lines are now with civil enforcement officers (traffic wardens). Cllr M Cartwright reported that HBBC are planning a campaign in 2024 to remind drivers that it is an offence to park obstructively on pavements.

LRALC – Mr J Kilcoyne reported on the activities of LRALC and training courses it can offer. All courses (except where LRALC is scheduled to visit a council to train councillors ‘on site’) will be via Zoom until further notice due to temporary re-location of the LRALC’s offices while the current premises at Anstey are redeveloped.

Rural Strategy – to be presented at the 2024 Annual Conference.

Tourism Plan – Ms Lindsay Orton, HBBC’s well-being development manager reported on progress with the updated Tourism Plan. Statistics given on why people visit the borough, where they visit, the economic impact, and the partnerships and promotions which are undertaken to promote tourism. The new tourism plan is to cover 2024-2030 and looks to include new elements such as accessibility of venues and activities, plus sustainability.

Parish & Community Initiative Fund (P&CIF) – Paul Scragg, HBBC explained the P&CIF and the deadline for applications, drawing attention to new criteria especially in relation to climate impact. Attention also drawn to a new ‘community equipment grant’ which will be announced in due course. The maximum grant available will be £3,000; it will be on a first-come-first-served basis; applications will be online; the total fund will be £25,000; it is designed to be quicker and simpler to apply to and administer than the P&CIF which is for larger projects. ‘Equipment’ can include items such as shelters, chairs, signage, office equipment etc.

Climate Member Champion – Cllr M Cartwright reported on activities taken by HBBC to address climate change and he urged parishes to declare a ‘climate emergency’ and appoint a dedicated ‘climate champion’ to work with HBBC.

Parish Engagement – opportunity for parishes present to engage with the forum. Matters covered included P&CIF, Neighbourhood Plan funding and whether to replace one of the Forums in 2024 with a meeting specifically devoted to Neighbourhood Plan matters.

Annual Rural Conference – to be at Mythe Barn, Sheepy Magna. Bookings to be made by 09.02.24. Update to follow. There will be a video featuring Mkt Bos PC’s new cemetery shelter and Mkt Bos Scouts’ scout hut as examples of beneficiaries of the P&CIF.

2. PC Meeting item 6 (planning)

6(a) Planning applications and appeals determined or withdrawn

- 23/00464/HOU 81 Pipistrelle Drive, erection of an Oak framed gazebo with tiled roof. Permitted.
- 23/00972/HOU 36 Barton Road, single storey front extension, rear extension and other alterations to dwelling. Permitted.
- 23/01015/TCA 45 Park Street, (T1) Flowering Cherry – Crown Reduce, (T2) Flowering Cherry – Re-pollard, (TG3) – Row of Flowering Cherries – Reduce tallest by 4ft from tips and prune remainder to match, remove dead branches, (T4) Bay Laurel – reduce height to approx. 16ft, (T5) Lawsons Cypress – Fell. Declined to make – Tree Preservation Orders not imposed and works may proceed.
- 23/01017/HOU 3 Redmoor Close, two storey and single storey side extension. Permitted.
- 23/00667/FUL The Old Rectory, 8 Rectory Lane, change of use from a dwellinghouse (Class C3) to a Specialist Education Needs (SEN) School (Class F1), erection of two single storey classrooms, a Multi-Use Gaming Area (MUGA), revised parking layout with electric charging points, widening of access, replacement perimeter fencing and external landscaping, works to trees and other works. Permitted.
- 23/00668/LBC The Old Rectory, 8 Rectory Lane, change of use from dwellinghouse (Class C3) to a Specialist Education Needs (SEN) School (Class F1), alterations to the building and other works within the curtilage of the listed building. Permitted.
- 23/01042/TCA 9 Sutton Lane, T1 – Yew – Reduce to 3.5m, T2 – Lawsons Cypress – Remove, T3 – Yew – Reduce to 3m to form a hedge with adjacent Holly hedge, T4 – Apple – Remove, T5 – Apple – Remove dead, rubbing and crossing branches (crown clean). Declined to make. Tree Preservation Order not imposed and works may proceed.
- 23/01106/TCA The Old Black Horse Inn, 17 Market Place, T1 – Cherry – Section Fell. Declined to make. Tree Preservation Order not imposed and works may proceed.
- 23/01107/TCA White House, 22 Park Street, T2 – Horse Chestnut – Reduce the 2 low limbs by approx. 3m and reduce upper crown to balance. Declined to make. Tree Preservation Order not imposed and works may proceed.

6(b) Planning application comments submitted under delegated powers

- 23/01153/HOU 122 Station Road, two storey rear extension. Comments still being collated for submission by 05.01.24.

6(c) New plans and appeals to comment on

- None at present

6(d) Planning enforcement and other miscellaneous planning matters

- No new issues at present but have chased for outcome of Maison Rose's pavement licence application as the Parish Council has not received formal notification of the decision.

3. PC Meeting item 7 (policies)

Distributed to councillors with the agenda are a draft cemetery risk assessment and a draft complaints procedure policy.

The draft cemetery risk assessment has been produced to meet insurance requirements and is a new document prepared after much discussion among members of the cemetery working party (Cllrs N Palmer, K Coleman, K Hughes and the Clerk). **Recommendation:** that the draft cemetery risk assessment be adopted. If adopted, the Parish Council will need to decide whether an advisory sign about the water hazard posed by the pond is necessary or not.

The complaints procedure is also a new document. Adoption of a complaints procedure was first discussed at the Parish Council Meeting in January 2023 and deferred until the February meeting when it was agreed Cllrs J Wastenev, N Palmer and the Clerk should meet to draw up an alternative Complaints Procedure with a view to it being adopted at the March meeting. The group was not able to meet in time for the March meeting but did meet during March and drew up a draft v4 document. It was agreed at the March meeting to carry the matter forward "to a future meeting". Due to the election in May, and the fact 2 new councillors joined the Council and would require time to become more familiar with Council procedure, and due to the fact that the meeting agendas have been very full this year, the document has been held back until now. **Recommendation:** that the document be adopted as distributed, this being the culmination of previous discussions about adoption of a complaints procedure, and it being best practice to have a complaints procedure in place.

4. PC Meeting item 8 (tree survey report)

The 2023 tree inspection report is distributed to councillors with the agenda. Some tree works have been identified. If the Parish Council agrees the works should be carried out, quotes will be sought accordingly.

5. PC Meeting item 9 (Finance)

9(a) To receive and approve the Q3 budget spreadsheet and word document relating to expenditure from reserves, as well as the cashbook expenditure and receipts sheets

Distributed to councillors with the agenda are copies of the Q3 budget spreadsheet and the word document relating to expenditure from reserves. These were updated on 02.01.24 to reflect all expenditure and receipts to date, including expenditure since the December PC meeting. Also distributed for additional detail are the cashbook expenditure and receipt sheets.

The cashbook expenditure and receipt sheets show in simple terms the monthly expenditure and receipts as reported / agreed at each Parish Council meeting. The budget spreadsheet and the word document on

reserves relate specifically to the actual budget set at the start of the year, and the movement within the reserve 'pots'.

It is intended to issue the Q3 bank reconciliations at the February meeting. The reconciliations have been completed but have not yet been checked by a Councillor for accuracy.

If Councillors have any questions, please can the questions be raised before the PC meeting as the information may not be to hand at the meeting to be able to answer 'on the spot'.

9(b) To note bank balances and receipts and approve items of expenditure

Bank balances at 22.12.23: Current account £115,934.33. Savings account £108,735.64.

Receipts:

<i>Name</i>	<i>Details</i>	<i>Net</i>	<i>VAT</i>	<i>Total</i>
HSBC	Interest	£527.23	£0.00	£527.23
Central England Co-Op	Cemetery fees	£250.00	£0.00	<u>£250.00</u>
				<u>£777.23</u>

Expenditure since December Parish Council Meeting:

<i>Name</i>	<i>Details</i>	<i>Net</i>	<i>VAT</i>	<i>Total</i>
Market Bosworth DCC (SO)	Office rent	£175.00	£0.00	£175.00
E.On Next (DD)	Toilet block electricity	£28.73	£1.44	£30.17
Water Plus (DD)	Cemetery water	£7.56	£0.00	£7.56
Key holder	Toilet block key rota	£70.00	£0.00	<u>£70.00</u>
				<u>£282.73</u>

Expenditure to approve:

<i>Name</i>	<i>Details</i>	<i>Net</i>	<i>VAT</i>	<i>Total</i>
HBBC (DD)	Trade waste collection	£90.35	£0.00	£90.35
Water Plus (DD)	Toilet block water	£22.26	£0.00	£22.26
HBBC	Cemetery rates	£71.00	£0.00	£71.00
HBBC	Recharge for electoral services	£98.10	£0.00	£98.10
HSBC	Bank charges	£8.00	£0.00	£8.00
Market Bosworth DCC	Meeting room hire	£45.00	£0.00	£45.00
GES (Leicester) Limited	Legionella inspection report	£275.00	£55.00	£330.00
Wicksteed Leisure Ltd	2 x swing seats	£238.46	£47.69	£286.15
Premier Company	Toilet block cleaning contract	£606.66	£121.33	£727.99
E2 Technology Solutions	Office 365 & monthly support	£45.80	£9.16	£54.96
Lucinda Gardening Service	Memorial Garden bark chippings	£400.00	£0.00	£400.00
Parish Clerk	Net salary	£1,949.74	£0.00	£1,949.74
Leicestershire County Council	Pension contributions	£804.12	£0.00	<u>£804.12</u>
				<u>£4,887.67</u>

6. PC Meeting item 10 (correspondence)

10(a) To consider what action the Parish Council might take to escalate concerns raised in recent correspondence in relation to the withdrawal of local bus services

2 x emails have been received from residents relating to the negative impact on the local community stemming from the withdrawal of the Roberts 159 bus service, especially in respect of its effect on where local youngsters can choose to go to college.

The correspondence has previously been forwarded to councillors for information. The correspondence has been acknowledged: the background, current situation and actions taken to date by the PC have been explained. With the correspondents' permission, the correspondence and the Parish Council's responses have also been forwarded to the Borough and County Councillors and to the MP so they also are aware.

10(b) To consider correspondence received in respect of continued noise nuisance at The Old Black Horse
Correspondence from a resident in respect of noise nuisance is distributed to councillors with the agenda. The original was also copied into Borough Councillor, Maureen Cook.

10(c) Miscellaneous correspondence received and distributed

- Notification of various TEN applications for sale of alcohol or for live music at events during the festive period
- Notification of LCC's online public consultation about the County Council's budget proposals, deadline for comment 17.01.24
- 1 x email from a resident expressing an interest in becoming a parish councillor should a casual vacancy arise, or at the next election. This was prompted by the newsletter and is the second such email
- Electronic copies of the MBCL newsletter, Bosworth 1485 project update, RCC newsletter
- Thank you email from Aspect regarding Aspect's grant application for £500



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APPENDICES

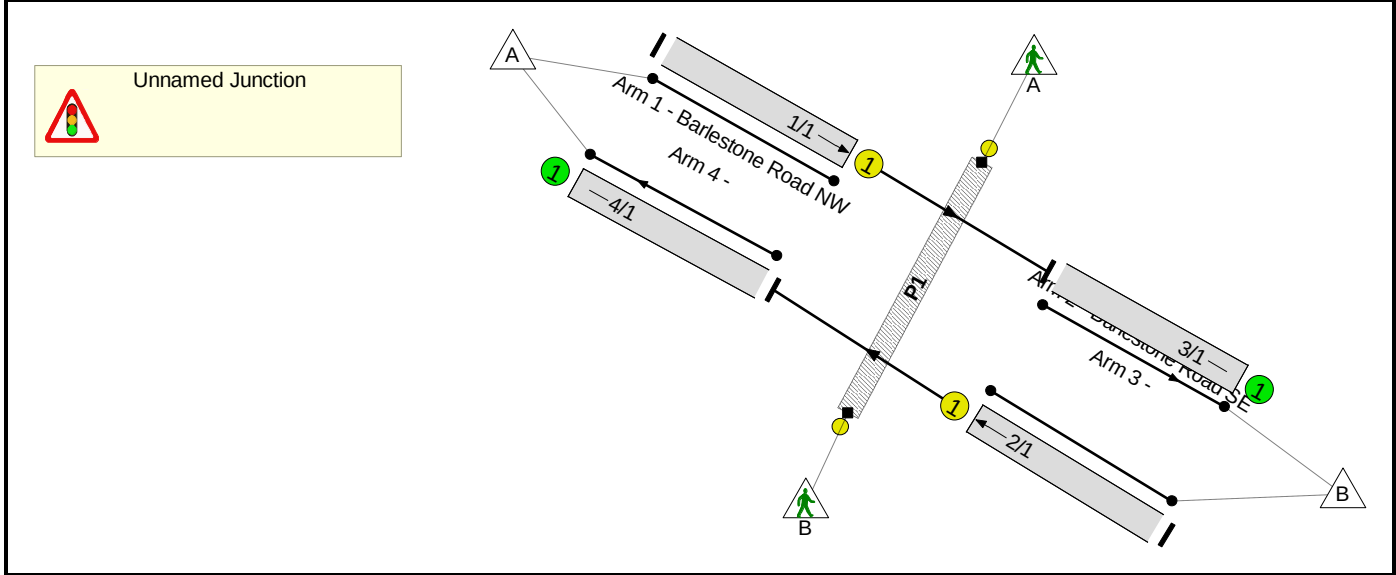


APPENDIX P

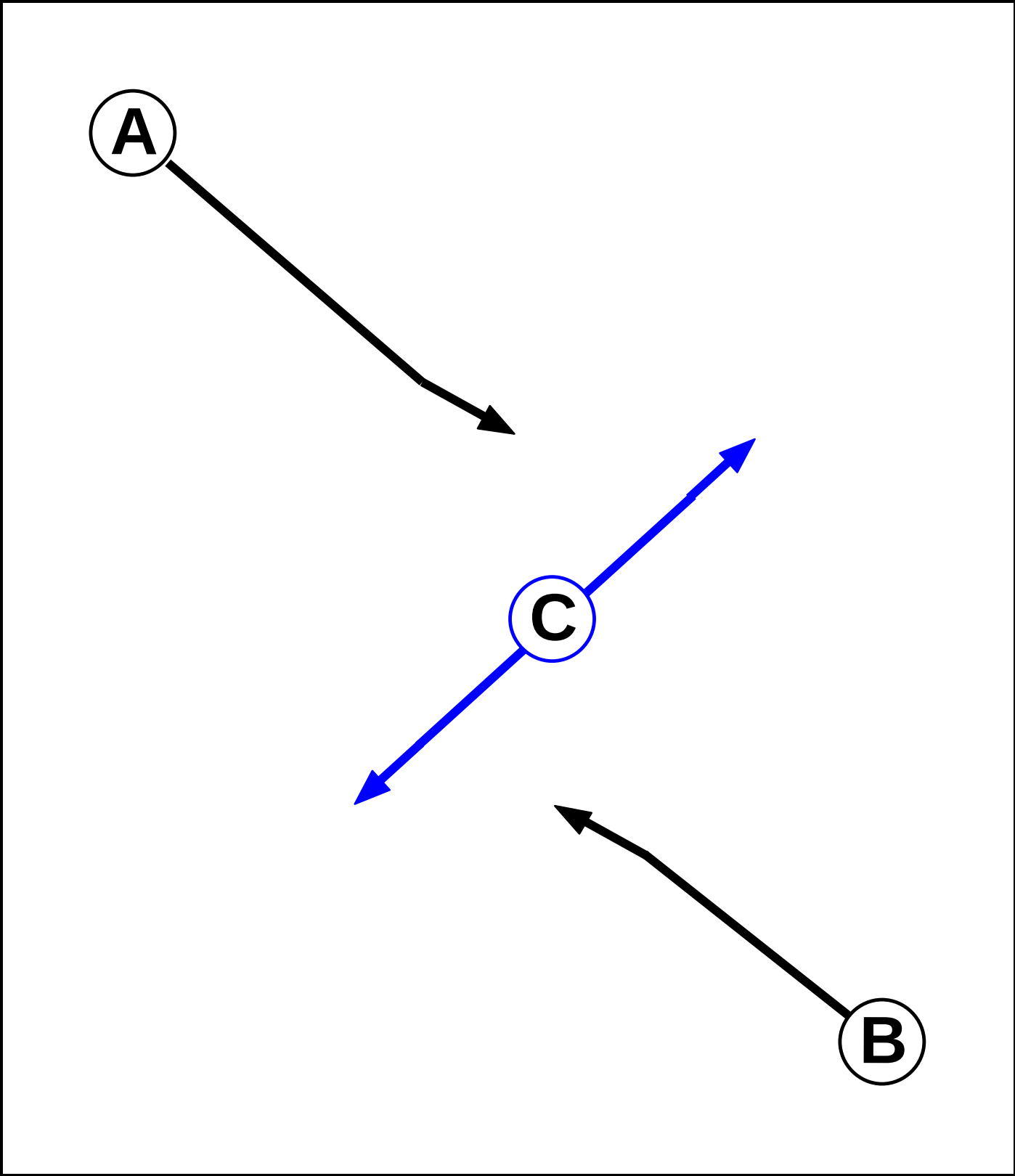
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Site Access Toucan Crossing.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Pedestrian		10	10

Full Input Data And Results

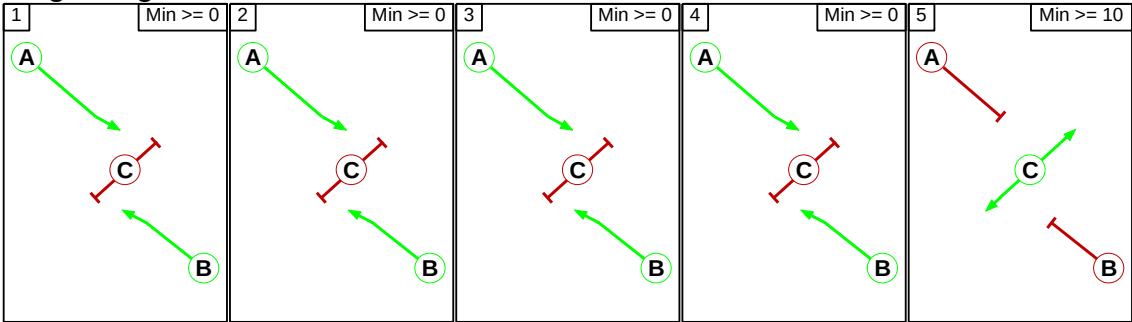
Phase Intergreens Matrix

Terminating Phase	Starting Phase			
		A	B	C
	A		-	7
	B	-		7
	C	7	7	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	A B
3	A B
4	A B
5	C

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage				
	1	2	3	4	5
	1		0	0	7
	2	0		0	7
	3	0	0		7
	4	0	0	0	
	5	7	7	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Lane Input Data

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Barlestone Road NW)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 3 Ahead	Inf
2/1 (Barlestone Road SE)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Ahead	Inf
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2033 Do Something AM'	08:00	09:00	01:00	
2: '2033 Do Something PM'	17:00	18:00	01:00	

Scenario 1: '2033 DS AM' (FG1: '2033 Do Something AM', Plan 1: 'all')

Traffic Flows, Desired

Desired Flow :

	Destination			
Origin		A	B	Tot.
	A	0	649	649
	B	449	0	449
	Tot.	449	649	1098

Traffic Lane Flows

Lane	Scenario 1: 2033 DS AM
Junction: Unnamed Junction	
1/1	595
2/1	389
3/1	595
4/1	389

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Barlestone Road NW)	3.00	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1915	1915
2/1 (Barlestone Road SE)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2033 DS PM' (FG2: '2033 Do Something PM', Plan 1: 'all')

Traffic Flows, Desired

Desired Flow :

		Destination		
Origin		A	B	Tot.
	A	0	546	546
	B	632	0	632
	Tot.	632	546	1178

Traffic Lane Flows

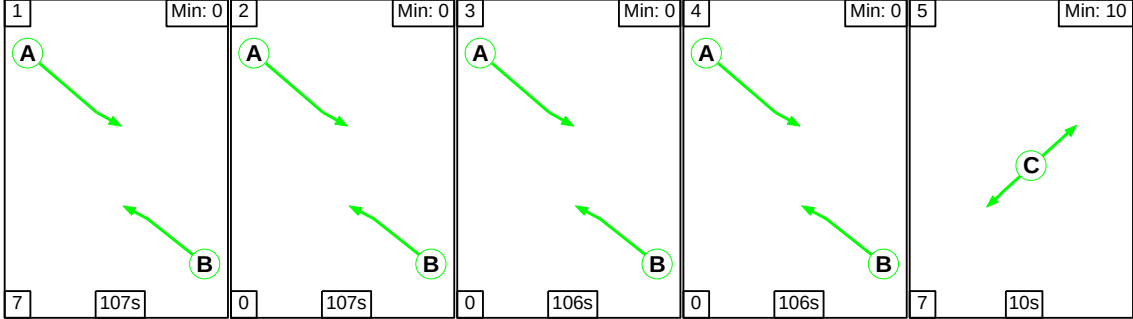
Lane	Scenario 2: 2033 DS PM
Junction: Unnamed Junction	
1/1	546
2/1	632
3/1	546
4/1	632

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Barlestone Road NW)	3.00	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1915	1915
2/1 (Barlestone Road SE)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2033 DS AM' (FG1: '2033 Do Something AM', Plan 1: 'all')

Stage Sequence Diagram

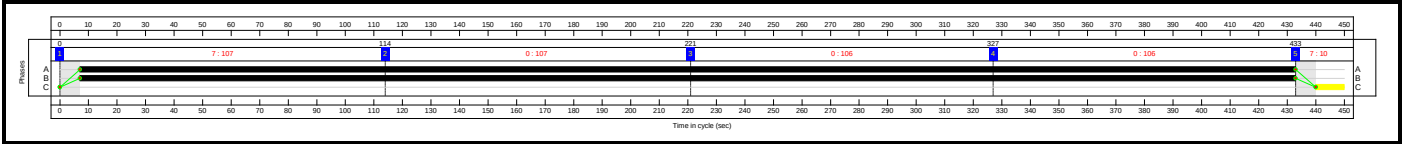


Stage Timings

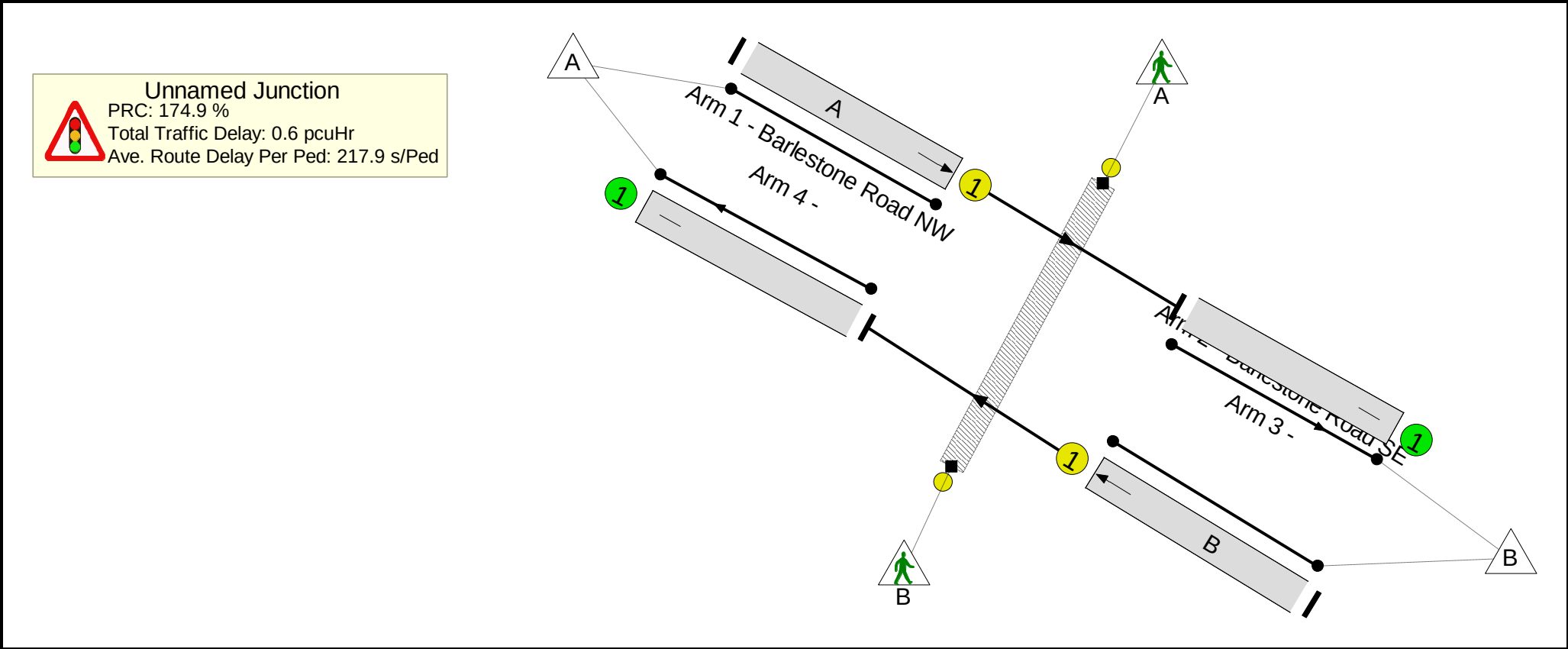
Stage	1	2	3	4	5
Duration	107	107	106	106	10
Change Point	0	114	221	327	433

Full Input Data And Results

Signal Timings Diagram



Network Layout Diagram



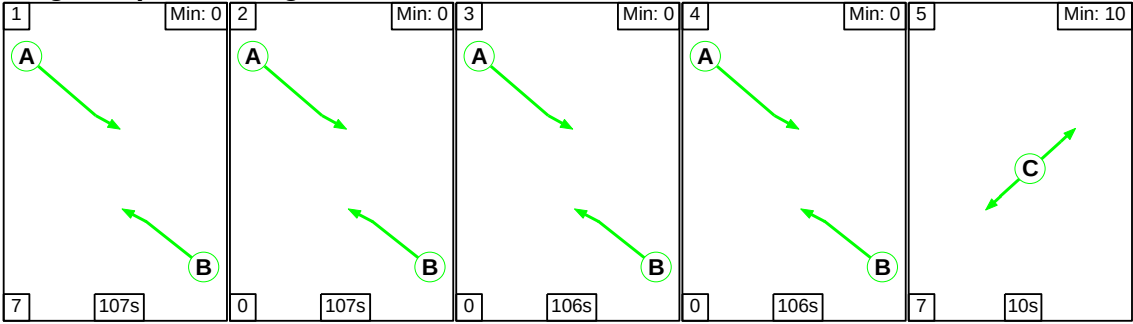
Network Results

Network Results

Full Input Data And Results

Scenario 2: '2033 DS PM' (FG2: '2033 Do Something PM', Plan 1: 'all')

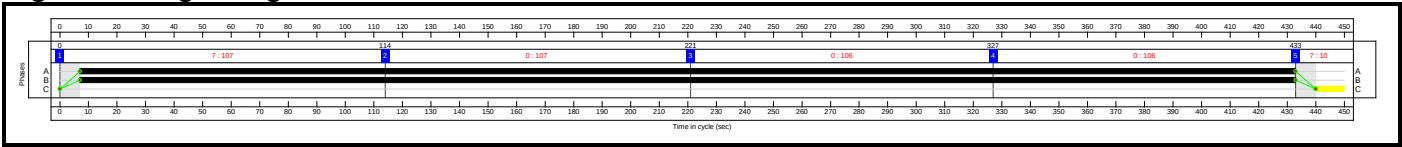
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	107	107	106	106	10
Change Point	0	114	221	327	433

Signal Timings Diagram



Network Layout Diagram

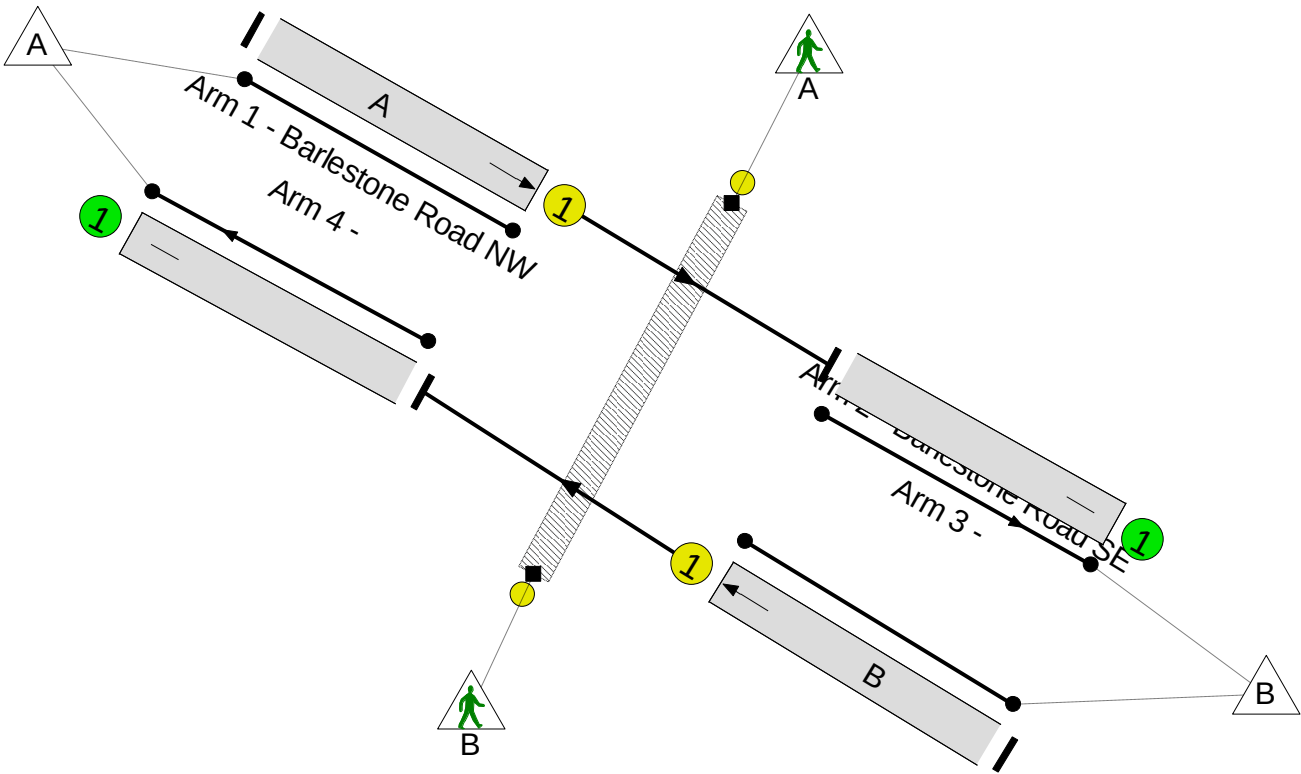


Unnamed Junction

PRC: 158.8 %

Total Traffic Delay: 0.8 pcuHr

Ave. Route Delay Per Ped: 217.9 s/Ped



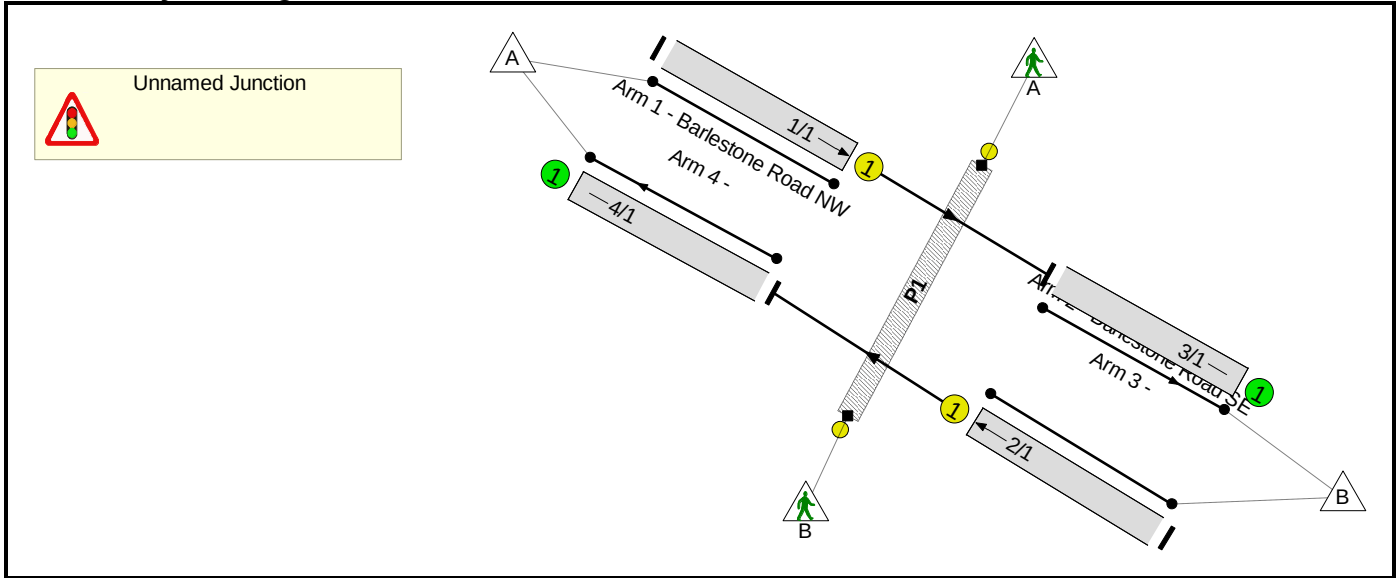
Network Results

Network Results

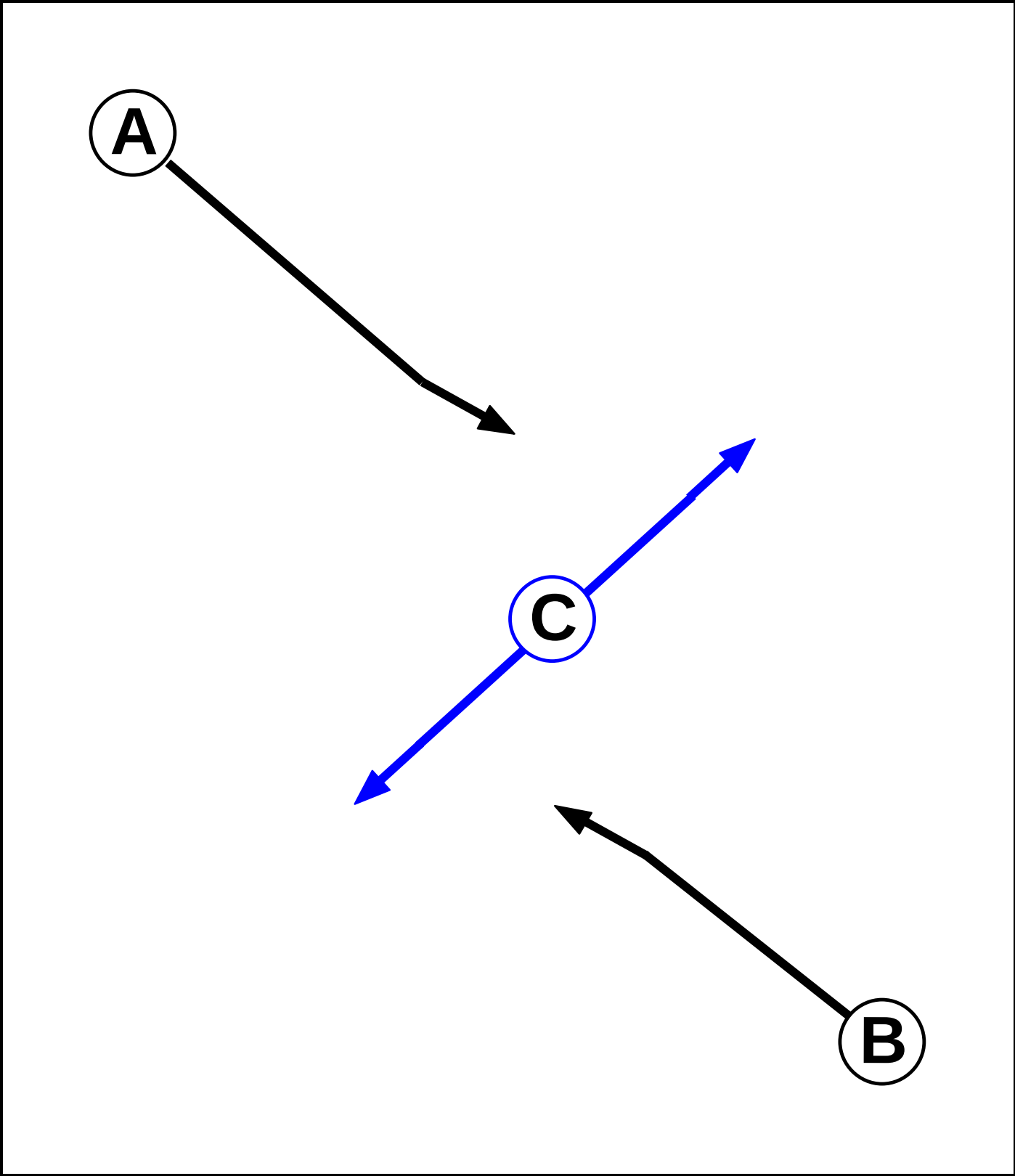
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Balrstone Road Crossing.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Pedestrian		10	10

Full Input Data And Results

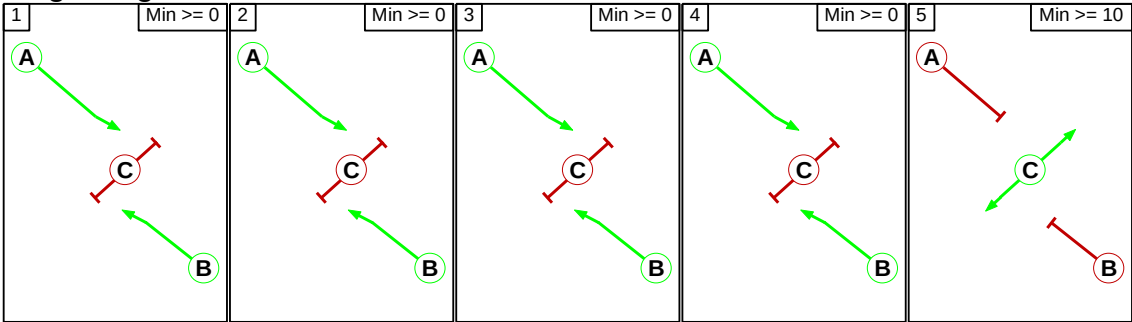
Phase Intergreens Matrix

Terminating Phase	Starting Phase			
		A	B	C
	A		-	7
	B	-		7
	C	7	7	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	A B
3	A B
4	A B
5	C

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage				
	1	2	3	4	5
	1		0	0	7
	2	0		0	7
	3	0	0		7
	4	0	0	0	
	5	7	7	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Lane Input Data

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Barlestone Road NW)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 3 Ahead	Inf
2/1 (Barlestone Road SE)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Ahead	Inf
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2033 Do Something AM'	08:00	09:00	01:00	
2: '2033 Do Something PM'	17:00	18:00	01:00	

Scenario 1: '2033 DS AM' (FG1: '2033 Do Something AM', Plan 1: 'all')

Traffic Flows, Desired

Desired Flow :

	Destination			
Origin		A	B	Tot.
	A	0	593	593
	B	424	0	424
	Tot.	424	593	1017

Traffic Lane Flows

Lane	Scenario 1: 2033 DS AM
Junction: Unnamed Junction	
1/1	593
2/1	424
3/1	593
4/1	424

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Barlestone Road NW)	3.00	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1915	1915
2/1 (Barlestone Road SE)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2033 DS PM' (FG2: '2033 Do Something PM', Plan 1: 'all')

Traffic Flows, Desired

Desired Flow :

		Destination		
Origin		A	B	Tot.
	A	0	415	415
	B	620	0	620
	Tot.	620	415	1035

Traffic Lane Flows

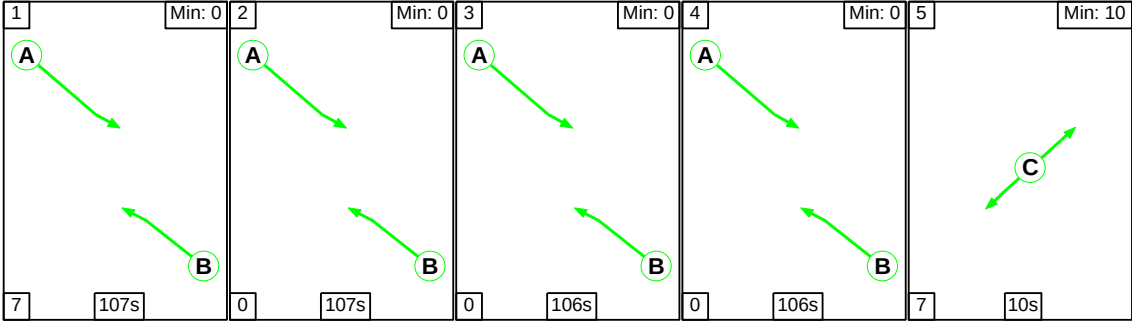
Lane	Scenario 2: 2033 DS PM
Junction: Unnamed Junction	
1/1	415
2/1	620
3/1	415
4/1	620

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Barlestone Road NW)	3.00	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1915	1915
2/1 (Barlestone Road SE)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2033 DS AM' (FG1: '2033 Do Something AM', Plan 1: 'all')

Stage Sequence Diagram

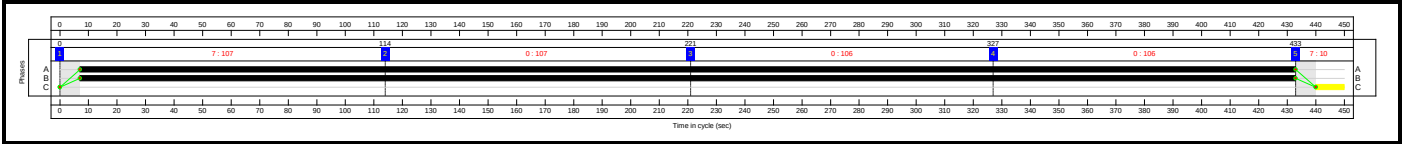


Stage Timings

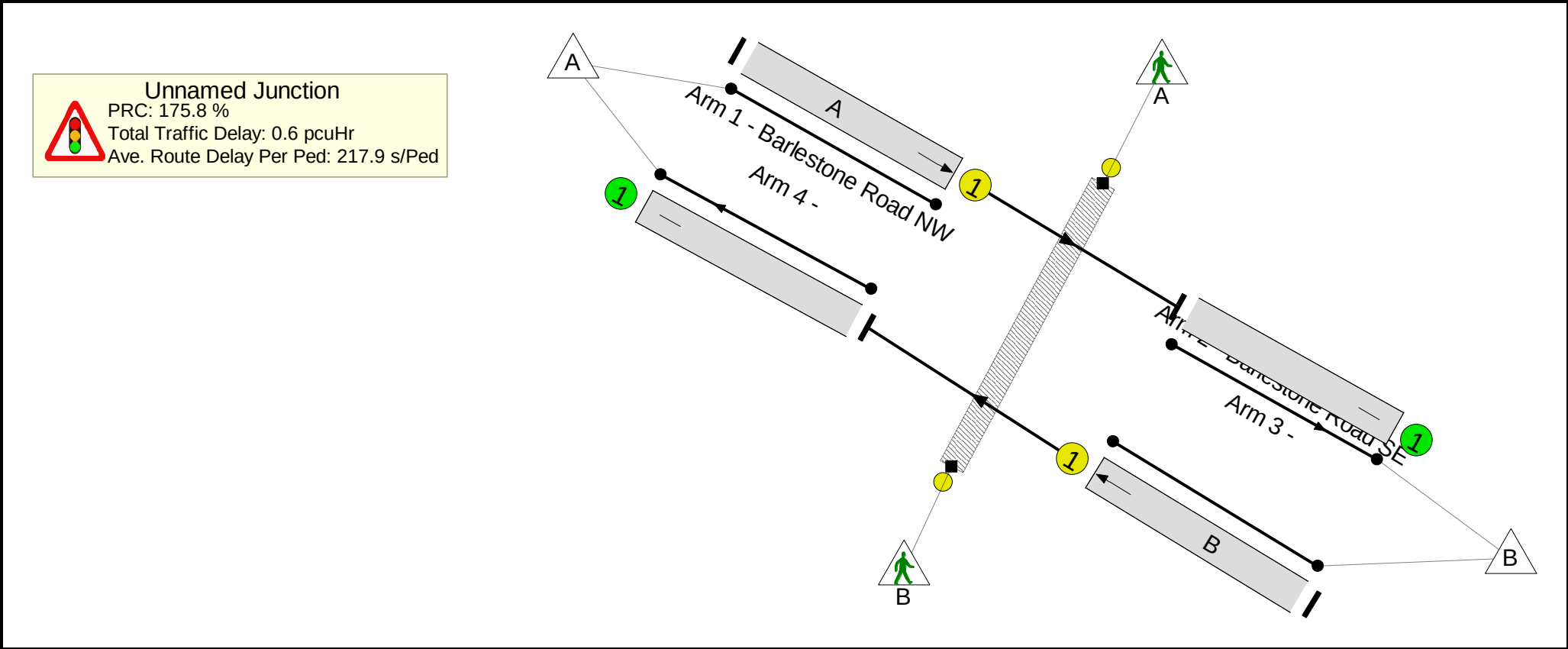
Stage	1	2	3	4	5
Duration	107	107	106	106	10
Change Point	0	114	221	327	433

Full Input Data And Results

Signal Timings Diagram



Network Layout Diagram



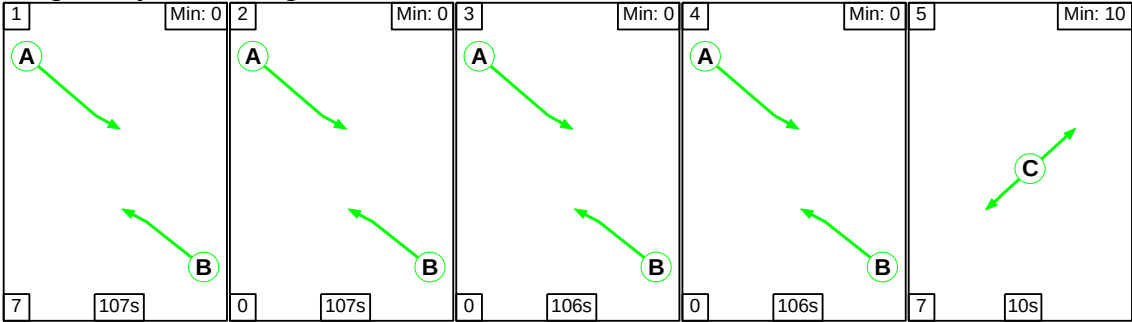
Network Results

Network Results

Full Input Data And Results

Scenario 2: '2033 DS PM' (FG2: '2033 Do Something PM', Plan 1: 'all')

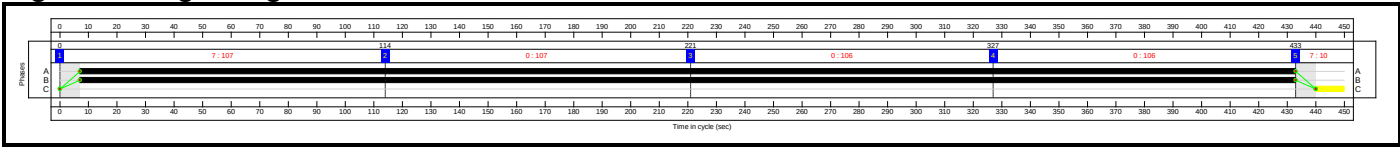
Stage Sequence Diagram



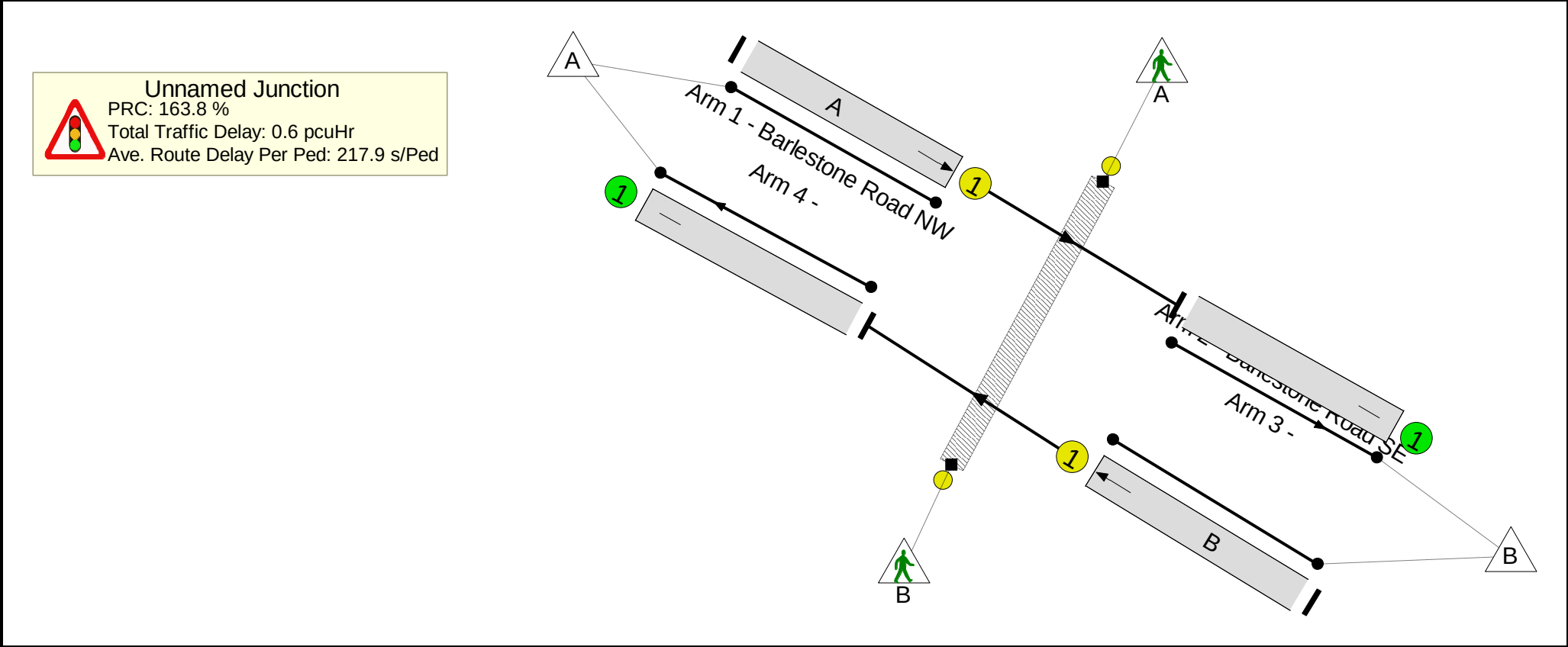
Stage Timings

Stage	1	2	3	4	5
Duration	107	107	106	106	10
Change Point	0	114	221	327	433

Signal Timings Diagram



Network Layout Diagram



Network Results

Network Results

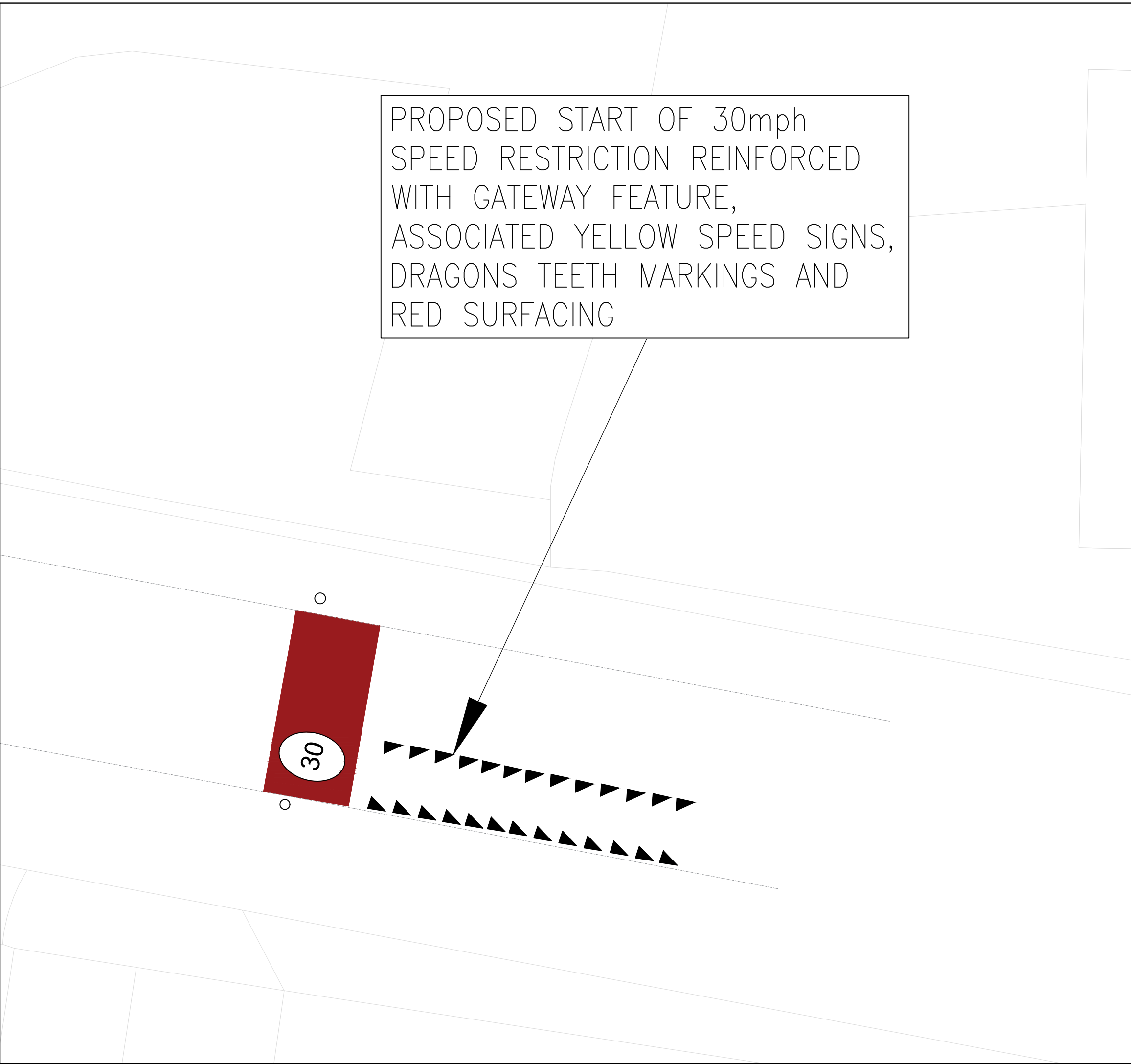
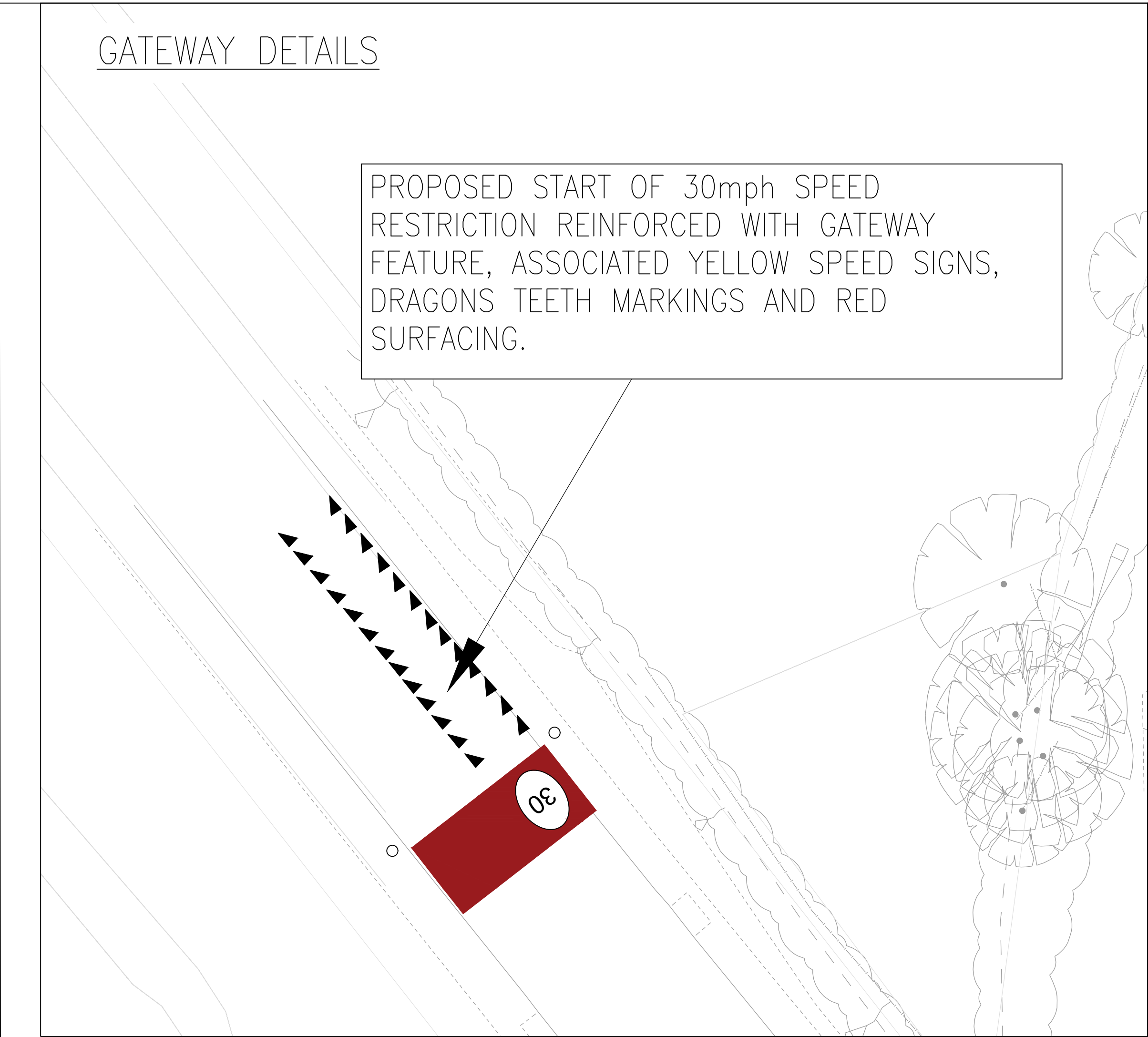
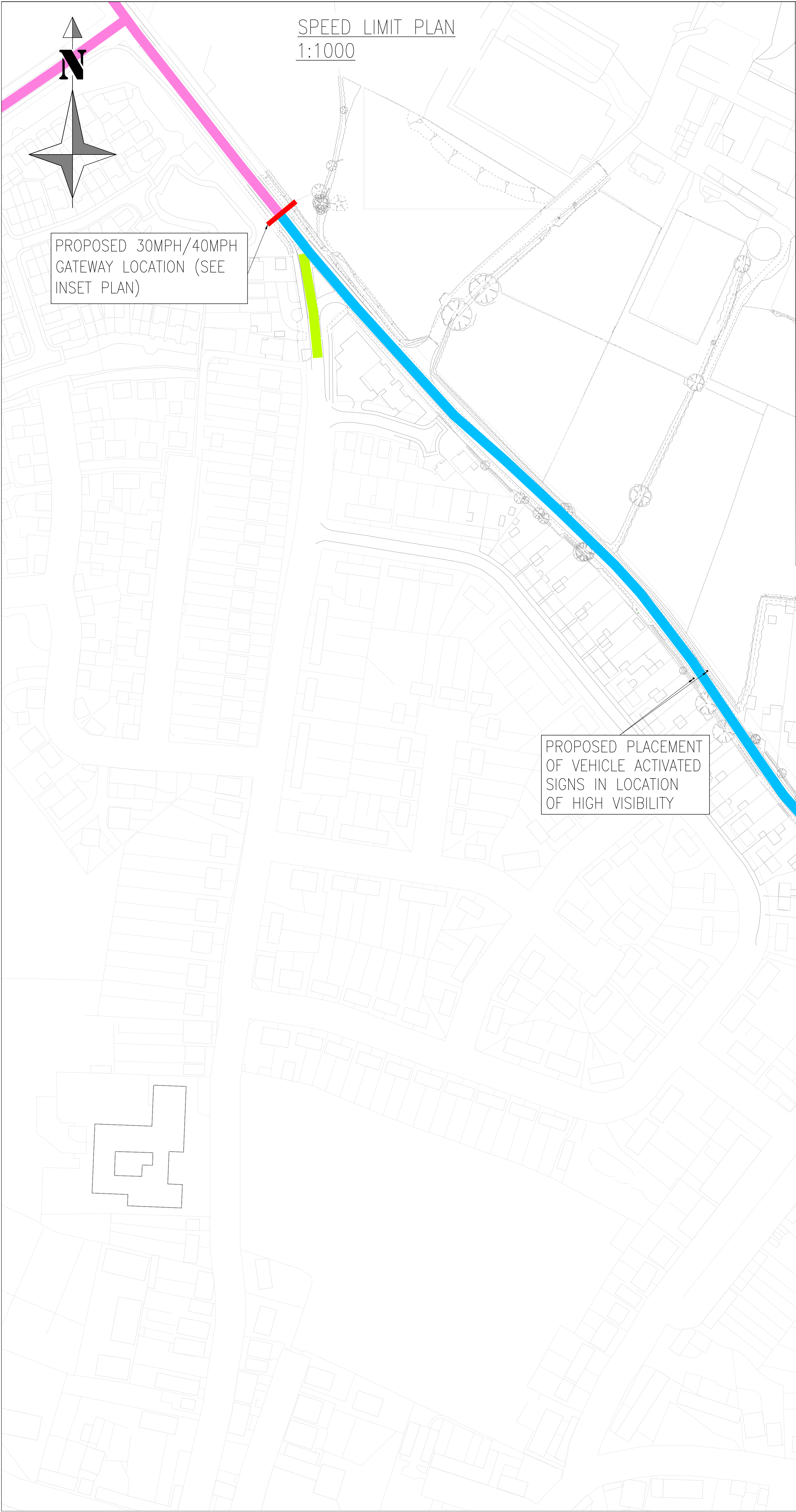


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APPENDICES



APPENDIX Q



NOTES:

- DO NOT SCALE FROM THIS DRAWING.

KEY:

- PROPOSED 30MPH
- EXISTING 30MPH
- EXISTING 40MPH

EXAMPLE OF VEHICLE ACTIVATED SIGN FROM LCC WEBSITE (EXACT DESIGN TO BE CONFIRMED BY LHA)

REV	AMENDMENTS	DRN	CHK	APP	DATE
1	FIRST ISSUE				

DRAWING TITLE: PROPOSED SPEED LIMIT CHANGED

CLIENT: DAVID WILSON HOMES EAST MIDLANDS

DRAWING NUMBER: 24832_08_020_09

REVISION: - SHEET SIZE: A0 SCALE: 1:1000

STATUS: FOR INFORMATION / APPROVAL

MEC
Consulting Group
Birmingham | Brighton | Leicester

Telephone: 01530 264 753
Email: groups@mc.co.uk
Website: www.mc.co.uk

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APPENDICES



APPENDIX R

James Wright

From: Toby France <francet@arriva.co.uk>
Sent: 06 February 2024 11:25
To: James Wright
Cc: Alex Bennett
Subject: RE: 24832 - Barlestone Road (B582), Newbold Verdon, Leicestershire: 153 Re route

Hi James,

Thanks for your email.

On the assumption that 153 continues to operate an hourly frequency at the point this development comes to fruition we would not be minded to re-route journeys as per your proposal, which would significantly increase the walking distance from the established demand from the existing residential area and reduce the frequency on the established routing to two-hourly. We also note that the bus stops adjacent the Co-Op are located approximately equidistant between Arnold's Crescent and the Northern boundary of the development site, essentially maximising the catchment area of the existing routing incorporating both established and new residential areas of the village.

We would instead suggest that a contribution is made towards pump-priming extended hours of operation from Newbold Verdon with additional early morning journeys (the first Leicester bound journey is not until 0749 currently) and potentially later return departures from Leicester (last bus currently 2015).

Please do not hesitate to get back in touch should I be of any further assistance.

Cheers

Toby J France CMILT, CMgr MCMi
Head of Commercial – East & South Midlands
Arriva UK Bus

Arriva plc | T: 07788 336 709 | E: francet@arriva.co.uk | [LinkedIn](#)

Arriva plc | Registered in England. Registered No: 347103 | www.arriva.co.uk
4 Westmoreland Avenue | Thurmaston | Leicester | LE4 8PH



From: James Wright <james.wright@m-ec.co.uk>
Sent: Monday, February 5, 2024 3:17 PM
To: Toby France <francet@arriva.co.uk>
Cc: Alex Bennett <alex.bennett@m-ec.co.uk>
Subject: 24832 - Barlestone Road (B582), Newbold Verdon, Leicestershire: 153 Re route

Hi Toby,

Suraj Dave @ Leicestershire CC has passed on your contact details to me following an enquire regarding the possibility of (part) re-routing the 153 Desford – Leicester Arriva bus service (timetable attached),

My client is proposing to develop the Land north of Barlestone Road into circa 210 dwellings (location plan is attached), so the mentioned service is key to the sustainability of our site,

We do appreciate the service is the only bus serving Newbold Verdon and that its existing route through Main Street and Dragon Lane will have to be retained in some regard to serve the wider village. However, to ensure our site is as sustainable as possible, and maximise the number of bus users, we require closer public transport facilities. Would it therefore be a possibility to re-route the service (or every other service) along Mill Lane, serving either Main Street or Dragon Lane as denoted on the attached markup?

Moreover, as part of the development proposals, we would seek to implement new bus stops along Barlestone Road (and any footway infrastructure needed to reach them), likely adjacent to its junction with Mill Lane and potentially on Mill Lane too, to serve the 153 service and facilitate the change of route – if any other contributions can be made to improve the viability of the re-routing / general sustainability of the site in terms of public transport, please could these be detailed to us,

Appreciate your thoughts on this,

Kind Regards,

James Wright BSc (Hons)
Graduate Transport Planner
james.wright@m-ec.co.uk

T: 01530 264753

M: 01530 444265

W: mec.co.uk

Birmingham | Brighton | Leicester



Please note our company name has changed to 'MEC Consulting Group Ltd'

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CIVIL ENGINEERING



TRANSPORT



FLOOD RISK & DRAINAGE



STRUCTURES



GEO-ENVIRONMENTAL



ACOUSTIC AIR



UTILITIES



GEOMATICS



LIGHTING



EXPERT WITNESS



MEC
Consulting Group

E: group@m-ec.co.uk
W: www.m-ec.co.uk