Land East of Warwick Road, Banbury

Transport Assessment

PREPARED BY:
Jubb Consulting Engineers Ltd.

FOR:
Vistry Homes Limited

DATE:
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REFERENCE:
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Contents

1 Project Information

1.1 Project Information

Client	Vistry Homes Limited

1.2 Project Details

Project Name	Land East of Warwick Road, Banbury
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1.3 Report Details

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3	January 2023	For Planning	R. Morant	J. Duffy

2 Introduction

2.1 Brief

2.1.1 Jubb has been commissioned by Vistry Homes Limited to provide transport and highways advice in relation to a proposed residential development at land accessed off Warwick Road to the north of Banbury and within the District of Cherwell.

2.1.2 It is understood that for a development of the scale that is envisaged at the site a comprehensive assessment of the potential impacts of the proposals is required. This is in line with Paragraph 113 of the National Planning Policy Framework (NPPF, 2021) which states:

> "*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*."

2.1.3 This Transport Assessment (TA) has been prepared to provide support to an outline planning application for up to 170 dwellings (Use Class C3) with associated open space and vehicular access off Warwick Road, Banbury, will all matters reserved except for access.

2.1.4 The proposed development is located bounding the 'Land Off Warwick Road North Of Hanwell Fields' (Planning Ref: 12/01789/OUT) site to the south and within close proximity to the 'Land For Proposed Development At Drayton Lodge Farmhouse' (Planning Ref: 18/01882/OUT) site, both of which are recently consented residential sites under construction.

2.1.5 This TA has outlined and assessed any transport issues in relation to the site and has considered the proposed development in context with regard to local and national planning policy. It has assessed the traffic generation of the development and potential impact on the surrounding transport network, with any required mitigation measures outlined.

2.1.6 A sustainability review of the site has also been undertaken with regard to access by non-car modes of transportation including walking, cycling, and public transport.

2.1.7 A framework Travel Plan (TP) has also been prepared in support of the proposed residential development and should be read in conjunction with this TA.

2.2 Development Proposals

2.2.1 The proposed development is for up to 170 dwellings (Use Class C3) with associated open space and vehicular access off Warwick Road, Banbury. The application will also include provision for affordable housing in accordance with the Adopted Local Plan.

2.2.2 The proposals include one main vehicular access to the site accessed off the B4100 Warwick Road on the western boundary that has been designed in accordance with relevant local and national standards.

2.2.3 The approach taken in developing the layout design for the site will serve to maximise movement via active modes of travel. The inclusion and proximity of high-quality pedestrian and cycle routes to the development will play an important role in connecting the development to the surroundings.

2.3 Scope of Report

2.3.1 The structure of this TA is as follows:

- **Section 3:** Considers the development in the context of relevant national and local planning and transport policies and guidance.
- **Section 4:** Examines the local transport conditions in the vicinity of the site and the accessibility by non-car modes of travel.
- **Section 5:** Provides a detailed description of the development proposals and access strategy.
- **Section 6:** Quantifies the trip generation and impact of the development proposals in the study area.
- **Section 7:** Sets out the Traffic Analysis undertaken to assess the capacity of the junctions within the study area to accommodate the proposed development.
- **Section 8:** Provides a summary and conclusions of the Transport Assessment.

3 Transport Planning Policy and Guidance

3.1 Introduction

3.1.1 This section of the TA provides a review of the existing and emerging planning and transport policies relevant to the proposed development at the national, regional and local level. It also references key guidance in the preparation of the proposals.

3.1.2 The following documents set out the relevant policy framework that guides the transport strategy for the proposed residential development in Banbury:

- National Planning Policy Framework (2021)
- National Planning Practice Guidance
- Oxfordshire Local Transport Plan 3: 2015 – 2031
- Cherwell Local Plan 2011-2031 (2015)
- Transport for New Developments: Transport Assessments and Travel Plans (2014)
- Manual for Streets
- Manual for Streets 2

3.1.3 The development proposals have been prepared with due consideration for this planning policy framework, appropriate to the level of the application.

National Planning Policy

3.2 National Planning Policy Framework (NPPF)

3.2.1 The National Planning Policy Framework (NPPF) sets out the central government's planning policies for England and how these are expected to be applied at a local level. It provides a framework within which locally prepared plans for housing and other development are produced. Originally published in March 2012, the NPPF has had numerous revisions, with the most recent being (at the time of writing) in July 2021.

3.2.2 In terms of transport, planning should:

> "*...actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable*".

3.2.3 It also states that:

> "*...the transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel. However, the Government recognises that different policies and measures will be required in different communities and opportunities to maximise sustainable transport will vary from urban to rural areas*".

3.2.4 Paragraph 8 sets out three objectives for the planning system for achieving sustainable development; economic, social and environmental. In terms of transport, this references the need for provision of appropriate infrastructure, ensuring accessibility and protection of the environment.

3.2.5 In relation to 'Considering Development Proposals', paragraph 110 requires determining authorities to ensure that:

- "...appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
- safe and suitable access to the site can be achieved for all users;
- 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; 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."

3.2.6 Paragraph 112 states that development should:

- *"...give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- *address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- *create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- *allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- *be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations*."

3.2.7 Paragraph 113 states that all development expected to generate significant amounts of movements should be required to provide a TP and the planning application should be supported by a TA or TS.

3.2.8 Paragraph 111 leads on to say:

> "*Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe*."

3.2.9 The proposed access arrangements will integrate with off-site provision to facilitate take-up of sustainable modes and will ensure that safe and suitable access can be achieved for all future users. The TA demonstrates that the transport impact of the scheme will not be 'severe' under the terms set out in the NPPF.

3.3 National Planning Practice Guidance (NPPG)

3.3.1 The NPPF is supplemented by the NPPG in relation to the preparation of TAs, TS' and TPs. The guidance states that these are required for all developments that generate significant amounts of movements, and that the development of these is an iterative process, as each may influence the other.

3.3.2 The guidance states that producing these documents provides a means to assess, and mitigate, the negative transport impacts of development; in this way, sustainable development can be achieved. The guidance sets out that whilst TPs promote the implementation of sustainable travel into the planning

process, TAs / TS' assess the potential transport implications of developments and propose mitigation measures where these are necessary to avoid unacceptable or "severe" impacts."

3.3.3 Hence, the NPPG refers to the need to reduce adverse impacts on climate change from new developments. Climate change is one of the core land use planning principles and the NPPG states that:

> "*...the distribution and design of new development and the potential for servicing sites through sustainable transport solutions, are particularly important considerations that affect transport emissions*."

3.3.4 The NPPG states that a well-designed space promotes ease of movement, and that this will need to show the ability to move safely, conveniently and efficiently to and within a place.

Oxfordshire County Council Policy

3.4 Connecting Oxfordshire - Local Transport Plan: 2015 – 2031

3.4.1 The Local Transport Plan (LTP) was adopted in 2015 providing transport policy framework for the county for a planning period up to Year 2031. The LTP sets out a vision for transport in Oxfordshire to provide an affordable, low carbon, accessible, integrated, efficient and reliable transport network to achieve a more competitive economy and better connected, more active and healthy communities.

3.4.2 The ten overarching objectives for the plan are:

- *"Maintain and improve transport connections to support economic growth and vitality across the county;*
- *Make most effective use of all available transport capacity through innovative management of network;*
- *Increase journey time reliability and minimise end to end public transport journey times on main routes;*
- *Minimise the need of travel;*
- *Reduce the reliance on car-borne trips;*
- *Secure infrastructure and services to support development and influence the location and layout of development to maximise the use and value of existing and planned transport investment;*
- *Reduce carbon emissions from transport;*
- *Mitigate and wherever possible enhance the impacts of transport on the local built, historic and natural environment;*
- *Develop and increase the use of high quality, innovative and resilient integrated transport system; and*
- *Develop and increase cycling and walking for local journeys, recreation and health*."

3.4.3 Volume 2 part ii contains area strategies, for which there is one for Banbury. This includes a significant list of necessary infrastructure improvements to enhance capacity within the town with 6 key policies to deliver the identified schemes. The policies are:

- *"BAN1 – We will seek opportunities to deliver transport schemes which will support the regeneration and growth of Banbury to 2031 and protect the historically sensitive areas of the town...*
- *BAN2 – We will work closely with Cherwell District Council, bus operators and other strategic partners to deliver the Banbury Bus Strategy, which seeks to deliver a commercial bus network for Banbury.*

- *BAN3 - We will strengthen Banbury's position on the rail network through revitalising the railway station area and improving pedestrian, cycle and bus access to the station.*
- *BAN 4 - We will work closely with Cherwell District Council and other strategic partners, and developers to provide facilities for pedestrians and cyclists and we will work to fill in the gaps in the walking and cycling network, including Public Rights of Way.*
- *BAN 5 - Travel Plans, Delivery & Servicing Plans and Construction Logistics Plans will be secured for all new developments that meet OCC's thresholds. Travel Plan/ DSP monitoring contributions will be secured.*
- *BAN 6 - Where schemes are needed to mitigate one particular development, the developer will be expected to deliver the infrastructure directly, or provide funding for the scheme. Where a scheme is required due to the impact of more than one development, each developer will be expected to make a contribution proportional to the scale of their impact. This will include contributions towards infrastructure improvements set out in Cherwell District Council's Infrastructure Delivery Plan for Banbury, as well as bus service enhancements and infrastructure improvements. Oxfordshire County Council is working towards establishing a strategic Transport Contribution rate for developer funding, which will be adopted in a future update of this strategy*."

Cherwell District Council Policy

3.5 Cherwell Local Plan (2015)

3.5.1 The Cherwell Local Plan Part 1 was adopted in July 2015. The relevant Local Plan policies are set out below:

3.5.2 Policy SLE 4 - Improved Transport and Connections (part)

"*The Council will support the implementation of the proposals in the Movement Strategies and the Local Transport Plan to deliver key connections, to support modal shift and to support more sustainable locations for employment and housing growth*."

3.5.3 Policy ESD 1 - Mitigating and Adapting to Climate Change (part)

"Measures will be taken to mitigate the impact of development within the District on climate change. At a strategic level, this will include:

- *Distributing growth to the most sustainable locations as defined in this Local Plan*
- *Delivering development that seeks to reduce the need to travel and which encourages sustainable travel options including walking, cycling and public transport to reduce dependence on private cars"*

3.5.4 Policy ESD15 – 'The Character of the Built and Historic Environment' states that:

"New development proposals should:

- *Be designed to deliver high quality safe, attractive, durable and healthy places to live and work. Development of all scales should be designed to improve the quality and appearance of an area and the way it functions"*

Key National and Local Guidance

3.5.5 In addition to the National and Local Policies, appropriate reference has been made to the following guidance in the preparation of the development proposals.

3.6 PPG – TPs, TAs and TSs in decision-taking (2014)

3.6.1 The "Planning Practice Guidance – Travel Plans, Transport Assessment and Statement in decision-taking" was published in March 2014. It sets out the overarching principles on Travel Plans, Transport Assessments and Statements in the planning process and emphasises their importance in promoting and delivering sustainable development.

3.6.2 The document states that Travel Plans, Transport Assessments or Statements are required for all development that will have a material impact on the local and strategic highway network. The development of these documents is an iterative process as each may influence the other and should be:

- *"commensurate with the size and scope of the proposed development to which they relate and build on existing information wherever possible;*
- *established at the earliest practicable possible stage of a development proposal;*
- *tailored to particular local circumstances and developed in close consultation with the Local Planning Authority/ Highway Authority, transport operators, Rail Network Operators, Highways Agency where there may be implications for the strategic road network and other relevant bodies*."

3.7 Manual for Streets

3.7.1 Manual for Streets (MfS) was published in March 2007. It provides guidance (but not formal policy) for practitioners working in England and Wales involved in the planning, design, provision and approval of new streets, and modifications to existing infrastructure. It aims to demonstrate the quality-of-life benefits which can arise through good design and with a higher priority being afforded to pedestrians and cyclists.

3.7.2 Regarding movement for a community, MfS considers that providing for movement along a street is vital, but that it should not be considered independently of the street's other functions, and that the need to cater for motor vehicles should not mean that walking and cycling are less considered.

3.7.3 Streets are considered the focus of movement in a neighbourhood, where pedestrians and cyclists generally share streets with motor vehicles. MfS considers that there may be situations where it is appropriate to include routes for pedestrians and cyclists segregated from motor traffic, but that they should be short, well overlooked and relatively wide to avoid any sense of confinement.

3.7.4 MfS approves the development of cul-de-sacs on sites with topography, boundary or other constraints. Cul-de-sacs can be useful in keeping motor traffic levels low in a particular area, but any through connections for pedestrians and cyclists should be well overlooked with active frontages.

3.7.5 Finally, cul-de-sacs are also considered to provide the best solution for developing awkward sites where through routes are not practical.

3.8 Manual for Streets 2

3.8.1 Manual for Streets 2 (MfS2) was published in September 2010. It is a companion document to MfS and explains how the principles of MfS can be applied more widely. In particular, MfS2 recommends that as a starting point for any scheme affecting non-trunk roads (regardless of speed limit), designers should start with MfS2. This widens the scope of the MfS advice away from residential streets to roads whose function may currently be primarily for traffic movement rather than pedestrian activity.

3.8.2 Manual for Streets 2 also provides guidelines that supplement those of MfS, providing further detail on selected matters. One of these is the subject of new residential development at urban extensions.

3.8.3 Regarding this subject, MfS2 requires urban extensions to be well connected to the urban edge of the existing settlement, as these can provide sustainable infrastructure links connecting urban open spaces with rural areas.

3.8.4 Urban extensions allow for the growth of towns and cities so that residents and workers in these areas can take advantage of the existing facilities provided in the town or city. MfS2 considers that, in order to achieve connected growth, urban extensions should link into the surrounding highway network of local and strategic routes. The form of urban extensions should be made up of linked streets and urban blocks, with streets being of generally low speeds and well overlooked.

3.8.5 The development of urban extensions will probably affect the character of rural routes, which may have to change fundamentally as they become part of the urban fabric. Thus, existing routes that pass or run through urban extensions may change in character or hierarchy as the development takes place bringing new place function as well as increases in movement on the highways, and these increases in traffic flows will need to be considered when redesigning the route.

3.9 Conclusion

3.9.1 It is clear from this review that the proposed residential development accessed off Warwick Road is compliant with the overarching national policy framework and local transportation policies in that the site is located within a sustainable location with the potential to promote the use of more sustainable modes of transport.

3.9.2 **Section 5** of this Transport Assessment shows that the proposed scheme can be adequately accommodated within the existing highway network with the proposed access strategy, which has been designed in accordance with current design guidelines and standards.

4 Existing Conditions

4.1 Introduction

4.1.1 This section provides a description of the site location and examines the level of accessibility to and from the site for all modes. The accessibility audit is in keeping with current national, regional and local planning policies which highlight the importance of integrating land-use, transport and planning decisions to address the needs of both present and future communities to create developments with good access to local infrastructure.

4.1.2 This section also includes a review of access to local facilities and amenities, a study of the existing local highway network and traffic conditions along with a preliminary study of collision data, a technical summary of vehicle speed data and a review of traffic data collected from recently consented planning applications surrounding the development site.

4.1.3 The sustainability of the site is considered regarding the provision of alternative modes of transport to the car, including walking, cycling and public transport.

4.2 Site Location

4.2.1 The development site is accessed off the B4100 Warwick Road to the north of Banbury. Banbury is a market town located in northern Oxfordshire, which sits astride the River Cherwell. The town lies roughly 40km west of Milton Keynes, 22km northwest of Bicester, 20km northeast of Chipping Norton, 40km south of Coventry and 35km southwest of Northampton.

4.2.2 The site is bounded to the north and east by open fields, to the south by the consented 'Land Off Warwick Road North Of Hanwell Fields' (Planning Ref: 12/01789/OUT) strategic development area, and to the west by B4100 Warwick Road. The site is also located within close proximity to the 'Land For Proposed Development At Drayton Lodge Farmhouse' (Planning Ref: 18/01882/OUT) site, which is also a new permitted residential site under construction.

4.2.3 Cherwell District Council's (CDC) The Cherwell Local Plan 2011 – 2031 ('Cherwell's Local Plan'), adopted in 2015 focusses on Bicester and Banbury as the most sustainable locations for growth in the District.

4.2.4 Banbury is an important urban centre and employment area in North Oxfordshire with a growing population of approx. 47,000. The town is served by junction 11 of the M40 (Birmingham-London) motorway with good road network links north to Birmingham, Coventry and Northampton, east to Milton Keynes, Brackley and Buckingham; west to Stratford-upon-Avon and Chipping Norton and south to Oxford, Bicester and Aylesbury.

4.2.5 The application site lies in a semi-suburb environment and is situated to the east of the B4100 (Warwick Road) on the north-western fringe of the town. It benefits from being located in close proximity to a wide range of compatible and supportive 'day to day' local services and is situated within 4km of Banbury town centre.

4.2.6 A Site Location Boundary Plan has been prepared by EDP and is shown in **Figure 4.1**. This is also shown as **Appendix A** to this report.

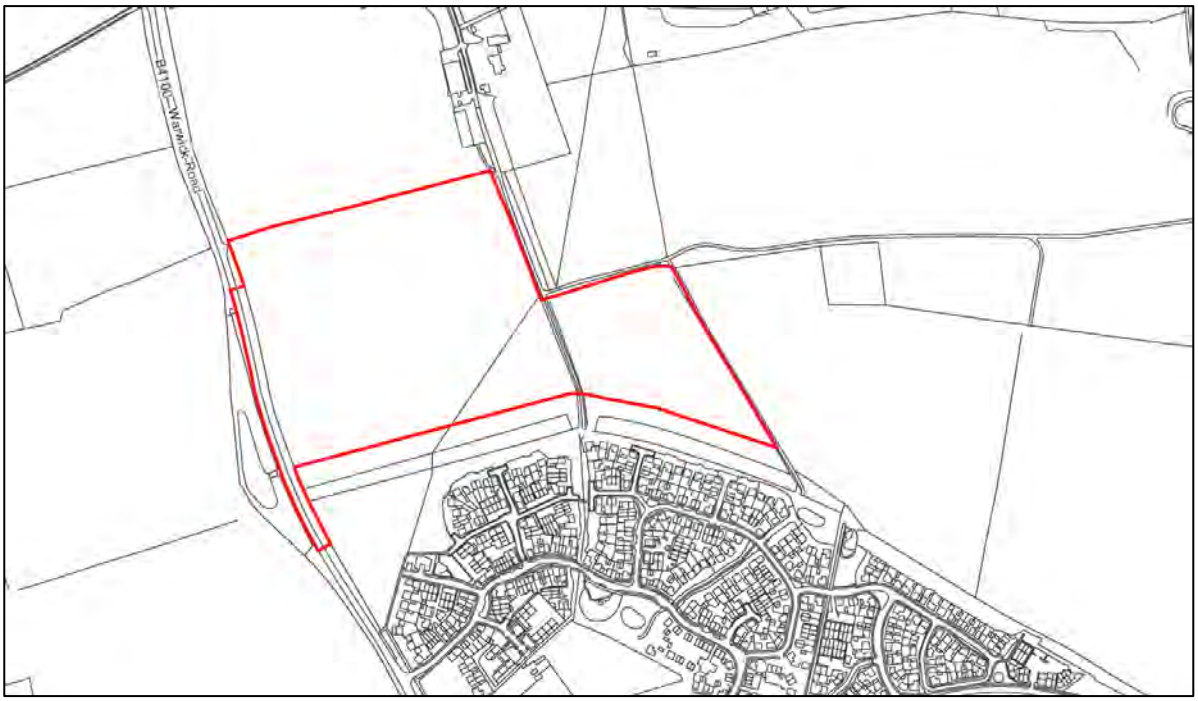

Figure 4.1. Site Location Boundary Plan

4.2.7 The site is reasonably served by the existing and proposed public transport network and is accessible by a number of Public Rights of Way (PRoWs) to existing facilities within the surrounding area providing real opportunities for people to travel to and from the site by a variety of means of travel other than the private car.

4.3 Accessibility to Local Facilities and Services

4.3.1 The requirement to locate residential developments within walking distance of day-to-day needs is set out in the NPPF, which states:

> "*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*".

4.3.2 It is important to state that Cherwell's Local Plan notes that Banbury forms one of the main centres within the District, and as such offers "*an important focus for shopping, commerce and the provision of leisure and other services to meet the needs of local people and visitors*". As such, it is considered that there is a range of amenities located in the town that serve day-to-day needs.

4.3.3 The proximity of the site to the key transport links and other attractions is summarised in **Table 4.1** along with the estimated journey time by different means of travel. It should be noted that all distances have been measured from the nearest boundary of the development site, and follow suitable pedestrian or cycle routes respectively, as opposed to 'as the crow flies' routes. The estimated journey times have been based on OpenStreetMap for the 'Foot (GraphHopper)' and the 'Bicycle (GraphHopper)' features for walking and cycling journeys respectively.

4.3.4 Manual for Streets states, in Paragraph 4.4.1 that "*...walking offers the greatest potential to replace short car trips, particularly those under 2 km*". As such, the accessibility of the site has been assessed in line with this 'threshold'.

Facility	Approximate Distance (Measures to nearest 50m)	Walking Time (nearest minute)	Cycling Time (nearest minute)
Sainsbury's Local, Walker Road	550m	7 minutes	2 minutes
Duke Meadow's Park, Dukes Meadow Drive	900m	10 minutes	7 minutes
Hanwell Fields Community School, Dukes Meadow Drive	1.3kms	16 minutes	8 minutes
Rotary Way Shopping Centre, Rotary Way (with dental surgery)	1.3kms	16 minutes	8 minutes
North Oxfordshire Academy, Ludlow Drive	1.4kms	17 minutes	7 minutes
Harwick Shopping Centre, Ferriston (with GP and pharmacy)	1.4kms	17 minutes	9 minutes
Hardwick School, Ferriston	1.4kms	17 minutes	9 minutes
Barley Mow Public House, A422 Warwick Road	1.6kms	19 minutes	8 minutes
Beaumont Industrial Estate, Beaumont Road	1.8kms	22 minutes	11 minutes
William Morris County Primary School, Bretch Hill	2.0kms	25 minutes	11 minutes

Table 4.1. Distance and Journey Times to Local Facilities

4.3.5 **Table 4.1** demonstrates that the proposed site is well positioned in a sustainable location and lies in close proximity to a wide range of facilities and services that are on offer in the local area.

4.3.6 As shown, the site lies within a reasonable walking distance of a range of amenities. Convenience stores, education (both primary schools and a secondary school), healthcare (a GP, pharmacy and a dental surgery) and recreation facilities lie within a reasonable walking distance of the site, as do the Rotary Way and Harwick local centres.

4.3.7 As such, a suite of local services and facilities, required on a day-to-day basis, are accessible from the proposed site on foot and by bicycle. Thus, active and sustainable modes of transport, primarily walking and cycling, offer a viable and realistic alternative to the private car for local trips.

4.3.8 It is also important to note that land to the southwest of the site (Land at Drayton Lodge Farmhouse development), to the west of B4100 Warwick Road, has been granted permission for 320 dwellings with a local centre providing retail and community facilities (18/01882/OUT).

4.3.9 The local centre is proposed just north of the Sainsbury's Local on Walker Road and would therefore be accessed within 600m from the site with an estimate of a 7-minute walking journey and a 2-minute cycle ride. The ''Illustrative Framework' plan is shown in **Figure 4.2**. This will further improve accessibility of the site to local facilities.

Figure 4.2: 'Land at Drayton Lodge Farmhouse' Illustrative Framework

4.4 Pedestrian Accessibility

4.4.1 A number of linkages have been identified that would connect the site to the wider pedestrian network. These linkages comprise existing Public Rights of Way (PRoW) along with a continuous shared use route that is proposed as part of the access strategy.

4.4.2 The first of these linkages provides a connection to the southeast, between the site and the roundabout junction between Dukes Meadow Drive and Winter Gardens Way. From the southern boundary of the site, three existing footpaths (120/107/10, 120/107/20 and 120/107/30) combine to provide a link through to the shared-use foot/cycleway that runs to the south of Dukes Meadow Drive, with the crossing of the carriageway facilitated by a refuge island.

4.4.3 The second of these linkages provides a connection to the south of the site, by way of an existing footpath (191/6/10). This footpath ties into the pedestrian network that is to be delivered as part of the consented 'Land Off Warwick Road North Of Hanwell Fields' (Planning Ref: 12/01789/OUT), which thereafter ties into the wider network of northern Banbury.

4.4.4 The third of these linkages provides a connection between the site and the village of Hanwell, which lies to the north. Through a combination of two existing footpaths (239/6/10 and 239/10/10) a link is provided from the northern boundary of the site through to the footway network on Main Street.

4.4.5 An additional linkage would be provided by a connection to the south of the site by way of a shared use route that would run on the eastern side of the B4100 Warwick Road as part of the site access strategy. This shared use route would run on a north-south alignment between the proposed vehicular access and the shared use route which has been delivered as part of the consented 'Land off Warwick Road North of Hanwell Fields' development (12/01789/OUT) and that continues southwards linking to the local footway network provided along the B4100 Warwick Road and Dukes Meadow Drive.

4.4.6 The extent of PRoWs surrounding the application site is shown in **Figure 4.3**, extracted from the Oxfordshire County Council Countryside Access Map.

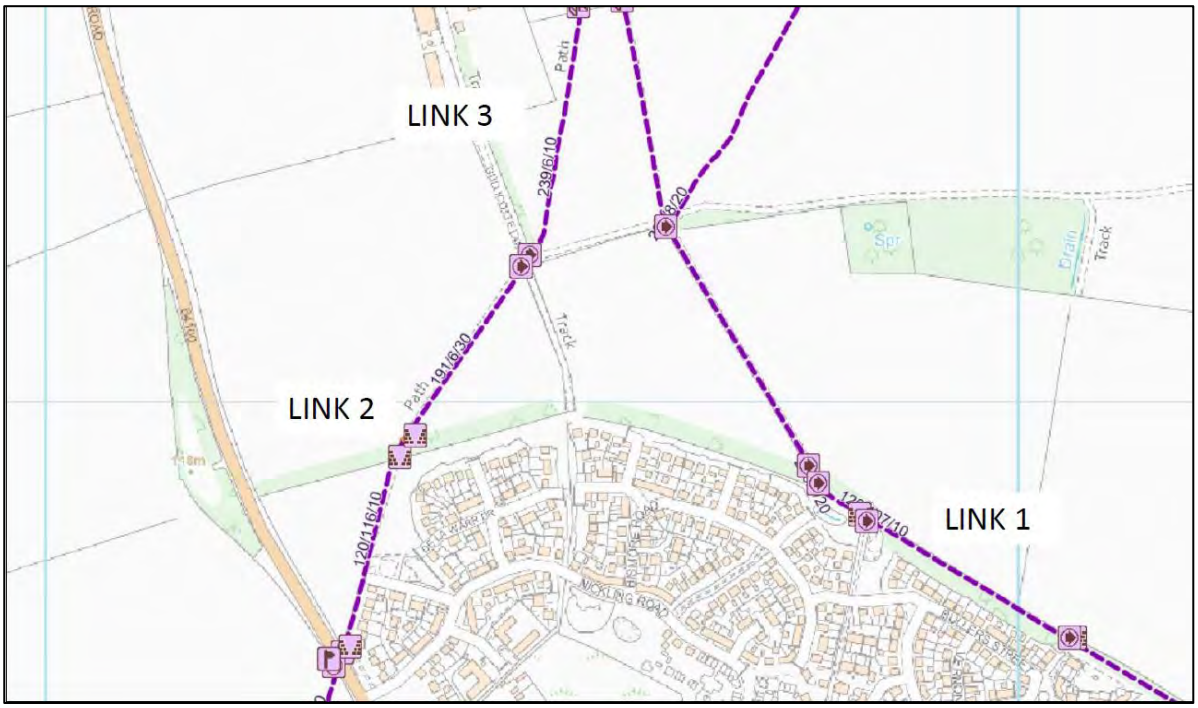

Figure 4.3: Extent of Public Rights of Way in Proximity to the Site

4.4.7 As such, it is considered that through a combination of the proposed shared use route together with the existing Public Rights of Way and the pedestrian network to be delivered as part of the consented 'Land off Warwick Road North of Hanwell Fields' development (with planning application reference 12/01789/OUT) that the site is well-connected to the wider pedestrian network of northern Banbury and the village of Hanwell.

4.4.8 The suitable pedestrian links to be facilitated as part of the development layout will provide appropriate connections to the existing and planned pedestrian network in the surrounding area. These will establish a continuous network of pathways facilitating suitable pedestrian access to nearby schools, retail, and employment opportunities with onwards connection to the town centre.

4.5 Cycling Accessibility

4.5.1 Cycling is recognised as one of the most sustainable modes of transport, with it generally acknowledged as having the potential to replace car trips for journeys up to 5km. This is supported by Manual for Streets 2 (MfS2), which clearly identifies the contribution that cycling can make to transport sustainability and accessibility, identifying this mode of travel as a good substitute for short car trips, particularly those under 5km.

4.5.2 The area is served by an extensive network of cycle routes, provided as a combination of on-road cycle lanes and traffic-free segregated tracks to the south of the application site, offering a range of cycling opportunities that connect with Banbury.

4.5.3 The local cycling network includes the following:

- Shared use route along Warwick Road, starting from the north of the junction with Nickling Road (as part of the consented 'Land off Warwick Road North of Hanwell Fields' development with planning application reference 12/01789/OUT) up to the roundabout junction with Duke's Meadow Drive. This new development is already constructed as shown in **Figure 4.4**, which is extracted from the Section 38 and Section 106 Agreements for this application.
- A number of shared use routes and cycle paths that run on a local level from the roundabout junction between Warwick Road and Duke's Meadow Drive on an eastbound direction to the A423 Southam Road and then on a north-south direction connecting Hanwell View with the Southam Road Cemetery.
- A cycleway along the Canal which runs on a north-south alignment from a point in close proximity to King's Sutton in the south to Napton in the Hill and beyond to the north.
- The National Cycle Network route number 5, which runs to the south of Banbury and is accessible at just over 5km to the south of the site. This is reached via several points off Bloxham Road, Oxford Road and Broughton Road. This provides access to Oxford to the south and Stratford-upon-Avon to the northwest along with access to NCN Routes 48 and 41 and to many other places along these routes.

Figure 4.4: New Shared Use Route Provided to the South of the Application Site

4.5.4 The local cycle network within Banbury is shown in **Figure 4.5** (except for the most recent developments, which include the improvements undertaken as part of the consented 'Land off Warwick Road North of Hanwell Fields' development with planning application reference 12/01789/OUT and 'Land For Proposed Development At Drayton Lodge Farmhouse' development with planning application reference 18/01882/OUT) and which comprise of 3.0m shared use routes provided on both sides of Warwick Road along the extent of the sites' boundaries and connecting to the south with the cycle network in Banbury. A Toucan crossing would also facilitate crossing for cyclists.

4.5.5 **Figure 4.5** has been extracted from the Local Cycling and Walking Infrastructure Plan (LCWIP) for Banbury, which is currently being developed by Oxfordshire County Council and Cherwell District Council in order to improve walking and cycling conditions to key destinations within Banbury and to promote the use of these more sustainable modes of transport to combat climate change and for health benefits. This shows that with the proposed shared use route as part of the access strategy there will be continuous cycle connections between the site and the rest of Banbury.

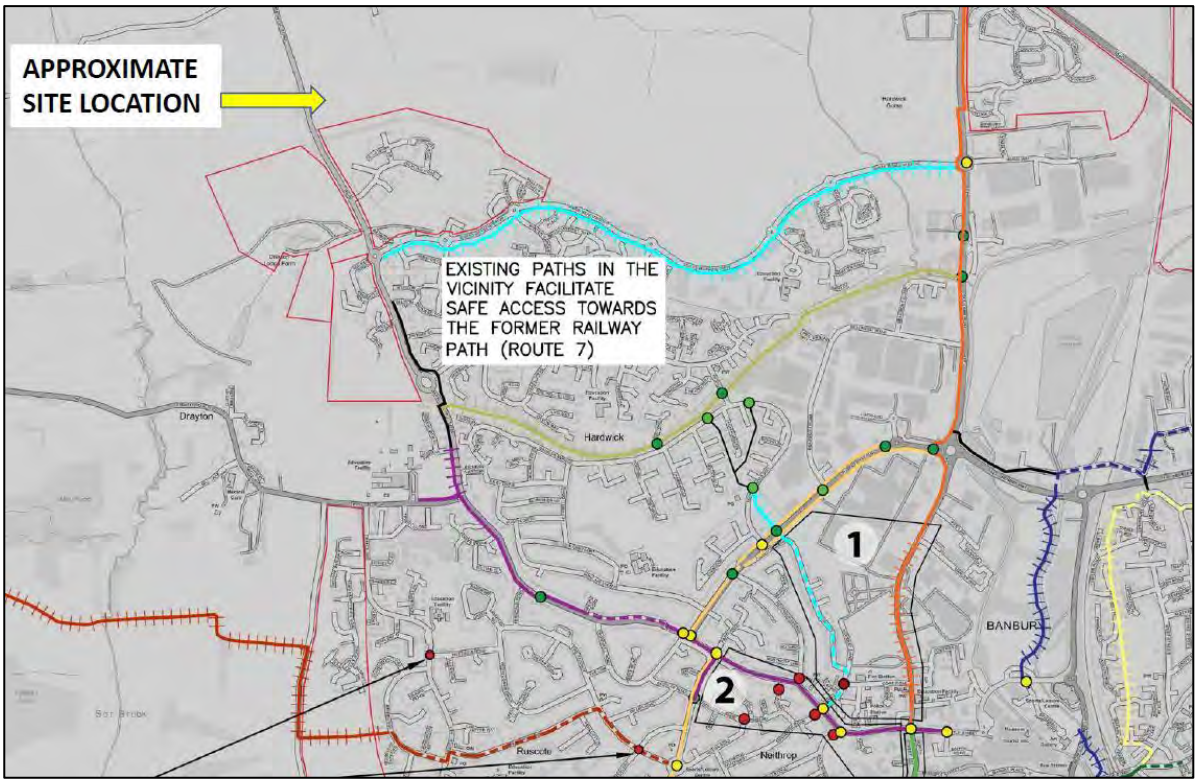

Figure 4.5: Local Cycle Network Surrounding the Application Site

4.5.6 Away from these dedicated cycle facilities, the roads within Banbury have an imposed limit of 30mph, therefore, travelling by bike is considered as relatively safe. The town is also surrounded by quiet country roads and lanes which are considered safe for cycling.

4.6 Public Transport Accessibility - Bus

4.6.1 The site is conveniently located to access the local bus services. The nearest existing bus stop to the proposed site access lies on Dukes Meadow Drive, known as 'Hardwick, Warwick Road'. This bus stop lies within 650m from the proposed site access junction, which equates to an 8-minute walk.

4.6.2 The 'Winter Gardens School' bus stop is located within 600m to the east of the application site and it is accessed from Dukes Meadow Drive from the PRoW located to the east of the application site (and with a walking journey time of 7 minutes).

4.6.3 It is important to note that as part of the consented 'Land For Proposed Development At Drayton Lodge Farmhouse' development (with application reference 18/01882/OUT) new bus stops are being proposed on Warwick Road just south of the junction with Nickling Road. This bus stop would be located within 400m to the south of the proposed site access, with a walking journey estimated of 4 minutes. Access to the bus stop would be facilitated by the provision of a Toucan crossing as part of the consented Drayton Lodge Farmhouse development.

4.6.4 **Figure 4.6** shows the location of the existing bus stops, extracted from the bustimes.org website, along with the locations of the development site and the new bus stop as part of the consented Drayton Lodge Farmhouse development.

Figure 4.6: Local Bus Stops within Close Distance to the Application Site

4.6.5 **Table 4.2** provides a summary of the key services available from these bus stops.

Service No.	Route	Days	First Service	Last Service	Approximate Frequency
B9 (accessed from Hardwick, Warwick Road, bus stop)	Local service to Castle Quay Shopping Centre and Wildmere Industrial Estate	Monday to Sunday	06:36	23:31	Every 15 minutes Monday to Saturday and hourly on Sundays
MR2 (accessed from Hardwick, Warwick Road, and Winter Gardens School, bus stops)	Local service to Bloxham	Monday to Friday (school days only)	07:38	15:28	1 daily service per direction
77A (accessed from Hardwick, Greville Road, bus stop)	Local service to town centre and to Leamington Spa	Monday to Saturday	10:08	17:56	2 daily services to town centre and 1 to Leamington Spa on weekdays and 1 service per direction on Saturdays

Table 4.2: Summary of Bus Services

4.6.6 As can be seen above, these bus stops also provide access to weekday school / college services (Service MR2), and morning services every day to the town centre and main employment areas on a local level.

4.6.7 The approximate travel time of bus journey from the development site to the key destinations is summarised below:

- Banbury Town Centre: 12 minutes
- Banbury Bus Station: 12 minutes
- Banbury Railway Station: 12 minutes
- Beaumont Industrial Estate: 6 minutes

4.6.8 Bus diversion of the existing town circular B9 through the new built 'Land off Warwick Road North of Hanwell Fields' development with planning application reference 12/01789/OUT, has been planned and is proposed to be implemented by the bus operator, Stagecoach, along with the proposed bus stop located just 400m to the south of the proposed site access.

4.7 Public Transport Accessibility – Rail

4.7.1 The nearest railway station is the local rail station at Banbury town centre, located within 5km southeast of the site (estimated by OpenStreetMap 'Bicycle (GraphHopper)' measurement tool and with a cycle journey time of 20 minutes. The station also offers cycle parking facilities (63 spaces) providing the opportunity to travel to the station by bicycle for onwards travel by rail. The station is also accessible via the B9 bus service which stops within close proximity to the station.

4.7.2 Banbury Railway Station is served by regular services to Oxford, Bicester and Leamington Spa. These are provided on services that reach London (on a frequency of 3 services per hour) and Birmingham (on a frequency of 2 trains per hour). These services provide access to the main destinations and associated journey times:

- Oxford: 18 minutes
- Reading: 45 minutes
- Birmingham (incl. Snow Hill, Moor Street, International & New Street): 50 minutes+
- London Marylebone: 1 hour+

4.7.3 The station also has a car park for 978 vehicle spaces and it is accessed within a 10-minute car drive from the proposed site access, reducing driving time when travelling farther away.

4.7.4 The station is accessible by sustainable travel modes from the site and offers direct connections to important local destinations during peak hours. Therefore, it is considered that the services offered at Banbury Railway Station present a realistic alternative to the private car for trips to these destinations.

4.8 Highway Network

4.8.1 The road network within the proximity of the development site constitutes a mixture of local access, urban distributor and primary highways. Vehicular access to the proposed development will be directly from Warwick Road via a new ghost island junction.

4.8.2 The site bounds the B4100 Warwick Road to the west, which provides the main access between Banbury to the south and Shotteswell to the north. The B4100 keeps running north up to the M40 to the south of Royal Leamington Spa.

4.8.3 The site is located within 4kms from the Banbury town centre. The site is easily accessible from the main road network and the M40 is located less than 6kms from the site with both driving journeys estimated as 6-minute car drives by the OpenStreetMap 'Car (GraphHopper)' tool.

4.8.4 The B4100 Warwick Road is a single carriageway road subject to the national speed limit on the section bounding the application site and it changes to a 40mph speed limit shortly further to the south. The 40mph was extended further north as part of the consented 'Land For Proposed Development At Drayton Lodge Farmhouse' development with planning application reference 18/01882/OUT and currently starts at just over 100m to the south of the application site.

4.8.5 To the north of the site the B4100 is of rural nature with reasonable geometry. To the south it enters the urban area with existing and recently constructed residential estates on both sides of the road. It proceeds into a signalised junction with the A422 Stratford Road where the speed limit changes to 30mph. The A422 travels west via intervening villages to Stratford-upon-Avon.

4.8.6 Continuing southwards, Warwick Road proceeds as primary route through to the town centre.

4.8.7 Travelling eastbound along Dukes Meadow Drive, which is accessed approximately 500m to the south of the proposed site access, this single carriageway passes several intermediate roundabout junctions with links to the residential estates to the south namely Usher Drive, Winter Gardens Way (twice) and Lapsley Drive (twice) before joining a four-arm roundabout with the A423 and Noral Way.

4.8.8 The A423 runs effectively parallel to the B4100 north to Southam. To the south it runs through the town centre as the main north/south route within Banbury joining with Warwick Road at a crossroads with Castle Street or via Ruscote Avenue at a four-arm roundabout junction with Hennef Way. Hennef Way is a dual carriageway link east towards the M40 (junction 11) and onwards south eastwards as the A422 to Brackley, or the A361 northeast to Daventry.

4.9 Preliminary Review of Highways Safety

4.9.1 A preliminary study of Personal Injury Collision (PIC) data was undertaken for the local highway network. PIC collision data for a full five-year period comprising January 2016 to December 2020, which was obtained by searching the Collision Map website and further reviewed by checking the bikedata.cyclestreets.net network website, for a study area surrounding the proposed development site for at least 1km on each direction on the main routes used by the development traffic using the latest information available. The study area is shown in **Figures 4.7 and 4.8**, extracted from the Collision Map website. This has investigated the location and nature of PIC data on the following highway network:

- B4100 Warwick Road, between the junction with Second Turn (leading to Shotteswell) to the north and the roundabout junction with Highlands to the south
- Dukes Meadow Drive between the roundabout junction with the B4100 Warwick Road to the west and the roundabout junction with Winter Gardens Way to the east
- Main Street (leading to Hanwell)
- Access road to Horley

Figure 4.7: PIC Collision Map: North of Proposed Site Access

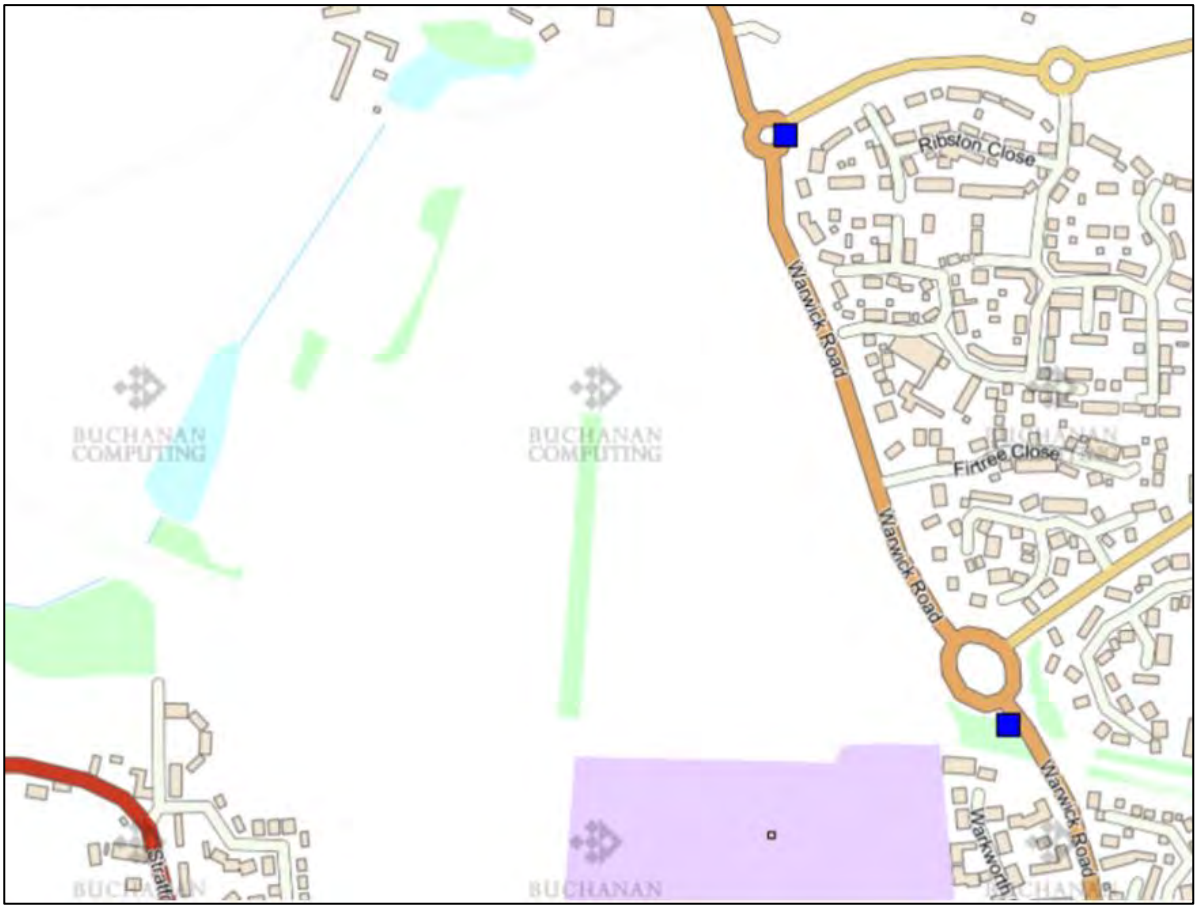

Figure 4.8: PIC Collision Map: South of Proposed Site Access

4.9.2 As can be established in the above figures, within the vicinity (and wider area) of the proposed site access, there have been a total of 8 collisions in the last 5 years when the information was available. Three of them were of a serious nature and the remaining five were of a slight nature. Further details of these collisions are provided following the location of the PICs recorded on a southbound direction.

4.9.3 The first collision took place on 28th of October 2020 at 17:53 hours in dark and wet/damp conditions. This seems to have been a typical shunt incident with three vehicles involved when travelling at the PM peak hour on a northbound direction. Two people were injured, one of them being of a serious nature.

4.9.4 The second collision happened on the 2nd of October 2020 at 22:19 hours in dark and wet/damp conditions. This took place when a young driver skidded and the vehicle entered a ditch with the driver being slightly injured. No other vehicles were involved.

4.9.5 The third collision took place on the 12th of November 2016 at 13:00 hours on wet/damp conditions and took place when a car skidded and hit a tree with no other vehicles involved. The car driver resulted in slight injuries.

4.9.6 The fourth collision occurred on the 23rd of September 2020 at 08:48 hours. This again involved a single vehicle which skidded and overturned as it entered a ditch. Both the driver and the passenger, which were elderly, resulted in slight injuries.

4.9.7 The fifth collision happened when a car slowed down to access the road to Horley and the vehicle behind, driven by an elderly driver, skidded and hit the car in front. This took place on the 16th of December 2016 at 08:00 hours on wet/damp road conditions with fog/mist. Both drivers and a passenger resulted in slight injuries.

4.9.8 The sixth collision took place when a car turning right from Hanwell onto the B4100 Warwick Road collided with another vehicle that was travelling on a northbound direction. This took place on the 31st of August 2018 at 13:26 hours and resulted in two people receiving slight injuries.

4.9.9 The seventh collision occurred on the 15th of November 2016 at 11:00 hours at the roundabout junction of the B4100 Warwick Road with Dukes Meadow Drive on wet/damp road conditions and raining weather conditions. The collision involved a cyclist and took place when a young driver behind the cyclist hit him when the vehicle skidded on the approach to the roundabout and resulted in a serious injury to the cyclist.

4.9.10 The last collision took place on the 15th of July 2019 at the roundabout junction of the B4100 Warwick Road with Highlands and took place when an elderly driver travelling northbound failed to stop at the roundabout and hit the two cars in front, which were waiting at the junction approach and resulted on a serious injury for the elderly driver.

4.9.11 Thus, given the overall dispersed nature of accidents, both in terms of geographical location and timescale, it is reasonable to conclude that the highway network surrounding the proposed development site does not include any geometric features that can be specifically linked to recorded collisions.

4.9.12 It is therefore concluded that there are no existing highway safety concerns to mitigate and that further inquiry into Personal Injury Collision Data for the area was deemed unnecessary.

4.10 Existing Traffic Data

4.10.1 In order to assess the operating condition of the B4100 Warwick Road at the present condition a traffic count survey was undertaken on this road at the proposed location of the site access.

4.10.2 The traffic survey was undertaken by an independent traffic survey company and took place for an entire week between Saturday the 05th of February 2022 until Friday the 11th of February (both inclusive). This took place when the restrictions related to Covid were eased. The results of this traffic count are shown as **Appendix B** to this report.

4.10.3 **Table 4.3** shows the movement flows for this junction at the AM and PM peak hours which have been considered as the peak times where most of the development traffic will be taking place due to its residential nature.

Date	B4100 Warwick Road (Northbound): AM Peak/PM Peak	B4100 Warwick Road (Southbound): AM Peak/PM Peak	Total AM Peak (08:00-09:00) / Total PM Peak (17:00-18:00)
Saturday 05/02/2022	105 / 161	120 / 146	225 / 307
Sunday 06/02/2022	62 / 130	44 / 145	106 / 275
Monday 07/02/2022	271 / 248	201 / 264	472 / 512
Tuesday 08/02/2022	321 / 271	320 / 238	641 / 509
Wednesday 09/02/2022	262 / 272	233 / 254	495 / 526
Thursday 10/02/2022	279 / 251	225 / 268	504 / 519
Friday 11/02/2022	238 / 257	205 / 241	443 / 498
Average of day of week	220 / 227	193 / 222	412 / 449
Average of a weekday	274 / 260	237 / 253	511 / 513

Table 4.3: B4100 Warwick Road - 2022 Survey Peak Flows

4.10.4 The traffic survey also showed that on average of a weekday 7.2% of the vehicle traffic was comprised of HGVs during the AM peak hour and 4.9% during the PM peak hour.

4.10.5 It is considered important to understand any changes to travel patterns in recent times. In order to accomplish this, use of traffic counts undertaken for other recent applications have been collected due to their relevance in terms of the study area and proximity to the application site.

4.10.6 In this case, traffic data from a traffic survey undertaken during Saturday the 9th of March 2019 and Friday the 15th of March have been collected from an ATC traffic survey data carried out on the B4100 Warwick Road to the south of the proposed site access and extracted from the 'Land For Proposed Development At Drayton Lodge Farmhouse' Transport Assessment (Jubb) for the consented application with planning ref: 18/01882/OUT. The results from this survey are shown in **Table 4.4** below. This is also shown as **Appendix C** to this report.

Date	B4100 Warwick Road (Northbound): AM Peak/PM Peak	B4100 Warwick Road (Southbound): AM Peak/PM Peak	Total AM Peak (08:00-09:00) / Total PM Peak (17:00-18:00)
Saturday 09/03/2019	110 / 206	159 / 183	269 / 389
Sunday 10/03/2019	54 / 156	61 / 162	115 / 318
Monday 11/03/2019	262 / 347	272 / 363	534 / 710
Tuesday 12/03/2019	273 / 294	261 / 274	534 / 568
Wednesday 13/03/2019	236 / 285	277 / 291	513 / 576
Thursday 14/03/2019	259 / 344	272 / 351	531 / 695
Friday 15/03/2019	263 / 298	270 / 269	533 / 567
Average of day of week	208 / 276	225 / 270	433 / 546
Average of a weekday	259 / 314	270 / 310	529 / 623

Table 4.4: B4100 Warwick Road - 2019 Survey Peak Flows

4.10.7 These counts show that the traffic volumes travelling along this section of the B4100 Warwick Road have been reduced in all cases by the following percentages:

- 3.4% during the AM Peak on an average weekday
- 4.7% during the AM Peak on an average day of the week
- 17.7% during the PM Peak on an average weekday
- 17.7% during the PM Peak on an average day of the week

4.10.8 The traffic count from March 2019 was carried out prior to Covid-19 related restrictions taking place. The traffic count from February 2022 has been undertaken post pandemic times and with the situation back to normality.

4.10.9 A number of studies have shown that the new normality has resulted in lower levels of car use, which are expected to work on a permanent basis as per the data researched and compiled. A significant percentage of people is now working from home on a permanent or part-time basis and these changes to travel patterns are reflected in the traffic surveys carried out in both March 2019 and February 2022.

4.10.10 The report 'Less is more: Changing travel in a post-pandemic society', undertaken by the Centre for Research into Energy Demand Solutions (CREDS) (Anable, 2022) shows that if only 50% of the WFH patterns from June 2021 were to be maintained the number of commuting vehicle trips in the morning would be reduced by an average of 12% with the impact on peak hours being much more noticeable.

4.10.11 The results of the vehicle traffic counts corroborate these new vehicle traffic trends and can be assumed that any increase in vehicle traffic growth will be partly offset by the reduction in commuting trips undertaken by car.

4.11 Vehicle Speed Survey

4.11.1 In order to ascertain the highway safety conditions of the proposed location for the site access junction, a vehicle speed survey was undertaken by an independent traffic survey company. The maximum speed limit on the B4100 Warwick Road is 60mph at the section by the proposed location of the site access junction.

4.11.2 An ATC vehicle speed survey was undertaken on the approximate location of the proposed site access junction. This was undertaken during the same period when the vehicle traffic count was carried out.

4.11.3 The speed survey was undertaken in accordance with the Highways England (now National Highways) Road Layout Appraisal CA 185 'Vehicle speed measurement' by use of an automatic speed measurement. The survey was carried out for the duration of an entire week between Saturday the 05th of February 2022 and Friday the 11th of February (both inclusive).

4.11.4 The 85th percentile vehicle speed is a widely used traffic statistical metric used in highway design and junction assessments and is defined as the speed at which 85% of vehicles are driving at or under.

4.11.5 The survey satisfies the conditions laid out in the document wherein the survey was undertaken on a non-bank holiday week and when there were no prominent local events taking place, or instances of high flows of heavy goods vehicles which would create an unrepresentative dataset.

4.11.6 The results of the survey are summarised below:

- The 85th percentile speeds recorded during the speed survey were:
  - 46.9mph for vehicles travelling northbound towards Warmington; and
  - 48.2mph for those travelling southbound towards Banbury.

4.11.7 This indicates that 85th percentile vehicle speeds are considerably lower than the signposted limit on both directions. The full results of this speed survey are shown as **Appendix B** to this report.

5 Development Proposals

5.1 Introduction

5.1.1 This Transport Assessment relates to the proposals for the provision of a residential development at the application site accessed off the B4100 Warwick Road, Banbury. This section of the Transport Assessment outlines the development proposals with particular consideration given to access to and from the site onto the surrounding public highway network.

5.1.2 The proposed development is for up to 170 dwellings (Use Class C3) with associated open space and vehicular access off Warwick Road. A Concept Masterplan has been prepared for the site by EDP and is shown in **Figure 5.1**. This is also shown as **Appendix D** to this report.

Figure 5.1: Concept Masterplan

5.1.3 To deliver a sustainable development, the proposed scheme has been sensitively designed to provide a high-quality layout and urban environment maximising transport sustainability and integration. The internal road network is to be engineered to accomplish the standards specified in the MfS Guidance with particular emphasis on the creation of safe routes around the site facilitating easy access by foot and cycle.

5.2 Access Strategy

Proposed Vehicle Access

5.2.1 The main access to the site will be obtained from the B4100 Warwick Road via a priority T-junction. A dedicated right turning lane will also be incorporated as part of the junction to enable right turning traffic into the development to wait safely in the centre of the carriageway.

5.2.2 To enhance the gateway into the town and denote the entrance to an urban area, it is proposed to extend the existing 40mph speed limit to the north past the location for the proposed site access and that appropriate signage and road surfacing be introduced. The developer would cover the costs of a Traffic Regulation Order (TRO) to be implemented in this regard.

5.2.3 This extension of the 40-mph speed limit will, in combination with the gateway feature 40mph surfacing and virtual speed bump, will assist in enhancing driver caution on entry to Banbury thereby improving conditions for future pedestrians and cyclists associated with the proposed development.

5.2.4 The proposed scheme will incorporate a new access junction on the western site boundary. This has been designed as a ghost island junction, in accordance with the DMRB document CD 123 'Geometric design of at-grade priority and signal-controlled junctions' and shown in **Figure 5.2**. It will also comply with the required visibility splays following DMRB standards.

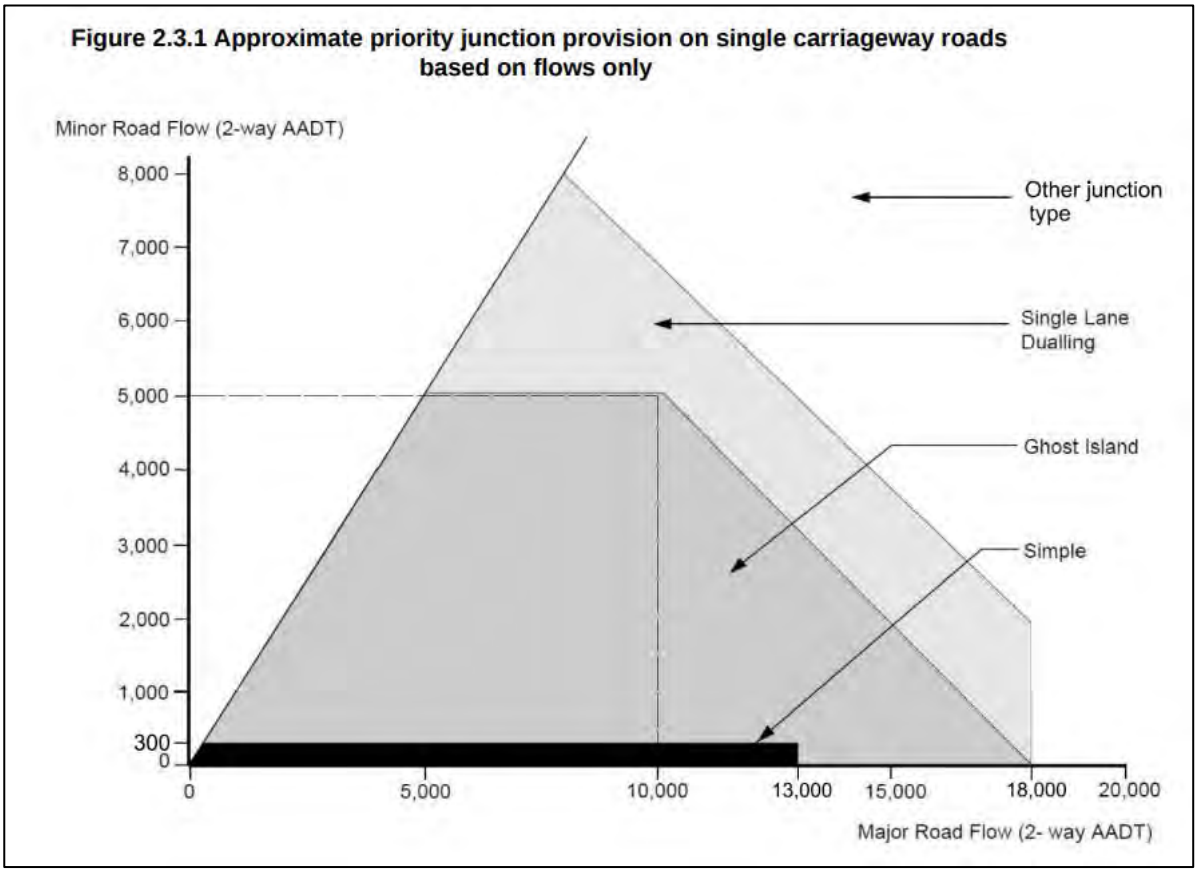

Figure 5.2: Junction Provision on Single Carriageway Roads Based on Flows only

5.2.5 The proposed highway layout arrangement at the site access is shown in **Figure 5.3**. This shows the Adopted Highways plan surrounding the proposed site access. There are no constraints related to third-party land that may obstruct these visibility splays. This has been included as **Appendix E** to this report.

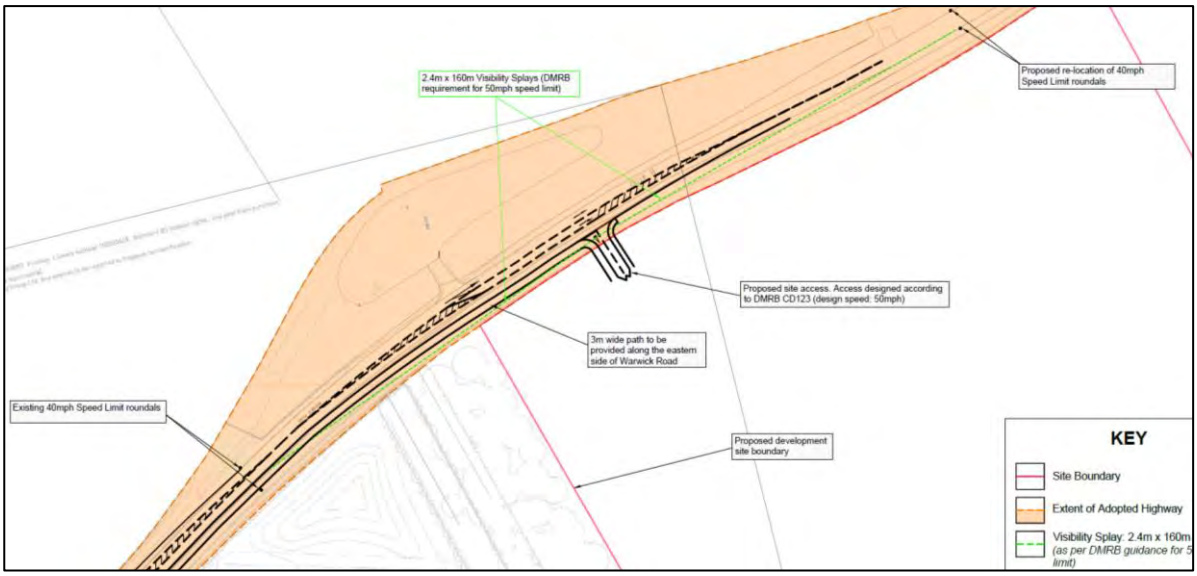

Figure 5.3: Proposed Highway Layout

5.2.6 The stopping sight distance for the proposed junction has been calculated based on the 85th percentile vehicle speeds recorded during the vehicle speed survey and the corresponding DMRB standards. It is proposed to provide visibility splays of up to 160.0m on each direction and on top of what is required in accordance with the relevant national guidance.

5.2.7 The access road is proposed to be 5.5m-wide in accordance with the relevant OCC guidance. This carriageway width will allow for the passing of two large vehicles as set out in Manual for Streets (2007).

Proposed Walking and Cycling Access

5.2.8 It is considered long-standing good practice that a distance of 2km has been supported by the previous PPG13 planning policy; whilst this guidance is superseded the threshold is still widely recognised and this figure is still accepted as being suitable for walking to replace short journeys. **Table 4.1** above shows a wide number of local services and facilities that can be reached within 2km from the proposed development.

5.2.9 Cycling has the potential to replace short car journeys for distances under 5km. Manual for Streets 2 (MfS2) clearly identifies the contribution that cycling can make to transport sustainability and accessibility, identifying this mode of travel as a good substitute for short car trips, particularly those under 5km. **Figure 4.5** above shows the continuous provision of cycle facilities that would be provided between the site and the rest of Banbury and with the town centre located within the 5km distance identified in Manual for Streets 2.

5.2.10 The proposed development provides an opportunity to extend and improve the local pedestrian and cycle network in the northwestern area of Banbury. This will provide a significant betterment to local and future residents travelling to the town centre and will promote walking and cycling as convenient and realistic modes of transport.

5.2.11 It is proposed to provide pedestrian and cycling facilities throughout the site to enhance permeability and connect directly to the main pedestrian access on the B4100 Warwick Road to the west and along the available Public Rights of Way to the south and east of the site.

5.2.12 The proposals comprise the provision of a 3.0m shared use route that will provide access to Warwick Road from the western site boundary and will be connected to the neighbouring 'Land off Warwick Road North of Hanwell Fields' development with planning application reference 12/01789/OUT and the existing network along Dukes Meadow Drive further south.

5.2.13 A pedestrian refuge island has been developed as part of the 'Land For Proposed Development At Drayton Lodge Farmhouse' (Planning Ref: 18/01882/OUT) site and this allows a safe crossing over Warwick Road.

5.2.14 It is also proposed to improve connections along the Public Rights of Way that cross the site and connect to Dukes Meadow Drive and to the 'Land Off Warwick Road North Of Hanwell Fields' (Planning Ref: 12/01789/OUT) site. These could provide additional pedestrian routes that would complement the proposed shared use route along Warwick Road.

5.2.15 These improvements could comprise:

- Footpath 191/6/30 crossing the site and leading south to Footpath 120/116/10 which connects to the shared use route along the B4100 Warwick Road.
- Footpath 239/7/20 running by the eastern site boundary and leading east to Footpath 120/107/10 which connects to the pedestrian and cycle facilities along Dukes Meadow Drive.

5.2.16 The improvements proposed in terms of new pedestrian, cycling and PRoWs mean that the town centre and many other local facilities and employment areas will be reached within a convenient cycling journey and the proposed improvements will also provide a significant improvement to the existing conditions of pedestrians and cyclists in the local area.

5.2.17 Cycle parking will be provided in accordance with Oxfordshire County Council 'Cycling Design Standards'.

Proposed Public Transport Access

5.2.18 The high frequency B9 bus service can be accessed within close proximity from the site. This provides a 15-minute service to the town centre and other main local destinations.

5.2.19 The new bus stop provided as part of the consented 'Land For Proposed Development At Drayton Lodge Farmhouse' development (planning reference 18/01882/OUT) would bring bus services closer to the proposed development and within a short walking distance. This bus stop would be located within 400m from the site access (and estimated as a 4-minute walking trip).

5.2.20 The proposed development will extend the pedestrian and cycle facilities further to the north and will promote bus services as a convenient and realistic mode of transport for future residents.

5.2.21 This proposed bus stop connection was developed in consultation with Stagecoach and was designed to offer services within reasonable walking distance of the surrounding existing and proposed residential units in the local area whilst at the same time ensuring that bus journey times were not compromised by excessive diversions.

5.3 Vehicle Parking Provision

5.3.1 Car parking will be provided in line with local policy, in particular the Cherwell Residential Design Guide Supplementary Planning Document, adopted in July 2018, and following consultation with the local planning officers. All the residential properties will have their own private parking spaces.

5.3.2 Cycle parking will be provided in compliance with the Cherwell Residential Design Guide and will follow the standards shown below:

- 1-bedroom dwellings: 1 parking space
- 2 or more bedroom dwellings: 2 parking spaces
- Visitors: 1 stand per 2 units where more than 4 units

5.3.3 Consideration will be given to the provision of electric charging points for vehicles, of which the Cherwell Residential Design Guide requires access to at least one electric point.

5.3.4 The potential provision of car club spaces within the proposed development will also be considered and discussed with the local planning officers.

5.4 Conclusion

5.4.1 This section has reviewed the proposed development and the mitigation measures, and it has concluded the following:

- **Site Access Scheme and Parking**: Access to the site will be provided in accordance with the standards set out in Manual for Streets. The proposed scheme will provide a single point of access from the B4100 Warwick Road. This will be designed as a ghost island junction in compliance with DMRB standards. A Traffic Regulation Order will be applied to extend the 40mph speed limit to past the site.
- **Pedestrian and Cycle Facilities and Routes**: Pedestrian and cycle access to the development site will be significantly improved by the extension of the recently constructed shared use route along the B4100 Warwick Road, which will be extended to provide access to the application site. It is also proposed to upgrade and improve the two Public Rights of Way which currently cross the application site to accommodate further pedestrian access routes for residents.
- **Public Transport**: The existing bus services provided are considered suitable to provide access to the town centre and main destinations in the area. Existing and proposed bus stops are considered adequate to serve the proposed development and in compliance with relevant guidance.

6 Development Trip Generation

6.1 Introduction

6.1.1 This section describes the traffic analysis undertaken to determine the likely effect that the proposed residential development will have on the surrounding highway network.

6.1.2 The traffic analysis includes the calculation of the number of trips associated with the development and the distribution and assignment of these trips to the highway network. This is based on a proposed development comprising up to 170 residential units. The proposed development is proposed to be accessed off the B4100 Warwick Road.

6.2 Development Vehicle Trip Rates and Traffic Generation

6.2.1 The TRICS database has been interrogated to establish weekday trip rates for the proposals which have been established using surveys of residential areas of comparable scale and location. It should be noted that the site will include a proportion of affordable housing, which typically have lower trip generation rates than market housing, and as such the use of the 'Houses Privately Owned' category to calculate the trip generation of the entire quantum provides a robust assessment.

6.2.2 Vehicle trip rates, for privately owned houses, that were previously established and accepted for the neighbouring Drayton Lodge Farmhouse development (Ref: 18/01882/OUT) have been used to assess the trip generation of the proposed development. These are set out in **Table 6.1**.

Vehicle Trip Rates	In	Out	Total
	Privately Owned Houses		
AM Peak	0.136	0.401	0.537
PM Peak	0.385	0.207	0.592

Table 6.1 Vehicle Trip Rates

6.2.3 To provide a robust assessment of the trip generation, the anticipated quantum of development for the site has been based on 170 dwellings. Therefore, applying the trip rates contained in **Table 6.1** results in a trip generation as summarised in **Table 6.2**.

Vehicle Trip Rates	In	Out	Total
	Development Traffic Generation		
AM Peak	23	68	91
PM Peak	65	35	101

Table 6.2 Vehicle Trip Generation

6.2.4 As can be seen above, the assessed development scenario is forecast to generate approximately 91-101 vehicles in 2-way movements during the identified AM and PM Peaks, which is equivalent to less than 2 vehicles per minute. Such an increase in traffic flow is not considered material and will fall within the bounds of normal daily fluctuation in traffic flows on the nearby highway network.

6.3 Vehicle Trip Distribution and Traffic Assignment

6.3.1 The forecast development traffic has been directionally assigned based upon the traffic distribution developed in support of the neighbouring Drayton Lodge Farmhouse development to the west of Warwick Road (Ref: 18/01882/OUT) located along the proposed highway study network. The detailed percentage of traffic distribution is set out in **Table 6.3** below.

Routeing Choice	Directional Percentage Distribution
A423 Southam Road North	0.90%
Hennef Way	48.50%
A423 Southam Rd South	11.80%
Warwick Rd Southeast	31.50%
A422 Stratford Road	5.40%
B4100 Warwick Road North	1.90%
Total	100%

Table 6.3 Vehicle Trip Distribution

6.3.2 Traffic distribution was established based upon the 2011 Census Data of Travel to Work for the MSOA of Cherwell 002 within which the adjoining residential settlement is located. The routes between the Area of Search and these external destinations has been identified through a local road network review. Where two or more suitable routes are identified, the attractiveness of routing choice was manually weighted based upon the known condition of local road and traffic volume.

6.3.3 Applying the above directional distribution to the figures in **Table 6.3**, the forecast development traffic has been assigned onto the proposed study highway network as shown in **Table 6.4** below with detailed traffic diagrams as shown in **Appendix F**.

O/D	Development Traffic Assignment			
	AM Peak		PM Peak	
	IN	OUT	IN	OUT
A423 Southam Road North	0	1	1	0
Hennef Way	11	33	32	17
A423 Southam Rd South	3	8	8	4
Warwick Rd Southeast	7	21	21	11
A422 Stratford Road	1	4	4	2
B4100 Warwick Road North	0	1	1	1
Total	23	68	65	35

Table 6.4 Vehicle Trip Assignment

6.4 Construction Impact

6.4.1 The anticipated impact of the construction traffic associated with the proposed development will be assessed based on experience of other comparable schemes within the area. Throughout the construction of the proposed development, various plant, equipment and materials will need to be transported to/from the site.

6.4.2 The related construction traffic will comprise two main types. Firstly, delivery-related traffic will comprise traffic associated with deliveries, plant movements, and material movements for export/import of materials. Secondly, workforce-related traffic will comprise the arrival/departure of the workforce associated with the development of the site.

Delivery and Servicing

6.4.3 A Construction Environmental Management Plan (CEMP), detailing the hours of operation and maximum vehicle movements, will be produced and agreed with relevant consultees prior to the construction work taking place (i.e. when a contractor has been appointed) to ensure that impacts are minimised.

6.4.4 This construction management plan can provide details of delivery times and routes, which, where practical, can be planned in a way to reduce disruption.

Work Related

6.4.5 Typical site hours require workers to arrive and depart outside the peak periods and therefore the peak hour impacts associated with this element of construction traffic are small. In addition, the number of workforce related movements are likely to be less than the total movement associated with the finished development and therefore present less onerous traffic conditions.

7 Traffic Analysis

7.1 Introduction

7.1.1 This section sets out the methodology for preparing forecasts for the assessment of the impact of the proposed development on the study area network. This includes details relating to background traffic growth.

7.1.2 The study area comprises a total of 6 junctions, which comprise the same junctions (except from the new access junction) that were included within the study area for the proposed development that was consented under planning application 18/01882/OUT 'Land For Proposed Development At Drayton Lodge Farmhouse' for a residential development of approximately 320 residential units and located within close proximity to the proposed development:

- Junction 1: Warwick Road / Nickling Road Junction
- Junction 2: Warwick Road / Dukes Meadow Drive Roundabout
- Junction 3: Warwick Road/Stratford Road Signalised Junction
- Junction 4: Warwick Road/Cromwell Road/Ruscote Avenue twin roundabouts
- Junction 5: Warwick Road – Access Junction to Drayton Lodge Farmhouse development; and
- Junction 6: New Access Junction

7.2 Assessment Year

7.2.1 The assessment year in respect of capacity analysis for the transport network is consistent with the size, scale and completion schedule of the proposed development, and that of other committed developments in the vicinity of the site.

7.2.2 An assessment year of 2027, 5-years post planning permission, is proposed to ensure a robust reflection of the future highway conditions and to accord with Local Highway Authority Guidance on Transport Assessment.

7.2.3 For the sake of consistency, the forecast AM and PM Peak turning movements along the study highway network for Year 2026 that were previously established using the Banbury Strategic Model (BSM) for the neighbouring consented Drayton Lodge Farmhouse development were subsequently abstracted from the supporting Transport Studies. The obtained Year 2026 with Drayton Lodge Farmhouse development traffic forecast are adopted as a baseline condition for the purposes of this assessment.

7.2.4 Assessments have therefore been undertaken for the following scenarios as summarised in **Table 7.1**:

Scenario	Description
2027 Base	▪ Five years after submission of planning application. ▪ Includes traffic growth from TEMPro from the BSM Base Year 2026
2027 Base + Development	▪ Five years after submission of planning application. ▪ Includes traffic growth from TEMPro and the proposed development

Table 7.1: Assessment Scenarios

7.2.5 The construction of the scenarios is discussed in the following sub-sections.

7.3 Analysis Period

7.3.1 This TA has considered the following analysis periods: weekday morning and evening peak periods (08:00-09:00 hours and 17:00-18:00 hours) which suit the analysis of vehicle trip generation based on the TRICS database which provides data on an hourly basis.

7.4 Derivation of Future Traffic Flows

7.4.1 The year considered for the future development scenario is 2027, in-line with the recommended 'Guidance for Transport Assessments'.

7.4.2 In order to consider and assess any other potential cumulative impacts of permitted or committed developments traffic growth has been calculated using the TEMPro methodology. This has only been applied for 1 year from the obtained Year 2026 with Drayton Lodge Farmhouse development traffic forecast which has been adopted as a baseline condition for the purposes of this assessment.

7.4.3 The National Trip End Model (NTEM) forecasts and the TEMPro software are used for transport planning purposes. The forecasts include population, employment, households by car ownership, trip ends and simple traffic growth factors based on data from the National Transport Model (NTM).

7.4.4 The correlated Origin/Destination growth rates for Car Drivers have been estimated using TEMPRO Dataset 7.2c for the Mid Super Output Area of Cherwell 001 within which the development site is located. The factors were subsequently adjusted in line with DfT TEMPRO User Guidance to account for National Transport Model (NTM) Traffic Growth (using the latest RTF 2018 Scenario – Reference Dataset) to reflect the characteristics of the local principal roads. The projected local growth factors are summarised in **Table 7.2** below.

Period	Growth Rate (Urban - All Roads)	
	AM	PM
2026 - 2027	1.007	1.008

Table 7.1 Future Traffic Growth 2026 – 2027

7.4.5 The growth factors shown in **Table 7.2** have been applied to uplift the obtained 2026 base flow (including the Drayton Lodge Farmhouse development) to represent a future year '2027 Base' scenario. And thus, the impact of the development traffic will be assessed solely on the obtained 2026 traffic flows that have been factored up to the assessment year 2027 level. As shown in **Section 4.10** above it is likely that these flows provide a worst case scenario and that, in reality, flows are far lower than assessed in this report.

7.5 Junction Capacity Assessments

7.5.1 The development proposals are not forecast to result in a tangible growth in traffic volume along Warwick Road with average increase of less than 10% observed on the total inflows at the identified key junctions. To provide a robust impact study, junction capacity tests have been carried out at the identified key junctions for the following assessment scenarios:

1. '2027 Base' Scenario - This scenario establishes a future year 2027 baseline condition on the existing highway network. It takes into account the traffic associated with the neighbouring consented developments as well as background traffic growth.

2. '2027 Base + Development' Scenario - This scenario represents the forecast '2027 Base' as specified above plus the forecast proposed development traffic accessed off Warwick Road.

7.5.2 Comparison of the differing impacts of each of the concurrent '2027 Base' and '2027 Base + Development' scenarios allows the performance of each junction to be viewed in the context of background traffic flows, and with the addition of traffic flows generated by the proposed development. Therefore, the material impact of the proposed development on the local highway network can be clearly assessed.

7.5.3 This approach is consistent with the assessment scope adopted in support of the consented developments in the local area.

7.5.4 In order to assess the performance and thus determine the saturation capacity of the existing highway, the approved junction models in terms of geometric input and modelling parameters that were previously established in support of the consented Drayton Lodge Farmhouse development have been adopted in this assessment for consistency.

7.5.5 The results of these assessments provide details of calculated Queue/Mean Maximum Queue (MMQ), Delay and Ratio of Flow to Capacity (RFC) for the existing priority junction and Degree of Saturation (DoS) for the proposed signal junctions. It is noted that where an RFC or DoS value is shown to exceed a value of 1 the associated approach is calculated to exceed capacity.

7.5.6 The results of the assessments for the future year scenarios are summarised in the following sub-sections.

Junction 1: Warwick Road / Nickling Road Junction

7.5.7 The results of the '2027 Base' and '2027 Base + Development' modelling for this priority T-junction are presented in **Table 7.4**. The full output is attached in **Appendix G**.

Arm	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2027 Base Scenario					
Nickling Road	0.3	8.91	0.20	0.1	10.41	0.11
Warwick Road (S)	0.1	5.86	0.05	0.2	6.80	0.13
	2027 Base + Development					
Nickling Road	0.3	9.46	0.21	0.1	11.11	0.12
Warwick Road (S)	0.1	6.05	0.06	0.2	6.92	0.14

Table 7.4 Warwick Rd/Nickling Road Junction

7.5.8 The results show that the junction will operate well below its design capacity in all scenarios. Comparison between the two 2027 scenarios demonstrates that the increases in RFC, queuing and delay in the 'With Development' scenario are marginal. As such, the addition of the traffic generated by the proposed development is not forecast to result in an unacceptable residual impact and thus no mitigation works are required at this junction.

Junction 2: Warwick Road / Dukes Meadow Drive Roundabout Junction

7.5.9 The outturn junction performance is summarised in the **Table 7.5** with the full ARCADY report included within **Appendix H**. As can be seen this roundabout junction will offer suitable capacity to accommodate not only the committed development traffic but also the vehicle movements from the proposed scheme.

Arm	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2027 Base					
Warwick Rd (N)	0.4	4.12	0.27	0.6	4.90	0.37
Dukes Meadow Dr	0.2	3.36	0.14	0.1	3.29	0.12
Warwick Rd (S)	0.3	3.43	0.24	1.9	7.54	0.65
Site Access	0.1	3.48	0.11	0.1	4.54	0.08
	2027 Base + Development					
Warwick Rd (N)	0.5	4.44	0.32	0.7	5.14	0.40
Dukes Meadow Dr	0.2	3.47	0.16	0.2	3.44	0.15
Warwick Rd (S)	0.3	3.50	0.24	2.0	7.84	0.66
Site Access	0.1	3.52	0.11	0.1	4.77	0.08

Table 7.5 Warwick Road/Dukes Meadow Drive Roundabout Junction

7.5.10 Comparison between the '2027 Base' and '2027 Base + Development' scenarios demonstrates that the development proposal is not forecast to lead to any material increase in queueing delay with a maximum increase of less than 2 PCUs predicted at all arms. Hence no mitigation works are required at this junction.

Junction 3: Warwick Road/Stratford Road Signalised Junction

7.5.11 It is noted that an 10% increase in saturation flow is applied in the LINSIG Model to account for the effect of MOVA control. This approach is consistent with the modelling approach adopted for the consented Drayton Lodge Farmhouse development. The optimised LINSIG outputs for the future year scenarios are summarised in **Table 7.6**. The full LINSIG outputs are attached in **Appendix I**.

7.5.12 The LINSIG results show that this junction will operate within its design capacity for all scenarios with an immaterial increase of less than 1 PCU in queue length predicted as result of the development traffic along Warwick Road under all scenarios. This is not considered material and would not constitute an unacceptable residual impact under paragraph 111 of the NPPF and thus no mitigation works are required at this junction.

Arm/Link/Scenario		AM Peak		PM Peak	
2027 Base MOVA		Deg of Sat	Queue	Deg of Sat	Queue
1/1 + 1/2	Warwick Road (S)	50.1%	9.0	63.2%	15.9
2/1	Warwick Road (N)	53.8%	14.1	30.7%	5.4
5/1	Stratford Road	52.2%	9.3	62.5%	9.3
PRC Over All Lanes (%)		67.3%		42.3%	
Total Delay Over All Lanes (PCU/Hr)		10.85		10.15	
Arm/Link/Scenario		AM Peak		PM Peak	
2027 + Development MOVA		Deg of Sat	Queue	Deg of Sat	Queue
1/1 + 1/2	Warwick Road (S)	50.6	9.1	65.1%	16.9
2/1	Warwick Road (N)	55.7	14.7	32.6%	5.7
5/1	Stratford Road	53.1	9.6	63.4%	9.4
PRC Over All Lanes (%)		61.7%		38.3%	
Total Delay Over All Lanes (PCU/Hr)		11.12		10.58	

Table 7.6 Warwick Road/Stratford Road Signalised Junction

Junction 4: Warwick Road/Cromwell Road/Ruscote Avenue Twin Roundabout Junctions

7.5.13 The results of the capacity assessment of this existing junction for the future year scenarios are summarised in **Table 7.7**. The full ARCADY output is attached in **Appendix J**.

Junction	Arm	AM Peak			PM Peak		
		Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
		2027 Base					
Warwick Rd/Cromwell Rd Rbt	Roundabout Link	0.7	4.78	0.39	0.9	5.39	0.48
	Cromwell Road	0.0	0.00	0.00	0.0	0.00	0.00
	Warwick Rd (W)	0.7	5.55	0.39	0.6	5.14	0.35
Warwick Rd/Ruscote Ave	Ruscote Ave	1.5	5.09	0.59	0.9	3.80	0.47
	Warwick Road	0.6	3.55	0.38	1.4	5.07	0.57
	Roundabout Link	0.5	3.78	0.30	0.5	4.20	0.31
Junction	Arm	AM Peak			PM Peak		
		Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
		2027 + Development					
Warwick Rd/Cromwell Rd Rbt	Roundabout Link	0.7	4.82	0.39	1.0	5.55	0.50
	Cromwell Road	0.0	0.00	0.00	0.0	0.00	0.00
	Warwick Rd (W)	0.7	5.74	0.41	0.6	5.22	0.36
Warwick Rd/Ruscote Ave	Ruscote Ave	1.5	5.19	0.59	0.9	3.84	0.48
	Warwick Road	0.7	3.58	0.38	1.4	5.23	0.58
	Roundabout Link	0.5	3.86	0.32	0.5	4.26	0.31

Table 7.7 Warwick Road/Stratford Road Signalised Junction

7.5.14 The ARCADY results in **Table 7.7** demonstrate that the twin roundabout junctions will operate satisfactorily within their design capacity under all scenarios. With the inclusion of forecast development traffic, the predicted delays and queue length are correspondingly inflated with a maximum increase of

less than 1PCU in queue length forecast along all arms in both AM and PM peak assessments. Hence no mitigation works are required at this location.

Junction 5: Warwick Road / Drayton Lodge Farmhouse Access

7.5.15 The results of the capacity of this proposed site access junction serving the consented Drayton Lodge Farmhouse development are summarised in **Table 7.8**. The full PICADY output is attached in **Appendix K**.

Arm	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2027 Base					
Drayton Lodge	0.0	5.99	0.01	0.0	7.01	0.01
Warwick Rd (N)	0.0	5.84	0.00	0.0	6.89	0.01
Arm	**AM**			**PM**		
	Queue (PCU)	**Delay (s)**	**RFC**	**Queue (PCU)**	**Delay (s)**	**RFC**
	2027 Base + Development Proposals					
Drayton Lodge	0.0	6.05	0.01	0.0	7.25	0.01
Warwick Rd (N)	0.0	5.90	0.00	0.0	7.13	0.01

Table 7.8 Site Access Junction

7.5.16 As can be seen above, this junction has sufficient capacity to accommodate development traffic with a minimal impact on the operation of the adjoining highway. The maximum RFC recorded is 0.01 during the AM peak with a notional queue length of less than 1 PCU.

Junction 6: Warwick Road / Site Access Priority Junction

7.5.17 The results of the capacity assessment for the proposed site access junction in the '2027 Base + Development' scenario are summarised in **Table 7.9**. The full PICADY output is attached in **Appendix L**.

Arm	AM			PM		
	Queue (PCUs)	Delay (s)	RFC	Queue (PCUs)	Delay (s)	RFC
2027 Base + Development						
Site Access Left Turn	0.1	5.91	0.10	0.1	6.04	0.06
Site Access Right Turn	0.0	7.28	0.00	0.0	9.48	0.00
Warwick Road South	0.0	5.21	0.03	0.1	5.98	0.10

Table 7.9: Warwick Road / Site Access Priority Junction

7.5.18 The junction is forecast to operate well within capacity in the '2027 Base + Development' scenario during the AM and PM peak hours. The junction can therefore accommodate traffic associated with the proposed development.

7.6 Summary

7.6.1 The Future Year Assessments forecast that the identified key junctions will operate satisfactorily within their capacity and should also provide further capacity margin to accommodate the further traffic growth in the area should this occur. The proposed development is not forecast to constitute any discernible impact with a notional increase in queue length and delays predicted at all testing junctions and thus the proposal would not result in an unaccepted impact as defined within the NPPF.

8 Summary and Conclusions

8.1 Summary

8.1.1 This Transport Assessment has been prepared in support of an outline planning application for a residential development comprising up to 170 residential units (Use Class C3) with associated open space and vehicular access off Warwick Road.

8.1.2 This Transport Assessment has been undertaken in accordance with the guidance included within the National Planning Policy Guidance and the National Planning Policy Framework.

8.2 Existing Conditions

8.2.1 Banbury is an important urban centre and employment area in North Oxfordshire. The application site benefits from being located in close proximity to a wide range of compatible and supportive 'day to day' local services and is situated within 4km of Banbury town centre.

8.2.2 The proposed development is located bounding the 'Land Off Warwick Road North Of Hanwell Fields' (Planning Ref: 12/01789/OUT) site to the south and within close proximity to the 'Land For Proposed Development At Drayton Lodge Farmhouse' (Planning Ref: 18/01882/OUT) site, both of which are recently consented residential sites under construction.

8.2.3 The site is very well located in terms of access to the local and strategic highway network being easily accessible from the main road network and the M40 is located less than 6kms from the site.

8.2.4 A number of connections have been identified that would link the site to the wider pedestrian network. These linkages comprise existing Public Rights of Way (PRoW) along with a continuous shared use route that is proposed as part of the access strategy. The surrounding area is also served by an extensive network of cycle routes, provided as a combination of on-road cycle lanes and traffic-free segregated tracks to the south of the application site, offering a range of cycling opportunities that connect with Banbury.

8.2.5 The site is conveniently located to access the local bus services. The nearest existing bus stop to the proposed site access lies on Dukes Meadow Drive, known as 'Hardwick, Warwick Road'. As part of the consented 'Land For Proposed Development At Drayton Lodge Farmhouse' development new bus stops are proposed on Warwick Road just south of the junction with Nickling Road. This bus stop would be located within 400m to the south of the proposed site access, with a walking journey estimated of 4 minutes.

8.2.6 A one-week long vehicle speed survey undertaken on the B4100 Warwick Road by the proposed location of the site access showed that 85th percentile vehicle speeds were considerably below the 60mph vehicle speed limit that applies to this section of the road (i.e. 46.9mph for vehicles travelling northbound and 48.2mph for those travelling southbound towards Banbury).

8.3 Preliminary Review on Highway Safety

8.3.1 Records of personal injury collisions have been obtained in the vicinity of the site for the 5-year period between January 2016 and December 2020. Considering the wide study area and the type roads within it the number of collisions is of a very low level (i.e. 8 collisions that are widely dispersed).

8.3.2 Thus, the conclusion of this preliminary study of PIC collision data is that it is not considered to be any specific accident problems in the vicinity of the development site.

8.4 Proposed Development

8.4.1 The proposed development is for up to 170 residential units (Use Class C3) with associated open space and vehicular access off Warwick Road.

8.4.2 The main vehicular access point to the proposed development will be provided off the B4100 Warwick Road. The access road is proposed to be 5.5m-wide in accordance with the relevant OCC guidance.

8.4.3 It is also proposed to extend of the 40mph vehicle speed limit to the north past the location for the proposed site access. The developer would cover the costs of a Traffic Regulation Order (TRO) to be implemented in this regard.

8.4.4 Car parking will be provided in line with local policy, in particular the Cherwell Residential Design Guide Supplementary Planning Document, adopted in July 2018, and following consultation with the local planning officers.

8.4.5 It is proposed to provide pedestrian facilities throughout the site to enhance permeability and connect directly to the existing pedestrian network on Warwick Road. The proposals comprise the provision of a 3.0m shared use route connecting the site access with the existing shared use route to the south of the site and which follows on to the local pedestrian network in Banbury. It is also proposed to improve connections along the Public Rights of Way that cross the site and connect to Dukes Meadow Drive and to the 'Land Off Warwick Road North Of Hanwell Fields' development.

8.4.6 Cycle parking will be provided in accordance with Oxfordshire County Council 'Cycling Design Standards'.

8.5 Traffic Generation, Distribution and Assignment

8.5.1 Vehicle trip generation for the proposed development has been calculated using the vehicle trip rates, for privately owned houses, that were previously established and accepted for the neighbouring Drayton Lodge Development (Ref: 18/01882/OUT).

8.5.2 The total volume of traffic flows generated from the proposed residential development is estimated as a total of 91 and 101 vehicle trips in and out of the site during the AM and PM peak times respectively, which is equivalent to less than 2 vehicles per minute. Such an increase in traffic flow is not considered material and will fall within the bounds of normal daily fluctuation in traffic flows on the nearby highway network.

8.5.3 Trip distribution has been estimated based upon the approved traffic assignment developed in support of the neighbouring Drayton Lodge Development to the west of Warwick Road (Ref: 18/01882/OUT) along the proposed highway study network.

8.6 Impact on the Local Highway Network

8.6.1 The capacity analyses undertaken for the junctions included within the study area have shown that the proposed development will have a limited and acceptable impact on all the junctions assessed. Furthermore, the proposed main access is also shown to operate within capacity in all assessed scenarios.

8.6.2 The Future Year Assessments forecast that the identified key junctions will operate satisfactorily within their capacity and should also provide further capacity margin to accommodate the further traffic growth in the area should this occur. The proposed development is not forecast to constitute any discernible impact with a notional increase in queue length and delays predicted at all testing junctions and thus the proposal would not result in an unaccepted impact as defined within NPPF.

8.7 Overall Conclusion

8.7.1 This Transport Assessment has assessed the traffic impacts from the proposed development.

8.7.2 The strategy for Oxfordshire County Council has a strong emphasis on minimising car use by integrating land use and transport planning and improving the choice of sustainable modes to access key services and facilities.

8.7.3 The area is located within walking and cycle distance from surrounding facilities provided within Banbury. There are good opportunities to encourage high levels of walking, cycling and public transport use.

8.7.4 It has been identified that there are no accident black spots on the highway in the vicinity of the site; and that the impact of development traffic on the local highway will be below levels which could be described as ‘severe’.

8.7.5 This Transport Assessment has assessed the likely effects of the traffic associated with the development proposals. It is the conclusion of this Transport Assessment that the proposed development will have a minimal impact on the highway network near the site.

8.7.6 Therefore, it is concluded that this development is appropriate and acceptable in traffic and transport terms. The proposal is compliant with NPPG and NPPF regulations, and with MfS/MfS2. Based on the above, it is considered that the proposed development is acceptable and will not cause a ‘severe’ impact on the local road network.

Appendix A: Site Location Boundary Plan

Site Boundary 12.63ha

client
Vistry Group

project title
Land East of Warwick Road, Banbury

drawing title
Site Location Boundary

date	**10 MAY 2022**	drawn by	**RA**
drawing number	**edp3253_d007e**	checked	**PW**
scale	**1:5,000 @ A3**	QA	

the environmental dimension partnership
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Appendix B: Vehicle Speed Survey + Traffic Counts on Warwick Road

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound

05/02/2022	Vehicle Classes													
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
1	12	0	0	0	0	0	0	0	0	0	0	0	0	12
2	8	0	0	0	0	0	0	0	0	0	0	0	0	8
3	6	0	0	0	0	0	0	0	0	0	0	0	0	6
4	1	1	0	0	0	0	0	0	0	0	0	1	0	3
5	3	0	0	0	0	0	0	0	0	0	0	0	0	3
6	13	2	0	0	0	0	0	0	0	0	0	0	0	15
7	9	2	0	0	0	0	0	0	0	0	0	0	0	11
8	45	5	0	0	0	0	0	0	0	0	0	0	0	50
9	100	4	0	0	0	0	0	1	0	0	0	0	0	105
10	199	3	0	0	0	0	0	1	0	0	0	1	0	204
11	216	10	0	0	1	0	0	0	0	0	0	1	0	228
12	219	15	0	0	0	0	0	0	0	0	0	0	0	234
13	245	10	0	0	0	0	1	0	0	0	0	1	0	257
14	201	4	0	0	0	0	0	2	0	0	0	0	0	207
15	187	3	0	0	0	0	0	0	0	0	0	0	0	190
16	170	5	0	0	1	0	0	1	0	0	0	1	0	178
17	190	2	0	0	0	0	0	0	0	0	0	0	0	192
18	155	6	0	0	0	0	0	0	0	0	0	0	0	161
19	140	4	0	0	0	0	0	0	0	0	0	0	0	144
20	89	2	0	0	0	0	0	0	0	0	0	0	0	91
21	48	1	0	0	0	0	0	0	0	0	0	0	0	49
22	31	1	0	0	0	0	0	0	0	0	0	0	0	32
23	40	0	0	0	0	0	0	0	0	0	0	0	0	40
24	22	0	0	0	0	0	0	0	0	0	0	0	0	22

7-19	2067	71	0	0	2	0	1	5	0	0	0	4	0	2150
6-22	2244	77	0	0	2	0	1	5	0	0	0	4	0	2333
6-24	2306	77	0	0	2	0	1	5	0	0	0	4	0	2395
0-24	2349	80	0	0	2	0	1	5	0	0	0	5	0	2442
													1.0%	99%
													0.0%	100%

Channel 2 - Southbound

05/02/2022	Vehicle Classes													
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
1	10	0	0	0	0	0	0	0	0	0	0	0	0	10
2	9	0	0	0	0	0	0	0	0	0	0	0	0	9
3	6	0	0	0	0	0	0	0	0	0	0	0	0	6
4	4	0	0	0	0	0	0	0	0	0	0	0	0	4
5	4	0	0	0	0	0	0	0	0	0	0	0	0	4
6	12	0	0	0	0	0	0	0	0	0	0	0	0	12
7	24	0	0	0	0	0	0	0	0	0	0	0	0	24
8	47	3	0	0	0	0	0	0	0	0	0	0	0	50
9	113	5	0	0	0	0	0	0	1	0	0	1	0	120
10	186	6	0	0	0	0	0	0	0	0	0	0	0	192
11	217	6	0	0	0	0	0	1	0	0	0	0	0	224
12	212	7	0	0	0	0	0	0	0	0	1	0	0	220
13	236	6	0	2	0	0	0	0	0	0	0	0	0	244
14	230	7	0	0	0	0	0	0	0	0	0	0	0	237
15	191	8	0	0	0	0	0	0	0	0	0	0	0	199
16	208	8	0	0	0	0	0	0	0	0	0	1	0	217
17	177	7	0	0	0	0	0	0	0	0	0	0	0	184
18	140	6	0	0	0	0	0	0	0	0	0	0	0	146
19	97	3	0	0	0	0	0	0	0	0	0	0	0	100
20	65	3	0	0	0	0	0	0	0	0	0	0	0	68
21	63	2	0	0	0	0	0	0	0	0	0	0	0	65
22	41	1	0	0	0	0	0	0	0	0	0	0	0	42
23	42	3	0	0	0	0	0	0	0	0	0	0	0	45
24	26	1	0	0	0	0	0	0	0	0	0	0	0	27

7-19	2054	72	0	2	0	0	0	1	1	0	1	2	0	2133
6-22	2247	78	0	2	0	0	0	1	1	0	1	2	0	2332
6-24	2315	82	0	2	0	0	0	1	1	0	1	2	0	2404
0-24	2360	82	0	2	0	0	0	1	1	0	1	2	0	2449
													1.7%	98%
													0.0%	100%

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound

06/02/2022	Vehicle Classes													
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
1	9	1	0	0	0	0	0	0	0	0	0	0	0	10
2	6	0	0	0	0	0	0	0	0	0	0	0	0	6
3	9	0	0	0	0	0	0	0	0	0	0	0	0	9
4	3	0	0	0	0	0	0	0	0	0	0	0	0	3
5	3	0	0	0	0	0	0	0	0	0	0	0	0	3
6	13	0	0	0	0	0	0	0	0	0	0	0	0	13
7	6	1	0	0	0	0	0	0	0	0	0	0	0	7
8	17	0	0	0	0	0	0	0	0	0	0	0	0	17
9	59	3	0	0	0	0	0	0	0	0	0	0	0	62
10	73	5	0	0	1	0	0	0	0	0	0	0	0	79
11	137	2	0	0	0	0	0	0	0	0	0	0	0	139
12	174	12	0	0	0	0	0	0	0	0	0	0	0	186
13	260	4	0	0	0	0	0	0	0	0	0	0	0	264
14	218	3	0	0	0	0	1	0	0	0	0	0	0	222
15	176	4	0	0	0	0	0	0	0	0	0	0	0	180
16	182	6	0	0	0	0	0	0	1	0	0	0	0	189
17	146	1	0	0	0	0	0	0	0	0	1	0	0	148
18	127	3	0	0	0	0	0	0	0	0	0	0	0	130
19	93	6	0	0	0	0	0	0	0	0	0	0	0	99
20	62	4	0	0	0	0	0	0	0	0	0	0	0	66
21	48	1	0	0	0	0	0	0	0	0	0	0	0	49
22	37	2	0	0	0	0	0	0	0	0	0	0	0	39
23	15	1	0	0	0	0	0	0	0	0	0	0	0	16
24	8	0	0	0	0	0	0	0	0	0	0	0	0	8

7-19	1662	49	0	0	1	0	1	0	1	0	1	0	0	1715
6-22	1815	57	0	0	1	0	1	0	1	0	1	0	0	1876
6-24	1838	58	0	0	1	0	1	0	1	0	1	0	0	1900
0-24	1881	59	0	0	1	0	1	0	1	0	1	0	0	1944
													0.0%	100%
													0.0%	100%

Channel 2 - Southbound

06/02/2022	Vehicle Classes													
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
1	16	0	0	0	0	0	0	0	0	0	0	0	0	16
2	6	0	0	0	0	0	0	0	0	0	0	0	0	6
3	8	0	0	0	0	0	0	0	0	0	0	0	0	8
4	2	0	0	0	0	0	0	0	0	0	0	0	0	2
5	3	0	0	0	0	0	0	0	0	0	0	0	0	3
6	9	0	0	0	0	0	0	0	0	0	0	0	0	9
7	16	0	0	0	0	0	0	0	0	0	0	0	0	16
8	15	0	0	0	0	0	0	0	0	0	0	0	0	15
9	42	2	0	0	0	0	0	0	0	0	0	0	0	44
10	102	4	0	0	0	0	0	0	0	0	0	0	0	106
11	147	5	0	0	0	0	0	0	0	0	0	0	0	152
12	170	4	0	0	0	0	0	0	0	0	0	0	0	174
13	174	6	0	0	0	0	0	0	0	0	0	0	0	180
14	151	4	0	0	0	0	0	0	1	0	0	0	0	156
15	182	6	0	0	0	0	0	0	0	0	0	0	0	188
16	192	4	0	0	0	0	0	0	0	0	0	1	0	197
17	189	7	0	0	0	0	0	0	0	0	0	0	0	196
18	141	4	0	0	0	0	0	0	0	0	0	0	0	145
19	104	3	0	0	0	0	0	0	0	0	0	0	0	107
20	81	2	0	0	0	0	0	0	0	0	0	0	0	83
21	62	2	0	0	0	0	0	0	0	0	0	0	0	64
22	24	1	0	0	0	0	0	0	0	0	0	0	0	25
23	18	1	0	0	0	0	0	0	0	0	0	0	0	19
24	15	0	0	0	0	0	0	0	0	0	0	0	0	15

7-19	1609	49	0	0	0	0	0	0	1	0	0	1	0	1660
6-22	1792	54	0	0	0	0	0	0	1	0	0	1	0	1848
6-24	1825	55	0	0	0	0	0	0	1	0	0	1	0	1882
0-24	1869	55	0	0	0	0	0	0	1	0	0	1	0	1926
													0.0%	100%
													0.0%	100%

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound

07/02/2022	Vehicle Classes													
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
2	1	1	0	0	0	0	0	0	0	0	0	0	0	2
3	2	0	0	0	0	0	0	0	0	0	0	0	0	2
4	6	1	0	0	0	0	0	0	0	0	0	0	0	7
5	9	0	0	0	0	0	0	0	0	0	0	0	0	9
6	41	7	0	0	0	0	0	0	0	0	0	0	0	48
7	60	3	0	0	0	0	0	0	1	0	0	0	0	64
8	206	16	2	0	0	0	0	0	0	0	0	0	0	224
9	251	17	1	0	1	0	0	0	1	0	0	0	0	271
10	127	10	1	0	0	0	0	0	0	0	0	2	0	140
11	145	11	0	0	2	0	0	0	0	0	0	0	0	158
12	129	20	1	0	0	0	0	0	1	0	0	1	0	152
13	153	16	1	0	0	0	0	0	0	0	0	2	0	172
14	163	15	0	0	0	0	0	0	0	0	0	0	0	178
15	193	18	0	1	0	0	0	0	0	0	0	1	0	213
16	153	21	1	0	1	0	0	0	0	0	0	0	0	176
17	245	16	0	0	1	0	0	0	0	0	0	1	0	263
18	242	6	0	0	0	0	0	0	0	0	0	0	0	248
19	171	5	0	0	0	0	0	0	0	0	0	2	0	178
20	109	1	0	0	0	0	0	0	0	0	0	0	0	110
21	68	2	0	0	0	0	0	0	0	0	0	0	0	70
22	44	0	0	0	0	0	0	0	0	0	0	0	0	44
23	24	1	0	0	0	0	0	0	0	0	0	0	0	25
24	16	0	0	0	0	0	0	0	0	0	0	0	0	16

7-19	2178	171	7	1	5	0	0	0	2	0	0	9	0	2373
6-22	2459	177	7	1	5	0	0	0	3	0	0	9	0	2661
6-24	2499	178	7	1	5	0	0	0	3	0	0	9	0	2702
0-24	2560	187	7	1	5	0	0	0	3	0	0	9	0	2772
													1.1%	99%
													0.0%	100%

Channel 2 - Southbound

07/02/2022	Vehicle Classes													
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
1	6	0	0	0	0	0	0	0	0	0	0	0	0	6
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	7	0	0	0	0	0	0	0	0	0	0	0	0	7
4	3	0	0	0	0	0	0	0	0	0	0	0	0	3
5	5	0	0	0	0	0	0	0	0	0	0	0	0	5
6	30	3	0	0	0	0	0	0	0	0	0	0	0	33
7	64	7	0	0	0	0	0	1	0	0	0	0	0	72
8	220	16	0	0	0	0	0	0	0	0	0	2	0	238
9	184	17	0	0	0	0	0	0	0	0	0	0	0	201
10	169	14	0	0	0	0	0	0	1	0	0	0	0	184
11	124	8	0	0	0	0	0	0	0	0	0	0	0	132
12	144	10	0	0	0	0	0	0	1	0	0	1	0	156
13	140	12	0	0	0	0	0	0	0	0	0	0	0	152
14	154	12	0	0	0	0	0	0	0	0	0	1	0	167
15	143	12	0	0	0	0	0	0	0	0	0	0	0	155
16	230	19	0	0	0	0	0	1	1	0	1	1	0	253
17	248	19	0	0	0	0	0	0	0	0	0	1	0	268
18	249	15	0	0	0	0	0	0	0	0	0	0	0	264
19	148	10	0	0	0	0	0	0	0	0	0	0	0	158
20	97	4	0	0	0	0	0	0	0	0	0	0	0	101
21	57	5	0	0	0	0	0	0	0	0	0	0	0	62
22	41	3	0	0	0	0	0	0	0	0	0	0	0	44
23	25	2	0	0	0	0	0	0	0	0	0	0	0	27
24	8	1	0	0	0	0	0	0	0	0	0	0	0	9

7-19	2153	164	0	0	0	0	0	1	3	0	1	6	0	2328
6-22	2412	183	0	0	0	0	0	2	3	0	1	6	0	2607
6-24	2445	186	0	0	0	0	0	2	3	0	1	6	0	2643
0-24	2496	189	0	0	0	0	0	2	3	0	1	6	0	2697
													0.0%	100%
													0.0%	100%

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound

08/02/2022	Vehicle Classes													
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
1	4	0	0	0	0	0	0	0	0	0	0	0	0	4
2	4	1	0	0	0	0	0	0	0	0	0	0	0	5
3	2	0	0	0	0	0	0	0	0	0	0	0	0	2
4	6	0	0	0	0	0	0	0	0	0	0	0	0	6
5	9	1	0	0	0	0	0	0	0	0	0	0	0	10
6	36	3	0	0	0	0	0	0	0	0	0	1	0	40
7	61	5	0	0	0	0	0	0	0	0	0	0	0	66
8	236	19	2	0	0	0	0	1	0	0	0	0	0	258
9	296	18	0	0	2	0	0	0	2	1	1	1	0	321
10	137	14	2	0	0	0	0	0	0	0	0	0	0	153
11	150	17	0	1	1	0	0	1	0	0	0	0	0	170
12	150	20	1	0	0	0	0	0	1	0	0	0	0	172
13	161	12	0	0	0	0	0	0	0	0	1	1	0	175
14	176	14	1	0	0	0	0	1	0	0	0	1	0	193
15	192	16	0	1	0	0	0	0	0	0	0	0	0	209
16	196	14	1	0	0	0	1	0	0	0	0	0	0	212
17	219	9	0	0	0	0	0	1	0	0	0	0	0	229
18	260	10	0	0	1	0	0	0	0	0	0	0	0	271
19	161	3	0	0	0	0	0	0	0	0	0	0	0	164
20	113	5	0	0	1	0	0	0	0	0	0	0	0	119
21	64	1	0	0	0	0	0	0	0	0	0	0	0	65
22	42	0	0	0	0	0	0	0	0	0	0	0	0	42
23	27	1	0	0	0	0	0	0	0	0	0	0	0	28
24	11	0	0	0	0	0	0	0	0	0	0	0	0	11

7-19	2334	166	7	2	4	0	1	4	3	1	2	3	0	2527
6-22	2614	177	7	2	5	0	1	4	3	1	2	3	0	2819
6-24	2652	178	7	2	5	0	1	4	3	1	2	3	0	2858
0-24	2713	183	7	2	5	0	1	4	3	1	2	4	0	2925
													2.2%	98%
													0.4%	100%

Channel 2 - Southbound

08/02/2022	Vehicle Classes													
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
1	5	0	0	0	0	0	0	0	0	0	0	0	0	5
2	4	0	0	0	0	0	0	0	0	0	0	0	0	4
3	2	0	0	0	0	0	0	0	0	0	0	0	0	2
4	3	0	0	0	0	0	0	0	0	0	0	0	0	3
5	10	1	0	0	0	0	0	0	0	0	0	0	0	11
6	32	5	0	0	0	0	0	0	1	0	0	0	0	38
7	75	5	0	0	0	0	0	1	0	0	1	0	0	82
8	209	17	0	0	0	0	0	0	0	0	0	0	0	226
9	304	16	0	0	0	0	0	0	0	0	0	0	0	320
10	161	14	0	0	0	0	0	0	0	0	0	0	0	175
11	139	8	0	0	0	0	0	0	0	0	0	0	0	147
12	150	10	0	0	0	0	0	0	0	0	0	1	0	161
13	157	11	0	0	0	0	0	0	0	0	1	0	0	169
14	179	11	0	0	0	0	0	0	0	0	0	1	0	191
15	206	21	0	0	0	0	0	1	0	0	0	1	0	229
16	199	17	0	0	0	0	0	0	0	0	0	2	0	218
17	265	19	0	0	0	0	0	0	0	0	0	0	0	284
18	222	16	0	0	0	0	0	0	0	0	0	0	0	238
19	158	10	0	0	0	0	0	0	0	0	0	1	0	169
20	94	7	0	0	0	0	0	0	0	0	0	0	0	101
21	59	4	0	0	0	0	0	0	0	0	0	0	0	63
22	53	4	0	0	0	0	0	0	0	0	0	0	0	57
23	24	3	0	0	0	0	0	0	0	0	0	0	0	27
24	18	1	0	0	0	0	0	0	0	0	0	0	0	19

7-19	2349	170	0	0	0	0	0	1	0	0	1	6	0	2527
6-22	2630	190	0	0	0	0	0	2	0	0	2	6	0	2830
6-24	2672	194	0	0	0	0	0	2	0	0	2	6	0	2876
0-24	2728	200	0	0	0	0	0	2	1	0	2	6	0	2939
													0.0%	100%
													0.0%	100%

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound

09/02/2022	Vehicle Classes													
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
1	1	2	0	0	0	0	0	0	0	0	0	0	0	3
2	3	0	0	0	0	0	0	0	0	0	0	0	0	3
3	3	1	0	0	0	0	0	0	0	0	0	0	0	4
4	3	0	0	0	0	0	0	0	0	0	0	1	0	4
5	10	2	0	0	0	0	0	0	0	0	0	0	0	12
6	39	4	0	0	0	0	0	0	0	0	0	1	0	44
7	64	4	0	0	0	0	0	0	0	0	0	0	0	68
8	243	18	2	0	0	0	0	0	0	0	0	0	0	263
9	243	17	1	0	0	0	0	0	0	0	1	0	0	262
10	142	17	0	0	0	0	0	0	0	0	0	0	0	159
11	137	14	1	0	1	0	1	0	1	0	0	0	0	155
12	153	18	1	1	1	0	0	0	0	0	0	1	0	175
13	163	7	1	0	1	0	0	0	0	0	0	0	0	172
14	193	15	3	0	1	0	0	0	1	0	0	0	0	213
15	194	12	0	1	0	0	0	1	0	0	0	1	0	209
16	218	20	1	0	1	0	0	2	0	0	0	0	0	242
17	236	23	0	0	0	0	0	0	0	0	0	0	0	259
18	263	9	0	0	0	0	0	0	0	0	0	0	0	272
19	165	6	0	0	0	0	0	1	0	0	0	0	0	172
20	134	6	0	0	0	0	0	0	0	0	0	0	0	140
21	72	3	0	0	0	0	0	0	0	0	0	0	0	75
22	45	1	0	0	0	0	0	0	0	0	0	0	0	46
23	33	1	0	0	0	0	0	0	0	0	0	0	0	34
24	13	1	0	0	0	0	0	0	0	0	0	0	0	14

7-19	2350	176	10	2	5	0	1	4	2	0	1	2	0	2553
6-22	2665	190	10	2	5	0	1	4	2	0	1	2	0	2882
6-24	2711	192	10	2	5	0	1	4	2	0	1	2	0	2930
0-24	2770	201	10	2	5	0	1	4	2	0	1	4	0	3000
													0.8%	99%
													0.0%	100%

Channel 2 - Southbound

09/02/2022	Vehicle Classes													
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
1	6	2	0	0	0	0	0	0	0	0	0	0	0	8
2	7	1	0	0	0	0	0	0	0	0	0	0	0	8
3	2	0	0	0	0	0	0	0	0	0	0	0	0	2
4	0	6	0	0	0	0	0	0	0	0	0	0	0	6
5	8	0	0	0	0	0	0	0	0	0	0	0	0	8
6	35	3	0	0	0	0	0	0	0	0	1	0	0	39
7	78	6	0	0	0	0	0	0	0	0	1	0	0	85
8	225	21	0	0	0	0	0	0	0	0	0	1	0	247
9	216	17	0	0	0	0	0	0	0	0	0	0	0	233
10	151	14	0	0	0	0	0	0	0	0	0	1	0	166
11	146	10	0	0	0	0	0	0	0	0	0	1	0	157
12	140	11	0	0	0	0	0	1	0	0	0	0	0	152
13	159	10	0	0	0	0	0	2	0	0	0	2	0	173
14	165	17	0	0	0	0	0	0	0	0	0	1	0	183
15	168	11	0	0	0	0	0	0	0	0	0	0	0	179
16	214	16	0	0	0	0	0	0	0	0	2	1	0	233
17	275	22	0	0	0	0	0	0	0	0	0	1	0	298
18	241	13	0	0	0	0	0	0	0	0	0	0	0	254
19	158	10	0	0	0	0	0	0	0	0	0	0	0	168
20	93	6	0	0	0	0	0	0	0	0	0	0	0	99
21	56	6	0	0	0	0	0	0	0	0	0	0	0	62
22	51	4	0	0	0	0	0	0	0	0	0	0	0	55
23	35	5	0	0	0	0	0	0	0	0	0	0	0	40
24	16	3	0	0	0	0	0	0	0	0	0	0	0	19

7-19	2258	172	0	0	0	0	0	3	0	0	2	8	0	2443
6-22	2536	194	0	0	0	0	0	3	0	0	3	8	0	2744
6-24	2587	202	0	0	0	0	0	3	0	0	3	8	0	2803
0-24	2645	214	0	0	0	0	0	3	0	0	4	8	0	2874
													0.0%	100%
													0.0%	100%

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound

10/02/2022	Vehicle Classes													
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
2	3	0	0	0	0	0	0	0	0	0	0	0	0	3
3	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4	5	0	0	0	0	0	0	0	0	0	0	0	0	5
5	8	1	0	0	0	0	0	0	0	0	0	0	0	9
6	41	3	0	0	0	0	0	0	0	0	0	1	0	45
7	52	6	0	0	0	0	0	0	0	0	0	0	0	58
8	230	26	2	0	0	0	0	1	0	0	0	0	0	259
9	261	17	0	0	0	0	0	0	0	0	0	1	0	279
10	134	17	0	0	1	0	0	0	0	0	0	1	0	153
11	158	9	0	0	1	0	0	0	1	0	0	0	0	169
12	147	14	1	0	0	0	0	0	0	0	0	1	0	163
13	182	12	2	0	0	0	0	0	0	0	0	4	0	200
14	181	17	0	0	1	0	0	0	1	0	0	1	0	201
15	212	14	0	2	0	0	0	2	2	0	0	0	0	232
16	206	17	0	0	0	0	0	1	0	0	0	0	0	224
17	231	13	0	0	1	0	0	0	0	0	0	0	0	245
18	236	12	0	0	1	0	0	2	0	0	0	0	0	251
19	189	6	1	0	0	0	0	0	0	0	0	0	0	196
20	120	5	0	0	0	0	0	0	0	0	0	0	0	125
21	79	3	0	0	0	0	0	1	0	0	0	0	0	83
22	59	1	0	0	0	0	0	0	0	0	0	0	0	60
23	41	1	0	0	0	0	0	0	0	0	0	0	0	42
24	16	2	0	0	0	0	0	0	0	0	0	0	0	18

7-19	2367	174	6	2	5	0	0	6	4	0	0	8	0	2572
6-22	2677	189	6	2	5	0	0	7	4	0	0	8	0	2898
6-24	2734	192	6	2	5	0	0	7	4	0	0	8	0	2958
0-24	2795	196	6	2	5	0	0	7	4	0	0	9	0	3024
													0.4%	100%
													1.2%	99%

Channel 2 - Southbound

10/02/2022	Vehicle Classes													
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
1	5	5	0	0	0	0	0	0	0	0	0	0	0	10
2	4	0	0	0	0	0	0	0	0	0	0	0	0	4
3	5	0	0	0	0	0	0	0	0	0	0	0	0	5
4	3	0	0	0	0	0	0	0	0	0	0	0	0	3
5	7	0	0	0	0	0	0	0	0	0	0	0	0	7
6	33	6	0	0	0	0	0	0	2	0	0	0	0	41
7	74	7	0	0	0	0	0	1	0	0	1	0	0	83
8	226	17	0	0	0	0	0	0	0	0	0	2	0	245
9	206	19	0	0	0	0	0	0	0	0	0	0	0	225
10	181	12	0	0	0	0	0	0	0	0	0	1	0	194
11	152	9	0	0	0	0	0	0	0	0	0	0	0	161
12	140	10	0	0	0	0	0	0	0	0	0	0	0	150
13	175	10	0	0	0	0	0	0	0	0	0	0	0	185
14	181	11	0	1	0	0	0	0	0	0	0	1	0	194
15	177	10	0	0	0	0	0	0	0	0	0	1	0	188
16	238	21	0	0	0	0	0	0	1	0	0	0	0	260
17	274	22	0	0	0	0	0	0	0	0	0	1	0	297
18	251	17	0	0	0	0	0	0	0	0	0	0	0	268
19	162	10	0	0	0	0	0	0	1	0	0	0	0	173
20	101	5	0	0	0	0	0	0	0	0	0	0	0	106
21	54	4	0	0	0	0	0	0	0	0	0	0	0	58
22	45	3	0	0	0	0	0	0	0	0	0	0	0	48
23	36	4	0	0	0	0	0	0	0	0	0	0	0	40
24	20	1	0	0	0	0	0	0	0	0	0	0	0	21

7-19	2363	168	0	1	0	0	0	0	2	0	0	6	0	2540
6-22	2637	187	0	1	0	0	0	1	2	0	1	6	0	2835
6-24	2693	192	0	1	0	0	0	1	2	0	1	6	0	2896
0-24	2750	203	0	1	0	0	0	1	4	0	1	6	0	2966
													0.0%	100%
													0.0%	100%

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound

11/02/2022	Vehicle Classes													
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
1	7	1	0	0	0	0	0	0	0	0	0	0	0	8
2	5	0	0	0	0	0	0	0	0	0	0	0	0	5
3	2	0	0	0	0	0	0	0	0	0	0	0	0	2
4	5	0	0	0	0	0	0	0	0	0	0	1	0	6
5	8	0	0	0	0	0	0	1	0	0	0	0	0	9
6	38	3	0	0	0	0	0	0	0	0	0	0	0	41
7	51	6	0	0	0	0	0	0	0	0	0	0	0	57
8	201	12	2	0	1	0	0	0	0	0	0	0	0	216
9	223	12	3	0	0	0	0	0	0	0	0	0	0	238
10	145	17	1	0	0	0	0	0	1	0	0	1	0	165
11	172	7	0	0	0	0	1	0	0	0	0	0	0	180
12	192	22	1	1	0	0	0	0	1	0	0	0	0	217
13	234	14	0	1	1	0	0	0	0	0	0	3	0	253
14	178	18	0	0	1	0	1	0	0	0	0	0	0	198
15	273	11	0	0	0	0	1	0	0	0	0	0	0	285
16	221	19	0	1	0	0	0	0	0	0	0	1	0	242
17	229	8	0	0	0	0	0	0	0	0	1	0	0	238
18	247	10	0	0	0	0	0	0	0	0	0	0	0	257
19	170	7	0	0	0	0	1	0	0	0	0	0	0	178
20	112	4	0	0	0	0	0	0	0	0	0	0	0	116
21	64	4	0	0	0	0	0	0	0	0	0	0	0	68
22	55	1	0	0	0	0	0	0	0	0	0	0	0	56
23	34	2	0	0	0	0	0	0	0	0	0	0	0	36
24	20	0	0	0	0	0	0	0	0	0	0	0	0	20

7-19	2485	157	7	3	3	0	4	0	2	0	1	5	0	2667
6-22	2767	172	7	3	3	0	4	0	2	0	1	5	0	2964
6-24	2821	174	7	3	3	0	4	0	2	0	1	5	0	3020
0-24	2886	178	7	3	3	0	4	1	2	0	1	6	0	3091
													1.3%	99%
													0.0%	100%

Channel 2 - Southbound

11/02/2022	Vehicle Classes													
Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
1	12	1	0	0	0	0	0	0	0	0	0	0	0	13
2	9	2	0	0	0	0	0	0	0	0	0	0	0	11
3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
4	2	0	0	0	0	0	0	0	0	0	0	0	0	2
5	8	0	0	0	0	0	0	0	0	0	0	0	0	8
6	28	3	0	0	0	0	0	0	0	0	0	0	0	31
7	75	4	0	0	0	0	0	0	0	0	1	0	0	80
8	207	13	0	0	0	0	0	0	0	0	0	0	0	220
9	188	16	0	0	0	0	0	0	0	0	0	1	0	205
10	197	11	0	0	0	0	0	0	0	0	0	0	0	208
11	176	8	0	0	0	0	0	0	0	0	0	0	0	184
12	197	17	0	1	0	0	0	0	0	0	0	2	0	217
13	194	18	0	0	0	0	0	1	1	0	0	1	0	215
14	212	14	0	0	0	0	0	0	0	0	0	0	0	226
15	234	14	0	0	0	0	0	0	0	0	1	1	0	250
16	236	20	0	0	0	0	0	0	0	0	0	0	0	256
17	242	16	0	0	0	0	0	0	0	0	0	0	0	258
18	228	13	0	0	0	0	0	0	0	0	0	0	0	241
19	141	8	0	0	0	0	0	0	0	0	0	0	0	149
20	100	5	0	0	0	0	0	0	0	0	0	0	0	105
21	77	6	0	0	0	0	0	0	0	0	0	0	0	83
22	64	3	0	1	0	0	0	0	0	0	0	0	0	68
23	44	3	0	0	0	0	0	0	0	0	0	0	0	47
24	14	7	0	0	0	0	0	0	0	0	0	0	0	21

7-19	2452	168	0	1	0	0	0	1	1	0	1	5	0	2629
6-22	2768	186	0	2	0	0	0	1	1	0	2	5	0	2965
6-24	2826	196	0	2	0	0	0	1	1	0	2	5	0	3033
0-24	2888	202	0	2	0	0	0	1	1	0	2	5	0	3101
													0.5%	100%
													0.0%	100%

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound

05/02/2022	Vehicle Speeds (MPH)												
Hr Ending	0-10	10-20	20-30	30-35	35-40	40-45	45-50	50-55	55-60	60-70	70-80	80+	TOTAL
1	0	0	0	1	3	5	2	1	0	0	0	0	12
2	0	0	0	1	4	3	0	0	0	0	0	0	8
3	0	0	0	0	2	2	2	0	0	0	0	0	6
4	0	0	0	1	0	1	1	0	0	0	0	0	3
5	0	0	0	0	0	2	0	1	0	0	0	0	3
6	0	0	0	0	1	9	2	3	0	0	0	0	15
7	0	0	0	0	2	4	3	2	0	0	0	0	11
8	0	1	1	10	18	16	1	2	1	0	0	0	50
9	0	0	0	4	32	44	21	2	2	0	0	0	105
10	1	4	9	20	74	73	18	4	1	0	0	0	204
11	0	5	0	23	97	76	23	2	2	0	0	0	228
12	1	0	0	26	83	86	36	1	0	1	0	0	234
13	1	2	6	26	93	91	29	9	0	0	0	0	257
14	0	1	4	14	79	71	26	11	0	1	0	0	207
15	0	4	2	10	60	81	27	5	1	0	0	0	190
16	1	1	2	5	63	68	30	6	2	0	0	0	178
17	0	1	1	13	57	82	28	7	1	2	0	0	192
18	0	0	4	16	67	56	14	2	1	1	0	0	161
19	0	0	1	17	48	62	13	1	1	0	1	0	144
20	0	0	1	8	35	33	7	6	0	1	0	0	91
21	0	0	1	1	21	17	6	3	0	0	0	0	49
22	0	0	1	3	11	10	5	2	0	0	0	0	32
23	0	0	0	6	17	14	3	0	0	0	0	0	40
24	0	0	3	2	6	8	1	1	1	0	0	0	22

7-19	4	19	30	184	771	806	266	52	12	5	1	0	2150
6-22	4	19	33	196	840	870	287	65	12	6	1	0	2333
6-24	4	19	36	204	863	892	291	66	13	6	1	0	2395
0-24	4	19	36	207	873	914	298	71	13	6	1	0	2442

Channel 2 - Southbound

05/02/2022	Vehicle Speeds (MPH)												
Hr Ending	0-10	10-20	20-30	30-35	35-40	40-45	45-50	50-55	55-60	60-70	70-80	80+	TOTAL
1	0	0	0	5	5	0	0	0	0	0	0	0	10
2	0	0	0	1	5	3	0	0	0	0	0	0	9
3	0	1	5	0	0	0	0	0	0	0	0	0	6
4	0	0	1	3	0	0	0	0	0	0	0	0	4
5	0	0	0	1	1	2	0	0	0	0	0	0	4
6	0	2	10	0	0	0	0	0	0	0	0	0	12
7	0	2	1	9	4	7	0	1	0	0	0	0	24
8	0	0	1	6	18	13	6	4	2	0	0	0	50
9	0	0	6	22	33	35	12	6	4	2	0	0	120
10	0	0	5	34	53	70	17	10	3	0	0	0	192
11	0	0	11	32	65	78	27	8	1	2	0	0	224
12	0	0	6	35	69	68	22	12	4	4	0	0	220
13	1	6	14	65	65	53	23	12	3	2	0	0	244
14	0	0	4	44	67	81	26	9	5	1	0	0	237
15	0	0	6	26	59	72	25	5	6	0	0	0	199
16	0	0	6	31	59	77	21	12	1	8	2	0	217
17	0	0	4	32	54	59	21	8	1	5	0	0	184
18	0	0	4	20	42	45	22	7	3	3	0	0	146
19	0	0	3	20	38	28	5	4	0	2	0	0	100
20	0	0	2	13	28	17	4	2	2	0	0	0	68
21	0	0	3	11	21	19	5	5	0	1	0	0	65
22	0	1	5	7	8	18	2	0	1	0	0	0	42
23	0	0	3	6	10	11	10	3	1	1	0	0	45
24	0	0	0	1	8	9	2	4	2	1	0	0	27

7-19	1	6	70	367	622	679	227	97	33	29	2	0	2133
6-22	1	9	81	407	683	740	238	105	36	30	2	0	2332
6-24	1	9	84	414	701	760	250	112	39	32	2	0	2404
0-24	1	12	100	424	712	765	250	112	39	32	2	0	2449

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound

06/02/2022	Vehicle Speeds (MPH)												
Hr Ending	0-10	10-20	20-30	30-35	35-40	40-45	45-50	50-55	55-60	60-70	70-80	80+	TOTAL
1	0	0	0	0	3	5	2	0	0	0	0	0	10
2	0	0	0	2	1	3	0	0	0	0	0	0	6
3	0	0	0	0	3	5	1	0	0	0	0	0	9
4	0	0	0	0	0	2	1	0	0	0	0	0	3
5	0	0	0	0	0	2	0	0	1	0	0	0	3
6	0	0	1	0	4	4	2	1	1	0	0	0	13
7	0	0	0	1	4	1	1	0	0	0	0	0	7
8	0	0	1	2	6	6	2	0	0	0	0	0	17
9	0	0	0	5	10	27	17	2	0	1	0	0	62
10	0	2	2	7	21	28	17	0	1	1	0	0	79
11	0	1	2	12	49	58	12	5	0	0	0	0	139
12	0	4	1	15	58	74	27	5	0	2	0	0	186
13	0	3	3	17	84	104	49	3	1	0	0	0	264
14	0	1	0	11	63	103	35	8	0	1	0	0	222
15	0	1	1	14	68	61	28	7	0	0	0	0	180
16	1	2	6	11	52	74	26	12	3	2	0	0	189
17	0	0	1	7	43	59	30	6	0	2	0	0	148
18	0	0	0	7	47	45	20	7	3	1	0	0	130
19	0	0	4	10	30	37	10	5	2	1	0	0	99
20	0	0	0	5	25	24	10	2	0	0	0	0	66
21	0	0	0	4	19	21	4	0	1	0	0	0	49
22	0	0	2	3	10	12	6	5	0	1	0	0	39
23	0	0	0	1	5	3	6	1	0	0	0	0	16
24	0	0	1	1	1	2	3	0	0	0	0	0	8
7-19	1	14	21	118	531	676	273	60	10	11	0	0	1715
6-22	1	14	23	131	589	734	294	67	11	12	0	0	1876
6-24	1	14	24	133	595	739	303	68	11	12	0	0	1900
0-24	1	14	25	135	606	760	309	69	13	12	0	0	1944

Channel 2 - Southbound

06/02/2022	Vehicle Speeds (MPH)												
Hr Ending	0-10	10-20	20-30	30-35	35-40	40-45	45-50	50-55	55-60	60-70	70-80	80+	TOTAL
1	0	0	0	1	1	12	1	0	1	0	0	0	16
2	0	2	4	0	0	0	0	0	0	0	0	0	6
3	0	4	4	0	0	0	0	0	0	0	0	0	8
4	0	0	2	0	0	0	0	0	0	0	0	0	2
5	0	1	2	0	0	0	0	0	0	0	0	0	3
6	0	0	0	0	2	6	1	0	0	0	0	0	9
7	0	0	3	3	5	4	1	0	0	0	0	0	16
8	0	0	1	4	3	5	1	1	0	0	0	0	15
9	0	0	1	7	8	16	7	3	2	0	0	0	44
10	0	1	3	10	36	36	10	3	4	3	0	0	106
11	0	3	2	22	24	64	22	9	5	1	0	0	152
12	0	0	4	34	47	54	16	15	2	2	0	0	174
13	0	0	1	38	39	66	25	8	1	2	0	0	180
14	0	3	2	25	41	53	18	8	2	3	1	0	156
15	0	0	7	29	55	54	29	6	4	4	0	0	188
16	0	0	1	33	53	74	21	7	3	5	0	0	197
17	0	1	8	26	49	73	25	11	1	2	0	0	196
18	0	0	4	29	37	49	13	10	2	1	0	0	145
19	0	0	2	14	29	37	11	9	2	3	0	0	107
20	0	0	0	15	25	22	12	5	2	2	0	0	83
21	0	0	2	11	16	17	7	7	1	3	0	0	64
22	0	1	1	4	3	12	2	1	0	1	0	0	25
23	0	0	0	5	7	5	2	0	0	0	0	0	19
24	0	0	0	5	3	1	4	2	0	0	0	0	15
7-19	0	8	36	271	421	581	198	90	28	26	1	0	1660
6-22	0	9	42	304	470	636	220	103	31	32	1	0	1848
6-24	0	9	42	314	480	642	226	105	31	32	1	0	1882
0-24	0	16	54	315	483	660	228	105	32	32	1	0	1926

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound

07/02/2022	Vehicle Speeds (MPH)												
Hr Ending	0-10	10-20	20-30	30-35	35-40	40-45	45-50	50-55	55-60	60-70	70-80	80+	TOTAL
1	0	0	0	0	1	0	0	1	0	0	0	0	2
2	0	0	0	0	1	0	1	0	0	0	0	0	2
3	0	0	0	0	1	1	0	0	0	0	0	0	2
4	0	0	0	0	1	4	2	0	0	0	0	0	7
5	0	0	0	1	1	3	3	0	0	1	0	0	9
6	0	0	0	1	12	18	14	3	0	0	0	0	48
7	0	0	0	2	19	25	12	5	0	1	0	0	64
8	0	0	1	9	66	101	39	6	2	0	0	0	224
9	0	1	2	13	84	130	34	7	0	0	0	0	271
10	0	0	5	10	47	54	18	5	1	0	0	0	140
11	0	2	0	10	58	61	18	8	1	0	0	0	158
12	0	0	1	16	63	61	11	0	0	0	0	0	152
13	0	2	2	19	63	74	9	2	0	1	0	0	172
14	0	0	2	11	55	72	30	4	4	0	0	0	178
15	0	6	3	12	81	71	32	7	0	1	0	0	213
16	0	0	3	12	55	81	15	6	2	2	0	0	176
17	0	2	5	20	80	106	43	6	1	0	0	0	263
18	0	1	4	23	81	94	38	5	1	1	0	0	248
19	0	1	1	13	67	67	23	5	0	1	0	0	178
20	0	1	1	14	36	38	16	4	0	0	0	0	110
21	0	0	0	4	21	31	7	6	1	0	0	0	70
22	0	0	0	1	14	19	8	2	0	0	0	0	44
23	0	0	1	3	6	11	1	3	0	0	0	0	25
24	0	0	0	1	3	7	1	2	1	1	0	0	16

7-19	0	15	29	168	800	972	310	61	12	6	0	0	2373
6-22	0	16	30	189	890	1085	353	78	13	7	0	0	2661
6-24	0	16	31	193	899	1103	355	83	14	8	0	0	2702
0-24	0	16	31	195	916	1129	375	87	14	9	0	0	2772

Channel 2 - Southbound

07/02/2022	Vehicle Speeds (MPH)												
Hr Ending	0-10	10-20	20-30	30-35	35-40	40-45	45-50	50-55	55-60	60-70	70-80	80+	TOTAL
1	0	0	0	0	1	0	4	0	1	0	0	0	6
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	2	3	1	1	0	0	0	0	0	7
4	0	2	1	0	0	0	0	0	0	0	0	0	3
5	0	0	2	0	0	2	0	1	0	0	0	0	5
6	0	0	0	2	10	12	4	3	1	1	0	0	33
7	1	2	1	10	14	22	16	4	1	1	0	0	72
8	0	11	11	33	56	70	33	14	5	5	0	0	238
9	0	0	4	32	56	69	19	12	6	3	0	0	201
10	0	0	7	30	45	63	19	11	6	3	0	0	184
11	0	0	4	24	37	41	16	7	1	2	0	0	132
12	0	0	6	30	34	50	16	12	5	3	0	0	156
13	0	0	10	29	29	55	14	8	4	3	0	0	152
14	0	0	6	24	55	49	20	8	1	4	0	0	167
15	0	0	4	23	46	52	16	12	2	0	0	0	155
16	0	3	15	37	82	74	23	12	3	4	0	0	253
17	0	0	10	40	79	92	24	18	1	4	0	0	268
18	0	0	12	61	83	67	20	12	4	5	0	0	264
19	0	0	9	30	47	42	20	7	1	2	0	0	158
20	0	0	7	21	28	29	12	3	0	1	0	0	101
21	0	0	3	9	15	23	8	3	1	0	0	0	62
22	0	0	2	6	9	18	5	3	1	0	0	0	44
23	0	0	0	1	7	7	8	1	1	2	0	0	27
24	0	0	0	3	1	2	1	0	1	1	0	0	9

7-19	0	14	98	393	649	724	240	133	39	38	0	0	2328
6-22	1	16	111	439	715	816	281	146	42	40	0	0	2607
6-24	1	16	111	443	723	825	290	147	44	43	0	0	2643
0-24	1	18	114	447	737	840	299	151	46	44	0	0	2697

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound

08/02/2022	Vehicle Speeds (MPH)												
Hr Ending	0-10	10-20	20-30	30-35	35-40	40-45	45-50	50-55	55-60	60-70	70-80	80+	TOTAL
1	0	0	0	1	0	1	2	0	0	0	0	0	4
2	0	0	0	1	2	2	0	0	0	0	0	0	5
3	0	0	0	0	0	1	1	0	0	0	0	0	2
4	0	0	0	0	2	1	3	0	0	0	0	0	6
5	0	0	0	1	3	4	1	1	0	0	0	0	10
6	0	0	0	3	12	18	3	4	0	0	0	0	40
7	0	0	1	2	18	23	13	7	2	0	0	0	66
8	0	1	1	17	79	109	40	10	1	0	0	0	258
9	0	1	5	18	105	127	54	10	1	0	0	0	321
10	0	1	0	9	55	62	23	3	0	0	0	0	153
11	1	0	5	21	68	54	14	4	1	2	0	0	170
12	0	1	3	17	59	72	16	3	0	1	0	0	172
13	0	0	1	17	62	67	22	6	0	0	0	0	175
14	0	0	3	25	72	77	11	3	0	1	1	0	193
15	0	1	3	18	83	75	24	4	1	0	0	0	209
16	1	0	2	22	69	78	30	6	3	1	0	0	212
17	1	1	4	18	72	83	43	5	0	2	0	0	229
18	0	1	3	28	104	88	35	10	1	1	0	0	271
19	0	2	4	15	56	53	28	4	1	1	0	0	164
20	0	0	2	4	37	46	23	3	3	1	0	0	119
21	0	0	1	4	22	26	10	2	0	0	0	0	65
22	0	2	0	2	10	16	11	0	0	1	0	0	42
23	0	0	0	2	6	9	9	2	0	0	0	0	28
24	0	0	0	2	1	5	3	0	0	0	0	0	11
7-19	3	9	34	225	884	945	340	68	9	9	1	0	2527
6-22	3	11	38	237	971	1056	397	80	14	11	1	0	2819
6-24	3	11	38	241	978	1070	409	82	14	11	1	0	2858
0-24	3	11	38	247	997	1097	419	87	14	11	1	0	2925

Channel 2 - Southbound

08/02/2022	Vehicle Speeds (MPH)												
Hr Ending	0-10	10-20	20-30	30-35	35-40	40-45	45-50	50-55	55-60	60-70	70-80	80+	TOTAL
1	0	0	0	2	3	0	0	0	0	0	0	0	5
2	0	1	3	0	0	0	0	0	0	0	0	0	4
3	0	0	2	0	0	0	0	0	0	0	0	0	2
4	0	1	2	0	0	0	0	0	0	0	0	0	3
5	0	0	0	7	0	3	1	0	0	0	0	0	11
6	0	0	1	6	14	8	5	3	1	0	0	0	38
7	0	0	6	11	28	20	11	4	0	2	0	0	82
8	1	2	7	28	58	73	35	12	3	7	0	0	226
9	0	5	13	49	89	97	43	12	4	8	0	0	320
10	0	1	4	24	59	59	12	9	4	3	0	0	175
11	0	0	8	22	40	50	16	6	1	4	0	0	147
12	0	1	8	32	54	53	10	1	0	2	0	0	161
13	0	2	7	23	51	47	23	12	2	2	0	0	169
14	0	0	13	31	57	61	15	9	4	1	0	0	191
15	0	0	3	38	68	84	21	14	0	1	0	0	229
16	0	0	5	33	59	76	22	17	3	3	0	0	218
17	0	0	6	42	71	93	32	26	7	5	2	0	284
18	0	0	7	48	67	80	23	9	0	4	0	0	238
19	0	0	7	31	47	51	18	11	2	2	0	0	169
20	0	0	0	15	16	35	20	9	3	3	0	0	101
21	0	0	1	6	17	25	8	5	0	1	0	0	63
22	0	0	0	9	17	15	11	4	1	0	0	0	57
23	0	0	1	3	7	8	5	2	1	0	0	0	27
24	0	0	1	4	8	3	2	0	1	0	0	0	19
7-19	1	11	88	401	720	824	270	138	30	42	2	0	2527
6-22	1	11	95	442	798	919	320	160	34	48	2	0	2830
6-24	1	11	97	449	813	930	327	162	36	48	2	0	2876
0-24	1	13	105	464	830	941	333	165	37	48	2	0	2939

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound

09/02/2022	Vehicle Speeds (MPH)												
Hr Ending	0-10	10-20	20-30	30-35	35-40	40-45	45-50	50-55	55-60	60-70	70-80	80+	TOTAL
1	0	0	0	0	2	1	0	0	0	0	0	0	3
2	0	0	0	0	1	1	1	0	0	0	0	0	3
3	0	0	2	0	0	0	1	0	1	0	0	0	4
4	0	0	0	0	2	0	2	0	0	0	0	0	4
5	0	0	0	0	2	6	3	1	0	0	0	0	12
6	0	0	0	3	9	15	15	2	0	0	0	0	44
7	0	0	2	1	30	19	12	1	2	1	0	0	68
8	0	0	1	18	83	115	34	10	2	0	0	0	263
9	0	0	2	9	73	108	57	12	0	1	0	0	262
10	0	0	1	12	55	61	19	10	0	1	0	0	159
11	0	0	3	16	65	49	14	7	1	0	0	0	155
12	0	1	2	30	68	56	15	2	1	0	0	0	175
13	0	1	1	25	66	60	17	1	1	0	0	0	172
14	0	1	5	18	78	83	23	4	0	1	0	0	213
15	0	2	2	18	84	71	24	7	0	1	0	0	209
16	0	0	2	17	80	105	31	5	1	1	0	0	242
17	0	5	5	20	92	97	29	9	1	1	0	0	259
18	1	3	0	15	99	103	36	7	4	3	1	0	272
19	1	1	1	10	58	70	19	8	1	2	1	0	172
20	0	1	2	18	35	60	16	4	2	2	0	0	140
21	0	0	1	1	15	30	26	0	1	1	0	0	75
22	0	0	0	1	13	19	13	0	0	0	0	0	46
23	0	0	0	0	12	12	8	1	1	0	0	0	34
24	0	0	0	1	5	5	1	2	0	0	0	0	14

7-19	2	14	25	208	901	978	318	82	12	11	2	0	2553
6-22	2	15	30	229	994	1106	385	87	17	15	2	0	2882
6-24	2	15	30	230	1011	1123	394	90	18	15	2	0	2930
0-24	2	15	32	233	1027	1146	416	93	19	15	2	0	3000

Channel 2 - Southbound

09/02/2022	Vehicle Speeds (MPH)												
Hr Ending	0-10	10-20	20-30	30-35	35-40	40-45	45-50	50-55	55-60	60-70	70-80	80+	TOTAL
1	0	0	0	0	1	7	0	0	0	0	0	0	8
2	0	0	0	0	0	6	2	0	0	0	0	0	8
3	0	0	0	0	2	0	0	0	0	0	0	0	2
4	0	0	0	0	0	0	2	4	0	0	0	0	6
5	0	0	0	3	2	2	0	0	1	0	0	0	8
6	0	0	0	11	6	12	2	4	2	2	0	0	39
7	0	3	3	10	14	28	13	7	3	4	0	0	85
8	0	0	10	39	75	72	21	18	5	7	0	0	247
9	0	0	2	21	70	88	29	10	8	2	3	0	233
10	0	0	3	24	52	46	19	11	5	6	0	0	166
11	0	0	8	35	43	45	12	9	3	2	0	0	157
12	0	0	4	24	49	48	17	4	4	2	0	0	152
13	0	0	3	39	62	46	16	6	0	1	0	0	173
14	0	0	11	31	49	52	20	15	1	4	0	0	183
15	0	0	7	37	54	45	22	9	0	5	0	0	179
16	0	0	10	33	66	80	25	10	3	6	0	0	233
17	0	0	8	57	89	90	32	13	3	6	0	0	298
18	0	0	14	65	71	71	17	10	2	3	0	1	254
19	0	1	4	38	42	43	30	8	0	2	0	0	168
20	0	0	6	10	26	37	9	7	3	1	0	0	99
21	0	0	0	9	13	17	10	4	4	5	0	0	62
22	0	0	1	8	10	15	7	7	2	5	0	0	55
23	0	0	2	5	6	16	5	5	1	0	0	0	40
24	0	0	1	3	5	6	4	0	0	0	0	0	19

7-19	0	1	84	443	722	726	260	123	34	46	3	1	2443
6-22	0	4	94	480	785	823	299	148	46	61	3	1	2744
6-24	0	4	97	488	796	845	308	153	47	61	3	1	2803
0-24	0	4	97	502	807	872	314	161	50	63	3	1	2874

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound

10/02/2022	Vehicle Speeds (MPH)												
Hr Ending	0-10	10-20	20-30	30-35	35-40	40-45	45-50	50-55	55-60	60-70	70-80	80+	TOTAL
1	0	0	0	0	2	1	0	0	0	0	0	0	3
2	0	0	0	0	1	1	0	0	0	1	0	0	3
3	0	0	0	0	0	0	1	0	0	0	0	0	1
4	0	0	0	0	3	1	1	0	0	0	0	0	5
5	0	0	0	0	2	4	2	0	1	0	0	0	9
6	0	0	0	1	12	18	9	4	0	1	0	0	45
7	0	0	0	1	21	20	12	3	0	1	0	0	58
8	0	0	0	18	86	98	43	12	1	1	0	0	259
9	0	1	9	12	77	124	47	6	1	2	0	0	279
10	0	0	1	12	53	60	22	5	0	0	0	0	153
11	1	0	3	20	63	51	24	5	2	0	0	0	169
12	0	1	2	22	60	55	19	2	0	2	0	0	163
13	0	1	2	28	79	59	24	7	0	0	0	0	200
14	0	0	1	21	69	76	25	6	2	1	0	0	201
15	0	2	3	16	78	100	27	4	1	1	0	0	232
16	0	0	3	13	75	91	32	9	0	1	0	0	224
17	1	7	6	16	77	92	38	6	1	1	0	0	245
18	1	1	6	16	93	91	33	10	0	0	0	0	251
19	0	2	3	23	64	84	16	4	0	0	0	0	196
20	0	0	2	8	39	49	20	6	1	0	0	0	125
21	0	0	1	9	24	30	10	7	1	1	0	0	83
22	0	0	0	8	17	21	8	4	0	2	0	0	60
23	0	0	0	5	13	14	6	3	1	0	0	0	42
24	0	1	0	0	5	8	2	1	1	0	0	0	18

7-19	3	15	39	217	874	981	350	76	8	9	0	0	2572
6-22	3	15	42	243	975	1101	400	96	10	13	0	0	2898
6-24	3	16	42	248	993	1123	408	100	12	13	0	0	2958
0-24	3	16	42	249	1013	1148	421	104	13	15	0	0	3024

Channel 2 - Southbound

10/02/2022	Vehicle Speeds (MPH)												
Hr Ending	0-10	10-20	20-30	30-35	35-40	40-45	45-50	50-55	55-60	60-70	70-80	80+	TOTAL
1	0	0	0	1	3	5	1	0	0	0	0	0	10
2	0	2	2	0	0	0	0	0	0	0	0	0	4
3	0	3	2	0	0	0	0	0	0	0	0	0	5
4	0	0	0	2	0	1	0	0	0	0	0	0	3
5	0	0	0	1	1	4	1	0	0	0	0	0	7
6	0	0	0	18	8	7	3	2	1	2	0	0	41
7	1	2	2	10	24	22	10	6	3	3	0	0	83
8	0	0	7	34	79	85	24	14	1	1	0	0	245
9	1	3	3	41	52	76	29	13	6	1	0	0	225
10	0	0	3	36	54	62	24	10	3	2	0	0	194
11	0	0	4	31	42	49	20	8	1	5	1	0	161
12	0	0	5	33	37	45	20	8	1	1	0	0	150
13	0	0	7	24	55	66	21	5	4	3	0	0	185
14	0	0	6	24	61	74	15	9	1	4	0	0	194
15	0	0	2	28	60	71	22	3	1	1	0	0	188
16	0	0	2	33	82	82	38	17	5	1	0	0	260
17	0	0	6	57	96	86	34	12	4	2	0	0	297
18	0	1	18	54	85	76	25	4	2	3	0	0	268
19	0	0	10	44	61	36	14	7	0	1	0	0	173
20	0	0	2	20	32	30	9	7	4	2	0	0	106
21	0	0	3	7	13	20	9	4	1	1	0	0	58
22	0	0	3	8	14	16	2	3	1	1	0	0	48
23	0	0	0	4	14	11	7	3	1	0	0	0	40
24	0	0	0	3	8	6	2	1	0	1	0	0	21

7-19	1	4	73	439	764	808	286	110	29	25	1	0	2540
6-22	2	6	83	484	847	896	316	130	38	32	1	0	2835
6-24	2	6	83	491	869	913	325	134	39	33	1	0	2896
0-24	2	11	87	513	881	930	330	136	40	35	1	0	2966

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound

11/02/2022	Vehicle Speeds (MPH)												
Hr Ending	0-10	10-20	20-30	30-35	35-40	40-45	45-50	50-55	55-60	60-70	70-80	80+	TOTAL
1	0	0	0	0	5	1	2	0	0	0	0	0	8
2	0	0	0	0	1	3	1	0	0	0	0	0	5
3	0	0	0	0	1	0	1	0	0	0	0	0	2
4	0	0	0	4	0	1	1	0	0	0	0	0	6
5	0	0	0	0	2	3	2	2	0	0	0	0	9
6	0	0	0	4	8	15	11	2	1	0	0	0	41
7	0	0	1	2	19	20	7	5	2	1	0	0	57
8	0	1	2	12	76	92	26	7	0	0	0	0	216
9	0	0	0	17	70	96	46	8	1	0	0	0	238
10	1	1	1	12	55	66	22	6	0	1	0	0	165
11	0	2	5	15	67	65	20	4	0	2	0	0	180
12	0	0	2	23	68	92	26	5	0	1	0	0	217
13	0	1	1	37	85	97	23	9	0	0	0	0	253
14	0	0	1	10	65	79	31	9	2	1	0	0	198
15	0	1	5	23	101	117	32	4	2	0	0	0	285
16	1	1	1	22	87	90	29	9	2	0	0	0	242
17	0	1	1	14	74	94	41	11	0	2	0	0	238
18	0	0	3	19	85	108	33	7	1	1	0	0	257
19	1	0	4	21	53	68	20	4	4	3	0	0	178
20	0	0	1	6	40	49	13	3	2	2	0	0	116
21	0	0	2	7	17	25	15	2	0	0	0	0	68
22	0	0	2	6	17	18	8	4	0	1	0	0	56
23	0	0	0	3	11	15	7	0	0	0	0	0	36
24	0	1	0	1	6	7	3	2	0	0	0	0	20

7-19	3	8	26	225	886	1064	349	83	12	11	0	0	2667
6-22	3	8	32	246	979	1176	392	97	16	15	0	0	2964
6-24	3	9	32	250	996	1198	402	99	16	15	0	0	3020
0-24	3	9	32	258	1013	1221	420	103	17	15	0	0	3091

Channel 2 - Southbound

11/02/2022	Vehicle Speeds (MPH)												
Hr Ending	0-10	10-20	20-30	30-35	35-40	40-45	45-50	50-55	55-60	60-70	70-80	80+	TOTAL
1	0	0	0	4	3	5	1	0	0	0	0	0	13
2	0	0	0	0	0	0	5	1	3	2	0	0	11
3	0	0	3	0	0	0	0	0	0	0	0	0	3
4	0	0	1	1	0	0	0	0	0	0	0	0	2
5	0	0	0	1	3	4	0	0	0	0	0	0	8
6	0	0	0	1	6	12	6	3	1	2	0	0	31
7	2	1	5	16	11	32	7	4	1	1	0	0	80
8	0	1	9	43	58	59	22	13	5	9	1	0	220
9	0	1	6	26	40	78	30	13	3	8	0	0	205
10	0	2	11	24	52	71	36	8	1	3	0	0	208
11	0	3	7	40	50	51	23	5	3	2	0	0	184
12	0	0	3	20	50	90	32	12	7	3	0	0	217
13	0	1	8	29	58	80	26	4	5	3	1	0	215
14	0	1	8	30	63	78	24	15	5	2	0	0	226
15	0	0	5	49	77	73	25	12	3	6	0	0	250
16	0	0	6	38	81	85	24	14	5	3	0	0	256
17	0	0	7	30	70	95	29	19	2	6	0	0	258
18	0	0	3	46	59	86	25	7	9	6	0	0	241
19	0	0	8	33	45	34	16	7	1	5	0	0	149
20	0	0	0	22	26	28	16	5	4	4	0	0	105
21	0	0	3	12	19	30	7	8	2	2	0	0	83
22	0	1	4	13	21	15	7	4	2	1	0	0	68
23	0	0	3	6	10	15	5	7	0	1	0	0	47
24	0	0	0	0	1	12	4	3	0	1	0	0	21

7-19	0	9	81	408	703	880	312	129	49	56	2	0	2629
6-22	2	11	93	471	780	985	349	150	58	64	2	0	2965
6-24	2	11	96	477	791	1012	358	160	58	66	2	0	3033
0-24	2	11	100	484	803	1033	370	164	62	70	2	0	3101

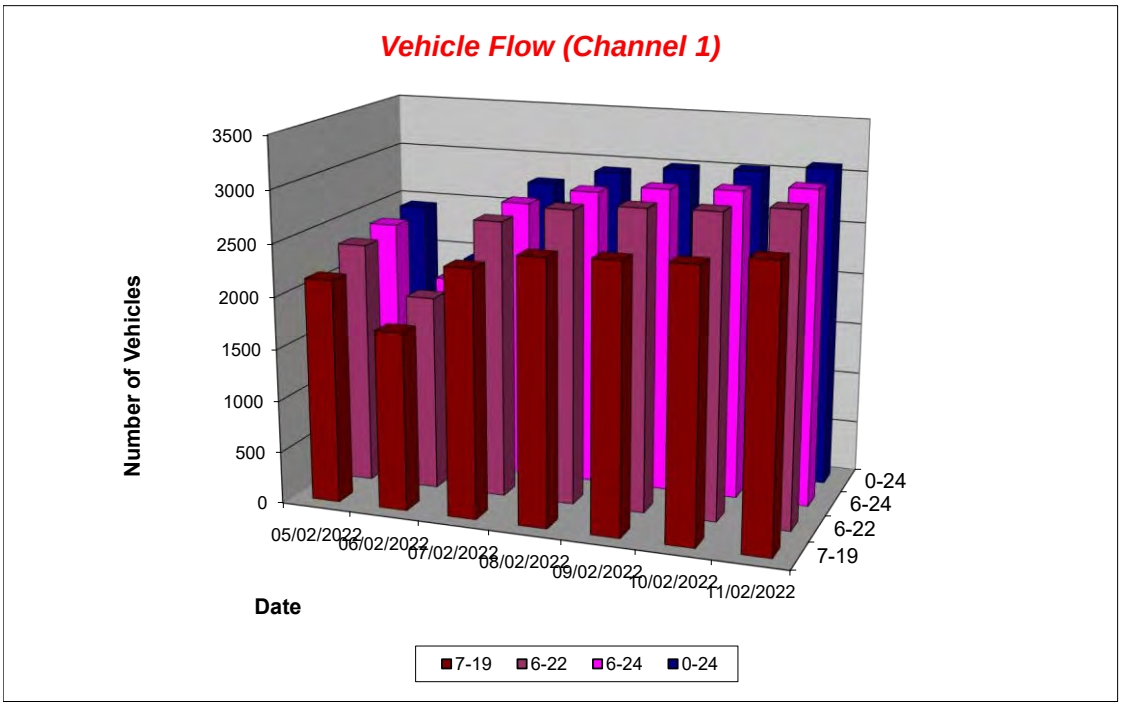
Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound | **Vehicle Flow** | **Week 1**

Hr Ending	05/02/2022 Saturday	06/02/2022 Sunday	07/02/2022 Monday	08/02/2022 Tuesday	09/02/2022 Wednesday	10/02/2022 Thursday	11/02/2022 Friday	Weekday Average	Average
1	12	10	2	4	3	3	8	4	6
2	8	6	2	5	3	3	5	4	5
3	6	9	2	2	4	1	2	2	4
4	3	3	7	6	4	5	6	6	5
5	3	3	9	10	12	9	9	10	8
6	15	13	48	40	44	45	41	44	35
7	11	7	64	66	68	58	57	63	47
8	50	17	224	258	263	259	216	244	184
9	105	62	271	321	262	279	238	274	220
10	204	79	140	153	159	153	165	154	150
11	228	139	158	170	155	169	180	166	171
12	234	186	152	172	175	163	217	176	186
13	257	264	172	175	172	200	253	194	213
14	207	222	178	193	213	201	198	197	202
15	190	180	213	209	209	232	285	230	217
16	178	189	176	212	242	224	242	219	209
17	192	148	263	229	259	245	238	247	225
18	161	130	248	271	272	251	257	260	227
19	144	99	178	164	172	196	178	178	162
20	91	66	110	119	140	125	116	122	110
21	49	49	70	65	75	83	68	72	66
22	32	39	44	42	46	60	56	50	46
23	40	16	25	28	34	42	36	33	32
24	22	8	16	11	14	18	20	16	16

7-19	2150	1715	2373	2527	2553	2572	2667	2538	2365
6-22	2333	1876	2661	2819	2882	2898	2964	2845	2633
6-24	2395	1900	2702	2858	2930	2958	3020	2894	2680
0-24	2442	1944	2772	2925	3000	3024	3091	2962	2743

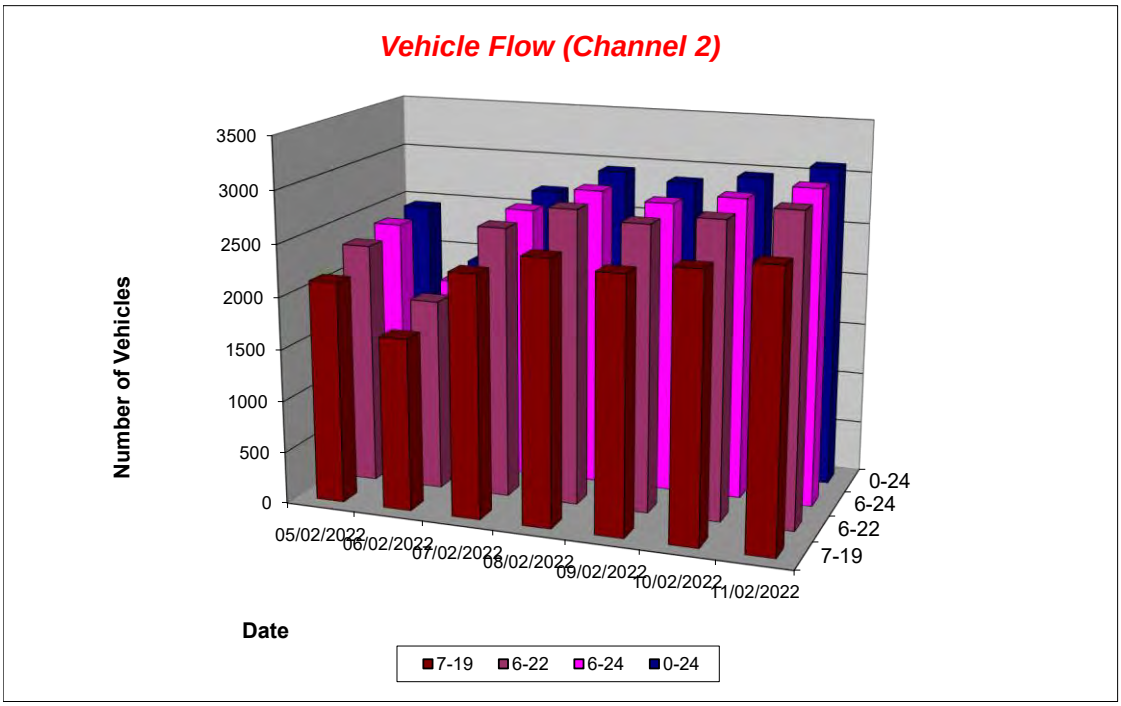


Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 2 - Southbound | **Vehicle Flow** | **Week 1**

Hr Ending	05/02/2022 Saturday	06/02/2022 Sunday	07/02/2022 Monday	08/02/2022 Tuesday	09/02/2022 Wednesday	10/02/2022 Thursday	11/02/2022 Friday	Weekday Average	Average
1	10	16	6	5	8	10	13	8	10
2	9	6	0	4	8	4	11	5	6
3	6	8	7	2	2	5	3	4	5
4	4	2	3	3	6	3	2	3	3
5	4	3	5	11	8	7	8	8	7
6	12	9	33	38	39	41	31	36	29
7	24	16	72	82	85	83	80	80	63
8	50	15	238	226	247	245	220	235	177
9	120	44	201	320	233	225	205	237	193
10	192	106	184	175	166	194	208	185	175
11	224	152	132	147	157	161	184	156	165
12	220	174	156	161	152	150	217	167	176
13	244	180	152	169	173	185	215	179	188
14	237	156	167	191	183	194	226	192	193
15	199	188	155	229	179	188	250	200	198
16	217	197	253	218	233	260	256	244	233
17	184	196	268	284	298	297	258	281	255
18	146	145	264	238	254	268	241	253	222
19	100	107	158	169	168	173	149	163	146
20	68	83	101	101	99	106	105	102	95
21	65	64	62	63	62	58	83	66	65
22	42	25	44	57	55	48	68	54	48
23	45	19	27	27	40	40	47	36	35
24	27	15	9	19	19	21	21	18	19
7-19	2133	1660	2328	2527	2443	2540	2629	2493	2323
6-22	2332	1848	2607	2830	2744	2835	2965	2796	2594
6-24	2404	1882	2643	2876	2803	2896	3033	2850	2648
0-24	2449	1926	2697	2939	2874	2966	3101	2915	2707



Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound **Average Speed** **Week 1**

Hr Ending	05/02/2022 Saturday	06/02/2022 Sunday	07/02/2022 Monday	08/02/2022 Tuesday	09/02/2022 Wednesday	10/02/2022 Thursday	11/02/2022 Friday
1	41.9	42.3	47.1	42.8	38.8	40.0	40.3
2	38.4	38.6	44.1	39.3	43.6	48.5	43.0
3	42.2	41.0	41.2	46.6	38.4	45.6	41.3
4	42.6	43.7	43.5	43.3	42.2	40.2	35.9
5	45.2	47.4	45.3	42.0	43.7	45.4	44.9
6	44.6	42.3	43.1	41.5	43.2	43.3	42.8
7	44.9	38.5	42.9	43.6	41.8	41.8	42.7
8	38.5	38.7	41.7	41.5	41.4	41.6	40.8
9	42.1	43.2	41.0	41.0	42.2	41.5	41.6
10	38.8	40.7	40.6	40.9	41.2	40.7	40.7
11	39.5	40.1	40.9	39.4	40.1	40.2	40.0
12	40.4	40.7	39.6	39.9	39.1	39.9	40.4
13	39.9	41.0	39.6	40.5	39.4	39.8	39.9
14	40.7	41.7	41.7	39.8	40.3	40.9	41.8
15	40.8	40.6	40.0	40.2	40.2	40.5	40.4
16	41.2	41.4	41.1	40.7	41.1	41.3	40.6
17	41.7	42.5	40.8	40.9	40.3	40.0	41.7
18	39.8	42.0	40.7	40.5	41.0	40.5	40.9
19	40.3	40.7	40.7	40.6	41.3	39.7	40.8
20	40.5	40.6	40.1	42.0	40.8	41.1	41.2
21	41.1	40.3	42.0	41.2	43.5	42.0	41.6
22	41.1	42.7	42.0	41.6	42.2	41.8	40.8
23	39.2	42.7	40.6	43.4	43.2	41.3	40.9
24	39.0	40.0	44.2	40.9	42.2	41.2	40.7
10-12	39.9	40.5	40.2	39.7	39.6	40.1	40.2
14-16	41.0	41.0	40.5	40.5	40.7	40.9	40.5
0-24	40.4	41.2	40.9	40.8	40.9	40.8	40.9

Average (ALL)	40.8
Weekday Inter-Peak	40.3

Channel 1 - Northbound **85th Percentile**

Hr Ending	05/02/2022 Saturday	06/02/2022 Sunday	07/02/2022 Monday	08/02/2022 Tuesday	09/02/2022 Wednesday	10/02/2022 Thursday	11/02/2022 Friday
1	47.7	46.7	55.0	48.2	41.0	41.6	44.8
2	42.2	44.0	49.1	42.9	48.7	60.9	45.8
3	46.3	43.8	42.6	48.5	52.3	-	45.3
4	49.5	45.7	47.4	48.3	45.9	44.1	41.6
5	49.6	53.9	55.0	47.4	48.6	51.3	50.3
6	49.1	51.0	48.1	47.0	48.4	49.0	48.8
7	50.7	44.1	48.8	50.0	48.4	47.2	49.8
8	45.1	45.3	46.7	46.8	46.6	47.1	46.2
9	47.4	49.3	46.0	46.6	47.5	47.7	46.7
10	46.0	48.7	46.5	46.0	46.9	46.1	47.4
11	45.6	45.7	47.2	46.2	45.9	46.5	46.6
12	46.0	47.8	44.2	45.8	44.8	46.5	45.7
13	46.4	46.8	45.6	45.8	44.7	45.7	45.3
14	46.8	47.0	47.2	45.8	46.0	46.6	47.4
15	47.3	46.2	47.2	45.7	46.2	46.4	46.0
16	47.7	49.1	47.4	47.0	46.4	47.1	46.6
17	47.9	48.4	46.8	47.7	47.0	47.6	47.7
18	45.4	48.0	46.8	46.3	48.0	46.8	46.3
19	46.3	47.8	46.5	47.5	48.5	45.4	48.0
20	46.7	45.7	45.8	48.0	47.7	47.0	47.0
21	46.4	45.5	47.9	46.2	49.1	49.0	47.3
22	46.7	50.8	46.9	49.7	46.5	49.2	48.1
23	43.8	48.1	46.9	49.3	48.8	47.8	45.4
24	47.5	49.5	52.4	46.5	48.7	50.9	49.7
10-12	45.8	47.0	45.8	46.1	45.4	46.5	46.1
14-16	47.5	47.8	47.4	46.4	46.4	46.8	46.3
0-24	46.7	47.6	46.8	46.8	47.0	47.0	46.8

85th %ile (ALL)	46.9
Weekday Inter-Peak	46.3

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 2 - Southbound **Average Speed** **Week 1**

Hr Ending	05/02/2022 Saturday	06/02/2022 Sunday	07/02/2022 Monday	08/02/2022 Tuesday	09/02/2022 Wednesday	10/02/2022 Thursday	11/02/2022 Friday
1	34.7	42.5	46.8	35.0	41.9	39.7	37.7
2	38.9	21.6	-	22.8	44.0	19.3	54.2
3	23.3	19.7	39.3	24.1	36.7	19.1	24.9
4	30.9	21.3	19.4	21.7	50.8	37.3	25.5
5	38.5	18.9	35.9	36.3	38.4	41.0	39.3
6	23.7	41.7	43.5	40.9	42.3	39.7	45.2
7	35.6	36.4	41.3	39.7	42.1	41.1	39.2
8	40.9	39.1	40.0	41.3	40.9	40.3	40.8
9	40.3	41.5	41.0	40.2	42.0	40.4	42.1
10	39.9	40.8	41.0	40.5	41.8	40.6	40.6
11	39.9	41.6	40.6	40.0	39.6	40.7	39.2
12	40.5	40.5	41.2	38.2	40.0	40.0	42.2
13	38.0	40.6	40.1	40.5	39.1	40.7	40.7
14	40.4	40.7	40.3	39.4	40.3	40.7	40.8
15	40.6	40.7	40.7	40.3	40.1	40.2	40.3
16	41.4	40.9	39.6	41.1	40.7	41.3	40.6
17	40.6	40.4	40.4	41.9	40.3	40.1	41.6
18	41.2	40.1	39.2	39.7	38.8	38.7	41.1
19	39.3	41.9	39.7	40.2	39.9	38.1	39.6
20	38.9	41.5	38.7	43.3	41.1	40.7	41.9
21	39.9	42.1	40.3	41.9	44.1	41.3	41.8
22	37.6	39.4	41.2	41.8	44.0	39.6	39.6
23	41.0	38.5	44.6	41.6	41.7	41.3	41.5
24	44.4	40.8	43.8	38.9	39.6	41.6	45.6
10-12	40.2	41.0	40.9	39.1	39.8	40.4	40.8
14-16	41.0	40.8	40.0	40.7	40.4	40.8	40.5
0-24	39.9	40.6	40.3	40.4	40.6	40.2	40.9

Average (ALL)	40.4
Weekday Inter-Peak	40.4

Channel 2 - Southbound **85th Percentile**

Hr Ending	05/02/2022 Saturday	06/02/2022 Sunday	07/02/2022 Monday	08/02/2022 Tuesday	09/02/2022 Wednesday	10/02/2022 Thursday	11/02/2022 Friday
1	37.9	48.1	52.8	38.5	44.9	43.9	42.9
2	42.2	28.9	-	28.9	46.1	26.7	60.1
3	29.7	24.9	44.8	26.3	37.7	24.0	28.3
4	33.4	22.4	26.6	24.8	53.2	42.6	30.5
5	43.5	23.3	48.2	42.5	46.3	46.8	44.3
6	28.3	45.1	51.0	47.9	52.2	48.9	53.6
7	43.3	42.2	50.7	48.3	52.3	51.4	48.7
8	48.3	46.3	49.7	50.0	49.2	47.0	49.9
9	48.3	49.2	48.7	48.6	49.8	48.1	50.4
10	46.5	48.8	48.7	48.0	50.2	47.4	48.3
11	47.0	49.4	48.0	47.8	47.4	48.9	47.4
12	48.2	48.0	49.4	44.9	47.3	47.0	49.3
13	46.7	47.4	48.5	48.6	45.5	47.9	48.5
14	46.9	49.1	47.9	46.8	48.9	47.6	48.4
15	47.2	48.0	47.4	46.6	48.0	45.8	47.8
16	50.1	48.0	47.7	48.2	48.4	48.0	47.5
17	48.0	47.8	47.5	50.5	47.6	47.0	48.8
18	48.8	47.3	47.0	46.4	46.7	45.9	49.0
19	45.7	49.8	47.2	47.9	47.6	44.8	48.1
20	45.4	49.1	46.0	50.9	48.9	48.5	50.6
21	47.3	51.2	46.9	48.8	53.4	49.5	49.9
22	45.3	48.0	48.3	48.5	54.0	47.6	47.9
23	49.9	42.4	52.8	49.8	49.7	47.8	50.6
24	52.1	49.0	56.8	46.2	45.3	49.9	52.5
10-12	47.6	48.7	48.8	46.4	47.4	48.1	48.6
14-16	48.8	48.0	47.7	47.4	48.2	47.1	47.7
0-24	47.6	48.4	48.3	48.2	48.7	47.5	48.9

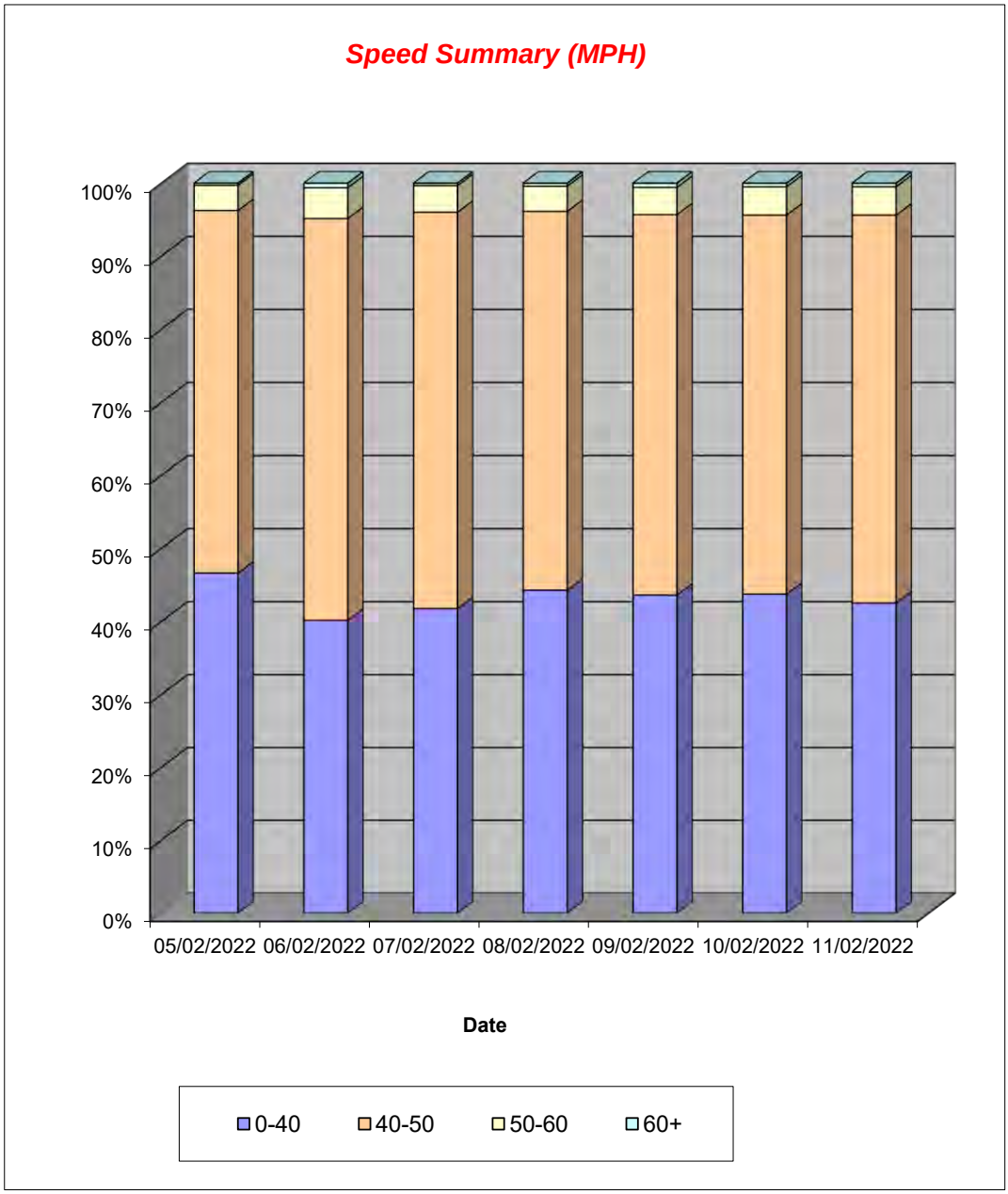
85th %ile (ALL)	48.2
Weekday Inter-Peak	47.8

Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound | **Speed Summary** | **Week 1**

Speed (MPH)	05/02/2022 Saturday	06/02/2022 Sunday	07/02/2022 Monday	08/02/2022 Tuesday	09/02/2022 Wednesday	10/02/2022 Thursday	11/02/2022 Friday
0-40	1139	781	1158	1296	1309	1323	1315
40-50	1212	1069	1504	1516	1562	1569	1641
50-60	84	82	101	101	112	117	120
60+	7	12	9	12	17	15	15
TOTAL	**2442**	**1944**	**2772**	**2925**	**3000**	**3024**	**3091**

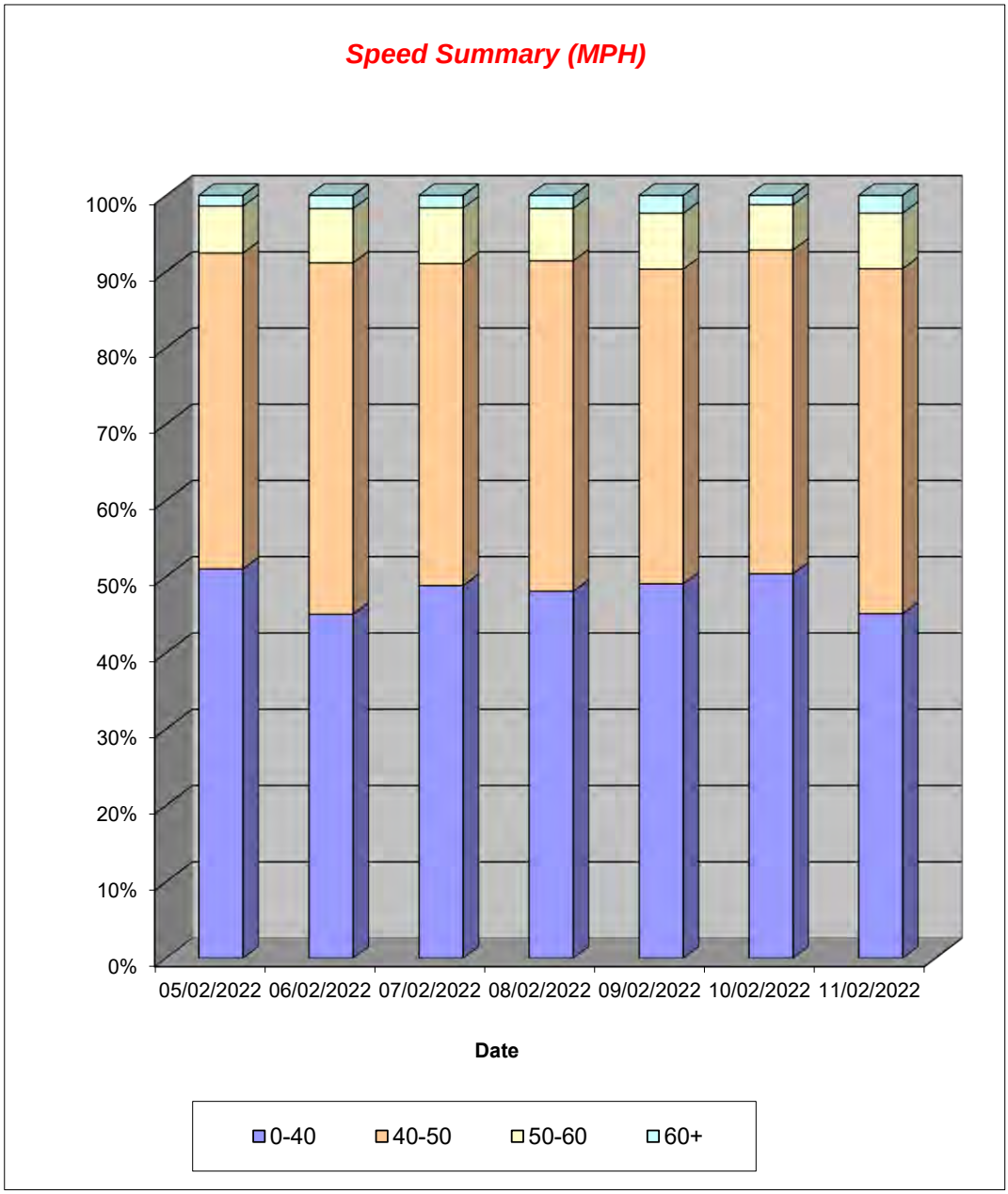


Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 2 - Southbound | **Speed Summary** | **Week 1**

Speed (MPH)	05/02/2022 Saturday	06/02/2022 Sunday	07/02/2022 Monday	08/02/2022 Tuesday	09/02/2022 Wednesday	10/02/2022 Thursday	11/02/2022 Friday
0-40	1249	868	1317	1413	1410	1494	1400
40-50	1015	888	1139	1274	1186	1260	1403
50-60	151	137	197	202	211	176	226
60+	34	33	44	50	67	36	72
TOTAL	**2449**	**1926**	**2697**	**2939**	**2874**	**2966**	**3101**



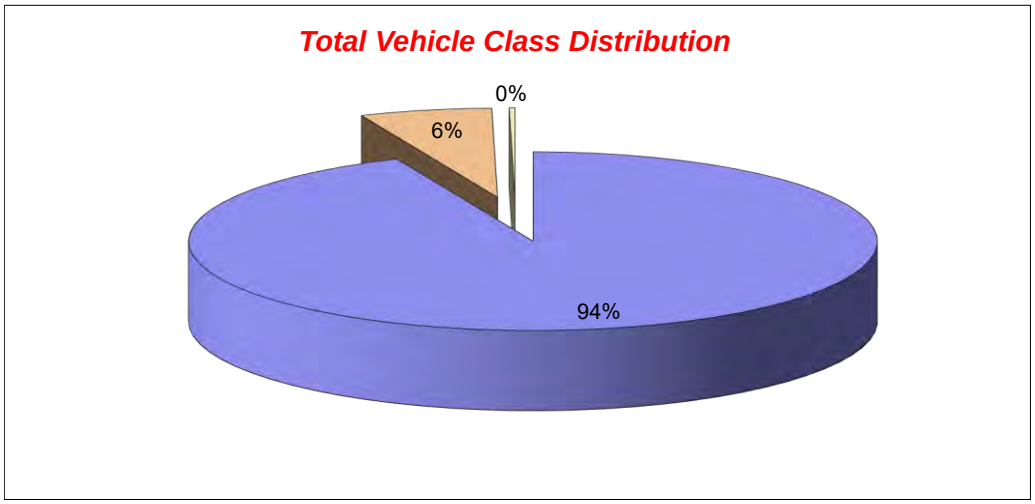
Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound | **Vehicle Class** | **Week 1**

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
05/02/2022				
7-19	2067	78	5	**2150**
6-22	2244	84	5	**2333**
6-24	2306	84	5	**2395**
0-24	2349	88	5	**2442**
06/02/2022				
7-19	1662	51	2	**1715**
6-22	1815	59	2	**1876**
6-24	1838	60	2	**1900**
0-24	1881	61	2	**1944**
07/02/2022				
7-19	2178	192	3	**2373**
6-22	2459	198	4	**2661**
6-24	2499	199	4	**2702**
0-24	2560	208	4	**2772**
08/02/2022				
7-19	2334	181	12	**2527**
6-22	2614	193	12	**2819**
6-24	2652	194	12	**2858**
0-24	2713	200	12	**2925**
09/02/2022				
7-19	2350	194	9	**2553**
6-22	2665	208	9	**2882**
6-24	2711	210	9	**2930**
0-24	2770	221	9	**3000**
10/02/2022				
7-19	2367	193	12	**2572**
6-22	2677	208	13	**2898**
6-24	2734	211	13	**2958**
0-24	2795	216	13	**3024**
11/02/2022				
7-19	2485	176	6	**2667**
6-22	2767	191	6	**2964**
6-24	2821	193	6	**3020**
0-24	2886	198	7	**3091**

Average				
7-19	2206	152	7	**2365**
6-22	2463	163	7	**2633**
6-24	2509	164	7	**2680**
0-24	2565	170	7	**2743**



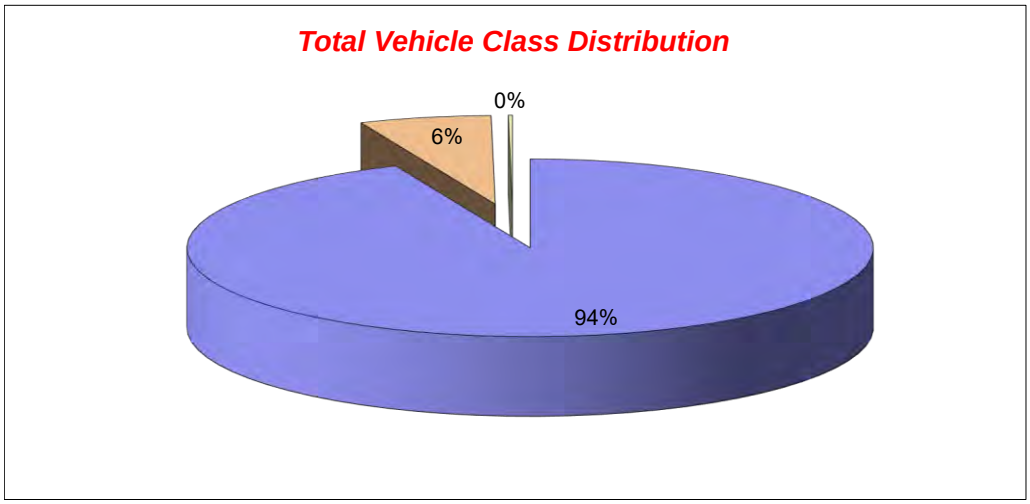
Banbury ATC, B4100 Warwick Road

Produced by Road Data Services Ltd.

Channel 2 - Southbound | **Vehicle Class** | **Week 1**

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
05/02/2022				
7-19	2054	74	5	2133
6-22	2247	80	5	2332
6-24	2315	84	5	2404
0-24	2360	84	5	2449
06/02/2022				
7-19	1609	50	1	1660
6-22	1792	55	1	1848
6-24	1825	56	1	1882
0-24	1869	56	1	1926
07/02/2022				
7-19	2153	170	5	2328
6-22	2412	189	6	2607
6-24	2445	192	6	2643
0-24	2496	195	6	2697
08/02/2022				
7-19	2349	176	2	2527
6-22	2630	196	4	2830
6-24	2672	200	4	2876
0-24	2728	206	5	2939
09/02/2022				
7-19	2258	180	5	2443
6-22	2536	202	6	2744
6-24	2587	210	6	2803
0-24	2645	222	7	2874
10/02/2022				
7-19	2363	174	3	2540
6-22	2637	193	5	2835
6-24	2693	198	5	2896
0-24	2750	209	7	2966
11/02/2022				
7-19	2452	173	4	2629
6-22	2768	191	6	2965
6-24	2826	201	6	3033
0-24	2888	207	6	3101

Average				
7-19	2177	142	4	2323
6-22	2432	158	5	2594
6-24	2480	163	5	2648
0-24	2534	168	5	2707



Road Data Services Ltd

Class No	Vehicle Description	Class No	Vehicle Description
1	Car, Light Van, Taxi 	5	Rigid 2 Axle HGV + 2 Axle (Close coupled) Trailer 
1	Light Goods Vehicle 	6	Rigid 3 Axle HGV + 2 Axle Drawbar Trailer 
1	Car or Light Goods Vehicle + 1 Axle Caravan or Trailer 	6	Rigid 3 Axle HGV + 3 Axle Drawbar Trailer 
1	Car or Light Goods Vehicle + 2 Axle Caravan or Trailer 	7	Artic, 2 Axle Tractor + 1 Axle Semi-Trailer 
2	Rigid 2 Axle Heavy Goods Vehicle 	8	Artic, 2 Axle Tractor + 2 Axle Semi-Trailer 
3	Rigid 3 Axle Heavy Goods Vehicle 	9	Artic, 2 Axle Tractor + 3 Axle Semi-Trailer 
3	Rigid 3 Axle Heavy Goods Vehicle 	10	Artic, 3 Axle Tractor + 1 Axle Semi-Trailer 
4	Rigid 4 Axle Heavy Goods Vehicle 	10	Artic, 3 Axle Tractor + 2 Axle Semi-Trailer 
4	Rigid 4 Axle Heavy Goods Vehicle 	11	Artic, 3 Axle Tractor + 3 Axle Semi-Trailer 
5	Rigid 2 Axle HGV + 2 Axle Drawbar Trailer 	12	Bus or Coach, 2 Axle 
5	Rigid 2 Axle HGV + 3 Axle Drawbar Trailer 	12	Bus or cCoach, 3 Axle 
5	Rigid 2 Axle HGV + 1 Axle Caravan or Trailer 	13	Vehicle with 7 or more Axles 

Classification Classes: Car/Van: 1 OGV1/Bus: 2,3,5,6,7,12 OGV2: 4,8,9,10,11,13

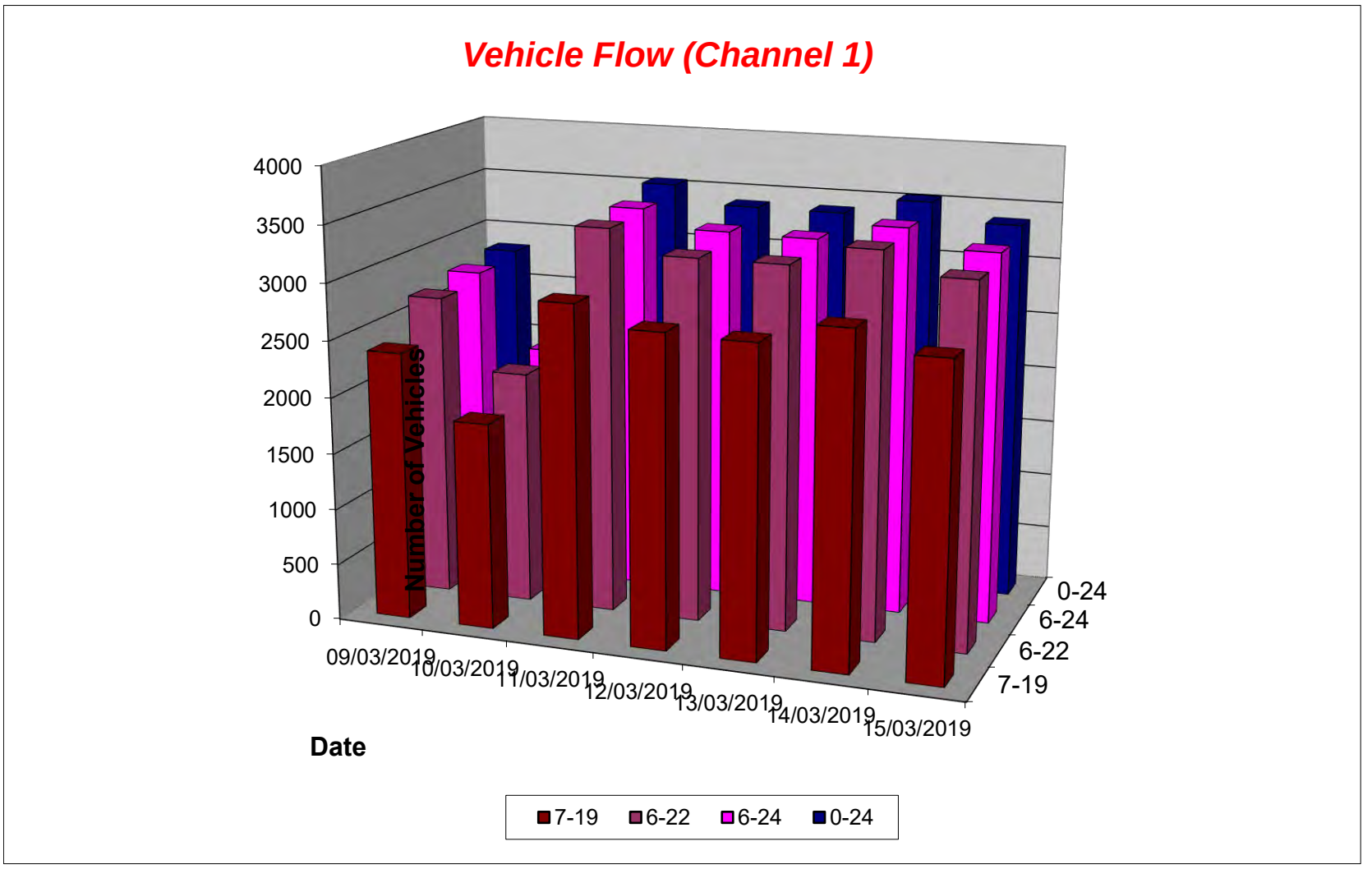
Appendix C: Drayton Lodge Farmhouse Traffic Count from 2017

Banbury ATC, Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound **Vehicle Flow** **Week 1**

Hr Ending	09/03/2019 Saturday	10/03/2019 Sunday	11/03/2019 Monday	12/03/2019 Tuesday	13/03/2019 Wednesday	14/03/2019 Thursday	15/03/2019 Friday	5 Day Ave	7 Day Ave
1	13	29	5	5	6	4	6	5	10
2	11	16	2	1	1	2	1	1	5
3	7	6	4	8	8	7	7	7	7
4	8	9	4	4	5	6	4	5	6
5	7	8	12	14	15	12	15	14	12
6	9	7	61	52	57	58	58	57	43
7	29	20	122	129	125	127	122	125	96
8	57	22	248	242	256	250	245	248	189
9	110	54	262	273	236	259	263	259	208
10	170	80	193	160	170	196	169	178	163
11	235	179	159	171	166	169	181	169	180
12	275	231	164	167	144	143	153	154	182
13	246	218	209	219	224	210	214	215	220
14	241	208	201	210	226	203	204	209	213
15	211	203	224	239	252	214	242	234	226
16	261	174	232	245	212	233	235	231	227
17	191	201	368	318	337	352	303	336	296
18	206	156	347	294	285	344	298	314	276
19	181	106	331	221	231	347	236	273	236
20	147	91	174	166	187	160	171	172	157
21	79	79	101	86	85	111	95	96	91
22	61	55	91	83	86	83	79	84	77
23	42	22	27	50	46	28	42	39	37
24	33	9	9	33	27	14	31	23	22
7-19	2384	1832	2938	2759	2739	2920	2743	2820	2616
6-22	2700	2077	3426	3223	3222	3401	3210	3296	3037
6-24	2775	2108	3462	3306	3295	3443	3283	3358	3096
0-24	2830	2183	3550	3390	3387	3532	3374	3447	3178



Banbury ATC, Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound **Average Speed** **Week 1**

Hr Ending	09/03/2019 Saturday	10/03/2019 Sunday	11/03/2019 Monday	12/03/2019 Tuesday	13/03/2019 Wednesday	14/03/2019 Thursday	15/03/2019 Friday
1	36.7	31.4	35.4	35.9	33.9	33.8	35.2
2	38.6	34.1	38.5	36.2	37.9	39.8	36.6
3	34.6	38.0	34.6	38.7	38.1	34.2	38.2
4	34.5	35.8	32.9	31.9	31.5	30.7	34.0
5	35.8	37.8	38.9	34.1	33.2	36.9	34.2
6	38.9	36.8	36.2	39.1	38.2	36.3	38.3
7	37.2	36.0	36.4	36.8	36.2	36.3	36.7
8	35.2	33.1	35.1	35.5	34.6	35.5	35.4
9	35.9	36.0	35.5	34.5	33.9	35.5	34.4
10	33.6	34.9	31.7	33.3	34.1	32.6	33.4
11	31.5	33.7	32.4	32.7	33.2	32.1	32.7
12	33.2	33.6	33.9	34.2	31.0	34.6	31.1
13	34.2	34.0	32.3	33.3	32.7	31.6	32.2
14	32.6	34.3	33.4	32.0	32.1	33.6	32.3
15	34.3	33.3	34.8	33.8	34.3	34.4	33.6
16	32.1	32.9	34.4	33.0	33.1	33.4	33.1
17	34.6	34.1	34.2	33.8	33.4	34.0	33.5
18	33.1	33.1	35.4	34.4	34.1	35.7	34.4
19	33.2	33.7	34.1	33.2	34.0	34.1	33.6
20	33.8	33.4	34.5	33.6	34.0	34.3	33.4
21	35.6	34.4	35.3	34.8	33.9	35.3	34.3
22	34.4	33.8	35.2	32.2	34.0	36.6	33.0
23	34.7	35.6	36.3	36.1	36.2	34.1	36.5
24	34.7	38.2	40.4	34.4	35.3	36.8	34.0
10-12	32.5	33.7	33.2	33.4	32.2	33.3	31.9
14-16	33.1	33.1	34.6	33.4	33.8	33.9	33.3
0-24	33.6	33.9	34.4	34.0	33.8	34.3	33.7

Average	34.0

Channel 1 - Northbound **85th Percentile**

Hr Ending	09/03/2019 Saturday	10/03/2019 Sunday	11/03/2019 Monday	12/03/2019 Tuesday	13/03/2019 Wednesday	14/03/2019 Thursday	15/03/2019 Friday
1	41.6	37.1	43.3	44.5	40.0	39.0	40.2
2	48.1	41.1	43.4	-	-	44.8	-
3	42.5	43.5	37.7	42.1	43.0	37.9	43.1
4	42.0	43.5	40.7	37.9	37.7	37.9	38.7
5	39.7	40.3	43.4	37.5	38.6	42.4	39.0
6	46.0	43.2	39.8	44.8	43.8	40.5	44.7
7	43.9	40.9	40.6	42.7	41.6	40.9	42.0
8	42.0	39.1	41.3	41.5	40.2	41.2	41.1
9	41.6	40.7	41.2	39.4	39.6	40.0	39.9
10	38.5	40.0	37.9	38.1	37.9	38.3	39.5
11	36.9	37.5	37.6	38.0	39.0	36.9	38.7
12	38.6	37.7	39.4	40.3	37.6	39.3	37.7
13	38.6	38.2	38.8	39.4	37.5	39.3	37.6
14	37.9	39.8	38.4	38.2	38.3	38.7	38.3
15	38.9	38.4	39.8	39.9	38.9	39.6	38.8
16	36.8	38.9	39.7	38.5	38.7	38.7	39.4
17	39.7	39.0	39.1	38.8	39.0	39.2	38.6
18	38.8	38.1	40.3	39.4	39.3	40.8	39.6
19	38.6	38.3	39.5	39.1	39.0	38.6	39.1
20	39.3	37.8	39.2	40.3	40.8	39.1	39.6
21	41.9	41.9	41.0	40.6	38.4	39.6	39.9
22	40.8	41.1	43.0	38.2	40.3	42.4	38.3
23	40.2	43.5	44.5	42.4	42.2	43.0	42.7
24	40.8	41.6	46.5	42.9	42.5	44.3	42.0
10-12	37.7	37.6	38.8	38.7	38.0	37.8	38.0
14-16	37.7	38.8	39.8	39.1	38.9	39.3	39.0
0-24	38.8	39.0	39.8	39.7	39.4	39.6	39.5

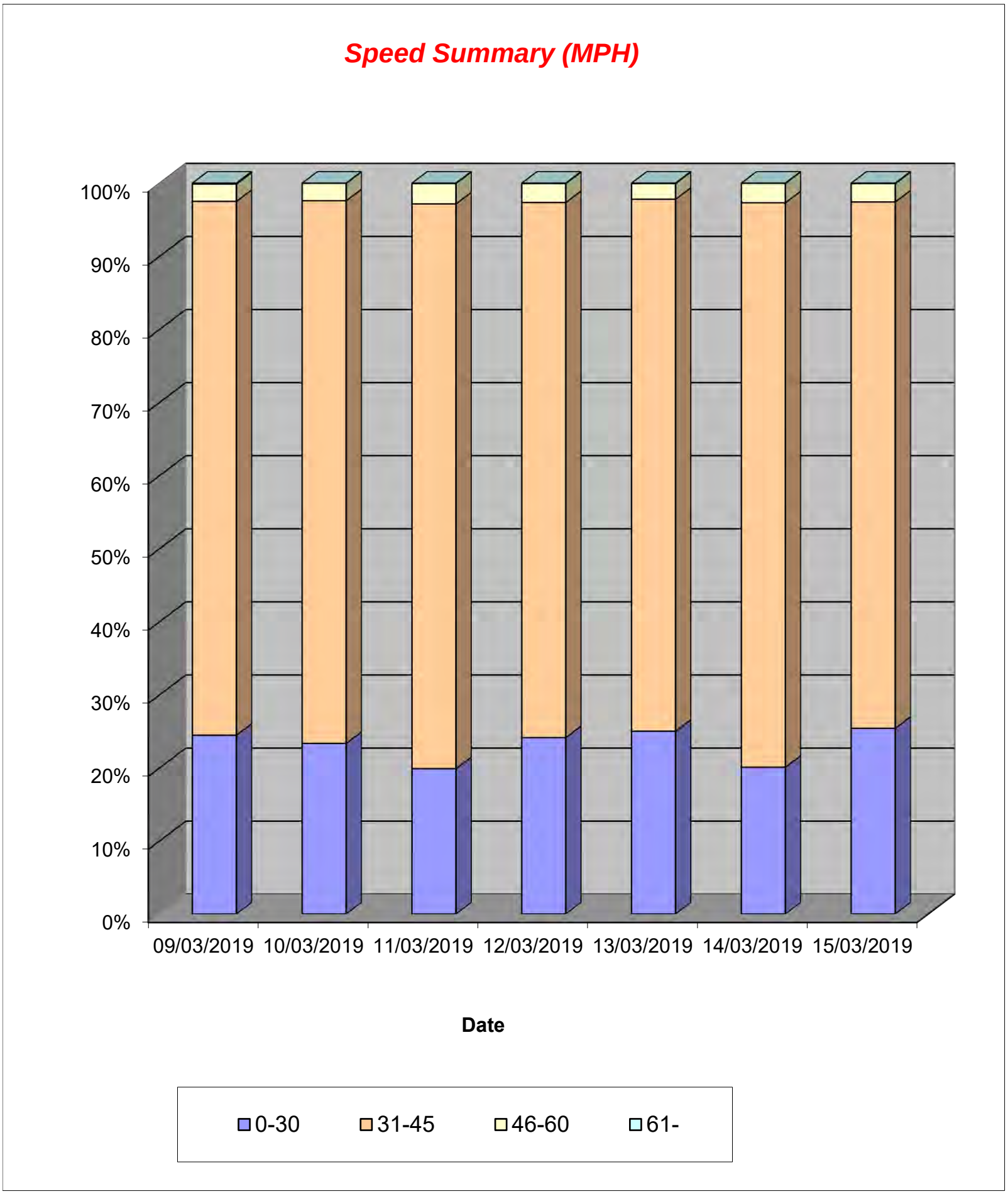
85th %ile	39.5

Banbury ATC, Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound | **Speed Summary** | **Week 1**

Speed (MPH)	09/03/2019 Saturday	10/03/2019 Sunday	11/03/2019 Monday	12/03/2019 Tuesday	13/03/2019 Wednesday	14/03/2019 Thursday	15/03/2019 Friday
0-30	693	510	707	819	848	710	858
31-45	2067	1621	2743	2482	2465	2728	2430
46-60	67	52	99	88	73	94	85
61-	3	0	1	1	1	0	1
TOTAL	**2830**	**2183**	**3550**	**3390**	**3387**	**3532**	**3374**



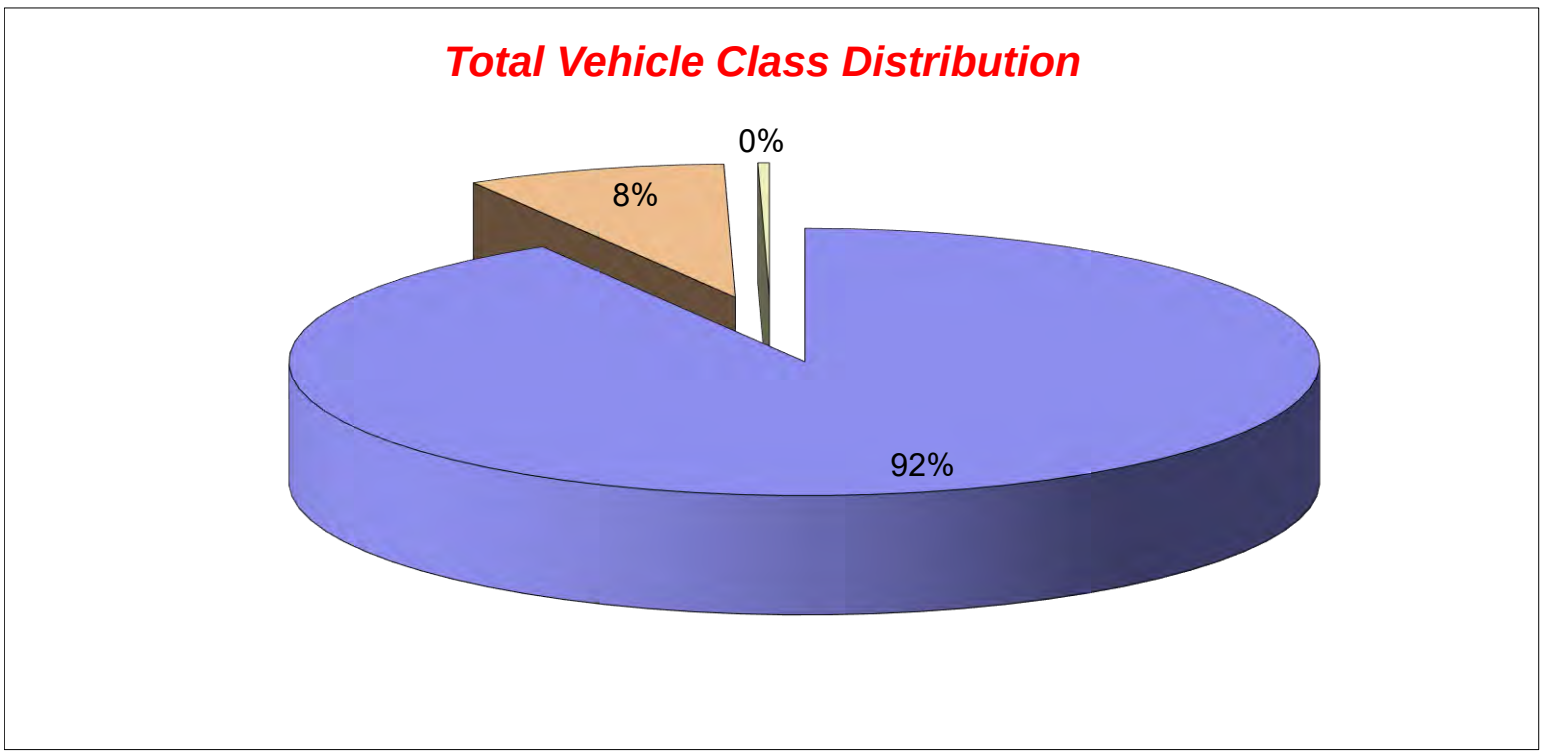
Banbury ATC, Warwick Road

Produced by Road Data Services Ltd.

Channel 1 - Northbound | **Vehicle Class** | **Week 1**

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
09/03/2019				
7-19	2264	117	3	**2384**
6-22	2562	135	3	**2700**
6-24	2636	136	3	**2775**
0-24	2686	141	3	**2830**
10/03/2019				
7-19	1756	75	1	**1832**
6-22	1993	83	1	**2077**
6-24	2024	83	1	**2108**
0-24	2094	88	1	**2183**
11/03/2019				
7-19	2626	295	17	**2938**
6-22	3083	324	19	**3426**
6-24	3116	327	19	**3462**
0-24	3201	330	19	**3550**
12/03/2019				
7-19	2472	274	13	**2759**
6-22	2909	301	13	**3223**
6-24	2988	305	13	**3306**
0-24	3066	311	13	**3390**
13/03/2019				
7-19	2444	286	9	**2739**
6-22	2902	309	11	**3222**
6-24	2973	311	11	**3295**
0-24	3054	320	13	**3387**
14/03/2019				
7-19	2611	292	17	**2920**
6-22	3064	318	19	**3401**
6-24	3102	322	19	**3443**
0-24	3187	324	21	**3532**
15/03/2019				
7-19	2469	265	9	**2743**
6-22	2912	289	9	**3210**
6-24	2983	291	9	**3283**
0-24	3067	297	10	**3374**

Average				
7-19	2377	229	10	**2616**
6-22	2775	251	11	**3037**
6-24	2832	254	11	**3096**
0-24	2908	259	11	**3178**

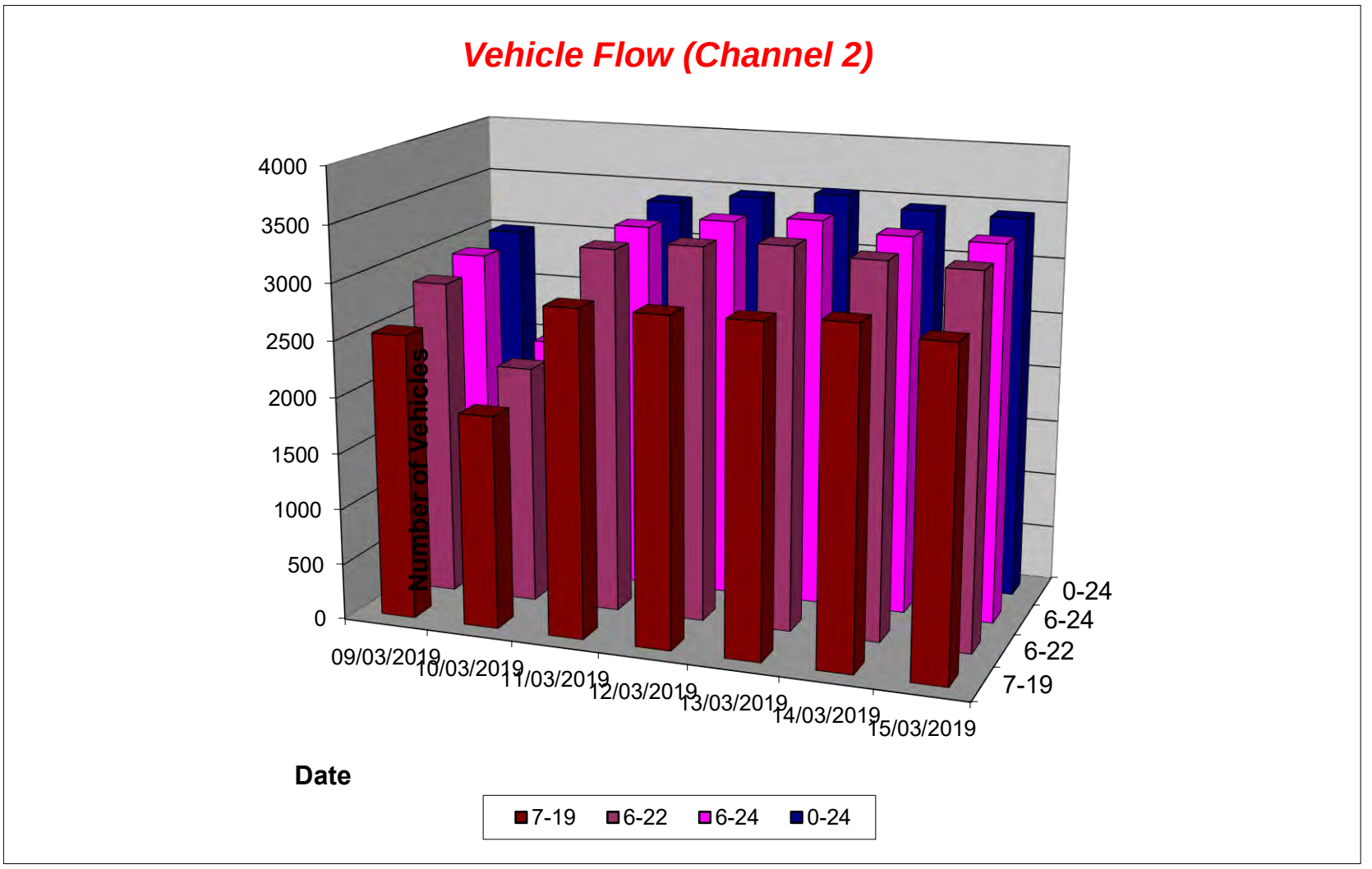


Banbury ATC, Warwick Road

Produced by Road Data Services Ltd.

Channel 2 - Southbound **Vehicle Flow** **Week 1**

Hr Ending	09/03/2019 Saturday	10/03/2019 Sunday	11/03/2019 Monday	12/03/2019 Tuesday	13/03/2019 Wednesday	14/03/2019 Thursday	15/03/2019 Friday	5 Day Ave	7 Day Ave
1	14	26	10	10	7	4	6	7	11
2	10	12	4	2	3	4	2	3	5
3	5	5	5	2	3	3	3	3	4
4	13	9	8	8	12	4	9	8	9
5	10	6	9	17	16	15	14	14	12
6	25	6	55	42	47	53	42	48	39
7	27	23	108	137	148	109	136	128	98
8	63	43	270	273	246	305	256	270	208
9	159	61	272	261	277	272	270	270	225
10	237	127	225	218	218	237	204	220	209
11	256	205	185	176	162	192	166	176	192
12	245	202	187	194	158	183	175	179	192
13	279	216	174	164	276	171	245	206	218
14	290	187	182	305	299	180	289	251	247
15	256	220	239	277	286	224	254	256	251
16	223	194	248	296	267	258	289	272	254
17	186	177	326	286	265	349	266	298	265
18	183	162	363	274	291	351	269	310	270
19	164	107	226	178	168	240	188	200	182
20	112	95	114	127	146	119	134	128	121
21	91	72	63	92	101	69	87	82	82
22	57	36	61	62	70	52	57	60	56
23	64	41	43	48	45	45	42	45	47
24	40	13	10	28	32	11	31	22	24
7-19	2541	1901	2897	2902	2913	2962	2871	2909	2712
6-22	2828	2127	3243	3320	3378	3311	3285	3307	3070
6-24	2932	2181	3296	3396	3455	3367	3358	3374	3141
0-24	3009	2245	3387	3477	3543	3450	3434	3458	3221



Banbury ATC, Warwick Road

Produced by Road Data Services Ltd.

Channel 2 - Southbound | **Average Speed** | **Week 1**

Hr Ending	09/03/2019 Saturday	10/03/2019 Sunday	11/03/2019 Monday	12/03/2019 Tuesday	13/03/2019 Wednesday	14/03/2019 Thursday	15/03/2019 Friday
1	34.2	32.8	34.8	40.5	39.5	34.3	38.6
2	31.5	32.1	35.8	36.3	40.9	36.7	40.1
3	33.2	37.6	40.6	27.0	25.5	34.8	30.4
4	30.1	28.4	33.0	29.0	32.2	27.7	31.6
5	31.2	36.3	26.8	31.5	31.1	30.4	31.8
6	33.8	37.3	32.2	31.6	31.5	31.7	31.9
7	32.4	35.4	30.5	31.0	30.9	29.9	31.1
8	31.7	31.8	26.5	24.0	24.3	25.8	23.8
9	33.4	32.4	27.8	25.0	24.3	27.9	24.2
10	29.4	30.7	27.6	27.5	26.9	27.7	27.1
11	27.4	29.5	28.9	29.0	29.5	28.6	29.7
12	27.4	29.4	30.2	29.9	25.1	30.2	24.5
13	26.5	29.2	29.2	29.2	26.2	29.1	26.9
14	24.3	30.9	29.8	24.1	23.0	29.7	24.1
15	27.4	29.9	27.3	25.8	26.6	28.0	26.6
16	27.4	29.8	26.3	24.5	25.7	26.9	25.1
17	28.4	31.0	22.1	24.2	25.0	22.0	24.5
18	29.5	28.6	23.6	24.7	25.7	24.0	25.5
19	29.8	29.5	26.7	27.9	28.5	27.1	27.4
20	31.4	29.8	31.2	28.6	28.0	30.5	28.4
21	31.6	31.3	32.3	31.0	31.6	30.9	31.0
22	32.1	31.4	33.3	32.0	31.0	33.4	31.1
23	30.3	29.5	32.7	30.8	31.6	31.3	31.1
24	32.7	36.8	38.8	33.7	34.0	38.0	33.7
10-12	27.4	29.5	29.6	29.4	27.3	29.4	27.0
14-16	27.4	29.8	26.8	25.1	26.1	27.4	25.8
0-24	28.6	30.2	27.5	26.7	26.6	27.4	26.4

Average	27.5

Channel 2 - Southbound | **85th Percentile**

Hr Ending	09/03/2019 Saturday	10/03/2019 Sunday	11/03/2019 Monday	12/03/2019 Tuesday	13/03/2019 Wednesday	14/03/2019 Thursday	15/03/2019 Friday
1	40.9	41.2	40.4	46.2	44.5	37.9	43.6
2	42.9	38.7	41.2	39.0	44.4	39.9	43.5
3	38.3	40.7	48.9	30.4	26.2	39.4	32.7
4	36.4	34.9	40.9	35.7	41.5	31.4	39.4
5	39.0	40.0	35.0	36.0	36.1	35.5	39.3
6	40.2	46.7	38.4	38.5	38.2	38.3	38.9
7	39.9	41.3	38.9	39.4	37.3	37.8	38.7
8	40.8	38.8	38.1	34.3	33.3	36.3	33.8
9	39.2	40.1	36.6	34.1	34.0	36.7	33.7
10	36.6	38.4	36.1	34.9	34.5	38.1	34.8
11	36.8	37.9	37.5	35.7	35.5	36.3	35.6
12	35.4	37.5	36.8	37.5	33.3	36.5	33.5
13	34.7	37.4	37.8	36.9	35.6	35.3	36.4
14	33.5	38.6	35.8	34.2	31.2	35.2	33.7
15	36.7	38.4	36.7	34.7	35.3	36.4	35.2
16	37.3	37.9	34.9	33.8	34.1	35.3	34.1
17	35.7	38.2	31.1	34.0	34.1	31.6	34.2
18	36.6	36.8	32.0	33.5	34.1	32.4	34.1
19	37.6	35.1	34.7	37.3	36.0	34.7	35.5
20	38.4	36.3	35.8	35.5	34.7	35.7	35.2
21	38.8	37.8	38.6	36.7	38.9	36.5	37.5
22	37.1	38.3	39.0	38.8	35.7	40.4	39.1
23	37.9	35.0	40.3	36.9	36.1	39.0	36.7
24	39.9	42.8	43.2	39.4	37.6	39.3	40.1
10-12	36.3	37.8	37.1	36.7	34.9	36.6	34.8
14-16	37.0	38.2	35.3	34.3	34.9	35.8	34.7
0-24	37.2	38.2	36.1	35.3	35.0	35.7	35.0

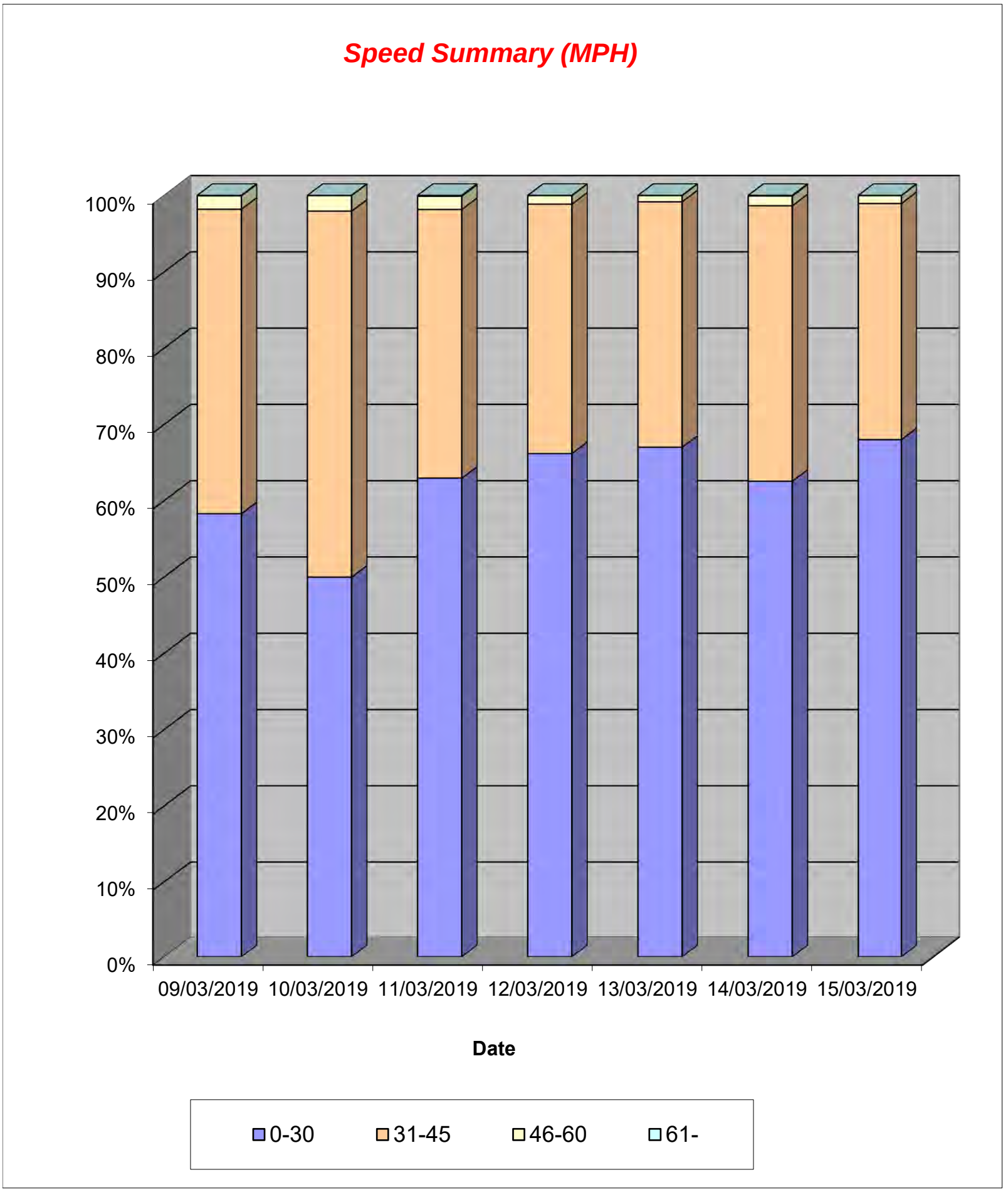
85th %ile	35.8

Banbury ATC, Warwick Road

Produced by Road Data Services Ltd.

Channel 2 - Southbound **Speed Summary** **Week 1**

Speed (MPH)	09/03/2019 Saturday	10/03/2019 Sunday	11/03/2019 Monday	12/03/2019 Tuesday	13/03/2019 Wednesday	14/03/2019 Thursday	15/03/2019 Friday
0-30	1754	1122	2132	2301	2374	2158	2335
31-45	1201	1077	1193	1137	1140	1246	1063
46-60	53	46	59	39	29	44	36
61-	1	0	3	0	0	2	0
TOTAL	**3009**	**2245**	**3387**	**3477**	**3543**	**3450**	**3434**



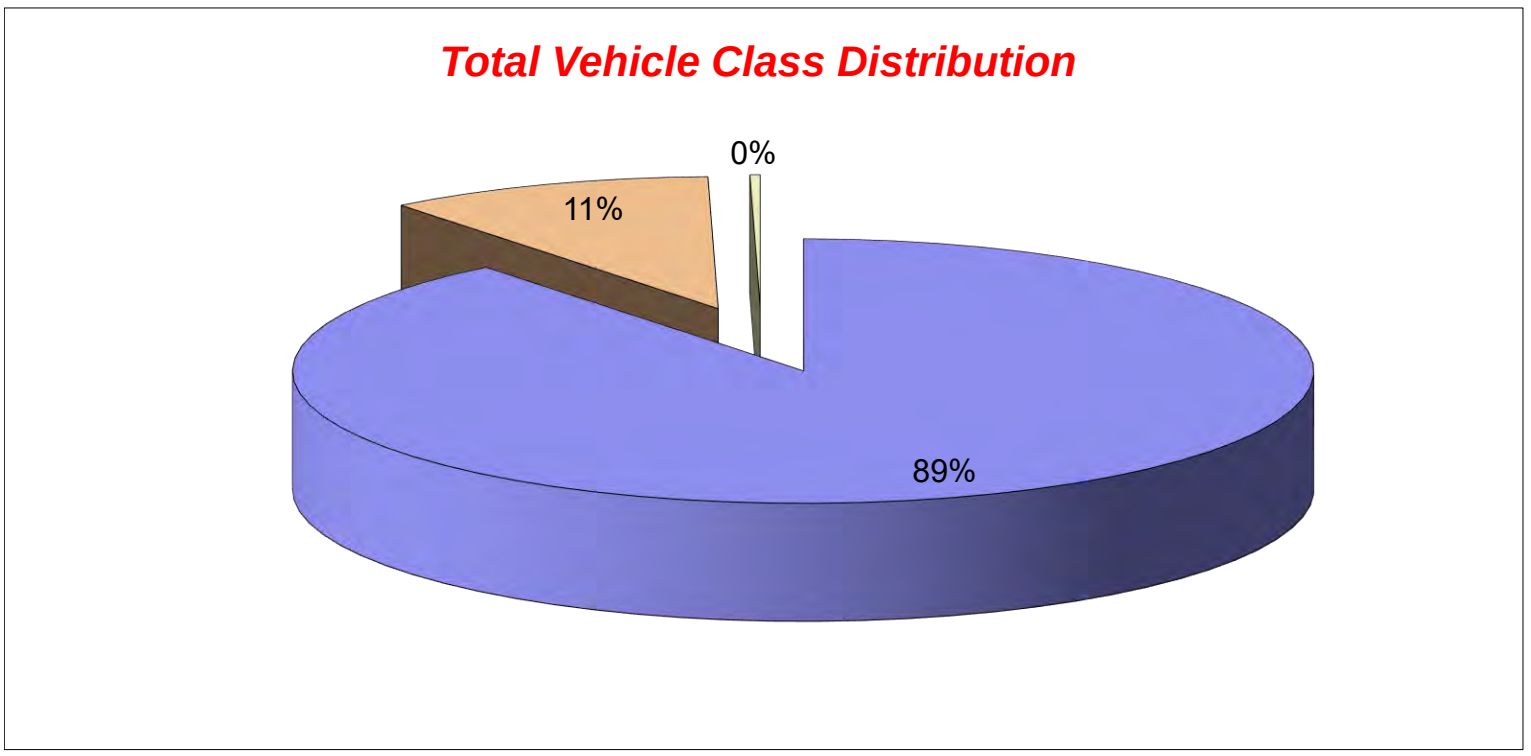
Banbury ATC, Warwick Road

Produced by Road Data Services Ltd.

Channel 2 - Southbound | **Vehicle Class** | **Week 1**

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
09/03/2019				
7-19	2345	192	4	**2541**
6-22	2615	209	4	**2828**
6-24	2715	213	4	**2932**
0-24	2782	223	4	**3009**
10/03/2019				
7-19	1776	121	4	**1901**
6-22	1985	138	4	**2127**
6-24	2036	141	4	**2181**
0-24	2095	146	4	**2245**
11/03/2019				
7-19	2511	370	16	**2897**
6-22	2828	399	16	**3243**
6-24	2877	403	16	**3296**
0-24	2964	407	16	**3387**
12/03/2019				
7-19	2550	343	9	**2902**
6-22	2934	375	11	**3320**
6-24	3008	377	11	**3396**
0-24	3080	386	11	**3477**
13/03/2019				
7-19	2587	319	7	**2913**
6-22	3021	348	9	**3378**
6-24	3096	350	9	**3455**
0-24	3172	362	9	**3543**
14/03/2019				
7-19	2540	404	18	**2962**
6-22	2854	439	18	**3311**
6-24	2907	442	18	**3367**
0-24	2983	447	20	**3450**
15/03/2019				
7-19	2538	326	7	**2871**
6-22	2924	352	9	**3285**
6-24	2994	355	9	**3358**
0-24	3061	364	9	**3434**

Average				
7-19	2407	296	9	**2712**
6-22	2737	323	10	**3070**
6-24	2805	326	10	**3141**
0-24	2877	334	10	**3221**



Appendix D: Concept Masterplan

- Site Boundary (12.63ha)
- 1 Arrival Square
- 2 Attenuation Pond
- 3 Wildflower Meadow and Oak Parkland
- 4 Woodland Planting
- 5 Public Right of Way Integrated within Green Corridor
- 6 Vehicular Access Point
- 7 Main Street With Green Verge, Including Rain Gardens
- 8 Neighbourhood Green with Swale
- 9 Natural Play Space
- 10 Informal Kick-about Space
- 11 Mown Grass Trails

client
Vistry Homes Ltd

project title
Land to the East of Warwick Road, Banbury

drawing title
Concept Masterplan

date	06 OCTOBER 2022	drawn by	NBo
drawing number	edp3253_d038d	checked	RAl
scale	1:5,000 @ A3	QA	RBa

the environmenta dimens on partnership
Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk

Appendix E: Proposed Site Access

KEY

- Site Boundary
- Extent of Adopted Highway
- Visibility Splay: 2.4m x 160m *(as per DMRB guidance for 50mph speed limit)*

Rev	Date	Description	By	Apvd
P3	29.04.22	RTL Amendment	JF	RM
P2	17.02.22	RTL Amendment	JF	RM
P1	28.01.2	Preliminary Issue	JF	RM

PROJECT:
WARWICK ROAD, BANBURY

TITLE:
PROPOSED VEHICULAR ACCESS
OPTION 1 (50MPH)

CLIENT:
BOVIS HOMES

SCALE@A1:
1:1000

PROJECT REF:
17279

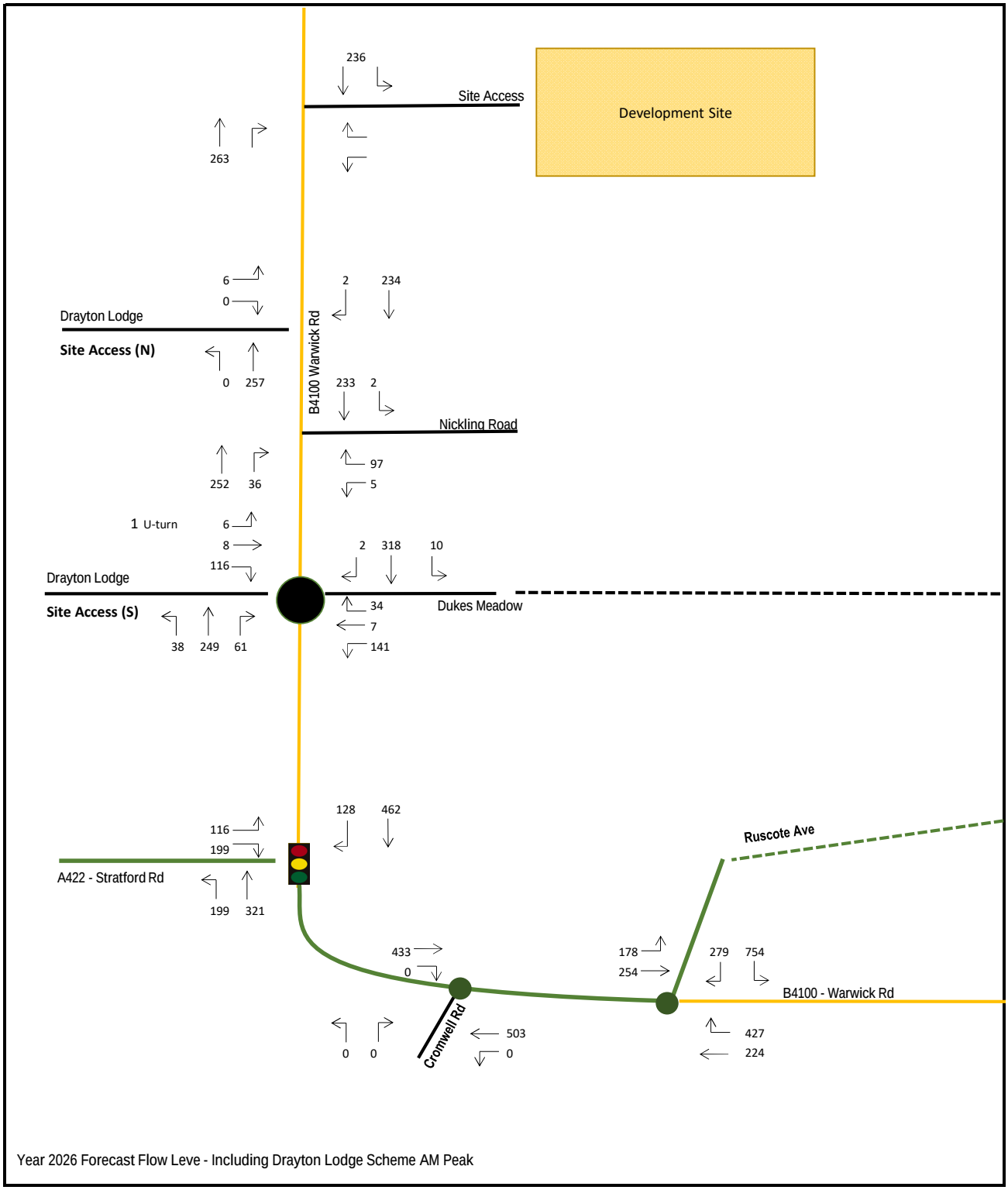
DRAWING No: 17279_T_003

REV: P3

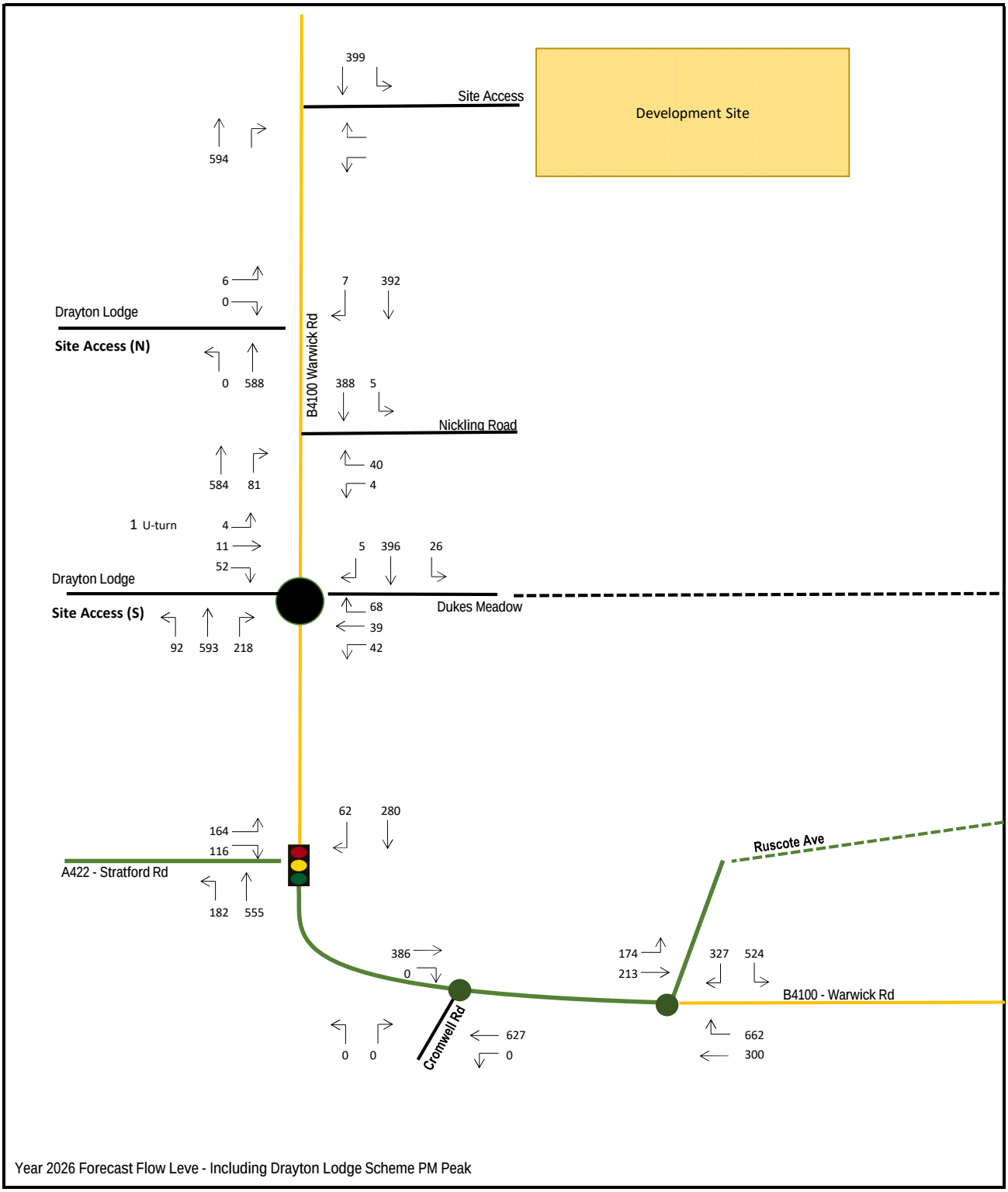
Revision Referencing
P = Preliminary A = Approval T = Tender C = Construction

Bristol, Cardiff, Plymouth, Winchester
St James Court, St James Parade, Bristol BS1 3LH
jubb.uk.com
+44(0)117 922 6266

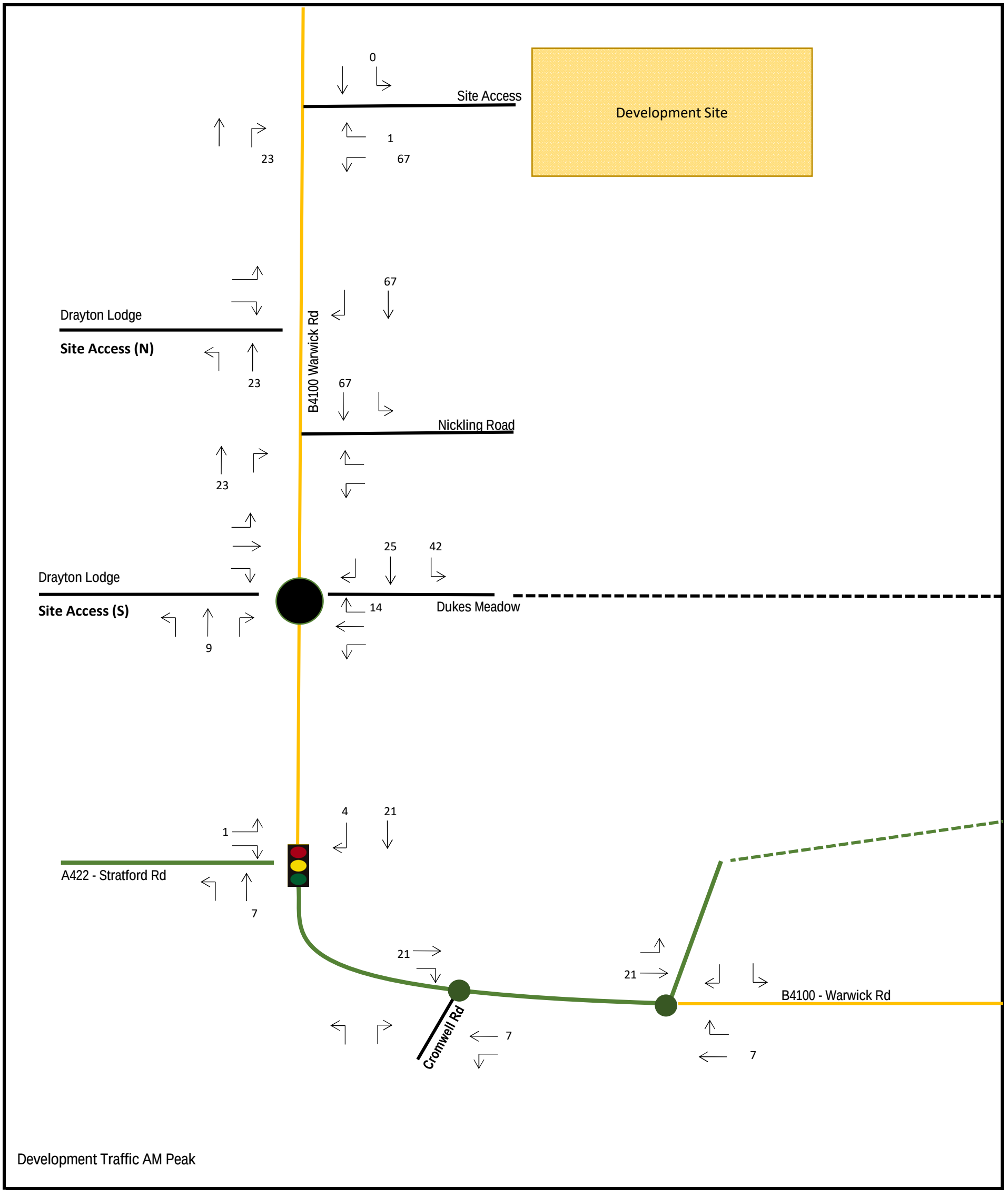
Appendix F: Vehicle Traffic Diagrams

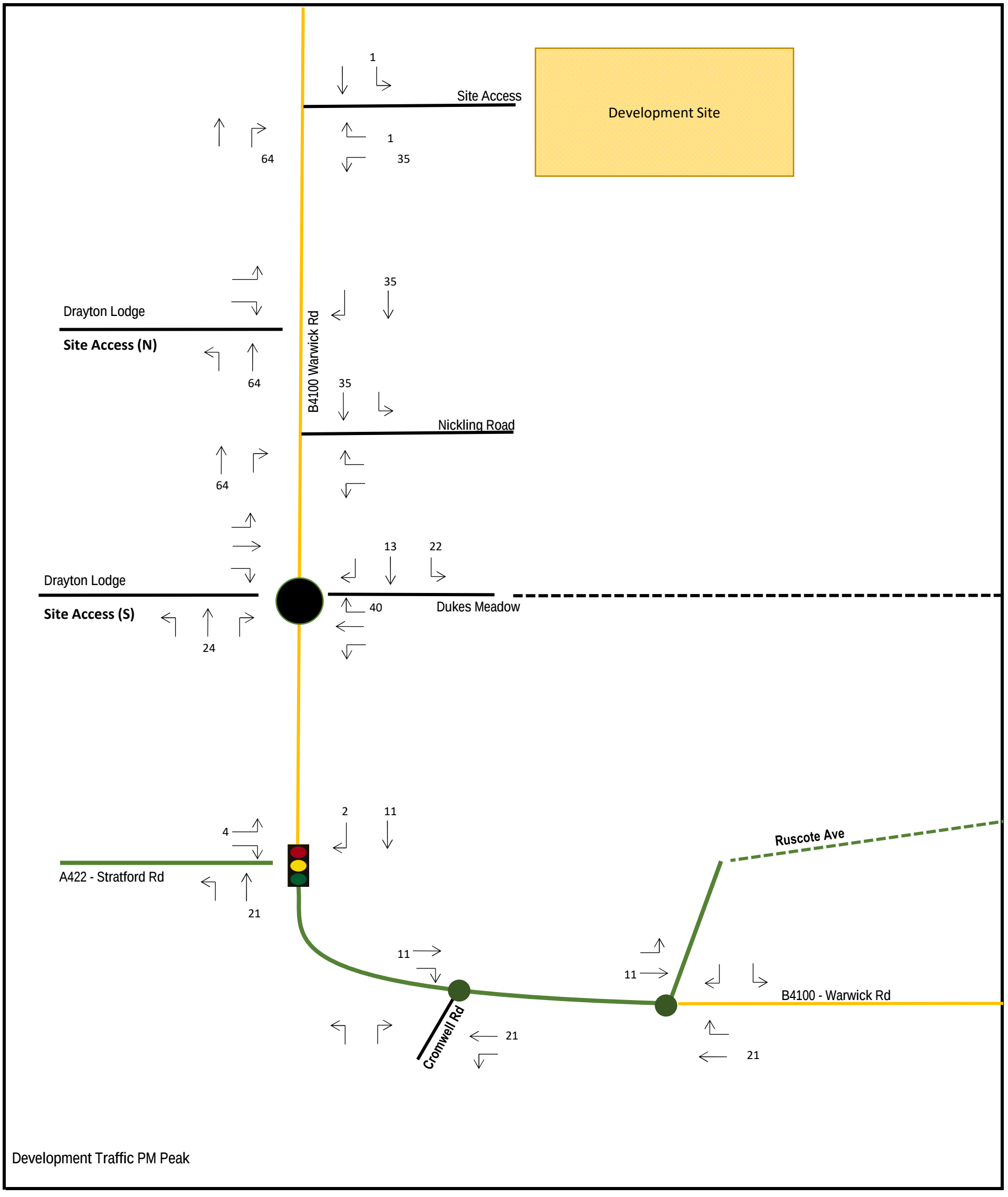


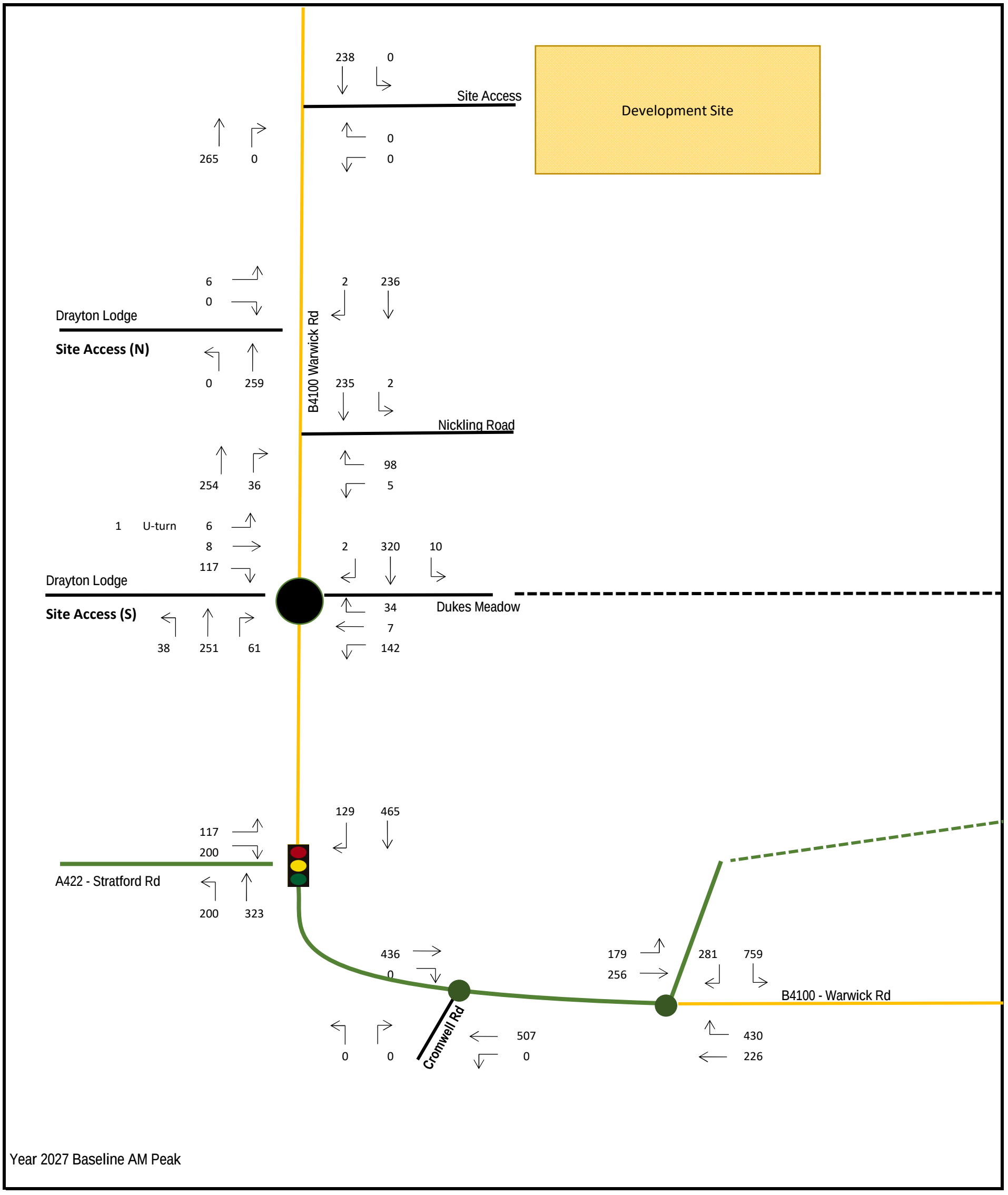
Year 2026 Forecast Flow Leve - Including Drayton Lodge Scheme AM Peak

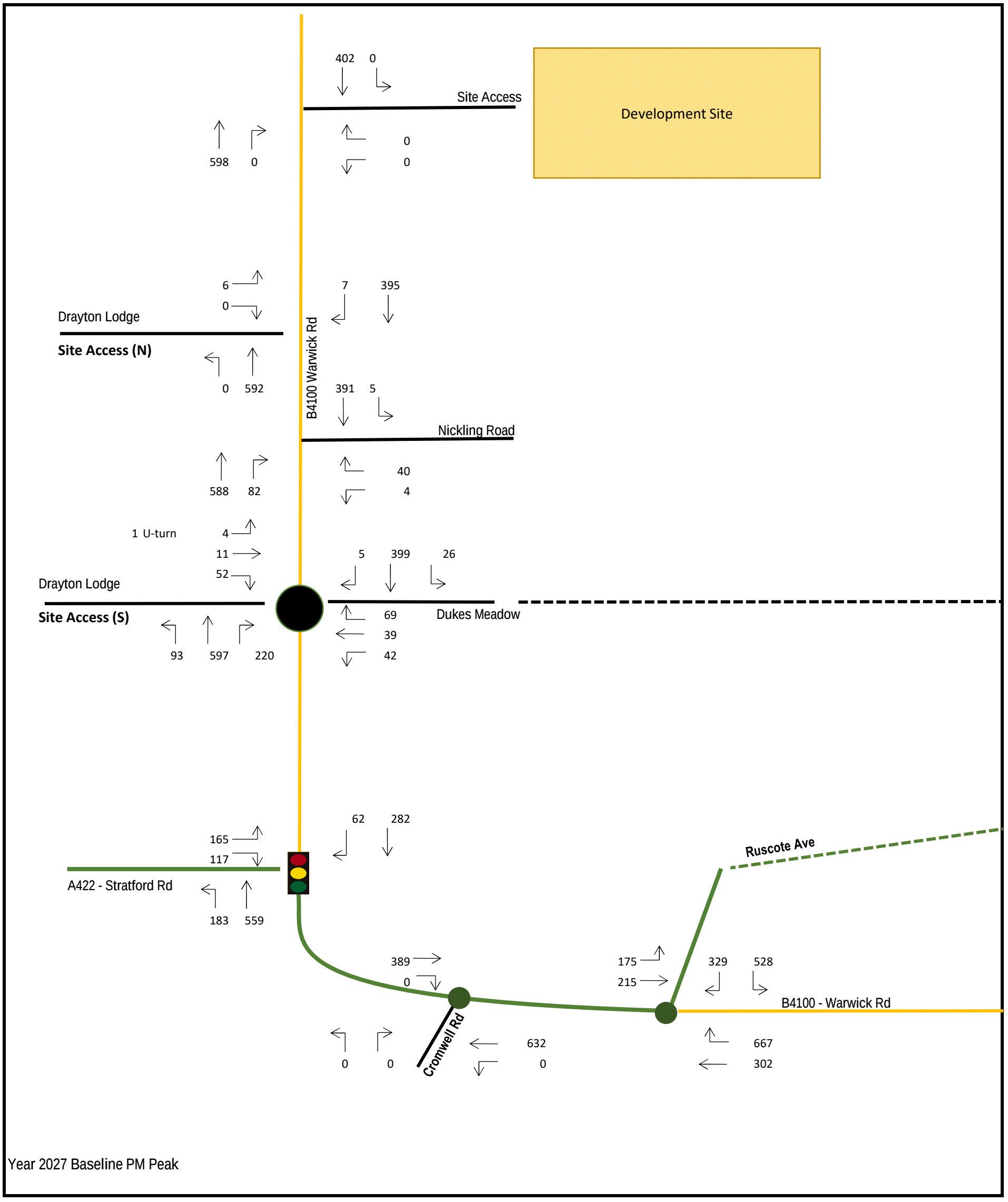


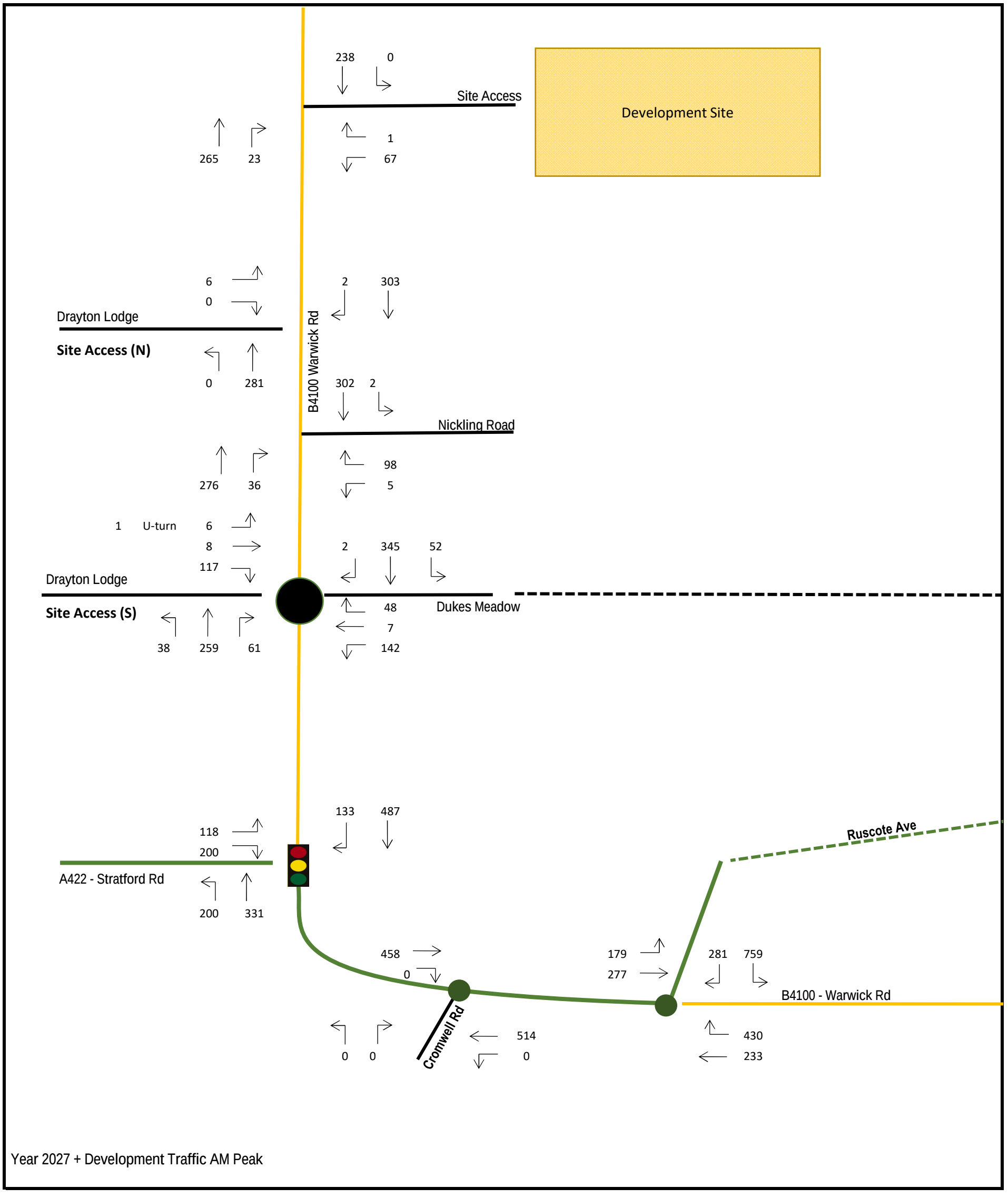
Year 2026 Forecast Flow Leve - Including Drayton Lodge Scheme PM Peak

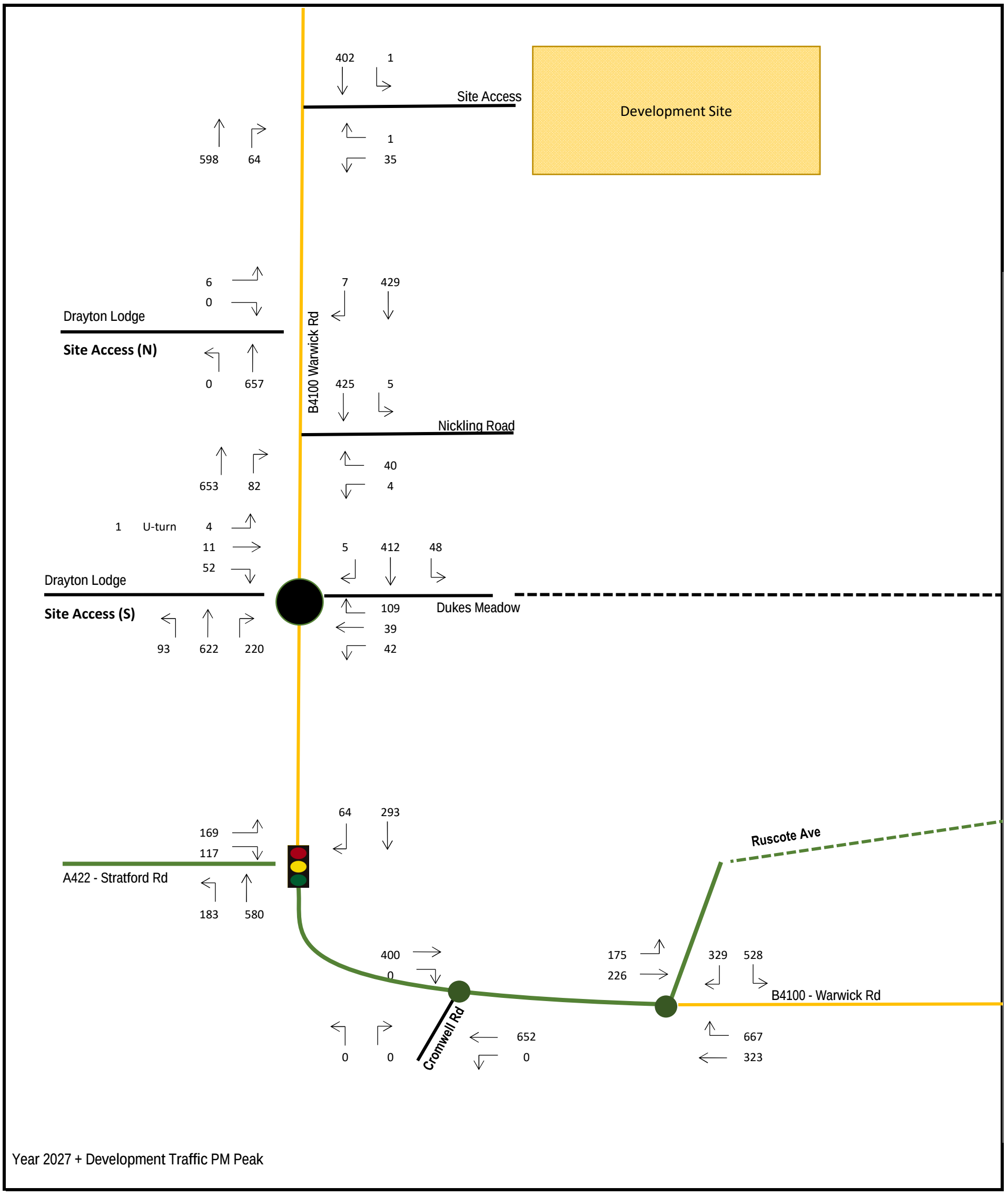

0
Site Access
Development Site
1
23
67
67
Drayton Lodge
Site Access (N)
B4100 Warwick Rd
23
67
Nickling Road
23
25
42
Drayton Lodge
Site Access (S)
14
Dukes Meadow
9
4
21
1
A422 - Stratford Rd
7
21
21
B4100 - Warwick Rd
Cromwell Rd
7
7
Development Traffic AM Peak


1
Site Access
Development Site
64
1
35
35
Drayton Lodge
Site Access (N)
64
B4100 Warwick Rd
35
Nickling Road
64
13
22
Drayton Lodge
Site Access (S)
40
Dukes Meadow
24
2
11
4
Ruscote Ave
A422 - Stratford Rd
21
11
11
B4100 - Warwick Rd
Cromwell Rd
21
21
Development Traffic PM Peak


Development Site
Site Access
238
0
265
0
0
0
Drayton Lodge
6
0
Site Access (N)
0
259
B4100 Warwick Rd
2
236
235
2
Nickling Road
98
5
254
36
1
U-turn
6
8
117
Drayton Lodge
Site Access (S)
38
251
61
2
320
10
34
7
142
Dukes Meadow
129
465
117
200
A422 - Stratford Rd
200
323
436
0
0
0
Cromwell Rd
507
0
179
256
281
759
B4100 - Warwick Rd
430
226
Year 2027 Baseline AM Peak


Site Access
402
0
598
0
0
0
Development Site
Drayton Lodge
Site Access (N)
6
0
0
592
B4100 Warwick Rd
7
395
391
5
Nickling Road
588
82
40
4
1 U-turn
4
11
52
Drayton Lodge
Site Access (S)
93
597
220
5
399
26
69
39
42
Dukes Meadow
165
117
A422 - Stratford Rd
183
559
62
282
Ruscote Ave
389
0
0
0
Cromwell Rd
632
0
175
215
329
528
667
302
B4100 - Warwick Rd
Year 2027 Baseline PM Peak


Development Site
Site Access
238
0
1
67
265
23
B4100 Warwick Rd
Drayton Lodge
6
0
Site Access (N)
0
281
2
303
302
2
Nickling Road
98
5
276
36
1
U-turn
6
8
117
Drayton Lodge
Site Access (S)
38
259
61
2
345
52
48
7
142
Dukes Meadow
118
200
A422 - Stratford Rd
200
331
133
487
458
0
0
0
514
0
Cromwell Rd
Ruscote Ave
179
277
281
759
B4100 - Warwick Rd
430
233
Year 2027 + Development Traffic AM Peak


Development Site
Site Access
402
1
1
35
598
64
Drayton Lodge
6
0
Site Access (N)
0
657
7
429
B4100 Warwick Rd
425
5
Nickling Road
40
4
653
82
1
U-turn
4
11
52
Drayton Lodge
Site Access (S)
93
622
220
5
412
48
109
39
42
Dukes Meadow
169
117
A422 - Stratford Rd
183
580
64
293
Ruscote Ave
400
0
175
226
329
528
B4100 - Warwick Rd
Cromwell Rd
0
0
652
0
667
323
Year 2027 + Development Traffic PM Peak

Appendix G: Junction 1: Warwick Road/Nickling Road Capacity Assessment

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.0.1499

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: Warwick Road - Nickling Road 13072022.j10
Path: Y:\PROJECT FOLDER\17279 Warwick Road, Banbury\Calculations\Transport\Modelling
Report generation date: 13/07/2022 16:42:02

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - Year 2027 Baseline									
Stream B-AC	D3	0.3	8.91	0.20	A	D4	0.1	10.41	0.11	B
Stream C-AB		0.1	5.86	0.05	A		0.2	6.80	0.13	A
	A1 - Year 2027 + Dev									
Stream B-AC	D5	0.3	9.46	0.21	A	D6	0.1	11.11	0.12	B
Stream C-AB		0.1	6.05	0.06	A		0.2	6.92	0.14	A

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	Warwick Rd - Nickling Rd
Location	Banbury
Site number	
Date	01/04/2019
Version	A
Status	Draft
Identifier	
Client	
Jobnumber	W15219
Enumerator	sradford
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

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	Year 2027 Baseline	AM	FLAT	07:45	09:15	90	15	✓
D4	Year 2027 Baseline	PM	FLAT	16:45	18:15	90	15	✓
D5	Year 2027 + Dev	AM	FLAT	07:45	09:15	90	15	✓
D6	Year 2027 + Dev	PM	FLAT	16:45	18:15	90	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

(Default Analysis Set) - Year 2027 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	Two-way	Two-way		1.79	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.79	A

Arms

Arms

Arm	Name	Description	Arm type
A	Warwick Road North		Major
B	Site Access		Minor
C	Warwick Road South		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Warwick Road South	6.00		✓	3.00	156.0	✓	6.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane	3.60	120	152

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	630	0.115	0.290	0.183	0.415
B-C	763	0.117	0.296	-	-
C-B	722	0.280	0.280	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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 period length (min)	Time segment length (min)	Run automatically
D3	Year 2027 Baseline	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Warwick Road North		FLAT	✓	237	100.000
B - Site Access		FLAT	✓	103	100.000
C - Warwick Road South		FLAT	✓	290	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Warwick Road North	B - Site Access	C - Warwick Road South
From	A - Warwick Road North	0	2	235
	B - Site Access	98	0	5
	C - Warwick Road South	254	36	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Warwick Road North	B - Site Access	C - Warwick Road South
From	A - Warwick Road North	0	0	4
	B - Site Access	0	0	2
	C - Warwick Road South	9	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.20	8.91	0.3	A	103	155
C-AB	0.05	5.86	0.1	A	36	54
C-A					254	381
A-B					2	3
A-C					235	353

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	508	0.203	102	0.0	0.3	8.863	A
C-AB	36	9	656	0.055	36	0.0	0.1	5.863	A
C-A	254	64			254				
A-B	2	0.50			2				
A-C	235	59			235				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	507	0.203	103	0.3	0.3	8.908	A
C-AB	36	9	656	0.055	36	0.1	0.1	5.865	A
C-A	254	64			254				
A-B	2	0.50			2				
A-C	235	59			235				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	507	0.203	103	0.3	0.3	8.908	A
C-AB	36	9	656	0.055	36	0.1	0.1	5.865	A
C-A	254	64			254				
A-B	2	0.50			2				
A-C	235	59			235				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	507	0.203	103	0.3	0.3	8.908	A
C-AB	36	9	656	0.055	36	0.1	0.1	5.865	A
C-A	254	64			254				
A-B	2	0.50			2				
A-C	235	59			235				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	507	0.203	103	0.3	0.3	8.908	A
C-AB	36	9	656	0.055	36	0.1	0.1	5.865	A
C-A	254	64			254				
A-B	2	0.50			2				
A-C	235	59			235				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	507	0.203	103	0.3	0.3	8.908	A
C-AB	36	9	656	0.055	36	0.1	0.1	5.865	A
C-A	254	64			254				
A-B	2	0.50			2				
A-C	235	59			235				

(Default Analysis Set) - Year 2027 Baseline, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	Two-way	Two-way		0.92	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.92	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	Year 2027 Baseline	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Warwick Road North		FLAT	✓	396	100.000
B - Site Access		FLAT	✓	44	100.000
C - Warwick Road South		FLAT	✓	670	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Warwick Road North	B - Site Access	C - Warwick Road South
From	A - Warwick Road North	0	5	391
	B - Site Access	40	0	4
	C - Warwick Road South	588	82	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Warwick Road North	B - Site Access	C - Warwick Road South
From	A - Warwick Road North	0	0	2
	B - Site Access	0	0	0
	C - Warwick Road South	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.11	10.41	0.1	B	44	66
C-AB	0.13	6.80	0.2	A	82	123
C-A					588	882
A-B					5	8
A-C					391	587

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	390	0.113	43	0.0	0.1	10.377	B
C-AB	82	21	611	0.134	81	0.0	0.2	6.786	A
C-A	588	147			588				
A-B	5	1			5				
A-C	391	98			391				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	390	0.113	44	0.1	0.1	10.413	B
C-AB	82	21	611	0.134	82	0.2	0.2	6.800	A
C-A	588	147			588				
A-B	5	1			5				
A-C	391	98			391				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	390	0.113	44	0.1	0.1	10.413	B
C-AB	82	21	611	0.134	82	0.2	0.2	6.800	A
C-A	588	147			588				
A-B	5	1			5				
A-C	391	98			391				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	390	0.113	44	0.1	0.1	10.413	B
C-AB	82	21	611	0.134	82	0.2	0.2	6.800	A
C-A	588	147			588				
A-B	5	1			5				
A-C	391	98			391				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	390	0.113	44	0.1	0.1	10.413	B
C-AB	82	21	611	0.134	82	0.2	0.2	6.800	A
C-A	588	147			588				
A-B	5	1			5				
A-C	391	98			391				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	390	0.113	44	0.1	0.1	10.413	B
C-AB	82	21	611	0.134	82	0.2	0.2	6.800	A
C-A	588	147			588				
A-B	5	1			5				
A-C	391	98			391				

(Default Analysis Set) - Year 2027 + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	Two-way	Two-way		1.66	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.66	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	Year 2027 + Dev	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Warwick Road North		FLAT	✓	304	100.000
B - Site Access		FLAT	✓	103	100.000
C - Warwick Road South		FLAT	✓	312	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Warwick Road North	B - Site Access	C - Warwick Road South
From	A - Warwick Road North	0	2	302
	B - Site Access	98	0	5
	C - Warwick Road South	276	36	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Warwick Road North	B - Site Access	C - Warwick Road South
From	A - Warwick Road North	0	0	4
	B - Site Access	0	0	2
	C - Warwick Road South	9	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.21	9.46	0.3	A	103	155
C-AB	0.06	6.05	0.1	A	36	54
C-A					276	414
A-B					2	3
A-C					302	453

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	484	0.213	102	0.0	0.3	9.403	A
C-AB	36	9	637	0.057	36	0.0	0.1	6.042	A
C-A	276	69			276				
A-B	2	0.50			2				
A-C	302	76			302				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	484	0.213	103	0.3	0.3	9.457	A
C-AB	36	9	637	0.057	36	0.1	0.1	6.048	A
C-A	276	69			276				
A-B	2	0.50			2				
A-C	302	76			302				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	484	0.213	103	0.3	0.3	9.457	A
C-AB	36	9	637	0.057	36	0.1	0.1	6.048	A
C-A	276	69			276				
A-B	2	0.50			2				
A-C	302	76			302				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	484	0.213	103	0.3	0.3	9.457	A
C-AB	36	9	637	0.057	36	0.1	0.1	6.048	A
C-A	276	69			276				
A-B	2	0.50			2				
A-C	302	76			302				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	484	0.213	103	0.3	0.3	9.457	A
C-AB	36	9	637	0.057	36	0.1	0.1	6.048	A
C-A	276	69			276				
A-B	2	0.50			2				
A-C	302	76			302				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	484	0.213	103	0.3	0.3	9.457	A
C-AB	36	9	637	0.057	36	0.1	0.1	6.048	A
C-A	276	69			276				
A-B	2	0.50			2				
A-C	302	76			302				

(Default Analysis Set) - Year 2027 + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	Two-way	Two-way		0.87	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.87	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	Year 2027 + Dev	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Warwick Road North		FLAT	✓	430	100.000
B - Site Access		FLAT	✓	44	100.000
C - Warwick Road South		FLAT	✓	735	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Warwick Road North	B - Site Access	C - Warwick Road South
From	A - Warwick Road North	0	5	425
	B - Site Access	40	0	4
	C - Warwick Road South	653	82	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Warwick Road North	B - Site Access	C - Warwick Road South
From	A - Warwick Road North	0	0	2
	B - Site Access	0	0	0
	C - Warwick Road South	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.12	11.11	0.1	B	44	66
C-AB	0.14	6.92	0.2	A	82	123
C-A					653	979
A-B					5	8
A-C					425	638

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	368	0.120	43	0.0	0.1	11.069	B
C-AB	82	21	602	0.136	81	0.0	0.2	6.908	A
C-A	653	163			653				
A-B	5	1			5				
A-C	425	106			425				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	368	0.120	44	0.1	0.1	11.112	B
C-AB	82	21	602	0.136	82	0.2	0.2	6.924	A
C-A	653	163			653				
A-B	5	1			5				
A-C	425	106			425				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	368	0.120	44	0.1	0.1	11.112	B
C-AB	82	21	602	0.136	82	0.2	0.2	6.924	A
C-A	653	163			653				
A-B	5	1			5				
A-C	425	106			425				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	368	0.120	44	0.1	0.1	11.112	B
C-AB	82	21	602	0.136	82	0.2	0.2	6.924	A
C-A	653	163			653				
A-B	5	1			5				
A-C	425	106			425				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	368	0.120	44	0.1	0.1	11.112	B
C-AB	82	21	602	0.136	82	0.2	0.2	6.924	A
C-A	653	163			653				
A-B	5	1			5				
A-C	425	106			425				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	368	0.120	44	0.1	0.1	11.112	B
C-AB	82	21	602	0.136	82	0.2	0.2	6.924	A
C-A	653	163			653				
A-B	5	1			5				
A-C	425	106			425				

Appendix H: Junction 2: Warwick Road/Dukes Meadow Roundabout Capacity Assessment

Junctions 10

ARCADY 10 - Roundabout Module

Filename: Warwick Rd - Dukes Meadow Proposed 13072022.j10
Path: Y:\PROJECT FOLDER\17279 Warwick Road, Banbury\Calculations\Transport\Modelling
Report generation date: 13/07/2022 16:37:57

»(Default Analysis Set) - Year 2027 Base Flow, AM
»(Default Analysis Set) - Year 2027 Base Flow, PM
»(Default Analysis Set) - Year 2027 + Dev Flow, AM
»(Default Analysis Set) - Year 2027 + Dev Flow, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	A1 -Year 2027 Base Flow									
A - Warwick Rd (N)	D1	0.4	4.12	0.27	A	D2	0.6	4.90	0.37	A
B - Dukes Meadow Drive		0.2	3.36	0.14	A		0.1	3.29	0.12	A
C - Warwick Rd (S)		0.3	3.43	0.24	A		1.9	7.54	0.65	A
D - Site Access		0.1	3.48	0.11	A		0.1	4.54	0.08	A
	A1 - Year 2027 + Dev Flow									
A - Warwick Rd (N)	D3	0.5	4.44	0.32	A	D4	0.7	5.14	0.40	A
B - Dukes Meadow Drive		0.2	3.47	0.16	A		0.2	3.44	0.15	A
C - Warwick Rd (S)		0.3	3.50	0.24	A		2.0	7.84	0.66	A
D - Site Access		0.1	3.52	0.11	A		0.1	4.77	0.08	A

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	Proposed Warwick Rd/Dukes Meadow Drive RA
Location	Banbury
Site number	
Date	01/10/2018
Version	
Status	(new file)
Identifier	
Client	Trinity College, Oxford
Jobnumber	W15219
Enumerator	sradford
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

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	Year 2027 Base Flow	AM	FLAT	07:45	09:15	90	15	✓
D2	Year 2027 Base Flow	PM	FLAT	16:45	18:15	90	15	✓
D3	Year 2027 + Dev Flow	AM	FLAT	07:45	09:15	90	15	✓
D4	Year 2027 + Dev Flow	PM	FLAT	16:45	18:15	90	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

(Default Analysis Set) - Year 2027 Base Flow, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout		A, B, C, D	3.65	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.65	A

Arms

Arms

Arm	Name	Description	No give-way line
A	Warwick Rd (N)		
B	Dukes Meadow Drive		
C	Warwick Rd (S)		
D	Site Access		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - Warwick Rd (N)	3.60	6.00	6.0	19.0	42.0	45.0		
B - Dukes Meadow Drive	3.55	5.80	11.0	45.0	42.0	30.0		
C - Warwick Rd (S)	3.25	6.25	18.0	20.0	42.0	45.0		
D - Site Access	3.00	6.00	10.0	30.0	42.0	37.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Warwick Rd (N)	0.548	1333
B - Dukes Meadow Drive	0.611	1528
C - Warwick Rd (S)	0.581	1495
D - Site Access	0.567	1362

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 period length (min)	Time segment length (min)	Run automatically
D1	Year 2027 Base Flow	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Warwick Rd (N)		FLAT	✓	332	100.000
B - Dukes Meadow Drive		FLAT	✓	179	100.000
C - Warwick Rd (S)		FLAT	✓	350	100.000
D - Site Access		FLAT	✓	131	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Warwick Rd (N)	B - Dukes Meadow Drive	C - Warwick Rd (S)	D - Site Access
From	A - Warwick Rd (N)	0	10	320	2
	B - Dukes Meadow Drive	34	0	142	3
	C - Warwick Rd (S)	251	61	0	38
	D - Site Access	6	8	117	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Warwick Rd (N)	B - Dukes Meadow Drive	C - Warwick Rd (S)	D - Site Access
From	A - Warwick Rd (N)	0	0	3	0
	B - Dukes Meadow Drive	1	0	1	0
	C - Warwick Rd (S)	10	0	0	0
	D - Site Access	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Warwick Rd (N)	0.27	4.12	0.4	A	332	498
B - Dukes Meadow Drive	0.14	3.36	0.2	A	179	269
C - Warwick Rd (S)	0.24	3.43	0.3	A	350	525
D - Site Access	0.11	3.48	0.1	A	131	197

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	332	83	185	1231	0.270	330	290	0.0	0.4	4.105	A
B - Dukes Meadow Drive	179	45	437	1261	0.142	178	79	0.0	0.2	3.356	A
C - Warwick Rd (S)	350	88	39	1473	0.238	349	577	0.0	0.3	3.420	A
D - Site Access	131	33	345	1166	0.112	130	43	0.0	0.1	3.474	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	332	83	186	1231	0.270	332	291	0.4	0.4	4.120	A
B - Dukes Meadow Drive	179	45	439	1260	0.142	179	79	0.2	0.2	3.362	A
C - Warwick Rd (S)	350	88	39	1473	0.238	350	579	0.3	0.3	3.428	A
D - Site Access	131	33	346	1165	0.112	131	43	0.1	0.1	3.479	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	332	83	186	1231	0.270	332	291	0.4	0.4	4.120	A
B - Dukes Meadow Drive	179	45	439	1260	0.142	179	79	0.2	0.2	3.362	A
C - Warwick Rd (S)	350	88	39	1473	0.238	350	579	0.3	0.3	3.428	A
D - Site Access	131	33	346	1165	0.112	131	43	0.1	0.1	3.479	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	332	83	186	1231	0.270	332	291	0.4	0.4	4.120	A
B - Dukes Meadow Drive	179	45	439	1260	0.142	179	79	0.2	0.2	3.362	A
C - Warwick Rd (S)	350	88	39	1473	0.238	350	579	0.3	0.3	3.428	A
D - Site Access	131	33	346	1165	0.112	131	43	0.1	0.1	3.479	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	332	83	186	1231	0.270	332	291	0.4	0.4	4.120	A
B - Dukes Meadow Drive	179	45	439	1260	0.142	179	79	0.2	0.2	3.362	A
C - Warwick Rd (S)	350	88	39	1473	0.238	350	579	0.3	0.3	3.428	A
D - Site Access	131	33	346	1165	0.112	131	43	0.1	0.1	3.479	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	332	83	186	1231	0.270	332	291	0.4	0.4	4.120	A
B - Dukes Meadow Drive	179	45	439	1260	0.142	179	79	0.2	0.2	3.362	A
C - Warwick Rd (S)	350	88	39	1473	0.238	350	579	0.3	0.3	3.428	A
D - Site Access	131	33	346	1165	0.112	131	43	0.1	0.1	3.479	A

(Default Analysis Set) - Year 2027 Base Flow, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout		A, B, C, D	6.27	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.27	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	Year 2027 Base Flow	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Warwick Rd (N)		FLAT	✓	430	100.000
B - Dukes Meadow Drive		FLAT	✓	150	100.000
C - Warwick Rd (S)		FLAT	✓	910	100.000
D - Site Access		FLAT	✓	67	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Warwick Rd (N)	B - Dukes Meadow Drive	C - Warwick Rd (S)	D - Site Access
From	A - Warwick Rd (N)	0	26	399	5
	B - Dukes Meadow Drive	69	0	42	39
	C - Warwick Rd (S)	597	220	0	93
	D - Site Access	4	11	0	52

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Warwick Rd (N)	B - Dukes Meadow Drive	C - Warwick Rd (S)	D - Site Access
From	A - Warwick Rd (N)	0	0	2	0
	B - Dukes Meadow Drive	1	0	0	0
	C - Warwick Rd (S)	4	0	0	0
	D - Site Access	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Warwick Rd (N)	0.37	4.90	0.6	A	430	645
B - Dukes Meadow Drive	0.12	3.29	0.1	A	150	225
C - Warwick Rd (S)	0.65	7.54	1.9	A	910	1365
D - Site Access	0.08	4.54	0.1	A	67	101

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	430	108	281	1179	0.365	428	665	0.0	0.6	4.867	A
B - Dukes Meadow Drive	150	38	454	1251	0.120	149	255	0.0	0.1	3.281	A
C - Warwick Rd (S)	910	228	164	1400	0.650	903	439	0.0	1.9	7.320	A
D - Site Access	67	17	879	863	0.078	67	188	0.0	0.1	4.518	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	430	108	283	1178	0.365	430	670	0.6	0.6	4.903	A
B - Dukes Meadow Drive	150	38	456	1250	0.120	150	257	0.1	0.1	3.288	A
C - Warwick Rd (S)	910	228	165	1400	0.650	910	441	1.9	1.9	7.538	A
D - Site Access	67	17	886	859	0.078	67	189	0.1	0.1	4.544	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	430	108	283	1178	0.365	430	670	0.6	0.6	4.903	A
B - Dukes Meadow Drive	150	38	456	1250	0.120	150	257	0.1	0.1	3.288	A
C - Warwick Rd (S)	910	228	165	1400	0.650	910	441	1.9	1.9	7.541	A
D - Site Access	67	17	886	859	0.078	67	189	0.1	0.1	4.544	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	430	108	283	1178	0.365	430	670	0.6	0.6	4.903	A
B - Dukes Meadow Drive	150	38	456	1250	0.120	150	257	0.1	0.1	3.288	A
C - Warwick Rd (S)	910	228	165	1400	0.650	910	441	1.9	1.9	7.541	A
D - Site Access	67	17	886	859	0.078	67	189	0.1	0.1	4.544	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	430	108	283	1178	0.365	430	670	0.6	0.6	4.903	A
B - Dukes Meadow Drive	150	38	456	1250	0.120	150	257	0.1	0.1	3.288	A
C - Warwick Rd (S)	910	228	165	1400	0.650	910	441	1.9	1.9	7.541	A
D - Site Access	67	17	886	859	0.078	67	189	0.1	0.1	4.544	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	430	108	283	1178	0.365	430	670	0.6	0.6	4.903	A
B - Dukes Meadow Drive	150	38	456	1250	0.120	150	257	0.1	0.1	3.288	A
C - Warwick Rd (S)	910	228	165	1400	0.650	910	441	1.9	1.9	7.541	A
D - Site Access	67	17	886	859	0.078	67	189	0.1	0.1	4.544	A

(Default Analysis Set) - Year 2027 + Dev Flow, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout		A, B, C, D	3.84	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.84	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	Year 2027 + Dev Flow	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Warwick Rd (N)		FLAT	✓	399	100.000
B - Dukes Meadow Drive		FLAT	✓	197	100.000
C - Warwick Rd (S)		FLAT	✓	358	100.000
D - Site Access		FLAT	✓	132	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Warwick Rd (N)	B - Dukes Meadow Drive	C - Warwick Rd (S)	D - Site Access
From	A - Warwick Rd (N)	0	52	345	2
	B - Dukes Meadow Drive	48	0	142	7
	C - Warwick Rd (S)	259	61	0	38
	D - Site Access	6	8	117	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Warwick Rd (N)	B - Dukes Meadow Drive	C - Warwick Rd (S)	D - Site Access
From	A - Warwick Rd (N)	0	0	3	0
	B - Dukes Meadow Drive	1	0	1	0
	C - Warwick Rd (S)	10	2	0	0
	D - Site Access	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Warwick Rd (N)	0.32	4.44	0.5	A	399	599
B - Dukes Meadow Drive	0.16	3.47	0.2	A	197	296
C - Warwick Rd (S)	0.24	3.50	0.3	A	358	537
D - Site Access	0.11	3.52	0.1	A	132	198

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	399	100	186	1231	0.324	397	312	0.0	0.5	4.420	A
B - Dukes Meadow Drive	197	49	463	1245	0.158	196	120	0.0	0.2	3.463	A
C - Warwick Rd (S)	358	90	58	1462	0.245	357	601	0.0	0.3	3.494	A
D - Site Access	132	33	367	1154	0.114	131	48	0.0	0.1	3.519	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	399	100	187	1230	0.324	399	313	0.5	0.5	4.441	A
B - Dukes Meadow Drive	197	49	465	1244	0.158	197	121	0.2	0.2	3.470	A
C - Warwick Rd (S)	358	90	58	1462	0.245	358	604	0.3	0.3	3.502	A
D - Site Access	132	33	368	1153	0.114	132	48	0.1	0.1	3.525	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	399	100	187	1230	0.324	399	313	0.5	0.5	4.441	A
B - Dukes Meadow Drive	197	49	465	1244	0.158	197	121	0.2	0.2	3.470	A
C - Warwick Rd (S)	358	90	58	1462	0.245	358	604	0.3	0.3	3.502	A
D - Site Access	132	33	368	1153	0.114	132	48	0.1	0.1	3.525	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	399	100	187	1230	0.324	399	313	0.5	0.5	4.441	A
B - Dukes Meadow Drive	197	49	465	1244	0.158	197	121	0.2	0.2	3.470	A
C - Warwick Rd (S)	358	90	58	1462	0.245	358	604	0.3	0.3	3.502	A
D - Site Access	132	33	368	1153	0.114	132	48	0.1	0.1	3.525	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	399	100	187	1230	0.324	399	313	0.5	0.5	4.441	A
B - Dukes Meadow Drive	197	49	465	1244	0.158	197	121	0.2	0.2	3.470	A
C - Warwick Rd (S)	358	90	58	1462	0.245	358	604	0.3	0.3	3.502	A
D - Site Access	132	33	368	1153	0.114	132	48	0.1	0.1	3.525	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	399	100	187	1230	0.324	399	313	0.5	0.5	4.441	A
B - Dukes Meadow Drive	197	49	465	1244	0.158	197	121	0.2	0.2	3.470	A
C - Warwick Rd (S)	358	90	58	1462	0.245	358	604	0.3	0.3	3.502	A
D - Site Access	132	33	368	1153	0.114	132	48	0.1	0.1	3.525	A

(Default Analysis Set) - Year 2027 + Dev Flow, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout		A, B, C, D	6.46	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.46	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	Year 2027 + Dev Flow	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Warwick Rd (N)		FLAT	✓	465	100.000
B - Dukes Meadow Drive		FLAT	✓	190	100.000
C - Warwick Rd (S)		FLAT	✓	935	100.000
D - Site Access		FLAT	✓	68	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Warwick Rd (N)	B - Dukes Meadow Drive	C - Warwick Rd (S)	D - Site Access
From	A - Warwick Rd (N)	0	48	412	5
	B - Dukes Meadow Drive	109	0	42	39
	C - Warwick Rd (S)	622	220	0	93
	D - Site Access	4	11	52	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Warwick Rd (N)	B - Dukes Meadow Drive	C - Warwick Rd (S)	D - Site Access
From	A - Warwick Rd (N)	0	0	2	0
	B - Dukes Meadow Drive	1	0	0	0
	C - Warwick Rd (S)	4	0	0	0
	D - Site Access	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Warwick Rd (N)	0.40	5.14	0.7	A	465	698
B - Dukes Meadow Drive	0.15	3.44	0.2	A	190	285
C - Warwick Rd (S)	0.66	7.84	2.0	A	935	1403
D - Site Access	0.08	4.77	0.1	A	68	102

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	465	116	282	1178	0.395	462	729	0.0	0.7	5.098	A
B - Dukes Meadow Drive	190	48	467	1243	0.153	189	277	0.0	0.2	3.436	A
C - Warwick Rd (S)	935	234	153	1406	0.665	927	503	0.0	2.0	7.587	A
D - Site Access	68	17	943	826	0.082	68	137	0.0	0.1	4.742	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	465	116	284	1177	0.395	465	735	0.7	0.7	5.143	A
B - Dukes Meadow Drive	190	48	470	1241	0.153	190	279	0.2	0.2	3.444	A
C - Warwick Rd (S)	935	234	154	1406	0.665	935	506	2.0	2.0	7.837	A
D - Site Access	68	17	951	822	0.083	68	138	0.1	0.1	4.772	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	465	116	284	1177	0.395	465	735	0.7	0.7	5.143	A
B - Dukes Meadow Drive	190	48	470	1241	0.153	190	279	0.2	0.2	3.444	A
C - Warwick Rd (S)	935	234	154	1406	0.665	935	506	2.0	2.0	7.840	A
D - Site Access	68	17	951	822	0.083	68	138	0.1	0.1	4.773	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	465	116	284	1177	0.395	465	735	0.7	0.7	5.143	A
B - Dukes Meadow Drive	190	48	470	1241	0.153	190	279	0.2	0.2	3.444	A
C - Warwick Rd (S)	935	234	154	1406	0.665	935	506	2.0	2.0	7.841	A
D - Site Access	68	17	951	822	0.083	68	138	0.1	0.1	4.773	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	465	116	284	1177	0.395	465	735	0.7	0.7	5.143	A
B - Dukes Meadow Drive	190	48	470	1241	0.153	190	279	0.2	0.2	3.444	A
C - Warwick Rd (S)	935	234	154	1406	0.665	935	506	2.0	2.0	7.841	A
D - Site Access	68	17	951	822	0.083	68	138	0.1	0.1	4.773	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Warwick Rd (N)	465	116	284	1177	0.395	465	735	0.7	0.7	5.143	A
B - Dukes Meadow Drive	190	48	470	1241	0.153	190	279	0.2	0.2	3.444	A
C - Warwick Rd (S)	935	234	154	1406	0.665	935	506	2.0	2.0	7.843	A
D - Site Access	68	17	951	822	0.083	68	138	0.1	0.1	4.773	A

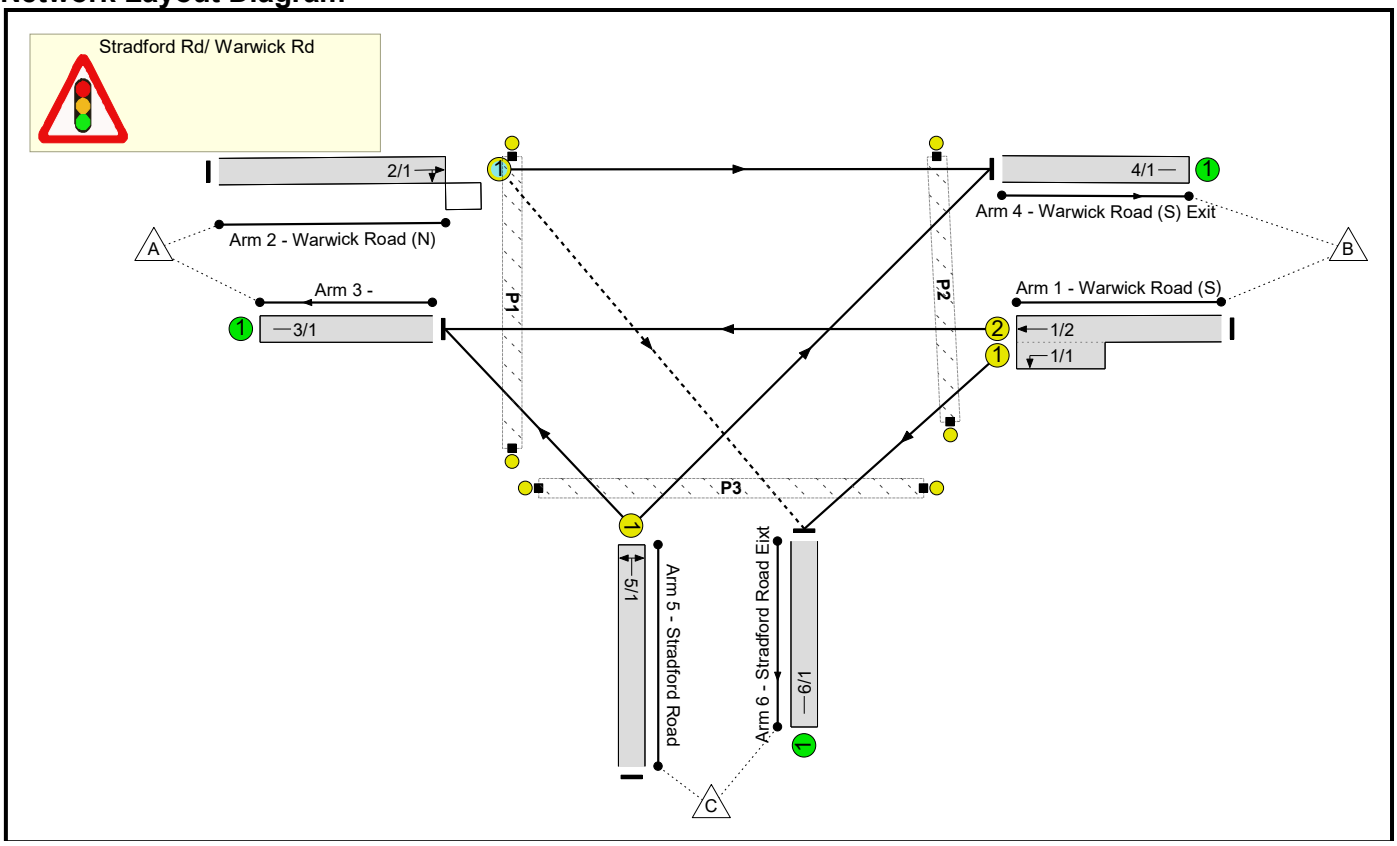
Appendix I: Junction 3: Warwick Road/Stratford Road Signalised Capacity Assessment

Full Input Data And Results

User and Project Details

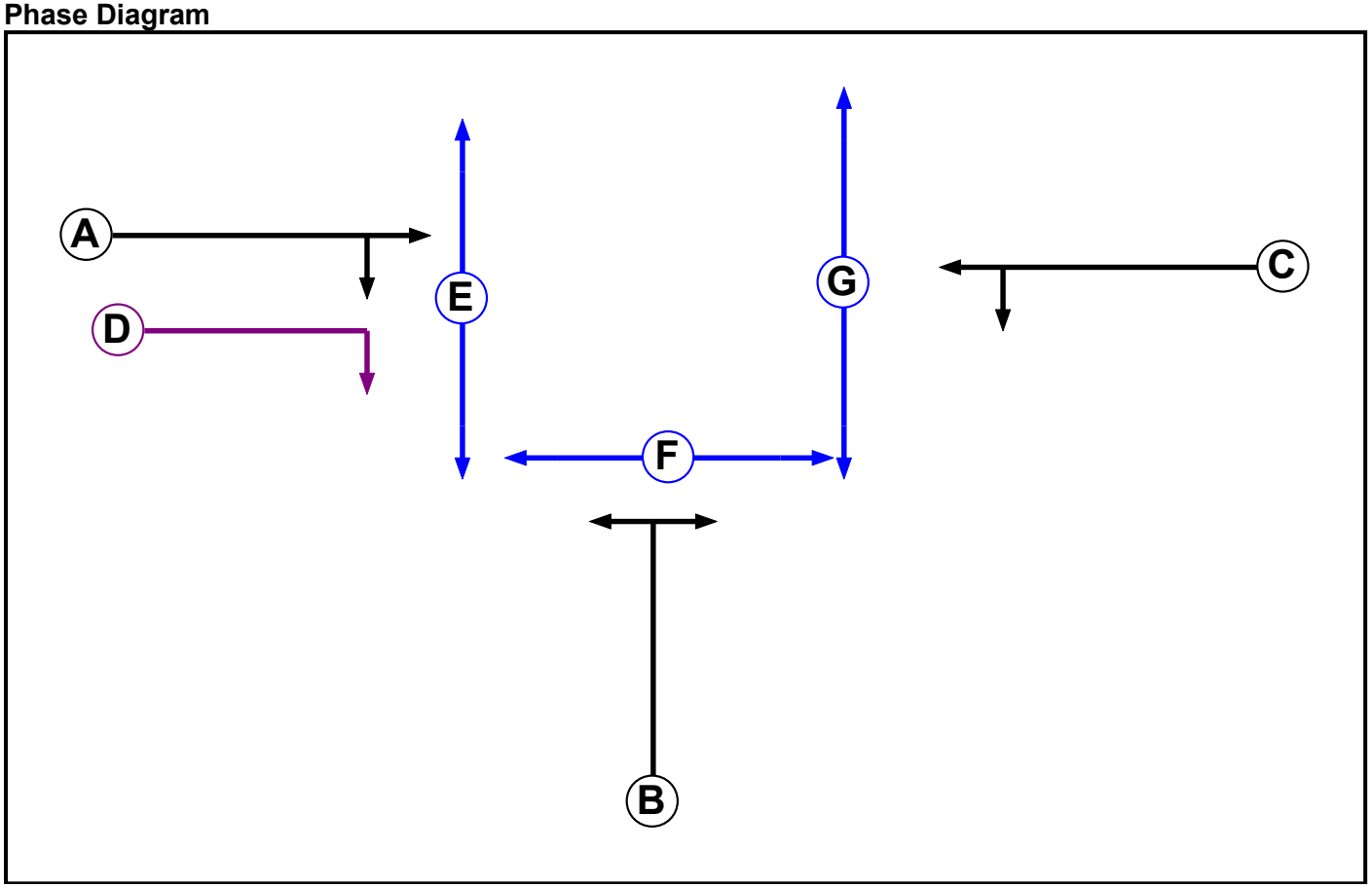
Project:	**17279 – Warwick Road, Banbury**
Title:	**Stratford Road/Warwick Road Junction**
Location:	Banbury
Additional detail:	
File name:	Warwick Rd - Stratford MOVA 13072022.lsg3x
Author:	SR
Company:	Jubb
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Ind. Arrow	A	4	4
E	Pedestrian		8	8
F	Pedestrian		8	8
G	Pedestrian		8	8

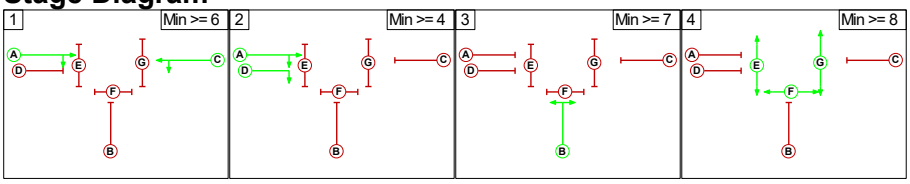
Phase Intergreens Matrix

		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		5	-	-	9	9	9
	B	6		5	6	8	9	6
	C	-	6		6	9	6	8
	D	-	5	5		6	9	9
	E	9	9	8	11		-	-
	F	9	9	11	9	-		-
	G	9	11	10	9	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

From Stage	To Stage			
	1	2	3	4
1		6	6	9
2	5		5	9
3	6	6		9
4	11	11	11	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Stradford Rd/ Warwick Rd

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)
2/1 (Warwick Road (N))	6/1 (Right)	1439	0	1/1	1.09	All	2.00	2.00	0.50	2	2.00
				1/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: Stradford Rd/ Warwick Rd

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 (Warwick Road (S))	U	C	2	3	5.0	Geom	-	3.25	0.00	Y	Arm 6 Left	25.00
1/2 (Warwick Road (S))	U	C	2	3	60.0	User	2162	-	-	-	-	-
2/1 (Warwick Road (N))	O	A D	2	3	60.0	User	2118	-	-	-	-	-
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1 (Warwick Road (S) Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Stradford Road)	U	B	2	3	60.0	User	2082	-	-	-	-	-
6/1 (Stradford Road Eixt)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Year 2027 AM Peak'	08:00	09:00	01:00	
2: 'Year 2027 PM Peak'	18:00	19:00	01:00	
3: 'Year 2027 + Dev AM Peak'	08:00	09:00	01:00	
4: 'Year 2027 + Dev PM Peak'	17:00	18:00	01:00	

Scenario 1: 'Scenario 1' (FG3: 'Year 2027 + Dev AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	487	133	620
	B	331	0	200	531
	C	118	200	0	318
	Tot.	449	687	333	1469

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: Scenario 1
Junction: Stradford Rd/ Warwick Rd	
1/1 (short)	200
1/2 (with short)	531(In) 331(Out)
2/1	620
3/1	449
4/1	687
5/1	318
6/1	333

Lane Saturation Flows

Junction: Stradford Rd/ Warwick Rd

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 (Warwick Road (S))	3.25	0.00	Y	Arm 6 Left	25.00	100.0 %	1830	1830
1/2 (Warwick Road (S) Lane 2)	This lane uses a directly entered Saturation Flow						2162	2162
2/1 (Warwick Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						2118	2118
3/1	Infinite Saturation Flow						Inf	Inf
4/1 (Warwick Road (S) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stradford Road Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
6/1 (Stradford Road Eixt Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'Scenario 2' (FG4: 'Year 2027 + Dev PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	293	64	357
	B	580	0	183	763
	C	169	117	0	286
	Tot.	749	410	247	1406

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: Scenario 2
Junction: Stradford Rd/ Warwick Rd	
1/1 (short)	183
1/2 (with short)	763(In) 580(Out)
2/1	357
3/1	749
4/1	410
5/1	286
6/1	247

Lane Saturation Flows

Junction: Stradford Rd/ Warwick Rd

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 (Warwick Road (S))	3.25	0.00	Y	Arm 6 Left	25.00	100.0 %	1830	1830
1/2 (Warwick Road (S) Lane 2)	This lane uses a directly entered Saturation Flow						2162	2162
2/1 (Warwick Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						2118	2118
3/1	Infinite Saturation Flow						Inf	Inf
4/1 (Warwick Road (S) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stradford Road Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
6/1 (Stradford Road Eixt Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'Scenario 5' (FG1: 'Year 2027 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	465	129	594
	B	323	0	200	523
	C	117	200	0	317
	Tot.	440	665	329	1434

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: Scenario 5
Junction: Stradford Rd/ Warwick Rd	
1/1 (short)	200
1/2 (with short)	523(In) 323(Out)
2/1	594
3/1	440
4/1	665
5/1	317
6/1	329

Lane Saturation Flows

Junction: Stradford Rd/ Warwick Rd								
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 (Warwick Road (S))	3.25	0.00	Y	Arm 6 Left	25.00	100.0 %	1830	1830
1/2 (Warwick Road (S) Lane 2)	This lane uses a directly entered Saturation Flow						2162	2162
2/1 (Warwick Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						2118	2118
3/1	Infinite Saturation Flow						Inf	Inf
4/1 (Warwick Road (S) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stradford Road Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
6/1 (Stradford Road Eixt Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'Scenario 6' (FG2: 'Year 2027 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	282	62	344
	B	559	0	183	742
	C	165	117	0	282
	Tot.	724	399	245	1368

Full Input Data And Results

Traffic Lane Flows

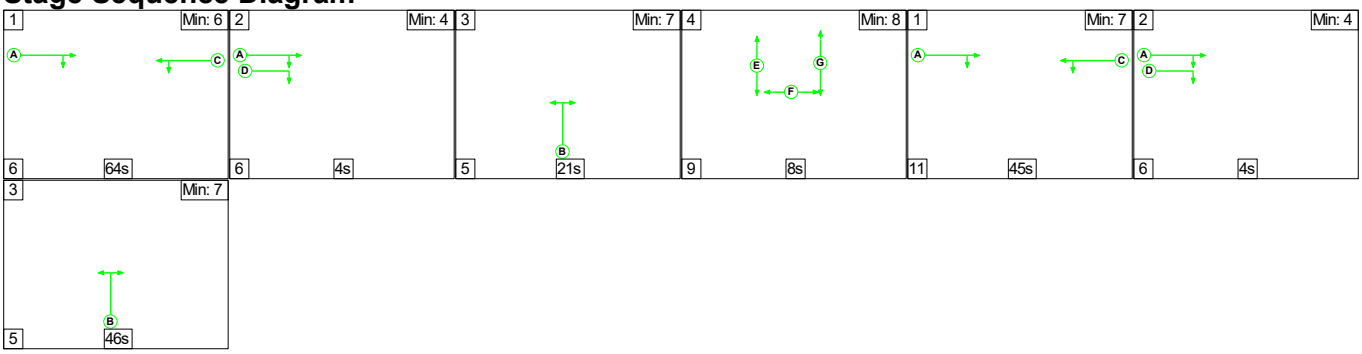
Lane	Scenario 4: Scenario 6
Junction: Stradford Rd/ Warwick Rd	
1/1 (short)	183
1/2 (with short)	742(In) 559(Out)
2/1	344
3/1	724
4/1	399
5/1	282
6/1	245

Lane Saturation Flows

Junction: Stradford Rd/ Warwick Rd								
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 (Warwick Road (S))	3.25	0.00	Y	Arm 6 Left	25.00	100.0 %	1830	1830
1/2 (Warwick Road (S) Lane 2)	This lane uses a directly entered Saturation Flow						2162	2162
2/1 (Warwick Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						2118	2118
3/1	Infinite Saturation Flow						Inf	Inf
4/1 (Warwick Road (S) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stradford Road Lane 1)	This lane uses a directly entered Saturation Flow						2082	2082
6/1 (Stradford Road Eixt Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'Scenario 1' (FG3: 'Year 2027 + Dev AM Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

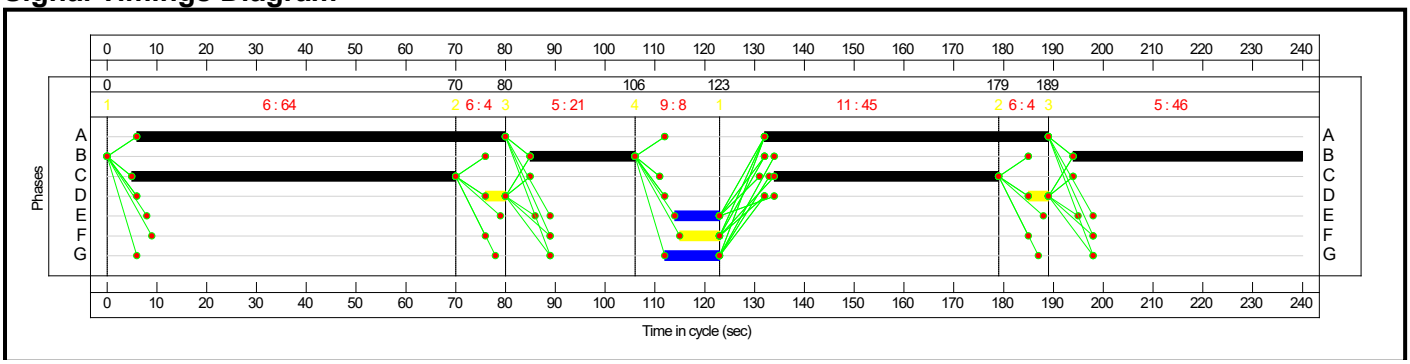


Full Input Data And Results

Stage Timings

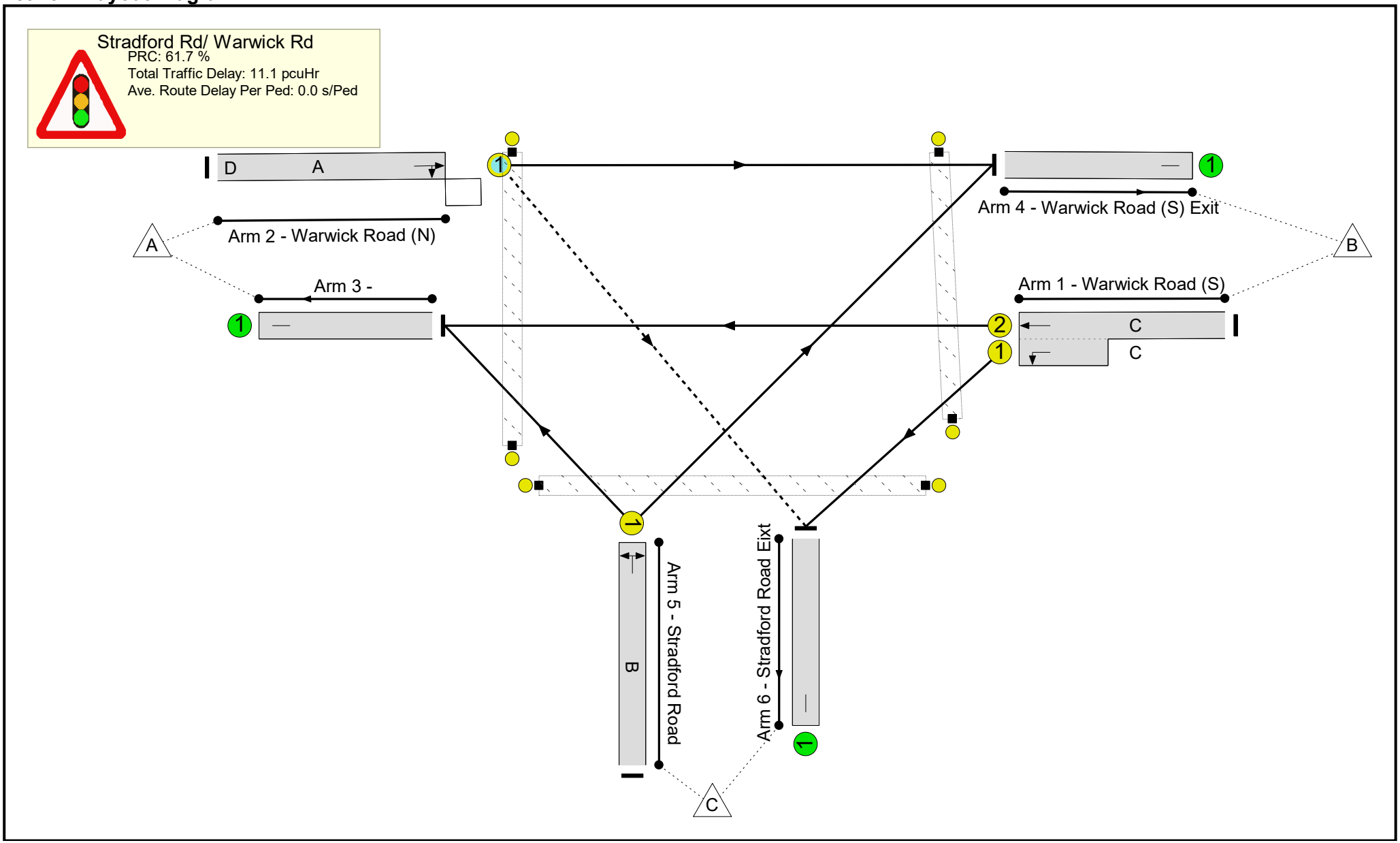
Stage	1	2	3	4	1	2	3
Duration	64	4	21	8	45	4	46
Change Point	0	70	80	106	123	179	189

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Stratford Road/Warwick Road Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**55.7%**
Stradford Rd/ Warwick Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**55.7%**
1/2+1/1	Warwick Road (S) Ahead Left	U	N/A	N/A	C		2	110	-	531	2162:1830	655+396	50.6 : 50.6%
2/1	Warwick Road (N) Ahead Right	O	N/A	N/A	A	D	2	131	8	620	2118	1114	55.7%
3/1		U	N/A	N/A	-		-	-	-	449	Inf	Inf	0.0%
4/1	Warwick Road (S) Exit	U	N/A	N/A	-		-	-	-	687	Inf	Inf	0.0%
5/1	Stradford Road Left Right	U	N/A	N/A	B		2	67	-	318	2082	599	53.1%
6/1	Stradford Road Eixt	U	N/A	N/A	-		-	-	-	333	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	9	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	11	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	8	-	0	-	0	0.0%

Full Input Data And Results

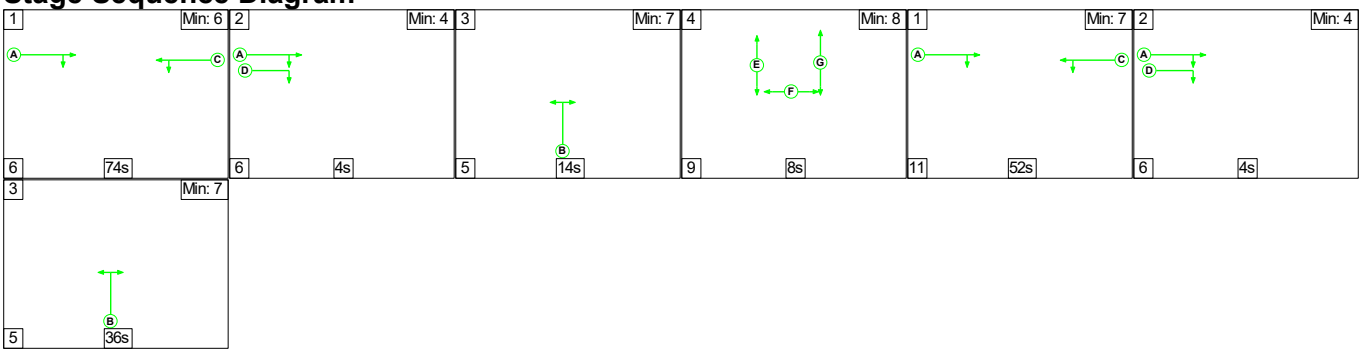
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Stratford Road/Warwick Road Junction	**-**	**-**	**122**	**9**	**2**	**9.2**	**1.7**	**0.2**	**11.1**	**-**	**-**	**-**	**-**
Stradford Rd/ Warwick Rd	**-**	**-**	**122**	**9**	**2**	**9.2**	**1.7**	**0.2**	**11.1**	**-**	**-**	**-**	**-**
1/2+1/1	531	531	-	-	-	3.0	0.5	-	3.5	23.7	8.6	0.5	9.1
2/1	620	620	122	9	2	3.0	0.6	0.2	3.9	22.6	14.1	0.6	14.7
3/1	449	449	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	687	687	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	318	318	-	-	-	3.2	0.6	-	3.7	42.4	9.0	0.6	9.6
6/1	333	333	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 61.7 Total Delay for Signalled Lanes (pcuHr): 11.12 Cycle Time (s): 240
PRC Over All Lanes (%): 61.7 Total Delay Over All Lanes(pcuHr): 11.12

Full Input Data And Results

Scenario 2: 'Scenario 2' (FG4: 'Year 2027 + Dev PM Peak', Plan 1: 'Network Control Plan 1')

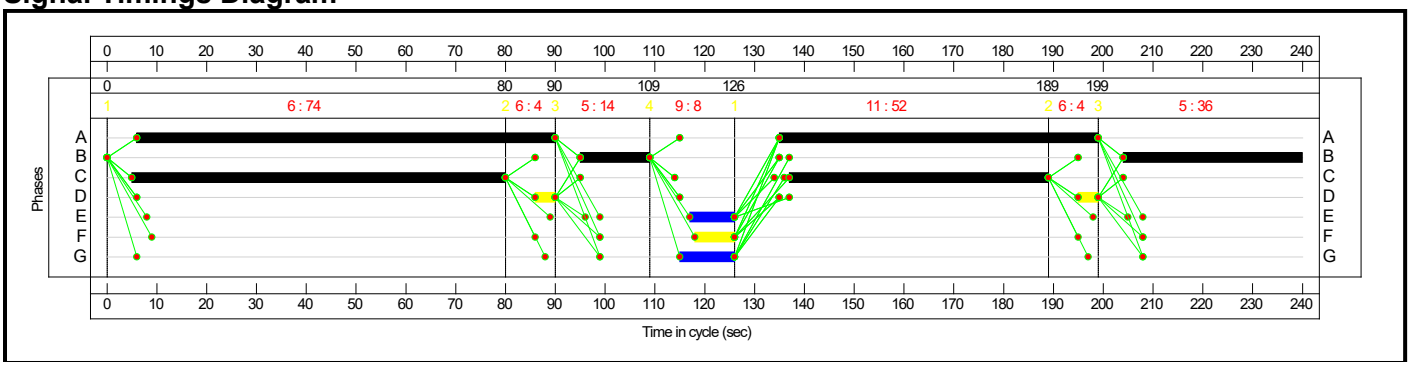
Stage Sequence Diagram



Stage Timings

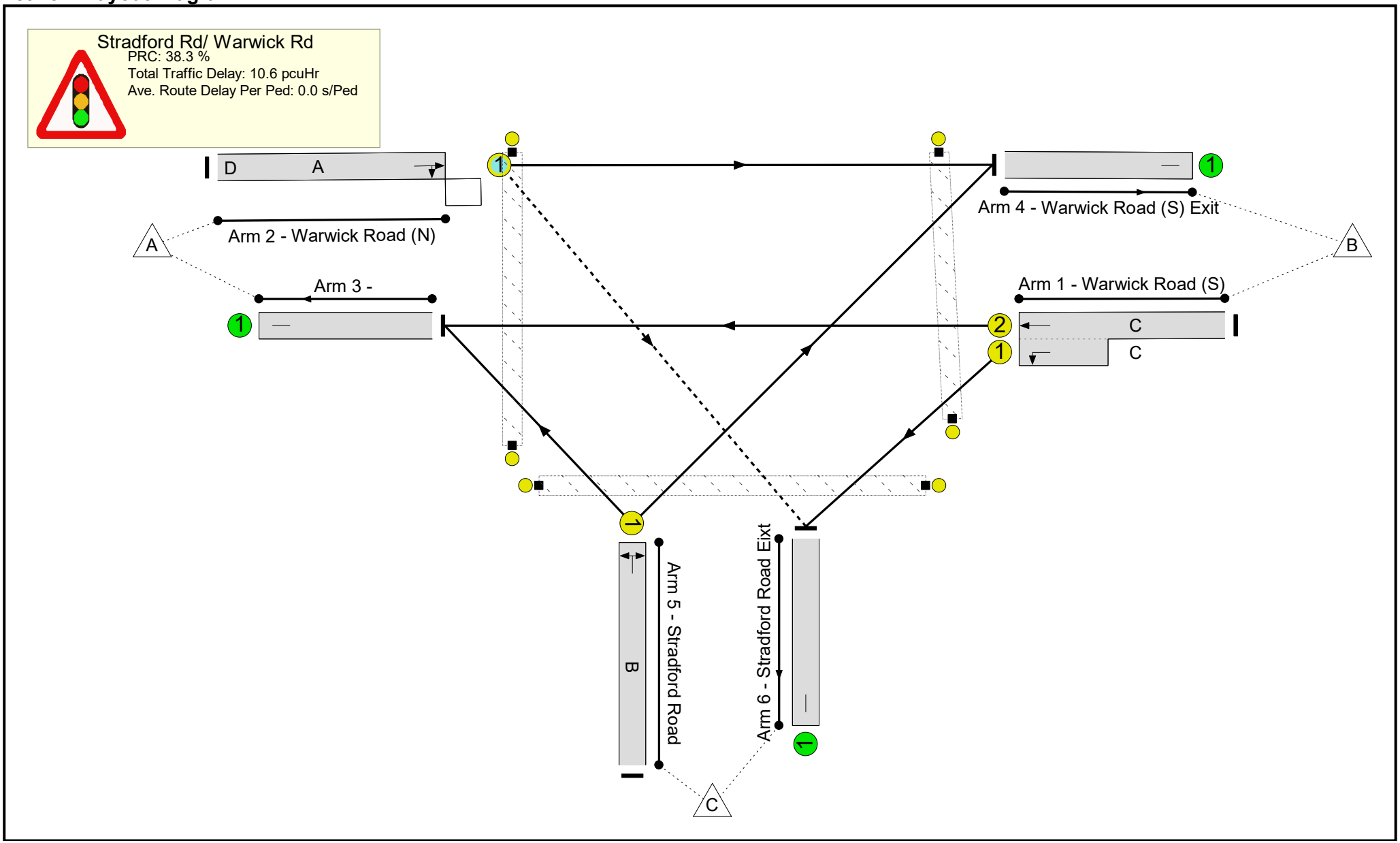
Stage	1	2	3	4	1	2	3
Duration	74	4	14	8	52	4	36
Change Point	0	80	90	109	126	189	199

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Stratford Road/Warwick Road Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**65.1%**
Stradford Rd/ Warwick Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**65.1%**
1/2+1/1	Warwick Road (S) Ahead Left	U	N/A	N/A	C		2	127	-	763	2162:1830	892+281	65.1 : 65.1%
2/1	Warwick Road (N) Ahead Right	O	N/A	N/A	A	D	2	148	8	357	2118	1096	32.6%
3/1		U	N/A	N/A	-		-	-	-	749	Inf	Inf	0.0%
4/1	Warwick Road (S) Exit	U	N/A	N/A	-		-	-	-	410	Inf	Inf	0.0%
5/1	Stradford Road Left Right	U	N/A	N/A	B		2	50	-	286	2082	451	63.4%
6/1	Stradford Road Eixt	U	N/A	N/A	-		-	-	-	247	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	9	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	11	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	8	-	0	-	0	0.0%

Full Input Data And Results

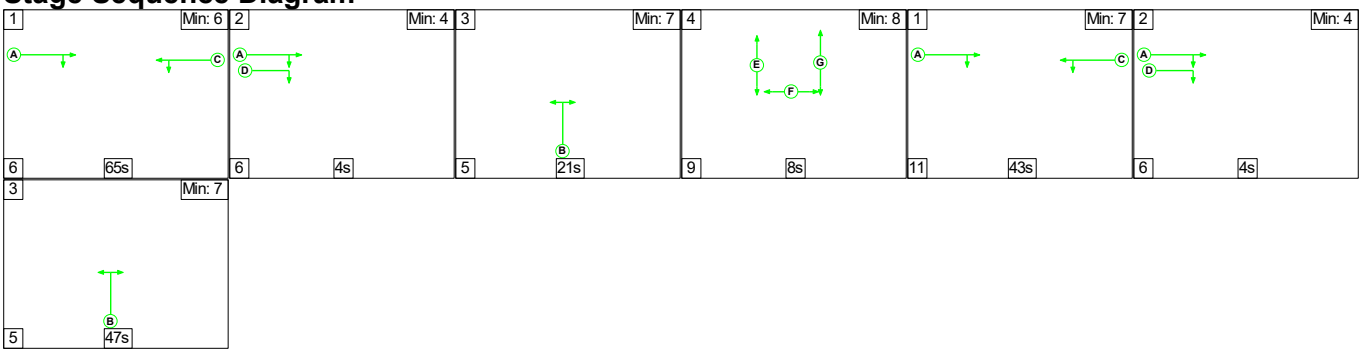
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Stratford Road/Warwick Road Junction	**-**	**-**	**59**	**4**	**1**	**8.3**	**2.0**	**0.3**	**10.6**	**-**	**-**	**-**	**-**
Stradford Rd/ Warwick Rd	**-**	**-**	**59**	**4**	**1**	**8.3**	**2.0**	**0.3**	**10.6**	**-**	**-**	**-**	**-**
1/2+1/1	763	763	-	-	-	3.9	0.9	-	4.8	22.7	16.0	0.9	16.9
2/1	357	357	59	4	1	1.0	0.2	0.3	1.5	15.3	5.5	0.2	5.7
3/1	749	749	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	410	410	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	286	286	-	-	-	3.4	0.9	-	4.2	53.5	8.6	0.9	9.4
6/1	247	247	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 38.3 Total Delay for Signalled Lanes (pcuHr): 10.58 Cycle Time (s): 240
PRC Over All Lanes (%): 38.3 Total Delay Over All Lanes(pcuHr): 10.58

Full Input Data And Results

Scenario 3: 'Scenario 5' (FG1: 'Year 2027 AM Peak', Plan 1: 'Network Control Plan 1')

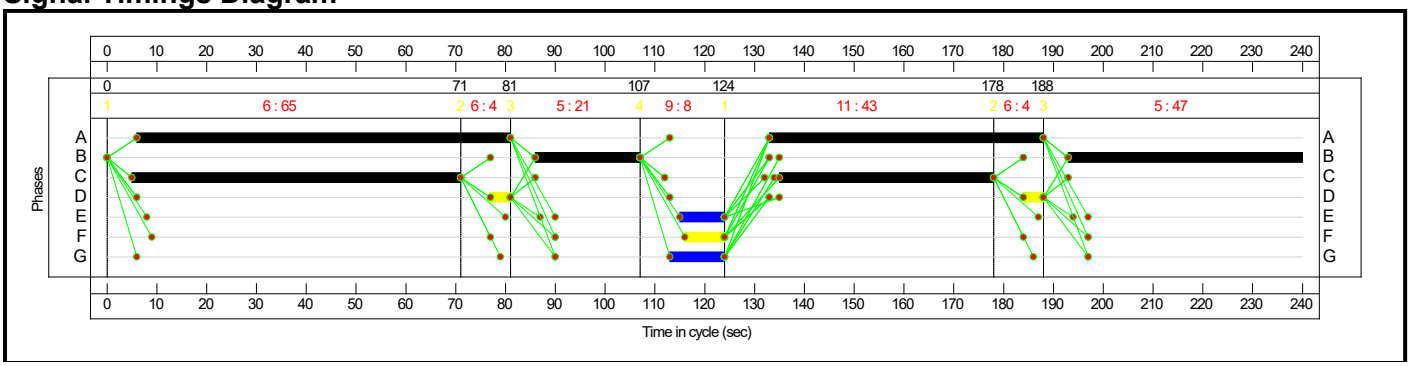
Stage Sequence Diagram



Stage Timings

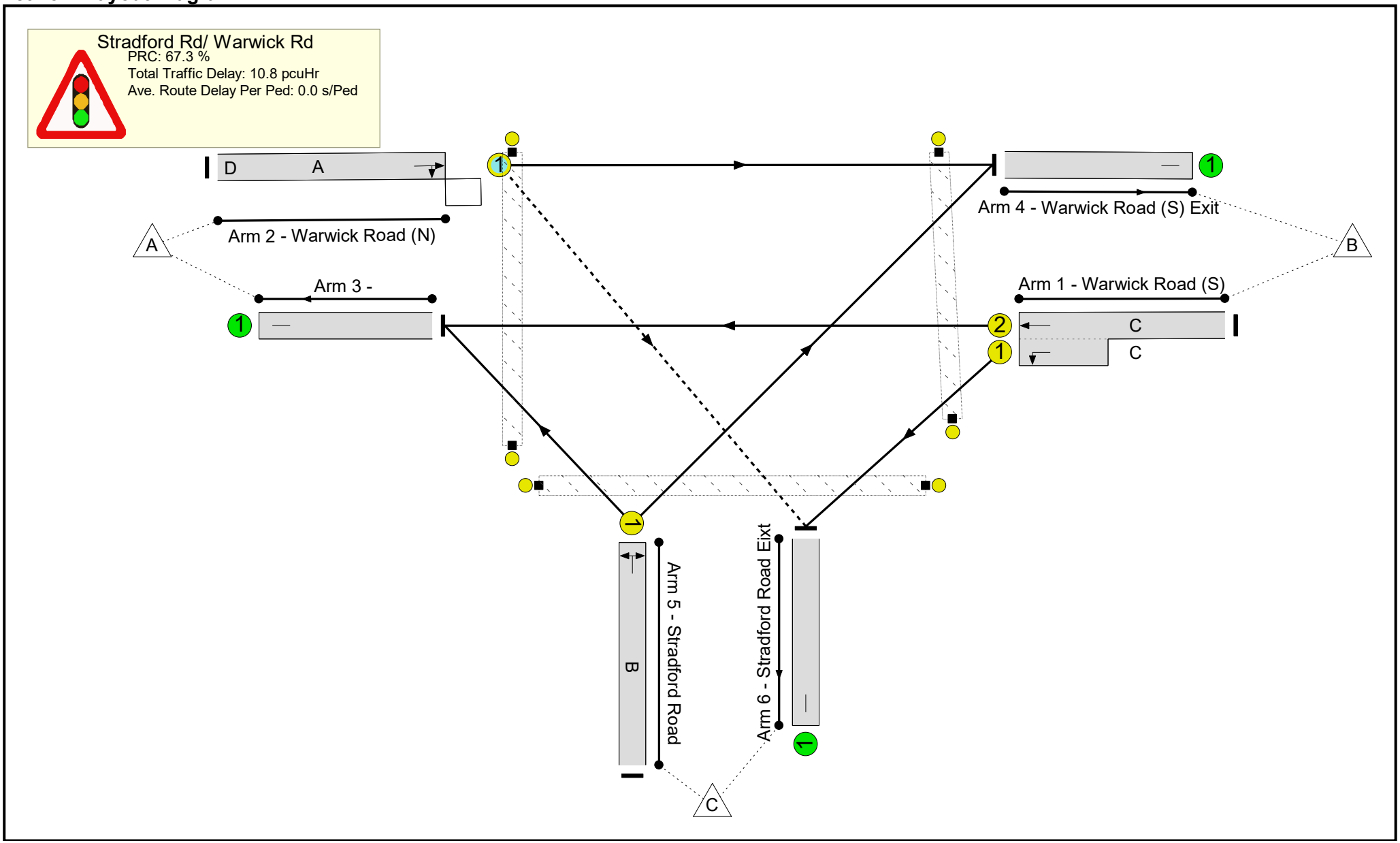
Stage	1	2	3	4	1	2	3
Duration	65	4	21	8	43	4	47
Change Point	0	71	81	107	124	178	188

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Stratford Road/Warwick Road Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**53.8%**
Stradford Rd/ Warwick Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**53.8%**
1/2+1/1	Warwick Road (S) Ahead Left	U	N/A	N/A	C		2	109	-	523	2162:1830	644+399	50.1 : 50.1%
2/1	Warwick Road (N) Ahead Right	O	N/A	N/A	A	D	2	130	8	594	2118	1104	53.8%
3/1		U	N/A	N/A	-		-	-	-	440	Inf	Inf	0.0%
4/1	Warwick Road (S) Exit	U	N/A	N/A	-		-	-	-	665	Inf	Inf	0.0%
5/1	Stradford Road Left Right	U	N/A	N/A	B		2	68	-	317	2082	607	52.2%
6/1	Stradford Road Eixt	U	N/A	N/A	-		-	-	-	329	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	9	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	11	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	8	-	0	-	0	0.0%

Full Input Data And Results

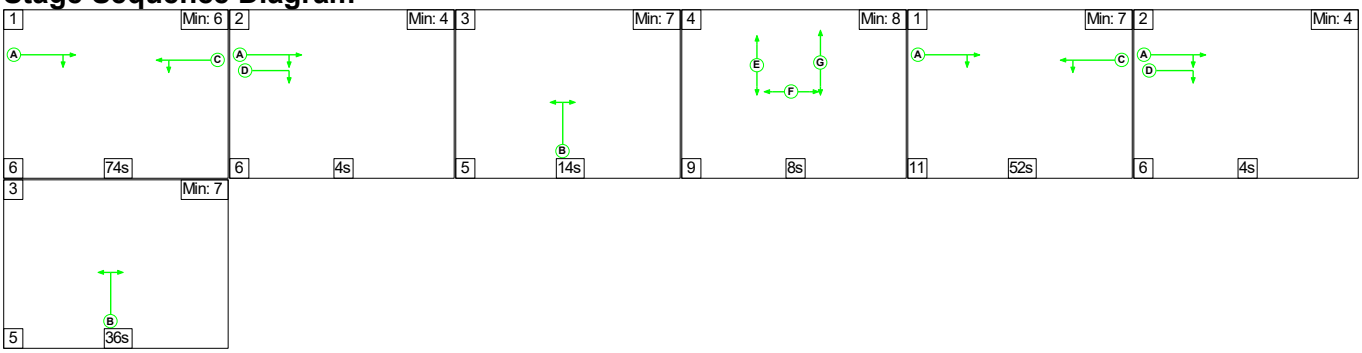
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Stratford Road/Warwick Road Junction	**-**	**-**	**118**	**9**	**2**	**9.0**	**1.6**	**0.2**	**10.8**	**-**	**-**	**-**	**-**
Stradford Rd/ Warwick Rd	**-**	**-**	**118**	**9**	**2**	**9.0**	**1.6**	**0.2**	**10.8**	**-**	**-**	**-**	**-**
1/2+1/1	523	523	-	-	-	3.0	0.5	-	3.5	23.9	8.5	0.5	9.0
2/1	594	594	118	9	2	2.9	0.6	0.2	3.7	22.5	13.5	0.6	14.1
3/1	440	440	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	665	665	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	317	317	-	-	-	3.1	0.5	-	3.7	41.7	8.8	0.5	9.3
6/1	329	329	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 67.3 Total Delay for Signalled Lanes (pcuHr): 10.85 Cycle Time (s): 240
PRC Over All Lanes (%): 67.3 Total Delay Over All Lanes(pcuHr): 10.85

Full Input Data And Results

Scenario 4: 'Scenario 6' (FG2: 'Year 2027 PM Peak', Plan 1: 'Network Control Plan 1')

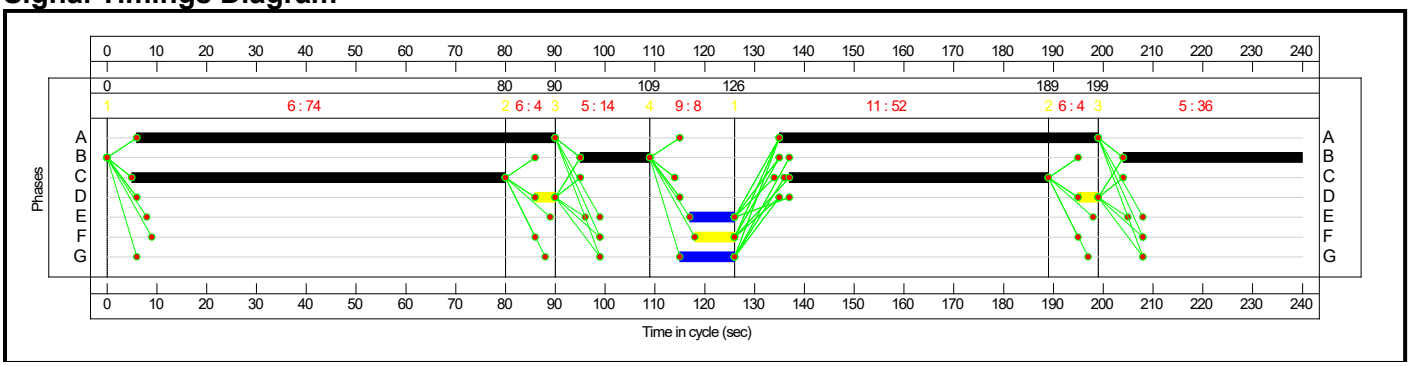
Stage Sequence Diagram



Stage Timings

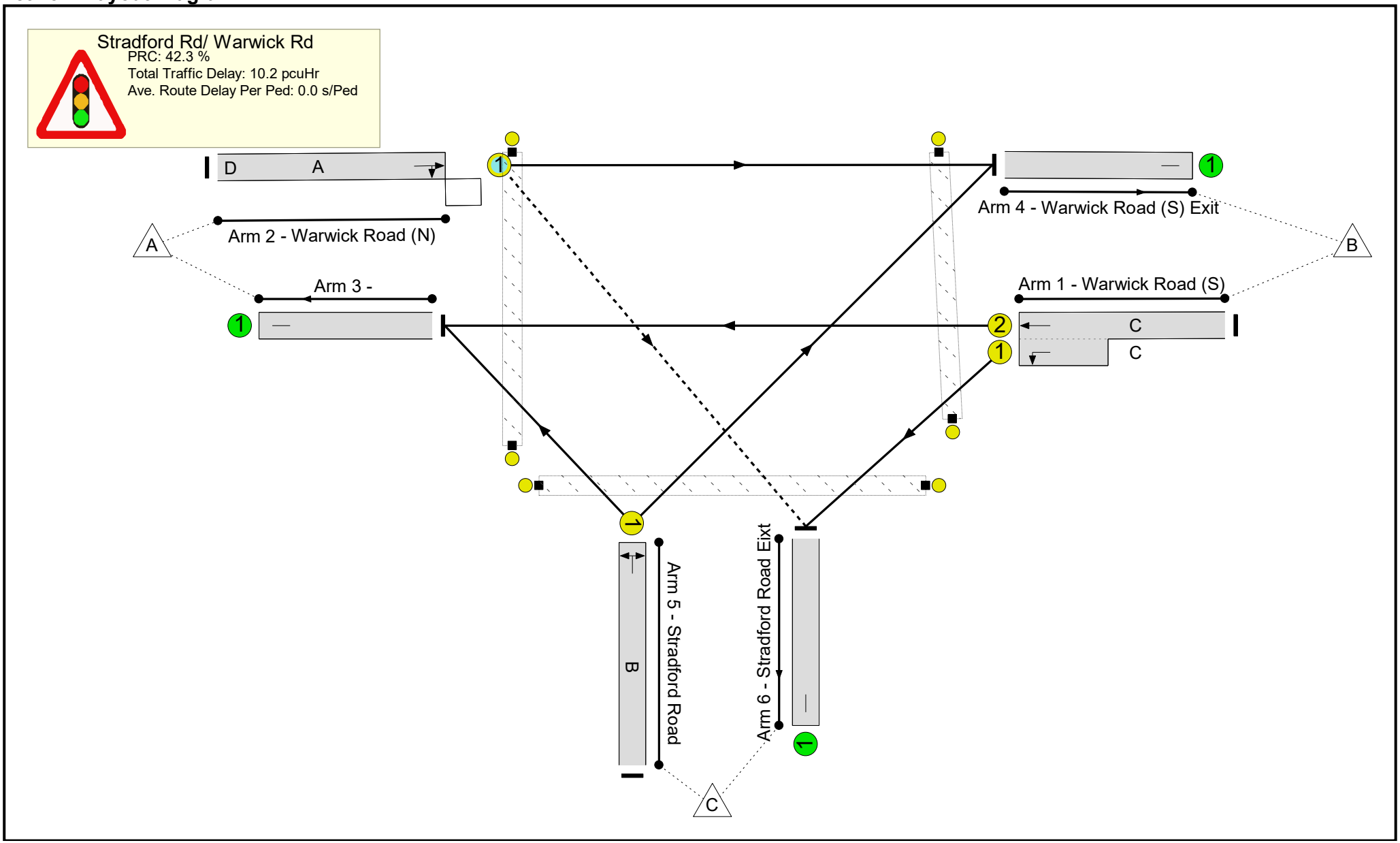
Stage	1	2	3	4	1	2	3
Duration	74	4	14	8	52	4	36
Change Point	0	80	90	109	126	189	199

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Stratford Road/Warwick Road Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.2%**
Stradford Rd/ Warwick Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.2%**
1/2+1/1	Warwick Road (S) Ahead Left	U	N/A	N/A	C		2	127	-	742	2162:1830	884+289	63.2 : 63.2%
2/1	Warwick Road (N) Ahead Right	O	N/A	N/A	A	D	2	148	8	344	2118	1121	30.7%
3/1		U	N/A	N/A	-		-	-	-	724	Inf	Inf	0.0%
4/1	Warwick Road (S) Exit	U	N/A	N/A	-		-	-	-	399	Inf	Inf	0.0%
5/1	Stradford Road Left Right	U	N/A	N/A	B		2	50	-	282	2082	451	62.5%
6/1	Stradford Road Eixt	U	N/A	N/A	-		-	-	-	245	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	9	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	11	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	8	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Stratford Road/Warwick Road Junction	**-**	**-**	**57**	**4**	**1**	**8.0**	**1.9**	**0.2**	**10.2**	**-**	**-**	**-**	**-**
Stradford Rd/ Warwick Rd	**-**	**-**	**57**	**4**	**1**	**8.0**	**1.9**	**0.2**	**10.2**	**-**	**-**	**-**	**-**
1/2+1/1	742	742	-	-	-	3.7	0.9	-	4.6	22.2	15.1	0.9	15.9
2/1	344	344	57	4	1	1.0	0.2	0.2	1.4	14.9	5.2	0.2	5.4
3/1	724	724	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	399	399	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	282	282	-	-	-	3.3	0.8	-	4.2	53.1	8.5	0.8	9.3
6/1	245	245	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 42.3 Total Delay for Signalled Lanes (pcuHr): 10.15 Cycle Time (s): 240
PRC Over All Lanes (%): 42.3 Total Delay Over All Lanes(pcuHr): 10.15

Appendix J: Junction 4: Warwick Road/Cromwell Road/Ruscote Avenue Twin Roundabouts Capacity Assessment

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.0.1499

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: Warwick Rd Double Roundabouts 13072022.j10
Path: Y:\PROJECT FOLDER\17279 Warwick Road, Banbury\Calculations\Transport\Modelling
Report generation date: 13/07/2022 16:45:10

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Layout - Year 2027 Base									
A - Western Mini - 1 - Roundabout Link	D3	0.7	4.78	0.39	A	D4	0.9	5.39	0.48	A
A - Western Mini - 2 - Cromwell Road		0.0	0.00	0.00	A		0.0	0.00	0.00	A
A - Western Mini - 3 - A422 Warwick Rd		0.7	5.55	0.39	A		0.6	5.14	0.35	A
B - Eastern - 1 - A422 Ruscote Ave		1.5	5.09	0.59	A		0.9	3.80	0.47	A
B - Eastern - 2 - Warwick Road		0.6	3.55	0.38	A		1.4	5.07	0.57	A
B - Eastern - 3 - Roundabout Link		0.5	3.78	0.30	A		0.5	4.20	0.31	A
	Existing Layout - Year 2027 + Dev Traffic									
A - Western Mini - 1 - Roundabout Link	D5	0.7	4.82	0.39	A	D6	1.0	5.55	0.50	A
A - Western Mini - 2 - Cromwell Road		0.0	0.00	0.00	A		0.0	0.00	0.00	A
A - Western Mini - 3 - A422 Warwick Rd		0.7	5.74	0.41	A		0.6	5.22	0.36	A
B - Eastern - 1 - A422 Ruscote Ave		1.5	5.19	0.59	A		0.9	3.84	0.48	A
B - Eastern - 2 - Warwick Road		0.7	3.58	0.38	A		1.4	5.23	0.58	A
B - Eastern - 3 - Roundabout Link		0.5	3.86	0.32	A		0.5	4.26	0.31	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	B4100 / Ruscote Ave / Cornwall Rd RAs
Location	Banbury
Site number	
Date	01/04/2019
Version	A
Status	Draft
Identifier	
Client	
Jobnumber	W15219
Enumerator	SRadford
Description	

Units

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

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
JUNCTIONS 9	5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	Year 2027 Base	AM	FLAT	07:45	09:15	90	15	✓
D4	Year 2027 Base	PM	FLAT	16:45	18:15	90	15	✓
D5	Year 2027 + Dev Traffic	AM	FLAT	07:45	09:15	90	15	✓
D6	Year 2027 + Dev Traffic	PM	FLAT	16:45	18:15	90	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	✓	100.000	100.000

Existing Layout - Year 2027 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	A - Western Mini	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 100% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
A	Western Mini	Mini-roundabout		1, 2, 3	5.14	A
B	Eastern	Standard Roundabout		1, 2, 3	4.35	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		4.59	A

Arms

Arms

Junction	Arm	Name	Description	No give-way line
A - Western Mini	1	Roundabout Link		
	2	Cromwell Road		
	3	A422 Warwick Rd		
B - Eastern	1	A422 Ruscote Ave		
	2	Warwick Road		
	3	Roundabout Link		

Roundabout Geometry

Junction	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)	Entry only	Exit only
B - Eastern	1 - A422 Ruscote Ave	6.30	7.30	1.0	18.4	29.0	32.0		
	2 - Warwick Road	4.30	6.60	13.6	40.0	29.0	7.0		
	3 - Roundabout Link	5.70	6.20	1.0	11.5	29.0	32.0		

Mini Roundabout Geometry

Junction	Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A - Western Mini	1 - Roundabout Link	6.50	6.50	8.30	1.0	12.20	6.50	0.0	✓
	2 - Cromwell Road	2.50	2.50	5.80	12.8	13.03	10.30	0.0	
	3 - A422 Warwick Rd	3.60	3.60	5.00	8.9	15.00	14.40	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/hr)
A - Western Mini	1 - Roundabout Link	0.622	1313
	2 - Cromwell Road	0.642	1043
	3 - A422 Warwick Rd	0.667	1110
B - Eastern	1 - A422 Ruscote Ave	0.708	1959
	2 - Warwick Road	0.740	1938
	3 - Roundabout Link	0.647	1708

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 period length (min)	Time segment length (min)	Run automatically
D3	Year 2027 Base	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Western Mini	1 - Roundabout Link		FLAT	✓	507	100.000
	2 - Cromwell Road		FLAT	✓	0	100.000
	3 - A422 Warwick Rd		FLAT	✓	436	100.000
B - Eastern	1 - A422 Ruscote Ave		FLAT	✓	1040	100.000
	2 - Warwick Road		FLAT	✓	656	100.000
	3 - Roundabout Link		FLAT	✓	435	100.000

Origin-Destination Data

Demand (PCU/hr)

A - Western Mini

		To		
		1 - Roundabout Link	2 - Cromwell Road	3 - A422 Warwick Rd
From	1 - Roundabout Link	0	0	507
	2 - Cromwell Road	0	0	0
	3 - A422 Warwick Rd	436	0	0

Demand (PCU/hr)

B - Eastern

		To		
		1 - A422 Ruscote Ave	2 - Warwick Road	3 - Roundabout Link
From	1 - A422 Ruscote Ave	0	759	281
	2 - Warwick Road	430	0	226
	3 - Roundabout Link	179	256	0

Vehicle Mix

A - Western Mini

Heavy Vehicle Percentages

		To		
		1 - Roundabout Link	2 - Cromwell Road	3 - A422 Warwick Rd
From	1 - Roundabout Link	0	0	7
	2 - Cromwell Road	0	0	0
	3 - A422 Warwick Rd	4	0	0

B - Eastern

Heavy Vehicle Percentages

		To		
		1 - A422 Ruscote Ave	2 - Warwick Road	3 - Roundabout Link
From	1 - A422 Ruscote Ave	0	4	5
	2 - Warwick Road	4	0	10
	3 - Roundabout Link	10	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Western Mini	1 - Roundabout Link	0.39	4.78	0.7	A	507	761
	2 - Cromwell Road	0.00	0.00	0.0	A	0	0
	3 - A422 Warwick Rd	0.39	5.55	0.7	A	436	654
B - Eastern	1 - A422 Ruscote Ave	0.59	5.09	1.5	A	1040	1560
	2 - Warwick Road	0.38	3.55	0.6	A	656	984
	3 - Roundabout Link	0.30	3.78	0.5	A	435	653

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	507	127	0	1313	0.386	504	433	0.0	0.7	4.748	A
	2 - Cromwell Road	0	0	504	720	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	436	109	0	1110	0.393	433	504	0.0	0.7	5.512	A
B - Eastern	1 - A422 Ruscote Ave	1040	260	255	1778	0.585	1034	607	0.0	1.4	5.006	A
	2 - Warwick Road	656	164	279	1731	0.379	653	1010	0.0	0.6	3.531	A
	3 - Roundabout Link	435	109	428	1431	0.304	433	505	0.0	0.5	3.764	A

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	507	127	0	1313	0.386	507	436	0.7	0.7	4.778	A
	2 - Cromwell Road	0	0	507	718	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	436	109	0	1110	0.393	436	507	0.7	0.7	5.553	A
B - Eastern	1 - A422 Ruscote Ave	1040	260	256	1778	0.585	1040	609	1.4	1.5	5.089	A
	2 - Warwick Road	656	164	281	1730	0.379	656	1015	0.6	0.6	3.551	A
	3 - Roundabout Link	435	109	430	1430	0.304	435	507	0.5	0.5	3.780	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	507	127	0	1313	0.386	507	436	0.7	0.7	4.778	A
	2 - Cromwell Road	0	0	507	718	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	436	109	0	1110	0.393	436	507	0.7	0.7	5.553	A
B - Eastern	1 - A422 Ruscote Ave	1040	260	256	1778	0.585	1040	609	1.5	1.5	5.089	A
	2 - Warwick Road	656	164	281	1730	0.379	656	1015	0.6	0.6	3.551	A
	3 - Roundabout Link	435	109	430	1430	0.304	435	507	0.5	0.5	3.780	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	507	127	0	1313	0.386	507	436	0.7	0.7	4.778	A
	2 - Cromwell Road	0	0	507	718	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	436	109	0	1110	0.393	436	507	0.7	0.7	5.553	A
B - Eastern	1 - A422 Ruscote Ave	1040	260	256	1778	0.585	1040	609	1.5	1.5	5.089	A
	2 - Warwick Road	656	164	281	1730	0.379	656	1015	0.6	0.6	3.551	A
	3 - Roundabout Link	435	109	430	1430	0.304	435	507	0.5	0.5	3.780	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	507	127	0	1313	0.386	507	436	0.7	0.7	4.778	A
	2 - Cromwell Road	0	0	507	718	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	436	109	0	1110	0.393	436	507	0.7	0.7	5.553	A
B - Eastern	1 - A422 Ruscote Ave	1040	260	256	1778	0.585	1040	609	1.5	1.5	5.089	A
	2 - Warwick Road	656	164	281	1730	0.379	656	1015	0.6	0.6	3.551	A
	3 - Roundabout Link	435	109	430	1430	0.304	435	507	0.5	0.5	3.780	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	507	127	0	1313	0.386	507	436	0.7	0.7	4.778	A
	2 - Cromwell Road	0	0	507	718	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	436	109	0	1110	0.393	436	507	0.7	0.7	5.553	A
B - Eastern	1 - A422 Ruscote Ave	1040	260	256	1778	0.585	1040	609	1.5	1.5	5.089	A
	2 - Warwick Road	656	164	281	1730	0.379	656	1015	0.6	0.6	3.551	A
	3 - Roundabout Link	435	109	430	1430	0.304	435	507	0.5	0.5	3.780	A

Existing Layout - Year 2027 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	A - Western Mini	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 100% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
A	Western Mini	Mini-roundabout		1, 2, 3	5.30	A
B	Eastern	Standard Roundabout		1, 2, 3	4.43	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		4.70	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	Year 2027 Base	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Western Mini	1 - Roundabout Link		FLAT	✓	632	100.000
	2 - Cromwell Road		FLAT	✓	0	100.000
	3 - A422 Warwick Rd		FLAT	✓	389	100.000
B - Eastern	1 - A422 Ruscote Ave		FLAT	✓	857	100.000
	2 - Warwick Road		FLAT	✓	969	100.000
	3 - Roundabout Link		FLAT	✓	390	100.000

Origin-Destination Data

Demand (PCU/hr)

A - Western Mini

		To		
		1 - Roundabout Link	2 - Cromwell Road	3 - A422 Warwick Rd
From	1 - Roundabout Link	0	0	632
	2 - Cromwell Road	0	0	0
	3 - A422 Warwick Rd	389	0	0

Demand (PCU/hr)

B - Eastern

		To		
		1 - A422 Ruscote Ave	2 - Warwick Road	3 - Roundabout Link
From	1 - A422 Ruscote Ave	0	528	329
	2 - Warwick Road	667	0	302
	3 - Roundabout Link	175	215	0

Vehicle Mix

Heavy Vehicle Percentages

A - Western Mini

		To		
		1 - Roundabout Link	2 - Cromwell Road	3 - A422 Warwick Rd
From	1 - Roundabout Link	0	0	2
	2 - Cromwell Road	0	0	0
	3 - A422 Warwick Rd	3	0	0

Heavy Vehicle Percentages

B - Eastern

		To		
		1 - A422 Ruscote Ave	2 - Warwick Road	3 - Roundabout Link
From	1 - A422 Ruscote Ave	0	0	1
	2 - Warwick Road	2	0	3
	3 - Roundabout Link	3	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Western Mini	1 - Roundabout Link	0.48	5.39	0.9	A	632	948
	2 - Cromwell Road	0.00	0.00	0.0	A	0	0
	3 - A422 Warwick Rd	0.35	5.14	0.6	A	389	584
B - Eastern	1 - A422 Ruscote Ave	0.47	3.80	0.9	A	857	1286
	2 - Warwick Road	0.57	5.07	1.4	A	969	1454
	3 - Roundabout Link	0.31	4.20	0.5	A	390	585

Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	632	158	0	1313	0.481	628	387	0.0	0.9	5.333	A
	2 - Cromwell Road	0	0	628	640	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	389	97	0	1110	0.350	387	628	0.0	0.6	5.111	A
B - Eastern	1 - A422 Ruscote Ave	857	214	214	1807	0.474	853	837	0.0	0.9	3.775	A
	2 - Warwick Road	969	242	328	1696	0.571	964	740	0.0	1.3	4.997	A
	3 - Roundabout Link	390	98	663	1279	0.305	388	628	0.0	0.5	4.175	A

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	632	158	0	1313	0.481	632	389	0.9	0.9	5.390	A
	2 - Cromwell Road	0	0	632	638	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	389	97	0	1110	0.350	389	632	0.6	0.6	5.141	A
B - Eastern	1 - A422 Ruscote Ave	857	214	215	1807	0.474	857	842	0.9	0.9	3.804	A
	2 - Warwick Road	969	242	329	1695	0.572	969	743	1.3	1.4	5.075	A
	3 - Roundabout Link	390	98	667	1277	0.305	390	631	0.5	0.5	4.203	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	632	158	0	1313	0.481	632	389	0.9	0.9	5.390	A
	2 - Cromwell Road	0	0	632	638	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	389	97	0	1110	0.350	389	632	0.6	0.6	5.141	A
B - Eastern	1 - A422 Ruscote Ave	857	214	215	1807	0.474	857	842	0.9	0.9	3.804	A
	2 - Warwick Road	969	242	329	1695	0.572	969	743	1.4	1.4	5.075	A
	3 - Roundabout Link	390	98	667	1277	0.305	390	631	0.5	0.5	4.203	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	632	158	0	1313	0.481	632	389	0.9	0.9	5.390	A
	2 - Cromwell Road	0	0	632	638	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	389	97	0	1110	0.350	389	632	0.6	0.6	5.141	A
B - Eastern	1 - A422 Ruscote Ave	857	214	215	1807	0.474	857	842	0.9	0.9	3.804	A
	2 - Warwick Road	969	242	329	1695	0.572	969	743	1.4	1.4	5.075	A
	3 - Roundabout Link	390	98	667	1277	0.305	390	631	0.5	0.5	4.203	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	632	158	0	1313	0.481	632	389	0.9	0.9	5.390	A
	2 - Cromwell Road	0	0	632	638	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	389	97	0	1110	0.350	389	632	0.6	0.6	5.141	A
B - Eastern	1 - A422 Ruscote Ave	857	214	215	1807	0.474	857	842	0.9	0.9	3.804	A
	2 - Warwick Road	969	242	329	1695	0.572	969	743	1.4	1.4	5.075	A
	3 - Roundabout Link	390	98	667	1277	0.305	390	631	0.5	0.5	4.203	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	632	158	0	1313	0.481	632	389	0.9	0.9	5.390	A
	2 - Cromwell Road	0	0	632	638	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	389	97	0	1110	0.350	389	632	0.6	0.6	5.141	A
B - Eastern	1 - A422 Ruscote Ave	857	214	215	1807	0.474	857	842	0.9	0.9	3.804	A
	2 - Warwick Road	969	242	329	1695	0.572	969	743	1.4	1.4	5.075	A
	3 - Roundabout Link	390	98	667	1277	0.305	390	631	0.5	0.5	4.203	A

Existing Layout - Year 2027 + Dev Traffic, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	A - Western Mini	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 100% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
A	Western Mini	Mini-roundabout		1, 2, 3	5.25	A
B	Eastern	Standard Roundabout		1, 2, 3	4.41	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		4.67	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	Year 2027 + Dev Traffic	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Western Mini	1 - Roundabout Link		FLAT	✓	514	100.000
	2 - Cromwell Road		FLAT	✓	0	100.000
	3 - A422 Warwick Rd		FLAT	✓	458	100.000
B - Eastern	1 - A422 Ruscote Ave		FLAT	✓	1040	100.000
	2 - Warwick Road		FLAT	✓	663	100.000
	3 - Roundabout Link		FLAT	✓	456	100.000

Origin-Destination Data

Demand (PCU/hr)

A - Western Mini

		To		
		1 - Roundabout Link	2 - Cromwell Road	3 - A422 Warwick Rd
From	1 - Roundabout Link	0	0	514
	2 - Cromwell Road	0	0	0
	3 - A422 Warwick Rd	458	0	0

Demand (PCU/hr)

B - Eastern

		To		
		1 - A422 Ruscote Ave	2 - Warwick Road	3 - Roundabout Link
From	1 - A422 Ruscote Ave	0	759	281
	2 - Warwick Road	430	0	233
	3 - Roundabout Link	179	277	0

Vehicle Mix

Heavy Vehicle Percentages

A - Western Mini

		To		
		1 - Roundabout Link	2 - Cromwell Road	3 - A422 Warwick Rd
From	1 - Roundabout Link	0	0	7
	2 - Cromwell Road	0	0	0
	3 - A422 Warwick Rd	4	0	0

Heavy Vehicle Percentages

B - Eastern

		To		
		1 - A422 Ruscote Ave	2 - Warwick Road	3 - Roundabout Link
From	1 - A422 Ruscote Ave	0	4	5
	2 - Warwick Road	4	0	10
	3 - Roundabout Link	10	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Western Mini	1 - Roundabout Link	0.39	4.82	0.7	A	514	771
	2 - Cromwell Road	0.00	0.00	0.0	A	0	0
	3 - A422 Warwick Rd	0.41	5.74	0.7	A	458	687
B - Eastern	1 - A422 Ruscote Ave	0.59	5.19	1.5	A	1040	1560
	2 - Warwick Road	0.38	3.58	0.7	A	663	995
	3 - Roundabout Link	0.32	3.86	0.5	A	456	684

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	514	129	0	1313	0.391	511	455	0.0	0.7	4.787	A
	2 - Cromwell Road	0	0	511	715	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	458	115	0	1110	0.413	455	511	0.0	0.7	5.691	A
B - Eastern	1 - A422 Ruscote Ave	1040	260	276	1763	0.590	1034	607	0.0	1.5	5.106	A
	2 - Warwick Road	663	166	279	1731	0.383	660	1031	0.0	0.7	3.555	A
	3 - Roundabout Link	456	114	428	1431	0.319	454	511	0.0	0.5	3.836	A

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	514	129	0	1313	0.391	514	458	0.7	0.7	4.819	A
	2 - Cromwell Road	0	0	514	713	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	458	115	0	1110	0.413	458	514	0.7	0.7	5.740	A
B - Eastern	1 - A422 Ruscote Ave	1040	260	277	1763	0.590	1040	609	1.5	1.5	5.193	A
	2 - Warwick Road	663	166	281	1730	0.383	663	1036	0.7	0.7	3.576	A
	3 - Roundabout Link	456	114	430	1430	0.319	456	514	0.5	0.5	3.856	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	514	129	0	1313	0.391	514	458	0.7	0.7	4.819	A
	2 - Cromwell Road	0	0	514	713	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	458	115	0	1110	0.413	458	514	0.7	0.7	5.740	A
B - Eastern	1 - A422 Ruscote Ave	1040	260	277	1763	0.590	1040	609	1.5	1.5	5.193	A
	2 - Warwick Road	663	166	281	1730	0.383	663	1036	0.7	0.7	3.576	A
	3 - Roundabout Link	456	114	430	1430	0.319	456	514	0.5	0.5	3.856	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	514	129	0	1313	0.391	514	458	0.7	0.7	4.819	A
	2 - Cromwell Road	0	0	514	713	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	458	115	0	1110	0.413	458	514	0.7	0.7	5.740	A
B - Eastern	1 - A422 Ruscote Ave	1040	260	277	1763	0.590	1040	609	1.5	1.5	5.193	A
	2 - Warwick Road	663	166	281	1730	0.383	663	1036	0.7	0.7	3.576	A
	3 - Roundabout Link	456	114	430	1430	0.319	456	514	0.5	0.5	3.856	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	514	129	0	1313	0.391	514	458	0.7	0.7	4.819	A
	2 - Cromwell Road	0	0	514	713	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	458	115	0	1110	0.413	458	514	0.7	0.7	5.740	A
B - Eastern	1 - A422 Ruscote Ave	1040	260	277	1763	0.590	1040	609	1.5	1.5	5.193	A
	2 - Warwick Road	663	166	281	1730	0.383	663	1036	0.7	0.7	3.576	A
	3 - Roundabout Link	456	114	430	1430	0.319	456	514	0.5	0.5	3.856	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	514	129	0	1313	0.391	514	458	0.7	0.7	4.819	A
	2 - Cromwell Road	0	0	514	713	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	458	115	0	1110	0.413	458	514	0.7	0.7	5.740	A
B - Eastern	1 - A422 Ruscote Ave	1040	260	277	1763	0.590	1040	609	1.5	1.5	5.193	A
	2 - Warwick Road	663	166	281	1730	0.383	663	1036	0.7	0.7	3.576	A
	3 - Roundabout Link	456	114	430	1430	0.319	456	514	0.5	0.5	3.856	A

Existing Layout - Year 2027 + Dev Traffic, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	A - Western Mini	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 100% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
A	Western Mini	Mini-roundabout		1, 2, 3	5.43	A
B	Eastern	Standard Roundabout		1, 2, 3	4.52	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		4.81	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	Year 2027 + Dev Traffic	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Western Mini	1 - Roundabout Link		FLAT	✓	652	100.000
	2 - Cromwell Road		FLAT	✓	0	100.000
	3 - A422 Warwick Rd		FLAT	✓	400	100.000
B - Eastern	1 - A422 Ruscote Ave		FLAT	✓	857	100.000
	2 - Warwick Road		FLAT	✓	990	100.000
	3 - Roundabout Link		FLAT	✓	401	100.000

Origin-Destination Data

Demand (PCU/hr)

A - Western Mini

		To		
		1 - Roundabout Link	2 - Cromwell Road	3 - A422 Warwick Rd
From	1 - Roundabout Link	0	0	652
	2 - Cromwell Road	0	0	0
	3 - A422 Warwick Rd	400	0	0

Demand (PCU/hr)

B - Eastern

		To		
		1 - A422 Ruscote Ave	2 - Warwick Road	3 - Roundabout Link
From	1 - A422 Ruscote Ave	0	528	329
	2 - Warwick Road	667	0	323
	3 - Roundabout Link	175	226	0

Vehicle Mix

Heavy Vehicle Percentages

A - Western Mini

		To		
		1 - Roundabout Link	2 - Cromwell Road	3 - A422 Warwick Rd
From	1 - Roundabout Link	0	0	2
	2 - Cromwell Road	0	0	0
	3 - A422 Warwick Rd	3	0	0

Heavy Vehicle Percentages

B - Eastern

		To		
		1 - A422 Ruscote Ave	2 - Warwick Road	3 - Roundabout Link
From	1 - A422 Ruscote Ave	0	0	1
	2 - Warwick Road	2	0	3
	3 - Roundabout Link	3	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Western Mini	1 - Roundabout Link	0.50	5.55	1.0	A	652	978
	2 - Cromwell Road	0.00	0.00	0.0	A	0	0
	3 - A422 Warwick Rd	0.36	5.22	0.6	A	400	600
B - Eastern	1 - A422 Ruscote Ave	0.48	3.84	0.9	A	857	1286
	2 - Warwick Road	0.58	5.23	1.4	A	990	1485
	3 - Roundabout Link	0.31	4.26	0.5	A	401	602

Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	652	163	0	1313	0.497	648	398	0.0	1.0	5.488	A
	2 - Cromwell Road	0	0	648	627	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	400	100	0	1110	0.360	398	648	0.0	0.6	5.188	A
B - Eastern	1 - A422 Ruscote Ave	857	214	225	1800	0.476	853	837	0.0	0.9	3.806	A
	2 - Warwick Road	990	248	328	1696	0.584	984	751	0.0	1.4	5.140	A
	3 - Roundabout Link	401	100	663	1279	0.313	399	649	0.0	0.5	4.228	A

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	652	163	0	1313	0.497	652	400	1.0	1.0	5.553	A
	2 - Cromwell Road	0	0	652	625	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	400	100	0	1110	0.360	400	652	0.6	0.6	5.221	A
B - Eastern	1 - A422 Ruscote Ave	857	214	226	1799	0.476	857	842	0.9	0.9	3.836	A
	2 - Warwick Road	990	248	329	1695	0.584	990	754	1.4	1.4	5.227	A
	3 - Roundabout Link	401	100	667	1277	0.314	401	652	0.5	0.5	4.256	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	652	163	0	1313	0.497	652	400	1.0	1.0	5.553	A
	2 - Cromwell Road	0	0	652	625	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	400	100	0	1110	0.360	400	652	0.6	0.6	5.221	A
B - Eastern	1 - A422 Ruscote Ave	857	214	226	1799	0.476	857	842	0.9	0.9	3.836	A
	2 - Warwick Road	990	248	329	1695	0.584	990	754	1.4	1.4	5.227	A
	3 - Roundabout Link	401	100	667	1277	0.314	401	652	0.5	0.5	4.256	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	652	163	0	1313	0.497	652	400	1.0	1.0	5.553	A
	2 - Cromwell Road	0	0	652	625	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	400	100	0	1110	0.360	400	652	0.6	0.6	5.221	A
B - Eastern	1 - A422 Ruscote Ave	857	214	226	1799	0.476	857	842	0.9	0.9	3.836	A
	2 - Warwick Road	990	248	329	1695	0.584	990	754	1.4	1.4	5.227	A
	3 - Roundabout Link	401	100	667	1277	0.314	401	652	0.5	0.5	4.256	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	652	163	0	1313	0.497	652	400	1.0	1.0	5.553	A
	2 - Cromwell Road	0	0	652	625	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	400	100	0	1110	0.360	400	652	0.6	0.6	5.221	A
B - Eastern	1 - A422 Ruscote Ave	857	214	226	1799	0.476	857	842	0.9	0.9	3.836	A
	2 - Warwick Road	990	248	329	1695	0.584	990	754	1.4	1.4	5.227	A
	3 - Roundabout Link	401	100	667	1277	0.314	401	652	0.5	0.5	4.256	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Western Mini	1 - Roundabout Link	652	163	0	1313	0.497	652	400	1.0	1.0	5.553	A
	2 - Cromwell Road	0	0	652	625	0.000	0	0	0.0	0.0	0.000	A
	3 - A422 Warwick Rd	400	100	0	1110	0.360	400	652	0.6	0.6	5.221	A
B - Eastern	1 - A422 Ruscote Ave	857	214	226	1799	0.476	857	842	0.9	0.9	3.836	A
	2 - Warwick Road	990	248	329	1695	0.584	990	754	1.4	1.4	5.227	A
	3 - Roundabout Link	401	100	667	1277	0.314	401	652	0.5	0.5	4.256	A

Appendix K: Junction 5: Warwick Road/Drayton Lodge Farmhouse Access Capacity Assessment

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.0.1499

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: Drayton Lodge Site Access 13072022.j10
Path: Y:\PROJECT FOLDER\17279 Warwick Road, Banbury\Calculations\Transport\Modelling
Report generation date: 13/07/2022 17:08:43

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - Year 2027 Baseline									
Stream B-AC	D1	0.0	5.99	0.01	A	D2	0.0	7.01	0.01	A
Stream C-AB		0.0	5.84	0.00	A		0.0	6.89	0.01	A
	A1 - Year 2027 + Dev									
Stream B-AC	D3	0.0	6.05	0.01	A	D4	0.0	7.25	0.01	A
Stream C-AB		0.0	5.90	0.00	A		0.0	7.13	0.01	A

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	Proposed Site Accesss
Location	Banbury
Site number	
Date	02/02/2016
Version	A
Status	Draft
Identifier	
Client	
Jobnumber	W15219
Enumerator	sradford
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

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	Year 2027 Baseline	AM	FLAT	07:45	09:15	90	15	✓
D2	Year 2027 Baseline	PM	FLAT	16:45	18:15	90	15	✓
D3	Year 2027 + Dev	AM	FLAT	07:45	09:15	90	15	✓
D4	Year 2027 + Dev	PM	FLAT	16:45	18:15	90	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

(Default Analysis Set) - Year 2027 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	Two-way	Two-way		0.09	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.09	A

Arms

Arms

Arm	Name	Description	Arm type
A	Warwick Road South		Major
B	Site Access		Minor
C	Warwick Road North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Warwick Road North	6.00		✓	3.00	100.0	✓	6.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane	3.00	100	80

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	550	0.100	0.253	0.159	0.362
B-C	674	0.103	0.261	-	-
C-B	687	0.266	0.266	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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 period length (min)	Time segment length (min)	Run automatically
D1	Year 2027 Baseline	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Warwick Road South		FLAT	✓	259	100.000
B - Site Access		FLAT	✓	6	100.000
C - Warwick Road North		FLAT	✓	238	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Warwick Road South	B - Site Access	C - Warwick Road North
From	A - Warwick Road South	0	0	259
	B - Site Access	0	0	6
	C - Warwick Road North	236	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Warwick Road South	B - Site Access	C - Warwick Road North
From	A - Warwick Road South	0	0	9
	B - Site Access	0	0	0
	C - Warwick Road North	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.01	5.99	0.0	A	6	9
C-AB	0.00	5.84	0.0	A	2	3
C-A					236	354
A-B					0	0
A-C					259	389

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	607	0.010	6	0.0	0.0	5.993	A
C-AB	2	0.50	618	0.003	2	0.0	0.0	5.843	A
C-A	236	59			236				
A-B	0	0			0				
A-C	259	65			259				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	607	0.010	6	0.0	0.0	5.993	A
C-AB	2	0.50	618	0.003	2	0.0	0.0	5.843	A
C-A	236	59			236				
A-B	0	0			0				
A-C	259	65			259				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	607	0.010	6	0.0	0.0	5.995	A
C-AB	2	0.50	618	0.003	2	0.0	0.0	5.843	A
C-A	236	59			236				
A-B	0	0			0				
A-C	259	65			259				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	607	0.010	6	0.0	0.0	5.995	A
C-AB	2	0.50	618	0.003	2	0.0	0.0	5.843	A
C-A	236	59			236				
A-B	0	0			0				
A-C	259	65			259				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	607	0.010	6	0.0	0.0	5.995	A
C-AB	2	0.50	618	0.003	2	0.0	0.0	5.843	A
C-A	236	59			236				
A-B	0	0			0				
A-C	259	65			259				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	607	0.010	6	0.0	0.0	5.995	A
C-AB	2	0.50	618	0.003	2	0.0	0.0	5.843	A
C-A	236	59			236				
A-B	0	0			0				
A-C	259	65			259				

(Default Analysis Set) - Year 2027 Baseline, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	Two-way	Two-way		0.09	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.09	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	Year 2027 Baseline	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Warwick Road South		FLAT	✓	592	100.000
B - Site Access		FLAT	✓	6	100.000
C - Warwick Road North		FLAT	✓	402	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Warwick Road South	B - Site Access	C - Warwick Road North
From	A - Warwick Road South	0	0	592
	B - Site Access	0	0	6
	C - Warwick Road North	395	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Warwick Road South	B - Site Access	C - Warwick Road North
From	A - Warwick Road South	0	0	4
	B - Site Access	0	0	0
	C - Warwick Road North	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.01	7.01	0.0	A	6	9
C-AB	0.01	6.89	0.0	A	7	11
C-A					395	593
A-B					0	0
A-C					592	888

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	520	0.012	6	0.0	0.0	7.008	A
C-AB	7	2	529	0.013	7	0.0	0.0	6.891	A
C-A	395	99			395				
A-B	0	0			0				
A-C	592	148			592				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	520	0.012	6	0.0	0.0	7.008	A
C-AB	7	2	529	0.013	7	0.0	0.0	6.891	A
C-A	395	99			395				
A-B	0	0			0				
A-C	592	148			592				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	520	0.012	6	0.0	0.0	7.008	A
C-AB	7	2	529	0.013	7	0.0	0.0	6.891	A
C-A	395	99			395				
A-B	0	0			0				
A-C	592	148			592				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	520	0.012	6	0.0	0.0	7.008	A
C-AB	7	2	529	0.013	7	0.0	0.0	6.891	A
C-A	395	99			395				
A-B	0	0			0				
A-C	592	148			592				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	520	0.012	6	0.0	0.0	7.008	A
C-AB	7	2	529	0.013	7	0.0	0.0	6.891	A
C-A	395	99			395				
A-B	0	0			0				
A-C	592	148			592				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	520	0.012	6	0.0	0.0	7.008	A
C-AB	7	2	529	0.013	7	0.0	0.0	6.891	A
C-A	395	99			395				
A-B	0	0			0				
A-C	592	148			592				

(Default Analysis Set) - Year 2027 + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	Two-way	Two-way		0.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.08	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	Year 2027 + Dev	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Warwick Road South		FLAT	✓	281	100.000
B - Site Access		FLAT	✓	6	100.000
C - Warwick Road North		FLAT	✓	305	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Warwick Road South	B - Site Access	C - Warwick Road North
From	A - Warwick Road South	0	0	281
	B - Site Access	0	0	6
	C - Warwick Road North	303	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Warwick Road South	B - Site Access	C - Warwick Road North
From	A - Warwick Road South	0	0	9
	B - Site Access	0	0	0
	C - Warwick Road North	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.01	6.05	0.0	A	6	9
C-AB	0.00	5.90	0.0	A	2	3
C-A					303	455
A-B					0	0
A-C					281	422

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	601	0.010	6	0.0	0.0	6.050	A
C-AB	2	0.50	612	0.003	2	0.0	0.0	5.899	A
C-A	303	76			303				
A-B	0	0			0				
A-C	281	70			281				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	601	0.010	6	0.0	0.0	6.050	A
C-AB	2	0.50	612	0.003	2	0.0	0.0	5.899	A
C-A	303	76			303				
A-B	0	0			0				
A-C	281	70			281				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	601	0.010	6	0.0	0.0	6.053	A
C-AB	2	0.50	612	0.003	2	0.0	0.0	5.899	A
C-A	303	76			303				
A-B	0	0			0				
A-C	281	70			281				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	601	0.010	6	0.0	0.0	6.053	A
C-AB	2	0.50	612	0.003	2	0.0	0.0	5.899	A
C-A	303	76			303				
A-B	0	0			0				
A-C	281	70			281				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	601	0.010	6	0.0	0.0	6.053	A
C-AB	2	0.50	612	0.003	2	0.0	0.0	5.899	A
C-A	303	76			303				
A-B	0	0			0				
A-C	281	70			281				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	601	0.010	6	0.0	0.0	6.053	A
C-AB	2	0.50	612	0.003	2	0.0	0.0	5.899	A
C-A	303	76			303				
A-B	0	0			0				
A-C	281	70			281				

(Default Analysis Set) - Year 2027 + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	Two-way	Two-way		0.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.08	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	Year 2027 + Dev	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Warwick Road South		FLAT	✓	657	100.000
B - Site Access		FLAT	✓	6	100.000
C - Warwick Road North		FLAT	✓	436	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Warwick Road South	B - Site Access	C - Warwick Road North
From	A - Warwick Road South	0	0	657
	B - Site Access	0	0	6
	C - Warwick Road North	429	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Warwick Road South	B - Site Access	C - Warwick Road North
From	A - Warwick Road South	0	0	4
	B - Site Access	0	0	0
	C - Warwick Road North	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.01	7.25	0.0	A	6	9
C-AB	0.01	7.13	0.0	A	7	11
C-A					429	644
A-B					0	0
A-C					657	986

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	503	0.012	6	0.0	0.0	7.247	A
C-AB	7	2	512	0.014	7	0.0	0.0	7.127	A
C-A	429	107			429				
A-B	0	0			0				
A-C	657	164			657				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	503	0.012	6	0.0	0.0	7.247	A
C-AB	7	2	512	0.014	7	0.0	0.0	7.127	A
C-A	429	107			429				
A-B	0	0			0				
A-C	657	164			657				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	503	0.012	6	0.0	0.0	7.250	A
C-AB	7	2	512	0.014	7	0.0	0.0	7.127	A
C-A	429	107			429				
A-B	0	0			0				
A-C	657	164			657				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	503	0.012	6	0.0	0.0	7.250	A
C-AB	7	2	512	0.014	7	0.0	0.0	7.127	A
C-A	429	107			429				
A-B	0	0			0				
A-C	657	164			657				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	503	0.012	6	0.0	0.0	7.250	A
C-AB	7	2	512	0.014	7	0.0	0.0	7.127	A
C-A	429	107			429				
A-B	0	0			0				
A-C	657	164			657				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	2	503	0.012	6	0.0	0.0	7.250	A
C-AB	7	2	512	0.014	7	0.0	0.0	7.127	A
C-A	429	107			429				
A-B	0	0			0				
A-C	657	164			657				

Appendix L: Junction 6: Warwick Road/Site Access Capacity Assessment

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.0.1499

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: Site Access Junction.j10
Path: Y:\PROJECT FOLDER\17279 Warwick Road, Banbury\Calculations\Transport\Modelling
Report generation date: 18/07/2022 15:26:25

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	Year 2027 + Dev					
Stream B-C	0.1	5.91	0.10	0.1	6.04	0.06
Stream B-A	0.0	7.28	0.00	0.0	9.48	0.00
Stream C-B	0.0	5.21	0.03	0.1	5.98	0.10

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	1
Location	Site Access Junction, Banbury
Site number	
Date	18/07/2022
Version	A
Status	(new file)
Identifier	
Client	Vistry
Jobnumber	17279
Enumerator	JUBB\SRadford
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

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	Year 2027 + Dev	AM	FLAT	07:45	09:15	90	15	✓
D2	Year 2027 + Dev	PM	FLAT	16:45	18:15	90	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

Year 2027 + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.88	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.88	A

Arms

Arms

Arm	Name	Description	Arm type
A	Warwick Road North		Major
B	Site Access		Minor
C	Warwick Road South		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.30		✓	3.00	250.0		-

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	8.10	2.83	2.75	2.75	2.75	✓	1.00	140	160

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	612	0.105	0.266	0.167	0.380
B-C	740	0.107	0.271	-	-
C-B	781	0.286	0.286	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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 period length (min)	Time segment length (min)	Run automatically
D1	Year 2027 + Dev	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		FLAT	✓	238	100.000
B		FLAT	✓	68	100.000
C		FLAT	✓	288	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	238
	B	1	0	67
	C	265	23	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	4
	B	0	0	0
	C	9	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.10	5.91	0.1	A	67	101
B-A	0.00	7.28	0.0	A	1	2
C-A					265	398
C-B	0.03	5.21	0.0	A	23	35
A-B					0	0
A-C					238	357

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	67	17	676	0.099	67	0.0	0.1	5.907	A
B-A	1	0.25	495	0.002	0.99	0.0	0.0	7.279	A
C-A	265	66			265				
C-B	23	6	713	0.032	23	0.0	0.0	5.214	A
A-B	0	0			0				
A-C	238	60			238				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	67	17	676	0.099	67	0.1	0.1	5.914	A
B-A	1	0.25	495	0.002	1.00	0.0	0.0	7.280	A
C-A	265	66			265				
C-B	23	6	713	0.032	23	0.0	0.0	5.214	A
A-B	0	0			0				
A-C	238	60			238				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	67	17	676	0.099	67	0.1	0.1	5.914	A
B-A	1	0.25	495	0.002	1	0.0	0.0	7.280	A
C-A	265	66			265				
C-B	23	6	713	0.032	23	0.0	0.0	5.214	A
A-B	0	0			0				
A-C	238	60			238				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	67	17	676	0.099	67	0.1	0.1	5.914	A
B-A	1	0.25	495	0.002	1	0.0	0.0	7.280	A
C-A	265	66			265				
C-B	23	6	713	0.032	23	0.0	0.0	5.214	A
A-B	0	0			0				
A-C	238	60			238				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	67	17	676	0.099	67	0.1	0.1	5.914	A
B-A	1	0.25	495	0.002	1	0.0	0.0	7.280	A
C-A	265	66			265				
C-B	23	6	713	0.032	23	0.0	0.0	5.214	A
A-B	0	0			0				
A-C	238	60			238				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	67	17	676	0.099	67	0.1	0.1	5.914	A
B-A	1	0.25	495	0.002	1	0.0	0.0	7.280	A
C-A	265	66			265				
C-B	23	6	713	0.032	23	0.0	0.0	5.214	A
A-B	0	0			0				
A-C	238	60			238				

Year 2027 + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.55	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.55	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	Year 2027 + Dev	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		FLAT	✓	403	100.000
B		FLAT	✓	36	100.000
C		FLAT	✓	662	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	1	402
	B	1	0	35
	C	598	64	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	2
	B	0	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.06	6.04	0.1	A	35	53
B-A	0.00	9.48	0.0	A	1	2
C-A					598	897
C-B	0.10	5.98	0.1	A	64	96
A-B					1	2
A-C					402	603

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	631	0.055	35	0.0	0.1	6.038	A
B-A	1	0.25	381	0.003	0.99	0.0	0.0	9.476	A
C-A	598	150			598				
C-B	64	16	666	0.096	64	0.0	0.1	5.970	A
A-B	1	0.25			1				
A-C	402	101			402				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	631	0.055	35	0.1	0.1	6.039	A
B-A	1	0.25	381	0.003	1.00	0.0	0.0	9.480	A
C-A	598	150			598				
C-B	64	16	666	0.096	64	0.1	0.1	5.977	A
A-B	1	0.25			1				
A-C	402	101			402				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	631	0.055	35	0.1	0.1	6.039	A
B-A	1	0.25	381	0.003	1	0.0	0.0	9.480	A
C-A	598	150			598				
C-B	64	16	666	0.096	64	0.1	0.1	5.977	A
A-B	1	0.25			1				
A-C	402	101			402				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	631	0.055	35	0.1	0.1	6.039	A
B-A	1	0.25	381	0.003	1	0.0	0.0	9.480	A
C-A	598	150			598				
C-B	64	16	666	0.096	64	0.1	0.1	5.977	A
A-B	1	0.25			1				
A-C	402	101			402				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	631	0.055	35	0.1	0.1	6.039	A
B-A	1	0.25	381	0.003	1	0.0	0.0	9.480	A
C-A	598	150			598				
C-B	64	16	666	0.096	64	0.1	0.1	5.977	A
A-B	1	0.25			1				
A-C	402	101			402				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	631	0.055	35	0.1	0.1	6.039	A
B-A	1	0.25	381	0.003	1	0.0	0.0	9.480	A
C-A	598	150			598				
C-B	64	16	666	0.096	64	0.1	0.1	5.977	A
A-B	1	0.25			1				
A-C	402	101			402				