



Bicester Motion

Bicester Motion – Experience Quarter Transport Assessment

December 2020



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Bicester Motion

Bicester Motion – Experience Quarter

Transport Assessment

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Executive Summary

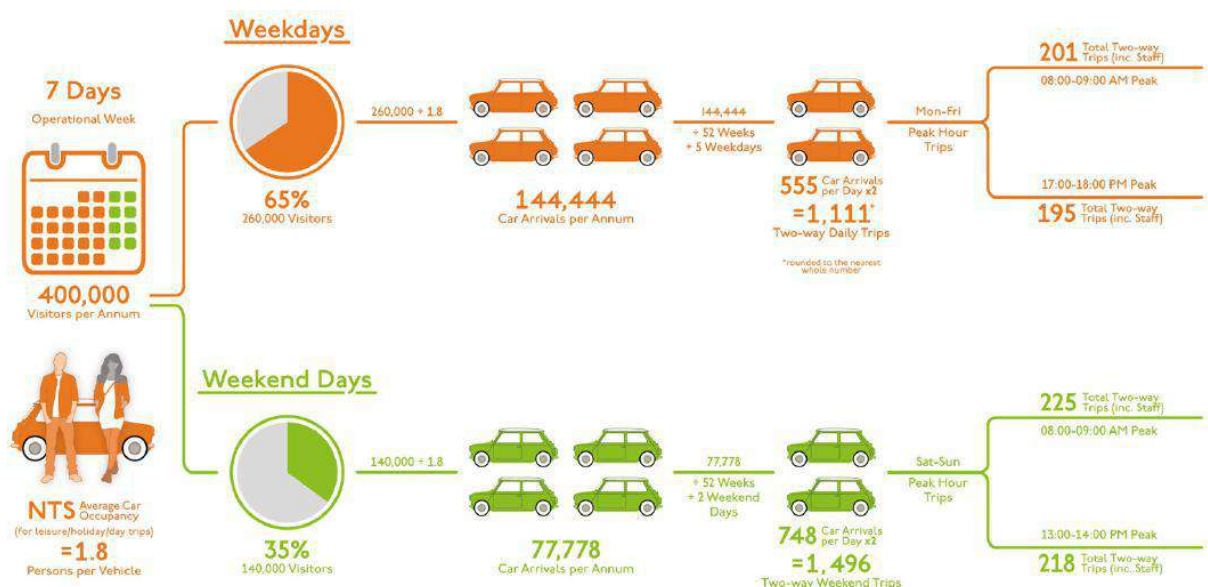
This Transport Assessment (TA) has been prepared on behalf of Bicester Motion. It accompanies an Outline planning application for a specialised and bespoke development consisting of commercial, business and services land uses, Light Industrial (Class B2) and Local Community and Learning Uses (Class F); ultimately the development will comprise an Experience Quarter focused on 'Motion' and all forms of wings and wheel technologies.

This TA includes a comprehensive assessment of the impact and mitigation required in order to make the development acceptable in planning terms, from a highways perspective, The pertinent content and methodologies of the assessment have been subject to detailed discussion and pre-application with relevant Highways Officers within Oxfordshire County Council.

The Experience Quarter site is accessible by sustainable modes of travel; with bus routes offering frequent services, within a short walk of the site. Pedestrian and cycle links surround the site and provide good connections with neighbouring residential areas and links to Bicester Town Centre and major cities, further afield.

The development proposals (inc. the wider Bicester Motion Masterplan) will situate a major employment (and leisure) site of strategic scale within easy walking and cycling distance of the majority of Bicester; including numerous large scale residential housing schemes coming forward throughout the town – this will help to support and facilitate NHS England's 'Healthy New Towns' programme (of which Bicester was awarded 'Healthy New Town' status (2016) and is a Demonstrator Site). Furthermore, the Experience Quarter will also raise the opportunity to provide a substantial level of new employment in the local area; With the significant housing supply within Bicester and in close proximity of the site, this will allow for more local employment, and as such, employees to the development travelling more sustainably.

The Experience Quarter would cater for up to 400,000 visitors per annum and operate 7-days a week for 365-days per year (excluding national closure days); The forecast traffic generation associated with the development is summarised graphically in the Figure below. The methodology/calculations have been shared and agreed with OCC as part of pre-application scoping discussions.



In terms of staff, it is anticipated that the development could employ up to c.200 Full-Time Equivalent (FTE) staff members, based on c.120sqm per FTE, as per the HCA's Employment Density Guide 2015. It is expected that there will be approximately two-thirds (66%) of total FTE staff, (c.132), on duty/on-site, daily, at any given time.

The main access to the Experience Quarter development will be provided from the A4221 Buckingham Road approximately 18m south of the existing gated access to the airfield; this will be via a new ghost island priority junction; the access junction will allow for all movements entering the site but will prohibit vehicles leaving the site from turning right across Buckingham Road by deflecting traffic using an appropriate splitter island and road markings.

The scope of the network capacity assessment was agreed with OCC Highway Officers and includes an assessment of the cumulative committed development impacts associated with the wider Bicester Motion Masterplan (NTS, Hotel & FAST 'Innovation Quarter'), as well as other local committed developments included in OCC's strategic SATURN model. The findings of the capacity modelling demonstrated that the development proposals are required to mitigate impact at specific locations on the local highway, in order to provide a 'nil detriment' during the weekday network peak hours (0800-0900 AM Peak & 1700-1800 PM Peak).

The capacity analysis and mitigation has demonstrated that the traffic demands placed on the study area by the introduction of the Employment Quarter can be adequately accommodated either by existing or already committed infrastructure or by the introduction of mitigation schemes for three off-site junction locations:

- A4421 Buckingham Rd/A4421 Skimmingdish Ln/Buckingham Rd/A4095 roundabout;
- B4100/A4095/Banbury Rd roundabout; and,
- A4421 Buckingham Rd/Bicester Road priority junction.

It has been concluded that the impact of development can be appropriately accommodated on the local highway network, subject to providing the necessary improvements aforementioned.

On the basis of the information and mitigation subsequently presented in this report, it is considered that the proposed development can be accommodated within the local area. As such there should be no reason why the application cannot be recommended in terms of highways and transportation.

It is concluded that the proposed development (considering the proposed mitigation) will not have a significant adverse impact on the operation of the surrounding highway network and therefore, in accordance with the NPPF, the proposal should be considered acceptable in transport terms.

1 Introduction

1.1 Overview

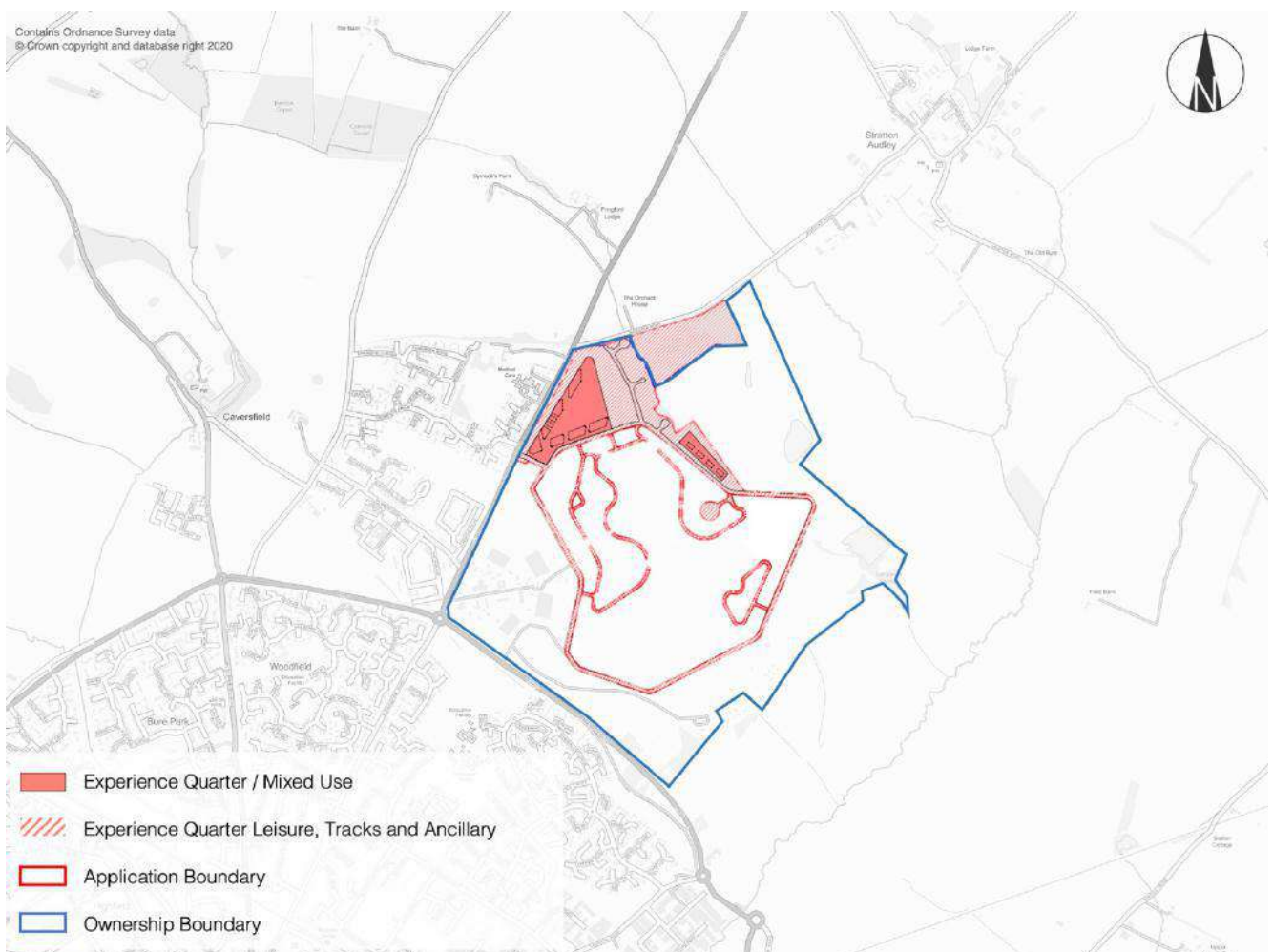
1.1.1 mode transport planning (mode) has been appointed by Bicester Motion to prepare a Transport Assessment (TA) to accompany an outline planning application for the Experience Quarter development included as part of the wider Bicester Motion Masterplan development proposals. The description of development is as follows:

Experience Quarter comprising Commercial, Business and Services uses (Class E), Light Industrial (Class B2) and Local Community and Learning Uses (Class F).

1.1.2 The proposed site is located to the north of Bicester, approximately 2km from the Town Centre; with its western boundary extending along Buckingham Road (A4421), Bicester Road along its northern boundary and the proposed wider Bicester Motion masterplan development to the south and east.

1.1.3 The location of the Experience Quarter development site, shown in relation to the Bicester Motion Masterplan is displayed in **Figure 1.1**.

Figure 1.1: Site Location Plan



1.2 Pre-Application Scoping with Oxfordshire County Council

- 1.2.1 Consultation regarding the scope of the wider Bicester Motion Masterplan was undertaken with highways officers from Oxfordshire County Council (OCC). A Transport Assessment scoping note (dated February 2019) was submitted to OCC in February 2019 and this was followed by a meeting, on 19th February 2019, in order to discuss the development parameters and modelling methodology. OCC has formally responded to the scoping exercise via email dated 7th March 2019 and subsequent email correspondence between mode and OCC dated 27th March, 9th April and 7th May 2019.
- 1.2.2 The full scoping/technical notes and pre-application highways comments/correspondences for the wider masterplan are provided in **Appendix A**, for reference.
- 1.2.3 Subsequent to the initial scoping exercise it was decided that the proposals for the Experience Quarter and FAST 'Innovation Quarter' elements of the wider masterplan will come forward as separate and individual applications.
- 1.2.4 Following a meeting on July 24th, regarding the FAST Future Technology Hub and submission of the draft wider Bicester Motion Masterplan TA, OCC Highway's response was received (dated 4th September 2019) – this is also provided at **Appendix A**, for reference.
- 1.2.5 Specific Brand Experience pre-application workshop meetings were held on 7th November and 18th December 2019; the salient items that have been discussed and agreed with OCC, as part of the entire pre-application process includes:
- Tailored interim application assessment for each element of the wider Bicester Motion Masterplan;
 - Trip rates & traffic generation - first principles traffic generation methodology for the Experience Quarter;
 - Capacity assessments and scope of off-site junctions;
 - Use and commission of the Saturn model;
 - Access proposals and preliminary junction location and layout plans; and,
 - Parking.
- 1.2.6 A subsequent wider prep-application response to the Brand Experience proposals was subsequently received from Cherwell District Council (CDC) dated 14th February 2020, again a copy is included in **Appendix A**.
- 1.2.7 It should be noted that this TA covers the proposals and impact associated with the Brand Experience element of the wider Masterplan proposals.

1.3 Bicester Transport SATURN Model

- 1.3.1 As agreed with OCC, the highway assessment undertaken within this report is based on the outputs from the Bicester SATURN model.

1.4 Bicester Motion Planning Background

- 1.4.1 The overall Bicester Motion Airfield development site, currently has recent/historic planning permissions for the following development/applications:
- **Application Ref. 16/01805/F** – for the change of land use of buildings from sui generis MOD use to various commercial (B1c/Light Industry / B8) uses;

- **Application Ref. 18/01253/F** – for the erection of a hotel and conference facility with associated access, parking and landscaping;
- **Application Ref. 18/01333/F** – for an extension to the existing Technical Site, to provide new employment units comprising flexible B1(c) light industrial, B2 general industrial, B8 storage distribution uses, with ancillary office, storage, display/sales, with associated access, parking and landscaping; and,
- **Application Ref. 19/02708/OUT** – resolution to grant for new employment units comprising B1 (Business), B2 (General Industrial), B8 (Storage) and D1 (Education) uses with ancillary offices, storage, display and sales, with all matters reserved except for access.

1.4.2 The above planning permissions for the Hotel and Technical Site are subject to various (ongoing) Section 278 and Section 106 Planning Obligations, which include the following highways/transport infrastructure contributions/improvements:

Hotel Application (18/01253/F):

- Buckingham Road/Skimmingdish Lane/A4095 Roundabout – Offsite junction improvements and kerb re-alignments to allow for increased flare capacity (across all four arms) – mode drawing ref. J32-3569-PS-110_RevF;
- Skimmingdish Lane/Launton Road Roundabout - Offsite junction improvements and kerb/footway re-alignment to allow for increased flare capacity (on the Skimmingdish Lane arm) – mode drawing ref. J32-3569-PS-112_RevD;
- New ghost right priority access junction (left out only); Inc. 3m wide (maximum) footway/cycleway on the eastern side of Buckingham Road from the access junction down to the proposed toucan along the eastern side of Buckingham Road (subject to constraints); A new toucan crossing to the south of priority junction with Skimmingdish Lane, including 3m footway/cycleway to tie in with bus shelter provision on eastern side of Buckingham Road (to be provided by either hotel or technical site application – whichever comes forward first) – mode drawing ref. J32-3569-PS-100_RevE;
- Public Transport Infrastructure – various contributions towards the provision of two new flagpole bus stops on Buckingham Road in the vicinity of the new hotel access; and improvements to the existing bus stops on Buckingham Road in the vicinity of the existing Bicester Motion access, to include one new bus stop shelter and two Real-Time Information displays at both stops.

New Technical Site Application (18/01333/F):

- Provision of 3m wide footway/cycleway along eastern side of Buckingham Road southbound towards Skimmingdish Lane; new dropped kerb crossings at Buckingham Road and Skimmingdish Lane (Inc. splitter island refuges);
- New 3m wide footway/cycleway from the existing (already constructed) footway provision at the northern side of the main BH access to tie in with the bus stop; A new toucan crossing to the south of priority junction with Skimmingdish Lane, including 3m footway/cycleway to tie in with bus shelter provision on eastern side of Buckingham Road (to be provided by either hotel or technical site application – whichever comes forward first) – mode drawing ref. J32-3568-PS-001_RevE.
- Legal agreements have now been resolved for the above items and BM is awaiting agreement and confirmation to commence the works in Q1 2021.

FAST 'Innovation Quarter' Application (19/02708/OUT) – Resolution to Grant:

- Buckingham Road/Skimmingdish Lane/A4095 Roundabout – Offsite junction improvements and kerb re-alignments to allow for increased capacity – mode drawing ref. J32-3684-PS-105_RevA;
- Skimmingdish Lane/Launton Road Roundabout - Offsite junction improvements and kerb/footway re-alignment to allow for capacity – mode drawing ref. J32-3684-PS-107_RevA;
- New ghost right priority access junction (left out only); formed with Skimmingdish Lane including uncontrolled crossing point and refuge to link the site with existing foot/cycle infrastructure on Skimmingdish Lane – mode drawing ref. J32-3684-PS-101_RevB;
- Improvements to existing site access junction formed between Skimmingdish Lane and the Gliding Club Access to incorporate a ghost island right turn lane, restriction to allow only left turns on egress and an uncontrolled pedestrian/cycle crossing with refuge to link the site with existing cycle infrastructure – mode drawing ref. J32-3684-PS-102_RevA;
- S106 contribution (to be confirmed) towards highway works at the B4100 Banbury Road/A4095 Southwold Lane/A4095 Lords Lane roundabout. It is understood that OCC are currently undertaking a preliminary mitigation scheme / feasibility study at this location.

1.5 Report Structure

- 1.5.1 This TA will consider the impact of the proposed development on the local highway network utilising outputs from the SATURN model. It will also consider the suitability of access to the development for sustainable modes of transport alongside private vehicles and service vehicles. It will also determine the level of traffic expected to be generated by the proposed development during peak hours.
- 1.5.2 A separate Framework Travel Plan (FTP) (dated December 2020) has also been prepared by mode which accompanies the planning application for the proposed development. This TA should be read in conjunction with the FTP.
- 1.5.3 Following this introduction, the TA will be structured as follows:
- **Chapter 2** Sets out the relevant national and local transport policy context;
 - **Chapter 3** Describes the existing situation, including a description of the surrounding transport facilities;
 - **Chapter 4** Outlines the development proposals;
 - **Chapter 5** Considers the trip generation and travel demand of the development; identifies modelling scenarios; SATURN model outputs;
 - **Chapter 6** Summarises the highway capacity assessment for the proposals; and,
 - **Chapter 7** Summarises and concludes the findings of the report.

2 Policy Review

2.1 Overview

2.1.1 This chapter considers the adopted transport and land use planning policies that relate to the development proposals. This chapter will review the following documents:

- National Planning Policy Framework (2019);
- Planning Practice Guidance (PPG) (2012);
- Adopted Cherwell Local Plan (2011-2031);
- Cherwell District Council RAF Bicester Planning Brief (Sep 2009);
- Connecting Oxfordshire: Oxfordshire Local Transport Plan (LTP4) (2015-2031); and,
- Connecting Oxfordshire: Oxfordshire LTP4 (2015-2031): Active & Healthy Travel Strategy.

2.2 National Planning Policy Framework (2019)

2.2.1 The National Planning Policy Framework (NPPF) sets out the Government's key objectives for achieving sustainable development. The NPPF was published in March 2012 and revised in February 2019 in order to streamline the national planning policies set out in previous policy guidance and a number of related circulars. These have been combined into a single document to make the planning system more accessible, whilst still protecting the environment and promoting sustainable growth.

2.2.2 The NPPF sets out the government's planning policies for England, and how these are expected to be applied, stating that all developments generating significant amounts of movement should be supported by a TA or Transport Statement (TS), alongside a Travel Plan (TP). Within the NPPF it also sets out that in order to achieve sustainable development, the planning system has three overarching objectives; economic, social and environmental (paragraph 8). A presumption in favour of sustainable development is at the heart of the NPPF (paragraph 10).

2.2.3 Under Chapter 9 'Promoting Sustainable Transport', it is stated that transport issues should be considered from the earliest stages of plan-making and development proposals. By doing this the potential impacts of development on transport networks can be addressed and the appropriate transport infrastructure can be implemented. By considering transport at the earliest stages, it allows the opportunity to promote walking, cycling and public transport, and mitigate any problems.

2.2.4 Paragraph 103 of the NPPF states that significant developments should be focused on being sustainable, this can be done through limiting the need to travel and offering a genuine choice of transport modes.

2.2.5 The NPPF (paragraph 104) states that planning policies should:

- "Support an appropriate mix of uses across an area, and within larger scale sites, to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities;
- Be prepared with the active involvement of local highway authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned;

- Provide high quality walking and cycling networks, supporting facilities such as cycle parking, local cycling and walking infrastructure.”

2.2.6 Within this context, new developments should:

“...give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas... 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” (paragraph 110).

“...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” (paragraph 110).

2.2.7 The NPPF also recognises that *“opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making”* (paragraph 103).

2.2.8 The NPPF highlights that for developments that generate *“...significant amounts of movement”*, a TA and TP should be developed to support the application so that the likely impacts of the proposal can be assessed (paragraph 111). When assessing applications, it should be ensured that:

- “the opportunity for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
- safe and suitable access to the site can be achieved for all people; and
- improvements can be undertaken within the transport network that cost effectively limits the significant impacts of the development.” *(Paragraph 108)*.

2.2.9 Paragraph 109 states that:

“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.”

2.2.10 The proposed development has been designed in accordance with NPPF guidelines and this TA and accompanying FTP demonstrate that the above objectives would be satisfied by the development proposals.

2.3 Planning Practice Guidance (2019)

2.3.1 The National Planning Policy Guidance (NPPG) was published in 2012 and most recently revised in February 2019. The updated guidance aims to facilitate the development of a robust and well thought out site, enabling an assessment of the transport impacts of both existing and proposed developments. The guidance can inform sustainable approaches to transport. A strong assessment will establish evidence that may be useful in:

- Improving the sustainability of transport provision;
- Enhancing the levels of accessibility;
- Creating a choice amongst different modes of transport;
- Improving health and well-being;

- Supporting economic vitality;
- Improving public understanding of the transport implications of development;
- Enabling other highway and transport authority's/service providers to support and deliver the transport infrastructure that conforms to the Local Plan; and
- Supporting local businesses and the regional economy.

2.3.2 This TA and the accompanying FTP demonstrate that the PPG objectives will be fulfilled.

2.4 Adopted Cherwell Local Plan, 2011-2031 (2015)

2.4.1 The adopted 'Cherwell Local Plan, 2011 – 2031: Part 1' provides the strategic planning policy framework and sets out site allocations for the District to 2031. The Plan forms part of the Statutory Development Plan and is intended to provide the basis for decisions on land use planning within Cherwell District. The policies of relevance are summarised below:

2.4.2 **Policy PSD 1:** Presumption in Favour of Sustainable Development:

- *“When considering development proposals, the Council will take a proactive approach to reflect the presumption in favour of sustainable development contained in the NPPF. The Council will always work proactively with applicants to jointly find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.*
- *Planning applications that accord with the policies in this Local Plan (or other part of the statutory Development Plan) will be approved without delay unless material considerations indicate otherwise.*
- *Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision then the Council will grant permission unless material considerations indicate otherwise – taking into account whether:*
 - *Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the NPPF taken as a whole;*
 - *Specific policies in the Framework indicate that development should be restricted.”*

2.4.3 **Policy SLE4:** Improved Transport and Connections:

- *“The Council will support the implementation of the proposals of 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.*
- *We will support key transport proposals including:*
 - *Transport Improvements at Banbury, Bicester and at the Former RAF Upper Heyford in accordance with the County Council's Local Transport Plan and Movement Strategies;*
 - *Projects associated with East-West rail including new stations at Bicester Town and Water Eaton;*
 - *Rail freight associated development at Graven Hill, Bicester; and,*

- *Improvements to M40 junctions.*
- *New Development in the District will be required to provide financial and/or in-kind contribution to mitigate the transport impacts of development.*
- *All development where reasonable to do so, should facilitate the use of sustainable modes of transport to make the fullest possible use of public transport, walking and cycling. Encouragement will be given to solutions which support reductions in greenhouse gas emissions and reduce congestion. Development which is not suitable for the roads that serve the development, and which have severe traffic impact will not be supported."*

2.4.4 Policy Bicester 8: Former RAF Bicester:

- *"The Council will encourage conservation-led proposals to secure a long-lasting, economically viable future for the Former RAF Bicester technical site and flying field.*
- *It will support heritage tourism uses, leisure, recreation, employment and community use. The development of hotel and conference facilities will also be supported as part of a wider package of employment uses.*
- *All proposals will be required to accord with the approved Planning Brief for the site and take into account the Bicester Masterplan."*

2.4.5 The proposed development has been designed in accordance with the Local Plan and this TA and accompanying FTP demonstrate that the objectives can be met.

2.5 Cherwell District Council (CDC) RAF Bicester Planning Brief (Sep 2009)

2.5.1 The RAF Bicester Planning Brief sets out the planning parameters and guidance for the future redevelopment of the Bicester Airfield site. This document was subject to a public consultation, amended as appropriate and approved by CDC's Executive. It is generally considered within the determination of planning applications on the airfield site. Whilst the RAF Bicester Planning Brief pre-dates the Local Plan 2031, the advice and guidance within the document is recommended to be referred to in this context. The key guidance in relation to transport, and in particular, this application, includes:

- Para 3.9.1 Access to the flying field – *"The existing (main) access to the flying field from Skimmingdish Lane (A4421) which is currently used by the Gliding Club will meet the required visibility standards of 4.5m x 160m (50mph speed limit)... Assuming the number of vehicles using this access remains similar, no alterations may be required. However, a right turn lane will be desirable if the traffic movements increase to over 500 movements per 12-hour period."*
- Para 3.9.2 Vehicular Access to the Technical Site - *"The existing (gated) access serving the technical site is located just off the roundabout of the A4421/A4095 & Skimmingdish and is unsuitable for any significant increase in traffic movements... Access to the north of the site from the Bicester Road (towards Stratton Audley village), will not be supported by the Local Highway Authority because the Bicester Road/A4421 junction has its poor visibility and geometry."* – the proposed accesses on Bicester Road and subsequent mitigation measures at the Bicester Road junction with the A4421 (considered within **Chapters 5 & 7**) provide necessary improvements and required visibility which now ensures the safe and appropriate operation at the priority junction and site accesses.

- Para 3.9.3 Access to the domestic site – *“The majority of the existing accesses serving the site appear acceptable off Skimmingdish Lane but may require visibility improvements. Use of the existing, disused and proposed but not implemented access points from Skimmingdish Lane will be acceptable in highway terms subject to keeping the sight lines clear of vegetation.”*
- Para 3.9.4 Pedestrian, cycle and public transport linkages – *“The location of this site is away from the majority of Bicester and is in need of significant improvements in terms pedestrian and cycle links and public transport to reach the closest local infrastructure and services. Another area of concern is the how pedestrians etc will cross the A4095 and the A4421 (to reach Technical site) and the type of measures required i.e., controlled crossing, reduction of speed limit etc. To address these concerns the Highway Authority will be seeking:*
 - *a bus stop on the east side of A4421 Buckingham Road within the existing deceleration lane;*
 - *a pedestrian crossing with a central refuge to enable pedestrians to cross both east west and north south to this point;*
 - *a controlled pedestrian crossing, subject to a safety audit, but the preference would be that signalisation at this roundabout be avoided;*

Links within the site (and improved transport links) should also be taken into consideration as well the existing routes the community of Caversfield currently enjoy.

Depending on the type of development that comes on in the future a Travel Plan will be appropriate to reduce the reliance on the private car and developer contributions will be sought towards improvements to public transport. It is unlikely the roads within the site would be offered for adoption so a private road agreement will be sought.”

- Para 5.8 Transport Assessment – *“Oxfordshire County Council will require a robust Transport Assessment to accompany a Planning application for development, which must consider the following:*
 - *Detailed information of the level of traffic generated by the site’s existing uses;*
 - *Site history;*
 - *Traffic generation for the proposed development(s);*
 - *Assessment of existing public transport, pedestrian and cycle links;*
 - *Accident records (previous 5 years)*
 - *Provisions of off-site infrastructure and financial contributions towards enhancing local services; and,*
 - *Travel Plan for site.”*

2.5.2 The proposed development has been designed in accordance with the Planning Brief and this TA and accompanying FTP demonstrate that the measures are considered, and the appropriate objectives can be met.

2.6 Connecting Oxfordshire: Oxfordshire Local Transport Plan (LTP4), 2015-2031 (2016)

2.6.1 Since the Oxfordshire Local Transport Plan 2011 – 2030 was adopted in 2011, the ways in which transport can be funded in Oxfordshire has changed. To ensure the county's transport systems are fit to support the population and economic growth, OCC has developed a 4th Local Transport Plan: Connecting Oxfordshire (2015-2031). The Plan was updated in 2016 in order to strengthen the emphasis on improving air quality and making better provision for walking and cycling. The following policies are of relevance to the development proposal:

2.6.2 Policy 03:

- *“Oxfordshire County Council will support measures and innovation that make more efficient use of transport network capacity by reducing the proportion of single occupancy car journeys and encouraging a greater proportion of journeys to be made on foot, by bicycle, and/or by public transport.”*

2.6.3 Policy 04:

- *“Oxfordshire County Council will prioritise the needs of different types of users in developing transport schemes or considering development proposals, taking into account road classification and function/purpose, the characteristics and function of the place and the need to make efficient use of transport network capacity.”*

2.6.4 Policy 17:

- *“Oxfordshire County Council will seek to ensure through cooperation with the districts and city councils, that the location of development makes the best use of existing and planned infrastructure, provides new or improved infrastructure and reduces the need to travel and supports walking, cycling and public transport.”*

2.6.5 Policy 34:

- *“Oxfordshire County Council will require the layout and design of new developments to proactively encourage walking and cycling, especially for local trips, and allow developments to be served by frequent, reliable and efficient public transport. To do this, we will:*
 - *Secure transport improvements to mitigate the cumulative adverse transport impacts from new developments in the locality and/or wider area, through effective Travel Plans, financial contributions from developers or direct works carried out by developers;*
 - *Identify the requirement for passenger transport services to service the development and negotiate the provision of these passenger transport services with the developer;*
 - *Ensure that developers promote and enable cycling and walking for journeys associated with the new development, including through the provision of effective travel plans;*
 - *Require that all infrastructure associated with the developments is provided to appropriate design standards and to appropriate timescales;*
 - *Set local routing agreements where appropriate to protect environmentally sensitive locations from traffic generated by new developments;*

- *Seek support towards the long-term operation and maintenance of facilities, services and selected highway infrastructure from appropriate developments, normally through the payment of commuted sums;*
- *Secure works to achieve suitable access to and mitigate against the impact of new developments in the immediate area, generally through direct works carried out by the developer."*

2.6.6 The proposed development has been designed in accordance with the Local Transport Plan and this TA and accompanying FTP demonstrate that the objectives can be met. This is demonstrated within **Chapters 4, 5 & 6**, which consider the existing conditions, development proposals (Inc. sustainable travel) and impact of the site on the local highway network.

2.7 Connecting Oxfordshire: Oxfordshire LTP4, 2015-2031: Active & Healthy Travel Strategy (2016)

- 2.7.1 This updated plan has brought active and healthy travel modes together as an Active & Healthy Travel Strategy. This builds on what was already in the original LTP4. It updates the LTP4 cycling strategy and adds new sections on walking and Door to Door integrated journeys, which covers longer journeys undertaken by cycling or walking in combination with bus or rail.
- 2.7.2 The Active & Healthy Travel Strategy aims to contribute to reducing pressure on the road network, contribute to economic growth and the reduction of emissions, quality of life and health, and link active travel with bus and rail options by enabling sustainable door to door journeys combining cycling or walking with public transport.
- 2.7.3 In terms of new development, the report states that: "*It is essential that new developments are planned with cycling in mind and with facilities to make cycling both convenient and safe. Designing new developments so that cycling is the most convenient transport method for the majority of trips will naturally increase the proportion of journeys made in this way.*"
- 2.7.4 The proposed development has been designed in accordance with the Active & Healthy Travel Strategy and this TA and in particular the accompanying FTP will ensure that sustainable travel and healthy travel options will be considered by all users to/from the development site.

2.8 Summary

- 2.8.1 In summary, the national and local planning policy aforementioned, aims to ensure that sustainable development takes place throughout the county of Oxfordshire and in Cherwell District. More specifically, a fundamental theme within transport policy is for new developments to be as sustainable as possible, in terms of pedestrian and cycle movements and public transport accessibility.
- 2.8.2 Development sites should evolve to integrate with existing and proposed transport infrastructure; encouraging the use of sustainable modes of travel to ensure that all occupants and visitors are provided with genuine modal choice.
- 2.8.3 Furthermore, the planning policy considered, requires that sites are completed within appropriate timescales and compliant with design standards.

2.8.4 This TA has been prepared in line with current best practice guidance and methodology, and as such, the development proposals are compliant and accord with the local and national planning policy prescribed above.

3 Existing Conditions

3.1 Overview

3.1.1 This chapter describes the existing site and the existing local transport network for all modes of travel/transport in order to assess the current accessibility of the site.

3.2 Site Description

3.2.1 The site is located at Bicester Motion, Bicester, OX26 5HA, situated on the northern edge of Bicester, approximately 2km north of the Town Centre. The development site proposes an Experience Quarter, the 'Experience Quarter', which will be encompassed within the wider Bicester Motion Masterplan development on land at the existing Bicester Motion Airfield site.

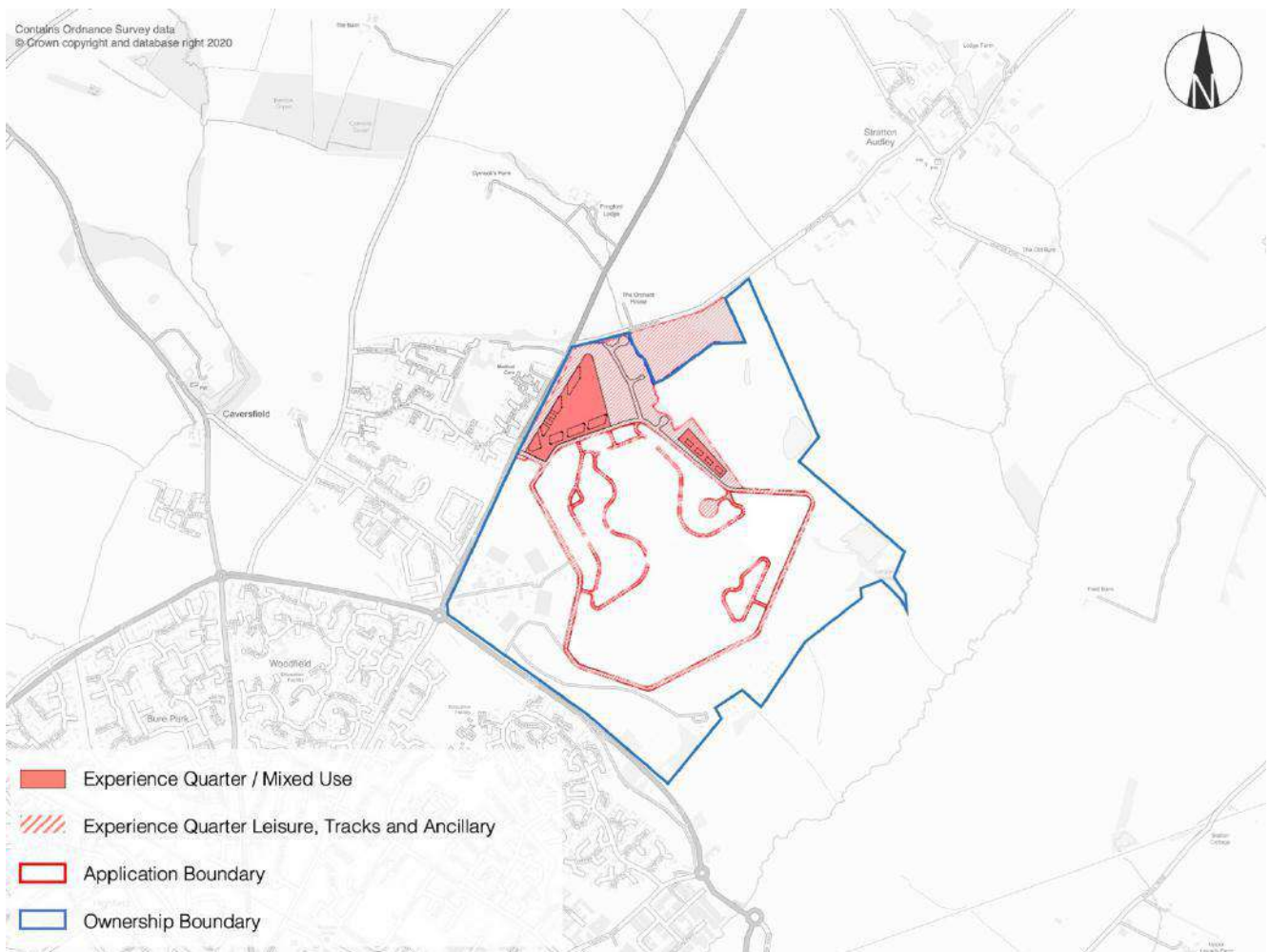
3.2.2 The Experience Quarter will be located at the northern extent of the Bicester Motion Masterplan and will comprise c.24,000 sqm of Commercial, Business and Services uses (Class E), Light Industrial (Class B2) and Local Community and Learning Uses (Class F). The site is located to the north of the consented 344-bedroom hotel/aparthotel and extension to the existing technical site comprising flexible light industrial, general industrial and storage/distribution units, as part of the wider Bicester Motion masterplan.

3.2.3 Primary vehicular access is proposed from the A4221 Buckingham Road using a historic/existing gated access to the airfield, via a new ghost island priority junction set c.50m to the south of Thompson Drive. The access is located c.240 metres north of the proposed main site access to the consented hotel aspect of the Bicester Motion masterplan.

3.2.4 A secondary access for servicing and emergency vehicles is proposed onto Bicester Road, utilising a historic/existing access, located c.90 metres from the Bicester Road/Buckingham Road priority junction.

3.2.5 For context and reference, **Figure 3.1** illustrates the site location in relation to the wider Masterplan site and highlights the existing and proposed site access.

Figure 3.1: Site Location



3.3 Local Highway Network

- 3.3.1 To the west and southwest of the site, the A4421 Buckingham Road provides a route for vehicles travelling between the town centre of Bicester and the Bicester Motion site.
- 3.3.2 West and north from the site, the A4421 Buckingham Road provides a link from Bicester's local highway network past the site, towards the villages of Stratton Audley, Fringford, Finmere and into Buckinghamshire.
- 3.3.3 Approximately 650m to the southwest of the proposed site main access on the A4421 Buckingham Road, the A4421 Buckingham Road joins with Skimmingdish Lane and the A4095 Southwold Lane in the form of a 4-arm roundabout.
- 3.3.4 The roundabout facilitates southwest (Buckingham Road), southeast (Skimmingdish Lane) and west (Southwold Lane) bound vehicle movements from the site to the centre of Bicester and around its northern perimeter roads.
- 3.3.5 The local highway network within the vicinity of the site; including the A4421 Buckingham Road, the A4095 Southwold Lane and the A4421 Skimmingdish Lane are all subject to a 50mph speed limit and incorporate street lighting.

- 3.3.6 From the southwest arm of the roundabout junction, Buckingham Road (towards Bicester Town Centre) is subject to a 40mph speed limit and a 7.5 tonne weight restriction.
- 3.3.7 The A4095 (Southwold Lane) to the west and south provides strategic access to the M40; northbound and southbound access to the M40 is achieved via both the B4100 (J10) and the A41 (J9). The M40 provides routes towards Banbury, Leamington Spa and Birmingham to the north and High Wycombe and greater London to the southeast.
- 3.3.8 The A4421 Skimmingdish Lane (eastbound), via both Blackthorn Road and Charbridge Lane, provides access to the A41; the A41 links with Waddesdon and Aylesbury to the southeast and the M40 and A34 to the southwest.

3.4 Existing Baseline (2016) Traffic Flows

- 3.4.1 In order to establish and understand the current traffic levels and speed data on the local road network, a number of Automatic Traffic Counters (ATCs) were installed along the A4421 Buckingham Road and Skimmingdish Lane, for a one-week period during July 2016; furthermore, an ATC was also installed on Bicester Road during May 2019.
- 3.4.2 The traffic surveys demonstrate that the 24-hour AADT two-way traffic flows are c.15,480 vehicles along Buckingham Road, c.16,650 vehicles along Skimmingdish Lane and c.1,040 vehicles along Bicester Road.
- 3.4.3 The average speeds in both directions were recorded at c.45mph, with a worst directional 85th percentile speed of c.53mph (northbound) along Buckingham Road. Along Skimmingdish Lane the average speeds were recorded at c.43mph, with a worst directional 85th percentile speed of c.50mph (eastbound). Bicester Road average speeds were recorded at c.45mph, with a worst directional 85th percentile speed of c.54mph (eastbound).
- 3.4.4 Full traffic count data is contained in **Appendix B**, for reference.
- 3.4.5 It should be noted that the weekday AM and PM peak hours are considerably higher than any peak hour recorded over the weekend (on a Saturday/Sunday); as a result, this TA will only assess the weekday peak hours (as agreed with OCC during scoping), as a worst-case scenario. The traffic flow differences between weekdays and weekends can be seen from the traffic survey data contained in **Appendix B**.

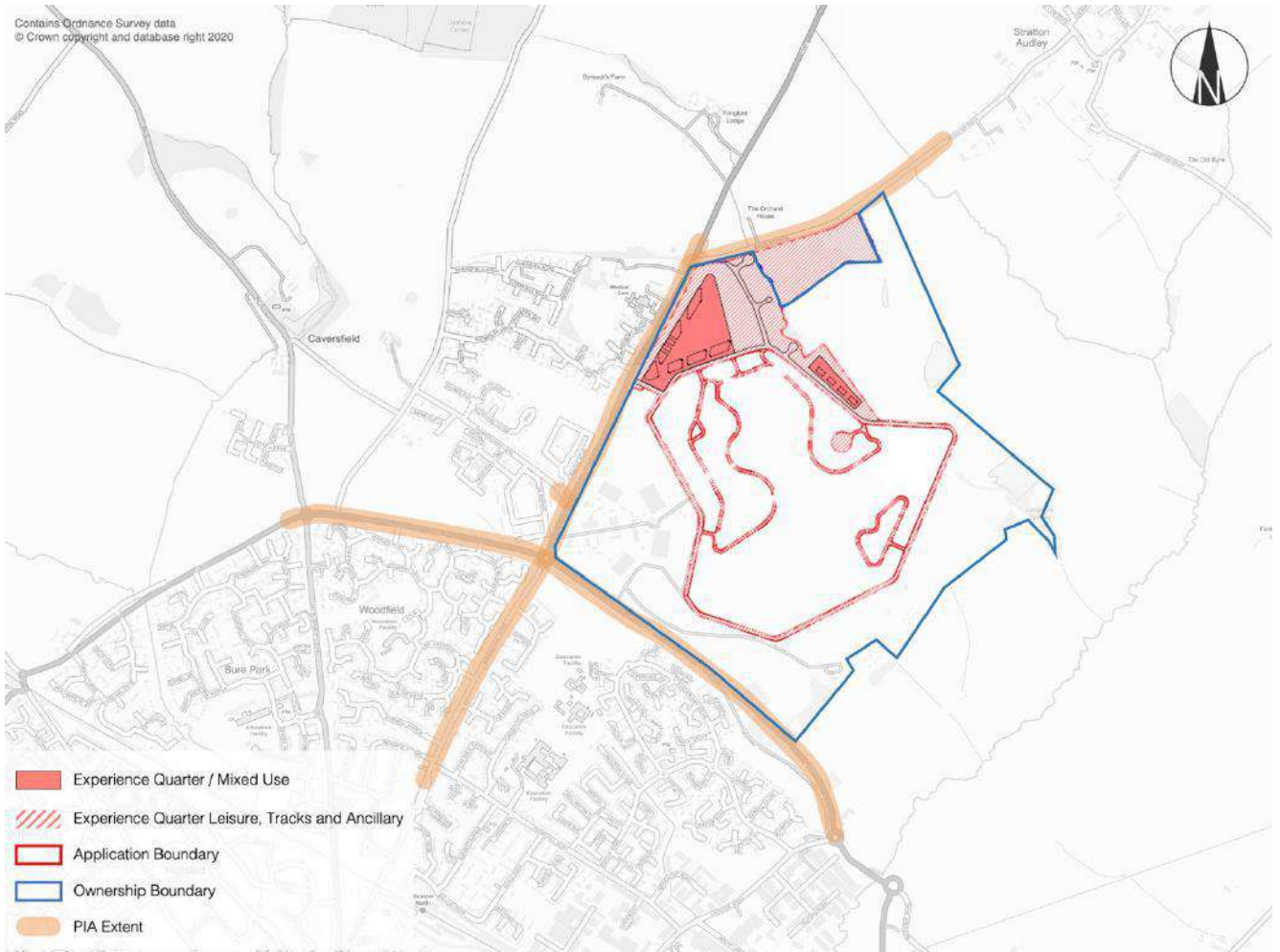
3.5 Highway Safety (Personal Injury Accident Data)

- 3.5.1 Personal Injury Accident (PIA) data has been obtained from OCC; for the most recent five-year period available, between 31/08/15 and 31/08/20, and for the study area comprising of the following main links and junctions:
- A4421 Buckingham Road;
 - Bicester Road;
 - A4421 Buckingham Road/A4421 Skimmingdish Lane/A4095 Southwold Lane/Buckingham Road Roundabout;
 - Skimmingdish Lane;
 - A4421 Skimmingdish Lane/Launton Road/A4421 Roundabout;

- A4095 Southwold Road; and,
- B4100 Banbury Road/A4095 Southwold Lane/A4095 Lords Lane Roundabout.

3.5.2 Broader details of the PIA study area, including plot map and full outputs of the accident data/reports are attached at **Appendix C**, for reference. The study area assessed is illustrated in **Figure 3.2**.

Figure 3.2: PIA Study Area



3.5.3 To analyse the PIA data, accidents within the study area have been classified in terms of their location, severity and impact on sensitive highway users; e.g., pedestrians and cyclists.

3.5.4 An overall accident summary is provided in **Table 3.1**.

Table 3.1: PIA Summary

Junction (J) / Link (L)	Accident Severity			Sensitive Users	
	Slight	Serious	Fatal	Peds	Cyclists
(J) A4421 Skimmingdish Ln/Launton Rd/A4421 Charbridge Ln R'bout	3	0	0	1	0
(J) Vulcan View / A4421 Skimmingdish Ln	1	0	0	0	1

Junction (J) / Link (L)	Accident Severity			Sensitive Users	
	Slight	Serious	Fatal	Peds	Cyclists
(J) A4421 Buckingham Rd/A4421 Skimmingdish Ln/Buckingham Rd/A4095 Southwold Ln R'bout	5	0	0	0	1
(J) A4421 Buckingham Road/Churchill Road Mini-Dumbbell R'bouts	3	0	0	0	1
(L) Buckingham Rd (Between Coopers Green and Southwold)	0	1	0	0	0
(L) A4421 Buckingham Rd (Between A4095 and Skimmingdish Lane)	0	1	0	1	0
(J) A4421 Buckingham Rd J/W Skimmingdish Lane (Priority)	2	0	0	0	0
(J) Skimmingdish Lane J/W Turnpike Road (Priority)	0	1	0	0	1
(J) A4421 Buckingham Road J/W Thompson Drive (Priority)	2	0	0	0	1
(J) A4421 Buckingham Road J/W Bicester Road (Priority)	1	0	0	0	0
(L) Bicester Road (Between Buckingham Rd and Stratton Audley)	1	0	0	0	0
(J) A4095 Southwold Lane J/W Hornbeam Road (Priority)	1	1	0	0	1
(J) A4095 Southwold Lane J/W Heather Road (Priority)	1	0	0	0	0
(L) A4095 Southwold Lane (Between Banbury Rd and Buckingham Rd)	2	1	0	1	0
(J) A4095 Lords Ln/B4100 Banbury Rd/A4095 Southwold Ln R'bout	4	0	0	0	1
Total	26	5	0	3	7

3.5.5 As summarised above, 31 accidents were reported in the study area, between 31/08/2015 and 31/08/2020 of which 26 were classified as 'slight' in severity, 5 were classified as 'serious' in severity and there were zero fatalities.

3.5.6 The highest number of PIAs recorded within the study area occurred at the A4421 Buckingham Road/Skimmingdish Lane/Southwold Lane roundabout (5), the A4095 Lords Lane/B4100 Banbury Road/A4095 Southwold Lane roundabout (4), the A4421 Skimmingdish Lane/Launton Road/A4421 Charbridge Lane Roundabout (3), A4421 Buckingham Road/Churchill Road Mini-Dumbbell Roundabouts (3) and the A4095 Southwold Lane between Banbury Road and Buckingham Road)

3.5.7 The contributory factors for the majority of accidents, within the aforementioned clusters, were the result of neglectful/erroneous driving; none of the incidents at these locations were directly attributed to the road or junction layout.

3.5.8 **Figure 3.3** illustrates the locations and severity of the PIAs within the study area.

Figure 3.3: PIA Location Map



3.5.9 As demonstrated above, all PIAs were dispersed throughout the study area. In total, seven cyclists were involved in PIAs over the most recent five-year period, and also, three incidents impacted on pedestrians.

3.5.10 Additionally, no more than one PIA involving a sensitive user (pedestrian/cyclist) was reported at any individual junction and/or road link throughout the study area.

Summary

3.5.11 Overall, the PIA data suggests that there is no strong correlation in how incidents occurred or were distributed throughout the study area, over the most recent five-year period. The majority of accidents recorded were 'slight' in severity (26) and there were no fatal accidents.

3.5.12 The majority of accidents were the result of driver error/neglectful driving, such as; failing to look properly, poor turn manoeuvres, careless /reckless driving and/or travelling too fast.

3.5.13 It is considered that given the low level of accidents recorded over the study period and lack of a common design cause for accidents that are clustered or within the vicinity of the site (i.e., no accidents were attributable to the existing layout/design of the junctions and/or highway); there will be no requirement for any specific road safety issues to be addressed or mitigated as a part of the development proposals.

3.6 Walking and Cycling

- 3.6.1 The surrounding local highway network offers pedestrian connectivity to the neighbouring residential areas (Thompson Drive/Turnpike Road/Skimmingdish Lane/Sunderland Drive) and amenities, including the wider Bicester Motion site, and Bicester Town Centre.
- 3.6.2 A 2.5m shared use footway/cycleway runs on the western side of Buckingham Road from Thompson Drive towards the A4421 Buckingham Road/A4095 Southwold Lane/A4421 Skimmingdish Lane/Buckingham Road roundabout and further onto Bicester Town Centre to the south.
- 3.6.3 The existing footway network follows the key pedestrian desire line and includes uncontrolled crossings with dropped kerbs at the Skimmingdish Lane and Thompson Drive priority junctions along the western side of Buckingham Road; however, there is currently no footway provision along the eastern side of the carriageway, along the frontage boundary of the development site.
- 3.6.4 The previous Bicester Motion (formerly Heritage) Hotel and Technical Site development applications which currently have planning permission (**Chapter 1.4**), propose to provide a new section of footway along the eastern side of Buckingham Road (from the main Bicester Motion access), along the northern side of Skimmingdish Lane, and incorporate dropped kerb tactile crossings (across the Buckingham Road and Skimmingdish Lane splitter islands), to connect with the provision on the western side of Buckingham Road and southern side of Skimmingdish Lane (mode drawing J32-3568-PS-001_RevE associated with the previous new technical site planning consent (and on-going S106 Agreements) illustrate these proposals).
- 3.6.5 At the A4421 Buckingham Road/A4095 Southwold Lane/A4421 Skimmingdish Lane/Buckingham Road roundabout, existing pedestrian crossing points are provided via splitter islands on the southern (Buckingham Road) and western (A4095) arms. At the A4095 arm of the junction, there is a controlled toucan crossing that provides a link to the existing shared footway and cycleway infrastructure that abuts the southern side of the A4095 carriageway, to provide a convenient walking/cycling route westbound in the direction of Southwold.
- 3.6.6 At the Buckingham Road (southern) arm of the roundabout, the splitter island provides an informal crossing with dropped kerbs and tactile paving to enable pedestrian travel along the A4421 Skimmingdish Lane, the A4095 Southwold Lane and Buckingham Road, towards Bicester Town Centre.
- 3.6.7 From the southwest arm of the roundabout, Buckingham Road benefits from footways on both sides of the carriageway which provide a convenient walking route to the wider local area and towards Bicester Town Centre.
- 3.6.8 Approximately 550 metres south of the proposed site access (60m to the north of the Bicester Motion main access) on Buckingham Road, sheltered cycle parking is provided on the western and eastern side of the carriageway. Four Sheffield cycle stands (eight spaces) are on the western side of the carriageway and three Sheffield cycle stands (six spaces) are on the eastern side; immediately next to the southbound sheltered bus stop.
- 3.6.9 There are street-lit shared cycleway/footways both east and west of the A4421 Buckingham Road/A4095 Southwold Lane/A4421 Skimmingdish Lane/Buckingham Road roundabout along Skimmingdish Lane and the A4095 Southwold Lane, respectively. The cycleway/footway is provided on the southern side of Skimmingdish Lane adjacent to the carriageway for approximately 250 metres to the east of the Skimmingdish Lane/Buckingham Road roundabout, before becoming segregated from the main road

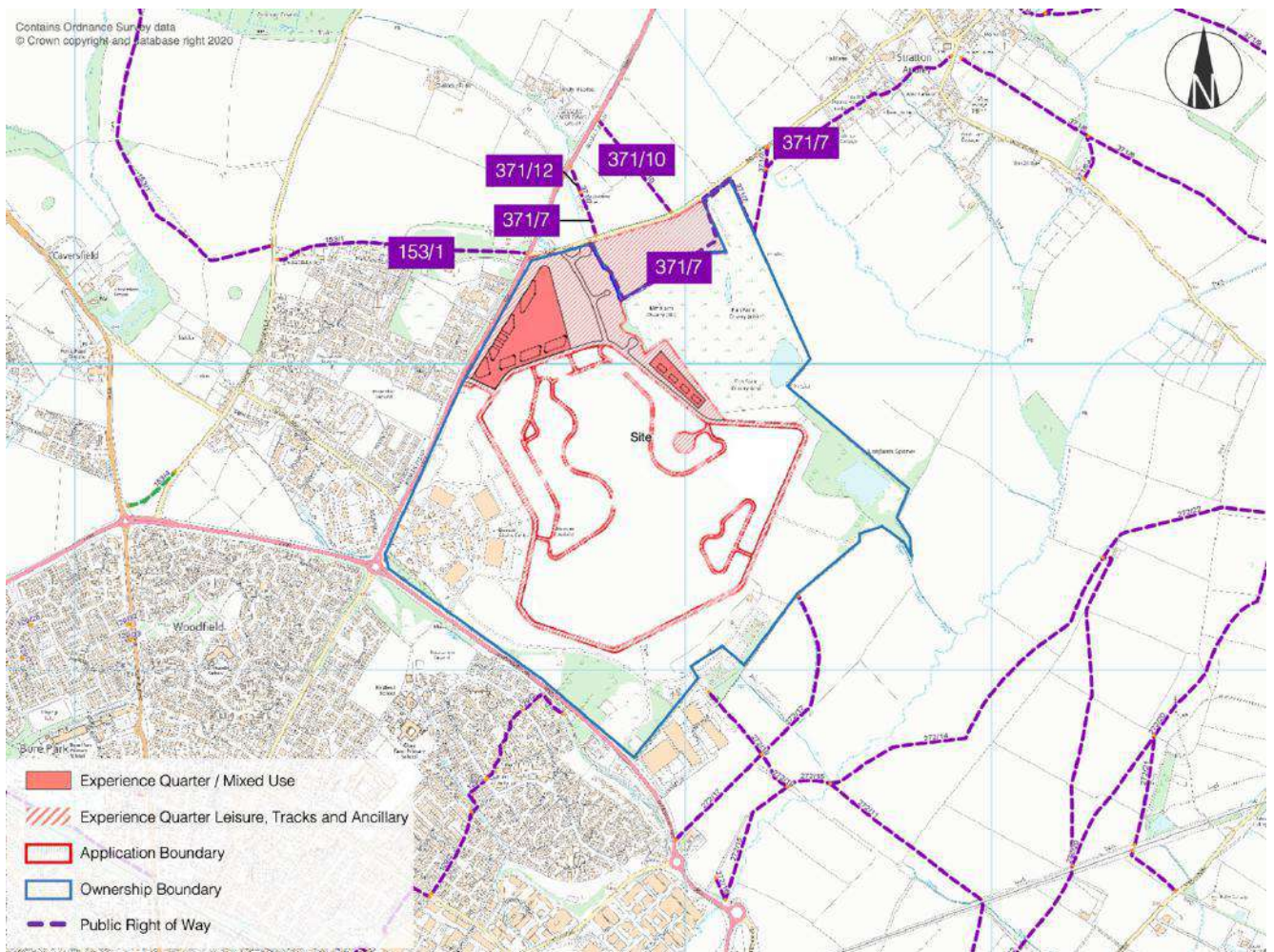
along the historic alignment of Skimmingdish Lane. This provides local access to the residential areas of Sunderland Drive and continues towards Launton Road. To the west, a cycleway/footway runs adjacent to the carriageway on the southern side of the A4095 Southwold Lane, providing local access to the residential areas accessible via Hornbeam Road and Heather Road, and further onto Banbury Road.

- 3.6.10 Footways will be provided throughout the wider Bicester Motion site which will connect the Brand Experience development site with Buckingham Road. The internal footways will also connect the Brand Experience site with the already consented hotel and new technical site and its main site access (c. 240 metres south of the proposed Brand Experience access), from which two new bus stops associated with those developments can be accessed (more details in **Section 3.8**). Internal links will also provide access to Skimmingdish Lane to the south of the site.

3.7 Public Rights of Way (PRoW)

- 3.7.1 There are several PRoWs located within close proximity of the development site. To the northwest of the site is a public footpath (route code 153/1) which runs along the north of Caversfield to Fringford Road. The footpath provides access to countryside to the northwest of the development. The PRoW is remote from the application site and will not be directly impacted on by development proposals.
- 3.7.2 Three further PRoW's are located at the northern extent of the site. Public footpath 371/7 (which joins 371/12) and 371/10 run to north of Bicester Road to the A4421 Buckingham Road. To the south of Bicester Road, the 371/7 also appears within the redline boundary of the site, according to OCC's online definitive map. The 371/7 continues in a north easterly alignment, parallel to Bicester Road, towards Stratton Audley.
- 3.7.3 **Figure 3.4** shows the location of the local PRoW's in relation to the site.

Figure 3.4: Local PPOs



3.8 Bus Services

- 3.8.1 The 'Guidelines for Planning for Public Transport in Developments' (Chartered Institution of Highways and Transportation, 1999), states that *"generally walking distances to bus stops in urban areas should be a maximum of 400m and preferably no more than 300m"*.
- 3.8.2 The nearest existing bus stops (serving both northbound and southbound directions) are situated c.550m (c.6-7-min walk) to the south of the proposed site access on Buckingham Road (c.50m south of Thompson Drive) and are accessible via the existing footways along the western side of the A4421 Buckingham Road.
- 3.8.3 The southbound bus stop is in the form of a lay-by, shelter with a hard-standing waiting area, a flag, pole and timetable display cabinet. There are no footways or formal crossing points along this side of the A4421. The northbound bus stop benefits from a lay-by, flag, pole and timetabling information.
- 3.8.4 The bus stops detailed on Buckingham Road are served by the Stagecoach X5 service. **Table 3.2** provides a summary of its route and typical frequency.
- 3.8.5 **Table 3.2** provides a summary of the typical frequencies of bus services aforementioned that route near to the site and serve the local area and bus stops along Buckingham Road.

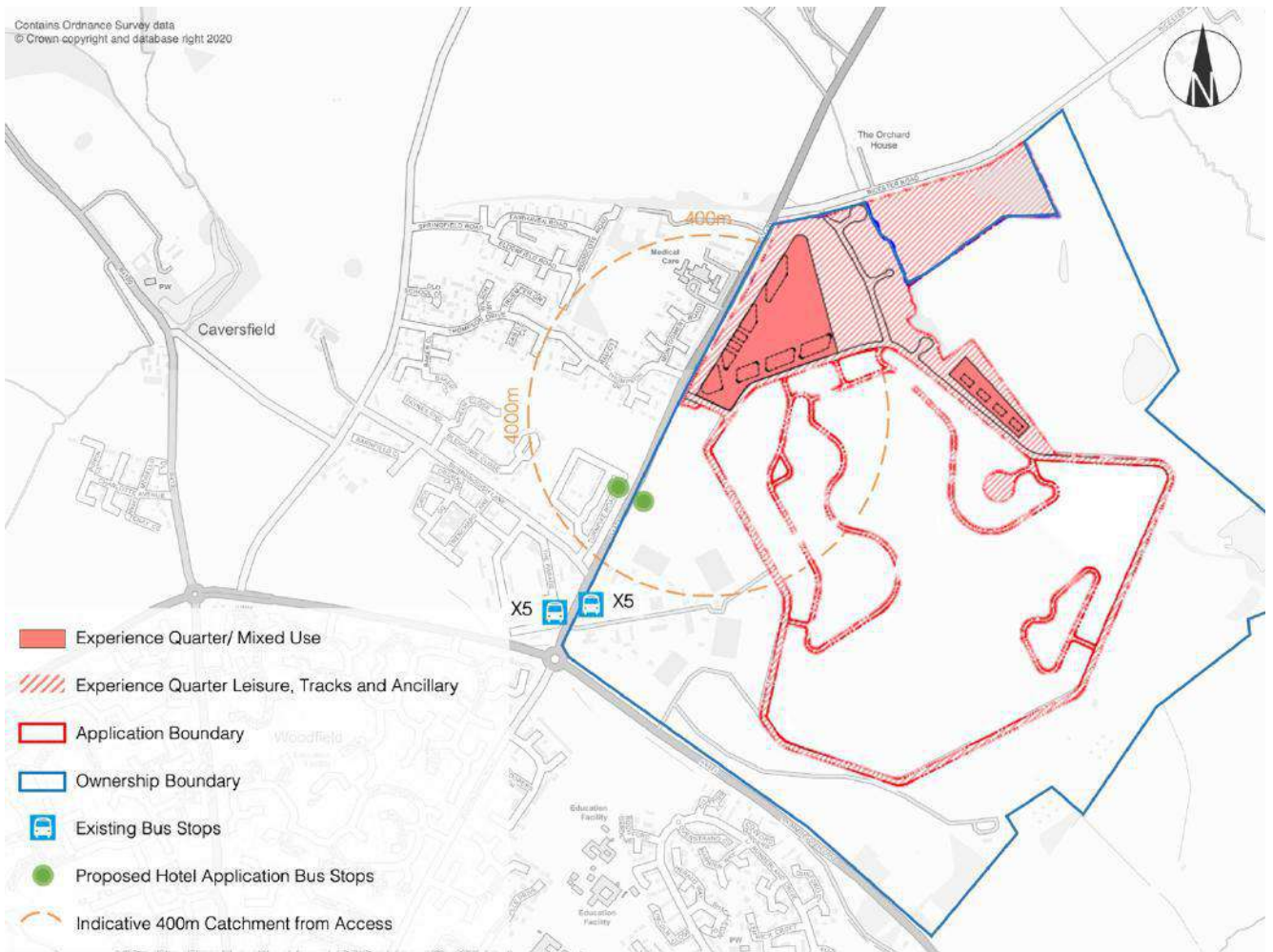
Table 3.2: Local Bus Services and Frequency*

Bus No.	Bus Route	Typical Daytime Frequency		
		Weekday	Saturday	Sunday
X5	Cambridge – Bedford – Central Milton Keynes – Buckingham – Bicester – Oxford City Centre	2 / Hour	2 / Hour	2 / Hour

*Bus service frequencies may be affected as a result of the Covid-19 pandemic – times correct as of 26/11/20

- 3.8.6 The X5 service detailed in **Table 3.2** provides a regular public transport connection between the site, Bicester Village and Bicester town centre, and also links the development to key towns and cities such as Oxford, Cambridge, Milton Keynes and Buckingham.
- 3.8.7 The previous Bicester Motion (formerly Heritage) Hotel and Technical Site development applications which currently have planning permission (aforementioned in **Chapter 1.4**), propose to provide public transport infrastructure contributions/improvements; including new bus stops on Buckingham Road in the vicinity of the new hotel access; and improvements to the existing bus stops on Buckingham Road in the vicinity of (opposite and north of) the existing Bicester Motion access, to include a shelter (at the northbound stop) and two Real-Time Information displays at both stops. Furthermore, the developments will also provide new footway/cycleway connections providing convenient and safe access to these facilities.
- 3.8.8 As such, this new public transport infrastructure (Inc. new bus stops in the vicinity of the hotel access) will result in the proposed access to the Experience Quarter on Buckingham Road being located within c.230m (c.3-min walk) of public transport services.
- 3.8.9 The location of the existing and proposed (indicative) bus stops are illustrated on **Figure 3.5**.

Figure 3.5: Local Bus Stops



3.9 Rail Services

- 3.9.1 Bicester North Railway Station is situated c.2km to the south of the site and is within a range of sustainable travel modes; such as walking, cycling and via bus services into Bicester Town Centre.
- 3.9.2 The station can be reached by bus (via the X5 route, including a short walk) within approximately 15-minutes from Buckingham Road. The station can also be reached within an approximate 9-minute cycle or 20-25-minute walk from the main site access along Buckingham Road.
- 3.9.3 Bicester North Station is located on the Chiltern Main Line which provides frequent direct services to and from key destinations around the country including Birmingham Moor Street, Banbury and London Marylebone.
- 3.9.4 The typical frequency of train services that serve Bicester North Station are summarised in **Table 3.3**.

Table 3.3: Bicester North Railway Station Services and Frequency*

Destination	Fastest Journey Time (approx.)	Typical Frequency
Birmingham Moor Street	64 minutes	Every hour

Destination	Fastest Journey Time (approx.)	Typical Frequency
Banbury	12 minutes	Every 20-40 minutes
London Marylebone	53 minutes	Every 20-45-minutes

**Train service frequencies may be affected as a result of the Covid-19 pandemic – times correct as of 26/11/20*

- 3.9.5 As aforementioned, the railway station is also accessible from the A4421 Buckingham Road via the X5 direct bus service which routes along the A4421 (within a 2-5-minute bus journey), effectively acting as an 'interchange' between sustainable bus and rail travel modes.
- 3.9.6 Platforms 1 and 2 at the station are accessible for mobility impaired users via a lift which operates Monday to Friday from 0600 to 2300 (assistance can also be requested outside these hours).
- 3.9.7 There are 65 secure and sheltered bicycle storage spaces near the station, by the Bicester North Railway Station bus stop and also on the opposite side of the station approach.
- 3.9.8 Car parking provision at the station has capacity for c.673 cars (with 6 accessible spaces) and operates 24-hours a day. The weekday daily rate of parking is c.£8.00 and the off-peak rate is c.£5.00. Monthly and annual tickets can be purchased at reduced rates.

3.10 Summary

- 3.10.1 A review of the existing transport infrastructure within the vicinity of the site has demonstrated that the site is accessible by car and via the local highway network, with good links to the strategic road network.
- 3.10.2 The site is also accessible by sustainable modes of travel; with bus routes offering frequent services, within a short walk of the site. Pedestrian and cycle links surround the site and provide good connections with neighbouring residential areas and links to Bicester Town Centre.
- 3.10.3 In addition, analysis of the local highway network in the vicinity of the site has demonstrated that there are no existing safety concerns, and therefore, no highway safety issues that are likely to be exacerbated by the development proposals.
- 3.10.4 The Experience Quarter (including the wider Bicester Motion Masterplan) development proposals will situate a major employment (and leisure) site of strategic scale within easy walking and cycling distance of the majority of Bicester; including numerous large scale residential housing schemes coming forward throughout the town – this is in accordance with and will help to support and facilitate NHS England's 'Healthy New Towns' programme (of which Bicester was awarded 'Healthy New Town' status (2016) and is a Demonstrator Site).
- 3.10.5 Furthermore, the Experience Quarter (and wider Bicester Motion Masterplan) will also raise the opportunity to provide a substantial level of new jobs/employment in the local area; With the significant housing supply within Bicester and in close proximity of the site, this will allow for more local employment, and as such, employees to the development travelling more sustainably (i.e., walking/cycling).

4 Development Proposals

4.1 Proposed Development

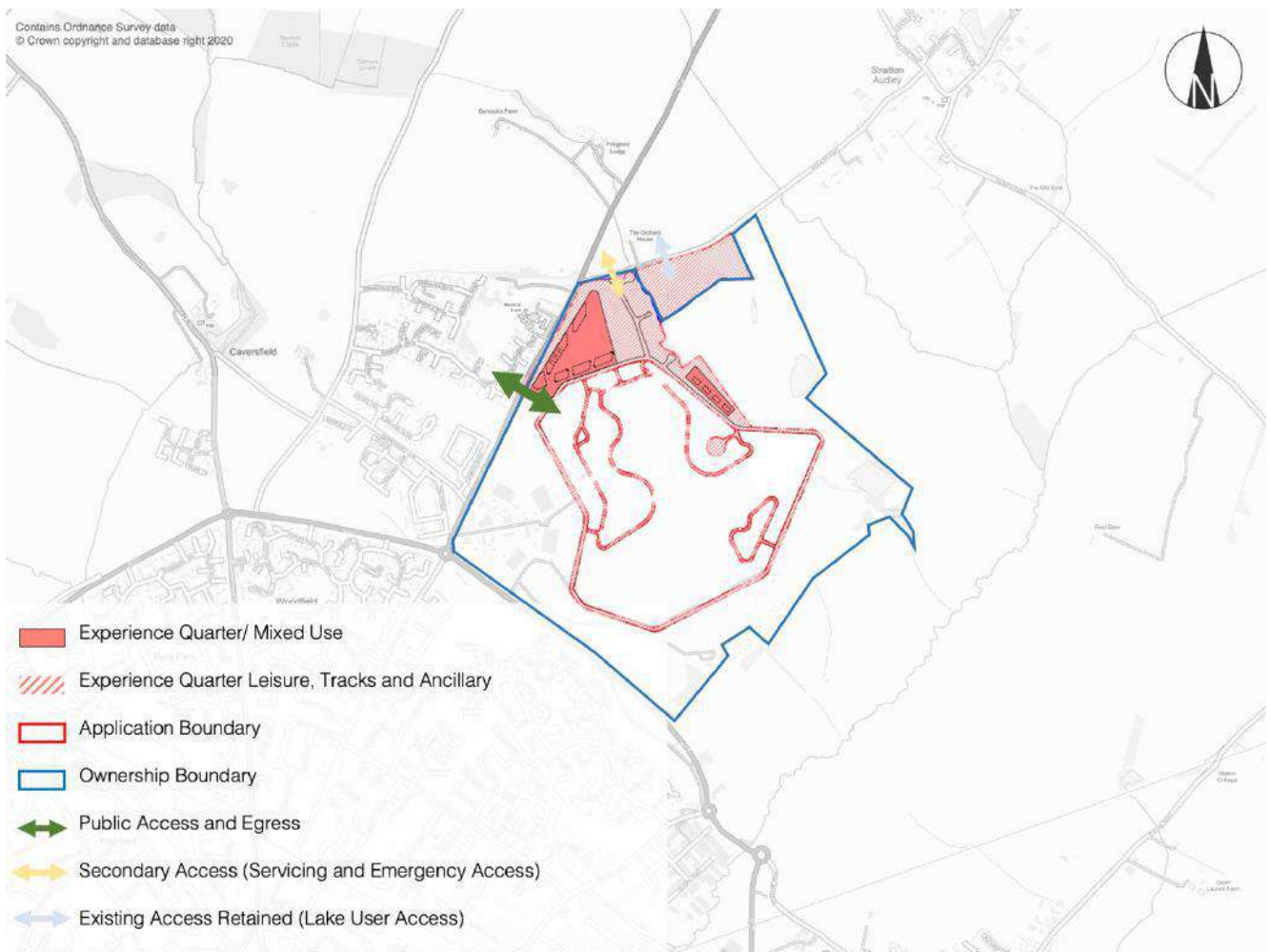
- 4.1.1 The development proposals for the site are for the development of an Experience Quarter, accompanying the wider Bicester Motion Masterplan development on land at the existing Bicester Motion site.
- 4.1.2 The description of the development is as follows:
- “Experience Quarter comprising Commercial, Business and Services uses (Class E), Light Industrial (Class B2) and Local Community and Learning Uses (Class F).”*
- 4.1.3 The proposed site is located to the north of Bicester, approximately 2km from the Town Centre; with its western boundary extending along Buckingham Road (A4421), Bicester Road along its northern boundary and the proposed wider Bicester Motion masterplan development to the south and east.
- 4.1.4 An indicative layout plan and area schedule (Ridge’s Bicester Motion Experience Quarter Layout Plan, Ref No. **5002854-RDG-Z01-ST-PL-A-0030 Rev G**, illustrating the general layout, location and schedule of the development is appended to this report, for reference (at Appendix D). The full range of masterplan layout and parameters plans are included within the suite of documents that accompany the planning application submission.

4.2 Vehicular Access

- 4.2.1 The main access to the Experience Quarter development will be provided from the A4221 Buckingham Road approximately 18m south of the existing gated access to the airfield; this will be via a new ghost island priority junction appropriately spaced c.50m to the south of Thompson Drive. The access is located c.240 metres north of the proposed site access to the consented hotel aspect of the Bicester Motion masterplan. The access proposals are illustrated on Drawing **J32-3684-PS-201 (Rev A)**, included at **Appendix E**.
- 4.2.2 The access will form a ghost island priority junction with a 6.0m wide access carriageway and incorporate compound curve corner kerb radii with Buckingham Road. The access junction will allow for all movements entering the site but will prohibit vehicles leaving the site from turning right across Buckingham Road by deflecting traffic using an appropriate splitter island and road markings (this will also require a TRO, to enforce the banned right turn movement). Localised widening/realignment will be carried out on Buckingham Road in order to facilitate a right-turn lane (provided at 3.5m wide) for vehicles entering the site. It should be noted that this access is consistent with the approved access as part of the hotel application (*18/01253/F*).
- 4.2.3 Visibility splays of 2.4m x 160m are achievable (subject to cutting back/removal/setting back of trees/hedgerow/foliage), in accordance with DMRB 85kmph speed limit roads and the recorded 85th percentile speeds of 53mph along Buckingham Road.
- 4.2.4 A 3.0m wide shared cycle/footway will be provided on the northern side of the proposed internal access road. The new pedestrian footway/cycleway will route around the northern corner of the access junction, and continue for approximately 130-140m north, where a new dropped kerb crossing point (with tactile paving and a central refuge island) will be provided for pedestrians and cyclists to connect with the existing provision on the western side of Buckingham Road.

- 4.2.5 In addition to the above main site access, an existing/historic gated access located on Bicester Road at the northern site boundary (c.90m east of the junction with Buckingham Road) is intended to be re-instated, improved and used as secondary access to the site, for the purposes of emergency and service access.
- 4.2.6 Maximum visibility splays of 2.4m x 100m to the west (covering the full extent to Buckingham Road junction) and 2.4m x 162m to the east are achievable (subject to cutting back/removal/setting back of trees/hedgerow/foilage), which accord to recorded 85th percentile traffic speeds of c.53mph along Bicester Road – this level of visibility is also considered appropriate and suitable given the existing and proposed nature of the secondary access.
- 4.2.7 An existing access located c.200m east of the proposed secondary access (as above) is intended to be retained, as this access is currently utilised by lake users. This access is not heavily trafficked and does not form a major/formal access to the development proposals.
- 4.2.8 Drawing no. **J32-3684-PS-006 (Rev F)** contained in **Appendix E**, illustrates the proposed secondary access (Inc. visibility splays) at Bicester Road (90m east of Buckingham Road), including the existing access, retained for the lake users.
- 4.2.9 **Figure 4.1** shows the proposed location of the development site accesses in relation to the development.

Figure 4.1: Proposed Access Locations



4.3 OCC’s Infrastructure Improvements

4.3.1 It is acknowledged that OCC’s LTP 4 Bicester Area Strategy includes aspirational proposals for improvements to the eastern peripheral corridor to which the Experience Quarter and wider Bicester Motion site lies to the north of; i.e. along the A4421 Skimmingdish Lane. Stating:

4.3.2 *“Eastern peripheral corridor: upgrade to dual carriageway on the A4421 between the Buckingham Road and Gavray Drive to complement the transport solution at the railway level crossing at Charbridge Lane and facilitate development in the area. This scheme will improve the operation of this section of the eastern perimeter road and enhance the integration of the North-East Bicester Business Park site with the rest of the town. This will include improvements to the Buckingham Road / A4221 junction to provide the necessary capacity for the additional trips generated from nearby employment and residential development, as well as support the heritage tourism development of the neighbouring Former RAF Bicester site.”*

4.3.3 Furthermore, Cherwell District Council’s (CDC) Infrastructure Development Plan (IDP) supporting the Cherwell Local Plan states that, for Skimmingdish Lane, dualling and signalisation of various junctions along the corridor, including improvements to the strategic highway capacity are prioritised as critical in the medium to long term.

- 4.3.4 OCC are unable at present to indicate precisely when these improvements are likely to come forward; and as such, it is considered that this will be sometime within the local plan period to 2031. In addition, it is understood that there are currently no route alignment options or proposal plans, which would inform the impact on surrounding land/local development; therefore, it is considered that the planned infrastructure improvements cannot preclude or notably determine the outcome of any development planning application.
- 4.3.5 In addition, and as aforementioned, it is understood that OCC is currently undertaking a preliminary mitigation scheme / feasibility study at the B4100 Banbury Road/A4095 Southwold Lane/A4095 Lords Lane roundabout.
- 4.3.6 It is considered that the impact of the proposed development in terms of OCC's infrastructure aspirations along Skimmingdish Lane and Banbury Road/Southwold Lane/Lords Lane roundabout are not significant and/or material.

4.4 Parking

Car Parking

- 4.4.1 There is no specific OCC parking standard covering the proposed development land uses and consequently a first principles approach has been adopted in order to determine the required level of parking provision for the site; this is summarised in **Table 4.1**.

Table 4.1: Maximum Car Parking Standards

Development Schedule	Area/Units	OCC (Max) Parking Standard	Parking Level Proposed
Experience Quarter	24,030 sqm	No relevant OCC standard for this bespoke use. (D2 closest land use = 1 space per 22sqm)	First Principles Approach Adopted

- 4.4.2 In order to determine the highest level of parking required for the development, a parking accumulation profile has been run, based on an annual visitor numbers of up to c.400,000 (and including proposed staff, assuming all drive to the site for robustness). The highest level of parking requirement is c.300 spaces during the weekdays and c.350 spaces at weekends, when the demand is forecast to be typically higher. The parking accumulation profile is contained within **Appendix F**, for reference.
- 4.4.3 In light of the above, it is considered that providing a total of c.400 spaces would be a suitable provision of parking to serve the development proposals – this is in accordance with the maximum OCC standards for the former D2 land use class (closest comparison to the development proposals) and is sufficient to accommodate the proposed traffic/parking demand for 400,000 visitors during the worst-case weekend accumulation peaks (350); including an additional c.50 spaces to accommodate some seasonal excess demand/overflow parking.
- 4.4.4 As the application is in Outline the parking standards and associated provision will be fully specified and agreed (Inc. proposed phased delivery of parking provision on a demand basis, if applicable and appropriate) during the reserved matters/detailed design stages (subject to further consultation, discussion and agreement with OCC).

- 4.4.5 Within the overall total car parking layouts for each land use, 10% of the total spaces will be allocated as disabled parking bays, in order to meet the required OCC parking standard.
- 4.4.6 Electric Vehicle (EV) charging points will also be provided within the car parking areas throughout the site; the level of provision will be provided at c.3% of total parking spaces (as agreed as part of the hotel application); in the absence of specific OCC and CDC policy/guidance, this is considered to be an appropriate level in order to accommodate sustainable EV provision. Furthermore, underground ducting/space can also be safeguarded, which will allow the retrofitting of additional equipment and charging units if considered necessary in the future and if the EV charging spaces were observed to be highly utilised. The uptake and usage of EV parking bays will be monitored as part of the Travel Plan process; the provision of bays can then be adjusted accordingly, in order to ensure they are providing for the required demand.
- 4.4.7 The overall provision of car parking, as detailed above is considered to be an adequate and appropriate level for the development proposals.

Cycle Parking

- 4.4.8 Cycle parking will be provided at the Experience Quarter development site; which will be provided in accordance with the estimated levels summarised in **Table 4.2**.
- 4.4.9 As the planning application is in Outline, the cycle parking will be specified in more detail during the reserved matters/detailed design stages (subject to further consultation/agreement with OCC). However, it should be noted that cycle parking will be provided in the form of covered Sheffield stands and will be located close to the main building entrances.

Table 4.2: Cycle Parking Standards

Development Schedule	Area/Units	OCC / First Principles Standard	Proposed Cycle Parking Level
Experience Quarter	24,030sqm	No relevant OCC standard for this bespoke use. Closest is D2 – 1 stand per 12 staff & c.15% of forecast daily visitor numbers (average weekday Mon-Fri)	c.6 stands (c.12 spaces) for staff & c.42 stands (c.84 for visitors)

- 4.4.10 Cycle parking will be monitored, as part of the Travel Planning for the site, and should it transpire that the demand exceeds supply – additional levels of cycle parking storage can be supplied/provided in future.
- 4.4.11 Furthermore, shower changing, and locker facilities will be provided for staff within specific land use buildings (as appropriate), in order to encourage sustainable travel by bicycle to/from the site.

4.5 Sustainable Travel Measures

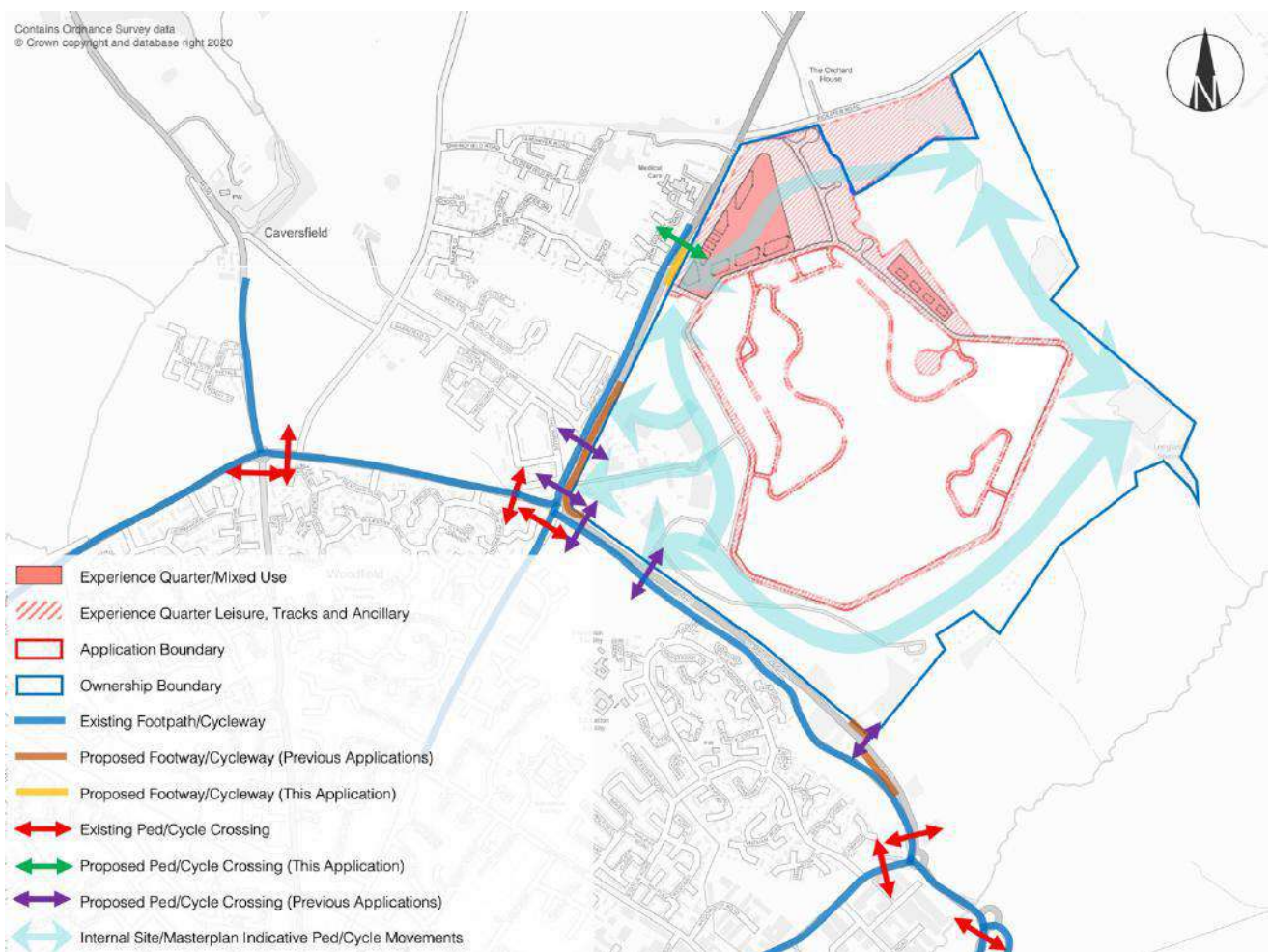
- 4.5.1 The proposed Bicester Motion scheme will provide a suite of measures to increase the sustainability of the Experience Quarter and increase non-car travel. These include the following:
- Adequate footway and cycle links will be provided within the site that will link with the existing provision in the vicinity of the site and across the wider Bicester Motion Masterplan (internally), including the existing technical site and recently approved Hotel and Technical Site planning applications once delivered; the intention is that this will connect the four Quarters of the site (Heritage, Innovation, Wilderness and Experience) via sustainable modes of travel.

- A new 3m shared footway/cycleway will be provided on the northern side of the proposed internal access road from Buckingham Road. Footways will be introduced internally within the site providing safe and permeable routes towards the main buildings and guest facilities;
- The 3m wide shared cycle/footway will continue around the northern corner of the Buckingham Road access junction, and continue for approximately 130-140m north, where a new dropped kerb crossing point (with tactile paving and a central refuge island) will be provided for pedestrians and cyclists to connect with the existing provision on the western side of Buckingham Road;
- Secure and sheltered guest/visitor and staff cycle parking will be provided close to the main building entrances; and,
- The site layout will include pedestrian and cycle friendly infrastructure; landscaping, signage, areas for social exchange, recreation and seating.

4.5.2 The measures detailed above will increase the permeability of the development for site users and will improve accessibility to local facilities and public transport services to provide guests, visitors and staff with attractive non-car options for their travel.

4.5.3 The proposed sustainable accessibility movement strategy, which incorporates the above measures (including the existing infrastructure and proposals as part of the consented Hotel/Technical Site/FAST ‘Innovation Quarter’ applications) is indicatively illustrated on **Figure 4.2**.

Figure 4.2: Sustainable Access Strategy Plan



5 Travel Demand

5.1 Introduction

5.1.1 This section provides an overview of the methodology used to calculate the travel demand associated with the development proposals; including vehicle trip generation, multi-modal trip generation and vehicle trip distribution.

5.2 Vehicular Trip Rates / Traffic Generation

5.2.1 The forecast traffic generation associated with the Experience Quarter is summarised in **Table 5.1** with a summary of calculations included at **Appendix G**, for reference. This methodology/calculation was shared and agreed with OCC as part of pre-application scoping discussions.

5.2.2 The individual trip rates/traffic generation calculation methodologies are summarised and described in the following paragraphs, tables and graphics.

Table 5.1: Development Traffic Generation Summary (Network Peak Hours)

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	In	Out	2-Way	In	Out	2-Way
Traffic Generation (First Principles – 400,000 visitors per annum)	191	10	201	2	193	195

5.2.3 The Experience Quarter is forecast to generate 201 two-way vehicle trips during the weekday AM peak hour and 195 two-way vehicle trips during the weekday PM peak hour. This is the equivalent of c.3 vehicles entering or leaving the site every minute, during the weekday peak hours.

Experience Quarter – First Principles Traffic Generation Methodology

5.2.4 To determine the Experience Quarter traffic generation, a first principles approach has been adopted using the projected visitor and staff numbers for the proposal, as described in the following section.

5.2.5 It is anticipated that the centre will be open 7-days per week for c.365 days per annum (excluding national closure days) and will attract a total of c.400,000 visitors per annum (based on client forecast figures).

5.2.6 In terms of staff, it is anticipated that the development could employ up to c.200 Full-Time Equivalent (FTE) staff members (24,030 / 120), based on c.120sqm per FTE, as per the HCA’s Employment Density Guide 2015. It is expected that as a worst case, there will be approximately two-thirds (66%) of total staff, 132 (128 x 0.66), on duty/on-site, daily, at any given time.

5.2.7 The latest available National Travel Survey (NTS) Table NTS0504 (2014 – 2018) indicates that 65% of leisure trips (sport/entertainment & holiday/day trips) occur between Monday to Friday, with 35% of trips occurring at the weekend (Saturday/Sunday). Furthermore, 2018 NTS Table NTS0905 indicates that the combined average car occupancy levels for ‘leisure’ and ‘holiday/day trips’ is 1.80 persons per vehicle.

5.2.8 Using the NTS figures above and assuming that all visitors will arrive by car, for robustness; of the 400,000 annual visitors, it is anticipated that 222,222 (400,000 / 1.80) will arrive by car (vehicular trips),

with 144,444 (222,222 x 0.65) arriving during the weekdays (Mon-Fri) and 77,778 (222,222 x 0.35) arriving at the weekend (Sat-Sun).

- 5.2.9 In terms of daily two-way vehicular movements during the weekday, this would equate to approximately 1,111 ((144,444 / 52 weeks / 5 weekdays) x 2) trips. Applying the same methodology, it is anticipated that there would be 1,495 ((77,778 / 52 weeks / 2 days) x 2) daily two-way vehicular trips each day at the weekend (Sat & Sun).
- 5.2.10 In order to profile the Experience Quarter arriving and departing vehicular traffic patterns throughout the weekday (08:00-18:00), a traffic survey of the British Motor Heritage Museum in Gaydon was sourced from the TRICS (v.7.5.4) database; the proportions of in and out traffic movements across the day were extrapolated and applied to the proposed weekday for the 1,111 two-way vehicle trips.
- 5.2.11 The specific details of this is included within the electronic spreadsheet previously submitted to OCC, and as summarised within the PDF copies of the specific sheets, contained in **Appendix G**; the TRICS output reports are also contained in **Appendix H**, for reference.
- 5.2.12 The forecast staff trips are also included within the AM and PM peak hours; for a robust assessment, it will be considered that all staff (c.132) drive to the site, arriving in the AM (08:00-09:00) and departing in the PM (17:00-18:00). This is considered a robust and worst-case assessment, as staff members are anticipated to be employed locally and therefore more inclined to travel sustainably.
- 5.2.13 **Figure 5.1** graphically represents the first principles methodology prescribed above for calculating the total vehicle trips and **Table 5.2** summarises the weekday (Mon-Fri) daily profile of development trips generated by the development proposals.

Figure 5.1: First Principles Traffic Generation Infographic

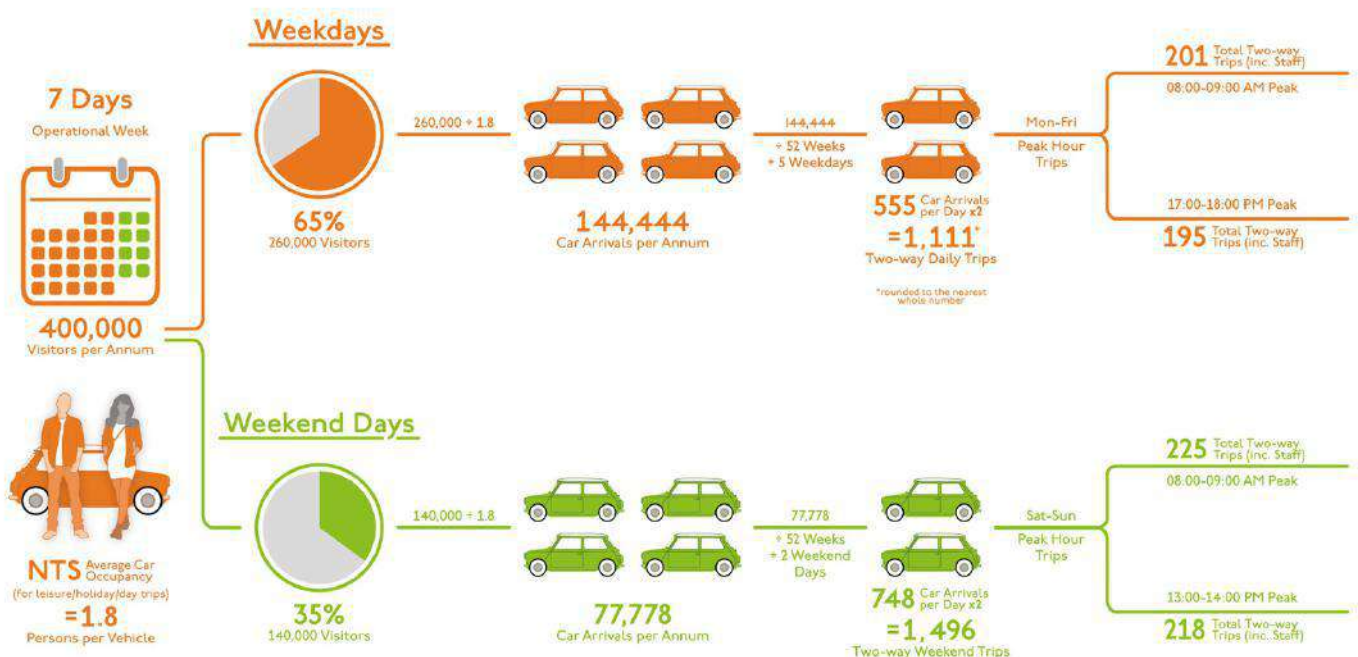


Table 5.2: Weekday Development Traffic Generation Profile

Time Period	In	Out	2-Way
0800-0900	191 (Inc. 132 staff)	10	201
0900-1000	83	17	100
1000-1100	73	39	112
1100-1200	60	47	108
1200-1300	60	88	148
1300-1400	96	66	162
1400-1500	66	78	143
1500-1600	34	78	111
1600-1700	23	71	94
1700-1800	2	193 (Inc. 132 staff)	195
Total 12-Hour	687	687	1,373

5.3 Multi-Modal Trip Generation

5.3.1 Indicative multi-modal percentages have been sourced from the 2018 NTS Average number of trips by main purpose and mode (Table NTS0409) – using the modal splits for the combined journey purposes including, 'Leisure', 'Personal Business', 'Other Escort', and 'Shopping'. These average modal splits have been applied to the two-way peak hour vehicle trips in **Table 5.1** in order to generate a forecast multi-modal assessment for the development proposals.

5.3.2 The forecast multi-modal trip generation at the development for journeys to the site is summarised in **Table 5.3** below.

Table 5.3: Multi-Modal Development Trips

Mode of Travel	% Mode Split	Two-Way Trip Generation	
		AM Peak (08:00-09:00)	PM Peak (17:00-18:00)
Train	2%	8	7
Bus	6%	23	22
Motorcycle	0%	0	0
Taxi	1%	4	4
Car Driver	53%*	201	195
Car Passenger	26.5%	100	97
Bicycle	1.5%	6	6
Walk	10%*	38	37
Total	100%	379	368

*% Mode Split for 'Car Driver' and 'Walk' modes have been adjusted based on the recommendation from OCC to reduce 'Walk' % and the first principles approach, suggesting a higher level of car drivers, for a better representation than the results shown in the 2018 NTS.

5.3.3 **Table 5.3** indicates that the site is forecast to generate 259 and 248 total person trips during the AM and PM peak hours, respectively.

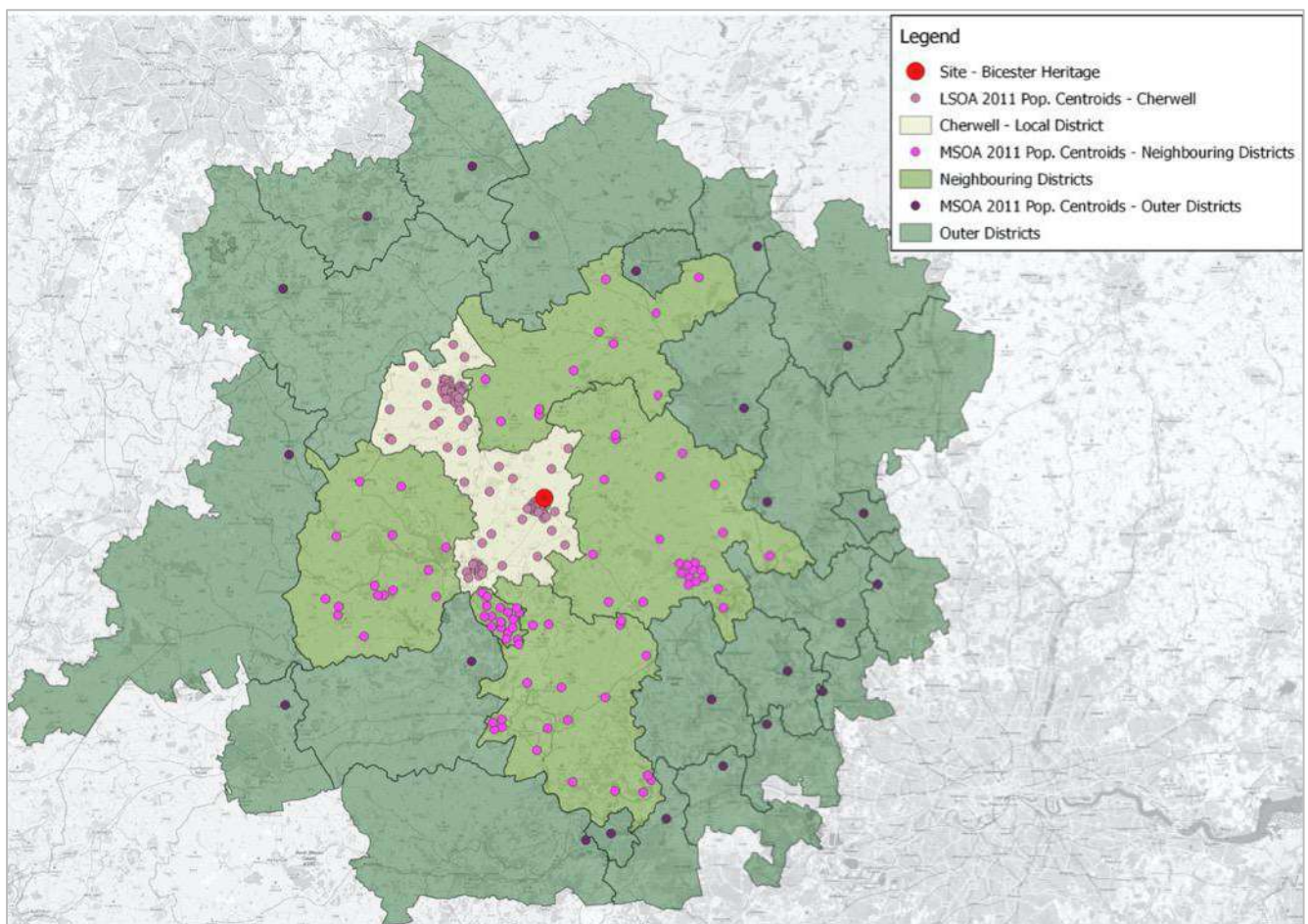
5.4 Vehicle Trip Distribution

5.4.1 Similarly, as agreed with OCC for the approved Bicester Motion (formerly Heritage) Hotel application, and as prescribed and detailed within the scoping assessment and pre-application communication with OCC Highways, a gravity model has been developed to inform the trip distribution for the Experience Quarter development (given that the site predominantly comprises of leisure/tourism use); this is again based on 2011 Census population data, using the following areas and methodology:

- District Areas, Middle Super Output Areas (MSOA) & Lower Super Output Areas (LSOAs) identified within a 50km catchment area of the site; and,
- A distribution proportion has been calculated based on resident populations within the identified catchment areas (Districts, MSOAs & LSOAs).

5.4.2 **Figure 5.2** illustrates the identified weighted centroids of the districts, MSOAs, LSOAs and catchment area used within the gravity model.

Figure 5.2: Distribution Catchment/Methodology



5.4.3 The vehicular trips have been assigned to the local highway network based upon the locations of the above Districts, MSOAs & LSOAs, and the logical routes taken to and from these areas.

5.4.4 The distribution percentages are shown graphically in **Figure 5.3** and are summarised by route assignment in **Table 5.4**.

Figure 5.3: Development Traffic Distribution

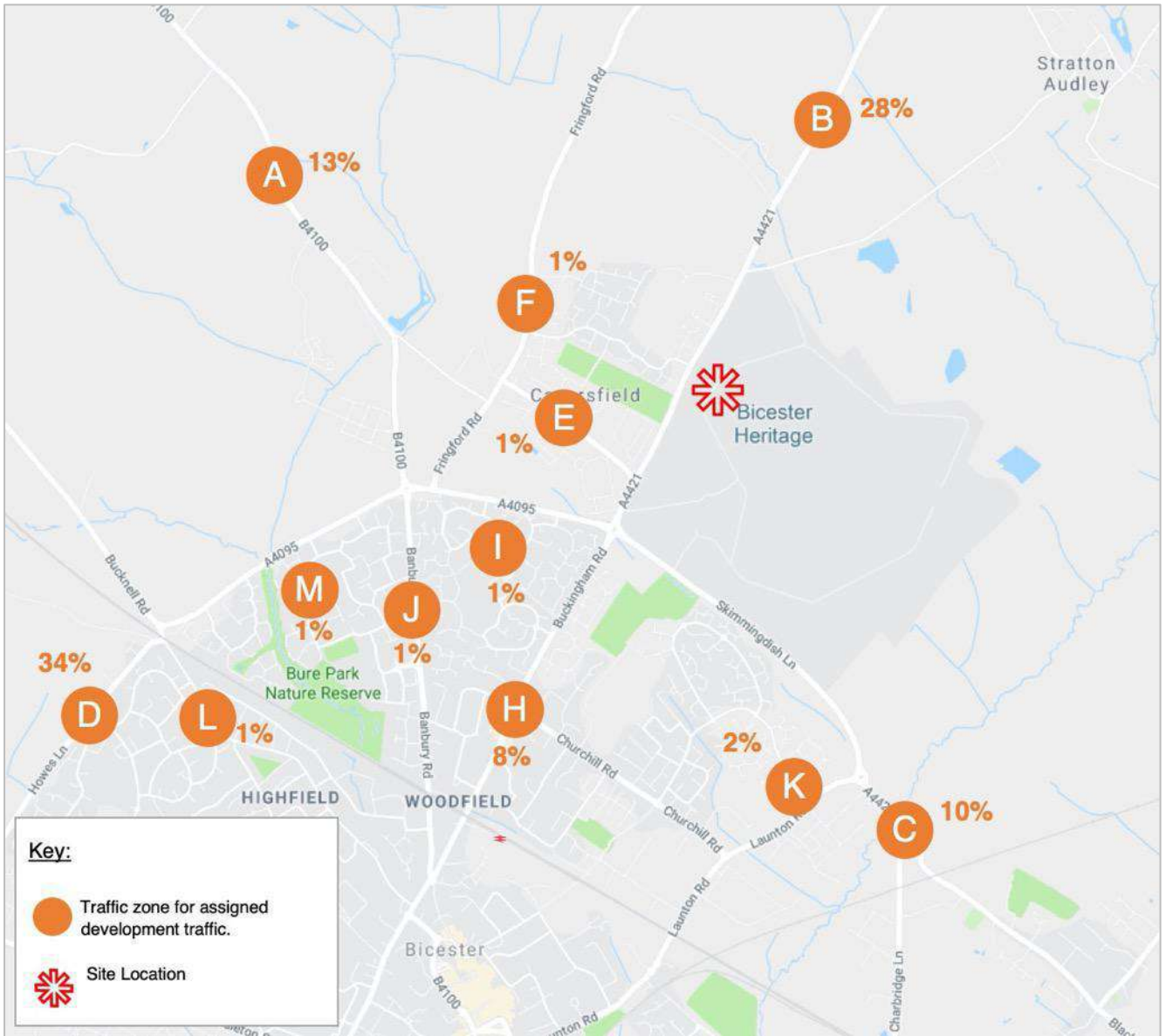


Table 5.4: Development Traffic Distribution Route Assignment

Zone	Traffic Distribution Route	Distribution %
A	B4100 Banbury Rd, towards M40 / A43	13%
B	A4421 Buckingham Rd, towards A421 / A43	28%
C	Charbridge Ln, towards A41	10%
D	Howes Ln, towards B4030 / A4095 / A41	34%
E	Skimmingdish Ln, local access to Caversfield	1%
F	Fringford Rd, local access to Caversfield	1%

Zone	Traffic Distribution Route	Distribution %
H	Buckingham Rd, local access to Bicester Town Centre	8%
I	Southwold Lane, local access	1%
J	Banbury Rd, local access	1%
K	Launton Rd, local access	2%
L	Bucknell Rd, local access	1%
M	A4095, local access	1%

5.4.5 **Appendix I** contains the full masterplan gravity model data, spreadsheets and outputs, for reference. The distribution percentages and associated development traffic flows can also be seen within the network flow diagrams contained within **Appendix J**.

6 Highway Assessment

6.1 Introduction

6.1.1 This chapter provides a summary of the detailed junction capacity assessments that have been undertaken using outputs from OCC's Bicester SATURN Model, to understand the impact of the development proposals on the operation of the local highway network.

6.2 OCC's Bicester SATURN Model

6.2.1 In order to inform the highway assessment presented within this chapter of the report, it was agreed with OCC that the impact of the development proposals should be tested using outputs from the Bicester SATURN model.

6.2.2 The full SATURN outputs/turning flows (provided by OCC) are contained in **Appendix K**, for reference. The scope of the modelling was agreed with OCC prior to commencing.

6.3 Geographical Scope of Assessment

6.3.1 Considering the forecast traffic generation and distribution of the development proposals, as detailed previously in **Chapter 5**, junction capacity assessments have been undertaken at the off-site junctions summarised in **Table 6.1** and illustrated on **Figure 6.1**.

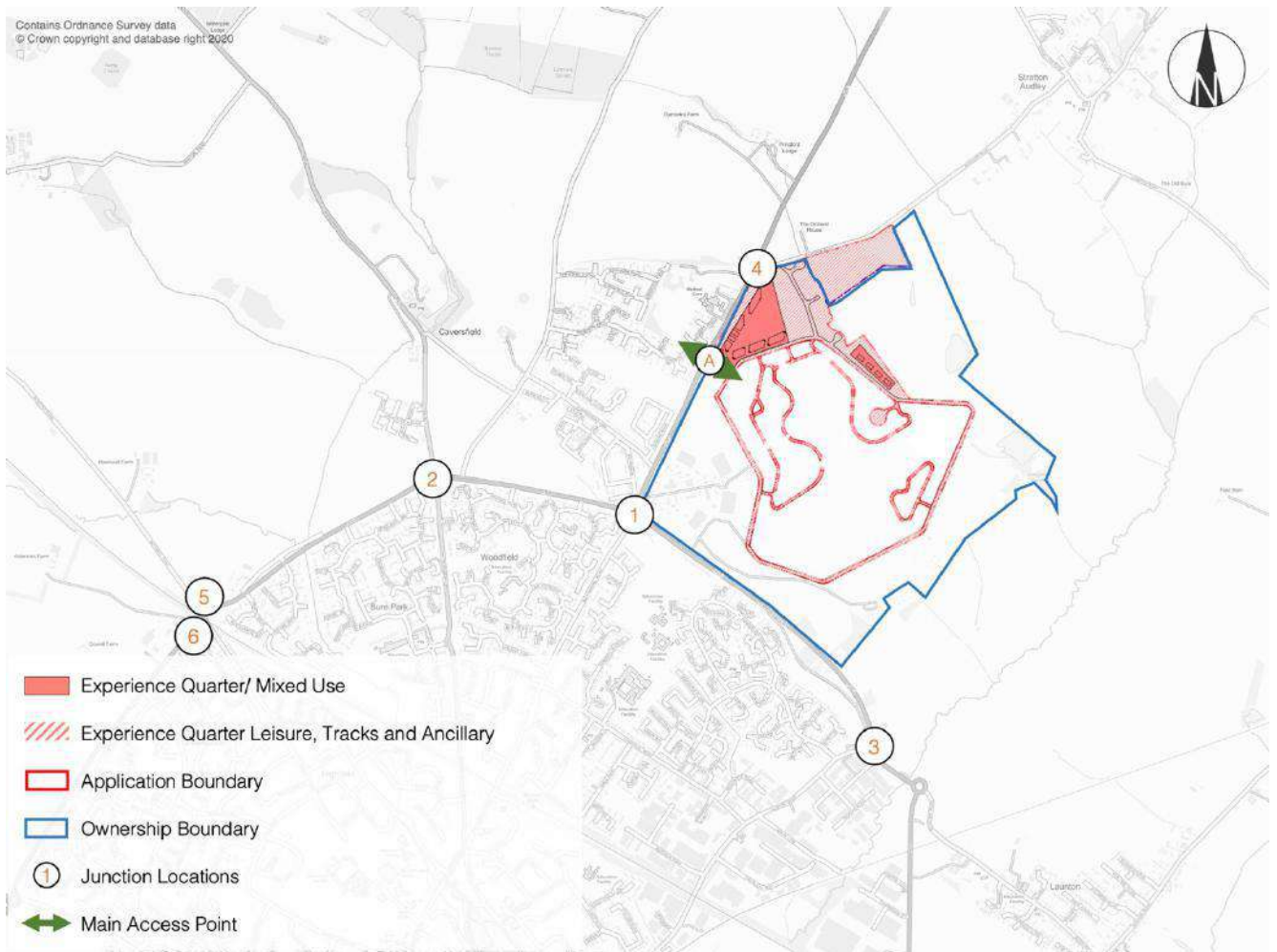
Table 6.1: Off-Site Junction Assessments

	Junction	Type of Junction
1*	A4421 Buckingham Rd/A4421 Skimmingdish Ln/Buckingham Rd/A4095 *	4-Arm Roundabout
2*	B4100/A4095/Banbury Rd *	4-Arm Roundabout
3*	A4421 Skimmingdish Ln/Wyndham Hall Care Home Access/Launton Rd *	4-Arm Roundabout
4	A4421 Buckingham Rd/Bicester Road	Priority
5	A4095/Bucknell Rd	3-Arm Roundabout
6	Bucknall Rd/Howes Ln	Priority

* It should be noted that Junctions 1, 2 and 3 have been modelled and assessed as the mitigated junction forms proposed within the approved FAST 'Innovation Quarter' planning application. The mitigated junction arrangement drawings are included in **Appendix L** for reference.

6.3.1 Junction capacity assessments have also been undertaken at the proposed main Experience Quarter access junction on Buckingham Road. No assessment has been carried out on the reinstated accesses onto Bicester Road as these are only envisaged to be utilised for infrequent servicing and/or emergency use as and when required. Network flow diagrams for the access and off-site junctions have been developed and calculated using the development traffic flow outputs from the SATURN model; these are contained in **Appendix J**, for reference.

Figure 6.1: Location of Off-Site (& Access) Junction Assessments



6.4 Assessment Scenarios

6.4.1 Junction capacity assessments have been undertaken at the specified junctions in **Table 6.1** for the following scenarios (as per the SATURN). The following scenarios (Inc. future year SATURN model outputs) have been agreed with OCC and subsequently modelled at the aforementioned junctions; the traffic network flow diagrams for each of these scenarios are contained within **Appendix J**:

- 2026 Future Year + BH's Committed Hotel, New Technical Site and FAST 'Innovation Quarter' (collectively referred to as 2026 Reference Case); and,
- 2026 Reference Case + Proposed Development.
- 2031 Future Year + BH's Committed Hotel, New Technical Site and FAST 'Innovation Quarter' (collectively referred to as 2031 Reference Case) + Development; and,
- 2031 Reference Case + Proposed Development inc. SEPR.

6.4.2 Within the latest SATURN model runs (commissioned by OCC), 2026 and 2031 future year baselines have been developed (as above); This TA, however, only reports on the 2026 future year assessment scenarios as this is considered to be the most realistic opening year and appropriate year of assessment for the development (confirmed with OCC); and as such any required mitigation will be undertaken to provide a 'nil detriment' impact to the 2026 + Committed scenario, as the reference case. The 2031

future year scenarios have been run as a sensitivity test and are included within the full modelling output results at **Appendix M** and **N**, for reference.

- 6.4.3 The full SATURN model outputs provided by OCC, including the model's uncertainty logsⁱ/committed developments, are contained in **Appendix K**, for reference.
- 6.4.4 It should be noted that the baseline traffic flows within the model already includes traffic generated by the existing Bicester Motion site uses; including the existing technical site and various hangars used for aviation clubs, Historic vehicle storage and events/exhibitions.
- 6.4.5 Furthermore, and in addition to the development included within the SATURN model's uncertainty log, the Bicester Motion Hotel, New Technical Site and FAST 'Innovation Quarter' developments have also been included within the highways assessment as further committed development. The traffic generation figures have been extracted from the approved and respective TAs and can be seen within the traffic network flow diagrams contained at **Appendix J**.
- 6.4.6 The peak hours of 08:00-09:00 for the AM and 17:00-18:00 for the PM have been used for the basis of assessment. As previously mentioned within this report (**Section 3.4**), the baseline AM and PM peak hours are considerably higher than any peak hour recorded over the weekend (Saturday/Sunday); as a result, this chapter will only assess the weekday peak hours, as a worst-case scenario. Furthermore, it is understood that the SATURN model does not contain any weekend traffic in order to utilise this to undertake these assessments.

6.5 Junction Capacity Analysis

- 6.5.1 Industry standard software package, Junctions 9 (ARCADY & PICADY modules), have been used to assess the capacity of the junctions. A summary of the modelling results is presented below, with full model outputs provided in **Appendix M**.
- 6.5.2 The junction assessments have been based on 100% of the development generated traffic and do not take into account any Travel Plan mode shift measures and internalised link trips associated with the wider masterplan land uses.
- 6.5.3 When assessing junction capacity, it is generally accepted that, a Ratio of Flow to Capacity (RFC) value of below 0.85 represents a junction that is considered to be operating satisfactorily (within practical capacity). At junctions operating at or close to zero practical reserve capacity, which equates to an RFC value of approximately 1.00 or above, small reductions in capacity may result in exponential queuing and/or delay results. Therefore, junctions operating close to or above 1.00 should be carefully reviewed to ensure that queuing and delay is not significantly impacted upon, and to ensure that the new development will not have a 'severe' or detrimental impact upon the existing highway infrastructure.

ⁱ For reference, it is understood that the 'Near Certain' and 'More than Likely' developments within the uncertainty logs are included within the SATURN model as committed development/infrastructure.
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Junction 1 - A4421 Buckingham Road/A4421 Skimmingdish Lane/Buckingham Road/A4095

6.5.4 ARCADY assessments have been undertaken for this roundabout junction based upon the approved mitigation layout for the FAST 'Innovation Quarter' application (J32-3684-PS-105 Rev A), included in **Appendix L**, and the results of the relevant scenarios are summarised below.

Table 6.2: 2026 Reference Case

J1 – A4421 Buckingham Rd/A4421 Skimmingdish Ln/Buckingham Rd/A4095 – 2026 Reference Case						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
A4421 Buckingham Rd (N)	0.99	56.26	24	0.54	4.07	1
A4421 Skimmingdish Ln (E)	0.58	5.28	1	0.99	52.00	26
Buckingham Rd (S)	0.51	7.56	1	0.83	33.21	4
A4095 (W)	0.78	9.48	3	0.83	14.64	5

Table 6.3: 2026 Reference Case + Development

J1 – A4421 Buckingham Rd/A4421 Skimmingdish Ln/Buckingham Rd/A4095 – 2026 SATURN + Comm + Dev						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
A4421 Buckingham Rd (N)	1.00	60.24	26	0.65	5.33	2
A4421 Skimmingdish Ln (E)	0.60	5.52	2	1.07	128.94	73
Buckingham Rd (S)	0.53	8.21	1	0.90	53.44	7
A4095 (W)	0.85	14.57	6	0.84	15.67	5

6.5.5 The modelling results show that the junction is forecast to operate at capacity in the AM peak (RFC 1.00) and over capacity (RFC 1.07) in the PM peak when the 2026 Reference Case + Development scenario is considered. This indicates that further mitigation over and above that already identified in relation to the approved FAST 'Innovation Quarter' application is required in this location to address traffic impacts as a result of the Experience Quarter application. Mitigation proposals for this junction are considered in **Section 6.6**.

Junction 2 – B4100 Banbury Road/A4095 Southwold Lane/A4095 Lords Lane

6.5.6 ARCADY assessments have been undertaken for this roundabout junction based upon the approved mitigation layout for the FAST 'Innovation Quarter' application (J32-3684-PS-106 Rev A), included in **Appendix L**, and the results of the relevant scenarios are summarised below.

Table 6.4: 2026 Reference Case

J2 – B4100 Banbury Rd/A4095 Southwold Ln/A4095 Lords Ln – 2026 Reference Case						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
B4100 Banbury Road (N)	0.93	31.58	11	0.81	15.03	4
A4095 Southwold Ln (E)	0.93	30.99	11	0.99	52.89	22
B4100 Banbury Road (S)	0.63	13.37	2	0.83	31.44	4
A4095 Lords Ln (W)	0.61	9.79	2	0.97	64.21	14

Table 6.5: 2026 Reference Case + Development

J2 – B4100 Banbury Rd/A4095 Southwold Ln/A4095 Lords Ln – 2026 Reference Case + Development						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
B4100 Banbury Road (N)	0.95	39.24	14	0.80	14.11	4
A4095 Southwold Ln (E)	0.96	40.12	14	1.05	105.27	53
B4100 Banbury Road (S)	0.64	14.33	2	0.86	39.39	5
A4095 Lords Ln (W)	0.68	11.74	2	0.97	60.69	14

6.5.7 The modelling results show that the junction is forecast to operate over capacity (RFC 1.05) in the PM peak when the 2026 Reference Case + Development scenario is considered. This indicates that further mitigation over and above that already identified in relation to the approved FAST 'Innovation Quarter' application is required in this location to address traffic impacts as a result of the Experience Quarter application. Mitigation proposals for this junction are considered in **Section 6.6**.

Junction 3 – A4421 Skimmingdish Lane/Care Homes Access/Launton Road

6.5.8 ARCADY assessments have been undertaken for this roundabout junction based upon the approved mitigation layout for the FAST 'Innovation Quarter' application (J32-3684-PS-107 Rev A), included in **Appendix L**, and the results of the relevant scenarios are summarised below.

Table 6.6: 2026 Reference Case

J3– A4421 Skimmingdish Ln/Care Homes Access/Launton Rd – 2026 Reference Case						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
Care Home Access (E)	0.10	22.85	0	0.13	18.37	0
A4421 Skimmingdish Ln (S)	0.87	16.21	6	0.93	26.13	11
Launton Road (W)	0.50	5.10	1	0.95	41.63	13
A4421 Skimmingdish Ln (N)	0.97	43.49	17	0.85	15.19	5

Table 6.7: 2026 Reference Case + Development

J3– A4421 Skimmingdish Ln/Care Homes Access/Launton Rd – 2026 Reference Case + Development						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
Care Home Access (E)	0.10	22.99	0	0.14	19.69	0
A4421 Skimmingdish Ln (S)	0.88	17.83	7	0.93	26.59	11
Launton Road (W)	0.51	5.24	1	0.95	41.56	13
A4421 Skimmingdish Ln (N)	0.97	44.20	18	0.86	16.91	6

6.5.9 The modelling results show that the junction is forecast to continue to operate with some reserve capacity in the 2026 Reference Case + Development scenario in both peak hour periods. The level of operation between the 2026 Reference Case and the 2026 Reference Case + Development scenario does not significantly change with maximum changes in delay of c. 1 second/vehicle and a corresponding uplift in queue length of c. 1 vehicle on any one junction arm.

6.5.10 On this basis no further mitigation over and above the consented position for the FAST 'Innovation Quarter' application is deemed to be necessary to deliver the Experience Quarter.

Junction 4 – A4421 Buckingham Road/Bicester Road

6.5.11 PICADY assessments have been undertaken for this priority junction and the results of the relevant scenarios are summarised below. These assessments are based upon the current junction arrangement.

Table 6.8: 2026 Reference Case

Junction 4 – A4421 Buckingham Rd/Bicester Rd – 2026 Reference Case						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
A4421 Buckingham Road	0.35	16.79	1	0.16	8.35	0
Bicester Road	0.47	7.82	2	0.99	80.57	38

Table 6.9: 2026 Reference Case + Development

Junction 4 – A4421 Buckingham Rd/Bicester Rd – 2026 Reference Case + Development						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
A4421 Buckingham Road	0.37	18.20	1	0.16	8.36	0
Bicester Road	0.50	8.34	3	1.02	110.36	52

6.5.12 The results indicate that the junction is operating close to practical capacity (RFC of 0.99) during the '2026 Reference Case scenario, at the A4421 Buckingham Road arm during the PM peak hour.

- 6.5.13 Following the introduction of the development traffic capacity is exceeded on the A4421 Buckingham Road arm in the PM peak hour with an RFC value of 1.02 reported.
- 6.5.14 Given the forecast exceedance of practical capacity and noting the safety concerns in relation to this junction noted by OCC in the Bicester Motion development brief (summarised in **Section 2.5**) a mitigation scheme is proposed for this junction. These proposals are considered in **Section 6.6**.

Junction 5 – A4095/Bucknell Road

- 6.5.15 ARCADY assessments have been undertaken for this roundabout junction and the results of the relevant scenarios are summarised below.

Table 6.10: 2026 Reference Case

Junction 5 – A4095/Bucknell Rd – 2026 Reference Case						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
A4095 (E)	0.19	2.53	0	0.23	2.64	0
Bucknell Road (S)	0.17	2.71	0	0.22	2.84	0
Bucknell Road (N)	0.01	4.96	0	0.00	0.00	0

Table 6.11: 2026 Reference Case + Development

Junction 5 – A4095/Bucknell Rd – 2026 Reference Case + Development						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
A4095 (E)	0.20	2.54	0	0.27	2.79	0
Bucknell Road (S)	0.21	2.85	0	0.22	2.84	0
Bucknell Road (N)	0.01	5.13	0	0.00	0.00	0

- 6.5.16 The model results show that there will be a minimal increase in the RFCs and delays (with zero impact on queuing) at the A4095/Bucknell Road roundabout when development traffic is added to the network.
- 6.5.17 All of the RFCs are well within the satisfactory design capacity of 0.85 at each arm of the junction in all scenarios considered.
- 6.5.18 Overall, the development traffic will have a negligible impact on the performance and operation of the roundabout in the 2026 Reference Case + Development scenario; therefore, no mitigation is required.

Junction 6 – Bucknell Road/Howes Lane

- 6.5.19 PICADY assessments have been undertaken for this priority junction and the results of the relevant scenarios are summarised below.

Table 6.12: 2026 Reference Case

Junction 6 – Bucknell Rd/Howes Ln – 2026 Reference Case						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
Bucknell Road	0.40	8.50	1	0.48	9.62	1
Howes Lane	0.35	8.25	1	0.41	9.35	1

Table 6.13: 2026 Reference Case + Development

Junction 6 – Bucknell Rd/Howes Ln – 2026 Reference Case + Development						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
Bucknell Road	0.45	9.86	1	0.41	10.91	1
Howes Lane	0.41	8.60	1	0.60	12.61	2

6.5.20 The model results show that there will be a minimal increase in the RFCs and delays (with a marginal impact on queuing) at the Bucknell Road/Howes Lane junction when development traffic is added to the network.

6.5.21 All of the RFCs are well within the satisfactory design capacity of 0.85 at each arm of the junction in all scenarios considered.

6.5.22 Overall, the development traffic will have a negligible impact on the performance and operation of the roundabout in the 2026 Reference Case + Development scenario; therefore, no mitigation is required.

Access Junction – A4421 Buckingham Road Access Junction

6.5.23 PICADY assessments have been undertaken for this proposed access junction and the results of the analysis is summarised in the following table.

Table 6.14: 2026 Reference Case + Development

Junction 7 – Buckingham Rd Access (A) Junction – 2026 Reference Case + Development						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
Development Access Rd	0.04	14.16	0	0.51	17.30	1
A4421 Buckingham Road	0.50	24.54	1	0.00	7.46	0

6.5.24 The results indicate that the junction would operate with significant reserve capacity during the '2026 Reference Case plus development' scenario. There is anticipated to be only a single queueing vehicle at the proposed access junction, either within the site or along the A4421 Buckingham Road, during the peak hours.

6.6 Mitigation

- 6.6.1 As aforementioned three junctions have been identified as requiring mitigation following the introduction of the development proposals as follows:
- A4421 Buckingham Rd/A4421 Skimmingdish Ln/Buckingham Rd/A4095 roundabout;
 - B4100/A4095/Banbury Rd roundabout; and,
 - A4421 Buckingham Rd/Bicester Road priority junction.
- 6.6.2 It should be noted that the first two junctions identified in the above list have already identified mitigation schemes identified as part of previous applications. The mitigation requirements to address the Experience Quarter traffic demands are therefore over and above the extant mitigation position.
- 6.6.3 Following previous communication with OCC (as part of the Hotel, New Technical Site and FAST 'Innovation Quarter' applications) the following information/response was elicited in response to proposed infrastructure improvements in the local area, which is summarised below in the following paragraphs:
- 6.6.4 OCC's LTP 4 Bicester Area Strategy includes aspirational proposals for improvements to the eastern peripheral corridor to which the Bicester Motion site lies to the north of; i.e. along the A4421 Skimmingdish Lane, stating:
- 6.6.5 *"Eastern peripheral corridor: upgrade to dual carriageway on the A4421 between the Buckingham Road and Gavray Drive to complement the transport solution at the railway level crossing at Charbridge Lane and facilitate development in the area. This scheme will improve the operation of this section of the eastern perimeter road and enhance the integration of the North-East Bicester Business Park site with the rest of the town. This will include improvements to the Buckingham Road / A4221 junction to provide the necessary capacity for the additional trips generated from nearby employment and residential development, as well as support the heritage tourism development of the neighbouring Former RAF Bicester site."*
- 6.6.6 Furthermore, CDC's Infrastructure Development Plan (IDP) supporting the Cherwell Local Plan states that, for Skimmingdish Lane, dualling and signalisation of various junctions along the corridor, including improvements to the strategic highway capacity are prioritised as critical in the medium to long term.
- 6.6.7 In terms of timescales, OCC are unable at this time to indicate precisely when these improvements are likely to come forward; and as such, it is believed that this will be sometime within the end of the local plan period at 2031. OCC has recently stated that they are currently planning to assess and consider the infrastructure requirements as part of the dualling and associated junction improvements along the Eastern Peripheral Route (over the course of the next year 2019-2020).
- 6.6.8 Therefore, and in summary, it is understood that the development is likely to be required to make a fair and proportionate contribution towards the wider improvement schemes, whenever they may come forward; and as such, in the interim, it will be important to consider appropriate mitigation, in order to offset the impact of the wider masterplan development proposals, and achieve a nil-detriment to the proposed future year (2026) highway network.

Junction 1 - A4421 Buckingham Road/A4421 Skimmingdish Lane/Buckingham Road/A4095

6.6.9 The forecast level of impact resulting from the development proposals at the Buckingham Road/Skimmingdish Lane roundabout can be mitigated (comparable to 2026 Reference Case) by introducing the following additional improvements at the junction:

- Increasing the approach half width on the Skimmingdish Lane (E) approach arm, creating a longer two to three-lane approach to the roundabout and hence increasing the effective flare length;
- Increasing the effective flare length on the Buckingham Road (N) arm, creating a longer two-lane approach to the roundabout;
- Increasing the entry width/effective flare length on the A4095 (W) arm, creating a longer two-lane approach to the roundabout; and,
- Increasing the entry width/effective flare length on the Buckingham Road (S) arm.

6.6.10 The full mitigation model outputs are contained in **Appendix N**, and a preliminary mitigation design layout drawing **J32-3684-PS-205** has also been prepared and is contained in **Appendix O**, for reference. The ARCADY mitigation assessment results are summarised below.

Table 6.15: 2026 Reference Case + Development (MITIGATED)

J1 – A4421 Buckingham Rd/A4421 Skimmingdish Ln/Buckingham Rd/A4095 – 2026 SATURN + Comm + Dev						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
A4421 Buckingham Rd (N)	0.96	39.97	17	0.63	4.87	2
A4421 Skimmingdish Ln (E)	0.56	4.68	1	0.99	54.79	27
Buckingham Rd (S)	0.48	6.52	1	0.84	36.56	5
A4095 (W)	0.85	14.55	6	0.86	17.66	6

6.6.11 The results summarised in **Table 6.15** demonstrate the junction can be mitigated to a similar operational capacity of that during the '2026 Reference Case scenario – as summarised in **Table 6.2** and accordingly it is concluded that Experience Quarter development impacts can be mitigated.

Junction 2 - B4100 Banbury Road/A4095 Southwold Lane/A4095 Lords Lane

6.6.12 The forecast level of impact resulting from the development proposals at the B4100 Banbury Road/A4095 Southwold Lane/A4095 Lords Lane roundabout can be mitigated (comparable to 2026 Reference Case) by introducing the following improvements at the junction:

- Increasing entry width and effective flare length on all arms of the junction.

6.6.13 The full mitigation model outputs are contained in **Appendix N**, and a preliminary mitigation design layout drawing **J32-3684-PS-206** has also been prepared and is contained in **Appendix O**, for reference. The ARCADY mitigation assessment results are summarised below.

Table 6.16: 2026 Reference Case + Development

J2 – B4100 Banbury Rd/A4095 Southwold Ln/A4095 Lords Ln – 2026 Reference Case + Development						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
B4100 Banbury Road (N)	0.89	21.09	8	0.75	10.53	3
A4095 Southwold Ln (E)	0.90	21.86	8	0.98	50.03	22
B4100 Banbury Road (S)	0.60	11.98	2	0.84	33.89	5
A4095 Lords Ln (W)	0.64	9.86	2	0.92	41.57	9

6.6.14 The results summarised in **Table 6.16** demonstrate the junction can be mitigated to a similar operational capacity of that during the '2026 Reference Case scenario – as summarised in **Table 6.4**.

6.6.15 It is important to note that in previous applications it was noted in discussions with OCC that there is already a prerequisite for mitigation at this junction. It is understood that OCC has a mitigation scheme for this roundabout, which is subject to final sign off and confirmation of funding; however, following the agreed approach for the approved FAST 'Innovation Quarter' application a mitigation scheme has been derived to address development traffic impacts as a result of the Experience Quarter.

6.6.16 It should be noted that this mitigation scheme may not in practice need to be implemented, subject to OCC's sign off of the aforementioned scheme; however, this exercise concludes that there is a mitigation proposal capable of accommodating the Experience Quarter's demands irrespective of OCC's proposals.

Junction 4 – A4421 Buckingham Road/Bicester Road

6.6.17 The forecast level of impact resulting from the development proposals at the Buckingham Road/Bicester Road priority junction can be mitigated (comparable to 2026 Reference Case) by introducing the following improvements at the junction:

- Introduction of a ghost right turn lane for traffic on the Buckingham Road (S) arm;
- Realignment of the Bicester Road (minor arm) on the approach to the A4421; and,
- As a result of the above improvements – it is proposed that the visibility will also significantly be improved significantly to achieve the required 2.4m x 160m.

6.6.18 The full mitigation model outputs are contained in **Appendix N**, and a preliminary mitigation design layout plan (**J32-3684-PS-008 (Rev C)**) has also been prepared and is contained in **Appendix O**, for reference. The PICADY mitigation assessment results are summarised below.

Table 6.17: 2026 Reference Case + Development (MITIGATED)

Junction 4 – A4421 Buckingham Rd/Bicester Rd – 2026 Reference Case + Development						
ARM	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	RFC	Delay (s)	Q (Veh)	RFC	Delay (s)	Q (Veh)
Bicester Road	0.42	22.18	1	0.18	9.47	0
A4421 Buckingham Road	0.26	14.55	0	0.24	9.80	0

6.6.19 The results summarised in **Table 6.17** demonstrate the junction can be improved and mitigated to experience a significantly improved operational capacity of that compared to the 2026 Reference Case scenario. The introduction of a right turn lane on the A4421 Buckingham Road and improvements to visibility from the Bicester Road arm also provide additional benefit in terms of highway safety thereby satisfying concerns raised by OCC in the Bicester Airfield Development Brief SPD as summarised in **Section 2.5** of this TA.

6.7 Summary

6.7.1 In summary the capacity analysis has demonstrated that the traffic demands placed on the study area by the introduction of the Employment Quarter can be adequately accommodated either by existing or already committed infrastructure or by the introduction of mitigation schemes for three off-site junction locations.

6.7.2 Therefore, it is concluded that the impact of development can be appropriately accommodated on the local highway network, subject to providing the necessary improvements aforementioned.

7 Summary & Conclusion

7.1 Summary

- 7.1.1 This TA has been prepared by mode transport planning to accompany an outline planning application for the Experience Quarter development included as part of wider Bicester Motion Masterplan development proposals. The Experience Quarter comprises Commercial, Business and Services uses (Class E), Light Industrial (Class B2) and Local Community and Learning Uses (Class F).
- 7.1.2 An analysis of the existing transport infrastructure within the vicinity of the site has demonstrated that the site is highly accessible by car via the local highway network, with links to the wider strategic road network.
- 7.1.3 Traffic surveys (ATCs) were undertaken along the A4421 Buckingham Road, Skimmingdish Lane and Bicester Road, for a one-week period during July 2016 and May 2019; The traffic surveys demonstrate that the 24-hour AADT two-way traffic flows are c.15,480 vehicles along Buckingham Road, c.16,650 vehicles along Skimmingdish Lane and c.1,040 vehicles along Bicester Road.
- 7.1.4 Analysis of the accident records for the local highway network surrounding the development site has concluded that there are no historic or existing safety concerns, and therefore, no highway safety issues that might be exacerbated by the development proposals.
- 7.1.5 The site is adequately accessible by sustainable modes of travel; existing pedestrian and cycle links are located within close proximity of the site and provide good connections with local facilities/amenities in the local area and towards Bicester town centre. The level of existing infrastructure for these users is also subject to a number of committed improvements as a result of previous consented developments that collectively will enhance pedestrian and cycle access.
- 7.1.6 Bus stops are situated c.550m (c.6-7-min walk) to the south of the proposed site access on Buckingham Road (c.50m south of Thompson Drive) and are accessible via the existing footways along the western side of the A4421 Buckingham Road. These bus stops are served by the Stagecoach X5 service, which provides two services an hour to Bicester town and Bicester Village, as well as to a number of key towns and cities such as Oxford, Cambridge, Milton Keynes and Buckingham.
- 7.1.7 The proposed bus stops on the A4421 Buckingham Road that are intended to be delivered as part of the consented Hotel application site access are situated within 230m (c.3-min walk) of the Experience Quarter and will be accessible from the Experience Quarter via the internal network of foot/cycleways within the site. These will enhance accessibility to public transport for future staff and visitors to the Experience Quarter.
- 7.1.8 Vehicular access to the site will be provided at two proposed locations:
- A4421 Buckingham Road – ghost right turn junction (left out/exit only) to serve the Experience Quarter; and,
 - Bicester Road – A reinstated access (located c.90m to the east of Buckingham Road) to provide infrequent service and emergency access to the Experience Quarter.
- 7.1.9 3.0m wide shared footway/cycleways will be provided at the proposed accesses and within the internal access road from the A4421 Buckingham Road. A new dropped kerb crossing point (with tactile paving

and central refuge island) will also be provided for pedestrians and cyclists to connect with the existing provision and infrastructure within the local surrounding area.

- 7.1.10 As the application is Outline the parking standards and associated provision and delivery will be specified during the reserved matters/detailed design stages (subject to further consultation/agreement with OCC). A first principles analysis has been carried out to inform this initial process, concluding that provision of 400 parking spaces will adequately accommodate maximum calculated demands (350) with allowance for fluctuations in demand.
- 7.1.11 Within the overall total car parking layouts for each land use, 10% of the total spaces are intended to be allocated as disabled parking bays, in order to meet the required OCC parking standard.
- 7.1.12 Electric Vehicle (EV) charging points will also be provided within the car parking areas; the level of provision is intended to be provided at c.3% of total parking spaces (as agreed as part of the consented hotel application).
- 7.1.13 The cycle parking will be specified in more detail during the reserved matters/detailed design stages (subject to further consultation/agreement with OCC); however, an indicative preliminary provision of .
- 7.1.14 A travel demand review has been undertaken which indicates that the site will generate 201 two-way vehicle trips during the weekday AM peak hour and 195 two-way vehicle trips during the weekday PM peak hour. This is the equivalent of c.3 vehicles entering or leaving the site every minute, during the weekday peak hours.
- 7.1.15 Out of the six offsite junctions that have been assessed from a capacity perspective, three are forecast to require mitigation as a result of the traffic demands from the Experience Quarter, as follows:
- A4421 Buckingham Rd/A4421 Skimmingdish Ln/Buckingham Rd/A4095 roundabout;
 - B4100/A4095/Banbury Rd roundabout; and,
 - A4421 Buckingham Rd/Bicester Road priority junction.
- 7.1.16 The forecast level of impact resulting from the development proposals have been mitigated by increasing the flare lengths and entry widths of specific problematic approach arms at each of the roundabouts and by upgrading the Bicester Road priority junction to include a ghost right turn lane. The upgrade to the Bicester Road priority junction provides a secondary benefit of enhancing safety at a junction already identified to have deficiencies in this respect.
- 7.1.17 A capacity assessment of the site access junction formed with the A4421 Buckingham Road has also been undertaken and concludes that the proposed arrangement will operate with significant reserve capacity with only a single vehicle queueing on both the major and minor (site access) roads in either peak period.

7.2 Conclusion & Recommendation

- 7.2.1 On the basis of the information and mitigation presented in this report it is considered that the proposed development can be accommodated within the local area. As such there should be no reason why the application cannot be recommended in terms of highways and transportation.
- 7.2.2 It is therefore concluded that the proposed development (considering the proposed mitigation) will not have a significant adverse impact on the operation of the surrounding highway network and therefore, in accordance with the NPPF, the proposal should be considered acceptable in transport terms.

APPENDICES

APPENDIX A – OCC Highways Scoping Correspondence

CHERWELL DISTRICT COUNCIL

Pre-Application Report

Pre-application Reference No:	19/02092/PREAPP
Proposal:	The proposed development is for an Automotive experience centre comprising B1 (business), B2 (light industrial) and D2 (Leisure) uses with ancillary spectator facilities comprising D1 (Non-residential), Sui Generis (workshop/ showrooms), A3 (restaurants and cafes) and offices, storage, display and sales comprising the 'Brand Experience Centre' at Bicester Motion, Bicester
Site Address:	Land north-west of former RAF Bicester Bicester Oxfordshire OX26 5HA
Date Site Visited:	7 th November 2019
Date & Time of Meeting (if applicable):	Two Meetings have taken place; Workshop 1 on 7th November 2019 and Workshop 2 on 18th December 2019.
Location of Meeting:	Bicester Motion Offices, Building 123, Bicester Heritage, Buckingham Road, Bicester
Attendees:	<p>CDC – Rebekah Morgan, Tim Screen, Charlotte Watkins, Emma Harrison, Jennifer Ballinger, Neil Whitton. OCC – Tim Peart.</p> <p>Applicants – Jon Westerman, Will Sparling (Edgars), Jonty Ashworth, Dan Geoghegan (Bicester Motion), Annetje Hacquebord (Ridge), Anthony Stiff (Anthony Stiff Associates), Nick Worlledge (Worlledge Associates), Adrian Forte (Mode Transport).</p> <p>N.B. List of the applicant's team is not complete.</p>

TECHNICAL ASSESSMENT

Internal Consultations Required: Building Control, Environmental Health, Landscape Services, Arboriculture, Conservation, Ecology, Policy Team, Economic Development Team, Public Art Team and the Bicester Delivery Team.

OCC Single Response (inc Highways, Drainage and Archaeology).

External Consultations Required: The Environment Agency, Historic England, Natural England, Thames Water, Thames Valley Police, Wildlife Trust, CPRE, relevant Town/Parish Council and adjoining Town/Parish Councils, Bicester Local History Society.

Drainage: You need to consider foul and surface water drainage when designing your proposals. In respect of foul drainage, you should first seek to connect to the public sewer network. You can contact Thames Water for further advice about this; information about their pre-application service is available online at:

<https://developers.thameswater.co.uk/commercial-building-works/water-supply/disconnections/pre-application-help-and-advice>.

Only if a connection to the public sewer network is not feasible should you then consider other foul drainage options. The Environment Agency would be consulted on any planning application that proposes non-mains foul drainage. If you are proposing non-mains foul drainage, you should submit a completed Foul Drainage Assessment Form with your planning application. This form can be viewed online at:

<https://www.gov.uk/government/publications/foul-drainage-assessment-form-fda1>

In respect of surface water drainage, wherever possible surface water should be drained within the site using Sustainable Drainage Systems (SuDS). Technical Standards for the design, maintenance and operation of SuDS can be viewed online at:

<https://www.gov.uk/government/publications/sustainable-drainage-systems-non-statutory-technical-standards>

In addition, you should refer to the guidance published on [Oxfordshire County Council's Flood Toolkit](#) concerning surface water drainage, and in particular the detailed guidance provided in the "Local Standards and Guidance for Surface Water Drainage on Major Development in Oxfordshire".

The Pre-Application submission is not accompanied by any drainage details or reports. I would strongly recommend that you engage with the County Council as Lead Local Flood Authority at as early a stage as possible as the use of SuDs could significantly affect the nature of the proposed development and the developable area. I would again strongly encourage you to seek pre-application advice on your drainage proposals to avoid delays during the application process.

EIA Screening Opinion Required? YES – an application for a Screening Opinion should be submitted.

Committee or Delegated Matter? Committee

Relevant Planning History: None on the pre-application site itself. There is however extensive planning history across the wider site, including a recent consent for the 'New Technical Site', a resolution to approve a new hotel and a currently pending application for the FAST zone. In addition, the original technical site has a detailed planning history with several planning applications and listed building consent applications associated with individual buildings, including a site wide consent for commercial uses.

The red line area for this pre-application enquiry includes part of the adjacent quarry site. You would need to contact Oxfordshire County Council for information relating to the planning history of the quarry site.

Policy:

CHERWELL LOCAL PLAN 2011 - 2031 PART 1 (CLP Part 1)

BIC8 - Former RAF Bicester

PSD1 – Presumption in favour of Sustainable Development

SLE1 – Employment Development

SLE 2 – Securing Dynamic Town Centres

SLE3 – Supporting Tourism Growth

SLE4 – Improved Transport Connections

ESD1 – Mitigating and Adapting to Climate Change

ESD2 – Energy Hierarchy and Allowable Solutions

ESD3 – Sustainable Construction

ESD4 – Decentralised Energy Systems

ESD5 – Renewable Energy

ESD7 - Sustainable Drainage Systems (SUDs)

ESD10 – Biodiversity and the natural environment

ESD13 – Local Landscape Protection and Enhancement

ESD15 - The Character of the Built and Historic Environment

INF1 – Infrastructure

CHERWELL LOCAL PLAN 1996 SAVED POLICIES (CLP 1996)

TR1 – Transportation Funding

C1 – Protection of sites of nature conservation value

C2 – Development affecting protected sites

C4 – Creation of new habitats

C7 – Landscape Conservation

C23 – Retention of features contributing to character or appearance of a conservation area

C25 – Development affecting the site or setting of a schedule ancient monument

C28 – Layout, design and external appearance of new development

ENV12 – Development on Contaminated land

Other Material Planning Considerations include:

National Planning Policy Framework (NPPF)

Planning Practice Guidance (PPG)

RAF Bicester Conservation Area Appraisal – November 2008

RAF Bicester Planning Brief 2009

Cherwell Non-Statutory Local Plan 2011

You should be aware of the following matters/issues/designations:

- The site is located within the Conservation Area of RAF Bicester;
- The wider Bicester Heritage site contains many Listed Buildings and non-designated heritage assets;
- The site lies within the setting of Scheduled Monuments;
- There is a Site of Special Scientific Interest (SSSI) on the adjacent quarry to the north – this appears to be outside of the application boundary (as shown).
- The site is within a designated Local Wildlife Site;
- There are residential properties to the west of the site;
- There are Public Rights of Way crossing the site around the quarry area;

PROFESSIONAL ASSESSMENT BY CASE OFFICER

This formal report is the conclusion of long-standing pre-application discussions on these proposals. Two meetings have taken place with relevant technical disciplines involved on both sides, and an accompanied site visit has also been carried out. I have also issued initial

feedback following the original submission of information and the first meeting; workshop 1 (my letter dated 22nd November 2019).

This report should be read in conjunction with that initial feedback, and the application submission should address the points raised. It should also take account of the points raised in the workshops and any agreed meeting notes.

I acknowledge that the presentation provided by the agent and their consultants, addressed at workshop 2 addressed many of the questions set out in the initial pre-application response regarding 'uses' and what the Brand Centre would be offering to users.

If the proposal is taken forward to the application stage, my understanding is that it would be submitted in outline with access being the only matter for consideration. My only concern with this approach is that some elements of the proposal will be more sensitive in terms of the historic environment and the natural environment (see detailed comments below) and we may require full details of some elements of the scheme to be able to fully consider the principal of the development. My comments below are made with the 'outline' approach in mind.

As with the advice on the FAST zone, the application will need to be accompanied by parameter plans and design coding of sufficient detail given the very significant constraints of this site.

It is considered that the main issues relating to your proposal are:

- The Principle of Development
- Economic Benefits
- The Outline submission and parameter plans
- Highway Safety and Connectivity
- Visual and Landscape Impact
- Trees and Landscaping
- Heritage Assets (Listed Buildings, Scheduled Monuments, Conservation Area)
- Ecology
- Impact on Aviation
- Flood Risk and Drainage
- Energy Efficiency Measures
- Noise – neighbouring Amenity

The Principle of Development

Planning law requires that applications for planning permission must be determined in accordance with the development plan unless material considerations indicate otherwise.

The Cherwell Local Plan 2011-2031 - Part 1 ("CLP Part 1") was formally adopted by Cherwell District Council on 20th July 2015 and provides the strategic planning policy framework for the District to 2031. The Local Plan 2011-2031 – Part 1 replaced a number of the 'saved' policies of the adopted Cherwell Local Plan 1996 ("CLP 1996") though many of its policies are retained and remain part of the development plan. The most relevant planning policies of Cherwell District's statutory Development Plan are set out above.

The majority of the pre-application site is part of a wider site which is allocated in the adopted CLP Part 1 under Policy Bicester 8 for 'conservation-led' proposals to 'secure a long-lasting, economically viable future for the site and flying field'. It should be noted that the 'quarry site' (which is also currently outside the applicant's ownership) is not included within the Policy Bicester 8 allocation and is considered to be outside the built up limits of Bicester and therefore within the open countryside.

Policy Bicester 8 seeks to establish uses which will be complementary to, and help enhance, the character and appearance of the Conservation Area and the nationally important heritage value of the site whilst securing an economically viable future for the site. The policy proposes a number of uses that will be acceptable at the (wider) site; this includes heritage tourism,

leisure, recreation and employment uses.

The policy is not specific about the precise type of uses within those categories that would be appropriate, the overall quantum of development for the site, or the form such development should take (conversion, re-use or new build for example); nor does it stipulate which parts of the overall site are suitable for development or otherwise. It does however refer to the approved Planning Brief for the site dated September 2009. This Brief is now somewhat out of date and superseded both by the CLP Part 1 itself as well as national planning policy and guidance and material circumstances; including the surrounding context and development that has taken place both on the wider site and within its environs. It also provides informal development principles only and does not have the status of a Supplementary Planning Document. This all affects the weight that can be applied to the Brief.

Within the Planning Brief the majority of the pre-application site is identified as comprising part of the flying field (n.b. the quarry site is not covered by the planning brief). The Brief states that "In respect of the flying field the study considered that its retention as an unobstructed area of green space was "essential to ensure its historic integrity" and concluded that "any loss of the extent of the flying field, or incursion into it by built development, would be wholly unacceptable and detrimental to its importance as an integral part of the conservation area". Accordingly, the development proposed here cannot be considered to be in accordance with the Planning Brief in principle terms. In this respect it conflicts with this part of Policy Bicester 8.

However, in my view there are material considerations which must be considered in the balance against this apparent conflict. These include; The issuing of a new national planning policy framework and planning practice guidance; the sale of Bicester Heritage by the MOD and its acquisition, investment and re-use by Bicester Heritage; the granting of permission for an extension to the technical site and the resolution to grant permission for a new hotel; the granting of planning permission for development within the environs of Bicester Heritage; the contribution that development at Bicester Heritage makes to the local economy and the employment and recreational offer now available at the site.

The types of uses proposed, themselves meet the aspirations of Policy Bicester 8 by providing leisure, recreation and employment uses. Although the Planning Brief suggests there should be no additional built development on the flying field, it is acknowledged that Policy Bicester 8 includes all of the flying field within the allocation and the Planning Brief alone, does not carry enough weight to identify areas where development should be strictly prohibited.

When considering the principle of development in the location proposed (within the flying field area) there is a need to consider the impact on the openness of the flying field and the ability to retain aviation activity (which links to its historic use as an airfield). In terms of retaining the 'openness' of the airfield, I do not believe this prohibits all development within the flying field. Retaining sufficient space between the built limits of the technical site and any new building(s) will allow a feeling of openness to be retained, along with careful consideration of the placement of any further buildings around the fringes of the flying field.

In my view, locating a building (or complex of buildings) in the area shown could be achieved without impacting on the overall openness of the flying field. This will require careful design considerations (further comments below) and the development should be compact to avoid the appearance of sprawl around the fringes of the airfield. As previously advised, I do have some reservations about the proposed trackside spectator buildings (more detail provided in heritage section); these have the potential to appear as sprawling development along the edge of the airfield.

The 'former quarry site' is not included within the Policy Bicester 8 allocation and therefore does not benefit from a presumption to support the type of development outlined in your submission. The proposed use of the quarry area for 4x4 tracks would compliment the offering at the brand centre and the quarry does offer a unique opportunity to create this type of feature. However, the approach needs to be led by a well-planned restoration scheme,

with the proposed use respecting and responding to the natural environment of the quarry. On this basis, I would not support any building/structures, or heavily engineered element (in terms of additional concrete features) within the quarry site. The open countryside setting of this part of the site needs to be reflected within your submission and demonstrated that a non-intrusive scheme is possible.

Your Planning Statement should explain how you consider the proposals to comply with Policy Bicester 8 and the Planning Brief and the weight that should be applied to any conflict with these, bearing in mind the above comments. It also needs to clearly address the quarry site, which is not included in the policy allocation.

In addition to Policy Bicester 8, the proposal for expanding the leisure/tourism uses at the site is also supported by the wider policies of the Local Plan. Policy PSD1 ensures that there is a presumption in favour of sustainable development that accords with the Plan and secures improvements to the economic, social and environmental conditions of an area, subject to other material considerations. Policy SLE2 relates to 'supporting tourism growth' and supports proposals for new and improved tourism facilities. The Council's planning committee have resolved to grant planning permission for a hotel on the site, and there are clear functional links between the proposals and the hotel.

In summary, in principle terms, the proposals will provide jobs, secure economic growth and significantly boost tourism in the local area, which would overall be consistent with the CLP Part 1. Proposals will however also need to have regard to, and be considered against, other planning policy requirements which are considered below.

Economic Benefits

The submitted design and access statement sets out an overview of the likely economic benefits of the scheme. It is acknowledged the scheme would bring clear and significant economic benefits to the town and the wider region. In a future planning application, we would encourage the economic impact assessment to be developed further, indicating likely connections to local supply chains, the relationship with other commercial development occurring around Bicester and the potential links with the town centre; including strategies for delivering these benefits.

The Outline Submission and Parameter Plans

Outline submission

If the proposal proceeds to the application stage, my understanding is that you intend to submit an application in outline, with all matters reserved except for access.

If you were to proceed in this manner, I believe there are elements of the scheme that we would require full details of to enable the LPA to determine the principal of the development. The brand centre building itself could be considered in outline, however, the majority of the ancillary development such as the trackside pavilions, any safety features and fencing around the airfield track and details of structures/engineering works in the quarry site (along with a restoration scheme) would need to be submitted with more substantial details to demonstrate how the use could be accommodated on the site without adverse impact.

Developable Area Parameter Plan

Developable area plan (included within the DAS) highlights three areas of potential development; main build area for the brand centre, quarry site and the area for the proposed trackside pavilions.

I do have concerns with the quarry area being identified as 'developable land', which in conjunction with the 'heights' parameter plan, suggests the area would be capable of accommodating buildings/structures up to 4m in height. Due to the history of the quarry site, any work in this area needs to be led by a sensitive restoration plan. Given that the quarry site is outside of the Policy Bicester 8 allocation, and within the open countryside, the Local Planning Authority would resist buildings/structures within this area. I believe there is potential to accommodate the 4x4 tracks provided they are designed to integrate within the natural landscape.

Land Use

The proposed brand centre would include a variety of proposed uses including restaurants, retail and employment uses. It is important that the predominant use is for leisure/tourism purposes to contribute to the requirements of Policy Bicester 8.

The purpose of the policy is to bring forward development on the site that contributes to the overall offer in Bicester but does not adversely impact on the town centre. The proposed restaurant and retail offers must be intrinsically linked to the leisure offering and should only represent a small proportion of the development.

Your application submission should explain in more detail the type of ancillary uses you envisage for this site, setting out maximum floorspace for each use and why this amount is needed. If a large proportion of town centre uses are proposed, we may require an impact assessment to be submitted.

Heights

The heights plan included within the DAS identifies varying heights for different elements of the scheme. I am content with the proposed heights for the brand experience centre; the design of the building(s) will be key, but overall it should not appear overly intrusive.

As set out above, I do have objections to the potentiality of 4m high buildings or structures within the quarry site. Similarly, I have concerns about the impact of the spectator buildings on the edge of the flying field.

Design

The design of the buildings will be very important to ensure the work well within the context of the site. I believe a high quality, modern design has the potential to work very well in this location. It would contrast with the historic buildings on the site and showcase the nature of the development being proposed. There is no reason why a modern design cannot take some influences from the historic nature of the site.

Whilst I have set out the above suggestion in terms of design style, it will be extremely important to work through this process with your architects/designers. The DAS should clearly set out the design process and the thinking behind the final design solution. I believe it will be worthwhile engaging in future pre-application discussions focussing on the design of the building(s), should you proceed to that stage.

The application should be accompanied by a Design Code. This will follow on from a thorough and detailed assessment and analysis of the site and its context in the DAS.

It needs to include;

- Building Frontages – please note that the buildings should have a clear relationship with the airfield and the Bicester Heritage site.
- Roof treatments
- Materials
- Colours
- Elevational detailing
- Surfacing
- Landscaping (hard and soft)
- Signage
- Lighting (also needs to be addressed in the Heritage Assessment and LVIA)
- Boundary Treatments (also needs to be addressed in the Heritage Assessment)
- Parking Principles (inc cycle parking and EV charging points)
- Service/delivery principles
- Use of photovoltaics (if applicable)

Highway Safety and Connectivity

In matters of highway safety, there have been ongoing discussions between your consultants, Mode, and Tim Peart (OCC), including a recent meeting regarding the FAST development.

During that meeting, it was made clear that the comments made by the Local Highway Authority regarding the FAST development will also be applicable to this proposal.

I do not intend to repeat the advice in this report as your consultants are fully aware of the concerns and there are ongoing discussions as to how best the concerns can be addressed at the application stage. If necessary, I would strongly encourage you to engage in pre-application discussions with the Local Highway Authority to ensure a strategy is in place for addressing their concerns, particularly with regard to off-site infrastructure improvements and wider sustainable transport issues.

My understanding is that agreement has been reached with regards to access points and management of traffic entering/leaving the site.

On matters of connectivity, the application should be accompanied by a Connectivity and Movement Parameter Plan. This should show both on and off-site linkages.

We would expect the application to include details of measures to encourage active travel to and from the site. This could include improving footpath and cycle connections between the site and town (particularly to the two stations and bus hub); proposing a comprehensive network of cycle and footpath routes within the site which connect easily to the external routes and submitting a draft framework travel plan which contains proposals for how both employees and visitors to the site will be encouraged to travel by means other than the car. These measures should be included within the Transport Assessment and shown on the Connectivity and Movement Parameter Plan.

All of the issues raised by the Local Authority during the meeting and in written correspondence will need to be clearly addressed in your submission, otherwise it is likely the LHA will raise an objection to the scheme.

Visual and Landscape Impact

The application is accompanied by a LVIA upon which initial feedback has been provided.

In terms of the landscaping parameters, landscape mitigation and amenity proposals must go hand in hand with the development and must be integrated with the buildings, service road, service yard, car parking and circulation routes, SuDS etc. Landscape structural planting needs to be considered as a 'permanent' element, which will not be impacted upon by future building work. Structural landscaping parameters should be included within the Open Space/Landscaping Parameter Plan and established as part of any outline application.

The overall design of the development will be key to ensuring any development sits appropriately within the setting. Landscape mitigation can be used to soften buildings and enhance the setting but should not attempt to 'hide' buildings. High quality design will be imperative on this site.

Heritage Assets (Listed Buildings, Scheduled Monuments, Conservation Area)

The airfield is protected principally for its 1920's origins, however the WWII additions are important as part of the airfield as a whole. Heritage impact is a key issue on this site with numerous listed buildings and Scheduled Monuments around the site. The proposals will be located within the Conservation Area which covers the whole Policy Bicester 8 allocation.

Following the second pre-application meeting, the following comments were received from the Council's Conservation Team:

'The brand experience centre is proposed to be located mostly to the north west of the airfield. This area is considered to be marginally less sensitive than other locations around the historic flying field. However, the incremental development of the airfield will potentially detract from its significance and therefore this development needs to be carefully managed. There are ongoing concerns about the cumulative impacts of the development of the site as a whole as a result of progressing individual schemes one at a time. Also as advised previously it is suggested that the applicant engage with Historic England at an early stage and any advice should be taken on board and form part of any subsequent application that is submitted to the LPA.

The comments provided here are in addition to those already provided for the first part of the preapplication enquiry. These should be read together, and the response as a whole taken into account going forward.

Perimeter track and bunding

The information submitted indicates that the perimeter track will be treated in such a way that it will remain the dominant feature of the airfield with any new tracks laid inside the perimeter track and appearing secondary due to their form and surface treatment. This approach is welcomed, however further details will be required as part of any application to allow for a full assessment of the resulting impacts. These details should include, the surfacing materials, a full justification and reasoning and an assessment of the extent to which the new tracks will visually intrude onto the historic airfield. In principle the proposed new track is considered on balance to be acceptable subject to appropriate detailing and materials.

Inevitably the use of the track for brand experiences will require bunding and safety

equipment to be installed around the perimeter. The proposed green bunding/ha ha approach is favoured over the wholesale installation of engineered safety barriers.

The aim is to retain the open nature of the airfield and keep any encroachment to a minimum. It is accepted that some kind of barrier is required on the part of the airfield closest to the Bicester Heritage buildings, these barriers should be kept to the lowest number possible and should be designed to be discrete.

Buildings

As the proposed designs for the buildings are indicative it is difficult to make a detailed assessment of their impact or provide any firm views. However, of the four approaches suggested at the second pre application meeting the village feel scheme is considered to be the least appropriate. It is felt that this site needs an innovative and unique building that addresses the individual characteristics of the historic airfield. Of the three remaining approaches the landmark and the campus feel are considered to address this the most. The final design and the materials used will be key to developing an appropriate and successful scheme that sustains the character of the conservation area.

There are still concerns regarding the appropriateness of the pavilion buildings. The preference would be for all of the buildings to be located together in one location in order to reduce the encroachment of development into the airfield. Similarly it is suggested that consideration needs to be given to the potential of including the spectating element within the main development of buildings, therefore the applicant is recommended to explore the possibility of locating the buildings differently as this will reduce any further harm that may result due to the development and reduce the visual impact on the historic flying field.

Planning application submission

As previously advised if the planning application were to come forward as an outline application this makes it difficult to assess the impact of the development on the heritage assets. A comprehensive detailed submission would be preferred. However, as a minimum any application should be accompanied by progressed parameter plans and design codes with an appropriate indicative materials palette. It is also suggested that photomontages should form part of any submission to give a clearer indication of the visual impact and allow for a more considered visual assessment.

Public Benefits

It is unavoidable that the proposed development will result in less than substantial harm to the significance of the Conservation Area. The NPPF para 196 states that the harm should be weighed against the public benefits. Therefore, a detailed assessment of the public benefits of the proposals should be included in any planning application. Public access alone is not considered to be a public benefit that can outweigh this less than substantial harm that will result. It is therefore suggested that more work is needed to explore other possible public benefits. This could include restoration of the existing buildings within the Bicester Heritage site such as the hangars and potentially taking wider view and considering the potential opportunities for Bicester town centre'.

I do not intend to repeat the advice set out above, but I would echo the comments of the Conservation team. The key points will be clearly demonstrating any public benefits of the scheme, the importance of high-quality design and addressing the concerns relating to the pavilion buildings.

I would re-iterate the need for early engagement with Historic England regarding the proposals. I would also request that you share any response with the LPA so our Conservation team can consider the comments as part of any future discussions.

Consideration also needs to be given to the cumulative impact of development around the airfield on heritage assets. This should include the consented schemes situated around the technical site, the hotel, the proposed FAST development and other schemes set out in the Bicester Motion masterplan. Although the masterplan has no status and has not been formally considered by the LPA, this information is in the public domain.

The Planning Practice Guidance: Conserving and Enhancing the Historic Environment, highlights this 'When assessing any application for development which may affect the setting of a heritage asset, local planning authorities may need to consider the implications of cumulative change'. The Historic England advice note, The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3, also advises on cumulative change and where significance may have been compromised in the past, additional change that may further detract from the significance of heritage assets needs to be considered.

The functional relationship between the Brand Centre and the rest of the airfield is very important. Whilst we are encouraging a modern, distinctive approach to architecture to set this development apart from the historic aspects of the site, the wider site still needs to read well as a whole site. The design needs to ensure the brand centre doesn't isolate itself as a separate development.

An element that has been discussed previously is the impact of lighting. Any lighting on the site, will need to be carefully considered both in terms of impact on heritage and ecology.

Ecology/Protected Species/Biodiversity

A separate meeting was held on 25th November 2020. The meeting focussed on technical details relating to the type/method of assessment used to calculate the required net biodiversity gain. There has also been ongoing correspondence with the Council's Ecologist who has provided technical advice.

In a very brief summary, my understanding is that the required net gain can be provided across the wider site. However, there is concern that each development parcel would not necessarily show the required net gain for that development as a stand-alone application. Therefore, in case where net gain can not be demonstrated, consideration needs to be given as how works on other parts of the site can be secured to mitigate the development.

The detailed advice provided by the Council's Ecologist should be considered prior to the submission of an application.

Impact on Aviation

Policy Bicester 8 makes clear that any development of the site should not preclude use of the flying field for flying. Your application will need to be accompanied by an Aviation Assessment which demonstrates that no such adverse impact will result from the proposals.

The aviation report submitted with the applications, appears to reach the conclusion

that aviation can be retained on the site in conjunction with the proposed development.

As part of the pre-application process, the report is taken as read and has not been scrutinised. As part of an application this document will be in the public domain and therefore will likely be scrutinised by the public, members of the local gliding club and any relevant bodies that wish to make comment. Any comments received will need to be carefully considered by the LPA and if necessary, we may choose to seek expert advice on the topic.

Flood Risk and Drainage

I would strongly encourage that you make early contact with the County Council on this matter. You have the relevant contact details.

As part of our pre-application process we are unable to consult externally and would also recommend that you seek pre-application advice from the Environment Agency and Water Authority as necessary.

Energy Efficiency Measures

The application should be accompanied by an Energy Statement. The relevant policies listed at the start of this report (esp ESD 1, ESD2, ESD 3 and ESD4) set out the Council's approach to ensuring that new development both mitigates and adapts to the impacts of climate change. Any future application needs to carefully consider these policies and demonstrate compliance.

The Energy Statement will need to demonstrate how reductions in carbon emissions will be achieved using the "energy hierarchy" set out in Policy ESD2. The development will also be required to meet BREEAM Very Good standard as a minimum and details of how this standard will be achieved should be set out in the Energy Statement where possible.

Noise – Impact on neighbouring amenity

Detailed noise comments were included in the stage 1 pre-application response. They do highlight the likelihood that the development, on occasion will generate high levels of noise due to nature of the proposal.

To the west of Buckingham Road is a residential area, I do have concerns that noise levels could have a detrimental impact on the amenity of the occupiers of these properties if it is not carefully managed. My main concern is there is an element of unknown in terms of noise as this will vary based on the level of use and type/age of vehicle on the track. Therefore, there is a risk of underestimating impact on residential properties.

A mitigation strategy will be essential. The strategy needs to clearly address potential residential impact and how mitigation will be managed so that residents can clearly understand how it will be managed. It should include a review process, that will allow adaptations should unexpected issues arise.

My understanding is that an electronic monitoring system could be implemented to monitor noise in real time and remove any vehicles exceeding agreed limits. If this type of technology is used, there will need to be clear monitoring of the system and safeguards put in place, should technical issues occur.

As part of any application, it is essential that the LPA is satisfied that noise can be adequately managed and the development will not adversely impact on residential amenity.

Conclusion

In principle, I am satisfied that the development of this site for leisure/tourism accords with the CLP Part 1 as discussed above. I do however have concerns about some elements of the proposal (as set out above) and potential noise implications.

If an outline application is to be submitted, I would also need to see sufficiently detailed parameter plans and a design code accompanying the application as discussed in this report, given the heritage sensitivities and constraints of the site. Some elements, such as the safety barriers and pavilions will need a greater level of detail included in the submission.

The technical reports supporting the application should also reflect the pre-application advice provided to date.

I have not been able to carry out external consultation, including consultation with key consultees such as Historic England and the Wildlife Trust, or with the relevant Town/Parish Council's and affected residents.

It is my professional opinion that if your application submission were to satisfactorily resolve and respond to all the matters raised during the pre-application discussions and all the matters highlighted in this report that the application would be one that we would be able to support.

Notwithstanding the officer comments above, a Section 106 Legal Agreement is likely to be required for this type of proposal.

You are advised to read the Council's Supplementary Planning Document for further advice. This is available on the Council's website:
<http://www.cherwell.gov.uk/index.cfm?articleid=3390>

Developer contributions may also be required by external agencies such as OCC:
Highways, public transport (OCC)
Monitoring (OCC)
Police and Community Safety (Thames Valley Police)

You may wish to consult with these agencies prior to submitting a planning application.

Please note that a Solicitor's undertaking will be required to pay the Council's reasonable legal fees based on the time taken to prepare and negotiate the S106 agreement and to investigate land title/s. It would assist the efficient processing of your application if you provided such an undertaking with any formal application for planning permission.

Date of Report: 14th February 2020

Case Officer: Rebekah Morgan

DISCLAIMER

The above advice represents the professional views of Council Officers and although given in good faith, it cannot prejudice any decision with the Council, as Local Planning Authority, may make at either Planning Committee or delegated officer level.

Subject: Re: Bicester Heritage - Masterplan TA Scoping
Date: Friday, 31 May 2019 at 15:04:20 British Summer Time
From: Adrian Forte
To: Peart, Timothy - Communities
CC: White, Joy - Communities, Smith, Benjamin - Communities, Ben Fairgrieve
Attachments: image001.png, image002.png, image003.png, image004.png, image005.png, image006.png, image007.png, image008.png, image009.png, image010.png, image011.jpg, NTS Average Journey Dist by Purpose.xlsx

Good afternoon Tim,

I hope you're keeping well.

Just tried to call you a short while ago in relation to your emails sent across over the course of the last week – apologies for only coming back to you now on these, I'm just catching up on things after being away on leave.

I will be addressing the points raised by responding to the individual emails for ease and clarity.

In relation to the extent of the gravity model for the wider masterplan – this was taken from the hotel site, of which the methodology was agreed and approved by OCC as part of the application. The method and reasoning behind the 50km catchment was based on the average trip length by journey purpose ('leisure/Holiday/day trip') from the NTS (table attached, for reference) – this came out at around 35km (21.6 miles); we then included, for robustness, a wider journey distribution sample size and extended this out to a 50km catchment.

I appreciate that this catchment does not include London and Birmingham (which would have the higher population densities); however, it should be noted that the gravity model as it stands, is based on a straight forward population/distance based gravity formula – this has not included any weighting factor on the travel distance, which would ultimately also have an impact on the distribution (as the propensity to visit the site would likely reduce, associated with the longer distance of travel).

Therefore, if we encompassed Birmingham and London within the model extent, we would most definitely incorporate a weighting factor (as above) within the formula, and this would likely not result in a significant impact on the existing distribution forecast to/from the development.

Considering the above we believe that the 50km gravity model extent and methodology currently undertaken is sufficient and appropriate for the purposes of the development proposals and the forthcoming Transport Assessment.

I would greatly appreciate your confirmation and acceptance of this; however, if you have any queries or require any further clarification on any of the above, please just let me know.

Many thanks and kind regards,
Adrian

Adrian Forte BSc (Hons) MCIHT

Principal Transport Planner

mode transport planning

Lombard House | 145 Great Charles Street | Birmingham | B3 3LP

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From: "Peart, Timothy - Communities" <Timothy.Peart@Oxfordshire.gov.uk>
Date: Wednesday, 22 May 2019 at 11:57
To: Adrian Forte <adrianforte@modetransport.co.uk>
Cc: "White, Joy - Communities" <Joy.White@Oxfordshire.gov.uk>, "Smith, Benjamin - Communities" <Benjamin.Smith@Oxfordshire.gov.uk>
Subject: RE: Bicester Heritage - Masterplan TA Scoping

Hi Adrian

I've just had a quick look at the spreadsheets you've sent across and just want to query the extent of the study area, which seems to be up to 50km of the site.

This doesn't include any areas or London or Birmingham, which are both easily accessible to Bicester Heritage via the M40 and their inclusion could potentially have a significant impact on the distribution from the development.

Have you given any thought to extending the area or is there any particular reason for why the study area is restricted to 50km?

Thanks

Tim Peart

Senior Transport Planner – Cherwell & West Oxfordshire
Communities
County Hall
New Road
Oxford
OX1 1ND
Email: timothy.peart@oxfordshire.gov.uk

From: Adrian Forte <adrianforte@modetransport.co.uk>
Sent: 16 May 2019 18:24
To: Peart, Timothy - Communities <Timothy.Peart@Oxfordshire.gov.uk>
Cc: White, Joy - Communities <Joy.White@Oxfordshire.gov.uk>; Smith, Benjamin - Communities <Benjamin.Smith@Oxfordshire.gov.uk>
Subject: Re: Bicester Heritage - Masterplan TA Scoping

Good evening Tim,

I hope you are keeping well.

Further to my email that I sent across last week; apologies, I have just realised that I had forgotten to append the gravity model distribution Excel spreadsheets, containing the relevant areas (Districts/MSOAs/LSOAs), populations, associated distribution and route assignments – Please see these attached now within the zipped folder, for your reference.

I trust that this is acceptable; however, if you require any further information and/or clarification, please just let me know.

Many thanks and kind regards,
Adrian

Adrian Forte BSc (Hons) MCIHT

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From: Adrian Forte <adrianforte@modetransport.co.uk>

Date: Tuesday, 7 May 2019 at 18:33

To: "Peart, Timothy - Communities" <Timothy.Peart@Oxfordshire.gov.uk>

Cc: "White, Joy - Communities" <Joy.White@Oxfordshire.gov.uk>, "Smith, Benjamin - Communities" <Benjamin.Smith@Oxfordshire.gov.uk>

Subject: Re: Bicester Heritage - Masterplan TA Scoping

Good evening Tim,

I hope you're keeping well.

Apologies, I had intended to respond to you sooner. I had also appreciated that you were off on leave until the start of last week; I hope you had a nice break over Easter (a distant memory now) and the bank holiday weekend, just gone.

Thanks very much for your most recent comments/notes on the BH Masterplan scope. Please see below some additional points/information (in red) for consideration/discussion.

Maybe we could catch up/discuss these during the week over the phone, if possible; we are now beginning to model the required local junctions, utilising the flows from the OCC SATURN model and the traffic generation/distribution methodologies, as below.

If you are free and able to give me a call at some stage (once you have reviewed the below), this would be greatly appreciated. I trust that this is acceptable and understandable; however, if you have any queries or require any further information and/or clarification, please do not hesitate to let me know.

Many thanks in advance and look forward to hearing from you. Talk soon.

Kind regards,
Adrian

Adrian Forte BSc (Hons) MCIHT

Principal Transport Planner

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From: Adrian Forte <adrianforte@modetransport.co.uk>
Date: Saturday, 13 April 2019 at 16:21
To: "Peart, Timothy - Communities" <Timothy.Peart@Oxfordshire.gov.uk>
Cc: "Smith, Benjamin - Communities" <Benjamin.Smith@Oxfordshire.gov.uk>, "White, Joy - Communities" <Joy.White@Oxfordshire.gov.uk>
Subject: Re: Bicester Heritage - Masterplan TA Scoping

Hi Tim,

I hope you're keeping well.

Thanks very much for your email; and apologies that I'm only acknowledging receipt of this now (especially on a Saturday!)

Your additional comments are much appreciated, and I will give these some more thought at the start of next week.

Would we maybe be able to have a catch up on the phone, say Wednesday/Thursday, just to discuss a few ideas? If this is possible, please let me know your availability and we can hopefully organise a call.

Enjoy the rest of the weekend.

Many thanks and kind regards,
Adrian

Adrian Forte BSc (Hons) MCIHT
Principal Transport Planner
mode transport planning

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From: "Peart, Timothy - Communities" <Timothy.Peart@Oxfordshire.gov.uk>
Date: Tuesday, 9 April 2019 at 10:29
To: Adrian Forte <adrianforte@modetransport.co.uk>
Cc: "Smith, Benjamin - Communities" <Benjamin.Smith@Oxfordshire.gov.uk>, "White, Joy - Communities" <Joy.White@Oxfordshire.gov.uk>
Subject: RE: Bicester Heritage - Masterplan TA Scoping

Dear Adrian

To follow up on the TA scoping note, please see my further comments below in blue.

Kind regards

Tim Peart

Senior Transport Planner – Cherwell & West Oxfordshire
Communities
County Hall
New Road
Oxford
OX1 1ND
Email: timothy.peart@oxfordshire.gov.uk

From: Adrian Forte <adrianforte@modetransport.co.uk>

Sent: 27 March 2019 15:47

To: Peart, Timothy - Communities <Timothy.Peart@Oxfordshire.gov.uk>; White, Joy - Communities <Joy.White@Oxfordshire.gov.uk>; Smith, Benjamin - Communities <Benjamin.Smith@Oxfordshire.gov.uk>

Cc: ja@bicesterheritage.co.uk; Jon Westerman <jon@edgarslimited.co.uk>; Ben Fairgrieve <benfairgrieve@modetransport.co.uk>; David Frisby <davidfrisby@modetransport.co.uk>; Clare O'Hanlon <Clare.O'Hanlon@cherwellandsouthnorthants.gov.uk>

Subject: Re: Bicester Heritage - Masterplan TA Scoping

Good afternoon Tim,

I hope you are keeping well.

Thank you very much for your comments below, in relation to our TA Scoping Note – please see our additional comments, clarifications and suggestions below in orange text, beneath your initial comments.

It would be worthwhile if we could possibly have a phone call over the next few days/week, in the hope of discussing and resolving/agreeing some of the topics further – I did try to call you last week, but unfortunately was unable to get through.

3. Access

I note that the new hotel access can also be utilised for access to Brand Experience Centre and Exhibition Hall. Is additional access onto Buckingham Road absolutely required? From a highways perspective it would be better to minimise the number of access points onto the highway and make better use of internal access routes as additional access points can cause delay, which would be a concern on a bus route in particular.

- Our comment within the Scoping Note was more in relation to the crossover/linked trips associated with the various land uses across the masterplan – there will be an element of linked trips associated with the hotel, brand experience centre, exhibition hall and general Bicester Heritage technical site uses, and therefore traffic may utilise the hotel access and park within the associated car parking areas – there is not intended to be vehicular internal access routes linking the various land uses based on the permitted hotel application and layout. There will however be permeable and convenient walking and cycling routes that will connect the various land uses across the wider masterplan layout.
- Therefore, it is proposed that a vehicular access specifically associated with the brand experience centre will be provided (and formalised) at the existing gated access location on Buckingham Road to the south of Thompson Drive. Likewise the permitted hotel access further south is planned to be retained as per the consented application.

Noted. However, the county council's view remains that better use of internal access routes for the complimentary land uses that outline above (the hotel, experience centre, exhibition hall etc.) should be prioritised over reliance on multiple access points from the highway in close proximity to each other.

Noted; however, the consolidation of accesses along Buckingham Road would likely require a larger (more significant) form of access (i.e. roundabout/signalisation scheme) to allow for the sufficient operation/capacity in relation to the combined overall traffic from the development site usage – this is considered to be out of context for the character of the road and local build up area. Therefore, the utilisation/upgrade/formalisation of the existing gated access to the south of Thompson's Drive for the Brand Experience Centre and the access further south for the Hotel application (both accesses to be ghost right priority junctions), are considered to be most

appropriate, and will allow for the respective development traffic (Hotel & Brand Experience Centre) to be dispersed more evenly and efficiently along the highway (reducing potential queuing/delay), as opposed to being concentrated at one point of access (potentially creating more of a capacity impact at one location). Furthermore, the junctions are appropriately spaced, in excess of 200m (c.250m) apart, and are not considered to be in close proximity of each other, which ensures that there will be no conflict/interaction/safety issues between the junctions.

4. Sustainable Access

I agree that the TA will need to consider the existing situation in terms of sustainable transport infrastructure and how the proposals can be linked to this.

- Agreed and to be included within the TA.

5. Parking Numbers

- Brand Experience Centre – Agreed that this should be based on first principles approach using assumptions within the business plan –
 - Agreed; taking the total floor area of the brand experience centre (c.11,677sqm) and applying OCC's parking standard for D2 (Assembly & Leisure – 1 space per 22sqm) would equate to an excessive requirement of c.530 car parking provision.
 - A first principles approach will be adopted within the TA, supported by visitor assumptions within the business plan (provided by Bicester Heritage).
 - Currently using the traffic generation methodology detailed within the Scoping Note, and taking the highest anticipated vehicle trips (from Saturday/weekend) = 640 two-way trips (320 arrivals and departures); assuming that all vehicles (320) arrive during in the AM period and leave during the PM period, and all anticipated staff (64 FTE) arrive by car in the AM period and leave during the PM period (this assumes that all employees travel by single occupancy car for robustness) – this would equate to demand for c.384 parking spaces being required – there is potential to add some contingency on top of this – to be determined as the scheme/proposals evolve.
 - This will need to be discussed further with OCC, in light of, and in line with the comments in relation to the traffic generation first principles, including the use of the National Travel Survey (NTS) data (as per Point 7, below).

Noted

- Future Technology Hub – Agreed this should be based on OCC standards applying an indicative use class mix.
 - Agreed, parking within the future technology hub will be provided in accordance with OCC's maximum standards for B1 (1 space per 30sqm) / B2 (1 space per 50sqm) / B8 (1 space per 200sqm) use, and in line with the anticipated mix of units within the development (total GFA – c.9,353sqm).
 - Currently the indicative mix of development is: 25% of B1(c) – 2,338sqm, 25% of B2 – 2,338sqm and 50% of B8 – 4,677sqm – this all equates to a total parking provision of c.148 spaces.

Noted

- Bicester Reserve - Public – I agree this could be based on the OCC standard for hotels (one space per room), but would request clarification on whether it is likely that all units will be one-bed? Even if not, there is still likely to be some car sharing as groups of visitors may arrive together so the above standard is likely to be appropriate.
 - Agreed, parking will be based on the OCC standard for C3 hotel (1 space per room) – at this stage parking has been calculated based on all units being one-bed; however, clarification on this will be sought from Bicester Heritage and the full development schedule will be included within the TA. There is the potential that c.20 of the lodges may be 2-bed units – however, we agree with your comment that the lodges are likely to be rented by families and/or groups of visitors that are likely to arrive together by car-sharing, therefore, applying the one space per unit standard is considered appropriate and sufficient.

Noted

- Bicester Reserve - Private – I note the suggestion to use either the C1 hotel or C3 residential standards. Perhaps the number of spaces should be somewhere in between based on how likely is it that visitors to private holiday lodges would bring two cars. If spaces are unallocated for this use there could also be

some flexibility by providing a shared parking area. How likely is it that all owners of private lodges would be staying on-site at same time?

- Agreed – this parking provision could be consolidated and reduced slightly, considering your points that holidaying visitors (owners or guests) are less likely to bring two cars and are more inclined to car share (similarly to the Bicester Reserve – Private land use above). We will consider the option and scope to provide unallocated parking in consultation with Bicester Heritage and the development of the internal masterplan layout. Therefore, it may be more appropriate to consider a parking standard of c.1 to 1.5 parking spaces per unit.

Noted

- Bicester Reserve - Parkland - This will need to be determined on its merits through a first principles approach. Are there any forecasts for visitor numbers in the business case to base this on?
 - This land use may prove to be slightly more challenging to provide a parking provision based on a first principles approach – we will consult with Bicester Heritage and see if there is any data/visitor numbers within the business case that could be utilised in this instance; however, in the absence of any insightful data/information, we reviewed the typical parking ratios sourced from the TRICS database for two country parks (07-Leisure / M-Country Parks) in Gloucester & Preston – these equated to a provision of 1.3 and 1.9 parking spaces per hectare, respectively. Therefore, we envisage providing parking towards the higher end at c.2 spaces per hectare. This would result in the provision of c.58 spaces for this element.

Noted. In the absence of any data from the business case, it's perhaps best to base this on TRICS data in the first instance but note that a larger (or smaller) parking area may be required in the future based on usage. **Noted.**

- Bomb stores - Are these to be privately owned? Presumably the 1 space per unit does not include the car storage area? Are the bomb stores going to be accompanied with individual parking spaces or a shared parking area(s)? If the latter, could there be a lower number of spaces provided depending on likelihood that all bomb stores are occupied at the same time?
 - That is correct, the 1 space per unit does not include the car storage area – this parking will be in addition to these areas.
 - Agreed, in relation to the allocated and unallocated parking provision, and likelihood of all bomb stores being occupied at the same time – we will consider the option and scope to provide unallocated parking in consultation with Bicester Heritage and the development of the internal masterplan layout. Therefore, it could be more appropriate to consider a lower parking ratio of c.0.75 parking spaces per unit – equating to c.36 communal/unallocated spaces.

Noted

- Hangar 5 Exhibition / Museum - Agree it may be best to base this on the adopted parking standards, unless the business case assumptions on visitor numbers suggest otherwise.
 - Agreed, this land use will look to conform with OCC's maximum standards of 1 space per 22sqm, equating to a provision of c.242 spaces; we will also consult further with Bicester Heritage in relation to any potential business case assumptions on an alternative/required ratio/standard.

Noted

6. Assessment Periods

We can agree with the assessment periods being the weekday AM and PM peak periods as a worst case scenario given the difference in flows between the weekday and weekend peaks.

- Agreed and confirmed that the TA will assess the capacity of the local highway network during the typical worst-case weekday AM and PM peak hours – 08:00-09:00 and 17:00-18:00, respectively. In line with the outputs from the County's SATURN traffic model.

Noted

7. Trip Generation

Brand Experience Centre

We would like some additional background or explanation in the TA on the forecast visitor numbers per annum.

- This will be reported within the TA, as provided from/informed by Bicester Heritage and contained within the business case.

I accept that the NTS data indicates that on average 38% of leisure trips are made by car. However, given the nature of the Brand Experience Centre proposed is it more likely that the destination may attract visitors from a wider area than average? Certain leisure attractions may be more likely to attract trips from a more local area (lowering the average in the NTS data), whereas the Brand Experience Centre may attract trips from a much wider region. Longer distance trips are more likely to be undertaken by car so an allowance should be made for this.

- We consider the NTS dataset (Table NTS0504) to be the most representative data source available (noting that ONS Census Data only covers Journey to Work (JtW) data), in order to forecast the anticipated modal split of visitors to the brand experience centre.
- It is appreciated that the NTS data is an average with nationwide coverage, and as commented, will include leisure trips made to more local facilities and attractions; however, this dataset will also include longer journey trips made to the wider national areas within England. Unfortunately, the NTS data cannot be split down further to cover either regional and/or only longer journey/wider leisure trips.
- Furthermore, there appears to be a main focus and reference from your comment in relation to longer distance trips (undertaken by the car) to the site – however, there are also visitors anticipated to travel to the site from local surrounding areas (including Bicester Town and local Oxfordshire and surrounding County residents, and visitors that are already visiting/within Bicester, Inc. Bicester Village) – these visitors (Inc. longer distant visitors) will also have the opportunity to travel to/from the site by sustainable means.
- Is OCC able to provide any advice on other relevant datasets and/or information to help justify an evidence base for the forecast car leisure trips to the site? This appears to be the main matter that we will need to resolve, in advance of undertaking our travel demand and capacity assessments within the TA.
- It would be appreciated if we could have a further discussion on this methodology, in order to agree the methodology and way forward.

Are there any first principles data sets of any similar developments that could be used? Is mode share data available from Gaydon Motor Museum (as with the arrival / departure profile outlined below)? The concern over use of the NTS data is that the category 'leisure trips' covers such a wide variety of trips, including very local trips (to the local swimming pool, pub etc.), that it is unlikely to be representative of the development proposed.

Unfortunately we have been unable to source any first principles methodologies for comparable developments and unfortunately the Gaydon Motor Museum is not a multi-modal survey within the TRICS database. I have however given your concern regarding the NTS mode share for 'leisure trips' some more consideration and we have now formulated an additional first principles method and approach using the NTS Average Car Occupancy by Journey Purpose for both 'Leisure' and 'Holiday/Day Trip'. Please see the corresponding method detailed below, for your reference, review and comment; please note that this approach results in a higher number of vehicular trips than the previous NTS method, and is now considered to be more robust and applicable:

- To determine the Brand Experience Centre traffic generation, a first principles approach has been adopted using the projected visitor and staff numbers for the proposal.
- It is anticipated that the centre will be open 7-days per week for c.360 days per annum (excluding major public holidays) and will attract a total of c.250,000 visitors per annum (based on BH figures/forecast).
- In terms of staff, it is anticipated that the development could employ up to c.97 full-time equivalent (FTE) staff members (based on 120sqm per FTE, as per the HCA's Employment Density Guide 2015). It is expected that there will be approximately 64 (97 x 0.66) staff on duty, daily, at a given time.
- The 2017 National Travel Survey (NTS) Table NTS0504 indicates that 65% of leisure trips (sport/entertainment & holiday/day trips) occur between Monday to Friday, with 35% of trips occurring at the weekend (Saturday/Sunday). Furthermore, 2017 NTS Table NTS0905 indicates that the average car occupancy for 'leisure' and 'holiday/day trips' is 1.80.
- Using the NTS figures above; of the 250,000 annual visitors, it is anticipated that 138,889 (250,000 / 1.80) will arrive by car (vehicular trips), with 90,278 (138,889 x 0.65) arriving during the weekdays (Mon-Fri) and 48,611 (138,889 x 0.35) arriving at the weekend (Sat-Sun).
- In terms of daily two-way vehicular movements during the weekday, this would equate to approximately 694 ((90,278 / 52 weeks / 5 weekdays) x 2) trips. Applying the same methodology, it is anticipated that there would be 935 ((48,611 / 52 weeks / 2 days) x 2) daily two-way vehicular trips each day at the weekend (Sat & Sun).

- In order to profile the Brand Experience Centre arriving and departing vehicular traffic patterns throughout the weekday (08:00-18:00), a traffic survey of the British Motor Heritage Museum in Gaydon was sourced from the TRICS (v.7.5.4) database; the proportions of in and out traffic movements across the day were extrapolated and applied to the proposed weekday for the 694 vehicle trips. **The specific details of this is included within the attached Excel spreadsheet, for reference** – in summary, the Brand Experience Centre is forecast to generate 107 and 103 two-way trips in the AM and PM peak hours, respectively.
- The forecast staff trips will also be included within the AM and PM peak hours; for a robust assessment, it will be considered that all staff (c.64) drive to the site, arriving in the AM (08:00-09:00) and departing in the PM (17:00-18:00).

I see the logic in the proposed methodology of applying the same arrival / departure profile from Gaydon Motor Museum to the proposed exhibition / museum space. However, would other elements of the experience centre generate different arrival / departure patterns? For instance would those arriving for a 'track day' experience be more likely to arrive / depart earlier or later? If so, this would alter the arrival / departure pattern.

- The brand experience centre is not only going to comprise of the driver/track experience element, there are also anticipated to be c.13 buildings comprising of a total of c.11,677sqm floor area – these will consist of various D1/D2, Sui Generis land uses with ancillary A1/A3/A5 uses. Therefore, the use of the Gaydon Motor Museum for the profiling of arrival and departure of vehicles is considered to be an appropriate and reflective forecast for the brand experience centre, in its entirety.
- It is acknowledged that the driver/track experience element will potentially have a slightly varied pattern of visitor arrivals from the Gaydon Motor Museum; considering factors such as the maximum permitted number of users on the track at any given time, and that the driver/track development trips may be dictated/informed by set booking slots/periods associated with its use. Furthermore there is also likely to be an element of trips linked between both the brand experience centre and the driver/track experience where visitors choose to do both when already visiting the site.
- We will consult further with Bicester Heritage, to enquire whether any additional and relevant information that can be sourced from the business case and intended operations of the driver/track experience; and potentially incorporate this accordingly (if applicable).

Agreed. It seems to me that the driver / track day experience should be separated out and based on the intended operation of this part of the development (number of users on track, booking slots etc.).

I agree with the proposal to include all staff arrivals by car as a worst case scenario.

- Agreed – however, this is likely to be a robust and worst-case assessment as employees at the site are anticipated to be employed locally and more inclined and able to travel sustainably.

Noted

Future Technology Hub / FAST

We would agree with the same trip rates from the New Technical Site application being applied to this element of the masterplan provided that there is no reason to assume that the Future Technology Hub would generate any different travel patterns (for instance, if visitors are more likely to travel from a wider area for any particular reason).

- Agreed, it is anticipated that the use and proposals of the Future Tech Hub / FAST is going to operate in a similar fashion to that of the existing and recently approved technical site expansion.

Noted. However it would be useful to have, in the TA, an explanation of what the FAST is and how it is intended to operate.

Hangar 5 / Bicester Reserve / Motor Vaults / Bomb Stores

The proposed TRICS parameters for these uses appear to be appropriate.

- Agreed and confirmed.

8. Internalisation / Linked Trips

It is accepted that visitors staying in the hotel will likely also be making use of the facilities on the wider site and that this could contribute towards trips for other aspects of the development (i.e. the Brand Experience Centre). An allowance can be made for this, however is there any background as to why this is assumed to be 25%?

- We will consult further with Bicester Heritage on this matter and look to provide justification through the

business case model; we will revert back to OCC on this for confirmation and approval; the TA will then incorporate the agreed level of internalised/linked trips for the relevant and associated highway assessments.

Noted

It is noted that hotel trips will be taken account of when considering committed developments.

- That is correct and agreed; both the Hotel and New Technical Site development trips will be considered as committed development within the TA.

9. / 10. Traffic Distribution and Capacity Assessments

Details of the routes allocated to / from journey origins / population centres generated by the gravity model should be provided. I note that figure 9.2 shows 32% of trips routing around Bicester via the western peripheral route (Howes Lane) and 9% routing via the eastern route (Skimmingdish Lane). How has this been determined?

- Agreed and confirmed that full details of the gravity model (Inc. all population Census data, used to calculate and forecast the distribution) will be appended to the TA, for reference.
- The routing of traffic has been determined using Google Maps traffic directions – this is based on journeys originating from the individual District/MSOA/LSOA centroids and traveling to the proposed development, using the quickest routes during the typical weekday AM (08:00-09:00) and PM (17:00-18:00) peak travel times.
- Where the directions provide two possible routing options, these are considered further, and if within a reasonable and comparable journey time of each other (within a few minutes), these have been apportioned using a 50/50 split of the two routes – otherwise, the fastest (i.e. most desirable) route has been chosen.
- Therefore, the resultant distribution and route assignment has resulted in c.32% of vehicular trips travelling around the western Bicester peripheral route and c.9% travelling via the eastern Bicester peripheral route.
- It should be noted further that the distribution proportions have been calculated using a population based gravity model (within a 50km catchment area drawn around the site), and as such, the resultant draw around the western peripheral route (to the south and west of the M40), could also be attributed to a larger resident population representation from the surrounding areas including Oxford, South Oxfordshire, Vale of Whitehorse, West Oxfordshire, Reading, West Berkshire, Swindon and Cotswold.
- Likewise, we have also carried out a high-level review of journey times and routes from wider areas including Greater London, these also primarily route along the M40 around the western periphery of Bicester, as this offers a considerably shorter journey time (c.30-minute benefit from Central London by car travelling on the M40 rather than A41/other cross-country routes).

Noted. We would like to see details of the centroid points, weighting, route assignment etc.

Noted, the gravity model has been refined and the relevant and associated excel sheets, containing the areas (Districts/MSOAs/LSOAs), populations, and route assignments have been appended to this email, for your reference and review. Please note that this is the intended distribution to be used within the final TA and capacity assessments going forward.

In a future year scenario with the strategic infrastructure improvements proposed for Bicester, including the dualling of the Eastern Peripheral Route and the South East Perimeter Road, the eastern peripheral route will become more attractive and a greater share of development trips would be expected to route via Skimmingdish Lane.

- It is appreciated and acknowledged that the Council's strategic infrastructure improvement aspirations around the eastern (Skimmingdish Lane) and south-eastern peripheral routes may offer a more attractive route than the current grade of road. However, as mentioned above, when reviewing primary route choice from wider areas, there is ultimately a limited population area that would be expected to route around the eastern periphery (Inc. areas along the A41/Aylesbury/Hemel Hempstead/Watford corridor). The majority of wider destinations to the south-east and south-west would still potentially continue to travel along the M40 corridor and north to Bicester around the A4095.
- In terms of distribution, there is currently no possible way to forecast the resultant impact of these strategic improvements, and as such adjust the distribution/route assignment accordingly. Furthermore, OCC do not currently have any proposed scheme plans for the strategic improvements, and the future year modelling scenarios (2026) that we will be assessing within the TA (utilising OCC's SATURN traffic

model) will not include the strategic dualling of Skimmingdish Lane – therefore, the consideration of a development distribution increase use of Skimmingdish Lane is not appropriate and required.

It is noted that it is the 2031 scenario where we see a different picture. With the SEPR, improved eastern perimeter routes and a more urbanised Howes Lane, it is likely that the eastern route would become a more attractive route for journeys from the M40 (as well as those from A41 Aylesbury etc.) Agreed, that it will be within the 2031 scenario where we will likely see the benefits of the South Eastern Perimeter Route (SEPR) and the Eastern Peripheral (Skimmingdish Lane) Route (EPR); the SATURN model analysis and outputs currently provided by OCC/WYG do not include for any improvements/dualling along Skimmingdish Lane (EPR). We would consider that the best method for assessing the likely impact of development trips and reassignment of existing traffic along Skimmingdish Lane would be to use the SATURN model – therefore, and on this basis, it is not considered appropriate and necessary for us to manually assign/distribute (additional) development trips along this route to model the likely effects.

Colleagues from transport strategy are currently in discussions with WYG regarding use of flows extracted from the updated SATURN Bicester model and the future year modelling scenarios. Depending on the modelling scenarios required an allowance for the above may be needed and this will inform the junction assessments required.

- We have been in recent communication with your colleague Ben Smith, in relation to the SATURN modelling – WYG are currently updating and running the various future year scenarios proposed by OCC.
- We are however, still awaiting OCC's suggestions in relation to the extent of the off-site junction modelling to be undertaken as part of the TA – within the Scoping Note the following extent has been proposed:
 - A4421 Buckingham Road/A4421 Skimmingdish Lane/Buckingham Road/A4095 – 4-arm Roundabout;
 - B4100/A4095/Banbury Road – 4-arm Roundabout;
 - A4421 Skimmingdish Lane/Wyndham Hall Care Home Access/Launton Road – 4-arm Roundabout;
 - A4095/Bucknell Road – 3-arm Roundabout; and,
 - Bucknell Road/Howes Lane – Priority.

Noted that discussions are ongoing with OCC transport strategy. Regarding the additional 'rat-run' junctions that we have suggested should be assessed, my opinion is that the TA should at least consider the impact of development traffic on these routes in terms of traffic distribution and trip numbers (even if final agreed trip rates and distribution concludes that individual junction capacity assessments along this route are not required). The application would be criticised, including by local members and residents, if these routes were not included within the scope of the assessment. Noted and agreed, to include a statement of the development traffic impact at these junctions within TA.

11. PIA Assessment

I would agree with the scope of the PIA analysis set out in the scoping note.

- Agreed and accepted; PIA data has now been ordered from OCC's Traffic and Road Safety team, covering the agreed extent for the most recent 5-year period from December 2013 to December 2018.

Noted

12. Travel Plan

A Framework Travel Plan will be required to support the masterplan site and all uses will be required to tie in with that Travel Plan. Individual uses within the site which exceed the thresholds set out in the document attached in the link below will require bespoke travel plans directly tailored to that use.

<https://www2.oxfordshire.gov.uk/cms/sites/default/files/folders/documents/roadsandtransport/transportpoliciesandplans/newdevelopments/Travelplanrequirementsmonitoringfees.pdf>

- Agreed that the planning application will be accompanied and supported by a Framework Travel Plan.
- The individual uses/buildings that exceed the threshold requirement for an individual and supplementary Travel Plan will then be produced prior to their respective occupation, imposed by way of a relevant and appropriate planning condition/s.

Noted

I trust that the above is acceptable and understandable; however, if you have any queries or require any further information and/or clarification, please do not hesitate to let me know.

As aforementioned, it would be beneficial to hopefully have a conversation on the phone, to follow up on a few of these points, once you have had the time to read and digest the information.

If you could please let me know when you are free for a call to discuss this, we can get something pencilled into our diaries.

I look forward to hearing from you.

Many thanks and kind regards,
Adrian

Adrian Forte BSc (Hons) MCIHT
Principal Transport Planner
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be green, keep it on the screen!



From: "Peart, Timothy - Communities" <Timothy.Peart@Oxfordshire.gov.uk>

Date: Thursday, 7 March 2019 at 12:08

To: Adrian Forte <adrianforte@modetransport.co.uk>, "White, Joy - Communities" <Joy.White@Oxfordshire.gov.uk>, "Smith, Benjamin - Communities" <Benjamin.Smith@Oxfordshire.gov.uk>

Cc: "ja@bicesterheritage.co.uk" <ja@bicesterheritage.co.uk>, Jon Westerman <jon@edgarlimited.co.uk>, Ben Fairgrieve <benfairgrieve@modetransport.co.uk>, David Frisby <davidfrisby@modetransport.co.uk>, Clare O'Hanlon <Clare.O'Hanlon@cherwellandsouthnorthants.gov.uk>

Subject: RE: Bicester Heritage - Hotel and NTS

Dear Adrian

Please see below my comments on the TA scoping note tabled during our recent meeting.

I understand Ben will be getting back to you as soon as he's able to regarding the modelling outputs and scenarios.

I hope the comments below are clear, however if you have any queries please let me know.

I've numbered my comments in accordance with the sections in the TA scoping note.

1. Access

I note that the new hotel access can also be utilised for access to Brand Experience Centre and Exhibition Hall. Is additional access onto Buckingham Road absolutely required? From a highways perspective it would be better to minimise the number of access points onto the highway and make better use of internal access routes as additional access points can cause delay, which would be a concern on a bus route in particular.

1. Sustainable Access

I agree that the TA will need to consider the existing situation in terms of sustainable transport infrastructure and how the proposals can be linked to this.

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- Hangar 5 Exhibition / Museum - Agree it may be best to base this on the adopted parking standards, unless the business case assumptions on visitor numbers suggest otherwise.

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We would like some additional background or explanation in the TA on the forecast visitor numbers per annum.

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trips from a much wider region. Longer distance trips are more likely to be undertaken by car so an allowance should be made for this.

I see the logic in the proposed methodology of applying the same arrival / departure profile from Gaydon Motor Museum to the proposed exhibition / museum space. However, would other elements of the experience centre generate different arrival / departure patterns? For instance would those arriving for a 'track day' experience be more likely to arrive / depart earlier or later? If so, this would alter the arrival / departure pattern.

I agree with the proposal to include all staff arrivals by car as a worst case scenario.

Future Technology Hub / FAST

We would agree with the same trip rates from the New Technical Site application being applied to this element of the masterplan provided that there is no reason to assume that the Future Technology Hub would generate any different travel patterns (for instance, if visitors are more likely to travel from a wider area for any particular reason).

Hangar 5 / Bicester Reserve / Motor Vaults / Bomb Stores

The proposed TRICS parameters for these uses appear to be appropriate.

1. Internalisation / Linked Trips

It is accepted that visitors staying in the hotel will likely also be making use of the facilities on the wider site and that this could contribute towards trips for other aspects of the development (i.e. the Brand Experience Centre). An allowance can be made for this, however is there any background as to why this is assumed to be 25%?

It is noted that hotel trips will be taken account of when considering committed developments.

1. / 10. Traffic Distribution and Capacity Assessments

Details of the routes allocated to / from journey origins / population centres generated by the gravity model should be provided. I note that figure 9.2 shows 32% of trips routing around Bicester via the western peripheral route (Howes Lane) and 9% routing via the eastern route (Skimmingdish Lane). How has this been determined?

In a future year scenario with the strategic infrastructure improvements proposed for Bicester, including the dualling of the Eastern Peripheral Route and the South East Perimeter Road, the eastern peripheral route will become more attractive and a greater share of development trips would be expected to route via Skimmingdish Lane.

Colleagues from transport strategy are currently in discussions with WYG regarding use of flows extracted from the updated SATURN Bicester model and the future year modelling scenarios. Depending on the modelling scenarios required an allowance for the above may be needed and this will inform the junction assessments required.

1. PIA Assessment

I would agree with the scope of the PIA analysis set out in the scoping note.

1. Travel Plan

A Framework Travel Plan will be required to support the masterplan site and all uses will be required to tie in with that Travel Plan. Individual uses within the site which exceed the thresholds set out in the document attached in the link below will require bespoke travel plans directly tailored to that use.

https://www2.oxfordshire.gov.uk/cms/sites/default/files/folders/documents/roadsandtransport/transport_policiesandplans/newdevelopments/Travelplanrequirementsmonitoringfees.pdf

Kind regards

Tim Peart

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From: Adrian Forte <adrianforte@modetransport.co.uk>

Sent: 15 February 2019 18:05

To: Peart, Timothy - Communities <Timothy.Peart@Oxfordshire.gov.uk>; White, Joy - Communities <Joy.White@Oxfordshire.gov.uk>; Smith, Benjamin - Communities <Benjamin.Smith@Oxfordshire.gov.uk>

Cc: ja@bicesterheritage.co.uk; Jon Westerman <jon@edgarslimited.co.uk>; Ben Fairgrieve <benfairgrieve@modetransport.co.uk>; David Frisby <davidfrisby@modetransport.co.uk>

Subject: Re: Bicester Heritage - Hotel and NTS

Good evening Tim, et al,

Please find attached our Transport Assessment Scoping Note for the Bicester Heritage Masterplan; this includes the development schedule, traffic generation/trip rates, distribution and proposed extent of capacity assessments to be undertaken.

There is also an Excel file attached which contains the raw data for the traffic generation, including some additional notes/comments, for reference.

I look forward to our meeting next Tuesday, at which we can discuss these elements in some more detail.

I hope you have a nice weekend.

Many thanks and kind regards,
Adrian

Adrian Forte BSc (Hons) MCIHT

TECHNICAL NOTE



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Bicester Heritage Masterplan

Job Number: J323684 **Date:** 15 February 2019 **Client:** Bicester Heritage

Prepared By: ALF **Approved By:** JEGB

Transport Assessment Scoping Note

1 Introduction / Development Proposals

1.1 mode transport planning (mode) has been appointed to prepare a Transport Assessment in support of a forthcoming planning application for the development of the wider Bicester Heritage Masterplan. It is envisaged that the site will comprise of the following development schedule:

- Brand Experience Centre – mixed use, leisure & tourism (D1, D2, B2 + ancillary A1, A3, A5; Sui Generis/Showroom) – c.11,677sqm;
- Future Technology Hub (FAST – Future Automotive Speed & Technology) – light industrial, workshops, vehicle maintenance/repair/parts workshops (B1c, B2 + B8) – c.9,353sqm;
- Bicester Reserve (Public) – holiday village, lodges, tipis & ancillary spa, restaurant, activities (C3) – c.64 units;
- Bicester Reserve (Private) – private holiday dwelling houses/lodges (C3) – c.27 units;
- Bicester Reserve (Public) – c.28.9 Hectares – public open space, to include pedestrian walkways and cycle routes, within parkland, for recreational purposes – to include ancillary ticket office/visitor centre & A4 (café/lounge);
- Motor Vaults/Bomb Stores – 48 car storage units, with ancillary accommodation (C3) – c.48 units; and,
- Hangar 5 Exhibition Hall/Museum – D1, D2 – c.5,314sqm.

1.2 An indicative block masterplan layout (Ridge Project Radial plan), illustrating the location of the development parcels (above) is appended to this note, for reference (**Appendix A**).

1.3 This note is provided to set out the intended methodology and parameters to be adopted within the assessment of the development proposals. It is proposed that a Transport Assessment (TA) and Framework Travel Plan (FTP) will be submitted to accompany the planning application.

2 Planning Policy

2.1 The proposals will be considered in relation to the following national and local planning policy:

- National Planning Policy Framework (NPPF), Planning Practice Guidance (PPG);
- Adopted Cherwell Local Plan (2011-2031);
- Cherwell District Council RAF Bicester Planning Brief (Sept 2009);
- Connecting Oxfordshire: Local Transport Plan (LTP4) – 2015-2031; and,
- Connecting Oxfordshire: LTP4: Active & Healthy Travel Planning.

3 Vehicular Access

3.1 The proposed site access locations (x 4) are summarised below and can also be seen on the indicative masterplan contained in **Appendix A**.

- Skimmingdish Lane – south eastern corner – predominantly serving the Future Technology Hub/FAST, Motor Vaults/Bomb Stores and Bicester Reserve (Private);
- Skimmingdish Lane – existing Bicester Gliding Club access – serving Hangar 5 Exhibition Hall/Museum, and also the Future Technology Hub/FAST;
- Buckingham Road – existing gated access to the airfield (c.30m south of Thompson Drive) – this is proposed to become the main access to the Brand Experience Centre; and,
- Bicester Road – existing gated access to the northern corner of the site – to serve the Bicester Reserve & Park and Bicester Reserve (Public).

3.2 The site access visibility requirements will be informed by ATC (85th %ile speeds) data, previously collected over a week-long period between 13th and 19th July 2016 along both the A4421 Skimmingdish Lane and Buckingham Road within the vicinity of the proposed site access junctions.

3.3 In addition to the proposed accesses summarised above, the access serving the hotel site application on Buckingham Road is also proposed to be utilised to serve the Brand Experience Centre and Exhibition Hall/Museum. Supplementary emergency/event day accesses will also be located on Bicester Road (x 2) and Skimmingdish Lane (access at the New Technical Site), all shown on the masterplan.

4 Sustainable Access

4.1 The TA will consider the existing situation in terms of sustainable transport infrastructure surrounding the site and will identify how the proposals intend to be linked with this.

5 Parking

5.1 **Table 5.1** summarises the OCC parking standards to be incorporated within the masterplan development proposals. The parking standards and indicative figures are to be discussed, agreed and confirmed with OCC through the scoping process.

Table 5.1: OCC Parking Standards

Development Schedule	Area/Units	OCC (max) Standard to be Applied	Parking Level
Brand Experience Centre	11,677sqm	No relevant/specific OCC standard for this bespoke/sui generis land use. Closest land use is D2 Assembly & Leisure – 1 spaces per 22sqm	TBC/discussed with OCC (c.385 based on first principles approach)
Future Technology Hub	9,353sqm	B1 – 1 space per 30sqm / B2 – 1 space per 50sqm / B8 – 1 space per 200	c.178 (based on indicative mix of 25% B1, 25% B2 & 50% B8)
Bicester Reserve – Public	64 units	C1 Hotel & Guest House – 1 space per bed	c.64 (assuming all units are 1-bed)
Bicester Reserve – Private	27 units	C1 Hotel & Guest House – 1 space per bed or C3 Resi – 1-2 spaces per unit	c.54 (based on C3) (max)
Bicester Reserve – Public Walk/Cycle Ways/Parkland	28.9 Hectares	No defined OCC parking standard (c.2 spaces per Hectare)	TBC/discussed with OCC (c.58)
Motor Vaults/Bomb Stores	48 units	Sui Generis – 1 space per unit (applying C1 Hotel/Guest House)	c.48
Hangar 5 Exhibition/Museum	5,314sqm	D2 Assembly & Leisure – 1 space per 22sqm	c.242

6 Assessment Periods

6.1 It should be noted (as previously presented and accepted within the BH Hotel application) that the weekday AM and PM peak hours are considerably higher than any peak hour recorded over the weekend (on a Saturday/Sunday), as shown by the traffic surveys undertaken in July 2016. As a result, it is proposed that the TA will only assess the weekday peak hours, as a worst-case scenario. The traffic flow differences between weekday and weekend flows are summarised in **Table 6.1** below for further reference.

Table 6.1: Two-way Traffic Volumes (Skimmingdish Lane)

Hour Ending	Weekday 5-day Average	Saturday	Sunday
0700	620	199	134
0800	1471	465	192
0900	1614	712	251
1000	1080	1071	465
1100	838	1355	929
1200	890	1390	1031
1300	978	1336	1166
1400	1032	1196	1031
1500	1096	1194	957
1600	1225	1128	920
1700	1554	1073	829
1800	1834	985	747
1900	1297	865	654
2000	833	599	579
2100	487	395	361
2200	344	300	287

6.2 **Table 6.1** demonstrates that the weekday traffic volumes are significantly greater than those recorded at the weekend in this location, and also that there are clear weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively. The traffic peaks during the weekday at 1,614 in the AM and 1,834 in the PM, which is significantly higher than the worst-case peak of 1,390 vehicles over the weekend (on Saturday). Accordingly, the capacity assessments undertaken within the TA will focus on the weekday time periods only.

6.3 Furthermore, it is noted that the SATURN traffic model does not contain any weekend traffic flow data, and therefore, the assessment of Saturday/Sunday cannot be undertaken (in line with previous assessments, in which we were requested to use the SATURN model).

7 Traffic Generation

7.1 The traffic generation for the proposed wider masterplan development is summarised in **Table 7.1**. An electronic Excel spreadsheet has also been provided to OCC, which contains this information (Inc. trip rates) in more detail.

Table 7.1: Masterplan Traffic Generation Summary

Development Schedule	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	In	Out	2-Way	In	Out	2-Way
Brand Experience Centre	89	4	93	1	90	91
Future Technology Hub	64	8	73	7	59	66
Bicester Reserve – Public	4	3	7	4	5	9
Bicester Reserve – Private	2	1	3	2	2	4
Bicester Reserve – Public Parkland	13	7	20	14	19	33
Motor Vaults/Bomb Stores	3	2	5	3	3	7
Hangar 5 Exhibition/Museum	72	9	81	17	52	69
Total	248	34	281	47	230	278

Brand Experience Centre – First Principles

- 7.3 To determine the Brand Experience Centre traffic generation, a first principles approach has been adopted using the projected visitor and staff numbers for the proposal.
- 7.4 It is anticipated that the centre will be open 7-days per week for c.360 days per annum (excluding major public holidays) and will attract a total of c.250,000 visitors per annum (based on client figures).
- 7.5 In terms of staff, it is anticipated that the development could employ up to c.97 full-time equivalent (FTE) staff members (based on 120sqm per FTE, as per the HCA’s Employment Density Guide 2015). It is expected that there will be approximately 64 (97 x 0.66) staff on duty, daily, at a given time.
- 7.6 The 2017 National Travel Survey (NTS) Table NTS0504 indicates that 65% of leisure trips (sport/entertainment & holiday/day trips) occur between Monday to Friday, with 35% of trips occurring at the weekend (Saturday/Sunday). Furthermore, 2017 NTS Table NTS0409 indicates that 38% of leisure trips are undertaken by car.
- 7.7 Using the NTS figures above; of the 250,000 annual visitors, it is anticipated that 95,000 (250,000 x 0.38) will arrive by car (vehicular trips), with 61,750 (95,000 x 0.65) arriving during the weekdays (Mon-Fri) and 33,250 (95,000 x 0.35) arriving at the weekend (Sat-Sun).

- 7.8 In terms of daily two-way vehicular movements during the weekday, this would equate to approximately 475 $((61,750 / 52 \text{ weeks} / 5 \text{ weekdays}) \times 2)$ trips. Applying the same methodology, it is anticipated that there would be 640 $((33,250 / 52 \text{ weeks} / 2 \text{ days}) \times 2)$ daily two-way vehicular trips each day at the weekend (Sat & Sun).
- 7.9 In order to profile the Brand Experience Centre arriving and departing vehicular traffic patterns throughout the weekday (08:00-18:00), a traffic survey of the British Motor Heritage Museum in Gaydon was sourced from the TRICS (v.7.5.4) database; the proportions of in and out traffic movements across the day were extrapolated and applied to the proposed weekday for the 475 vehicle trips. The specific details of this is included within the electronic spreadsheet provided to OCC and contained with the TRICS output reports in **Appendix B**. The forecast staff trips will also be included within the AM and PM peak hours; for a robust assessment, it will be considered that all staff (c.64) drive to the site, arriving in the AM (08:00-09:00) and departing in the PM (17:00-18:00). This is considered a worst case, as the majority of staff are anticipated to be employed locally and more inclined to travel sustainably.

Future Technology Hub / FAST

- 7.10 The agreed and approved trip rates from the New Technical Site planning application are proposed to be utilised for the Future Technology Hub/FAST element; these trip rates were calculated based on a site survey that was undertaken in July 2018 at the existing main Bicester Heritage access. The trip rates and associated traffic generations are considered to be relevant and appropriate for the proposed land use and operations.

Hangar 5 (Exhibition Hall/Museum) / Bicester Reserve / Motor Vaults/Bomb Stores

- 7.11 The TRICS database (v.7.5.4) was used in order to calculate the trips rates associated with the Hangar 5 Exhibition Hall/Museum, Bicester Reserve, and Bomb Stores/Motor Vaults.
- 7.12 The Exhibition Hall/Museum TRICS parameters included land use 07: Leisure and Category S: Exhibition Centre for sites with a GFA range between c.900 to 30,000sqm; these are considered relevant and robust for the proposed land use.
- 7.13 The Bicester Reserve and Motor Vaults/Bomb Stores TRICS parameters included land use 03: Residential and Category J: Holiday Accommodation for sites with a no. of unit range between c.50 to 1,780; these survey sites are also considered relevant and robust for the proposed land use.
- 7.14 The Bicester Reserve public open space (Inc. walk/cycle paths & ancillary use) TRICS parameters included land use 07: Leisure and Category M: Country Parks for sites with an average area of c.38 Hectares. The TRICS sites only included surveys that were undertaken at the weekend (Sat/Sun); however, these are considered to be a worst-case and robust assessment when applying to a typical weekday AM & PM peak hour assessment.
- 7.15 Full TRICS output reports are appended to this note (**Appendix B**), for reference.

8 Internalisation / Linked Trips

- 8.1 It is considered that a proportion of the overall masterplan development trips will be internalised and linked with other various uses throughout the site; Bicester Heritage envisage that c.25% of hotel users/guests

will be associated with/contribute towards trips for other aspects of the development. In particular, and for the purposes of the transport assessment, this level of hotel development traffic will be deducted from the traffic generated to/from the Brand Experience Centre.

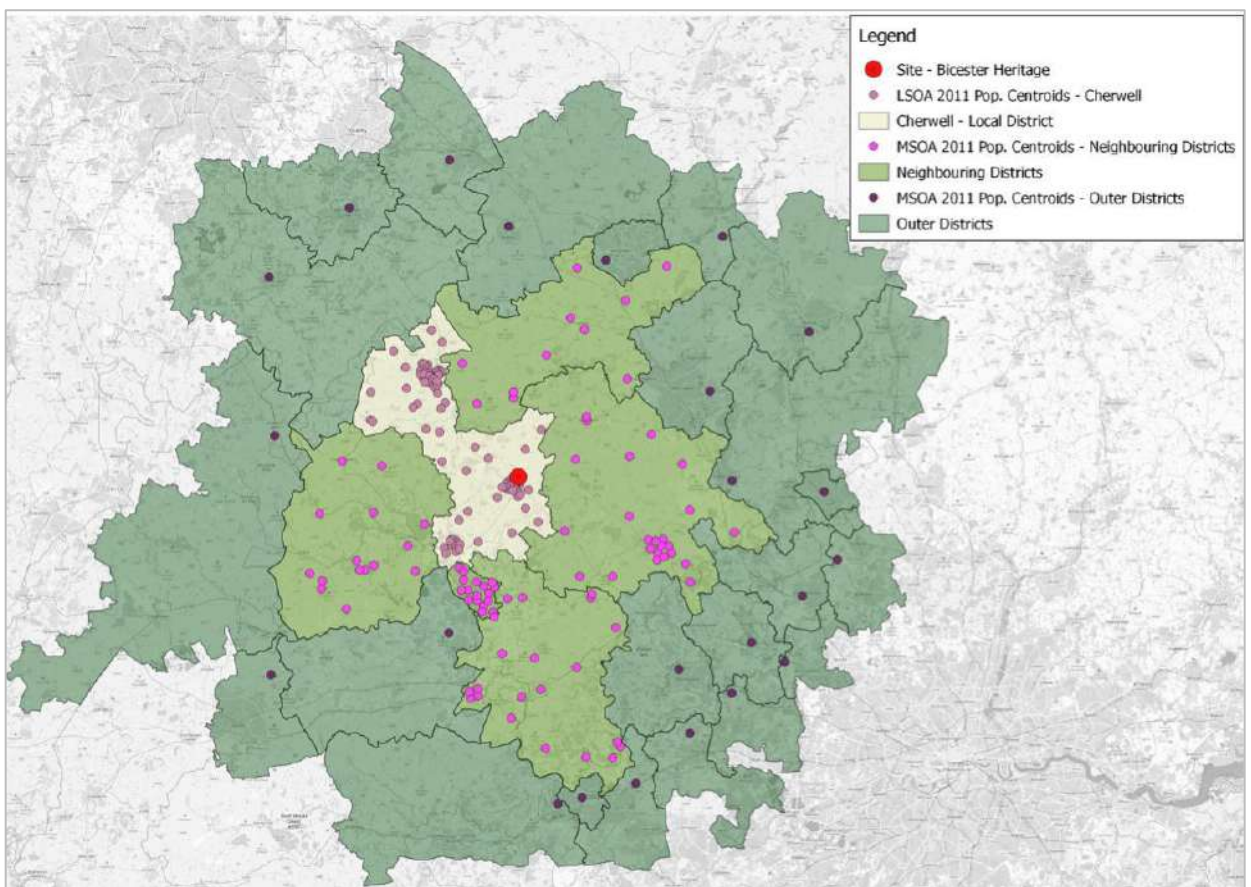
9 Traffic Distribution

9.1 Similarly, and as agreed with OCC for the BH Hotel application, a gravity model has been developed to inform the trip distribution for the overall masterplan development (given that the site predominantly comprises of leisure use); this is again based on 2011 Census population data, using the following methodology:

- District Areas, Middle Super Output Areas (MSOA) & Lower Super Output Areas (LSOAs) identified within a 50km catchment area of the site; and,
- A distribution proportion has been calculated based on resident populations within the identified catchment areas (Districts, MSOAs & LSOAs).

9.2 **Figure 9.1** illustrates the identified weighted centroids of the districts, MSOAs, LSOAs and catchment area used.

Figure 9.1: Distribution Catchment/Methodology



- 9.3 The hotel vehicular trips have been assigned to the local highway network based upon the locations of the above Districts, MSOAs & LSOAs, and the logical routes taken to and from these areas.
- 9.4 The distribution percentages are shown graphically in **Figure 9.2** and are summarised by route assignment, including forecast traffic generation (worst-case AM peak traffic), in **Table 9.1**.

Figure 9.2: Development Traffic Distribution

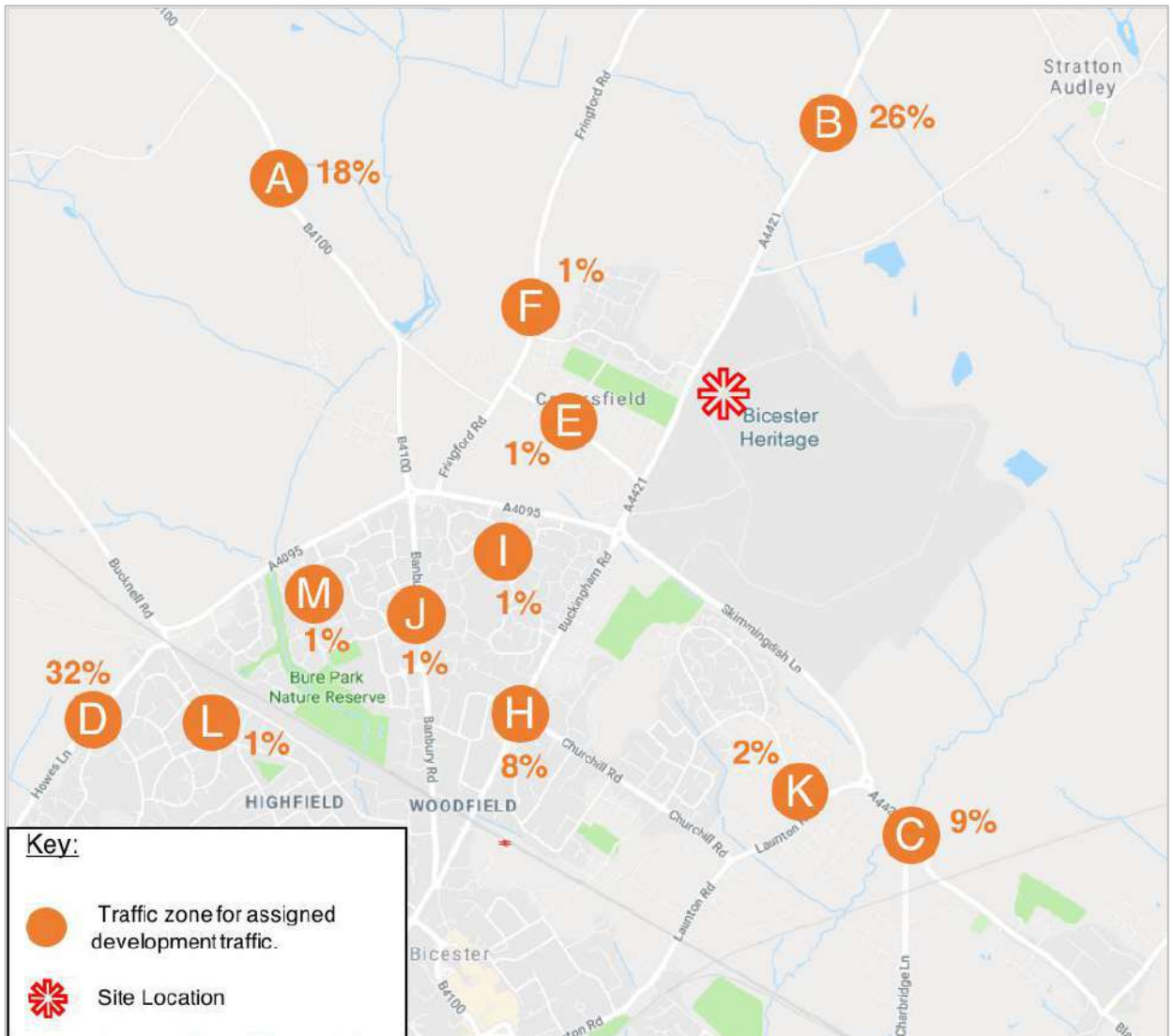


Table 9.1: Development Traffic Distribution Route Assignment

Zone	Traffic Distribution Route	Distribution %	Approx. Dev Trips (2-Way) (AM Peak Trips)
A	B4100 Banbury Rd, towards M40 / A43	18%	51
B	A4421 Buckingham Rd, towards A421 / A43	26%	73

Zone	Traffic Distribution Route	Distribution %	Approx. Dev Trips (2-Way) (AM Peak Trips)
C	Charbridge Ln, towards A41	9%	25
D	Howes Ln, towards B4030 / A4095 / A41	32%	90
E	Skimmingdish Ln, local to Caversfield	1%	3
F	Fringford Rd, local to Caversfield	1%	3
H	Buckingham Rd, local to Bicester Town Centre	8%	23
I	Southwold Lane, local access	0.5%	2
J	Banbury Rd, local access	1%	3
K	Launton Rd, local access	2%	6
L	Bucknell Rd, local access	1%	3
M	A4095, local access	1%	3

9.5 It is considered that a population-based gravity model is the best forecast of traffic distribution for the purposes of the overall masterplan development, considering its predominant leisure use; also considering that 2011 Census Journey to Work (JtW) Data would only be appropriate for residential and employment development-based distributions.

10 Capacity Assessments

10.1 Considering the forecast traffic generation and distribution of the development proposals, as prescribed within this note, off-site junction capacity assessments will be undertaken at 6 x locations as part of the Transport Assessment. **Table 10.1** and **Figure 10.1**, overleaf, summarise the junctions to be assessed and illustrate their locations, respectively.

Figure 10.1: Location of Highway Capacity Assessments



Table 10.1: Junctions to be Assessed

Junction	Type of Junction
A4421 Buckingham Rd/A4421 Skimmingdish Ln/Buckingham Rd/A4095	4-Arm Roundabout
B4100/A4095/Banbury Rd	4-Arm Roundabout
A4421 Skimmingdish Ln/Wyndham Hall Care Home Access/Launton Rd	4-Arm Roundabout
A4421 Buckingham Rd/Bicester Road	Priority
A4095/Bucknell Rd	3-Arm Roundabout
Bucknell Rd/Howes Ln	Priority

10.4 It is anticipated that the outputs from Bicester’s SATURN model at the junctions specified above (to be agreed with OCC) will be utilised for the purposes of the capacity modelling assessments within the TA.

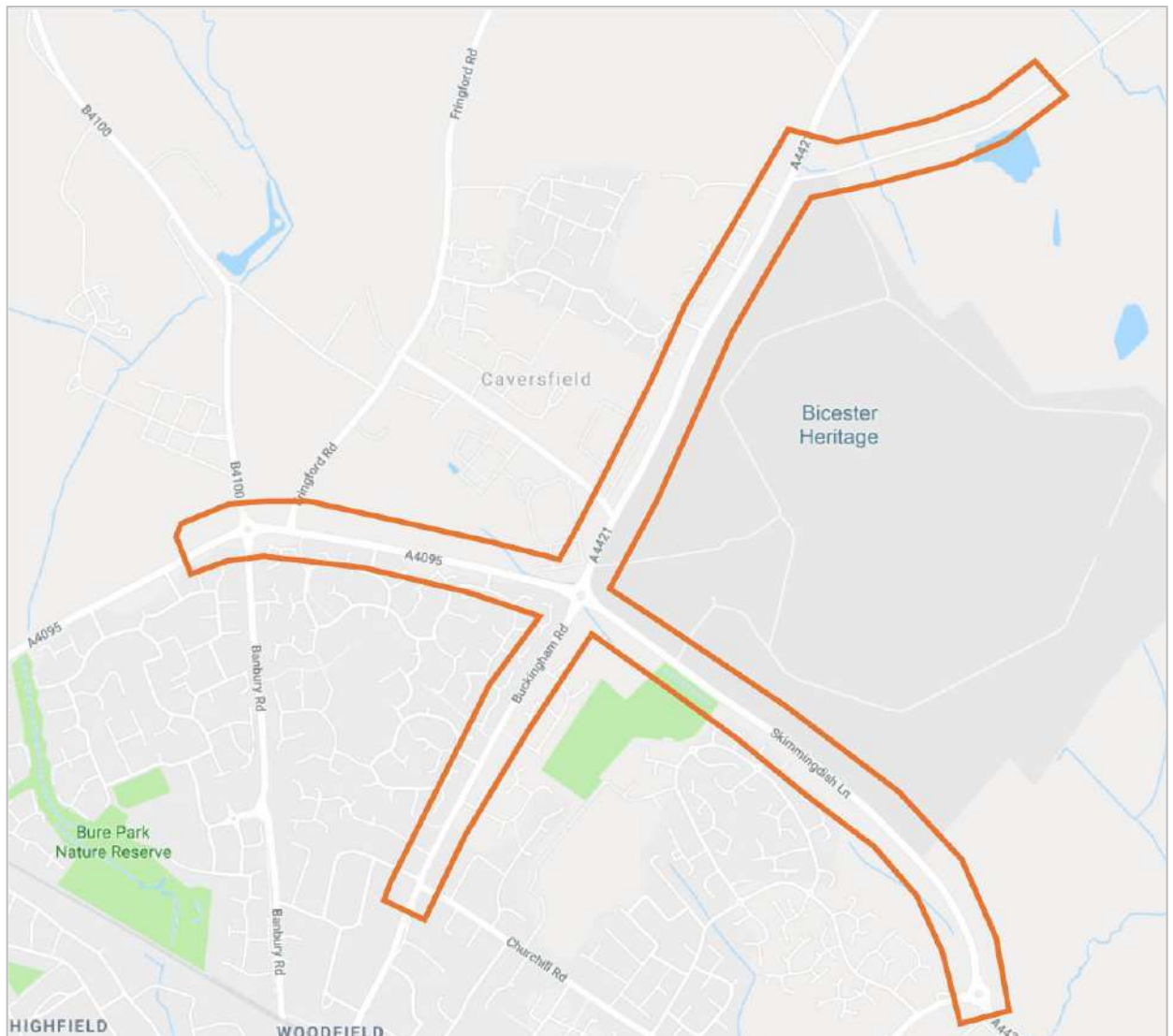
10.5 The following scenarios (for both the AM (08:00-09:00) and PM (17:00-18:00) weekday) will be modelled, based on the outputs obtainable from the SATURN model:

- 2021 Future Year SATURN Model;
- 2021 + Proposed Development (Cumulative Inc. Committed Hotel and New Tech Site applications);
- 2026 Future Year SATURN Model; and,
- 2026 + Proposed Development (Cumulative Inc. Committed Hotel & New Tech Site applications).

11 Personal Injury Accident (PIA) Data Analysis

11.1 The TA will also include a review and provide analysis of Personal Injury Accident (PIA) data for the extents illustrated on **Figure 11.1**, for the most recent 5-year period (provided by OCC).

Figure 11.1: Extent of PIA Analysis



12 Travel Plan

- 12.1 The planning application will be supported by a FTP for the wider masterplan land uses with the intention of minimising car traffic to/from the site in favour of sustainable modes of travel.
- 12.2 The Travel Plan for the hotel application previously suggested exploring the provision of shuttle bus services to connect and link with the local area, including Bicester, Bicester Village, and the local railway stations – Bicester Heritage are keen to introduce and fully support this facility as part of the wider masterplan, and envisage/look to attain a substantial level of sustainable travel as a result.
- 12.3 It should be noted that the forecast traffic generation summarised earlier in this note is considered to be robust and worst case, as this does not take account for such travel planning measures that will aim to reduce further the level of single occupancy car drivers to/from the development.

Appendix A – Indicative Masterplan

Appendix B – TRICS Outputs

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : J - HOLIDAY ACCOMMODATION

VEHICLESSelected regions and areas:

02 SOUTH EAST		
HF	HERTFORDSHIRE	1 days
WS	WEST SUSSEX	1 days
04 EAST ANGLIA		
SF	SUFFOLK	1 days
06 WEST MIDLANDS		
SH	SHROPSHIRE	1 days

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

Secondary Filtering selection:

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

Parameter: Number of units
 Actual Range: 55 to 1779 (units:)
 Range Selected by User: 31 to 9700 (units:)

Parking Spaces Range: Selected: 29 to 5000 Actual: 29 to 5000

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/06 to 15/08/16

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

Selected survey days:

Monday	1 days
Wednesday	2 days
Friday	1 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	1
Edge of Town	2

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

Selected Location Sub Categories:

No Sub Category	4
-----------------	---

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

Secondary Filtering selection:Use Class:

Not Known	3 days
D2	1 days

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

Secondary Filtering selection (Cont.):Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	3 days

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

Population within 5 miles:

50,001 to 75,000	1 days
75,001 to 100,000	2 days
125,001 to 250,000	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	2 days
1.6 to 2.0	1 days

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

Travel Plan:

Yes	1 days
No	3 days

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

PTAL Rating:

No PTAL Present	4 days
-----------------	--------

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

LIST OF SITES relevant to selection parameters

1	HF-03-J-01	CARAVAN		HERTFORDSHIRE
	BREAKSPEAR WAY			
	HEMEL HEMPSTEAD			
	Edge of Town			
	No Sub Category			
	Total Number of units:		55	
	Survey date: WEDNESDAY		30/07/08	Survey Type: MANUAL
2	SF-03-J-01	CARAVAN PARK		SUFFOLK
	WALTON AVENUE			
	FELIXSTOWE			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Number of units:		300	
	Survey date: WEDNESDAY		28/05/08	Survey Type: MANUAL
3	SH-03-J-01	CARAVAN PARK		SHROPSHIRE
	WELSHPOOL ROAD			
	SHREWSBURY			
	BICTON HEATH			
	Edge of Town			
	No Sub Category			
	Total Number of units:		115	
	Survey date: FRIDAY		26/06/09	Survey Type: MANUAL
4	WS-03-J-02	BUTLINS		WEST SUSSEX
	UPPER BOGNOR ROAD			
	BOGNOR REGIS			
	Edge of Town Centre			
	No Sub Category			
	Total Number of units:		1779	
	Survey date: MONDAY		15/08/16	Survey Type: MANUAL

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

TRIP RATE for Land Use 03 - RESIDENTIAL/J - HOLIDAY ACCOMMODATION

VEHICLES**Calculation factor: 1 UNITS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. UNITS	Trip Rate	No. Days	Ave. UNITS	Trip Rate	No. Days	Ave. UNITS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	562	0.022	4	562	0.014	4	562	0.036
08:00 - 09:00	4	562	0.067	4	562	0.040	4	562	0.107
09:00 - 10:00	4	562	0.071	4	562	0.092	4	562	0.163
10:00 - 11:00	4	562	0.096	4	562	0.149	4	562	0.245
11:00 - 12:00	4	562	0.071	4	562	0.109	4	562	0.180
12:00 - 13:00	4	562	0.138	4	562	0.106	4	562	0.244
13:00 - 14:00	4	562	0.146	4	562	0.113	4	562	0.259
14:00 - 15:00	4	562	0.161	4	562	0.077	4	562	0.238
15:00 - 16:00	4	562	0.114	4	562	0.080	4	562	0.194
16:00 - 17:00	4	562	0.100	4	562	0.088	4	562	0.188
17:00 - 18:00	4	562	0.064	4	562	0.072	4	562	0.136
18:00 - 19:00	4	562	0.051	4	562	0.068	4	562	0.119
19:00 - 20:00	4	562	0.041	4	562	0.045	4	562	0.086
20:00 - 21:00	4	562	0.030	4	562	0.040	4	562	0.070
21:00 - 22:00	4	562	0.014	4	562	0.021	4	562	0.035
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.186			1.114			2.300

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

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

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Parameter summary

Trip rate parameter range selected:	55 - 1779 (units:)
Survey date date range:	01/01/06 - 15/08/16
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

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

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
 Category : S - EXHIBITION CENTRE

VEHICLESSelected regions and areas:

06 WEST MIDLANDS		
HE	HEREFORDSHIRE	1 days
SH	SHROPSHIRE	1 days
07 YORKSHIRE & NORTH LINCOLNSHIRE		
NY	NORTH YORKSHIRE	1 days
08 NORTH WEST		
GM	GREATER MANCHESTER	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 932 to 30000 (units: sqm)
 Range Selected by User: 250 to 30000 (units: sqm)

Parking Spaces Range: Selected: 5 to 3000 Actual: 5 to 3000

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 29/03/14

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

Selected survey days:

Tuesday	1 days
Thursday	1 days
Friday	2 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	2
Edge of Town	2

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

Selected Location Sub Categories:

Residential Zone	1
Built-Up Zone	1
Out of Town	1
No Sub Category	1

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

Secondary Filtering selection:Use Class:

D1 2 days

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

Population within 1 mile:

1,001 to 5,000 1 days

10,001 to 15,000 3 days

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

Population within 5 miles:

25,001 to 50,000 1 days

75,001 to 100,000 1 days

100,001 to 125,000 1 days

125,001 to 250,000 1 days

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

Car ownership within 5 miles:

1.1 to 1.5 4 days

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

Travel Plan:

No 4 days

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

PTAL Rating:

No PTAL Present 4 days

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

LIST OF SITES relevant to selection parameters

<p>1 GM-07-S-01 CONFERENCE CENTRE HUDDERSFIELD ROAD OLDHAM SCOUTHEAD Edge of Town Out of Town Total Gross floor area: 2100 sqm <i>Survey date: FRIDAY 24/05/13</i></p>	<p>GREATER MANCHESTER</p> <p><i>Survey Type: MANUAL</i></p>
<p>2 HE-07-S-01 CONFERENCE CENTRE CONINGSBY STREET HEREFORD</p> <p>Edge of Town Centre Built-Up Zone Total Gross floor area: 932 sqm <i>Survey date: TUESDAY 22/10/13</i></p>	<p>HEREFORDSHIRE</p> <p><i>Survey Type: MANUAL</i></p>
<p>3 NY-07-S-01 EXHIBITION CEN. WETHERBY ROAD HARROGATE</p> <p>Edge of Town Residential Zone Total Gross floor area: 6044 sqm <i>Survey date: FRIDAY 13/10/06</i></p>	<p>NORTH YORKSHIRE</p> <p><i>Survey Type: MANUAL</i></p>
<p>4 SH-07-S-01 EXHIBITION CENTRE SAINT QUENTIN GATE TELFORD</p> <p>Edge of Town Centre No Sub Category Total Gross floor area: 30000 sqm <i>Survey date: THURSDAY 27/04/06</i></p>	<p>SHROPSHIRE</p> <p><i>Survey Type: MANUAL</i></p>

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
SH-07-S-02	GFA too small.
TW-07-S-01	GFA too small.

TRIP RATE for Land Use 07 - LEISURE/S - EXHIBITION CENTRE

VEHICLES**Calculation factor: 100 sqm****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	12325	0.249	3	12325	0.081	3	12325	0.330
08:00 - 09:00	4	9769	1.361	4	9769	0.161	4	9769	1.522
09:00 - 10:00	4	9769	1.021	4	9769	0.182	4	9769	1.203
10:00 - 11:00	4	9769	0.719	4	9769	0.210	4	9769	0.929
11:00 - 12:00	4	9769	0.768	4	9769	0.348	4	9769	1.116
12:00 - 13:00	4	9769	0.688	4	9769	0.420	4	9769	1.108
13:00 - 14:00	4	9769	0.443	4	9769	0.484	4	9769	0.927
14:00 - 15:00	4	9769	0.343	4	9769	0.694	4	9769	1.037
15:00 - 16:00	4	9769	0.361	4	9769	1.241	4	9769	1.602
16:00 - 17:00	4	9769	0.271	4	9769	1.576	4	9769	1.847
17:00 - 18:00	4	9769	0.315	4	9769	0.978	4	9769	1.293
18:00 - 19:00	3	12325	0.238	3	12325	0.362	3	12325	0.600
19:00 - 20:00	3	12325	0.257	3	12325	0.206	3	12325	0.463
20:00 - 21:00	3	12325	0.097	3	12325	0.195	3	12325	0.292
21:00 - 22:00	3	12325	0.057	3	12325	0.243	3	12325	0.300
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			7.188			7.381			14.569

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

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

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Parameter summary

Trip rate parameter range selected:	932 - 30000 (units: sqm)
Survey date date range:	01/01/01 - 29/03/14
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

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

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
 Category : M - COUNTRY PARKS

VEHICLESSelected regions and areas:

03 SOUTH WEST
 GS GLOUCESTERSHIRE 1 days
08 NORTH WEST
 LC LANCASHIRE 1 days

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

Secondary Filtering selection:

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

Parameter: Site area
 Actual Range: 16.00 to 60.80 (units: hect)
 Range Selected by User: 16.00 to 560.00 (units: hect)

Parking Spaces Range: Selected: 30 to 540 Actual: 30 to 540

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/10 to 12/05/12

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

Selected survey days:

Saturday 1 days
 Sunday 1 days

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

Selected survey types:

Manual count 2 days
 Directional ATC Count 0 days

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

Selected Locations:

Free Standing (PPS6 Out of Town) 2

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

Selected Location Sub Categories:

Out of Town 2

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

Secondary Filtering selection:Use Class:

D2 1 days

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

Secondary Filtering selection (Cont.):Population within 1 mile:

1,000 or Less 2 days

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

Population within 5 miles:5,001 to 25,000 1 days
125,001 to 250,000 1 days

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

Car ownership within 5 miles:1.1 to 1.5 1 days
1.6 to 2.0 1 days

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

Travel Plan:

No 2 days

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

PTAL Rating:

No PTAL Present 2 days

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

LIST OF SITES relevant to selection parameters

1	GS-07-M-01	COUNTRY PARK	GLOUCESTERSHIRE
	B4070		
	NEAR GLOUCESTER		
	Free Standing (PPS6 Out of Town)		
	Out of Town		
	Total Site area:	60.80 hect	
	Survey date: SUNDAY	25/04/10	Survey Type: MANUAL
2	LC-07-M-03	COUNTRY PARK	LANCASHIRE
	SKITHAM LANE		
	PRESTON		
	PILING		
	Free Standing (PPS6 Out of Town)		
	Out of Town		
	Total Site area:	16.00 hect	
	Survey date: SATURDAY	12/05/12	Survey Type: MANUAL

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

TRIP RATE for Land Use 07 - LEISURE/M - COUNTRY PARKS

VEHICLES**Calculation factor: 1 hect****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	38.40	0.078	2	38.40	0.091	2	38.40	0.169
08:00 - 09:00	2	38.40	0.443	2	38.40	0.234	2	38.40	0.677
09:00 - 10:00	2	38.40	0.534	2	38.40	0.482	2	38.40	1.016
10:00 - 11:00	2	38.40	0.833	2	38.40	0.638	2	38.40	1.471
11:00 - 12:00	2	38.40	0.742	2	38.40	0.964	2	38.40	1.706
12:00 - 13:00	2	38.40	0.638	2	38.40	0.651	2	38.40	1.289
13:00 - 14:00	2	38.40	0.807	2	38.40	0.625	2	38.40	1.432
14:00 - 15:00	2	38.40	0.794	2	38.40	0.703	2	38.40	1.497
15:00 - 16:00	2	38.40	0.898	2	38.40	0.846	2	38.40	1.744
16:00 - 17:00	2	38.40	0.534	2	38.40	0.938	2	38.40	1.472
17:00 - 18:00	2	38.40	0.482	2	38.40	0.664	2	38.40	1.146
18:00 - 19:00	2	38.40	0.469	2	38.40	0.404	2	38.40	0.873
19:00 - 20:00	1	16.00	0.250	1	16.00	0.125	1	16.00	0.375
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			7.502			7.365			14.867

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

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

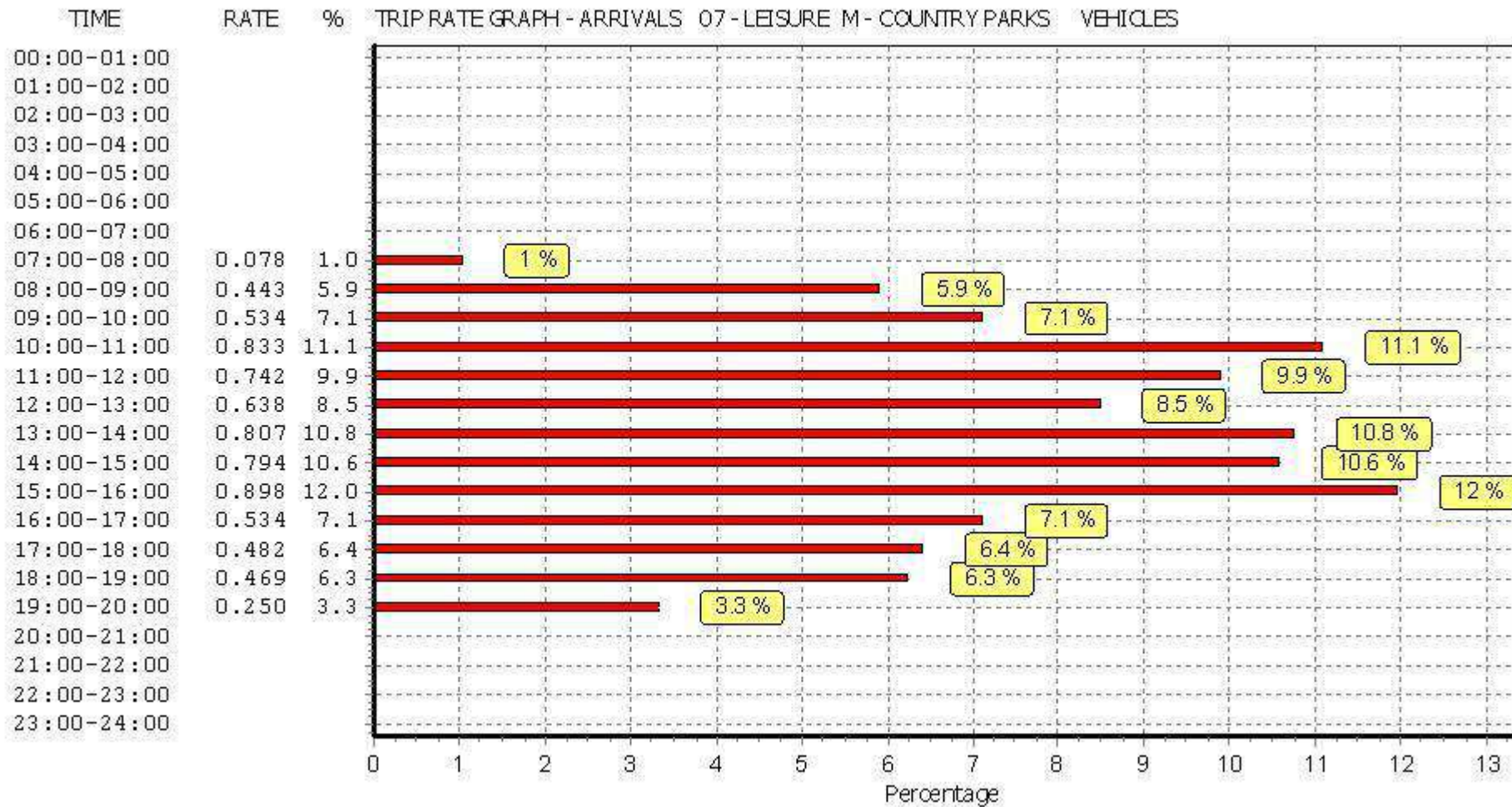
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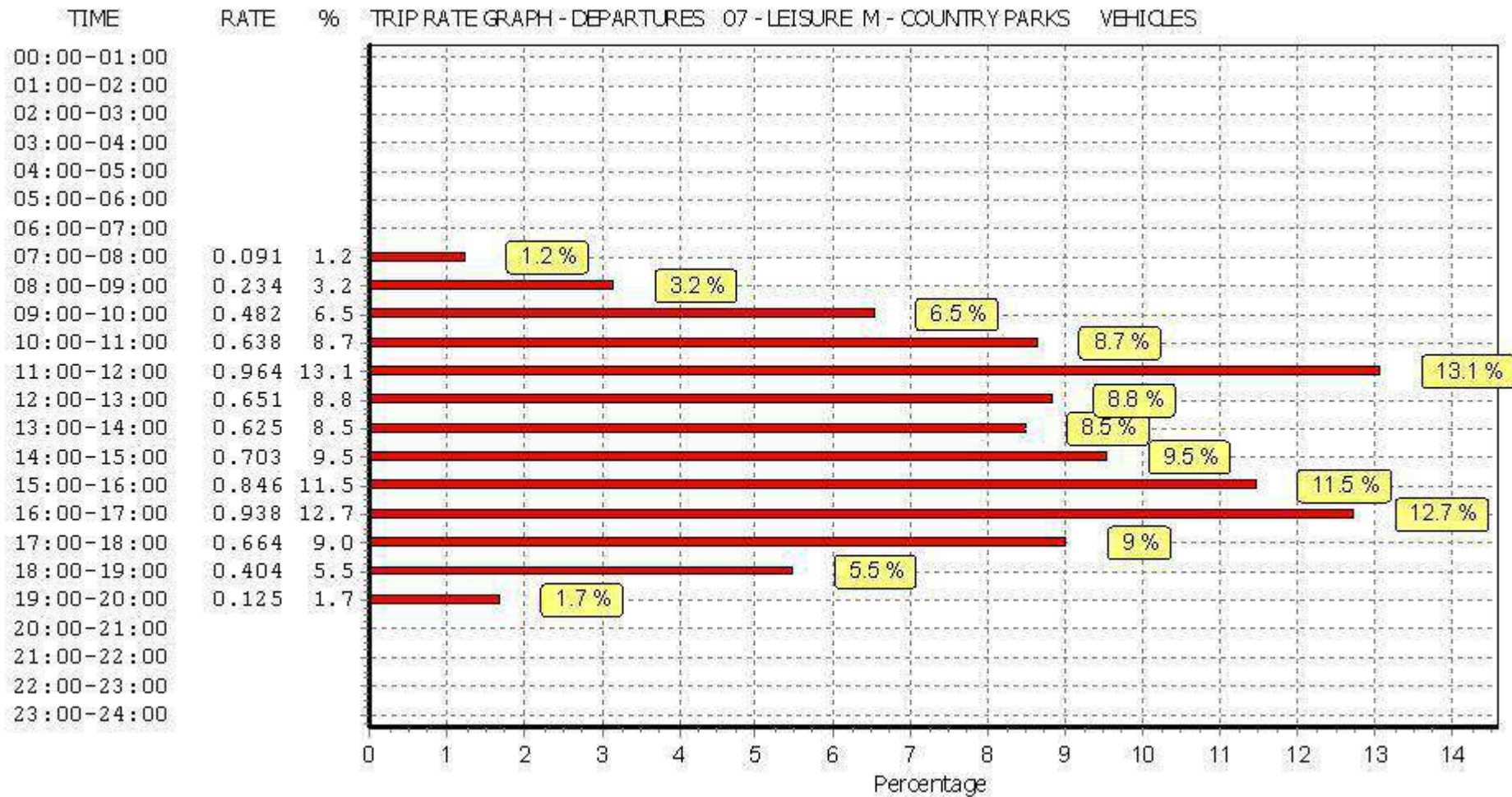
Parameter summary

Trip rate parameter range selected:	16.00 to 60.80 (units: hect)
Survey date date range:	01/01/10 - 12/05/12
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	1
Number of Sundays:	1
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

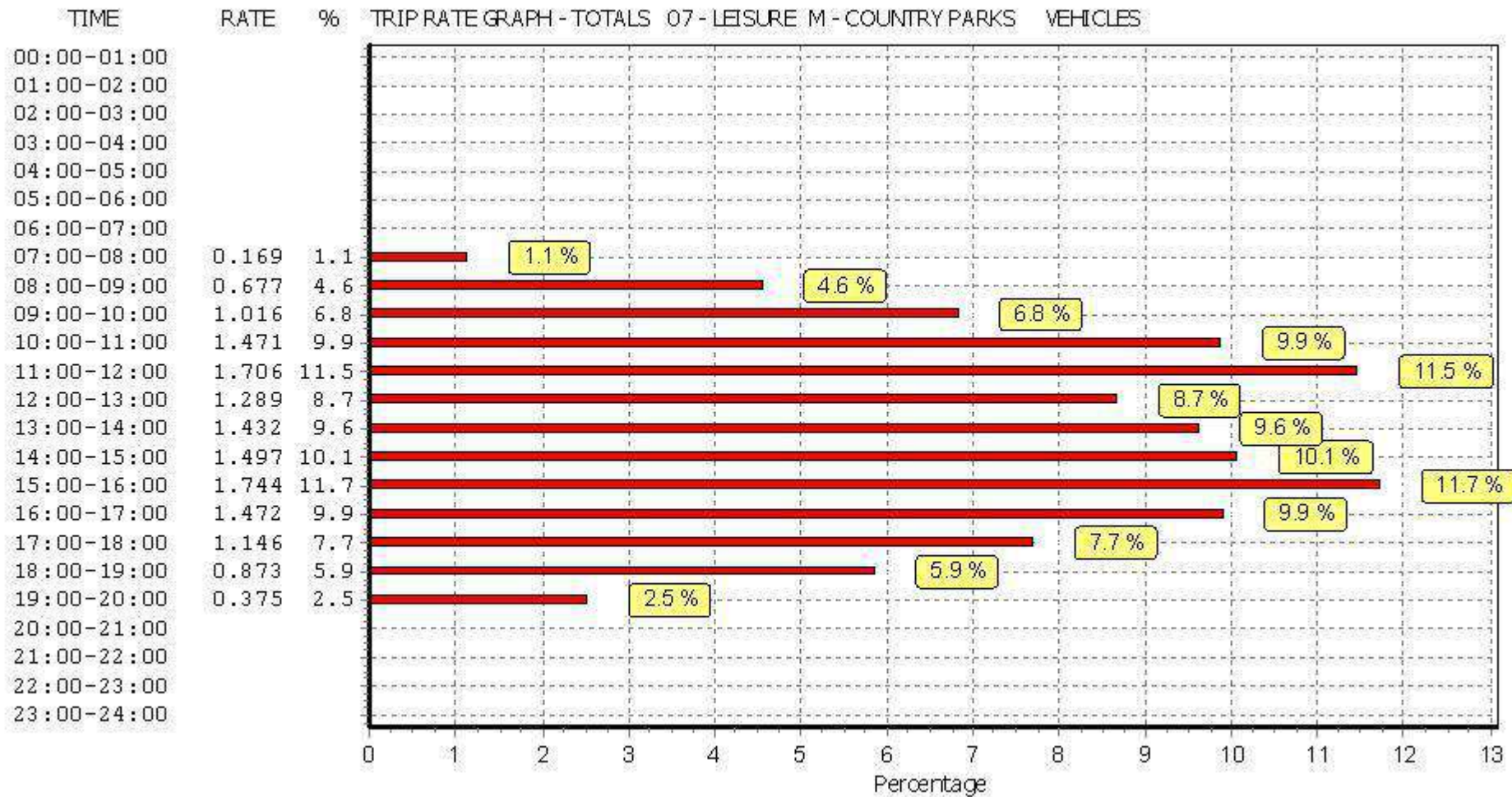
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

SITE DETAILS FOR WM-10-A-01

mode transport limited Lombard House, 145 Great Charles Street Birmingham, B3 3LP

Licence No: 754101

Site Reference: WM-10-A-01
 Latitude/Longitude: 52.18886, -1.48111
 Land Use Type: 10 - TOURIST ATTRACTIONS/A - TOURIST ATTRACTIONS
 Region/Area: WEST MIDLANDSWEST MIDLANDS

Description: MOTOR CENTRE
 Street: OFF THE B4100
 District: GAYDON
 Town: NEAR WARWICK
 Post Code: CV35 0BJ
 Planning Authority:

Location: Free Standing (PPS6 Out of Town)
 Location Sub Category: Out of Town
 Use Class: D2

Population within 500m: 0
 Population within 1 Mile: 1,001 to 5,000
 Population within 5 Miles: 5,001 to 25,000
 Car ownership within 5 Miles: 0.6 to 1.0
 Reason for blank public transport table: No local PT

Is site associated with a travel plan: No
 If not, are there any plans to implement a Travel Plan in the future?
 Is survey data available before the implementation of the Travel Plan?
 Is the location of the site hilly or flat: Flat
 Urban Regeneration:

No. of developments for this Site: 1
 No. of survey Days for this Site: 1

Comments

The site is located south of Coventry, and to the east of Stratford Upon Avon. It is west of Junction 12 of the M40 and is surrounded by open land.

Bus (or tram) site accessibility

1. Is there a site specific company bus service associated with the development?: Yes
2. If Yes to question 1, for how many years: 0

11. Please enter general comments/views about the relevance, quality and importance of public transport services relating to this development.

There is no local public transport available.

Design features encouraging non-car modes

12. Pedestrians
None

13. Pedal cycles
None

14. Public transport
None

SITE PHOTO



mode transport limited Lombard House, 145 Great Charles Street Birmingham, B3 3LP

Licence No: 754101

Site reference:	WM-10-A-01
Trade name:	HERITAGE MOTOR CENTRE
Site area (h/a):	25.50
Open since	1993
Total Employees	150
Full Time Employees	90 60%
Part Time Employees	60 40%
Approximate % of total employees working standard 9-5 hours or similar	100%
Percentage Split of Employee Gender	
Male	50%
Female	50%
Name of nearest site	COVENTRY TRANSPORT M.
Distance to nearest similar site	25.0 Km

OPENING TIMES (24 Hour format)

Mon to Thurs	10:00	to	17:00
Friday	10:00	to	17:00
Saturday	10:00	to	17:00
Sunday	10:00	to	17:00

Comments

The site contains a gift shop, licenced cafe, land rover 4 x 4 experience, go kart track and kids mini railway.

On-Site parking

Total no. of parking spaces 422

Number of spaces

Employee 0
Disabled 10
Visitor/Customer 407
OGV parking bays 0
Cycle racks 0
OGV loading bays 0
Mother & Toddler 0
Motorcycle spaces 4

Parking charges No

Comments about the management of the site car park, along with enforcement measures

There is also one space for the site's shuttle bus, included in the total spaces shown.

Site parking surface or non-surface (multi-storey/underground)

Surface

Off-Site parking details

Is there off-site parking available

No

Off-Site parking included in the counts

No

Free On-Street parking available nearby

No

If yes, considered easy to find a space

No

If prepared to pay, easy to find somewhere to park off-site all day

No

Parking restrictions

Area subject to parking restrictions (controlled parking zone - CPZ)

No

Off-Street parking

Off-Street parking available

NO

Park & Ride

Park & Ride Type Facility providing relevant means of accessing the site

No

SURVEY DAY DETAILS FOR WM-10-A-01 / 01

mode transport limited Lombard House, 145 Great Charles Street Birmingham, B3 3LP

Licence No: 754101

Site reference: WM-10-A-01 Survey date: 15/02/06 Day of week: Wednesday

Survey type: Manual Count
 AM weather: Mild and Cloudy
 PM weather: Mild and Clear

Initial car park occupancy: 15 Final car park occupancy: 0

BRACKETED ACCUMULATION FIGURES ARE NOT ABSOLUTE

Parking Capacity 24% (422 On-Site Spaces)

Data proportions in %

Motor cars	98	Motor cycles	0	Public service	0
Light goods	2	OGV (1)	0	OGV (2)	0
				Taxis	0

Taxis are included as cars in this survey

Time	Arr 313	Dep 328	Totals 641	Parking Accum
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00	33	6	39	42
09:00-10:00	47	10	57	79
10:00-11:00	41	23	64	97
11:00-12:00	34	28	62	103
12:00-13:00	34	52	86	85
13:00-14:00	54	39	93	100
14:00-15:00	37	46	83	91
15:00-16:00	19	46	65	64
16:00-17:00	13	42	55	35
17:00-18:00	1	36	37	0
18:00-19:00	0	0	0	0
19:00-20:00	0	0	0	0
20:00-21:00	0	0	0	0
21:00-22:00				
22:00-23:00				
23:00-24:00				

Comments

No PSVs, pedal cycles or taxis entered or exited the site during this survey.

SURVEY DAY DETAILS FOR WM-10-A-01 / 02

mode transport limited Lombard House, 145 Great Charles Street Birmingham, B3 3LP

Licence No: 754101

Site reference: WM-10-A-01 Survey date: 15/02/06 Day of week: Wednesday

Vehicles surveyed: OGV

Data proportions in % OGV (1) 100 OGV (2) 0

1 occupant per OGV is assumed, and included in the vehicle occupants count

Time	Arr 1	Dep 1	Totals 2	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00	0	0	0	(0)
09:00-10:00	1	1	2	(0)
10:00-11:00	0	0	0	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	0	0	0	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00				
22:00-23:00				
23:00-24:00				

APPENDIX B – Traffic Survey Data

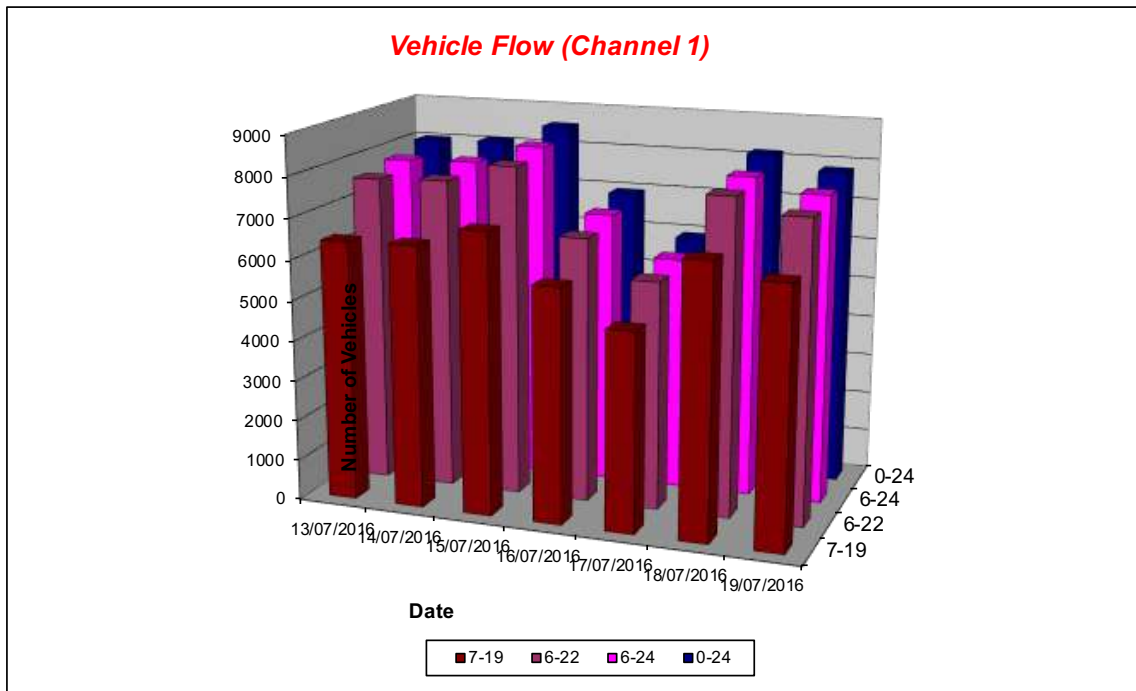
Bicester ATC 1, A4421 (Week 1)

Channel 1 - Southbound

Vehicle Flow

Week 1

Hr Ending	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday	5 Day Ave	7 Day Ave
1	28	26	26	42	51	19	19	24	30
2	12	15	10	25	31	11	9	11	16
3	12	12	13	22	8	11	11	12	13
4	17	19	21	15	15	13	20	18	17
5	30	30	30	26	10	30	27	29	26
6	130	131	127	60	27	158	140	137	110
7	527	503	422	138	78	542	508	500	388
8	897	906	782	252	125	930	905	884	685
9	753	786	730	405	201	940	914	825	676
10	568	545	629	562	350	594	510	569	537
11	423	447	534	621	453	545	429	476	493
12	402	442	500	623	547	466	411	444	484
13	410	467	459	581	481	457	394	437	464
14	423	410	475	503	471	391	367	413	434
15	427	454	504	470	495	427	384	439	452
16	466	436	559	467	480	413	416	458	462
17	529	505	618	468	423	455	519	525	502
18	604	553	583	419	496	582	596	584	548
19	517	511	559	394	365	473	462	504	469
20	291	335	391	267	279	274	264	311	300
21	224	208	229	207	225	161	190	202	206
22	150	173	164	156	160	132	152	154	155
23	113	112	118	132	101	78	105	105	108
24	65	48	71	86	45	53	73	62	63
7-19	6419	6462	6932	5765	4887	6673	6307	6559	6206
6-22	7611	7681	8138	6533	5629	7782	7421	7727	7256
6-24	7789	7841	8327	6751	5775	7913	7599	7894	7428
0-24	8018	8074	8554	6941	5917	8155	7825	8125	7641



Bicester ATC 1, A4421 (Week 1)

Channel 1 - Southbound

Average Speed

Week 1

Hr Ending	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday
1	46.1	50.1	44.9	49.0	47.1	50.6	49.1
2	52.2	49.7	49.2	49.2	47.3	42.1	48.6
3	49.7	45.5	55.3	49.2	48.6	52.3	49.8
4	55.9	50.4	49.7	54.0	51.8	52.2	55.1
5	54.1	54.2	49.6	53.2	52.8	50.5	48.1
6	49.7	50.6	50.5	49.5	51.5	50.0	51.9
7	46.3	46.0	46.9	51.5	52.1	46.3	46.4
8	44.3	42.6	44.7	48.3	50.3	43.9	42.7
9	43.3	42.9	43.5	45.2	47.8	42.7	41.4
10	44.0	44.6	43.1	44.7	46.3	44.6	45.5
11	44.9	44.1	44.4	44.1	45.9	44.5	45.3
12	44.8	46.4	44.7	44.0	45.0	40.5	46.4
13	45.8	45.9	44.2	45.5	45.8	45.6	43.5
14	41.7	45.8	44.8	45.6	46.2	44.7	46.9
15	44.1	46.0	43.4	44.7	46.7	44.5	46.9
16	45.4	47.1	44.2	45.2	45.5	45.8	46.3
17	45.3	45.6	44.8	45.7	46.8	43.9	45.5
18	46.3	46.8	46.0	47.1	47.2	47.6	48.0
19	46.3	47.0	46.9	48.4	46.8	45.9	46.2
20	47.4	47.5	47.6	48.0	47.4	48.9	47.6
21	48.6	49.0	47.4	47.8	46.9	46.4	49.1
22	47.6	49.2	47.5	46.9	47.2	50.0	47.4
23	48.4	47.0	47.0	46.0	47.9	47.6	46.9
24	46.1	47.9	47.5	47.0	46.4	49.5	47.0
10-12	44.8	45.3	44.5	44.1	45.4	42.7	45.8
14-16	44.8	46.5	43.8	45.0	46.1	45.1	46.6
0-24	45.3	45.7	45.1	45.9	46.6	45.0	45.5

7 Day Ave 45.6

Channel 1 - Southbound

85th Percentile

Hr Ending	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday
1	58.7	58.6	54.0	58.7	53.9	58.7	58.2
2	66.0	53.3	58.4	58.9	53.7	58.9	66.0
3	58.6	53.3	65.8	58.8	53.5	58.5	58.3
4	65.8	58.8	58.2	65.5	65.9	65.6	58.3
5	65.8	66.3	53.2	58.5	58.1	58.8	53.0
6	58.8	66.1	58.6	58.9	66.3	58.4	58.5
7	53.0	49.0	53.4	58.4	58.5	53.5	53.2
8	48.8	48.9	48.4	53.7	58.8	48.5	48.9
9	48.8	48.2	48.7	53.5	58.6	48.2	48.6
10	48.7	48.7	48.3	48.5	53.8	48.3	48.8
11	48.0	49.0	48.6	48.5	53.0	48.1	53.9
12	48.4	53.2	48.2	48.4	48.2	48.6	53.3
13	48.9	48.5	48.2	48.4	48.1	53.2	53.5
14	53.8	53.1	48.6	48.3	48.1	48.9	53.1
15	48.4	49.0	48.1	48.1	53.3	48.1	53.6
16	49.0	53.7	48.5	53.2	53.1	48.4	53.4
17	48.9	48.0	48.9	54.0	53.0	53.3	54.0
18	53.1	53.6	48.3	53.1	53.5	53.9	53.1
19	53.9	53.1	53.8	53.4	53.7	53.8	53.9
20	53.4	53.1	53.4	53.4	53.5	53.3	53.6
21	53.5	53.8	53.3	53.5	53.8	53.7	53.3
22	53.8	53.3	53.9	53.2	53.1	58.3	53.1
23	58.1	53.0	53.6	53.5	53.2	53.1	53.5
24	53.6	53.3	53.6	53.3	53.7	58.0	53.2
10-12	48.5	48.4	48.4	48.6	48.5	48.3	54.0
14-16	48.3	53.3	48.1	53.5	53.4	48.8	53.1
0-24	48.6	48.9	48.6	53.2	53.1	53.3	53.0

Bicester ATC 1, A4421 (Week 1)

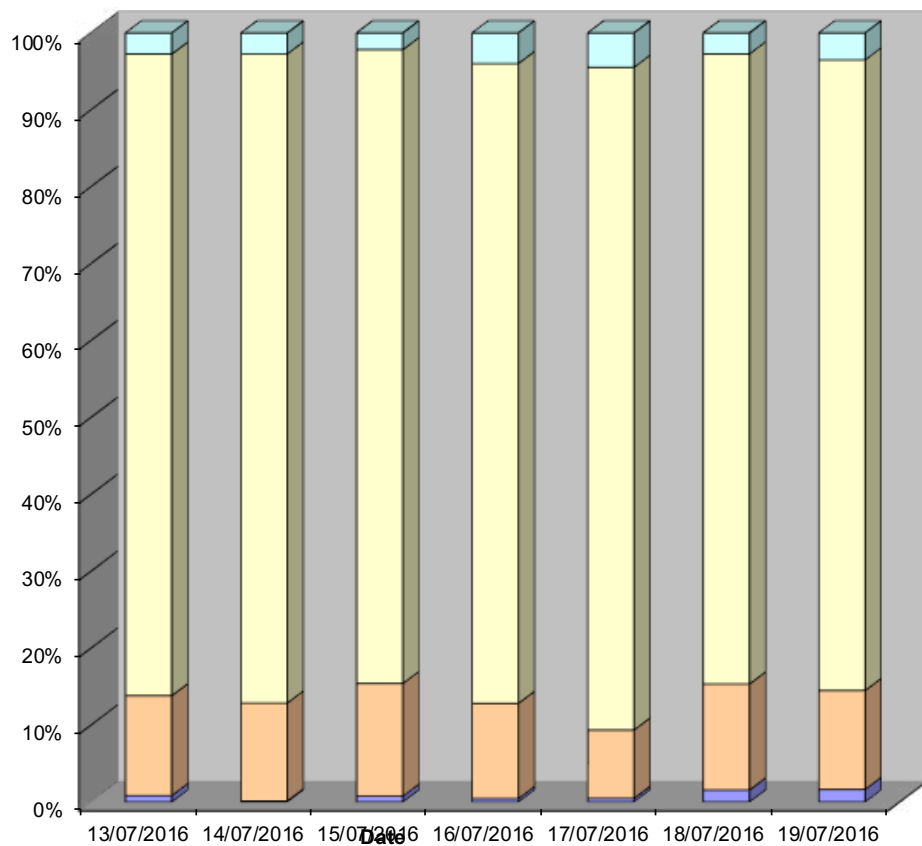
Channel 1 - Southbound

Speed Summary

Week 1

Speed (MPH)	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday
0-25	67	10	64	31	28	127	127
26-40	1041	1029	1254	859	525	1124	1007
41-55	6689	6814	7050	5774	5099	6682	6416
56-	221	221	186	277	265	222	275
TOTAL	8018	8074	8554	6941	5917	8155	7825

Speed Summary (MPH)



■ 0-25
 ■ 26-40
 ■ 41-55
 ■ 56-

Bicester ATC 1, A4421 (Week 1)

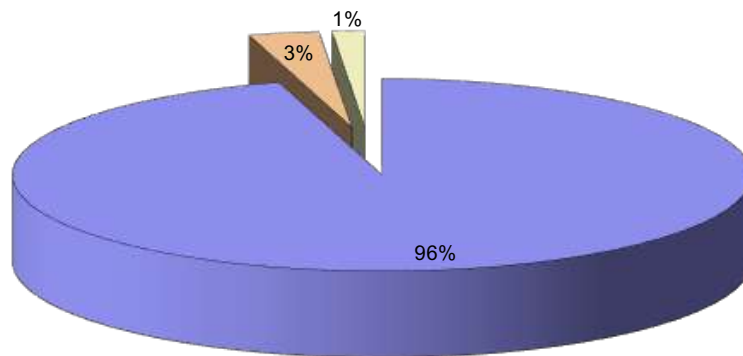
Channel 1 - Southbound

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
13/07/2016				
7-19	6108	222	89	6419
6-22	7246	261	104	7611
6-24	7412	267	110	7789
0-24	7598	291	129	8018
14/07/2016				
7-19	6142	221	99	6462
6-22	7303	265	113	7681
6-24	7449	270	122	7841
0-24	7644	285	145	8074
15/07/2016				
7-19	6621	229	82	6932
6-22	7766	267	105	8138
6-24	7948	269	110	8327
0-24	8128	288	138	8554
16/07/2016				
7-19	5629	114	22	5765
6-22	6376	131	26	6533
6-24	6586	136	29	6751
0-24	6751	151	39	6941
17/07/2016				
7-19	4777	89	21	4887
6-22	5496	106	27	5629
6-24	5638	108	29	5775
0-24	5772	109	36	5917
18/07/2016				
7-19	6345	214	114	6673
6-22	7403	252	127	7782
6-24	7525	254	134	7913
0-24	7737	269	149	8155
19/07/2016				
7-19	6032	197	78	6307
6-22	7091	230	100	7421
6-24	7256	237	106	7599
0-24	7448	250	127	7825
Average				
7-19	5951	184	72	6206
6-22	6954	216	86	7256
6-24	7116	220	91	7428
0-24	7297	235	109	7641

Total Vehicle Class Distribution



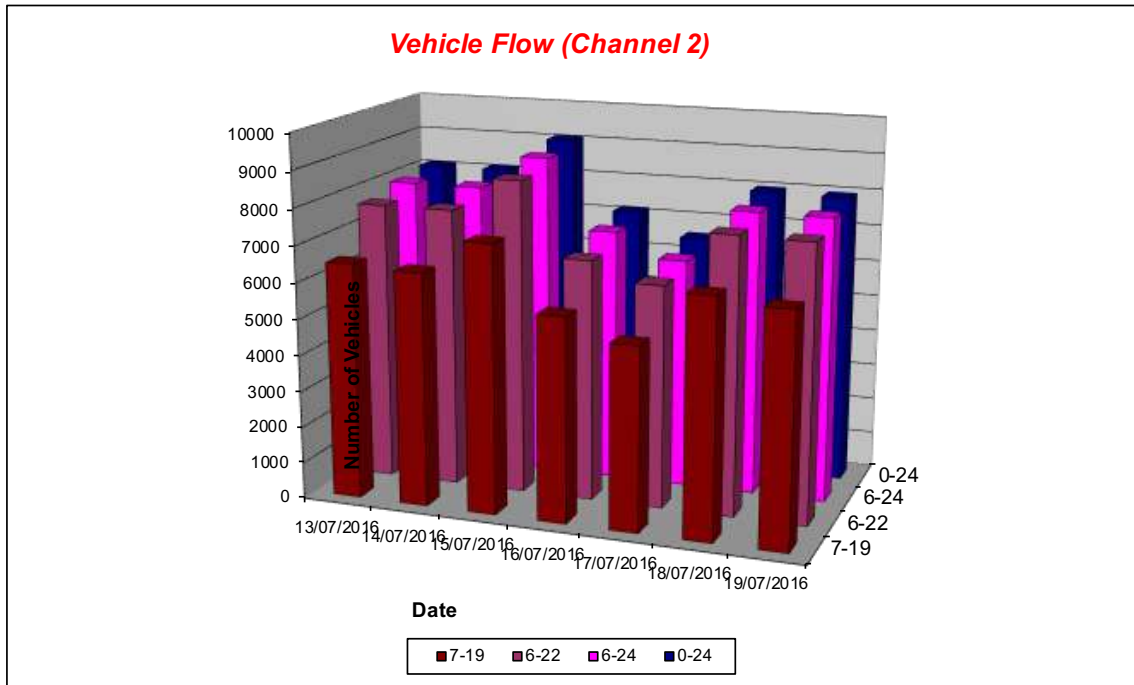
Bicester ATC 1, A4421 (Week 1)

Channel 2 - Northbound

Vehicle Flow

Week 1

Hr Ending	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday	5 Day Ave	7 Day Ave
1	33	33	37	54	87	21	30	31	42
2	11	19	19	29	42	18	10	15	21
3	11	9	18	20	14	18	8	13	14
4	8	8	12	14	13	16	13	11	12
5	21	15	19	14	13	22	19	19	18
6	65	67	71	38	21	72	71	69	58
7	234	233	228	180	62	245	246	237	204
8	510	517	479	232	122	579	536	524	425
9	476	508	439	312	255	480	474	475	421
10	378	322	407	405	263	435	327	374	362
11	389	353	338	495	457	380	357	363	396
12	391	383	450	615	426	387	375	397	432
13	405	418	522	555	555	439	392	435	469
14	397	455	573	539	470	413	408	449	465
15	492	497	645	535	468	476	507	523	517
16	589	605	841	491	509	571	616	644	603
17	808	747	904	519	555	746	802	801	726
18	911	900	969	493	498	913	892	917	797
19	739	708	781	403	446	667	630	705	625
20	448	489	506	320	470	433	441	463	444
21	278	338	315	287	366	240	311	296	305
22	244	219	227	242	194	198	257	229	226
23	173	172	175	203	134	133	157	162	164
24	91	93	99	153	85	78	71	86	96
7-19	6485	6413	7348	5594	5024	6486	6316	6610	6238
6-22	7689	7692	8624	6623	6116	7602	7571	7836	7417
6-24	7953	7957	8898	6979	6335	7613	7799	8084	7676
0-24	8102	8108	9074	7148	6525	7980	7950	8243	7841



Bicester ATC 1, A4421 (Week 1)

7 Day Ave 51.2

Channel 2 - Northbound

Average Speed

Week 1

Hr Ending	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday
1	46.8	49.9	49.4	46.1	47.7	47.3	46.4
2	46.6	48.7	48.8	48.4	49.1	47.3	44.0
3	46.6	44.1	50.5	48.0	49.4	51.3	52.4
4	48.6	47.4	48.6	50.0	47.0	53.3	50.7
5	47.2	47.0	47.1	49.2	49.2	49.9	48.8
6	49.3	45.9	48.8	50.3	50.6	49.2	48.6
7	49.1	48.8	49.8	48.8	49.4	48.3	48.4
8	45.7	45.7	44.9	48.3	47.8	44.9	44.4
9	45.6	44.8	44.7	46.4	47.1	43.8	44.8
10	45.3	45.0	44.6	46.3	47.2	45.9	44.8
11	44.2	44.6	44.3	46.0	45.4	45.0	45.4
12	44.4	45.1	44.2	44.8	46.4	44.5	45.1
13	45.2	44.9	44.8	45.8	45.5	44.9	46.4
14	44.2	45.0	44.5	44.9	45.9	45.2	46.2
15	43.7	44.4	43.6	44.8	46.9	44.6	44.6
16	43.7	44.5	42.5	45.5	44.6	45.1	44.5
17	44.3	45.0	43.6	45.9	46.5	44.3	43.6
18	43.8	44.6	42.9	45.8	45.6	43.1	43.6
19	45.1	44.9	44.3	46.9	45.2	44.8	45.3
20	46.4	46.0	46.4	46.5	45.8	46.2	46.0
21	46.5	46.7	46.6	46.4	46.1	47.8	46.8
22	46.6	46.3	46.7	45.9	47.1	47.3	45.6
23	46.7	46.4	45.3	45.2	46.5	46.4	46.8
24	49.6	48.1	46.9	45.8	48.3	49.4	47.3
10-12	44.3	44.9	44.3	45.4	45.9	44.7	45.3
14-16	43.7	44.4	43.0	45.2	45.7	44.9	44.6
0-24	45.1	45.3	44.5	46.0	46.1	45.1	45.1

7 Day Ave 45.3

Channel 2 - Northbound

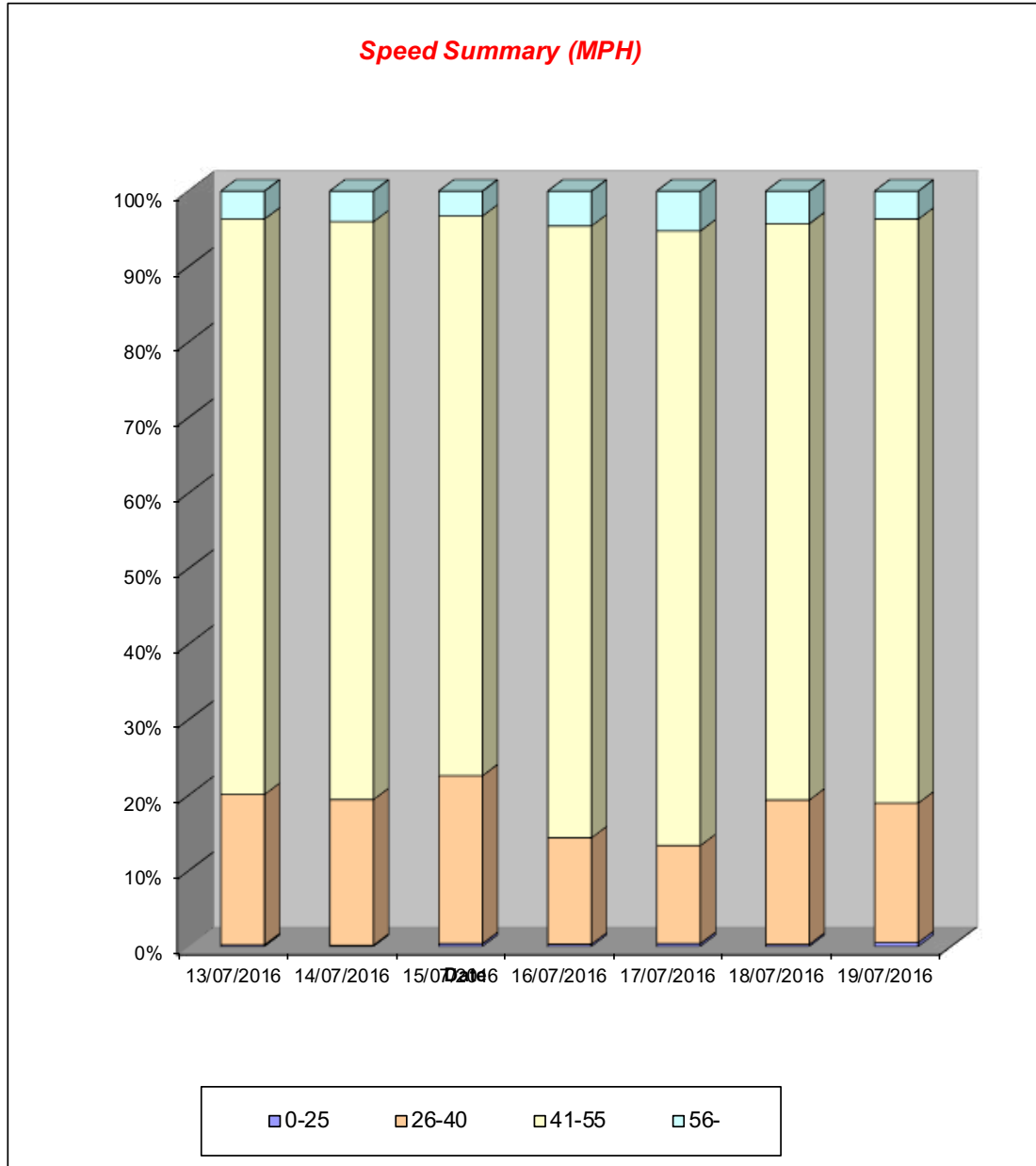
85th Percentile

Hr Ending	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday
1	53.3	65.8	58.7	53.6	53.2	58.6	53.8
2	53.5	53.3	58.5	53.3	58.2	53.8	48.3
3	53.9	48.2	66.1	53.1	65.8	58.5	58.7
4	53.5	48.5	58.2	58.2	58.8	58.2	65.9
5	58.4	53.2	58.5	53.1	53.1	53.9	53.8
6	58.8	53.6	58.7	58.4	58.5	58.4	53.7
7	53.8	53.4	58.8	59.0	58.8	53.3	53.4
8	53.7	53.9	53.4	53.5	58.8	53.8	53.1
9	53.7	48.5	53.9	53.5	53.3	48.2	48.4
10	54.0	53.2	53.7	54.0	53.0	53.4	48.3
11	48.3	48.7	48.1	53.2	48.8	48.2	53.7
12	48.5	48.7	48.6	48.4	53.7	48.9	53.3
13	53.4	48.6	48.7	53.4	53.9	48.6	53.8
14	48.7	53.8	48.0	53.3	53.9	53.4	53.2
15	48.2	48.2	48.4	53.5	53.4	53.4	48.6
16	48.4	53.8	48.4	53.1	53.1	48.9	49.0
17	48.5	53.2	48.3	53.5	54.0	48.6	48.2
18	48.8	49.0	49.0	54.0	48.8	48.9	48.9
19	53.5	53.1	48.8	53.6	53.7	53.5	53.1
20	53.4	53.1	53.7	53.9	53.4	53.3	54.0
21	53.5	53.8	53.4	53.7	53.0	53.9	53.6
22	53.2	53.4	53.7	53.4	53.2	53.3	53.6
23	53.6	53.5	53.3	53.7	53.2	53.3	53.9
24	58.5	58.1	53.4	53.1	58.5	58.2	53.6
10-12	48.7	48.1	48.4	48.8	53.4	48.3	53.2
14-16	48.9	48.2	48.9	53.7	53.1	53.0	48.9
0-24	53.4	53.0	53.1	53.5	53.3	53.7	53.1

7 Day Ave 53.3

Bicester ATC 1, A4421 (Week 1)

Channel 2 - Northbound		Speed Summary						Week 1
Speed (MPH)	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday	
0-25	17	13	35	22	25	22	42	
26-40	1614	1564	2016	1006	847	1526	1467	
41-55	6171	6203	6724	5790	5309	6088	6146	
56-	300	328	299	330	344	344	295	
TOTAL	8102	8108	9074	7148	6525	7980	7950	



Bicester ATC 1, A4421 (Week 1)

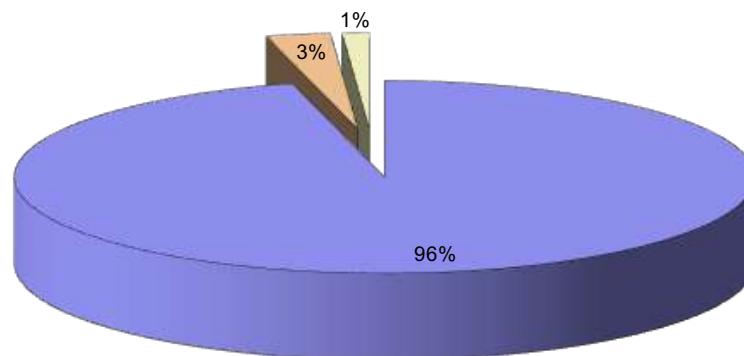
Channel 2 - Northbound

Vehicle Class

Week 1

Day / Time	Classes	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
13/07/2016					
7-19		6186	210	89	6485
6-22		7353	236	100	7689
6-24		7605	241	107	7953
0-24		7717	261	124	8102
14/07/2016					
7-19		6088	227	98	6413
6-22		7318	255	119	7692
6-24		7575	260	122	7957
0-24		7697	278	133	8108
15/07/2016					
7-19		7055	226	67	7348
6-22		8280	259	85	8624
6-24		8544	268	86	8898
0-24		8696	284	94	9074
16/07/2016					
7-19		5458	111	25	5594
6-22		6467	127	29	6623
6-24		6817	132	30	6979
0-24		6970	142	36	7148
17/07/2016					
7-19		4918	78	28	5024
6-22		5987	94	35	6116
6-24		6198	99	38	6335
0-24		6381	104	40	6525
18/07/2016					
7-19		6196	198	92	6486
6-22		7275	223	104	7602
6-24		7479	227	107	7813
0-24		7617	247	116	7980
19/07/2016					
7-19		6037	195	84	6316
6-22		7258	215	98	7571
6-24		7476	221	102	7799
0-24		7611	229	110	7950
Average					
7-19		5991	178	69	6238
6-22		7134	201	81	7417
6-24		7385	207	85	7676
0-24		7527	221	93	7841

Total Vehicle Class Distribution



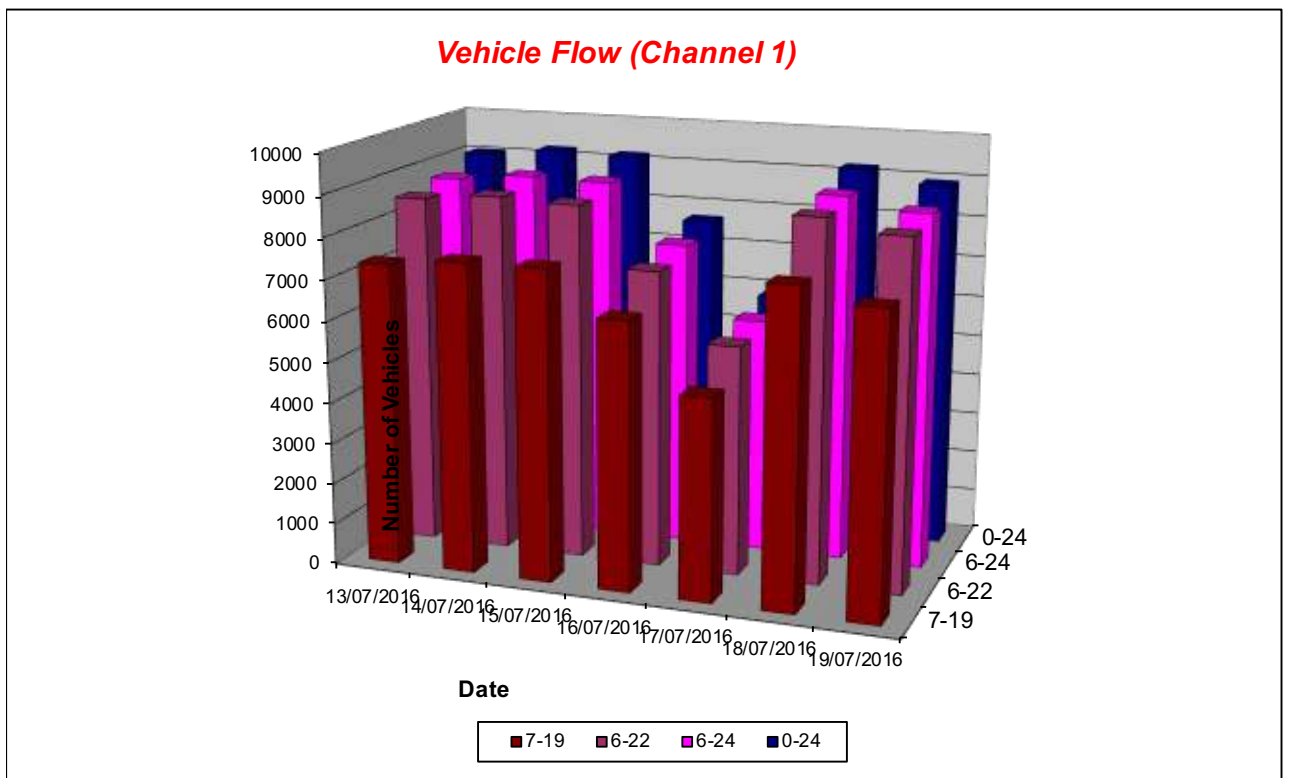
Bicester ATC 2, A4421 (Week 1)

Channel 1 - Eastbound

Vehicle Flow

Week 1

Hr Ending	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday	5 Day Ave	7 Day Ave
1	33	29	27	57	45	18	37	29	35
2	17	24	17	18	34	16	11	17	20
3	23	23	18	20	13	19	19	20	19
4	42	43	46	27	18	30	46	41	36
5	48	48	46	28	9	49	40	46	38
6	161	156	163	65	33	162	155	159	128
7	403	386	359	105	63	366	393	381	296
8	898	930	855	255	106	946	904	907	699
9	1075	1141	992	361	120	1204	1027	1088	846
10	654	618	598	548	276	680	641	638	574
11	441	464	486	750	509	448	465	461	509
12	419	498	471	712	577	435	409	446	503
13	461	465	507	662	603	495	450	476	520
14	494	476	547	600	549	469	468	491	515
15	531	518	572	602	492	547	503	534	538
16	486	524	598	554	495	496	500	521	522
17	611	608	681	520	400	607	584	618	573
18	706	722	671	498	415	733	738	714	640
19	568	567	563	436	345	557	580	567	517
20	391	387	394	289	294	368	389	386	359
21	244	243	212	184	189	213	227	228	216
22	173	172	144	139	151	188	174	170	163
23	114	139	120	139	99	103	110	117	118
24	46	33	89	94	44	45	53	53	58
7-19	7344	7531	7541	6498	4887	7617	7269	7460	6955
6-22	8555	8719	8650	7215	5584	8752	8452	8626	7990
6-24	8715	8891	8859	7448	5727	8900	8615	8796	8165
0-24	9039	9214	9176	7663	5879	9194	8923	9109	8441



Bicester ATC 2, A4421 (Week 1)

Channel 1 - Eastbound

Average Speed

Week 1

Hr Ending	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday
1	43.9	43.3	46.2	48.9	47.9	42.3	44.2
2	49.5	46.8	44.2	48.6	48.6	47.7	47.3
3	47.6	44.3	48.1	48.4	48.4	46.7	45.6
4	48.4	47.1	49.2	48.6	46.9	46.5	47.1
5	47.6	47.1	48.8	48.5	49.9	47.9	47.6
6	47.7	47.3	46.0	46.8	47.1	48.5	47.6
7	45.4	46.2	46.2	49.2	47.1	47.5	45.9
8	43.2	43.3	42.7	46.5	46.8	43.7	42.9
9	42.0	40.3	41.8	45.4	44.9	39.3	42.0
10	43.8	43.3	43.4	44.7	45.0	43.8	44.0
11	43.1	42.9	42.7	44.1	44.5	43.4	43.3
12	42.9	43.2	44.6	42.7	44.6	43.0	43.0
13	43.3	44.2	43.7	44.8	44.1	43.2	43.1
14	44.3	44.6	43.3	45.7	44.6	44.3	44.0
15	43.2	43.8	43.3	46.3	45.5	43.0	43.1
16	43.0	43.9	43.5	45.5	46.4	43.3	42.9
17	43.5	43.9	43.5	45.4	46.7	43.4	43.1
18	44.4	43.5	44.0	45.7	47.4	44.4	44.5
19	45.0	44.7	45.9	46.7	47.1	45.2	44.8
20	45.9	45.2	46.9	47.8	47.5	45.7	46.0
21	44.9	45.5	47.7	47.1	48.1	48.2	44.6
22	46.1	46.5	45.5	46.4	47.6	46.2	45.2
23	46.6	46.3	48.3	46.9	47.9	47.0	46.6
24	47.5	43.8	46.9	47.8	47.8	45.4	48.0

10-12	43.0	43.0	43.7	43.4	44.5	43.2	43.1
14-16	43.1	43.9	43.4	45.9	45.9	43.1	43.0
0-24	43.9	43.7	44.0	45.5	45.8	43.7	43.8

7 Day Ave 44.3

Channel 1 - Eastbound

85th Percentile

Hr Ending	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday
1	48.7	53.6	54.0	58.7	58.9	53.7	48.2
2	53.5	53.3	53.4	58.9	53.7	53.9	53.5
3	58.6	48.3	58.3	53.8	53.5	53.5	53.3
4	58.3	53.8	58.2	58.0	53.4	53.1	53.3
5	58.3	58.8	53.2	53.5	53.1	53.8	58.0
6	58.8	53.6	53.6	53.9	53.8	53.4	53.5
7	53.0	54.0	53.4	58.4	58.5	53.5	53.2
8	48.8	48.9	48.4	53.7	58.8	48.5	48.9
9	48.8	48.2	48.7	53.5	53.6	48.2	48.6
10	48.7	48.7	48.3	53.5	53.8	48.3	48.8
11	48.0	49.0	48.6	48.5	53.0	53.1	53.9
12	48.4	48.2	48.2	48.4	53.2	48.6	48.3
13	48.9	48.5	48.2	53.4	48.1	48.2	48.5
14	48.8	53.1	48.6	53.3	53.1	48.9	48.1
15	48.4	49.0	48.1	53.1	53.3	48.1	48.6
16	49.0	48.7	48.5	53.2	53.1	48.4	48.4
17	48.9	48.0	48.9	54.0	53.0	48.3	49.0
18	48.1	48.6	53.3	53.1	53.5	48.9	48.1
19	53.9	53.1	53.8	53.4	53.7	53.8	53.9
20	53.4	53.1	53.4	53.4	53.5	53.3	53.6
21	53.5	53.8	53.3	53.5	53.8	53.7	53.3
22	53.8	53.3	53.9	53.2	58.1	58.3	53.1
23	58.1	53.0	58.6	53.5	53.2	53.1	53.5
24	58.6	53.3	53.6	53.3	53.7	48.0	58.2

10-12	48.5	48.4	48.4	48.6	53.5	48.3	49.0
14-16	48.3	48.3	48.1	53.5	53.4	48.8	48.1
0-24	48.6	48.9	48.6	53.2	53.1	48.3	48.0

7 Day Ave 49.8

Bicester ATC 2, A4421 (Week 1)

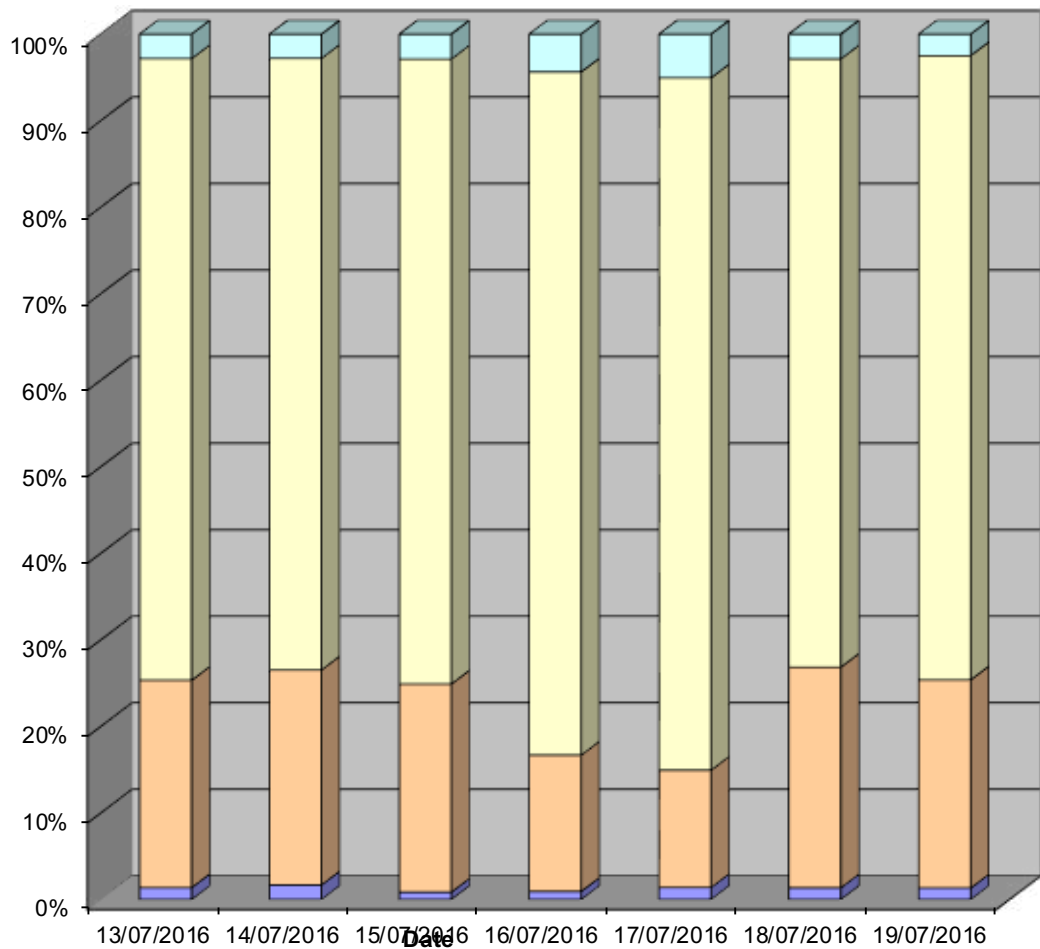
Channel 1 - Eastbound

Speed Summary

Week 1

Speed (MPH)	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday
0-25	123	154	77	71	81	124	118
26-40	2167	2289	2207	1207	797	2344	2146
41-55	6493	6513	6628	6050	4704	6462	6437
56-	256	258	264	335	297	264	222
TOTAL	9039	9214	9176	7663	5879	9194	8923

Speed Summary (MPH)



■ 0-25
 ■ 26-40
 ■ 41-55
 ■ 56-

Bicester ATC 2, A4421 (Week 1)

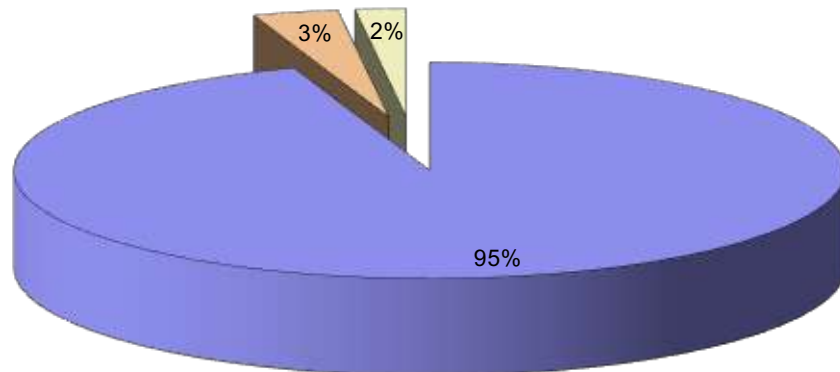
Channel 1 - Eastbound

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
13/07/2016				
7-19	6905	298	141	7344
6-22	8055	332	168	8555
6-24	8207	334	174	8715
0-24	8480	355	204	9039
14/07/2016				
7-19	7109	274	148	7531
6-22	8232	311	176	8719
6-24	8390	315	186	8891
0-24	8664	334	216	9214
15/07/2016				
7-19	7121	292	128	7541
6-22	8177	318	155	8650
6-24	8375	324	160	8859
0-24	8641	338	197	9176
16/07/2016				
7-19	6341	116	41	6498
6-22	7036	131	48	7215
6-24	7259	136	53	7448
0-24	7450	145	68	7663
17/07/2016				
7-19	4769	77	41	4887
6-22	5447	91	46	5584
6-24	5585	92	50	5727
0-24	5725	95	59	5879
18/07/2016				
7-19	7143	314	160	7617
6-22	8227	345	180	8752
6-24	8358	350	192	8900
0-24	8617	365	212	9194
19/07/2016				
7-19	6843	282	144	7269
6-22	7973	310	169	8452
6-24	8128	312	175	8615
0-24	8389	329	205	8923
Average				
7-19	6604	236	115	6955
6-22	7592	263	135	7990
6-24	7757	266	141	8165
0-24	7995	280	166	8441

Total Vehicle Class Distribution



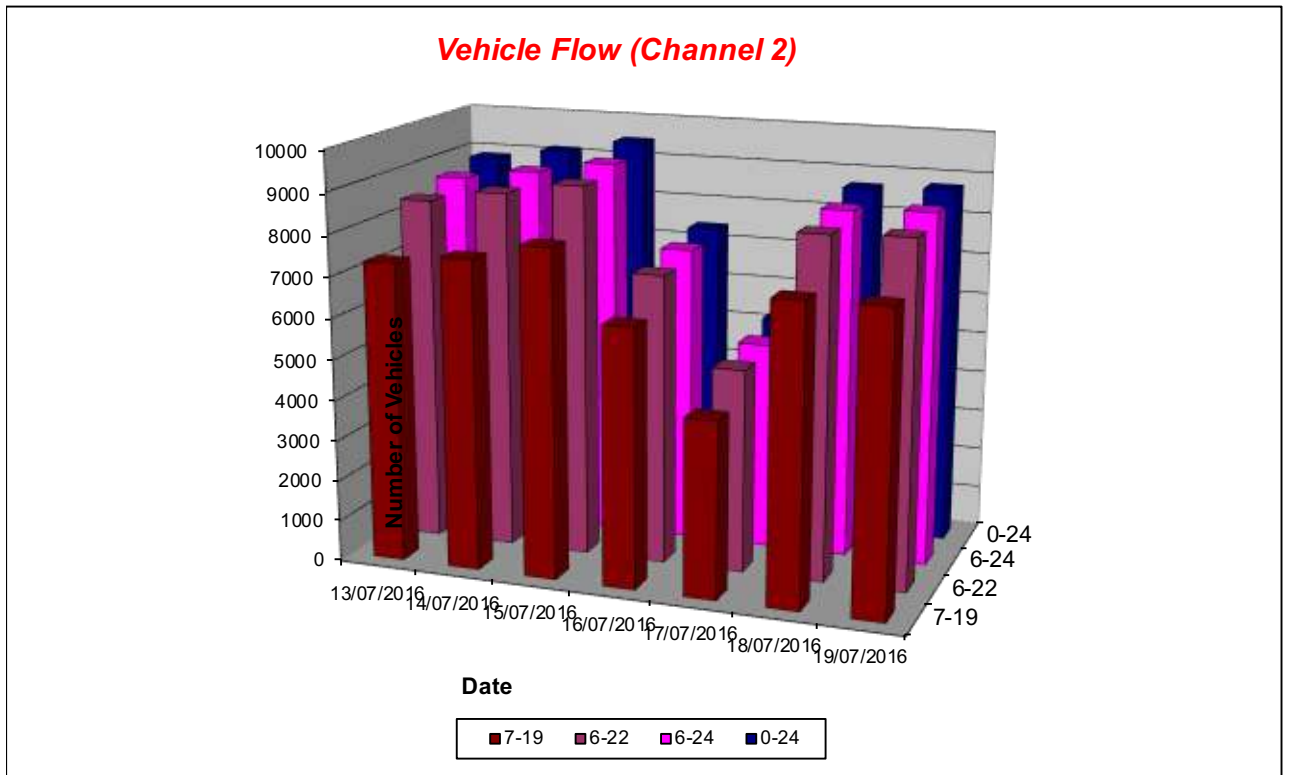
Bicester ATC 2, A4421 (Week 1)

Channel 2 - Westbound

Vehicle Flow

Week 1

Hr Ending	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday	5 Day Ave	7 Day Ave
1	25	35	37	44	57	22	22	28	35
2	18	23	13	19	37	15	18	17	20
3	17	15	18	18	14	14	16	16	16
4	16	14	19	12	12	15	16	16	15
5	46	46	44	16	13	35	39	42	34
6	75	74	98	32	16	72	73	78	63
7	248	252	231	94	71	218	246	239	194
8	575	572	571	210	86	547	556	564	445
9	542	561	510	351	131	508	512	527	445
10	429	440	467	523	189	445	430	442	418
11	352	401	440	605	420	352	343	378	416
12	432	437	487	678	454	417	444	443	478
13	463	525	573	674	563	476	473	502	535
14	522	496	625	596	482	523	538	541	540
15	525	593	697	592	465	501	493	562	552
16	680	663	843	574	425	658	676	704	646
17	917	980	979	553	429	916	888	936	809
18	1118	1109	1060	487	332	1150	1162	1120	917
19	742	763	710	429	309	715	722	730	627
20	442	476	435	310	285	450	431	447	404
21	282	268	226	211	172	240	282	260	240
22	161	197	179	161	136	175	159	174	167
23	158	141	123	121	79	125	150	139	128
24	72	51	80	88	48	67	61	66	67
7-19	7297	7540	7962	6272	4285	7208	7237	7449	6829
6-22	8430	8733	9033	7048	4949	8291	8355	8568	7834
6-24	8660	8925	9236	7257	5076	8483	8566	8774	8029
0-24	8857	9132	9465	7398	5225	8656	8750	8972	8212



Bicester ATC 2, A4421 (Week 1)

Channel 2 - Westbound

Average Speed

Week 1

Hr Ending	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday
1	40.8	46.2	47.3	44.7	47.5	43.5	40.5
2	47.4	48.5	46.7	44.8	47.6	44.3	45.6
3	43.9	47.7	47.0	44.9	48.2	47.5	44.2
4	46.1	45.5	48.3	42.6	44.2	46.5	48.0
5	46.4	44.6	44.8	48.3	48.2	49.4	46.3
6	47.3	47.7	47.9	47.5	48.6	47.8	47.9
7	47.1	47.0	44.7	52.0	51.1	47.2	47.1
8	42.5	42.0	42.4	48.6	48.9	44.0	42.7
9	42.9	41.4	40.9	45.7	45.9	42.1	42.5
10	42.7	41.6	43.0	43.9	45.8	43.5	43.0
11	42.8	41.5	41.7	42.8	43.8	43.0	42.8
12	41.5	40.9	41.9	41.9	43.7	41.6	41.2
13	41.4	40.9	42.3	42.3	43.8	41.4	41.4
14	40.2	42.1	41.5	43.5	43.4	40.5	39.8
15	40.5	41.4	40.5	43.1	44.4	40.3	40.3
16	39.9	40.2	39.7	45.4	42.9	40.1	39.6
17	37.1	37.7	39.0	44.0	44.7	37.1	37.1
18	32.3	36.8	36.9	44.5	44.3	31.9	32.2
19	41.1	40.4	40.6	44.4	45.9	40.9	41.0
20	42.7	41.6	45.2	45.9	46.2	45.1	43.1
21	45.0	44.5	45.6	45.3	44.6	46.4	45.4
22	45.9	44.1	43.9	44.7	45.8	43.9	45.9
23	44.3	45.4	44.5	45.3	45.3	45.8	43.6
24	46.7	43.0	47.9	46.0	47.5	47.9	46.0

10-12	42.1	41.2	41.8	42.3	43.7	42.3	41.9
14-16	40.2	40.8	40.1	44.2	43.7	40.2	39.9
0-24	40.5	40.8	41.2	44.1	44.6	40.6	40.3

7 Day Ave 41.7

Channel 2 - Westbound

85th Percentile

Hr Ending	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday
1	48.3	53.3	58.7	53.6	53.2	53.6	48.8
2	58.5	65.8	53.5	53.3	58.2	53.8	53.3
3	48.9	53.2	58.6	53.1	53.3	58.5	48.7
4	53.5	48.5	58.2	48.2	53.8	53.2	53.4
5	53.4	53.2	53.5	53.1	53.1	58.9	53.8
6	53.8	53.6	53.7	58.4	53.5	53.4	58.7
7	53.8	53.4	53.8	59.0	58.8	53.3	53.4
8	48.7	48.9	48.4	53.5	58.8	53.8	48.1
9	48.7	48.5	48.9	53.5	53.3	48.2	48.4
10	49.0	48.2	48.7	49.0	54.0	48.4	48.3
11	48.3	48.7	48.1	48.2	48.8	48.2	48.7
12	48.5	48.7	48.6	48.4	48.7	48.9	48.3
13	48.4	48.6	48.7	48.4	48.9	48.6	48.8
14	48.7	48.8	48.0	48.3	48.9	48.4	48.2
15	48.2	48.2	48.4	48.5	48.4	48.4	48.6
16	48.4	48.8	48.4	53.1	48.1	48.9	49.0
17	43.5	43.2	43.3	53.5	54.0	48.6	43.2
18	43.8	44.0	44.0	49.0	53.8	43.9	43.9
19	48.5	48.1	48.8	48.6	53.7	48.5	48.1
20	48.4	48.1	53.7	53.9	53.4	53.3	49.0
21	53.5	53.8	53.4	53.7	53.0	53.9	53.6
22	53.2	53.4	48.7	53.4	53.2	53.3	53.6
23	53.6	53.5	53.3	53.7	53.2	53.3	48.9
24	53.5	53.1	58.4	53.1	58.5	53.2	53.6

10-12	48.7	48.1	48.4	48.8	48.4	48.3	48.2
14-16	48.9	48.2	48.9	53.7	48.1	48.0	48.9
0-24	48.4	48.0	48.1	53.5	53.3	48.7	48.1

7 Day Ave 49.7

Bicester ATC 2, A4421 (Week 1)

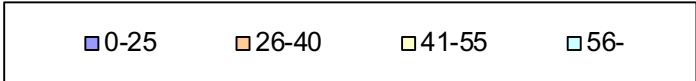
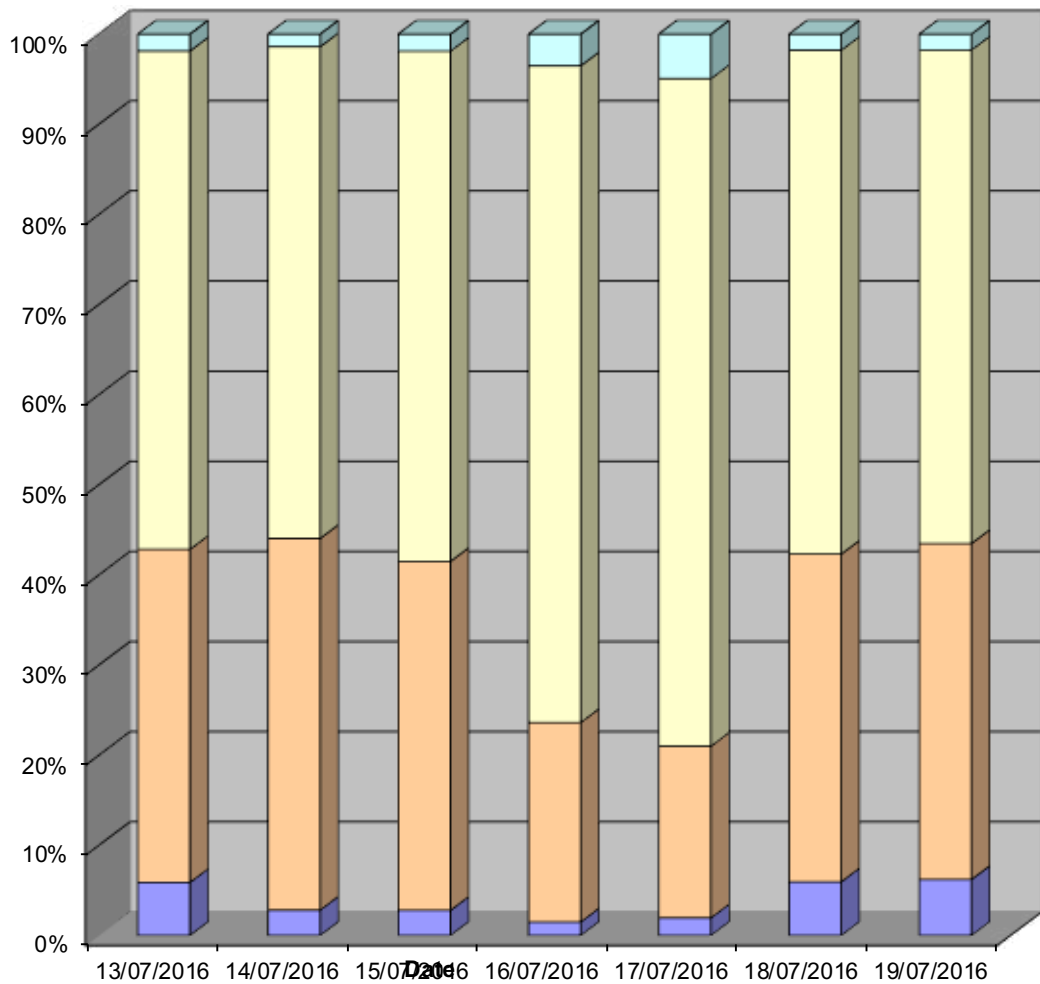
Channel 2 - Westbound

Speed Summary

Week 1

Speed (MPH)	13/07/2016 Wednesday	14/07/2016 Thursday	15/07/2016 Friday	16/07/2016 Saturday	17/07/2016 Sunday	18/07/2016 Monday	19/07/2016 Tuesday
0-25	521	257	264	110	102	515	543
26-40	3273	3766	3663	1637	995	3147	3262
41-55	4897	4982	5359	5390	3870	4839	4790
56-	166	127	179	261	258	155	155
TOTAL	8857	9132	9465	7398	5225	8656	8750

Speed Summary (MPH)



Bicester ATC 2, A4421 (Week 1)

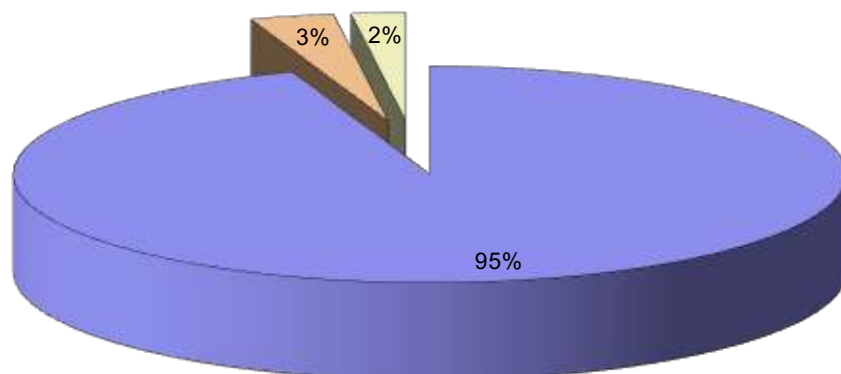
Channel 2 - Westbound

Vehicle Class

Week 1

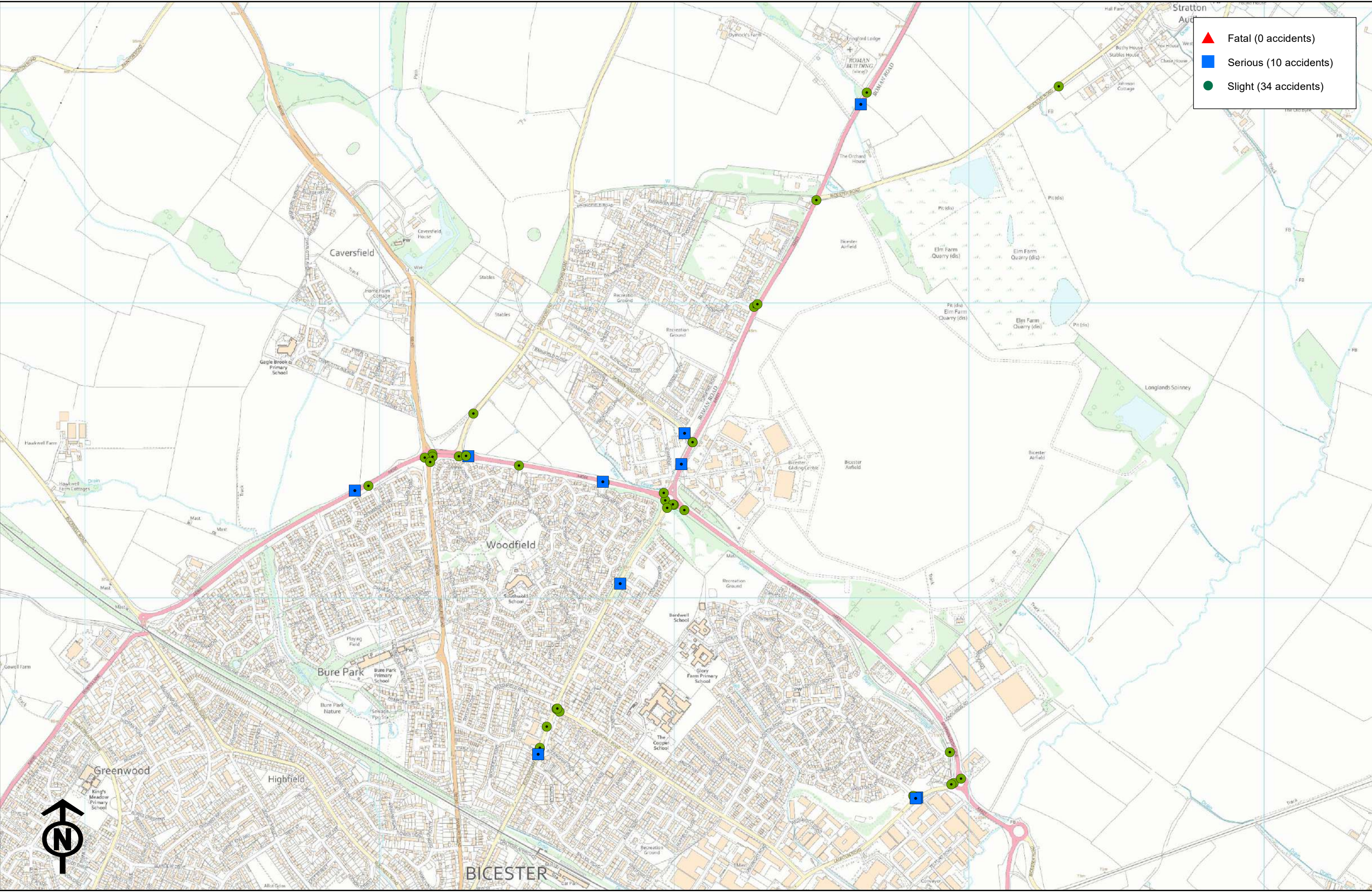
Classes Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
13/07/2016				
7-19	6882	261	154	7297
6-22	7954	296	180	8430
6-24	8170	301	189	8660
0-24	8293	332	232	8857
14/07/2016				
7-19	7096	295	149	7540
6-22	8218	333	182	8733
6-24	8398	335	192	8925
0-24	8549	359	224	9132
15/07/2016				
7-19	7553	272	137	7962
6-22	8557	306	170	9033
6-24	8753	310	173	9236
0-24	8916	352	197	9465
16/07/2016				
7-19	6135	102	35	6272
6-22	6891	117	40	7048
6-24	7095	119	43	7257
0-24	7213	133	52	7398
17/07/2016				
7-19	4190	53	42	4285
6-22	4833	63	53	4949
6-24	4952	66	58	5076
0-24	5085	76	64	5225
18/07/2016				
7-19	6795	253	160	7208
6-22	7837	276	178	8291
6-24	8013	281	189	8483
0-24	8138	306	212	8656
19/07/2016				
7-19	6832	248	157	7237
6-22	7890	284	181	8355
6-24	8089	288	189	8566
0-24	8209	312	229	8750
Average				
7-19	6498	212	119	6829
6-22	7454	239	141	7834
6-24	7639	243	148	8029
0-24	7772	267	173	8212

Total Vehicle Class Distribution



APPENDIX C – Personal Injury Accident Data

▲ Fatal (0 accidents)
 ■ Serious (10 accidents)
 ● Slight (34 accidents)



Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:

Selected using Manual Selection

Thursday	15/01/2015	Time	1741	Control	4	at	LAUNTON ROAD J/W BOSTON ROAD	BICESTER
E: 459824	N: 223323	Junction Detail:	3	Control	4			
Fine without high winds		Road surface	Dry				Darkness: street lights present and lit	
Vehicle Reference 1	Car						Moving from N to S	Turning right
Vehicle Reference 2	Motorcycle over 500cc						Moving from S to NE	Going ahead other
Casualty Reference:	1	Age:	45	Male			Driver/rider	Severity: Serious Injured by vehicle: 2
Wednesday	04/03/2015	Time	1835	Control	4	at	BUCKINGHAM ROAD J/W GARAGE FORECOURT APPROX 65M NE OF J/W CEDAR DRIVE	BICESTER
E: 458543	N: 223489	Junction Detail:	8	Control	4			
Fine without high winds		Road surface	Dry				Darkness: street lights present and lit	
Vehicle Reference 1	Goods 3.5 tonnes mgw and under						Moving from N to W	Turning right
Vehicle Reference 2	Pedal Cycle						Moving from S to N	Going ahead other
Casualty Reference:	1	Age:	28	Female			Driver/rider	Severity: Slight Injured by vehicle: 2
Wednesday	03/06/2015	Time	1751	Control	4	at	A4421 SKIMMINGDISH LANE RBT J/W A4421 BUCKINGHAM ROAD	LAUNTON
E: 458999	N: 224316	Junction Detail:	1	Control	4			
Fine without high winds		Road surface	Dry				Daylight	
Vehicle Reference 1	Car						Moving from SE to N	Changing lane to right
Vehicle Reference 2	Pedal Cycle						Moving from SE to N	Overtaking moving vehicle O/S
Casualty Reference:	1	Age:	47	Male			Driver/rider	Severity: Slight Injured by vehicle: 2

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:

Selected using Manual Selection

Thursday 13/08/2015 Time 1235 Slight at A4095 LORDS LANE J/W GERMANDER WAY BICESTER
E: 457962 N: 224381 Junction Detail: 3 Control 4
Fine without high winds Road surface Wet/Damp Daylight
Vehicle Reference 1 Car Moving from NE to S Going ahead other
Vehicle Reference 2 Goods 3.5 tonnes mgw and under Moving from S to NE Turning right
Casualty Reference: 1 Age: 46 Male Driver/rider Severity: Slight Injured by vehicle: 2

Wednesday 07/10/2015 Time 0710 Slight at BUCKINGHAM ROAD AT MINI RBT J/W CHURCHILL ROAD BICESTER
E: 458600 N: 223624 Junction Detail: 2 Control 4
Raining without high winds Road surface Wet/Damp Darkness: street lights present and lit
Vehicle Reference 1 Car Moving from SE to N Going ahead other
Vehicle Reference 2 Pedal Cycle Moving from NE to S Going ahead other
Casualty Reference: 1 Age: Male Driver/rider Severity: Slight Injured by vehicle: 2

Friday 06/11/2015 Time 0855 Slight at BUCKINGHAM ROAD AT MINI RBT J/W CHURCHILL ROAD BICESTER
E: 458611 N: 223614 Junction Detail: 2 Control 4
Fine without high winds Road surface Wet/Damp Daylight
Vehicle Reference 1 Car Moving from S to SE Turning right
Vehicle Reference 2 Car Moving from SE to N Going ahead other
Casualty Reference: 1 Age: 42 Male Driver/rider Severity: Slight Injured by vehicle: 2

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:

Selected using Manual Selection

Tuesday	10/11/2015	Time	0355	Slight	at	A4421 BUCKINGHAM ROAD RBT J/W A4095 SOUTHWOLD LANE	BICESTER
E: 458969	N: 224332	Junction Detail:	1	Control	4		
Raining without high winds		Road surface	Wet/Damp	Darkness: street lights present and lit			
Vehicle Reference 1	Car	Moving from N to SE		Going ahead other			
Casualty Reference:	1	Age:	29	Male	Driver/rider	Severity: Slight	Injured by vehicle: 1
Wednesday	25/11/2015	Time	1832	Slight	at	A4095 SOUTHWOLD LANE J/W HORNBEAM ROAD	BICESTER
E: 458764	N: 224392	Junction Detail:	3	Control	4		
Fine without high winds		Road surface	Wet/Damp	Darkness: street lights present and lit			
Vehicle Reference 1	Car	Moving from W to S		Turning right			
Casualty Reference:	1	Age:	21	Male	Driver/rider	Severity: Slight	Injured by vehicle: 1
Vehicle Reference 2	Car	Moving from E to W		Going ahead other			
Monday	21/12/2015	Time	1008	Slight	at	A4421 J/W ACCESS TO FRINGFORD LODGE	STRATTON AUDLEY
E: 459653	N: 225715	Junction Detail:	8	Control	4		
Fine without high winds		Road surface	Dry	Daylight			
Vehicle Reference 1	Car	Moving from S to NE		Going ahead other			
Casualty Reference:	1	Age:	23	Female	Driver/rider	Severity: Slight	Injured by vehicle: 1
Vehicle Reference 2	Goods 3.5 tonnes mgw and under	Moving from S to NE		Going ahead but held up			
Vehicle Reference 3	Car	Moving from S to N		Turning left			

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:

Selected using Manual Selection

Sunday	27/12/2015	Time	1645	Slight	at	A4095 SOUTHWOLD LANE J/W HEATHER ROAD	BICESTER
E: 458473	N: 224450	Junction Detail:	3	Control	4		
Fine without high winds		Road surface	Dry	Darkness: street lights present and lit			
Vehicle Reference 1	Car			Moving from	S to E	Turning right	
Vehicle Reference 2	Car			Moving from	E to W	Going ahead other	
Casualty Reference:	1	Age:	53	Female	Passenger	Severity: Slight	Injured by vehicle: 2
Tuesday	01/03/2016	Time	1332	Slight	at	BUCKINGHAM ROAD J/W CO OP STORE / KFC ACCESS	BICESTER
E: 458567	N: 223564	Junction Detail:	3	Control	4		
Fine without high winds		Road surface	Dry	Daylight			
Vehicle Reference 1	Car			Moving from	N to S	Turning right	
Casualty Reference:	1	Age:	9	Male	Pedestrian	Severity: Slight	Injured by vehicle: 1
Wednesday	09/03/2016	Time	0805	Slight	at	BUCKINGHAM ROAD J/W GARAGE FORECOURT APPROX 65M NE OF J/W CEDAR DRIVE	BICESTER
E: 458544	N: 223491	Junction Detail:	8	Control	4		
Raining without high winds		Road surface	Wet/Damp	Daylight			
Vehicle Reference 1	Car			Moving from	N to W	Turning right	
Casualty Reference:	1	Age:	32	Female	Pedestrian	Severity: Slight	Injured by vehicle: 1

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:

Selected using Manual Selection

Thursday 31/03/2016 Time 1519 Slight at LAUNTON ROAD J/W BOSTON ROAD BICESTER
E: 459811 N: 223329 Junction Detail: 3 Control 4
Fine without high winds Road surface Dry Daylight
Vehicle Reference 1 Car Moving from S to N Turning left
Vehicle Reference 2 Pedal Cycle Moving from S to NE Going ahead other
Casualty Reference: 1 Age: 7 Male Driver/rider Severity: Slight Injured by vehicle: 2

Thursday 12/05/2016 Time 0023 Slight at A4421 BUCKINGHAM ROAD J/W THOMPSON ROAD CAVERSFIELD
E: 459270 N: 224988 Junction Detail: 3 Control 4
Fine without high winds Road surface Dry Darkness: street lights present and lit
Vehicle Reference 1 Car Moving from W to S Turning right
Casualty Reference: 1 Age: 43 Male Driver/rider Severity: Slight Injured by vehicle: 1
Vehicle Reference 2 Goods 3.5 tonnes mgw and under Moving from S to NE Going ahead other

Thursday 07/07/2016 Time 1609 Serious at LAUNTON ROAD J/W BOSTON ROAD BICESTER
E: 459819 N: 223320 Junction Detail: 3 Control 4
Fine without high winds Road surface Dry Daylight
Vehicle Reference 1 Motor Cycle over 125 cc and up to 500cc Moving from NE to S Overtaking stat vehicle O/S
Casualty Reference: 1 Age: 35 Female Driver/rider Severity: Serious Injured by vehicle: 1
Vehicle Reference 2 Goods 3.5 tonnes mgw and under Moving from NE to N Turning right

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:
Selected using Manual Selection

Sunday 02/10/2016 Time 1212 Slight at A4421 SKIMMINGDISH LANE APPROX 40M SE OF RBT J/W A4421 BUCKINGHAM ROAD LAUNTON
E: 459034 N: 224298 Junction Detail: 0 Control
Fine without high winds Road surface Dry Daylight

Vehicle Reference 1	Car			Moving from N to SE	Going ahead other	
Casualty Reference:	1	Age:	28	Male	Driver/rider	Severity: Slight Injured by vehicle: 1
Vehicle Reference 2	Car			Moving from SE to N	Going ahead other	
Casualty Reference:	2	Age:	34	Male	Driver/rider	Severity: Slight Injured by vehicle: 2
Vehicle Reference 3	Car			Moving from SE to N	Going ahead other	
Casualty Reference:	3	Age:	49	Female	Driver/rider	Severity: Slight Injured by vehicle: 3

Tuesday 25/10/2016 Time 0519 Serious at A4095 SOUTHWOLD LANE J/W HORNBEAM ROAD BICESTER
E: 458757 N: 224394 Junction Detail: 3 Control 4
Fine without high winds Road surface Wet/Damp Darkness: street lights present and lit

Vehicle Reference 1	Car			Moving from S to E	Turning right	
Vehicle Reference 2	Pedal Cycle			Moving from E to W	Going ahead other	
Casualty Reference:	1	Age:	39	Male	Driver/rider	Severity: Serious Injured by vehicle: 2

Friday 04/11/2016 Time 0852 Slight at A4095 SOUTWOLD LANE RBT J/W B4100 BANBURY ROAD CAVERSFIELD
E: 458179 N: 224488 Junction Detail: 1 Control 4
Raining without high winds Road surface Wet/Damp Daylight

Vehicle Reference 1	Motorcycle 50cc and under			Moving from N to S	Going ahead other	
Casualty Reference:	1	Age:	18	Female	Driver/rider	Severity: Slight Injured by vehicle: 1

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:

Selected using Manual Selection

Saturday 26/11/2016 Time 1637 Serious at A4095 SOUTHWOLD LANE AT TOUCAN CROSSING APPROX 120M E OF JRBT J/W B4100 CAVERSFIELD
E: 458301 N: 224481 Junction Detail: 3 Control 4
Fine without high winds Road surface Wet/Damp Darkness: street lights present and lit

Vehicle Reference 1 Car Moving from W to E Going ahead other
Casualty Reference: 1 Age: 50 Male Pedestrian Severity: Serious Injured by vehicle: 1

Wednesday 07/12/2016 Time 2246 Serious at BUCKINGHAM ROAD AT TRAFFIC CALMING BUILD OUT APPROX 120M SW OF J/W COOPERS GREEN BI
E: 458816 N: 224048 Junction Detail: 0 Control
Fine without high winds Road surface Wet/Damp Darkness: street lights present and lit

Vehicle Reference 1 Motor Cycle over 125 cc and up to 500cc Moving from NE to S Going ahead other
Casualty Reference: 1 Age: 44 Male Driver/rider Severity: Serious Injured by vehicle: 1

Saturday 10/12/2016 Time 1845 Serious at A44421 BUCKINGHAM ROAD AT BUS STOP APPROX 100M N OF RBT J/W A4095 SOUTHWOLD LANE
E: 459024 N: 224453 Junction Detail: 0 Control
Raining without high winds Road surface Wet/Damp Darkness: no street lighting

Vehicle Reference 1 Car Moving from S to NE Going ahead other
Casualty Reference: 1 Age: 16 Female Pedestrian Severity: Serious Injured by vehicle: 1

Vehicle Reference 2 Bus or coach Moving from NE to S Going ahead but held up

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:

Selected using Manual Selection

Tuesday 14/02/2017 Time 2030 Serious at SKIMMINGDISH LANE J/W TURNPIKE ROAD CAVERSFIELD
 E: 459035 N: 224559 Junction Detail: 3 Control 4
 Fine without high winds Road surface Dry Darkness: no street lighting
 Vehicle Reference 1 Car Moving from SE to N Going ahead other
 Vehicle Reference 2 Pedal Cycle Moving from SE to NE Turning right
 Casualty Reference: 1 Age: 15 Male Driver/rider Severity: Serious Injured by vehicle: 2

Tuesday 16/05/2017 Time 1117 Slight at A4421 SKIMMINGDISH LANE RBT J/W BUCKINGHAM ROAD LAUNTON
 E: 458995 N: 224318 Junction Detail: 1 Control 4
 Fine without high winds Road surface Dry Daylight
 Vehicle Reference 1 Car Moving from NE to S Stopping
 Casualty Reference: 1 Age: 72 Female Driver/rider Severity: Slight Injured by vehicle: 1
 Casualty Reference: 2 Age: 72 Male Passenger Severity: Slight Injured by vehicle: 1
 Vehicle Reference 2 Car Moving from NE to S Starting

Friday 07/07/2017 Time 1922 Slight at A4095 RBT J/W B4100 BANBURY ROAD BICESTER
 E: 458180 N: 224479 Junction Detail: 1 Control 4
 Other Road surface Dry Daylight
 Vehicle Reference 1 Car Moving from E to W Going ahead other
 Vehicle Reference 2 Pedal Cycle Moving from N to S Going ahead other
 Casualty Reference: 1 Age: 33 Male Driver/rider Severity: Slight Injured by vehicle: 2

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:

Selected using Manual Selection

Wednesday 29/11/2017 Time 1807 Slight at A4421 J/W SKIMMINGDISH LANE CAVERSFIELD
 E: 459062 N: 224528 Junction Detail: 3 Control 4
 Fine without high winds Road surface Wet/Damp Darkness: street lights present and lit
 Vehicle Reference 1 Goods 7.5 tonnes mgw and over Moving from NE to S Going ahead other
 Vehicle Reference 2 Car Moving from NE to S Waiting to turn right
 Casualty Reference: 1 Age: 22 Female Driver/rider Severity: Slight Injured by vehicle: 2

Friday 05/01/2018 Time 0738 Slight at A4421 BUCKINGHAM ROAD RBT J/W A4095 SOUTHWOLD LANE BICESTER
 E: 458964 N: 224356 Junction Detail: 1 Control 4
 Fine without high winds Road surface Wet/Damp Darkness: street lights present and lit
 Vehicle Reference 1 Car Moving from N to SE Going ahead other
 Vehicle Reference 2 Motor Cycle over 50 cc and up to 125cc Moving from N to NE Turning left
 Casualty Reference: 1 Age: 24 Female Driver/rider Severity: Slight Injured by vehicle: 2

Monday 15/01/2018 Time 0728 Serious at BUCKINGHAM ROAD AT PELICAN CROSSING 50M NE OF J/W CEDAR DRIVE BICESTER
 E: 458538 N: 223470 Junction Detail: 0 Control
 Raining without high winds Road surface Wet/Damp Darkness: street lights present and lit
 Vehicle Reference 1 Car Moving from S to NE Going ahead other
 Casualty Reference: 1 Age: 12 Female Pedestrian Severity: Serious Injured by vehicle: 1

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:

Selected using Manual Selection

Tuesday 21/08/2018 Time 2255 Slight at A4095 LORDS LANE RBT J/W B4100 BANBURY ROAD BICESTER
 E: 458153 N: 224476 Junction Detail: 1 Control 4
 Fine without high winds Road surface Dry Darkness: street lights present and lit
 Vehicle Reference 1 Car Moving from S to N Going ahead other
 Vehicle Reference 2 Motor Cycle over 50 cc and up to 125cc Moving from E to W Going ahead other
 Casualty Reference: 1 Age: 17 Male Driver/rider Severity: Slight Injured by vehicle: 2

Friday 16/11/2018 Time 1845 Slight at A4095 SOUTHWOLD LANE J/W FRINGFORD ROAD BICESTER
 E: 458269 N: 224481 Junction Detail: 3 Control 4
 Raining without high winds Road surface Wet/Damp Darkness: street lights present and lit
 Vehicle Reference 1 Car Moving from E to W Going ahead other
 Casualty Reference: 1 Age: 37 Male Driver/rider Severity: Slight Injured by vehicle: 1
 Vehicle Reference 2 Car Moving from N to W Turning right

Wednesday 28/11/2018 Time 0741 Slight at A4421 BUCKINGHAM ROAD J/W THOMPSON DRIVE BICESTER
 E: 459282 N: 224997 Junction Detail: 3 Control 4
 Raining without high winds Road surface Wet/Damp Darkness: no street lighting
 Vehicle Reference 1 Pedal Cycle Moving from NE to N Turning right
 Casualty Reference: 1 Age: 22 Male Driver/rider Severity: Slight Injured by vehicle: 1
 Vehicle Reference 2 Car Moving from NE to S Going ahead other

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:

Selected using Manual Selection

Thursday 13/12/2018 Time 0800 Slight at BICESTER ROAD STRATTON AUDLEY - SIGNIFICANT UNCERTAINTY OVER LOCATION
E: 460305 N: 225736 Junction Detail: 0 Control
Other Road surface Frost/Ice Daylight

Vehicle Reference 1 Car Moving from NE to S Going ahead other
Casualty Reference: 1 Age: Female Driver/rider Severity: Slight Injured by vehicle: 1

Friday 04/01/2019 Time 1730 Slight at BUCKINGHAM ROAD AT MINI RBT J/W CHURCHILL ROAD BICESTER
E: 458603 N: 223625 Junction Detail: 2 Control 4
Fine without high winds Road surface Dry Darkness: street lights present and lit

Vehicle Reference 1 Car Moving from N to S Going ahead other
Vehicle Reference 2 Car Moving from S to E Turning right
Casualty Reference: 1 Age: 25 Female Driver/rider Severity: Slight Injured by vehicle: 2

Wednesday 10/04/2019 Time 1524 Slight at A4421 SKIMMINGDISH LANE RBT J/W LAUNTON ROAD BICESTER
E: 459948 N: 223373 Junction Detail: 1 Control 4
Fine without high winds Road surface Dry Daylight

Vehicle Reference 1 Car Moving from S to NE Going ahead other
Casualty Reference: 1 Age: 54 Female Driver/rider Severity: Slight Injured by vehicle: 1

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:

Selected using Manual Selection

Saturday 01/06/2019 Time 0157 Serious at A4421 BUCKINGHAM ROAD APPROX 350M NE OF J/W STRATTON AUDLEY TURN STRATTON AUDLEY - C
E: 459633 N: 225675 Junction Detail: 0 Control
Fine without high winds Road surface Dry Darkness: no street lighting

Vehicle Reference 1 Goods over 3.5 tonnes and under 7.5 tonnes mgw Moving from S to NE Going ahead other
Casualty Reference: 1 Age: 12 Female Passenger Severity: Serious Injured by vehicle: 1

Wednesday 19/06/2019 Time 0630 Slight at A4421 SKIMMINGDISH LANE RBT J/W LAUNTON ROAD BICESTER
E: 459973 N: 223387 Junction Detail: 1 Control 4
Raining without high winds Road surface Wet/Damp Daylight

Vehicle Reference 1 Car Moving from N to SE Going ahead other
Casualty Reference: 1 Age: 51 Female Driver/rider Severity: Slight Injured by vehicle: 1

Monday 22/07/2019 Time 1730 Slight at BUCKINGHAM ROAD AT CROSSING POINT APPROX 5M S OF RBT J/W A4421 / A4095 SKIMMINGDISH LAN
E: 458976 N: 224305 Junction Detail: 1 Control 4
Fine without high winds Road surface Dry Daylight

Vehicle Reference 1 Car Moving from N to S Going ahead other
Vehicle Reference 2 Pedal Cycle Moving from W to E Going ahead other
Casualty Reference: 1 Age: 12 Male Driver/rider Severity: Slight Injured by vehicle: 2

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:

Selected using Manual Selection

Friday	27/09/2019	Time	0835	Slight	at	B4100 BANBURY RD RBT J/W A4095 SOUTHWOLD LANE	BICESTER
E: 458172	N: 224462	Junction Detail:	1	Control	4		
Fine without high winds		Road surface	Dry	Daylight			
Vehicle Reference 1	Car	Moving from N to S		Going ahead other			
Casualty Reference:	2	Age:	35	Female	Pedestrian	Severity: Slight	Injured by vehicle: 1
Vehicle Reference 2	Pedal Cycle	Moving from W to E		Going ahead other			
Casualty Reference:	1	Age:	5	Female	Driver/rider	Severity: Slight	Injured by vehicle: 2
Wednesday	27/11/2019	Time	1658	Serious	at	A4095 LORDS LANE APPROX 30M SW OF J/W GERMANDER WAY	BICESTER
E: 457916	N: 224364	Junction Detail:	0	Control			
Raining without high winds		Road surface	Wet/Damp	Darkness: street lights present and lit			
Vehicle Reference 1	Car	Moving from S to NE		Stopping			
Casualty Reference:	1	Age:	20	Female	Driver/rider	Severity: Serious	Injured by vehicle: 1
Vehicle Reference 2	Car	Moving from S to NE		Stopping			
Vehicle Reference 3	Car	Moving from S to NE		Stopping			
Thursday	28/11/2019	Time	1732	Slight	at	LAUNTON ROAD APPROX 10M SW OF RBT J/W A4421 SKIMMINGDISH LANE	BICESTER
E: 459940	N: 223367	Junction Detail:	1	Control	4		
Raining without high winds		Road surface	Wet/Damp	Darkness: street lights present and lit			
Vehicle Reference 1	Car	Moving from S to SE		Starting			
Casualty Reference:	1	Age:	43	Female	Pedestrian	Severity: Slight	Injured by vehicle: 1

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:

Selected using Manual Selection

Monday 30/12/2019 Time 1636 Slight at A4421 BUCKINGHAM RD J/W BICESTER RD TO STRATTON AUDLEY CAVERSFIELD
 E: 459482 N: 225351 Junction Detail: 3 Control 4
 Fine without high winds Road surface Dry Darkness: no street lighting
 Vehicle Reference 1 Car Moving from S to NE Going ahead other
 Casualty Reference: 1 Age: 75 Female Driver/rider Severity: Slight Injured by vehicle: 1
 Vehicle Reference 2 Goods 3.5 tonnes mgw and under Moving from S to E Waiting to turn right

Wednesday 15/01/2020 Time 0726 Slight at A4421 BUCKINGHAM RD J/W SIMMINGDISH LANE BICESTER
 E: 459062 N: 224529 Junction Detail: 3 Control 4
 Fine without high winds Road surface Wet/Damp Darkness: no street lighting
 Vehicle Reference 1 Car Moving from W to NE Turning left
 Vehicle Reference 2 Motorcycle over 500cc Moving from S to NE Going ahead other
 Casualty Reference: 1 Age: 51 Male Passenger Severity: Slight Injured by vehicle: 2

Tuesday 28/01/2020 Time 0811 Slight at FRINGFORD ROAD POSS AT BEND APPROX 150M N OF J/W A4095 CAVERSFIELD
 E: 458318 N: 224626 Junction Detail: 0 Control
 Other Road surface Frost/Ice Daylight
 Vehicle Reference 1 Car Moving from S to NE Going ahead right bend
 Casualty Reference: 1 Age: 31 Male Driver/rider Severity: Slight Injured by vehicle: 1

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection: Notes:

Selected using Manual Selection

Friday 22/05/2020 Time 1705 Slight at A4095 SOUTHWOLD LANE 116M WEST OF RBT BY PED CROSSING BICESTER

E: 458293 N: 224482 Junction Detail: 3 Control 4

Fine without high winds Road surface Dry Daylight

Vehicle Reference 1 Car Moving from W to E Stopping

Casualty Reference: 2 Age: 42 Male Driver/rider Severity: Slight Injured by vehicle: 1

Vehicle Reference 2 Car Moving from W to E Going ahead but held up

Casualty Reference: 1 Age: 55 Male Driver/rider Severity: Slight Injured by vehicle: 2

Tuesday 25/08/2020 Time 1705 Slight at VULCAN VIEW WHERE CYCLE PATH JOINS AND J/W SKIMMINGDISH LANE BICESTER

E: 459935 N: 223477 Junction Detail: 3 Control 4

Fine without high winds Road surface Wet/Damp Daylight

Vehicle Reference 1 Car Moving from N to S Going ahead other

Vehicle Reference 2 Pedal Cycle Moving from E to W Going ahead other

Casualty Reference: 1 Age: 28 Male Driver/rider Severity: Slight Injured by vehicle: 2

Accidents between dates 01/01/2015 and 31/08/2020 (68) months

Selection:

Selected using Manual Selection

Notes:

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	5	21	26
2-wheeled motor vehicles	0	3	4	7
Pedal cycles	0	2	9	11
Horses & other	0	0	0	0
Total	0	10	34	44

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	1	20	21
Passenger	0	1	3	4
Motorcycle rider	0	3	3	6
Cyclist	0	2	9	11
Pedestrian	0	3	4	7
Other	0	0	0	0
Total	0	10	39	49

Number of casualties meeting the criteria: 49

APPENDIX D – Indicative Masterplan



- KEY:**
- - - - - Application Boundary
 - - - - - Ownership Boundary
 - - - - - SAM
 - Indicative Massing



Experience Quarter - Indicative Layout Plan

PLANNING

DRAWN BY: JY CHECKED BY: AH
 PROJECT: 5002854-RDG-Z01-ST-PL-A-0030 REV: G 15/04/2019

SCALE 1:5000 @ A1

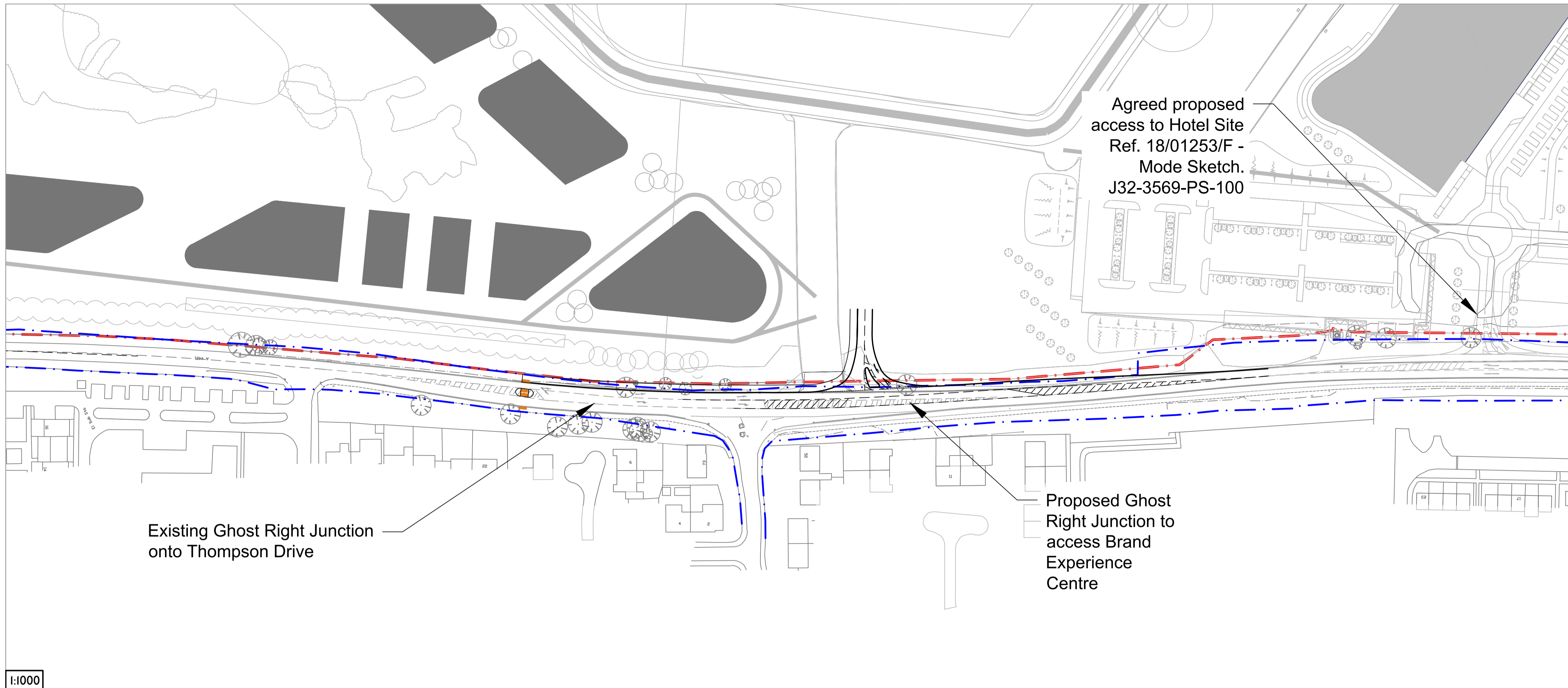
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G	Car park Update	16/11/2020	JY	LS
F	Application Boundary Line, Buckingham Road Entrance Update	12/11/2020	JY	LS
E	Runway & Tracks Update	28/09/2020	JY	LS
D	Status and Graphic Update	11/02/2020	JY	AH
C	Track naming updated	01/08/2019	JY	AH
B	Application boundary line and ownership boundary line updated	03/07/2019	JY	AH
A	Application boundary line updated	25/06/2019	JY	AH



THE COWYARDS
 BLenheim PARK, OXFORD ROAD
 WOODSTOCK
 OX20 1QR

TEL NO: 01993815000
 WWW.RIDGE.CO.UK

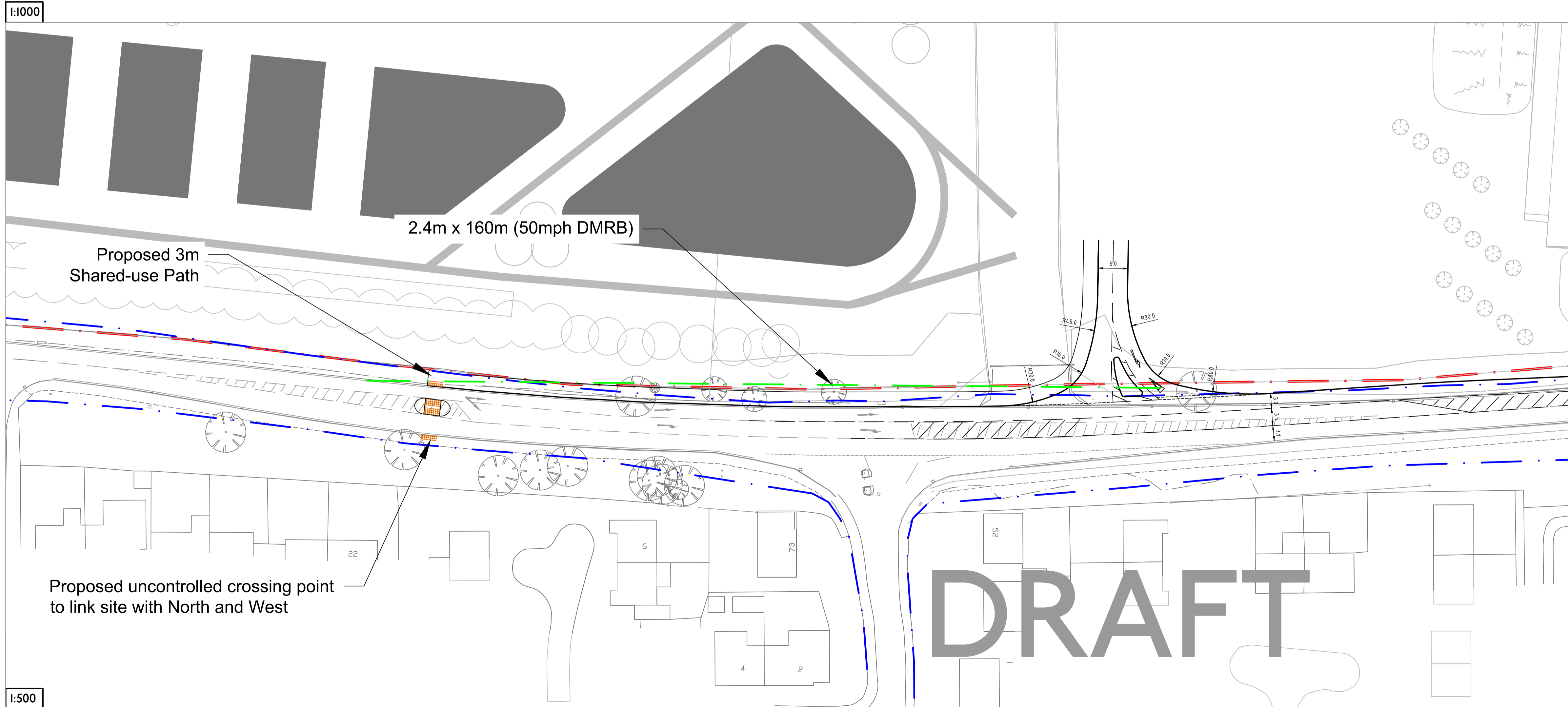
APPENDIX E – Preliminary Access Drawings



This drawing has been produced by mode transport planning.
 No responsibility will be accepted for the use of this drawing in any other project.
 DO NOT SCALE OFF THIS DRAWING.
 Dimensions shown are in metres unless stated otherwise.
 Road markings & traffic signs are to be in accordance with 'The Traffic Signs Regulations and General Directions 2016'
 Tactile paving is to be in accordance with 'Guidance on the use of tactile paving surfaces 2007'
 Visibility Splays shown are taken from 'DMRB'



- Red Line Boundary - - - - -
- Extent of Adopted Highway - - - - -
- 2.4m x 160m Visibility Splay (DMRB) - - - - -



A	05-11-19	DRAFT for internal comment only
rev	date	remarks
client		

Bicester Motion

job title
 Bicester Motion
 Brand Experience Application

drawing title
 Proposed Access

drawing no.
 J32-3684-PS-201

drawn	jwm	checked	alf
created	Nov '19	scale	Varies as Shown@AI

mode transport planning
 Lombard House
 145 Great Charles Street
 Birmingham
 B3 3LP

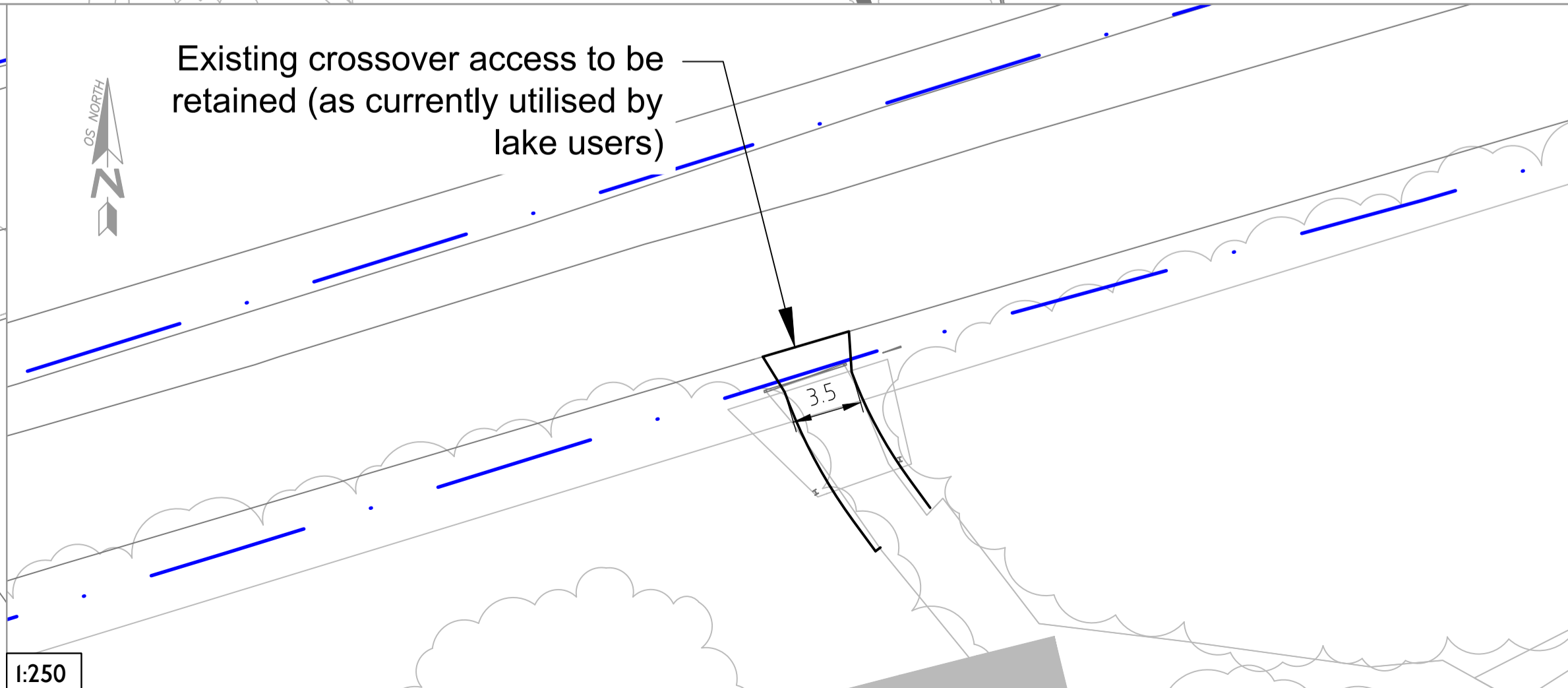
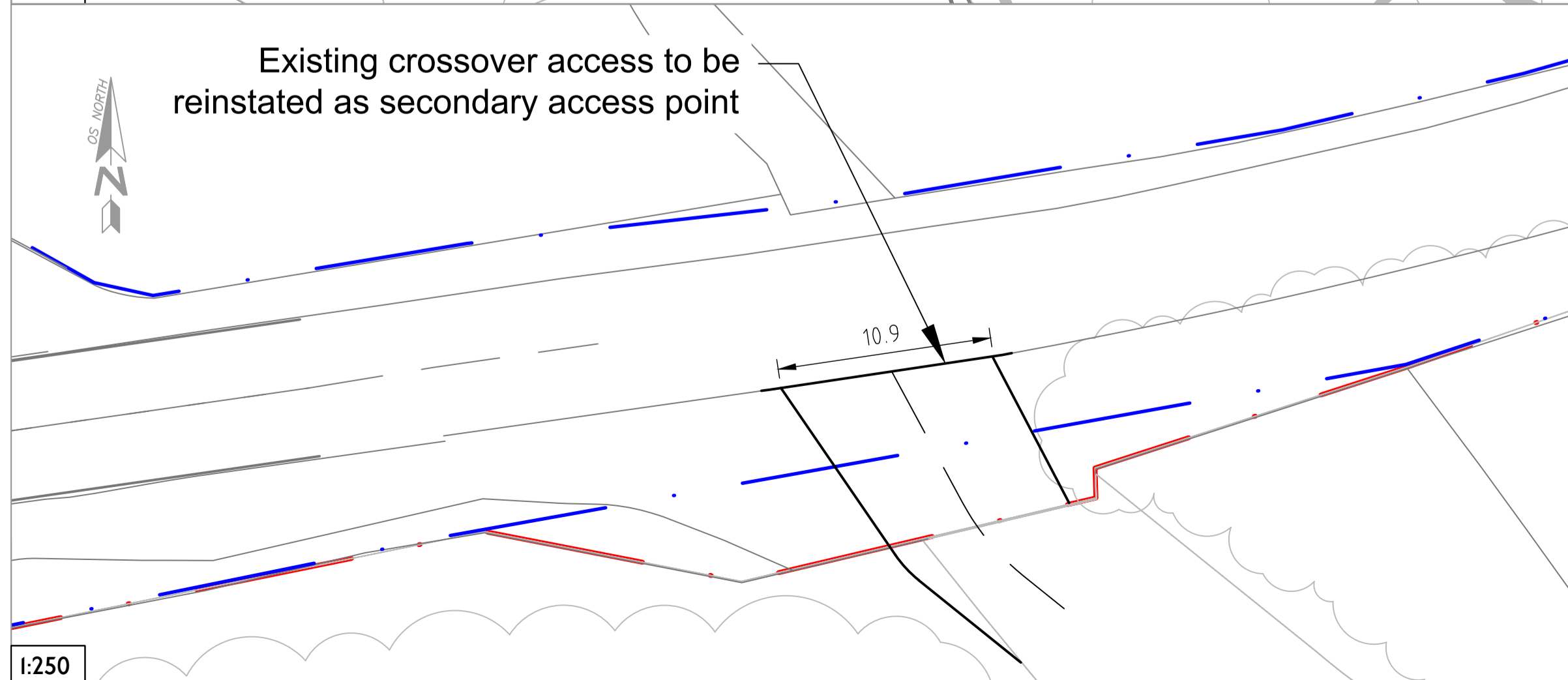
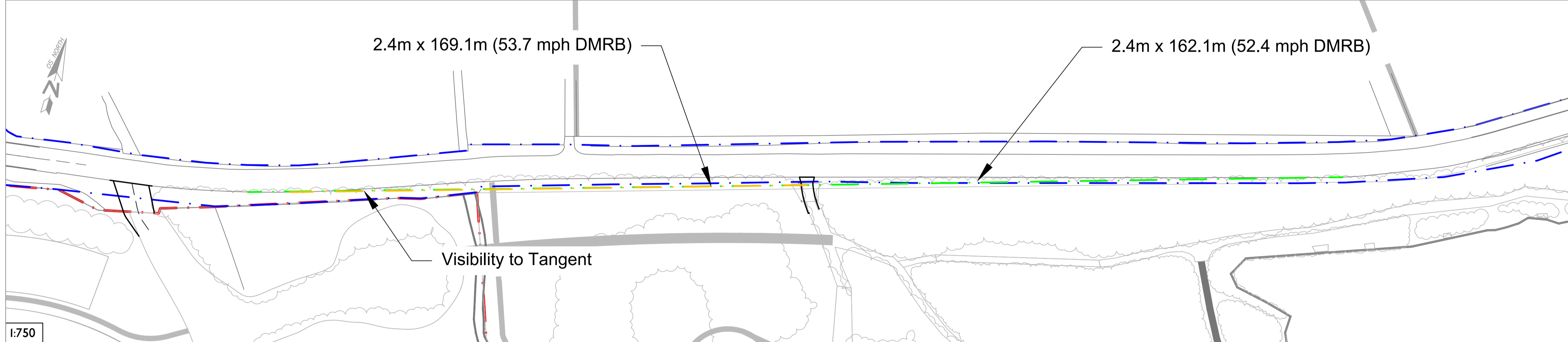
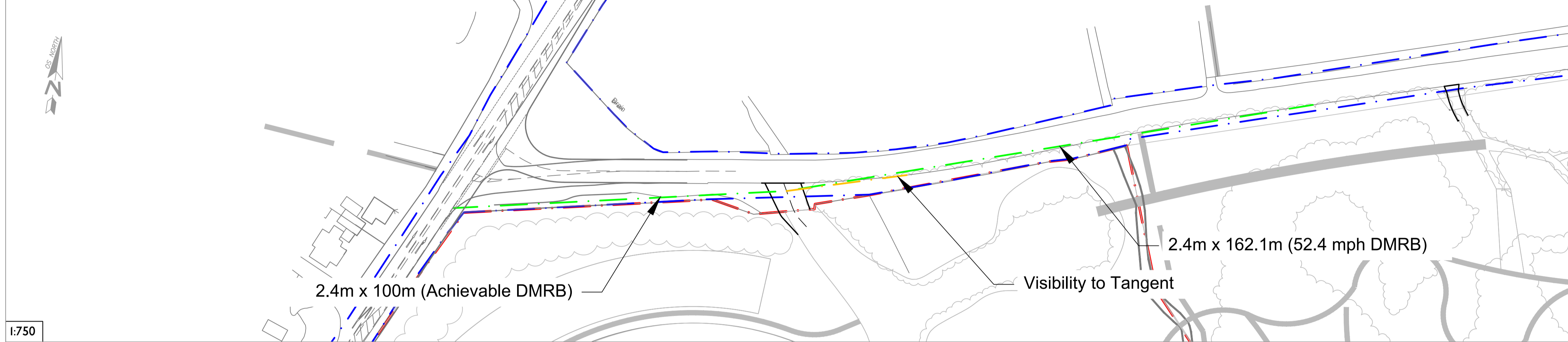
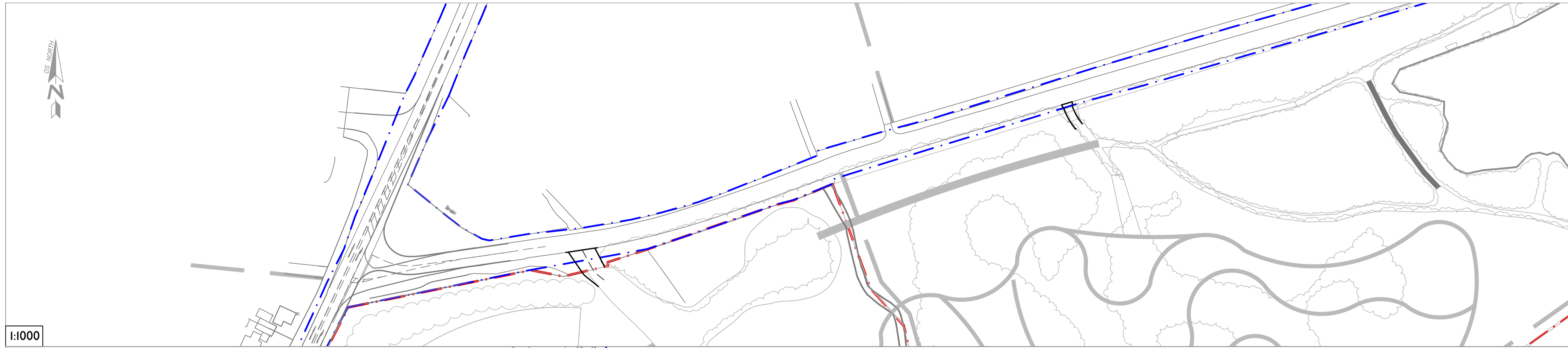


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transport planning

File: C:\Users\jamesk\Dropbox (mode)\Project\Birmingham2 - Projects\J323684 - Bicester Heritage Masterplans5 - Graphics2 - CAD2 - Sheets\191105-132-3684-PS-201.dwg

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 DO NOT SCALE OFF THIS DRAWING.
 Dimensions shown are in metres unless stated otherwise.
 Road markings & traffic signs are to be in accordance with 'The Traffic Signs Regulations and General Directions 2016'
 Tactile paving is to be in accordance with 'Guidance on the use of tactile paving surfaces 2007'
 Visibility Splays shown are taken from 'DMRB'



- Red Line Boundary - - - - -
- Extent of Adopted Highway - - - - -
- Achievable Visibility Splay (DMRB) - - - - -
- Visibility to Tangent - - - - -

rev	date	remarks
F	15-12-20	Amended
E	30-07-19	Amended
D	12-07-19	Amended
C	10-06-19	Amended based on ATC survey results
B	24-05-19	DRAFT Amended
A	10-05-19	DRAFT for internal comment only

client

Bicester Motion

job title
 Bicester Motion
 Brand Experience Application

drawing title
 Bicester Road - Secondary Access Point

drawing no.
 J32-3684-PS-006

drawn	jwm	checked	alf
created	Apr '19	scale	Varies as Shown@A1

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 w www.modetransport.co.uk

transport planning

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APPENDIX F – Parking Accumulation Summary

APPENDIX G – Trip Generation Summary

PROJECT RADIAL

DEVELOPMENT DATA - FINAL - MODE 27.11.2019

mode Ref. on Plan	Zone name	Description of use	Planning classification/s	GEA (sqm) / no of units	Anticipated Visitor Numbers (pa) approx.
A	Brand Experience Centre	Mixed use - leisure and tourism	D1, D2 + B2, + ancillary A1, A3, A5, Sui Generis, Showroom	24,030	400,000
B	Future Technology Hub/FAST	Industrial, workshop and vehicle workshop	B1c, B2 + B8	21,994	-
C	Bicester Reserve - Public	Holiday village, lodges / tipis / spa and restaurant / activities	C3	64	104,000
D	Bicester Reserve - Private	Private holiday dwelling houses/lodges	C3	27	36,960
E	Bicester Reserve - Public Country Park/Land	Pedestrian footpaths/cycleways, parkland for recreation - inc. ancillary ticket office/visitor centre & A4 use	Predominantly D2	29	(Hectares)
F	Motor Vaults / Bomb Stores Area	Car storage units (with ancillary accommodation)	C3	48	9,360
G	Aircraft Hangar	Flying club and ancillary offices - to be relocated from existing hangar	B8 + ancillary office + clubrooms	3,774	10,800
H	Hangar 5 - Exhibition Hall 3 (Museum)		D1/D2	5,314	416,000

Total Visitors 977,120

Average Daily Visitors (based on c.365 days) 2,677

PROJECT RADIAL

DEVELOPMENT DATA - FINAL - MODE 27.11.2019

		Weekday (Mon-Fri) Traffic Generation																	
		Trip Rates						Vehicular Trips						12-Hour Traffic (c.0700-1900)					
		AM Peak (0800-0900)			PM Peak (1700-1800)			AM Peak (0800-0900)			PM Peak (1700-1800)			Trip Rates			Vehicular Trips		
mode Ref. on Plan	Zone name	IN	OUT	2-WAY	IN	OUT	2-WAY	IN	OUT	2-WAY	IN	OUT	2-WAY	IN	OUT	2-WAY	IN	OUT	2-WAY
A	Brand Experience Centre	First Principles - Please see 'Gaydon British Motor Museum' tab sheet for full calculation & details						191	10	201	2	193	195				687	687	1373
B	Future Technology Hub/FAST	0.687	0.09	0.777	0.072	0.633	0.705	151	20	171	16	139	155	3.723	3.38	7.103	819	743	1562
C	Bicester Reserve - Public	0.067	0.04	0.107	0.064	0.072	0.136	4	3	7	4	5	9	1.101	1.008	2.109	70	65	135
D	Bicester Reserve - Private	0.067	0.04	0.107	0.064	0.072	0.136	2	1	3	2	2	4	1.101	1.008	2.109	30	27	57
E	Bicester Reserve - Public Country Park/Land	0.443	0.234	0.677	0.482	0.664	1.146	13	7	20	14	19	33	7.502	7.365	14.867	217	213	430
F	Motor Vaults / Bomb Stores Area	0.067	0.04	0.107	0.064	0.072	0.136	3	2	5	3	3	7	1.101	1.008	2.109	53	48	101
G	Aircraft Hangar	These trips are already on the highway network - associated with the existing Gliding Club - typical vehicular trips are illustrated in the adjacent cells, for reference						30	0	30	0	30	30	Typical daily visitor traffic			30	30	60
H	Hangar 5 - Exhibition Hall 3 (Museum)	1.361	0.161	1.522	0.315	0.978	1.293	72	9	81	17	52	69	6.777	6.737	13.514	360	358	718
		TOTAL TRIPS (ex Aircraft Hangar)						436	51	487	57	413	471				2236	2141	4377
		Internalised /Linked Trips to be Established (in consultation with BH) - Hotel Trips						79	103	182	83	66	149						
		New discounted trips (linked internal use) To be Agreed 20%						16	21	36	17	13	30						
		Total (Inc. linked internalisation)						420	30	451	41	400	441						

PROJECT RADIAL

DEVELOPMENT DATA - FINAL - MODE 27.11.2019

mode Ref. on Plan	Zone name	Comments/Clarifications
A	Brand Experience Centre	Based on forecast daily weekday visitors (c.625), by applying NTS 65% leisure trips occurring on weekday; and applying the NTS single car driver (38%) method of travel for leisure/recreational purposes (extrapolated using arrival/departure trip profile from British Motor Museum Gaydon site - see separate tab)
B	Future Technology Hub/FAST	BH NTS surveyed trip rates (July 2018) that were approved and accepted as part of the recent NTS permission
C	Bicester Reserve - Public	TRICS Resi - Holiday Accommodation
D	Bicester Reserve - Private	TRICS Resi - Holiday Accommodation
E	Bicester Reserve - Public Country Park/Land	TRICS Leisure - Country Parks - Only Saturday TRICS data available - considered worst-case/robust assumption when applied to weekday peak hours
F	Motor Vaults / Bomb Stores Area	TRICS Resi - Holiday Accommodation
G	Aircraft Hangar	c.120 members - with 10-15 members visiting the site on a daily basis
H	Hangar 5 - Exhibition Hall 3 (Museum)	TRICS - Exhibition Centre in absence of specific & relevant museum sites (exhibition centre considered to be a worst-case and robust assessment)

Site reference: WM-10-A-01 Survey date: 15/02/2006 Day of week: Wednesday

Survey type: Manual Count
 AM weather: Mild and Cloudy
 PM weather: Mild and Clear

Initial car park occupancy: 15 Final car park occupancy: 0

BRACKETED ACCUMULATION FIGURES ARE NOT ABSOLUTE

Parking Capacity: 24% (422 On-Site Spaces)

Data proportions in %

Motor cars: 98 Motor cycles: 0 Public service vehicles: 0
 Light goods: 2 OGV (1): 0 OGV (2): 0
 Taxis: 0

Taxis are included as cars in this survey

Time Arr 313 Dep 328 Totals 641 Parking Accum

00:00-01:00
 01:00-02:00
 02:00-03:00
 03:00-04:00
 04:00-05:00
 05:00-06:00
 06:00-07:00
 07:00-08:00
 08:00-09:00
 09:00-10:00
 10:00-11:00
 11:00-12:00
 12:00-13:00
 13:00-14:00
 14:00-15:00
 15:00-16:00
 16:00-17:00
 17:00-18:00
 18:00-19:00
 19:00-20:00
 20:00-21:00
 21:00-22:00
 22:00-23:00
 23:00-24:00

Comments

No PSVs pedal cycles or taxis entered or exited the site during this survey.

Brand Experience Centre (First Principles) Vehicle Trips Per Day				
(Table NTS0905)		Leisure	Holiday/Day Trips	Average
Average Car Occupancy		1.69	1.92	1.80
(Table NTS0504)				
Visitors PA		400,000	65%	35%
Trips P/A		260,000	1,000	1,346
Daily Trips		555	747	1,493
Daily Vehicular Trips (1-Way)		555	747	1,493
Daily Vehicular Trips (2-Way)		1,109	1,493	1,493
55%				

Time	Weekday							Saturday						
	Proportions / Trip Profile		Brand Experience Visitor Trips		Staff Trips		Brand Experience Visitor Trips		Staff Trips					
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	Park Acc					
08:00-09:00	33	6	39	42	11%	2%	58	10	132	0	180	79	14	197
09:00-10:00	47	10	57	79	15%	3%	83	17			247	112	23	287
10:00-11:00	41	23	64	97	13%	7%	73	39			281	98	52	332
11:00-12:00	34	28	62	103	11%	9%	60	47			294	81	64	349
12:00-13:00	34	52	86	85	11%	16%	60	88			266	81	118	312
13:00-14:00	54	39	93	100	17%	12%	96	66			296	129	89	352
14:00-15:00	37	46	83	91	12%	14%	66	78			283	88	105	336
15:00-16:00	19	46	65	64	6%	14%	34	78			239	45	105	276
16:00-17:00	13	42	55	35	4%	13%	23	71			191	31	96	212
17:00-18:00	1	36	37	0	0%	11%	2	61	0	132	0	2	82	0

19:00-20:00 313 328 641

APPENDIX H – TRICS Database Outputs

SITE DETAILS FOR WM-10-A-01

mode transport limited Lombard House, 145 Great Charles Street Birmingham, B3 3LP

Licence No: 754101

Site Reference: WM-10-A-01
 Latitude/Longitude: 52.18886, -1.48111
 Land Use Type: 10 - TOURIST ATTRACTIONS/A - TOURIST ATTRACTIONS
 Region/Area: WEST MIDLANDS WEST MIDLANDS

Description: MOTOR CENTRE
 Street: OFF THE B4100
 District: GAYDON
 Town: NEAR WARWICK
 Post Code: CV35 0BJ
 Planning Authority:

Location: Free Standing (PPS6 Out of Town)
 Location Sub Category: Out of Town
 Use Class: D2

Population within 500m: 0
 Population within 1 Mile: 1,001 to 5,000
 Population within 5 Miles: 5,001 to 25,000
 Car ownership within 5 Miles: 0.6 to 1.0
 Reason for blank public transport table: No local PT

Is site associated with a travel plan: No
 If not, are there any plans to implement a Travel Plan in the future?
 Is survey data available before the implementation of the Travel Plan?
 Is the location of the site hilly or flat: Flat
 Urban Regeneration:

No. of developments for this Site: 1
 No. of survey Days for this Site: 1

Comments

The site is located south of Coventry, and to the east of Stratford Upon Avon. It is west of Junction 12 of the M40 and is surrounded by open land.

Bus (or tram) site accessibility

1. Is there a site specific company bus service associated with the development?: Yes
2. If Yes to question 1, for how many years: 0

11. Please enter general comments/views about the relevance, quality and importance of public transport services relating to this development.

There is no local public transport available.

Design features encouraging non-car modes

12. Pedestrians
None

13. Pedal cycles
None

14. Public transport
None

SITE PHOTO



mode transport limited Lombard House, 145 Great Charles Street Birmingham, B3 3LP

Licence No: 754101

Site reference:	WM-10-A-01
Trade name:	HERITAGE MOTOR CENTRE
Site area (h/a):	25.50
Open since	1993
Total Employees	150
Full Time Employees	90 60%
Part Time Employees	60 40%
Approximate % of total employees working standard 9-5 hours or similar	100%
Percentage Split of Employee Gender	
Male	50%
Female	50%
Name of nearest site	COVENTRY TRANSPORT M.
Distance to nearest similar site	25.0 Km

OPENING TIMES (24 Hour format)

Mon to Thurs	10:00	to	17:00
Friday	10:00	to	17:00
Saturday	10:00	to	17:00
Sunday	10:00	to	17:00

Comments

The site contains a gift shop, licenced cafe, land rover 4 x 4 experience, go kart track and kids mini railway.

On-Site parking

Total no. of parking spaces 422

Number of spaces

Employee 0
Disabled 10
Visitor/Customer 407
OGV parking bays 0
Cycle racks 0
OGV loading bays 0
Mother & Toddler 0
Motorcycle spaces 4

Parking charges No

Comments about the management of the site car park, along with enforcement measures

There is also one space for the site's shuttle bus, included in the total spaces shown.

Site parking surface or non-surface (multi-storey/underground)

Surface

Off-Site parking details

Is there off-site parking available

No

Off-Site parking included in the counts

No

Free On-Street parking available nearby

No

If yes, considered easy to find a space

No

If prepared to pay, easy to find somewhere to park off-site all day

No

Parking restrictions

Area subject to parking restrictions (controlled parking zone - CPZ)

No

Off-Street parking

Off-Street parking available NO

Park & Ride

Park & Ride Type Facility providing relevant means of accessing the site

No

SURVEY DAY DETAILS FOR WM-10-A-01 / 01

mode transport limited Lombard House, 145 Great Charles Street Birmingham, B3 3LP

Licence No: 754101

Site reference: WM-10-A-01 Survey date: 15/02/06 Day of week: Wednesday

Survey type: Manual Count
 AM weather: Mild and Cloudy
 PM weather: Mild and Clear

Initial car park occupancy: 15 Final car park occupancy: 0

BRACKETED ACCUMULATION FIGURES ARE NOT ABSOLUTE

Parking Capacity 24% (422 On-Site Spaces)

Data proportions in %

Motor cars	98	Motor cycles	0	Public service	0
Light goods	2	OGV (1)	0	OGV (2)	0
				Taxis	0

Taxis are included as cars in this survey

Time	Arr 313	Dep 328	Totals 641	Parking Accum
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00	33	6	39	42
09:00-10:00	47	10	57	79
10:00-11:00	41	23	64	97
11:00-12:00	34	28	62	103
12:00-13:00	34	52	86	85
13:00-14:00	54	39	93	100
14:00-15:00	37	46	83	91
15:00-16:00	19	46	65	64
16:00-17:00	13	42	55	35
17:00-18:00	1	36	37	0
18:00-19:00	0	0	0	0
19:00-20:00	0	0	0	0
20:00-21:00	0	0	0	0
21:00-22:00				
22:00-23:00				
23:00-24:00				

Comments

No PSVs, pedal cycles or taxis entered or exited the site during this survey.

SURVEY DAY DETAILS FOR WM-10-A-01 / 02

mode transport limited Lombard House, 145 Great Charles Street Birmingham, B3 3LP

Licence No: 754101

Site reference: WM-10-A-01 Survey date: 15/02/06 Day of week: Wednesday

Vehicles surveyed: OGV

Data proportions in % OGV (1) 100 OGV (2) 0

1 occupant per OGV is assumed, and included in the vehicle occupants count

Time	Arr 1	Dep 1	Totals 2	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00	0	0	0	(0)
09:00-10:00	1	1	2	(0)
10:00-11:00	0	0	0	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	0	0	0	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00				
22:00-23:00				
23:00-24:00				

APPENDIX I – Gravity Distribution Model

LA/Districts/MSOAs/LSOAs

Outer Districts

Distance (km)

Resident Population (2011 Census)

Pop/Dist

Percent

Pop/Dist(Weighted)

Weighted Percent

Weighting Factor:
1



MSOA - Mid Layer (Population Centres - Weighted Centroids)

ED2003652 : Aylesbury Vale 001 - Akeley	14.1	8623	611	0.46%	611	0.46%
ED2003653 : Aylesbury Vale 002 - Buckingham (N)	14.5	6469	447	0.33%	447	0.33%
ED2003654 : Aylesbury Vale 003 - Newton Longville	22.2	5531	249	0.19%	249	0.19%
ED2003655 : Aylesbury Vale 004 - Steeple Claydon	9.5	9456	990	0.74%	990	0.74%
ED2003656 : Aylesbury Vale 005 - Window	18.0	5725	318	0.24%	318	0.24%
ED2003657 : Aylesbury Vale 006 - Great Brickhill	26.2	6053	231	0.17%	231	0.17%
ED2003658 : Aylesbury Vale 007 - Wing	27.8	7041	253	0.19%	253	0.19%
ED2003659 : Aylesbury Vale 008 - Quainton	18.8	8334	444	0.33%	444	0.33%
ED2003660 : Aylesbury Vale 009 - Inghoe Aston	35.6	9544	268	0.20%	268	0.20%
ED2003661 : Aylesbury Vale 010 - Westcott	11.3	5750	507	0.38%	507	0.38%
ED2003662 : Aylesbury Vale 011 - Water Mead	25.1	6266	249	0.19%	249	0.19%
ED2003663 : Aylesbury Vale 012 - Berfields	23.0	5478	238	0.18%	238	0.18%
ED2003664 : Aylesbury Vale 013 - Quarrendon	24.2	6187	256	0.19%	256	0.19%
ED2003665 : Aylesbury Vale 014 - Broughton	26.4	5896	223	0.17%	223	0.17%
ED2003666 : Aylesbury Vale 015 - Aylesbury	25.3	6723	266	0.20%	266	0.20%
ED2003667 : Aylesbury Vale 016 - Fairford Leys	24.0	6398	269	0.20%	269	0.20%
ED2003668 : Aylesbury Vale 017 - Bedgrove	27.3	8804	323	0.24%	323	0.24%
ED2003669 : Aylesbury Vale 018 - Southcourt	25.4	6912	272	0.20%	272	0.20%
ED2003670 : Aylesbury Vale 019 - Harvey Road, Aylesbury	26.5	8726	329	0.25%	329	0.25%
ED2003671 : Aylesbury Vale 020 - Walton Hall	25.8	5883	228	0.17%	228	0.17%
ED2003672 : Aylesbury Vale 021 - Stoke Mandeville	30.1	9641	321	0.24%	321	0.24%
ED2003673 : Aylesbury Vale 022 - Haddenham	21.8	8105	372	0.28%	372	0.28%
ED2003674 : Aylesbury Vale 023 - Long Crendon	18.6	5259	283	0.21%	283	0.21%
ED2003675 : Aylesbury Vale 024 - Wendover	32.1	8334	259	0.19%	259	0.19%
ED2005940 : Oxford 001 - Cotteslowe	17.2	5866	341	0.25%	341	0.25%
ED2005941 : Oxford 002 - Summertown	17.3	7209	416	0.31%	416	0.31%
ED2005942 : Oxford 003 - Cherwell School	18.6	6750	364	0.27%	364	0.27%
ED2005943 : Oxford 004 - New Marston	18.0	6259	349	0.26%	349	0.26%
ED2005944 : Oxford 005 - Northcote	17.9	7013	407	0.30%	407	0.30%
ED2005945 : Oxford 006 - Headington	18.2	10495	575	0.43%	575	0.43%
ED2005946 : Oxford 007 - Headington Quarry	17.9	7990	447	0.33%	447	0.33%
ED2005947 : Oxford 008 - Oxford	19.7	16342	828	0.62%	828	0.62%
ED2005948 : Oxford 009 - Osney	20.2	6820	338	0.25%	338	0.25%
ED2005949 : Oxford 010 - Wood Farm	19.1	7303	383	0.29%	383	0.29%
ED2005950 : Oxford 011 - Morrell Avenue, Oxford	20.0	11282	563	0.42%	563	0.42%
ED2005951 : Oxford 012 - New Hinksey	21.2	5944	281	0.21%	281	0.21%
ED2005952 : Oxford 013 - Lye Valley	20.3	14349	705	0.53%	705	0.53%
ED2005953 : Oxford 014 - Larkrise Primary School	20.8	5713	275	0.21%	275	0.21%
ED2005954 : Oxford 015 - Cowley	21.4	9640	451	0.34%	451	0.34%
ED2005955 : Oxford 016 - Littlemore	22.2	9863	444	0.33%	444	0.33%
ED2005956 : Oxford 017 - Ballour Road, Oxford	21.9	6431	279	0.21%	279	0.21%
ED2005957 : Oxford 018 - Greater Leys	22.6	6937	307	0.23%	307	0.23%
ED2005681 : South Northamptonshire 001 - Nether Heyford	34.4	8128	236	0.18%	236	0.18%
ED2005682 : South Northamptonshire 002 - Denton	40.9	6358	156	0.12%	156	0.12%
ED2005683 : South Northamptonshire 003 - Blisworth	32.8	13255	405	0.30%	405	0.30%
ED2005684 : South Northamptonshire 004 - Greens Norton	26.5	7984	301	0.23%	301	0.23%
ED2005685 : South Northamptonshire 005 - Paulerspury	25.6	8066	315	0.24%	315	0.24%
ED2005686 : South Northamptonshire 006 - Chipping Warden	20.1	7461	372	0.28%	372	0.28%
ED2005687 : South Northamptonshire 007 - Silverstone	19.8	5920	299	0.22%	299	0.22%
ED2005688 : South Northamptonshire 008 - Potterybury	23.3	8671	372	0.28%	372	0.28%
ED2005689 : South Northamptonshire 009 - Brackley (N)	13.5	7641	567	0.42%	567	0.42%
ED2005690 : South Northamptonshire 010 - Brackley (S)	12.6	5377	426	0.32%	426	0.32%
ED2005691 : South Northamptonshire 011 - Farthinghoe	13.4	6328	474	0.35%	474	0.35%
ED2005958 : South Oxfordshire 001 - Thame (NE)	22.1	5675	257	0.19%	257	0.19%
ED2005959 : South Oxfordshire 002 - Stanton St Johns	19.5	5556	285	0.21%	285	0.21%
ED2005960 : South Oxfordshire 003 - Thame (S)	22.5	5886	262	0.20%	262	0.20%
ED2005961 : South Oxfordshire 004 - Tiddington	19.3	6640	345	0.26%	345	0.26%
ED2005962 : South Oxfordshire 005 - Chinnor	28.6	8294	290	0.22%	290	0.22%
ED2005963 : South Oxfordshire 006 - Clifton Hampden	28.3	8166	289	0.22%	289	0.22%
ED2005964 : South Oxfordshire 007 - Warberough	29.0	7261	251	0.19%	251	0.19%
ED2005965 : South Oxfordshire 008 - Watlington	31.8	5451	172	0.13%	172	0.13%
ED2005966 : South Oxfordshire 009 - Ladygrove	34.3	8043	234	0.18%	234	0.18%
ED2005967 : South Oxfordshire 010 - Brasenose	35.1	5731	163	0.12%	163	0.12%
ED2005968 : South Oxfordshire 011 - Ewelme	34.0	7670	225	0.17%	225	0.17%
ED2005969 : South Oxfordshire 012 - Wallingford	35.1	9141	261	0.19%	261	0.19%
ED2005970 : South Oxfordshire 013 - Fleet Meadow	35.5	5635	159	0.12%	159	0.12%
ED2005971 : South Oxfordshire 014 - Queensway, Didcot (S)	36.1	5731	159	0.12%	159	0.12%
ED2005972 : South Oxfordshire 015 - West Hagbourne	38.5	7982	207	0.16%	207	0.16%
ED2005973 : South Oxfordshire 016 - Henley-on-Thames (W)	45.2	5550	123	0.09%	123	0.09%
ED2005974 : South Oxfordshire 017 - Henley-on-Thames (S)	46.0	6069	132	0.10%	132	0.10%
ED2005975 : South Oxfordshire 018 - Woodcote	43.5	7910	182	0.14%	182	0.14%
ED2005976 : South Oxfordshire 019 - Rotherfield Grey	47.3	6130	129	0.10%	129	0.10%
ED2005977 : South Oxfordshire 020 - Kidmore End	46.0	5736	125	0.09%	125	0.09%
ED2005993 : West Oxfordshire 001 - Chipping Norton	28.1	6337	226	0.17%	226	0.17%
ED2005994 : West Oxfordshire 002 - Sandford St Martin	21.8	6078	279	0.21%	279	0.21%
ED2005995 : West Oxfordshire 003 - Shilton-under Wychedwood	32.1	5907	184	0.14%	184	0.14%
ED2005996 : West Oxfordshire 004 - Woodstock	16.7	8027	482	0.36%	482	0.36%
ED2005997 : West Oxfordshire 005 - Charlbury	23.7	5555	234	0.18%	234	0.18%
ED2005998 : West Oxfordshire 006 - Long Hanborough	20.7	5816	281	0.21%	281	0.21%
ED2005999 : West Oxfordshire 007 - Minster Lovell	25.0	6169	213	0.16%	213	0.16%
ED2006000 : West Oxfordshire 008 - Witney (E)	26.9	11829	439	0.33%	439	0.33%
ED2006001 : West Oxfordshire 009 - Deer Park, Witney (W)	29.3	5613	192	0.14%	192	0.14%
ED2006002 : West Oxfordshire 010 - Burwell, Witney	28.5	10080	354	0.26%	354	0.26%
ED2006003 : West Oxfordshire 011 - Stanton Harcourt	22.2	5416	244	0.18%	244	0.18%
ED2006004 : West Oxfordshire 012 - Burford	36.6	5574	152	0.11%	152	0.11%
ED2006005 : West Oxfordshire 013 - Carterton (N)	35.3	9100	258	0.19%	258	0.19%
ED2006006 : West Oxfordshire 014 - Carterton (S)	36.1	6669	185	0.14%	185	0.14%
ED2006007 : West Oxfordshire 015 - Bampton	34.6	6609	191	0.14%	191	0.14%

MSOA - Lower Layer (Population Centres - Weighted Centroids)

E01028479 : Cherwell 001A - Millington	27.0	1,249	46	0.03%	46	0.03%
E01028480 : Cherwell 001B - Waddington	24.5	1,468	60	0.04%	60	0.04%
E01028508 : Cherwell 001C - Hornton	28.1	1,089	39	0.03%	39	0.03%
E01028509 : Cherwell 001D - Wroxton	25.0	1,527	61	0.05%	61	0.05%
E01028441 : Cherwell 002A - Harwell Fields	22.9	2,474	108	0.08%	108	0.08%
E01028443 : Cherwell 002C - North Oxfordshire Academy	23.2	1,464	63	0.05%	63	0.05%
E01028444 : Cherwell 002D - Hill View Primary School	22.8	1,533	67	0.05%	67	0.05%
E01028493 : Cherwell 002E - Usher Drive, Harwell Fields	23.6	1,632	69	0.05%	69	0.05%
E01028493 : Cherwell 002F - Hardwick	23.3	1,347	58	0.04%	58	0.04%
E01028445 : Cherwell 003A - Blisworth Industrial Estate	22.6	1,458	65	0.05%	65	0.05%
E01028446 : Cherwell 003B - Ruscott	22.1	1,544	70	0.05%	70	0.05%
E01028447 : Cherwell 003C - Townsend, Neithrop	21.8	1,260	58	0.04%	58	0.04%
E01028448 : Cherwell 003D - Gillett Road, Neithrop	21.6	1,606	74	0.06%	74	0.06%
E01028435 : Cherwell 004A - Castle Quay Shopping Centre	20.8	1,696	82	0.06%	82	0.06%
E01028437 : Cherwell 004C - Wildmere Industrial Estate	21.1	1,592	75	0.06%	75	0.06%
E01028438 : Cherwell 004D - Spiceball Park	21.3	1,687	79	0.06%	79	0.06%
E01028439 : Cherwell 004E - Winchester Close, Grimsbury	20.7	1,423	69	0.05%	69	0.05%
E01028440 : Cherwell 004F - South Street, Grimsbury	20.9	1,634	78	0.06%	78	0.06%
E01028491 : Cherwell 004G - Thorpe Way, Grimsbury	20.5	1,433	70	0.05%	70	0.05%
E01028492 : Cherwell 004H - Banbury	20.5	1,415	69	0.05%	69	0.05%
E01028449 : Cherwell 005A - Bretch Hill (E)	21.7	1,354	63	0.05%	63	0.05%
E01028450 : Cherwell 005B - Edmunds Road	22.0	1,461	66	0.05%	66	0.05%
E01028451 : Cherwell 005C - Trinity Close, Bretch Hill	22.9	1,308	57	0.04%	57	0.04%
E01028452 : Cherwell 005D - Cromwell Road, Bretch Hill	22.3	1,393	62	0.05%	62	0.05%
E01028453 : Cherwell 005E - Dover Avenue, Bretch Hill	22.5	1,359	60	0.05%	60	0.05%
E01028454 : Cherwell 005F - Miller Road, Neithrop	22.2	1,595	72	0.05%	72	0.05%
E01028430 : Cherwell 006A - People's Park, Banbury	21.3	1,477	69	0.05%	69	0.05%
E01028431 : Cherwell 006B - Leigh Grove, Banbury	20.8	1,515	73	0.05%	73	0.05%
E01028432 : Cherwell 006C - Banbury Academy	20.6	1,551	75	0.06%	75	0.06%
E01028433 : Cherwell 006D - Blessed George Napier Catholic School and Sixth Form College, Banbury	19.7	1,678	85	0.06%	85	0.06%
E01028434 : Cherwell 006E - Tudor Hall School	21.1	1,555	74	0.06%	74	0.06%
E01028426 : Cherwell 007A - Bankside, Cherwell Heights	19.5	1,378	71	0.05%	71	0.05%
E01028427 : Cherwell 007B - Upper Windsor Street, Calthorpe	20.5	1,524	74	0.06%	74	0.06%
E01028428 : Cherwell 007C - Chatsworth Drive, Cherwell Heights	19.4	1,443	74	0.06%	74	0.06%
E01028429 : Cherwell 007D - Coppice Close, Cherwell Heights	20.0	1,064	53	0.04%	53	0.04%
E01028422 : Cherwell 008A - Tavford	16.6	1,548	94	0.07%	94	0.07%
E01028433 : Cherwell 008B - West Alderbury	16.4	1,463	89	0.07%	89	0.07%
E01028475 : Cherwell 008C - Bodicote	18.5	2,126	115	0.09%	115	0.09%
E01028476 : Cherwell 008D - Bloxham (N)	19.8	2,405	122	0.09%	122	0.09%
E01028474 : Cherwell 009A - Milcombe	20.0	1,582	79	0.06%	79	0.06%
E01028485 : Cherwell 009B - Hoop Norton (N)	25.2	1,313	52	0.04%	52	0.04%
E01028486 : Cherwell 009C - Wigginton	24.8	1,283	52	0.04%	52	0.04%
E01028503 : Cherwell 009D - Broughton	22.7	1,151	51	0.04%	51	0.04%
E01028504 : Cherwell 009E - Swaciffle	27.0	1,323	56	0.04%	56	0.04%
E01028481 : Cherwell 010A - Deddington (S)	14.4	1,471	102	0.08%	102	0.08%
E01028482 : Cherwell 010B - Barford St Michael	16.6	1,224	74	0.06%	74	0.06%
E01028505 : Cherwell 010C - Caulcott	8.4	1,758	210	0.16%	210	0.16%
E01028506 : Cherwell 010D - Souldern	8.4	1,753	210	0.16%	210	0.16%
E01028507 : Cherwell 010E - Middle Aston	12.4	1,428	115	0.09%	115	0.09%
E01028425 : Cherwell 011A - Ambrosden (W)	5.1	2,248	441	0.33%	441	0.33%
E01028477 : Cherwell 011B - Bucknell	5.6	1,536	274	0.20%	274	0.20%
E01028478 : Cherwell 011C - Caversfield	0.6	1,481	2395	1.79%	2395	1.79%
E01028483 : Cherwell 011D - Stratton Audley	8.4	1,270	152	0.11%	152	0.11%
E01028484 : Cherwell 011E - Fringford	4.6	1,093	239	0.18%	239	0.18%
E01028499 : Cherwell 011F - Launton	2.6	1,521	580	0.43%	580	0.43%
E01028459 : Cherwell 012A - Lime Crescent, Southwold	0.7	1,476	2161	1.62%	2161	1.62%
E01028460 : Cherwell 012B - Lily Close, Bure Park	1.6	2,159	1373	1.03%	1373	1.03%
E01028461 : Cherwell 012C - Willow Drive, Southwold	1.1	1,748	1593	1.19%	1593	1.19%
E01028462 : Cherwell 012D - Taylor Close, Bure Park	1.4	1,631	1196	0.89%	1196	0.89%
E01028455 : Cherwell 013A - Manston Park	1.2	1,442	1216	0.91%	1216	0.91%
E01028456 : Cherwell 013B - Bassett Avenue	1.4	1,463	1060	0.79%	1060	0.79%
E01028457 : Cherwell 013C - The Cooper School, Bicester	1.0	1,396	1344	1.01%	1344	1.01%
E01028458 : Cherwell 013D - Glory Farm, Bicester	0.8	1,545	2038	1.52%	2038	1.52%
E01028467 : Cherwell 013E - Bicester North Station	1.9	1,581	815	0.61%	815	0.61%
E01028466 : Cherwell 014A - The Bicester School	2.6	1,730	675	0.50%	675	0.50%
E01028469 : Cherwell 014B - Bunyan Road, Bicester	2.3	1,527	678	0.51%	678	0.51%
E01028470 : Cherwell 014C - Huston Street, Bicester	1.9	1,698	888	0.66%	888	0.66%
E01028471 : Cherwell 014D - Orchard Way, Bicester	2.4	1,366	562	0.42%	562	0.42%
E01028472 : Cherwell 014E - Hemingway Drive, Bicester	2.7	1,295	474	0.35%	474	0.35%
E01028473 : Cherwell 014F - Eden Way, Bicester	3.0	1,539	507	0.38%	507	0.38%
E01028463 : Cherwell 015A - Mallards Way, Bicester	2.4	2,523	1030	0.77%	1030	0.77%
E01028464 : Cherwell 015B - Peregrine Way, Bicester	3.1	1,428	459	0.34%	459	0.34%
E01028465 : Cherwell 015C - Avocet Way, Bicester	2.9	1,460	509	0.38%	509	0.38%
E01028468 : Cherwell 015D - Chapel Street, Bicester	2.4	1,847	784	0.59%	784	0.59%
E01028424 : Cherwell 016A - Chesterton	4.7	1,602	344	0.26%	344	0.26%
E01028497 : Cherwell 016B - Weston On The Green	9.7	1,422	146	0.11%	146	0.11%
E01028498 : Cherwell 016C - Snipton-on-Cherwell	11.7	1,633	140	0.10%	140	0.10%
E01028500 : Cherwell 016D - Arncott	7.8	2,108	270	0.20%	270	0.20%
E01028501 : Cherwell 016E - Murcott	9.0	1,281	143	0.11%	143	0.11%
E01028502 : Cherwell 016F - Islip	12.1	1,230	102	0.08%	102	0.08%
E01028487 : Cherwell 017A - Grovelands, Kidlington	15.0	1,274	85	0.06%	85	0.06%
E01028489 : Cherwell 017B - Church Street, Kidlington	14.2	1,397	99	0.07%	99	0.07%
E01028490 : Cherwell 017C - Marlborough Avenue, Kidlington	14.5	1,208	83	0.06%	83	0.06%
E01028491 : Cherwell 017D - Exeter Road, Kidlington	14.5	1,499	104	0.08%	104	0.08%
E01028494 : Cherwell 017E - Bellenger Way, Kidlington	15.2	1,166	77	0.06%	77	0.06%
E01028492 : Cherwell 018A - Churchill Road, Kidlington	14.8	1,474	100	0.07%	100	0.07%
E01028493 : Cherwell 018B - Queens Avenue, Kidlington	14.2	1,410	99	0.07%	99	0.07%
E01028495 : Cherwell 018C - Norton Avenue, Kidlington	15.1	1,313	87	0.06%	87	0.06%
E01028496 : Cherwell 018D - Beech Crescent, Kidlington	15.4	1,401	91	0.07%	91	0.07%
E01028488 : Cherwell 019A - Oxford Airport	14.8	1,581	107	0.08%	107	0.08%
E01028510 : Cherwell 019B - Bagbroke	16.3	1,599	98	0.07%	98	0.07%
E01028511 : Cherwell 019C - Oxford Parkway	14.9	1,609	108	0.08%	108	0.08%
E01028512 : Cherwell 019D - Yarnton	16.8	1,443	86	0.06%	86	0.06%
Total		4,104,953	133,699		133,699	

1231569 - Routes to Bicester Heritage

District/Location	Route - Local Assignment (Bicester)	Total Vehicles (%)	Primary Route %	Second Route Option - Local Assignment (Bicester) - 0 to 5 mins diff in journey time	Total Vehicles (%) - Second Route
Bedford	B	2.28%	2.28%		0.00%
Central Bedfordshire	B	5.58%	5.58%		0.00%
Chilton	D	1.57%	0.79%	C	0.78%
Cotswold	A	1.58%	0.79%	D	0.79%
Deacon	A	1.71%	0.85%		0.86%
Owerty	A	1.47%	0.73%	B	0.74%
E01028422 - Cherwell 008A - Twyford	A	0.07%	0.07%		0.00%
E01028423 - Cherwell 008B - West Ashbury	A	0.07%	0.07%		0.00%
E01028424 - Cherwell 016A - Chesterton	D	0.26%	0.26%		0.00%
E01028425 - Cherwell 011A - Ambrosden (W)	C	0.31%	0.31%		0.00%
E01028426 - Cherwell 007A - Borelde, Cherwell Heights	A	0.05%	0.05%		0.00%
E01028427 - Cherwell 007B - Upper Windsor Street, Calthorpe	A	0.06%	0.06%		0.00%
E01028428 - Cherwell 007C - Chalfonts Drive, Cherwell Heights	A	0.06%	0.06%		0.00%
E01028428 - Cherwell 007D - Coptic Close, Cherwell Heights	A	0.04%	0.04%		0.00%
E01028430 - Cherwell 008A - Pheggs Park, Banbury	A	0.05%	0.05%		0.00%
E01028431 - Cherwell 008B - Leigh Grove, Banbury	A	0.05%	0.05%		0.00%
E01028432 - Cherwell 008C - Banbury Academy	A	0.06%	0.06%		0.00%
E01028433 - Cherwell 008D - General George Hagan Catholic School and St. Pauls Farm College, Banbury	A	0.06%	0.06%		0.00%
E01028434 - Cherwell 008E - Tudor Hall School	A	0.06%	0.06%		0.00%
E01028435 - Cherwell 008A - Castle Quay Shopping Centre	A	0.06%	0.06%		0.00%
E01028437 - Cherwell 008C - Widdows Industrial Estate	A	0.06%	0.06%		0.00%
E01028438 - Cherwell 004D - Spicoball Park	A	0.06%	0.06%		0.00%
E01028439 - Cherwell 004E - Winchester Close, Grimbury	A	0.05%	0.05%		0.00%
E01028440 - Cherwell 004L - South Street, Grimbury	A	0.05%	0.05%		0.00%
E01028441 - Cherwell 002A - Harwell Fields	A	0.08%	0.08%		0.00%
E01028443 - Cherwell 002C - North Oxlefordline Academy	A	0.05%	0.05%		0.00%
E01028444 - Cherwell 002D - Hill View Primary School	A	0.05%	0.05%		0.00%
E01028445 - Cherwell 003A - Beaumont Industrial Estate	A	0.05%	0.05%		0.00%
E01028446 - Cherwell 007B - Turcot	A	0.05%	0.05%		0.00%
E01028447 - Cherwell 003C - Townland, Neithrop	A	0.04%	0.04%		0.00%
E01028448 - Cherwell 003D - Gifford Road, Neithrop	A	0.06%	0.06%		0.00%
E01028449 - Cherwell 005A - Breach Hill (E)	A	0.05%	0.05%		0.00%
E01028450 - Cherwell 009B - Edmunds Road	A	0.05%	0.05%		0.00%
E01028451 - Cherwell 005C - Trinity Close, Breach Hill	A	0.04%	0.04%		0.00%
E01028452 - Cherwell 005D - Cromwell Road, Breach Hill	A	0.05%	0.05%		0.00%
E01028453 - Cherwell 005E - Lower Avenue, Breach Hill	A	0.05%	0.05%		0.00%
E01028454 - Cherwell 005F - Miller Road, Neithrop	A	0.05%	0.05%		0.00%
E01028455 - Cherwell 013A - Marston Park	K	0.91%	0.91%		0.00%
E01028456 - Cherwell 013B - Bassett Avenue	H	0.79%	0.79%		0.00%
E01028457 - Cherwell 013C - The Copper School, Bicester	H	1.01%	1.01%		0.00%
E01028458 - Cherwell 013D - Old Farm, Bicester	E	1.52%	0.76%	H	0.76%
E01028459 - Cherwell 012A - Lime Crescent, Southweald	H	1.62%	0.81%		0.81%
E01028460 - Cherwell 012B - Lily Close, Bure Park	M	1.03%	1.03%		0.00%
E01028461 - Cherwell 012C - Willow Close, Southweald	H	1.18%	0.59%	I	0.59%
E01028462 - Cherwell 012D - Taylor Close, Bure Park	H	0.89%	0.44%	J	0.45%
E01028463 - Cherwell 012E - Marlton Way, Bicester	C	0.77%	0.39%	H	0.39%
E01028464 - Cherwell 012F - Parkway Way, Bicester	C	0.84%	0.42%		0.42%
E01028465 - Cherwell 013C - Ancer Way, Bicester	C	0.38%	0.38%		0.00%
E01028466 - Cherwell 016A - The Bicester School	J	0.59%	0.29%	J	0.29%
E01028467 - Cherwell 013E - Bicester North Station	H	0.61%	0.61%		0.00%
E01028468 - Cherwell 015B - Chapel Street, Bicester	H	0.59%	0.29%	J	0.29%
E01028469 - Cherwell 014B - Bunnet Road, Bicester	L	0.25%	0.25%	H	0.25%
E01028470 - Cherwell 014C - Hudson Street, Bicester	L	0.66%	0.33%	H	0.33%
E01028471 - Cherwell 014D - Orchard Way, Bicester	H	0.24%	0.12%	H	0.12%
E01028472 - Cherwell 014E - Hempsay Drive, Bicester	D	0.18%	0.18%		0.00%
E01028473 - Cherwell 014F - Eden Way, Bicester	D	0.38%	0.19%	H	0.19%
E01028474 - Cherwell 009A - Milcombe	A	0.06%	0.06%		0.00%
E01028475 - Cherwell 008C - Biddicate	A	0.09%	0.09%		0.00%
E01028476 - Cherwell 008D - Blotston (N)	A	0.09%	0.09%		0.00%
E01028477 - Cherwell 011B - Beckford	L	0.26%	0.13%	A	0.13%
E01028478 - Cherwell 011C - Coverfield	E	1.79%	0.89%	F	0.90%
E01028479 - Cherwell 001A - Millington	A	0.03%	0.03%		0.00%
E01028480 - Cherwell 001B - Wardington	A	0.04%	0.04%		0.00%
E01028481 - Cherwell 010A - Dodington (N)	A	0.08%	0.04%	D	0.04%
E01028482 - Cherwell 010B - Barber St Michael	A	0.06%	0.03%	D	0.03%
E01028483 - Cherwell 011D - Stratton Audley	B	0.11%	0.11%		0.00%
E01028484 - Cherwell 011E - Kingsford	B	0.18%	0.09%	D	0.09%
E01028485 - Cherwell 009B - Hook Norton (N)	A	0.02%	0.02%	D	0.02%
E01028486 - Cherwell 002C - Wigington	D	0.04%	0.02%	D	0.02%
E01028487 - Cherwell 017A - Grosvenor, Kidlington	D	0.06%	0.06%		0.00%
E01028488 - Cherwell 019A - Oxford Airport	D	0.08%	0.08%		0.00%
E01028489 - Cherwell 017B - Church Street, Kidlington	D	0.04%	0.04%	C	0.04%
E01028490 - Cherwell 017C - Marlborough Avenue, Kidlington	D	0.05%	0.03%	C	0.03%
E01028491 - Cherwell 017D - Exeter Road, Kidlington	D	0.08%	0.04%	C	0.04%
E01028492 - Cherwell 018A - Church Hill Road, Kidlington	D	0.07%	0.04%	C	0.04%
E01028493 - Cherwell 018B - Queens Avenue, Kidlington	D	0.07%	0.04%	C	0.04%
E01028494 - Cherwell 017E - Bellinger Way, Kidlington	D	0.06%	0.03%	C	0.03%
E01028495 - Cherwell 018C - Morton Avenue, Kidlington	C	0.06%	0.03%	C	0.03%
E01028496 - Cherwell 018D - Beach Crescent, Kidlington	D	0.07%	0.03%	C	0.03%
E01028497 - Cherwell 018E - Weston On The Green	D	0.11%	0.05%	C	0.05%
E01028498 - Cherwell 018C - Ship-on-on-Cherwell	D	0.10%	0.10%		0.00%
E01028499 - Cherwell 011F - Laughton	B	0.41%	0.20%	C	0.21%
E01028500 - Cherwell 014D - Amcotts	C	0.20%	0.20%		0.00%
E01028501 - Cherwell 018E - Murcott	C	0.11%	0.05%	D	0.05%
E01028502 - Cherwell 018F - Higg	D	0.08%	0.04%	C	0.04%
E01028503 - Cherwell 005D - Broughton	A	0.04%	0.04%		0.00%
E01028504 - Cherwell 008E - Westcliffe	A	0.04%	0.04%		0.00%
E01028505 - Cherwell 010C - Caulcott	D	0.16%	0.08%	H	0.08%
E01028506 - Cherwell 010D - Souldern	A	0.16%	0.16%		0.00%
E01028507 - Cherwell 010E - Middle Acton	D	0.09%	0.04%	A	0.04%
E01028508 - Cherwell 010C - Horton	A	0.01%	0.01%		0.00%
E01028509 - Cherwell 010D - Wroxton	A	0.05%	0.05%		0.00%
E01028510 - Cherwell 018A - Hagbourne	D	0.07%	0.07%	D	0.00%
E01028511 - Cherwell 019C - Oxford Parkway	D	0.04%	0.04%	C	0.04%
E01028512 - Cherwell 019D - Vandon	D	0.06%	0.03%	C	0.03%
E01028513 - Cherwell 004E - Thorpe Way, Grimbury	A	0.05%	0.05%		0.00%
E01028514 - Cherwell 004H - Banbury	A	0.05%	0.05%		0.00%
E01028515 - Cherwell 002E - Upper Street, Harwell Fields	A	0.05%	0.05%		0.00%
E01028516 - Cherwell 002F - Hartwick	A	0.04%	0.04%		0.00%
E01028517 - Aylesbury Vale 001 - Akeley	B	0.46%	0.46%		0.00%
E01028518 - Aylesbury Vale 002 - Beckingham (N)	B	0.33%	0.33%		0.00%
E01028519 - Aylesbury Vale 003 - Newton Longville	B	0.19%	0.19%		0.00%
E01028520 - Aylesbury Vale 004 - Gosport Clays	B	0.74%	0.74%		0.00%
E01028521 - Aylesbury Vale 005 - Winslow	B	0.24%	0.24%		0.00%
E01028522 - Aylesbury Vale 006 - Great Brickhill	B	0.17%	0.17%		0.00%
E01028523 - Aylesbury Vale 007 - Wing	B	0.19%	0.19%		0.00%
E01028524 - Aylesbury Vale 008 - Quainton	B	0.17%	0.17%		0.00%
E01028525 - Aylesbury Vale 009 - Highgate Station	B	0.20%	0.20%		0.00%
E01028526 - Aylesbury Vale 010 - Westcott	C	0.18%	0.18%	B	0.18%

E02003662	Aylesbury Vale011 - Water Mead	C	0.19%	0.19%			0.00%
E02003663	Aylesbury Vale012 - Barnfields	C	0.18%	0.19%		B	0.00%
E02003664	Aylesbury Vale013 - Quatredon	C	0.19%	0.19%			0.00%
E02003665	Aylesbury Vale014 - Broughton	C	0.17%	0.17%			0.00%
E02003666	Aylesbury Vale015 - Aylesbury	C	0.20%	0.20%			0.00%
E02003667	Aylesbury Vale016 - Fairfield Lays	C	0.20%	0.20%			0.00%
E02003668	Aylesbury Vale017 - Bedgebury	C	0.21%	0.21%			0.00%
E02003669	Aylesbury Vale018 - Southcott	C	0.20%	0.20%			0.00%
E02003670	Aylesbury Vale019 - Harvey Road, Aylesbury	C	0.25%	0.25%			0.00%
E02003671	Aylesbury Vale020 - Waterhill	C	0.17%	0.17%			0.00%
E02003672	Aylesbury Vale021 - Stoke Mandeville	C	0.24%	0.24%			0.00%
E02003673	Aylesbury Vale022 - Haseldenham	C	0.24%	0.24%		D	0.14%
E02003674	Aylesbury Vale023 - Long Credenon	C	0.21%	0.21%			0.00%
E02003675	Aylesbury Vale024 - Winslow	C	0.19%	0.19%			0.00%
E02005681	South Northamptonshire 001 - Mithen Heyford	A	0.18%	0.18%			0.00%
E02005682	South Northamptonshire 002 - Davton	A	0.12%	0.08%		B	0.06%
E02005683	South Northamptonshire 003 - Blisworth	A	0.30%	0.15%		B	0.15%
E02005684	South Northamptonshire 004 - Great Northon	A	0.23%	0.11%		B	0.11%
E02005685	South Northamptonshire 005 - Paulesbury	A	0.24%	0.12%		B	0.12%
E02005686	South Northamptonshire 006 - Chipping Waddell	A	0.28%	0.28%			0.00%
E02005687	South Northamptonshire 007 - Silsoe	A	0.22%	0.11%		B	0.11%
E02005688	South Northamptonshire 008 - Potterybury	B	0.28%	0.14%		A	0.14%
E02005689	South Northamptonshire 009 - Brackley (N)	A	0.42%	0.21%		B	0.21%
E02005690	South Northamptonshire 010 - Brackley (S)	A	0.32%	0.16%		B	0.16%
E02005691	South Northamptonshire 011 - Farningham	D	0.25%	0.12%		B	0.12%
E02005940	Oxford 001 - Cottered	D	0.15%	0.15%			0.00%
E02005941	Oxford 002 - Summerdown	D	0.11%	0.11%			0.00%
E02005942	Oxford 003 - Cherwell School	D	0.27%	0.14%		A	0.14%
E02005943	Oxford 004 - New Marston	D	0.26%	0.26%			0.00%
E02005944	Oxford 005 - Northway	D	0.30%	0.30%			0.00%
E02005945	Oxford 006 - Headington	D	0.41%	0.27%		C	0.27%
E02005946	Oxford 007 - Headington Quarry	D	0.33%	0.17%		C	0.17%
E02005947	Oxford 008 - Culham	D	0.62%	0.62%			0.00%
E02005948	Oxford 009 - Dunsy	D	0.21%	0.13%		A	0.13%
E02005949	Oxford 010 - Wood Farm	D	0.29%	0.14%		C	0.14%
E02005950	Oxford 011 - Maral Avenue, Oxford	D	0.42%	0.42%			0.00%
E02005951	Oxford 012 - New Hinkley	D	0.21%	0.21%			0.00%
E02005952	Oxford 013 - Le Vall	D	0.24%	0.24%		C	0.24%
E02005953	Oxford 014 - Larkrise Primary School	D	0.21%	0.21%			0.00%
E02005954	Oxford 015 - Cowley	D	0.34%	0.17%		C	0.17%
E02005955	Oxford 016 - Littlemore	D	0.18%	0.18%			0.00%
E02005956	Oxford 017 - Barford Road, Oxford	D	0.21%	0.21%			0.00%
E02005957	Oxford 018 - Greter Lees	D	0.24%	0.23%			0.00%
E02005958	South Oxfordshire 001 - Thames (N)	D	0.18%	0.18%		D	0.18%
E02005959	South Oxfordshire 002 - Stanton St John	C	0.11%	0.11%		C	0.11%
E02005960	South Oxfordshire 003 - Thames (S)	C	0.26%	0.10%		D	0.16%
E02005961	South Oxfordshire 004 - Tringdon	D	0.26%	0.13%		C	0.13%
E02005962	South Oxfordshire 005 - Clipping	D	0.22%	0.11%		C	0.11%
E02005963	South Oxfordshire 006 - Clifton Hampden	D	0.25%	0.25%			0.00%
E02005964	South Oxfordshire 007 - Warborough	D	0.19%	0.19%			0.00%
E02005965	South Oxfordshire 008 - Wallingford	D	0.33%	0.13%			0.00%
E02005966	South Oxfordshire 009 - Lydbrope	D	0.18%	0.18%			0.00%
E02005967	South Oxfordshire 010 - Brasenose	D	0.12%	0.12%			0.00%
E02005968	South Oxfordshire 011 - Ewelme	D	0.17%	0.17%			0.00%
E02005969	South Oxfordshire 012 - Wallingford	D	0.19%	0.19%			0.00%
E02005970	South Oxfordshire 013 - Fleet Meadow	D	0.22%	0.12%			0.00%
E02005971	South Oxfordshire 014 - Queensway, Didcot (S)	D	0.12%	0.12%			0.00%
E02005972	South Oxfordshire 015 - West Hagbourne	D	0.16%	0.16%			0.00%
E02005973	South Oxfordshire 016 - Henley-on-Thames (W)	D	0.09%	0.09%			0.00%
E02005974	South Oxfordshire 017 - Henley-on-Thames (S)	D	0.10%	0.10%			0.00%
E02005975	South Oxfordshire 018 - Woodcot	D	0.14%	0.14%			0.00%
E02005976	South Oxfordshire 019 - Madingley Camp	D	0.10%	0.10%			0.00%
E02005977	South Oxfordshire 020 - Kidmore End	D	0.09%	0.09%			0.00%
E02005980	West Oxfordshire 001 - Chipping Norton	D	0.17%	0.08%		A	0.08%
E02005984	West Oxfordshire 002 - Sandford St Martin	D	0.24%	0.10%		A	0.14%
E02005989	West Oxfordshire 003 - Sligton-under-Witchwood	D	0.14%	0.14%			0.00%
E02005990	West Oxfordshire 004 - Woodstock	D	0.38%	0.18%		A	0.18%
E02005997	West Oxfordshire 005 - Charlbury	D	0.18%	0.18%			0.00%
E02005998	West Oxfordshire 006 - Long Hanborough	D	0.23%	0.23%			0.00%
E02005999	West Oxfordshire 007 - Minster Lovell	D	0.16%	0.16%			0.00%
E02006000	West Oxfordshire 008 - Witney (E)	D	0.31%	0.31%			0.00%
E02006001	West Oxfordshire 009 - Deep Park, Witney (W)	D	0.14%	0.14%			0.00%
E02006002	West Oxfordshire 010 - Burwell, Witney	D	0.26%	0.26%			0.00%
E02006003	West Oxfordshire 011 - Sutton Hurrend	D	0.18%	0.18%			0.00%
E02006004	West Oxfordshire 012 - Burford	D	0.11%	0.11%			0.00%
E02006005	West Oxfordshire 013 - Carterton (N)	D	0.19%	0.19%			0.00%
E02006006	West Oxfordshire 014 - Carterton (S)	D	0.44%	0.14%			0.00%
E02006007	West Oxfordshire 015 - Banston	D	0.14%	0.14%			0.00%
E02006008	Leam	B	1.11%	1.11%			0.00%
E02006009	Leam	B	1.57%	1.57%			0.00%
E02006010	Milton Keynes	A	4.39%	2.14%		B	2.14%
E02006011	Northampton	D	2.32%	2.32%			0.00%
E02006012	Rugby	A	1.44%	0.73%		B	0.73%
E02006013	South Buckinghamshire	D	1.01%	1.01%			0.00%
E02006014	St Albans	B	2.91%	2.91%			0.00%
E02006015	Stratford-on-Avon	A	1.78%	1.78%			0.00%
E02006016	Tamworth	D	3.02%	3.02%			0.00%
E02006017	Three Rivers	D	1.26%	1.26%			0.00%
E02006018	Valley White Horse	D	3.33%	3.33%			0.00%
E02006019	Wyrewood	A	2.05%	2.05%			0.00%
E02006020	Wellingborough	B	1.13%	1.13%			0.00%
E02006021	West Berkshire	D	2.19%	2.19%			0.00%
E02006022	West Berkshire	D	2.20%	2.20%			0.00%
E02006023	Windsor and Maidenhead	D	2.20%	2.20%			0.00%
E02006024	Wokingham	D	2.20%	2.20%			0.00%
E02006025	Wymondley	D	3.21%	3.21%			0.00%

Route Code	Primary Route	Secondary Route	Total (%)
A	12.28%	0.92%	13.20%
B	32.17%	5.12%	37.29%
C	7.22%	0.94%	8.16%
D	31.80%	1.28%	33.08%
E	0.90%	0.00%	0.90%
F	0.80%	0.90%	1.70%
G	0.00%	0.00%	0.00%
H	2.51%	0.00%	2.51%
I	0.60%	0.60%	1.20%
J	0.00%	0.60%	0.60%
K	1.87%	0.00%	1.87%
L	0.90%	0.00%	0.90%
M	1.91%	0.00%	1.91%
Total	84.97%	15.03%	100.00%

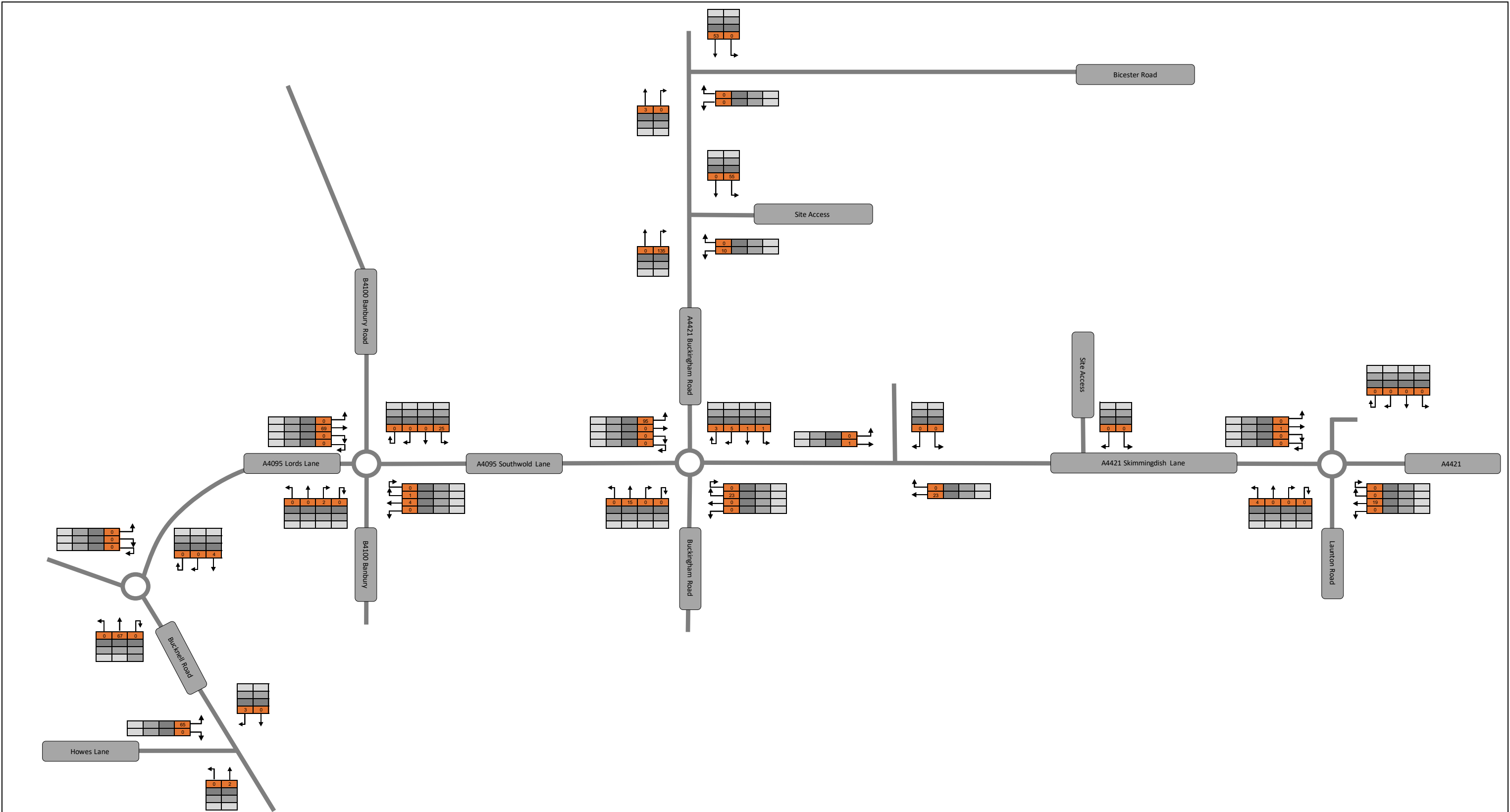
J323569 - Assignment

Route Code	%	Route
A	13.20%	B4100 Banbury Road/A4095 Southwold Lane/A4421 Buckingham Road
B	27.92%	A4421 Buckingham Road (N)
C	9.94%	Charbridge Lane/A4421 Skimmingdish Lane/A4421 Buckingham Road
D	33.88%	A4095 Lords Lane/A4095 Southwold Lane/A4421 Buckingham Road
E	0.90%	Skimmingdish Lane/A4421 Buckingham Road
F	0.90%	Skimmingdish Lane/Fringford Road/A4095 Southwold Lane/A4421 Buckingham Road
G	0.09%	Fringford Road/A4095 Southwold Lane/A4421 Buckingham Road
H	8.00%	Buckingham Road/A4421 Buckingham Road (N)
I	0.60%	A4095 Southwold Lane/A4421 Buckingham Road
J	0.99%	Banbury Road (S)/A4095 Southwold Lane/A4421 Buckingham Road
K	1.67%	Launton Road/A4421 Skimmingdish Lane/A4421 Buckingham Road (N)
L	0.90%	Bucknell Rd
M	1.03%	Local to the A4095 (Lily Close)
100.00%		

13%
28%
10%
34%
1%
1%
0%
8%
1%
1%
2%
1%
1%
100.00%



APPENDIX J – Traffic Turning Flow Diagrams



Legend	
0	Total Vehicles
0	Total HGV
%	% HGV
0	PCU

Notes

Job Title:
Bicester Motion - Brand Experience Centre

Figure Title:
Development Traffic (Left-Turn Only) (AM)

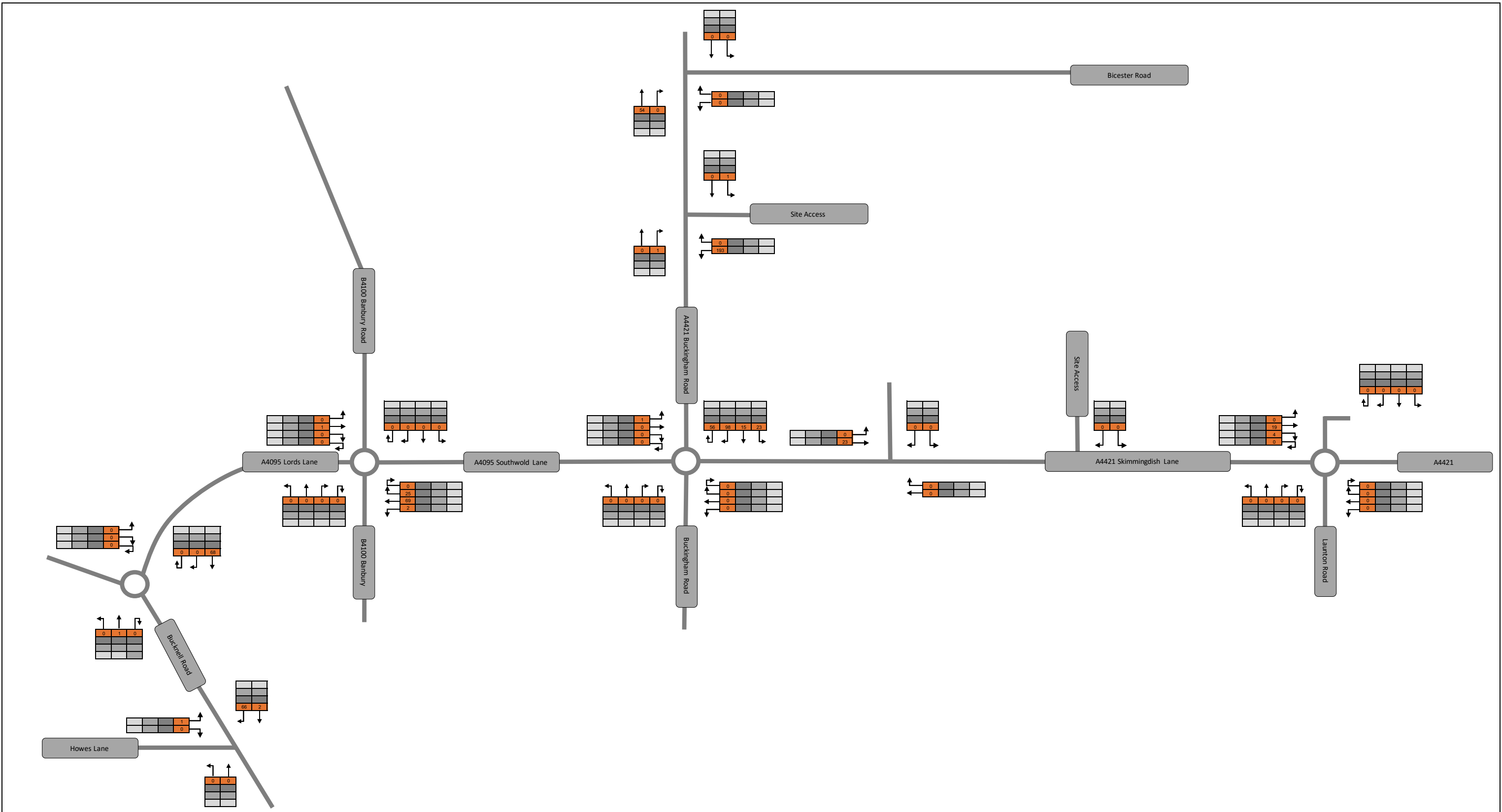
Job No.
J323684

Drawn:
MS

Figure No.
NFDs

Date:
27/11/2020





Legend	
0	Total Vehicles
0	Total HGV
%	% HGV
0	PCU

Notes

Job Title:
Bicester Motion - Brand Experience Centre

Figure Title:
Development Traffic (Left-Turn Only) (PM)

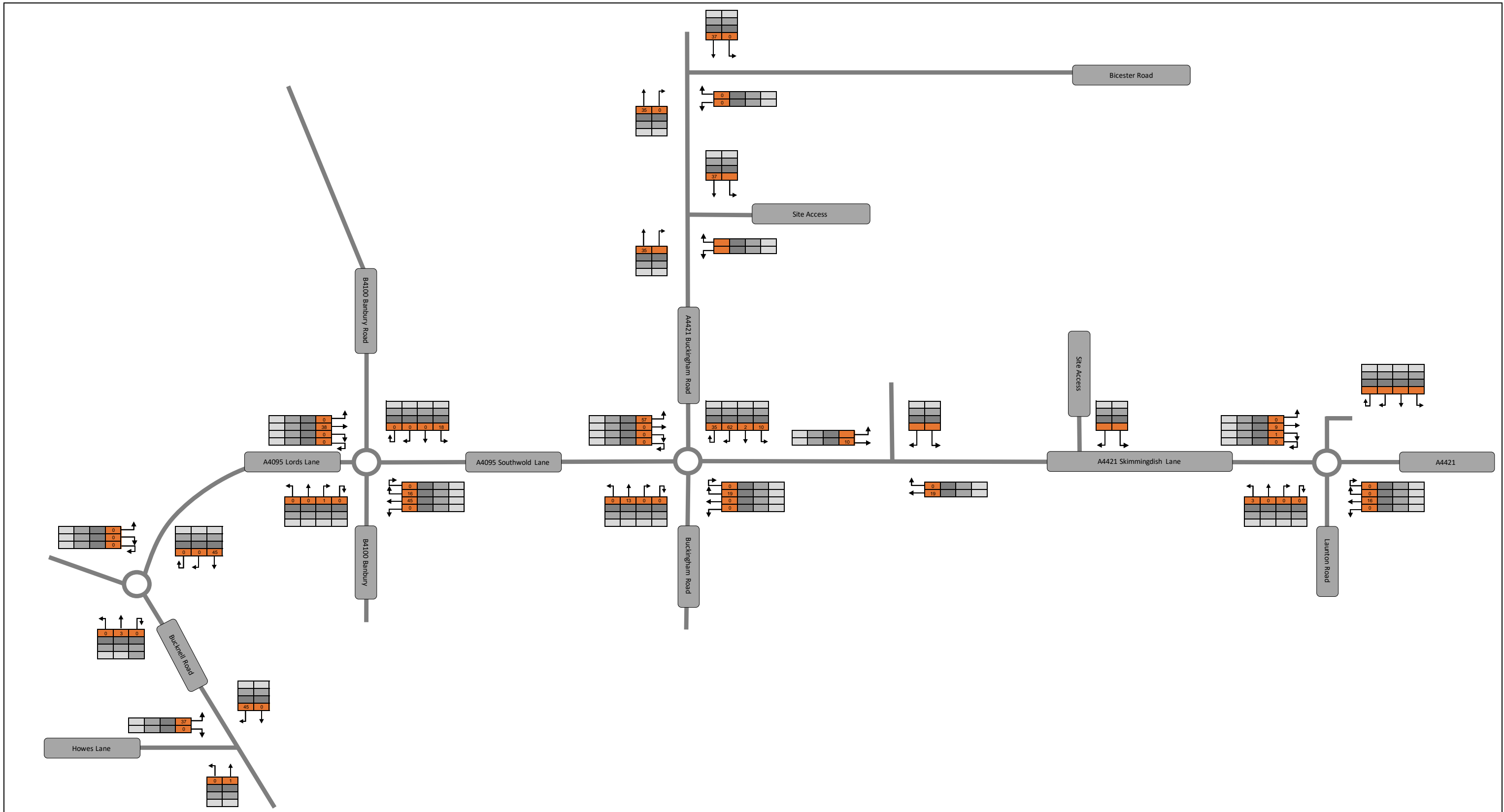
Job No.
J323684

Drawn:
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Figure No.
NFDs

Date:
27/11/2020





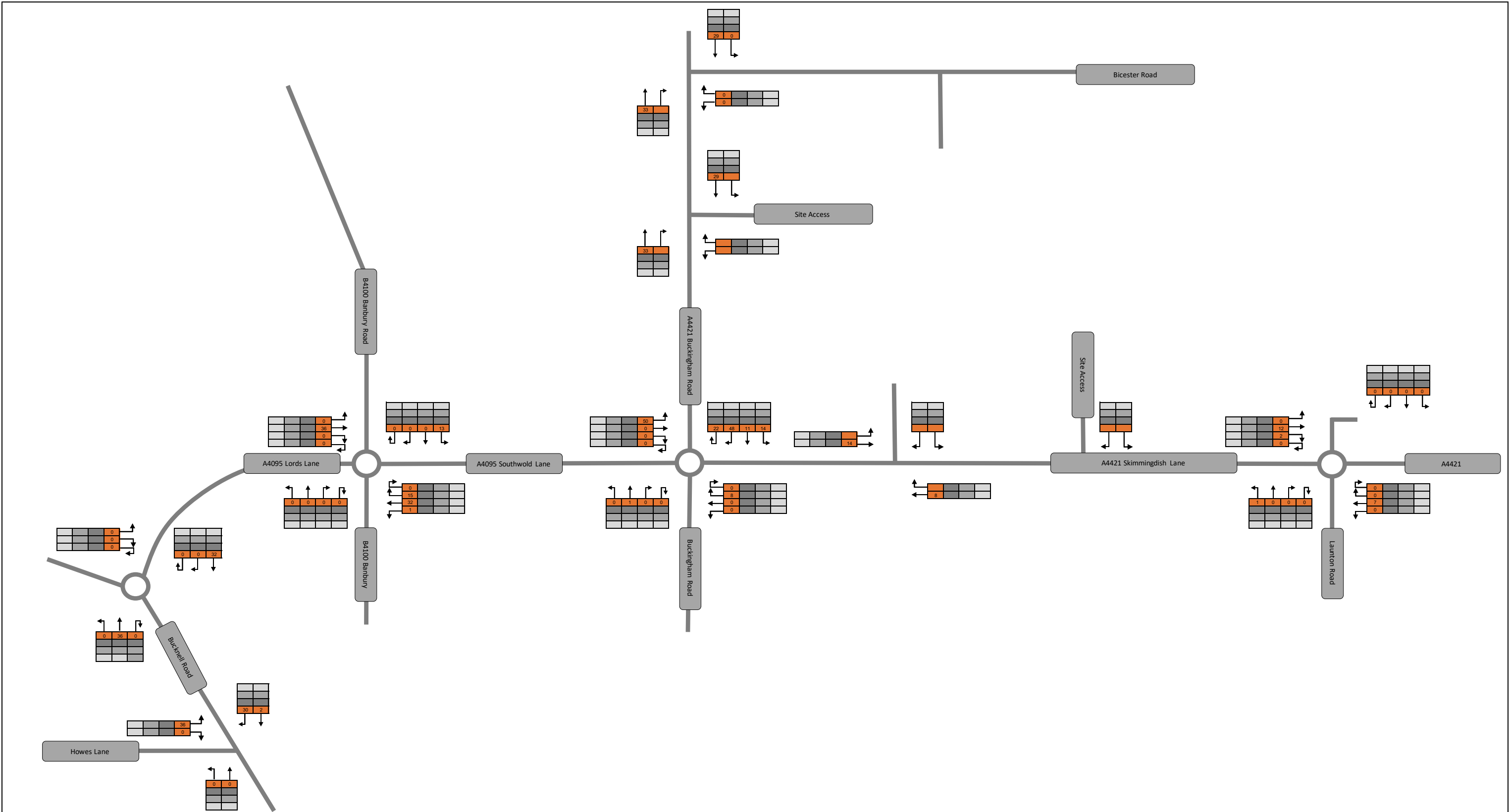
Legend	
0	Total Vehicles
0	Total HGV
%	% HGV
0	PCU

Notes

Job Title: Bicester Motion - Brand Experience Centre
 Figure Title: Committed Development Traffic - Hotel & NTS (AM)

Job No. J323684
 Figure No. NFDs
 Drawn: MS
 Date: 27/11/2020





Legend	<table border="1"> <tr><td>0</td><td>Total Vehicles</td></tr> <tr><td>0</td><td>Total HGV</td></tr> <tr><td>%</td><td>% HGV</td></tr> <tr><td>0</td><td>PCU</td></tr> </table>	0	Total Vehicles	0	Total HGV	%	% HGV	0	PCU
0	Total Vehicles								
0	Total HGV								
%	% HGV								
0	PCU								

Notes

Job Title: Bicester Motion - Brand Experience Centre

Figure Title: Committed Development Traffic - Hotel & NTS (PM)

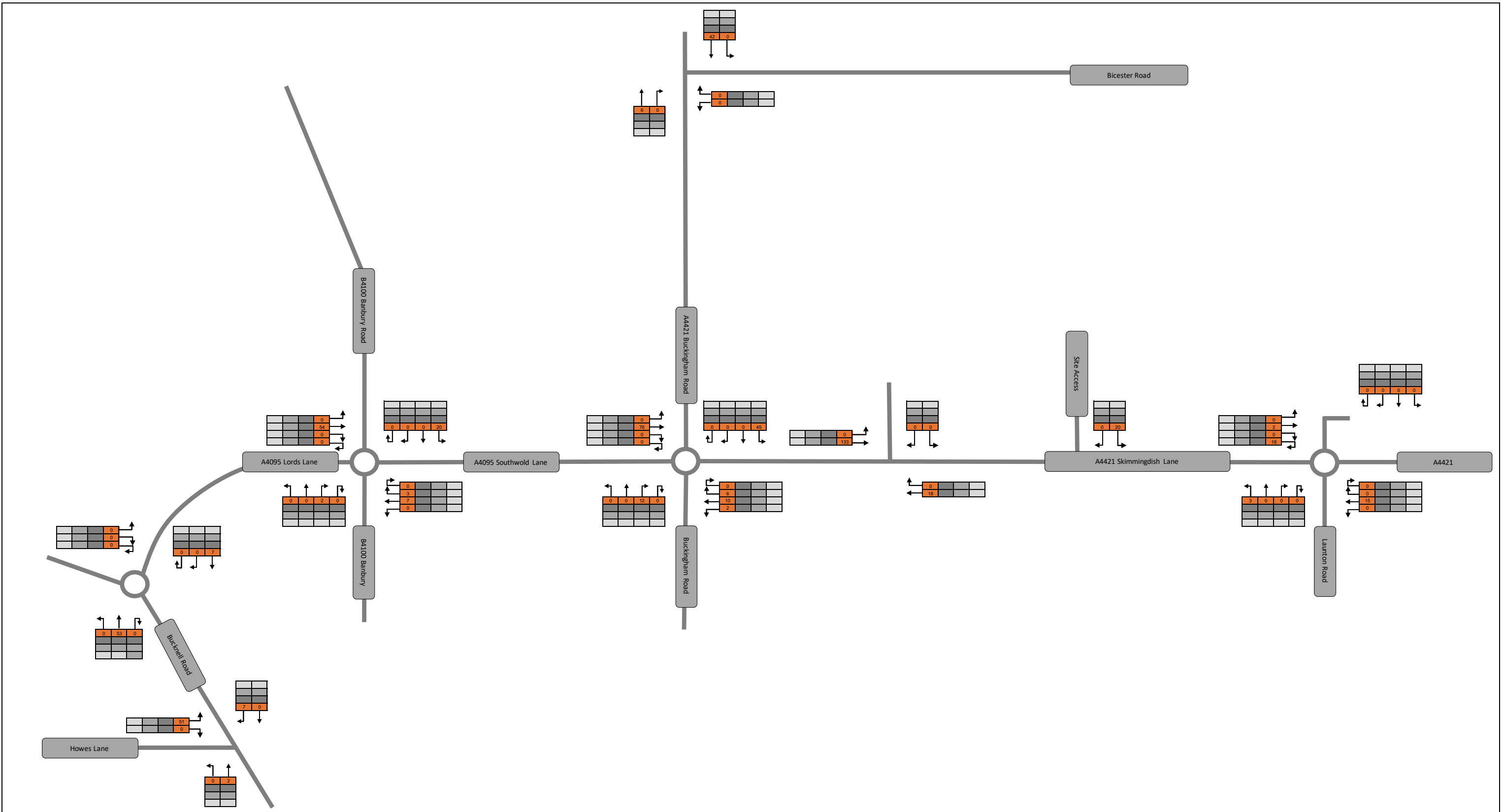
Job No. J323684

Figure No. NFDs

Drawn: MS

Date: 27/11/2020





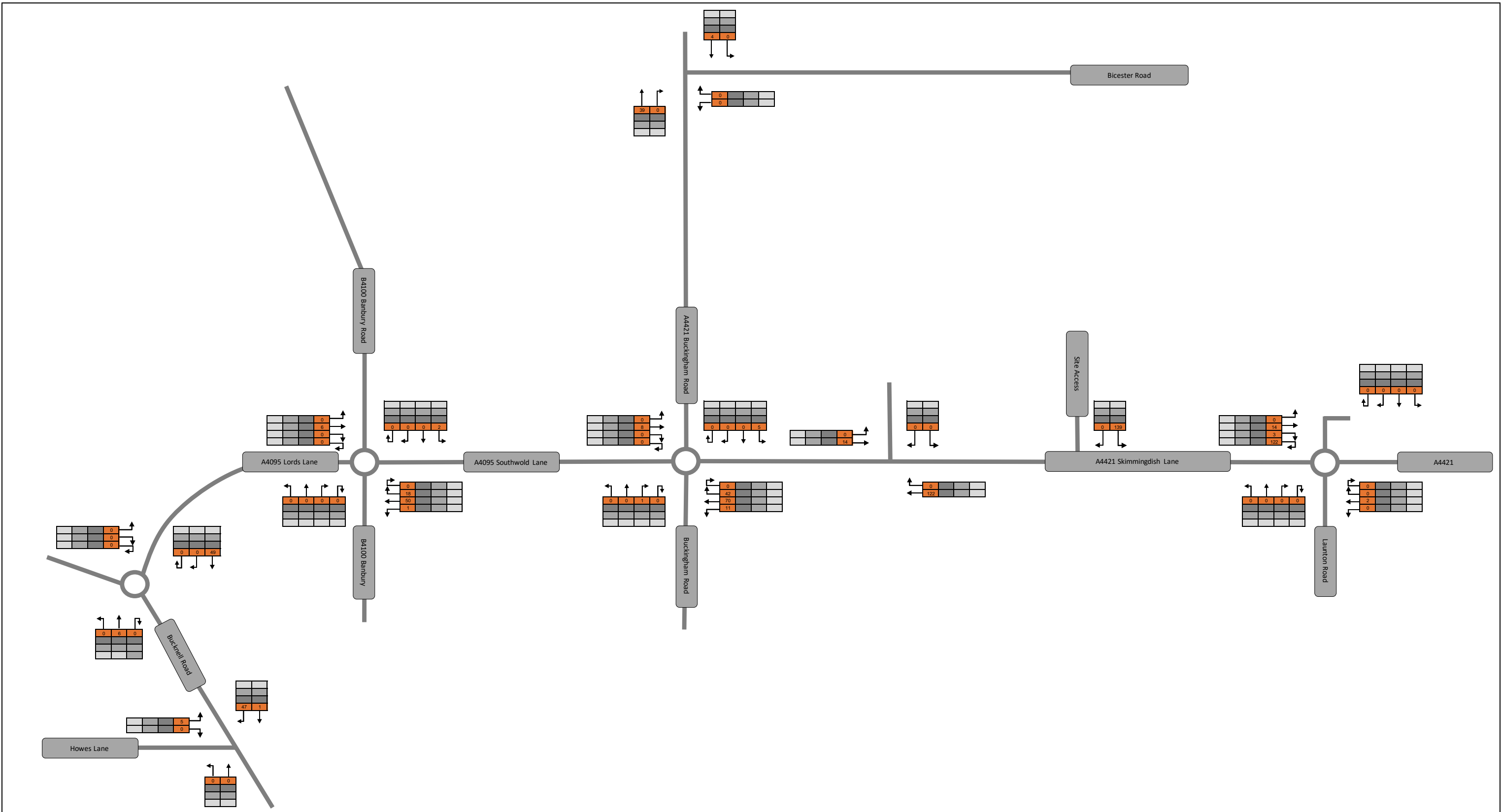
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0	Total Vehicles								
0	Total HGV								
%	% HGV								
0	PCU								

Notes

Job Title:
Bicester Motion - Brand Experience Centre

Figure Title:
Committed Development Traffic - FAST (AM)

Job No. J323684	Drawn: MS
Figure No. NFDs	Date: 28/11/2019



Legend	
0	Total Vehicles
0	Total HGV
%	% HGV
0	PCU

Notes

Job Title:
Bicester Motion - Brand Experience Centre

Figure Title:
Committed Development Traffic - FAST (PM)

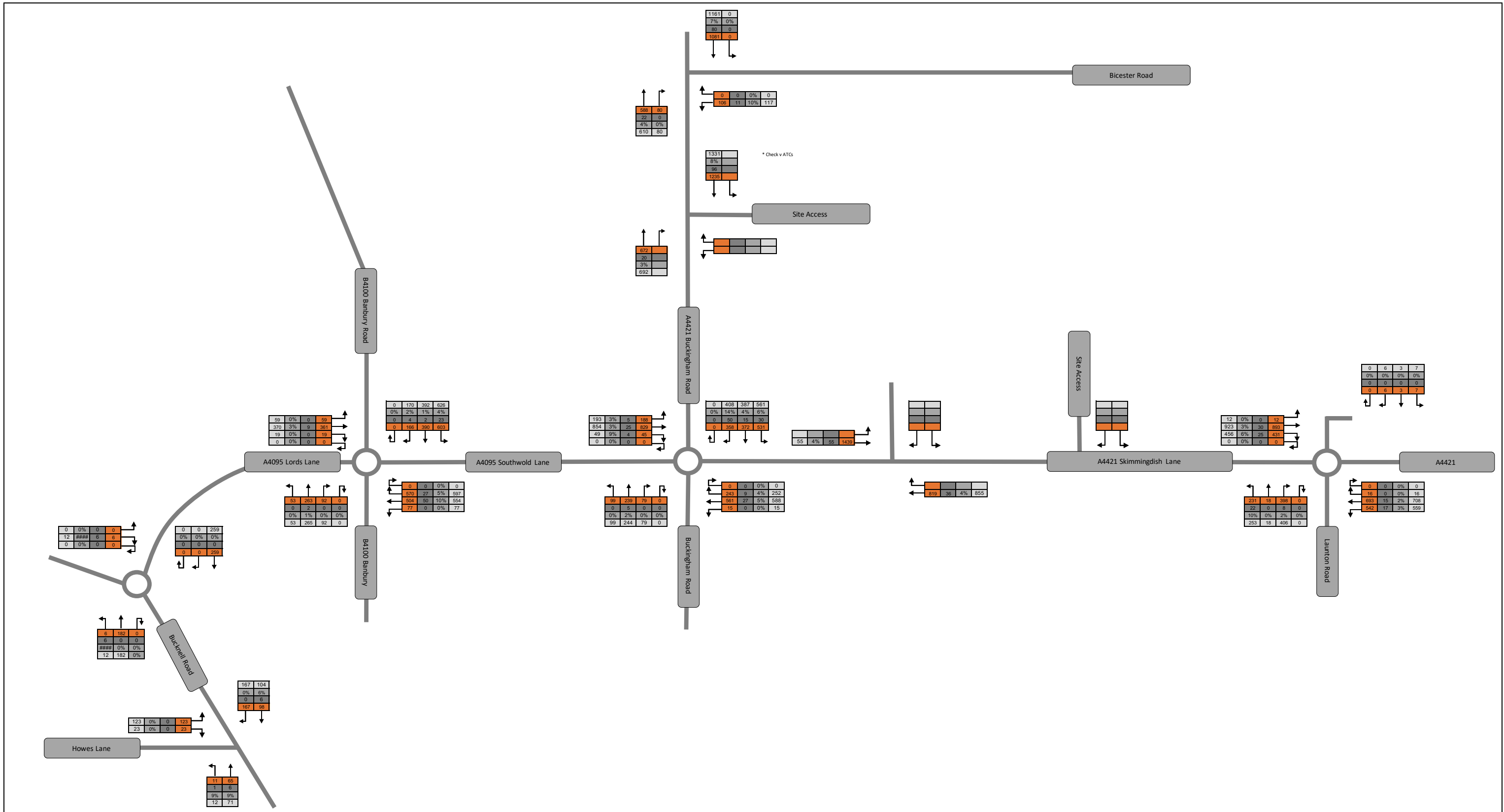
Job No.
J323684

Figure No.
NFDs

Drawn:
MS

Date:
28/11/2019





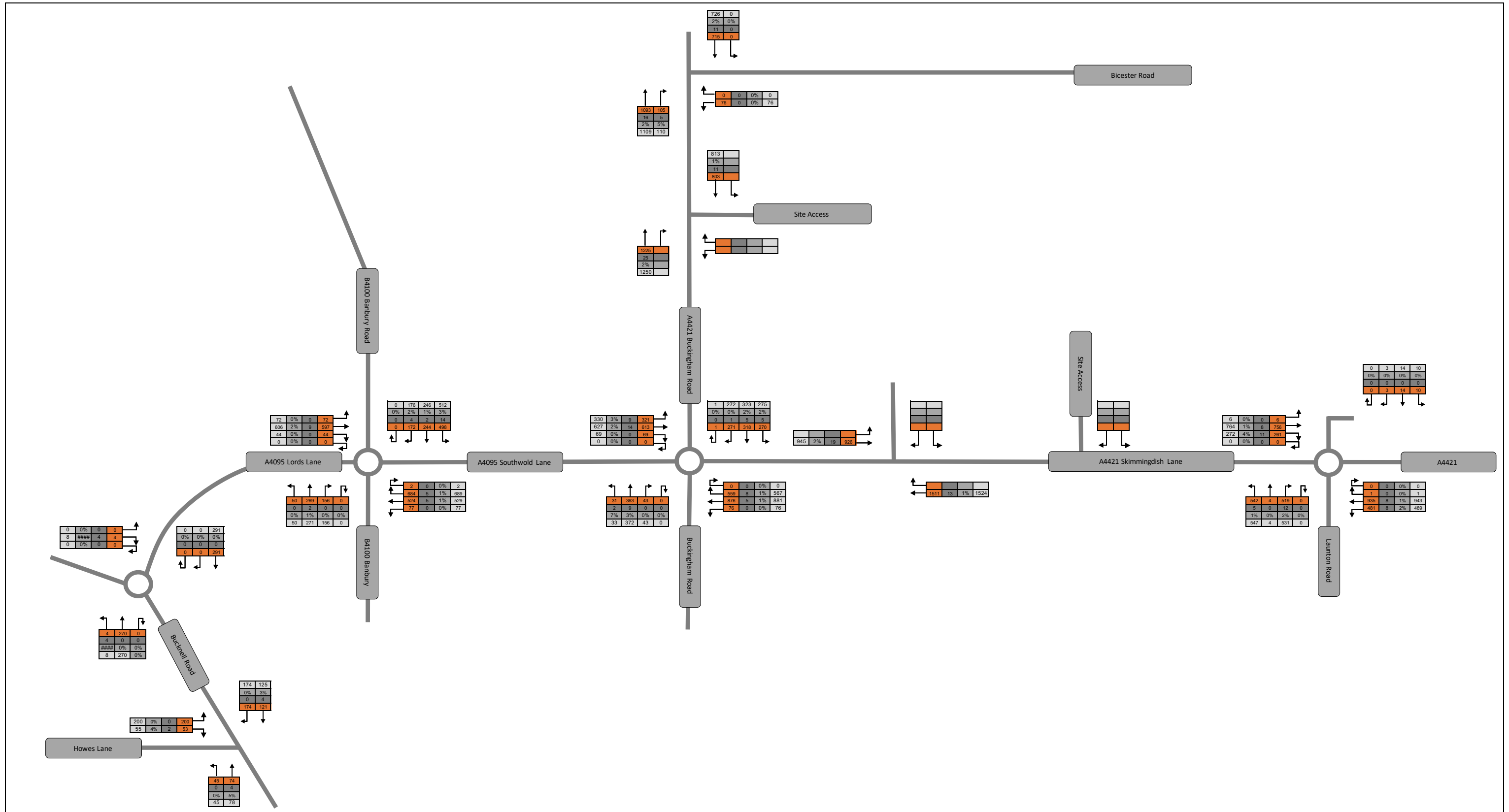
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0	Total HGV
%	% HGV
0	PCU

Notes

Job Title: Bicester Motion - Brand Experience Centre
 Figure Title: 2026 SATURN Base (AM)

Job No: J323684
 Drawn: MS
 Figure No: NFDs
 Date: 27/11/2020





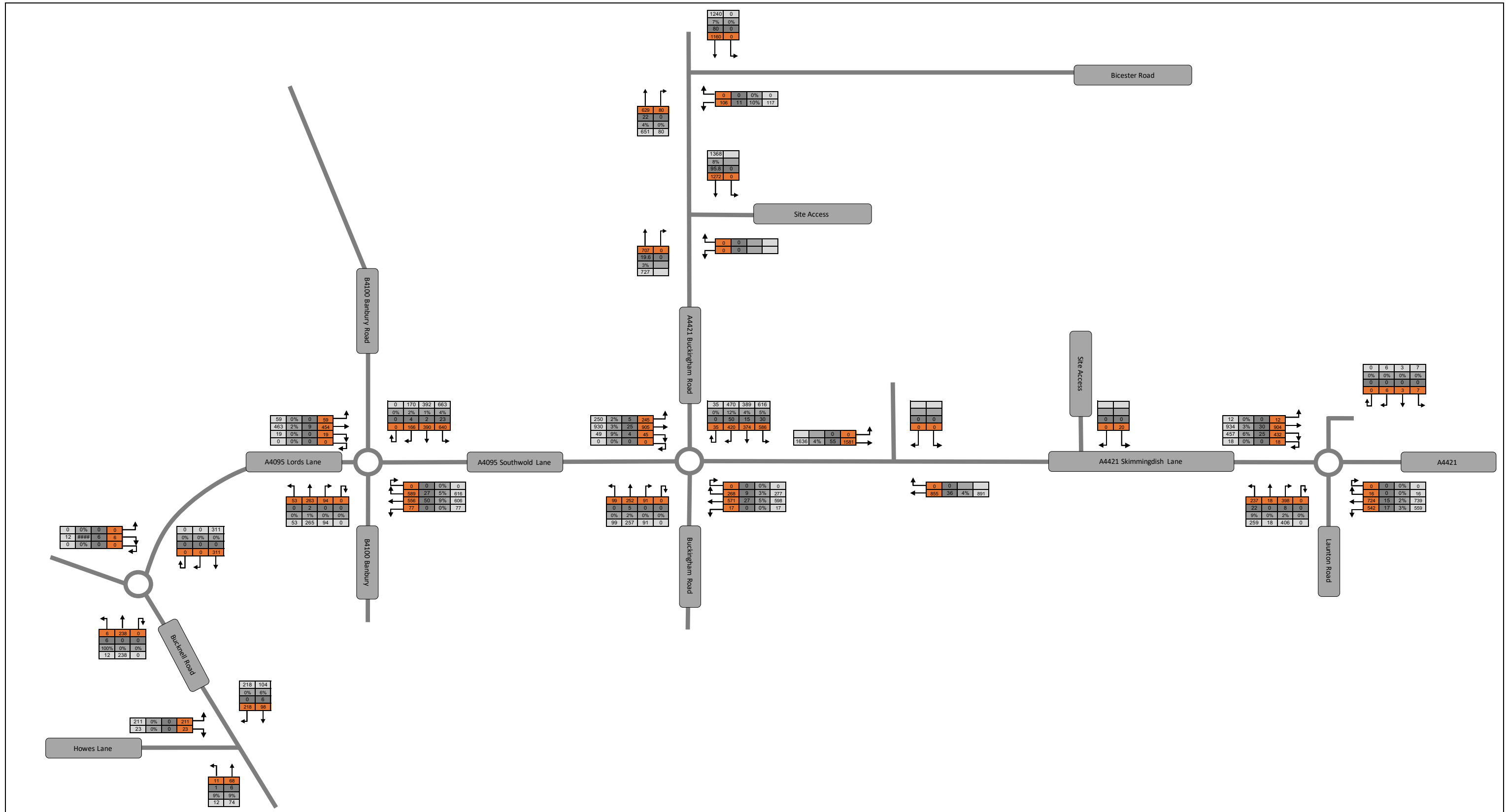
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%	% HGV
0	PCU

Notes

Job Title: Bicester Motion - Brand Experience Centre
 Figure Title: 2026 SATURN Base (PM)

Job No. J323684
 Drawn: MS
 Figure No. NFDs
 Date: 27/11/2020





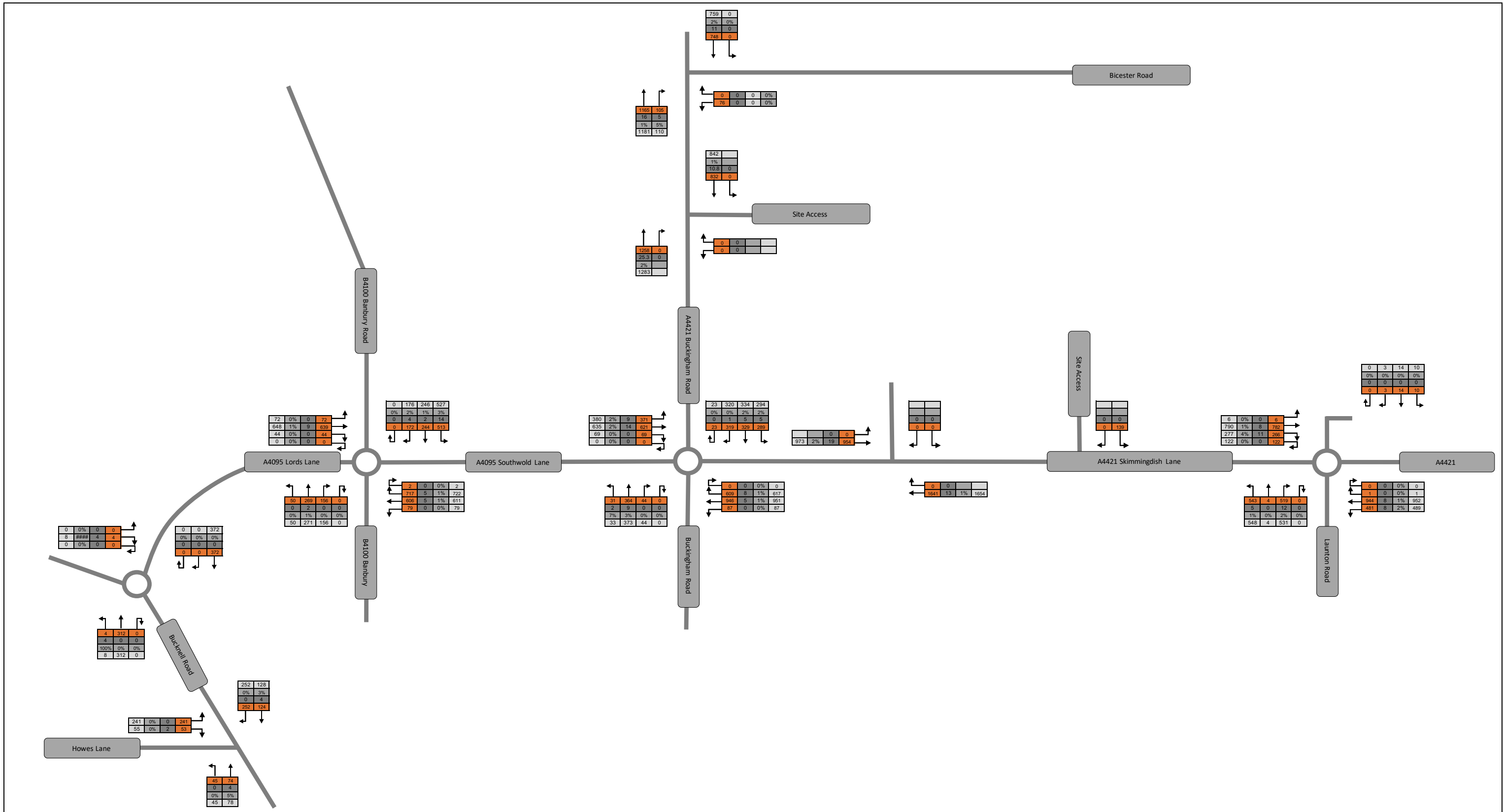
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%	% HGV
0	PCU

Notes

Job Title: Bicester Motion - Brand Experience Centre
 Figure Title: 2026 SATURN Base + Committed Development (AM)

Job No. J323684
 Drawn: MS
 Figure No. NFDs
 Date: 27/11/2020





Legend	
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0	Total HGV
%	% HGV
0	PCU

Notes

Job Title:
Bicester Motion - Brand Experience Centre

Figure Title:
2026 SATURN Base + Committed Development (PM)

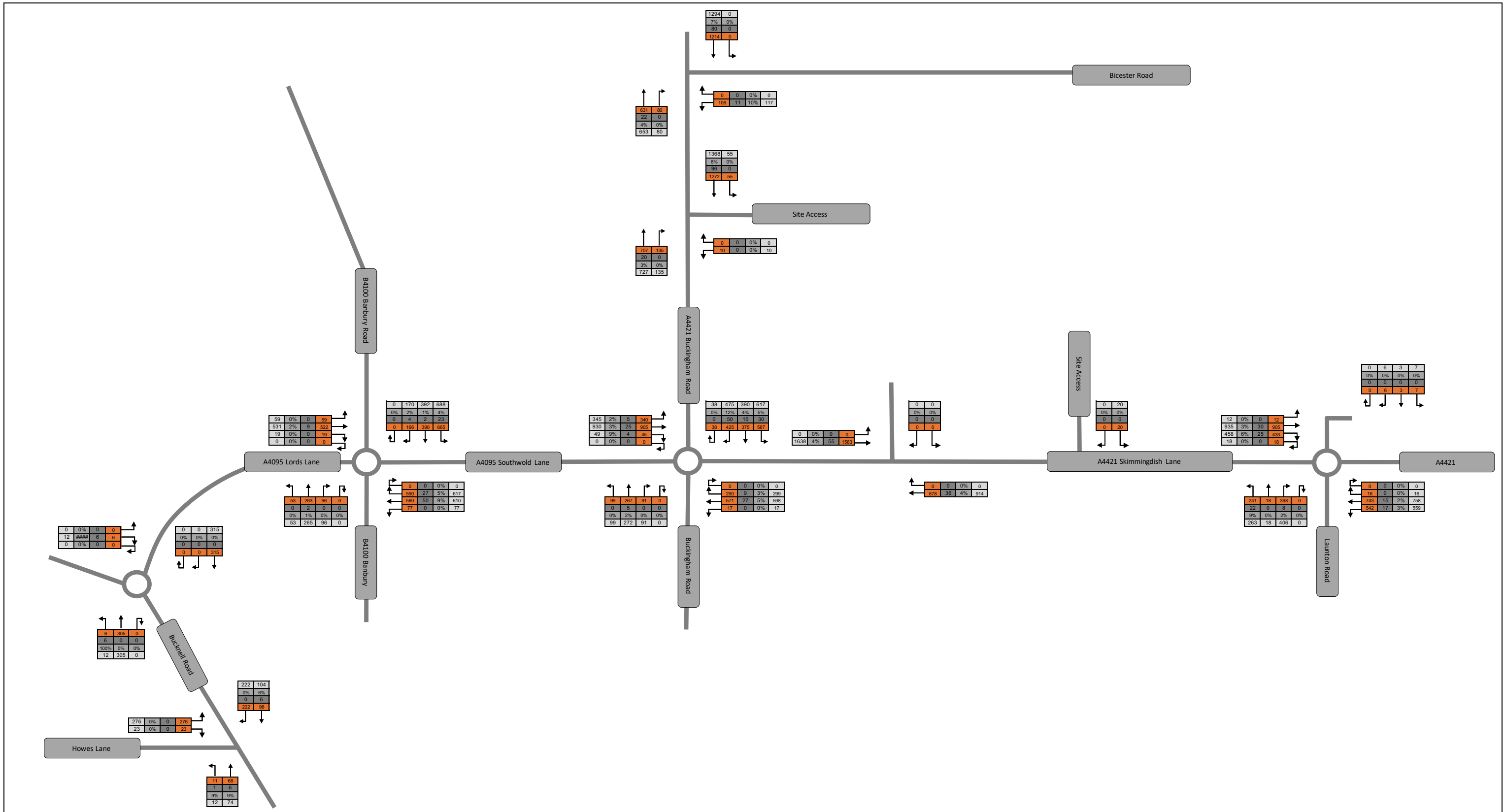
Job No.
J323684

Figure No.
NFDs

Drawn:
MS

Date:
27/11/2020





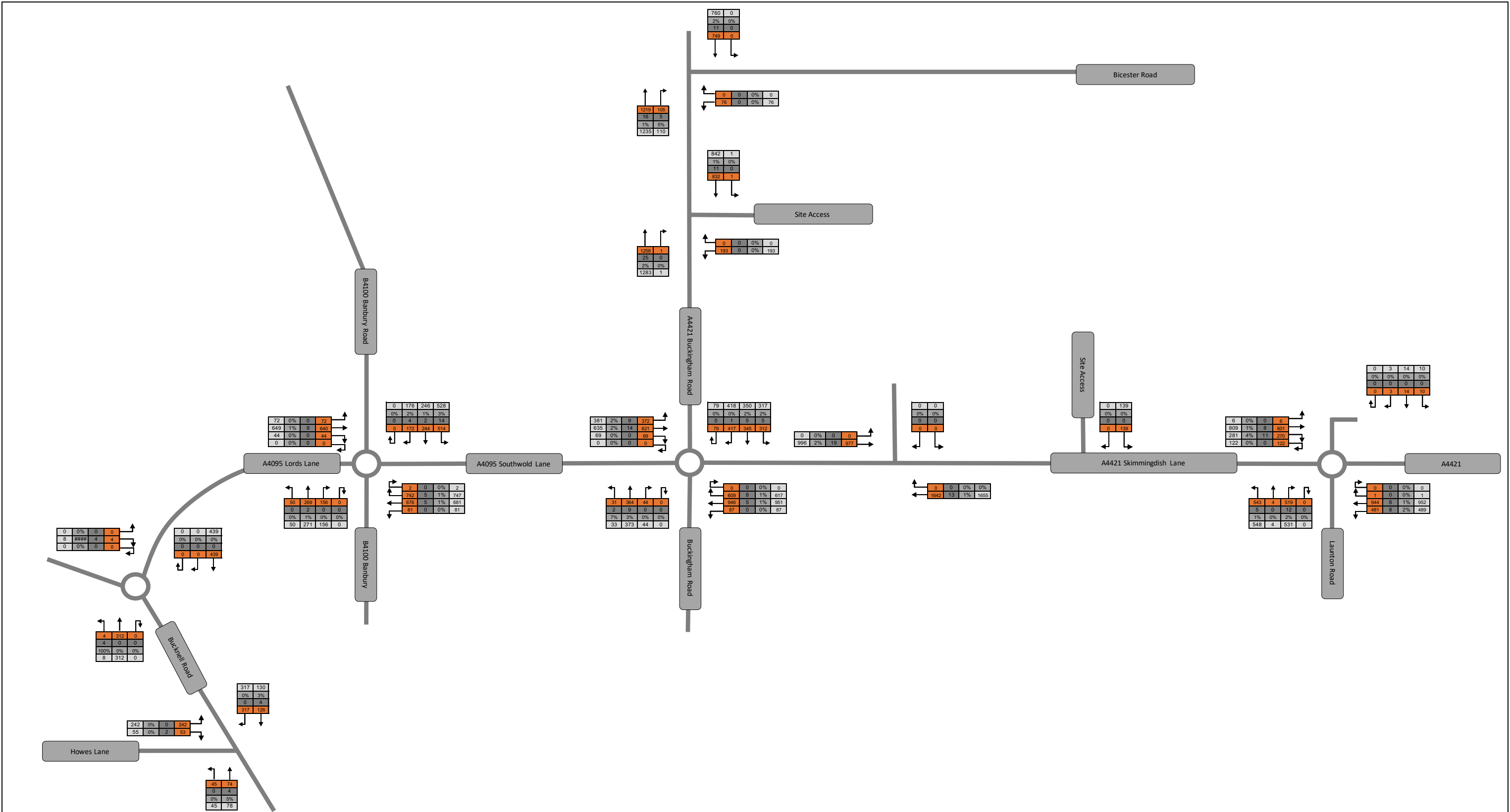
Legend	
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0	Total HGV
%	% HGV
0	PCU

Notes

Job Title: Bicester Motion - Brand Experience Centre
 Figure Title: 2026 SATURN Base + Committed Development + Development (AM)

Job No. J323684
 Drawn: MS
 Figure No. NFDs
 Date: 27/11/2020





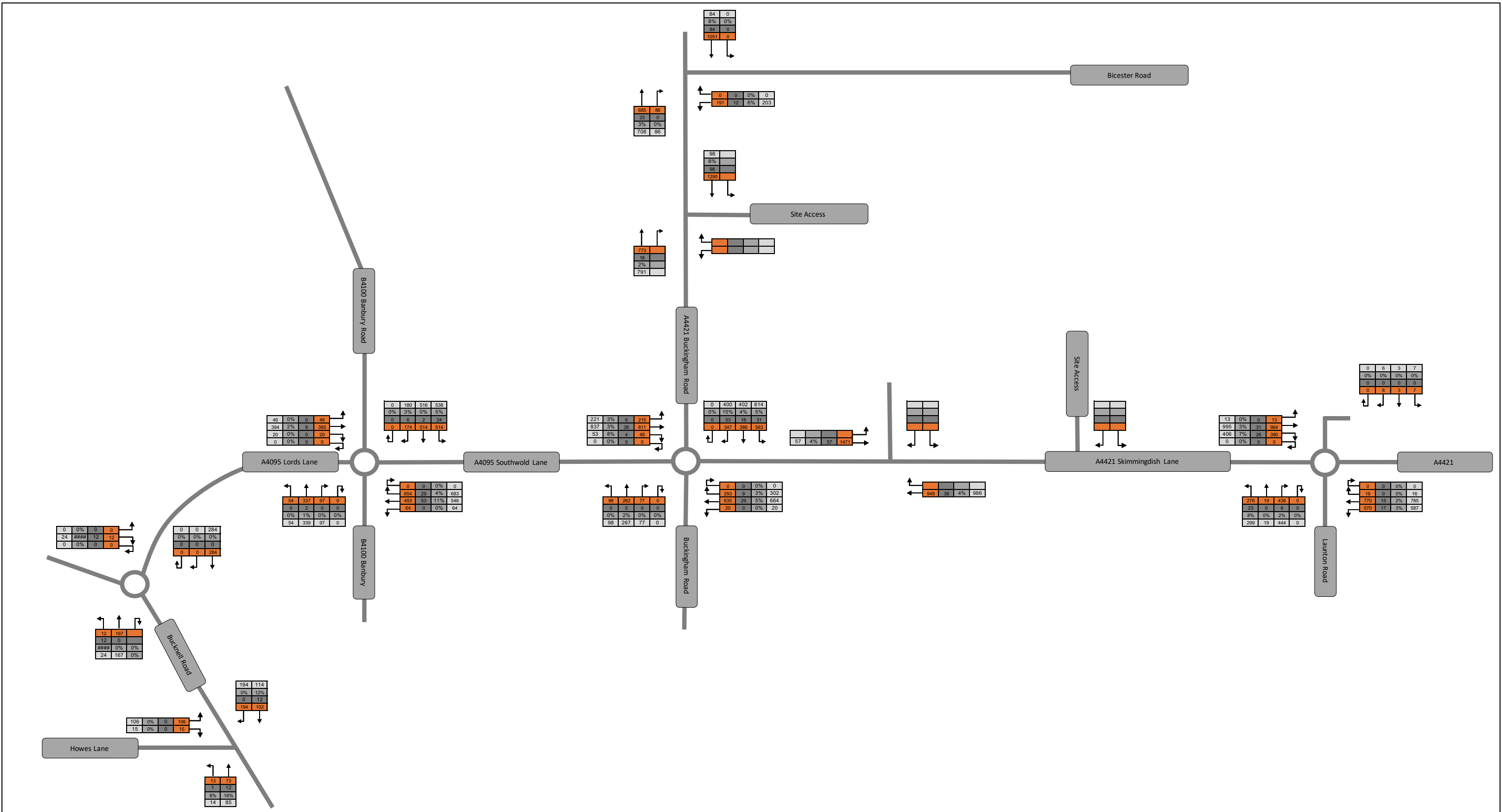
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0	Total HGV
%	% HGV
0	PCU

Notes

Job Title: Bicester Motion - Brand Experience Centre
 Figure Title: 2026 SATURN Base + Committed Development + Development (PM)

Job No. J323684
 Drawn: MS
 Figure No. NFDs
 Date: 27/11/2020





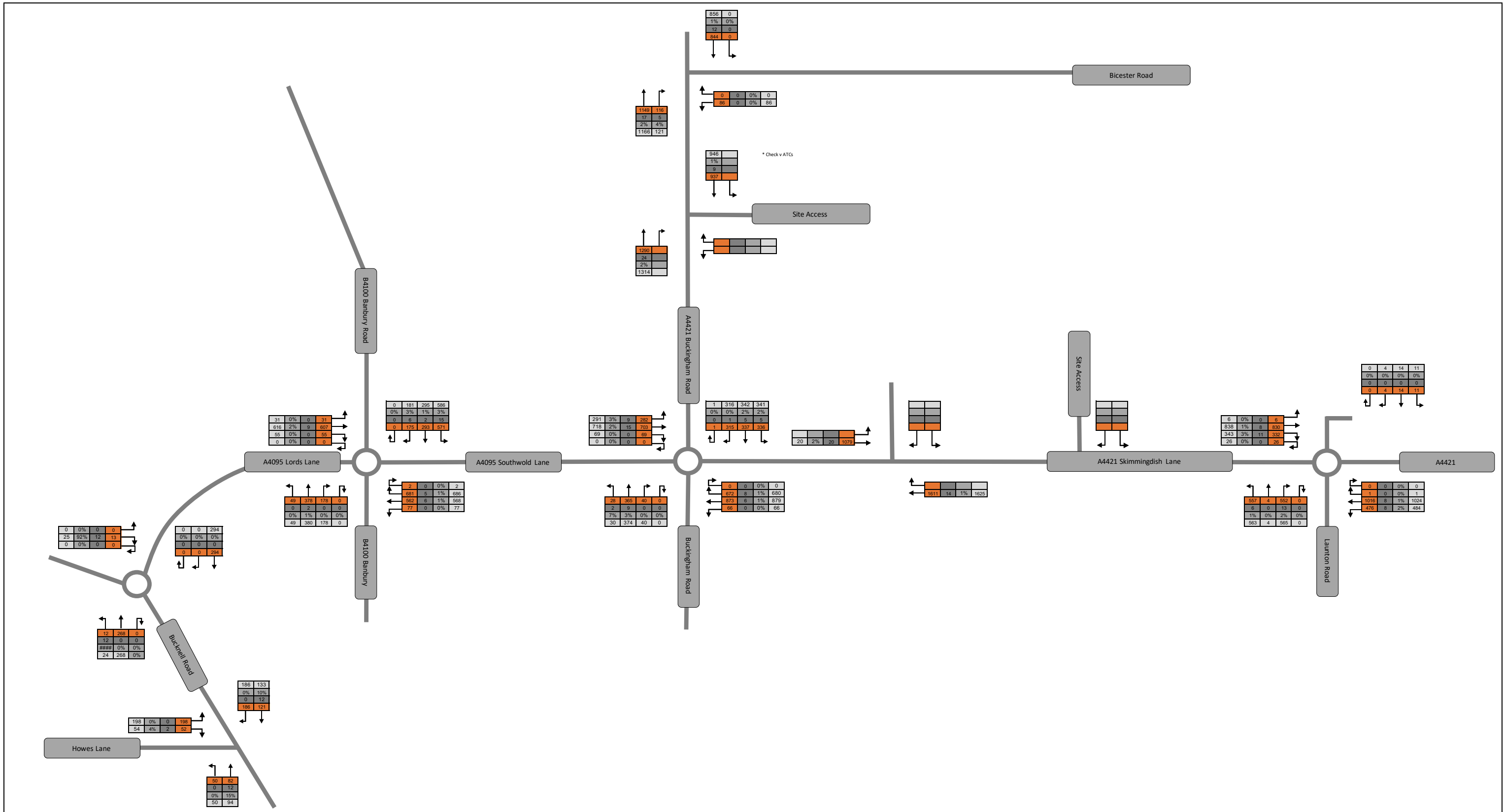
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%	% HGV
0	PCU

Notes

Job Title: Bicester Motion - Brand Experience Centre
 Figure Title: 2031 SATURN Base (AM)

Job No. J323684
 Drawn: MS
 Figure No. NFDs
 Date: 27/11/2020





Legend

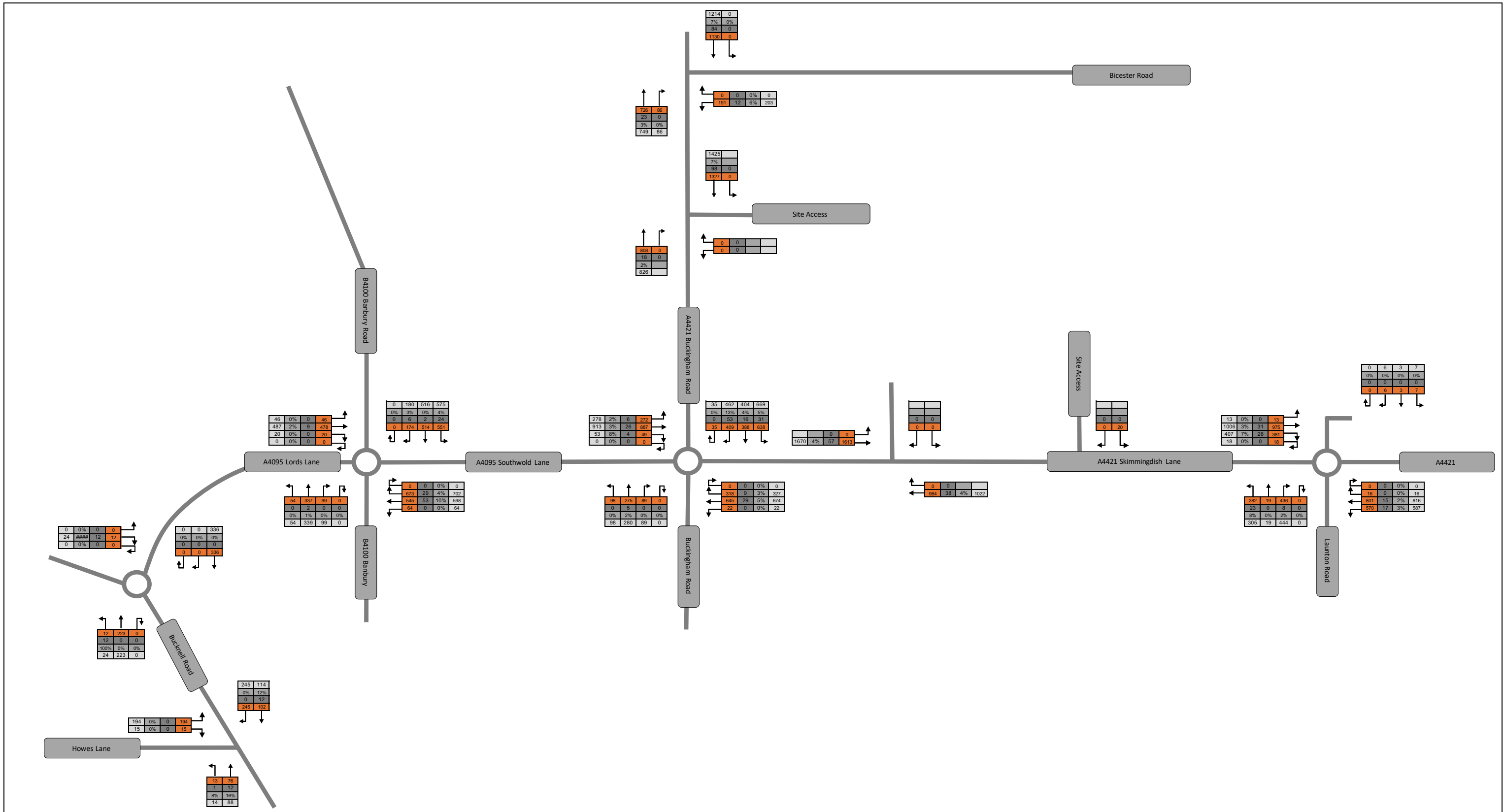
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%	% HGV
0	PCU

Notes

Job Title: Bicester Motion - Brand Experience Centre
 Figure Title: 2031 SATURN Base (PM)

Job No. J323684
 Drawn: MS
 Figure No. NFDs
 Date: 27/11/2020





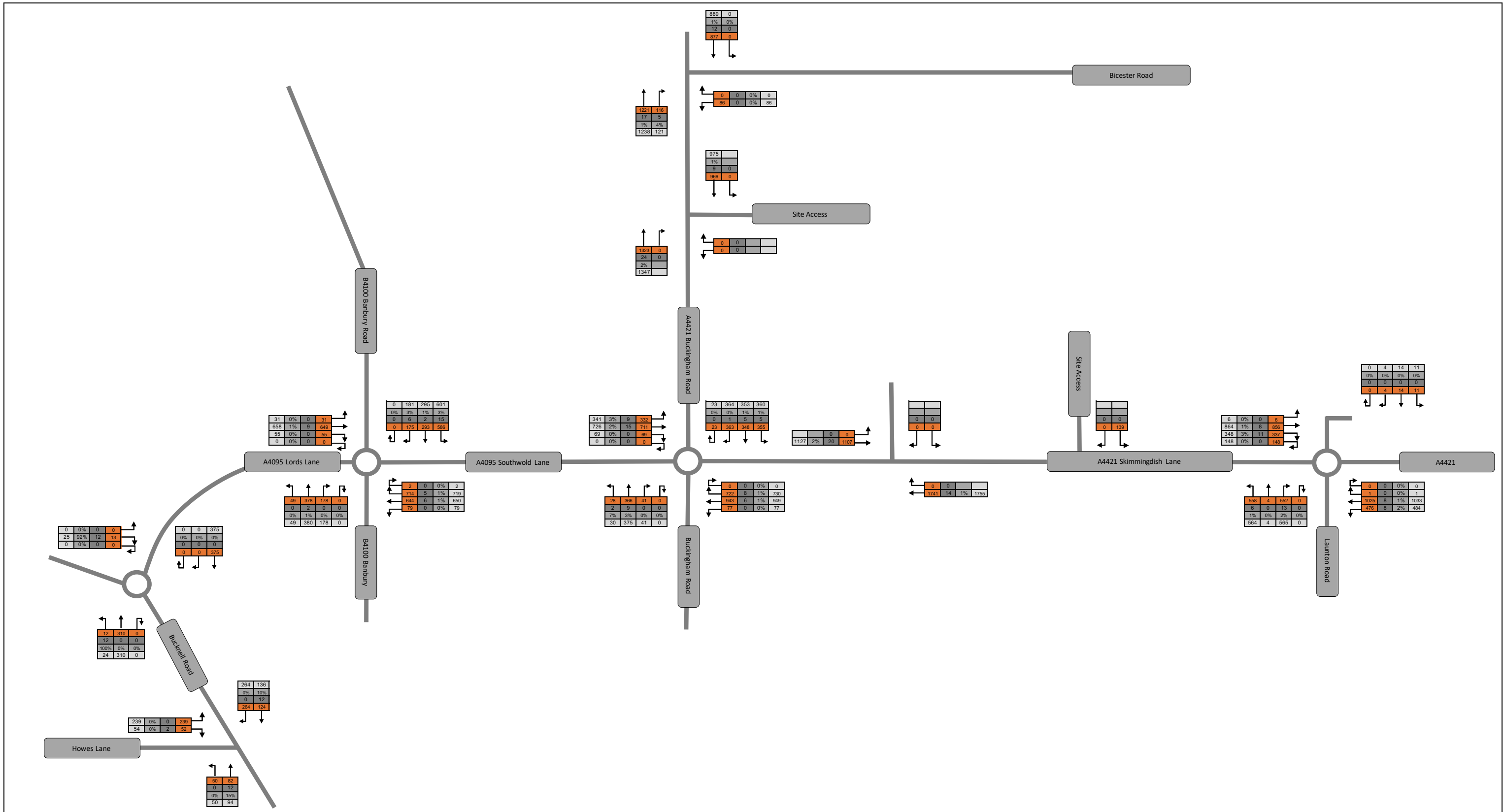
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0	Total HGV
%	% HGV
0	PCU

Notes

Job Title: Bicester Motion - Brand Experience Centre
 Figure Title: 2031 SATURN Base + Committed Development (AM)

Job No. J323684
 Drawn: MS
 Figure No. NFDs
 Date: 27/11/2020





Legend	
0	Total Vehicles
0	Total HGV
%	% HGV
0	PCU

Notes

Job Title:
Bicester Motion - Brand Experience Centre

Figure Title:
2031 SATURN Base + Committed Development (PM)

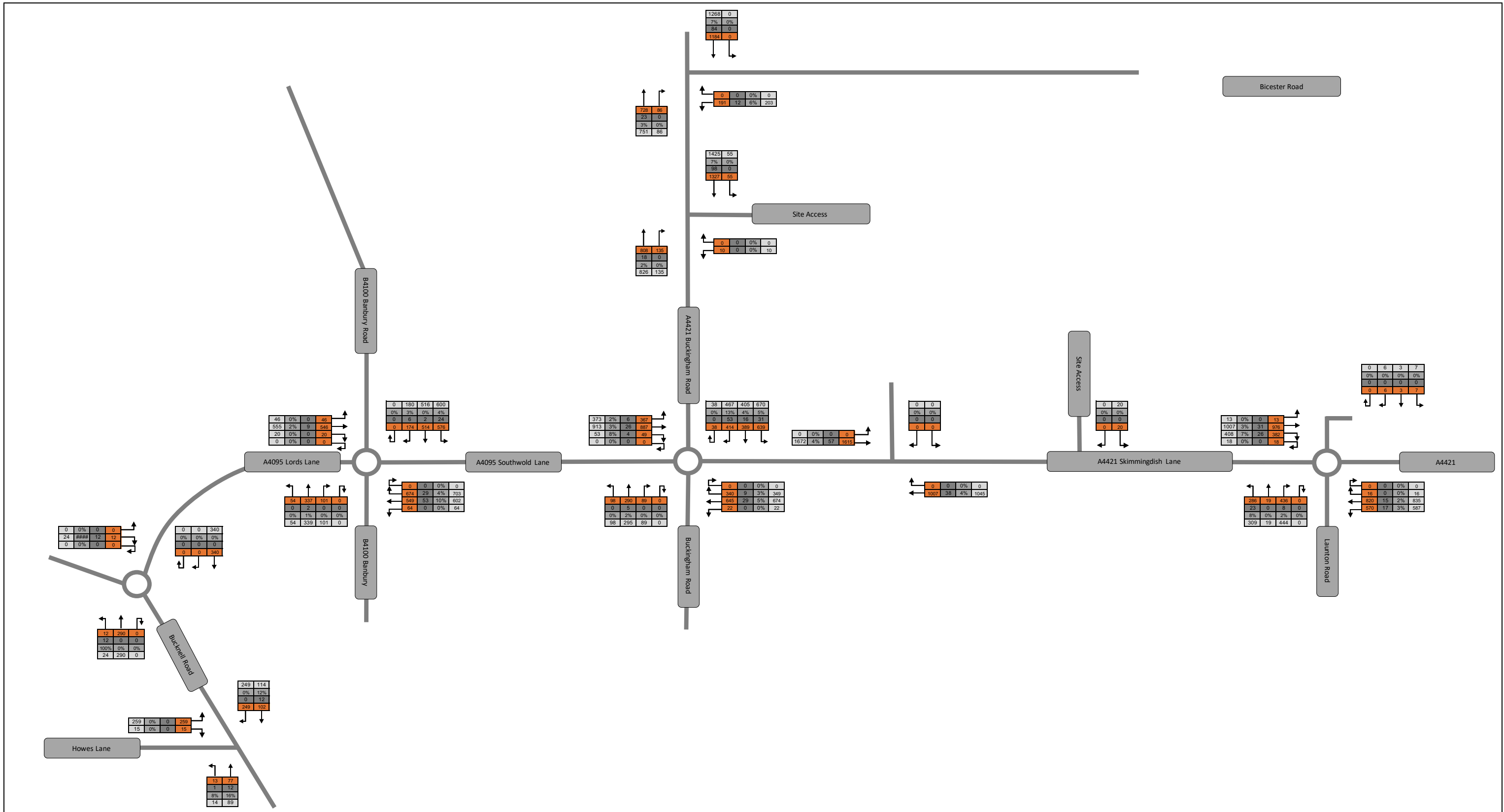
Job No.
J323684

Figure No.
NFDs

Drawn:
MS

Date:
27/11/2020





Legend	
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0	Total HGV
%	% HGV
0	PCU

Notes

Job Title:
Bicester Motion - Brand Experience Centre

Figure Title:
2031 SATURN Base + Committed Development + Development (AM)

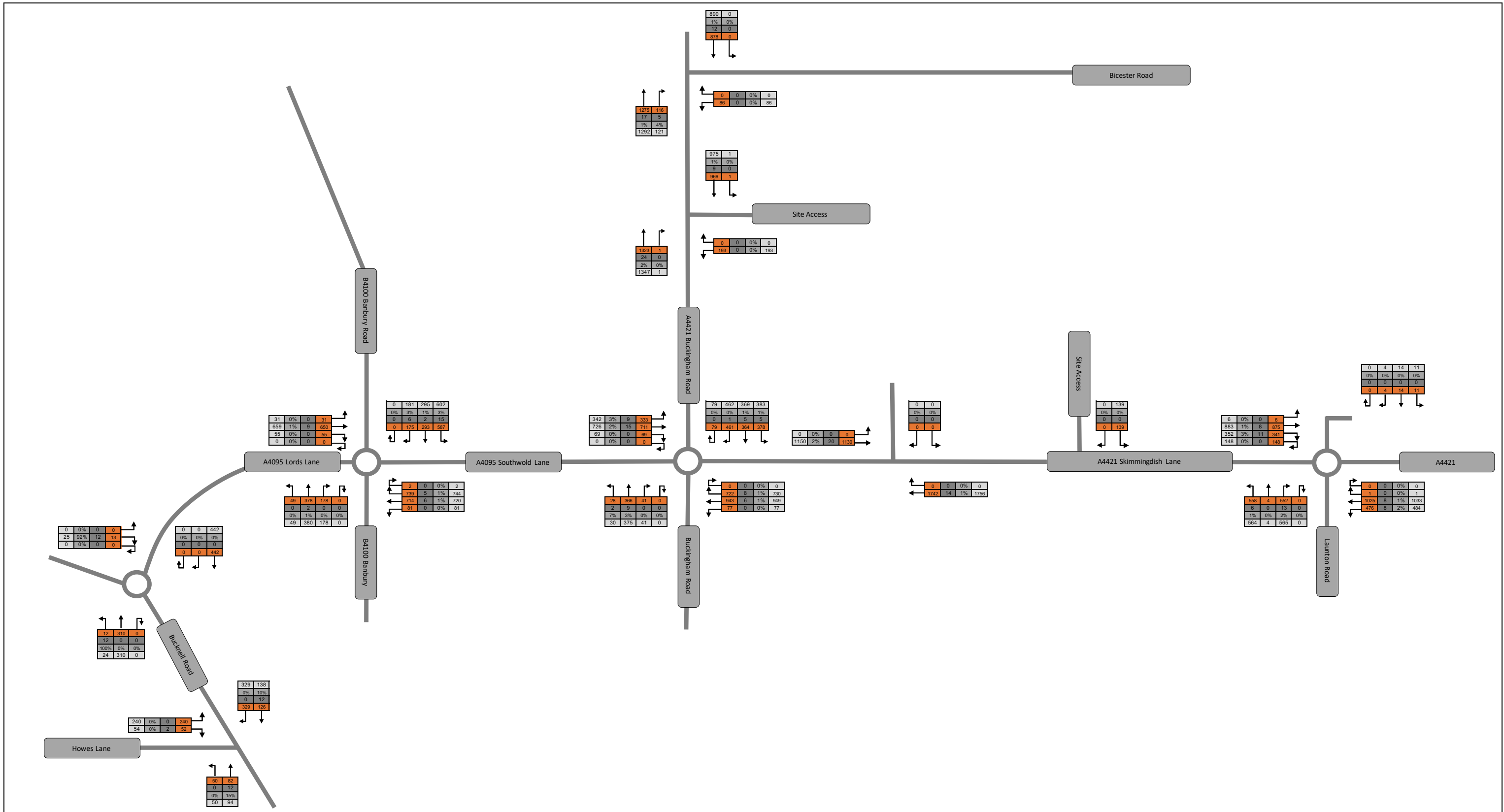
Job No.
J323684

Figure No.
NFDs

Drawn:
MS

Date:
27/11/2020





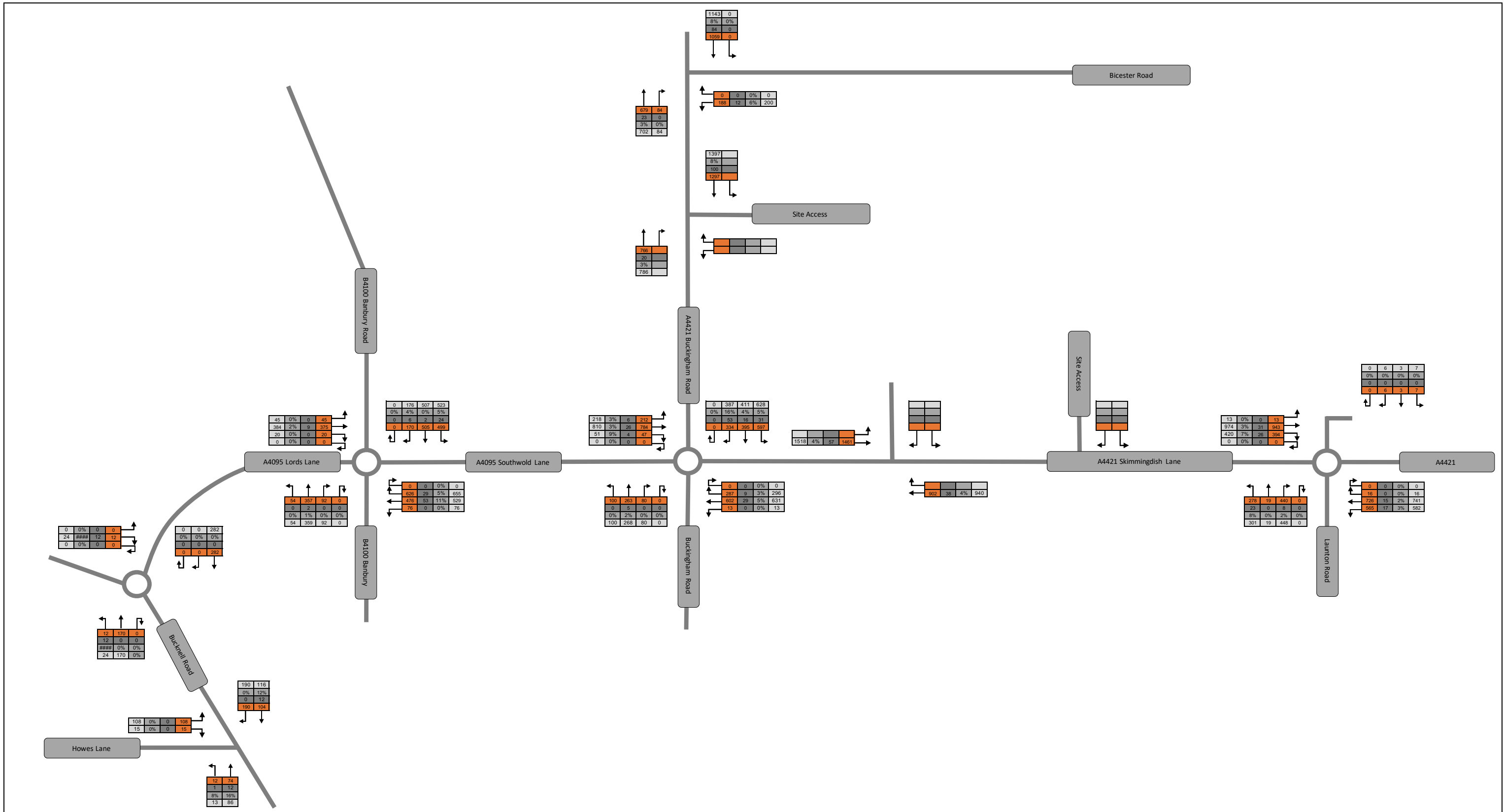
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0	Total Vehicles								
0	Total HGV								
%	% HGV								
0	PCU								

Notes

Job Title: Bicester Motion - Brand Experience Centre
 Figure Title: 2031 SATURN Base + Committed Development + Development (PM)

Job No. J323684
 Drawn: MS
 Figure No. NFDs
 Date: 27/11/2020





Legend	
0	Total Vehicles
0	Total HGV
0%	% HGV
0	PCU

Notes

Job Title:
Bicester Motion - Brand Experience Centre

Figure Title:
2031 SATURN Base (AM) - Including SEPR Development

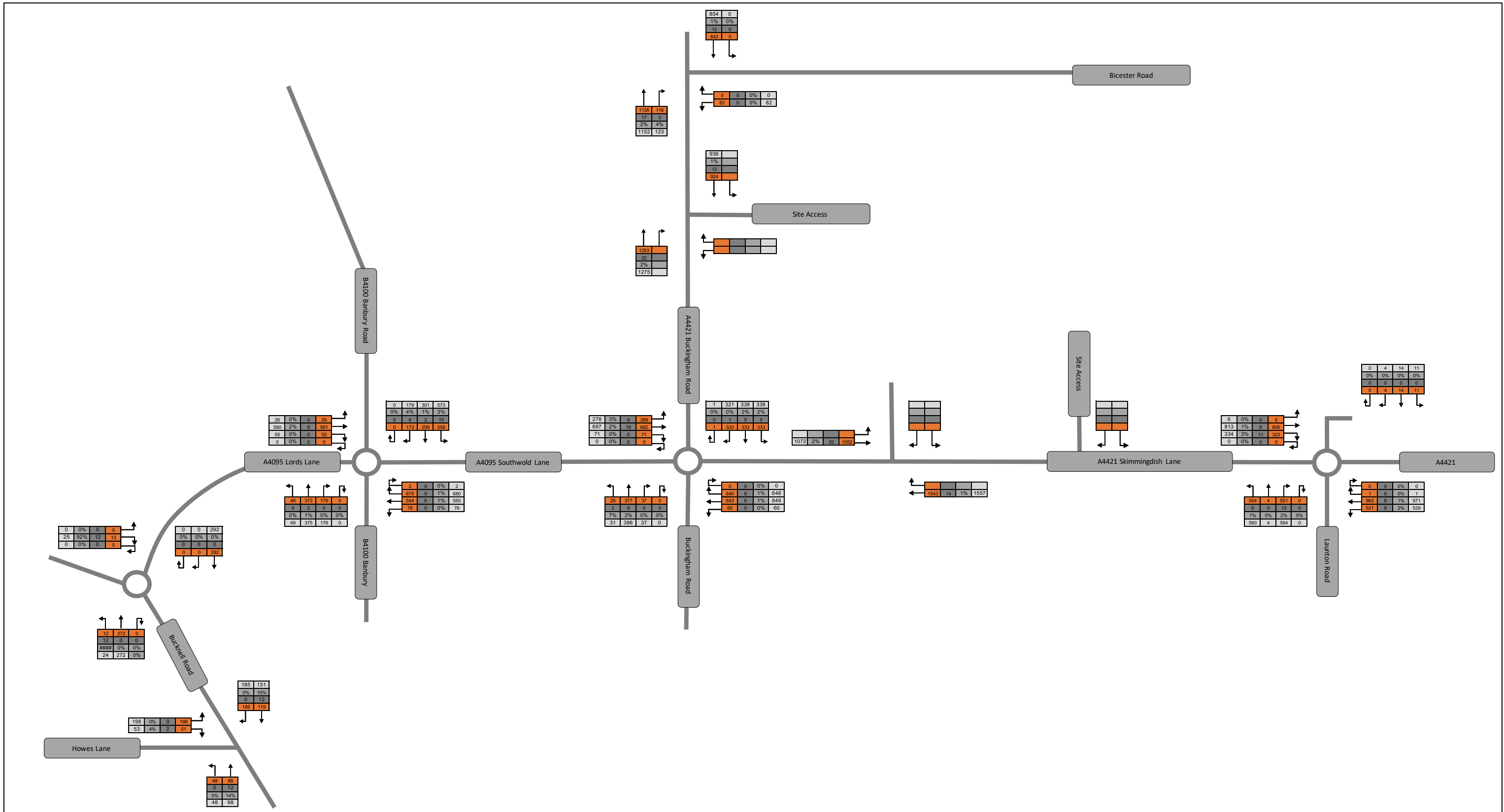
Job No.
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Figure No.
NFDs

Drawn:
MS

Date:
27/11/2020





Legend	
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0	Total HGV
%	% HGV
0	PCU

Notes

Job Title:
Bicester Motion - Brand Experience Centre

Figure Title:
2031 SATURN Base (PM) - Including SEPR Development

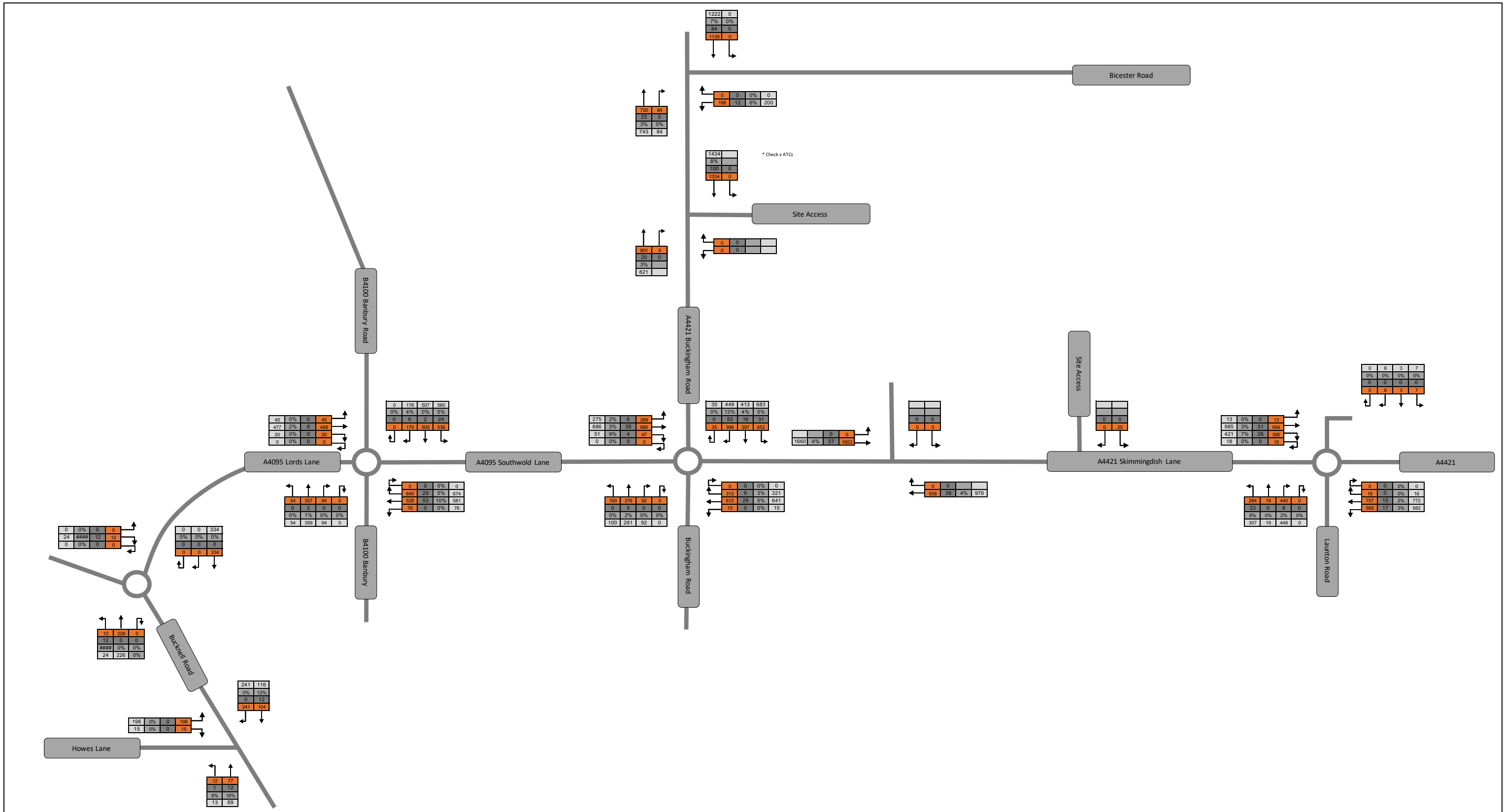
Job No.
J323684

Figure No.
NFDs

Drawn:
MS

Date:
27/11/2020





Legend

0	Total Vehicles
0	Total HGV
%	% HGV
0	PCU

Notes

Job Title:
Bicester Motion - Brand Experience Centre

Figure Title:
2031 SATURN Base + Committed Development (AM) - Including SEPR Development

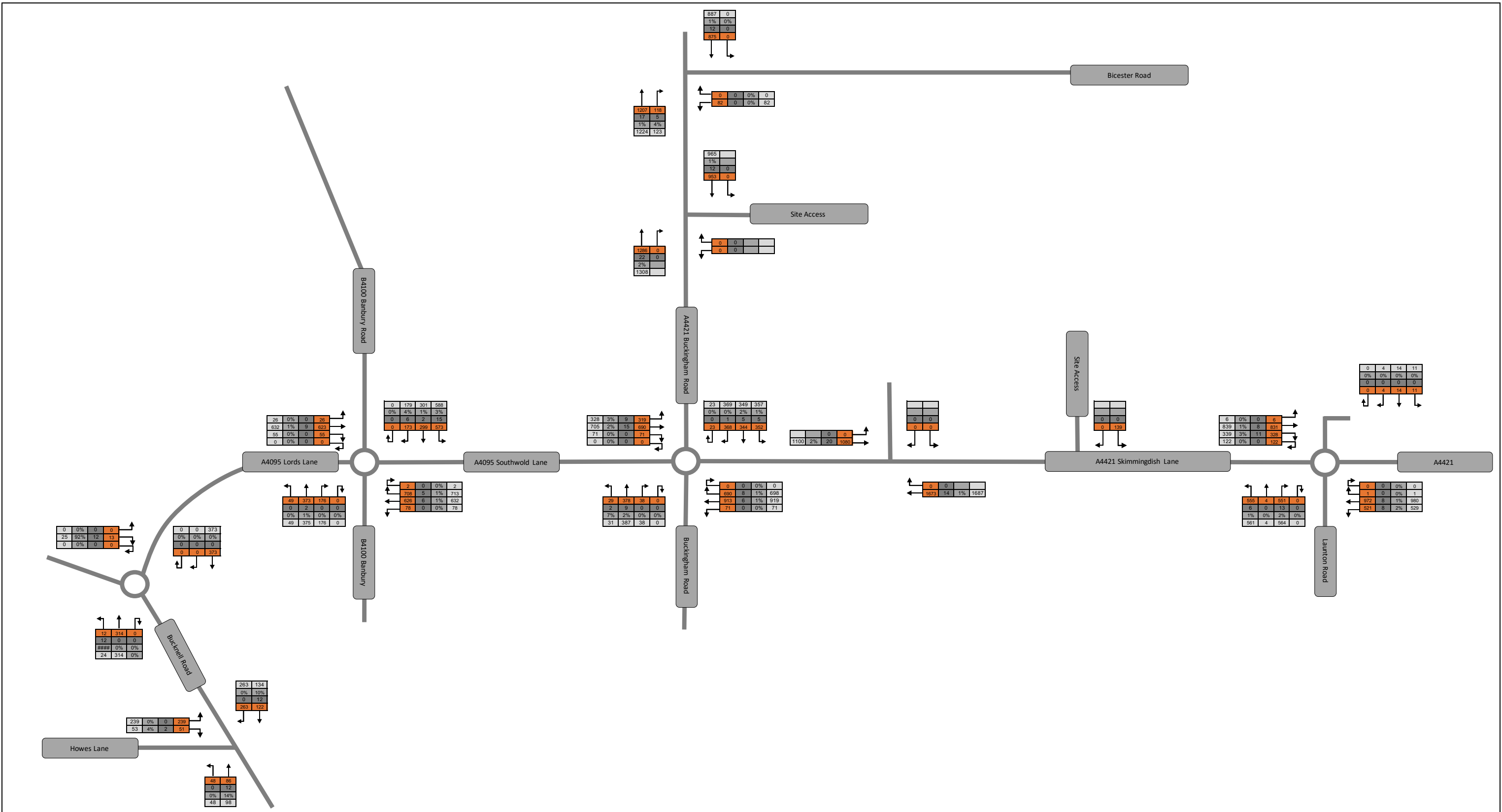
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Figure No.
NFDs

Drawn:
MS

Date:
27/11/2020





Legend

0	Total Vehicles
0	Total HGV
%	% HGV
0	PCU

Notes

Job Title: Bicester Motion - Brand Experience Centre

Figure Title: 2031 SATURN Base + Committed Development (PM) - Including SEPR Development

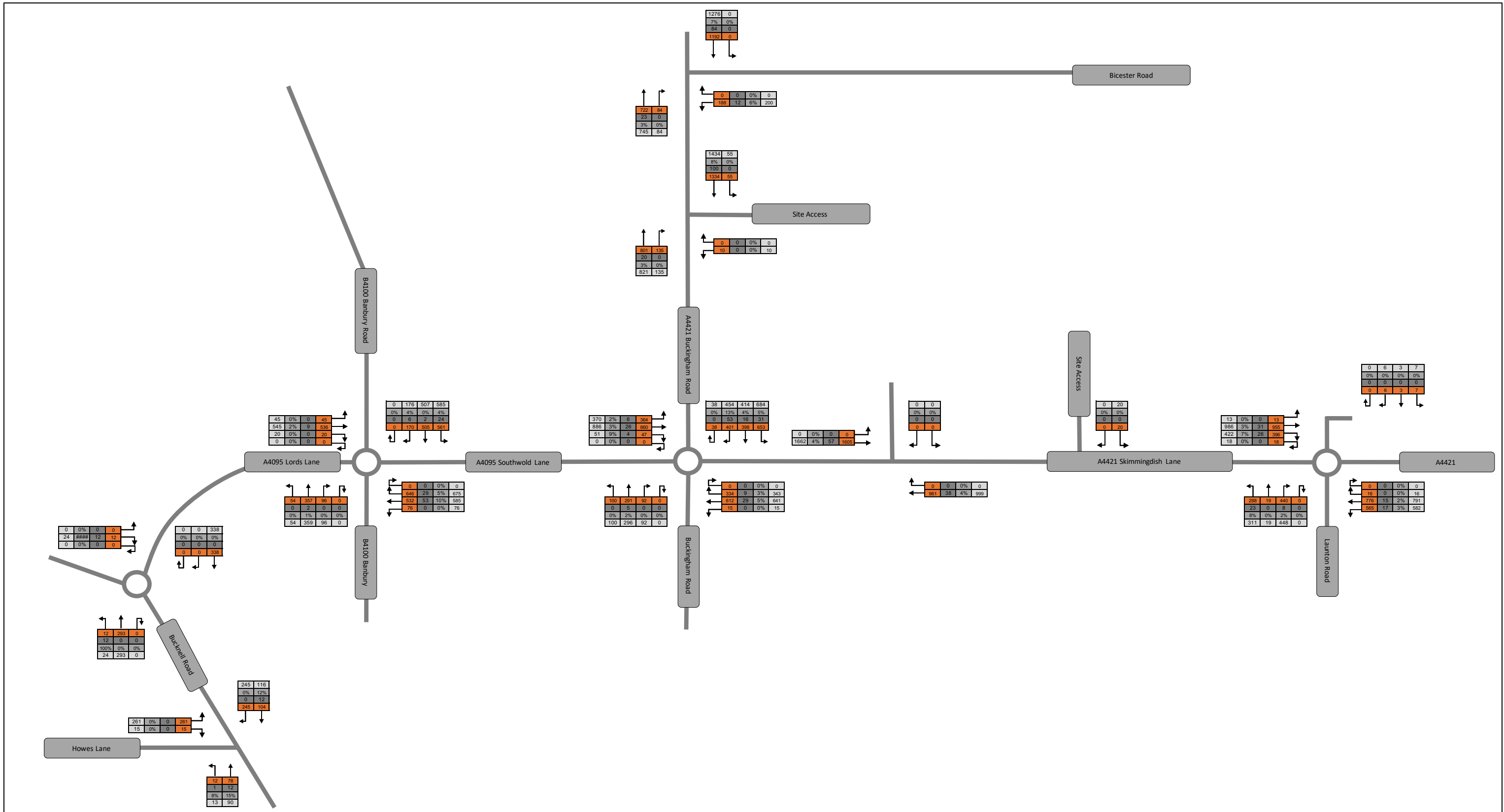
Job No. J323684

Figure No. NFDs

Drawn: MS

Date: 27/11/2020





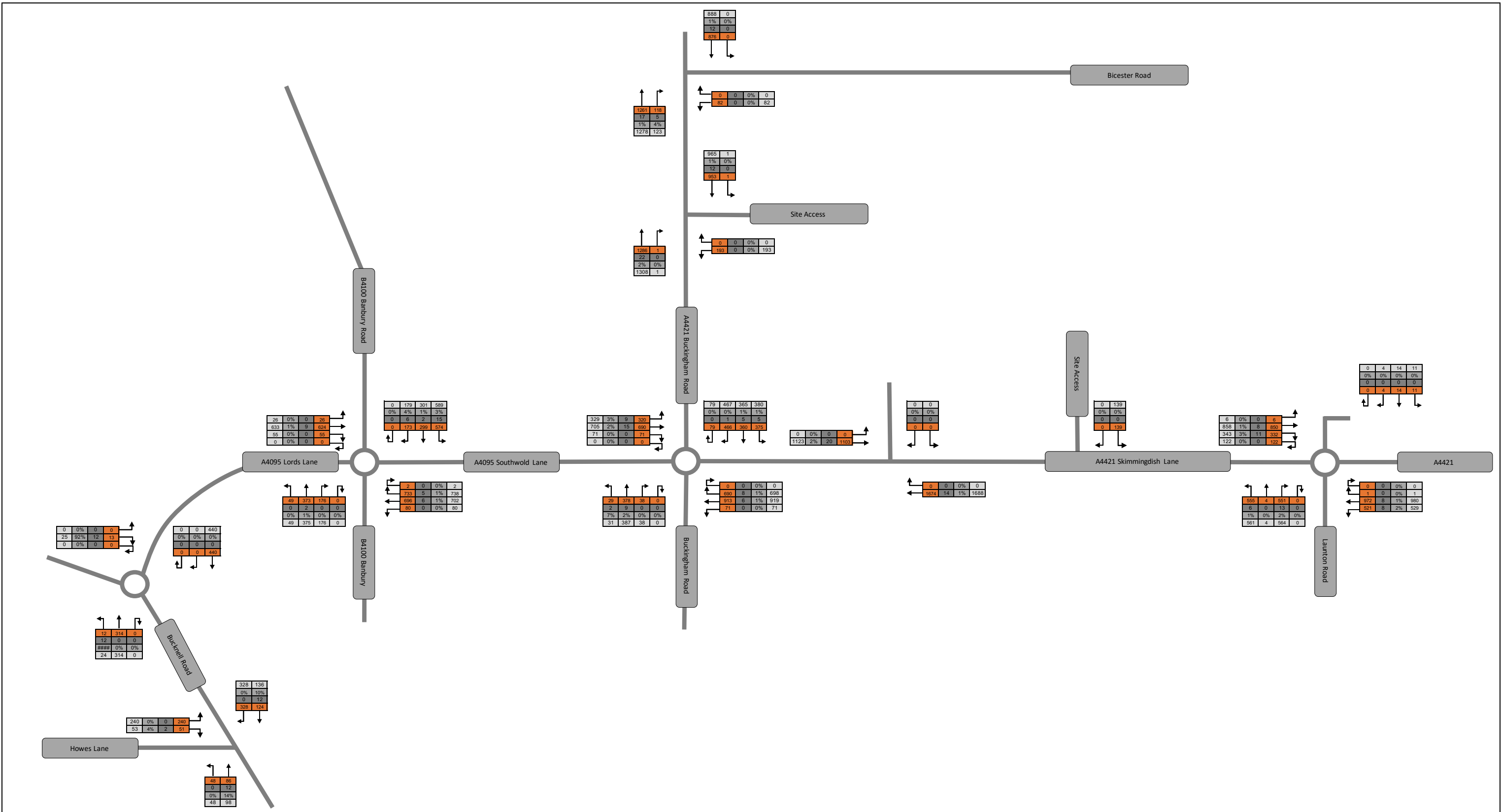
Legend	
0	Total Vehicles
0	Total HGV
%	% HGV
0	PCU

Notes

Job Title: Bicester Motion - Brand Experience Centre
 Figure Title: 2031 SATURN Base + Committed Development + Development (AM) - Including SEPR Development

Job No. J323684
 Drawn: MS
 Figure No. NFDs
 Date: 27/11/2020





Legend	
0	Total Vehicles
0	Total HGV
%	% HGV
0	PCU

Notes

Job Title: Bicester Motion - Brand Experience Centre
 Figure Title: 2031 SATURN Base + Committed Development + Development (PM) - Including SEPR Development

Job No. J323684
 Drawn: MS
 Figure No. NFDs
 Date: 27/11/2020



APPENDIX K – OCC SATURN Model Outputs

2025 SATURN Model Flows

Model ID	Model Name	Model Type	Model Path	Model ID	Model Name	Model Type	Model Path	Model ID	Model Name	Model Type	Model Path	Model ID	Model Name	Model Type	Model Path	Model ID	Model Name	Model Type	Model Path	Model ID	Model Name	Model Type	Model Path	Model ID	Model Name	Model Type	Model Path	Model ID	Model Name	Model Type	Model Path			
26	B4100/Bucknell Road	Bucknell Road	B4100 N	B4100 S	30045	30040	30221	30045_30040_30221	735	86	24	14	6	840	837	651	54	11	6	6	718	728	708	101	6	3	6	838	827					
			Bucknell Road	30045	30040	30041	30045_30040_30041	10	17	1	1	0	28	28	47	2	0	0	0	0	0	48	48	49	0	0	0	0	0	0	0	0	0	
			Bucknell Road	30221	30040	30045	30221_30040_30045	182	78	20	11	6	677	692	546	82	20	11	6	6	645	659	880	87	13	7	6	980	992					
			Bucknell Road	30045	30040	30041	30045_30040_30041	109	1	0	0	0	118	126	118	1	17	9	0	0	0	0	136	139	18	0	0	0	163	166				
27	B4100/Banbury Road/Buckingham Road	Banbury Road	B4100 N	B4100 S	30045	30040	30221	30045_30040_30221	735	86	24	14	6	840	837	651	54	11	6	6	718	728	708	101	6	3	6	838	827					
			Banbury Road	30045	30040	30041	30045_30040_30041	10	17	1	1	0	28	28	47	2	0	0	0	0	0	48	48	49	0	0	0	0	0	0	0	0	0	
			Buckingham Road	30221	30040	30045	30221_30040_30045	182	78	20	11	6	677	692	546	82	20	11	6	6	645	659	880	87	13	7	6	980	992					
			Buckingham Road	30045	30040	30041	30045_30040_30041	109	1	0	0	0	118	126	118	1	17	9	0	0	0	0	136	139	18	0	0	0	163	166				
28	B4100/Tha Green	The Green	B4100 N	B4100 S	30045	30040	30221	30045_30040_30221	735	86	24	14	6	840	837	651	54	11	6	6	718	728	708	101	6	3	6	838	827					
			The Green	30045	30040	30041	30045_30040_30041	10	17	1	1	0	28	28	47	2	0	0	0	0	0	48	48	49	0	0	0	0	0	0	0	0	0	
			The Green	30221	30040	30045	30221_30040_30045	182	78	20	11	6	677	692	546	82	20	11	6	6	645	659	880	87	13	7	6	980	992					
			The Green	30045	30040	30041	30045_30040_30041	109	1	0	0	0	118	126	118	1	17	9	0	0	0	0	136	139	18	0	0	0	163	166				

In Ref	Description	From Arm	To Arm	AM Peak 1-79665									Inter Peak 1-79425									PM Peak 1-77857								
				Car	GV	HGV(PCU)	HGV(Veh)	Bus	Total	PCUs	Car	GV	HGV(PCU)	HGV(Veh)	Bus	Total	PCUs	Car	GV	HGV(PCU)	HGV(Veh)	Bus	Total	PCUs						
				5	6	7	8	Total	5	6	7	8	Total	5	6	7	8	Total												
1	A4421 Skinninggish Lane / Buckingham Road / A495 roundabout	ARM A: A4421 (North)	ARM A: A4421 (North)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
		ARM A: A4421 (North)	ARM B: Skinninggish Ln (East)	506	60	56	31	0	597	622	233	47	40	23	0	303	321	309	19	8	5	0	333	337						
		ARM A: A4421 (North)	ARM C: Buckingham Rd (South)	337	42	25	14	2	395	408	227	40	6	3	2	273	278	279	48	6	3	2	333	337						
		ARM A: A4421 (North)	ARM C: A495 (West)	213	15	10	6	0	234	216	207	22	10	0	0	138	139	219	25	0	1	0	220	221						
		ARM B: Skinninggish Ln (East)	ARM A: A4421 (North)	235	43	17	9	0	287	295	216	52	46	26	0	294	314	590	42	14	8	0	640	646						
		ARM B: Skinninggish Ln (East)	ARM C: Buckingham Rd (South)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
		ARM B: Skinninggish Ln (East)	ARM C: A495 (West)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
		ARM C: Buckingham Rd (South)	ARM A: A4421 (North)	503	70	51	29	0	602	625	389	62	56	31	0	481	506	789	48	10	6	0	843	847						
		ARM C: Buckingham Rd (South)	ARM B: Skinninggish Ln (East)	225	33	6	3	2	263	288	216	55	13	7	2	280	287	321	47	13	7	2	377	385						
		ARM C: Buckingham Rd (South)	ARM C: A495 (West)	80	0	0	0	0	0	0	0	0	0	0	0	27	27	109	0	0	0	0	37	37						
		ARM D: A495 (West)	ARM A: A4421 (North)	151	15	10	6	0	182	166	102	20	17	10	0	132	140	219	41	16	9	0	269	276						
		ARM D: A495 (West)	ARM B: Skinninggish Ln (East)	680	78	46	26	0	784	805	372	42	56	31	0	445	470	601	66	27	15	0	682	694						
		ARM D: A495 (West)	ARM C: Buckingham Rd (South)	40	4	7	4	0	47	51	45	0	6	3	0	48	50	71	0	0	0	0	71	71						
ARM D: A495 (West)	ARM C: A495 (West)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
2	A4421 Skinninggish Lane / Launton Road roundabout	ARM A: Skinninggish Ln (North)	ARM A: Skinninggish Ln (North)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
		ARM A: Skinninggish Ln (North)	ARM B: Care Home Access Road	819	93	56	31	0	949	968	408	40	65	36	0	484	513	747	50	15	8	0	805	811						
		ARM A: Skinninggish Ln (North)	ARM D: Launton Rd (West)	333	35	46	26	0	394	414	242	49	32	18	0	309	323	281	31	21	11	0	323	332						
		ARM B: Care Home Access Road	ARM A: Skinninggish Ln (North)	0	6	0	0	0	6	6	0	0	0	0	0	0	0	2	2	0	0	0	4	4						
		ARM B: Care Home Access Road	ARM B: Care Home Access Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
		ARM B: Care Home Access Road	ARM C: A4421 (South)	0	7	0	0	0	7	7	0	0	0	0	0	0	0	1	1	0	0	0	11	11						
		ARM C: A4421 (South)	ARM D: Launton Rd (West)	650	60	27	15	0	726	738	365	40	56	31	0	436	461	884	71	14	8	0	963	969						
		ARM C: A4421 (South)	ARM B: Care Home Access Road	12	4	0	0	0	16	16	1	7	0	0	0	8	8	0	0	0	0	0	1	1						
		ARM C: A4421 (South)	ARM C: Skinninggish Ln (North)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
		ARM D: Launton Rd (West)	ARM D: Launton Rd (West)	466	82	16	9	8	565	580	348	84	36	20	8	460	484	464	49	0	0	0	8	521	529					
		ARM D: Launton Rd (West)	ARM B: Skinninggish Ln (North)	208	47	41	23	0	278	296	277	73	46	25	0	376	396	531	17	10	6	0	554	558						
		ARM D: Launton Rd (West)	ARM C: A4421 (South)	7	13	13	9	1	350	350	156	13	7	0	0	220	227	550	53	1	0	0	4	4						
		ARM D: Launton Rd (West)	ARM C: A4421 (South)	362	70	4	0	8	440	448	340	67	30	17	8	432	454	485	53	8	5	8	551	563						
		ARM D: Launton Rd (West)	ARM D: Launton Rd (West)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
		ARM A: A4421 (North)	ARM C: A4421 (South)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
		ARM A: A4421 (North)	ARM B: Bicester Rd (East)	220	103	13	7	1	330	337	168	77	10	6	1	252	258	360	55	8	5	1	421	424						
		ARM A: A4421 (North)	ARM C: Charbridge Ln (South)	961	67	44	24	7	1059	1085	580	30	85	48	7	665	710	872	59	14	8	7	945	958						
		ARM B: Bicester Rd (East)	ARM A: A4421 (North)	459	47	26	9	1	503	503	242	56	93	55	3	384	413	747	50	15	8	3	617	627						
ARM B: Bicester Rd (East)	ARM C: Charbridge Ln (South)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
ARM B: Bicester Rd (East)	ARM B: Bicester Rd (East)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
ARM B: Bicester Rd (East)	ARM C: Charbridge Ln (South)	113	5	2	1	0	119	120	44	24	5	0	0	71	73	62	11	0	0	0	0	73	73							
ARM C: Charbridge Ln (South)	ARM A: A4421 (North)	85	17	9	5	0	107	107	57	28	0	0	0	75	77	109	67	67	0	0	130	139								
ARM C: Charbridge Ln (South)	ARM B: Bicester Rd (East)	45	14	0	0	0	59	59	56	14	9	5	0	75	79	101	10	2	1	0	112	113								
ARM C: Charbridge Ln (South)	ARM C: Charbridge Ln (South)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
ARM C: Charbridge Ln (South)	ARM C: Wretchwick Way (South)	629	36	0	0	4	729	736	352	24	0	0	0	536	538	29	29	0	0	0	4	546	570							
ARM D: Charbridge Ln (South)	ARM C: Wretchwick Way (South)	283	36	15	9	3	331	341	203	32	77	43	3	280	318	353	41	14	8	3	405	414								
ARM D: Charbridge Ln (South)	ARM D: Gavray Dr (West)	42	0	0	0	0	42	42	43	3	0	0	0	46	46	85	0	0	0	0	85	85								
ARM D: Charbridge Ln (South)	ARM C: Wretchwick Way (North)	463	46	0	0	4	512	512	282	45	0	0	4	336	347	421	0	0	0	0	436	437								
ARM D: Charbridge Ln (South)	ARM C: Wretchwick Way (South)	37	0	0	0	0	37	37	21	0	0	0	0	21	21	26	0	0	0	0	26	26								
ARM D: Charbridge Ln (South)	ARM D: Gavray Dr (West)	8	0	0	0	0	8	8	8	0	0	0	0	8	8	14	0	0	0	0	14	14								
ARM D: Charbridge Ln (South)	ARM C: Wretchwick Way (North)	47	0	0	0	0	47	47	28	0	0	0	0	50	50	20	0	0	0	0	70	77								
ARM D: Charbridge Ln (South)	ARM B: Wretchwick Avenue	64	0	0	0	0	64	64	33	0	0	0	0	33	33	30	0	0	0	0	63	63								
ARM D: Charbridge Ln (South)	ARM C: Wretchwick Way (South)	7	0	0	0	0	7	7	16	0	0	0	0	16	16	27	0	0	0	0	27	27								
ARM D: Gavray Dr (West)	ARM C: Charbridge Ln (South)	41	0	0	0	0	79	79	41	0	0	0	0	41	41	79	0	0	0	0	79	79								
ARM D: Gavray Dr (West)	ARM B: Wretchwick Avenue	21	0	0	0	0	21	21	9	0	0	0	0	9	9	21	0	0	0	0	41	41								
ARM D: Gavray Dr (West)	ARM C: Wretchwick Way (South)	29	0	0	0	0	29	29	16	0	0	0	0	16	16	18	0	0	0	0	18	18								
ARM D: Wretchwick Way (North)	ARM C: Wretchwick Way (South)	236	36	15	0	0	281	281	165	27	0	0	0	236	271	275	15	0	0	0	241	243								
ARM D: Wretchwick Way (North)	Arm A: Perignie Way (West)	105	0	0	0	1	106	107	71	4	2	1	1	77	78	121	22	0	0	0	1	144	145							
ARM D: Wretchwick Way (North)	Arm B: Wretchwick Way (South)	445	47	26	15	2	508	522	282	36	98	55	2	374	419	460	35	15	8	2	508	514								
ARM D: Wretchwick Way (North)	Arm C: Perignie Way (West)	13	22	0	0	0	41	41	39	0	0	0	0	39	41	14	9	0	0	0	0	124	124							
ARM D: Wretchwick Way (North)	Arm A: Wretchwick Way (North)	123	0	0	0	1	124	125	48	11	1	1	1	61	62	67	0	0	0	0	1	68	69							
ARM D: Wretchwick Way (North)	Arm B: Wretchwick Way (South)	42	0	0	0	0	42	42	0	0	0	0	0	21	21	25	6	0	0	0	0	23	23							
ARM D: Wretchwick Way (North)	Arm C: Perignie Way (West)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
ARM D: Wretchwick Way (North)	Arm A: Neunkircher Way (South)	264	23	15	9	2	298	307	159	15	75	42	2	218	233	258	25	14	8	2	293	302								
ARM D: Wretchwick Way (North)	Arm B: Neunkircher Way (South)	113	0	0	0	0	113	113	17	0	0	0	0	113	113	17	0	0	0	0	0	113	113							
ARM D: Wretchwick Way (North)	Arm C: Wretchwick Way (South)	296	36	26	15	2	349	363	273	20	98	55	2	350	395	507	25	15	8	2	542	551								
ARM D: Wretchwick Way (North)	Arm A: Neunkircher Way (South)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
ARM D: Wretchwick Way (North)	Arm B: Neunkircher Way (South)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
ARM D: Wretchwick Way (North)	Arm C: Perignie Way (West)	125	0	0	0	0	125	125	102	14	13	7	0	127	127	206	20	0	0	0	0	116	116							
ARM D: Wretchwick Way (North)	Arm A: Wretchwick Way (North)	168	33	0	0	0	200	200	48	15	0	0	0	63	63	66	20	0	0	0	86	86								
ARM D: Wretchwick Way (North)	Arm B: Neunkircher Way (South)	284	24	0	0	0	307	307	96	5	0	0	0	101	101	148	14	0	0	0	162	162								
ARM D: Wretchwick Way (North)	Arm C: Perignie Way (West)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
ARM A: London Rd (North)	ARM A: London Rd (North)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
ARM A: London Rd (North)	ARM A: A4421 (East)	29	0	0	0	0	29	29	51	0	0	0	0	51	51	131	2	8	4	0	137	140								
ARM A: London Rd (North)	ARM C: A41 (North)	66	24	0	0	0	130	130	107	24	0	0	0	75	180															

Table with columns: In Ref, Description, From Arm, To Arm, AM Peak (Car, LGV, HGV (PCU), HGV (Veh), Bus (Veh), Total Veh, Total PCUs), Inter Peak (Car, LGV, HGV (PCU), HGV (Veh), Bus (Veh), Total Veh, Total PCUs), PM Peak (Car, LGV, HGV (PCU), HGV (Veh), Bus (Veh), Total Veh, Total PCUs), Total PCUs. Rows include various road descriptions and junctions like A4421 Skimmingdish Lane, A4421 Charlbridge Lane, A4421 Wrethcwick Way, A4421 Neunkirchen Way, A4421 Seefeheld Way, A41 / Pioneer Road, A41 / Oxford Road, and Oxford Road / Kings End.

11	A41 Oxford Road / Vendee Drive roundabout	ARM A: A41 (North)	63	0	0	0	63	63	28	4	0	0	32	32	64	0	0	0	64	64	
		ARM B: Unlabelled Rd (East)	0	0	0	0	0	0	0	0	0	0	0	35	35	0	0	0	0	0	
		ARM A: A41 (North)	866	163	224	125	10	1164	1273	802	173	202	113	10	1098	1197	1140	120	99	55	10
		ARM D: P&R (West)	2	0	0	0	0	2	2	3	0	0	0	0	3	3	1	0	0	0	0
		ARM A: A41 (North)	114	0	0	0	2	116	116	138	23	0	0	2	133	138	250	0	0	0	254
		ARM B: Unlabelled Rd (East)	154	32	0	0	0	186	186	82	25	12	7	0	114	120	156	20	0	0	175
		ARM B: Unlabelled Rd (East)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		ARM B: Unlabelled Rd (East)	0	0	0	0	0	1	1	2	0	0	0	0	4	4	13	1	0	0	14
		ARM B: Unlabelled Rd (East)	7	0	0	0	0	7	7	29	0	0	0	0	29	29	4	0	0	0	4
		ARM B: Unlabelled Rd (East)	14	0	0	0	0	14	14	16	6	0	0	0	22	22	41	0	0	0	41
		ARM C: A41 (South)	982	181	214	119	10	1292	1397	704	167	228	127	10	1008	1119	987	149	105	59	10
		ARM C: A41 (South)	1	0	0	0	0	1	1	35	0	0	0	0	35	35	0	0	0	0	20
		ARM C: A41 (South)	0	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	2
		ARM C: A41 (South)	88	0	0	0	0	88	88	280	0	0	0	0	280	280	108	0	0	0	108
		ARM C: A41 (South)	229	9	11	6	2	256	265	120	14	18	10	2	146	155	411	47	14	8	2
		ARM D: P&R (West)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
		ARM D: P&R (West)	2	0	0	0	0	2	2	0	0	0	0	0	0	0	1	0	0	0	1
		ARM D: P&R (West)	7	0	0	0	0	7	7	2	0	0	0	0	1	1	3	0	0	0	3
		ARM D: P&R (West)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		ARM D: P&R (West)	2	0	0	0	0	2	2	1	0	0	0	0	1	1	3	0	0	0	3
ARM E: Vendee Dr (North)	335	0	0	0	0	335	335	159	0	0	0	0	159	159	257	0	1	0	257		
ARM E: Vendee Dr (North)	23	0	14	8	0	31	37	35	0	13	7	0	32	38	34	0	0	0	34		
ARM E: Vendee Dr (North)	376	65	96	53	2	497	542	189	11	29	16	2	217	232	279	18	12	7	2		
ARM E: Vendee Dr (North)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	24		
ARM E: Vendee Dr (North)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1		
ARM E: Vendee Dr (North)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ARM E: Vendee Dr (North)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ARM E: Vendee Dr (North)	335	0	0	0	0	335	335	159	0	0	0	0	159	159	257	0	1	0	257		
ARM E: Vendee Dr (North)	23	0	14	8	0	31	37	35	0	13	7	0	32	38	34	0	0	0	34		
ARM E: Vendee Dr (North)	376	65	96	53	2	497	542	189	11	29	16	2	217	232	279	18	12	7	2		
ARM E: Vendee Dr (North)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	24		
ARM E: Vendee Dr (North)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1		
12	M40 Junction 9	Arm A: M1 North	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Arm B: A1 East	66	1	60	33	0	101	127	70	0	52	29	0	99	122	115	4	30	17	0
		Arm C: M1 North	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Arm D: A34 West	919	191	797	444	0	1554	1908	1063	250	685	382	0	1695	1998	1050	364	549	306	0
		Arm E: M1 North	39	0	45	25	0	64	84	16	0	58	33	0	49	74	105	0	52	29	0
		Arm B: A1 East	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Arm B: A1 East	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Arm B: A1 East	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Arm B: A1 East	874	199	224	125	12	1210	1322	800	120	146	81	12	1013	1090	797	78	53	30	12
		Arm C: M1 South	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Arm C: M1 South	272	48	16	9	0	329	326	184	17	37	21	0	252	265	214	21	16	6	0
		Arm C: M1 South	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Arm C: M1 South	206	36	50	28	0	269	291	165	30	49	27	0	222	244	573	120	26	15	0
		Arm D: A34 West	1301	242	436	243	0	1786	1979	1206	268	628	462	0	1936	2203	1257	366	625	348	0
		Arm D: A34 West	961	136	147	82	12	1191	1268	877	143	158	88	12	1120	1202	1093	171	59	33	12
		Arm D: A34 West	509	98	59	33	0	640	666	105	13	31	17	0	135	148	61	63	45	25	0
		Arm D: A34 West	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		ARM A: B4100 (North)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		ARM A: B4100 (North)	409	82	43	24	0	514	533	308	40	60	33	0	381	408	494	62	27	15	0
		ARM A: B4100 (North)	418	94	0	0	2	514	516	206	21	6	3	2	232	236	247	44	0	0	2
ARM A: B4100 (North)	150	18	0	0	0	174	180	63	2	0	0	0	6	71	72	162	7	0	0		
ARM B: A4095 (East)	546	80	51	29	0	654	677	284	45	61	34	0	363	389	629	48	9	5	0		
ARM B: A4095 (East)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ARM B: A4095 (East)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ARM B: A4095 (East)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ARM C: B4100 (South)	371	69	94	53	0	493	535	268	36	21	12	0	316	325	505	51	10	6	0		
ARM C: B4100 (South)	283	52	0	0	2	337	339	156	26	8	4	2	189	193	314	62	0	0	2		
ARM C: B4100 (South)	97	0	0	0	0	97	97	70	4	0	0	0	73	73	174	4	0	0	0		
ARM C: B4100 (South)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ARM D: A4095 (West)	54	0	0	0	0	54	54	30	0	3	2	0	32	33	49	0	0	0	0		
ARM D: A4095 (West)	45	0	0	0	0	46	46	42	0	0	0	0	42	42	24	7	0	0	0		
ARM D: A4095 (West)	356	20	16	9	0	385	399	219	23	0	11	0	263	272	526	71	15	9	0		
ARM D: A4095 (West)	20	0	0	0	0	20	20	29	0	3	2	0	31	33	55	0	0	0	0		
ARM D: A4095 (West)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
15	A4095 Southwold Lane / B4100 Banbury Road roundabout	ARM A: B4100 (North)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		ARM A: B4100 (North)	409	82	43	24	0	514	533	308	40	60	33	0	381	408	494	62	27	15	0
		ARM A: B4100 (North)	418	94	0	0	2	514	516	206	21	6	3	2	232	236	247	44	0	0	2
		ARM A: B4100 (North)	150	18	0	0	0	174	180	63	2	0	0	0	6	71	72	162	7	0	0
		ARM B: A4095 (East)	546	80	51	29	0	654	677	284	45	61	34	0	363	389	629	48	9	5	0
		ARM B: A4095 (East)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		ARM B: A4095 (East)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		ARM B: A4095 (East)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		ARM C: B4100 (South)	371	69	94	53															

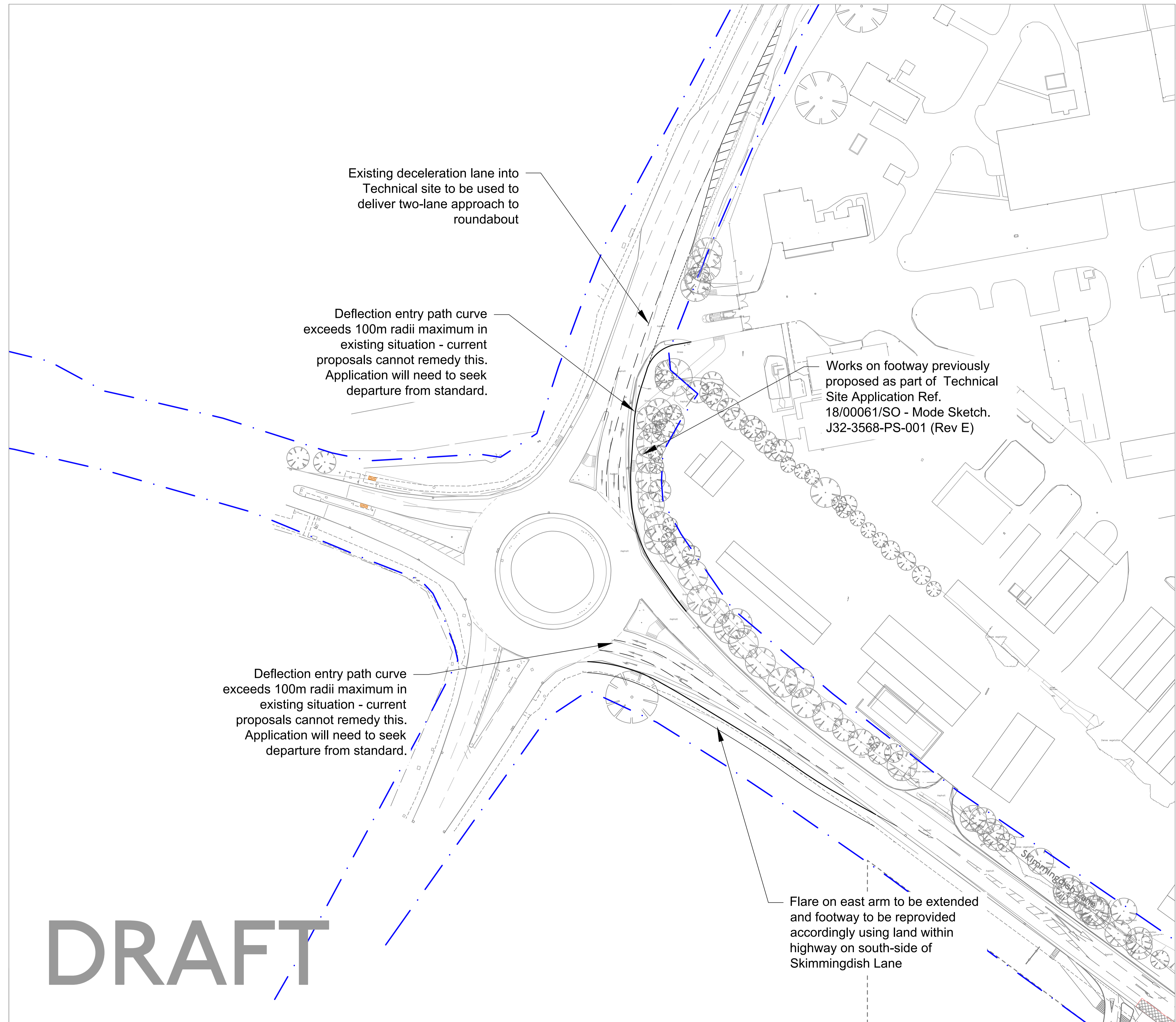
26	B4100 N	B4100 S	726	83	25	14	6	829	846	630	55	11	6	6	698	709	686	95	6	3	6	790	799	
	B4100 N	Bucknell Road	4	0	0	0	0	11	12	82	0	0	0	0	85	85	90	0	0	0	0	90	90	
	B4100 S	B4100 N	647	86	20	11	6	750	765	560	79	21	11	6	657	672	878	99	13	8	6	990	1002	
	B4100 S	Bucknell Road	112	1	0	0	0	14	126	140	114	1	18	10	14	139	161	138	15	0	0	14	167	181
	Bucknell Road	B4100 N	45	0	0	0	0	0	45	45	47	8	0	0	0	55	55	112	0	0	0	2	114	115
	Bucknell Road	B4100 S	33	0	0	0	0	14	47	61	19	1	2	1	14	34	49	32	0	0	0	14	46	60
27	Banbury Road	Buckingham Road	27	0	0	0	0	27	27	2	0	0	0	0	0	2	4	0	0	0	0	4	4	
	Banbury Road	B4100 N	325	49	0	0	2	376	378	291	14	0	0	2	308	310	270	43	0	0	2	314	316	
	Buckingham Road	Banbury Road	3	0	0	0	0	3	3	2	0	0	0	0	2	2	25	0	0	0	0	25	25	
	Buckingham Road	B4100 S	406	40	27	15	4	465	480	421	44	11	6	4	475	484	506	52	6	3	4	565	572	
	B4100 S	Banbury Road	283	30	0	0	0	2	316	318	249	27	0	0	2	277	279	403	19	0	0	2	424	426
	B4100 S	Buckingham Road	409	56	30	11	4	480	495	359	61	21	11	4	435	448	583	80	16	9	0	6	681	683
28	B4100 N	The Green	108	6	0	0	0	115	115	122	25	4	2	0	149	151	94	10	0	0	0	104	104	
	B4100 N	B4100 S	772	161	43	24	0	957	976	479	50	67	37	0	567	597	744	82	27	15	0	840	852	
	B4100 N	The Green	18	8	0	0	0	26	26	7	0	0	0	0	7	7	34	19	0	0	0	53	54	
	The Green	B4100 N	67	27	0	0	0	0	84	84	89	13	2	1	0	103	104	43	31	0	0	76	76	
	B4100 N	B4100 N	565	117	51	29	0	710	733	449	42	78	43	0	534	568	828	81	9	5	0	913	917	
	B4100 S	The Green	10	13	0	0	0	22	22	10	0	0	0	0	0	0	33	14	0	0	0	47	47	
29	A4421 N	A4421 S	814	162	150	82	0	1059	1125	511	111	39	21	0	644	661	764	102	21	12	0	877	887	
	A4421 N	Stratton Audley Road	67	26	0	0	0	93	93	17	8	0	0	0	25	25	23	0	0	0	0	23	23	
	A4421 S	Stratton Audley Road	64	28	0	0	0	93	93	52	9	0	0	0	61	61	60	2	3	2	0	63	65	
	A4421 S	Stratton Audley Road	558	89	41	23	0	670	688	464	109	43	24	0	596	615	937	130	28	15	0	1132	1145	
	Stratton Audley Road	A4421 N	24	3	0	0	0	27	27	18	19	0	0	0	36	36	39	3	0	0	0	102	102	
	Stratton Audley Road	A4421 S	89	1	1	0	0	90	90	85	9	0	0	0	94	94	72	10	0	0	0	82	82	
30	A4421 N	Stoke Lynn Road	92	6	0	0	0	98	98	100	9	0	0	0	108	108	100	15	0	0	0	115	115	
	A4421 S	Stoke Lynn Road	811	156	150	84	0	1051	1117	496	111	39	21	0	629	646	735	97	21	12	0	844	853	
	Stoke Lynn Road	A4421 S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Stoke Lynn Road	A4421 N	50	27	0	0	0	77	77	63	7	0	0	0	70	70	45	2	0	0	0	46	46	
	A4421 S	Stoke Lynn Road	572	91	41	23	0	685	704	453	110	43	24	0	607	626	1002	130	28	15	0	1149	1163	
	A4421 S	Stoke Lynn Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
31	B4110 N	Aunt Elms Lane	18	0	0	0	0	18	18	30	0	0	0	0	30	30	36	0	0	0	0	36	36	
	B4110 N	B4110 S	744	190	43	24	2	959	980	454	57	65	36	2	549	580	746	100	27	15	2	862	876	
	Aunt Elms Lane	B4110 S	141	4	0	0	0	144	144	2	0	0	0	0	2	2	54	0	0	0	0	54	54	
	Aunt Elms Lane	B4110 N	24	0	0	0	0	24	24	25	0	0	0	0	25	25	22	2	0	0	0	24	24	
	B4110 S	B4110 N	522	129	51	29	2	682	706	407	64	69	38	2	511	544	808	109	9	5	2	924	929	
	B4110 S	Aunt Elms Lane	2	0	0	0	0	2	2	4	0	0	0	0	4	4	0	0	0	0	0	11	11	
32	Fringford Road N	Fringford Road S	160	0	0	0	0	160	160	42	1	0	0	0	42	42	1	0	0	0	0	1	1	
	Fringford Road N	Aunt Elms Lane	165	4	0	0	0	169	169	28	0	0	0	0	28	28	75	2	0	0	0	78	78	
	Fringford Road S	Aunt Elms Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Fringford Road S	Fringford Road N	53	0	0	0	0	53	53	44	11	0	0	0	54	54	187	23	0	0	0	211	211	
	Aunt Elms Lane	Fringford Road N	20	0	0	0	0	20	20	34	0	0	0	0	34	34	47	0	0	0	0	47	47	
	Aunt Elms Lane	Fringford Road S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
33	Fringford Road N	Skimmingdish Lane	27	3	0	0	0	25	25	25	0	0	0	0	25	25	23	0	0	0	0	0	0	
	Fringford Road N	Skimmingdish Lane	310	4	0	0	0	314	314	59	1	0	0	0	60	60	70	2	0	0	0	73	73	
	Skimmingdish Lane	Fringford Road N	14	0	0	0	0	14	14	10	0	0	0	0	10	10	6	0	0	0	0	6	6	
	Skimmingdish Lane	Fringford Road N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	0	0	0	0	44	44	
	Fringford Road S	Fringford Road N	65	0	0	0	0	65	65	60	0	0	0	0	60	60	208	23	0	0	0	231	231	
	Fringford Road S	Skimmingdish Lane	8	0	0	0	0	8	8	18	11	0	0	0	28	28	27	0	0	0	0	27	27	
34	A4421 N	A4421 S	1034	156	176	98	2	1289	1369	554	112	66	37	2	704	736	826	99	16	9	2	937	944	
	A4421 N	Skimmingdish Lane	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	A4421 S	Skimmingdish Lane	5	0	0	0	0	5	5	5	0	0	0	0	5	5	55	0	0	0	0	55	55	
	A4421 S	Skimmingdish Lane	658	93	33	18	2	771	788	526	124	76	42	2	695	731	1133	130	44	24	2	1290	1311	
	Skimmingdish Lane	A4421 N	2	0	0	0	0	2	2	1	0	0	0	0	1	1	0	0	0	0	0	0	0	
	Skimmingdish Lane	A4421 S	37	3	0	0	0	40	40	40	10	0	0	0	10	10	13	0	0	0	0	13	13	
35	A4421 Buckingham Road N	A4421 Skimmingdish Lane E	492	60	56	31	0	583	608	233	47	40	23	0	303	321	312	19	8	5	0	336	340	
	A4421 Buckingham Road N	Buckingham Road S	328	42	25	14	2	385	398	327	43	6	3	2	375	380	393	48	6	3	2	337	340	
	A4421 Buckingham Road N	A4421 Buckingham Road N	237	57	94	53	0	347	389	109	22	20	11	0	142	151	282	32	1	0	1	315	316	
	A4421 Buckingham Road N	Buckingham Road N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	
	A4421 Skimmingdish Lane E	Buckingham Road S	20	0	0	0	0	20	20	17	0	0	0	0	17	17	66	0	0	0	0	66	66	
	A4421 Skimmingdish Lane E	A4421 Skimmingdish Lane E	536	70	51	29	0	635	657	409	62	56	31	0	502	526	844	53	10	0	0	562	567	
	A4421 Buckingham Road N	A4421 Buckingham Road N	239	44	17	9	0	293	300	216	52	46	26	0	294	314	623	42	14	8	0	672	679	
	A4421 Skimmingdish Lane E	A4421 Skimmingdish Lane E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	A4421 Skimmingdish Lane E	A4421 Skimmingdish Lane E	98	0	0	0	0	98	98	38	7	4	1	0	41	41	27	4	0	0	0	28	28	
	Buckingham Road S	A4421 Buckingham Road N	223	33	6	3	2	262	266	215	52	13	7	2	277	284	306	50	13	7	2	365	373	
	B																							

APPENDIX L – Preliminary FAST Mitigation Proposal Drawings

This drawing has been produced by mode transport planning.
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 DO NOT SCALE OFF THIS DRAWING.
 Dimensions shown are in metres unless stated otherwise.
 Road markings & traffic signs are to be in accordance with 'The Traffic Signs Regulations and General Directions 2016'
 Tactile paving is to be in accordance with 'Guidance on the use of tactile paving surfaces 2007'
 Visibility Splays shown are taken from 'DMRB'



Extent of Adopted Highway



DRAFT

rev	date	remarks
A	28-10-19	DRAFT for internal comment only
client		

Bicester Motion

job title	Bicester Motion F.A.S.T Application
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drawing title	Skimmingdish Lane - Offsite Highway Improvements - Buckingham Road Roundabout
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drawing no.	J32-3684-PS-105
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drawn	jwm	checked	alf
created	Oct '19	scale	1:500@A1

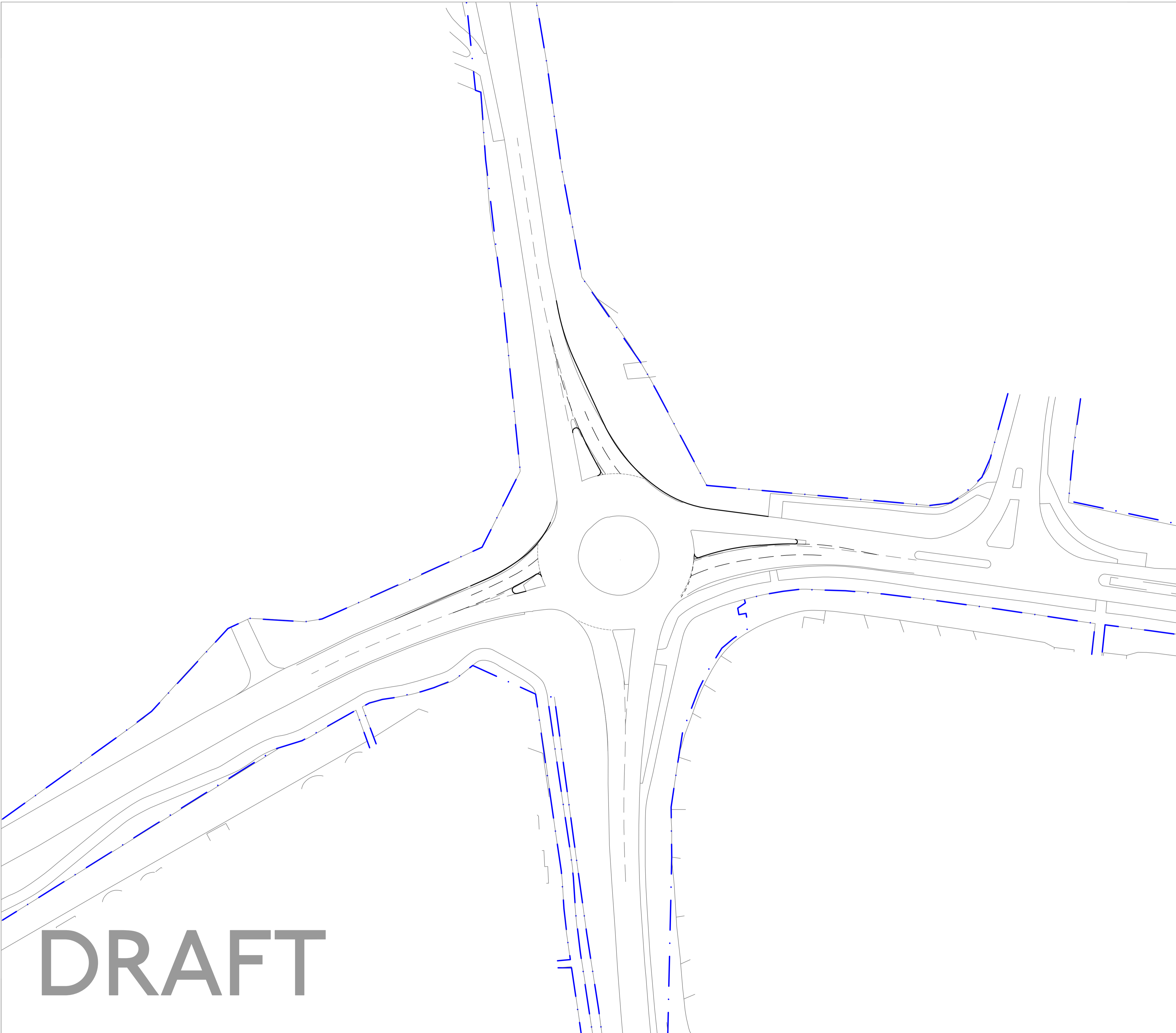
mode transport planning
 Lombard House
 145 Great Charles Street
 Birmingham
 B3 3LP



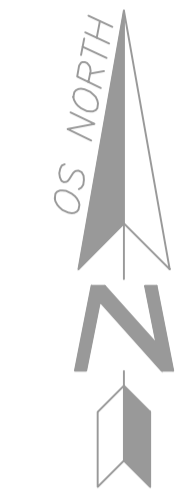
t 0121 794 8390
 e info@modetransport.co.uk
 w www.modetransport.co.uk

transport planning

File: C:\Users\james\OneDrive (mode)\Project\Birmingham2 - Projects\J323684_Bicester Heritage Masterplans5_Graphics2_CAD2_Sheets\191025_132-3684-PS-105.dwg



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 Dimensions shown are in metres unless stated otherwise.
 Road markings & traffic signs are to be in accordance with 'The Traffic Signs Regulations and General Directions 2016'
 Tactile paving is to be in accordance with 'Guidance on the use of tactile paving surfaces 2007'
 Visibility Splays shown are taken from 'DMRB'



Extent of Adopted Highway - - - - -

rev	date	remarks
A	28-10-19	DRAFT for internal comment only

client

Bicester Motion

job title
 Bicester Motion
 F.A.S.T Application

drawing title
 Skimmingdish Lane - Offsite Highway
 Improvements - Buckingham Road Roundabout

drawing no.
 J32-3684-PS-106

drawn	jwm	checked	alf
created	Oct '19	scale	1:500@A1

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transport planning

DRAFT

File: C:\Users\JamesM\OneDrive (mode)\Project\Birmingham2 - Project\J323684_Bicester Heritage Masterplan15_Graphics2_CAD2_Sheets\191025-132-3684-PS-106.dwg

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 Dimensions shown are in metres unless stated otherwise.
 Road markings & traffic signs are to be in accordance with 'The Traffic Signs Regulations and General Directions 2016'
 Tactile paving is to be in accordance with 'Guidance on the use of tactile paving surfaces 2007'
 Visibility Splays shown are taken from 'DMRB'



Extent of Adopted Highway

Business Park Access - Partially constructed to date

Works on north arm previously proposed as part of Hotel application Ref. 18/01253/F - Mode Sketch. J32-3569-PS-112 Rev D

West arm to be realigned with re-provided footway to provide extra flare using land within highway on south-side of Launton Road

DRAFT

rev	date	remarks
A	28-10-19	DRAFT for internal comment only
client		

Bicester Motion

job title	Bicester Motion F.A.S.T Application
-----------	--

drawing title	Skimmingdish Lane - Offsite Highway Improvements - Launton Road Roundabout
---------------	--

drawing no.	J32-3684-PS-107
-------------	-----------------

drawn	jwm	checked	alf
created	Oct '19	scale	1:250@A1

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transport planning

APPENDIX M – Junctions 9 Outputs – Reference Case

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.5.0.6896 © Copyright TRL Limited, 2018
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: 1_191021_A4421 Buckingham rd_Buck rd_A4421 Skim Ln_FAST_MITIGATED_V2.j9
Path: C:\Users\JamesMonk\Dropbox (mode)\Project\Birmingham\2. Projects\J323684_Bicester Heritage Masterplan\4. Data\Modelling\200125_EQ\Baseline
Report generation date: 25/11/2020 17:15:47

- »2026 SATURN Base + Committed (inc. FAST), AM
- »2026 SATURN Base + Committed (inc. FAST), PM
- »2026 SATURN Base + Committed (inc. FAST) + Development, AM
- »2026 SATURN Base + Committed (inc. FAST) + Development, PM
- »2031 SATURN Base + Committed (inc. FAST) + Development , AM
- »2031 SATURN Base + Committed (inc. FAST) + Development , PM
- »2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), AM
- »2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2026 SATURN Base + Committed (inc. FAST)								
1 - A4421 Buckingham Road (N)	24.1	56.26	0.99	F	1.2	4.07	0.54	A
2 - A4421 Skimmingdish Lane (E)	1.4	5.28	0.58	A	25.8	52.00	0.99	F
3 - Buckingham Road	1.0	7.56	0.51	A	4.2	33.21	0.83	D
4 - A4095 Southwold Lane	3.4	9.48	0.78	A	4.6	14.64	0.83	B
2026 SATURN Base + Committed (inc. FAST) + Development								
1 - A4421 Buckingham Road (N)	26.4	60.24	1.00	F	1.9	5.33	0.65	A
2 - A4421 Skimmingdish Lane (E)	1.5	5.52	0.60	A	72.9	128.94	1.07	F
3 - Buckingham Road	1.1	8.21	0.53	A	6.7	53.44	0.90	F
4 - A4095 Southwold Lane	5.5	14.57	0.85	B	4.9	15.67	0.84	C
2031 SATURN Base + Committed (inc. FAST) + Development								
1 - A4421 Buckingham Road (N)	40.5	83.52	1.03	F	3.0	7.68	0.75	A
2 - A4421 Skimmingdish Lane (E)	2.1	6.97	0.68	A	148.3	250.46	1.17	F
3 - Buckingham Road	1.5	10.70	0.61	B	7.6	61.26	0.91	F
4 - A4095 Southwold Lane	7.5	19.86	0.89	C	8.3	26.04	0.91	D
2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)								
1 - A4421 Buckingham Road (N)	36.9	76.85	1.02	F	2.8	7.35	0.74	A
2 - A4421 Skimmingdish Lane (E)	1.8	6.34	0.65	A	112.6	194.34	1.13	F
3 - Buckingham Road	1.4	9.81	0.59	A	8.7	68.32	0.93	F
4 - A4095 Southwold Lane	6.2	16.74	0.87	C	6.6	21.11	0.88	C

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	(untitled)
Location	
Site number	
Date	04/05/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-499K8KJ\Mode
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026 SATURN Base + Committed (inc. FAST)	AM	ONE HOUR	07:15	08:45	15
D2	2026 SATURN Base + Committed (inc. FAST)	PM	ONE HOUR	16:45	18:15	15
D3	2026 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15
D4	2026 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15
D5	2031 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15
D6	2031 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15
D7	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:15	08:45	15
D8	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026 SATURN Base + Committed (inc. FAST), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A4421 Buckingham Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4421 Skimmingdish Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Buckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	25.66	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A4421 Buckingham Road (N)	
2	A4421 Skimmingdish Lane (E)	
3	Buckingham Road	
4	A4095 Southwold Lane	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A4421 Buckingham Road (N)	3.50	9.90	50.0	48.9	50.0	15.5	
2 - A4421 Skimmingdish Lane (E)	3.60	10.00	55.0	13.3	50.0	28.5	
3 - Buckingham Road	3.20	8.20	33.0	15.9	50.0	30.5	
4 - A4095 Southwold Lane	3.80	9.30	30.0	31.4	50.0	26.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A4421 Buckingham Road (N)	0.807	2629
2 - A4421 Skimmingdish Lane (E)	0.746	2455
3 - Buckingham Road	0.654	1961
4 - A4095 Southwold Lane	0.726	2271

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026 SATURN Base + Committed (inc. FAST)	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4421 Buckingham Road (N)		✓	1415	100.000
2 - A4421 Skimmingdish Lane (E)		✓	856	100.000
3 - Buckingham Road		✓	442	100.000
4 - A4095 Southwold Lane		✓	1195	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	35	586	374	420
	2 - A4421 Skimmingdish Lane (E)	268	0	17	571
	3 - Buckingham Road	252	91	0	99
	4 - A4095 Southwold Lane	245	905	45	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	0	5	4	12
	2 - A4421 Skimmingdish Lane (E)	3	0	0	5
	3 - Buckingham Road	2	0	0	0
	4 - A4095 Southwold Lane	2	3	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4421 Buckingham Road (N)	0.99	56.26	24.1	F
2 - A4421 Skimmingdish Lane (E)	0.58	5.28	1.4	A
3 - Buckingham Road	0.51	7.56	1.0	A
4 - A4095 Southwold Lane	0.78	9.48	3.4	A

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1065	780	1856	0.574	1060	1.3	4.492	A
2 - A4421 Skimmingdish Lane (E)	644	655	1849	0.349	642	0.5	2.978	A
3 - Buckingham Road	333	970	1270	0.262	331	0.4	3.831	A
4 - A4095 Southwold Lane	900	484	1857	0.485	896	0.9	3.734	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1272	934	1737	0.732	1267	2.7	7.576	A
2 - A4421 Skimmingdish Lane (E)	770	783	1750	0.440	769	0.8	3.663	A
3 - Buckingham Road	397	1161	1138	0.349	397	0.5	4.849	A
4 - A4095 Southwold Lane	1074	580	1788	0.601	1072	1.5	5.013	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1558	1140	1576	0.989	1499	17.4	33.687	D
2 - A4421 Skimmingdish Lane (E)	942	928	1638	0.575	940	1.3	5.140	A
3 - Buckingham Road	487	1404	971	0.501	485	1.0	7.372	A
4 - A4095 Southwold Lane	1316	708	1696	0.776	1308	3.3	9.118	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1558	1146	1571	0.991	1531	24.1	56.264	F
2 - A4421 Skimmingdish Lane (E)	942	946	1624	0.580	942	1.4	5.281	A
3 - Buckingham Road	487	1416	963	0.506	487	1.0	7.561	A
4 - A4095 Southwold Lane	1316	710	1694	0.777	1315	3.4	9.484	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1272	942	1730	0.735	1357	2.9	11.880	B
2 - A4421 Skimmingdish Lane (E)	770	836	1709	0.450	772	0.8	3.849	A
3 - Buckingham Road	397	1193	1116	0.356	399	0.6	5.037	A
4 - A4095 Southwold Lane	1074	585	1784	0.602	1082	1.5	5.177	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1065	786	1852	0.575	1071	1.4	4.647	A
2 - A4421 Skimmingdish Lane (E)	644	662	1844	0.350	646	0.5	3.009	A
3 - Buckingham Road	333	977	1265	0.263	334	0.4	3.868	A
4 - A4095 Southwold Lane	900	487	1854	0.485	902	0.9	3.791	A

2026 SATURN Base + Committed (inc. FAST), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A4421 Buckingham Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4421 Skimmingdish Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Buckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	29.06	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2026 SATURN Base + Committed (inc. FAST)	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4421 Buckingham Road (N)		✓	960	100.000
2 - A4421 Skimmingdish Lane (E)		✓	1642	100.000
3 - Buckingham Road		✓	439	100.000
4 - A4095 Southwold Lane		✓	1061	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	23	289	329	319
	2 - A4421 Skimmingdish Lane (E)	609	0	87	946
	3 - Buckingham Road	364	44	0	31
	4 - A4095 Southwold Lane	371	621	69	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	0	2	2	0
	2 - A4421 Skimmingdish Lane (E)	1	0	0	1
	3 - Buckingham Road	3	0	0	7
	4 - A4095 Southwold Lane	2	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4421 Buckingham Road (N)	0.54	4.07	1.2	A
2 - A4421 Skimmingdish Lane (E)	0.99	52.00	25.8	F
3 - Buckingham Road	0.83	33.21	4.2	D
4 - A4095 Southwold Lane	0.83	14.64	4.6	B

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	723	550	2150	0.336	721	0.5	2.515	A
2 - A4421 Skimmingdish Lane (E)	1236	555	2018	0.613	1230	1.6	4.533	A
3 - Buckingham Road	331	1422	995	0.332	329	0.5	5.391	A
4 - A4095 Southwold Lane	799	779	1666	0.480	795	0.9	4.117	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	863	658	2063	0.418	862	0.7	2.998	A
2 - A4421 Skimmingdish Lane (E)	1476	664	1937	0.762	1470	3.1	7.612	A
3 - Buckingham Road	395	1699	817	0.483	393	0.9	8.459	A
4 - A4095 Southwold Lane	954	931	1555	0.613	951	1.6	5.933	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1057	800	1947	0.543	1055	1.2	4.027	A
2 - A4421 Skimmingdish Lane (E)	1808	813	1826	0.990	1745	18.9	31.610	D
3 - Buckingham Road	483	2028	606	0.797	473	3.4	25.389	D
4 - A4095 Southwold Lane	1168	1112	1424	0.820	1158	4.2	13.006	B

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1057	807	1942	0.544	1057	1.2	4.068	A
2 - A4421 Skimmingdish Lane (E)	1808	815	1825	0.991	1780	25.8	51.996	F
3 - Buckingham Road	483	2063	584	0.827	480	4.2	33.214	D
4 - A4095 Southwold Lane	1168	1132	1410	0.829	1167	4.6	14.644	B

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	863	669	2054	0.420	865	0.7	3.031	A
2 - A4421 Skimmingdish Lane (E)	1476	667	1935	0.763	1566	3.4	12.133	B
3 - Buckingham Road	395	1791	758	0.521	407	1.1	10.600	B
4 - A4095 Southwold Lane	954	980	1520	0.627	965	1.7	6.612	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	723	555	2146	0.337	724	0.5	2.531	A
2 - A4421 Skimmingdish Lane (E)	1236	558	2016	0.613	1243	1.6	4.697	A
3 - Buckingham Road	331	1435	986	0.335	333	0.5	5.535	A
4 - A4095 Southwold Lane	799	788	1659	0.481	802	0.9	4.213	A

2026 SATURN Base + Committed (inc. FAST) + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A4421 Buckingham Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4421 Skimmingdish Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Buckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	28.34	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4421 Buckingham Road (N)		✓	1425	100.000
2 - A4421 Skimmingdish Lane (E)		✓	878	100.000
3 - Buckingham Road		✓	457	100.000
4 - A4095 Southwold Lane		✓	1290	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	38	587	375	425
	2 - A4421 Skimmingdish Lane (E)	290	0	17	571
	3 - Buckingham Road	267	91	0	99
	4 - A4095 Southwold Lane	340	905	45	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	0	5	4	12
	2 - A4421 Skimmingdish Lane (E)	3	0	0	5
	3 - Buckingham Road	2	0	0	0
	4 - A4095 Southwold Lane	2	3	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4421 Buckingham Road (N)	1.00	60.24	26.4	F
2 - A4421 Skimmingdish Lane (E)	0.60	5.52	1.5	A
3 - Buckingham Road	0.53	8.21	1.1	A
4 - A4095 Southwold Lane	0.85	14.57	5.5	B

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1073	780	1856	0.578	1067	1.4	4.532	A
2 - A4421 Skimmingdish Lane (E)	661	661	1844	0.358	659	0.6	3.031	A
3 - Buckingham Road	344	993	1254	0.274	343	0.4	3.942	A
4 - A4095 Southwold Lane	971	514	1836	0.529	967	1.1	4.120	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1281	933	1737	0.738	1276	2.7	7.711	A
2 - A4421 Skimmingdish Lane (E)	789	790	1745	0.452	788	0.8	3.760	A
3 - Buckingham Road	411	1187	1120	0.367	410	0.6	5.065	A
4 - A4095 Southwold Lane	1160	616	1763	0.658	1157	1.9	5.900	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1569	1136	1579	0.993	1507	18.3	34.918	D
2 - A4421 Skimmingdish Lane (E)	967	935	1633	0.592	964	1.4	5.363	A
3 - Buckingham Road	503	1435	950	0.530	501	1.1	7.983	A
4 - A4095 Southwold Lane	1420	751	1666	0.853	1407	5.3	13.255	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1569	1145	1572	0.998	1537	26.4	60.235	F
2 - A4421 Skimmingdish Lane (E)	967	953	1619	0.597	967	1.5	5.515	A
3 - Buckingham Road	503	1447	941	0.535	503	1.1	8.211	A
4 - A4095 Southwold Lane	1420	754	1664	0.854	1419	5.5	14.565	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1281	947	1727	0.742	1375	3.0	13.017	B
2 - A4421 Skimmingdish Lane (E)	789	849	1699	0.464	792	0.9	3.977	A
3 - Buckingham Road	411	1223	1095	0.375	413	0.6	5.295	A
4 - A4095 Southwold Lane	1160	622	1759	0.659	1174	2.0	6.294	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1073	786	1852	0.579	1079	1.4	4.698	A
2 - A4421 Skimmingdish Lane (E)	661	669	1839	0.359	662	0.6	3.064	A
3 - Buckingham Road	344	1000	1249	0.275	345	0.4	3.984	A
4 - A4095 Southwold Lane	971	518	1834	0.530	975	1.1	4.206	A

2026 SATURN Base + Committed (inc. FAST) + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A4421 Buckingham Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4421 Skimmingdish Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Buckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	59.91	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4421 Buckingham Road (N)		✓	1153	100.000
2 - A4421 Skimmingdish Lane (E)		✓	1642	100.000
3 - Buckingham Road		✓	439	100.000
4 - A4095 Southwold Lane		✓	1062	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	79	312	345	417
	2 - A4421 Skimmingdish Lane (E)	609	0	87	946
	3 - Buckingham Road	364	44	0	31
	4 - A4095 Southwold Lane	372	621	69	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	0	2	2	0
	2 - A4421 Skimmingdish Lane (E)	1	0	0	1
	3 - Buckingham Road	3	0	0	7
	4 - A4095 Southwold Lane	2	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4421 Buckingham Road (N)	0.65	5.33	1.9	A
2 - A4421 Skimmingdish Lane (E)	1.07	128.94	72.9	F
3 - Buckingham Road	0.90	53.44	6.7	F
4 - A4095 Southwold Lane	0.84	15.67	4.9	C

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	868	550	2153	0.403	865	0.7	2.789	A
2 - A4421 Skimmingdish Lane (E)	1236	683	1924	0.643	1229	1.8	5.133	A
3 - Buckingham Road	331	1536	922	0.359	328	0.6	6.045	A
4 - A4095 Southwold Lane	800	820	1636	0.489	796	0.9	4.265	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1037	658	2066	0.502	1035	1.0	3.488	A
2 - A4421 Skimmingdish Lane (E)	1476	817	1824	0.809	1467	4.0	9.848	A
3 - Buckingham Road	395	1835	731	0.540	392	1.1	10.561	B
4 - A4095 Southwold Lane	955	980	1521	0.628	952	1.7	6.295	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1269	799	1951	0.651	1266	1.8	5.231	A
2 - A4421 Skimmingdish Lane (E)	1808	999	1689	1.071	1659	41.2	58.815	F
3 - Buckingham Road	483	2116	551	0.877	467	5.2	37.354	E
4 - A4095 Southwold Lane	1169	1136	1408	0.831	1158	4.5	13.827	B

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1269	807	1945	0.653	1269	1.9	5.326	A
2 - A4421 Skimmingdish Lane (E)	1808	1002	1686	1.072	1681	72.9	128.944	F
3 - Buckingham Road	483	2138	537	0.900	478	6.7	53.445	F
4 - A4095 Southwold Lane	1169	1154	1394	0.839	1168	4.9	15.673	C

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1037	669	2057	0.504	1040	1.0	3.553	A
2 - A4421 Skimmingdish Lane (E)	1476	821	1821	0.811	1747	5.2	73.187	F
3 - Buckingham Road	395	2102	559	0.706	411	2.6	26.455	D
4 - A4095 Southwold Lane	955	1101	1433	0.666	966	2.0	7.886	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	868	556	2148	0.404	869	0.7	2.817	A
2 - A4421 Skimmingdish Lane (E)	1236	686	1921	0.643	1250	1.8	5.462	A
3 - Buckingham Road	331	1557	908	0.364	339	0.6	6.405	A
4 - A4095 Southwold Lane	800	838	1624	0.492	804	1.0	4.413	A

2031 SATURN Base + Committed (inc. FAST) + Development , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A4421 Buckingham Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4421 Skimmingdish Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Buckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	38.43	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2031 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4421 Buckingham Road (N)		✓	1480	100.000
2 - A4421 Skimmingdish Lane (E)		✓	1007	100.000
3 - Buckingham Road		✓	477	100.000
4 - A4095 Southwold Lane		✓	1303	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	38	639	389	414
	2 - A4421 Skimmingdish Lane (E)	340	0	22	645
	3 - Buckingham Road	290	89	0	98
	4 - A4095 Southwold Lane	367	887	49	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	0	5	4	13
	2 - A4421 Skimmingdish Lane (E)	3	0	0	5
	3 - Buckingham Road	2	0	0	0
	4 - A4095 Southwold Lane	2	3	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4421 Buckingham Road (N)	1.03	83.52	40.5	F
2 - A4421 Skimmingdish Lane (E)	0.68	6.97	2.1	A
3 - Buckingham Road	0.61	10.70	1.5	B
4 - A4095 Southwold Lane	0.89	19.86	7.5	C

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1114	768	1863	0.598	1108	1.5	4.732	A
2 - A4421 Skimmingdish Lane (E)	758	667	1840	0.412	755	0.7	3.312	A
3 - Buckingham Road	359	1077	1195	0.300	357	0.4	4.288	A
4 - A4095 Southwold Lane	981	567	1799	0.545	976	1.2	4.353	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1330	919	1746	0.762	1324	3.1	8.402	A
2 - A4421 Skimmingdish Lane (E)	905	796	1739	0.521	904	1.1	4.302	A
3 - Buckingham Road	429	1288	1050	0.409	428	0.7	5.779	A
4 - A4095 Southwold Lane	1171	679	1718	0.682	1168	2.1	6.497	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1630	1114	1594	1.022	1542	24.9	42.924	E
2 - A4421 Skimmingdish Lane (E)	1109	930	1636	0.678	1105	2.1	6.730	A
3 - Buckingham Road	525	1552	869	0.604	522	1.5	10.278	B
4 - A4095 Southwold Lane	1435	827	1611	0.890	1415	6.9	16.935	C

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1630	1127	1584	1.029	1567	40.5	83.523	F
2 - A4421 Skimmingdish Lane (E)	1109	945	1624	0.683	1108	2.1	6.975	A
3 - Buckingham Road	525	1563	861	0.610	525	1.5	10.699	B
4 - A4095 Southwold Lane	1435	832	1608	0.892	1432	7.5	19.855	C

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1330	937	1732	0.768	1478	3.5	22.868	C
2 - A4421 Skimmingdish Lane (E)	905	885	1670	0.542	909	1.2	4.751	A
3 - Buckingham Road	429	1341	1012	0.424	432	0.7	6.238	A
4 - A4095 Southwold Lane	1171	688	1712	0.684	1193	2.2	7.205	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1114	775	1858	0.600	1122	1.5	4.944	A
2 - A4421 Skimmingdish Lane (E)	758	675	1833	0.414	760	0.7	3.362	A
3 - Buckingham Road	359	1086	1189	0.302	360	0.4	4.352	A
4 - A4095 Southwold Lane	981	572	1795	0.546	985	1.2	4.463	A

2031 SATURN Base + Committed (inc. FAST) + Development , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A4421 Buckingham Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4421 Skimmingdish Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Buckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	109.52	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2031 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4421 Buckingham Road (N)		✓	1282	100.000
2 - A4421 Skimmingdish Lane (E)		✓	1742	100.000
3 - Buckingham Road		✓	435	100.000
4 - A4095 Southwold Lane		✓	1113	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	79	378	364	461
	2 - A4421 Skimmingdish Lane (E)	722	0	77	943
	3 - Buckingham Road	366	41	0	28
	4 - A4095 Southwold Lane	333	711	69	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	0	1	1	0
	2 - A4421 Skimmingdish Lane (E)	1	0	0	1
	3 - Buckingham Road	3	0	0	7
	4 - A4095 Southwold Lane	3	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4421 Buckingham Road (N)	0.75	7.68	3.0	A
2 - A4421 Skimmingdish Lane (E)	1.17	250.46	148.3	F
3 - Buckingham Road	0.91	61.26	7.6	F
4 - A4095 Southwold Lane	0.91	26.04	8.3	D

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	965	615	2112	0.457	962	0.8	3.120	A
2 - A4421 Skimmingdish Lane (E)	1311	730	1891	0.694	1303	2.2	6.035	A
3 - Buckingham Road	327	1650	849	0.386	325	0.6	6.841	A
4 - A4095 Southwold Lane	838	903	1572	0.533	833	1.1	4.847	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1152	735	2014	0.572	1151	1.3	4.159	A
2 - A4421 Skimmingdish Lane (E)	1566	873	1784	0.878	1550	6.3	14.408	B
3 - Buckingham Road	391	1966	647	0.604	388	1.5	13.700	B
4 - A4095 Southwold Lane	1001	1076	1447	0.691	996	2.2	7.909	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1412	888	1889	0.747	1405	2.9	7.347	A
2 - A4421 Skimmingdish Lane (E)	1918	1066	1642	1.168	1631	78.0	101.601	F
3 - Buckingham Road	479	2151	529	0.906	460	6.2	43.974	E
4 - A4095 Southwold Lane	1225	1193	1362	0.899	1205	7.2	20.673	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1412	900	1879	0.751	1411	3.0	7.682	A
2 - A4421 Skimmingdish Lane (E)	1918	1071	1638	1.171	1637	148.3	250.457	F
3 - Buckingham Road	479	2159	524	0.914	473	7.6	61.261	F
4 - A4095 Southwold Lane	1225	1208	1351	0.907	1221	8.3	26.041	D

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1152	755	1998	0.577	1159	1.4	4.322	A
2 - A4421 Skimmingdish Lane (E)	1566	881	1779	0.880	1767	98.0	250.438	F
3 - Buckingham Road	391	2177	512	0.764	407	3.6	37.926	E
4 - A4095 Southwold Lane	1001	1184	1369	0.731	1023	2.8	10.993	B

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	965	623	2105	0.458	967	0.9	3.170	A
2 - A4421 Skimmingdish Lane (E)	1311	734	1887	0.695	1694	2.4	64.852	F
3 - Buckingham Road	327	2027	608	0.539	337	1.2	13.763	B
4 - A4095 Southwold Lane	838	1077	1447	0.579	844	1.4	6.022	A

2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A4421 Buckingham Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4421 Skimmingdish Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Buckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	35.38	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4421 Buckingham Road (N)		✓	1490	100.000
2 - A4421 Skimmingdish Lane (E)		✓	961	100.000
3 - Buckingham Road		✓	483	100.000
4 - A4095 Southwold Lane		✓	1271	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	38	653	398	401
	2 - A4421 Skimmingdish Lane (E)	334	0	15	612
	3 - Buckingham Road	291	92	0	100
	4 - A4095 Southwold Lane	364	860	47	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	0	5	4	13
	2 - A4421 Skimmingdish Lane (E)	3	0	0	5
	3 - Buckingham Road	2	0	0	0
	4 - A4095 Southwold Lane	2	3	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4421 Buckingham Road (N)	1.02	76.85	36.9	F
2 - A4421 Skimmingdish Lane (E)	0.65	6.34	1.8	A
3 - Buckingham Road	0.59	9.81	1.4	A
4 - A4095 Southwold Lane	0.87	16.74	6.2	C

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1122	749	1880	0.597	1116	1.5	4.678	A
2 - A4421 Skimmingdish Lane (E)	723	662	1843	0.393	721	0.6	3.202	A
3 - Buckingham Road	364	1038	1222	0.298	362	0.4	4.178	A
4 - A4095 Southwold Lane	957	566	1799	0.532	952	1.1	4.230	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1339	896	1765	0.759	1333	3.0	8.212	A
2 - A4421 Skimmingdish Lane (E)	864	791	1743	0.496	863	1.0	4.082	A
3 - Buckingham Road	434	1242	1082	0.401	433	0.7	5.542	A
4 - A4095 Southwold Lane	1143	677	1719	0.665	1139	1.9	6.176	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1641	1088	1615	1.016	1559	23.5	40.683	E
2 - A4421 Skimmingdish Lane (E)	1058	927	1638	0.646	1055	1.8	6.138	A
3 - Buckingham Road	532	1498	906	0.587	529	1.4	9.466	A
4 - A4095 Southwold Lane	1399	826	1612	0.868	1384	5.8	14.851	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1641	1099	1607	1.021	1587	36.9	76.854	F
2 - A4421 Skimmingdish Lane (E)	1058	943	1626	0.651	1058	1.8	6.338	A
3 - Buckingham Road	532	1509	898	0.592	532	1.4	9.809	A
4 - A4095 Southwold Lane	1399	830	1609	0.870	1398	6.2	16.741	C

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1339	911	1754	0.764	1473	3.4	19.337	C
2 - A4421 Skimmingdish Lane (E)	864	871	1682	0.514	867	1.1	4.435	A
3 - Buckingham Road	434	1288	1049	0.414	437	0.7	5.908	A
4 - A4095 Southwold Lane	1143	685	1713	0.667	1159	2.0	6.689	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1122	755	1875	0.598	1129	1.5	4.878	A
2 - A4421 Skimmingdish Lane (E)	723	670	1837	0.394	725	0.7	3.244	A
3 - Buckingham Road	364	1047	1216	0.299	365	0.4	4.233	A
4 - A4095 Southwold Lane	957	570	1796	0.533	960	1.2	4.325	A

2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A4421 Buckingham Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4421 Skimmingdish Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Buckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	86.47	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4421 Buckingham Road (N)		✓	1280	100.000
2 - A4421 Skimmingdish Lane (E)		✓	1674	100.000
3 - Buckingham Road		✓	445	100.000
4 - A4095 Southwold Lane		✓	1081	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	79	375	360	466
	2 - A4421 Skimmingdish Lane (E)	690	0	71	913
	3 - Buckingham Road	378	38	0	29
	4 - A4095 Southwold Lane	320	690	71	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	0	1	1	0
	2 - A4421 Skimmingdish Lane (E)	1	0	0	1
	3 - Buckingham Road	2	0	0	7
	4 - A4095 Southwold Lane	3	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4421 Buckingham Road (N)	0.74	7.35	2.8	A
2 - A4421 Skimmingdish Lane (E)	1.13	194.34	112.6	F
3 - Buckingham Road	0.93	68.32	8.7	F
4 - A4095 Southwold Lane	0.88	21.11	6.6	C

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	964	598	2126	0.453	960	0.8	3.080	A
2 - A4421 Skimmingdish Lane (E)	1260	732	1889	0.667	1252	2.0	5.589	A
3 - Buckingham Road	335	1608	883	0.379	333	0.6	6.513	A
4 - A4095 Southwold Lane	814	886	1586	0.513	810	1.0	4.613	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1151	716	2030	0.567	1149	1.3	4.076	A
2 - A4421 Skimmingdish Lane (E)	1505	876	1782	0.844	1493	5.0	11.955	B
3 - Buckingham Road	400	1919	683	0.586	397	1.4	12.467	B
4 - A4095 Southwold Lane	972	1057	1463	0.664	968	1.9	7.225	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1409	867	1907	0.739	1403	2.8	7.074	A
2 - A4421 Skimmingdish Lane (E)	1843	1069	1639	1.125	1622	60.2	81.430	F
3 - Buckingham Road	490	2151	533	0.919	469	6.7	45.864	E
4 - A4095 Southwold Lane	1190	1193	1365	0.872	1174	5.9	17.584	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1409	877	1898	0.742	1409	2.8	7.348	A
2 - A4421 Skimmingdish Lane (E)	1843	1074	1635	1.127	1634	112.6	194.339	F
3 - Buckingham Road	490	2164	525	0.934	482	8.7	68.324	F
4 - A4095 Southwold Lane	1190	1211	1352	0.880	1187	6.6	21.110	C

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1151	731	2017	0.570	1157	1.3	4.211	A
2 - A4421 Skimmingdish Lane (E)	1505	883	1777	0.847	1762	48.4	166.132	F
3 - Buckingham Road	400	2179	514	0.778	419	4.0	42.435	E
4 - A4095 Southwold Lane	972	1189	1368	0.710	988	2.5	9.849	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	964	606	2119	0.455	966	0.8	3.128	A
2 - A4421 Skimmingdish Lane (E)	1260	737	1886	0.668	1445	2.1	12.691	B
3 - Buckingham Road	335	1795	762	0.440	348	0.8	8.951	A
4 - A4095 Southwold Lane	814	981	1518	0.536	819	1.2	5.191	A

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.5.0.6896 © Copyright TRL Limited, 2018
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Filename: 2_191021_B4100 Banbury Road Roundabout (Hotel Application)_FAST_MITIGATED.j9
Path: C:\Users\JamesMonk\Dropbox (mode)\Project\Birmingham\2. Projects\J323684_Bicester Heritage Masterplan\4. Data\Modelling\200125_EQ\Baseline
Report generation date: 25/11/2020 17:10:44

- »2026 SATURN Base + Committed (inc. FAST), AM
- »2026 SATURN Base + Committed (inc. FAST), PM
- »2026 SATURN Base + Committed (inc. FAST) + Development, AM
- »2026 SATURN Base + Committed (inc. FAST) + Development, PM
- »2031 SATURN Base + Committed (inc. FAST) + Development, AM
- »2031 SATURN Base + Committed (inc. FAST) + Development , PM
- »2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), AM
- »2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2026 SATURN Base + Committed (inc. FAST)								
1 - B4100 Banbury Road (N)	10.8	31.58	0.93	D	4.1	15.03	0.81	C
2 - A4095 Southwold Lane (E)	10.7	30.68	0.93	D	21.9	52.38	0.98	F
3 - B4100 Banbury Road (S)	1.6	13.37	0.63	B	4.3	31.50	0.83	D
4 - A4095 Lords Lane (W)	1.6	9.79	0.61	A	14.4	64.31	0.97	F
2026 SATURN Base + Committed (inc. FAST) + Development								
1 - B4100 Banbury Road (N)	13.8	39.24	0.95	E	3.9	14.11	0.80	B
2 - A4095 Southwold Lane (E)	14.2	40.12	0.96	E	52.9	105.27	1.05	F
3 - B4100 Banbury Road (S)	1.8	14.33	0.64	B	5.4	39.39	0.86	E
4 - A4095 Lords Lane (W)	2.1	11.74	0.68	B	13.5	60.69	0.97	F
2031 SATURN Base + Committed (inc. FAST) + Development								
1 - B4100 Banbury Road (N)	26.2	67.29	1.00	F	9.7	32.21	0.92	D
2 - A4095 Southwold Lane (E)	54.3	124.97	1.06	F	96.8	183.67	1.12	F
3 - B4100 Banbury Road (S)	3.2	22.43	0.77	C	30.7	158.27	1.07	F
4 - A4095 Lords Lane (W)	3.3	17.83	0.77	C	17.4	78.82	0.99	F
2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)								
1 - B4100 Banbury Road (N)	16.7	46.25	0.97	E	8.4	28.12	0.91	D
2 - A4095 Southwold Lane (E)	41.5	100.41	1.04	F	79.6	153.22	1.09	F
3 - B4100 Banbury Road (S)	3.4	23.18	0.79	C	25.8	136.20	1.05	F
4 - A4095 Lords Lane (W)	2.9	16.40	0.75	C	11.0	54.12	0.95	F

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	(untitled)
Location	
Site number	
Date	04/05/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-499K8KJMode
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026 SATURN Base + Committed (inc. FAST)	AM	ONE HOUR	07:30	09:00	15
D2	2026 SATURN Base + Committed (inc. FAST)	PM	ONE HOUR	16:45	18:15	15
D3	2026 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:30	09:00	15
D4	2026 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15
D7	2031 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:30	09:00	15
D8	2031 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15
D9	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:30	09:00	15
D10	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026 SATURN Base + Committed (inc. FAST), 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		1, 2, 3, 4	25.70	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	B4100 Banbury Road (N)	
2	A4095 Southwold Lane (E)	
3	B4100 Banbury Road (S)	
4	A4095 Lords Lane (W)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - B4100 Banbury Road (N)	3.45	7.50	25.0	33.7	42.0	20.5	
2 - A4095 Southwold Lane (E)	3.50	7.50	30.0	26.4	42.0	28.0	
3 - B4100 Banbury Road (S)	3.47	6.70	22.4	15.1	42.0	38.5	
4 - A4095 Lords Lane (W)	3.95	5.80	20.0	33.9	42.0	29.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B4100 Banbury Road (N)	0.703	1951
2 - A4095 Southwold Lane (E)	0.691	1946
3 - B4100 Banbury Road (S)	0.612	1643
4 - A4095 Lords Lane (W)	0.638	1668

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026 SATURN Base + Committed (inc. FAST)	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B4100 Banbury Road (N)		✓	1196	100.000
2 - A4095 Southwold Lane (E)		✓	1222	100.000
3 - B4100 Banbury Road (S)		✓	410	100.000
4 - A4095 Lords Lane (W)		✓	532	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	640	390	166
	2 - A4095 Southwold Lane (E)	589	0	77	556
	3 - B4100 Banbury Road (S)	263	94	0	53
	4 - A4095 Lords Lane (W)	59	454	19	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	11	1	0
	2 - A4095 Southwold Lane (E)	6	0	0	3
	3 - B4100 Banbury Road (S)	2	0	0	0
	4 - A4095 Lords Lane (W)	0	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - B4100 Banbury Road (N)	0.93	31.58	10.8	D
2 - A4095 Southwold Lane (E)	0.93	30.68	10.7	D
3 - B4100 Banbury Road (S)	0.63	13.37	1.6	B
4 - A4095 Lords Lane (W)	0.61	9.79	1.6	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	900	425	1550	0.581	895	1.4	5.454	A
2 - A4095 Southwold Lane (E)	920	430	1579	0.583	914	1.4	5.372	A
3 - B4100 Banbury Road (S)	309	981	1006	0.307	307	0.4	5.138	A
4 - A4095 Lords Lane (W)	401	708	1167	0.343	398	0.5	4.672	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1075	509	1493	0.720	1071	2.5	8.435	A
2 - A4095 Southwold Lane (E)	1099	515	1523	0.721	1094	2.5	8.306	A
3 - B4100 Banbury Road (S)	369	1174	885	0.417	368	0.7	6.944	A
4 - A4095 Lords Lane (W)	478	847	1077	0.444	477	0.8	5.993	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1317	621	1417	0.929	1289	9.4	24.260	C
2 - A4095 Southwold Lane (E)	1345	620	1453	0.926	1319	9.2	23.328	C
3 - B4100 Banbury Road (S)	451	1415	734	0.615	448	1.5	12.464	B
4 - A4095 Lords Lane (W)	586	1026	961	0.609	583	1.5	9.442	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1317	624	1415	0.931	1311	10.8	31.581	D
2 - A4095 Southwold Lane (E)	1345	630	1446	0.931	1339	10.7	30.681	D
3 - B4100 Banbury Road (S)	451	1437	720	0.627	451	1.6	13.371	B
4 - A4095 Lords Lane (W)	586	1038	953	0.615	586	1.6	9.787	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1075	513	1490	0.722	1108	2.7	10.176	B
2 - A4095 Southwold Lane (E)	1099	532	1511	0.727	1130	2.8	10.199	B
3 - B4100 Banbury Road (S)	369	1213	860	0.428	372	0.8	7.428	A
4 - A4095 Lords Lane (W)	478	869	1063	0.450	481	0.8	6.221	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	900	428	1547	0.582	906	1.4	5.652	A
2 - A4095 Southwold Lane (E)	920	435	1576	0.584	925	1.4	5.579	A
3 - B4100 Banbury Road (S)	309	993	999	0.309	310	0.5	5.236	A
4 - A4095 Lords Lane (W)	401	716	1162	0.345	402	0.5	4.743	A

2026 SATURN Base + Committed (inc. FAST), 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		1, 2, 3, 4	42.20	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2026 SATURN Base + Committed (inc. FAST)	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B4100 Banbury Road (N)		✓	929	100.000
2 - A4095 Southwold Lane (E)		✓	1404	100.000
3 - B4100 Banbury Road (S)		✓	475	100.000
4 - A4095 Lords Lane (W)		✓	755	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	513	244	172
	2 - A4095 Southwold Lane (E)	717	2	79	606
	3 - B4100 Banbury Road (S)	269	156	0	50
	4 - A4095 Lords Lane (W)	72	639	44	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	6	2	0
	2 - A4095 Southwold Lane (E)	2	0	0	1
	3 - B4100 Banbury Road (S)	1	0	0	0
	4 - A4095 Lords Lane (W)	0	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - B4100 Banbury Road (N)	0.81	15.03	4.1	C
2 - A4095 Southwold Lane (E)	0.98	52.38	21.9	F
3 - B4100 Banbury Road (S)	0.83	31.50	4.3	D
4 - A4095 Lords Lane (W)	0.97	64.31	14.4	F

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	699	629	1451	0.482	696	0.9	4.745	A
2 - A4095 Southwold Lane (E)	1057	344	1681	0.629	1050	1.7	5.652	A
3 - B4100 Banbury Road (S)	358	1120	943	0.379	355	0.6	6.101	A
4 - A4095 Lords Lane (W)	568	856	1105	0.515	564	1.0	6.612	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	835	752	1367	0.611	833	1.5	6.708	A
2 - A4095 Southwold Lane (E)	1262	412	1634	0.772	1256	3.2	9.357	A
3 - B4100 Banbury Road (S)	427	1339	808	0.529	425	1.1	9.361	A
4 - A4095 Lords Lane (W)	679	1023	997	0.681	675	2.1	11.028	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1023	893	1271	0.805	1014	3.8	13.544	B
2 - A4095 Southwold Lane (E)	1546	500	1573	0.982	1493	16.4	33.006	D
3 - B4100 Banbury Road (S)	523	1597	649	0.806	513	3.6	24.862	C
4 - A4095 Lords Lane (W)	831	1224	869	0.957	798	10.3	39.956	E

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1023	910	1259	0.812	1022	4.1	15.033	C
2 - A4095 Southwold Lane (E)	1546	505	1570	0.984	1524	21.9	52.377	F
3 - B4100 Banbury Road (S)	523	1627	630	0.830	520	4.3	31.503	D
4 - A4095 Lords Lane (W)	831	1246	854	0.973	815	14.4	64.309	F

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	835	803	1332	0.627	845	1.7	7.531	A
2 - A4095 Southwold Lane (E)	1262	421	1628	0.775	1335	3.6	15.142	C
3 - B4100 Banbury Road (S)	427	1417	760	0.562	439	1.3	11.611	B
4 - A4095 Lords Lane (W)	679	1077	963	0.705	726	2.5	18.029	C

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	699	639	1444	0.484	702	0.9	4.876	A
2 - A4095 Southwold Lane (E)	1057	348	1678	0.630	1065	1.7	5.937	A
3 - B4100 Banbury Road (S)	358	1135	934	0.383	360	0.6	6.306	A
4 - A4095 Lords Lane (W)	568	868	1097	0.518	574	1.1	6.955	A

2026 SATURN Base + Committed (inc. FAST) + Development, 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		1, 2, 3, 4	32.00	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B4100 Banbury Road (N)		✓	1221	100.000
2 - A4095 Southwold Lane (E)		✓	1227	100.000
3 - B4100 Banbury Road (S)		✓	412	100.000
4 - A4095 Lords Lane (W)		✓	600	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	665	390	166
	2 - A4095 Southwold Lane (E)	590	0	77	560
	3 - B4100 Banbury Road (S)	263	96	0	53
	4 - A4095 Lords Lane (W)	59	522	19	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	4	1	2
	2 - A4095 Southwold Lane (E)	5	0	0	9
	3 - B4100 Banbury Road (S)	1	0	0	0
	4 - A4095 Lords Lane (W)	0	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - B4100 Banbury Road (N)	0.95	39.24	13.8	E
2 - A4095 Southwold Lane (E)	0.96	40.12	14.2	E
3 - B4100 Banbury Road (S)	0.64	14.33	1.8	B
4 - A4095 Lords Lane (W)	0.68	11.74	2.1	B

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	919	477	1568	0.586	914	1.4	5.461	A
2 - A4095 Southwold Lane (E)	924	430	1544	0.598	918	1.5	5.697	A
3 - B4100 Banbury Road (S)	310	984	996	0.311	308	0.4	5.221	A
4 - A4095 Lords Lane (W)	452	710	1179	0.383	449	0.6	4.915	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1098	571	1502	0.731	1093	2.6	8.690	A
2 - A4095 Southwold Lane (E)	1103	515	1489	0.741	1098	2.8	9.089	A
3 - B4100 Banbury Road (S)	370	1178	871	0.425	369	0.7	7.155	A
4 - A4095 Lords Lane (W)	539	850	1089	0.495	538	1.0	6.519	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1344	697	1415	0.950	1309	11.4	27.876	D
2 - A4095 Southwold Lane (E)	1351	617	1422	0.950	1316	11.4	27.949	D
3 - B4100 Banbury Road (S)	454	1412	720	0.630	450	1.6	13.165	B
4 - A4095 Lords Lane (W)	661	1025	975	0.677	656	2.0	11.144	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1344	701	1412	0.952	1335	13.8	39.235	E
2 - A4095 Southwold Lane (E)	1351	629	1414	0.956	1340	14.2	40.117	E
3 - B4100 Banbury Road (S)	454	1437	703	0.645	453	1.8	14.334	B
4 - A4095 Lords Lane (W)	661	1039	966	0.684	660	2.1	11.744	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1098	577	1498	0.733	1141	2.9	11.277	B
2 - A4095 Southwold Lane (E)	1103	537	1474	0.748	1147	3.1	12.411	B
3 - B4100 Banbury Road (S)	370	1231	837	0.443	374	0.8	7.841	A
4 - A4095 Lords Lane (W)	539	878	1070	0.504	544	1.0	6.892	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	919	481	1564	0.588	925	1.4	5.678	A
2 - A4095 Southwold Lane (E)	924	436	1541	0.600	930	1.5	5.956	A
3 - B4100 Banbury Road (S)	310	997	988	0.314	312	0.5	5.334	A
4 - A4095 Lords Lane (W)	452	719	1174	0.385	453	0.6	5.008	A

2026 SATURN Base + Committed (inc. FAST) + Development, 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		1, 2, 3, 4	64.21	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B4100 Banbury Road (N)		✓	930	100.000
2 - A4095 Southwold Lane (E)		✓	1501	100.000
3 - B4100 Banbury Road (S)		✓	475	100.000
4 - A4095 Lords Lane (W)		✓	756	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	514	244	172
	2 - A4095 Southwold Lane (E)	742	2	81	676
	3 - B4100 Banbury Road (S)	269	156	0	50
	4 - A4095 Lords Lane (W)	72	640	44	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	3	1	2
	2 - A4095 Southwold Lane (E)	1	0	0	1
	3 - B4100 Banbury Road (S)	1	0	0	0
	4 - A4095 Lords Lane (W)	0	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - B4100 Banbury Road (N)	0.80	14.11	3.9	B
2 - A4095 Southwold Lane (E)	1.05	105.27	52.9	F
3 - B4100 Banbury Road (S)	0.86	39.39	5.4	E
4 - A4095 Lords Lane (W)	0.97	60.69	13.5	F

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	700	629	1472	0.476	697	0.9	4.619	A
2 - A4095 Southwold Lane (E)	1130	344	1689	0.669	1122	2.0	6.267	A
3 - B4100 Banbury Road (S)	358	1190	901	0.397	355	0.6	6.560	A
4 - A4095 Lords Lane (W)	569	874	1097	0.519	565	1.1	6.709	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	836	752	1387	0.603	834	1.5	6.473	A
2 - A4095 Southwold Lane (E)	1349	412	1642	0.822	1340	4.3	11.579	B
3 - B4100 Banbury Road (S)	427	1422	759	0.563	425	1.3	10.691	B
4 - A4095 Lords Lane (W)	680	1044	988	0.688	675	2.1	11.366	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1024	895	1289	0.795	1015	3.6	12.792	B
2 - A4095 Southwold Lane (E)	1653	501	1580	1.046	1543	31.6	52.286	F
3 - B4100 Banbury Road (S)	523	1648	620	0.844	510	4.4	29.985	D
4 - A4095 Lords Lane (W)	832	1222	875	0.952	801	9.9	38.780	E

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1024	913	1276	0.802	1023	3.9	14.105	B
2 - A4095 Southwold Lane (E)	1653	505	1577	1.048	1568	52.9	105.266	F
3 - B4100 Banbury Road (S)	523	1672	605	0.865	519	5.4	39.394	E
4 - A4095 Lords Lane (W)	832	1242	862	0.966	818	13.5	60.691	F

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	836	799	1355	0.617	845	1.6	7.181	A
2 - A4095 Southwold Lane (E)	1349	420	1637	0.825	1539	5.5	56.901	F
3 - B4100 Banbury Road (S)	427	1612	642	0.665	440	2.1	18.832	C
4 - A4095 Lords Lane (W)	680	1156	916	0.742	721	3.1	21.775	C

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	700	643	1463	0.479	703	0.9	4.754	A
2 - A4095 Southwold Lane (E)	1130	348	1686	0.670	1144	2.1	6.795	A
3 - B4100 Banbury Road (S)	358	1212	888	0.403	363	0.7	6.933	A
4 - A4095 Lords Lane (W)	569	892	1085	0.525	577	1.1	7.193	A

2031 SATURN Base + Committed (inc. FAST) + Development, 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		1, 2, 3, 4	74.01	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2031 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B4100 Banbury Road (N)		✓	1264	100.000
2 - A4095 Southwold Lane (E)		✓	1287	100.000
3 - B4100 Banbury Road (S)		✓	492	100.000
4 - A4095 Lords Lane (W)		✓	621	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	576	514	174
	2 - A4095 Southwold Lane (E)	674	0	64	549
	3 - B4100 Banbury Road (S)	337	101	0	54
	4 - A4095 Lords Lane (W)	46	555	20	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	4	0	3
	2 - A4095 Southwold Lane (E)	4	0	0	10
	3 - B4100 Banbury Road (S)	1	0	0	0
	4 - A4095 Lords Lane (W)	0	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - B4100 Banbury Road (N)	1.00	67.29	26.2	F
2 - A4095 Southwold Lane (E)	1.06	124.97	54.3	F
3 - B4100 Banbury Road (S)	0.77	22.43	3.2	C
4 - A4095 Lords Lane (W)	0.77	17.83	3.3	C

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	952	506	1556	0.612	945	1.5	5.843	A
2 - A4095 Southwold Lane (E)	969	530	1483	0.653	962	1.8	6.810	A
3 - B4100 Banbury Road (S)	370	1044	958	0.387	368	0.6	6.077	A
4 - A4095 Lords Lane (W)	468	831	1104	0.424	465	0.7	5.609	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1136	605	1486	0.765	1130	3.1	9.943	A
2 - A4095 Southwold Lane (E)	1157	633	1415	0.818	1148	4.2	13.026	B
3 - B4100 Banbury Road (S)	442	1246	827	0.535	440	1.1	9.256	A
4 - A4095 Lords Lane (W)	558	993	1000	0.559	556	1.2	8.083	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1392	736	1395	0.998	1332	18.1	39.239	E
2 - A4095 Southwold Lane (E)	1417	747	1341	1.057	1310	31.0	59.709	F
3 - B4100 Banbury Road (S)	542	1428	710	0.763	534	2.9	19.731	C
4 - A4095 Lords Lane (W)	684	1162	891	0.767	676	3.1	16.226	C

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1392	743	1390	1.001	1359	26.2	67.292	F
2 - A4095 Southwold Lane (E)	1417	762	1331	1.065	1324	54.3	124.966	F
3 - B4100 Banbury Road (S)	542	1445	699	0.775	541	3.2	22.428	C
4 - A4095 Lords Lane (W)	684	1174	883	0.774	683	3.3	17.830	C

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1136	615	1479	0.768	1227	3.5	19.129	C
2 - A4095 Southwold Lane (E)	1157	686	1380	0.838	1345	7.2	85.210	F
3 - B4100 Banbury Road (S)	442	1447	697	0.635	448	1.8	14.766	B
4 - A4095 Lords Lane (W)	558	1103	928	0.602	565	1.6	10.105	B

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	952	513	1551	0.614	959	1.6	6.164	A
2 - A4095 Southwold Lane (E)	969	537	1478	0.656	990	1.9	7.686	A
3 - B4100 Banbury Road (S)	370	1073	939	0.394	375	0.7	6.431	A
4 - A4095 Lords Lane (W)	468	852	1090	0.429	471	0.8	5.843	A

2031 SATURN Base + Committed (inc. FAST) + Development , 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		1, 2, 3, 4	119.38	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2031 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B4100 Banbury Road (N)		✓	1055	100.000
2 - A4095 Southwold Lane (E)		✓	1536	100.000
3 - B4100 Banbury Road (S)		✓	605	100.000
4 - A4095 Lords Lane (W)		✓	736	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	587	293	175
	2 - A4095 Southwold Lane (E)	739	2	81	714
	3 - B4100 Banbury Road (S)	378	178	0	49
	4 - A4095 Lords Lane (W)	31	650	55	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	3	1	3
	2 - A4095 Southwold Lane (E)	3	0	0	1
	3 - B4100 Banbury Road (S)	1	0	0	0
	4 - A4095 Lords Lane (W)	0	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - B4100 Banbury Road (N)	0.92	32.21	9.7	D
2 - A4095 Southwold Lane (E)	1.12	183.67	96.8	F
3 - B4100 Banbury Road (S)	1.07	158.27	30.7	F
4 - A4095 Lords Lane (W)	0.99	78.82	17.4	F

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	794	661	1449	0.548	789	1.2	5.424	A
2 - A4095 Southwold Lane (E)	1156	391	1640	0.705	1147	2.3	7.176	A
3 - B4100 Banbury Road (S)	455	1218	877	0.520	451	1.1	8.381	A
4 - A4095 Lords Lane (W)	554	968	1029	0.538	550	1.1	7.438	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	948	788	1360	0.697	944	2.2	8.567	A
2 - A4095 Southwold Lane (E)	1381	468	1587	0.870	1366	5.9	15.386	C
3 - B4100 Banbury Road (S)	544	1451	732	0.743	537	2.7	17.957	C
4 - A4095 Lords Lane (W)	662	1153	910	0.727	656	2.5	13.893	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1162	919	1270	0.915	1138	8.1	23.986	C
2 - A4095 Southwold Lane (E)	1691	563	1522	1.111	1505	52.4	79.796	F
3 - B4100 Banbury Road (S)	666	1615	630	1.057	604	18.1	79.374	F
4 - A4095 Lords Lane (W)	810	1281	827	0.980	772	12.1	47.452	E

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1162	939	1256	0.925	1155	9.7	32.211	D
2 - A4095 Southwold Lane (E)	1691	571	1516	1.116	1514	96.8	183.673	F
3 - B4100 Banbury Road (S)	666	1625	623	1.069	616	30.7	158.270	F
4 - A4095 Lords Lane (W)	810	1296	818	0.991	789	17.4	78.819	F

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	948	859	1312	0.723	977	2.7	11.577	B
2 - A4095 Southwold Lane (E)	1381	486	1574	0.877	1558	52.4	173.855	F
3 - B4100 Banbury Road (S)	544	1638	615	0.884	596	17.6	149.160	F
4 - A4095 Lords Lane (W)	662	1300	815	0.812	711	5.0	42.876	E

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	794	699	1422	0.558	800	1.3	5.837	A
2 - A4095 Southwold Lane (E)	1156	397	1636	0.707	1356	2.5	25.117	D
3 - B4100 Banbury Road (S)	455	1417	753	0.605	520	1.6	19.850	C
4 - A4095 Lords Lane (W)	554	1132	923	0.600	568	1.5	10.490	B

2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), 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		1, 2, 3, 4	57.66	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B4100 Banbury Road (N)		✓	1236	100.000
2 - A4095 Southwold Lane (E)		✓	1254	100.000
3 - B4100 Banbury Road (S)		✓	507	100.000
4 - A4095 Lords Lane (W)		✓	601	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	561	505	170
	2 - A4095 Southwold Lane (E)	646	0	76	532
	3 - B4100 Banbury Road (S)	357	96	0	54
	4 - A4095 Lords Lane (W)	45	536	20	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	4	0	4
	2 - A4095 Southwold Lane (E)	5	0	0	10
	3 - B4100 Banbury Road (S)	1	0	0	0
	4 - A4095 Lords Lane (W)	0	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - B4100 Banbury Road (N)	0.97	46.25	16.7	E
2 - A4095 Southwold Lane (E)	1.04	100.41	41.5	F
3 - B4100 Banbury Road (S)	0.79	23.18	3.4	C
4 - A4095 Lords Lane (W)	0.75	16.40	2.9	C

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	931	488	1566	0.594	925	1.4	5.566	A
2 - A4095 Southwold Lane (E)	944	520	1482	0.637	937	1.7	6.530	A
3 - B4100 Banbury Road (S)	382	1008	977	0.391	379	0.6	5.993	A
4 - A4095 Lords Lane (W)	452	822	1107	0.409	450	0.7	5.453	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1111	584	1499	0.741	1106	2.8	9.037	A
2 - A4095 Southwold Lane (E)	1127	622	1415	0.796	1119	3.7	11.859	B
3 - B4100 Banbury Road (S)	456	1204	850	0.536	454	1.1	9.041	A
4 - A4095 Lords Lane (W)	540	982	1003	0.539	538	1.1	7.715	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1361	711	1411	0.965	1320	13.1	30.876	D
2 - A4095 Southwold Lane (E)	1381	743	1337	1.033	1296	25.0	51.179	F
3 - B4100 Banbury Road (S)	558	1399	724	0.771	550	3.1	19.956	C
4 - A4095 Lords Lane (W)	662	1159	889	0.744	655	2.7	15.009	C

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1361	717	1406	0.968	1346	16.7	46.253	E
2 - A4095 Southwold Lane (E)	1381	757	1327	1.041	1315	41.5	100.411	F
3 - B4100 Banbury Road (S)	558	1420	710	0.787	557	3.4	23.183	C
4 - A4095 Lords Lane (W)	662	1175	879	0.753	661	2.9	16.404	C

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1111	593	1493	0.744	1166	3.0	12.756	B
2 - A4095 Southwold Lane (E)	1127	655	1394	0.809	1274	4.8	47.929	E
3 - B4100 Banbury Road (S)	456	1357	750	0.608	463	1.6	12.843	B
4 - A4095 Lords Lane (W)	540	1070	946	0.571	546	1.4	9.155	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	931	494	1562	0.596	937	1.5	5.816	A
2 - A4095 Southwold Lane (E)	944	527	1478	0.639	956	1.8	7.058	A
3 - B4100 Banbury Road (S)	382	1027	965	0.396	385	0.7	6.255	A
4 - A4095 Lords Lane (W)	452	837	1097	0.412	455	0.7	5.631	A

2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), 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		1, 2, 3, 4	98.26	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B4100 Banbury Road (N)		✓	1046	100.000
2 - A4095 Southwold Lane (E)		✓	1511	100.000
3 - B4100 Banbury Road (S)		✓	598	100.000
4 - A4095 Lords Lane (W)		✓	705	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	574	299	173
	2 - A4095 Southwold Lane (E)	733	2	80	696
	3 - B4100 Banbury Road (S)	373	176	0	49
	4 - A4095 Lords Lane (W)	26	624	55	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	3	1	4
	2 - A4095 Southwold Lane (E)	1	0	0	1
	3 - B4100 Banbury Road (S)	1	0	0	0
	4 - A4095 Lords Lane (W)	0	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - B4100 Banbury Road (N)	0.91	28.12	8.4	D
2 - A4095 Southwold Lane (E)	1.09	153.22	79.6	F
3 - B4100 Banbury Road (S)	1.05	136.20	25.8	F
4 - A4095 Lords Lane (W)	0.95	54.12	11.0	F

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	787	640	1461	0.539	783	1.2	5.276	A
2 - A4095 Southwold Lane (E)	1138	394	1653	0.688	1129	2.2	6.767	A
3 - B4100 Banbury Road (S)	450	1199	894	0.503	446	1.0	7.968	A
4 - A4095 Lords Lane (W)	531	959	1042	0.509	527	1.0	6.934	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	940	765	1375	0.684	937	2.1	8.144	A
2 - A4095 Southwold Lane (E)	1358	472	1599	0.850	1346	5.1	13.659	B
3 - B4100 Banbury Road (S)	538	1430	752	0.715	532	2.4	16.013	C
4 - A4095 Lords Lane (W)	634	1143	924	0.686	629	2.1	12.038	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1152	903	1279	0.900	1131	7.2	21.852	C
2 - A4095 Southwold Lane (E)	1664	569	1531	1.087	1508	44.0	68.904	F
3 - B4100 Banbury Road (S)	658	1616	637	1.033	605	15.6	70.338	F
4 - A4095 Lords Lane (W)	776	1290	831	0.934	751	8.5	36.730	E

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1152	922	1266	0.909	1147	8.4	28.118	D
2 - A4095 Southwold Lane (E)	1664	577	1525	1.091	1521	79.6	153.217	F
3 - B4100 Banbury Road (S)	658	1630	628	1.049	618	25.8	136.197	F
4 - A4095 Lords Lane (W)	776	1307	820	0.947	766	11.0	54.117	F

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	940	817	1339	0.702	964	2.4	10.186	B
2 - A4095 Southwold Lane (E)	1358	487	1588	0.855	1568	27.1	125.534	F
3 - B4100 Banbury Road (S)	538	1645	620	0.868	600	10.3	117.409	F
4 - A4095 Lords Lane (W)	634	1313	816	0.777	663	3.8	26.738	D

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	787	666	1443	0.546	792	1.2	5.577	A
2 - A4095 Southwold Lane (E)	1138	400	1649	0.690	1237	2.3	11.003	B
3 - B4100 Banbury Road (S)	450	1302	831	0.542	487	1.2	11.568	B
4 - A4095 Lords Lane (W)	531	1048	985	0.539	541	1.2	8.297	A

Junctions 9
ARCADY 9 - Roundabout Module
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Filename: 3_191021_Launton Rd_A4421_Care Home Rdbt (Final Scenarios)_FAST_MITIGATED.j9
Path: C:\Users\JamesMonk\Dropbox (mode)\Project\Birmingham\2. Projects\J323684_Bicester Heritage Masterplan\4. Data\Modelling\200125_EQ\Baseline
Report generation date: 25/11/2020 17:12:22

- »2026 SATURN Base + Committed (inc. FAST), AM
- »2026 SATURN Base + Committed (inc. FAST), PM
- »2026 SATURN Base + Committed (inc. FAST) + Development, AM
- »2026 SATURN Base + Committed (inc. FAST) + Development, PM
- »2031 SATURN Base + Committed (inc. FAST) + Development , AM
- »2031 SATURN Base + Committed (inc. FAST) + Development , PM
- »2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), AM
- »2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2026 SATURN Base + Committed (inc. FAST)								
1 - Care Home	0.1	22.85	0.10	C	0.1	18.37	0.13	C
2 - A4421 (S)	6.1	16.21	0.87	C	10.7	26.13	0.93	D
3 - Launton Road	1.0	5.10	0.50	A	12.8	41.63	0.95	E
4 - A4421 Skimmingdish Lane (N)	17.3	43.49	0.97	E	5.2	15.19	0.85	C
2026 SATURN Base + Committed (inc. FAST) + Development								
1 - Care Home	0.1	22.99	0.10	C	0.2	19.69	0.14	C
2 - A4421 (S)	6.7	17.83	0.88	C	10.9	26.59	0.93	D
3 - Launton Road	1.0	5.24	0.51	A	12.8	41.56	0.95	E
4 - A4421 Skimmingdish Lane (N)	17.6	44.20	0.97	E	5.9	16.91	0.86	C
2031 SATURN Base + Committed (inc. FAST) + Development								
1 - Care Home	0.1	27.30	0.12	D	0.3	39.96	0.26	E
2 - A4421 (S)	10.7	26.54	0.93	D	35.8	74.76	1.02	F
3 - Launton Road	1.5	6.67	0.60	A	38.5	104.62	1.04	F
4 - A4421 Skimmingdish Lane (N)	28.3	66.10	1.00	F	23.3	56.47	0.99	F
2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)								
1 - Care Home	0.1	27.24	0.12	D	0.3	34.46	0.23	D
2 - A4421 (S)	8.2	20.90	0.90	C	27.4	59.90	1.00	F
3 - Launton Road	1.4	6.36	0.59	A	22.3	65.60	1.00	F
4 - A4421 Skimmingdish Lane (N)	27.2	64.13	1.00	F	15.1	39.72	0.96	E

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	(untitled)
Location	
Site number	
Date	03/05/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-499K8KJMode
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026 SATURN Base + Committed (inc. FAST)	AM	ONE HOUR	07:45	09:15	15
D2	2026 SATURN Base + Committed (inc. FAST)	PM	ONE HOUR	16:30	18:00	15
D3	2026 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:45	09:15	15
D4	2026 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:30	18:00	15
D5	2031 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:45	09:15	15
D6	2031 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:30	18:00	15
D7	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:45	09:15	15
D8	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026 SATURN Base + Committed (inc. FAST), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A4421 (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Launton Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
3	A4421/Launton Road/Care Home	Standard Roundabout		1, 2, 3, 4	25.32	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Care Home	
2	A4421 (S)	
3	Launton Road	
4	A4421 Skimmingdish Lane (N)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Care Home	2.70	6.10	6.0	20.9	50.0	25.0	
2 - A4421 (S)	3.40	7.80	36.5	12.0	50.0	16.0	
3 - Launton Road	3.60	7.00	40.0	57.1	50.0	9.0	
4 - A4421 Skimmingdish Lane (N)	3.50	8.50	24.0	18.0	50.0	34.5	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Care Home	0.521	1207
2 - A4421 (S)	0.674	2024
3 - Launton Road	0.714	2100
4 - A4421 Skimmingdish Lane (N)	0.646	1928

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026 SATURN Base + Committed (inc. FAST)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Care Home		✓	16	100.000
2 - A4421 (S)		✓	1282	100.000
3 - Launton Road		✓	653	100.000
4 - A4421 Skimmingdish Lane (N)		✓	1366	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	7	3	6
	2 - A4421 (S)	16	0	542	724
	3 - Launton Road	18	398	0	237
	4 - A4421 Skimmingdish Lane (N)	12	904	432	18

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	0	0	0
	2 - A4421 (S)	0	0	3	2
	3 - Launton Road	0	2	0	9
	4 - A4421 Skimmingdish Lane (N)	0	3	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - Care Home	0.10	22.85	0.1	C
2 - A4421 (S)	0.87	16.21	6.1	C
3 - Launton Road	0.50	5.10	1.0	A
4 - A4421 Skimmingdish Lane (N)	0.97	43.49	17.3	E

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	12	1311	500	0.024	12	0.0	7.367	A
2 - A4421 (S)	965	343	1738	0.555	960	1.2	4.602	A
3 - Launton Road	492	572	1611	0.305	490	0.4	3.207	A
4 - A4421 Skimmingdish Lane (N)	1028	324	1651	0.623	1022	1.6	5.667	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	14	1569	362	0.040	14	0.0	10.361	B
2 - A4421 (S)	1152	411	1691	0.682	1149	2.1	6.601	A
3 - Launton Road	587	685	1533	0.383	586	0.6	3.803	A
4 - A4421 Skimmingdish Lane (N)	1228	388	1610	0.763	1222	3.1	9.134	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	18	1885	191	0.092	17	0.1	20.688	C
2 - A4421 (S)	1412	491	1635	0.863	1397	5.7	14.349	B
3 - Launton Road	719	832	1430	0.503	717	1.0	5.042	A
4 - A4421 Skimmingdish Lane (N)	1504	474	1556	0.967	1461	13.8	29.642	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	18	1915	175	0.101	18	0.1	22.854	C
2 - A4421 (S)	1412	501	1628	0.867	1410	6.1	16.210	C
3 - Launton Road	719	840	1424	0.505	719	1.0	5.102	A
4 - A4421 Skimmingdish Lane (N)	1504	476	1555	0.967	1490	17.3	43.487	E

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	14	1631	328	0.044	15	0.0	11.494	B
2 - A4421 (S)	1152	431	1677	0.687	1168	2.3	7.278	A
3 - Launton Road	587	696	1524	0.385	589	0.6	3.852	A
4 - A4421 Skimmingdish Lane (N)	1228	390	1609	0.763	1284	3.4	12.812	B

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	12	1326	493	0.024	12	0.0	7.494	A
2 - A4421 (S)	965	348	1735	0.556	969	1.3	4.727	A
3 - Launton Road	492	578	1607	0.306	492	0.4	3.233	A
4 - A4421 Skimmingdish Lane (N)	1028	326	1650	0.623	1035	1.7	5.921	A

2026 SATURN Base + Committed (inc. FAST), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A4421 (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Launton Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
3	A4421/Launton Road/Care Home	Standard Roundabout		1, 2, 3, 4	27.06	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2026 SATURN Base + Committed (inc. FAST)	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Care Home		✓	27	100.000
2 - A4421 (S)		✓	1426	100.000
3 - Launton Road		✓	1066	100.000
4 - A4421 Skimmingdish Lane (N)		✓	1176	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	10	14	3
	2 - A4421 (S)	1	0	481	944
	3 - Launton Road	4	519	0	543
	4 - A4421 Skimmingdish Lane (N)	6	782	266	122

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	0	0	0
	2 - A4421 (S)	0	0	2	1
	3 - Launton Road	0	2	0	1
	4 - A4421 Skimmingdish Lane (N)	0	1	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - Care Home	0.13	18.37	0.1	C
2 - A4421 (S)	0.93	26.13	10.7	D
3 - Launton Road	0.95	41.63	12.8	E
4 - A4421 Skimmingdish Lane (N)	0.85	15.19	5.2	C

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	20	1265	537	0.038	20	0.0	6.959	A
2 - A4421 (S)	1074	303	1790	0.600	1068	1.5	4.944	A
3 - Launton Road	803	801	1500	0.535	798	1.1	5.095	A
4 - A4421 Skimmingdish Lane (N)	885	392	1644	0.539	881	1.2	4.689	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	24	1513	406	0.060	24	0.1	9.435	A
2 - A4421 (S)	1282	363	1749	0.733	1277	2.7	7.546	A
3 - Launton Road	958	958	1388	0.690	954	2.2	8.211	A
4 - A4421 Skimmingdish Lane (N)	1057	469	1594	0.663	1054	1.9	6.627	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	30	1832	237	0.126	29	0.1	17.338	C
2 - A4421 (S)	1570	442	1696	0.926	1543	9.5	20.665	C
3 - Launton Road	1174	1159	1246	0.942	1142	10.1	28.526	D
4 - A4421 Skimmingdish Lane (N)	1295	561	1534	0.844	1283	4.9	13.696	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	30	1853	226	0.132	30	0.1	18.370	C
2 - A4421 (S)	1570	445	1693	0.927	1565	10.7	26.130	D
3 - Launton Road	1174	1175	1235	0.950	1163	12.8	41.625	E
4 - A4421 Skimmingdish Lane (N)	1295	572	1528	0.848	1294	5.2	15.192	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	24	1551	386	0.063	25	0.1	9.984	A
2 - A4421 (S)	1282	368	1746	0.734	1313	2.9	8.896	A
3 - Launton Road	958	984	1370	0.699	1000	2.4	10.766	B
4 - A4421 Skimmingdish Lane (N)	1057	491	1580	0.669	1070	2.1	7.230	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	20	1277	531	0.038	20	0.0	7.057	A
2 - A4421 (S)	1074	306	1788	0.600	1079	1.5	5.111	A
3 - Launton Road	803	809	1494	0.537	807	1.2	5.278	A
4 - A4421 Skimmingdish Lane (N)	885	397	1641	0.540	889	1.2	4.810	A

2026 SATURN Base + Committed (inc. FAST) + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A4421 (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Launton Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
3	A4421/Launton Road/Care Home	Standard Roundabout		1, 2, 3, 4	26.20	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Care Home		✓	16	100.000
2 - A4421 (S)		✓	1301	100.000
3 - Launton Road		✓	657	100.000
4 - A4421 Skimmingdish Lane (N)		✓	1368	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	7	3	6
	2 - A4421 (S)	16	0	542	743
	3 - Launton Road	18	398	0	241
	4 - A4421 Skimmingdish Lane (N)	12	905	433	18

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	0	0	0
	2 - A4421 (S)	0	0	3	2
	3 - Launton Road	0	2	0	9
	4 - A4421 Skimmingdish Lane (N)	0	3	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - Care Home	0.10	22.99	0.1	C
2 - A4421 (S)	0.88	17.83	6.7	C
3 - Launton Road	0.51	5.24	1.0	A
4 - A4421 Skimmingdish Lane (N)	0.97	44.20	17.6	E

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	12	1313	500	0.024	12	0.0	7.379	A
2 - A4421 (S)	979	344	1737	0.564	974	1.3	4.688	A
3 - Launton Road	495	586	1601	0.309	493	0.4	3.244	A
4 - A4421 Skimmingdish Lane (N)	1030	324	1651	0.624	1023	1.6	5.681	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	14	1571	361	0.040	14	0.0	10.390	B
2 - A4421 (S)	1170	412	1690	0.692	1166	2.2	6.816	A
3 - Launton Road	591	702	1520	0.388	590	0.6	3.865	A
4 - A4421 Skimmingdish Lane (N)	1230	388	1610	0.764	1224	3.1	9.174	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	18	1887	190	0.093	17	0.1	20.782	C
2 - A4421 (S)	1432	492	1634	0.876	1416	6.2	15.470	C
3 - Launton Road	723	852	1416	0.511	722	1.0	5.177	A
4 - A4421 Skimmingdish Lane (N)	1506	474	1556	0.968	1462	14.0	29.950	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	18	1917	174	0.101	18	0.1	22.986	C
2 - A4421 (S)	1432	502	1628	0.880	1430	6.7	17.826	C
3 - Launton Road	723	861	1410	0.513	723	1.0	5.245	A
4 - A4421 Skimmingdish Lane (N)	1506	476	1555	0.969	1492	17.6	44.202	E

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	14	1634	326	0.044	15	0.0	11.558	B
2 - A4421 (S)	1170	432	1676	0.698	1187	2.4	7.615	A
3 - Launton Road	591	715	1511	0.391	592	0.6	3.925	A
4 - A4421 Skimmingdish Lane (N)	1230	390	1609	0.764	1287	3.4	12.993	B

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	12	1328	492	0.025	12	0.0	7.507	A
2 - A4421 (S)	979	349	1734	0.565	984	1.3	4.822	A
3 - Launton Road	495	592	1597	0.310	495	0.5	3.273	A
4 - A4421 Skimmingdish Lane (N)	1030	326	1650	0.624	1037	1.7	5.937	A

2026 SATURN Base + Committed (inc. FAST) + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A4421 (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Launton Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
3	A4421/Launton Road/Care Home	Standard Roundabout		1, 2, 3, 4	27.71	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Care Home		✓	27	100.000
2 - A4421 (S)		✓	1426	100.000
3 - Launton Road		✓	1066	100.000
4 - A4421 Skimmingdish Lane (N)		✓	1199	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	10	14	3
	2 - A4421 (S)	1	0	481	944
	3 - Launton Road	4	519	0	543
	4 - A4421 Skimmingdish Lane (N)	6	801	270	122

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	0	0	0
	2 - A4421 (S)	0	0	2	1
	3 - Launton Road	0	2	0	1
	4 - A4421 Skimmingdish Lane (N)	0	1	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - Care Home	0.14	19.69	0.2	C
2 - A4421 (S)	0.93	26.59	10.9	D
3 - Launton Road	0.95	41.56	12.8	E
4 - A4421 Skimmingdish Lane (N)	0.86	16.91	5.9	C

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	20	1282	528	0.038	20	0.0	7.083	A
2 - A4421 (S)	1074	306	1788	0.600	1068	1.5	4.956	A
3 - Launton Road	803	801	1500	0.535	798	1.1	5.095	A
4 - A4421 Skimmingdish Lane (N)	903	392	1644	0.549	898	1.2	4.795	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	24	1534	395	0.061	24	0.1	9.710	A
2 - A4421 (S)	1282	367	1747	0.734	1277	2.7	7.584	A
3 - Launton Road	958	958	1389	0.690	954	2.2	8.211	A
4 - A4421 Skimmingdish Lane (N)	1078	469	1594	0.676	1075	2.0	6.881	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	30	1856	224	0.133	29	0.1	18.436	C
2 - A4421 (S)	1570	446	1693	0.927	1542	9.6	20.903	C
3 - Launton Road	1174	1158	1247	0.942	1142	10.1	28.476	D
4 - A4421 Skimmingdish Lane (N)	1320	561	1534	0.860	1306	5.5	14.945	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	30	1878	212	0.140	30	0.2	19.693	C
2 - A4421 (S)	1570	450	1690	0.929	1565	10.9	26.590	D
3 - Launton Road	1174	1174	1235	0.950	1163	12.8	41.558	E
4 - A4421 Skimmingdish Lane (N)	1320	572	1528	0.864	1318	5.9	16.913	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	24	1574	373	0.065	25	0.1	10.332	B
2 - A4421 (S)	1282	373	1743	0.736	1314	2.9	8.988	A
3 - Launton Road	958	985	1370	0.700	1000	2.4	10.775	B
4 - A4421 Skimmingdish Lane (N)	1078	491	1580	0.682	1093	2.2	7.611	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	20	1295	521	0.039	20	0.0	7.192	A
2 - A4421 (S)	1074	309	1786	0.601	1079	1.5	5.130	A
3 - Launton Road	803	810	1494	0.537	807	1.2	5.278	A
4 - A4421 Skimmingdish Lane (N)	903	397	1641	0.550	907	1.2	4.928	A

2031 SATURN Base + Committed (inc. FAST) + Development , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A4421 (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Launton Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
3	A4421/Launton Road/Care Home	Standard Roundabout		1, 2, 3, 4	37.93	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2031 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Care Home		✓	16	100.000
2 - A4421 (S)		✓	1406	100.000
3 - Launton Road		✓	741	100.000
4 - A4421 Skimmingdish Lane (N)		✓	1389	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	7	3	6
	2 - A4421 (S)	16	0	570	820
	3 - Launton Road	19	436	0	286
	4 - A4421 Skimmingdish Lane (N)	13	976	382	18

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	0	0	0
	2 - A4421 (S)	0	0	3	2
	3 - Launton Road	0	2	0	8
	4 - A4421 Skimmingdish Lane (N)	0	3	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - Care Home	0.12	27.30	0.1	D
2 - A4421 (S)	0.93	26.54	10.7	D
3 - Launton Road	0.60	6.67	1.5	A
4 - A4421 Skimmingdish Lane (N)	1.00	66.10	28.3	F

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	12	1356	476	0.025	12	0.0	7.758	A
2 - A4421 (S)	1059	306	1762	0.601	1053	1.5	5.032	A
3 - Launton Road	558	644	1564	0.357	556	0.6	3.561	A
4 - A4421 Skimmingdish Lane (N)	1046	353	1630	0.642	1039	1.8	6.018	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	14	1621	333	0.043	14	0.0	11.305	B
2 - A4421 (S)	1264	366	1720	0.735	1259	2.7	7.723	A
3 - Launton Road	666	770	1476	0.451	665	0.8	4.433	A
4 - A4421 Skimmingdish Lane (N)	1249	423	1586	0.787	1242	3.5	10.243	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	18	1929	167	0.106	17	0.1	24.039	C
2 - A4421 (S)	1548	431	1674	0.925	1522	9.3	20.713	C
3 - Launton Road	816	930	1364	0.598	813	1.5	6.511	A
4 - A4421 Skimmingdish Lane (N)	1529	517	1527	1.002	1464	19.8	38.789	E

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	18	1961	149	0.118	18	0.1	27.299	D
2 - A4421 (S)	1548	440	1668	0.928	1542	10.7	26.538	D
3 - Launton Road	816	943	1355	0.602	816	1.5	6.668	A
4 - A4421 Skimmingdish Lane (N)	1529	518	1526	1.002	1495	28.3	66.105	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	14	1727	276	0.052	15	0.1	13.815	B
2 - A4421 (S)	1264	396	1699	0.744	1295	3.0	9.536	A
3 - Launton Road	666	793	1460	0.456	669	0.8	4.562	A
4 - A4421 Skimmingdish Lane (N)	1249	425	1584	0.788	1346	4.0	20.667	C

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	12	1373	466	0.026	12	0.0	7.926	A
2 - A4421 (S)	1059	310	1759	0.602	1064	1.5	5.224	A
3 - Launton Road	558	651	1559	0.358	559	0.6	3.605	A
4 - A4421 Skimmingdish Lane (N)	1046	355	1629	0.642	1054	1.8	6.358	A

2031 SATURN Base + Committed (inc. FAST) + Development , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A4421 (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Launton Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
3	A4421/Launton Road/Care Home	Standard Roundabout		1, 2, 3, 4	76.57	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2031 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Care Home		✓	29	100.000
2 - A4421 (S)		✓	1502	100.000
3 - Launton Road		✓	1114	100.000
4 - A4421 Skimmingdish Lane (N)		✓	1370	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	11	14	4
	2 - A4421 (S)	1	0	476	1025
	3 - Launton Road	4	552	0	558
	4 - A4421 Skimmingdish Lane (N)	6	875	341	148

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	0	0	0
	2 - A4421 (S)	0	0	2	1
	3 - Launton Road	0	2	0	1
	4 - A4421 Skimmingdish Lane (N)	0	1	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - Care Home	0.26	39.96	0.3	E
2 - A4421 (S)	1.02	74.76	35.8	F
3 - Launton Road	1.04	104.62	38.5	F
4 - A4421 Skimmingdish Lane (N)	0.99	56.47	23.3	F

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	22	1433	449	0.049	22	0.1	8.416	A
2 - A4421 (S)	1131	379	1740	0.650	1124	1.8	5.771	A
3 - Launton Road	839	881	1443	0.581	833	1.4	5.851	A
4 - A4421 Skimmingdish Lane (N)	1031	417	1631	0.632	1025	1.7	5.873	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	26	1712	301	0.087	26	0.1	13.059	B
2 - A4421 (S)	1350	453	1690	0.799	1342	3.8	10.134	B
3 - Launton Road	1001	1053	1321	0.758	995	3.0	10.819	B
4 - A4421 Skimmingdish Lane (N)	1232	497	1579	0.780	1225	3.4	9.987	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	32	2017	140	0.227	31	0.3	32.752	D
2 - A4421 (S)	1654	538	1632	1.013	1576	23.2	40.806	E
3 - Launton Road	1227	1238	1190	1.031	1148	22.5	52.067	F
4 - A4421 Skimmingdish Lane (N)	1508	574	1529	0.987	1454	16.9	34.783	D

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	32	2053	121	0.263	32	0.3	39.959	E
2 - A4421 (S)	1654	549	1625	1.018	1603	35.8	74.759	F
3 - Launton Road	1227	1260	1175	1.044	1163	38.5	104.620	F
4 - A4421 Skimmingdish Lane (N)	1508	581	1524	0.990	1483	23.3	56.474	F

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	26	1865	221	0.118	27	0.1	18.642	C
2 - A4421 (S)	1350	483	1670	0.809	1475	4.6	27.998	D
3 - Launton Road	1001	1153	1251	0.801	1137	4.6	49.959	E
4 - A4421 Skimmingdish Lane (N)	1232	569	1532	0.804	1307	4.4	20.418	C

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	22	1459	435	0.050	22	0.1	8.719	A
2 - A4421 (S)	1131	386	1736	0.651	1142	1.9	6.166	A
3 - Launton Road	839	895	1433	0.585	851	1.4	6.318	A
4 - A4421 Skimmingdish Lane (N)	1031	426	1625	0.635	1042	1.8	6.281	A

2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A4421 (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Launton Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
3	A4421/Launton Road/Care Home	Standard Roundabout		1, 2, 3, 4	34.97	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Care Home		✓	16	100.000
2 - A4421 (S)		✓	1357	100.000
3 - Launton Road		✓	747	100.000
4 - A4421 Skimmingdish Lane (N)		✓	1382	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	7	3	6
	2 - A4421 (S)	16	0	565	776
	3 - Launton Road	19	440	0	288
	4 - A4421 Skimmingdish Lane (N)	13	955	396	18

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	0	0	0
	2 - A4421 (S)	0	0	3	2
	3 - Launton Road	0	2	0	8
	4 - A4421 Skimmingdish Lane (N)	0	3	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - Care Home	0.12	27.24	0.1	D
2 - A4421 (S)	0.90	20.90	8.2	C
3 - Launton Road	0.59	6.36	1.4	A
4 - A4421 Skimmingdish Lane (N)	1.00	64.13	27.2	F

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	12	1354	477	0.025	12	0.0	7.742	A
2 - A4421 (S)	1022	316	1755	0.582	1016	1.4	4.838	A
3 - Launton Road	562	611	1587	0.354	560	0.5	3.497	A
4 - A4421 Skimmingdish Lane (N)	1040	356	1627	0.639	1033	1.7	5.993	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	14	1619	334	0.043	14	0.0	11.265	B
2 - A4421 (S)	1220	378	1711	0.713	1216	2.4	7.203	A
3 - Launton Road	672	731	1504	0.447	671	0.8	4.316	A
4 - A4421 Skimmingdish Lane (N)	1242	426	1583	0.785	1235	3.5	10.155	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	18	1928	167	0.105	17	0.1	23.990	C
2 - A4421 (S)	1494	447	1663	0.898	1474	7.4	17.446	C
3 - Launton Road	822	886	1395	0.589	820	1.4	6.231	A
4 - A4421 Skimmingdish Lane (N)	1522	521	1523	0.999	1459	19.2	38.061	E

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	18	1960	150	0.118	18	0.1	27.240	D
2 - A4421 (S)	1494	456	1657	0.902	1491	8.2	20.898	C
3 - Launton Road	822	896	1388	0.592	822	1.4	6.359	A
4 - A4421 Skimmingdish Lane (N)	1522	523	1522	1.000	1490	27.2	64.131	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	14	1720	279	0.052	15	0.1	13.634	B
2 - A4421 (S)	1220	408	1690	0.722	1242	2.7	8.405	A
3 - Launton Road	672	748	1492	0.450	674	0.8	4.414	A
4 - A4421 Skimmingdish Lane (N)	1242	429	1582	0.786	1335	3.9	19.667	C

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	12	1371	468	0.026	12	0.0	7.908	A
2 - A4421 (S)	1022	321	1751	0.583	1027	1.4	5.001	A
3 - Launton Road	562	617	1583	0.355	563	0.6	3.537	A
4 - A4421 Skimmingdish Lane (N)	1040	358	1626	0.640	1049	1.8	6.326	A

2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A4421 (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Launton Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
3	A4421/Launton Road/Care Home	Standard Roundabout		1, 2, 3, 4	54.59	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Care Home		✓	29	100.000
2 - A4421 (S)		✓	1494	100.000
3 - Launton Road		✓	1110	100.000
4 - A4421 Skimmingdish Lane (N)		✓	1318	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	11	14	4
	2 - A4421 (S)	1	0	521	972
	3 - Launton Road	4	551	0	555
	4 - A4421 Skimmingdish Lane (N)	6	858	332	122

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Care Home	2 - A4421 (S)	3 - Launton Road	4 - A4421 Skimmingdish Lane (N)
From	1 - Care Home	0	0	0	0
	2 - A4421 (S)	0	0	2	1
	3 - Launton Road	0	2	0	1
	4 - A4421 Skimmingdish Lane (N)	0	1	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - Care Home	0.23	34.46	0.3	D
2 - A4421 (S)	1.00	59.90	27.4	F
3 - Launton Road	1.00	65.60	22.3	F
4 - A4421 Skimmingdish Lane (N)	0.96	39.72	15.1	E

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	22	1394	470	0.046	22	0.0	8.030	A
2 - A4421 (S)	1125	353	1757	0.640	1118	1.7	5.571	A
3 - Launton Road	836	822	1485	0.563	831	1.3	5.461	A
4 - A4421 Skimmingdish Lane (N)	992	416	1631	0.608	986	1.5	5.530	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	26	1667	325	0.080	26	0.1	12.014	B
2 - A4421 (S)	1343	422	1710	0.785	1336	3.5	9.447	A
3 - Launton Road	998	983	1371	0.728	993	2.6	9.386	A
4 - A4421 Skimmingdish Lane (N)	1185	497	1578	0.751	1179	2.9	8.899	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	32	1990	155	0.207	31	0.3	29.052	D
2 - A4421 (S)	1645	507	1653	0.995	1582	19.2	35.336	E
3 - Launton Road	1222	1166	1241	0.985	1172	15.0	37.893	E
4 - A4421 Skimmingdish Lane (N)	1451	587	1520	0.955	1414	12.1	27.543	D

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	32	2025	136	0.235	32	0.3	34.460	D
2 - A4421 (S)	1645	515	1647	0.999	1612	27.4	59.897	F
3 - Launton Road	1222	1187	1226	0.997	1193	22.3	65.604	F
4 - A4421 Skimmingdish Lane (N)	1451	598	1513	0.959	1439	15.1	39.724	E

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	26	1759	276	0.094	27	0.1	14.469	B
2 - A4421 (S)	1343	441	1698	0.791	1437	4.0	18.355	C
3 - Launton Road	998	1053	1321	0.755	1074	3.3	18.787	C
4 - A4421 Skimmingdish Lane (N)	1185	538	1552	0.763	1232	3.4	12.766	B

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Care Home	22	1414	459	0.048	22	0.1	8.237	A
2 - A4421 (S)	1125	358	1754	0.641	1134	1.8	5.885	A
3 - Launton Road	836	834	1477	0.566	843	1.3	5.754	A
4 - A4421 Skimmingdish Lane (N)	992	422	1627	0.610	999	1.6	5.800	A

Junctions 9
PICADY 9 - Priority Intersection Module
Version: 9.5.0.6896 © Copyright TRL Limited, 2018
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Filename: 4_191021_A4421_Bicester Rd Priority (Final Scenarios).j9
Path: C:\Users\JamesMonk\Dropbox (mode)\Project\Birmingham\2. Projects\J323684_Bicester Heritage Masterplan\4. Data\Modelling\200125_EQ\Baseline
Report generation date: 25/11/2020 17:13:34

- »2026 SATURN Base + Committed (inc. FAST), AM
- »2026 SATURN Base + Committed (inc. FAST), PM
- »2026 SATURN Base + Committed (inc. FAST) + Development, AM
- »2026 SATURN Base + Committed (inc. FAST) + Development, PM
- »2031 SATURN Base + Committed (inc. FAST) + Development , AM
- »2031 SATURN Base + Committed (inc. FAST) + Development , PM
- »2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), AM
- »2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2026 SATURN Base + Committed (inc. FAST)								
Stream B-AC	0.5	16.79	0.35	C	0.2	8.35	0.16	A
Stream C-AB	2.4	7.82	0.47	A	37.6	80.57	0.99	F
2026 SATURN Base + Committed (inc. FAST) + Development								
Stream B-AC	0.6	18.20	0.37	C	0.2	8.36	0.16	A
Stream C-AB	2.7	8.34	0.50	A	51.6	110.36	1.02	F
2031 SATURN Base + Committed (inc. FAST) + Development								
Stream B-AC	1.6	28.49	0.63	D	0.2	9.45	0.20	A
Stream C-AB	3.9	9.04	0.58	A	95.3	200.24	1.11	F
2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)								
Stream B-AC	1.6	28.33	0.62	D	0.2	9.32	0.19	A
Stream C-AB	3.7	8.81	0.56	A	92.7	196.22	1.11	F

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	Bicester Heritage Masterplan
Location	Bicester
Site number	
Date	26/04/2019
Version	
Status	
Identifier	EHC
Client	Bicester Heritage
Jobnumber	J323684
Enumerator	DESKTOP-499K8KJ\Mode
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026 SATURN Base + Committed (inc. FAST)	AM	ONE HOUR	07:15	08:45	15
D2	2026 SATURN Base + Committed (inc. FAST)	PM	ONE HOUR	16:45	18:15	15
D3	2026 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15
D4	2026 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15
D5	2031 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15
D6	2031 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15
D7	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:15	08:45	15
D8	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026 SATURN Base + Committed (inc. FAST), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4	A4421 Buckingham Rd/Bicester Rd	T-Junction	Two-way		2.06	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A4421 Buckingham Road (N)		Major
B	Bicester Road		Minor
C	A4421 Buckingham Road		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A4421 Buckingham Road	6.50			147.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Bicester Road	One lane	3.70	250	130

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
4	B-A	674	0.120	0.303	0.191	0.433
4	B-C	755	0.113	0.286	-	-
4	C-B	659	0.250	0.250	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026 SATURN Base + Committed (inc. FAST)	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	1160	100.000
B - Bicester Road		✓	106	100.000
C - A4421 Buckingham Road		✓	709	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
	A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road	
A - A4421 Buckingham Road (N)	0	0	1160	
B - Bicester Road	0	0	106	
C - A4421 Buckingham Road	629	80	0	

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road	
A - A4421 Buckingham Road (N)	0	0	7	
B - Bicester Road	0	0	10	
C - A4421 Buckingham Road	4	0	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.35	16.79	0.5	C
C-AB	0.47	7.82	2.4	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	80	443	0.180	79	0.2	9.862	A
C-AB	152	783	0.195	150	0.5	5.695	A
C-A	381			381			
A-B	0			0			
A-C	873			873			

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	95	396	0.241	95	0.3	11.932	B
C-AB	233	823	0.283	231	0.9	6.103	A
C-A	405			405			
A-B	0			0			
A-C	1043			1043			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	117	331	0.353	116	0.5	16.666	C
C-AB	413	885	0.467	408	2.3	7.615	A
C-A	367			367			
A-B	0			0			
A-C	1277			1277			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	117	331	0.353	117	0.5	16.794	C
C-AB	418	889	0.470	417	2.4	7.823	A
C-A	363			363			
A-B	0			0			
A-C	1277			1277			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	95	396	0.241	96	0.3	12.033	B
C-AB	236	827	0.286	242	1.0	6.280	A
C-A	401			401			
A-B	0			0			
A-C	1043			1043			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	80	443	0.180	80	0.2	9.922	A
C-AB	155	785	0.197	156	0.6	5.784	A
C-A	379			379			
A-B	0			0			
A-C	873			873			

2026 SATURN Base + Committed (inc. FAST), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4	A4421 Buckingham Rd/Bicester Rd	T-Junction	Two-way		34.85	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2026 SATURN Base + Committed (inc. FAST)	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	748	100.000
B - Bicester Road		✓	76	100.000
C - A4421 Buckingham Road		✓	1270	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	748
	B - Bicester Road	0	0	76
	C - A4421 Buckingham Road	1165	105	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	2
	B - Bicester Road	0	0	0
	C - A4421 Buckingham Road	1	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.16	8.35	0.2	A
C-AB	0.99	80.57	37.6	F
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	57	591	0.097	57	0.1	6.731	A
C-AB	357	1126	0.317	352	1.1	4.656	A
C-A	599			599			
A-B	0			0			
A-C	563			563			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	68	559	0.122	68	0.1	7.334	A
C-AB	619	1242	0.498	613	2.5	5.800	A
C-A	523			523			
A-B	0			0			
A-C	672			672			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	84	515	0.163	83	0.2	8.342	A
C-AB	1390	1409	0.987	1294	26.7	35.628	E
C-A	8			8			
A-B	0			0			
A-C	824			824			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	84	515	0.163	84	0.2	8.350	A
C-AB	1398	1412	0.990	1355	37.6	80.572	F
C-A	0			0			
A-B	0			0			
A-C	824			824			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	68	559	0.122	69	0.1	7.343	A
C-AB	814	1341	0.607	948	4.0	13.813	B
C-A	328			328			
A-B	0			0			
A-C	672			672			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	57	591	0.097	57	0.1	6.751	A
C-AB	368	1137	0.324	379	1.2	4.839	A
C-A	588			588			
A-B	0			0			
A-C	563			563			

2026 SATURN Base + Committed (inc. FAST) + Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4	A4421 Buckingham Rd/Bicester Rd	T-Junction	Two-way		2.19	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Am	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	1214	100.000
B - Bicester Road		✓	106	100.000
C - A4421 Buckingham Road		✓	711	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
A - A4421 Buckingham Road (N)		0	0	1214
B - Bicester Road		0	0	106
C - A4421 Buckingham Road		631	80	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
A - A4421 Buckingham Road (N)		0	0	7
B - Bicester Road		0	0	10
C - A4421 Buckingham Road		4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.37	18.20	0.6	C
C-AB	0.50	8.34	2.7	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	80	432	0.185	79	0.2	10.168	B
C-AB	155	776	0.200	153	0.6	5.781	A
C-A	380			380			
A-B	0			0			
A-C	914			914			

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	95	383	0.249	95	0.3	12.491	B
C-AB	239	815	0.294	237	1.0	6.249	A
C-A	400			400			
A-B	0			0			
A-C	1091			1091			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	117	314	0.371	116	0.6	18.027	C
C-AB	432	878	0.493	426	2.6	8.068	A
C-A	350			350			
A-B	0			0			
A-C	1337			1337			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	117	314	0.371	117	0.6	18.199	C
C-AB	438	882	0.496	437	2.7	8.338	A
C-A	345			345			
A-B	0			0			
A-C	1337			1337			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	95	383	0.249	96	0.3	12.609	B
C-AB	243	821	0.297	250	1.1	6.459	A
C-A	396			396			
A-B	0			0			
A-C	1091			1091			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	80	432	0.185	80	0.2	10.245	B
C-AB	158	778	0.202	160	0.6	5.879	A
C-A	378			378			
A-B	0			0			
A-C	914			914			

2026 SATURN Base + Committed (inc. FAST) + Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4	A4421 Buckingham Rd/Bicester Rd	T-Junction	Two-way		50.81	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	749	100.000
B - Bicester Road		✓	76	100.000
C - A4421 Buckingham Road		✓	1324	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	749
	B - Bicester Road	0	0	76
	C - A4421 Buckingham Road	1219	105	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	2
	B - Bicester Road	0	0	0
	C - A4421 Buckingham Road	1	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.16	8.36	0.2	A
C-AB	1.02	110.36	51.6	F
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	57	591	0.097	57	0.1	6.734	A
C-AB	384	1156	0.332	379	1.2	4.640	A
C-A	613			613			
A-B	0			0			
A-C	564			564			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	68	559	0.122	68	0.1	7.338	A
C-AB	683	1278	0.534	676	2.9	6.068	A
C-A	508			508			
A-B	0			0			
A-C	673			673			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	84	514	0.163	83	0.2	8.348	A
C-AB	1458	1423	1.025	1332	34.4	46.081	E
C-A	0			0			
A-B	0			0			
A-C	825			825			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	84	514	0.163	84	0.2	8.356	A
C-AB	1458	1424	1.023	1389	51.7	110.362	F
C-A	0			0			
A-B	0			0			
A-C	825			825			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	68	559	0.122	69	0.1	7.347	A
C-AB	1034	1415	0.730	1210	7.5	40.623	E
C-A	157			157			
A-B	0			0			
A-C	673			673			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	57	591	0.097	57	0.1	6.754	A
C-AB	404	1176	0.344	429	1.4	5.000	A
C-A	592			592			
A-B	0			0			
A-C	564			564			

2031 SATURN Base + Committed (inc. FAST) + Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4	A4421 Buckingham Rd/Bicester Rd	T-Junction	Two-way		4.03	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2031 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Am	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	1184	100.000
B - Bicester Road		✓	191	100.000
C - A4421 Buckingham Road		✓	814	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	1184
	B - Bicester Road	0	0	191
	C - A4421 Buckingham Road	728	86	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	7
	B - Bicester Road	0	0	6
	C - A4421 Buckingham Road	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.63	28.49	1.6	D
C-AB	0.58	9.04	3.9	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	144	455	0.316	142	0.5	11.438	B
C-AB	188	837	0.224	185	0.7	5.526	A
C-A	425			425			
A-B	0			0			
A-C	891			891			

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	172	405	0.424	171	0.7	15.296	C
C-AB	296	890	0.333	294	1.3	6.065	A
C-A	436			436			
A-B	0			0			
A-C	1064			1064			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	210	336	0.626	207	1.6	27.247	D
C-AB	554	973	0.570	544	3.7	8.570	A
C-A	342			342			
A-B	0			0			
A-C	1304			1304			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	210	336	0.626	210	1.6	28.494	D
C-AB	564	980	0.576	563	3.9	9.043	A
C-A	332			332			
A-B	0			0			
A-C	1304			1304			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	172	405	0.424	175	0.8	15.885	C
C-AB	303	899	0.337	313	1.4	6.340	A
C-A	429			429			
A-B	0			0			
A-C	1064			1064			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	144	455	0.316	145	0.5	11.657	B
C-AB	191	840	0.227	193	0.7	5.628	A
C-A	422			422			
A-B	0			0			
A-C	891			891			

2031 SATURN Base + Committed (inc. FAST) + Development , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4	A4421 Buckingham Rd/Bicester Rd	T-Junction	Two-way		99.40	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2031 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	878	100.000
B - Bicester Road		✓	86	100.000
C - A4421 Buckingham Road		✓	1391	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	878
	B - Bicester Road	0	0	86
	C - A4421 Buckingham Road	1275	116	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	1
	B - Bicester Road	0	0	0
	C - A4421 Buckingham Road	1	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.20	9.45	0.2	A
C-AB	1.11	200.24	95.3	F
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	65	564	0.115	64	0.1	7.193	A
C-AB	471	1178	0.400	464	1.7	5.054	A
C-A	576			576			
A-B	0			0			
A-C	661			661			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	77	527	0.147	77	0.2	7.999	A
C-AB	877	1308	0.671	864	5.1	8.321	A
C-A	373			373			
A-B	0			0			
A-C	789			789			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	95	476	0.199	94	0.2	9.432	A
C-AB	1532	1381	1.109	1330	55.4	79.740	F
C-A	0			0			
A-B	0			0			
A-C	967			967			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	95	476	0.199	95	0.2	9.446	A
C-AB	1532	1383	1.108	1372	95.3	200.244	F
C-A	0			0			
A-B	0			0			
A-C	967			967			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	77	527	0.147	78	0.2	8.016	A
C-AB	1250	1423	0.879	1386	61.5	195.875	F
C-A	0			0			
A-B	0			0			
A-C	789			789			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	65	564	0.115	65	0.1	7.212	A
C-AB	740	1344	0.551	974	3.0	21.375	C
C-A	307			307			
A-B	0			0			
A-C	661			661			

2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4	A4421 Buckingham Rd/Bicester Rd	T-Junction	Two-way		3.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Am	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	1192	100.000
B - Bicester Road		✓	188	100.000
C - A4421 Buckingham Road		✓	806	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	1192
	B - Bicester Road	0	0	188
	C - A4421 Buckingham Road	722	84	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	7
	B - Bicester Road	0	0	6
	C - A4421 Buckingham Road	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.62	28.33	1.6	D
C-AB	0.56	8.81	3.7	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	142	453	0.312	140	0.4	11.424	B
C-AB	182	832	0.219	180	0.7	5.519	A
C-A	425			425			
A-B	0			0			
A-C	897			897			

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	169	403	0.420	168	0.7	15.259	C
C-AB	288	885	0.325	285	1.2	6.036	A
C-A	437			437			
A-B	0			0			
A-C	1072			1072			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	207	333	0.621	204	1.5	27.123	D
C-AB	538	966	0.557	529	3.5	8.384	A
C-A	350			350			
A-B	0			0			
A-C	1312			1312			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	207	333	0.621	207	1.6	28.331	D
C-AB	547	973	0.562	546	3.7	8.808	A
C-A	341			341			
A-B	0			0			
A-C	1312			1312			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	169	403	0.420	172	0.7	15.830	C
C-AB	294	893	0.329	303	1.3	6.292	A
C-A	430			430			
A-B	0			0			
A-C	1072			1072			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	142	453	0.312	143	0.5	11.634	B
C-AB	185	835	0.222	188	0.7	5.619	A
C-A	422			422			
A-B	0			0			
A-C	897			897			

2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4	A4421 Buckingham Rd/Bicester Rd	T-Junction	Two-way		97.02	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	876	100.000
B - Bicester Road		✓	82	100.000
C - A4421 Buckingham Road		✓	1379	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	876
	B - Bicester Road	0	0	82
	C - A4421 Buckingham Road	1261	118	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	1
	B - Bicester Road	0	0	0
	C - A4421 Buckingham Road	1	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.19	9.32	0.2	A
C-AB	1.11	196.22	92.7	F
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	62	565	0.109	61	0.1	7.147	A
C-AB	470	1171	0.401	463	1.7	5.097	A
C-A	568			568			
A-B	0			0			
A-C	659			659			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	74	528	0.140	74	0.2	7.927	A
C-AB	868	1299	0.668	855	5.0	8.320	A
C-A	372			372			
A-B	0			0			
A-C	788			788			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	90	476	0.190	90	0.2	9.310	A
C-AB	1518	1373	1.105	1322	54.1	78.352	F
C-A	0			0			
A-B	0			0			
A-C	964			964			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	90	476	0.190	90	0.2	9.323	A
C-AB	1518	1375	1.104	1364	92.7	196.215	F
C-A	0			0			
A-B	0			0			
A-C	964			964			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	74	528	0.140	74	0.2	7.943	A
C-AB	1240	1416	0.876	1378	58.1	189.250	F
C-A	0			0			
A-B	0			0			
A-C	788			788			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	62	565	0.109	62	0.1	7.163	A
C-AB	715	1327	0.539	936	2.9	18.502	C
C-A	323			323			
A-B	0			0			
A-C	659			659			

Junctions 9
ARCADY 9 - Roundabout Module
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Filename: 5_191021_A4421_A4095 Lords Ln_Bucknell Rd Rdbt (Final Scenarios).j9
Path: C:\Users\JamesMonk\Dropbox (mode)\Project\Birmingham\2. Projects\J323684_Bicester Heritage Masterplan\4. Data\Modelling\200125_EQ\Baseline
Report generation date: 25/11/2020 17:14:30

- »2026 SATURN Base + Committed (Inc. FAST) , AM
- »2026 SATURN Base + Committed (Inc. FAST), PM
- »2026 SATURN Base + Committed (Inc. FAST) + Development, AM
- »2026 SATURN Base + Committed (Inc. FAST) + Development, PM
- »2031 SATURN Base + Committed (Inc. FAST) + Development , AM
- »2031 SATURN Base + Committed (Inc. FAST) + Development , PM
- »2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR), AM
- »2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR), PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2026 SATURN Base + Committed (Inc. FAST)								
1 - A4095 Lords Lane	0.2	2.53	0.19	A	0.3	2.64	0.23	A
2 - Bucknell Road (S)	0.2	2.71	0.17	A	0.3	2.84	0.22	A
3 - Bucknell Road (N)	0.0	4.96	0.01	A	0.0	0.00	0.00	A
2026 SATURN Base + Committed (Inc. FAST) + Development								
1 - A4095 Lords Lane	0.2	2.54	0.20	A	0.4	2.79	0.27	A
2 - Bucknell Road (S)	0.3	2.85	0.21	A	0.3	2.84	0.22	A
3 - Bucknell Road (N)	0.0	5.13	0.01	A	0.0	0.00	0.00	A
2031 SATURN Base + Committed (Inc. FAST) + Development								
1 - A4095 Lords Lane	0.3	2.61	0.21	A	0.4	2.84	0.28	A
2 - Bucknell Road (S)	0.3	2.90	0.21	A	0.3	2.94	0.22	A
3 - Bucknell Road (N)	0.0	5.14	0.02	A	0.0	4.99	0.02	A
2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR)								
1 - A4095 Lords Lane	0.3	2.60	0.21	A	0.3	2.68	0.23	A
2 - Bucknell Road (S)	0.3	2.91	0.21	A	0.3	2.95	0.23	A
3 - Bucknell Road (N)	0.0	5.15	0.02	A	0.0	5.00	0.02	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	A4095 Lords Lane/Bucknell Road
Location	Bicester
Site number	
Date	29/04/2019
Version	
Status	
Identifier	EHC
Client	Bicester Heritage
Jobnumber	J323684
Enumerator	DESKTOP-499K8KJ\Mode
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026 SATURN Base + Committed (Inc. FAST)	AM	ONE HOUR	07:45	09:15	15
D2	2026 SATURN Base + Committed (Inc. FAST)	PM	ONE HOUR	16:30	18:00	15
D3	2026 SATURN Base + Committed (Inc. FAST) + Development	AM	ONE HOUR	07:45	09:15	15
D4	2026 SATURN Base + Committed (Inc. FAST) + Development	PM	ONE HOUR	16:30	18:00	15
D5	2031 SATURN Base + Committed (Inc. FAST) + Development	AM	ONE HOUR	07:45	09:15	15
D6	2031 SATURN Base + Committed (Inc. FAST) + Development	PM	ONE HOUR	16:30	18:00	15
D7	2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:45	09:15	15
D8	2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026 SATURN Base + Committed (Inc. FAST) , 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
5	A4095 Lords Lane/Bucknell Road	Standard Roundabout		1, 2, 3	2.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A4095 Lords Lane	
2	Bucknell Road (S)	
3	Bucknell Road (N)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A4095 Lords Lane	4.02	6.23	16.9	29.8	29.8	20.5	
2 - Bucknell Road (S)	3.75	7.40	7.7	16.6	29.8	16.0	
3 - Bucknell Road (N)	3.00	9.00	10.3	43.9	29.8	19.5	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A4095 Lords Lane	0.688	1773
2 - Bucknell Road (S)	0.657	1636
3 - Bucknell Road (N)	0.665	1639

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026 SATURN Base + Committed (Inc. FAST)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4095 Lords Lane		✓	311	100.000
2 - Bucknell Road (S)		✓	244	100.000
3 - Bucknell Road (N)		✓	6	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	311	0
	2 - Bucknell Road (S)	238	0	6
	3 - Bucknell Road (N)	0	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	0	0
	2 - Bucknell Road (S)	0	0	100
	3 - Bucknell Road (N)	0	100	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4095 Lords Lane	0.19	2.53	0.2	A
2 - Bucknell Road (S)	0.17	2.71	0.2	A
3 - Bucknell Road (N)	0.01	4.96	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	234	4	1767	0.133	234	0.2	2.346	A
2 - Bucknell Road (S)	184	0	1597	0.115	183	0.1	2.546	A
3 - Bucknell Road (N)	5	179	760	0.006	4	0.0	4.763	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	280	5	1766	0.158	279	0.2	2.422	A
2 - Bucknell Road (S)	219	0	1597	0.137	219	0.2	2.612	A
3 - Bucknell Road (N)	5	214	749	0.007	5	0.0	4.843	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	342	7	1764	0.194	342	0.2	2.531	A
2 - Bucknell Road (S)	269	0	1597	0.168	268	0.2	2.709	A
3 - Bucknell Road (N)	7	262	733	0.009	7	0.0	4.958	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	342	7	1764	0.194	342	0.2	2.532	A
2 - Bucknell Road (S)	269	0	1597	0.168	269	0.2	2.709	A
3 - Bucknell Road (N)	7	262	733	0.009	7	0.0	4.958	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	280	5	1766	0.158	280	0.2	2.422	A
2 - Bucknell Road (S)	219	0	1597	0.137	220	0.2	2.612	A
3 - Bucknell Road (N)	5	214	748	0.007	5	0.0	4.846	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	234	5	1767	0.133	234	0.2	2.348	A
2 - Bucknell Road (S)	184	0	1597	0.115	184	0.1	2.546	A
3 - Bucknell Road (N)	5	179	760	0.006	5	0.0	4.764	A

2026 SATURN Base + Committed (Inc. FAST), 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
5	A4095 Lords Lane/Bucknell Road	Standard Roundabout		1, 2, 3	2.73	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2026 SATURN Base + Committed (Inc. FAST)	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4095 Lords Lane		✓	372	100.000
2 - Bucknell Road (S)		✓	316	100.000
3 - Bucknell Road (N)		✓	4	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	372	0
	2 - Bucknell Road (S)	312	0	4
	3 - Bucknell Road (N)	0	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	0	0
	2 - Bucknell Road (S)	0	0	100
	3 - Bucknell Road (N)	0	100	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4095 Lords Lane	0.23	2.64	0.3	A
2 - Bucknell Road (S)	0.22	2.84	0.3	A
3 - Bucknell Road (N)	0.00	0.00	0.0	A

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	280	0	1773	0.158	279	0.2	2.408	A
2 - Bucknell Road (S)	238	0	1616	0.147	237	0.2	2.609	A
3 - Bucknell Road (N)	0	234	742	0.000	0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	334	0	1773	0.189	334	0.2	2.501	A
2 - Bucknell Road (S)	284	0	1616	0.176	284	0.2	2.702	A
3 - Bucknell Road (N)	0	280	726	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	410	0	1773	0.231	409	0.3	2.639	A
2 - Bucknell Road (S)	348	0	1616	0.215	348	0.3	2.838	A
3 - Bucknell Road (N)	0	343	706	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	410	0	1773	0.231	410	0.3	2.639	A
2 - Bucknell Road (S)	348	0	1616	0.215	348	0.3	2.838	A
3 - Bucknell Road (N)	0	344	705	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	334	0	1773	0.189	335	0.2	2.502	A
2 - Bucknell Road (S)	284	0	1616	0.176	284	0.2	2.705	A
3 - Bucknell Road (N)	0	281	726	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	280	0	1773	0.158	280	0.2	2.413	A
2 - Bucknell Road (S)	238	0	1616	0.147	238	0.2	2.612	A
3 - Bucknell Road (N)	0	235	742	0.000	0	0.0	0.000	A

2026 SATURN Base + Committed (Inc. FAST) + Development, 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
5	A4095 Lords Lane/Bucknell Road	Standard Roundabout		1, 2, 3	2.74	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 SATURN Base + Committed (Inc. FAST) + Development	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4095 Lords Lane		✓	315	100.000
2 - Bucknell Road (S)		✓	311	100.000
3 - Bucknell Road (N)		✓	6	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	315	0
	2 - Bucknell Road (S)	305	0	6
	3 - Bucknell Road (N)	0	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	0	0
	2 - Bucknell Road (S)	0	0	100
	3 - Bucknell Road (N)	0	100	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4095 Lords Lane	0.20	2.54	0.2	A
2 - Bucknell Road (S)	0.21	2.85	0.3	A
3 - Bucknell Road (N)	0.01	5.13	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	237	4	1767	0.134	237	0.2	2.351	A
2 - Bucknell Road (S)	234	0	1605	0.146	233	0.2	2.622	A
3 - Bucknell Road (N)	5	229	744	0.006	4	0.0	4.870	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	283	5	1766	0.160	283	0.2	2.427	A
2 - Bucknell Road (S)	280	0	1605	0.174	279	0.2	2.714	A
3 - Bucknell Road (N)	5	274	729	0.007	5	0.0	4.977	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	347	7	1764	0.197	347	0.2	2.539	A
2 - Bucknell Road (S)	342	0	1605	0.213	342	0.3	2.849	A
3 - Bucknell Road (N)	7	336	708	0.009	7	0.0	5.131	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	347	7	1764	0.197	347	0.2	2.539	A
2 - Bucknell Road (S)	342	0	1605	0.213	342	0.3	2.849	A
3 - Bucknell Road (N)	7	336	708	0.009	7	0.0	5.132	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	283	5	1766	0.160	283	0.2	2.430	A
2 - Bucknell Road (S)	280	0	1605	0.174	280	0.2	2.717	A
3 - Bucknell Road (N)	5	274	728	0.007	5	0.0	4.980	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	237	5	1767	0.134	237	0.2	2.353	A
2 - Bucknell Road (S)	234	0	1605	0.146	234	0.2	2.627	A
3 - Bucknell Road (N)	5	230	743	0.006	5	0.0	4.872	A

2026 SATURN Base + Committed (Inc. FAST) + Development, 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
5	A4095 Lords Lane/Bucknell Road	Standard Roundabout		1, 2, 3	2.81	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 SATURN Base + Committed (Inc. FAST) + Development	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4095 Lords Lane		✓	439	100.000
2 - Bucknell Road (S)		✓	316	100.000
3 - Bucknell Road (N)		✓	4	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	439	0
	2 - Bucknell Road (S)	312	0	4
	3 - Bucknell Road (N)	0	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	0	0
	2 - Bucknell Road (S)	0	0	100
	3 - Bucknell Road (N)	0	100	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4095 Lords Lane	0.27	2.79	0.4	A
2 - Bucknell Road (S)	0.22	2.84	0.3	A
3 - Bucknell Road (N)	0.00	0.00	0.0	A

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	331	0	1773	0.186	330	0.2	2.493	A
2 - Bucknell Road (S)	238	0	1616	0.147	237	0.2	2.609	A
3 - Bucknell Road (N)	0	234	742	0.000	0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	395	0	1773	0.223	394	0.3	2.611	A
2 - Bucknell Road (S)	284	0	1616	0.176	284	0.2	2.702	A
3 - Bucknell Road (N)	0	280	726	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	483	0	1773	0.273	483	0.4	2.790	A
2 - Bucknell Road (S)	348	0	1616	0.215	348	0.3	2.838	A
3 - Bucknell Road (N)	0	343	706	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	483	0	1773	0.273	483	0.4	2.790	A
2 - Bucknell Road (S)	348	0	1616	0.215	348	0.3	2.838	A
3 - Bucknell Road (N)	0	344	705	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	395	0	1773	0.223	395	0.3	2.612	A
2 - Bucknell Road (S)	284	0	1616	0.176	284	0.2	2.705	A
3 - Bucknell Road (N)	0	281	726	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	331	0	1773	0.186	331	0.2	2.497	A
2 - Bucknell Road (S)	238	0	1616	0.147	238	0.2	2.612	A
3 - Bucknell Road (N)	0	235	742	0.000	0	0.0	0.000	A

2031 SATURN Base + Committed (Inc. FAST) + Development , 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
5	A4095 Lords Lane/Bucknell Road	Standard Roundabout		1, 2, 3	2.83	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2031 SATURN Base + Committed (Inc. FAST) + Development	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4095 Lords Lane		✓	340	100.000
2 - Bucknell Road (S)		✓	302	100.000
3 - Bucknell Road (N)		✓	12	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	340	0
	2 - Bucknell Road (S)	290	0	12
	3 - Bucknell Road (N)	0	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	0	0
	2 - Bucknell Road (S)	0	0	100
	3 - Bucknell Road (N)	0	100	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4095 Lords Lane	0.21	2.61	0.3	A
2 - Bucknell Road (S)	0.21	2.90	0.3	A
3 - Bucknell Road (N)	0.02	5.14	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	256	9	1761	0.145	255	0.2	2.390	A
2 - Bucknell Road (S)	227	0	1574	0.144	227	0.2	2.670	A
3 - Bucknell Road (N)	9	218	747	0.012	9	0.0	4.875	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	306	11	1758	0.174	305	0.2	2.477	A
2 - Bucknell Road (S)	271	0	1574	0.173	271	0.2	2.763	A
3 - Bucknell Road (N)	11	261	733	0.015	11	0.0	4.984	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	374	13	1755	0.213	374	0.3	2.607	A
2 - Bucknell Road (S)	333	0	1574	0.211	332	0.3	2.899	A
3 - Bucknell Road (N)	13	319	714	0.019	13	0.0	5.139	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	374	13	1755	0.213	374	0.3	2.607	A
2 - Bucknell Road (S)	333	0	1574	0.211	333	0.3	2.899	A
3 - Bucknell Road (N)	13	319	713	0.019	13	0.0	5.140	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	306	11	1758	0.174	306	0.2	2.480	A
2 - Bucknell Road (S)	271	0	1574	0.173	272	0.2	2.766	A
3 - Bucknell Road (N)	11	261	733	0.015	11	0.0	4.987	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	256	9	1761	0.145	256	0.2	2.394	A
2 - Bucknell Road (S)	227	0	1574	0.144	228	0.2	2.675	A
3 - Bucknell Road (N)	9	218	747	0.012	9	0.0	4.879	A

2031 SATURN Base + Committed (Inc. FAST) + Development , 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
5	A4095 Lords Lane/Bucknell Road	Standard Roundabout		1, 2, 3	2.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2031 SATURN Base + Committed (Inc. FAST) + Development	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4095 Lords Lane		✓	442	100.000
2 - Bucknell Road (S)		✓	322	100.000
3 - Bucknell Road (N)		✓	13	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	442	0
	2 - Bucknell Road (S)	310	0	12
	3 - Bucknell Road (N)	0	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	0	0
	2 - Bucknell Road (S)	0	0	100
	3 - Bucknell Road (N)	0	92	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4095 Lords Lane	0.28	2.84	0.4	A
2 - Bucknell Road (S)	0.22	2.94	0.3	A
3 - Bucknell Road (N)	0.02	4.99	0.0	A

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	333	10	1760	0.189	332	0.2	2.519	A
2 - Bucknell Road (S)	242	0	1578	0.154	242	0.2	2.693	A
3 - Bucknell Road (N)	10	233	773	0.013	10	0.0	4.715	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	397	12	1758	0.226	397	0.3	2.646	A
2 - Bucknell Road (S)	289	0	1578	0.183	289	0.2	2.794	A
3 - Bucknell Road (N)	12	279	757	0.015	12	0.0	4.827	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	487	14	1754	0.277	486	0.4	2.839	A
2 - Bucknell Road (S)	355	0	1578	0.225	354	0.3	2.942	A
3 - Bucknell Road (N)	14	341	736	0.019	14	0.0	4.990	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	487	14	1754	0.277	487	0.4	2.839	A
2 - Bucknell Road (S)	355	0	1578	0.225	355	0.3	2.942	A
3 - Bucknell Road (N)	14	341	736	0.019	14	0.0	4.990	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	397	12	1758	0.226	398	0.3	2.647	A
2 - Bucknell Road (S)	289	0	1578	0.183	290	0.2	2.795	A
3 - Bucknell Road (N)	12	279	757	0.015	12	0.0	4.828	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	333	10	1760	0.189	333	0.2	2.522	A
2 - Bucknell Road (S)	242	0	1578	0.154	243	0.2	2.696	A
3 - Bucknell Road (N)	10	234	773	0.013	10	0.0	4.718	A

2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR), 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
5	A4095 Lords Lane/Bucknell Road	Standard Roundabout		1, 2, 3	2.83	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4095 Lords Lane		✓	338	100.000
2 - Bucknell Road (S)		✓	305	100.000
3 - Bucknell Road (N)		✓	12	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	338	0
	2 - Bucknell Road (S)	293	0	12
	3 - Bucknell Road (N)	0	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	0	0
	2 - Bucknell Road (S)	0	0	100
	3 - Bucknell Road (N)	0	100	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4095 Lords Lane	0.21	2.60	0.3	A
2 - Bucknell Road (S)	0.21	2.91	0.3	A
3 - Bucknell Road (N)	0.02	5.15	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	254	9	1761	0.145	254	0.2	2.387	A
2 - Bucknell Road (S)	230	0	1574	0.146	229	0.2	2.674	A
3 - Bucknell Road (N)	9	220	747	0.012	9	0.0	4.880	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	304	11	1758	0.173	304	0.2	2.474	A
2 - Bucknell Road (S)	274	0	1574	0.174	274	0.2	2.768	A
3 - Bucknell Road (N)	11	263	732	0.015	11	0.0	4.990	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	372	13	1755	0.212	372	0.3	2.603	A
2 - Bucknell Road (S)	336	0	1574	0.213	336	0.3	2.905	A
3 - Bucknell Road (N)	13	322	712	0.019	13	0.0	5.147	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	372	13	1755	0.212	372	0.3	2.603	A
2 - Bucknell Road (S)	336	0	1574	0.213	336	0.3	2.905	A
3 - Bucknell Road (N)	13	323	712	0.019	13	0.0	5.148	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	304	11	1758	0.173	304	0.2	2.475	A
2 - Bucknell Road (S)	274	0	1574	0.174	274	0.2	2.769	A
3 - Bucknell Road (N)	11	264	732	0.015	11	0.0	4.991	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	254	9	1761	0.145	255	0.2	2.390	A
2 - Bucknell Road (S)	230	0	1574	0.146	230	0.2	2.676	A
3 - Bucknell Road (N)	9	221	746	0.012	9	0.0	4.884	A

2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR), 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
5	A4095 Lords Lane/Bucknell Road	Standard Roundabout		1, 2, 3	2.88	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4095 Lords Lane		✓	373	100.000
2 - Bucknell Road (S)		✓	326	100.000
3 - Bucknell Road (N)		✓	13	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	373	0
	2 - Bucknell Road (S)	314	0	12
	3 - Bucknell Road (N)	0	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A4095 Lords Lane	2 - Bucknell Road (S)	3 - Bucknell Road (N)
From	1 - A4095 Lords Lane	0	0	0
	2 - Bucknell Road (S)	0	0	100
	3 - Bucknell Road (N)	0	92	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4095 Lords Lane	0.23	2.68	0.3	A
2 - Bucknell Road (S)	0.23	2.95	0.3	A
3 - Bucknell Road (N)	0.02	5.00	0.0	A

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	281	10	1760	0.160	280	0.2	2.431	A
2 - Bucknell Road (S)	245	0	1578	0.156	245	0.2	2.698	A
3 - Bucknell Road (N)	10	236	772	0.013	10	0.0	4.721	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	335	12	1758	0.191	335	0.2	2.530	A
2 - Bucknell Road (S)	293	0	1578	0.186	293	0.2	2.800	A
3 - Bucknell Road (N)	12	282	756	0.015	12	0.0	4.835	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	411	14	1754	0.234	410	0.3	2.679	A
2 - Bucknell Road (S)	359	0	1578	0.227	359	0.3	2.951	A
3 - Bucknell Road (N)	14	345	734	0.020	14	0.0	5.000	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	411	14	1754	0.234	411	0.3	2.679	A
2 - Bucknell Road (S)	359	0	1578	0.227	359	0.3	2.951	A
3 - Bucknell Road (N)	14	346	734	0.020	14	0.0	5.001	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	335	12	1758	0.191	336	0.2	2.533	A
2 - Bucknell Road (S)	293	0	1578	0.186	293	0.2	2.801	A
3 - Bucknell Road (N)	12	283	756	0.015	12	0.0	4.838	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4095 Lords Lane	281	10	1760	0.160	281	0.2	2.435	A
2 - Bucknell Road (S)	245	0	1578	0.156	246	0.2	2.701	A
3 - Bucknell Road (N)	10	237	772	0.013	10	0.0	4.723	A

Junctions 9
PICADY 9 - Priority Intersection Module
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Filename: 6_191021_Howes Lane__Bucknell Rd Priority (Final Scenarios).j9
Path: C:\Users\JamesMonk\Dropbox (mode)\Project\Birmingham\2. Projects\J323684_Bicester Heritage Masterplan\4. Data\Modelling\200125_EQ\Baseline
Report generation date: 25/11/2020 17:09:30

- »2026 SATURN Base + Committed (Inc. FAST), AM
- »2026 SATURN Base + Committed (Inc. FAST), PM
- »2026 SATURN Base + Committed (Inc. FAST) + Development, AM
- »2026 SATURN Base + Committed (Inc. FAST) + Development, PM
- »2031 SATURN Base + Committed (Inc. FAST) + Development , AM
- »2031 SATURN Base + Committed (Inc. FAST) + Development, PM
- »2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR), AM
- »2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR), PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2026 SATURN Base + Committed (Inc. FAST)								
Stream B-C	0.5	8.25	0.35	A	0.7	9.35	0.41	A
Stream B-A	0.1	8.79	0.06	A	0.2	10.13	0.14	B
Stream C-AB	0.7	8.50	0.40	A	1.0	9.62	0.48	A
2026 SATURN Base + Committed (Inc. FAST) + Development								
Stream B-C	0.8	9.86	0.45	A	0.7	9.42	0.41	A
Stream B-A	0.1	8.82	0.06	A	0.2	10.91	0.15	B
Stream C-AB	0.8	8.60	0.41	A	1.7	12.61	0.60	B
2031 SATURN Base + Committed (Inc. FAST) + Development								
Stream B-C	0.7	9.41	0.43	A	0.7	9.50	0.41	A
Stream B-A	0.0	8.98	0.04	A	0.2	11.26	0.15	B
Stream C-AB	1.0	9.56	0.46	A	1.9	13.90	0.63	B
2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR)								
Stream B-C	0.7	9.46	0.43	A	0.7	9.53	0.41	A
Stream B-A	0.0	8.96	0.04	A	0.2	11.75	0.15	B
Stream C-AB	0.9	9.42	0.46	A	1.9	13.84	0.63	B

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	Howes Lane/Bucknell Road Priority
Location	Bicester
Site number	
Date	29/04/2019
Version	
Status	
Identifier	EHC
Client	Bicester Heritage
Jobnumber	J323684
Enumerator	DESKTOP-499K8KJ\Mode
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026 SATURN Base + Committed (Inc. FAST)	AM	ONE HOUR	07:45	09:15	15
D2	2026 SATURN Base + Committed (Inc. FAST)	PM	ONE HOUR	16:30	18:00	15
D3	2026 SATURN Base + Committed (Inc. FAST) + Development	AM	ONE HOUR	07:45	09:15	15
D4	2026 SATURN Base + Committed (Inc. FAST) + Development	PM	ONE HOUR	16:30	18:00	15
D5	2031 SATURN Base + Committed (Inc. FAST) + Development	AM	ONE HOUR	07:45	09:15	15
D6	2031 SATURN Base + Committed (Inc. FAST) + Development	PM	ONE HOUR	16:30	18:00	15
D7	2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:45	09:15	15
D8	2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026 SATURN Base + Committed (Inc. FAST), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
6	Howes Lane/Bucknell Road	T-Junction	Two-way		6.38	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Bucknell Road (S)		Major
B	Howes Lane		Minor
C	Bucknell Road (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Bucknell Road (N)	7.55			154.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B - Howes Lane	Two lanes	3.72	3.62	68	47

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
6	B-A	556	0.094	0.239	0.150	0.341
6	B-C	701	0.100	0.253	-	-
6	C-B	663	0.240	0.240	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026 SATURN Base + Committed (Inc. FAST)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bucknell Road (S)		✓	79	100.000
B - Howes Lane		✓	234	100.000
C - Bucknell Road (N)		✓	316	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
From	A - Bucknell Road (S)	0	11	68
	B - Howes Lane	23	0	211
	C - Bucknell Road (N)	98	218	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
From	A - Bucknell Road (S)	0	9	9
	B - Howes Lane	0	0	0
	C - Bucknell Road (N)	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.35	8.25	0.5	A
B-A	0.06	8.79	0.1	A
C-AB	0.40	8.50	0.7	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	159	679	0.234	158	0.3	6.884	A
B-A	17	474	0.037	17	0.0	7.881	A
C-AB	184	693	0.265	182	0.4	7.025	A
C-A	54			54			
A-B	8			8			
A-C	51			51			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	190	675	0.281	189	0.4	7.407	A
B-A	21	457	0.045	21	0.0	8.242	A
C-AB	224	699	0.321	224	0.5	7.564	A
C-A	60			60			
A-B	10			10			
A-C	61			61			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	232	669	0.347	232	0.5	8.225	A
B-A	25	435	0.058	25	0.1	8.778	A
C-AB	284	708	0.401	283	0.7	8.452	A
C-A	64			64			
A-B	12			12			
A-C	75			75			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	232	669	0.347	232	0.5	8.247	A
B-A	25	435	0.058	25	0.1	8.786	A
C-AB	284	708	0.401	284	0.7	8.497	A
C-A	64			64			
A-B	12			12			
A-C	75			75			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	190	675	0.281	190	0.4	7.433	A
B-A	21	457	0.045	21	0.0	8.252	A
C-AB	225	699	0.321	225	0.5	7.626	A
C-A	59			59			
A-B	10			10			
A-C	61			61			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	159	679	0.234	159	0.3	6.927	A
B-A	17	473	0.037	17	0.0	7.899	A
C-AB	184	693	0.265	184	0.4	7.089	A
C-A	54			54			
A-B	8			8			
A-C	51			51			

2026 SATURN Base + Committed (Inc. FAST), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
6	Howes Lane/Bucknell Road	T-Junction	Two-way		7.17	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2026 SATURN Base + Committed (Inc. FAST)	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bucknell Road (S)		✓	119	100.000
B - Howes Lane		✓	294	100.000
C - Bucknell Road (N)		✓	376	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
From	A - Bucknell Road (S)	0	45	74
	B - Howes Lane	53	0	241
	C - Bucknell Road (N)	124	252	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
From	A - Bucknell Road (S)	0	0	5
	B - Howes Lane	0	0	0
	C - Bucknell Road (N)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.41	9.35	0.7	A
B-A	0.14	10.13	0.2	B
C-AB	0.48	9.62	1.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	181	668	0.272	180	0.4	7.358	A
B-A	40	459	0.087	40	0.1	8.566	A
C-AB	219	700	0.313	217	0.5	7.427	A
C-A	64			64			
A-B	34			34			
A-C	56			56			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	217	661	0.328	216	0.5	8.094	A
B-A	48	440	0.108	48	0.1	9.169	A
C-AB	269	708	0.380	269	0.7	8.189	A
C-A	69			69			
A-B	40			40			
A-C	67			67			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	265	650	0.408	265	0.7	9.315	A
B-A	58	414	0.141	58	0.2	10.112	B
C-AB	343	718	0.478	342	1.0	9.543	A
C-A	71			71			
A-B	50			50			
A-C	81			81			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	265	650	0.408	265	0.7	9.354	A
B-A	58	414	0.141	58	0.2	10.132	B
C-AB	343	719	0.478	343	1.0	9.617	A
C-A	71			71			
A-B	50			50			
A-C	81			81			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	217	660	0.328	217	0.5	8.140	A
B-A	48	439	0.108	48	0.1	9.195	A
C-AB	270	708	0.381	271	0.7	8.279	A
C-A	68			68			
A-B	40			40			
A-C	67			67			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	181	668	0.272	182	0.4	7.422	A
B-A	40	459	0.087	40	0.1	8.605	A
C-AB	219	700	0.313	220	0.5	7.519	A
C-A	64			64			
A-B	34			34			
A-C	56			56			

2026 SATURN Base + Committed (Inc. FAST) + Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
6	Howes Lane/Bucknell Road	T-Junction	Two-way		7.24	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 SATURN Base + Committed (Inc. FAST) + Development	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bucknell Road (S)		✓	79	100.000
B - Howes Lane		✓	299	100.000
C - Bucknell Road (N)		✓	320	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
From	A - Bucknell Road (S)	0	11	68
	B - Howes Lane	23	0	276
	C - Bucknell Road (N)	98	222	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
From	A - Bucknell Road (S)	0	9	9
	B - Howes Lane	0	0	0
	C - Bucknell Road (N)	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.45	9.86	0.8	A
B-A	0.06	8.82	0.1	A
C-AB	0.41	8.60	0.8	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	208	679	0.306	206	0.4	7.577	A
B-A	17	473	0.037	17	0.0	7.899	A
C-AB	187	693	0.270	185	0.4	7.071	A
C-A	54			54			
A-B	8			8			
A-C	51			51			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	248	675	0.368	248	0.6	8.411	A
B-A	21	456	0.045	21	0.0	8.266	A
C-AB	229	699	0.327	228	0.5	7.630	A
C-A	59			59			
A-B	10			10			
A-C	61			61			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	304	669	0.454	303	0.8	9.812	A
B-A	25	434	0.058	25	0.1	8.811	A
C-AB	289	708	0.408	288	0.8	8.555	A
C-A	64			64			
A-B	12			12			
A-C	75			75			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	304	669	0.454	304	0.8	9.863	A
B-A	25	434	0.058	25	0.1	8.819	A
C-AB	289	708	0.408	289	0.8	8.601	A
C-A	63			63			
A-B	12			12			
A-C	75			75			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	248	675	0.368	249	0.6	8.470	A
B-A	21	456	0.045	21	0.0	8.278	A
C-AB	229	699	0.327	230	0.5	7.692	A
C-A	59			59			
A-B	10			10			
A-C	61			61			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	208	679	0.306	208	0.4	7.651	A
B-A	17	472	0.037	17	0.0	7.918	A
C-AB	187	693	0.270	188	0.4	7.140	A
C-A	54			54			
A-B	8			8			
A-C	51			51			

2026 SATURN Base + Committed (Inc. FAST) + Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
6	Howes Lane/Bucknell Road	T-Junction	Two-way		8.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 SATURN Base + Committed (Inc. FAST) + Development	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bucknell Road (S)		✓	119	100.000
B - Howes Lane		✓	295	100.000
C - Bucknell Road (N)		✓	443	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
From	A - Bucknell Road (S)	0	45	74
	B - Howes Lane	53	0	242
	C - Bucknell Road (N)	126	317	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
From	A - Bucknell Road (S)	0	0	5
	B - Howes Lane	0	0	0
	C - Bucknell Road (N)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.41	9.42	0.7	A
B-A	0.15	10.91	0.2	B
C-AB	0.60	12.61	1.7	B
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	182	667	0.273	181	0.4	7.378	A
B-A	40	442	0.090	40	0.1	8.926	A
C-AB	276	701	0.394	273	0.7	8.373	A
C-A	58			58			
A-B	34			34			
A-C	56			56			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	218	660	0.330	217	0.5	8.127	A
B-A	48	420	0.114	48	0.1	9.671	A
C-AB	340	709	0.479	338	1.0	9.699	A
C-A	59			59			
A-B	40			40			
A-C	67			67			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	266	649	0.411	266	0.7	9.380	A
B-A	58	389	0.150	58	0.2	10.876	B
C-AB	433	720	0.602	431	1.6	12.385	B
C-A	55			55			
A-B	50			50			
A-C	81			81			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	266	649	0.411	266	0.7	9.420	A
B-A	58	388	0.150	58	0.2	10.915	B
C-AB	434	720	0.602	434	1.7	12.608	B
C-A	54			54			
A-B	50			50			
A-C	81			81			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	218	659	0.330	218	0.5	8.175	A
B-A	48	418	0.114	48	0.1	9.719	A
C-AB	340	710	0.480	343	1.1	9.916	A
C-A	58			58			
A-B	40			40			
A-C	67			67			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	182	667	0.273	183	0.4	7.443	A
B-A	40	441	0.090	40	0.1	8.978	A
C-AB	277	701	0.394	278	0.7	8.541	A
C-A	57			57			
A-B	34			34			
A-C	56			56			

2031 SATURN Base + Committed (Inc. FAST) + Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
6	Howes Lane/Bucknell Road	T-Junction	Two-way		7.27	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2031 SATURN Base + Committed (Inc. FAST) + Development	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bucknell Road (S)		✓	90	100.000
B - Howes Lane		✓	274	100.000
C - Bucknell Road (N)		✓	351	100.000

Origin-Destination Data

Demand (Veh/hr)

	From	To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
	A - Bucknell Road (S)	0	13	77
	B - Howes Lane	15	0	259
	C - Bucknell Road (N)	102	249	0

Vehicle Mix

Heavy Vehicle Percentages

	From	To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
	A - Bucknell Road (S)	0	8	16
	B - Howes Lane	0	0	0
	C - Bucknell Road (N)	12	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.43	9.41	0.7	A
B-A	0.04	8.98	0.0	A
C-AB	0.46	9.56	1.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	195	679	0.287	193	0.4	7.397	A
B-A	11	462	0.024	11	0.0	7.987	A
C-AB	211	690	0.305	209	0.5	7.452	A
C-A	53			53			
A-B	10			10			
A-C	58			58			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	233	674	0.345	232	0.5	8.143	A
B-A	13	443	0.030	13	0.0	8.381	A
C-AB	258	696	0.371	257	0.6	8.186	A
C-A	57			57			
A-B	12			12			
A-C	69			69			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	285	668	0.427	284	0.7	9.370	A
B-A	17	418	0.040	16	0.0	8.973	A
C-AB	327	704	0.464	325	1.0	9.475	A
C-A	60			60			
A-B	14			14			
A-C	85			85			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	285	668	0.427	285	0.7	9.411	A
B-A	17	417	0.040	17	0.0	8.983	A
C-AB	327	704	0.464	327	1.0	9.559	A
C-A	60			60			
A-B	14			14			
A-C	85			85			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	233	674	0.345	234	0.5	8.193	A
B-A	13	442	0.030	14	0.0	8.394	A
C-AB	258	696	0.371	260	0.7	8.298	A
C-A	57			57			
A-B	12			12			
A-C	69			69			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	195	678	0.287	195	0.4	7.464	A
B-A	11	461	0.025	11	0.0	8.006	A
C-AB	211	691	0.306	212	0.5	7.553	A
C-A	53			53			
A-B	10			10			
A-C	58			58			

2031 SATURN Base + Committed (Inc. FAST) + Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
6	Howes Lane/Bucknell Road	T-Junction	Two-way		9.37	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2031 SATURN Base + Committed (Inc. FAST) + Development	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bucknell Road (S)		✓	132	100.000
B - Howes Lane		✓	292	100.000
C - Bucknell Road (N)		✓	455	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
From	A - Bucknell Road (S)	0	50	82
	B - Howes Lane	52	0	240
	C - Bucknell Road (N)	126	329	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
From	A - Bucknell Road (S)	0	0	15
	B - Howes Lane	0	0	0
	C - Bucknell Road (N)	10	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.41	9.50	0.7	A
B-A	0.15	11.26	0.2	B
C-AB	0.63	13.90	1.9	B
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	181	664	0.272	179	0.4	7.407	A
B-A	39	435	0.090	39	0.1	9.077	A
C-AB	287	695	0.413	284	0.8	8.703	A
C-A	56			56			
A-B	38			38			
A-C	62			62			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	216	655	0.329	215	0.5	8.171	A
B-A	47	411	0.114	47	0.1	9.885	A
C-AB	353	702	0.503	352	1.1	10.249	B
C-A	56			56			
A-B	45			45			
A-C	74			74			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	264	643	0.411	263	0.7	9.453	A
B-A	57	378	0.151	57	0.2	11.212	B
C-AB	451	711	0.634	448	1.9	13.543	B
C-A	50			50			
A-B	55			55			
A-C	90			90			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	264	643	0.411	264	0.7	9.496	A
B-A	57	377	0.152	57	0.2	11.257	B
C-AB	452	712	0.635	451	1.9	13.901	B
C-A	49			49			
A-B	55			55			
A-C	90			90			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	216	655	0.329	217	0.5	8.220	A
B-A	47	409	0.114	47	0.1	9.939	A
C-AB	354	702	0.504	357	1.2	10.582	B
C-A	55			55			
A-B	45			45			
A-C	74			74			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	181	663	0.272	181	0.4	7.473	A
B-A	39	434	0.090	39	0.1	9.131	A
C-AB	287	695	0.413	289	0.8	8.926	A
C-A	55			55			
A-B	38			38			
A-C	62			62			

2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
6	Howes Lane/Bucknell Road	T-Junction	Two-way		7.21	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bucknell Road (S)		✓	90	100.000
B - Howes Lane		✓	276	100.000
C - Bucknell Road (N)		✓	349	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
From	A - Bucknell Road (S)	0	12	78
	B - Howes Lane	15	0	261
	C - Bucknell Road (N)	104	245	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
From	A - Bucknell Road (S)	0	8	15
	B - Howes Lane	0	0	0
	C - Bucknell Road (N)	12	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.43	9.46	0.7	A
B-A	0.04	8.96	0.0	A
C-AB	0.46	9.42	0.9	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	196	679	0.290	195	0.4	7.420	A
B-A	11	463	0.024	11	0.0	7.973	A
C-AB	208	692	0.301	206	0.5	7.395	A
C-A	55			55			
A-B	9			9			
A-C	59			59			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	235	674	0.348	234	0.5	8.175	A
B-A	13	444	0.030	13	0.0	8.363	A
C-AB	255	697	0.365	254	0.6	8.102	A
C-A	59			59			
A-B	11			11			
A-C	70			70			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	287	668	0.430	287	0.7	9.424	A
B-A	17	419	0.039	16	0.0	8.949	A
C-AB	322	705	0.457	321	0.9	9.336	A
C-A	62			62			
A-B	13			13			
A-C	86			86			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	287	668	0.430	287	0.7	9.465	A
B-A	17	418	0.039	17	0.0	8.957	A
C-AB	323	706	0.457	323	0.9	9.417	A
C-A	62			62			
A-B	13			13			
A-C	86			86			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	235	674	0.348	235	0.5	8.227	A
B-A	13	443	0.030	14	0.0	8.377	A
C-AB	255	697	0.365	256	0.7	8.210	A
C-A	59			59			
A-B	11			11			
A-C	70			70			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	196	678	0.290	197	0.4	7.484	A
B-A	11	462	0.024	11	0.0	7.992	A
C-AB	208	692	0.301	209	0.5	7.491	A
C-A	54			54			
A-B	9			9			
A-C	59			59			

2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
6	Howes Lane/Bucknell Road	T-Junction	Two-way		9.37	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2031 SATURN Base + Committed (Inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bucknell Road (S)		✓	134	100.000
B - Howes Lane		✓	291	100.000
C - Bucknell Road (N)		✓	452	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
From	A - Bucknell Road (S)	0	48	86
	B - Howes Lane	51	0	240
	C - Bucknell Road (N)	124	328	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bucknell Road (S)	B - Howes Lane	C - Bucknell Road (N)
From	A - Bucknell Road (S)	0	0	14
	B - Howes Lane	4	0	0
	C - Bucknell Road (N)	10	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.41	9.53	0.7	A
B-A	0.15	11.75	0.2	B
C-AB	0.63	13.84	1.9	B
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	181	663	0.273	179	0.4	7.420	A
B-A	38	418	0.092	38	0.1	9.456	A
C-AB	285	694	0.411	282	0.8	8.698	A
C-A	55			55			
A-B	36			36			
A-C	65			65			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	216	654	0.330	215	0.5	8.189	A
B-A	46	395	0.116	46	0.1	10.307	B
C-AB	351	700	0.502	350	1.1	10.233	B
C-A	55			55			
A-B	43			43			
A-C	77			77			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	264	642	0.412	263	0.7	9.486	A
B-A	56	363	0.155	56	0.2	11.703	B
C-AB	448	709	0.632	445	1.9	13.494	B
C-A	49			49			
A-B	53			53			
A-C	95			95			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	264	642	0.412	264	0.7	9.529	A
B-A	56	363	0.155	56	0.2	11.750	B
C-AB	449	710	0.632	449	1.9	13.843	B
C-A	49			49			
A-B	53			53			
A-C	95			95			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	216	654	0.330	217	0.5	8.240	A
B-A	46	394	0.116	46	0.1	10.364	B
C-AB	352	701	0.502	355	1.2	10.561	B
C-A	54			54			
A-B	43			43			
A-C	77			77			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	181	663	0.273	181	0.4	7.486	A
B-A	38	417	0.092	39	0.1	9.518	A
C-AB	286	694	0.412	287	0.8	8.918	A
C-A	54			54			
A-B	36			36			
A-C	65			65			

Junctions 9
PICADY 9 - Priority Intersection Module
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Filename: A_200117_A4421 Buckingham Rd_Site Access Priority.j9
Path: C:\Users\JamesMonk\Dropbox (mode)\Project\Birmingham\2. Projects\J323684_Bicester Heritage Masterplan\4. Data\Modelling\200125_EQ\Access
Report generation date: 25/11/2020 16:59:04

- »2026 SATURN Base + Comm (inc FAST) + Development, AM
- »2026 SATURN Base + Comm (inc FAST) + Development, PM
- »2031 SATURN Base + Committed (inc FAST) + Development, AM
- »2031 SATURN Base + Committed (inc FAST) + Development, PM
- »2031 SATURN Base + Committed (inc FAST) + Development (SEPR), AM
- »2031 SATURN Base + Committed (inc FAST) + Development (SEPR), PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2026 SATURN Base + Comm (inc FAST) + Development								
Stream B-AC	0.0	14.16	0.04	B	1.0	17.30	0.51	C
Stream C-AB	1.0	24.54	0.50	C	0.0	7.46	0.00	A
2031 SATURN Base + Committed (inc FAST) + Development								
Stream B-AC	0.0	14.92	0.04	B	1.2	21.12	0.56	C
Stream C-AB	1.1	27.22	0.53	D	0.0	8.20	0.00	A
2031 SATURN Base + Committed (inc FAST) + Development (SEPR)								
Stream B-AC	0.0	15.29	0.04	C	1.2	21.00	0.55	C
Stream C-AB	1.2	28.62	0.54	D	0.0	8.18	0.00	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	A4421 Skimmingdish Lane/Site Access
Location	Bicester
Site number	
Date	30/04/2019
Version	
Status	
Identifier	EHC
Client	Bicester Heritage
Jobnumber	J323684
Enumerator	DESKTOP-499K8KJMode
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2026 SATURN Base + Comm (inc FAST) + Development	AM	ONE HOUR	07:15	08:45	15
D8	2026 SATURN Base + Comm (inc FAST) + Development	PM	ONE HOUR	16:45	18:15	15
D9	2031 SATURN Base + Committed (inc FAST) + Development	AM	ONE HOUR	07:15	08:45	15
D10	2031 SATURN Base + Committed (inc FAST) + Development	PM	ONE HOUR	16:45	18:15	15
D11	2031 SATURN Base + Committed (inc FAST) + Development (SEPR)	AM	ONE HOUR	07:15	08:45	15
D12	2031 SATURN Base + Committed (inc FAST) + Development (SEPR)	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026 SATURN Base + Comm (inc FAST) + Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
SA 4	A4421 Skimmingdish Lane/Site Access	T-Junction	Two-way		1.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A4421 Buckingham Road (N)		Major
B	Site Access		Minor
C	A4421 Buckingham Road (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A4421 Buckingham Road (S)	6.00		✓	3.50	150.0	✓	10.00

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	50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
SA 4	B-A	519	0.094	0.239	0.150	0.341
SA 4	B-C	655	0.100	0.254	-	-
SA 4	C-B	754	0.292	0.292	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2026 SATURN Base + Comm (inc FAST) + Development	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	1327	100.000
B - Site Access		✓	10	100.000
C - A4421 Buckingham Road (S)		✓	842	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To		
	A - A4421 Buckingham Road (N)	B - Site Access	C - A4421 Buckingham Road (S)
A - A4421 Buckingham Road (N)	0	55	1272
B - Site Access	0	0	10
C - A4421 Buckingham Road (S)	707	135	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A - A4421 Buckingham Road (N)	B - Site Access	C - A4421 Buckingham Road (S)
A - A4421 Buckingham Road (N)	0	0	8
B - Site Access	0	0	0
C - A4421 Buckingham Road (S)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.04	14.16	0.0	B
C-AB	0.50	24.54	1.0	C
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	8	389	0.019	7	0.0	9.441	A
C-AB	102	440	0.231	100	0.3	10.567	B
C-A	532			532			
A-B	41			41			
A-C	958			958			

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	9	337	0.027	9	0.0	10.980	B
C-AB	121	379	0.320	121	0.5	13.904	B
C-A	636			636			
A-B	49			49			
A-C	1144			1144			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	265	0.042	11	0.0	14.154	B
C-AB	149	295	0.505	147	1.0	23.941	C
C-A	778			778			
A-B	61			61			
A-C	1400			1400			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	265	0.042	11	0.0	14.159	B
C-AB	149	295	0.505	149	1.0	24.541	C
C-A	778			778			
A-B	61			61			
A-C	1400			1400			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	9	337	0.027	9	0.0	10.984	B
C-AB	121	379	0.320	123	0.5	14.196	B
C-A	636			636			
A-B	49			49			
A-C	1144			1144			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	8	389	0.019	8	0.0	9.447	A
C-AB	102	440	0.231	102	0.3	10.686	B
C-A	532			532			
A-B	41			41			
A-C	958			958			

2026 SATURN Base + Comm (inc FAST) + Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
SA 4	A4421 Skimmingdish Lane/Site Access	T-Junction	Two-way		1.44	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2026 SATURN Base + Comm (inc FAST) + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	833	100.000
B - Site Access		✓	193	100.000
C - A4421 Buckingham Road (S)		✓	1259	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To		
	A - A4421 Buckingham Road (N)	B - Site Access	C - A4421 Buckingham Road (S)
A - A4421 Buckingham Road (N)	0	1	832
B - Site Access	0	0	193
C - A4421 Buckingham Road (S)	1258	1	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A - A4421 Buckingham Road (N)	B - Site Access	C - A4421 Buckingham Road (S)
A - A4421 Buckingham Road (N)	0	0	1
B - Site Access	0	0	0
C - A4421 Buckingham Road (S)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.51	17.30	1.0	C
C-AB	0.00	7.46	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	145	495	0.294	144	0.4	10.210	B
C-AB	0.75	569	0.001	0.75	0.0	6.332	A
C-A	947			947			
A-B	0.75			0.75			
A-C	626			626			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	174	463	0.374	173	0.6	12.353	B
C-AB	0.90	533	0.002	0.90	0.0	6.761	A
C-A	1131			1131			
A-B	0.90			0.90			
A-C	748			748			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	212	420	0.506	211	1.0	17.053	C
C-AB	1	484	0.002	1	0.0	7.460	A
C-A	1385			1385			
A-B	1			1			
A-C	916			916			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	212	420	0.506	212	1.0	17.297	C
C-AB	1	484	0.002	1	0.0	7.460	A
C-A	1385			1385			
A-B	1			1			
A-C	916			916			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	174	463	0.374	175	0.6	12.547	B
C-AB	0.90	533	0.002	0.90	0.0	6.763	A
C-A	1131			1131			
A-B	0.90			0.90			
A-C	748			748			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	145	495	0.294	146	0.4	10.348	B
C-AB	0.75	569	0.001	0.75	0.0	6.334	A
C-A	947			947			
A-B	0.75			0.75			
A-C	626			626			

2031 SATURN Base + Committed (inc FAST) + Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
SA 4	A4421 Skimmingdish Lane/Site Access	T-Junction	Two-way		1.57	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2031 SATURN Base + Committed (inc FAST) + Development	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Am	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	1382	100.000
B - Site Access		✓	10	100.000
C - A4421 Buckingham Road (S)		✓	943	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A4421 Buckingham Road (N)	B - Site Access	C - A4421 Buckingham Road (S)
From	A - A4421 Buckingham Road (N)	0	55	1327
	B - Site Access	0	0	10
	C - A4421 Buckingham Road (S)	808	135	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A4421 Buckingham Road (N)	B - Site Access	C - A4421 Buckingham Road (S)
From	A - A4421 Buckingham Road (N)	0	0	7
	B - Site Access	0	0	0
	C - A4421 Buckingham Road (S)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.04	14.92	0.0	B
C-AB	0.53	27.22	1.1	D
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	8	380	0.020	7	0.0	9.666	A
C-AB	102	430	0.236	100	0.3	10.890	B
C-A	608			608			
A-B	41			41			
A-C	999			999			

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	9	326	0.028	9	0.0	11.342	B
C-AB	121	367	0.331	121	0.5	14.583	B
C-A	726			726			
A-B	49			49			
A-C	1193			1193			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	252	0.044	11	0.0	14.910	B
C-AB	149	281	0.531	147	1.1	26.381	D
C-A	889			889			
A-B	61			61			
A-C	1461			1461			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	252	0.044	11	0.0	14.916	B
C-AB	149	281	0.531	149	1.1	27.218	D
C-A	889			889			
A-B	61			61			
A-C	1461			1461			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	9	326	0.028	9	0.0	11.349	B
C-AB	121	367	0.331	124	0.5	14.951	B
C-A	726			726			
A-B	49			49			
A-C	1193			1193			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	8	380	0.020	8	0.0	9.673	A
C-AB	102	430	0.236	102	0.3	11.020	B
C-A	608			608			
A-B	41			41			
A-C	999			999			

2031 SATURN Base + Committed (inc FAST) + Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
SA 4	A4421 Skimmingdish Lane/Site Access	T-Junction	Two-way		1.62	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2031 SATURN Base + Committed (inc FAST) + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	967	100.000
B - Site Access		✓	193	100.000
C - A4421 Buckingham Road (S)		✓	1324	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To		
	A - A4421 Buckingham Road (N)	B - Site Access	C - A4421 Buckingham Road (S)
A - A4421 Buckingham Road (N)	0	1	966
B - Site Access	0	0	193
C - A4421 Buckingham Road (S)	1323	1	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A - A4421 Buckingham Road (N)	B - Site Access	C - A4421 Buckingham Road (S)
A - A4421 Buckingham Road (N)	0	0	1
B - Site Access	0	0	0
C - A4421 Buckingham Road (S)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.56	21.12	1.2	C
C-AB	0.00	8.20	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	145	469	0.310	144	0.4	11.009	B
C-AB	0.75	539	0.001	0.75	0.0	6.682	A
C-A	996			996			
A-B	0.75			0.75			
A-C	727			727			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	174	433	0.401	173	0.7	13.801	B
C-AB	0.90	498	0.002	0.90	0.0	7.245	A
C-A	1189			1189			
A-B	0.90			0.90			
A-C	868			868			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	212	383	0.556	210	1.2	20.651	C
C-AB	1	440	0.003	1	0.0	8.201	A
C-A	1457			1457			
A-B	1			1			
A-C	1064			1064			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	212	383	0.556	212	1.2	21.122	C
C-AB	1	440	0.003	1	0.0	8.201	A
C-A	1457			1457			
A-B	1			1			
A-C	1064			1064			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	174	433	0.401	176	0.7	14.121	B
C-AB	0.90	498	0.002	0.90	0.0	7.248	A
C-A	1189			1189			
A-B	0.90			0.90			
A-C	868			868			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	145	469	0.310	146	0.5	11.192	B
C-AB	0.75	539	0.001	0.75	0.0	6.682	A
C-A	996			996			
A-B	0.75			0.75			
A-C	727			727			

2031 SATURN Base + Committed (inc FAST) + Development (SEPR), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
SA 4	A4421 Skimmingdish Lane/Site Access	T-Junction	Two-way		1.63	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2031 SATURN Base + Committed (inc FAST) + Development (SEPR)	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Am	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	1389	100.000
B - Site Access		✓	10	100.000
C - A4421 Buckingham Road (S)		✓	936	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A4421 Buckingham Road (N)	B - Site Access	C - A4421 Buckingham Road (S)
From	A - A4421 Buckingham Road (N)	0	55	1334
	B - Site Access	0	0	10
	C - A4421 Buckingham Road (S)	801	135	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A4421 Buckingham Road (N)	B - Site Access	C - A4421 Buckingham Road (S)
From	A - A4421 Buckingham Road (N)	0	0	8
	B - Site Access	0	0	0
	C - A4421 Buckingham Road (S)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.04	15.29	0.0	C
C-AB	0.54	28.62	1.2	D
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	8	376	0.020	7	0.0	9.770	A
C-AB	102	425	0.239	100	0.3	11.042	B
C-A	603			603			
A-B	41			41			
A-C	1004			1004			

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	9	322	0.028	9	0.0	11.515	B
C-AB	121	361	0.336	121	0.5	14.909	B
C-A	720			720			
A-B	49			49			
A-C	1199			1199			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	247	0.045	11	0.0	15.276	C
C-AB	150	275	0.544	147	1.1	27.641	D
C-A	881			881			
A-B	61			61			
A-C	1469			1469			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	247	0.045	11	0.0	15.285	C
C-AB	150	275	0.544	150	1.2	28.620	D
C-A	881			881			
A-B	61			61			
A-C	1469			1469			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	9	322	0.028	9	0.0	11.524	B
C-AB	121	361	0.336	124	0.5	15.321	C
C-A	720			720			
A-B	49			49			
A-C	1199			1199			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	8	376	0.020	8	0.0	9.778	A
C-AB	102	425	0.239	102	0.3	11.179	B
C-A	603			603			
A-B	41			41			
A-C	1004			1004			

2031 SATURN Base + Committed (inc FAST) + Development (SEPR), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
SA 4	A4421 Skimmingdish Lane/Site Access	T-Junction	Two-way		1.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2031 SATURN Base + Committed (inc FAST) + Development (SEPR)	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	954	100.000
B - Site Access		✓	193	100.000
C - A4421 Buckingham Road (S)		✓	1287	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A4421 Buckingham Road (N)	B - Site Access	C - A4421 Buckingham Road (S)
From	A - A4421 Buckingham Road (N)	0	1	953
	B - Site Access	0	0	193
	C - A4421 Buckingham Road (S)	1286	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A4421 Buckingham Road (N)	B - Site Access	C - A4421 Buckingham Road (S)
From	A - A4421 Buckingham Road (N)	0	0	2
	B - Site Access	0	0	0
	C - A4421 Buckingham Road (S)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.55	21.00	1.2	C
C-AB	0.00	8.18	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	145	469	0.309	144	0.4	10.986	B
C-AB	0.75	540	0.001	0.75	0.0	6.672	A
C-A	968			968			
A-B	0.75			0.75			
A-C	717			717			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	174	433	0.400	173	0.7	13.760	B
C-AB	0.90	499	0.002	0.90	0.0	7.231	A
C-A	1156			1156			
A-B	0.90			0.90			
A-C	857			857			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	212	384	0.554	210	1.2	20.535	C
C-AB	1	441	0.003	1	0.0	8.179	A
C-A	1416			1416			
A-B	1			1			
A-C	1049			1049			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	212	384	0.554	212	1.2	20.997	C
C-AB	1	441	0.003	1	0.0	8.179	A
C-A	1416			1416			
A-B	1			1			
A-C	1049			1049			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	174	433	0.400	176	0.7	14.076	B
C-AB	0.90	499	0.002	0.90	0.0	7.234	A
C-A	1156			1156			
A-B	0.90			0.90			
A-C	857			857			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	145	469	0.309	146	0.5	11.168	B
C-AB	0.75	540	0.001	0.75	0.0	6.675	A
C-A	968			968			
A-B	0.75			0.75			
A-C	717			717			

APPENDIX N – Junctions 9 Outputs – Mitigation Proposals

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.5.0.6896 © Copyright TRL Limited, 2018
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Filename: 1_191021_A4421 Buckingham rd_Buckingham rd_A4421 Skimmingdish Ln_EQ_MITIGATED_V2.j9
Path: C:\Users\JamesMonk\Dropbox (mode)\Project\Birmingham\2. Projects\J323684_Bicester Heritage Masterplan\4. Data\Modelling\201125_EQ\EQ Mitigation
Report generation date: 16/12/2020 16:01:42

- »2026 SATURN Base + Committed (inc. FAST) + Development, AM
- »2026 SATURN Base + Committed (inc. FAST) + Development, PM
- »2031 SATURN Base + Committed (inc. FAST) + Development , AM
- »2031 SATURN Base + Committed (inc. FAST) + Development , PM
- »2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), AM
- »2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2026 SATURN Base + Committed (inc. FAST) + Development								
1 - A4421 Buckingham Road (N)	16.5	39.97	0.96	E	1.7	4.87	0.63	A
2 - A4421 Skimmingdish Lane (E)	1.2	4.68	0.56	A	27.4	54.79	0.99	F
3 - Buckingham Road	0.9	6.52	0.48	A	4.6	36.56	0.84	E
4 - A4095 Southwold Lane	5.5	14.55	0.85	B	5.5	17.66	0.86	C
2031 SATURN Base + Committed (inc. FAST) + Development								
1 - A4421 Buckingham Road (N)	25.1	55.72	0.99	F	2.6	6.76	0.73	A
2 - A4421 Skimmingdish Lane (E)	1.7	5.74	0.64	A	86.4	142.66	1.09	F
3 - Buckingham Road	1.2	8.13	0.54	A	6.2	49.84	0.89	E
4 - A4095 Southwold Lane	7.5	19.87	0.89	C	10.7	33.62	0.93	D
2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)								
1 - A4421 Buckingham Road (N)	22.8	50.99	0.99	F	2.5	6.51	0.72	A
2 - A4421 Skimmingdish Lane (E)	1.5	5.29	0.61	A	55.3	98.13	1.04	F
3 - Buckingham Road	1.1	7.55	0.53	A	6.7	52.45	0.90	F
4 - A4095 Southwold Lane	6.2	16.75	0.87	C	8.1	26.09	0.90	D

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	(untitled)
Location	
Site number	
Date	04/05/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-499K8KJ\Mode
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15
D4	2026 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15
D5	2031 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15
D6	2031 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15
D7	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:15	08:45	15
D8	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026 SATURN Base + Committed (inc. FAST) + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A4421 Buckingham Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4421 Skimmingdish Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Buckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	20.68	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A4421 Buckingham Road (N)	
2	A4421 Skimmingdish Lane (E)	
3	Buckingham Road	
4	A4095 Southwold Lane	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A4421 Buckingham Road (N)	3.50	9.90	60.0	48.9	50.0	15.5	
2 - A4421 Skimmingdish Lane (E)	3.60	10.30	76.0	13.3	50.0	29.0	
3 - Buckingham Road	3.20	8.60	46.0	15.9	50.0	30.0	
4 - A4095 Southwold Lane	3.80	9.20	30.0	31.4	50.0	24.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A4421 Buckingham Road (N)	0.821	2705
2 - A4421 Skimmingdish Lane (E)	0.776	2618
3 - Buckingham Road	0.687	2132
4 - A4095 Southwold Lane	0.728	2274

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4421 Buckingham Road (N)		✓	1425	100.000
2 - A4421 Skimmingdish Lane (E)		✓	878	100.000
3 - Buckingham Road		✓	457	100.000
4 - A4095 Southwold Lane		✓	1290	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	38	587	375	425
	2 - A4421 Skimmingdish Lane (E)	290	0	17	571
	3 - Buckingham Road	267	91	0	99
	4 - A4095 Southwold Lane	340	905	45	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	0	5	4	12
	2 - A4421 Skimmingdish Lane (E)	3	0	0	5
	3 - Buckingham Road	2	0	0	0
	4 - A4095 Southwold Lane	2	3	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4421 Buckingham Road (N)	0.96	39.97	16.5	E
2 - A4421 Skimmingdish Lane (E)	0.56	4.68	1.2	A
3 - Buckingham Road	0.48	6.52	0.9	A
4 - A4095 Southwold Lane	0.85	14.55	5.5	B

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1073	780	1916	0.560	1068	1.3	4.218	A
2 - A4421 Skimmingdish Lane (E)	661	662	1979	0.334	659	0.5	2.723	A
3 - Buckingham Road	344	993	1388	0.248	343	0.3	3.439	A
4 - A4095 Southwold Lane	971	515	1837	0.529	967	1.1	4.114	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1281	933	1795	0.714	1276	2.4	6.881	A
2 - A4421 Skimmingdish Lane (E)	789	791	1875	0.421	788	0.7	3.308	A
3 - Buckingham Road	411	1188	1247	0.329	410	0.5	4.298	A
4 - A4095 Southwold Lane	1160	616	1764	0.657	1157	1.9	5.891	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1569	1136	1634	0.960	1527	13.0	26.686	D
2 - A4421 Skimmingdish Lane (E)	967	947	1750	0.552	965	1.2	4.570	A
3 - Buckingham Road	503	1442	1064	0.473	502	0.9	6.387	A
4 - A4095 Southwold Lane	1420	752	1666	0.853	1407	5.3	13.254	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1569	1145	1627	0.964	1555	16.5	39.973	E
2 - A4421 Skimmingdish Lane (E)	967	964	1736	0.557	967	1.2	4.676	A
3 - Buckingham Road	503	1453	1055	0.477	503	0.9	6.519	A
4 - A4095 Southwold Lane	1420	755	1664	0.854	1419	5.5	14.546	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1281	947	1784	0.718	1337	2.6	9.026	A
2 - A4421 Skimmingdish Lane (E)	789	827	1846	0.427	791	0.8	3.417	A
3 - Buckingham Road	411	1210	1230	0.334	412	0.5	4.408	A
4 - A4095 Southwold Lane	1160	620	1761	0.658	1174	2.0	6.273	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1073	786	1912	0.561	1078	1.3	4.346	A
2 - A4421 Skimmingdish Lane (E)	661	668	1974	0.335	662	0.5	2.747	A
3 - Buckingham Road	344	999	1384	0.249	345	0.3	3.469	A
4 - A4095 Southwold Lane	971	517	1835	0.529	974	1.1	4.198	A

2026 SATURN Base + Committed (inc. FAST) + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A4421 Buckingham Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4421 Skimmingdish Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Buckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	30.32	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4421 Buckingham Road (N)		✓	1153	100.000
2 - A4421 Skimmingdish Lane (E)		✓	1642	100.000
3 - Buckingham Road		✓	439	100.000
4 - A4095 Southwold Lane		✓	1062	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	79	312	345	417
	2 - A4421 Skimmingdish Lane (E)	609	0	87	946
	3 - Buckingham Road	364	44	0	31
	4 - A4095 Southwold Lane	372	621	69	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	0	2	2	0
	2 - A4421 Skimmingdish Lane (E)	1	0	0	1
	3 - Buckingham Road	3	0	0	7
	4 - A4095 Southwold Lane	2	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4421 Buckingham Road (N)	0.63	4.87	1.7	A
2 - A4421 Skimmingdish Lane (E)	0.99	54.79	27.4	F
3 - Buckingham Road	0.84	36.56	4.6	E
4 - A4095 Southwold Lane	0.86	17.66	5.5	C

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	868	550	2220	0.391	865	0.6	2.653	A
2 - A4421 Skimmingdish Lane (E)	1236	683	2064	0.599	1230	1.5	4.289	A
3 - Buckingham Road	331	1537	1037	0.319	329	0.5	5.067	A
4 - A4095 Southwold Lane	800	821	1636	0.489	796	0.9	4.265	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1037	658	2131	0.486	1035	0.9	3.283	A
2 - A4421 Skimmingdish Lane (E)	1476	817	1960	0.753	1470	3.0	7.259	A
3 - Buckingham Road	395	1838	835	0.472	393	0.9	8.105	A
4 - A4095 Southwold Lane	955	981	1520	0.628	952	1.7	6.307	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1269	798	2015	0.630	1267	1.7	4.791	A
2 - A4421 Skimmingdish Lane (E)	1808	999	1819	0.994	1741	19.7	32.464	D
3 - Buckingham Road	483	2194	596	0.810	472	3.7	26.919	D
4 - A4095 Southwold Lane	1169	1171	1382	0.846	1156	5.0	15.135	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1269	806	2008	0.632	1269	1.7	4.870	A
2 - A4421 Skimmingdish Lane (E)	1808	1002	1817	0.995	1777	27.4	54.790	F
3 - Buckingham Road	483	2229	573	0.844	480	4.6	36.562	E
4 - A4095 Southwold Lane	1169	1192	1367	0.855	1167	5.5	17.663	C

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1037	671	2120	0.489	1039	1.0	3.338	A
2 - A4421 Skimmingdish Lane (E)	1476	821	1957	0.754	1573	3.2	11.809	B
3 - Buckingham Road	395	1937	769	0.513	409	1.1	10.376	B
4 - A4095 Southwold Lane	955	1035	1481	0.645	969	1.9	7.219	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	868	555	2216	0.392	869	0.6	2.677	A
2 - A4421 Skimmingdish Lane (E)	1236	686	2061	0.600	1243	1.5	4.434	A
3 - Buckingham Road	331	1551	1028	0.321	333	0.5	5.195	A
4 - A4095 Southwold Lane	800	830	1630	0.491	803	1.0	4.374	A

2031 SATURN Base + Committed (inc. FAST) + Development , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A4421 Buckingham Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4421 Skimmingdish Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Buckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	28.00	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2031 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4421 Buckingham Road (N)		✓	1480	100.000
2 - A4421 Skimmingdish Lane (E)		✓	1007	100.000
3 - Buckingham Road		✓	477	100.000
4 - A4095 Southwold Lane		✓	1303	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	38	639	389	414
	2 - A4421 Skimmingdish Lane (E)	340	0	22	645
	3 - Buckingham Road	290	89	0	98
	4 - A4095 Southwold Lane	367	887	49	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	0	5	4	13
	2 - A4421 Skimmingdish Lane (E)	3	0	0	5
	3 - Buckingham Road	2	0	0	0
	4 - A4095 Southwold Lane	2	3	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4421 Buckingham Road (N)	0.99	55.72	25.1	F
2 - A4421 Skimmingdish Lane (E)	0.64	5.74	1.7	A
3 - Buckingham Road	0.54	8.13	1.2	A
4 - A4095 Southwold Lane	0.89	19.87	7.5	C

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1114	768	1923	0.579	1109	1.4	4.391	A
2 - A4421 Skimmingdish Lane (E)	758	667	1974	0.384	756	0.6	2.948	A
3 - Buckingham Road	359	1078	1326	0.271	358	0.4	3.713	A
4 - A4095 Southwold Lane	981	568	1800	0.545	976	1.2	4.347	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1330	919	1804	0.737	1325	2.7	7.430	A
2 - A4421 Skimmingdish Lane (E)	905	797	1869	0.484	904	0.9	3.724	A
3 - Buckingham Road	429	1289	1173	0.366	428	0.6	4.826	A
4 - A4095 Southwold Lane	1171	679	1719	0.681	1168	2.1	6.489	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1630	1114	1649	0.988	1570	17.6	32.733	D
2 - A4421 Skimmingdish Lane (E)	1109	945	1750	0.634	1106	1.7	5.563	A
3 - Buckingham Road	525	1561	977	0.538	523	1.1	7.890	A
4 - A4095 Southwold Lane	1435	829	1611	0.891	1415	6.9	16.976	C

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1630	1127	1639	0.994	1599	25.1	55.721	F
2 - A4421 Skimmingdish Lane (E)	1109	963	1736	0.639	1109	1.7	5.736	A
3 - Buckingham Road	525	1573	968	0.543	525	1.2	8.126	A
4 - A4095 Southwold Lane	1435	833	1608	0.892	1432	7.5	19.875	C

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1330	937	1789	0.744	1419	3.0	12.086	B
2 - A4421 Skimmingdish Lane (E)	905	851	1826	0.496	908	1.0	3.938	A
3 - Buckingham Road	429	1322	1148	0.373	431	0.6	5.035	A
4 - A4095 Southwold Lane	1171	686	1714	0.683	1193	2.2	7.166	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1114	775	1918	0.581	1121	1.4	4.549	A
2 - A4421 Skimmingdish Lane (E)	758	674	1969	0.385	760	0.6	2.982	A
3 - Buckingham Road	359	1085	1321	0.272	360	0.4	3.753	A
4 - A4095 Southwold Lane	981	571	1797	0.546	985	1.2	4.455	A

2031 SATURN Base + Committed (inc. FAST) + Development , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A4421 Buckingham Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4421 Skimmingdish Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Buckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	69.10	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2031 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4421 Buckingham Road (N)		✓	1282	100.000
2 - A4421 Skimmingdish Lane (E)		✓	1742	100.000
3 - Buckingham Road		✓	435	100.000
4 - A4095 Southwold Lane		✓	1113	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	79	378	364	461
	2 - A4421 Skimmingdish Lane (E)	722	0	77	943
	3 - Buckingham Road	366	41	0	28
	4 - A4095 Southwold Lane	333	711	69	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	0	1	1	0
	2 - A4421 Skimmingdish Lane (E)	1	0	0	1
	3 - Buckingham Road	3	0	0	7
	4 - A4095 Southwold Lane	3	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4421 Buckingham Road (N)	0.73	6.76	2.6	A
2 - A4421 Skimmingdish Lane (E)	1.09	142.66	86.4	F
3 - Buckingham Road	0.89	49.84	6.2	E
4 - A4095 Southwold Lane	0.93	33.62	10.7	D

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	965	615	2178	0.443	962	0.8	2.952	A
2 - A4421 Skimmingdish Lane (E)	1311	730	2029	0.646	1304	1.8	4.917	A
3 - Buckingham Road	327	1652	960	0.341	325	0.5	5.651	A
4 - A4095 Southwold Lane	838	904	1571	0.533	833	1.1	4.850	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1152	735	2079	0.554	1151	1.2	3.873	A
2 - A4421 Skimmingdish Lane (E)	1566	873	1919	0.816	1556	4.2	9.680	A
3 - Buckingham Road	391	1972	745	0.525	389	1.1	10.041	B
4 - A4095 Southwold Lane	1001	1080	1444	0.693	996	2.2	7.957	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1412	884	1955	0.722	1406	2.5	6.481	A
2 - A4421 Skimmingdish Lane (E)	1918	1066	1770	1.083	1744	47.6	62.727	F
3 - Buckingham Road	479	2260	552	0.867	463	5.0	35.751	E
4 - A4095 Southwold Lane	1225	1243	1326	0.924	1199	8.8	24.465	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1412	898	1943	0.726	1411	2.6	6.762	A
2 - A4421 Skimmingdish Lane (E)	1918	1071	1767	1.086	1763	86.4	142.664	F
3 - Buckingham Road	479	2279	539	0.888	474	6.2	49.842	E
4 - A4095 Southwold Lane	1225	1261	1313	0.933	1218	10.7	33.618	D

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1152	761	2057	0.560	1158	1.3	4.026	A
2 - A4421 Skimmingdish Lane (E)	1566	880	1913	0.818	1886	6.5	91.932	F
3 - Buckingham Road	391	2290	531	0.736	404	3.1	30.350	D
4 - A4095 Southwold Lane	1001	1230	1336	0.749	1031	3.1	12.876	B

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	965	624	2170	0.445	967	0.8	2.998	A
2 - A4421 Skimmingdish Lane (E)	1311	734	2026	0.647	1330	1.9	5.308	A
3 - Buckingham Road	327	1679	942	0.348	338	0.5	6.048	A
4 - A4095 Southwold Lane	838	927	1555	0.539	846	1.2	5.130	A

2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A4421 Buckingham Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4421 Skimmingdish Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Buckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	25.52	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4421 Buckingham Road (N)		✓	1490	100.000
2 - A4421 Skimmingdish Lane (E)		✓	961	100.000
3 - Buckingham Road		✓	483	100.000
4 - A4095 Southwold Lane		✓	1271	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	38	653	398	401
	2 - A4421 Skimmingdish Lane (E)	334	0	15	612
	3 - Buckingham Road	291	92	0	100
	4 - A4095 Southwold Lane	364	860	47	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	0	5	4	13
	2 - A4421 Skimmingdish Lane (E)	3	0	0	5
	3 - Buckingham Road	2	0	0	0
	4 - A4095 Southwold Lane	2	3	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4421 Buckingham Road (N)	0.99	50.99	22.8	F
2 - A4421 Skimmingdish Lane (E)	0.61	5.29	1.5	A
3 - Buckingham Road	0.53	7.55	1.1	A
4 - A4095 Southwold Lane	0.87	16.75	6.2	C

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1122	749	1940	0.578	1116	1.4	4.341	A
2 - A4421 Skimmingdish Lane (E)	723	662	1978	0.366	721	0.6	2.860	A
3 - Buckingham Road	364	1039	1354	0.268	362	0.4	3.624	A
4 - A4095 Southwold Lane	957	566	1800	0.532	952	1.1	4.225	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1339	896	1824	0.734	1334	2.7	7.273	A
2 - A4421 Skimmingdish Lane (E)	864	792	1874	0.461	863	0.8	3.558	A
3 - Buckingham Road	434	1242	1207	0.360	433	0.6	4.648	A
4 - A4095 Southwold Lane	1143	678	1720	0.664	1139	1.9	6.168	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1641	1088	1671	0.982	1585	16.6	31.010	D
2 - A4421 Skimmingdish Lane (E)	1058	942	1753	0.604	1055	1.5	5.141	A
3 - Buckingham Road	532	1506	1017	0.523	530	1.1	7.361	A
4 - A4095 Southwold Lane	1399	827	1612	0.868	1384	5.9	14.878	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1641	1099	1663	0.987	1616	22.8	50.992	F
2 - A4421 Skimmingdish Lane (E)	1058	959	1739	0.609	1058	1.5	5.286	A
3 - Buckingham Road	532	1517	1008	0.527	532	1.1	7.552	A
4 - A4095 Southwold Lane	1399	830	1609	0.870	1398	6.2	16.748	C

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1339	910	1812	0.739	1419	2.9	11.034	B
2 - A4421 Skimmingdish Lane (E)	864	840	1835	0.471	866	0.9	3.729	A
3 - Buckingham Road	434	1271	1185	0.366	436	0.6	4.819	A
4 - A4095 Southwold Lane	1143	683	1716	0.666	1159	2.0	6.660	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1122	755	1935	0.580	1128	1.4	4.491	A
2 - A4421 Skimmingdish Lane (E)	723	669	1972	0.367	725	0.6	2.887	A
3 - Buckingham Road	364	1046	1349	0.269	364	0.4	3.660	A
4 - A4095 Southwold Lane	957	570	1798	0.532	960	1.1	4.317	A

2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A4421 Buckingham Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4421 Skimmingdish Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Buckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	50.01	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A4421 Buckingham Road (N)		✓	1280	100.000
2 - A4421 Skimmingdish Lane (E)		✓	1674	100.000
3 - Buckingham Road		✓	445	100.000
4 - A4095 Southwold Lane		✓	1081	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	79	375	360	466
	2 - A4421 Skimmingdish Lane (E)	690	0	71	913
	3 - Buckingham Road	378	38	0	29
	4 - A4095 Southwold Lane	320	690	71	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A4421 Buckingham Road (N)	2 - A4421 Skimmingdish Lane (E)	3 - Buckingham Road	4 - A4095 Southwold Lane
From	1 - A4421 Buckingham Road (N)	0	1	1	0
	2 - A4421 Skimmingdish Lane (E)	1	0	0	1
	3 - Buckingham Road	2	0	0	7
	4 - A4095 Southwold Lane	3	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A4421 Buckingham Road (N)	0.72	6.51	2.5	A
2 - A4421 Skimmingdish Lane (E)	1.04	98.13	55.3	F
3 - Buckingham Road	0.90	52.45	6.7	F
4 - A4095 Southwold Lane	0.90	26.09	8.1	D

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	964	598	2192	0.440	961	0.8	2.916	A
2 - A4421 Skimmingdish Lane (E)	1260	732	2028	0.622	1254	1.6	4.615	A
3 - Buckingham Road	335	1610	997	0.336	333	0.5	5.407	A
4 - A4095 Southwold Lane	814	887	1586	0.513	810	1.0	4.615	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1151	716	2095	0.549	1149	1.2	3.800	A
2 - A4421 Skimmingdish Lane (E)	1505	876	1917	0.785	1497	3.5	8.432	A
3 - Buckingham Road	400	1923	785	0.510	398	1.0	9.263	A
4 - A4095 Southwold Lane	972	1060	1461	0.665	968	1.9	7.252	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1409	864	1971	0.715	1404	2.4	6.295	A
2 - A4421 Skimmingdish Lane (E)	1843	1070	1767	1.043	1725	32.9	47.698	E
3 - Buckingham Road	490	2250	563	0.870	474	5.1	35.469	E
4 - A4095 Southwold Lane	1190	1241	1331	0.895	1170	6.9	20.339	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1409	876	1962	0.718	1409	2.5	6.510	A
2 - A4421 Skimmingdish Lane (E)	1843	1074	1764	1.045	1753	55.3	98.128	F
3 - Buckingham Road	490	2279	544	0.901	483	6.7	52.446	F
4 - A4095 Southwold Lane	1190	1262	1316	0.905	1186	8.1	26.085	D

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	1151	736	2078	0.554	1156	1.3	3.926	A
2 - A4421 Skimmingdish Lane (E)	1505	882	1912	0.787	1710	4.0	34.718	D
3 - Buckingham Road	400	2130	644	0.621	420	1.7	17.344	C
4 - A4095 Southwold Lane	972	1169	1383	0.703	994	2.4	9.783	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A4421 Buckingham Road (N)	964	606	2186	0.441	965	0.8	2.955	A
2 - A4421 Skimmingdish Lane (E)	1260	736	2025	0.623	1270	1.7	4.827	A
3 - Buckingham Road	335	1627	985	0.340	340	0.5	5.617	A
4 - A4095 Southwold Lane	814	901	1576	0.516	819	1.1	4.789	A

Junctions 9
ARCADY 9 - Roundabout Module
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Filename: 2_191021_B4100 Banbury Road Roundabout (Hotel Application)_EQ_MITIGATED.j9
Path: C:\Users\JamesMonk\Dropbox (mode)\Project\Birmingham\2. Projects\J323684_Bicester Heritage Masterplan\4. Data\Modelling\200125_EQ\EQ Mitigation
Report generation date: 25/11/2020 17:06:38

- »2026 SATURN Base + Committed (inc. FAST) + Development, AM
- »2026 SATURN Base + Committed (inc. FAST) + Development, PM
- »2031 SATURN Base + Committed (inc. FAST) + Development, AM
- »2031 SATURN Base + Committed (inc. FAST) + Development , PM
- »2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), AM
- »2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2026 SATURN Base + Committed (inc. FAST) + Development								
1 - B4100 Banbury Road (N)	7.5	21.09	0.89	C	2.9	10.53	0.75	B
2 - A4095 Southwold Lane (E)	7.8	21.86	0.90	C	22.3	50.03	0.98	F
3 - B4100 Banbury Road (S)	1.5	11.98	0.60	B	4.6	33.89	0.84	D
4 - A4095 Lords Lane (W)	1.8	9.86	0.64	A	9.0	41.57	0.92	E
2031 SATURN Base + Committed (inc. FAST) + Development								
1 - B4100 Banbury Road (N)	11.7	32.18	0.94	D	5.9	19.22	0.87	C
2 - A4095 Southwold Lane (E)	26.4	66.39	1.00	F	53.3	103.58	1.05	F
3 - B4100 Banbury Road (S)	2.9	20.41	0.76	C	29.7	150.66	1.07	F
4 - A4095 Lords Lane (W)	2.8	14.96	0.74	B	12.1	56.63	0.96	F
2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)								
1 - B4100 Banbury Road (N)	8.5	23.80	0.91	C	5.3	17.23	0.85	C
2 - A4095 Southwold Lane (E)	18.5	49.94	0.98	E	39.4	80.69	1.02	F
3 - B4100 Banbury Road (S)	3.0	20.05	0.76	C	23.7	123.20	1.04	F
4 - A4095 Lords Lane (W)	2.5	13.73	0.72	B	8.1	40.00	0.91	E

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	(untitled)
Location	
Site number	
Date	04/05/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-499K8KJMode
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:30	09:00	15
D4	2026 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15
D7	2031 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:30	09:00	15
D8	2031 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15
D9	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:30	09:00	15
D10	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026 SATURN Base + Committed (inc. FAST) + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B4100 Banbury Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4095 Southwold Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	18.41	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	B4100 Banbury Road (N)	
2	A4095 Southwold Lane (E)	
3	B4100 Banbury Road (S)	
4	A4095 Lords Lane (W)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - B4100 Banbury Road (N)	3.45	7.70	38.0	33.7	42.0	26.0	
2 - A4095 Southwold Lane (E)	3.50	7.80	40.0	26.4	42.0	29.0	
3 - B4100 Banbury Road (S)	3.47	7.10	26.0	15.1	42.0	40.0	
4 - A4095 Lords Lane (W)	3.95	6.10	26.0	33.9	42.0	30.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B4100 Banbury Road (N)	0.719	2061
2 - A4095 Southwold Lane (E)	0.713	2061
3 - B4100 Banbury Road (S)	0.626	1720
4 - A4095 Lords Lane (W)	0.652	1746

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B4100 Banbury Road (N)		✓	1221	100.000
2 - A4095 Southwold Lane (E)		✓	1227	100.000
3 - B4100 Banbury Road (S)		✓	412	100.000
4 - A4095 Lords Lane (W)		✓	600	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	665	390	166
	2 - A4095 Southwold Lane (E)	590	0	77	560
	3 - B4100 Banbury Road (S)	263	96	0	53
	4 - A4095 Lords Lane (W)	59	522	19	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	4	1	2
	2 - A4095 Southwold Lane (E)	5	0	0	9
	3 - B4100 Banbury Road (S)	1	0	0	0
	4 - A4095 Lords Lane (W)	0	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - B4100 Banbury Road (N)	0.89	21.09	7.5	C
2 - A4095 Southwold Lane (E)	0.90	21.86	7.8	C
3 - B4100 Banbury Road (S)	0.60	11.98	1.5	B
4 - A4095 Lords Lane (W)	0.64	9.86	1.8	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	919	477	1666	0.552	914	1.2	4.757	A
2 - A4095 Southwold Lane (E)	924	431	1643	0.562	919	1.3	4.935	A
3 - B4100 Banbury Road (S)	310	985	1058	0.293	309	0.4	4.793	A
4 - A4095 Lords Lane (W)	452	711	1246	0.363	449	0.6	4.509	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1098	571	1599	0.686	1094	2.1	7.069	A
2 - A4095 Southwold Lane (E)	1103	515	1586	0.696	1099	2.2	7.339	A
3 - B4100 Banbury Road (S)	370	1179	930	0.398	369	0.7	6.413	A
4 - A4095 Lords Lane (W)	539	850	1153	0.468	538	0.9	5.843	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1344	698	1510	0.890	1325	6.9	17.950	C
2 - A4095 Southwold Lane (E)	1351	624	1512	0.894	1332	7.0	18.312	C
3 - B4100 Banbury Road (S)	454	1428	765	0.593	451	1.4	11.342	B
4 - A4095 Lords Lane (W)	661	1033	1032	0.640	657	1.7	9.515	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1344	701	1507	0.892	1342	7.5	21.093	C
2 - A4095 Southwold Lane (E)	1351	632	1507	0.897	1348	7.8	21.862	C
3 - B4100 Banbury Road (S)	454	1446	753	0.602	453	1.5	11.980	B
4 - A4095 Lords Lane (W)	661	1043	1025	0.644	660	1.8	9.858	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1098	577	1596	0.688	1118	2.3	7.856	A
2 - A4095 Southwold Lane (E)	1103	526	1578	0.699	1125	2.4	8.290	A
3 - B4100 Banbury Road (S)	370	1206	912	0.406	374	0.7	6.723	A
4 - A4095 Lords Lane (W)	539	866	1142	0.472	543	0.9	6.037	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	919	481	1664	0.553	923	1.2	4.888	A
2 - A4095 Southwold Lane (E)	924	435	1640	0.563	928	1.3	5.084	A
3 - B4100 Banbury Road (S)	310	995	1051	0.295	311	0.4	4.871	A
4 - A4095 Lords Lane (W)	452	717	1241	0.364	453	0.6	4.575	A

2026 SATURN Base + Committed (inc. FAST) + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B4100 Banbury Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4095 Southwold Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	36.07	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B4100 Banbury Road (N)		✓	930	100.000
2 - A4095 Southwold Lane (E)		✓	1501	100.000
3 - B4100 Banbury Road (S)		✓	475	100.000
4 - A4095 Lords Lane (W)		✓	756	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	514	244	172
	2 - A4095 Southwold Lane (E)	742	2	81	676
	3 - B4100 Banbury Road (S)	269	156	0	50
	4 - A4095 Lords Lane (W)	72	640	44	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	3	1	2
	2 - A4095 Southwold Lane (E)	1	0	0	1
	3 - B4100 Banbury Road (S)	1	0	0	0
	4 - A4095 Lords Lane (W)	0	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - B4100 Banbury Road (N)	0.75	10.53	2.9	B
2 - A4095 Southwold Lane (E)	0.98	50.03	22.3	F
3 - B4100 Banbury Road (S)	0.84	33.89	4.6	D
4 - A4095 Lords Lane (W)	0.92	41.57	9.0	E

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	700	630	1569	0.446	697	0.8	4.113	A
2 - A4095 Southwold Lane (E)	1130	345	1795	0.629	1123	1.7	5.308	A
3 - B4100 Banbury Road (S)	358	1192	961	0.372	355	0.6	5.923	A
4 - A4095 Lords Lane (W)	569	875	1161	0.490	565	0.9	6.042	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	836	753	1482	0.564	834	1.3	5.542	A
2 - A4095 Southwold Lane (E)	1349	412	1747	0.773	1343	3.3	8.780	A
3 - B4100 Banbury Road (S)	427	1425	814	0.525	425	1.1	9.206	A
4 - A4095 Lords Lane (W)	680	1046	1049	0.648	676	1.8	9.559	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1024	904	1375	0.745	1018	2.8	9.907	A
2 - A4095 Southwold Lane (E)	1653	502	1682	0.982	1598	16.8	31.631	D
3 - B4100 Banbury Road (S)	523	1700	641	0.816	512	3.8	26.055	D
4 - A4095 Lords Lane (W)	832	1250	916	0.909	811	7.2	29.573	D

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1024	919	1364	0.751	1023	2.9	10.534	B
2 - A4095 Southwold Lane (E)	1653	506	1680	0.984	1630	22.3	50.031	F
3 - B4100 Banbury Road (S)	523	1732	621	0.842	520	4.6	33.891	D
4 - A4095 Lords Lane (W)	832	1273	901	0.924	825	9.0	41.567	E

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	836	786	1458	0.573	842	1.4	5.901	A
2 - A4095 Southwold Lane (E)	1349	418	1743	0.774	1424	3.6	13.836	B
3 - B4100 Banbury Road (S)	427	1503	765	0.558	440	1.3	11.525	B
4 - A4095 Lords Lane (W)	680	1100	1014	0.670	707	2.1	12.708	B

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	700	639	1563	0.448	702	0.8	4.196	A
2 - A4095 Southwold Lane (E)	1130	348	1793	0.630	1138	1.7	5.553	A
3 - B4100 Banbury Road (S)	358	1206	952	0.376	360	0.6	6.114	A
4 - A4095 Lords Lane (W)	569	886	1154	0.493	574	1.0	6.252	A

2031 SATURN Base + Committed (inc. FAST) + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B4100 Banbury Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4095 Southwold Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	40.13	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2031 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B4100 Banbury Road (N)		✓	1264	100.000
2 - A4095 Southwold Lane (E)		✓	1287	100.000
3 - B4100 Banbury Road (S)		✓	492	100.000
4 - A4095 Lords Lane (W)		✓	621	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	576	514	174
	2 - A4095 Southwold Lane (E)	674	0	64	549
	3 - B4100 Banbury Road (S)	337	101	0	54
	4 - A4095 Lords Lane (W)	46	555	20	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	4	0	3
	2 - A4095 Southwold Lane (E)	4	0	0	10
	3 - B4100 Banbury Road (S)	1	0	0	0
	4 - A4095 Lords Lane (W)	0	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - B4100 Banbury Road (N)	0.94	32.18	11.7	D
2 - A4095 Southwold Lane (E)	1.00	66.39	26.4	F
3 - B4100 Banbury Road (S)	0.76	20.41	2.9	C
4 - A4095 Lords Lane (W)	0.74	14.96	2.8	B

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	952	506	1654	0.575	946	1.3	5.047	A
2 - A4095 Southwold Lane (E)	969	530	1580	0.613	963	1.6	5.776	A
3 - B4100 Banbury Road (S)	370	1045	1018	0.364	368	0.6	5.517	A
4 - A4095 Lords Lane (W)	468	832	1168	0.400	465	0.7	5.101	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1136	606	1583	0.718	1132	2.5	7.894	A
2 - A4095 Southwold Lane (E)	1157	634	1510	0.766	1151	3.1	9.855	A
3 - B4100 Banbury Road (S)	442	1249	884	0.501	441	1.0	8.095	A
4 - A4095 Lords Lane (W)	558	995	1061	0.526	557	1.1	7.112	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1392	737	1489	0.935	1362	9.9	24.088	C
2 - A4095 Southwold Lane (E)	1417	763	1422	0.996	1358	18.0	38.403	E
3 - B4100 Banbury Road (S)	542	1478	733	0.739	535	2.6	17.627	C
4 - A4095 Lords Lane (W)	684	1187	934	0.732	678	2.6	13.717	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1392	743	1485	0.937	1385	11.7	32.182	D
2 - A4095 Southwold Lane (E)	1417	776	1414	1.002	1383	26.4	66.394	F
3 - B4100 Banbury Road (S)	542	1505	715	0.758	540	2.9	20.415	C
4 - A4095 Lords Lane (W)	684	1206	922	0.741	683	2.8	14.961	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1136	615	1577	0.721	1172	2.7	9.652	A
2 - A4095 Southwold Lane (E)	1157	656	1495	0.774	1248	3.6	19.601	C
3 - B4100 Banbury Road (S)	442	1347	819	0.540	449	1.2	9.916	A
4 - A4095 Lords Lane (W)	558	1053	1022	0.546	564	1.2	7.966	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	952	511	1651	0.577	957	1.4	5.227	A
2 - A4095 Southwold Lane (E)	969	536	1576	0.615	977	1.6	6.089	A
3 - B4100 Banbury Road (S)	370	1060	1009	0.367	373	0.6	5.684	A
4 - A4095 Lords Lane (W)	468	844	1160	0.403	470	0.7	5.227	A

2031 SATURN Base + Committed (inc. FAST) + Development , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B4100 Banbury Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4095 Southwold Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	79.22	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2031 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B4100 Banbury Road (N)		✓	1055	100.000
2 - A4095 Southwold Lane (E)		✓	1536	100.000
3 - B4100 Banbury Road (S)		✓	605	100.000
4 - A4095 Lords Lane (W)		✓	736	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	587	293	175
	2 - A4095 Southwold Lane (E)	739	2	81	714
	3 - B4100 Banbury Road (S)	378	178	0	49
	4 - A4095 Lords Lane (W)	31	650	55	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	3	1	3
	2 - A4095 Southwold Lane (E)	3	0	0	1
	3 - B4100 Banbury Road (S)	1	0	0	0
	4 - A4095 Lords Lane (W)	0	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - B4100 Banbury Road (N)	0.87	19.22	5.9	C
2 - A4095 Southwold Lane (E)	1.05	103.58	53.3	F
3 - B4100 Banbury Road (S)	1.07	150.66	29.7	F
4 - A4095 Lords Lane (W)	0.96	56.63	12.1	F

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	794	661	1545	0.514	790	1.0	4.746	A
2 - A4095 Southwold Lane (E)	1156	392	1744	0.663	1149	1.9	5.970	A
3 - B4100 Banbury Road (S)	455	1219	935	0.487	452	0.9	7.391	A
4 - A4095 Lords Lane (W)	554	969	1092	0.507	550	1.0	6.595	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	948	790	1454	0.652	945	1.8	7.038	A
2 - A4095 Southwold Lane (E)	1381	468	1690	0.817	1372	4.2	11.019	B
3 - B4100 Banbury Road (S)	544	1456	785	0.693	539	2.1	14.373	B
4 - A4095 Lords Lane (W)	662	1157	968	0.683	657	2.1	11.430	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1162	930	1355	0.857	1148	5.3	16.382	C
2 - A4095 Southwold Lane (E)	1691	568	1619	1.044	1581	31.7	51.143	F
3 - B4100 Banbury Road (S)	666	1688	637	1.045	608	16.7	73.027	F
4 - A4095 Lords Lane (W)	810	1321	860	0.942	782	9.1	37.385	E

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1162	948	1342	0.865	1159	5.9	19.225	C
2 - A4095 Southwold Lane (E)	1691	574	1615	1.047	1605	53.3	103.575	F
3 - B4100 Banbury Road (S)	666	1712	622	1.071	614	29.7	150.662	F
4 - A4095 Lords Lane (W)	810	1339	848	0.955	799	12.1	56.627	F

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	948	854	1408	0.673	964	2.1	8.351	A
2 - A4095 Southwold Lane (E)	1381	479	1682	0.821	1573	5.3	53.690	F
3 - B4100 Banbury Road (S)	544	1650	662	0.822	636	6.7	108.752	F
4 - A4095 Lords Lane (W)	662	1343	846	0.783	694	4.0	27.509	D

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	794	684	1529	0.520	798	1.1	4.956	A
2 - A4095 Southwold Lane (E)	1156	396	1741	0.664	1170	2.0	6.441	A
3 - B4100 Banbury Road (S)	455	1240	922	0.494	478	1.0	8.520	A
4 - A4095 Lords Lane (W)	554	1004	1070	0.518	566	1.1	7.299	A

2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B4100 Banbury Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4095 Southwold Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	31.03	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B4100 Banbury Road (N)		✓	1236	100.000
2 - A4095 Southwold Lane (E)		✓	1254	100.000
3 - B4100 Banbury Road (S)		✓	507	100.000
4 - A4095 Lords Lane (W)		✓	601	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	561	505	170
	2 - A4095 Southwold Lane (E)	646	0	76	532
	3 - B4100 Banbury Road (S)	357	96	0	54
	4 - A4095 Lords Lane (W)	45	536	20	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	4	0	4
	2 - A4095 Southwold Lane (E)	5	0	0	10
	3 - B4100 Banbury Road (S)	1	0	0	0
	4 - A4095 Lords Lane (W)	0	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - B4100 Banbury Road (N)	0.91	23.80	8.5	C
2 - A4095 Southwold Lane (E)	0.98	49.94	18.5	E
3 - B4100 Banbury Road (S)	0.76	20.05	3.0	C
4 - A4095 Lords Lane (W)	0.72	13.73	2.5	B

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	931	488	1665	0.559	926	1.3	4.834	A
2 - A4095 Southwold Lane (E)	944	520	1579	0.598	938	1.5	5.572	A
3 - B4100 Banbury Road (S)	382	1009	1038	0.368	379	0.6	5.444	A
4 - A4095 Lords Lane (W)	452	822	1172	0.386	450	0.6	4.971	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1111	584	1596	0.696	1107	2.2	7.300	A
2 - A4095 Southwold Lane (E)	1127	623	1510	0.747	1122	2.8	9.149	A
3 - B4100 Banbury Road (S)	456	1206	907	0.502	454	1.0	7.914	A
4 - A4095 Lords Lane (W)	540	984	1065	0.507	539	1.0	6.819	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1361	712	1506	0.904	1339	7.6	19.541	C
2 - A4095 Southwold Lane (E)	1381	753	1422	0.971	1336	14.0	32.145	D
3 - B4100 Banbury Road (S)	558	1439	753	0.742	551	2.7	17.355	C
4 - A4095 Lords Lane (W)	662	1181	935	0.708	657	2.3	12.715	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1361	717	1502	0.906	1357	8.5	23.802	C
2 - A4095 Southwold Lane (E)	1381	763	1415	0.976	1363	18.5	49.944	E
3 - B4100 Banbury Road (S)	558	1467	734	0.760	557	3.0	20.053	C
4 - A4095 Lords Lane (W)	662	1200	922	0.718	661	2.5	13.735	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1111	593	1591	0.699	1136	2.4	8.311	A
2 - A4095 Southwold Lane (E)	1127	638	1499	0.752	1189	3.2	13.743	B
3 - B4100 Banbury Road (S)	456	1273	863	0.528	463	1.1	9.160	A
4 - A4095 Lords Lane (W)	540	1026	1037	0.521	546	1.1	7.411	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	931	493	1662	0.560	935	1.3	4.984	A
2 - A4095 Southwold Lane (E)	944	526	1575	0.599	951	1.5	5.826	A
3 - B4100 Banbury Road (S)	382	1022	1030	0.371	384	0.6	5.591	A
4 - A4095 Lords Lane (W)	452	833	1165	0.388	454	0.6	5.081	A

2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B4100 Banbury Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A4095 Southwold Lane (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	62.42	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B4100 Banbury Road (N)		✓	1046	100.000
2 - A4095 Southwold Lane (E)		✓	1511	100.000
3 - B4100 Banbury Road (S)		✓	598	100.000
4 - A4095 Lords Lane (W)		✓	705	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	574	299	173
	2 - A4095 Southwold Lane (E)	733	2	80	696
	3 - B4100 Banbury Road (S)	373	176	0	49
	4 - A4095 Lords Lane (W)	26	624	55	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B4100 Banbury Road (N)	2 - A4095 Southwold Lane (E)	3 - B4100 Banbury Road (S)	4 - A4095 Lords Lane (W)
From	1 - B4100 Banbury Road (N)	0	3	1	4
	2 - A4095 Southwold Lane (E)	1	0	0	1
	3 - B4100 Banbury Road (S)	1	0	0	0
	4 - A4095 Lords Lane (W)	0	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - B4100 Banbury Road (N)	0.85	17.23	5.3	C
2 - A4095 Southwold Lane (E)	1.02	80.69	39.4	F
3 - B4100 Banbury Road (S)	1.04	123.20	23.7	F
4 - A4095 Lords Lane (W)	0.91	40.00	8.1	E

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	787	641	1557	0.506	783	1.0	4.630	A
2 - A4095 Southwold Lane (E)	1138	395	1758	0.647	1130	1.8	5.674	A
3 - B4100 Banbury Road (S)	450	1200	953	0.472	447	0.9	7.059	A
4 - A4095 Lords Lane (W)	531	960	1105	0.480	527	0.9	6.190	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	940	766	1469	0.640	937	1.7	6.739	A
2 - A4095 Southwold Lane (E)	1358	472	1702	0.798	1351	3.8	10.024	B
3 - B4100 Banbury Road (S)	538	1434	806	0.667	533	1.9	13.018	B
4 - A4095 Lords Lane (W)	634	1147	983	0.644	630	1.8	10.099	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1152	911	1366	0.843	1139	4.9	15.098	C
2 - A4095 Southwold Lane (E)	1664	573	1629	1.021	1578	25.1	43.074	E
3 - B4100 Banbury Road (S)	658	1683	649	1.015	611	13.8	62.719	F
4 - A4095 Lords Lane (W)	776	1329	865	0.897	757	6.6	29.291	D

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	1152	926	1356	0.850	1150	5.3	17.227	C
2 - A4095 Southwold Lane (E)	1664	579	1625	1.024	1607	39.4	80.694	F
3 - B4100 Banbury Road (S)	658	1712	631	1.044	619	23.7	123.196	F
4 - A4095 Lords Lane (W)	776	1350	851	0.912	770	8.1	39.995	E

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	940	815	1434	0.656	954	1.9	7.695	A
2 - A4095 Southwold Lane (E)	1358	481	1695	0.801	1498	4.4	29.114	D
3 - B4100 Banbury Road (S)	538	1577	716	0.751	619	3.4	53.852	F
4 - A4095 Lords Lane (W)	634	1297	886	0.716	655	2.7	16.932	C

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B4100 Banbury Road (N)	787	655	1547	0.509	791	1.0	4.785	A
2 - A4095 Southwold Lane (E)	1138	399	1755	0.648	1148	1.9	6.026	A
3 - B4100 Banbury Road (S)	450	1218	942	0.478	460	0.9	7.614	A
4 - A4095 Lords Lane (W)	531	981	1092	0.486	538	1.0	6.572	A

Junctions 9
PICADY 9 - Priority Intersection Module
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Path: C:\Users\JamesMonk\Dropbox (mode)\Project\Birmingham\2. Projects\J323684_Bicester Heritage Masterplan\4. Data\Modelling\200125_EQ\EQ Mitigation
Report generation date: 25/11/2020 17:03:03

- »2026 SATURN Base + Committed (inc. FAST) + Development, AM
- »2026 SATURN Base + Committed (inc. FAST) + Development, PM
- »2031 SATURN Base + Committed (inc. FAST) + Development , AM
- »2031 SATURN Base + Committed (inc. FAST) + Development , PM
- »2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), AM
- »2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2026 SATURN Base + Committed (inc. FAST) + Development								
Stream B-AC	0.7	22.18	0.42	C	0.2	9.47	0.18	A
Stream C-AB	0.4	14.55	0.26	B	0.3	9.80	0.24	A
2031 SATURN Base + Committed (inc. FAST) + Development								
Stream B-AC	2.2	40.15	0.71	E	0.3	10.81	0.22	B
Stream C-AB	0.4	14.34	0.27	B	0.4	11.18	0.28	B
2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)								
Stream B-AC	2.2	39.76	0.70	E	0.3	10.65	0.21	B
Stream C-AB	0.4	14.37	0.27	B	0.4	11.23	0.29	B

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	Bicester Heritage Masterplan
Location	Bicester
Site number	
Date	26/04/2019
Version	
Status	
Identifier	EHC
Client	Bicester Heritage
Jobnumber	J323684
Enumerator	DESKTOP-499K8KJMode
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15
D4	2026 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15
D5	2031 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15
D6	2031 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15
D7	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:15	08:45	15
D8	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026 SATURN Base + Committed (inc. FAST) + Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4	A4421 Buckingham Rd/Bicester Rd	T-Junction	Two-way		1.74	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A4421 Buckingham Road (N)		Major
B	Bicester Road		Minor
C	A4421 Buckingham Road		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A4421 Buckingham Road	6.00		✓	3.50	147.0	✓	10.00

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 - Bicester Road	One lane	3.70	30	30

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
4	B-A	537	0.098	0.247	0.156	0.353
4	B-C	688	0.105	0.267	-	-
4	C-B	752	0.292	0.292	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	1214	100.000
B - Bicester Road		✓	106	100.000
C - A4421 Buckingham Road		✓	711	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	1214
	B - Bicester Road	0	0	106
	C - A4421 Buckingham Road	631	80	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	7
	B - Bicester Road	0	0	10
	C - A4421 Buckingham Road	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.42	22.18	0.7	C
C-AB	0.26	14.55	0.4	B
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	80	388	0.205	79	0.3	11.590	B
C-AB	60	467	0.129	60	0.1	8.819	A
C-A	475			475			
A-B	0			0			
A-C	914			914			

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	95	342	0.278	95	0.4	14.510	B
C-AB	72	412	0.175	72	0.2	10.572	B
C-A	567			567			
A-B	0			0			
A-C	1091			1091			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	117	279	0.419	115	0.7	21.866	C
C-AB	88	335	0.263	88	0.3	14.487	B
C-A	695			695			
A-B	0			0			
A-C	1337			1337			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	117	279	0.419	117	0.7	22.180	C
C-AB	88	335	0.263	88	0.4	14.549	B
C-A	695			695			
A-B	0			0			
A-C	1337			1337			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	95	342	0.278	97	0.4	14.715	B
C-AB	72	412	0.175	72	0.2	10.621	B
C-A	567			567			
A-B	0			0			
A-C	1091			1091			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	80	388	0.205	80	0.3	11.705	B
C-AB	60	467	0.129	60	0.1	8.855	A
C-A	475			475			
A-B	0			0			
A-C	914			914			

2026 SATURN Base + Committed (inc. FAST) + Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4	A4421 Buckingham Rd/Bicester Rd	T-Junction	Two-way		0.83	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	749	100.000
B - Bicester Road		✓	76	100.000
C - A4421 Buckingham Road		✓	1324	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To		
	A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
A - A4421 Buckingham Road (N)	0	0	749
B - Bicester Road	0	0	76
C - A4421 Buckingham Road	1219	105	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
A - A4421 Buckingham Road (N)	0	0	2
B - Bicester Road	0	0	0
C - A4421 Buckingham Road	1	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.18	9.47	0.2	A
C-AB	0.24	9.80	0.3	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	57	535	0.107	57	0.1	7.525	A
C-AB	79	557	0.142	78	0.2	7.516	A
C-A	918			918			
A-B	0			0			
A-C	564			564			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	68	505	0.135	68	0.2	8.242	A
C-AB	94	526	0.180	94	0.2	8.335	A
C-A	1096			1096			
A-B	0			0			
A-C	673			673			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	84	464	0.180	83	0.2	9.461	A
C-AB	116	483	0.239	115	0.3	9.779	A
C-A	1342			1342			
A-B	0			0			
A-C	825			825			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	84	464	0.180	84	0.2	9.472	A
C-AB	116	483	0.239	116	0.3	9.798	A
C-A	1342			1342			
A-B	0			0			
A-C	825			825			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	68	505	0.135	69	0.2	8.256	A
C-AB	94	526	0.180	95	0.2	8.357	A
C-A	1096			1096			
A-B	0			0			
A-C	673			673			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	57	535	0.107	57	0.1	7.548	A
C-AB	79	557	0.142	79	0.2	7.543	A
C-A	918			918			
A-B	0			0			
A-C	564			564			

2031 SATURN Base + Committed (inc. FAST) + Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4	A4421 Buckingham Rd/Bicester Rd	T-Junction	Two-way		4.06	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2031 SATURN Base + Committed (inc. FAST) + Development	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Am	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	1184	100.000
B - Bicester Road		✓	191	100.000
C - A4421 Buckingham Road		✓	814	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	1184
	B - Bicester Road	0	0	191
	C - A4421 Buckingham Road	728	86	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	7
	B - Bicester Road	0	0	6
	C - A4421 Buckingham Road	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.71	40.15	2.2	E
C-AB	0.27	14.34	0.4	B
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	144	409	0.351	142	0.5	13.360	B
C-AB	65	474	0.137	64	0.2	8.763	A
C-A	548			548			
A-B	0			0			
A-C	891			891			

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	172	363	0.474	170	0.9	18.592	C
C-AB	77	420	0.184	77	0.2	10.470	B
C-A	654			654			
A-B	0			0			
A-C	1064			1064			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	210	298	0.705	205	2.1	36.935	E
C-AB	95	346	0.274	94	0.4	14.271	B
C-A	802			802			
A-B	0			0			
A-C	1304			1304			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	210	298	0.705	210	2.2	40.145	E
C-AB	95	346	0.274	95	0.4	14.335	B
C-A	802			802			
A-B	0			0			
A-C	1304			1304			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	172	363	0.474	177	0.9	19.883	C
C-AB	77	420	0.184	78	0.2	10.528	B
C-A	654			654			
A-B	0			0			
A-C	1064			1064			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	144	409	0.351	145	0.6	13.722	B
C-AB	65	474	0.137	65	0.2	8.801	A
C-A	548			548			
A-B	0			0			
A-C	891			891			

2031 SATURN Base + Committed (inc. FAST) + Development , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4	A4421 Buckingham Rd/Bicester Rd	T-Junction	Two-way		0.96	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2031 SATURN Base + Committed (inc. FAST) + Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	878	100.000
B - Bicester Road		✓	86	100.000
C - A4421 Buckingham Road		✓	1391	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	878
	B - Bicester Road	0	0	86
	C - A4421 Buckingham Road	1275	116	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	1
	B - Bicester Road	0	0	0
	C - A4421 Buckingham Road	1	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.22	10.81	0.3	B
C-AB	0.28	11.18	0.4	B
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	65	510	0.127	64	0.1	8.065	A
C-AB	87	536	0.163	87	0.2	7.991	A
C-A	960			960			
A-B	0			0			
A-C	661			661			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	77	475	0.163	77	0.2	9.033	A
C-AB	104	500	0.209	104	0.3	9.085	A
C-A	1146			1146			
A-B	0			0			
A-C	789			789			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	95	428	0.221	94	0.3	10.788	B
C-AB	128	450	0.284	127	0.4	11.143	B
C-A	1404			1404			
A-B	0			0			
A-C	967			967			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	95	428	0.221	95	0.3	10.811	B
C-AB	128	450	0.284	128	0.4	11.178	B
C-A	1404			1404			
A-B	0			0			
A-C	967			967			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	77	475	0.163	78	0.2	9.060	A
C-AB	104	500	0.209	105	0.3	9.122	A
C-A	1146			1146			
A-B	0			0			
A-C	789			789			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	65	510	0.127	65	0.1	8.094	A
C-AB	87	536	0.163	88	0.2	8.030	A
C-A	960			960			
A-B	0			0			
A-C	661			661			

2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4	A4421 Buckingham Rd/Bicester Rd	T-Junction	Two-way		3.97	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	AM	ONE HOUR	07:15	08:45	15

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

Demand overview (Traffic)

Am	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	1192	100.000
B - Bicester Road		✓	188	100.000
C - A4421 Buckingham Road		✓	806	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	1192
	B - Bicester Road	0	0	188
	C - A4421 Buckingham Road	722	84	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	7
	B - Bicester Road	0	0	6
	C - A4421 Buckingham Road	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.70	39.76	2.2	E
C-AB	0.27	14.37	0.4	B
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	142	408	0.347	139	0.5	13.330	B
C-AB	63	472	0.134	63	0.2	8.771	A
C-A	544			544			
A-B	0			0			
A-C	897			897			

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	169	361	0.469	168	0.9	18.526	C
C-AB	76	418	0.181	75	0.2	10.492	B
C-A	649			649			
A-B	0			0			
A-C	1072			1072			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	207	296	0.700	202	2.1	36.672	E
C-AB	92	343	0.270	92	0.4	14.305	B
C-A	795			795			
A-B	0			0			
A-C	1312			1312			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	207	296	0.700	207	2.2	39.763	E
C-AB	92	343	0.270	92	0.4	14.366	B
C-A	795			795			
A-B	0			0			
A-C	1312			1312			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	169	361	0.469	174	0.9	19.774	C
C-AB	76	418	0.181	76	0.2	10.542	B
C-A	649			649			
A-B	0			0			
A-C	1072			1072			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	142	408	0.347	143	0.5	13.687	B
C-AB	63	472	0.134	64	0.2	8.810	A
C-A	544			544			
A-B	0			0			
A-C	897			897			

2031 SATURN Base + Committed (inc. FAST) + Development (SEPR), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4	A4421 Buckingham Rd/Bicester Rd	T-Junction	Two-way		0.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2031 SATURN Base + Committed (inc. FAST) + Development (SEPR)	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A4421 Buckingham Road (N)		✓	876	100.000
B - Bicester Road		✓	82	100.000
C - A4421 Buckingham Road		✓	1379	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	876
	B - Bicester Road	0	0	82
	C - A4421 Buckingham Road	1261	118	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A4421 Buckingham Road (N)	B - Bicester Road	C - A4421 Buckingham Road
From	A - A4421 Buckingham Road (N)	0	0	1
	B - Bicester Road	0	0	0
	C - A4421 Buckingham Road	1	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.21	10.65	0.3	B
C-AB	0.29	11.23	0.4	B
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	62	510	0.121	61	0.1	8.005	A
C-AB	89	537	0.166	88	0.2	8.011	A
C-A	949			949			
A-B	0			0			
A-C	659			659			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	74	476	0.155	74	0.2	8.944	A
C-AB	106	500	0.212	106	0.3	9.115	A
C-A	1134			1134			
A-B	0			0			
A-C	788			788			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	90	428	0.211	90	0.3	10.630	B
C-AB	130	450	0.288	129	0.4	11.196	B
C-A	1388			1388			
A-B	0			0			
A-C	964			964			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	90	428	0.211	90	0.3	10.651	B
C-AB	130	450	0.288	130	0.4	11.233	B
C-A	1388			1388			
A-B	0			0			
A-C	964			964			

17:45 - 18:00

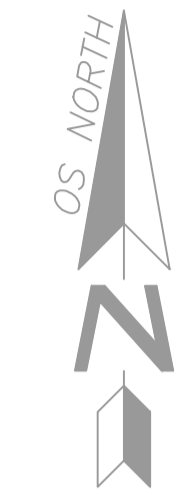
Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	74	476	0.155	74	0.2	8.965	A
C-AB	106	500	0.212	107	0.3	9.153	A
C-A	1134			1134			
A-B	0			0			
A-C	788			788			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	62	510	0.121	62	0.1	8.031	A
C-AB	89	537	0.166	89	0.2	8.048	A
C-A	949			949			
A-B	0			0			
A-C	659			659			

APPENDIX O – Preliminary Mitigation Drawings

This drawing has been produced by mode transport planning.
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 DO NOT SCALE OFF THIS DRAWING.
 Dimensions shown are in metres unless stated otherwise.
 Road markings & traffic signs are to be in accordance with 'The Traffic Signs Regulations and General Directions 2016'
 Tactile paving is to be in accordance with 'Guidance on the use of tactile paving surfaces 2007'
 Visibility Splays shown are taken from 'DMRB'



Extent of Adopted Highway —

Existing deceleration lane into
 Technical site to be used to
 deliver two-lane approach to
 roundabout

Deflection entry path curve
 exceeds 100m radii maximum in
 existing situation - current
 proposals cannot remedy this.
 Application will need to seek
 departure from standard.

Deflection entry path curve
 exceeds 100m radii maximum in
 existing situation - current
 proposals cannot remedy this.
 Application will need to seek
 departure from standard.

Flare on east arm to be extended
 and footway to be reprovided
 accordingly using land within
 highway on south-side of
 Skimmingdish Lane

DRAFT

rev	date	remarks
-	30-11-20	DRAFT for internal comment only
client		

Bicester Motion

job title
 Bicester Motion
 Brand Experience Application

drawing title
 Skimmingdish Lane - Offsite Highway
 Improvements - Buckingham Road Roundabout

drawing no.
 J32-3684-PS-205

drawn	jwm	checked	-
created	Jul '20	scale	1:500@A1

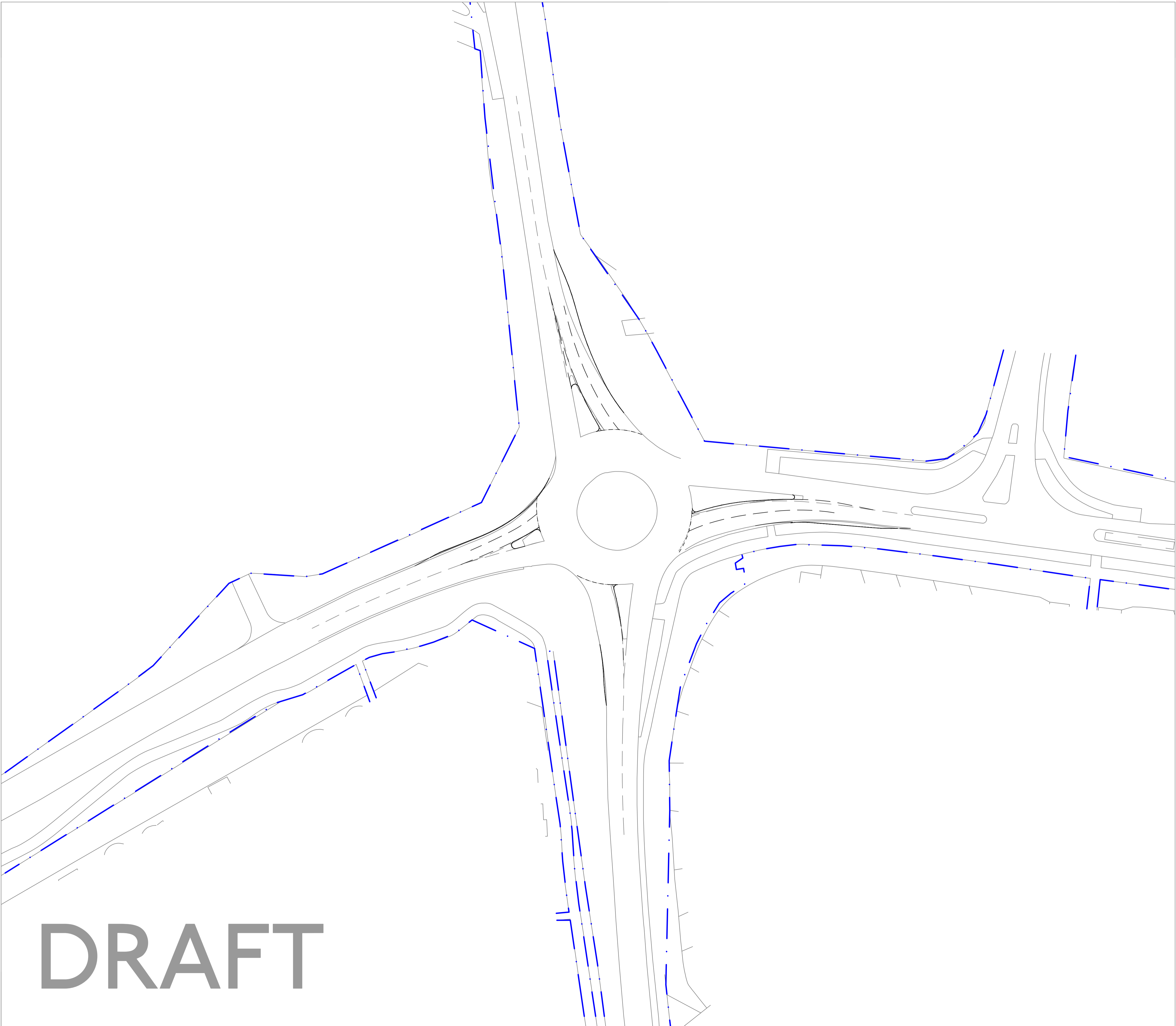
mode transport planning
 Lombard House
 145 Great Charles Street
 Birmingham
 B3 3LP



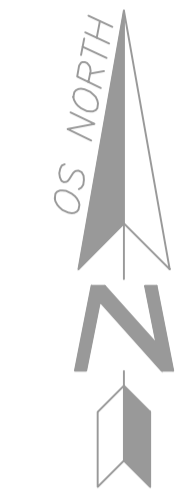
t 0121 794 8390
 e info@modetransport.co.uk
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transport planning

File: C:\Users\Link\Engineering\Dropbox\B - Business\1\Projects\11 LE Proposals\LE10018 - Bicester S278 Highway\3 Design\Acad\J32-3684-PS-205-207B.dwg



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 Visibility Splays shown are taken from 'DMRB'



Extent of Adopted Highway ———

rev	date	remarks
-	07-07-20	DRAFT for internal comment only
client		

Bicester Motion

job title
**Bicester Motion
 Brand Experience Application**

drawing title
**Skimmingdish Lane - Offsite Highway
 Improvements - Banbury Road Roundabout**

drawing no.
J32-3684-PS-206

drawn	jwm	checked	-
created	Jul '20	scale	1:500@A1

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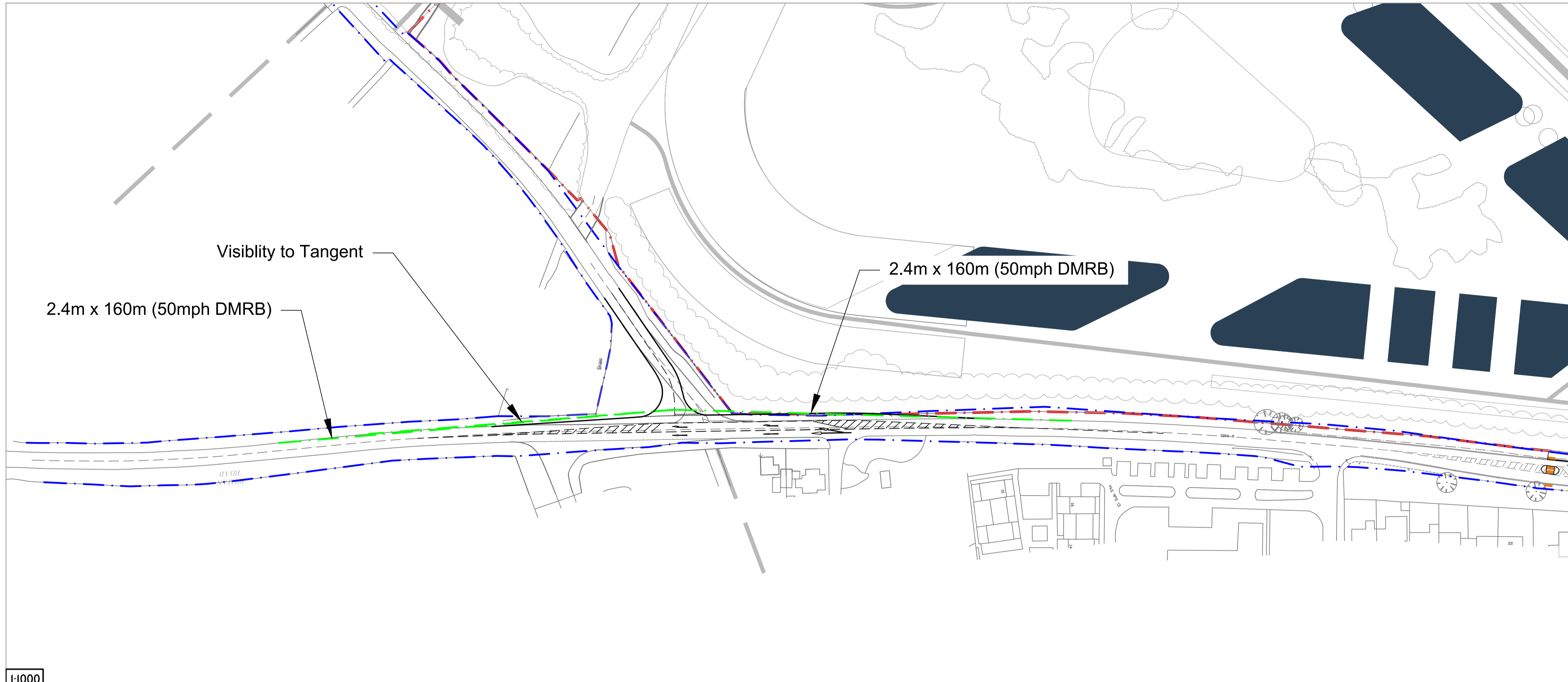
transport planning

DRAFT

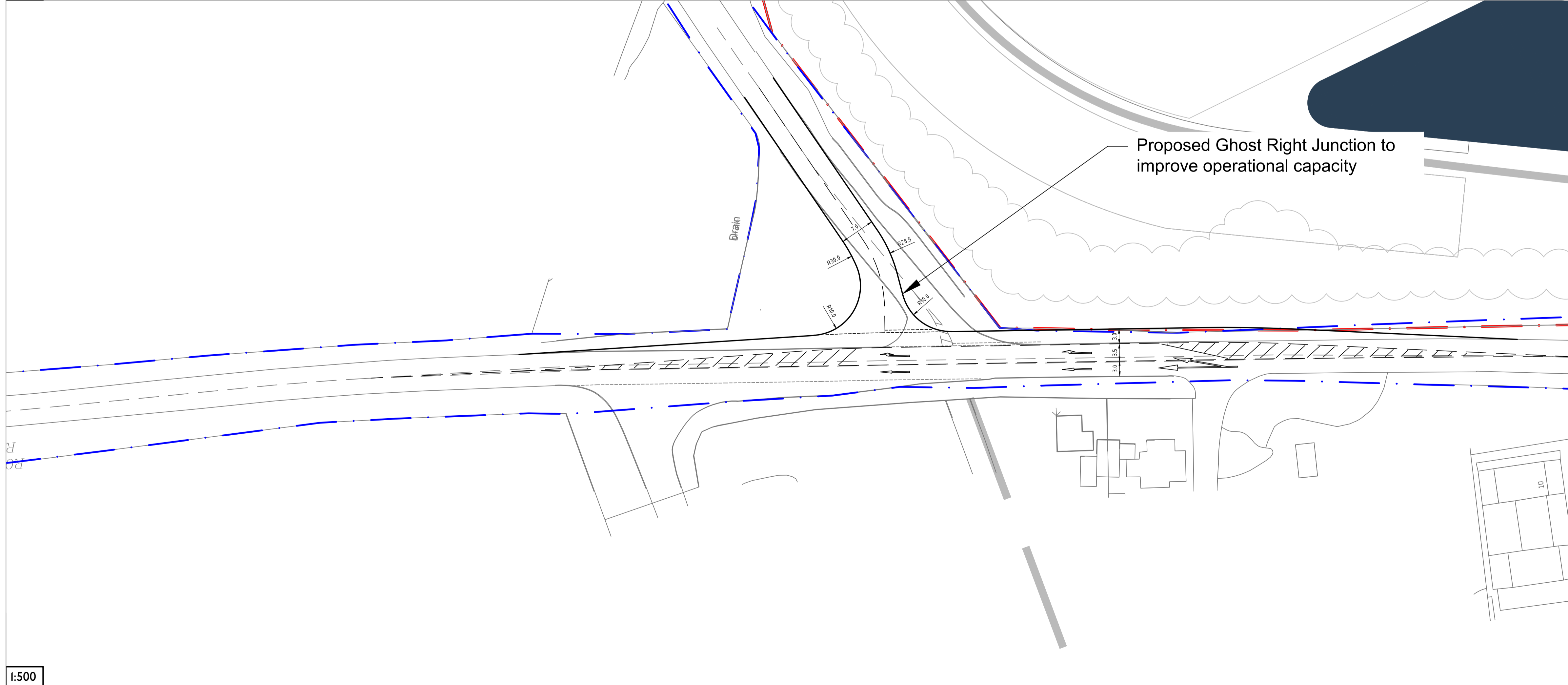
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 Dimensions shown are in metres unless stated otherwise.
 Road markings & traffic signs are to be in accordance with 'The Traffic Signs Regulations and General Directions' 2016'
 Tactile paving is to be in accordance with 'Guidance on the use of tactile paving surfaces 2007'
 Visibility Splays shown are taken from 'DMRB'



- Red Line Boundary - - - - -
- Extent of Adopted Highway - - - - -
- 2.4m x 160m Visibility Splay (DMRB) - - - - -



1:1000



1:500

rev	date	remarks
C	30-07-19	Amended
B	12-07-19	Amended
A	24-05-18	DRAFT for internal comment only

client **Bicester Motion**

job title **Bicester Motion Masterplan**

drawing title **Buckingham Road - Offsite Highway Improvements (Bicester Road Access)**

drawing no. **J32-3684-PS-008**

drawn	jwm	checked	bdf
created	Apr '19	scale	Varies as Shown@A1

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