East Midlands Gateway
Phase 2 (EMG2)

Document DCO 6.6A/MCO 6.6A (Part 1)

ENVIRONMENTAL STATEMENT

Technical Appendices

Appendix 6A

Transport Assessment

April 2026

06

The East Midlands Gateway Phase 2 and Highway Order 202X and The East Midlands Gateway Rail Freight and Highway (Amendment) Order 202X

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The East Midlands Gateway Phase 2 and Highway Order 202X and The East Midlands Gateway Rail Freight and Highway (Amendment) Order 202X

APPENDIX 6.6A TRANSPORT ASSESSMENT (PART 1) (DOCUMENT DCO 6.6A/MCO 6.6A)

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1. INTRODUCTION

Instruction

1.1 BWB Consulting Ltd (BWB) has been appointed by Segro Properties Ltd and Segro (EMG) Ltd (together the Applicant or Segro) to provide highways and transportation advice in support of a second phase of its East Midlands Gateway Logistics Park (EMG1), which is a Strategic Rail Freight Interchange located to the north of East Midlands Airport. EMG1 is a Nationally Significant Infrastructure Project (NSIP) comprising a rail freight terminal and warehousing units (Use Class B8) authorised by The East Midlands Gateway Rail Freight Interchange and Highway Order 2016 (SI 2016/17 – the EMG1 Order) and is now substantially complete.

Proposed Development

1.2 The proposed second phase to EMG1 (known as EMG2) includes the development of the EMG2 Main Site and Community Park. This has been identified by the Secretary of State as a project of national significance and is the subject of an application for a Development Consent Order (DCO) pursuant to a direction made under Section 35 of the Planning Act 2008, along with significant highway works which are an NSIP in their own right. At the same time further development and infrastructure improvements at EMG1 are proposed which are the subject of an application for a material change to the EMG1 DCO. Details of the applications are contained in Chapter 3 of the ES. The terms used in this TA are defined in the glossary appended to Chapter 1 of the ES (Appendix 1A, **Document DCO 6.1A/MCO 6.1A**). The applications comprise the following three interrelated component parts:

<u>Development Consent Order (DCO) Application</u>

- **EMG2 Works** – A new logistics and advanced manufacturing employment park on the EMG2 Main Site located to the south of East Midlands Airport and the A453, and west of the M1 motorway. This part of the Scheme falls within the 'East Midlands Airport and Gateway Industrial Cluster' (EMAGIC), which is part of the East Midlands Freeport designated by the Government in 2022. It comprises 300,000sqm of B2/B8 Use Class, plus an allowance for 200,000sqm of B8 mezzanine floorspace; together with HGV parking and a bus interchange, an upgrade to the EMG1 substation and the provision of a community park.

- **Highways Works** – the A453 EMG2 access junction works (referred to as the EMG2 Access Works); significant improvements at Junction 24 of the M1 (referred to as the J24 Improvements), works to the wider highway network including the Active Travel Link, Hyam's Lane Works, L57 Footpath Upgrade, A6 Kegworth Bypass/A453 Junction Improvements and Finger Farm Roundabout Improvements, together with other works; and

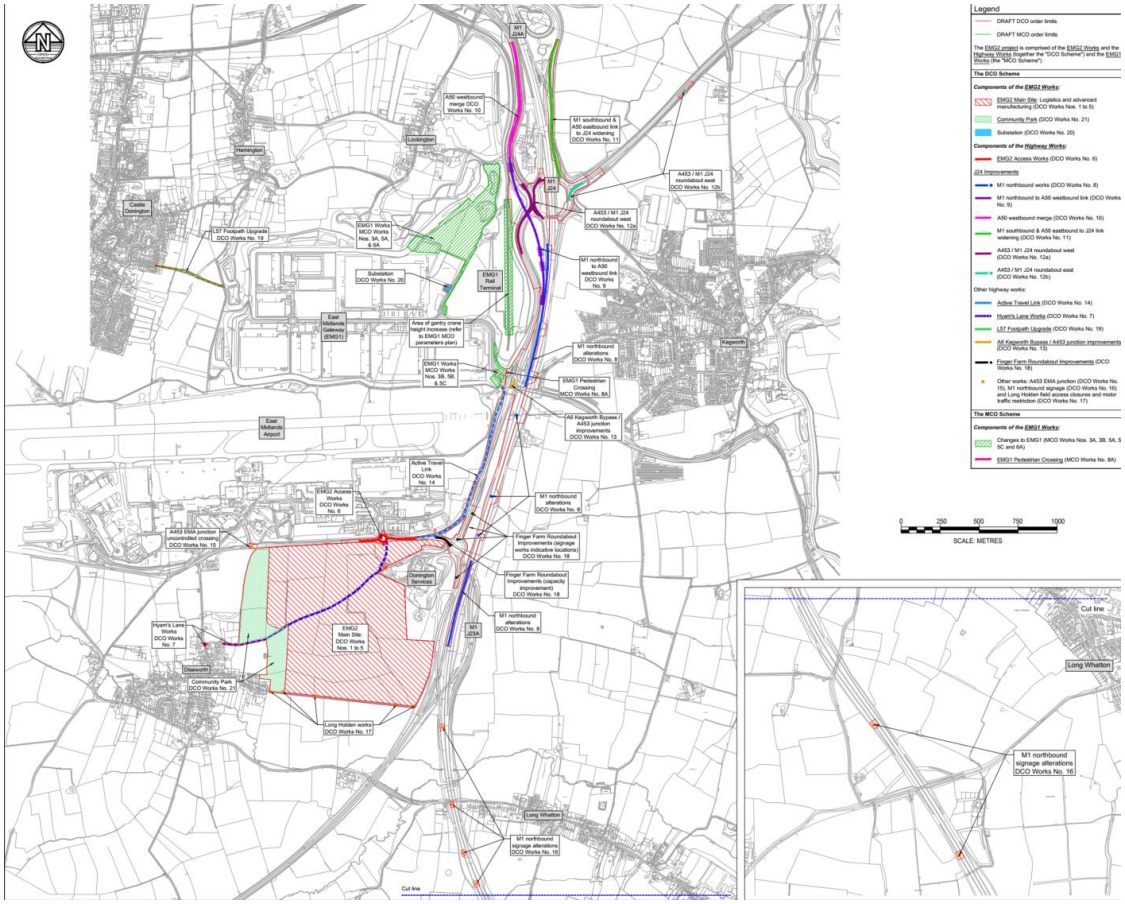
<u>Material Change Order (MCO) Application</u>

- **EMG1 Works** – Additional warehousing unit of 26,500sqm plus a mezzanine allowance for 3,500 sqm (Use Class B8) at Plot 16 of EMG1, together with works to increase the permitted height of the gantry cranes at the rail freight terminal,

improvements to the EMG1 public transport interchange, and site management building and addition of a pedestrian crossing near the entrance to EMG1.

1.3 The locations of the three parts of the development are shown at **Figure 1**, which presents the Components Plan, **Document DCO2.7/MCO2.7.** The Parameters Plan for the EMG2 Works is included in **Document DCO 2.5** and the EMG1 Works in **Document MCO 2.5**.

Figure 1. Site Location



1.4 This Transport Assessment (TA) has been prepared to support the applications for a DCO and a MCO described above.

Overview of Scoping Discussions

1.5 Since April 2022, extensive pre-application discussions have been held with the 'Transport Working Group' (TWG) consisting of the following key statutory highway authorities, consultant representations and project team:

- National Highways (NH – managing the Strategic Road Network)
- Leicestershire County Council (LCountyC – local highway authority); NB where 'LCountyC' are referenced in the TA, this relates to their Highways Development

Management team; LCountyC's Network Data and Intelligence (NDI) team also formed part of the TWG

- Nottinghamshire County Council (NCountyC)
- Leicester City Council (LCityC)
- East Midlands County Combined Authority (EMCCA)
- Nottingham City Council (NCityC) – who originally formed part of the TWG but stepped away when it was evident that there would be limited impact on their highway network
- Derbyshire County Council (DCountyC) - ditto
- Derby City Council (DCityC) – whilst never formally forming part of the TWG, DCityC have been kept abreast of key updates, including a response to the statutory consultation process
- Jacobs – National Highways representation
- Integrated Transport Planning – Travel Plan Co-ordinator for EMG1/EMG2
- AECOM – who manage the East Midlands Freeport Model (EMFM), which is a cordoned part of the larger Pan Regional Transport Model (PRTM) on behalf of LCountyC Network Data Intelligence (NDI); - this is examined in further detail in **Section 8**
- Segro – Applicant
- Delta Planning and Oxalis – Applicants Planning Consultants.

1.6 Monthly meetings have been held with the TWG since April 2022 and are planned to continue if required throughout the DCO/MCO Examinations. The assessment of transport impacts has been based on a comprehensive transport modelling exercise, for which the TWG was established to oversee. It has also provided opportunities for discussion around other aspects of the development including the sustainable transport strategy and package of mitigation required to accommodate the development.

1.7 Further details of the scoping discussions and the feedback received during the statutory consultation are outlined in **Section 3**.

1.8 NH, LCountyC, NCountyC and LCityC have been party to a number of key technical submissions via a series of transport related documents and Technical Notes. This TA summarises the various submissions agreed to date and brings the details together in one place.

1.9 The key transport related documents and Technical Notes produced at the time of the DCO submission are listed in **Table 1** along with the authoring organisation. It also includes reference to the associated formal sign off sheets and which authorities have signed and returned these, as formal agreement to the details and core assumptions (i.e. those ticked). Documents are also ticked in **Table 1** where agreements have been confirmed by LCountyC, even if a formal sign off sheet has not been signed, as set out in further detail in subsequent sections of this TA.

1.10 It should be noted that NH and NCountyC have signed a large number of documents. LCountyC have made it clear that they will not formally sign anything off at this stage of the process. Where there is not yet formal approvals in place, it does not necessarily mean that the highway authorities are not in agreement with the principle of such documents; it just means that formal sign offs have not been sent. These documents are to be read in conjunction with this TA. Copies of each document are contained at **Appendices 1** to **18**. It should be noted that this table has now been superseded by the Statements of Common Ground produced alongside NH, LCountyC and NCountyC.

Table 1. Key Supporting Transport Documents and Technical Notes

Document Name	Document Reference & Date of Issue	Author	TA App	Sign off sheet	NH	LCC	NCC
Sustainable Transport Strategy	Sustainable Transport Strategy – Version 5-0, April 2025	ITP	*	Transport Reporting 1	~	~	~
Framework Travel Plan	Framework Travel Plan – Version 5-0, April 2025	ITP	**	Transport Reporting 1	~	~	~
VISSIM Scoping Note	EMG2-BWB-GEN-XX-RP-TR-0003_S2-P3, 24 February 2023	BWB	1	1A Modelling	✓	***	✓
Furnessing and Forecasting Methodology Note	EMG2-BWB-GEN-XX-RP-TR-0004_S2-P5, 4 April 2025	BWB	2	1A Modelling	✓	~	✓
Walking, Cycling and Horse-Riding Assessment & Review Assessment Report (WCHAR)	EMG2-BWB-GEN-XX-RP-TR-0005_S2-P5, 16 May 2025	BWB	3		✓	***	***
VISSIM Local Model Validation Report	EMG2-BWB-GEN-XX-RP-TR-0006_S2-P3, 6 February 2025 ***	BWB	4	1E Modelling	✓	***	***
Base Model Validation Report	EMG2-BWB-GEN-XX-RP-TR-0007_S2-P4, 31 May 2024	BWB	5	1D Modelling	✓	✓	✓
EMFM Base Year Model Review	EMFM 2019 – East Midlands Gateway Phase 2: Base Year Model Review v1.1, 11 November 2022	AECOM	6	1A Modelling	✓	✓	✓
EMFM Base Year Model Review Addendum	EMFM 2019 – East Midlands Gateway Phase 2: Base Year Model Review Addendum (update to May 2024 TAG data book) v1.0, 19 August 2024	AECOM	7	1A Modelling	✓	✓	✓
PRTM Proforma v14 & Uncertainty Log v7	PRTM Development Testing Proforma v14, 10 October	BWB	8	1A Modelling	✓	✓	✓

	2024 & Uncertainty Log v7 (4 July 2024)						
EMFM Forecasting Report (Stage 1A)	EMFM 2019 – East Midlands Gateway Phase 2: Forecasting Report v1.0, 4 February 2025	AECOM	9	Stage 1G Modelling	✓		
EMG1 Rail Freight Terminal Note	EMG2-BWB-GEN-XX-RP-CH-0011_S2-P01	BWB	10	1B Modelling	✓	✓	✓
Trip Generation Core Assessment	EMG2-BWB-GEN-XX-RP-TR-0012_S2-P1, 18 October 2024	BWB	11	1B Modelling	✓	✓	✓
Construction Traffic Calculations	EMG2-BWB-GEN-XX-RP-TR-0013_S2-P3, 11 April 2025	BWB	12	1F Modelling	✓		
Covid-19 Assessment	EMG2-BWB-GEN-XX-RP-TR-0014_S2-P1, 7 January 2025	BWB	13	1C Modelling	✓		✓
Highway Safety Position Statement	EMG2-BWB-GEN-XX-RP-TR-0015_S2-P1, 14 March 2025	BWB	14	Transport Reporting 3	~		
HGV Route Plan	EMG2-BWB-GEN-XX-RP-TR-0016_S2-P3, 14 May 2025	BWB	15	Transport Reporting 2	✓		
Construction Traffic Management Plan (CTMP)	PC23-004 EMG 2	Taylor Skelton	Appended to the CEMP	Transport Reporting 5	✓		
TA & ES Assessment Methodology	EMG2-BWB-GEN-XX-RP-TR-0017_S2-P4, 28 April 2025	BWB	17		~	~	
COBALT Assessment Methodology	EMG2-BWB-GEN-XX-RP-TR-0018_S2-P1, 12 May 2025	BWB	18	Transport Reporting 4	✓		

the Sustainable Transport Strategy is included in* ***Document DCO 6.6C*

the Framework Travel Plan is included in* ***Document DCO 6.6D

**** deferred to NH's review and approval*

~ *comments have been received and taken on board in this TA*

1.14 A package of Highway Works has been identified to accommodate the additional activity from the proposed development for all modes of travel. To confirm that the proposed Highway Works are appropriate in scale and layout, the mitigation package has been tested through the EMFM, a strategic highway assignment model operated by AECOM on behalf of LCountyC. At the time the EMFM modelling work was commissioned, it had a base year of 2019, which is examined in greater detail in **Section 8**.

1.15 **Section 8** discusses the more recent 2023 version of the EMFM. However, unless explicitly stated, any references made to 'EMFM' in the TA refer to the 2019 version.

1.16 Further detailed analysis has also been undertaken using microsimulation VISSIM modelling, supported by a WCHAR.

1.17 The detailed geometric design of the highway mitigation has been advanced to a sufficient stage to confirm it is deliverable.

1.18 Feedback was also received from LCountyC on the design information by email on 2 July 2025 confirming they accept the majority of the information provided. LCountyC raised a few areas where further work is needed during the technical approval process and the need for further supporting information, such as additional swept paths, approval on departures and confirmation of Stopping Sight Distances. These comments have been taken on board within revised versions of the drawings submitted with the application.

1.19 The Applicant is targeting BREEAM Outstanding across all units of the EMG2 Main Site development together with Plot 16 at EMG1 (part of the EMG1 Works). Despite the outline nature of the applications details required to achieve certain BREEAM credits for TRA01 and TRA02 are included in this TA.

Report Structure

1.20 The remainder of this TA is structured as follows:

- **Section 2: Policy Context** – summarises the key national and local planning policies relating to transport within the context of the EMG2 Project, in particular the overarching National Planning Policy Framework and National Networks National Policy Statement.
- **Section 3: Background Information** – provides an overview of the East Midlands Freeport and surrounding planned development. It also summarises the scoping discussions held with the TWG and the comments received during the first, statutory, consultation.
- **Section 4**: **Existing Highway Conditions** – sets out details of existing land uses and occupiers of EMG1. It then describes the area that will accommodate the various components of the EMG2 Project, as well as the surrounding highway network, junction layouts and a summary of the Personal Injury Collision records.
- **Section 5**: **Existing Sustainable Travel Opportunities** – describes the existing opportunities and facilities to walk, cycle and access public transport in the vicinity of the EMG2 Project.
- **Section 6: Proposed Development** – provides details of each of the EMG2 Project components, as well as the proposed Highway Works, sustainable travel improvements and access strategy. It also provides details of parking requirements and HGV routing plans.
- **Section 7: Trip Generation** – quantifies the agreed multi-modal trip generation of the EMG2 Project for the core operational assessment and construction phase as well as summarising the forecast trip generation with the Travel Plan measures in place.
- **Section 8: EMFM SATURN Modelling Methodology** – summarises the strategic transport modelling undertaken using the EMFM, including the base model validation, forecast year scenarios and strategic modelling results.

- **Section 9: Detailed Junction Modelling Methodology** – summarises the approach taken to building the detailed transport models using VISSIM microsimulation, Junctions 11 and LinSig software. It also presents the furnessing methodology used to derive forecast year traffic flows.
- **Section 10: Highway Impact Assessment: Core Scenario (Stage 1A Modelling)** – presents the results of the detailed junction modelling for the Stage 1A core scenario, highlighting where the development is predicted to have a severe impact and where mitigation is required.
- **Section 11: Highway Impact Assessment: Sensitivity Test (Stage 1B Modelling**) – presents the results of the detailed junction modelling for a select number of junctions that require a sensitivity test.
- **Section 12: Highway Mitigation** – presents the details of the proposed Highway Works and the results of the EMFM modelling testing the package of mitigation, summarising the benefits of the EMG2 Project.
- **Section 13: Highway Impact Assessment: Core Scenario (Stage 2A Modelling)** – presents the results of the detailed junction modelling for the Stage 2A core scenario, highlighting where the development is predicted to have a severe impact and where mitigation is required with the mitigation measures included for.
- **Section 14: Highway Impact Assessment: Sensitivity Test (Stage 2B Modelling**) – presents the results of the detailed junction modelling for a select number of junctions that require a sensitivity test with the mitigation measures included for.
- **Section 15: Construction Traffic Assessment** – presents the modelling results of the construction traffic scenario and any associated mitigation requirements.
- **Section 16: Summary and Conclusions** – summarises the findings of the report and offers conclusions in relation to the EMG2 Project impacts.

2. POLICY CONTEXT

Introduction

2.1 This section of the TA examines the context of the EMG2 Project and how this relates to the relevant transport and development planning policies and guidelines. It provides an overall spatial and planning context for the EMG2 Project.

2.2 Policies have been adopted in national guidelines such as the Transport White Paper (2011), that seek to encourage more sustainable modes other than the car and a planning system that places greater emphasis on the link between transport and land use planning policies. This is to encourage transport decisions at a local level that are compatible with environmental and community goals and best reflect local circumstances and requirements.

2.3 The following national and local planning policy documents have been reviewed:

- The National Planning Policy Framework (NPPF).
- National Networks National Policy Statement (NNNSP).
- Planning Practice Guidance (PPG).
- Department for Transport Circular 01/2022 'Strategic Road Network and the Delivery of Sustainable Development'.
- Highways England 'The Strategic Road Network Planning for the Future' (2015).
- North West Leicestershire District Council (NWLDC) Local Plan.
- NWLDC Local Plan Substantive Review.
- Leicestershire County Council Local Transport Plan 4.
- Leicestershire Highways Design Guide – Transport Assessments.

National Planning Policy

National Planning Policy Framework (MHCLG, Revised December 2024)

2.4 The National Planning Policy Framework (NPPF) replaced the majority of previous Planning Policy Statements on 27 March 2012 and was last updated in December 2024. It sets out the Government's expectations and requirements from the planning system. It provides guidance for local Councils to use when defining their own personal local and neighbourhood plans. This approach allows the planning system to be customised to reflect the needs and priorities of individual communities.

2.5 The NPPF defines the delivery of sustainable development through three roles:

- an economic objective.
- a social objective.
- an environmental objective.

2.6 These objectives should be delivered through the preparation and implementation of plans and the application of the policies in the Framework; they are not criteria against which every decision can or should be judged. Planning policies and decisions should play an active role in guiding development towards sustainable solutions, but in doing so should take local circumstances into account, to reflect the character, needs and opportunities of each area.

2.7 Paragraph 109 of the NPPF states that:

> *"Transport issues should be considered from the earliest stages of plan-making and development proposals, using a vision-led approach to identify transport solutions that deliver well-designed, sustainable and popular places. This should involve:*
>
> - *making transport considerations an important part of early engagement with local communities;*
> - *ensuring patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places;*
> - *understanding and addressing the potential impacts of development on transport networks;*
> - *realising opportunities from existing or proposed transport infrastructure, and changing transport technology and usage – for example in relation to the scale, location or density of development that can be accommodated;*
> - *identifying and pursuing opportunities to promote walking, cycling and public transport use; and*
> - *identifying, assessing and taking into account the environmental impacts of traffic and transport infrastructure – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains".*

2.8 Paragraph 110 states that:

> *"The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making".*

2.9 Paragraph 111 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 highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned;*

- *identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development;*
- *provide for high quality walking and cycling networks and supporting facilities such as cycle parking (drawing on Local Cycling and Walking Infrastructure Plans); and*
- *provide for any large-scale transport facilities that need to be located in the area, and the infrastructure and wider development required to support their operation, expansion and contribution to the wider economy".*

2.10 In assessing sites that may be allocated for development in plans, or specific applications for development, NPPF Paragraph 115 states that *"it should be ensured that:*

- *sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location;*
- *safe and suitable access to the site can be achieved for all users;*
- *the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and*
- *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision-led approach".*

2.11 Paragraph 116 of the NPPF goes on to state 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, following mitigation, would be severe, taking into account all reasonable future scenarios"

2.12 Within the context of the NPPF, Paragraph 117 sets out that: *"development should:*

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

2.13 Paragraph 118 seeks to ensure that:

> *"All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed and monitored".*

National Networks National Policy Statement (March 2024)

2.14 The National Networks National Policy Statement (NPS) sets out the need for, and Government's policies to, deliver development of Nationally Significant Infrastructure Projects on the national road and rail networks for England.

2.15 The National Network faces a number of challenges in terms of maintaining network performance and meeting customer needs. This is triggered by a growing demand and greater reliance on movements using the National Network, which plays a significant role in supporting economic growth. Paragraphs 3.7 and 3.8 of NPS states:

> *"The Government's Levelling Up the United Kingdom White Paper recognises the role that transport can play in boosting productivity, by connecting people to jobs, and businesses to each other, and sets out an ambition to level up transport connectivity. It recognises the role that specific projects on national networks can play in improving connectivity between towns and cities to boost growth."*

> *"Transport infrastructure is a catalyst and key driver of growth, and it is important that the planning and development of infrastructure fully considers the role it can play in delivering sustainable growth, how it can support local and regional development plans and the growth aspirations of local authority areas. This will include exploring options to unlock sites for housing and employment growth made accessible by sustainable transport and the regenerative impact major infrastructure can play in driving renewal, increasing density, as well as creating new places and communities."*

2.16 Paragraph 3.17 relates to the Governments environmental and net zero policies and states:

> *"Any national network Nationally Significant Infrastructure Project (NSIP) should seek to improve and enhance the environment irrespective of the reasons for developing the scheme. However, there may be instances where infrastructure interventions are required to bring about improvements to environmental outcomes. Such outcomes might include contributing to net zero targets through, for example, electric vehicle charging, electrification of rail, improvements to air quality through reductions in congestion, or delivering localised environmental improvements to cultural heritage, landscape, or biodiversity."*

2.17 Paragraph 3.22 sets out the following concluding statement:

> *"The government has, therefore, concluded that at a strategic level there is a compelling need for development of the strategic road and strategic rail networks, and strategic rail freight interchanges (SRFIs) – both as individual networks and as a fully integrated system. The Examining Authority and the Secretary of State should,*

therefore, start their consideration of applications for development consent for the types of infrastructure covered by this National Policy Statement (NPS) on this basis. The Secretary of State should give substantial weight to considerations of need where these align with those set out in this NPS."

2.18 The NPS sets out a range of measures to help make the best use of capacity on the National Network. Paragraph 3.42 states:

"There are interdependencies between the efficient operation of the SRN and its impact on the local road network and vice versa. Effective operation and optimisation of both the SRN and the local road network are essential to achieve the outcomes set by the Transport Decarbonisation Plan. There are a range of measures that can be employed to make the best use of all road capacity (not just the SRN) which may impact upon demand for the SRN. These include:

- *Promoting journey choice by enabling more active travel and public transport (including buses, coaches and rail) in urban areas whilst not restricting other transport options. The creation of mobility hubs and improving integration between modes through park-and-ride services, cycle parking provision at rail stations, and the coordination of bus / rail timetables, can all contribute.*

- *Providing genuine choice in transport mode by increasing accessibility to public transport, connecting places and by improving the environment for journeys by active travel, in both urban and rural areas. The government has committed to transforming local transport systems through Bus Back Better strategy and the City Region Sustainable Transport Settlements. In addition, Bus Back Better sets out measures enabling buses to be used by all thereby enhancing levels of accessibility.*

- *Integrating with spatial planning can support walking, wheeling and cycling or public transport as the natural first choice for journeys. Where developments are located, how they are designed and how well public transport services are integrated has a huge impact on whether people's natural first choice for short journeys is on foot or by cycle, by public transport or by private car. The Strategic Road Network and the delivery of sustainable development Circular 01/2022 establishes how additional spatial considerations in transport decisions can help tackle congestion and support better journeys for all road users.*

- *Greater deployment of technology can support more effective use of the network. Such technological interventions might include greater use of digital signalling, greater provision of route information to drivers, alternative fuels, self-driving vehicles or digital connectivity.*

- *Bringing forward maintenance schemes and small-scale enhancements to ensure that the SRN is operating as effectively as possible."*

2.19 Paragraph 3.43 states:

"The Transport Decarbonisation Plan recognises the need to base local transport planning on setting the outcome communities want to achieve and provides the transport solutions to deliver those local transport outcomes (vision-led approaches including 'vision and validate,' 'decide and provide' or 'monitor and manage'). However, there are varying challenges that will be presented by certain sites based on their land use, scale and/or location. In some cases, they will not always offset the need to increase capacity. The competing demands for road space will remain or even increase with diversification in the type and number of users, the vehicle they use or where alternative sustainable modes are prioritised."

"Whilst the majority of journeys on the SRN will continue to be made by private motor vehicle and over long distances, there may be opportunities to consider how the SRN can assist in delivering sustainable transport interventions or outcomes connecting communities and enabling active travel (where road safety considerations allow). Transport corridors created by the SRN can also be used to support public transport by facilitating coach journeys and park-and-ride schemes, providing vital connections to jobs, international gateways and between our towns and cities. In addition, safe links and movements across the SRN can be incredibly valuable to support better accessibility and connectivity and enhance the local active travel and public transport offer, including in rural areas."

2.20 Paragraph 4.12 refers to Environmental Statement's and states:

"A key part of environmental assessment is the consideration of cumulative effects. The applicant should provide information on how the effects of the proposal would combine and interact with the effects of other development, where relevant. For most practical purposes this means that the applicant should consider the impact of other existing and committed developments within an appropriate geographical area and assess the additional impact of their own development…"

2.21 Paragraphs 4.57 and 4.56 consider 'Road Safety' and state:

"Highways developments provide an opportunity to make significant safety improvements and significant incident reduction benefits when they are well designed. Some developments may have safety as a key objective, but even where safety is not the main aim of a development, the opportunity should be taken to improve safety, including introducing the most modern and effective safety measures where proportionate. Consideration should also be given to wider transport objectives, including expanding active travel, and creating safe and pleasant walking, wheeling and cycling environments. In developing roads schemes the applicant should have due regard to the needs of drivers and riders and the imperative to ensure road user safety…"

"The applicant should undertake an objective assessment of the impact of the proposed development on safety including the impact of any mitigation measures. This should use the methodology outlined in the guidance from Department for Transport's Transport Analysis Guidance and from National Highways. They should also put in place arrangements for undertaking the road safety audit process and ensuring

their implementation. Road safety audits are a mandatory requirement for highway improvement schemes in the UK (including motorways). Road safety audits are intended to ensure that operational road safety experience is applied during the design and construction process so that the number and severity of collisions is as low as is reasonably practicable."

2.22 Paragraphs 5.269 to 5.89 consider 'Impacts on transport networks', including that of Strategic Rail Freight Terminals. Whilst such a facility is not proposed as part of EMG2, improvements to the existing facility at EMG1 is included for within the MCO. This considers "*the impact of construction on local networks whilst the scheme is being developed, and the impact of the scheme on wider transport networks once it is operational*", considering the following items:

i) Applicants assessment of road and rail developments, including Strategic Rail Freight Interchanges

ii) Mitigation

iii) Decision making.

2.23 Of particular relevance are the following key paragraphs which are summarised below:

- 5.271 – consultation of the relevant authorities as appropriate on the assessment of transport impacts

- 5,273 - applicants should seek to offer an integrated transport outcome, significantly considering opportunities to support other sustainable transport modes, as well as improving local connectivity and accessibility in developing infrastructure

- 5,274 - the applicant should provide evidence that as part of the project they have addressed any new or existing severance issues and/or safety concerns that act as a barrier to non-motorised users

- 5.283 - the applicant should provide evidence that the development improves the operation of the network and assists with capacity issues

- 5.286 - the Examining Authority and the Secretary of State should give due consideration to impacts on local transport networks and policies set out in existing and emerging local plans and Local Transport Plans, during both construction and operation

- 5.287 - consideration should also be given to whether the applicant has maximised opportunities to allow for journeys associated with the development to be undertaken via sustainable modes

- 5.288 - Schemes should be developed, and options considered, in the light of relevant policies and plans, both national and local, taking into account local models where appropriate

- 5.289 - Infrastructure development should recognise the importance of providing adequate lorry parking facilities, taking into account any local shortages, to reduce the risk of parking in locations that lack proper facilities or could cause a nuisance. For strategic rail freight interchanges, facilities should serve those drivers using the site in question.

Planning Practice Guidance: Travel Plans, Transport Assessments and Statements in Decision Making

2.24 Guidance on Transport Assessments was published in March 2007 but as of October 2014 it was archived and replaced with Planning Practice Guidance (PPG).

2.25 PPG sets out when Travel Plans, Transport Assessments and Statements for developments are required. PPG was produced to assist stakeholders in determining whether an assessment may be required and, if so, what the level and scope of that assessment should be. It provides guidance on the content and preparation of Transport Assessments and Transport Statements and the promotion of smarter choices via Travel Plans.

2.26 PPG suggests that Transport Assessments should be:

- *Proportionate to the size and scope of the proposed development to which they relate and build on existing information wherever possible;*
- *Established at the earliest practicable possible stage of a development proposal;*
- *Tailored to particular local circumstances (other locally-determined factors and information beyond those which are set out in this guidance may need to be considered in these studies provided there is robust evidence for doing so locally).*

2.27 In determining whether a Travel Plan will be needed for a proposed development, PPG states that local planning authorities should take into account the following considerations:

- *The Travel Plan policies (if any) of the Local Plan;*
- *The scale of the proposed development and its potential for additional trip generation (smaller applications with limited impacts may not need a Travel Plan);*
- *Existing intensity of transport use and the availability of public transport;*
- *Proximity to nearby environmental designations or sensitive areas;*
- *Impact on other priorities/ strategies (such as promoting walking and cycling);*
- *The cumulative impacts of multiple developments within a particular area;*
- *Whether there are particular types of impacts around which to focus the Travel Plan (e.g. minimising traffic generated at peak times); and*
- *Relevant national policies.*

2.28 A Framework Travel Plan and Sustainable Transport Strategy have been produced by Integrated Transport Planning (ITP) and can be found in DCO Documents **DCO 6.6B** and **DCO6.6C** respectively.

Department for Transport Circular 01/2022

2.29 On 23 December 2023, the Department for Transport (DfT) issued new policy within Circular 01/2022 in relation to the SRN. It sets out how the Secretary of State will engage with communities and the development industry to deliver sustainable development whilst safeguarding the primary function and purpose of the SRN in England.

2.30 The Circular 01/2022 'Strategic Road Network and the Delivery of Sustainable Development' replaces the policies set out in the DfT Circular 02/2013 of the same title. The policy is intended for all parties involved in development proposals which may result in traffic or other impacts on the SRN. It should be read in conjunction with the NPPF, Manual for Streets, Local Transport Note 1/20 and all other local planning policy documents.

2.31 Paragraphs 11 and 12 focus on the principle of sustainable development and state:

"11. The company will act in a manner which conforms to the principles of sustainable development. In this context, the company's licence agreement defines sustainable development as encouraging economic growth while protecting the environment and improving safety and quality of life for current and future generations. Alongside this, the company has an important role to play in the drive towards zero emission transport through its commitment to net zero maintenance and construction emissions by 2040 and net zero road user emissions by 2050[footnote 5], and its role as a statutory consultee in the planning system.

12. New development should be facilitating a reduction in the need to travel by private car and focused on locations that are or can be made sustainable. In this regard, recent research on the location of development[footnote 6] found that walking times between new homes and a range of key amenities regularly exceeded 30 minutes, reinforcing car dependency. Developments in the right places and served by the right sustainable infrastructure[footnote 7] delivered alongside or ahead of occupancy must be a key consideration when planning for growth in all local authority areas."

2.32 Paragraph 29 relates to capacity improvements on the SRN and states:

"29. New connections and capacity enhancements to the SRN which are necessary to deliver strategic growth should be identified as part of the plan-making process, as this provides the best opportunity to consider the cumulative impacts of development (including planned growth in adjoining authorities) and to identify appropriate mechanisms for the delivery of strategic highway infrastructure. However, there cannot be any presumption that such infrastructure will be funded through a future RIS. The company will therefore work with local authorities in their strategic policy-making functions in identifying realistic alternative funding mechanisms, to include other public funding programmes and developer contribution strategies to be secured by a policy in a local plan or spatial development strategy."

2.33 Paragraph 30 relates to the logistics and distribution sector from a development locational perspective and states:

"30. The NPPF is clear that planning policies should recognise the specific locational requirements of different economic sectors, including for storage and distribution operations at a variety of scales and in suitably accessible locations. To operate efficiently, the freight and logistics sector requires land for distribution and consolidation centres at multiple stages within supply chains including the need for welfare facilities for the drivers of commercial vehicles. For instance, some hubs serve regions and tend to be located out-of-town near the SRN, while others are 'last-mile' facilities that will support more sustainable freight alternatives in urban areas. The Future of Freight Plan sets out that a joined-up approach between the planning system, local authorities and industry can safeguard and prioritise the land needed for these uses, such that all parties should work together to identify the specific requirements in their area."

2.34 Paragraphs 47 to 52 relate to 'Assessment of Development Proposals' and state:

"47. Where the company is requested to do so, it will engage with local planning authorities and development promoters at the pre-application stage on the scope of transport assessments/statements and travel plans. This process should determine the inputs and methodology relevant to establishing the potential impacts on the SRN and net zero principles that will inform the design and use of the scheme. Development promoters are strongly encouraged to engage with the company to resolve any potential issues and maximise opportunities for walking, wheeling, cycling, public transport and shared travel, as early as possible[footnote 18].

48. Where a transport assessment is required, this should start with a vision of what the development is seeking to achieve and then test a set of scenarios to determine the optimum design and transport infrastructure to realise this vision. Where such development has not been identified in an up-to-date development plan (or an emerging plan that is at an advanced stage[footnote 19]), developers should demonstrate that the development would be located in an area of high accessibility by sustainable transport modes[footnote 20] and would not create a significant constraint to the delivery of any planned improvements to the transport network or allocated sites.

49. A transport assessment for consideration by the company must also consider existing and forecast levels of traffic on the SRN, alongside any additional trips from committed developments[footnote 21] that would impact on the same sections (link or junction) as the proposed development. Assumptions underpinning projected levels of traffic should be clearly stated to avoid the default factoring up of baseline traffic. The scenario(s) to be assessed, which depending on the development and local circumstances may include sensitivity testing, should be agreed with the company; where a scenario with particularly high or low growth is proposed, this should be supported by appropriate evidence. Planned improvements to the SRN or local road network should also be considered in any assessment where there is a high degree of certainty that this will be delivered[footnote 22].

50. An opening year assessment to include trips generated by the proposed development, forecasted growth and committed development shall be carried out to establish the residual transport impacts of a proposed development. For multi-phase developments, additional assessments shall be provided based on the opening of each phase.

51. Where a transport assessment indicates that a development would have an unacceptable safety impact or the residual cumulative impacts on the SRN would be severe, the developer must identify when, in relation to the occupation of the development, transport improvements become necessary.

52. The scope and phasing of necessary transport improvements will normally be defined by the company in planning conditions that seek to manage development in line with the completion of these works. In such circumstances, modifications to the SRN must have regard to the need to future-proof the network, while its delivery may require a funding agreement between the development promoter and the company."

The Strategic Road Network – Planning for the Future (Highways England, 2015)

2.35 Highways England's (now National Highways) 'Strategic Road Network – Planning for the Future document was published in September 2015 and describes the approach National Highways take when engaging with the planning system and the issues that are considered in draft planning documents and planning applications. It contains advice on the information that National Highways like to see included in planning proposals and the support they can offer relating to the whole SRN.

2.36 The document reflects national policy requirements within the NPPF and PPG stating at Paragraph 32 "*The NPPF states that development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe*".

2.37 Paragraph 33 goes on to state:

"*Moreover, the Circular states that development proposals are likely to be wholly acceptable if: they can be accommodated within the existing capacity of a section (link or junction) of the SRN, or they do not increase demand for use of a section that is already at full capacity, taking account of any travel plan, traffic management and/or capacity enhancement measures that may be agreed*".

2.38 Where the Circular tests are not satisfied, additional assessment will be required to enable all parties to understand the scope and scale of the impact that the proposals are likely to have on the SRN. This assessment should:

- *Demonstrate how the proposals will reduce the need to travel, especially by car;*
- *Demonstrate how the proposals will improve accessibility by all modes of travel and influence travel behaviours;*
- *Assess the likely impact of residual trips (i.e. after measures above have been considered); and*
- *Identify appropriate and proportionate mitigation measures, and ensure that what is proposed promotes sustainable transport outcomes and avoids unnecessary works to the SRN.*

2.39 Paragraph 10 states, NH recommend that:

"engaging with us early helps to ensure that issues that may take time to analyse and resolve are identified as soon as possible. We can then work together to:

- *Consider the most appropriate locations for development;*
- *Assess the potential impact of proposed development proposals on the SRN;*
- *Progress an appropriate sustainable development (including considering how best to deliver the development, and any associated mitigation works scheme, whilst minimising the adverse impacts that it might give rise to); whilst*
- *Maintaining the efficiency and safety of the SRN."*

2.40 In terms of assessing development impacts, Paragraph 100 states:

"the overall forecast demand on the SRN and surrounding local road network should be assessed and compared to the ability of the existing network to accommodate traffic. For developments which will be brought forward in phases, this assessment should focus on the overall forecast demand of the development as a whole, not just the initial phases(s)".

2.41 Paragraph 101 goes on to state:

"Assessments should be carried out for:

- *the development and construction phase; and*
- *the opening year, assuming full build out and occupation, and*
- *either a date ten years after the date of registration of the associated planning application or the end of the Local Plan period (whichever is the greater)."*

Local Planning Policy

NWLDC Adopted Local Plan

2.42 The current development plan for the local area is the NWLDC Local Plan, which was formally adopted in 2017 and sets out the strategy for delivering homes, jobs and infrastructure across the district between 2011 and 2031. The Local Plan has been subject to a partial review which was adopted in March 2021.

2.43 The role of the Local Plan is to identify the scale of development and allocate sites to meet the development needs of NWLDC in order to achieve the districts vision for growth. Furthermore, the Local Plan seeks to identify key local issues and provide a set of policies to manage change which will be used by decision makers to determine planning applications.

2.44 Section 4 sets out the vision for the Local Plan part and states:

> *"Businesses will choose to locate and grow in this area, taking advantage of its excellent location in the centre of the country, close to major road and rail networks and a major international airport. The East Midlands Enterprise Gateway, focussed on East Midlands Airport, Donington Park and the East Midlands Gateway Rail Fright Interchange, will be recognised as a key destination in its own right. This strongly performing economy will be reflected in low unemployment and reduced instances of deprivation."*

2.45 The Local Plan sets out 15 objectives to meets its ambitions. These are:

- ***Objective 1*** *- Promote the health and wellbeing of the district's population.*
- ***Objective 2*** *- Support the delivery of new homes balanced with economic growth to provide a stock of housing that meets the needs of the community, including the need for affordable housing.*
- ***Objective 3*** *- Ensure new development is of a high quality of design and layout whilst having due regard to the need to accommodate national standards in a way that reflects local context and circumstances. 21*
- ***Objective 4*** *– Ensure regard is had to reducing the need to travel and to maintaining access to services and facilities including jobs, shops, education, sport and recreation, green space, cultural facilities, communication networks, health and social care.*
- ***Objective 5*** *- Support economic growth throughout the district and the provision of a diverse range of employment opportunities including the development of tourism and leisure.*
- ***Objective 6*** *- Enhance the vitality and viability of the districts town and local centres, with a particular focus on the regeneration of Coalville, in ways that help meet the consumer needs.*
- ***Objective 7*** *- Enhance community safety so far as practically possible and in a way which is proportionate to the scale of development proposed whenever allocating sites for development or granting planning permission.*
- ***Objective 8*** *- Prepare for, limit and adapt to climate change.*
- ***Objective 9*** *- New developments need to be designed to use water efficiently, to reduce flood risk and the demand for water within the district, whilst at the same time taking full account of flood risk and ensuring the effective use of sustainable urban drainage systems (SUDs).*
- ***Objective 10*** *- Conserve and enhance the identity, character and diversity and local distinctiveness of the district's built, natural, cultural, industrial and rural heritage and heritage assets.*
- ***Objective 11*** *- Protect and enhance the natural environment including the district's biodiversity, geodiversity and water environment areas identified for their importance.*
- ***Objective 12*** *- Conserve and enhance the quality of the district's landscape character including the National Forest and Charnwood Forest and other valued landscapes.*
- ***Objective 13*** *- Take account of the need to reduce the amount of waste produced.*

- ***Objective 14*** *- Seek to deliver the infrastructure needs of the area, including Green sustainable development.*
- ***Objective 15*** *- Take full account of the need to safeguard mineral resources including sand and gravel, igneous rock and brickclay.*

2.46 Of key importance is Policy Ec2(2) 'New Employment Sites'. This enables employment development to come forward where evidence indicates an immediate need or demand for additional employment land (B1, B2 and B8) in North West Leicestershire that cannot be met from land allocated in the Local Plan. It states that the Council will consider favourably proposals that meet such identified need in appropriate locations subject to the following key criteria:

- *The site must be accessible or capable of being made accessible by a choice of means of transport, including sustainable transport modes;*
- *The site must have good access to the strategic highway network (M1, M42/A42 and A50) and an acceptable impact on the capacity of that network, including any junctions; and*
- *The site must be shown to be not detrimental to the amenities of any nearby residential properties or the wider environment.*

2.47 Section 8 of the NLWDC Local Plan focuses on the 'Economic' ambitions. It states that NWLDC are committed to support the creation of a sustainable local economy. Paragraphs 8.5 and 8.6 state:

"The Leicester and Leicestershire Local Enterprise Partnership Strategic Economic Plan identifies five growth areas across Leicester and Leicestershire, two of which are located in the district; the East Midlands Enterprise Gateway and the Coalville Growth Corridor (see Appendix 4)."

"The East Midlands Enterprise Gateway is focussed upon a number of existing major economic activities in the north of the district (principally East Midlands Airport, East Midlands Distribution Centre and Donington Park) and potential major employment opportunities associated with the development of a Strategic Rail Freight Interchange (SRFI) west of Junction 24 of the M1 and north of East Midlands Airport (referred to as Roxhill)."

2.48 Policy IF1 sets out how new developments will include the provision of new infrastructure. It states:

"Development will be supported by, and make contributions to as appropriate, the provision of new physical, social and green infrastructure in order to mitigate its impact upon the environment and communities. Contributions may be secured by means of planning obligations and/or a Community Infrastructure Levy charge, in the event that the Council brings a Charging schedule into effect.

The type of infrastructure required to support new development includes, but is not limited to:

(a) Affordable housing; and

(b) Community Infrastructure including education, health, cultural facilities and other public services; and

(c) Transport including highways, footpaths and cycleways, public transport and associated facilities; and

(d) Green infrastructure including open space, sport and recreation, National Forest planting (either new provision or enhancement of existing sites) and provision of or improvements to sites of nature conservation value; and

(e) The provision of superfast broadband communications; and

(f) Utilities and waste; and

(g) Flood prevention and sustainable drainage.

The infrastructure secured (on or off-site) will be provided either as part of the development or through a financial contribution to the appropriate service provider and may include the long-term management and maintenance of the infrastructure.

In negotiating the provision of infrastructure the Council will have due regard to viability issues and where appropriate will require that the applicant provide viability information to the Council which will then be subject to independent verification.

The District Council will work closely with infrastructure providers to ensure inclusion of infrastructure schemes within their programmes, plans and strategies, and delivery of specific infrastructure requirements in conjunction with individual development schemes and the expected timing of development coming forward. The Council will also work with partners and other stakeholders to secure public funding towards infrastructure, where possible."

2.49 Policy IF4 relates to 'Transport Infrastructure and New Development'. It states:

"The Council, working with the highway authorities, will ensure that development takes account of the impact upon the highway network and the environment, including climate change, and incorporates safe and accessible connections to the transport network to enable travel choice, including by non-car modes, for residents, businesses and employees. In assessing proposals regard will be had to any Transport Assessment/Statement and Travel Plan prepared to support the application.

New development will be expected to maximise accessibility by sustainable modes of transport, having regard to the nature and location of the development site, and contribute towards improvement of the following where there is a demonstrable impact as a result of the proposed development:

(a) The provision of cycle links within and beyond sites so as to create a network of cycleways across the district, including linkages to key Green Infrastructure;

(b) The provision of public footpath links within and beyond sites so as to enhance the network of footpaths across the district, including linkages to key Green Infrastructure;

(c) The provision of new public transport services, or the enhancement of existing services, to serve new developments so that accessibility by non-car modes to essential services and facilities, such as shops, schools and employment, is maximised.

Where new development has a demonstrable impact upon the highway network contributions towards improvements will be sought commensurate with the impact. The following specific highway improvements are identified as priorities."

NWLDC Local Plan Substantive Review

2.50 NWLDC are currently preparing the New NWLDC Local Plan which will replace the existing Plan and provide a strategic planning direction until 2042. The Plan will address the employment and housing land requirement shortfalls identified in the current Local Plan, in addition to identifying land for future growth. At the time of writing this TA, the Council has produced a draft Local Plan which was the subject of consultation in 2024 and a further consultation in 2025. The submissions made are currently being considered.

2.51 The EMG2 Main Site and community park area are provisionally proposed to be allocated in the draft New Local Plan under Policy EMP90 for employment development.

Leicestershire County Council Local Transport Plan 4

2.52 LCountyC published its fourth Local Transport Plan (LTP4) in 2024 which sets out the vision for transport across the county up to 2050 and replaces the former LTP3. The Local Transport Plan includes a framework for how LCountyC will manage and develop the transport system within Leicestershire and the actions that will be undertaken to deliver the programme.

2.53 The LTP4 comprises three phases, the first of which covers the period up to 2030. The LTP Core Document was adopted in November 2024 and sets out the following strategic vision:

"Delivering a safe, connected and integrated transport network which is resilient and well managed to support the ambitions and health of our growing communities, safeguards the environment whilst delivering economic prosperity"

2.54 The vision will be supported by five core themes:

- Enabling Health and Wellbeing
- Protecting the Environment
- Delivering Economic Growth
- Enhancing our Transport Networks Resilience
- Embracing Innovation

2.55 The delivery of core themes will be supported by the development of Multi-Modal Area Investment Plans, Focused Strategic and the County Strategic Transport Investment

Plan, which will set out the transport solutions that are programmed for the delivery and implementation of LTP4.

2.56 Phase 2 of LTP4 will cover the period up to 2040 and is being finalised with expected completion by Spring 2026. So far, development has commenced on the Multi-Modal Area Investment Plans initially prioritising three areas; Market Harborough, Hinckley and South-East Leicestershire.

2.57 LCountyC is also developing two focused strategies as part of Phase two, the first being a Safe, Accessible and Inclusive Transport Network, then will begin work on the second Delivering a Resilient Transport Network.

2.58 In addition, LCountyC will begin work on the development of the County Strategic Transport Investment Plan. This will initially begin with a review of the strategic needs and requirements for the County focused on strategic infrastructure including the SRN and rail network.

2.59 Phase 3 of LTP4 will cover the period up to 2050 is due to be completed by Winter 2026. This will set out the monitoring and review progress to identify success of where greater focus is required. It will also set out the Council's approach to a post 2050 vision for the future and 'horizon scanning' to make sure the council is proactive and can adapt the LTP and transport solutions to accommodate travel behaviour change, innovation and changes to national policy and guidance.

Leicestershire Highways Design Guide

2.60 LCountyC issued a revised highways design guide in early 2025 to take account of the updates to the NPPF and the requirements of LTN1/20 as well as green infrastructure, drainage, highway adoption general design principle changes. The Leicestershire Highways Design Guide (LHDG) states:

"A TA will be expected to demonstrate how a development sits against paragraph 115 of National Planning Policy Framework (NPPF) and give the Local Highway Authority (LHA) sufficient information to consider whether the development should be advised for approval given the tests for advising refusal set out in paragraph 116 of NPPF."

2.61 The LHDG also sets out the expectations from a TA, following the guidelines within the Planning Policy Guidance. The key headings are listed below and should aim to demonstrate that a development is clearly acceptable against the tests for refusal set out in NPPF Paragraph 116.

- Full description of development
- Level of parking in accordance with LHDG minimum standards
- Servicing provision
- Site location and baseline transport and highway conditions
- Proposed sustainable accessibility improvements
- Safe and suitable access for all users
- Predicted multi-modal trip generation

- Vehicle trip breakdown
- Off-site detailed junction modelling
- Mitigation proposals
- Personal Injury Collision analysis
- Highway impact of site construction works

2.62 This TA takes into consideration the TA scope listed in the LHDG ana also includes additional information where necessary, such as strategic transport modelling using the EMFM.

3. BACKGROUND INFORMATION

Introduction

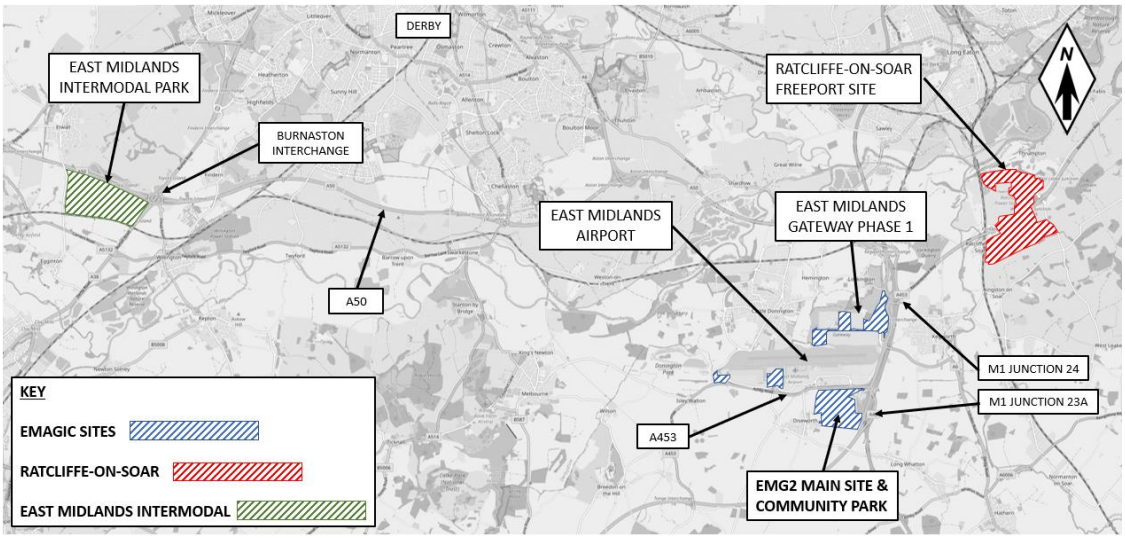
3.1 The following section provides background information on the East Midlands Freeport designation. It then goes on to set out the response to the scoping opinion issued by the Planning Inspectorate. Scoping comments were also received from the TWG during the first statutory consultation process, but these are not repeated in this TA because matters have progressed since then.

East Midlands Freeport Sites & Draft Local Plan Allocations

3.2 On 1 March 2022, the Government announced the designation of the East Midlands Freeport. Freeports are special areas within the UK's borders where different economic regulations apply. Freeports in England are centred around one or more air, rail, or seaport, but can extend up to 45km beyond the port. With Freeport status comes a comprehensive package of measures, comprising tax reliefs, customs, business rates retention, planning, regeneration, innovation and trade and investment support and incentives. East Midlands will be the only inland Freeport in England and will create a globally connected, world-leading advanced manufacturing and logistics hub at the heart of the UK.

3.3 The spatial extent of the East Midlands Freeport covers three complementary locations, including the EMAGIC sites, Uniper's Ratcliffe on Soar site and the East Midlands Intermodal Park (EMIP) near A50 Junction 4. The locations of the East Midlands Freeport sites are shown at **Figure 2** highlighting that EMG1 and the EMG2 Main Site fall within the EMAGIC cluster of sites.

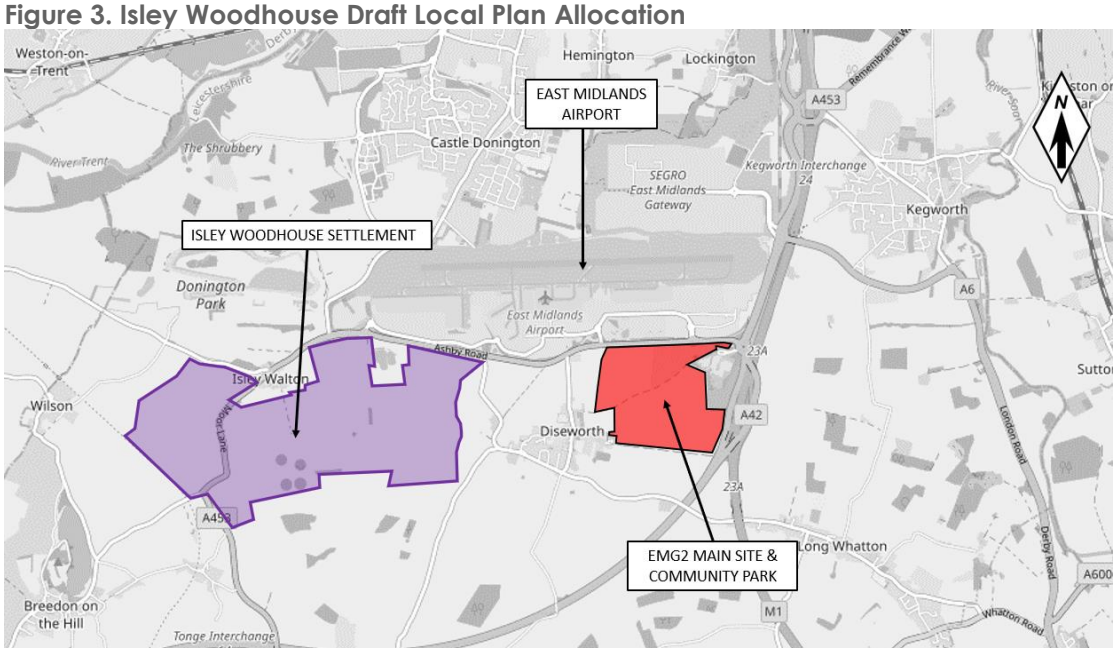
Figure 2. East Midlands Freeport Sites



3.4 NWLDC is also promoting a new settlement through its New Local Plan referred to as 'IW1 – Isley Woodhouse', located to the west of the EMG2 Main Site between Diseworth and Isley Walton. It is being promoted for a residential led mixed use development of

up to 4,740 homes and other ancillary employment, retail and education uses. The Isley Woodhouse settlement location is shown at **Figure 3**.

Figure 3. Isley Woodhouse Draft Local Plan Allocation



3.5 The Ratcliffe on Soar Power Station re-development proposals have received planning permission via a Local Development Order (LDO) for employment development. This in effect allows the site to be redeveloped up to a point where it generates the same level of traffic as was the case when the Power Station was operating at full capacity. A further approval under the LDO is required for anything in addition.

3.6 Furthermore, it is understood that a planning application for development on Isley Woodhouse was submitted to NWLDC in May 2025. At the request of the highway authorities these sites are taken into account in this TA, particularly from a transport modelling perspective. Notwithstanding the fact that the East Midlands Intermodal Park site, near A50 Junction 4 to the southwest of Derby has not progressed, it has also been considered in the transport modelling work.

East Midlands Growth Point

3.7 There is significant planned growth in the vicinity of EMG1 and East Midlands Airport including EMG2, the other East Midlands Freeport sites, Isley Woodhouse settlement and other local plan allocations which are cumulatively referred to as the 'East Midlands Growth Point'. A separate TWG has been set up with the various stakeholders, highway authorities and consultants to consider these sites. The purpose of having a separate combined TWG is to unlock capacity on the SRN to ensure that all developments are able to come forward without having any unacceptable impacts on the network.

3.8 The East Midlands Growth Point includes the following five sites, one of which comprises the EMG2 Main Site and Community Park.

- **East Midlands Gateway Phase 2 (EMG2)** – North West Leicestershire, south of A453 and East Midlands Airport (EMG2 Works) and Plot 16 at EMG1 (EMG1 Works) – EMG2

forms part of the Governments EMAGIC Freeport designation and allocated under Policy EMP90 of the draft Local Plan.

- **Isley Woodhouse** – North West Leicestershire, west of Diseworth Village – draft Local Plan allocation (Policy IW1)
- **Ratcliffe on Soar Power Station (Uniper)** – Rushcliffe, north of A453 Remembrance Way – approved under a Local Development Order (LDO) subject to conditions
- **Land West of Castle Donington** – North West Leicestershire, Castle Donington – draft Local Plan allocation (Policy CD10)
- **Land north of Derby Road, Kegworth & Land north of Remembrance Way, Kegworth** (known locally as Coaker Land) – North West Leicestershire, north/south of A453, east of M1J24 – draft Local Plan allocation (Policy EMP73).

3.9 Isley Woodhouse, Land West of Castle Donington and Coaker Land sites are proposed to be draft allocations in the new NWLDC Local Plan.

3.10 The Highway Works presented in this TA to accommodate the EMG2 Project is consistent with and can form part of a wider strategic scheme currently being considered by the East Midlands Growth Point project which will enable the delivery of wider development sites. However, whilst the mitigation strategy can form a key part of the overarching strategy, it has been developed and assessed without any reliance on any of the other developments listed above or their associated mitigation.

Scoping Discussions

3.11 Scoping discussions with the TWG for the EMG2 Project began in April 2022 where an initial meeting was held to introduce the Scheme and understand any initial points of detail that should be included in the TA. Monthly TWG meetings have then continued, and since October 2024 regular separate meetings focussing on transport modelling have been held with representatives from NH, LCountyC and NCountyC, alongside their relevant transport consultants. These meetings are planned to continue throughout the DCO/MCO Examination, if required. Minutes from all TWG and modelling meetings have been produced and circulated to all attendees with a summary of key actions.

3.12 All meeting minutes up to at least July 2025 have been agreed with NH and NCountyC and all meeting minutes up to the end of 2024 have also been agreed with LCountyC. After the end of 2024, LCountyC stopped reviewing minutes and subsequently confirmed via email on 3 June 2025 that they "*will not be commenting or formally agreeing the TWG or modelling minutes as indicated in the actions below. These can reasonably remain your recorded record of the collaborative meetings undertaken*". **Appendix 19** includes copies of all TWG meeting minutes, whilst **Appendix 20** includes copies of all modelling meeting minutes.

3.13 BWB has produced a series of core documents and Technical Notes summarising key submissions and pieces of information, which are listed at **Table 1**, together with the appendix reference. The purpose of these Technical Notes was to agree key details with the TWG ahead of the DCO/MCO applications being submitted to understand the position of all highway authorities. The Technical Notes are referenced throughout the remainder of this TA.

PINS Scoping Opinion

3.14 An application for a Scoping Opinion was issued to the Planning Inspectorate in August 2024. A Scoping Opinion was received from the Planning Inspectorate, on behalf of the Secretary of State, on 24 September 2024, a copy of which is included as **Document DCO6.1D/MCO 6.1D**.

3.15 Section 3.3 covers 'Traffic and Transport' and a summary of the Planning Inspectorate's comments, along with the action taken in this TA to address them, is provided in **Table 2**.

Table 2. Planning Inspectorate's Scoping Comments and Actions

ID	Reference	PINS Comments	Action Taken
3.3.1	Hazardous/ abnormal loads	The Scoping Report proposes to scope out hazardous / abnormal loads. No details are provided regarding the type of load which will arrive or depart the rail freight terminal. In this absence the ES should include an assessment of this matter	The number of hazardous/abnormal loads cannot be quantified at this stage given construction and operational requirements have not been confirmed. Any hazardous loads would be transported via HGVs and so have been accounted for in the overall HGV numbers assessed as part of the transport modelling work. Whilst the delivery of abnormal loads would normally be planned outside normal working hours, it is possible that some deliveries of major plant and equipment may require special delivery requirements during normal operating hours. In all instances, such deliveries will be planned with appropriate highway authorities and police and executed in compliance with those requirements as per the requirements of the CTMP a copy of which is contained with the Construction Environmental Management Plan (CEMP - **Document DCO 6.3A**)
3.3.2	Methodology	The ES should include details of the methodology and guidance that has been	The methodology undertaken in this TA follows national requirements in

ID	Reference	PINS Comments	Action Taken
		followed in undertaking the Transport Assessment. The ES should consider impacts of the development on capacity and operation of the rail network, including the potential impact of increased rail freight movements on environmental matters, for example accidents and safety and indirect effects on passenger rail transport operations and growth.	Circular 01/2022, the Department for Transports TAG M4, NNNSP and LCountyC guidance documents. There will be no changes to the number of trains permitted to use the EMG1 rail freight terminal as part of the EMG2 DCO or MCO.
3.3.3	Transport Working Group	A record of the meetings and outcomes of the TWG should be appended to the ES, alongside technical notes, reports and drawings.	All minutes from the TWG and modelling meetings are included **Appendix 19** and **20** respectively – references for the associated Technical Notes, reports and drawings are set out in the relevant sections of this TA.
3.3.4	CTMP	The CTMP should be appended and set out proposals for monitoring HGV movements to and from the development.	The CTMP includes a commitment to monitoring construction traffic numbers and ensuring they fall within the maximum limit specified in the CTMP (appended to the CEMP at **Document DCO 6.3A**) and HGV Route Plan at **Appendix 15**. Both documents have been agreed with NH.
3.3.5	Traffic Modelling	Traffic modelling should be appended taking account of all proposed floorspace and land uses. The scope of the modelling should be discussed and agreed.	All details regarding traffic modelling using EMFM, VISSIM, LinSig and Junctions 11 are provided in this TA, with the relevant outputs appended. The modelling follows a methodology and scope that has been agreed with the TWG.
3.3.6	Heavy Goods Vehicle (HGV) Movements	Details of the anticipated number of HGVs should be provided during both	The number of HGVs forecast to be generated during the construction and operational stages of development are

ID	Reference	PINS Comments	Action Taken
		construction and operational phases.	provided in **Section 7** of this TA and have been agreed with the TWG, aside from LCountyC from a construction numbers perspective at this stage of the process.
3.3.7	SRN Mitigation	The scope of mitigation works on the SRN should be discussed and where possible agreed with the relevant bodies.	Full details of the highway mitigation on the SRN have been discussed and shared with the TWG. The general arrangements have been designed and tested.
3.3.8	A50 Transport Corridor	The potential effects of the development on the A50 corridor should be included.	The Area of Influence and study area for the TA extends to A50 Junction 1. This junction has been tested for capacity to understand the impacts of EMG2, details of which are provided in **Section 10**. No other part of the A50 corridor to the west falls within the Area of Influence. This means that past A50 Junction 1, impacts from the EMG2 Project will be minimal and require no further consideration. This position has been agreed with NH.

Strategy for this Transport Assessment

3.16 The remainder of this TA takes into account the detailed scoping discussions and responses received from key parties during the statutory consultation. It builds on the documents submitted to the TWG to date, which cover key submissions and aim to provide a full understanding of the highway impacts of the proposed development and the package of mitigation to accommodate all highway users.

4. EXISTING HIGHWAY CONDITIONS

Site Details

4.1 The EMG2 Project is located in NWLDC's jurisdiction on land close to East Midlands Airport. It includes the EMG2 Main Site and Community Park situated south of the airport together with land required for associated Highway Works to the east and north of East Midlands Airport along the A453 and M1 corridors. It also includes land to the north of East Midlands Airport in EMG1 to accommodate the EMG1 Works. The boundary of these areas is identified on the Location Plans (Order Limits) (**Documents 2.1 and MCO 2.1**).

4.2 The component parts of the EMG2 Project are described in further detail below to help set the scene with regards to the extent of the existing conditions considered in this section of the TA.

EMG2 Works

4.3 The EMG2 Main Site and Community Park comprises land immediately south of East Midlands Airport and to the east of the village of Diseworth. This falls within the EMAGIC Freeport designation. It has an area of approximately 250 acres, comprising arable farmland and is located approximately 15 kilometres to the northwest of Loughborough, 25 kilometres to the southeast of Derby and 25 kilometres to the southwest of Nottingham. The EMG2 Works also include the upgrade to a substation located within EMG1 but which is required for the EMG2 Main Site.

4.4 The EMG2 Main Site and Community Park are bound to the north by the A453 Ashby Road, which connects with the SRN via Junction 23A of the M1 (known as Finger Farm roundabout) to the east of the EMG2 Main Site. Moto Donington services is located immediately adjacent to the northeast corner of the EMG2 Main Site. The EMG2 Main Site is bisected by Hyam's Lane which is a Public Highway that extends from Diseworth Village in the southwest to the western boundary of the Donington Park services in the northeast.

Highway Works

4.5 The principal areas of land required for the Highways Works, as presented in the 'Overview of Works on the Strategic and Local Road Network' drawing included in **Appendix 21** are as follows:

- Along a section of the M1 motorway northbound between J23A and J24, alongside the northbound off-slip to J24 and the A50 where it connects with J24. This section of the M1 comprises a dual, four lane carriageway with hard shoulders and a central reservation and adjoining areas of landscaping.

- Along the A50 / M1 southbound link to J24. This section currently provides two lanes of traffic within the weaving section to J24.

- Along the A50 westbound link from J24. This has two lanes of traffic and father north joins with the link from the M1 southbound from J24A to then form the A50 dual three lane carriageway.

4.6 Other areas of land affected by the Highway Works are within existing public highway around the access to the EMG2 Main Site on the A453 (referred to as the EMG2 Access Works) and the existing access to EMG1 on the A453 (referred to as the A6 Kegworth Bypass/A453 Junction Improvements).

4.7 The A453 between EMG1 and EMG2 is proposed to provide a new cycleway on its western side, referred to as the Active Travel Link, some of which is located in land to the west of the A453.

EMG1 Works

4.8 The EMG2 Project includes land within parts of the existing EMG1 site located to the north of East Midlands Airport upon which the EMG1 Works are proposed. Specifically, it includes:

- Operational land within the Rail Freight Terminal where higher gantry cranes are proposed than those already permitted (but yet to be constructed) under the EMG1 DCO (this is examined in greater detail in **Section 6**).

- An area of open land adjoining the Rail Freight Terminal which was utilised during the construction of EMG1 for temporary surface water storage ponds whilst drainage works were completed. These became redundant once the drainage works were completed and have been removed. This area of land extends to 6.08ha and is currently unused. It is referred to as Plot 16.

- Operational land and small areas of landscaping within and adjacent to the existing public transport interchange and site management building at the EMG1 site access.

East Midlands Gateway Phase 1

4.9 SEGRO's EMG1 logistics park is located to the north of East Midlands Airport with direct access to the SRN via the A453, A50 and M1 at Junction 24. It currently comprises a 700-acre logistics park. The development incorporates a strategic rail freight interchange which includes a rail freight terminal, capable of handling up to 16 freight trains per day, container storage and HGV parking. **Figure 4** shows the layout of EMG1.

Figure 4. East Midlands Gateway 1 Layout



4.10 Since EMG1 began operating, there has been on-going monitoring and refinement of the Travel Plan by ITP, the appointed Travel Plan Co-ordinator. Annual surveys have been undertaken between 2021 and 2024 as part of each Occupier Travel Plan to record the number of employees travelling by different modes of transport. The findings from the surveys are presented in **Table 3**.

Table 3. EMG1 Employee Travel Survey Findings (2021 to 2024)

Mode	10-year Travel Plan Target	Employee Travel Survey Mode Share			
		2021	2022	2023	2024
Drive alone	68%	43%	42%	51%	56%
Car share	17%	26%	38%	25%	22%
Public transport	10%	28%	14%	18%	16%
Active Travel	5%	0%	3%	2%	1%
Other	n/a	3%	3%	4%	5%

4.11 The data shows that the percentage of staff driving alone is currently at 56%, which is a significant improvement on the original 10-year target of 68%. Given the success of the Travel Plan and Sustainable Transport Strategy at EMG1, ITP are adopting a similar approach to the EMG2 Works. Full details are set out in the Sustainable Transport Strategy and Framework Travel Plan documents in documents **DCO 6.6B** and **DCO 6.6C** respectively. This is also considered in further detail in **Section 7**.

Local Highway Network

4.12 The EMG2 Main Site is currently served by a number of field accesses from Hyam's Lane and Long Holden. Hyam's Lane is an adopted public highway with adjacent Public Footpath (footpath L45) maintained by LCountyC for the 1.3 kilometres section from Diseworth to the point where it meets the western boundary of Moto Donington Services (**Appendix 22** includes a copy of the highway boundary information). The footpath extends through the EMG2 Main Site and connects with the A453 close to Finger Farm roundabout. This is presented in the relevant Parameters Plan (**Document DCO2.5**).

4.13 The EMG2 Main Site is also served by another field access from the A453/Hunter Road roundabout. This field access comprises a dropped kerb with a gate setback from the roundabout.

4.14 The A453 extends in an east to west direction past the northern side of the EMG2 Main Site. It comprises a single carriageway road, with one lane in each direction and is subject to a 50mph speed limit. The carriageway measures approximately 7 metres wide and features double red line (red route) markings along the entire EMG2 Main Site frontage and further afield. A shared footway/cycleway exists along the northern side of the carriageway that extends from the East Midlands Airport access to Finger Farm roundabout and then north along the western side of the A453 up to the A453/A6 Kegworth Road bypass signal controlled junction providing connections into EMG1 and to Ashby Road which extends into Kegworth Village. Much of the section alongside the western side of the A453 is of a poor standard and users are required to cross the A453 at an uncontrolled crossing just north of the Finger Farm roundabout.

4.15 The A453 forms the western and northern arms of Finger Farm roundabout, which provides access to/from the M1 in both the northbound and southbound directions, as well as to/ from the A42 towards Birmingham. At a distance approximately 2 kilometres north of the Finger Farm roundabout, the A453 forms the southwestern and northeastern arms of M1 Junction 24, comprising a large signal controlled grade separated roundabout, providing all movements onto the M1, the A50 towards Derby and the A453 towards Nottingham and local access to Kegworth along the former A6.

4.16 Two Automatic Traffic Count (ATC) surveys were commissioned on the A453 at the EMG2 Main Site frontage for 7-days between 26 November 2022 and 2 December 2022 (inclusive). The ATC surveys recorded vehicle speeds during this time. **Figure 5** shows the locations of the ATC surveys, whilst **Table 4** summarises the results for both survey locations.

Figure 5. Automatic Traffic Count Survey Locations

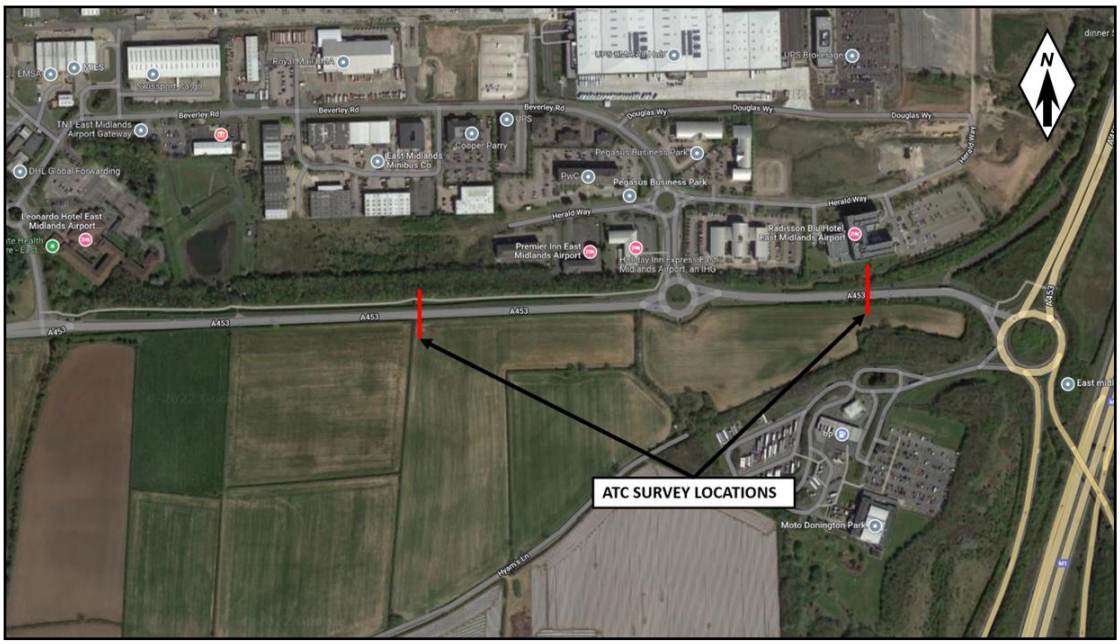


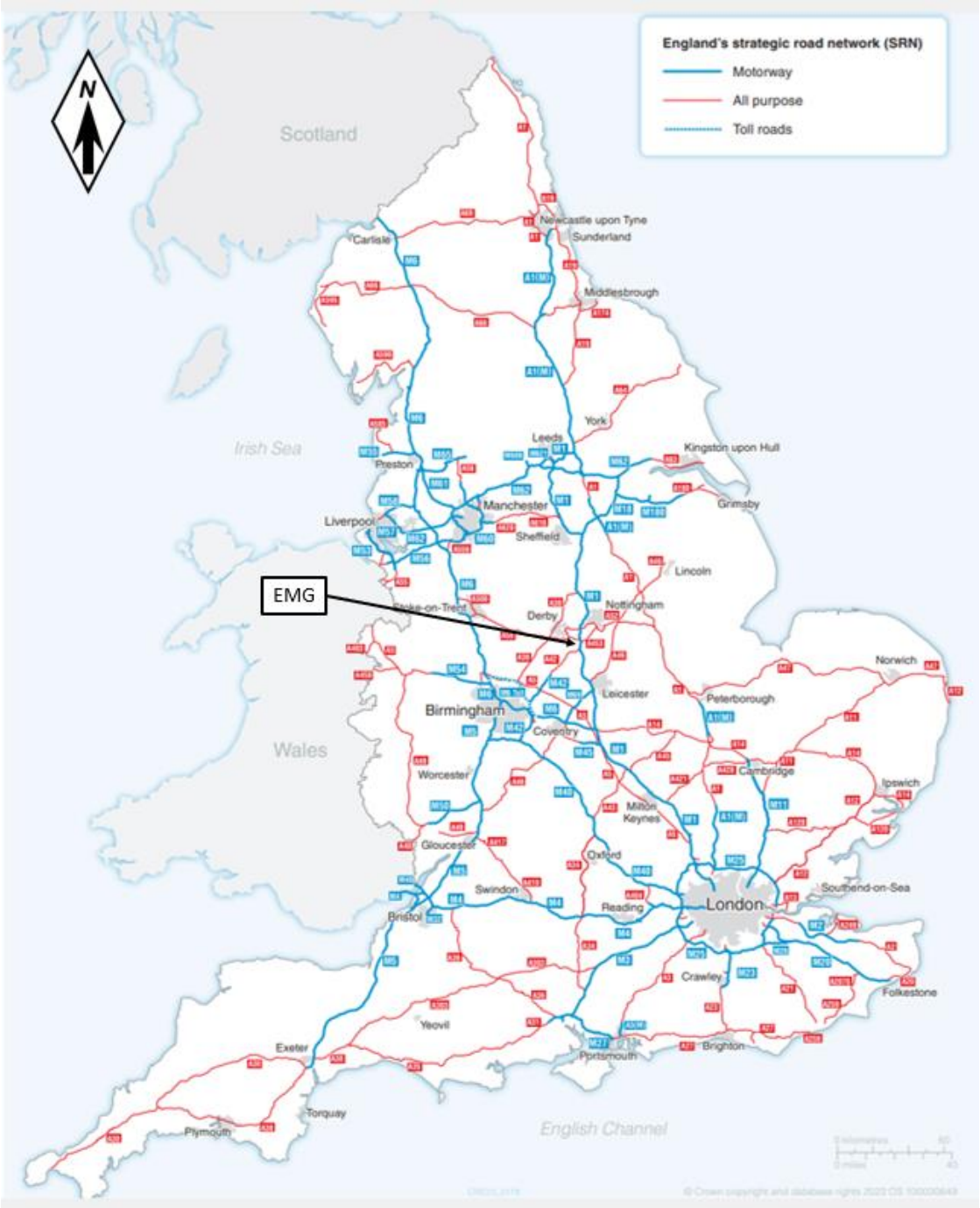
Table 4. Summary of Vehicle Speed Results (A453)

		Eastbound	Westbound
Eastern Survey	Average	36.5	37.2
	85th percentile	43.8	43.4
Western Survey	Average	43.7	46.5
	85th percentile	51.1	54.0

Strategic Road Network

4.17 The EMG2 Main Site is conveniently positioned for access to various parts of the SRN as shown at **Figure 6**. The central location of EMG within the UK and its proximity to M1 Junction 23A and Junction 24 provides excellent connections with the rest of the country via the M1, A453, A50 and A42.

Figure 6. Strategic Road Network



M1 Motorway

4.18 The M1 Motorway is a strategic route for local, regional and international traffic and plays an important role in connecting major settlements within the north and south of the UK. In 2019, the section of the motorway between Junctions 23A and 25 was upgraded as part of the Smart Motorways Programme to provide four lanes in either direction by converting the hard shoulders into running lanes between J24 and J25 with technology and signage works on the already four-lane section between J23A and J25.

A453 between M1 Junction 23A and J24

4.19 The A453 to the southwest of M1 Junction 24 extends north to south and parallel to the M1 Motorway, forming a signal-controlled junction with the EMG1 access roundabout before continuing south to Finger Farm roundabout at M1 Junction 23A, providing access to the M1 southbound and A42. Along this section, the A453 comprises a dual carriageway with two lanes in either direction and provides an alternative route choice for drivers travelling towards the A6, A50 and A453 eastbound, as well as providing a shorter route to the A453 westbound towards the EMG2 Main Site.

A50

4.20 The A50 is a dual carriageway extending to the northwest from M1 Junction 24. Traffic travelling southbound on the M1 can also join the A50 at Junction 24A slightly further north. The A50 continues west from M1 Junction 24 as a dual carriageway west towards Derby, whilst also providing access to the A38 in both directions at A50 Junction 4.

A42

4.21 The A42 extends to the southwest from M1 Junction 23A, joining with the M42 approximately 23 kilometres to the southwest before continuing towards Birmingham. In the vicinity of M1 Junction 23A, the A42 comprises a dual carriageway providing two lanes in either direction.

Local Junctions

4.22 During scoping discussions with the TWG, a number of junctions have been discussed as having the potential to be impacted by the EMG2 Project. This includes the 17 junctions shown at **Figure 7**. The following section provides brief details of each junction. Reference to Junction 1 is missing because it was originally intended that two main access points might be provided to the EMG2 Main Site. This has been limited to one now, which retains the reference of Junction 2.

Figure 7. Location of Key Local Junctions



Junction 2 – A453/Hunter Road Roundabout

4.23 The A453/Hunter Road junction comprises a 3-arm roundabout providing a field access into the eastern part of the EMG2 Main Site on its southern side. It has an Inscribed Circular Diameter (ICD) of 55 metres and is priority controlled with the two arms on the A453 featuring flared approaches with two lanes at the give-way line, whilst Hunter Road features two approach lanes, separating left and right turning movements. Priority-controlled pedestrian and cycle crossings are provided across the A453 (west) and Hunter Road arms, staggering the movements at the central islands. Hunter Road serves various commercial units located within the East Midlands Airport.

Junction 3 – Finger Farm Roundabout

4.24 At a distance approximately 430 metres to the east of the A453/Hunter Road roundabout, the A453 forms a large 4-arm roundabout with the A453 (north), A42 and Donington Park Service access road, known as M1 Junction 23A and referred to as Finger Farm. The roundabout has an ICD of approximately 95 metres with and is priority controlled. All four arms provide flared entries with three lanes at the give way line and pedestrian/cycle crossings are provided across both the A453 arms which connect to an off-road footway/cycleway that continues towards EMG1 and the Moto Donington Services. There is a consented scheme, referred to 'East Midlands Point' which proposes a new arm on the northeastern side of the junction to serve a small employment development. This has been included for in the assessment work.

Junction 4 – A453/A6 Kegworth Road Bypass Signal Controlled Gyratory

4.25 The A453/A6 Kegworth Bypass is a large signal-controlled roundabout that provides access into EMG1. The A453 (south) arm provides two ahead lanes towards M1 Junction 24 and a single right turn lane to the A6 Kegworth Bypass that operate under the same green signal, along with a separately signalled left turn lane into EMG1. The A453 (north) arm provides three lanes, whilst the EMG1 arm (Wilder's Way) provides two lanes turning let towards M1 Junction 24 (single lane with short flare) and two lanes for movements ahead onto the circulatory (again comprising a single lane with short flare). The A6 Kegworth Bypass provides a single lane widening into a short left/ahead flare at the stop line. Signal-controlled pedestrian crossings are provided across the A453 (south) to accommodate movements towards EMG1 and also across the A6 Kegworth Bypass to connect pedestrians and cyclists to Ashby Road which links to Kegworth.

Junction 5 – Junction 24 of the M1

4.26 Junction 24 of the M1 is a large grade separated signal-controlled roundabout, which provides all movements to and from the motorway, whilst also providing connections to the A453, A50 and A6. The A453, which links the motorway with Nottingham via Clifton, joins from the northeast, with the A453 link towards the EMG2 Man Site joining from the southwest, which connects with Junction 23A of the M1 and the A42. Derby Road, which links the motorway with Loughborough via Kegworth joins the roundabout from the southeast, whilst the A50, which links the motorway with Derby joins from the northwest. The A453 arm from the southwest features a segregated left turn towards the A50. A shared footway/cycleway extends east to west across the northern part of the junction, with signal controlled pedestrian crossings provided on the M1 northbound on-slip and M1 southbound off-slip arms, which connect to the A453 and into Kegworth, with a link to Nottingham, even if it is perhaps somewhat convoluted.

Junction 6 – A453/East Midlands Airport Signal Controlled Junction

4.27 At a distance 830 metres to the west of the A453/Hunter Road roundabout, the A453 features a signal controlled junction with the East Midlands Airport access. The A453 provides two ahead lanes in either direction, with the eastern arm featuring a separately signalled right turn lane into the airport. The A453 (west) arm features a short left turn give-way lane into the airport. The East Midlands Airport arm features two lanes which are separately signalled, providing left and right turn movements onto the A453. The footway/cycleway that exists along the A453 (east of the junction) extends into the airport along the eastern side of the carriageway.

Junction 7 – A453/Grimes Gate Priority Controlled Junction

4.28 The A453 forms a priority controlled T-junction with Grimes Gate approximately 380 metres west of the northwest corner of the EMG2 Main Site. The A453 forms the major arms and provides a single ahead lane in each direction along with a left turn slip lane. Grimes Gate forms the minor arm and provides a single lane approach, flaring into two lanes at the give way line (separating left and right turning movements). A priority controlled pedestrian crossing exists across Grimes Gate, which staggers movements with pedestrian refuge islands. Grimes Gate provides access into Diseworth.

Junction 8 – A453/The Green Priority Controlled Junction

4.29 The A453 forms a priority controlled T-junction with The Green approximately 770 metres west of the A453/Grimes Gate junction. The A453 forms the major arms and The Green forms the minor arm of the junction. All three arms feature single lane approaches. The Green extends south and past the western and southern boundaries of Diseworth and further afield provides access into Long Whatton.

Junction 9 – A453/East Midlands Airport Roundabout

4.30 The A453 forms a 3-arm roundabout with an unnamed road serving the western part of East Midlands Airport located approximately 1.2 kilometres west of the A453/The Green junction. The A453 forms the eastern and western arms and provide single lane approaches, flaring into two lanes at the give way line (the A453 western arm although comprises a dual carriageway). The unnamed road into East Midlands Airport provides a single lane entry at the roundabout.

Junction 10 – A453 Walton Hill Signal Controlled Junction

4.31 The A453 forms a signal controlled junction with the A453 Walton Hill approximately 320 metres west of the A453/East Midlands Airport roundabout. The A453 features single lane approaches, with short left and right turn flares providing a route towards Castle Donington. The right turn lane form the A453 (east) is separately signalled to the ahead movement, whilst the left turn lane from the A453 (west) is priority controlled, although features signals at a pedestrian crossing. The road from Castle Donington features two lanes that provide separately signalled movements to the east and west on the A453.

Junction 11 – A42 Junction 14 on-slip/A453/Top Brand/Gelscoe Lane Roundabout

4.32 The southern end of the A453 forms a four-arm priority controlled roundabout with the westbound on-slip to the A42 (exit only) at Junction 14 along with Gelscoe Lane and Top Brand. The three entry lanes all provide single lane approaches with short flares and two lanes at the give way lines. The roundabout provide access to the A42 westbound.

Junction 12 – M1 Junction 23

4.33 Junction 23 of the M1 is a large grade separated signal controlled roundabout providing all movements to and from the motorway and forms part of the SRN. The M1 slip roads form the northern and southern arms, whilst the A512 forms the eastern and western arms and provide connections towards Loughborough and Ashby-de-la-Zouch respectively. All four arms provide three lanes at the stop line onto the roundabout circulatory. A signal controlled crossing exists across the M1 northbound on-slip and M1 southbound off-slip arms providing a pedestrian/cycle link between the A512 east and wester arms.

Junction 13 – A50 Junction 1

4.34 Junction 1 of the A50 is a large grade separated signal controlled roundabout providing all movements to and from the dual carriageway and forms part of the SRN. It can be accessed via Trent Lane through Castle Donington to the south or from Junction 24A of

the M1 to the east. To the west, the A50 continues towards Derby, whilst the arms to the north provide access to villages within Derbyshire and Nottinghamshire. The entry arms from the A50 operate under traffic signals, whilst the arms to the north and south are priority controlled.

4.35 There is an approved mitigation scheme at A50 Junction 1 associated with the 'Land South of A50 Junction 1, Castle Donington' committed development, which involves signalising the Trent Lane and Tamworth Road entry arms and opposing circulatory. These committed improvements are taken into account in the traffic modelling work presented in later sections of this TA. Details of the signalisation scheme are shown on the approved drawings at **Appendix 23**.

Junction 14 – M1 Junction 25

4.36 Junction 25 of the M1 is a large grade separated roundabout providing all movements to and from the motorway and forms part of the SRN. It provides two arms to/from the A52, which to the east extend towards Nottingham and to the west extend towards Derby. The M1 entry and A52 arms operate from traffic signals, whilst the other two smaller arms (Bostocks Lane north and south) are priority controlled.

Junction 15 – Station Road/Broad Rushes Roundabout

4.37 The Station Road/Broad Rushes roundabout is located within the northern part of Castle Donington. The Station Road (N) arm provides access to A50 Junction 1, whilst the Broad Rushes arm provide access to the bypass around the western side of Castle Donington. The Station Road (S) arm provides access into Castle Donington via the High Street. All three arms are priority controlled and provide flared entries with two lanes at the give way line. Pedestrian and cycle crossings feature on the Station Road (N) and Broad Rushes arms.

Junction 16 – A453/Kegworth Road Roundabouts

4.38 The A453/Kegworth Road roundabouts provide access to the Ratcliffe on Soar Power Station. The southernmost roundabout provides access to/from the A453 in the westbound direction, whilst the northernmost roundabout provides access to the A453 in the eastbound direction. Access to/from the A453 in all directions is via slip roads and the roundabouts are priority controlled.

Junction 17 – A453/Barton Lane/West Leake dumbbell Roundabouts

4.39 The A453/Barton Lane/West Leake is a grade separated dumbbell roundabout, with the A453 extending over the connection in between the two roundabouts. The northern roundabout provides a secondary access into the Ratcliffe on Soar Power Station and to/from the A453 eastbound, whilst the southern roundabout provides access to/from the A453 westbound. The roundabouts are both priority controlled.

Traffic Flows

4.40 It was agreed with the TWG (aside from LCountyC after November 2024) that PRTM 2019 will be used at this stage of the process to test the impacts of the proposed

development, because NH had not signed off the updated PRTM 2023 model at the time of commission (this is considered in further detail in **Section 8**). Whilst the links in EMFM are well validated in the area around EMG2, the model is not validated at junction turning count level and therefore observed turning counts have been commissioned. Manual classified turning count surveys were commissioned in November 2022 and May 2023 at the following 16 junctions. The difference in dates was due to additional junctions being added to the study area at that time. The surveys were undertaken between 0700 to 1000 hours and 1600 to 1900 hours and included a recording of queue lengths at 5-minute intervals. These are included in the Furnessing and Forecasting Methodology Note, document EMG2-BWB-GEN-XX-RP-TR-0004_S2-P5, included in **Appendix 2**, agreed with NH and NCountyC.

November 2022 Surveys

- Junction 2: A453/Hunter Road roundabout
- Junction 3: Finger Farm roundabout
- Junction 4: EMGP1 gyratory
- Junction 5: M1 Junction 24
- Junction 6: A453/Grimes Gate priority junction
- Junction 7: A453/The Green priority junction
- Junction 8: A453/East Midlands Airport signal junction
- Junction 9: A453/East Midlands Airport roundabout
- Junction 10: A453/Walton Hill signal junction
- Junction 12 – M1 Junction 23

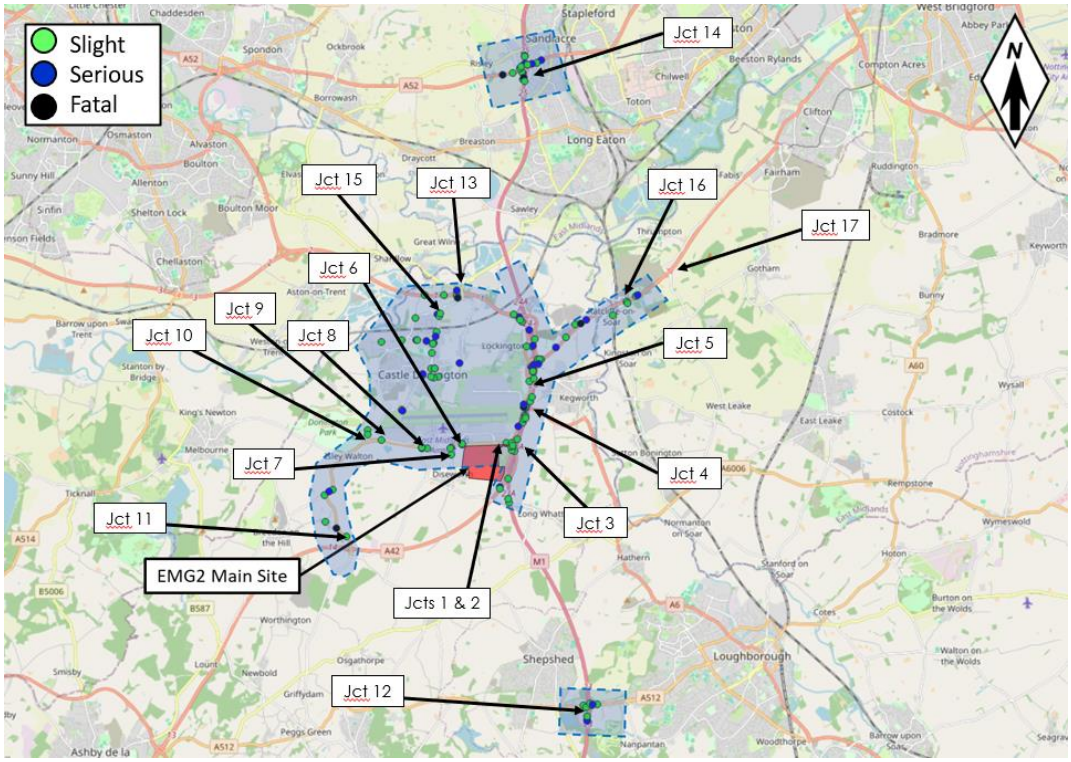
May 2023 Surveys

- Junction 11: A42 Junction 14 on-slip/A453/Top Brand/Gelscoe Lane Roundabout
- Junction 13: A50 Junction 1
- Junction 14: M1 Junction 25
- Junction 15: Station Road/Broad Rushes Roundabout
- Junction 16: A453/Kegworth Road Roundabouts
- Junction 17: A453/Barton Lane/West Leake dumbbell Roundabouts

Personal Injury Collision Data

4.41 An assessment of Personal Injury Collision (PIC) records has been undertaken across the highway network that would be impacted by the EMG2 Project. PIC records were purchased from LCountyC, NCountyC and NH for the relevant parts of the highway network for the six-year period between 1 January 2019 and 23 October 2024. The study area included the following 17 junctions and associated link as presented in **Figure 8** below.

Figure 8. Personal Injury Collison Review Study area



- Junctions 1 & 2: EMG2 Main Site frontage and A453/Hunter Road Roundabout
- Junction 3: Finger Farm Roundabout
- Junction 4: A453/EMG1 access junction
- Junction 5: M1 Junction 24
- Junction 6: A453/East Midlands Airport Signal Junction
- Junction 7: A453/Grimes Gate Priority Junction
- Junction 8: A453/The Green Priority Junction
- Junction 9: A453/East Midlands Airport Roundabout
- Junction 10: A453/Walton Hill Signal Junction (Leicestershire)
- Junction 11: A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Roundabout
- Junction 12: M1 Junction 23
- Junction 13: A50 Junction 1
- Junction 14: M1 Junction 25
- Junction 15: Station Road/Broad Rushes Roundabout
- Junction 16: A453/Kegworth Road dumbbell Roundabouts
- Junction 17: A453/Barton Lane/West Leake dumbbell Roundabouts

4.42 A total of 175 PICs were recorded across the study area, of which 125 were classified as slight, 42 as serious and 8 as fatal. The PIC records have been reviewed in detail within the Highway Safety Position Statement Technical Note – document reference EMG2-BWB-GEN-XX-RP-TR-0015 Revision P1 (**Appendix 14**). The assessment identified the following three locations where a cluster of PICs has formed highlighting a potential safety problem:

- **EMG1 access junction** – a cluster of PICs have been recorded due to turning movements from the A6 to EMG1 colliding with drivers travelling southbound on the A453. One of the PICs was fatal.

- **M1 Junction 24** – a cluster of PICs have been recorded on the M1 northbound off-slip on approach to the roundabout.

- **A453/The Green** – a cluster of PICs have been recorded due to right turning movements from the A453 west into The Green. This appears to be due to the location of the junction within a dip in the carriageway and potential lack of signage or warnings. However, in looking at historic Google Street View records, the tourist sign to the 'Queen's Head' highlighting a left turn into The Green from the east was obstructed by overgrown vegetation until 2023 and since then there have been no PICs occurring through westbound travelling vehicles. There appear to have been improvements to the warning signs for eastbound vehicles between 2017 and 2020, which appears to have slowed the rate of collisions.

4.43 The remaining areas in the study area did not identify any specific locations or trends or indicate specific existing safety issues. The three locations identified above are considered in further detail within this TA and within the proposed highway mitigation to ensure that there would be benefits of the scheme from a highway safety perspective.

5. EXISTING SUSTAINABLE TRAVEL OPPORTUNITIES

Introduction

5.1 The following section considers the existing facilities in proximity to EMG2 Project and reviews the existing opportunities to walk, cycle and access public transport from EMG2 and EMG1 to understand the current sustainable travel credentials.

5.2 **Appendix 3** includes the WCHAR assessment report which has been produced in accordance with the requirements of DMRB GG 142 to inform the design of the Scheme and proposed Highway Works, as part of EMG2 Works. The purpose of this report is to provide a specific assessment of the existing facilities and provision for pedestrians, cyclists and equestrians that will help inform decision making throughout the design process.

Local Amenities

5.3 The Applicant is targeting BREEAM Outstanding across the EMG2 Project. BREEAM TRA01 requires details of the number and type of existing accessible amenities within 500 metres of the EMG2 Main Site. Table 7.1 of the BREEAM UK New Construction Technical Manual (BRE Global Ltd, 2018) sets out a list of amenities that should be considered. These are shown in **Table 5** along with the walking distance from a central part of the EMG2 Main Site (only access to outside space is available within 500 metres of Plot 16 at EMG1).

Table 5. Key Local Amenities (BREEAM)

Amenity Type	Amenity	Approximate Walking Distance (metres)	Approximate Walking Time (minutes)
Appropriate Food Outlet	Greggs / Costa Coffee – Moto Donington Services	500	6
Access to Cash	BP petrol station – Moto Donington Services	500	6
Access to an outdoor space	EMG2 Community Park	200	2
Access to a recreation or leisure facility for fitness	-	-	-
Publicly Available Postal Facility	-	-	-
Over the counter services associated with a pharmacy	-	-	-
Public sector GP surgery or general Medical Centre	-	-	-

5.4 There are only three key facilities listed in the BREEAM documentation within 500 metres of the EMG2 Main Site. This is not unusual for large scale development of this nature and its locational needs, particularly with regard to accessibility to key nodes of the SRN.

Active Travel

5.5 The Guidelines for Providing for Journeys on Foot (GPJF) document describes acceptable walking distances for pedestrians without mobility impairment. GPJF suggests that the maximum walking distance for town centres is approximately 800m, commuting/schools is approximately 2km and for other facilities is approximately 1.2km.

5.6 GPJF states that an average walking speed of approximately 1.4m/s (5km/hr) can be assumed. The walking distance thresholds for commuting and other facilities set out in the GPJF document (within table 3.2) are summarised below in **Table 6**.

Table 6. GPJF Acceptable Walking Distances Guidance Table

Journey Purpose	Suggested Acceptable Walking Distance (Metres)		
	Town Centres	Commuting/School/ Sight-Seeing	Elsewhere
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200

5.7 Similarly, Local Transport Note (LTN 1/20) states that there are limits to the distances generally considered acceptable for cycling. The mean average length for cycling is 4km (2.4 miles), although journeys of up to three times this distance are not uncommon for regular commuters. It is widely considered that cycling has the potential to substitute for short car trips, particularly those under 5km and form part of a longer multi modal journey by public transport. Cycling is therefore an important journey to work mode that has the potential to substitute for short car journeys.

5.8 **Figure 9** identifies a 2km walking distance and 5km cycle distance from the centre of the EMG2 Main Site, whilst **Figure 10** shows the same distance isochrones from Plot 16 at EMG1.

Figure 9. Active Travel Isochrones from EMG2 Main Site

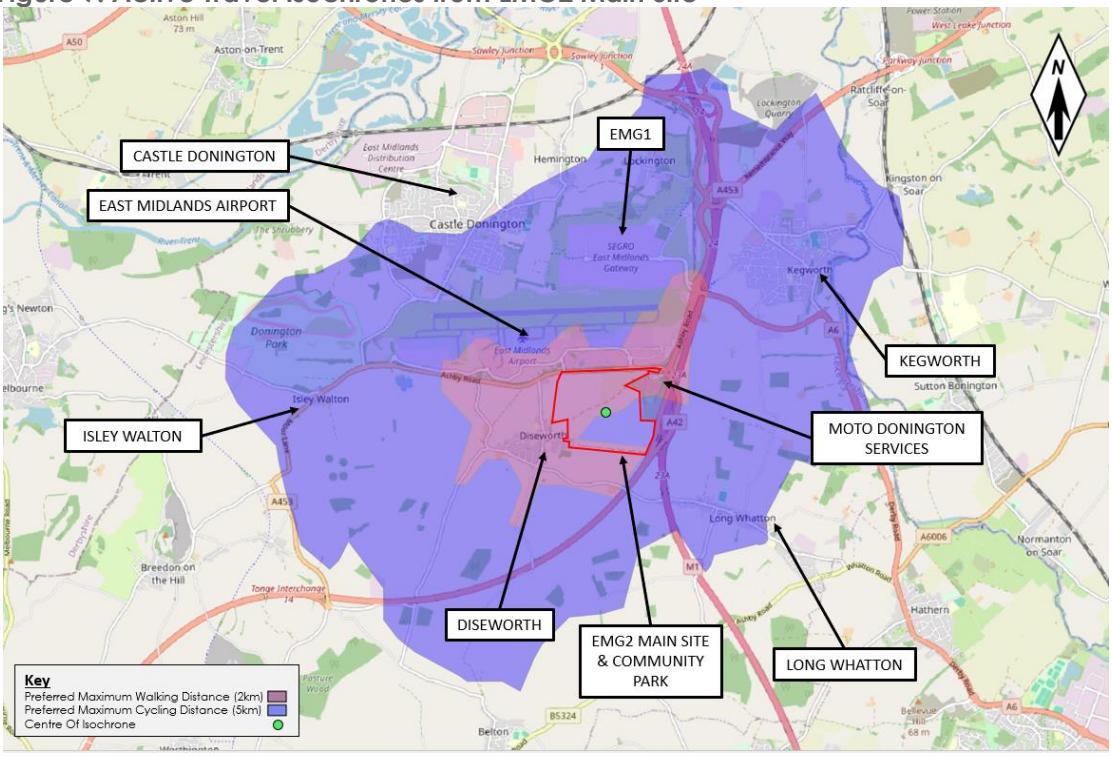
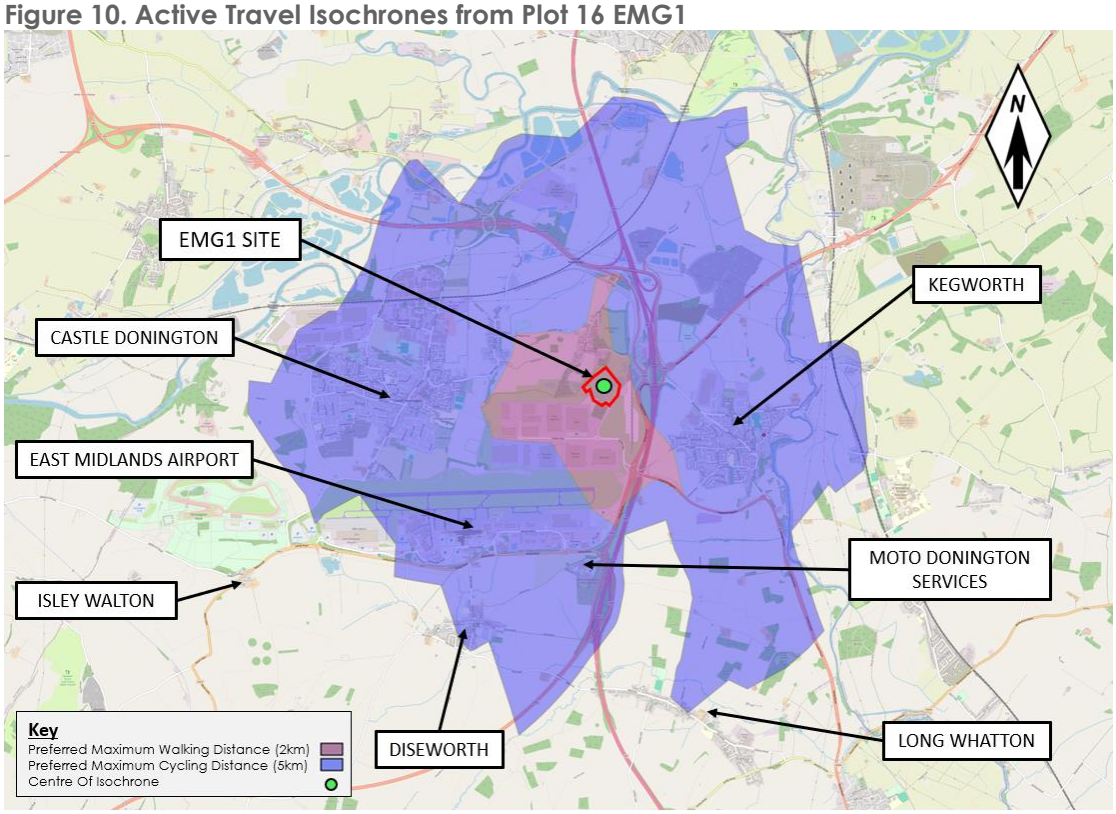


Figure 10. Active Travel Isochrones from Plot 16 EMG1



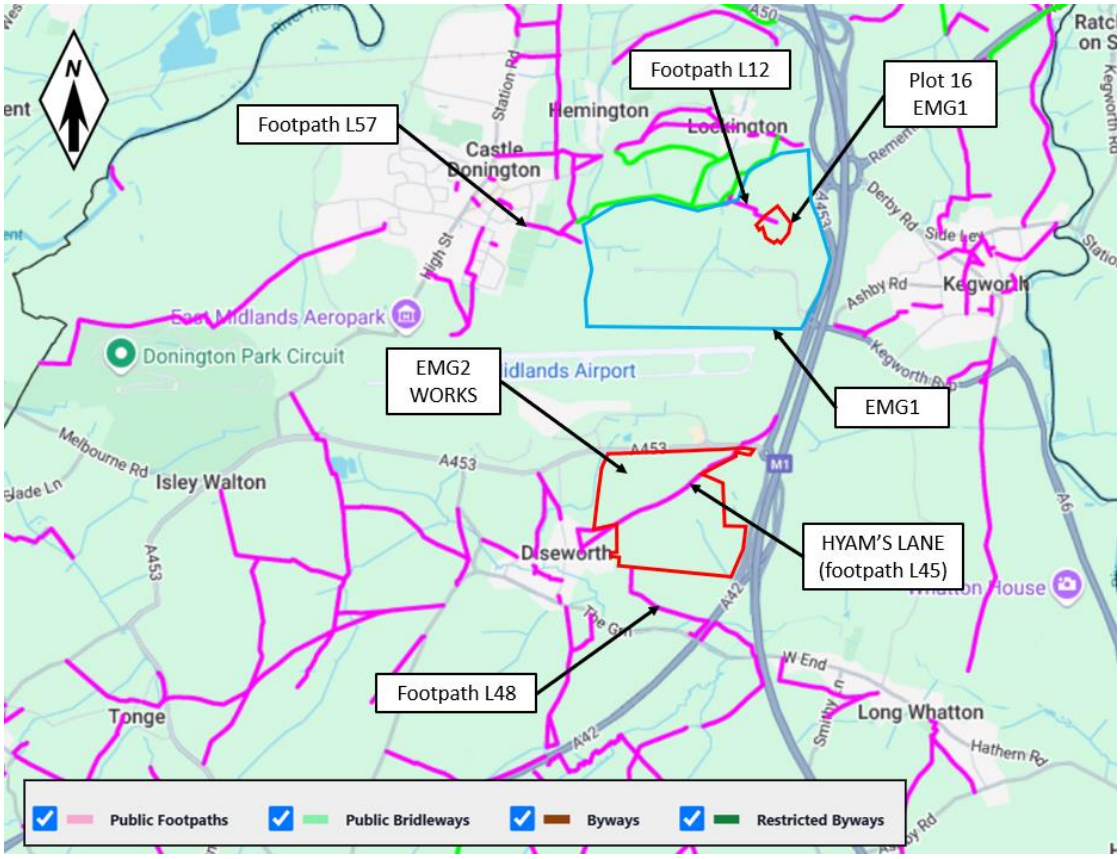
5.9 **Figure 9** shows that the 2 kilometres walking isochrone from the EMG2 Main Site includes East Midlands Airport, EMG1, the village of Diseworth and the Moto Donington Services. The 5 kilometres cycle isochrone extends to the villages of Kegworth, Castle Donington and Long Whatton.

5.10 **Figure 10** shows that the 2 kilometres walking isochrone from Plot 16 EMG1 includes the remainder of EMG1 and the western part of Kegworth. The 5 kilometres cycle isochrone includes all of Castle Donington, Kegworth, East Midlands Airport, Moto Donington Services and parts of Diseworth. It can therefore be concluded that subject to infrastructure being in place, that active travel trips from the surrounding villages can be expected as a reasonable mode of travel.

5.11 With regard to infrastructure, the A453 across the EMG2 Main Site frontage provides a shared footway/cycleway along its northern edge, which extends into East Midlands Airport via the Pegasus Business Park estate roads. It continues east along the A453 to Finger Farm roundabout. From this point, the footway/cycleway connects with a dropped kerb crossing on the A453 connecting with a poor quality footway/cycleway along the eastern edge of the A453 up to EMG1 roundabout. At this point, signal controlled crossings exist to connect pedestrians and cyclists into EMG1 or to Ashby Road which provides on off-road footway/cycleway link into Kegworth.

5.12 **Figure 11** shows the locations of all Public Rights of Way (PRoW) in the vicinity of the EMG2 Main Site and EMG1 including the alignment of Hyam's Lane which bisects the former.

Figure 11. Public Rights of Way



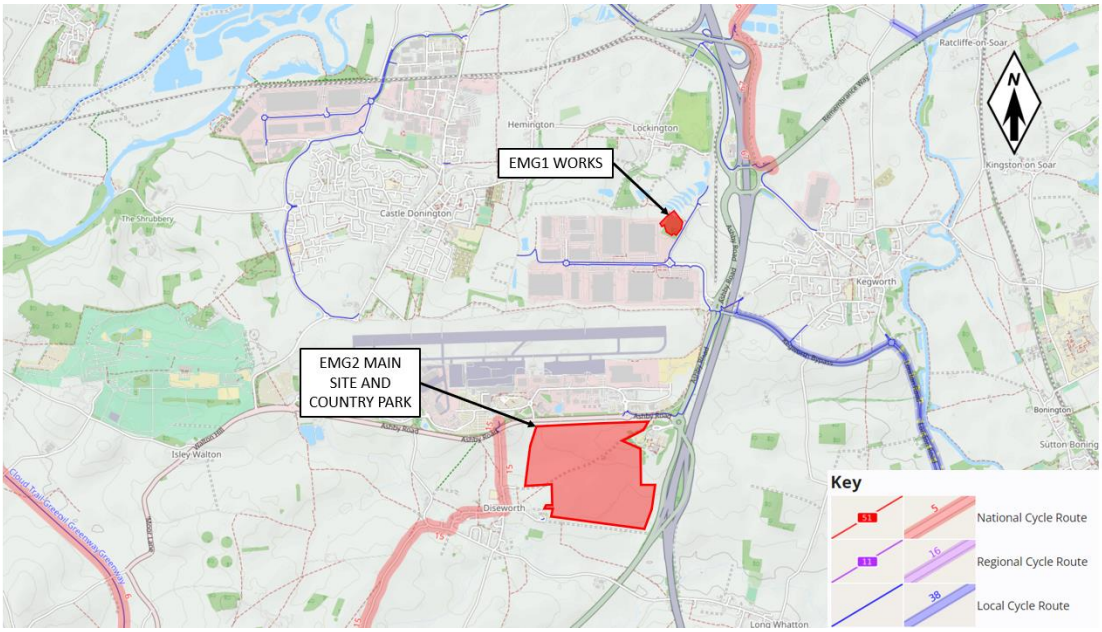
5.13 Hyam's Lane bisects the EMG2 Main Site from northeast to southwest and comprises an unclassified single track road with an unbound gravel surface. A PRoW referred to as Footpath L45/L46 follows the route of Hyam's Lane and provides connectivity between Diseworth Village and Moto Donington Services.

5.14 The area surrounding the EMG2 Main Site and EMG1 Works benefits from an existing network of PRoW, particularly footpaths and bridleways, offering the potential for alternative walking and cycling links. This includes Footpath L48 which extends to the southeast of Diseworth and across the A42 towards Long Whatton.

5.15 Footpath L12 passes through EMG1 by Plot 16 connecting with a public bridleway L11 and Footpath L57 that extends into Castle Donington.

5.16 In terms of cycle infrastructure, **Figure 12** shows the cycle routes in the immediate vicinity of the EMG2 Main Site and EMG1.

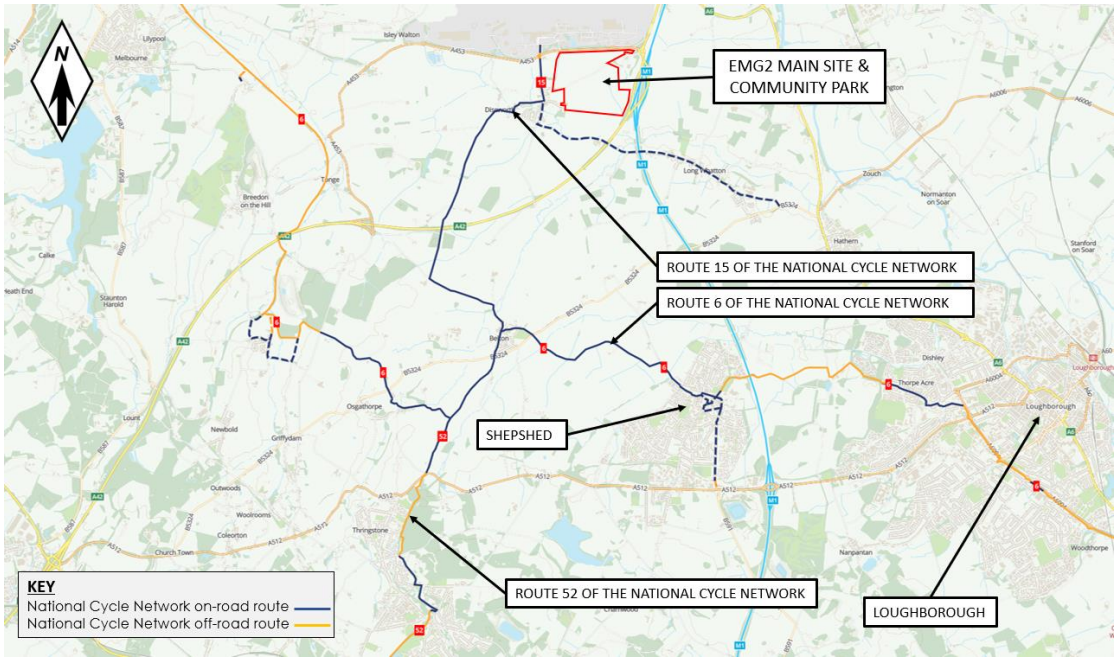
Figure 12. Local Cycle Routes



5.17 The details show the location of the existing cycle route along the A453 between the EMG2 Main Site frontage and EMG1. This connects with existing cycle facilities that leads into Kegworth along the former route of the A6, which comprises off-road footway/cycleway infrastructure.

5.18 Route 15 of the National Cycle Network extends through the village of Diseworth connecting with the A453 from Grimes Gate to East Midlands Airport. The section through Diseworth comprises an on-road route. Route 15 connects with a secondary route that extends along The Green from Diseworth into Long Whatton to the east. **Figure 13** shows the National Cycle Network further afield of the EMG2 Main Site.

Figure 13. National Cycle Routes



5.19 The details show that Route 15 of the National Cycle Network continues south through Diseworth over the A42 towards Belton village before connecting to Route 6 of the National Cycle Network that extends east towards Shepshed and Loughborough or west to smaller villages such as Osgathorpe. Furthermore, Route 15 connects to Route 52 of the National Cycle Network that extends to the south towards Thringstone.

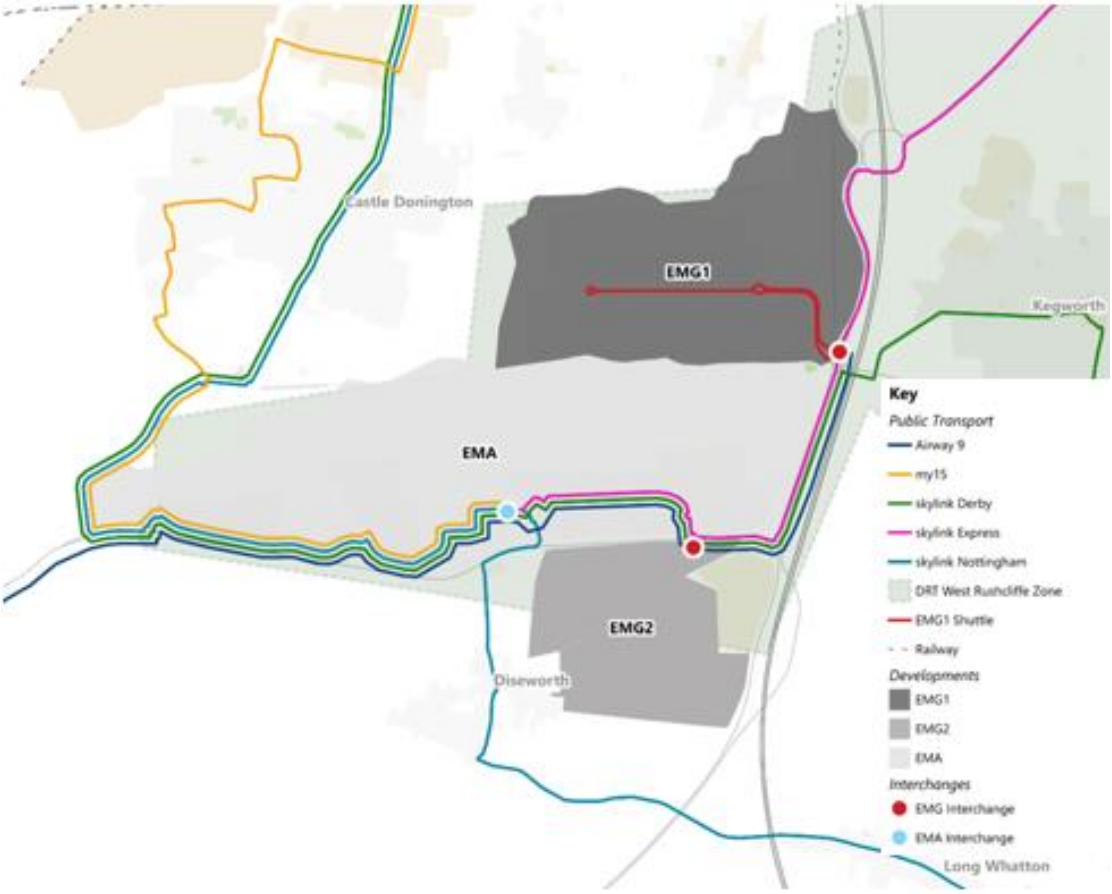
5.20 The proposals have been subject to a WCHAR in accordance with DMRB GG 142. The Assessment Report is provided at **Appendix 3** and the Review Report is provided at **Appendix 24.** Opportunities have been reviewed against the scheme proposals and have been addressed. Where necessary, changes to the scheme have been incorporated within the drawings accompanying the DCO/MCO submission.

Bus Services

5.21 **Figure 14** shows the locations of the local bus stops in the vicinity of the EMG2 Main Site within the East Midlands Airport area and Diseworth. The closest bus stops are located near Pegasus Business Park on Hunter Road approximately 100 metres north of the A453/Hunter Road roundabout and comprise a shelter with timetable information and bus lay-by. These stops are served by Route Numbers 9, Skylink (Derby), Skylink (Nottingham) and Skylink (Airport).

5.22 There are further bus stops within the western part of East Midlands Airport approximately 850 metres from a central part of the EMG2 Main Site which are served by an additional route (My15).

Figure 14. Local Bus Routes



5.23 The above bus services travel to various settlements in the vicinity of the EMG2 Main Site, including Nottingham, Ilkeston, Stapleford, Long Eaton, Leicester, Loughborough, Coalville, Ashby de la Zouch, Swadlincote, Burton-upon-Trent and Derby. The destinations covered by each of the local bus services is shown at **Figure 15,** whilst **Tables 7** and **8** summarise the timetable information for Monday to Saturday and Sundays respectively.

Figure 15. Destinations Served by Local Bus Routes

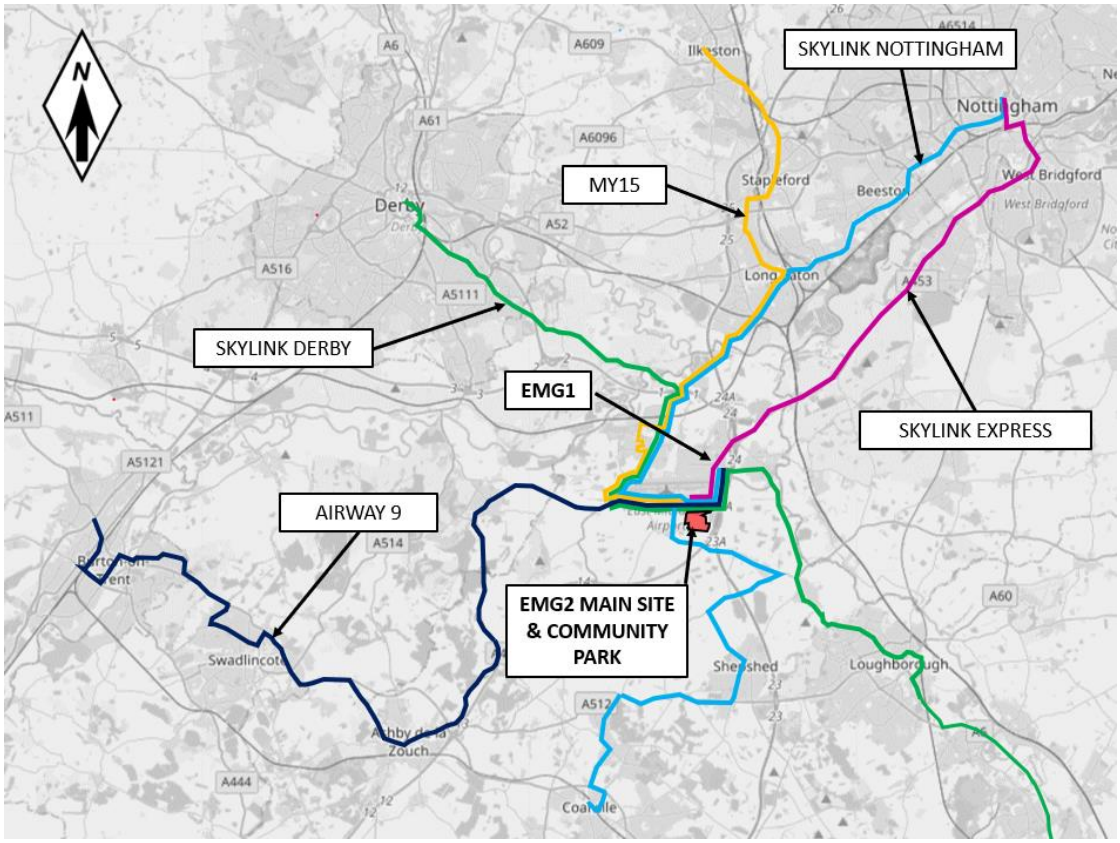


Table 7. Bus Timetable Information (Monday to Saturday)

Service	Route	Peak Time Frequency
Skylink Derby	Leicester – Loughborough – Kegworth – EMG1 – EMA – Castle Donington - Derby	15 minutes
Skylink Express	Nottingham – Clifton – EMG1 (non-stop)	30 minutes
Skylink Nottingham	Nottingham – Long Eaton – Castle Donington – EMA – EMG1	20 minutes
Airway 9	Horninglow – Burton – Ashby – Melbourne – EMA – EMG1	60 minutes
My15	Ilkeston – Stapleford – Old Sawley – Castle Donington - EMA	30 minutes

Table 8. Bus Timetable Information (Sundays)

Service	Route	Frequency
Skylink Derby	Leicester – Loughborough – Kegworth – EMG1 – EMA – Castle Donington - Derby	30 minutes
Skylink Express	Nottingham – Clifton – EMG1 (non-stop)	30 minutes
Skylink Nottingham	Nottingham – Long Eaton – Castle Donington – EMA – EMG1	30 minutes
Airway 9	Horninglow – Burton – Ashby – Melbourne – EMA – EMG1	60 minutes
My15	Ilkeston – Stapleford – Old Sawley – Castle Donington - EMA	60 minutes

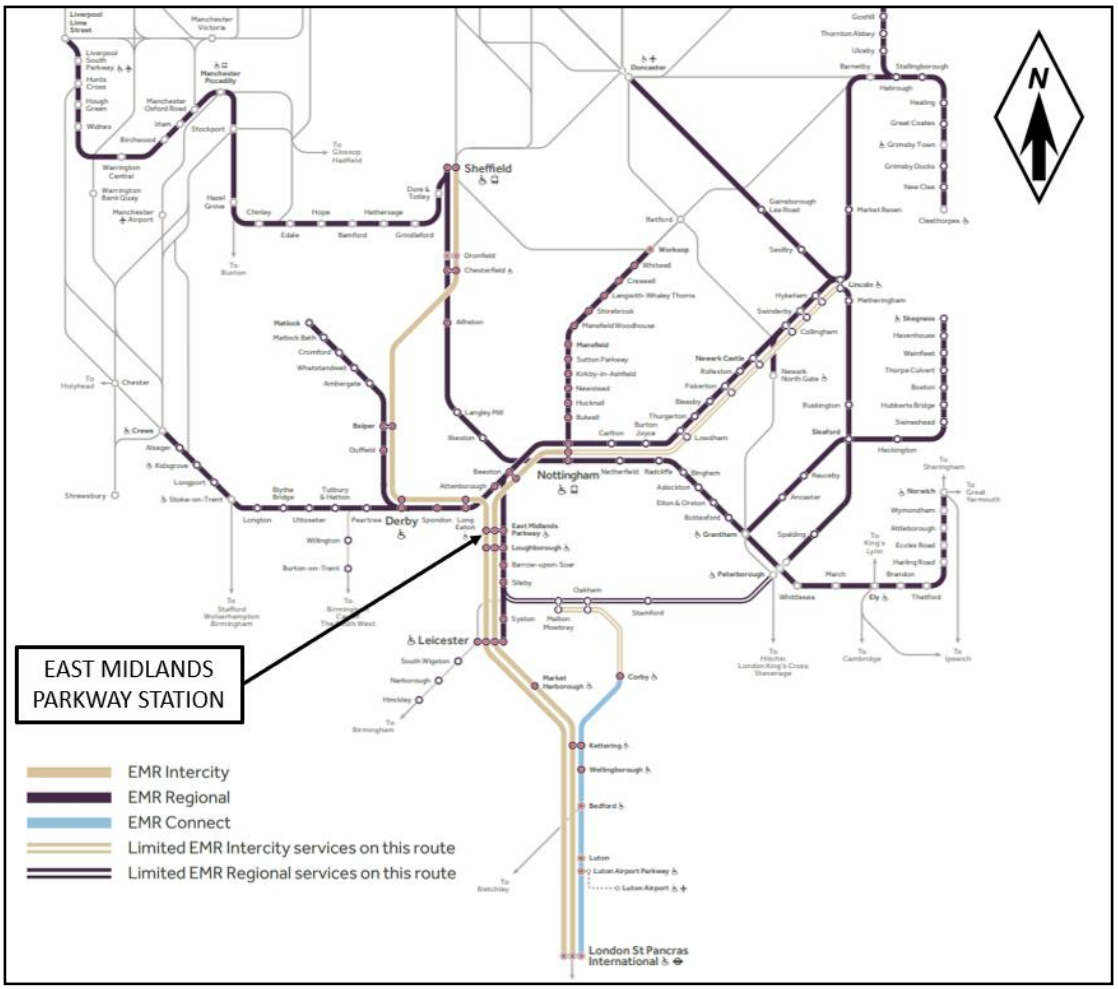
Rail Services

5.24 The East Midlands Parkway Railway Station is located approximately 5.5 kilometres to the northeast of the EMG2 Main Site adjacent to the Ratcliffe on Soar Power Station. It lies on the East Midlands Railway line, which links London St Pancras with the East Midlands (Nottingham, Leicester, Lincoln and Derby) and Sheffield in South Yorkshire.

5.25 East Midlands Parkway Railway Station provides a number of customer facilities including waiting rooms, full time staff support with a service desk/ticket office, toilets, café and refreshment facilities and sheltered cycle parking for 20 bicycles. There is also a large car park with 885 parking spaces that is open 24 hours per day, 7 days a week that operates on a pay and display basis, although longer term season passes are available.

5.26 East Midlands Parkway is served by three train lines, the East Midlands Railway Intercity, which travels between London St Pancras and Sheffield (via Leicester) or London St Pancras and Nottingham (with limited services continuing to Lincoln) plus the East Midlands Railway Connect which travels between Leicester and Sheffield/Lincoln/Worksop (with limited services continuing to Liverpool Lime Street and Norwich). Generally, the above services operate at a combined frequency of one train every 10 minutes within any direction. This includes two trains per hour between Nottingham and London St Pancras. **Figure 16** shows the route map of services operated by the East Midlands Railway line.

Figure 16. Train Services from East Midlands Parkway Station



Accessibility Index Calculator

5.27 The review of existing public transport accessibility includes a calculation of the public transport Accessibility Index (AI) using the BREEAM V6 TRA01/02 Accessibility Index Calculator.

5.28 The AI is an indicator of the accessibility and density of the public transport network. It is influenced by the proximity and diversity of the public transport network and the frequency of services at the accessible nodes. The greater the number of compliant nodes, services and their proximity to the building, the higher the AI. The values represent a distance from a central position of the EMG2 Main Site.

- Distance (m) from the main building entrance to each compliant node.
- Public transport types serving the compliant node e.g. bus and rail.
- Average number of services stopping per hour at each node during the operational hours of the building for a typical day.

5.29 There are five bus stops in the vicinity of the EMG2 Main Site near Pegasus Business Park and within 500m from a central position of it. As a result, the AI for the EMG2 Main Site is 4.41. A copy of the BREEAM calculator is included at **Appendix 25**.

Summary

5.30 In summary, there are a number of existing opportunities to walk, cycle and access public transport services in the vicinity of the EMG2 Main Site and EMG1. The proposed Highway Works and public transport strategy, detailed later in this TA, seek to build and enhance these existing opportunities to provide future employees with a range of travel options to limit reliance on private car travel.

6. PROPOSED DEVELOPMENT

Introduction

6.1 The EMG2 Project comprises a second phase to Segro's EMG1 logistics park and Rail Freight Interchange and comprises the following three components as set out in **Table 9**:

Table 9. Development Proposals Summary

Component	Details	Works Nos.
DCO Application		
EMG2 Works	Logistics and advanced manufacturing development, HGV parking and bus interchange located on the EMG2 Main Site south of East Midlands Airport and the A453, and west of the M1 motorway, comprising 300,000sqm ground floor area of B2/B8 use (assessed as 60,000sqm B2 and 240,000sqm B8 as set out in Section 7 of the TA), plus an allowance for 200,000sqm of B8 mezzanine floorspace	DCO Works Nos. 1 to 5 as described in the draft DCO (**Document DCO 3.1**).
	Together with an upgrade to the EMG1 substation and provision of a community park.	DCO Works Nos. 20 and 21 as described in the draft DCO **(Document DCO 3.1**).
Highway Works	Works to the highway network: the A453 EMG2 access junction works (referred to as the EMG2 Access Works); significant improvements at Junction 24 of the M1 (referred to as the J24 Improvements), works to the wider highway network including the Active Travel Link, Hyam's Lane Works, L57 Footpath Upgrade, A6 Kegworth Bypass/A453 Junction Improvements and Finger Farm Roundabout Improvements, together with other works.	DCO Works Nos. 6 to 19 as described in the draft **DCO (Document DCO 3.1**).
MCO Application		
EMG1 Works	Additional warehousing development on Plot 16 (26,500sqm plus a mezzanine allowance of 3,500sqm) together with works to increase the permitted height of the cranes at the EMG1 rail-freight terminal, improvements to the public transport interchange, site management building and the EMG1 Pedestrian Crossing.	MCO Works Nos. 3A, 3B, 5A, 5B, 5C, 6A and 8A in the draft MCO (**Document MCO 3.1**).

EMG2 Main Site (DCO)

6.2 The relevant Parameters Plan (**Document DCO 2.5**) shows that Zones 1 to 6a include the maximum area for the warehousing and distribution use at 300,000sqm ground floorspace, plus the potential for a further 200,000sqm of mezzanine floorspace. The land use class applied for is primarily B8 with up to 20% of the floorspace being for B2 use together with ancillary office space.

6.3 Office floorspace is expected to comprise around 6% of the total development floorspace, which is standard for Segro schemes, and is therefore ancillary to the predominant B2/B8 use. All units would be accessible from the EMG2 Main Site via the site access from the A453/Hunter Road roundabout.

6.4 Zone 6b on the Parameters Plan comprises the bus interchange at the EMG2 Main Site, which would accommodate existing public bus services that are proposed to be diverted, plus the dedicated electric shuttle bus service. The location of the bus interchange would ensure electric shuttle buses can travel to all units within the EMG2 Main Site without the need for travelling back onto the A453 and was amended during the consultation process.

6.5 Zone 7 comprises a 1.94ha space in the northwest corner of the EMG2 Main Site which would be used for HGV parking for early arrivals and visits to the EMG2 Main Site.

Highway Works (DCO)

6.6 A package of Highway Works is proposed including EMG2 Main Site access, substantial improvements around M1 Junction 24, as well as more minor works on the local highway network and active travel improvements.

6.7 An overview of the proposed Highway Works is shown on the drawing at **Appendix 21** and they are shown in detail on the Highways Plans (**Documents DCO 2.8A to D**) and the Components of the Proposed Development Plan (**Document DCO 2.7**).

6.8 **Appendix 26** provides the Geometric Design Strategy Record for the local highway network, and **Appendix 27** provides the Geometric Design Strategy Record for the Strategic Road Network. **Appendix 28** provides details of the directional signage changes that form part of the highway works. Within the drawings references to 'NB', 'EB', 'SB' and 'WB' relate to the direction of the flow of traffic i.e. 'eastbound direction' for EB.

6.9 The Stage 1 Road Safety Audit (RSA) process has been completed with the RSA and Design Team Response reports and revised drawings agreed with NH and LCC. All geometric departures from standard on the SRN have been approved by NH.

6.10 The proposed Highways Works are described further as follows:

- A453/EMG2 Main Site access junction – providing access to the EMG2 Main Site via a new arm from the A453/Hunter Road roundabout (DCO Works No. 6).
- M1 Junction 24 improvements comprising:
  - Construction of a new free-flow link road from the M1 northbound to provide a direct link to the A50 westbound, which will cross over the A453, and will include the A50 westbound merge alterations (DCO Works Nos. 9 and 10);
  - Widening of the A50 eastbound link at J24 and other related works and traffic management measures in this location (DCO Works No. 11);
  - Alteration of the west side of the J24 roundabout to provide three lanes from the M1 northbound to A453 northbound through the junction, two lanes from

the A453 northbound to the M1 northbound through the junction and removal of the segregated left-turn lane from the A453 northbound to the A50 westbound post feedback from NH (DCO Works No. 12a);

- Signing and lining amendments on the east side of the J24 roundabout and the A453 southbound approach (DCO Works No. 12b);
- Provision of new M1 northbound exit to the A50 and associated improvements to gantries signage, signals and road markings on the M1 (DCO Works No. 8); and
- Changes to the signage on the M1 northbound before J23A to sign the A50 via the new M1 J24 link road rather than via J23A as at present (DCO Works No. 16).

- A6 Kegworth Bypass/A453 Junction Improvements providing widening at the EMG1 roundabout to increase junction capacity to accommodate traffic generation from the EMG2 Main Site (DCO Works No. 13).
- Works to the A453/A42/Finger Farm roundabout (DCO Works No 18).

6.11 There will be multiple pedestrian and cycle access points into the EMG2 Main Site and Community Park to ensure future staff have access to a number of active modes of travel. The following Active Travel Works are proposed as part of the development, which the WCHAR Preliminary Design Stage Assessment and Review Reports, included in **Appendices 3** and **24** have helped inform:

- A new shared use footway/cycleway along the length of the EMG2 Main Site estate road providing pedestrian and cyclist access to all units and ensuring they are separated from vehicle and HGV traffic (part of DCO Works No. 2).
- The existing PRoW L45 which bisects the EMG2 Main Site will become integrated into Hyam's Lane. Hyam's Lane will be resurfaced and upgraded to allow cyclist access (**DCO Works No. 7**).
- A new Toucan crossing point will be installed on the A453 to the east of the Hunter Road roundabout for pedestrians and cyclists to safely cross the A453 to/from EMG2 Main Site and connecting to the Active Travel Link, unlocking connections to EMG1, Kegworth and beyond (part of **DCO Works No. 6**). The crossing has been included for in the EMFM modelling and is examined in further detail below.
- A new shared use cycle track from Hyam's Lane to the proposed A453 Toucan crossing (part of **DCO Works No. 2**).
- An Active Travel Link providing a dedicated cycle track alongside the A453 between EMG1 and the EMG2 Main Site (**DCO Works No. 14**). This will provide a new dedicated shared use cycle track north of the new Toucan crossing alongside the A453 to connect the EMG2 Main Site with EMG1 for pedestrians and cyclists as well as improving cycling in the wider area between Kegworth and East Midlands Airport.
- The route along Hyam's Lane, to the Toucan Crossing and then to the EMG1 access junction will form of an extension to the National Cycle Route 15 providing connectivity towards Kegworth and EMG1 to the northeast and Diseworth to the southwest.

- The Hyam's Lane Works will also provide signage at the junction of Hyam's Lane and Grimes Gate and resurfacing works along Hyam's Lane to enhance cycle access.
- At the A453/East Midlands Airport junction an uncontrolled crossing providing pedestrian crossing improvements across the A453 to between the airport and proposed EMG2 Community Park.
- The upgrade of public footpath L57 which connects Diseworth Lane to the west of EMG1 and Castle Donington for improved connectivity for cyclists. Payment was made to LCountyC under the Section106 agreement for EMG1 for the upgrade works to be carried out by LCountyC however these works have never been implemented.
- A new footpath from the western end of Hyam's Lane and PRoW L45/L46 northwards through the proposed Community Park connecting to the A453 Ashby Road by the Airport access via the western edge of the EMG2 Main Site.
- A new bridleway from the western end of Hyam's Lane and PRoW L45 southwards through the proposed Community Park connecting to Long Holden and PRoW L48. Connecting these two PRoWs will create a valuable new publicly accessible route all the way from PRoW L48 to the airport and will create a loop for use by equestrians.
- A new footpath from the eastern end of Hyams' Lane and PRoW L45 southwards connecting to Long Holden via the eastern edge of the EMG2 Main Site creating a publicly accessible circular route around the southern part of the EMG2 Main Site.
- Restricting access to Long Holden by changing its status from an all purpose highway to a bridleway which more accurately reflects its character and will allow access to be controlled.

6.12 The location of the new Toucan crossing on the A453 to the east of the Hunter Road roundabout is on the desire line between the EMG2 Main Site and EMG1/Kegworth and on a section of the A453 where vehicle speeds are slower because drivers have negotiated the roundabouts at either side. The ATC speed survey results at **Table 4** confirm that average vehicle speeds on this section were between 36.5mph and 37.2mph and 85th percentile seeds were between 43.4mph and 43.8mph.

6.13 **Table 10** includes an extract from LTN1/20 showing the suitability of various crossing types based on roads carrying different traffic flows and speeds. It confirms that signal controlled crossings are suitable for most people on roads with speeds between 40mph and 50mph with any volume of traffic flows. As a result, a standalone Toucan crossing is considered the most appropriate crossing type for this location.

Table 10. Crossing Design Suitability (extract from Table 10-2 of LTN 1/20)

Speed Limit	Total traffic flow to be crossed (pcu)	Maximum number of lanes to be crossed in one movement	Uncontrolled	Cycle Priority	Parallel	Signal	Grade separated
≥ 60mph	Any	Any					
40 mph and 50 mph	> 10000	Any					
	6000 to 10000	2 or more					
	0-6000	2					
	0-10000	1					
≤ 30mph	> 8000	> 2					
	> 8000	2					
	4000-8000	2					
	0-4000	2					
	0-4000	1					

Provision suitable for most people

Provision not suitable for all people and will exclude some potential users and/or have safety concerns

Provision suitable for few people and will exclude most potential users and/or have safety concerns

Notes:
1. If the actual 85th percentile speed is more than 10% above the speed limit the next highest speed limit should be applied
2. The recommended provision assumes that the peak hour motor traffic flow is no more than 10% of the 24 hour flow

6.14 The proposed crossing at the A453/East Midlands Airport junction would be uncontrolled with pedestrians walking with traffic. Whilst LTN1/20 suggests a signal controlled crossing would be suitable for most people, pedestrians would be able to cross using the existing islands, which would be connected with dropped kerbs and tactile paving, allowing for crossing movements in front of vehicles when traffic is being held on a red signal. This arrangement is considered suitable because it forms a minor part of the scheme seeking to improve connections between people working at the airport and the proposed Community Park, so usage of the crossing is expected to be low and not warrant full signal controlled crossings.

EMG1 Works (MCO)

6.15 The EMG1 works as shown on the relevant Parameters Plan (**Document MCO 2.5**) and the Highways Plan (**Document MCO 2.8**), comprise the following elements:

- Provision of a maximum of 26,500sqm additional warehousing unit on Plot 16 which lies adjacent to the rail freight terminal, with an additional 3,500sqm of internal mezzanine floorspace.
- An increase to the maximum permitted height of gantry cranes at the rail freight terminal by 4m, to 24m overall. At present the terminal uses mobile reach stacker cranes but the EMG1 DCO permitted installation of gantry cranes up to 20m. Therefore, approval is sought to install gantry cranes up to 24m which would provide additional operational efficiency to the terminal. **Appendix 10** includes the EMG1 Rail Freight Technical Note – document reference EMG2-BWB-GEN-XX-RP-CH-0011 Revision P1 - explaining how the changes to the gantry crane height would have no impact on trip generation, which has been agreed with the TWG. The details in this Technical Note have been formally agreed with NH and NCountyC in

the Stage 1B sign off sheet (**Appendix 29**) and with LCountyC by email on 11 December 2024 (**Appendix 30**).

- An expansion of the EMG1 Management Suite by the EMG1 site entrance to cater for the additional demand of management facilities.
- Enhancement to the Public Transport Interchange by way of installation of EV charging infrastructure for buses and provision of a drop-off layby adjacent to the transport hub.
- Providing a signalised pedestrian crossing over the exit from EMG1 (MCO Works No. 8A).

Public Transport Improvements

6.16 The EMG2 Project includes delivering a purpose built bus interchange within the northeast part of the EMG2 Main Site close to Pegasus Business Park and served from the A453/Hunter Road roundabout. The location of the bus interchange has emerged following discussions between ITP and local bus operators (Trent Barton) and the TWG. The location of the bus interchange within the EMG2 Main Site would now remove the need for buses to exit back onto the A453 and all units would be served internally directly from the bus interchange via the electric shuttle buses. The location of the bus interchange allows for the interception of existing bus services travelling along the A453 and via Pegasus Business Park.

6.17 The bus interchange will include dedicated bays for commercial bus services to call at as well as the dedicated on-site electric shuttle buses that will call at the interchange and transfer staff and visitors to the units within the EMG2 Main Site, replicating the success of the system implemented at EMG1. Provision will be made at the interchange for EV bus charging points to facilitate the electric shuttle bus service. The bus interchange will also include a range of other facilities such as undercover waiting areas, toilets and real time bus information. All bus stops will be provided with raised kerbs to aid level boarding for those with mobility impairment.

6.18 The on-site electric shuttle buses will transfer people from the interchange to all units within the EMG2 Main Site. A number of bus stop will be provided along the main industrial access road through the EMG2 Main Site close to the entrances to each unit. Each stop will comprise a flagpole, shelter and timetable information. In addition, staff and visitors will have the option of travelling to/from the bus interchange using the free electric bicycles.

6.19 The BREEAM AI has been updated to include the improvements with the provision of a new bus interchange accommodating a total of six buses (including the internal electric shuttle buses) and reduced walking distance compared to the existing bus stop at Pegasus Business Park. A copy of the BREEAM calculator for the EMG2 Works is included at **Appendix 31** and shows that the EMG2 Main Site would have an AI of 6.21, which is an improvement to the existing score of 4.41, as detailed in Section 5.

Proposed HGV Park

6.20 A parking area for HGVs is proposed which will cater for HGV visits to the EMG2 Main Site and will allow early HGV arrivals to wait before they serve the relevant building within the EMG2 Main Site.

EMG2 Main Site Vehicular Access

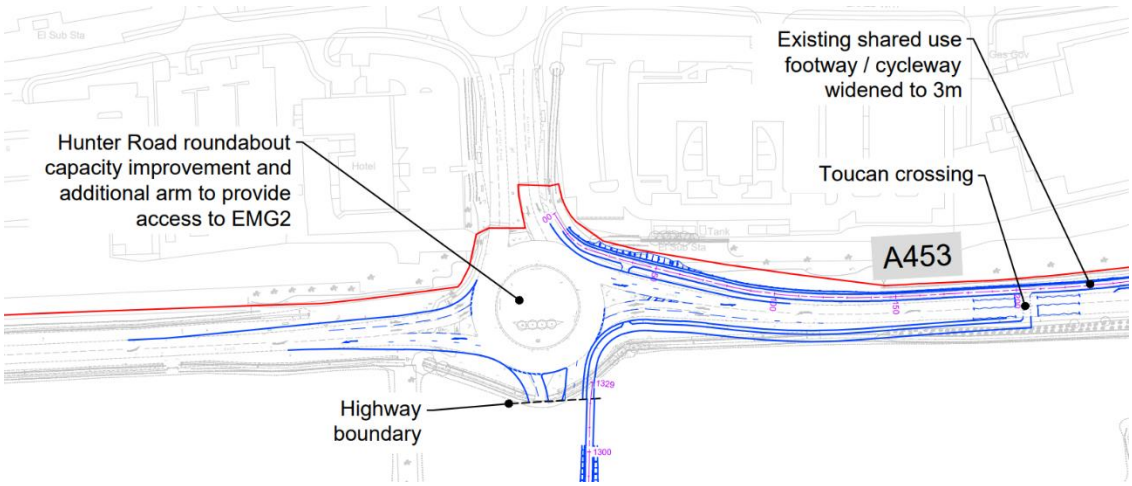
6.21 The relevant Parameters Plan (**Document DCO 2.5**) shows how the EMG2 Main Site will be served by a single point of access from the A453/Hunter Road roundabout. This would be via a fourth arm at the southern side of the roundabout replacing the existing field access. This access would serve 100% of development on EMG2 Main Site, as well as the new bus interchange and HGV park. The access strategy has evolved over time, where initially two points of access were proposed. Details of the access strategy and its evolution over time are provided in Pages 19 to 22 of the Design Access Document (**Doc DCO 5.3/MCO 5.3**).

6.22 The access arm into EMG2 Main Site will comprise a dual carriageway with two lanes for vehicles entering and exiting it. The section of dual carriageway then narrows to a 10.5m wide single carriageway continuing south to a new internal roundabout, from which point the remainder of the new industrial road would comprise a single carriageway road of 10.5 metres in width.

6.23 The dualling and 10.5m wide single carriageway will help overcome any potential concerns from an emergency access perspective. Emergency vehicles will also have the ability to access the EMG2 Main Site via Hyams Lane, which would measure a minimum of 3.7 metres wide between the EMG2 main site road and Diseworth to allow such use (but not general vehicle traffic).

6.24 The EMG2 Main Site access works also include extending the A453 westbound entry flare to 75 metres and also extending the length of the two lane exit in the westbound direction. The general arrangement of the proposed EMG2 Main Site access can be found at **Document DCO 2.8A**, whilst an extract is shown at **Figure 17**.

Figure 17. Proposed Site Access to EMG2 Main Site



6.25 The drawings included in **Appendix 26** include for swept path analysis of 16.5 metres and 18.55 metres long HGVs entering and departing the EMG2 Main Site via the proposed A453/Hunter Road roundabout in all directions. It demonstrates how turning movements in all directions would be achievable without conflicting drivers in adjacent lanes. Further swept path assessments will be undertaken as part of approval of details under the EMG2 DCO requirements.

6.26 Development on Plot 16 which forms part of the EMG1 Works would be served by the existing access along Wilder's Way and the existing industrial road that leads to the EMG1 rail freight terminal.

Operations

6.27 It is anticipated that the proposed development would predominantly operate across three shift patterns, similar to EMG1 (although this will not be known until end occupiers are identified). These shift patters are likely to be as follows and across 7 days a week:

- 06:00 – 14:00 hours
- 14:00 – 22:00 hours
- 22:00 – 06:00 hours

6.28 As each of the units would provide ancillary office space, it is envisaged that there would be an additional shift pattern of 0900 to 1730 hours.

Parking Provision

6.29 Final layouts of each plot, including the number of parking spaces, will be finalised as each plot comes forward in detail. However, at this early stage the number of parking spaces across the development has been considered.

6.30 LCountyC's adopted parking standards are outlined in the LHDG. This contains the Council's normal maximum parking requirements for non-residential land uses. The parking standards for employment land uses vary depending on the location of the site in question, which in this instance is 'out of any town'. **Table 11** shows LCountyC's standards for both B2 and B8 land uses.

Table 11. Leicestershire County Council Parking Standards

Vehicle Parking Type	B8 Use Class	B2 Use Class
Cars	One space for every 150sqm	One space for every 55sqm
Disabled	Six bays plus 2% of total parking spaces (when total over 200 spaces	
HGV	One lorry space for every 400sqm	
Motorcycles	One space, plus an additional space for every 10 car parking spaces	
Bicycle	One long stay space per 500sqm (staff) plus one short stay space per 1,000sqm (visitors)	
Electric vehicles	Follow guidelines in the latest Building Regulations, which states all new non-residential buildings with more than 10 parking spaces must have a minimum of one charge point and cable routes for one in five (20%) of the total number of spaces	

6.31 In terms of the dimensions of parking spaces, the LHDG sets out the following:

- Minimum car parking size is 2.4 x 5.5m with an additional 0.5m if bounded by a wall, fence, hedge, line of trees or other similar obstructions on 1 side, 1m if bounded on both sides.
- Motorcycle parking spaces should be 2.5 x 1.5m with a 1m space between each bike.
- Cycle parking should be secure and under cover and Sheffield stands are preferred. They can accommodate two cycles provided that the stands are placed 1m apart and at least 0.5m from any wall.

6.32 During the statutory consultation, residents raised concern with existing on-street parking taking place in Diseworth associated with people travelling to East Midlands Airport. This issue is therefore separate to the EMG2 Project; however, a compliant amount of parking will be provided across all units at EMG2, which should ensure that all parking is accommodated within the site and not within any of the nearby villages.

6.33 The EMG2 Main Site will remain privately owned by SEGRO who will put measures in place to prevent non site related vehicles, such as those associated with East Midlands Airport, from parking within the EMG2 Main Site.

6.34 Disabled parking will be provided at 10% of the total car parking spaces. Car sharing is being actively promoted within the Framework Travel Plan assisted by 5% of spaces being designated to those who car share. This is to also meet the credits required from a BREEAM perspective.

6.35 Whilst LCountyC does not currently adopt any electric vehicle charging standards, Segro has a policy to provide 20% of parking space at all their sites with electric vehicle

charging equipment. This exceeds the minimum requirements within the latest Building Regulations guidance which requires 10% of all spaces.

HGV Routeing

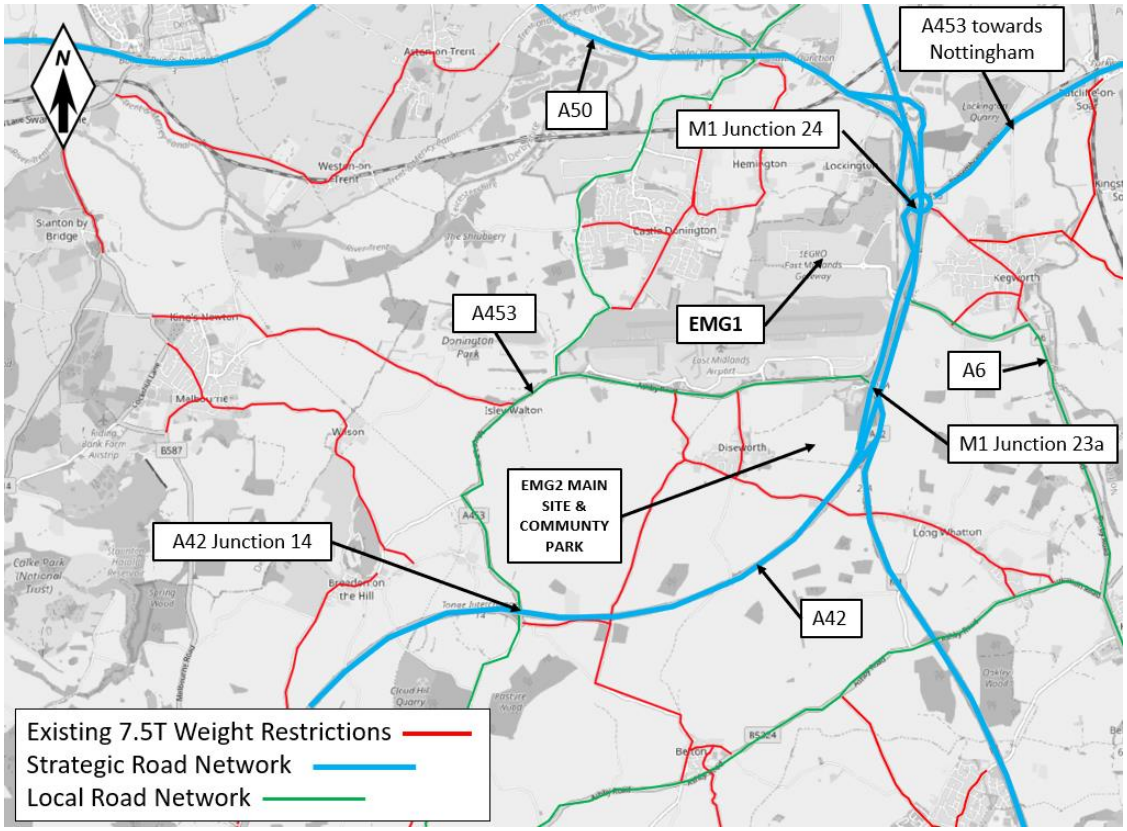
6.36 HGV routeing associated with the EMG1 Works will be covered via the formal routeing strategy agreed, and successfully implemented, for EMG1.

6.37 The EMG2 Main Site is located near the SRN in close proximity to M1 Junctions 23A and J24 with good access to the M1, A453, A50, A6 and A42. Nevertheless, there are local sensitivities regarding the potential increase in HGV movements on the local road network surrounding EMG2. The HGV Routeing Plan Technical Note – document reference EMG2-BWB-GEN-XX-RP-TR-0016 Revision P3 (**Appendix 15**) therefore presents the HGV Routeing Plan for the EMG2 Works for the avoidance of doubt, whilst the following section provides a summary of the key details.

6.38 The following local roads leading into villages surrounding the site feature 7.5T weight restrictions, which are also shown on **Figure 18**:

- Hill Top & High Street, Castle Donington
- Grimes Gate & The Green, Diseworth leading to Long Whatton
- Derby Road, Kegworth
- Melbourne Road, Melbourne
- Kegworth Road, Ratcliffe on Soar.

Figure 18. Existing Weight Restrictions



6.39 The existing weight restrictions mean that HGVs associated with the EMG2 Project will be required to travel via the SRN and major local roads. The permitted routes for HGVs are therefore listed below and reflect those shown in blue and green in **Figure 18**.

To the north

- A453 (E), M1 northbound
- A453 (E), A453 eastbound towards Nottingham

To the east

- A453 (E), A6

To the south

- A453 (E), M1 southbound
- A453 (E), A42
- A453 (W), A42 via Junction 14 (albeit EMFM does not assign HGVs in this direction)

To the west

- A453 (E), A50 westbound

- A453 (W), Castle Donington western bypass, A50 westbound via Junction 1 (albeit EMFM does not assign HGVs in this direction)

6.40 All occupiers will need to comply with the existing weight restrictions which will ensure that HGVs travel using the permitted routes.

6.41 In the event that parts of the SRN are temporarily closed, HGVs would have alternative route choices to reach the EMG2 Main Site and EMG1. This is largely supported by the A453 that extends parallel to the M1 motorway between Junction 23A and J24 alongside other strategic connections with the A50, A6 and A42. Full details of the diversion routes are included in the HGV Routeing Plan Technical Note – document reference EMG2-BWB-GEN-XX-RP-TR-0016 Revision P3 - at **Appendix 15**, which has been agreed with NH and will ensure that even when parts of the SRN are closed. HGVs would still be able to avoid the local road network to reach the EMG2 Main Site and EMG1.

6.42 During a time when road closures are in place, or a PIC has occurred on part of the SRN, then NH adopt protocols to manage closures and keep disruption and delays to a minimum. These protocols include:

- Dedicated events and incident liaison officers
- Dedicated route managers
- Route cards for temporary directional signage to be put out on the network
- VMS signage for long distance and strategic routes advance warning drivers
- Notifications to key significant important stakeholders such as East Midlands Airport.

6.43 NH is subject to a Key Performance Indicator which requires 86% of lane compromising incidents to be cleared within 60 minutes of the incident occurring.

6.44 For the logistics operators at the EMG2 Main Site, management staff will review the transport position across the wider network allowing drivers to adjust their route strategies to avoid congested areas accordingly (whilst continuing to follow all existing weight restrictions).

6.45 With the existing weight restrictions in place, the EMG2 DCO does not include any specific management measures to control the movement of HGVs. This is the same at EMG1 where no management measures were required as part of the DCO to control the movements of HGVs.

6.46 Notwithstanding this, SEGRO has a management company at EMG1 who can be contacted should there be issues with HGVs contravening the existing weight restrictions and the management company will also cover the EMG2 Main Site. Since EMG1 has started operating, SEGRO are aware of only two complaints of HGVs travelling along non-permitted routes, one of which was valid whilst the other was not. Therefore, there are no significant issues at present with HGVs associated with EMG1, which is expected to also be the case for the EMG2 Main Site. Issues with HGV movements are no longer raised at EMG1 meetings with the local Parish Councils.

Construction

6.47 A CTMP for the DCO Scheme has been produced and appended to the CEMP in **Document DCO6.3A**. It covers the full extent of the DCO Order Limits for the initial stage of development including:

- EMG2 Main Site roads and earthworks
- M1 corridor gantry and signage works
- M1 Junction 24 mitigation package
- Finger Farm signage works and upgrade
- A453 south minor highway works.

6.48 The construction stage will require a separate CTMP for each phase of construction, detailed within a phase specific Construction and Environmental Management Plan. The current CTMP sets out the proposed works that will be implemented to mitigate the potential effects of traffic during the construction stage of the EMG2 Project as far as possible. It also provides guidance for the Principal Contractor (once appointed) and all subcontractors regarding access routes to the EMG2 Main Site and EMG1 Works, maintenance requirements for the existing public highway and restrictions for staff to follow.

6.49 The CTMP commits to arranging a Construction Traffic Management Working Group to discuss, plan, and manage, upcoming traffic management on the road network. The group will include NH, LCountyC, local bus operators, East Midlands Airport, Moto Donington Services, emergency services, as well as the Principal Contractor.

6.50 A range of management measures are set out in the CTMP which will be adopted during the construction phase to limit impacts on the SRN and local road network. The CTMP is is appended to the Construction Environmental Management Plan (**Document DCO 6.3A**) and has been formally agreed with NH, LCountyC and NCountyC within the Statements of Common Ground.

7. TRIP GENERATION

Introduction

7.1 The following section summarises the agreed traffic generation forecasts for the EMG2 Project during both the operational and construction phases. These values have been tested in EMFM, which is examined in greater detail in **Section 8**, and the detailed junction models to understand the impacts of the EMG2 Project and associated mitigation requirements, set out in subsequent sections.

Operational Phase

Traffic Generation

7.2 Full details explaining the process of agreeing the trip rates and traffic generation calculations for the operational phase, are provided in the Trip Generation Core Assessment Technical Note – document reference EMG2-BWB-GEN-XX-RP-TR-0012 Revision P1 (**Appendix 11**). This Technical Note has been formally agreed with NH and NCountyC in the Stage 1A modelling sign off sheet (**Appendix 33**), with LCountyC confirming they accept the trip generation figures by email on 11 December 2024 (**Appendix 30**).

7.3 It was agreed with the TWG on 27 July 2022 that the original trip rates adopted for the EMG1 DCO in 2014 should be retained for the purposes of this TA. These were based on surveys undertaken at Swan Valley in 2007. **Table 12** shows the agreed trip rates, whilst **Table 13** calculates the traffic generation for the 430,000sqm of development across Plot 16 of EMG1 and EMG2 Main Site reflecting the agreed split of B2/B8 use. Whilst the EMG2 Project now includes 530,000sqm of industrial floorspace, the inclusion of an additional 100,000sqm of mezzanine (200,000sqm total) came after agreement on the trip rates/traffic generation and is explained later in this section but has no impact on the traffic generation calculations. Trip rates for the traditional morning peak period of 0800 to 0900 hours have been adopted, but trip rates for the evening shoulder peak period of 1600 to 1700 hours have been used for the B8 development, as requested by the TWG, because they are higher and provide further robustness, which mirrors the approach undertaken for the EMG1 DCO (EMFM assesses 1700 to 1800 hours as the evening peak hour).

Table 12. Proposed Development Trip Rates

	AM Peak (08:00 – 09:00)			PM Peak (1600- 1700 for B8 and 17:00 – 18:00 for B2)		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
B8 Trip Rates (retained from EMG1 Transport Assessment)						
Total	0.140	0.036	0.176	0.065	0.155	0.220
HGVs	0.019	0.023	0.041	0.025	0.015	0.040
B2 Trip Rates (taken from TRICS)						
Total	0.392	0.071	0.463	0.049	0.369	0.417
HGVs	0.016	0.014	0.030	0.003	0.006	0.009

Table 13. Proposed Development Traffic Generation

	AM Peak (08:00 – 09:00)			PM Peak (1600- 1700 for B8 and 17:00 – 18:00 for B2)		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
340,000sqm B8 development at EMG2 (including for 100,000sqm of mezzanine space)						
Total	476	122	598	221	527	748
HGVs	65	78	143	85	51	136
30,000sqm B8 development at Plot 16 of EMG1						
Total	42	11	53	20	47	67
HGVs	6	7	13	8	5	13
60,000sqm B2 development at EMG2						
Total	235	43	278	30	222	252
HGVs	10	8	18	2	4	6
Total 430,000sqm development						
Total	753	176	929	270	795	1,065
HGVs	81	93	174	95	60	155

7.4 The EMG2 Works is predicted to generate 929 trips in the morning peak hour and 1,065 trips in the evening peak hour, of which 53 in the morning and 67 in the evening would be generated by Plot 16 of EMG1.

7.5 Since EMG1 has been operating, annual surveys have been undertaken to monitor the volume of traffic being generated across all units. The latest surveys were undertaken in September 2024 when EMG1 was close to being at full occupation with the results presented in an 'EMG1 Vehicle Trip Rate Comparison Report' dated 7 February 2025 (**Appendix 34**). **Table 14** summarises the B8 trip rates at EMG1 from the 2024 surveys, including for mezzanines.

Table 14. EMG1 Surveyed B8 Trip Rates (2024)

	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
Total	0.071	0.022	0.092	0.026	0.062	0.089
HGVs	0.015	0.012	0.028	0.015	0.015	0.029

7.6 By adopting the 2024 EMG1 surveyed B8 trip rates and applying them to the total proposed development B8 floorspace of 370,000sqm (inclusive of 30,000sqm development at Plot 16 EMG1), **Table 15** calculates the volume of traffic that could be generated and the difference when compared to the agreed traffic generation in **Table 14**. The traffic generation for the 60,000sqm of B2 floorspace proposed at EMG2 remains unchanged.

Table 15. Forecast Traffic Generation based on 2024 EMG1 Recorded Trip Rates

	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
	Arrivals	Departures	Two-way*	Arrivals	Departures	Two-way*
EMG2 B8 Traffic Generation (370,000sqm)						
Total	263	81	344	96	229	325
HGVs	56	44	100	56	56	112
EMG2 B2 Traffic Generation (60,000sqm)						
Total	235	43	278	30	222	252
HGVs	10	8	18	2	4	6
Total EMG2 Traffic Generation (430,000sqm)						
Total	498	124	622	126	451	577
HGVs	66	52	118	58	60	118
Difference versus Agreed Traffic Generation – Vehicle Trips						
Total	**-255**	**-52**	**-307**	**-144**	**-344**	**-488**
HGVs	**-15**	**-41**	**-56**	**-37**	**0**	**-37**
Difference versus Agreed Traffic Generation – Percentage						
Total	**-33.9%**	**-29.5%**	**-33.0%**	**-53.3%**	**-43.3%**	**-45.8%**
HGVs	**-18.5%**	**-44.1%**	**-32.2%**	**-38.9%**	**0.0%**	**-23.9%**

*any errors in the calculation of two-way trips are due to rounding

7.7 By adopting the surveyed B8 trip rates at EMG1, the forecast traffic generation from the EMG2 Works (plus Plot 16) based on the 430,000sqm is 622 trips in the morning peak hour and 577 trips in the evening peak hour. This is a significant reduction of 307 trips (-33.0%) in the morning and 488 trips (-45.8%) in the evening compared to what is being assessed in this TA; such a reduction has not been modelled in EMFM. Therefore, the trip rates being adopted, assessed, and used to determine the proposed Highway Works, should be viewed as highly robust; they in effect provide a 'worse than worst-case' based on information obtained post agreeing the use of the original EMG1 forecast trip rates in July 2022 as set out in **Table 14** above.

7.8 The above was set out in an email to the TWG on 5 March 2025, included in **Appendix 35**. This set out that, building on the above, when considering 200,000sqm GFA of additional mezzanine floor space at the EMG2 Main Site versus the 100,000sqm GFA originally proposed, and the recorded EMG1 2024 trip rates, the proposed development would generate 33% less B8 trips versus that assessed in this TA in **Table 13** in the morning peak hour and 48% less trips in the PM peak hour.

7.9 NH accepted the principle of the increase in mezzanine floorspace to 200,000sqm GFA in an email dated 1 May 2025 which is included in **Appendix 36**. This was on the proviso that:

i) it is used for the intended vertical stacking/storage purpose as stated. with a provision within the DCO stipulating that the additional 100,000 sqm floor space for

storage/racking must be used for its intended purpose in perpetuity, ancillary to B8 ground floor space; and

ii) sustainable transport objectives achieved for EMG1 to be applied to EMG2, to be included for within the Sustainable Transport Strategy.

7.10 As a result, Requirement 27 has been included within the DCO (**Document DCO3.1** to deal with i), and the Sustainable Transport Strategy confirms that the modal split achieved for EMG1 has been applied to the EMG2 Main Site. The Sustainable Transport Strategy is included in **Document DCO 6.6B** and this is considered in further detail later on in this section.

HGVs between EMG2 to EMG1 Rail Freight Terminal

7.11 The core traffic generation in **Table 13** shows that there is predicted to be a total of 174 HGVs in the morning peak hour and 155 HGVs in the evening peak hour generated by the development. This is the total number of HGVs including any potential hazardous or abnormal loads.

7.12 The predicted EMG2 Main Site traffic generation has been assigned to the highway network in accordance with the in-built gravity model in EMFM and therefore does not assign any HGVs between EMG2 Main Site and the EMG1 Rail Freight Interchange. The Trip Generation Core Assessment Technical Note – document reference EMG2-BWB-GEN-XX-RP-TR-0012 Revision P1 (**Appendix 11**) calculates the number of HGVs that could travel between the EMG2 Main Site and EMG1 based on the methodology adopted as part of the EMG1 DCO and approved by the TWG. It calculates 40 HGVs in the morning peak hour (18 arrivals, 22 departures) and 44 HGVs in the evening peak hour (28 arrivals, 16 departures) as having the potential to visit the EMG1 rail freight terminal from EMG2 Main Site. These HGVs have been assigned further afield on the external highway network but would incur a slightly different turning movement at the EMG1 roundabout as shown at **Figures 19** and **20.**

Figure 19. HGV Assignment between EMG2 and EMG1 Rail Freight Terminal (Morning peak hour)

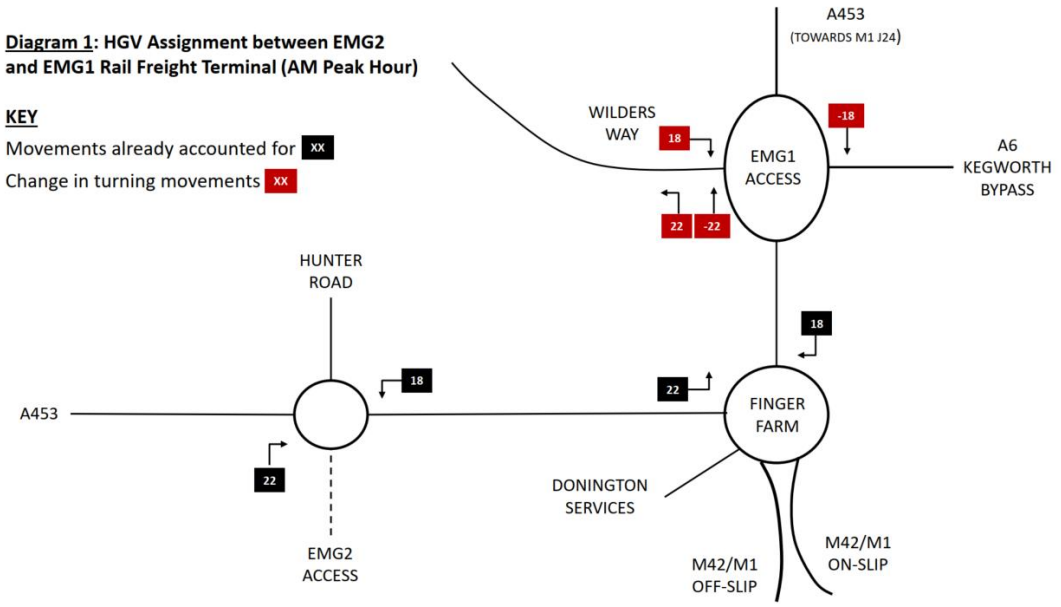
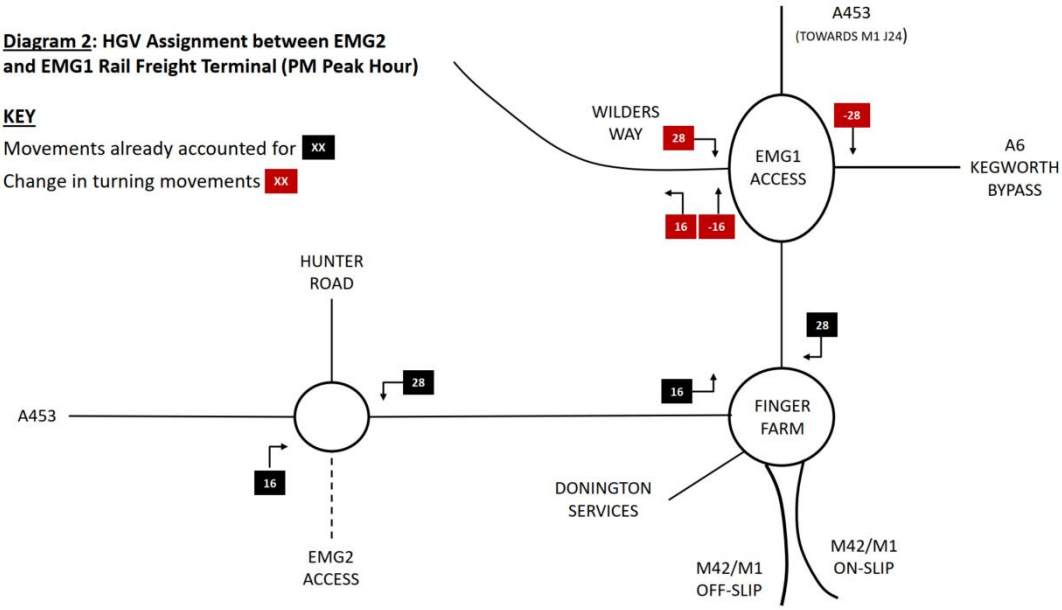


Figure 20. HGV Assignment between EMG2 and EMG1 Rail Freight Terminal (Evening peak hour)



7.13 It was agreed with the TWG that these re-assigned HGVs do not need formally testing in EMFM, but for a sensitivity test to be undertaken in VISSIM that manually re-assigns said HGV trips to understand the impacts at the EMG1 access roundabout. the Trip Generation Core Assessment Technical Note – document Technical Note EMG2-BWB-GEN-XX-RP-TR-0012 Revision P1 (**Appendix 11**) has been formally agreed with NH and NCountyC in the Stage 1B Modelling sign off sheet (**Appendix 29**), with LCountyC confirming they accept the HGV numbers and VISSIM modelling approach by email on 11 December 2024 (**Appendix 30**). This is examined in further detail in Section 13.

Modal Split/Person Trip Generation

7.14 It was originally agreed with the TWG that the modal split information from the 2014 TA supporting the EMG1 DCO should be retained as the baseline position to forecast the person trip generation for the proposed development, which informed the agreement to use the original forecast EMG1 trip rates to determine traffic generation. This was because it excludes any benefits from the travel planning measures already in place at EMG1. The original EMG1 modal split information is shown at **Table 16.**

Table 16. Modal Split and Person Trip Generation

Mode of Travel	% Modal Split
Car (single occupancy)	80%
Car share	11%
Public Transport	5%
Active Travel	3%
Other	2%

7.15 The above calculations show that of all trips from the EMG2 Project, 80% would be expected to comprise single occupancy car trips, 12% car sharing trips, 5% by public transport and 3% on foot/by bicycle.

7.16 Using the above modal split and the peak hour light vehicle trip generation in **Table 16**, **Tables 17, 18,** and **19** calculate the person trip generation for the EMG2 Main Site, EMG1 Plot 16 and total development based on the original EMG1 modal split.

Table 17. EMG2 Main Site Person Trip Generation

Mode of Travel	AM Peak (08:00 – 09:00)	PM Peak (16:00 – 17:00)
Car (single occupancy)	715	858
Car share	98	118
Public Transport	45	54
Active Travel	27	32
Other	9	11
Total	**894**	**1,073**

Table 18. EMG1 Plot 16 Works Person Trip Generation

Mode of Travel	AM Peak (08:00 – 09:00)	PM Peak (16:00 – 17:00)
Car (single occupancy)	40	54
Car share	6	7
Public Transport	3	3
Active Travel	1	1
Other	1	1
Total	**50**	**68**

Table 19. Total Person Trip Generation

Mode of Travel	AM Peak (08:00 – 09:00)	PM Peak (16:00 – 17:00)
Car (single occupancy)	755	912
Car share	104	125
Public Transport	48	57
Active Travel	28	33
Other	10	12
Total	**944**	**1,140**

7.17 Based on the modal split set out in **Table 16** The proposed development in its entirety would expect to generate 125 car share trips, 57 public transport trips and 33 active travel trips during the busier evening peak hour, based on the original EMG1 modal split information.

7.18 The increase in active travel trips is therefore expected to be relatively low based on this methodology, which aligns with the monitoring surveys and Travel Plan strategy at EMG1, which focuses more on car sharing and public transport. Whilst employees have opportunities to travel by walking and cycling, with significant improvements being proposed as part of the EMG2 Project, the additional activity should be satisfactorily accommodated on the network, particularly with the proposed improvements to active travel links, PRoWs and public transport infrastructure, summarised in **Section 6**.

7.19 The impact of the additional vehicular trip generated is assessed in **Section 10**.

Framework Travel Plan Targets

7.20 Taking the above a step further, the Framework Travel Plan for the EMG2 Main Site aims to reduce single occupancy car trips from 80% to 56% across a 10 year period by displacing them into other modes. This will be done by implementing a range of measures and incentives to encourage staff to travel by sustainable modes. Full details of the Travel Plan targets and measures can be found at **Document DCO 6.6C**, whilst in extract of the EMG2 Travel Plan targets are provided in **Table 20**.

Table 20. Travel Plan Targets

Mode	Year 1 Target Opening Target	Year 3 Interim Target	Year 6 Interim Target	Year 10 Target End Target
Drive alone (SOV)	68%	64%	58%	**56%**
Car Share	15%	17%	21%	**22%**
Public Transport	12%	14%	15%	**16%**
Walking & Cycling	1%	1%	2%	**2%**
Other	4%	4%	4%	**4%**

7.21 The targeted modal shift in single occupancy car drivers from 80% to 56% will have benefits in reducing the number of drivers to the EMG2 Main Site. **Table 21** calculates the targeted person trip generation at the 10-year target period based on the modal shift proposed at **Table 20**, along with the change in number of movements by each mode compared to that set out in **Table 19**.

Table 21. Targeted 10-Year Person Trip Generation

Mode of Travel	AM Peak (08:00 – 09:00)	PM Peak (16:00 – 17:00)
Car (single occupancy)	529 (-216)	638 (-274)
Car share	208 (+114)	251 (+126)
Public Transport	151 (+103)	182 (+125)
Active Travel	19 (-9)	23 (-10)
Other	38 (+28)	46 (+34)
Total	**944**	**1,140**

7.22 The Travel Plan targets would result in a reduction of 216 car driver trips in the morning peak hour and 274 car driver trips in the evening peak hour when compared to that set out in **Table 19**. This would be achieved by displacing these journeys into other modes.

7.23 This would result in an uplift in trips generated by public transport, totalling 151 in the morning peak hour and 182 in the evening peak hour. Any such uplift should still be satisfactorily accommodated on the network for the reasons set out in paragraph 7.18 above, noting that this is targeted 10 years after opening.

7.24 Through scoping discussions with stakeholders, it has been identified that the Skylink Express service, for example, may need capacity increases for peak hour services due to increased passengers travelling to the EMG2 Main Site, EMG1 and East Midlands Airport. Details of the funding approach are provided in the Sustainable Travel Strategy included in **Document DCO 6.6B** and could involve securing funds under the DCO or allocating funds to an EMG2 Bus Fund and drawing down from it earlier in the Travel Plan delivery process, with spend to be determined through the EMG2 Sustainable Transport Working Group.

7.25 Plot 16, included within the EMG1 works, will be covered by an occupier specific Travel Plan governed by the EMG1 DCO and will not be tied to the EMG2 DCO Framework Travel Plan or Sustainable Transport Strategy.

Construction Phase

Traffic Generation

7.26 Full details explaining the methodology of calculating the traffic generation during the construction phase are provided in the Construction Traffic Calculations Technical Note – document reference EMG2-BWB-GEN-XX-RP-TR-0013 Revision P3 (**Appendix 12**). This document has been formally agreed with NH and NCountyC (**Appendix 37**). Whilst LCountyC agreed the construction traffic numbers there is an outstanding matter in relation to minerals and waste under discussion. .

7.27 The total peak hour construction vehicle movements are shown in **Table 22** and include construction traffic associated with works on EMG2 Main Site, EMG1 Works and Highway Works. The calculations adopt a number of robust assumptions and assume that all construction components start in Year 1, whereas in reality components will be staggered. For example, enabling works/earthworks are required before buildings can be constructed.

Table 22. Total Construction Vehicle Traffic Generation

	Morning Peak Hour			Evening Peak Hour		
	Arrive	Depart	Two-way	Arrive	Depart	Two-way
HGV	17	17	34	3	3	6
LGV	3	3	6	1	1	2
Car	19	4	23	5	29	34
Vans	38	8	45	9	56	65
Total	**77**	**32**	**108**	**18**	**89**	**107**

7.28 The construction phase of the development is expected to generate up to 108 vehicle trips in the morning peak hour and 107 vehicle trips in the evening peak hour. These values have been tested in EMFM as part of an assessment of construction traffic flows, which is examined in greater detail in **Section 15**.

8. EAST MIDLANDS FREEPORT MODEL – SATURN MODELLING METHODOLOGY

Introduction

8.1 This section summarises the strategic transport modelling work and analyses the results of the forecast year scenarios.

East Midlands Freeport Model

8.2 As set out in the introduction, the EMFM was developed by AECOM for LCountyC as a cordon of the larger PRTM specifically to assess developments in the vicinity of East Midlands Airport. It has a base year of 2019 and is a highway assignment model for the typical morning and evening peak hour periods. The highway simulation network of the EMFM has been extended northward and model zones have been disaggregated for zones outside Leicestershire to provide greater detail in the East Midlands Freeport area. The EMFM uses the latest May 2024 TAG Databook to estimate trip making and growth in the future.

Local Model Validation Report

8.3 The first stage of the EMFM modelling involved a review of the base year model. This originally took place in November 2022, where detailed discussions were held with the TWG to agree the uncertainty log information and planning data assumptions, which are examined in detail in this section, to feed into the base model. An agreement on the committed development sites and infrastructure schemes to be included was originally reached during the TWG meeting on 9 March 2023, with minutes included at **Appendix 19** and include for the Land South of A50 Junction 1, Castle Donington development that was overturned at Appeal (19/01496/OUTM).

8.4 A Base Year Model Review report was issued by AECOM in November 2022. The Base Year model considered the zone system and network structure in the vicinity of EMG2 and the network coding along the A453 and several key junctions in the local area. It also considered the performance of the base model against observed counts and journey time data collated as part of the EMFM update. A copy of the Base Year Model Review is included at **Appendix 6**, which concluded that:

1. The coded highway network near the proposed development is satisfactory and representative of the 2019 road configurations.
2. The base year model performs well against observed counts and journey time data and meets TAG acceptability guidelines in terms of screen line and cordon performance, link flow performance and journey time validation performance.
3. The link flow performance resulted in a pass rate of 94.2% in the morning peak hour and 92.2% in the evening peak hour, which exceeds that 85% TAG criteria guidelines.
4. The journey time validation performance resulted in a pass rate of 89.1% in the morning peak hour and 90.6% in the evening peak hour and hence performs well.

5. In summary, the EMFM was considered to contain sufficient detail for a strategic assessment of the proposed development.

8.5 The base year model was re-run in August 2024 following an agreement by the TWG on the updated planning data assumptions within the uncertainty log. AECOM produced a Base Model Review Addendum which confirmed that there were no material changes from the conclusions of the original report and that the EMFM continues to be suitable for the strategic assessment of the EMG2 Project.

8.6 A copy of the Base Model Review Addendum is included at **Appendix 7**. The Addendum has been formally agreed with NH and NCountyC in the Stage 1A Modelling sign off sheet (**Appendix 33**), with LCountyC confirming they are content with the details by email on 11 December 2024 (**Appendix 30**).

Development Trip Distribution

8.7 As part of the original EMFM modelling, development trips were distributed using the following three methodologies:

1. an in built gravity model.
2. EMG1 parent zone
3. Pegasus Park parent zone.

8.8 LCountyC raised concern with using the Pegasus Park parent zone approach due to differences in the development mix within that zone and hence this option was disregarded. AECOM subsequently distributed the development traffic using the in built gravity model and EMG1 parent zone approaches and provided outputs in January 2023.

8.9 The information was circulated to the TWG in January 2023 which showed similarities in the two approaches. It was concluded that, because the gravity model is more familiar to the TWG, that it should be used in the forecasting year scenarios, as agreed by the TWG. However, concerns were raised with development distribution along roads leading to local villages including Diseworth, Castle Donington and Kegworth and the TWG requested that this be considered in the TA.

Forecast Years & Assessment Criteria

8.10 It has been agreed with the TWG that a forecast base year of 2022 be adopted (aligning with the year traffic surveys were undertaken) and forecast years of 2028 and 2038, reflecting the year of opening and post 10 years. The 2038 forecast year was agreed with the TWG within PRTM Proforma version 14 as being more appropriate, in accordance with Circular 01/2022 requirements as it exceeds the current end of Local Plan period of 2031. PRTM proforma v14 was formally agreed with NH and NCountyC within the Stage 1A Modelling sign off sheet (**Appendix 33**), whilst LCountyC confirmed it was acceptable by email on 11 December 2024 (**Appendix 30**).

8.11 The forecast year modelling has been undertaken in four stages, referred to as 'Stage 1A/2A modelling' and 'Stage 1B/2B modelling'. The stages adopt slightly different

planning data assumptions in the uncertainty logs and baseline traffic, as summarised below.

- **Stage 1A modelling** (Proforma v14, Uncertainty Log v7, included at **Appendix 8**) = 2028/2038 forecast years with and without EMG2, including, consented and committed sites as well as draft Local Plan allocation sites, East Midlands Intermodal Park (EMIP) and full redevelopment of the Ratcliffe on Soar Power Station site, part of which is authorised by a Local Development Order (LDO).
- **Stage 1B modelling** (Proforma v14a, Uncertainty Log v7a, included at **Appendix 38**) = 2028/2038 forecast years with and without EMG2, including consented and committed sites but excluding the draft Local Plan allocation sites, EMIP and Ratcliffe on Soar Power Station site redevelopment proposals beyond which is currently able to proceed under the LDO.
- **Stage 2A modelling** = as per Stage 1A but with the inclusion of the proposed Highway Works, details of which are presented in Section 12.
- **Stage 2B modelling** = as per Stage 1B but with the inclusion of the proposed Highway Works, details of which are presented in Section 12.

8.12 The difference between Stage 1A/2A and 1B/2B is the inclusion (1A/2A) or exclusion (1B/2B) of the EMIP site, Ratcliffe on Soar Power Station site redevelopment proposals over and above that permitted in the LDO, and the draft Local Plan allocation sites in the baseline, which represent the following projects:

- Isley Woodhouse (W1)
- Land North and South of Park Lane, Castle Donington (CD10)
- Land West of Hilltop Farm, Castle Donington (EMP89)
- Land North of J11/M42 (EMP82)
- Land North of Remembrance Way, Kegworth (EMP73)
- Land North of Derby Road, Kegworth (EMP73)

8.13 The TA and ES Assessment Methodology Technical Note – document EMG2-BWB-GEN-XX-RP-TR-0017 Revision P4 (**Appendix 17**) sets out the basis for the two stage approach to modelling and the policy context for it, which can be summarised as follows:

- Stage 1A/2A modelling complies with the Highway Authorities interpretation of the TAG M4 Guidance.
- Stage 1B/2B modelling complies with the guidance in Circular 01/2022 and Institute of Environmental Management and Assessment (IEMA) 2024.

8.14 The Stage 1A/2A modelling provides a highly robust assessment as it includes traffic from the draft Local Plan allocations within the baseline but not any associated highway mitigation because it is unknown at this stage of the process. This is with the exception of the proposed re-alignment of the A453 around the Isley Woodhouse draft allocation, which is included in the Uncertainty Log v7 because it forms part of the access strategy for that development.

8.15 The planning data assumptions and highway schemes included in the Uncertainty Log v7 (Stage 1A) and v7a (Stage 1B) were discussed and agreed with the TWG, based on information provided by the relevant Local Planning Authorities to LCountyC's NDI team. The committed and consented schemes and draft Local Plan allocations have been profiled out within the uncertainty logs in accordance with the Local Planning Authority's understanding of when they are likely to be built out.

8.16 As required by the TWG, the core scenario for this TA adopts the outputs from the Stage 1A modelling, inclusive of draft Local Plan allocation sites, EMIP and the Ratcliffe on Soar Power Station site in the baseline. A sensitivity test is undertaken using Stage 1B modelling, excluding draft Local Plan allocation sites, EMIP and the Ratcliffe on Soar Power Station site. This TA therefore tests the following scenarios, with the 'with development' ones assessing both the 'core' and 'sensitivity' tests:

- 2022 forecast base year 'without development'
- 2028 forecast opening year 'without development'
- 2028 forecast opening year 'with development'
- 2038 forecast future year 'without development'
- 2038 forecast future year 'with development'
- 2028 forecast future year with development with mitigation.
- 2038 forecast future year with development with mitigation.

8.17 Planned development growth is accounted for within the 'without development' scenarios as per the agreed Uncertainty Log v7. The Uncertainty Log v7 was formally agreed, alongside PRTM Proforma v14, with NH and NCountyC within the Stage 1A Modelling sign off sheet (**Appendix 33**), whilst LCountyC confirmed it was acceptable by email on 11 December 2024 (**Appendix 30**).

8.18 The 'with development' scenarios include the development on both EMG2 Main Site and Plot 16 of EMG1. A scenario has not been undertaken that considers EMG1 traffic in isolation, which is being applied for separately via an MCO. However, section 6.9 of Chapter 6 of the ES (**Document MCO 6.6A**) considers the impacts of the EMG1 MCO in isolation confirming there would be no substantial or significant environmental impacts. As set out in **Table 13,** Plot 16 is expected to generate 53 two-way trips in the morning peak hour and 67 two-way trips in the evening peak hour, which equates to circa one per minute on average, and between 5.7% and 6.3% of the total EMG2 Project traffic. This would have a negligible impact on the network and would not trigger the requirement for strategic transport modelling on its own merit or result in a severe impact on the operation of the local highway network including EMG1 site access gyratory.

Committed Developments & Highway Infrastructure Schemes

8.19 The Uncertainty Log v7 (**Appendix 8**) includes a comprehensive list of committed developments, in addition to the draft Local Plan allocations. The overall list is extensive and includes a vast number of developments across the East Midlands. **Table 23** lists the larger committed housing developments, whilst **Table 24** includes the larger committed employment developments included in the uncertainty log in Northwest Leicestershire,

Rushcliffe, Broxtowe and South Derbyshire. The list below is not exhaustive; for example, Garendon Park in Charnwood is also included for in the actual detail included in the uncertainty log.

Table 23. Large Committed Housing Developments included in EMFM Base Model

District	Site Description	Quantum
North West Leicestershire	Money Hill North of Nottingham Road	2,050 dwellings
	Land off Grange Road (South East Coalville)	3,500 dwellings
	Land at Measham, Waterside	450 dwellings
	Land north of Standard Hill and West of Highfield Street, Coalville	400 dwellings
Rushcliffe	South of Clifton SUE	3,000 dwellings
	East of Gamston/North of Tollerton	4,000 dwellings
	Melton Road, Edwalton	1,700 dwellings
	Land north of Bingham	1,050 dwellings
Broxtowe	HS2 Innovation	3,693 dwellings
	Chetynd Barracks	1,500 dwellings
	Eastwood	1,250 dwellings
South Derbyshire	Wragley Way SUE	1,850 dwellings
	Boulton Moor SUE	1,255 dwellings
	Land west of Mickleover	1,306 dwellings
	Rykneld Road SUE	900 dwellings

Table 24. Large Committed Employment Developments included in EMFM Base Model

District	Site Description	Quantum
North West Leicestershire	Mercia Park	350,000sqm
	Beveridge Lane, Ellistown	199,018sqm
	EMG1 Strategic Rail Freight Interchange	2,220 jobs
	EMDC	122,610sqm
	DHL East Midlands Airport	83,445sqm
	Money Hill	15.91ha
Rushcliffe	Fairham Pastures, Clifton	100,000sqm
	East of Gamston/North of Tollerton	12ha
	Land north of Bingham	14.16ha
Broxtowe	HS2 Innovation Campus	170,402sqm
	Beeston – Boots	100,000sqm

8.22 In addition to committed developments, the uncertainty log includes a number of committed highway improvement schemes. The majority of these were already coded in EMFM but during discussions with the TWG, three additional schemes on the A52 near Nottingham were asked to be included in the base model by NCountyC and NH (A52/A60 Nottingham Knight roundabout, A52/A606 Wheatcroft Island and A52/A5011 Gamston roundabout).

8.23 NCountyC were able to provide general arrangement drawings of the improvement schemes but signal timing information was unavailable. Following on-going conversations with NH seeking to obtain the signal timing information, BWB adopted a different methodology to calculate the green times, full details of which are included in an email dated 23 August 2024 (**Appendix 39**). A summary of the approach is provided below.

1. As EMFM data provides entry/exit flows for each arm but not turning counts, a furnessing exercise was undertaken to determine turning proportions, using an agreed methodology.
2. Each junction was split into individual streams, typically including an approach arm and the opposing lanes on the circulatory.
3. Traffic was assigned to each lane using the turning proportions determined through the furnessing exercise. Where multiple lanes allow for the same direction of travel, flows were split equally across each lane.
4. A percentage of the maximum lane flow for each arm in the same stream was calculated. For example, if the heaviest flow is 100 vehicles on an entry arm lane

and 150 vehicles on a circulatory lane, then the percentage split would be 40% (entry arm) and 60% (circulatory).

5. A base cycle time of 60 seconds was adopted for streams with two stages and streams with more than two stages adopted a cycle time of 90 seconds.
6. Intergreens were calculated based on geometries using the supplied drawings.
7. The total green times were calculated by subtracting the intergreen time from the total cycle time.
8. The remaining green time was then allocated to each stage stream in line with the percentage split calculated at point 4.

8.24 By adopting the above methodology, green times for each stream for the three junctions were determined. These provided a reasonable estimation of green times in the absence of any further information, which AECOM took on board in the EMFM modelling. This approach was discussed with the TWG at the August and September 2024 meetings, as set out in the corresponding meeting minutes at **Appendix 19**. The signal timing information was provided to AECOM on 27 August 2024, copying in all members of the TWG.

Covid-19 Assessment

8.25 The version of EMFM available at the time the assessment work was undertaken had a base year of 2019, which pre-dates the Covid-19 pandemic. An assessment has therefore been undertaken (with input from AECOM) to review traffic data across the road network in the vicinity of the EMG2 Project to understand whether traffic flows have changed from 2019 to 2023 and whether adjustments to the base model flows in EMFM is required to account for changes since the pandemic. Full details of the assessment, including a plan showing the locations of the traffic counters, are included in Covid Assessment Technical Note – document reference EMG2-BWB-GEN-XX-RP-TR-0014 Revision P1 at **Appendix 13**, agreed with NH and NCountyC, but not LCountyC, because this was around the time when they suggested EMFM 2023 was available for use, which would deal with any Covid-19 related matters. However, at that time EMFM 2023 had not been approved for use by NH.

8.26 The 2019 to 2023 flow comparison undertaken by both AECOM and BWB are presented in **Tables 25** and **26** respectively and compare weekday flows at six key links in the vicinity of EMG between 2019 and 2023. NB PCU's refer to Passenger Car Units.

Table 25. AECOM Analysis (April, May & June 2019 vs 2023 PCU flows)

Time Periods	2019 Flow	2023 Flow	Change (no.) (2023-2019)	Change (%) ((2023-2019)/2019)
AM peak hour (08:00-09:00)	29,107	28,429	-679	-2.3%
PM peak hour (17:00-18:00)	30,422	29,272	-1,150	-3.8%
Daily 24-hours (00:00-24:00)	448,565	442,725	-5,839	-1.3%

Table 26. BWB Analysis (March & October 2019 vs 2023 total flows)

Time Periods	2019 Flow	2023 Flow	Change (no.) (2023-2019)	Change (%) ((2023-2019)/2019)
AM peak hour (08:00-09:00)	18,877	18,691	-186	-1.0%
PM peak hour (17:00-18:00)	20,511	19,175	-1,336	-6.5%
Daily 24-hours (00:00-24:00)	333,639	326,897	-6,742	-2.0%

8.27 The data shows that 2023 traffic recorded across the six links was lower than what was recorded in 2019. The data shows the following range in traffic flows:

- Morning peak hour = -1.0% to -2.3% reduction in traffic
- Evening peak hour = -3.8% to -6.5% reduction in traffic
- Daily 24-hour = -1.3% to -2.0% reduction in traffic

8.28 The Covid Assessment Technical Note therefore concluded that the base flows in EMFM (2019) are robust and a sensitivity test adjusting the base flows is not required as it would reduce traffic flows to those in the current EMFM model.

8.29 The conclusions have been formally agreed with NH and NCountyC in the Stage 1C Modelling sign off sheet (**Appendix 40**). Whilst LCountyC do not dispute the numbers, they have requested a 2023 assessment within EMFM, which the Applicant has carried out as a sensitivity test and presented under a separate document submitted at Deadline 1. The PRTM 2023 modelling started following confirmation from NH on 19 May 2025 that they have approved the use of the 2023 version of PRTM. Following the NH approval, AECOM were tasked by the TWG with identifying an approach for the sensitivity test which they did on 16 July 2025. NH agreed the approach to be used on the 17 July 2025.

8.30 The details in the Covid Assessment Technical Note should also help address the concerns raised by Wings Communities Ltd (Protect Diseworth) on the impacts of Covid-19 during the statutory consultation by demonstrating how the base flows in the transport modelling work are robust.

Stage 1 Forecasting Reports

Stage 1A Modelling

8.31 AECOM issued the EMFM Forecasting Report for the Stage 1A modelling scenarios in February 2025 covering the 2022, 2028 and 2038 forecast year with and without development i.e. the core scenarios. A copy of the Forecasting Report is included in **Appendix 41.** NH issued a Technical Note on 21 February 2025 (**Appendix 42**) setting out a number of issues for BWB to consider in this TA. These were categorised into the following criteria and level of significance:

- **Observations** – points for consideration on an issue that would not significantly affect the model.
- **Comments** – the main function is to highlight such issues for attention in subsequent project stages
- **Substantive Issues** – which require corrective action. The audit will suggest the detailed action required to address the issue, although there should be freedom for the development team to use alternative approaches in order to achieve the required level of analysis.

8.32 BWB responded to the NH Technical Note on 16 April 2025 with a log as to how the substantive issues in particular will be addressed in this TA. The approach was formally agreed with NH on 16 May 2025 (**Appendix 43**) and has been taken into consideration in later sections of this TA.

8.33 An extract of the development trip generation adopted in EMFM at the EMG2 Main Site and EMG1 Works (i.e. Plot 16) are shown in **Table 27** and mirror the trip generation set out in **Section 7**.

Table 27. Development Trip Generation – Operational Traffic (EMFM Model)

	Light Vehicle Trips (in veh)			HGV Trips (in veh)			All (in veh)		
	Departing (Out)	Arriving (In)	Total	Departing (Out)	Arriving (In)	Total	Departing (Out)	Arriving (In)	Total
East Midlands Gateway Phase 2 Development - Employment B2 (60,000sqm)									
AM Peak hour (08:00 to 09:00)	34	226	**260**	8	10	**18**	43	235	**278**
PM Peak hour (17:00 to 18:00)	218	28	**246**	4	2	**6**	222	30	**252**
East Midlands Gateway Phase 2 Development - Employment B8 (340,000sqm)									
AM Peak hour (08:00 to 09:00)	44	411	**455**	78	65	**143**	122	476	**598**
PM Peak hour (17:00 to 18:00)	476	136	**612**	51	85	**136**	527	221	**748**
East Midlands Gateway Phase 2 Development Total									
AM Peak hour (08:00 to 09:00)	78	637	**715**	86	75	**161**	165	711	**876**
PM Peak hour (17:00 to 18:00)	694	164	**858**	55	87	**142**	748	250	**998**
East Midlands Gateway Phase 1 (Plot 16) Development Total									
AM Peak hour (08:00 to 09:00)	4	36	**40**	7	6	**13**	11	42	**53**
PM Peak hour (17:00 to 18:00)	42	12	**54**	5	8	**13**	47	20	**67**

8.34 The distribution of development trips (cars and HGVs separately) has been extracted from EMFM. The outputs show that HGVs are assigning via the SRN (M1, A50 and A42) and therefore reflecting the existing weight restrictions in place. Car traffic is predicted to assign more granularly across the both the SRN and local road network, depending on the origin and destination points.

8.35 **Table 28** summarises the distribution pattern for cars and HGVs from EMFM, as an average of both arrivals and departures from the development (both EMG2 Main Site and Plot 16 EMG1) during both 2028 and 2038 forecast years. Whilst an average has been taken, the distribution patterns are relatively similar in all scenarios. **Figure 20A** shows the locations of the routes.

Table 28. Development Distribution Pattern from EMFM

Route No.	Route	Average Distribution (car)		Average Distribution (HGV)	
		AM	PM	AM	PM
A	A50	6%	9%	16%	21%
B	M1 (N)	6%	6%	15%	13%
C	A453 (E) towards Nottingham	6%	8%	12%	11%
D	Hilton Hotel Lane	1%	1%	0%	0%
E	Derby Road	2%	2%	0%	0%
F	A6 Kegworth Bypass	11%	7%	4%	3%
G	M1 (S)	27%	30%	25%	24%
H	A42	6%	8%	26%	26%
I	Grimes gate, The Green east through Long Whatton	1%	2%	0%	0%
J	Grimes Gate, The Green, Smithy Lane	3%	2%	0%	0%
K	The Green, unnamed road towards A42	9%	7%	0%	0%
L	A453 (W) towards A42	5%	4%	0%	0%
M	Walton Hill	9%	6%	0%	0%
N	East Midlands Airport	7%	7%	1%	1%
O	EMG1	2%	1%	1%	0%

Figure 20A. Development Trip Distribution Routes



8.36 The outputs showed that development trips were being assigned along the more strategic routes and not significantly impacted by congestion and re-assignment through more local roads. There was 13% of car traffic in the morning peak hour and 12% in the evening peak hour routing along Grimes Gate or The Green near Diseworth. However, the EMFM plots showed that these related to drivers originating from villages to the south of the EMG2 Main Site, who would naturally choose those routes as they are most direct, rather than it being an issue of rat-running. Plots showing the distribution of development trips are shown in **Figures 21** and **22**.

Figure 21. Development HGV Flow Increases

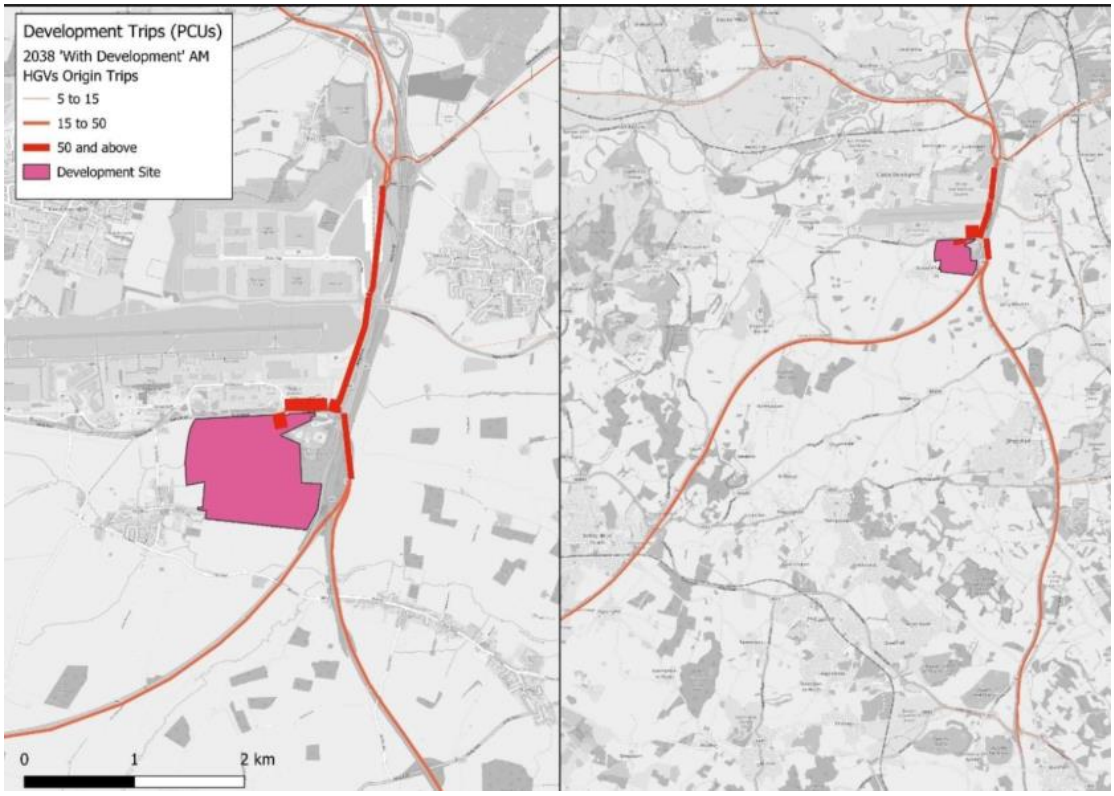
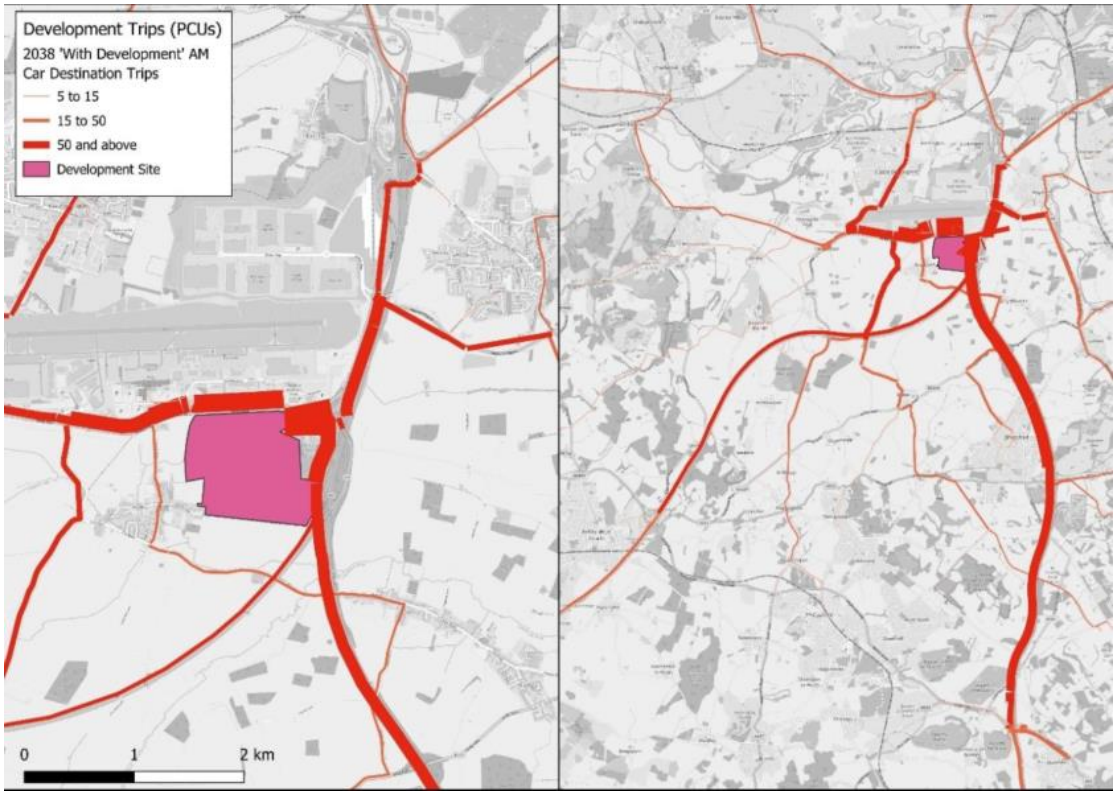


Figure 22. Development Car Flow Increases



8.37 There were discussions during the March 2023 and February 2025 TWG meetings (**Appendix 19**) in relation to traffic impacts along Castle Donington High Street. The EMFM outputs show that there is predicted to be car traffic increases through Castle Donington, which are predicted to route via the High Street rather than the bypass. It is understood that the High Street is a more attractive route in EMFM based on journey time, however from the public exhibition events in February and March 2025, local residents view was that traffic travelling between the A50 and A453 would use the bypass, as whilst it is slightly longer, it is quicker and incurs less delay and therefore it appears this is not accurately represented in EMFM. Should this be a concern to LCountyC, then additional signage on the approach to the roundabout at the southern end of the bypass can be introduced to direct traffic via the bypass rather than the High Street.

8.38 The EMFM modelling suggests that there will be limited impacts of cars travelling through nearby villages including Diseworth, Long Whatton and Kegworth. However, these are relatively small and largely comprise trips originating from those villages, rather than an issue of rat-running. Notwithstanding this, details of the change in traffic through the villages are considered as part of the proposed Highway Works presented in **Section 13** with confirmation of the actual flow increases.

8.39 During the statutory consultation, DCityC requested for the impacts along the A50 corridor to be considered. AECOM has provided development trip distribution plots for this part of the network, which are included at **Appendix 44**, along with plans showing where on the A50 network the flows have been taken from. **Table 29** summarises the development traffic flows, separating light vehicles, HGVs (PCU) and total vehicles (PCU). It should be noted that 'EB' refers to the eastbound direction, whilst 'WB' refers to the westbound direction.

Table 29. Development Trip Distribution along A50 Corridor

EMGP2 Development-related Trips	Light Vehicles				HGVs (in PCUs. Divide by 2 to convert to vehicles)				Total (PCUs)			
	2028		2038		2028		2038		2028		2038	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
A50 EB	8	57	7	54	31	19	30	18	39	76	37	72
A50 WB	33	13	28	12	23	29	23	29	56	42	51	41
2-way	41	70	35	66	54	48	53	47	95	118	88	113

8.40 The data shows that the development would generate up to 118 additional PCUs along the A50 corridor, of which 48 would comprise HGV PCUs, during the 2028 evening peak hour (equating to 94 vehicles). The additional volume of traffic is therefore small compared to baseline traffic on the A50, which is the reason junctions to the west of A50 Junction 1 fall outside the Area of Interest (AoI).

8.41 EMFM assigned 7% of development car trips to/from East Midlands Airport. This is a standard approach in EMFM because the airport is a zone in the model which attracts traffic. However, it was agreed with the TWG that this figure is unrealistic and for this 7% to be re-distributed across the seven highest routes. The final agreed distribution pattern presented to the TWG by email on 3 March 2025 is presented in **Table 30**, which NH

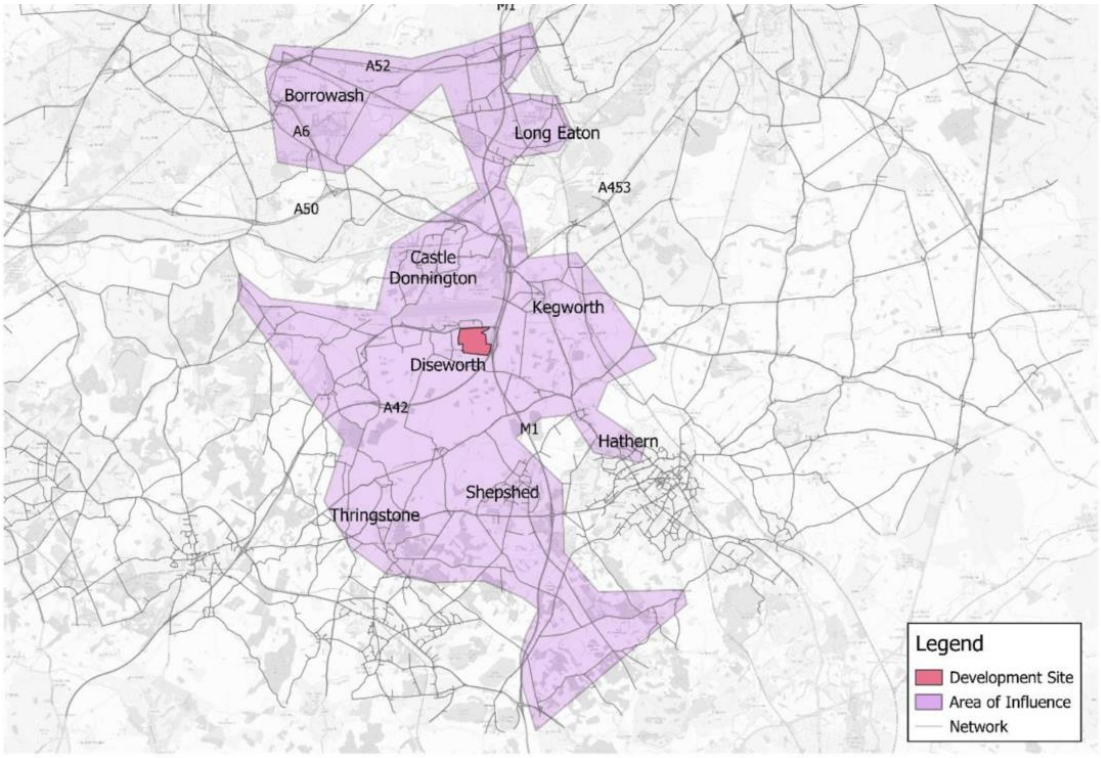
confirmed is acceptable by email on 25 March 2025. The routes are shown at **Figure 20A**. This matter was also discussed with the TWG at the March 2025 meeting, with the minutes included at **Appendix 19**.

Table 30. Amended Development Distribution Pattern

Route No.	Route	Average Distribution (car)		Average Distribution (HGV)	
		AM	PM	AM	PM
A	A50	7%	10%	16%	21%
B	M1 (N)	7%	7%	15%	13%
C	A453 (E) towards Nottingham	7%	9%	12%	11%
D	Hilton Hotel Lane	1%	1%	0%	0%
E	Derby Road	2%	2%	0%	0%
F	A6 Kegworth Bypass	12%	8%	4%	3%
G	M1 (S)	28%	31%	25%	24%
H	A42	6%	9%	26%	26%
I	Grimes gate, The Green east through Long Whatton	1%	2%	0%	0%
J	Grimes Gate, The Green, Smithy Lane	3%	2%	0%	0%
K	The Green, unnamed road towards A42	10%	8%	0%	0%
L	A453 (W) towards A42	5%	4%	0%	0%
M	Walton Hill	10%	6%	0%	0%
N	East Midlands Airport	0%	0%	1%	1%
O	EMG1	2%	1%	1%	0%

8.42 EMFM identified an Area of Influence derived by links forecast to experience a change in flow of +/-5% and +/- 30 PCU's between 2028 and 2038 'with development' and 'without development' scenarios. An extract of the AoI is included at **Figure 23.**

Figure 23. EMFM Stage 1A Modelling Area of Influence



8.43 The AoI extends to the following parts of the network:

- A453 including Finger Farm roundabout
- M1 Junction 25
- A42 Junction 14
- A52 Brian Clough Way between M1 Junction 25 and Raynesway Interchange
- A6 Alvaston Bypass between Raynesway Park Interchange and Thulston Roundabout
- Local roads in and around Borrowash, Long Eaton, Castle Donington, Kegworth, Diseworth, Hathern, Thringston and Shepshed.

8.44 The AoI does not extend as far as the LCityC or NCityC regions and so impacts on that part of the network will be negligible. The AoI does extend to the eastern side of DCityC near Borrowash, which are considered as part of determining the study area, which is detailed later in the TA.

8.45 EMFM provided node volume-capacity (V/C) ratios showing locations where forecast flows are approaching or exceeding capacity. V/C ratios exceeding 85% indicate where the network is under stress and a possibility of a reduction in speeds and increase in delays. The V/C ratio plots highlight the worst-case node at junctions and show that there are expected to be capacity issues between the EMG2 Main Site access on the A453 and M1 Junction 24, as well as the A453/Walton Hill signal-controlled junction to the west. **Figures 24** and **25** show the V/C ratios for the 2038 without development (left

part of circle) and 2038 with development scenario (right part of circle) during the morning and evening peak hours. V/C ratios for the 2028 opening year are presented in the Forecasting Report at **Appendix 41** and show similarities in predicted junction performances.

Figure 24. Stage 1A Modelling Volume-Capacity Ratios (morning peak hour)

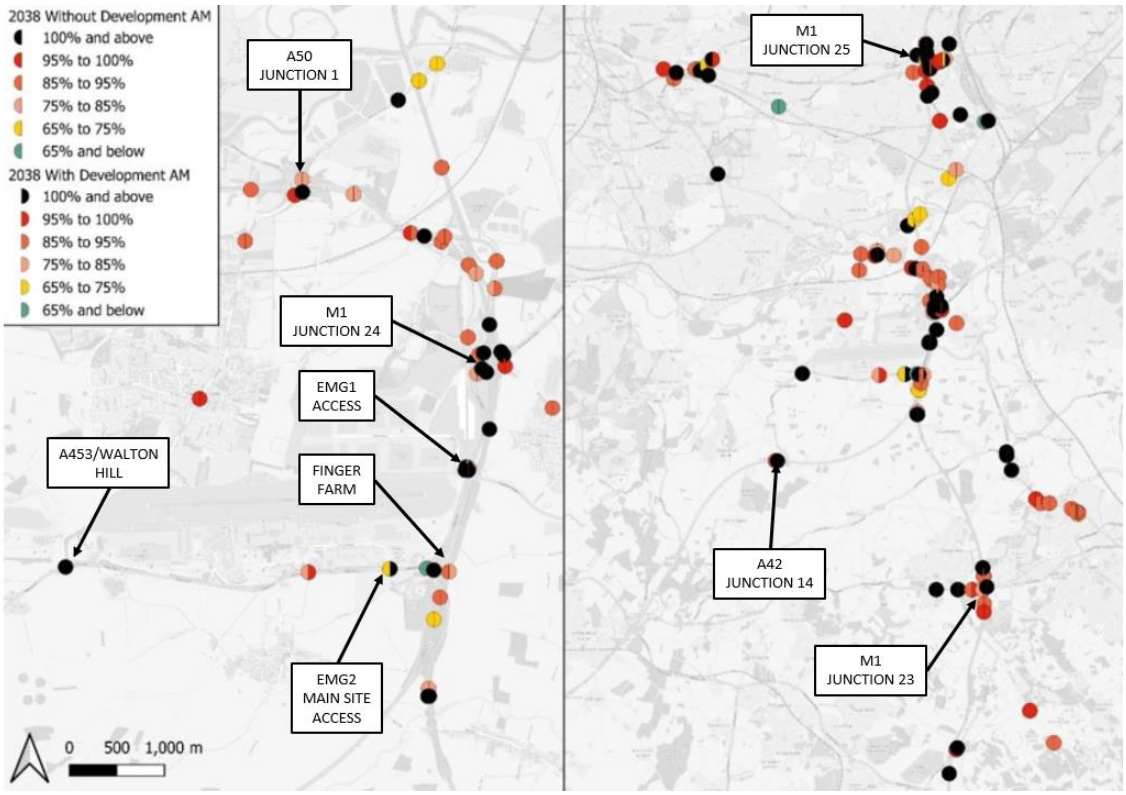
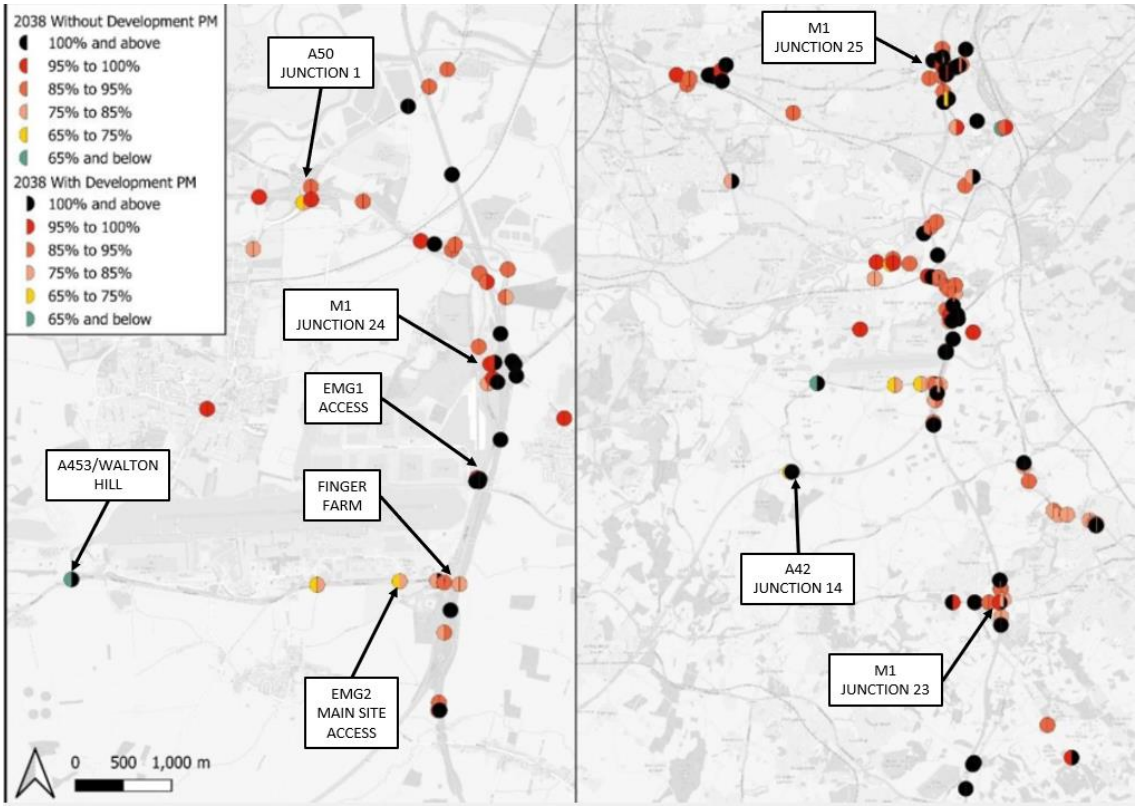


Figure 25. Stage 1A Modelling Volume-Capacity Ratios (evening peak hour)



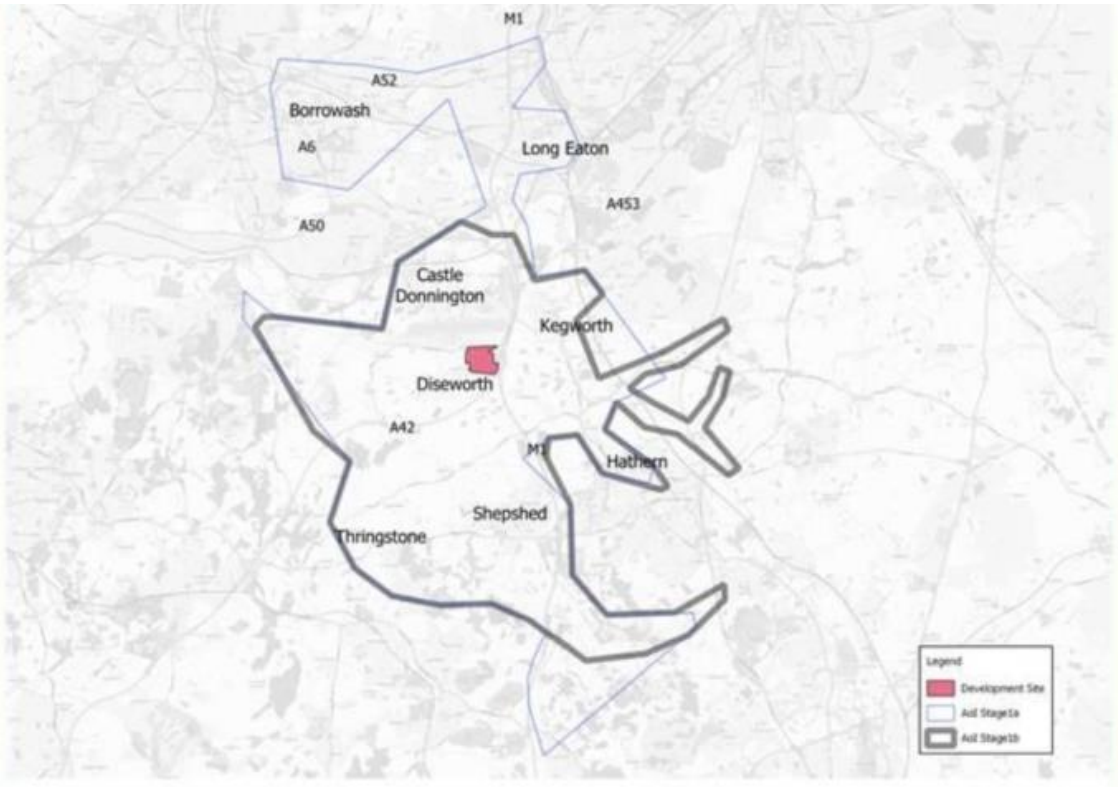
8.46 The outputs from EMFM were used to determine the study area for the detailed junction modelling.

Stage 1B Modelling

8.47 AECOM issued the EMFM Forecasting Report Addendum covering the Stage 1B modelling in March 2025. A copy of the Forecasting Report Addendum is included in **Appendix 45.**

8.48 The results of the Stage 1B modelling were similar to Stage 1A in terms of flow changes, predicted V/C ratios and forecast delays, with issues continuing to be identified at Finger Farm, EMG1 access, M1 Junction 24 and the A453/Walton Hill junctions in particular. The AoI was slightly smaller compared to Stage 1A and did not extend as far north around areas of Borrowash and Long Eaton. A comparison of the AoI is shown in **Figure 26**.

Figure 26. Comparison of Area of Influence between Stage 1A and 1B modelling



8.49 The Stage 1B modelling outputs are being used as a sensitivity test to the core Stage 1A modelling outputs.

Study Area

8.50 The EMFM model was used to identify junctions that may operate at or over capacity in the future and which require further detailed assessment using the appropriate industry standard modelling software. A list of 27 junctions was identified within the Stage 1A AoI as being in close proximity to the EMG2 Main Site and EMG1 Works or forecast to exceed capacity and for the potential to be impacted by the EMG2 Project based on the Stage 1A EMFM modelling.

8.51 The list of 27 junctions was reviewed in further detail considering the worst-case V/C ratios and change in traffic as a result of the development traffic using the Stage 1A modelling outputs. This then determined whether further detailed assessment was required. **Table 31** summarises the assessment undertaken, which resulted in 16 of the 27 junctions needing further detailed assessment, either because they are expected to exceed capacity or experience a significant change in traffic from the EMG2 Project. The remaining 11 junctions were removed from the study area on the basis that they would either operate well within capacity and/or the change in traffic from the EMG2 Project would be low. This information was shared with the TWG by email on 3 March 2025.

Table 31. Transport Assessment Study Area

No.	Junction	2038 VoC (%)				Traffic Flows (Total Vehicles)						Included within the Study Area?	Comments	Proposed Modelling Programme
		AM		PM		AM			PM					
		Without Dev	With Dev	Without Dev	With Dev	Without Dev	With Dev	Difference	Without Dev	With Dev	Difference			
1	A453 Site Access Roundabout, Leics	-	-	-	-	-	-	-	-	-	-	✗	Removed from scheme	
2	A453 / Hunter Road Roundabout, Leics	73.77%	101.36%	65.77%	84.83%	2458	3057	599	1993	3186	1193	✓		VISSIM
3	Finger Farm Roundabout, Leics	101.36%	104.95%	84.91%	85.77%	4646	4854	208	4212	4620	408	✓		VISSIM
4	A453 / EMGP1 Signal Junction, Leics	103.07%	102.54%	101.92%	101.96%	4779	4875	96	4977	5260	283	✓		VISSIM
5	M1 J24, Leics (SRN)	117.82%	119.79%	108.09%	108.78%	11823	11842	19	12215	12639	424	✓		VISSIM
6	A453 / East Midlands Airport Signal Junction, Leics	82.81%	95.98%	68.72%	75.25%	1878	1823	-55	1898	2099	201	✓		LINSIG
7	A453 / Grimes Gate, Leics	54.86%	68.40%	41.77%	57.34%	1485	1657	172	1325	1496	171	✓	Junction expected to operate with VoC of less than 85% but to be modelled given its proximit	JUNCTIONS 10
8	A453 / The Green, Leics	38.43%	55.43%	32.60%	40.55%	1904	2102	198	1833	2003	170	✓	Junction expected to operate with VoC of less than 85% but to be modelled given its proximit	JUNCTIONS 10
9	A453 / East Midlands Airport Roundabout, Leics	73.51%	77.07%	55.18%	60.30%	2112	2049	-62	2199	2452	253	✓	Junction expected to operate with VoC of less than 85% but to be modelled given its proximit	JUNCTIONS 10
10	A453 / Walton Hill, Leics	106.27%	109.76%	59.62%	100.17%	3198	3194	-4	3367	3478	111	✓		LINSIG
11	A42 J14 Eastbound off slip, Leics (SRN)	28.32%	27.22%	34.28%	36.66%	1208	1367	159	1203	1256	53	✗	Well within capacity	-
12	A42 J14 Roundabout with Top Brand / Gelscoe Lane, Leics (SRN)	37.15%	47.35%	17.47%	40.39%	1157	1343	186	1198	1386	188	✓		JUNCTIONS 10
13	M1 J23, Leics (SRN)	102.28%	102.35%	76.06%	75.51%	6040	6104	63	6211	6355	145	✓		LINSIG
14	A50 Junction 1, Leics (SRN)	101.62%	101.35%	99.45%	98.69%	5191	5285	94	5107	5196	89	✓		LINSIG
15	A50 Junction 2, Derbys (SRN)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	✗	Junction outside of AoI	-
16	M1 J25, Notts (SRN)	120.54%	106.15%	114.04%	113.39%	7222	7276	54	7655	7763	108	✓		LINSIG
17	Beacon Road / Shepshed Road Priority Crossroads, Woodhouse Eaves,	97.27%	96.52%	92.67%	93.29%	2668	2693	25	3039	3099	60	✗	Change in traffic flows minimal, hence has been removed from study area	-
18	A6 Derby Road / Wheaton Road / Zouch Road Signal Junction, Hathern,	107.50%	109.07%	78.91%	83.79%	2695	2725	30	3015	3126	111	✗	Change in traffic flows minimal, hence has been removed from study area	-
19	Station Road / Broad Rushes Roundabout, Castle Donington, Leics	87.35%	88.80%	81.86%	83.43%	2629	2716	87	2359	2440	81	✓		JUNCTIONS 10
20	High Street / Park Lane / Delven Lane Signal Junction, Castle Donington	96.84%	96.73%	98.01%	98.18%	1063	1116	53	939	955	16	✗	Overall reduction in traffic, hence has been removed from study area	-
21	A453 / Kegworth Road Slip Roads, Ratcliffe on Soar, Notts	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	✓	Junction outside of AoI, but requested by NH	JUNCTIONS 10
22	A453 / Barton Lane / West Leake Lane Slip Roads, Ratcliffe on Soar, Not	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	✓	Junction outside of AoI, but requested by NH	JUNCTIONS 10
23	B591 / Whitewick Road Signal Junction, Copt Oak, Leics	#N/A	#N/A	#N/A	#N/A	2089	2109	20	1692	1727	35	✗		-
24	A6/London Road, Kegworth	42.94%	44.21%	44.06%	66.38%	1639	1687	48	1920	2008	88	✗	Well within capacity and mitigation strategy expected to reduce traffic flows further	-
25	The Green/Lady Gate, Diseworth	15.30%	17.65%	17.95%	17.94%	600	726	126	634	717	83	✗	Well within capacity and mitigation strategy expected to reduce traffic flows further	-
26	Tamworth Road/Fields Farm Road roundabout, Long Eaton	81.81%	82.64%	84.70%	102.23%	2316	2311	-5	2436	2438	2	✗	Change in traffic flows minimal	-
27	Nottingham Road/Draycott Road, Borrowash	62.17%	51.85%	87.58%	91.57%	1738	1704	-34	1525	1539	14	✗	Change in traffic flows minimal	-

8.52 The 16 junctions in the study area, which were set out in **Section 4**, are listed below with the locations shown on **Figure 27** (NB Junction 1 was removed because it was originally intended that two main access points might be provided to the EMG2 Main Site which is no longer the case, as detailed within Pages 19 to 22 of the Design Approach Document – **Doc DCO 5.3 / MCO 5.3**).

- Junction 2: A453/Hunter Road Roundabout (Leicestershire)
- Junction 3: Finger Farm Roundabout (National Highways)
- Junction 4: A453/EMGP1 Signal Gyratory (National Highways)
- Junction 5: M1 Junction 24 (National Highways)
- Junction 6: A453/East Midlands Airport Signal Junction (Leicestershire)
- Junction 7: A453/Grimes Gate Priority Junction (Leicestershire)
- Junction 8: A453/The Green Priority Junction (Leicestershire)
- Junction 9: A453/East Midlands Airport Roundabout (Leicestershire)
- Junction 10: A453/Walton Hill Signal Junction (Leicestershire)
- Junction 11: A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Roundabout (National Highways)
- Junction 12: M1 Junction 23 (National Highways)
- Junction 13: A50 Junction 1 (National Highways)
- Junction 14: M1 Junction 25 (National Highways)
- Junction 15: Station Road/Broad Rushes Roundabout (Leicestershire)
- Junction 16: A453/Kegworth Road dumbbell Roundabouts (Nottinghamshire)
- Junction 17: A453/Barton Lane/West Leake dumbbell Roundabouts (Nottinghamshire)

Figure 27. Location of Junctions in Study Area



9. DETAILED JUNCTION MODELLING METHODOLOGY

Introduction

9.1 The EMFM modelling undertaken by AECOM provided a general overview of the network performance but requires further standalone and microsimulation junction modelling to test junctions in detail.

9.2 Detailed junction models have been created for the 16 junctions in the study area. The following section summarises the modelling programmes used and the model validation process that has been undertaken with the TWG.

9.3 **Table 1** references the VISSIM Local Model Validation Report (LMVR) Technical Note – document reference EMG2-BWB-GEN-XX-RP-TR-0006_VISSIM_LMVR-S2-P03 (**Appendix 4**) which was signed off by NH, with NCountyC and LCountyC deferring to NH's review and approval. In the immediate lead up to the non statutory consultation process, NH raised an issue with HGV matrices which required an update for the evening peak hour. Whilst this resulted in HGV flows reducing, regardless of this, the base VISSIM model needed revalidating as a result. This is set out in an updated version of the VISSIM LMVR Technical Note - document reference EMG2-BWB-GEN-XX-RP-TR-0006_VISSIM_LMVR-S2-P06, included in **Appendix 46**.

Baseline Traffic Surveys

9.4 A wide range of traffic surveys have been collected to provide a detailed base for the assessment work. These include:

- Manual classified turning counts
- Queue length surveys
- TomTom journey time data.

9.5 Traffic flows for the M1 and A42 mainlines were obtained from the Webtris database for the same day as the surveys (where possible).

9.6 Manual classified turning count surveys were commissioned at all off-site junctions between the hours of 0700-1000 in the morning and 1600 to 1900 hours in the evening. This was to identify the network peak hour across the three-hour period for robustness.

9.7 Vehicle classification was broken down into the following types:

- Pedal cycle
- Motorcycle
- Car
- LGV – delivery vans excluding vehicles with twin rear tyres
- OGV1 – goods vehicles with two axles with twin tyres, three axle (rigid), tractors, ambulanced or road rollers

- OGV2 – goods vehicles with three axles (articulated), four axles or more (rigid or articulated
- Bus

9.8 Queue lengths recorded the maximum queue (number of vehicles) per lane at 5-minute intervals.

9.9 TomTom journey time survey was obtained at 15-minute intervals across the VISSIM network area for neutral days within November 2023 during the peak hours. Full details are provided in the VISSIM LMVR Technical Note – document reference EMG2-BWB-GEN-XX-RP-TR-0006_VISSIM_LMVR-S2-P06 (**Appendix 46**) whilst a list of the 20 journey time routes is provided below.

- Route 1 – A50 to M1 South
- Route 2 – M1 North to M1 South
- Route 3 – A453 Remembrance Way to A42
- Route 4 – Kegworth Bypass to A42
- Route 5 - M1 North to A42
- Route 6 – M1 North to Derby Road
- Route 7 – A453 Remembrance Way to A453 EMA
- Route 8 – M1 North to A453 Remembrance Way
- Route 9 – Kegworth Bypass to M1 South
- Route 10 – M1 South to Kegworth Bypass
- Route 11 – Derby Road to M1 North
- Route 12 – M1 South to A50
- Route 13 – M1 South to M1 North
- Route 14 – A42 to A453 Remembrance Way via A453
- Route 15 - A42 to Kegworth Bypass
- Route 16 – A453 EMA to A453 Remembrance Way
- Route 17 – A42 to A50 via A453
- Route 18 – A42 to A453 Remembrance Way via M1
- Route 19 – M1 South to A453 Remembrance Way via M1
- Route 20 – M1 South to Derby Road via M1

Local Junction Modelling

9.10 Industry standard modelling software within Junctions 11 (PICADY and ARCADY) and LinSig has been used to test the capacity of most junctions across the study area. This includes the following list.

- Junction 6: A453/East Midlands Airport Signal Junction
- Junction 7: A453/Grimes Gate Priority Junction
- Junction 8: A453/The Green Priority Junction
- Junction 9: A453/East Midlands Airport Roundabout
- Junction 10: A453/Walton Hill Signal Junction (Leicestershire)
- Junction 11: A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Roundabout
- Junction 12: M1 Junction 23
- Junction 13: A50 Junction 1
- Junction 14: M1 Junction 25
- Junction 15: Station Road/Broad Rushes Roundabout
- Junction 16: A453/Kegworth Road dumbbell Roundabouts
- Junction 17: A453/Barton Lane/West Leake dumbbell Roundabouts

9.11 Prior to testing the forecast year traffic flows, each model underwent a validation process to demonstrate it reflected observed conditions and survey results. At this time, the priority junctions were built in Junctions 10 (but have subsequently been updated to Junctions 11, albeit without any changes to the geometric inputs and hence results). The details were presented within the Modelling Validation Technical Note EMG2-BWB-GEN-XX-RP-TR-0007 Revision P4, included at **Appendix 5**.

9.12 In terms of the Junctions 11 models, the validation process sought to demonstrate how modelled versus observed queues on each arm are within 2 PCU's, which was deemed to represent a good level of validation. For the LinSig models, the validation process followed the requirements of the Transport for London modelling guidelines (as this is the only published guidelines for validating LinSig models and is adopted for projects outside of London) and sought to demonstrate how modelled Degree of Saturations are within 5% of observed values from Degree of Saturation surveys.

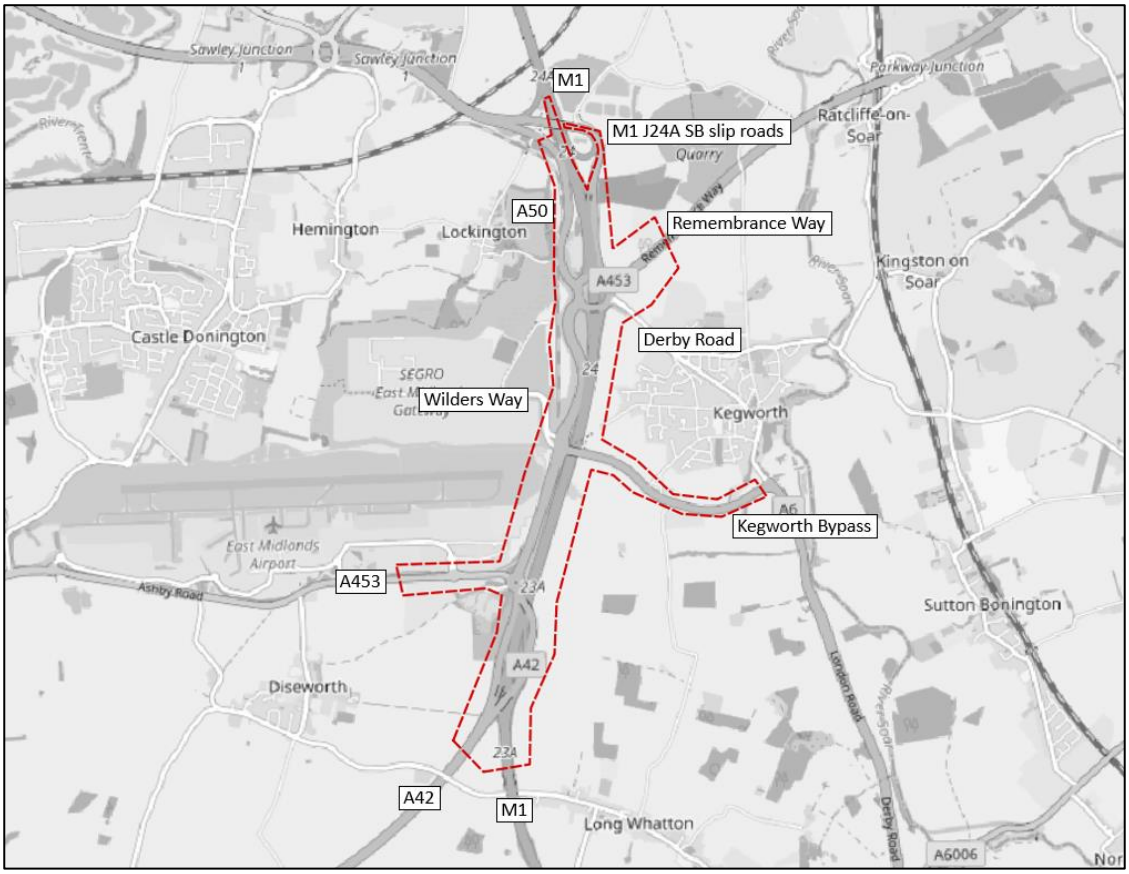
9.13 The Modelling Validation Note Technical Note confirmed that all the Junctions 11 and LinSig models validated within the thresholds and are considered suitable to take forward to test the future forecast traffic flows. This was agreed with NH within a Technical Note dated 5 June 2024 (**Appendix 47**) who reviewed all 12 junctions, including those on the local road network and have formally sign the 'Stage 1D Modelling' sheet covering this document (**Appendix 48**). NCountyC confirmed that they agree with the validation of Junction 16 and 17, which are located on the A453 Remembrance Way within their administrative area, by email on 11 June 2024. LCountyC reviewed the models and provided feedback by email on 15 August 2025 raising only one comment on the Station Road/Broad Rushes roundabout Junctions 11 model, which has been taken on board in the TA. Therefore, the base Junctions 11 and LinSig models have been agreed by all parties.

VISSIM Modelling

9.14 It was agreed with the TWG that the following five junctions are tested using microsimulation VISSIM modelling because of their proximity to the SRN. The VISSIM model extent is shown at **Figure 28**.

- Junction 1: A453/ EMG2 Main Site Access Roundabout
- Junction 2: A453/Hunter Road Roundabout
- Junction 3: Finger Farm Roundabout
- Junction 4: A453/EMGP1 Signal Gyratory
- Junction 5: M1 Junction 24

Figure 28. VISSIM Model Extent



9.15 A VISSIM network model of base year 2012 was available but outdated and therefore it was agreed with the TWG that this model be cordoned and re-validated to a base year of 2022. The strategy for updating the base VISSIM model was outlined in a VISSIM Scoping Note - document reference EMG2-BWB-GEN-XX-RP-TR-0003 Revision P3 (**Appendix 1**), which has been formally approved by NH within the Stage 1A Modelling sign off sheet (**Appendix 33**). LCountyC and NCountyC agreed to defer to NH on this element.

9.16 The November 2022 manual classified turning count surveys, alongside Webtris data on the M1 and A42 mainlines were used to validate the base VISSIM model. An origin-destination (OD) matrix was used to understand traffic movements through the VISSIM network, derived through a LinSig model.

9.17 The VISSIM LMVR Technical Note was issued to the TWG in consultation with NH consultants. The report concluded that the model calibrates well against observed and modelled turning movements during both peak hours at 15-minute intervals in line with DfT guidelines and as a result satisfied the standard criteria. The base model was subsequently agreed with NH within the Stage 1A Modelling sign off sheet (**Appendix 33**) with LCountyC and NCountyC agreeing to defer to NH on this element. As set out in paragraph 9.3, the base model has since been updated.

Deriving Future Forecast Traffic Flows

9.18 EMFM is validated at link flow level but not turning movement level and therefore a furnessing process has been carried out to derive future forecast traffic flows to be input into the Junctions 11, LinSig and VISSIM models.

9.19 BWB prepared a Modelling Furnessing Approach Technical Note – document EMG2-BWB-GEN-XX-RP-TR-0004 Revision P5 (**Appendix 2**) which was agreed by NH and NCountyC. LCountyC provided comments by email on 1 August 2025 which raised no concern with the methodology adopted. This included for all baseline survey information and set out the methodology for deriving the future forecast traffic flows, which in summary involved the following process:

- Column adjustment: calculate turning counts across columns using survey data proportions in combination with the target link flow out of each arm.
- Sum row: calculate the sum of each arm row total.
- Row adjustment: calculate turning counts across rows using survey data proportions in combination with the target link flow into each arm.
- Sum column: calculate the sum of each column.
- Round all values in the matrix to the closest integer.
- Update sums for column and row total.
- Repeat the above 'x' number of iterations until the flows converge.

9.20 The macro has been built to run the furnessing 20 times for each matrix, however it should be noted that every time the macro is executed, it runs an additional 20 times. The furnessing spreadsheet therefore has been run for at least 20 iterations. The furnessing methodology has been double constrained, i.e. both origin and destination and the traffic flow matrices are furnessed until link flows are within a GEH of 5 (which is the Geoffrey E. Havers formula typically used in transport planning/traffic engineering to compare the accuracy of traffic models). This has been calculated by taking the absolute difference between the calculated target link flow and furnessed link flow. Should these be higher than a GEH of 5, the macro is executed until convergence is achieved. The furnessing process has been undertaken for the assessment years 2028 and 2038.

9.21 Due to high volumes of traffic that travel on the motorways and major A-roads there is the potential for these numbers to affect the furnessing outputs. As the furnessing process is based on turning proportions, the large motorway flows could cause the furnessing to assign traffic that would use the junctions to the motorway mainline movements instead.

9.22 Therefore, the M1 and A42 mainline flows were removed and furnessed seperately to avoid any re-assignment and subsequently added back into the matrix after the furnessing process was complete.

9.23 EMFM, as a strategic highway model, re-routes traffic in response to congestion. To ensure the true impact of the development is modelled and fully mitigated, the development traffic was originally extracted from the EMFM model, and assigned manually to exclude the effects of any rerouting. The modelling therefore presents a highly robust assessment of the full impact of the proposed development trips.

9.24 Copies of the furnessing spreadsheets were sent to the TWG on 4 April 2025. Comments were received from NH on 23 April 2025 and 18 June 2025, which have been taken on board, as well as conversations in subsequent meetings. An updated version of the Modelling Furnessing Approach Technical Note – document EMG2-BWB-GEN-XX-RP-TR-0004 Revision P7 (**Appendix 49**) has been produced, This is set out in further detail in **Section 12**, but is where all traffic flows used to inform the subsequent capacity assessment work can be found, given that GIS outputs from EMFM cannot be appended to the TA.

10. HIGHWAY IMPACT ASSESSMENTS: CORE SCENARIO (STAGE 1A MODELLING)

Introduction

10.1 The following section presents the results of the detailed junction modelling assessments for the Stage 1A forecast year core scenarios using VISSIM, Junctions 11 and LinSig software at all 16 junctions. This includes draft Local Plan allocations, EMIP and the Power Station in the baseline but without any mitigation which is likely to accompany that development, because it is unknown at this stage. The following results consider the impacts of the EMG2 Works (including Plot 16) on top of the forecast baseline position that includes traffic from the draft Local Plan allocations, EMIP and Ratcliffe on Soar.

10.2 For many junctions, certains arms are referred to as North (N), East (E), South (S) or West (W). In these instances, this relates to the side of the junction the arm is located at, rather than the direction of travelling traffic. For example, A453(E) refers to the eastern arm on the A453. This is the case for all transport modelling sections within the remainder of the TA.

Measurement of Capacity

10.3 The primary measurement of capacity at priority controlled junctions in Junctions 11 is the Ratio of Flow to Capacity (RFC), which is a value calculated for each arm of the junction. Typically, a value of 0.85 or less on all arms is seen to be an acceptable criterion for new junction design, whilst existing junctions within the highway network may typically operate with some or all arms having a RFC value of, or close to 1.0. This essentially means that the specific arm (or arms) is saturated, resulting in the potential for continuous queueing on approach to the give way line during the peak time segments.

10.4 The primary measurements of capacity at signal controlled junctions in LinSig are Degree of Saturation (DoS) and Practical Reserve Capacity (PRC). DoS gives a ratio of the vehicle arrival rate to the relative saturation flow rate, where a value over 100% indicates that demand is greater than capacity, whilst a value of 90% or less is considered to provide an acceptable design criterion. PRC provides a measure of the capacity of the junction as a whole, with a positive value indicating spare capacity available.

10.5 The primary measurement of capacity in VISSIM is to conduct a journey time analysis between the without development and with development scenarios along with a comparson of predicted queues and a series of network perormanec indicator such as average delays, average speeds, number of vehicle entering the network and latent demand. Judgement is then required as to where significant impacts are expected to occur and hence where mitigation needs to be focussed.

Measurement of Impacts

10.6 The impacts of the Highway Works which are an NSIP in their own right and the ability of those works to accommodate the impact of the EMG2 Project will be assessed against the policy contained within Paragraph 5.283 of the NPS, which states:

> *"The applicant should provide evidence that the development improves the operation of the network and assists with capacity issues"*

10.7 In addition the impacts of the EMG2 Project will be assessed against the policy contained within Paragraph 116 of the NPPF, which states:

> "*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, following mitigation, would be severe, taking into account all reasonable future scenarios*"

10.8 The forecast year traffic flows input into the junction models have been taken directly from the furnessing spreadsheet, which have been agreed with the TWG.

Junctions 2 to 5 (VISSIM Network)

Introduction

10.9 BWB have produced a VISSIM Forecast Modelling report (BWB document EMG2-BWB-GEN-XX-RP-TR-0019_VISSIM Modelling Forecast Report-S2_P4) which sets out the forecast VISSIM modelling results in detail, a copy of which is included with **Appendix 50**.

10.10 The following details within this TA provide a summary of the Network Performance results to give an overview of the impacts of the development on the VISSIM network. It should be noted development traffic from the EMG2 Works (plus Plot 16) was assigned manually on top of 2028/2038 furnessed without development flows using the distribution pattern at **Table 30**, as worst-case to avoid any impacts of background re-assignment. This provides an assessment of the true impacts of the development traffic.

Network Performance

10.11 **Table 32** sets out the high level network performance comparison on all scenarios for 2028, as the year of opening of the development, which is NH's key assessment year as per Circular 01/2022. This compares 'without development' (WoD) and 'with development' (WD) scenarios.

Table 32: 2028 VISSIM Network Performance Comparison – Stage 1A

Peak Hour	Scenario	Delay (s)	Speed (mph)	Veh Arr (veh)	Latent Delay (s)	Latent Demand (Veh)
AM	2024 Base	52	48.6	18740	1401	1
	2028 WoD	121	40.1	21027	2863	4
	2028 WD	153	36.5	21598	15843	48
	WD - WoD	32	-3.6	571	12981	44
PM	2024 Base	42	51	18534	2354	1
	2028 WoD	81	45.8	21253	60070	15
	2028 WD	100	42.4	22163	133859	44
	WD - WoD	20	-3.4	910	73789	30

10.12 When comparing the results of the with development scenario against the without development scenario, the average delay increases in both peak hours, more significantly in the morning peak hour with a delay increase of 32 seconds. The average speed decreases in both peak hours as a result of additional congestion.

10.13 **Table 33** sets out the network performance comparison on all scenarios for 2038.

Table 33: 2038 VISSIM Network Performance Comparison – Stage 1A

Peak Hour	Scenario	Delay (s)	Speed (mph)	Veh Arr (veh)	Latent Delay (s)	Latent Demand (Veh)
AM	2024 Base	52	48.6	18740	1401	1
	2038 WoD	211	32.3	21974	108213	150
	2038 WD	259	28.8	22360	378853	373
	WD - WoD	48	-3.5	386	270640	223
PM	2024 Base	42	51	18534	2354	1
	2038 WoD	126	40.2	22275	748599	484
	2038 WD	154	36.8	22872	1567205	906
	WD - WoD	28	-3.4	597	818606	422

10.14 Similarly to the 2028 assessment, the 2038 results show that the average delays increase. The number of vehicles that enter the model and latent demand also increase, with the average speed decreasing overall.

10.15 In summary, the results show that, as expected, the EMG2 development is having an impact on the network performance across the VISSIM network area. Therefore, a comprehensive mitigation strategy using the Stage 2A modelling results has been proposed to address the impacts of the EMG2 development, details of which are presented in subsequent sections. The purpose of the mitigation is to demonstrate how the impacts of the EMG2 development would be mitigated and that there would be overall benefits to the operation of the Strategic Road Network around M1 Junction 24.

Junction 6 – A453/East Midlands Airport Signal Junction

10.16 The agreed base LinSig model for the A453/East Midlands Airport signal junction has been tested for capacity using the Stage 1A forecast year flows. **Appendix 51** contains the LinSig output data, whilst **Table 34** summarises the results.

Table 34. A453/East Midlands Airport LinSig Summary Results – Stage 1A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – EMA Access	6.2	35	61.5	6.2	22.2	45.2
Arm 2 – A453 (E)	7.8	6.0	60.9	4.5	6.6	35.7
Arm 3 – A453 (W)	10.1	16.7	61.6	6.5	19.4	45.5
	PRC over all lanes = 46.1%			PRC over all lanes = 97.9%		
2038 forecast year 'without development'						
Arm 1 – EMA Access	12.6	32.9	70.9	8.2	25.4	56.6
Arm 2 – A453 (E)	10.5	10.9	70.4	5.4	7.8	38.5
Arm 3 – A453 (W)	15.5	22.3	71.4	10.3	21.1	61.4
	PRC over all lanes = 26%			PRC over all lanes = 46.5%		
2028 forecast year 'with development'						
Arm 1 – EMA Access	7.4	44.5	72.0	5.1	19.3	41.3
Arm 2 – A453 (E)	8.4	10.5	74.7	7.6	10.3	47.0
Arm 3 – A453 (W)	16.9	17.2	9.9	6.4	21.5	46.2
	PRC over all lanes = 20.4%			PRC over all lanes = 91.7%		
2038 forecast year 'with development'						
Arm 1 – EMA Access	15.1	59.0	86.9	7.8	19.8	63.0
Arm 2 – A453 (E)	11.4	20.5	86.1	10.1	13.1	56.4
Arm 3 – A453 (W)	13.6	25.2	87.3	9.1	26.7	61.9
	PRC over all lanes = 3%			PRC over all lanes = 43%		

10.17 The results show that the junction is predicted to operate within capacity during all scenarios in both peak hours. Therefore, it can be concluded that the existing junction layout will remain suitable to accommodate the forecast year traffic flows without the need for any mitigating improvements.

Junction 7 – A453/Grimes Gate Priority Junction

10.18 The agreed base Junctions 11 model for the A453/Grimes Gate priority junction has been tested for capacity using the Stage 1A forecast year flows. **Appendix 52** includes the Junctions 11 output data, whilst **Table 35** summarises the modelling results.

Table 35.A453/Grimes Gate Junctions 11 Summary Results – Stage 1A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Stream B-C – Grimes Gate	0.0	6.51	0.02	0.0	6.75	0.02
Stream B-A – Grimes Gate	0.3	10.36	0.24	0.1	8.63	0.08
Stream C-AB – A453 (W)	0.0	3.89	0.02	0.0	4.75	0.04
2038 forecast year 'without development'						
Stream B-C – Grimes Gate	0.0	7.27	0.03	0.0	7.36	0.03
Stream B-A – Grimes Gate	0.5	12.77	0.33	0.2	11.35	0.17
Stream C-AB – A453 (W)	0.0	3.88	0.02	0.1	4.29	0.06
2028 forecast year 'with development'						
Stream B-C – Grimes Gate	0.0	6.74	0.01	0.0	7.34	0.03
Stream B-A – Grimes Gate	0.6	13.05	0.36	0.1	9.72	0.10
Stream C-AB – A453 (W)	0.0	3.45	0.03	0.0	5.00	0.05
2038 forecast year 'with development'						
Stream B-C – Grimes Gate	0.0	7.79	0.03	0.0	8.44	0.04
Stream B-A – Grimes Gate	0.9	16.82	0.47	0.2	13.42	0.17
Stream C-AB – A453 (W)	0.1	3.48	0.04	0.1	4.82	0.06

10.19 The results show that the junction is predicted to operate well within capacity during all scenarios in both peak hours. Therefore, it can be concluded that the existing junction layout will remain suitable to accommodate the forecast year traffic flows without the need for any mitigating improvements.

Junction 8 – A453/The Green Priority Junction

10.20 The agreed base Junctions 11 model for the A453/The Green priority junction has been tested for capacity using the Stage 1A forecast year flows. **Appendix 53** includes the Junctions 11 output data, whilst **Table 36** summarises the modelling results.

Table 36. A453/The Green Junctions 11 Summary Results – Stage 1A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Steam B-AC – The Green	5.9	49.47	0.88	1.0	14.84	0.50
Stream C-AB – A453 (W)	0.7	4.88	0.25	0.5	5.92	0.25
2038 forecast year 'without development'						
Steam B-AC – The Green	6.1	56.79	0.88	5.3	60.80	0.87
Stream C-AB – A453 (W)	1.2	5.92	0.38	7.9	26.89	0.85
2028 forecast year 'with development'						
Steam B-AC – The Green	122.9	800.13	1.39	1.1	17.92	0.53
Stream C-AB – A453 (W)	0.6	4.58	0.24	0.6	6.78	0.30
2038 forecast year 'with development'						
Steam B-AC – The Green	172.0	1153.41	1.54	28.8	321.69	1.26
Stream C-AB – A453 (W)	1.2	5.76	0.39	53.0	204.22	1.11

10.21 The results show that the junction would operate within capacity at the 2028 forecast year with or without development, but capacity problems will occur on The Green arm at the 2038 forecast year, again with or without development. In the 2038 evening peak hour, the with development scenario will also trigger impacts on the A453 (W) arm.

10.22 Whilst the Junctions 11 modelling suggests that mitigation may be required, the junction is predicted to operate within capacity in EMFM and therefore it is likely that EMFM assigned more traffic along this route compared to what would occur in reality. From the first statutory consultation, feedback was received from local residents who asked that capacity improvements not be proposed at junctions leading towards Diseworth so as not to encourage higher traffic flows in the vicinity of the village. This aligns with the principle of the mitigation strategy seeking to promote further use of the Strategic Road Network rather than local roads, further details of which are presented in Section 12.

10.23 The PIC analysis identified a safety problem at this junction, albeit the rate of PICs has reduced in more recent years following more signage being installed. However, it is evident that further assessment is required to ensure there are no severe impacts both from a capacity and safety perspective at this junction. The proposed Highway Works seek to increase capacity at Finger Farm and the A453 corridor, with the aim of making this a more attractive route and discouraging traffic travelling towards the EMG2 Main Site and East Midlands Airport to route via The Green. Therefore, further assessment of this junction is presented in subsequent sections.

Junction 9 – A453/East Midlands Airport Roundabout

10.24 The agreed base Junctions 11 model for the A453/East Midlands Airport roundabout has been tested for capacity using the Stage 1A forecast year flows. **Appendix 54** includes the Junctions 11 output data, whilst **Table 37** summarises the results.

Table 37. A453/East Midlands Airport Roundabout Junctions 11 Summary Results – Stage 1A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Arm 1 – Walton Hill	0.2	4.69	0.12	0.7	5.0	0.35
Arm 2 – A453 (E)	1.0	5.41	0.34	1.3	6.27	0.35
Arm 3 – A453 (W)	8.0	32.18	0.89	1.5	10.47	0.51
2038 forecast year 'without development'						
Arm 1 – Walton Hill	0.4	4.85	0.16	1.1	6.34	0.44
Arm 2 – A453 (E)	1.1	5.47	0.35	1.6	6.23	0.42
Arm 3 – A453 (W)	56.3	166.82	1.11	6.3	24.5	0.84
2028 forecast year 'with development'						
Arm 1 – Walton Hill	0.3	4.77	0.13	0.6	4.9	0.35
Arm 2 – A453 (E)	1.0	5.54	0.31	1.4	5.97	0.4
Arm 3 – A453 (W)	25.9	84.01	0.99	1.2	8.31	0.45
2038 forecast year 'with development'						
Arm 1 – Walton Hill	0.4	4.84	0.17	1.0	6.5	0.46
Arm 2 – A453 (E)	0.8	5.28	0.33	1.6	6.6	0.45
Arm 3 – A453 (W)	74.3	229.49	1.15	6.1	23.86	0.84

10.25 The results show that the junction would operate over capacity in all scenarios during the morning peak hour on the A453 (W) arm, albeit the changes in traffic flows associated with the proposed development will result in a negligible impact. The junction would operate within capacity in all scenarios during the evening peak hour.

10.26 Without prejudice to the above, this junction forms part of the site access strategy to the Isley Woodhouse settlement and is expected to undergo significant improvements to accommodate this development and other planned schemes. The issue with capacity is a result of the background traffic from Isley Woodhouse being included in EMFM modelling but none of the physical infrastructure (i.e. mitigation) which will inevitably be required to accommodate that development.

10.27 To understand this further, the A453/East Midlands Airport roundabout will also be tested using the Stage 1B forecast flows, as a sensitivity test, which excludes the traffic generated by the draft Local Plan allocations, including Isley Woodhouse (in compliance with Circular 01/22 and IEMA guidance). This information is presented in **Section 11**.

Junction 10 – A453/Walton Hill Signal Junction

10.28 The agreed base Junctions 11 model for the A453/Walton Hill signal-controlled junction has been tested for capacity using the Stage 1A forecast year flows. **Appendix 55** includes the LinSig output data, whilst **Table 38** summarises the modelling results.

Table 38. A453/Walton Hill Signal LinSig Summary Results – Stage 1A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – Local Road (N)	10.4	19.3	71.3	9.5	19.9	68.3
Arm 2 – A453 (E)	8.1	24.0	61.0	9.7	23.8	66.6
Arm 3 – Walton Hill	8.5	27.9	69.5	5.0	31.1	5.0
	PRC over all lanes = 26.2%			PRC over all lanes = 31.8%		
2038 forecast year 'without development'						
Arm 1 – Local Road (N)	17.4	35.9	92.6	93.8	229.5	111.7
Arm 2 – A453 (E)	14.1	45.2	90.6	69.7	249.9	112.5
Arm 3 – Walton Hill	16.9	33.5	90.9	73.3	238.4	112.2
	PRC over all lanes = -2.9%			PRC over all lanes = -25.0%		
2028 forecast year 'with development'						
Arm 1 – Local Road (N)	12.2	19.9	76.3	9.7	19.8	68.7
Arm 2 – A453 (E)	7.5	22.3	55.3	10.0	23.9	97.5
Arm 3 – Walton Hill	9.7	32.1	77.2	4.8	34.3	67.7
	PRC over all lanes = 16.6%			PRC over all lanes = 31.0%		
2038 forecast year 'with development'						
Arm 1 – Local Road (N)	15.4	33.6	90.0	126.8	317.9	117.8
Arm 2 – A453 (E)	13.2	40.7	88.0	93.8	315.7	117.5
Arm 3 – Walton Hill	16.3	30.5	89.2	72.8	243.1	112.5
	PRC over all lanes = 0.0%			PRC over all lanes = -30.9%		

10.29 The results show that the junction is expected to operate within capacity during all 2028 scenarios. The junction would operate over capacity at the 2038 future year, with or without the development, although there would be a slight beneficial impact in the morning peak hour and a negligible change in the evening peak hour from the development.

10.30 Similar to the above, it is envisaged that the main impact on capacity is being caused by traffic from the Isley Woodhouse traffic, given this development is located directly south (and evidenced by way of limited impacts from the proposed development). This shows that whilst capacity issues will likely occur, the proposed development has a negligible impact on the operation of the junction. Therefore, it can be concluded that there is no severe impact and no further assessment or mitigation is required at this location. However, further assessment of this junction will be undertaken using the Stage 1B flows to understand this position in more detail when excluding traffic from the draft Local Plan allocations, including Isley Woodhouse.

Junction 11 – A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Roundabout

10.31 The agreed base Junctions 11 model for the A42 Junction 14 on-slip/Top Brand/Gelscoe Lane roundabout has been tested for capacity using the Stage 1A forecast year flows. **Appendix 56** includes the Junctions 11 output data, whilst **Table 39** summarises the results.

Table 39. A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Junctions 11 Summary Results – Stage 1A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Arm 1 – A453 (N)	0.8	6.6	0.37	1	7.31	0.35
Arm 2 – Gelscoe Lane	0.2	4.46	0.08	0.2	4.63	0.15
Arm 3 – Top Brand	0.5	6.35	0.23	0.2	4.75	0.08
2038 forecast year 'without development'						
Arm 1 – A453 (N)	1	6.37	0.4	1.3	7.45	0.35
Arm 2 – Gelscoe Lane	0.4	4.95	0.16	0.4	5.02	0.19
Arm 3 – Top Brand	1.2	7.75	0.4	0.3	5.06	0.22
2028 forecast year 'with development'						
Arm 1 – A453 (N)	1.8	9.31	0.55	1.2	7.74	0.35
Arm 2 – Gelscoe Lane	0.2	4.67	0.08	0.4	5.02	0.21
Arm 3 – Top Brand	0.6	6.18	0.25	0.2	4.37	0.09
2038 forecast year 'with development'						
Arm 1 – A453 (N)	1.8	8.76	0.57	1.5	7.68	0.39
Arm 2 – Gelscoe Lane	0.3	5.06	0.15	1	6.7	0.36
Arm 3 – Top Brand	1	7.81	0.38	0.5	5.42	0.23

10.32 The results show that the junction is predicted to operate well within capacity during all scenarios and in both peak hours. Therefore, it can be concluded that the existing junction layout will remain suitable to accommodate the forecast year traffic flows without the need for any mitigating improvements.

Junction 12 – M1 Junction 23

10.33 The agreed base LinSig model for M1 Junction 23 has been tested for capacity using the Stage 1A forecast year flows. **Appendix 57** includes the LinSig output data, whilst **Table 40** summarises the results.

Table 40. M1 Junction 23 LinSig Summary Results – Stage 1A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – M1 SB slip	10.8	29.8	83.7	7.2	33.9	75.7
Arm 2 – A512 (E)	10.3	26.4	72.8	12.1	19.1	77.0
Arm 3 – M1 NB slip	5.8	50.4	75.8	4.9	42.2	67.7
Arm 4 – A512 (W)	9.6	21.0	77.7	7.0	17.1	63.8
	PRC over all lanes = 7.3%			PRC over all lanes = 16.9%		
2038 forecast year 'without development'						
Arm 1 – M1 SB slip	60.4	203.6	109.5	8.9	39.5	89.2
Arm 2 – A512 (E)	49.3	151.8	105.9	17.1	24.6	89.1
Arm 3 – M1 NB slip	18.1	158	103.2	10.4	75.7	93.0
Arm 4 – A512 (W)	94.4	203.4	109.9	21.9	39.9	95.8
	PRC over all lanes = -24.7%			PRC over all lanes = -6.4%		
2028 forecast year 'with development'						
Arm 1 – M1 SB slip	11.0	30.2	84.0	7.2	30.1	71.1
Arm 2 – A512 (E)	11.7	29.0	78.2	11.5	20.1	75.5
Arm 3 – M1 NB slip	5.6	49.0	74.2	4.7	43.5	66.8
Arm 4 – A512 (W)	10.9	23.5	82.1	6.5	16.6	60.5
	PRC over all lanes = 5.9%			PRC over all lanes = 19.2%		
2038 forecast year 'with development'						
Arm 1 – M1 SB slip	72.0	243.2	112.1	10.0	44.2	85.8
Arm 2 – A512 (E)	42.1	121.8	103.8	18.3	26.6	90.7
Arm 3 – M1 NB slip	28.2	267.7	111.9	11.2	84.8	94.6
Arm 4 – A512 (W)	80.9	163.6	107.3	20.4	36.7	94.8
	PRC over all lanes = -24.6%			PRC over all lanes = -5.3%		

10.34 The results show that M1 Junction 23 would operate within capacity at the 2028 forecast year of opening in all scenarios and both peak hours, which is the Circular 01/2022 compliant assessment year. Whilst the junction would exceed capacity at the 2038 forecast year, the development would have no impact on capacity and there would be a slight betterment in overall PRC in both peak hours, which is a result of traffic re-assigning at the junction. Therefore, it can be concluded that there would be no severe impacts at this junction from the development and no mitigation is required.

10.35 In response to the Highway Safety Position Statement at **Appendix 14**, NH requested consideration is given to refreshing lane markings and clarifying signage on the circulatory of the junction. However, as the modelling shows the junction would perform better with the development in place, it is considered that no mitigation is required at M1 Junction 23 from both a capacity and safety perspective and therefore the proposals do not consider lane markings or signage further.

10.36 Notwithstanding this, given the strategic nature of the junction, this is assessed once more in subsequent sections, including for the wider mitigation, to see if this conclusion remains valid.

Junction 13 – A50 Junction 1

10.37 The agreed base LinSig model for A50 Junction 1 has been tested for capacity using the Stage 1A forecast year flows, which includes the committed improvement scheme associated with Land South of A50 Junction 1, Castle Donington development that signalises the Trent Lane and Tamworth Road arms. **Appendix 58** includes the LinSig output data, whilst **Table 41** summarises the results.

Table 41. A50 Junction 1 LinSig Summary Results – Stage 1A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – B5010	2.0	10.1	63.9	1.4	9.8	52.8
Arm 2 – B6540	9.5	20.4	99.4	8.4	17.5	89.2
Arm 3 – A50 slip road (E)	18.4	78.0	99.1	9.0	27.2	84.0
Arm 4 – Ryecroft Road	0.3	8.7	18.2	0.3	7.8	16.1
Arm 5 – Trent Lane	6.9	19.0	73.8	11.7	33.7	88.5
Arm 6 – A50 slip road (W)	9.3	18.4	94.7	6.0	15.4	90.5
	PRC over all lanes = -10.4%			PRC over all lanes = -6.3%		
2038 forecast year 'without development'						
Arm 1 – B5010	2.3	14.3	72.4	2.1	11.2	54.3
Arm 2 – B6540	7.5	14.6	78.8	13.9	29.6	93.5
Arm 3 – A50 slip road (E)	8.9	24.2	82.7	6.4	20.1	71.3
Arm 4 – Ryecroft Road	0.4	8.8	21.2	0.5	8.9	24.7
Arm 5 – Trent Lane	50.7	167.9	107.7	55.7	153.2	106.9
Arm 6 – A50 slip road (W)	32.7	93.9	106.3	5.8	14.6	70.2
	PRC over all lanes = -20.2%			PRC over all lanes = -18.8%		
2028 forecast year 'with development'						
Arm 1 – B5010	2.2	12.7	71.3	0.9	5.8	38.6
Arm 2 – B6540	9.0	19.4	96.2	8.5	21.6	92.6
Arm 3 – A50 slip road (E)	22.9	100.1	101.5	8.6	32.0	85.5
Arm 4 – Ryecroft Road	0.3	9.5	21.7	0.2	6.7	14.6
Arm 5 – Trent Lane	4.8	18.2	71.4	9.0	25.7	83.0
Arm 6 – A50 slip road (W)	20.0	49.4	102.3	5.6	15.0	68.1
	PRC over all lanes = -18.9%			PRC over all lanes = -2.9%		
2038 forecast year 'with development'						
Arm 1 – B5010	2.3	14.5	72.9	2.2	11.3	55.7
Arm 2 – B6540	17.0	39.3	101.7	14.0	29.7	93.5
Arm 3 – A50 slip road (E)	12.8	45.4	93.5	6.1	19.5	69.6
Arm 4 – Ryecroft Road	0.4	9.4	23.6	0.7	9.4	31.5
Arm 5 – Trent Lane	51.7	166.1	107.5	72.1	196.8	109.9
Arm 6 – A50 slip road (W)	42.9	125.5	109.0	5.9	14.6	71.2
	PRC over all lanes = -21.1%			PRC over all lanes = -22.2%		

10.38 The results show that A50 Junction 1 is forecast to exceed capacity in all scenarios, with or without the development. However, the overall change in PRC and associated queues and delays would be negligible as a result of the proposed development, with the greatest queue increase expected on the A50 slip road (W) arm (eastbound off slip) in 2028 which would experience an increase from 9.3 PCUs to 20.0 PCUs (total of circa 115 metres). This arm has a total length of approximately 420 metres, so this queue would continue to be well within the stacking space of the slip road and not interfere with the A50 mainline. This is also the case for the A50 slip road (E) arm (westbound off-slip) which would experience a worst-case queue of 42.9 PCUs (an increase from 32.7 PCUs at the without development scenario), which equates to approximately 246 metres and well within the stacking space of the slip road. There would be a beneficial impact on PRC in 2028 during the evening peak hour.

10.39 Therefore, whilst there would be capacity problems from a PRC perspective, the queues would not cause issues with the A50 mainline and the overall change from the proposed development would not be severe. Consequently, no mitigation is required at this junction, but this is assessed once more in subsequent sections under different modelling scenarios to ensure this position remains.

10.40 NH confirmed in its response to the Highway Safety Position Statement (**Appendix 14**) that there are no existing safety problems at this location.

Junction 14 – M1 Junction 25

10.41 The agreed base LinSig model for M1 Junction 25 has been tested for capacity using the Stage 1A forecast year flows. **Appendix 59** includes the LinSig output data, whilst **Table 42** summarises the results.

Table 42 M1 Junction 25 LinSig Summary Results – Stage 1A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – M1 slip (N)	34.6	113.0	102.4	89.9	359.8	119.8
Arm 2 – A52 (E)	117.1	577.8	138.3	87.7	383.3	122.1
Arm 3 – Bostocks Lane (S)	48.7	327.0	116.3	42.8	330.8	117.2
Arm 4 – M1 slip (S)	165.9	616.1	144.9	13.4	35.6	87.5
Arm 5 – A52 (W)	88.7	537.1	135.2	5.5	25.2	58.3
Arm 6 – Bostocks Lane (N)	124.5	604.8	143.5	27.1	106.6	100.3
	PRC over all lanes = -61.0%			PRC over all lanes = -35.6%		
2038 forecast year 'without development'						
Arm 1 – M1 slip (N)	41.1	144.0	104.6	115.7	389.9	122.4
Arm 2 – A52 (E)	81.0	454.4	126.8	86.9	433.0	125.8
Arm 3 – Bostocks Lane (S)	14.3	108.2	98.7	55.7	418.6	124.5
Arm 4 – M1 slip (S)	247.0	636.3	146.6	22.3	49.6	97.1
Arm 5 – A52 (W)	98.6	618.8	144.1	4.9	22.7	51.1
Arm 6 – Bostocks Lane (N)	130.4	642.5	147.8	11.6	73.8	95.4
	PRC over all lanes = -64.7%			PRC over all lanes = -39.8%		
2028 forecast year 'with development'						
Arm 1 – M1 slip (N)	52.4	227.7	109.5	15.2	37.6	89.1
Arm 2 – A52 (E)	13.3	25.5	75.2	49.8	212.2	109.0
Arm 3 – Bostocks Lane (S)	75.3	649.3	146.0	32.7	279.2	112.9
Arm 4 – M1 slip (S)	178.0	638.6	146.8	14.5	34.1	91.8
Arm 5 – A52 (W)	95.4	608.0	143.4	5.4	24.7	55.8
Arm 6 – Bostocks Lane (N)	125.3	637.4	147.8	13.7	90.1	98.0
	PRC over all lanes = -64.5%			PRC over all lanes = -25.5%		
2038 forecast year 'with development'						
Arm 1 – M1 slip (N)	13.3	33.4	86.1	116.0	392.4	122.6
Arm 2 – A52 (E)	15.0	52.5	90.3	82.0	412.1	124.1
Arm 3 – Bostocks Lane (S)	68.8	557.6	136.6	53.8	409.7	123.7
Arm 4 – M1 slip (S)	320.1	863.8	178.9	25.9	59.1	98.7
Arm 5 – A52 (W)	10.0	27.3	76.4	4.9	22.8	51.3
Arm 6 – Bostocks Lane (N)	164.4	859.3	176.8	13.0	86.1	97.3
	PRC over all lanes = -98.8%			PRC over all lanes = -37.9%		

10.42 The results show that the junction would exceed capacity in all scenarios, with or without the development. In the 2028 opening year, the overall PRC would reduce slightly from -61.0% to -64.5% in the morning hour but experience a betterment from -35.6% to -25.5% in the evening peak hour. On balance, it is therefore considered that there would be no severe impacts from the development.

10.43 There would be a larger impact on PRC at the 2038 forecast year during the morning peak hour which is predicted to change from -64.7% to -98.8%. However, the proposed development would result in an overall increase of 56 PCUs in the morning peak hour (7,688 increasing to 7,744) and 42 PCUs in the evening peak hour (7,218 increasing to 7,260) as an overall net change. This equates to a less than 0.7% increase in total turning movements. Therefore, whilst certain arms are showing stress, the impacts from the development are negligible and significant capacity problems would occur without the development, which is why the negative PRC values have exponentially increased regardless of the limited change in traffic flows overall.

10.44 In response to the Highway Safety Position Statement at **Appendix 14**, NH requested consideration is given to refreshing lane markings and clarifying signage on the circulatory of the junction. However, as the modelling confirms that the development would have a less than 1% impact on total traffic movements through the junction, this is an existing issue that will not be significantly exacerbated. Therefore, it is considered that no mitigation is required at M1 Junction 25 from both a capacity and safety perspective and therefore the proposals do not consider lane markings or signage any further.

10.45 Overall, it can be concluded that there is no severe impact at this location and no mitigation should be required. However, this is assessed once more in subsequent sections, including for the wider mitigation to see if this conclusion remains valid.

Junction 15 – Station Road/Broad Rushes Roundabout

10.46 The agreed base Junctions 11 model the Station Road/Broad Rushes roundabout has been tested for capacity using the Stage 1A forecast year flows. **Appendix 60** includes the Junctions 11 output data, whilst **Table 43** summarises the results.

Table 43. Station Road/Broad Rushes Roundabout Junctions 11 Summary Results – Stage 1A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Arm 1 – Station Road (N)	7.3	16.63	0.83	3.4	9.07	0.68
Arm 2 – Station Road (S)	0.9	9.61	0.46	10.2	46.20	0.91
Arm 3 – Broad Rushes	2.8	13.90	0.70	6.0	24.11	0.82
2038 forecast year 'without development'						
Arm 1 – Station Road (N)	8.4	19.85	0.87	4.7	12.23	0.77
Arm 2 – Station Road (S)	4.0	24.45	0.80	33.5	135.43	1.07
Arm 3 – Broad Rushes	39.0	132.26	1.07	13.0	58.10	0.95
2028 forecast year 'with development'						
Arm 1 – Station Road (N)	7.4	18.38	0.85	2.7	7.84	0.63
Arm 2 – Station Road (S)	1.2	9.97	0.49	8.0	39.01	0.90
Arm 3 – Broad Rushes	3.5	15.82	0.75	3.3	16.11	0.73
2038 forecast year 'with development'						
Arm 1 – Station Road (N)	9.7	21.15	0.87	5.2	12.72	0.81
Arm 2 – Station Road (S)	7.6	42.26	0.87	40.9	157.53	1.07
Arm 3 – Broad Rushes	51.7	171.50	1.08	14.7	62.36	0.95

10.47 The results show that the junction would exceed the 85% threshold in the 2028 opening year but operate within 100% during both the without and with development scenarios. The Broad Rushes and Station Road (S) arms would exceed 100% at the 2038 future year scenario, with or without development. However, the development would have a 0.01 impact on RFC on the Broad Rushes arm in the morning peak hour and no impact on the RFC if the Station Road (S) arm in the evening peak hour.

10.48 Queues on these arms in the respective peak hours are expected to be significant with or without the development, although the change would not be significant and need to be treated with caution under congested conditions in any case. Therefore, it is considered that whilst capacity issues are likely to be experienced, the impact of the proposed development will not be severe and therefore no mitigation is considered necessary. However, the junction will be re-assessed with the Stage 2 mitigation scenario flows in subsequent sections to ensure this conclusion remains.

Junction 16 – A453/Kegworth Road Roundabout

10.49 The A453/Kegworth Road roundabout (the first roundabout providing movements to/from the A453 westbound) fell outside the AoI from the EMFM modelling, but has been tested for capacity nonetheless. The agreed base Junctions 11 model for A453/Kegworth Road roundabout has been tested for capacity using the Stage 1A forecast year flows. **Appendix 61** includes the Junctions 11 output data and a plan showing the junction location, whilst **Table 44** summarises the results.

Table 44. A453/Kegworth Road Roundabout Junctions 11 Summary Results – Stage 1A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Arm 1 – A453 Off-slip	0.2	2.69	0.13	0.2	2.94	0.18
Arm 2 – Local Road	0.2	2.6	0.13	0.2	2.79	0.19
Arm 3 – Kegworth Road	0.2	3.3	0.15	0.2	3.19	0.16
2038 forecast year 'without development'						
Arm 1 – A453 Off-slip	0.3	3.3	0.2	0.4	3.83	0.3
Arm 2 – Local Road	0.6	3.5	0.35	1.3	5.32	0.55
Arm 3 – Kegworth Road	0.6	4.86	0.37	0.7	5.89	0.42
2028 forecast year 'with development'						
Arm 1 – A453 Off-slip	0.2	2.69	0.13	0.2	2.9	0.18
Arm 2 – Local Road	0.1	2.58	0.12	0.2	2.81	0.19
Arm 3 – Kegworth Road	0.2	3.41	0.17	0.1	2.85	0.05
2038 forecast year 'with development'						
Arm 1 – A453 Off-slip	0.3	3.34	0.21	0.4	3.12	0.26
Arm 2 – Local Road	0.6	3.53	0.35	1.7	6.2	0.62
Arm 3 – Kegworth Road	0.6	4.89	0.37	0	3.77	0.04

10.50 The results show that the junction is predicted to operate well within capacity during all scenarios in both peak hours. Therefore, it can be concluded that the existing junction layout will remain suitable to accommodate the forecast year traffic flows without the need for any mitigating improvements.

Junction 17 – A453/Trent Lane/West Leake dumbbell Roundabout

10.51 The A453/Trent Lane/West Leake roundabouts fell outside the AoI from the EMFM modelling, but have been tested for capacity, nonetheless. The agreed base Junctions 11 model for the A453/Trent Lane/West Leake roundabout has been tested for capacity using the Stage 1A forecast year flows. **Appendix 62** includes the Junctions 11 output data, whilst **Table 45** summarises the results.

Table 45. A453/Trent Lane/West Leake dumbbell Roundabout Junctions 11 Summary Results – Stage 1A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
J1- Arm 1 – Dumbbell Link	0.5	4.15	0.3	0.3	3.29	0.23
J1- Arm 2 – A453 SWB Off-Slip	0	0	0	0	2.65	0.02
J1- Arm 3 – West Leake Lane	0.7	6.03	0.39	0.5	4.35	0.33
J2- Arm 1 – Barton Lane	0.1	4.32	0.07	0	2.99	0.02
J2- Arm 2 – A453 NEB Off-Slip	0.5	4.05	0.3	0.1	2.75	0.06
J2- Arm 3 – Dumbbell Link	0.3	3.09	0.22	0.2	2.25	0.17
2038 forecast year 'without development'						
J1- Arm 1 – Dumbbell Link	1	5.42	0.48	1	5.42	0.48
J1- Arm 2 – A453 SWB Off-Slip	0	3.19	0.01	0	3.19	0.01
J1- Arm 3 – West Leake Lane	1.1	6.22	0.5	1.1	6.22	0.5
J2- Arm 1 – Barton Lane	0.1	4.29	0.07	0.1	4.29	0.07
J2- Arm 2 – A453 NEB Off-Slip	0.1	3.07	0.08	0.1	3.07	0.08
J2- Arm 3 – Dumbbell Link	0.6	3.19	0.33	0.6	3.19	0.33
2028 forecast year 'with development'						
J1- Arm 1 – Dumbbell Link	0.5	4.03	0.3	0.3	3.29	0.23
J1- Arm 2 – A453 SWB Off-Slip	0	2.89	0.04	0	2.65	0.02
J1- Arm 3 – West Leake Lane	0.7	4.98	0.38	0.5	4.34	0.33
J2- Arm 1 – Barton Lane	0.1	3.68	0.06	0	3	0.02
J2- Arm 2 – A453 NEB Off-Slip	0.1	3.01	0.06	0.1	2.75	0.06
J2- Arm 3 – Dumbbell Link	0.3	2.61	0.2	0.2	2.25	0.17
2038 forecast year 'with development'						
J1- Arm 1 – Dumbbell Link	0.5	3.67	0.31	0.5	3.67	0.31
J1- Arm 2 – A453 SWB Off-Slip	0	2.75	0.01	0	2.75	0.01
J1- Arm 3 – West Leake Lane	0.8	5.18	0.44	0.8	5.18	0.44
J2- Arm 1 – Barton Lane	0	3.14	0.02	0	3.14	0.02
J2- Arm 2 – A453 NEB Off-Slip	0.1	2.72	0.05	0.1	2.72	0.05

10.52 The results show that the junction is predicted to operate well within capacity during all scenarios and in both peak hours. Therefore, it can be concluded that the existing junction layout will remain suitable to accommodate the forecast year traffic flows without the need for any mitigating improvements.

11. HIGHWAY IMPACT ASSESSMENTS: SENSITIVITY TEST (STAGE 1B MODELLING)

Introduction

11.1 Section 10 of the TA summarised the junction modelling results of the Stage 1A forecast year scenarios. This identified potential issues at the following junctions, including those forecast to operate over capacity regardless of the development proposals:

- **Junctions 2 to 5: VISSIM network** – junctions expected to exceed capacity with the performance worsening as a result of the proposed development.
- **Junction 8: A453/The Green** – junction predicted to operate within capacity in EMFM but exceed capacity in Junctions 11 as a result of the proposed development.
- **Junction 9: A453/East Midlands Airport roundabout** – junction expected to exceed capacity with or without development but capacity issues are largely being driven by the Isley Woodhouse settlement and the junction will undergo improvements as part of the access strategy to the Isley Woodhouse settlement.
- **Junction 10: A453/Walton Hill signal junction** – this junction is expected to exceed capacity with or without development but capacity issues are largely being driven by the Isley Woodhouse settlement and the junction is expected to undergo improvements as part of the A453 realignment and access strategy associated with the Isley Woodhouse settlement.
- **Junction 12: M1 Junction 23** – junction is expected to exceed capacity with or without development but no severe impact. This junction will be re-assessed to ensure this conclusion remains with the proposed highway mitigation.
- **Junction 13: A50 Junction 1** – junction is expected to exceed capacity with or without development but no severe impact. This junction will be re-assessed to ensure this conclusion remains with the proposed highway mitigation.
- **Junction 14: M1 Junction 25** – junction is expected to exceed capacity with or without development but no severe impact. This junction will be re-assessed to ensure this conclusion remains with the proposed highway mitigation.
- **Junction 15**: **Station Road/Broad Rushes roundabout** – this junction is expected to exceed capacity with or without development but no severe impact. This junction will be re-assessed to ensure this conclusion remains with the proposed highway mitigation.

11.2 The following section tests the above junctions under the Stage 1B forecast year scenarios, as a sensitivity test to understand their future performance at 2028/2038 with and without the proposed development when excluding the draft Local Plan allocation sites, EMIP and part of the Ratcliffe on Soar Power Station development in the baseline traffic.

Junctions 1 to 5 (VISSIM Network)

11.3 The Stage 1A forecast year modelling identified capacity issues across the VISSIM network area. This section of the network is therefore expected to experience

congestion and delay, which is predicted to be worsened by the proposed development.

11.4 The VISSIM model has been tested using the Stage 1B forecast year flows. The VISSIM Forecast Modelling report (BWB document EMG2-BWB-GEN-XX-RP-TR-0019_VISSIM Modelling Forecast Report-S2_P4 - **Appendix 50**) includes the output data, whilst **Table 46** sets out the high level network performance comparison on all scenarios for 2028, as the year of opening of the development, which is NH's key assessment year in line with Circular 01/2022. this compares 'without development' (WoD) and 'with development' (WD) scenarios.

Table 46: 2028 VISSIM Network Performance Comparison – Stage 1B

Peak Hour	Scenario	Delay (s)	Speed (mph)	Veh Arr (veh)	Latent Delay (s)	Latent Demand (Veh)
AM	2024 Base	52	48.6	18740	1401	1
	2028 WoD	81	44.6	20248	2133	1
	2028 WD	133	38.5	21761	14652	4
	WD - WoD	52	-6.1	1513	12519	3
PM	2024 Base	41	52	18541	2336	1
	2028 WoD	72	46.9	21255	56562	11
	2028 WD	98	42.7	22145	155640	66
	WD - WoD	26	-4.2	890	99077	55

11.5 When comparing the results of the with development scenario against the without development scenario, the average delay increases in both peak hours with average speeds reducing, with the junction performance showing similarities in both peak hours.

11.6 **Table 47** below sets out the network performance comparison on all scenarios for 2038.

Table 47: 2038 VISSIM Network Performance Comparison – Stage 1B

Peak Hour	Scenario	Delay (s)	Speed (mph)	Veh Arr (veh)	Latent Delay (s)	Latent Demand (Veh)
AM	2024 Base	52	48.6	18740	1401	1
	2038 WoD	164	36.0	21514	445083	502
	2038 WD	203	32.5	21984	849994	726
	WD - WoD	38	-3.4	470	404911	225
PM	2024 Base	41	52	18541	2336	1
	2038 WoD	110	42.0	22299	516565	252
	2038 WD	132	38.8	23177	790090	382
	WD - WoD	23	-3.2	878	273525	130

11.7 Similarly to the 2028 assessment, the 2038 results show that the average delay increase, the amount of vehicles that enter the model increases and Latent Demand increases. Average speeds therefore reduce as a result in both peak hours.

11.8 In summary, the results show that, as expected, the EMG2 development is also having an impact on the network performance across the VISSIM network area under the Stage 1B sensitivity test scenario. Therefore, similar to the conclusions in Section 10, a comprehensive mitigation strategy has been determined using the Stage 2A modelling outputs, as the core scenario for this Transport Assessment which will also be tested using the Stage 2B modelling results to ensure it mitigates the impacts of the EMG2 development in both scenarios. This is detailed in subsequent sections.

Junction 8 – A453/The Green Priority Junction

11.9 The Stage 1A modelling identified capacity problems at this junction, most notably on The Green but also for right turners into The Green from the A453. Capacity issues were not identified in EMFM and therefore it is likely that the strategic model is over assigning traffic along this route.

11.10 The Junctions 11 model has been re-tested using Stage 1B forecast flows. **Appendix 63** includes the output data, whilst **Table 48** summarises the results.

Table 48. A453/The Green Junctions 11 Summary Results – Stage 1B

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Steam B-AC – The Green	2.8	26.93	0.75	1.0	14.03	0.49
Stream C-AB – A453 (W)	0.4	4.69	0.17	0.7	6.23	0.31
2038 forecast year 'without development'						
Steam B-AC – The Green	68.0	440.14	1.24	3.4	37.63	0.79
Stream C-AB – A453 (W)	0.0	5.28	0.02	0.7	6.79	0.30
2028 forecast year 'with development'						
Steam B-AC – The Green	78.5	529.37	1.28	1.2	18.04	0.55
Stream C-AB – A453 (W)	0.5	4.35	0.19	0.9	7.21	0.36
2038 forecast year 'with development'						
Steam B-AC – The Green	384.1	2451.51	1.89	7.6	82.63	0.92
Stream C-AB – A453 (W)	0.1	4.65	0.04	0.8	8.51	0.36

11.11 The results show that similar to Stage 1A results, the junction would continue to operate over capacity with the Stage 1B flows with or without development. The capacity issues would occur on The Green. This is because the junction is forecast to operate within capacity in EMFM causing a larger volume of traffic to route via this junction. In reality, a greater proportion of traffic would route via the A42 and Finger Farm roundabout reducing impacts at this location. Therefore, the conclusions presented in **Section 10** remain and this is considered in further detail in **Sections 13 and 14**.

Junction 9 – A453/East Midlands Airport Roundabout

11.12 The Stage 1A forecast year modelling identified capacity issues on the A453 (W) arm of the roundabout during the morning peak hour. The Junctions 11 model has been tested using the Stage 1B forecast year flows to understand the performance of the junction

when excluding draft Local Plan allocations from the background traffic. **Appendix 64** includes the Junctions 11 output data, whilst **Table 49** summarises the results.

Table 49. A453/East Midlands Airport Roundabout Junctions 11 Summary Results – Stage 1B

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Arm 1 – Walton Hill	0.2	4.66	0.11	0.9	4.76	0.33
Arm 2 – A453 (E)	1.2	5.38	0.35	1.0	5.38	0.32
Arm 3 – A453 (W)	4.4	17.74	0.78	1.5	9.06	0.52
2038 forecast year 'without development'						
Arm 1 – Walton Hill	0.2	4.23	0.11	0.9	4.83	0.35
Arm 2 – A453 (E)	1.8	6.19	0.43	1.6	6.63	0.46
Arm 3 – A453 (W)	3	12.75	0.66	1.3	8.49	0.46
2028 forecast year 'with development'						
Arm 1 – Walton Hill	0.3	4.8	0.11	0.7	4.75	0.33
Arm 2 – A453 (E)	0.8	5.14	0.31	1.1	5.53	0.35
Arm 3 – A453 (W)	8.9	33.07	0.87	1.9	9.69	0.51
2038 forecast year 'with development'						
Arm 1 – Walton Hill	0.3	4.15	0.12	0.8	5.01	0.37
Arm 2 – A453 (E)	1.4	5.77	0.39	2	7.23	0.5
Arm 3 – A453 (W)	3.2	15.15	0.73	1.0	8.12	0.4

11.13 The results show that the junction would operate comfortably within capacity during all scenarios in both peak hours. As per the conclusions in **Section 10**, this confirms that the capacity issues are being driven by traffic from the Isley Woodhouse settlement and when removing this traffic the junction has ample spare capacity. Therefore, given this junction forms part of the access strategy to the Isley Woodhouse development improvements are expected to be delivered as part of that scheme. The EMG2 Project would not have any severe impacts and no mitigation is deemed required.

Junction 10 – A453/Walton Hill Signal Junction

11.14 The Stage 1A forecast year modelling identified capacity issues on all arms of the roundabout during the evening peak hour. The LinSig model has been tested using the Stage 1B forecast year flows to understand the performance of the junction when excluding draft Local Plan allocations from the background traffic. **Appendix 65** includes the LinSig output data, whilst **Table 50** summarises the results.

Table 50. A453/Walton Hill LinSig Summary Results – Stage 1B

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – Local Road (N)	8.9	17.7	68.1	9.3	17.6	67.8
Arm 2 – A453 (E)	8.8	27.7	68.3	9.9	25.8	67.8
Arm 3 – Walton Hill	7.7	26.2	66.2	4.3	31.8	62.4
	PRC over all lanes = 31.7%			PRC over all lanes = 32.7%		
2038 forecast year 'without development'						
Arm 1 – Local Road (N)	10.0	19.1	72.6	10.9	20.6	74.2
Arm 2 – A453 (E)	10.2	26.0	71.7	11.3	25.5	73.2
Arm 3 – Walton Hill	7.6	30.2	72.4	4.3	35.4	66.0
	PRC over all lanes = 23.9%			PRC over all lanes = 21.3%		
2028 forecast year 'with development'						
Arm 1 – Local Road (N)	10.5	19.1	72.0	9.5	18.0	68.7
Arm 2 – A453 (E)	7.0	22.4	54.0	10.3	25.3	68.6
Arm 3 – Walton Hill	8.6	29.3	71.6	4.4	35.1	67.5
	PRC over all lanes = 25.0%			PRC over all lanes = 31.0%		
2038 forecast year 'with development'						
Arm 1 – Local Road (N)	9.5	18.4	70.5	11.2	21.0	73.7
Arm 2 – A453 (E)	9.7	26.9	70.6	11.7	25.8	73.6
Arm 3 – Walton Hill	7.9	28.7	71.4	4.7	40.6	73.8
	PRC over all lanes = 26.0%			PRC over all lanes = 20.6%		

11.15 The results show that the junction is predicted to operate comfortably within capacity in all scenarios during both peak hours, with spare capacity across all three arms. Therefore, the capacity issues are being driven by traffic from the Isley Woodhouse development which is located directly to the south of the junction. Therefore, it is envisaged that improvements will be required as part of the Isley Woodhouse development and there would be no severe impacts from the EMG2 Project. Therefore, no mitigation is deemed required.

Junction 12 – M1 Junction 23

11.16 The Stage 1A forecast year modelling identified capacity issues at the junction during the morning peak hour at the 2038 future year. However, capacity problems would occur with or without development and it was concluded that the overall change in conditions was non severe.

11.17 The LinSig model has been re-tested using the Stage 1B forecast year flows to understand the performance of the junction when excluding draft Local Plan allocations from the background traffic. **Appendix 66** includes the LinSig output data, whilst **Table 51** summarises the results.

Table 51. M1 Junction 23 LinSig Summary Results – Stage 1B

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – M1 SB slip	9.8	30.1	80.2	6.4	29.6	69.6
Arm 2 – A512 (E)	9.9	24.4	69.7	10.6	18.2	71.6
Arm 3 – M1 NB slip	6.2	47.8	75.5	4.6	40.7	65.5
Arm 4 – A512 (W)	9.6	20.9	77.3	5.9	16.1	56.3
	PRC over all lanes = 8.2%			PRC over all lanes = 25.7%		
2038 forecast year 'without development'						
Arm 1 – M1 SB slip	59.8	218.1	110.5	8.5	39.2	84.6
Arm 2 – A512 (E)	25.4	58.5	97.8	15.0	21.6	85.4
Arm 3 – M1 NB slip	9.3	56.5	87.2	12.4	97.4	96.5
Arm 4 – A512 (W)	91.8	192.4	109.2	24.2	43.4	96.6
	PRC over all lanes = -22.8%			PRC over all lanes = -7.3%		
2028 forecast year 'with development'						
Arm 1 – M1 SB slip	10.3	31.2	81.8	7.3	30.3	70.1
Arm 2 – A512 (E)	11.0	26.3	74.6	11.6	20.2	75.7
Arm 3 – M1 NB slip	6.0	46.8	74.1	4.9	44.8	68.1
Arm 4 – A512 (W)	10.6	23.2	81.4	6.8	16.8	61.7
	PRC over all lanes = 7.0%			PRC over all lanes = 18.8%		
2038 forecast year 'with development'						
Arm 1 – M1 SB slip	50.1	173.8	107.4	11.9	46.0	96.8
Arm 2 – A512 (E)	33.7	88.2	101.2	25.4	42.1	96.7
Arm 3 – M1 NB slip	25.7	256.6	110.2	19.7	170.6	104.2
Arm 4 – A512 (W)	95.6	195.7	109.5	78.6	162.0	107.2
	PRC over all lanes = -22.4%			PRC over all lanes = -19.2%		

11.18 The results show that the junction would operate within capacity at the 2028 forecast year of opening with the EMG2 Works in place, which is the Circular 01/2022 compliant assessment year. Therefore, when excluding traffic from the draft Local Plan allocations there would be capacity within the junction to accommodate the proposed development.

11.19 Whilst the junction would operate over capacity at the 2038 future year, there would be a slight improvement with the development in the morning peak hour, with the PRC improving from -22.8% to -22.4%. There would however be a worsening of performance in the evening peak hour, with the PRC reducing from -7.3% to -19.2%. This is therefore considered in further detail in **Sections 13** and **14**.

Junction 13 – A50 Junction 1

11.20 The Stage 1A forecast year modelling identified capacity issues at the junction during both peak hours and at both the 2028 and 2038 future years. However, capacity problems would occur with or without development and it was concluded that the overall change in conditions would be non severe and not result in queues extending back to the A50 mainline.

11.21 The LinSig model has been re-tested using the Stage 1B forecast year flows to understand the performance of the junction when excluding draft Local Plan allocations from the background traffic. **Appendix 67** includes the LinSig output data, whilst **Table 52** summarises the results.

Table 52. A50 Junction 1 LinSig Summary Results – Stage 1B

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – B5010	1.4	7.4	54.4	1.4	10.4	51.2
Arm 2 – B6540	7.4	17.6	63.5	7.0	16.2	80.0
Arm 3 – A50 slip road (E)	12.7	49.8	94.1	7.1	22.2	76.9
Arm 4 – Ryecroft Road	0.2	8.4	15.8	0.3	7.4	16.1
Arm 5 – Trent Lane	6.2	18.5	71.1	10.1	26.9	88.0
Arm 6 – A50 slip road (W)	7.7	18.2	86.0	6.5	17.2	77.3
	PRC over all lanes = -4.5%			PRC over all lanes = 2.2%		
2038 forecast year 'without development'						
Arm 1 – B5010	1.4	8.3	55.5	1.5	11.4	53.5
Arm 2 – B6540	9.0	16.6	91.3	11.9	21.6	98.9
Arm 3 – A50 slip road (E)	7.7	23.0	78.9	7.2	20.0	74.2
Arm 4 – Ryecroft Road	0.2	8.0	14.6	0.6	9.3	28.3
Arm 5 – Trent Lane	6.7	19.7	74.0	24.0	71.7	100.1
Arm 6 – A50 slip road (W)	7.8	18.5	86.0	6.0	17.0	72.8
	PRC over all lanes =-3.5 %			PRC over all lanes = -11.2%		
2028 forecast year 'with development'						
Arm 1 – B5010	1.6	8.2	58.9	1.1	8.1	45.1
Arm 2 – B6540	7.7	18.0	87.7	7.4	16.3	83.6
Arm 3 – A50 slip road (E)	13.4	53.6	95.0	7.4	22.4	76.8
Arm 4 – Ryecroft Road	0.2	8.8	16.4	0.3	7.3	15.8
Arm 5 – Trent Lane	5.8	17.8	67.5	10.1	26.7	87.8
Arm 6 – A50 slip road (W)	8.7	19.6	92.5	6.4	17.0	75.6
	PRC over all lanes = -5.6%			PRC over all lanes = 2.5%		
2038 forecast year 'with development'						
Arm 1 – B5010	1.6	9.3	58.6	2.2	12.1	56.7
Arm 2 – B6540	10.0	19.3	66.1	15.6	29.8	100.5
Arm 3 – A50 slip road (E)	8.8	26.2	85.0	8.6	23.5	81.1
Arm 4 – Ryecroft Road	0.3	8.3	15.5	1.0	12.2	43.4
Arm 5 – Trent Lane	6.6	17.8	71.7	50.2	145.7	106.2
Arm 6 – A50 slip road (W)	7.7	16.9	84.5	6.1	15.5	71.3
	PRC over all lanes = -9.4%			PRC over all lanes = -18.0%		

11.22 The results show that the junction would continue to operate over capacity in all scenarios during both peak hours, although better compared to the Stage 1A assessment in Section 10. At the 2028 year of opening, the junction PRC would only reduce from -4.5% to -5.6% in the morning peak hour and from -2.2% to -2.5% in the

evening peak hour, which is the Circular 01/2022 compliant scenario. This is considered a negligible impact.

11.23 Furthermore, similar to the conclusions of the Stage 1A assessment, the forecast queue lengths during both the 2028 and 2038 assessment years would continue to be accommodated on the slip roads within extending back and impacting the A50 mainline. Consequently, the proposed development would not have a severe impact and no mitigation is deemed required.

Junction 14 – M1 Junction 25

11.24 The Stage 1A forecast year modelling identified capacity issues at the junction during both peak hours and at both the 2028 and 2038 future years. However, capacity problems would occur with or without development and it was concluded that the overall change in conditions would be non-severe given there would be a less than a 0.7% net increase in traffic between the without and with development scenarios.

11.25 The LinSig model has been re-tested using the Stage 1B forecast year flows to understand the performance of the junction when excluding draft Local Plan allocations from the background traffic. **Appendix 68** includes the LinSig output data, whilst **Table 53** summarises the results.

Table 53. M1 Junction 25 LinSig Summary Results – Stage 1B

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – M1 slip (N)	108.7	432.5	130.7	75.8	318.8	117.5
Arm 2 – A52 (E)	15.5	33.7	84.3	65.2	279.0	114.1
Arm 3 – Bostocks Lane (S)	85.9	635.8	144.5	41.0	272.5	112.8
Arm 4 – M1 slip (S)	71.2	248.3	114.4	12.3	30.4	87.9
Arm 5 – A52 (W)	5.9	12.2	48.1	5.3	25.8	56.0
Arm 6 – Bostocks Lane (N)	133.8	699.2	154.3	9.4	51.7	91.0
	PRC over all lanes = -71.5%			PRC over all lanes = -30.5%		
2038 forecast year 'without development'						
Arm 1 – M1 slip (N)	153.2	681.8	148.8	243.2	689.2	155.3
Arm 2 – A52 (E)	109.0	660.8	146.9	170.2	745.0	158.1
Arm 3 – Bostocks Lane (S)	12.8	62.4	93.5	160.3	718.1	156.0
Arm 4 – M1 slip (S)	229.7	667.0	149.5	115.5	658.1	148.8
Arm 5 – A52 (W)	8.0	27.6	71.3	75.1	646.5	147.0
Arm 6 – Bostocks Lane (N)	137.3	691.5	153.3	2.9	16.8	62.1
	PRC over all lanes = -70.3%			PRC over all lanes = -75.6%		
2028 forecast year 'with development'						
Arm 1 – M1 slip (N)	19.1	49.7	94.3	74.4	338.9	117.5
Arm 2 – A52 (E)	86.6	401.1	122.7	64.6	276.8	113.9
Arm 3 – Bostocks Lane (S)	67.1	475.1	128.7	40.4	277.4	113.1
Arm 4 – M1 slip (S)	140.0	473.9	138.6	13.6	33.2	90.3
Arm 5 – A52 (W)	86.2	561.4	138.0	5.0	25.5	54.7
Arm 6 – Bostocks Lane (N)	111.6	547.8	137.7	10.0	55.2	91.9
	PRC over all lanes = -54.0%			PRC over all lanes = -30.5%		
2038 forecast year 'with development'						
Arm 1 – M1 slip (N)	53.4	194.2	108.1	261.5	732.4	156.4
Arm 2 – A52 (E)	10.5	28.7	70.5	177.3	793.3	164.6
Arm 3 – Bostocks Lane (S)	73.3	549.8	136.0	161.4	753.7	160.6
Arm 4 – M1 slip (S)	30.7	53.4	98.9	17.7	47.6	95.3
Arm 5 – A52 (W)	5.2	11.5	44.0	7.4	26.5	67.4
Arm 6 – Bostocks Lane (N)	137.0	541.1	96.6	7.7	60.4	89.9
	PRC over all lanes = -52.2%			PRC over all lanes = -82.9%		

11.26 The results show that the junction would continue to operate over capacity in all scenarios with or without the development. At the 2028 year of opening, there would be a betterment in junction PRC which would improve from -71.5% to -54.0% in the morning peak hour and show no change in the evening peak hour at -30.5% with and without development. Therefore, the development would have no impact on the

Circular 01/2022 compliant forecast year of opening. Hence, no mitigation is deemed required.

Junction 15 – Station Road/Broad Rushes Roundabout

11.27 The Stage 1A forecast year modelling showed that the junction would exceed capacity but it was concluded that the development would not have a severe impact. The Junctions 11 model has been re-tested using the Stage 1B forecast year flows to understand the performance of the junction when excluding draft Local Plan allocations from the background traffic. **Appendix 69** includes the LinSig output data, whilst **Table 54** summarises the results.

Table 54. Station Road/Broad Rushes Roundabout Junctions 11 Summary Results – Stage 1B

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Arm 1 – Station Road (N)	7.0	14.71	0.81	3.3	9.29	0.69
Arm 2 – Station Road (S)	0.9	9.71	0.46	6.3	33.50	0.86
Arm 3 – Broad Rushes	2.9	14.58	0.69	2.9	15.58	0.71
2038 forecast year 'without development'						
Arm 1 – Station Road (N)	5.1	12.22	0.75	2.9	8.13	0.65
Arm 2 – Station Road (S)	1.7	12.32	0.56	6.9	35.60	0.87
Arm 3 – Broad Rushes	3.0	14.15	0.71	3.3	18.88	0.76
2028 forecast year 'with development'						
Arm 1 – Station Road (N)	7.8	17.77	0.83	3.5	8.73	0.69
Arm 2 – Station Road (S)	1.0	9.75	0.46	5.2	29.59	0.86
Arm 3 – Broad Rushes	3.0	16.25	0.71	2.9	15.20	0.71
2038 forecast year 'with development'						
Arm 1 – Station Road (N)	6.6	14.40	0.80	3.7	9.72	0.70
Arm 2 – Station Road (S)	1.8	13.19	0.59	14.0	64.50	0.95
Arm 3 – Broad Rushes	3.1	16.23	0.73	10.0	47.31	0.94

11.28 The results show that the junction would operate within capacity in all scenarios during both peak hours. Therefore, there is ample capacity to accommodate traffic from the proposed development and it is only when additional background traffic from the draft Local Plan allocations and Isley Woodhouse settlement is included are capacity issues triggered. Therefore, no mitigation is deemed required.

12. HIGHWAY MITIGATION

Introduction

12.1 The Stage 1A and 1B modelling showed that there would be significant impacts triggered by the proposed development at the following locations:

- Finger Farm roundabout (Junction 3)
- M1 Junction 24 (Junction 5)
- A453/The Green (Junction 7)

12.2 Physical Highway Works have therefore been proposed to address the impacts of the proposed development at the above first two junctions, with the aim of increasing capacity on the SRN and limiting additional impacts through the more sensitive parts of the network, particularly near Diseworth, Long Whatton, Castle Donington and Kegworth. **Sections 13** and **14** consider whether any further mitigation is required at the any other junctions considered within the study area for the TA, included the A453/The Green junction listed above.

Proposed Highway Works

12.3 **Section 6** of the TA summarises the proposed Highway Works, which include significant improvements to M1 Junction 24 and other improvements at the A453/A6 Kegworth Bypass roundabout and Finger Farm roundabout. Full details of the layout of the proposed highway works can be found at **Documents DCO 2.8A, 2.8B, 2.8C** and **2.8D**.

12.4 It should be noted that following the Stage 2 modelling being undertaken, changes were made to the southwest corner of M1 Junction 24, including the removal of the segregated left turn lane from the A453 northbound to A50 westbound. This formed part of the iterative process in finalising the proposed Highway Works (including consultation with NH on the scheme geometry) and was considered in line with the VISSIM modelling presented later in this Section.

12.5 These changes in the southwest corner of M1 Junction 24 were therefore not included in the EMFM modelling but are not expected to fundamentally change the modelling results and would only result in additional capacity benefits. They will however be tested in PRTM 2023 as a sensitivity test now the model has been approved by NH. **Figure 29** shows an extract of the changes made at the southwest corner of M1 Junction 24.

Figure 29. M1 Junction 24 Highway Mitigation changes



12.6 The following section summarises the proposed Highway Works and presents the results of the strategic highway modelling under Stages 2A and 2B as well as revised detailed modelling to show the benefits of the Highway Works.

Stage 2A EMFM Modelling

12.7 AECOM issued the EMFM Forecasting Report Addendum for the Stage 2A modelling in June 2025 covering the 2028 and 2038 forecast years with development, with mitigation scenario. A copy of the Forecasting Report Addendum and detailed extracts of various figures are included in **Appendix 70.**

12.8 The Forecasting Report Addendum compares key performance results between the Stage 1A without development and Stage 2A with development scenarios to understand the overall impacts of the EMG2 Project inclusive of the proposed Highway Works, albeit excluding any reduction in traffic as a result of the proposed Active Travel Works and Travel Planning measures, to provide a worst-case assessment.

12.9 The proposed Highway Works described above were coded into EMFM. To 'unlock' the full benefits of the proposed mitigation, signal timings at the following two junctions were optimised in EMFM:

- The signal head to the southwest of the Wilder's Way/A453/Kegworth bypass roundabout that controls the A453 northound traffic and the circulatory traffic.
- The signal head to the northeast of M1 Junction 24 that controls the M1 southbound and circulatory traffic.

12.10 The optimisation of the signals was undertaken such that demand and delay were better balanced to reflect the additional road capacity and were based on outputs from the detailed VISSIM modelling i.e. by understanding the minimum/maximum green times.

12.11 The optimisation of these two junctions was performed over five iterations by reviewing the outputs and adjusting the green times each iteration.

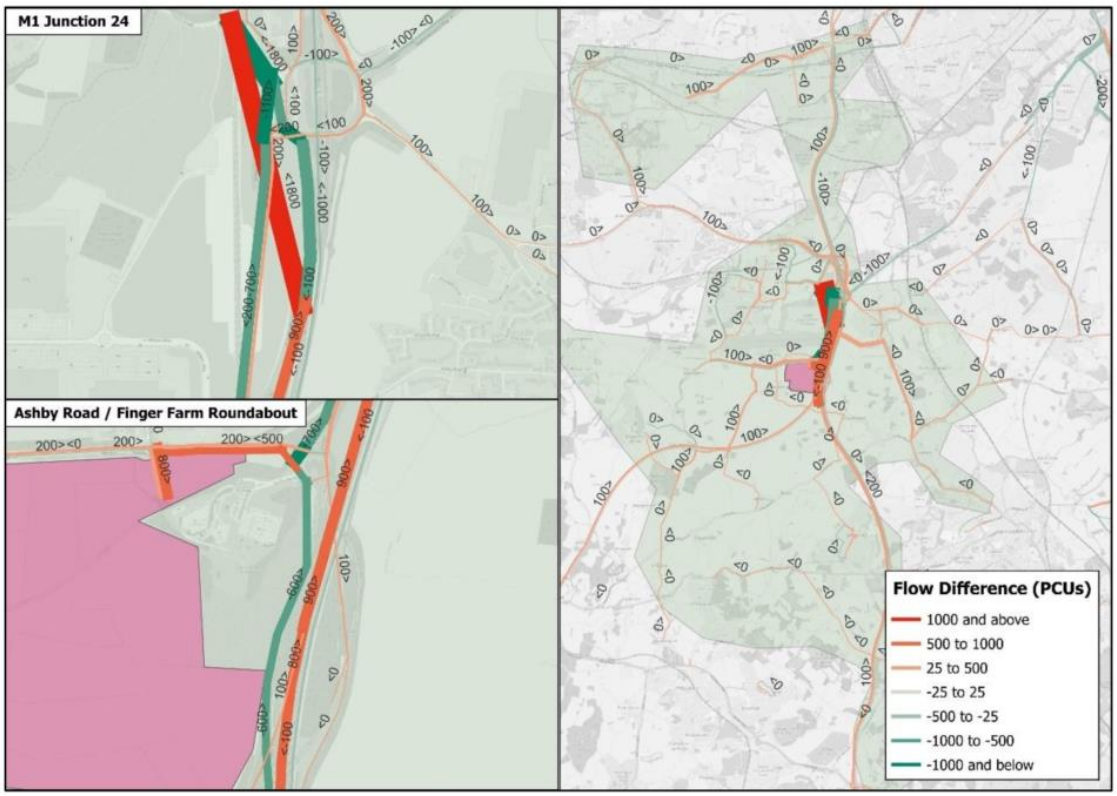
12.12 A sixth iteration was assessed in EMFM that included optimising the Hilton Hotel Lane signalised junction with M1 Junction 24. The signals were optimised based on both

forecast traffic demand volumes and outputs from the detailed VISSIM modelling. The EMFM Forecasting Report Addendum states that *"the forecast outputs from this sixth iteration were considered localised and have not been documented in this report however outputs have been provided to inform the VISSIM modelling"*. The flow differences as a result of this final iteration in EMFM are also included in **Appendix 70.**

12.13 The development trip generation for Plot 16 at EMG1 and EMG2 Main Site remained identical to the Stage 1 modelling and as per the values presented in **Table 13** of the TA. The EMFM Forecasting Report states that *"as expected, the forecast trip distribution for Stage 2a (with mitigation) is very similar to Stage 1a (without mitigation) as reported in the Forecasting Report. How development traffic routes through the network is also very similar"*.

12.14 The EMFM Forecasting Report Addendum provides a number of network performance results including forecast flow changes between the Stage 1A without development and the Stage 2A with development, with mitigation scenarios. An extract from the 2038 morning peak hour is sown at **Figure 30**, although the results are similar in both peak hours.

Figure 30. Stage 2A Modelling EMFM Forecast Flow Changes in Morning Peak Hour



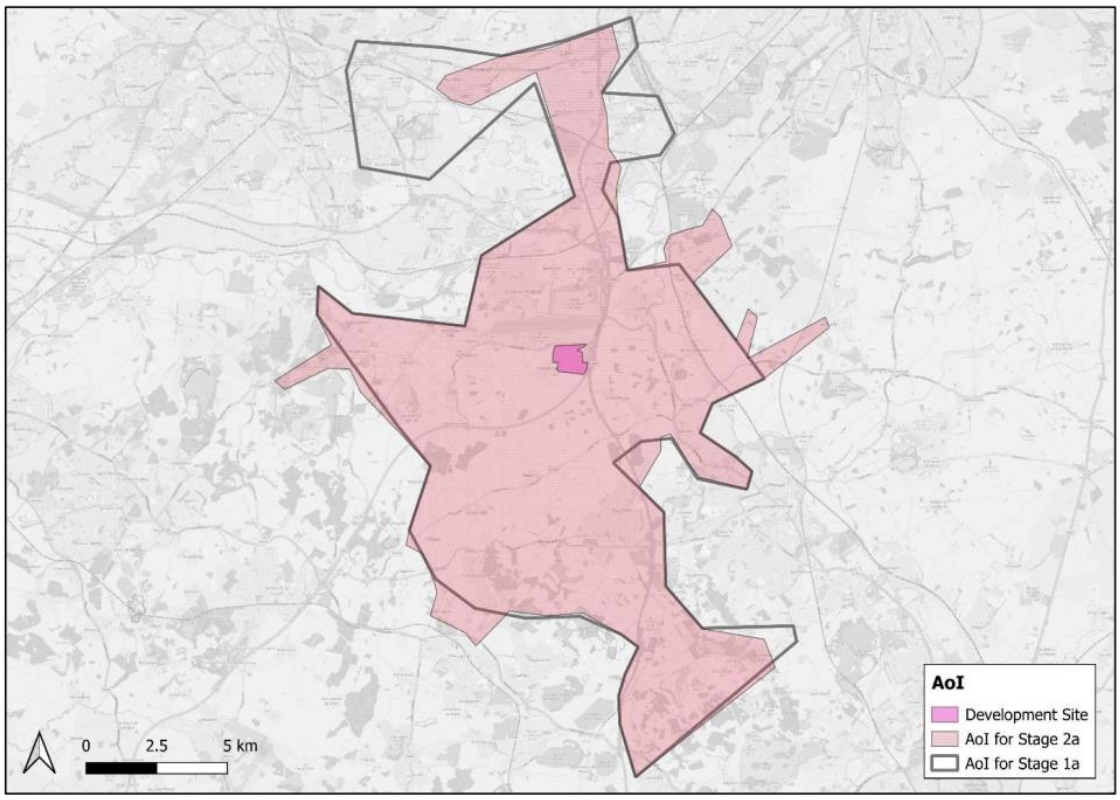
12.15 In summary, the results show the following forecast flow changes:

- The largest flow increases are forecast along the new M1 northbound to A50 link road, which is accommodating diverted traffic from the A453, Finger Farm and M1 Junction 24 and effectively operating as planned.

- There is an increase of up to 400 PCUs on the M1 southbound off-slip to Junction 24, which is a result of capacity increases on this arm.
- There is forecast to be an increase in traffic on the A6 Kegworth Bypass as a result of less traffic and lower delays at the EMG1 access roundabout, which is being diverted along the new link road.
- There is forecast to be a reduction in northbound traffic on the A453 at Finger Farm, whilst southbound A453 traffic is predicted to increase, as expected, because of development traffic to the EMG2 Main Site.

12.16 The EMFM Forecast Report Addendum provides a revised AoI and compares this against the Stage 1A AoI. An extract of the AoI is shown in **Figure 31** which shows that it is largely similar, albeit it does not extend as far into Derbyshire and the A50 corridor in particular.

Figure 31. Stage 2A Modelling EMFM Area of Influence



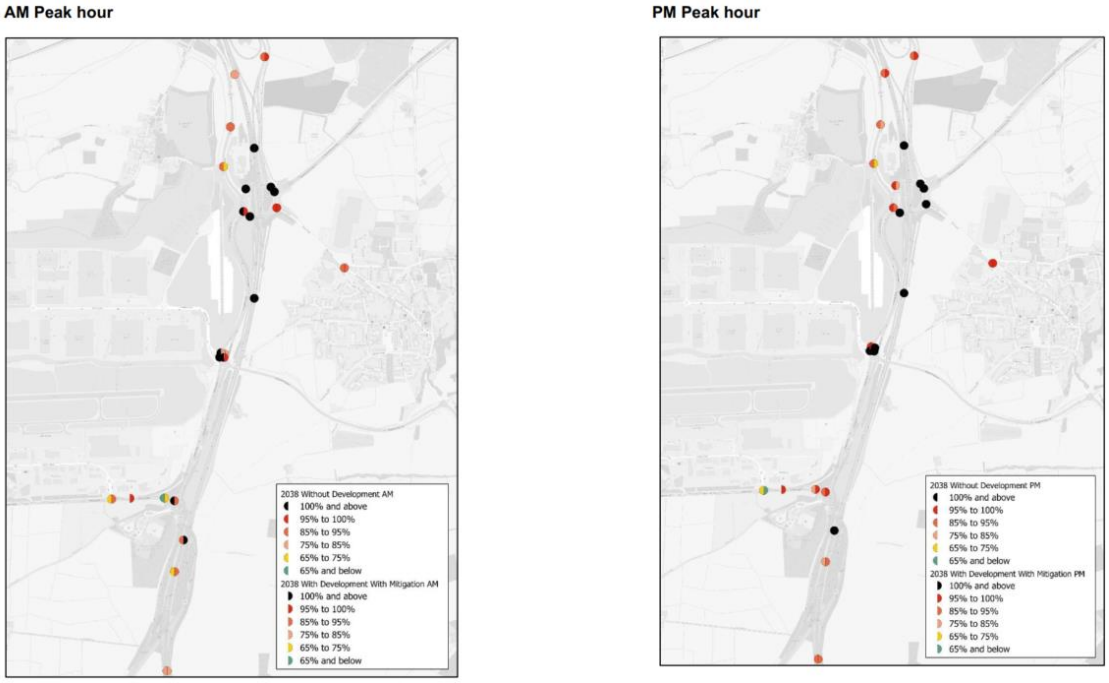
12.17 The EMFM modelling also generates results showing forecast delay changes and shows the following changes:

- There will be a natural delay on the A50 where vehicles join from the new link road because there is no junction there at present.
- Delays are predicted to decrease on all circulatory lanes of M1 Junction 24 for all forecast year scenarios in both peak hours. There are also predicted to be reduced delays on the M1 southbound off-slip.
- Delays are predicted to decrease at the EMG1 access roundabout in all scenarios.

- Delays are predicted to remain unchanged at Finger Farm roundabout in all scenarios, except for the eastbound approach which is expected to see a decrease in delays during the 2038 morning peak hour.
- The EMFM modelling suggests there could be delays on the A453 to the east of the EMG2 Main Site as a result of the new Toucan crossing, albeit these would be 'transiant' in nature. That is because, as set out in paragraph 3.6.11 of the forecasting report, it is "*demand dependant and this demand dependency cannot be accurately reflected in the EMFM*". This has therfore been considered in further detail as part of the VISSIM modelling in the next section.

12.18 The EMFM Forecasting Report Addendum provided node V/C ratios showing locations where forecast flows are approaching or exceeding capacity. The left part of the circle shows the Stage 1A without development V/C ratio, whilst the right part of the circle shows the Stage 2A with development, with mitigation V/C ratio. The values presented reflect the worst-case node. **Figure 32** shows the results for the 2038 forecast year for both the AM and PM peak periods.

Figure 32. Stage 2A Modelling Volume-Capacity Ratios



12.19 The EMFM Forecasting Report Addendum provides the following summary:

- The V/C ratios at M1 Junction 24 decrease slightly overall.
- In the morning peak hour, the M1 northbound off-slip and A453 Remembrance Way nodes at M1 Junction 24 that are forecast to have higher V/C ratios, which is a result of additional capacity being created on the gyratory and traffic travelling towards the EMG2 Main Site.
- The V/C ratios at the EMG1 access roundabout are predicted to generally decrease in both forecast years.
- The V/C ratios are predicted to decrease at Finger Farm roundabout in the morning peak hour in both forecast years. There are predicted to be increases in

the V/C ratios in the PM peak hour due to higher volumes of traffic forecast on the A453 to the west of Finger Farm.

12.20 **Tables 55** and **56** summarise the vehicle kilometres and junction delay (VehHrs) across both the SRN and non SRN in EMFM comparing the outputs from Stage 1a and 2a modelling. It should be noted that they are based on iteration 5 of the modelling, which excludes the optimisation of the Hilton Hotel Lane node at M1 Junction 24.

Table 55. EMFM Modelling Network Statistics for Strategic Road Network

Scenario	Year/Peak	AoI Vehkm (km)	Junction Delay VehHrs
Stage 1a Without Development	2038 AM	271,128	1,485
Stage 1a With Development	2038 AM	271,242	1,569
Stage 2a (Mitigation Measures (no optimisation))	2038 AM	273,032	1,538
Stage 2a (Mitigation Measures Iteration 5)	2038 AM	273,203	1,506
Stage 1a Without Development	2038 PM	290,953	1,295
Stage 1a With Development	2038 PM	294,263	1,372
Stage 2a (Mitigation Measures (no optimisation))	2038 PM	296,272	1,404
Stage 2a (Mitigation Measures Iteration 5)	2038 PM	295,418	1,345
Stage 1a Without Development	2038 AM + PM	562,081	2,780
Stage 1a With Development	2038 AM + PM	565,506	2,941
Stage 2a (Mitigation Measures (no optimisation))	2038 AM + PM	569,303	2,941
Stage 2a (Mitigation Measures Iteration 5)	2038 AM + PM	568,621	2,850
Stage 1a With Development **Minus** Stage 1a Without Development **(AM)**		115	84
Stage 2a With Development **Minus** Stage 1a Without Development **(AM)**		2,076	21
Stage 1a With Development **Minus** Stage 1a Without Development **(PM)**		3,310	77
Stage 2a With Development **Minus** Stage 1a Without Development **(PM)**		5,319	109
		% compared to 1a 'Without Development'	
Stage 1a Without Development	2038 AM + PM	0.0%	0.0%
Stage 1a With Development	2038 AM + PM	0.6%	5.8%
Stage 2a (Mitigation Measures (no optimisation))	2038 AM + PM	1.3%	5.8%
Stage 2a (Mitigation Measures Iteration 5)	2038 AM + PM	1.2%	3.9%

Table 56. EMFM Modelling Network Statistics for non Strategic Road Network

Scenario	Year/Peak	AoI Vehkm (km)	Junction Delay Vehhr
Stage 1a Without Development	2038 AM	466,669	4,699
Stage 1a With Development	2038 AM	471,838	4,928
Stage 2a (Mitigation Measures (no optimisation))	2038 AM	468,677	4,846
Stage 2a (Mitigation Measures Iteration 5)	2038 AM	468,754	4,721
Stage 1a Without Development	2038 PM	493,185	5,129
Stage 1a With Development	2038 PM	500,628	5,312
Stage 2a (Mitigation Measures (no optimisation))	2038 PM	499,340	5,340
Stage 2a (Mitigation Measures Iteration 5)	2038 PM	499,411	5,269
Stage 1a Without Development	2038 AM + PM	959,854	9,828
Stage 1a With Development	2038 AM + PM	972,466	10,240
Stage 2a (Mitigation Measures (no optimisation))	2038 AM + PM	968,017	10,186
Stage 2a (Mitigation Measures Iteration 5)	2038 AM + PM	968,165	9,990
Stage 1a With Development **Minus** Stage 1a Without Development **(AM)**		5,169	229
Stage 2a With Development **Minus** Stage 1a Without Development **(AM)**		2,085	22
Stage 1a With Development **Minus** Stage 1a Without Development **(PM)**		7,443	183
Stage 2a With Development **Minus** Stage 1a Without Development **(PM)**		6,155	211
		% compared to 1a 'Without Development'	
Stage 1a Without Development	2038 AM + PM	0.0%	0.0%
Stage 1a With Development	2038 AM + PM	1.3%	4.2%
Stage 2a (Mitigation Measures (no optimisation))	2038 AM + PM	0.9%	3.6%
Stage 2a (Mitigation Measures Iteration 5)	2038 AM + PM	0.9%	1.6%

12.21 The results show that the number of kilometres driven on the SRN increases as a direct result of the proposed highway mitigation, increasing by 1,960 kilometres from 271,242 kilometres in the Stage 1A with development scenario to 273,202 kilometres in the Stage

2A scenario during the morning peak hour. There is also a similar increase in the evening peak hour.

12.22 With regards to the number of kilometres driven on the local road network, these would decrease as a direct result of the proposed Highway Works when compared to the Stage 1A scenario, decreasing by 3,084 kilometres from 471,838 kilometres in the Stage 1A with development scenario to 468,754 kilometres in the Stage 2A scenario during the morning peak hour. There is also a similar decrease in the evening peak hour.

12.23 This shows that, as intended, the proposed Highway Works are attracting more traffic to the SRN, which would otherwise use the local road network.

12.24 Whilst junction delay and average speeds increase when undertaking the same comparisons on the SRN, AECOM confirmed that not only are they high level and indicative, that also if vehicle kilometres increase, the total delay is going to increase, even if average delay per vehicle remains the same. This is examined in further detail in the subsequent sections with regards to the more detailed VISSIM modelling.

12.25 Building on the above, and the revised AoI in particular, **Table 31** within **Section 8** of the TA identified a study area of 16 junctions (from an initial list of 27 junctions) by comparing V/C ratios and the change in traffic flows using outputs from the Stage 1A EMFM modelling. These 16 junctions have been assessed and mitigated where there are forecast to be impacts triggered by the proposed development.

12.26 The Stage 2A modelling outputs from EMFM, inclusive of the proposed Highway Works, have been used to revisit the same exercise and compare the V/C ratios and changes in traffic flows at the same 16 junctions to understand whether any of the previous conclusions change. **Appendix 71** includes an updated spreadsheet confirming that there would be an overall reduction in traffic flows compared to the Stage 1A without development scenario at the following 10 junctions as a result of the proposed Highway Works:

- Junction 3 – Finger Farm roundabout
- Junction 4 – A453/EMG1 roundabout
- Junction 5 – M1 Junction 24
- Junction 6 – A453/East Midlands Airport signal junction (morning peak only)
- Junction 9 – A453/East Midlands Airport roundabout (morning peak only)
- Junction 10 – A453/Walton Hill signal junction (morning peak only)
- Junction 12 – M1 Junction 23 (evening peak only)
- Junction 13 – A50 Junction 1 (evening peak only, and a 3 vehicle increase in the morning)
- Junction 15 – Station Road/Broad Rushes roundabout (morning peak only)

12.27 The other six junctions, listed below for completeness, are predicted to operate within capacity, with V/C ratios of less than 90% based on the Stage 2A EMFM results (this is with the exception of M1 Junction 25 (Junction 14) which is expected to experience a

small increase in traffic, albeit a slight improvement in capacity in the morning peak hour and a negligible worsening of capacity in the evening peak hour, although this is non-severe, as agreed with NH):

- Junction 2 – A453/Hunter Road roundabout (worst-case V/C of 86% on any given arm)
- Junction 7 – A453/Grimes Gate priority junction (worst-case V/C of 69% on any given arm)
- Junction 8 – A453/The Green priority junction (worst-case V/C of 48% on any given arm albeit noting subsequent commentary in **Section 13**)
- Junction 11 – A42 Junction 14/Top Brand/Gelscoe Lane junction (worst-case V/C of 40% on any given arm)Junction 16 – A453/Kegworth Road dumbbell roundabouts (junction falls outside the AoI)
- Junction 17 – A453/Barton Lane/West Leake Lane dumbbell roundabouts (junction falls outside the AoI)

12.28 The Stage 2A EMFM modelling therefore demonstrates how the proposed Highway Works would have significant improvements overall at all 16 junctions included in the original study area. This is either by reducing traffic flows when compared to the Stage 1A without development scenario or by ensuring they would continue to operate within capacity.

12.29 The spreadsheet at **Appendix 71** also shows how there would be no significant impacts at the remaining 11 junctions that were originally considered but disregarded from the study area. This means there are no changes to the previous conclusions or any requirement for additional modelling.

12.30 The Stage 2A EMFM Forecasting Report showed high V/C ratios i.e. over 95% at the following five additional junctions not considered to date:

i) Nottingham Road/Willowcroft Road, Spondon, Derby

ii) Derby Road/Nottingham Road Gyratory, Derby (city centre)

iii) High Street/Park Lane, Castle Donington

iv) A6 Derby Road/Whatton Road, Loughborough

v) Derby Road/Bishop Meadow Road, Loughborough.

12.31 A separate table is also included at **Appendix 71** showing the change in V/C ratios between the Stage 1A without development and Stage 2A scenarios. It confirms how V/C ratios would either improve or are expected to experience a negligible increase, hence not triggering the need for any further detailed assessment at the five junctions listed above.

12.32 Overall, it can be concluded that the proposed Highway Works would result in beneficial impacts across all junctions in the vicinity of the site. Should the study area

have been determined using the Stage 2A EMFM outputs, as suggested by LCountyC and discussed at previous TWG meetings, then it would have reduced versus that considered in this TA. Nevertheless, this provides a robust assessment, and detailed capacity assessments for all 16 junctions included in the original study area in **Section 13** should provide comfort and evidence highlighting the impacts across a larger study area.

12.33 The EMFM outputs have been reviewed to understand the increase in traffic flows through local villages from the Stage 2A modelling outputs. The morning and evening peak hour two-way flow increases are presented below.

- Diseworth (Grimes Gate) = 19 morning peak hour, 41 evening peak hour
- Castle Donington (High Street) = 139 morning peak hour, 9 evening peak hour
- Kegworth (Derby Road) = 31 morning peak hour, 9 evening peak hour
- Kegworth (Nottingham Road) = 6 morning peak hour, 38 evening peak hour
- Long Whatton (Main Street) = -51 morning peak hour, 56 evening peak hour

12.34 The data shows that traffic increases through villages in the vicinity of the site would be low, which is a result of the significant Highway Works proposed that draws traffic to the SRN. A percentage of these trips would originate from nearby villages associated with residents working at the site, rather than an issue of rat-running. The largest increase would be along Castle Donington High Street in the morning peak hour, but it is likely that EMFM is overestimating traffic using the High Street and underestimating increases on the bypass because of how these links are coded in EMFM. Nevertheless, there should be no significant impacts and no further assessment of traffic increases through local villages has been undertaken over and above that within Chapter 6 of the ES.

Stage 2B EMFM Modelling

12.35 AECOM issued the EMFM Forecasting Report Addendum covering the Stage 2B modelling in July 2025. A copy of the Forecasting Report Addendum is included in **Appendix 72.**

12.36 The Stage 2B Addendum considers the benefits of the proposed Highway Works without traffic from the Ratcliffe on Soar redevelopment, EMIP and draft Local Plan allocations. The conclusions remain unchanged from the Stage 2A EMFM forecasting report and demonstrate that the proposed Highway Works would bring significant operational benefits to the network, particularly the A453 corridor between Finger Farm and M1 Junction 24.

COBALT Assessment

12.37 **Appendix 73** includes for the COBALT Assessment (EMG2-BWB-GEN-XX-RP-TR-0020 Revision P5), undertaken in accordance with the COBALT Methodology Note prepared in May 2025 (Technical Note EMG2-BWB-GEN-XX-RP-TR-0018 Revision P1) included in **Appendix 18**, to which comments were received from NH.

12.38 In summary, the COBALT assessment concludes that, the EMG2 Project, including the proposed Highway Works, provide a benefit to the key junctions on the SRN where mitigation is taking plcce in terms of road safety. When reviewing the impacts in more detail, it is forecast that initially there would be a negligible impact as a result of the EMG2 Project on the links assessed, but this would improve in the future year of 2038 with a number of the links seeing beneficial impacts.

12.39 Similarly, at the junctions assessed, the EMG2 Project would initially result in negligible and beneficial impacts, with the exception of the A453/Hunter Road site access roundabout and M1 Junction 24, albeit the rate of collisions at M1 Junction 24 would only increase by 0.1 per year, hence no noticeable change. The rate and severity of collisions is however expected to improve in the future year of 2038, across all the junctions assessed showing as having a beneficial impact with the proposed Highway Works included for.

12.40 Section 4 of the TA highlighted three locations on the surrounding network where there could be existing safety problems. The following provides a summary of the COBALT assessment at these three junctions:

- **A453/A6 Kegworth Bypass roundabout** – The COBALT assessment shows how there would be a beneficial impact on highway safety at both 2028 and 2038. This is due to traffic flows decreasing because a larger proportion of traffic is transferred to the M1 and new free flow link to the A50 westbound. Furthermore, the issue between conflicting movements between the A6 westbound and A453 southbound has been resolved through the introduction of an additional circulatory lane which allows traffic on the roundabout to clear before traffic from the A6 is released. NH response to the Highway Safety Position Statement (**Appendix 14**) issued on 30 June 2025 requested that road markings and signage should be reviewed. As part of the mitigation and detailed design at this junction, which involves delivering a new lane for right turning movements into EMG1 from the A453 southbound, the road markings will be reviewed.

- **M1 Junction 24** – The COBALT assessment shows there would be a marginal increase of 0.1 collisions per year across the entire junction in 2028, with a beneficial impact occurring at 2038. Whilst this is positive, the safety issue was identified on the M1 northbound off-slip and the new free flow link reduces traffic flows on this arm thereby reducing queueing. This should improve highway safety by limiting the risk of rear end shunt collisions. Furthermore, the changes to the A50 westbound weaving section should address the safety concerns raised during the first public consultation. NH has agreed that there will be no unacceptable impacts to highway safety at M1 Junction 24.

- **A453/The Green** – The COBALT assessment shows how there would be a negligible impact on the rate of collisions in 2028 and a beneficial impact in 2038. This is due to capacity improvements being created at Finger Farm allowing a larger proportion of traffic to route via the A42 and M1 Junction 23A.

12.41 Whilst the COBALT assessment does not predict any significant worsening of safety issues at Finger Farm, as part of the Highway Works being delivered on the A453 westbound exit arm, the existing lane markings and signage across the junction will be reviewed as

part of the detailed design, which should address the comments raised by NH on 30 June 2025 in response to the Highway Safety Position Statement (**Appendix 14**).

12.42 In summary, the COBALT assessment and proposed Highway Works show how the EMG2 Project would have beneficial impacts on highway safety at the above three locations and assist in addressing any existing safety issues.

Revised Furnessing methodology

12.43 **Section 9** set out the furnessing approach used to derive future forecast traffic flows. As set out an updated version of the Modelling Furnessing Approach Technical Note – document EMG2-BWB-GEN-XX-RP-TR-0004 Revision P7 (**Appendix 49**), has been produced setting out a minor amendment/extension to the methodlogy agreed with NH and NCountyC to date, which is detailed at Section 7 of the note.

12.44 That is because, upon receiving the Stage 2 EMFM outputs, and furnessing the traffic flows using the agreed Option 4 methodology, with it being based on the survey turning proportions, it was not encapsulating the rerouting of traffic due to the mitigation strategy and provided unrealistic O-D Matrices.

12.45 As a result, an alternative methodology has been applied to the Stage 2 furnessing determined in collaboration with NH, which retains the Stage 2A furnessed flows and applies the difference between EMFM forecast flows for Stage 1A and Stage 2A. This therefore accounts for the re-routing while maintaining consistency in the matrix build from Stage 1A. This is set out in Section 7 of the Modelling Furnessing Approach Technical Note document EMG2-BWB-GEN-XX-RP-TR-0004 Revision P7 (**Appendix 49**) and has been agreed with NH.

12.46 The subsequent Stage 2A and 2B VISSIM modelling using these forecast demand flows is presented in **Sections 13** and **14.**

13. HIGHWAY IMPACT ASSESSMENTS: CORE SCENARIO (STAGE 2A MODELLING)

Introduction

13.1 The following section presents the results of the detailed junction modelling assessments for the core Stage 2A forecast year scenarios using VISSIM, Junctions 11 and LinSig software at all 16 junctions when taking into consideration the mitigation strategy. As required by the Highway Authorities this includes draft Local Plan allocations, EMIP and part of the Ratcliffe on Soar Power Station development in the baseline but without any mitigation which is likely to accompany those developments, because it is unknown at this stage.

13.2 Similar to the Stage 1A and 1B assessments, the 'with development' scenarios continue to manually assign the EMG2 development traffic on top of furnessed without development flows for robustness and to test the true impacts of the devleopment to avoid any background traffic re-assignment. The summary tables retain the Stage 1A modelling results presented in **Section 10** for comparison and ease of reference

Junctions 2 to 5 (VISSIM Network)

Introduction

13.3 BWB have produced a VISSIM Forecast Modelling report (BWB document EMG2-BWB-GEN-XX-RP-TR-0019_VISSIM Modelling Forecast Report-S2_P4) which sets out the forecast VISSIM modelling results in detail, a copy of which is included with **Appendix 50**.

13.4 In addition, the Geometric Design Stategy Record for the works on the SRN, **Appendix 27**, provides an assessment of the followng aspects in accordance with DMRB CD 122:

- M1 J24 northbound diverge layout;
- M1 J24A northbound diverge layout (proposed diverge to the A50);
- M1 J23A to 24 northbound weaving;
- M1 northbound to A50 westbound link cross-section; and
- A50 westbound merge where the link from the M1 northbound joins the link from the J24 signalised roundabout.

13.5 The following details within this TA provide a summary of the Network Performance results to give an overview of the impacts of the development with the proposed mitigation on the VISSIM network.

Network Performance

13.6 **Table 57** sets out the high level network performance comparison on all scenarios for 2028, as the year of opening of the development, which is NH's key assessment year in line with Circular 01/2022. this compares 'without development' (WoD), 'with development' (WD), and 'with development with mitigation' (WDMit) scenarios.

Table 57: 2028 Network Performance Comparison – Stage 2A

Peak Hour	Scenario	Delay (s)	Speed (mph)	Veh Arr (veh)	Latent Delay (s)	Latent Demand (Veh)
AM	2024 Base	52	48.6	18740	1401	1
	WoD	121	40.1	21027	2863	4
	WD	153	36.5	21598	15843	48
	WD Mit	93	43.1	21970	2926	2
	WD - WoD	32	-3.6	571	12981	44
	WDMit -WoD	-28	3.0	943	63	-2
PM	2024 Base	42	51	18534	2354	1
	WoD	81	45.8	21253	60070	15
	WD	100	42.4	22163	133859	44
	WD Mit	73	46.5	22288	123541	49
	WD – WoD	20	-3.4	910	73789	30
	WDMit – WoD	-7	0.7	1035	63471	34

13.7 When comparing the results of the 'with development' scenario including for mitigation against the 'without development' scenario, the average delay reduces in the morning peak hour (28 seconds), and the average speed and vehicles arriving increases significantly (+3.0mph and 943 vehicles respectively). The latent demand would decrease by 2 vehicles.

13.8 In the evening peak hour, the average delay decreases slightly by 7 seconds. The average speed increases slightly by 0.7mph. The number of vehicles arriving in the network increases by 1,035 vehicles, and the latent demand increases by 34 vehicles, which is a positive overall, in that the Strategic Road Network is able to accommodate a higher number of vehicles.

13.9 The VISSIM Forecast Modelling report (BWB document EMG2-BWB-GEN-XX-RP-TR-0019_VISSIM Modelling Forecast Report-S2_P4) presents the journey time results and shows that there would be reductions in journey times along a number of routes in both the morning and evneing peak hours.

13.10 **Table 58** below sets out the network performance comparison on all scenarios for 2038.

Table 58: 2038 Network Performance Comparison – Stage 2A

Peak Hour	Scenario	Delay (s)	Speed (mph)	Veh Arr (veh)	Latent Delay (s)	Latent Demand (Veh)
AM	2024 Base	52	48.6	18740	1401	1
	WoD	211	32.3	21974	108213	150
	WD	259	28.8	22360	378853	373
	WD Mit	177	34.6	22739	1003413	580
	WD – WoD	48	-3.5	386	270640	223
	Mit – WoD	-34	2.4	765	895201	430
PM	2024 Base	42	51	18534	2354	1
	WoD	126	40.2	22275	748599	484
	WD	154	36.8	22872	1567205	906
	WD Mit	120	40.6	23151	980709	500
	WD – WoD	28	-3.4	597	818606	422
	Mit – WoD	-7	0.4	876	232110	16

13.11 Similarly to the 2028 assessment, the 2038 results show that the average delay reduces, considerably still in the morning peak hour (34 seconds), which results in higher average speeds and an additional 765 vehicles arriving through the network area.

13.12 In the evening peak hour, there is a marginal decrease in delay of 7 seconds with average speeds increasing slightly by 0.4mph. Whilst this is a small change, they are again from a low base and the junction performance overall would be much better compared to the morning peak hour, which is the key time period.

13.13 In addition, the VISSIM Forecast Modelling report (BWB document EMG2-BWB-GEN-XX-RP-TR-0019_VISSIM Modelling Forecast Report-S2_P4) shows how journey times would reduce along a number of the routes in both peak hours.

13.14 As set out in the Trip Generation Core Assessment Technical Note at **Appendix 11**, and paragraphs 7.11 to 7.13 above, it was agreed that a sensitivity test is undertaken that manually re-assigns HGVs between EMG2 and the EMG1 rail freight terminal when including for the mitigation. Therefore, the Stage 2A modelled flows were adjusted so that 40 HGVs in the morning peak hour (18 arrivals, 22 departures) and 44 HGVs in the evening peak hour (28 arrivals, 16 departures) were assigned between EMG2 Main Site and EMG1.

13.15 The modelling results of the sensitivity test are summarised in **Table 59**.

Table 59: 2038 Network Performance Comparison – Stage 2A Sensitivity Test

Peak	Scenario	Delay (seconds)	Speed (mph)	Vehicles Arriving	Latent Demand
AM	WoD	239	30.3	21,375	810
	WD Sensitivity	176	34.0	22,746	533
	WD Seni - WoD	-63	3.7	1,371	-277
PM	WoD	139	38.9	22,196	485
	WD Sensitivity	143	38.2	22,939	558
	WD Sensi - WoD	4	-0.7	743	73

13.16 The results show that the performance of the VISSIM modelling would be slightly better than the Stage 2A core assessment above. Therefore, the slight adjustment to HGV flows at the A453/A6 Kegworth Road roundabout would have no material impacts on the operation of the network and there are no changes to the conclusion of the Stage 2A modelling results.

13.17 In summary, the results show that, the comprehensive mitigation strategy included for the highway network within the VISSIM model, extending from the EMG2 Main Site access to M1 Junction 24, would, overall, provide significant benefit. In summary:

i) A453/Hunter Road/EMG2 Main Site access roundabout – traffic would be able to safely enter and exit the EMG2 site in any given scenario and hence it would operate within capacity; vehicles would struggle to exit Hunter Road without the mitigation measures included for; hence the proposals provide betterment on said arm.

ii) Toucan crossing on the A453 – this operates within capacity when called, without any negative blocking back to either roundabout east or west.

iii) Finger Farm – the gyratory works well once the in mitigation is in place, as there are far less vehicles wanting to use the A453 when comparing to the base scenarios once the new M1 to A50 link road is included for.

iv) A453/A6 Kegworth Bypass roundabout – while there is not an inherit capacity issue at the A453/A6 Kegworth Bypass roundabout, the addition of a second right turn lane from the A453 southbound into EMG1 in effect future proofs the junction by increasing storage capacity within it and should also help alleviate the potential collision issue raised, as and the extra lane will help prevent vehicles from trying to manoeuvre around any queuing vehicles to enter the preceding two lane section into EMG1.

v) M1 Junction 24 diverge slip roads - in the base scenarios there is severe queuing forecast on both the M1 diverge slip road approaches, with vehicles queuing back onto the mainline to M1 Junction 23A to the south in the morning peak hour in particular, With the proposed Highway Works included for, there is still queuing back onto the M1 mainline, but this is vastly improved, especially on the northbound approach, where the queue does not prejudice the operation of the proposed M1 northbound to A50 westbound link road and allows vehicles to access it. It is also worth reminding that the Stage 2A assessment work includes

for all of the Ratcliffe on Soar Power Station redevelopment, EMIP and draft Local Plan allocation traffic in the baseline but not any mitigation, because it is unknown at this stage of the process. Either way, the improved operation will help improve the PIC record observed on the M1 northbound diverge slip road.

vi) M1 Junction 24 circulatory links – the inclusion of the additional lane on the western side of the junction increases capacity as it allows more vehicles to access the junction and manoeuvre through it quicker. This in turn allows the MOVA at the junction to assign more green time to the busier arms (M1 southbound/A50, A453 Remembrance Way, and M1 northbound approaches), allowing for additional vehicles to enter the model. For the avoidance of doubt, the proposed Highway Works do not go as far as resolving all capacity issues at M1 Junction 24, especially on the A453 Remembrance Way arm and M1 southbound and A50 approach, but neither does it prejudice its operation either, over and above the congestion anticipated if the Ratcliffe on Soar Power Station is fully redeveloped in Stage 2A but without any further mitigation included for at this stage of the process (because it is not currently known).

vii) New M1 to A50 link road – whilst this introduces another conflict point, as result the removal of the current two to one merge on the exit from M1 Junction 24 to provide two full lanes, and the merge with the separated left turn lane, it reduces the number of conflict points overall. This in turn helps the A50 heading west from M1Junction 24, including for the new link road merge, to operate safely and within capacity.

Junction 6 – A453/East Midlands Airport Signal Junction

13.18 The agreed base LinSig model for the A453/East Midlands Airport signal junction has been tested for capacity using the Stage 2A forecast year flows. **Appendix 51** contains the LinSig output data, whilst **Table 60** summarises the results.

Table 60. A453/East Midlands Airport LinSig Summary Results – Stage 2A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – EMA Access	6.2	35	61.5	6.2	22.2	45.2
Arm 2 – A453 (E)	7.8	6.0	60.9	4.5	6.6	35.7
Arm 3 – A453 (W)	10.1	16.7	61.6	6.5	19.4	45.5
	PRC over all lanes = 46.1%			PRC over all lanes = 97.9%		
2038 forecast year 'without development'						
Arm 1 – EMA Access	12.6	32.9	70.9	8.2	25.4	56.6
Arm 2 – A453 (E)	10.5	10.9	70.4	5.4	7.8	38.5
Arm 3 – A453 (W)	15.5	22.3	71.4	10.3	21.1	61.4
	PRC over all lanes = 26%			PRC over all lanes = 46.5%		
2028 forecast year 'with development'						
Arm 1 – EMA Access	7.4	44.5	72.0	5.1	19.3	41.3
Arm 2 – A453 (E)	8.4	10.5	74.7	7.6	10.3	47.0
Arm 3 – A453 (W)	16.9	17.2	9.9	6.4	21.5	46.2
	PRC over all lanes = 20.4%			PRC over all lanes = 91.7%		
2038 forecast year 'with development'						
Arm 1 – EMA Access	15.1	59.0	86.9	7.8	19.8	63.0
Arm 2 – A453 (E)	11.4	20.5	86.1	10.1	13.1	56.4
Arm 3 – A453 (W)	13.6	25.2	87.3	9.1	26.7	61.9
	PRC over all lanes = 3%			PRC over all lanes = 43%		
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – EMA Access	6.0	41.3	66.9	5.2	19.8	47.9
Arm 2 – A453 (E)	7.9	7.9	69.4	7.8	10.9	47.8
Arm 3 – A453 (W)	14.4	16.5	70.1	6.5	21.6	46.9
	PRC over all lanes = 28.3%			PRC over all lanes = 87.9%		
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – EMA Access	10.5	44.9	77.6	7.7	20.4	62.2
Arm 2 – A453 (E)	9.4	13.6	80.2	10.7	13.4	58.6
Arm 3 – A453 (W)	22.5	21.5	79.9	9.3	25.9	61.3
	PRC over all lanes = 12.2%			PRC over all lanes = 44.8%		

13.19 The results show that the junction is predicted to continue to operate within capacity during all scenarios in both peak hours. Therefore, it can be concluded that the existing junction layout will remain suitable to accommodate the forecast year traffic flows without the need for any mitigating improvements.

Junction 7 – A453/Grimes Gate Priority Junction

13.20 The agreed base Junctions 11 model for the A453/Grimes Gate priority junction has been tested for capacity using the Stage 2A forecast year flows. **Appendix 52** includes the Junctions 11 output data, whilst **Table 61** summarises the modelling results.

Table 61.A453/Grimes Gate Junctions 11 Summary Results – Stage 2A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Stream B-C – Grimes Gate	0.0	6.51	0.02	0.0	6.75	0.02
Stream B-A – Grimes Gate	0.3	10.36	0.24	0.1	8.63	0.08
Stream C-AB – A453 (W)	0.0	3.89	0.02	0.0	4.75	0.04
2038 forecast year 'without development'						
Stream B-C – Grimes Gate	0.0	7.27	0.03	0.0	7.36	0.03
Stream B-A – Grimes Gate	0.5	12.77	0.33	0.2	11.35	0.17
Stream C-AB – A453 (W)	0.0	3.88	0.02	0.1	4.29	0.06
2028 forecast year 'with development'						
Stream B-C – Grimes Gate	0.0	6.74	0.01	0.0	7.34	0.03
Stream B-A – Grimes Gate	0.6	13.05	0.36	0.1	9.72	0.10
Stream C-AB – A453 (W)	0.0	3.45	0.03	0.0	5.00	0.05
2038 forecast year 'with development'						
Stream B-C – Grimes Gate	0.0	7.79	0.03	0.0	8.44	0.04
Stream B-A – Grimes Gate	0.9	16.82	0.47	0.2	13.42	0.17
Stream C-AB – A453 (W)	0.1	3.48	0.04	0.1	4.82	0.06
2028 forecast year 'with development' 'with Mitigation'						
Stream B-C – Grimes Gate	0.0	6.75	0.01	0.0	7.51	0.03
Stream B-A – Grimes Gate	0.5	12.52	0.34	0.1	10.08	0.10
Stream C-AB – A453 (W)	0.0	3.57	0.03	0.1	4.96	0.05
2038 forecast year 'with development' 'with Mitigation'						
Stream B-C – Grimes Gate	0.0	7.55	0.02	0.0	8.54	0.04
Stream B-A – Grimes Gate	0.8	15.93	0.44	0.2	13.58	0.16
Stream C-AB – A453 (W)	0.0	3.40	0.02	0.1	4.85	0.06

13.21 The results show that the junction is predicted to continue to operate well within capacity during all scenarios in both peak hours. Therefore, it can be concluded that the existing junction layout will remain suitable to accommodate the forecast year traffic flows without the need for any mitigating improvements.

Junction 8 – A453/The Green Priority Junction

13.22 The agreed base Junctions 11 model for the A453/The Green priority junction has been tested for capacity using the Stage 2A forecast year flows. **Appendix 53** includes the Junctions 11 output data, whilst **Table 62** summarises the modelling results.

Table 62. A453/The Green Junctions 11 Summary Results – Stage 2A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Steam B-AC – The Green	5.9	49.47	0.88	1.0	14.84	0.50
Stream C-AB – A453 (W)	0.7	4.88	0.25	0.5	5.92	0.25
2038 forecast year 'without development'						
Steam B-AC – The Green	6.1	56.79	0.88	5.3	60.80	0.87
Stream C-AB – A453 (W)	1.2	5.92	0.38	7.9	26.89	0.85
2028 forecast year 'with development'						
Steam B-AC – The Green	122.9	800.13	1.39	1.1	17.92	0.53
Stream C-AB – A453 (W)	0.6	4.58	0.24	0.6	6.78	0.30
2038 forecast year 'with development'						
Steam B-AC – The Green	172.0	1153.41	1.54	28.8	321.69	1.26
Stream C-AB – A453 (W)	1.2	5.76	0.39	53.0	204.22	1.11
2028 forecast year 'with development' 'with Mitigation'						
Steam B-AC – The Green	40.2	243.49	1.13	1.2	20.55	0.56
Stream C-AB – A453 (W)	0.7	4.53	0.24	1.1	8.27	0.42
2038 forecast year 'with development' 'with Mitigation'						
Steam B-AC – The Green	72.9	505.43	1.28	25.2	276.97	1.18
Stream C-AB – A453 (W)	0.7	4.37	0.22	31.0	129.44	1.03

13.23 The results show that the junction would operate within capacity at the 2028 forecast year without development, but capacity issues start to be noted on The Green arm in the 2038 forecast year in the morning peak hour, with or without development, where the RFC starts to exceed 0.85, albeit only just. In the 2038 evening peak hour, the development also triggers impacts on the both The Green and A453 (W) arms.

13.24 With the mitigation included for, focused on the Strategic Road Network, the impacts at the junction reduce, which adds to the conclusion in **Section 12** that it helps reduce traffic overall on the local highway network. However, The Green is still forecast to operate over capacity in both the morning and evening peak hours, with the A453 (W) and The Green arms still forecast to operate over capacity in the latter. However, there would be a significant improvement in queuing on The Green, reducing from 123 PCUs to 40 PCUs in the morning peak hour in 2028 and 172 PCUs to 73 PCUs in 2038.

13.25 Whilst the Junctions 11 modelling suggests that the junction would operate over capacity, the junction is predicted to operate within capacity in EMFM. Whilst speed curves have been included for in the EMFM modelling, for example, it is understood that further geometric parameters, such as the crest to the east of the junction on the A453, cannot be accurately reflected at such a high level of strategic modelling.

13.26 The PIC analysis identified a safety problem at this junction, albeit the rate of PICs has reduced in more recent years following more signage being installed. The proposed highway mitigation seeks to increase capacity at Finger Farm and the A453 corridor, with the aim of making this a more attractive route and discouraging traffic travelling towards the EMG2 Main Site and East Midlands Airport to route via The Green.

13.27 In reality it is therefore envisaged that more strategic traffic looking to route via the A453/The Green junction in EMFM will instead take advantage of the increased capacity on the Strategic Road Network, and Finger Farm in particular, to access the site and Hunter Road to the north to and from the east rather than west. Some more local traffic may use Grimes Gate instead of The Green still.

13.28 Either way, from the first statutory consultation, feedback was received from local residents who asked that capacity improvements not be proposed at junctions leading towards Diseworth so as not to encourage higher traffic flows in the vicinity of the village. This aligns with the principle of the mitigation strategy seeking to promote further use of the Strategic Road Network rather than local roads in the vicinity of the site.

13.29 Hence no mitigation is proposed at the A453/The Green junction, albeit this will also be tested using the Stage 2B forecast flows, which excludes the traffic generated by the draft Local Plan allocations. This information is presented in **Section 14**.

Junction 9 – A453/East Midlands Airport Roundabout

13.30 The Stage 1 modelling results showed that the junction would exceed capacity in Stage 1A but operate well within capacity in Stage 1B. This confirms that the capacity problems are being driven by the Isley Woodhouse development.

13.31 Nevertheless, the agreed base Junctions 11 model for the A453/East Midlands Airport roundabout has been tested for capacity using the Stage 2A forecast year flows. **Appendix 54** includes the Junctions 11 output data, whilst **Table 63** summarises the results.

Table 63. A453/East Midlands Airport Roundabout Junctions 11 Summary Results – Stage 2A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Arm 1 – Walton Hill	0.2	4.69	0.12	0.7	5.0	0.35
Arm 2 – A453 (E)	1.0	5.41	0.34	1.3	6.27	0.35
Arm 3 – A453 (W)	8.0	32.18	0.89	1.5	10.47	0.51
2038 forecast year 'without development'						
Arm 1 – Walton Hill	0.4	4.85	0.16	1.1	6.34	0.44
Arm 2 – A453 (E)	1.1	5.47	0.35	1.6	6.23	0.42
Arm 3 – A453 (W)	56.3	166.82	1.11	6.3	24.5	0.84
2028 forecast year 'with development'						
Arm 1 – Walton Hill	0.3	4.77	0.13	0.6	4.9	0.35
Arm 2 – A453 (E)	1.0	5.54	0.31	1.4	5.97	0.4
Arm 3 – A453 (W)	25.9	84.01	0.99	1.2	8.31	0.45
2038 forecast year 'with development'						
Arm 1 – Walton Hill	0.4	4.84	0.17	1.0	6.5	0.46
Arm 2 – A453 (E)	0.8	5.28	0.33	1.6	6.6	0.45
Arm 3 – A453 (W)	74.3	229.49	1.15	6.1	23.86	0.84
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – Walton Hill	0.2	4.82	0.12	1.2	5.05	0.35
Arm 2 – A453 (E)	1.0	5.44	0.33	1.4	6.02	0.39
Arm 3 – A453 (W)	16.7	57.19	0.95	1.1	9.46	0.52
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – Walton Hill	0.3	4.79	0.15	1.0	6.34	0.44
Arm 2 – A453 (E)	0.9	5.18	0.33	1.4	6.43	0.43
Arm 3 – A453 (W)	69.9	196.36	1.12	4.7	19.71	0.79

13.32 The results show that the junction would continue to operate over capacity in all scenarios during the morning peak hour on the A453 (W) arm, albeit the changes in traffic flows associated with the proposed development, including for mitigation, will result in a negligible impact. The junction would operate within capacity in all scenarios during the evening peak hour.

13.33 As set out in **Sections 10** and **11**, this junction forms part of the site access strategy to the Isley Woodhouse settlement and is expected to undergo significant improvements to accommodate this development and other planned schemes. The issue with capacity is a result of the background traffic from Isley Woodhouse in particular being included in EMFM modelling but none of the physical infrastructure (i.e. mitigation) which will inevitably be required to accommodate that development.

13.34 To understand this further and build on the conclusions of the Stage 1B modelling in Section 11, the A453/East Midlands Airport roundabout will also be tested using the Stage 2B forecast flows, which excludes the traffic generated by the draft Local Plan allocations. This information is presented in **Section 14**.

Junction 10 – A453/Walton Hill Signal Junction

13.35 The Stage 1 modelling results showed that the junction would exceed capacity in Stage 1A but operate well within capacity in Stage 1B. This confirms that the capacity problems are being driven by the Isley Woodhouse development.

13.36 Nevertheless, the agreed base LinSig model for the A453/Walton Hill signal-controlled junction has been tested for capacity using the Stage 2A forecast year flows. **Appendix 55** includes the LinSig output data, whilst **Table 64** summarises the modelling results.

Table 64. A453/Walton Hill Signal LinSig Summary Results – Stage 2A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – Local Road (N)	10.4	19.3	71.3	9.5	19.9	68.3
Arm 2 – A453 (E)	8.1	24.0	61.0	9.7	23.8	66.6
Arm 3 – Walton Hill	8.5	27.9	69.5	5.0	31.1	5.0
	PRC over all lanes = 26.2%			PRC over all lanes = 31.8%		
2038 forecast year 'without development'						
Arm 1 – Local Road (N)	17.4	35.9	92.6	93.8	229.5	111.7
Arm 2 – A453 (E)	14.1	45.2	90.6	69.7	249.9	112.5
Arm 3 – Walton Hill	16.9	33.5	90.9	73.3	238.4	112.2
	PRC over all lanes = -2.9%			PRC over all lanes = -25.0%		
2028 forecast year 'with development'						
Arm 1 – Local Road (N)	12.2	19.9	76.3	9.7	19.8	68.7
Arm 2 – A453 (E)	7.5	22.3	55.3	10.0	23.9	97.5
Arm 3 – Walton Hill	9.7	32.1	77.2	4.8	34.3	67.7
	PRC over all lanes = 16.6%			PRC over all lanes = 31.0%		
2038 forecast year 'with development'						
Arm 1 – Local Road (N)	15.4	33.6	90.0	126.8	317.9	117.8
Arm 2 – A453 (E)	13.2	40.7	88.0	93.8	315.7	117.5
Arm 3 – Walton Hill	16.3	30.5	89.2	72.8	243.1	112.5
	PRC over all lanes = 0.0%			PRC over all lanes = -30.9%		
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – Local Road (N)	11.6	20.5	74.9	10.3	18.9	72.2
Arm 2 – A453 (E)	7.3	21.4	54.2	11.1	25.7	71.9
Arm 3 – Walton Hill	9..8	31.0	75.7	4.4	36.7	67.5
	PRC over all lanes = 18.9%			PRC over all lanes = 24.7%		
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – Local Road (N)	15.9	36.7	91.0	109.9	281.1	115.1
Arm 2 – A453 (E)	13.3	46.7	90.8	69.3	233.6	111.4
Arm 3 – Walton Hill	18.2	32.0	917	64.6	212.7	110.4
	PRC over all lanes = -1.9%			PRC over all lanes = -27.9%		

13.37 The results show that the junction is expected to continue to operate within capacity during all 2028 scenarios. In 2038, the junction would operate over capacity at the 2038 future year, with or without the development.

13.38 As set out in **Sections 10** and **11**, the main impact on capacity is the introduction of Isley Woodhouse traffic. The results show that there would be a slight betterment in capacity at the 2038 with development scenario in the morning peak hour, albeit a slight worsening in the evening peak hour. This shows that whilst capacity issues will likely occur, the proposed development has a negligible impact on the operation of the junction overall. Therefore, it can be concluded that there is no severe impact and no further assessment or mitigation is required at this location based on the Stage 2A modelling.

13.39 However, for completeness, the A453/Walton Hill signal junction will also be tested using the Stage 2B forecast flows, which excludes the traffic generated by the draft Local Plan allocations, to check the conclusions of the Stage 1B modelling remain. This information is presented in **Section 14**.

Junction 11 – A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Roundabout

13.40 The agreed base Junctions 11 model for the A42 Junction 14 on-slip/Top Brand/Gelscoe Lane roundabout has been tested for capacity using the Stage 2A forecast year flows. **Appendix 56** includes the Junctions 11 output data, whilst **Table 65** summarises the results.

Table 65. A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Junctions 11 Summary Results – Stage 2A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Arm 1 – A453 (N)	0.8	6.6	0.37	1	7.31	0.35
Arm 2 – Gelscoe Lane	0.2	4.46	0.08	0.2	4.63	0.15
Arm 3 – Top Brand	0.5	6.35	0.23	0.2	4.75	0.08
2038 forecast year 'without development'						
Arm 1 – A453 (N)	1	6.37	0.4	1.3	7.45	0.35
Arm 2 – Gelscoe Lane	0.4	4.95	0.16	0.4	5.02	0.19
Arm 3 – Top Brand	1.2	7.75	0.4	0.3	5.06	0.22
2028 forecast year 'with development'						
Arm 1 – A453 (N)	1.8	9.31	0.55	1.2	7.74	0.35
Arm 2 – Gelscoe Lane	0.2	4.67	0.08	0.4	5.02	0.21
Arm 3 – Top Brand	0.6	6.18	0.25	0.2	4.37	0.09
2038 forecast year 'with development'						
Arm 1 – A453 (N)	1.8	8.76	0.57	1.5	7.68	0.39
Arm 2 – Gelscoe Lane	0.3	5.06	0.15	1	6.7	0.36
Arm 3 – Top Brand	1	7.81	0.38	0.5	5.42	0.23
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – A453 (N)	0.9	5.91	0.32	0.7	6.84	0.31
Arm 2 – Gelscoe Lane	0.2	4.70	0.10	0.4	5.13	0.18
Arm 3 – Top Brand	0.7	7.35	0.36	0.2	4.77	0.12
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – A453 (N)	0.9	6.07	0.37	1.3	6.74	0.36
Arm 2 – Gelscoe Lane	0.3	4.95	0.17	0.9	5.88	0.33
Arm 3 – Top Brand	1.5	9.83	0.51	0.6	6.11	0.28

13.41 The results show that the junction is predicted to operate well within capacity during all scenarios and in both peak hours. Therefore, it can be concluded that the existing junction layout will remain suitable to accommodate the forecast year traffic flows without the need for any mitigating improvements. No further assessment is required as a result.

Junction 12 – M1 Junction 23

13.42 The agreed base LinSig model for M1 Junction 23 has been tested for capacity using the Stage 2A forecast year flows. **Appendix 57** includes the LinSig output data, whilst **Table 66** summarises the results.

Table 66. M1 Junction 23 LinSig Summary Results – Stage 2A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – M1 SB slip	10.8	29.8	83.7	7.2	33.9	75.7
Arm 2 – A512 (E)	10.3	26.4	72.8	12.1	19.1	77.0
Arm 3 – M1 NB slip	5.8	50.4	75.8	4.9	42.2	67.7
Arm 4 – A512 (W)	9.6	21.0	77.7	7.0	17.1	63.8
	PRC over all lanes = 7.3%			PRC over all lanes = 16.9%		
2038 forecast year 'without development'						
Arm 1 – M1 SB slip	60.4	203.6	109.5	8.9	39.5	89.2
Arm 2 – A512 (E)	49.3	151.8	105.9	17.1	24.6	89.1
Arm 3 – M1 NB slip	18.1	158	103.2	10.4	75.7	93.0
Arm 4 – A512 (W)	94.4	203.4	109.9	21.9	39.9	95.8
	PRC over all lanes = -24.7%			PRC over all lanes = -6.4%		
2028 forecast year 'with development'						
Arm 1 – M1 SB slip	11.0	30.2	84.0	7.2	30.1	71.1
Arm 2 – A512 (E)	11.7	29.0	78.2	11.5	20.1	75.5
Arm 3 – M1 NB slip	5.6	49.0	74.2	4.7	43.5	66.8
Arm 4 – A512 (W)	10.9	23.5	82.1	6.5	16.6	60.5
	PRC over all lanes = 5.9%			PRC over all lanes = 19.2%		
2038 forecast year 'with development'						
Arm 1 – M1 SB slip	72.0	243.2	112.1	10.0	44.2	85.8
Arm 2 – A512 (E)	42.1	121.8	103.8	18.3	26.6	90.7
Arm 3 – M1 NB slip	28.2	267.7	111.9	11.2	84.8	94.6
Arm 4 – A512 (W)	80.9	163.6	107.3	20.4	36.7	94.8
	PRC over all lanes = -24.6%			PRC over all lanes = -5.3%		
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – M1 SB slip	10.7	39.1	82.5	6.8	30.5	72.5
Arm 2 – A512 (E)	11.0	26.3	74.6	10.9	18.6	72.9
Arm 3 – M1 NB slip	5.6	49.0	74.2	4.4	39.7	56.4
Arm 4 – A512 (W)	11.3	24.2	83.5	6.3	16.5	59.2
	PRC over all lanes = 7.8			PRC over all lanes = 23.4		
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – M1 SB slip	59.7	195.7	108.8	9.0	39.4	90.0
Arm 2 – A512 (E)	50.4	155.8	106.2	17.8	25.7	90.0
Arm 3 – M1 NB slip	23.9	229	108.8	9.7	70.3	91.7
Arm 4 – A512 (W)	107.6	225.7	111.5	19.0	35.0	94.1
	PRC over all lanes = -23.9			PRC over all lanes = -4.6		

13.43 The results show that M1 Junction 23 would operate within capacity at the 2028 forecast year in all scenarios, which is the Circular 01/2022 compliant assessment year, with or without development. Whilst the junction would exceed capacity at the 2038 forecast year, the development would have no impact on capacity and there would be a slight betterment in overall PRC with mitigation included for, which is a result of traffic re-assignment at this junction. Therefore, it can be concluded that there would be no

severe impacts at this junction from the development and no further assessment or mitigation is required as a result, based on the Stage 2A modelling.

13.44 However, for completeness, because of its strategic nature, M1 Junction 23 will also be tested using the Stage 2B forecast flows, which excludes the traffic generated by the draft Local Plan allocations. This information is presented in **Section 14**.

Junction 13 – A50 Junction 1

13.45 The Stage 1A and 1B modelling results showed that the junction would exceed capacity with or without development, but there would be a negligible impact from the proposed development.

13.46 The agreed base LinSig model for A50 Junction 1 has been tested for capacity using the Stage 2A forecast year flows, which includes the committed improvement scheme associated with Land South of A50 Junction 1, Castle Donington development that signalises the Trent Lane and Tamworth Road arms. **Appendix 58** includes the LinSig output data, whilst **Table 67** summarises the results.

Table 67. A50 Junction 1 LinSig Summary Results – Stage 2A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – B5010	2.0	10.1	63.9	1.4	9.8	52.8
Arm 2 – B6540	9.5	20.4	99.4	8.4	17.5	89.2
Arm 3 – A50 slip road (E)	18.4	78.0	99.1	9.0	27.2	84.0
Arm 4 – Ryecroft Road	0.3	8.7	18.2	0.3	7.8	16.1
Arm 5 – Trent Lane	6.9	19.0	73.8	11.7	33.7	88.5
Arm 6 – A50 slip road (W)	9.3	18.4	94.7	6.0	15.4	90.5
	PRC over all lanes = -10.4%			PRC over all lanes = -6.3%		
2038 forecast year 'without development'						
Arm 1 – B5010	2.3	14.3	72.4	2.1	11.2	54.3
Arm 2 – B6540	7.5	14.6	78.8	13.9	29.6	93.5
Arm 3 – A50 slip road (E)	8.9	24.2	82.7	6.4	20.1	71.3
Arm 4 – Ryecroft Road	0.4	8.8	21.2	0.5	8.9	24.7
Arm 5 – Trent Lane	50.7	167.9	107.7	55.7	153.2	106.9
Arm 6 – A50 slip road (W)	32.7	93.9	106.3	5.8	14.6	70.2
	PRC over all lanes = -20.2%			PRC over all lanes = -18.8%		
2028 forecast year 'with development'						
Arm 1 – B5010	2.2	12.7	71.3	0.9	5.8	38.6
Arm 2 – B6540	9.0	19.4	96.2	8.5	21.6	92.6
Arm 3 – A50 slip road (E)	22.9	100.1	101.5	8.6	32.0	85.5
Arm 4 – Ryecroft Road	0.3	9.5	21.7	0.2	6.7	14.6
Arm 5 – Trent Lane	4.8	18.2	71.4	9.0	25.7	83.0
Arm 6 – A50 slip road (W)	20.0	49.4	102.3	5.6	15.0	68.1
	PRC over all lanes = -18.9%			PRC over all lanes = -2.9%		
2038 forecast year 'with development'						
Arm 1 – B5010	2.3	14.5	72.9	2.2	11.3	55.7
Arm 2 – B6540	17.0	39.3	101.7	14.0	29.7	93.5
Arm 3 – A50 slip road (E)	12.8	45.4	93.5	6.1	19.5	69.6
Arm 4 – Ryecroft Road	0.4	9.4	23.6	0.7	9.4	31.5
Arm 5 – Trent Lane	51.7	166.1	107.5	72.1	196.8	109.9
Arm 6 – A50 slip road (W)	42.9	125.5	109.0	5.9	14.6	71.2
	PRC over all lanes = -21.1%			PRC over all lanes = -22.2%		
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – B5010	1.9	9.6	62.2	0.9	6.6	39.4
Arm 2 – B6540	8.5	19.1	91.7	8.4	18.7	92.8
Arm 3 – A50 slip road (E)	14.6	58.8	96.1	7.1	24.0	77.5
Arm 4 – Ryecroft Road	0.2	8.3	15.6	0.3	7.0	18.0
Arm 5 – Trent Lane	6.9	20.4	74.8	11.5	28.0	90.0
Arm 6 – A50 slip road (W)	8.7	19.2	93.5	6.1	15.4	70.9
	PRC over all lanes = -6.8			PRC over all lanes = -4.7		
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – B5010	2.2	14.0	70.1	1.9	10.4	49.3

Arm 2 – B6540	11.6	25.5	100.2	14.7	30.7	100.1
Arm 3 – A50 slip road (E)	10.1	38.1	89.8	5.7	18.6	66.3
Arm 4 – Ryecroft Road	0.3	8.3	18.9	1.6	13.1	54.5
Arm 5 – Trent Lane	10.6	25.0	88.0	74.5	206.3	110.6
Arm 6 – A50 slip road (W)	7.9	16.5	86.5	5.4	14.4	66.9
	PRC over all lanes = -11.3			PRC over all lanes = -22.9		

13.47 The results show that A50 Junction 1 is forecast to exceed capacity in all scenarios, with or without the development. However, the overall change in PRC and associated queues and delays will reduce overall as a result of the proposed development, including for the mitigation, with a reduction in queuing on the A50 slip road (W) arm (eastbound off slip) for example.

13.48 Whilst there would be a slight worsening of the performance in the evening peak hour (-22.9% PRC with development and mitigation in 2038 v 18.8% without them in 2038) there would be betterment in the morning peak hour (-11.3% v -20.2%). Therefore, it can be concluded that there would be no severe impacts at this junction from the development and no further assessment or mitigation is required as a result based on the Stage 2A modelling.

13.49 However, for completeness, because of its strategic nature, the A50 junction 1 roundabout will also be tested using the Stage 2B forecast flows, which excludes the traffic generated by the draft Local Plan allocations. This information is presented in **Section 14**.

Junction 14 – M1 Junction 25

13.50 The agreed base LinSig model for M1 Junction 25 has been tested for capacity using the Stage 2A forecast year flows. **Appendix 59** includes the LinSig output data, whilst **Table 68** summarises the results.

Table 68 M1 Junction 25 LinSig Summary Results – Stage 2A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – M1 slip (N)	34.6	113.0	102.4	89.9	359.8	119.8
Arm 2 – A52 (E)	117.1	577.8	138.3	87.7	383.3	122.1
Arm 3 – Bostocks Lane (S)	48.7	327.0	116.3	42.8	330.8	117.2
Arm 4 – M1 slip (S)	165.9	616.1	144.9	13.4	35.6	87.5
Arm 5 – A52 (W)	88.7	537.1	135.2	5.5	25.2	58.3
Arm 6 – Bostocks Lane (N)	124.5	604.8	143.5	27.1	106.6	100.3
	PRC over all lanes = -61.0%			PRC over all lanes = -35.6%		
2038 forecast year 'without development'						
Arm 1 – M1 slip (N)	41.1	144.0	104.6	115.7	389.9	122.4
Arm 2 – A52 (E)	81.0	454.4	126.8	86.9	433.0	125.8
Arm 3 – Bostocks Lane (S)	14.3	108.2	98.7	55.7	418.6	124.5
Arm 4 – M1 slip (S)	247.0	636.3	146.6	22.3	49.6	97.1
Arm 5 – A52 (W)	98.6	618.8	144.1	4.9	22.7	51.1
Arm 6 – Bostocks Lane (N)	130.4	642.5	147.8	11.6	73.8	95.4
	PRC over all lanes = -64.7%			PRC over all lanes = -39.8%		
2028 forecast year 'with development'						
Arm 1 – M1 slip (N)	52.4	227.7	109.5	15.2	37.6	89.1
Arm 2 – A52 (E)	13.3	25.5	75.2	49.8	212.2	109.0
Arm 3 – Bostocks Lane (S)	75.3	649.3	146.0	32.7	279.2	112.9
Arm 4 – M1 slip (S)	178.0	638.6	146.8	14.5	34.1	91.8
Arm 5 – A52 (W)	95.4	608.0	143.4	5.4	24.7	55.8
Arm 6 – Bostocks Lane (N)	125.3	637.4	147.8	13.7	90.1	98.0
	PRC over all lanes = -64.5%			PRC over all lanes = -25.5%		
2038 forecast year 'with development'						
Arm 1 – M1 slip (N)	13.3	33.4	86.1	116.0	392.4	122.6
Arm 2 – A52 (E)	15.0	52.5	90.3	82.0	412.1	124.1
Arm 3 – Bostocks Lane (S)	68.8	557.6	136.6	53.8	409.7	123.7
Arm 4 – M1 slip (S)	320.1	863.8	178.9	25.9	59.1	98.7
Arm 5 – A52 (W)	10.0	27.3	76.4	4.9	22.8	51.3
Arm 6 – Bostocks Lane (N)	164.4	859.3	176.8	13.0	86.1	97.3
	PRC over all lanes = -98.8%			PRC over all lanes = -37.9%		
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – M1 slip (N)	12.9	29.7	83.9	51.2	204.3	108.6
Arm 2 – A52 (E)	35.0	137.2	103.6	70.4	313.6	116.6
Arm 3 – Bostocks Lane (S)	62.9	516.4	132.4	38.7	309.6	115.3
Arm 4 – M1 slip (S)	178.8	654.8	149.5	15.0	32.9	91.9

Arm 5 – A52 (W)	95.4	605.7	143.3	5.4	23.4	54.5
Arm 6 – Bostocks Lane (N)	133.2	651.5	149.5	13.3	88.4	97.7
	PRC over all lanes = -66.2%			PRC over all lanes = -29.6%		
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – M1 slip (N)	53.3	203.5	108.6	115.8	394.8	122.8
Arm 2 – A52 (E)	91.3	551.7	135.4	84.7	423.8	125.1
Arm 3 – Bostocks Lane (S)	10.8	71.6	92.9	54.2	415.2	124.1
Arm 4 – M1 slip (S)	267	707.6	156.4	27.2	59.5	98.8
Arm 5 – A52 (W)	71.0	424.9	125.0	4.7	21.2	47.9
Arm 6 – Bostocks Lane (N)	142.2	708.1	155.4	12.8	85.2	97.1
	PRC over all lanes = -73.7%			PRC over all lanes = -39.0%		

13.51 The results show that the junction would exceed capacity in all scenarios, with or without the development. In the 2028 opening year, the overall PRC would reduce from -61.0% to -66.2% with the development and mitigation in place in the morning hour but see a betterment from -35.6% to -29.6% in the evening peak hour.

13.52 There would be a larger impact on PRC at the 2038 forecast year during the morning peak hour which is predicted to change from -64.7% to -73.7% with the same comparison. However, the proposed development would result in an overall increase of 35 PCUs in the morning peak hour (7,688 increasing to 7,721) and 70 PCUs in the evening peak hour (7,218 increasing to 7,288) when considering development traffic any associated reassignment. This equates to a less than 1% increase in total turning movements. Therefore, whilst certain arms are showing stress, the impacts from the development are negligible and significant capacity problems would occur without the development, which is why the negative PRC values have increased still regardless of the limited change in traffic flows overall.

13.53 Overall, it can be concluded that there is no severe impact at this location and no further assessment or mitigation should be required as a result based on the Stage 2A modelling.

13.54 However, for completeness, because of its strategic nature, M1 Junction 25 will also be tested using the Stage 2B forecast flows, which excludes the traffic generated by the draft Local Plan allocations. This information is presented in **Section 14**.

Junction 15 – Station Road/Broad Rushes Roundabout

13.55 The Stage 1 modelling results showed that the junction would exceed capacity in Stage 1A but operate within capacity in Stage 1B. This shows that the capacity problems are being driven by the Isley Woodhouse development and other draft Local Plan allocations.

13.56 The agreed base Junctions 11 model the Station Road/Broad Rushes roundabout has been tested for capacity using the Stage 2A forecast year flows. **Appendix 60** includes the Junctions 11 output data, whilst **Table 69** summarises the results.

Table 69. Station Road/Broad Rushes Roundabout Junctions 11 Summary Results – Stage 2A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Arm 1 – Station Road (N)	7.3	16.63	0.83	3.4	9.07	0.68
Arm 2 – Station Road (S)	0.9	9.61	0.46	10.2	46.20	0.91
Arm 3 – Broad Rushes	2.8	13.90	0.70	6.0	24.11	0.82
2038 forecast year 'without development'						
Arm 1 – Station Road (N)	8.4	19.85	0.87	4.7	12.23	0.77
Arm 2 – Station Road (S)	4.0	24.45	0.80	33.5	135.43	1.07
Arm 3 – Broad Rushes	39.0	132.26	1.07	13.0	58.10	0.95
2028 forecast year 'with development'						
Arm 1 – Station Road (N)	7.4	18.38	0.85	2.7	7.84	0.63
Arm 2 – Station Road (S)	1.2	9.97	0.49	8.0	39.01	0.90
Arm 3 – Broad Rushes	3.5	15.82	0.75	3.3	16.11	0.73
2038 forecast year 'with development'						
Arm 1 – Station Road (N)	9.7	21.15	0.87	5.2	12.72	0.81
Arm 2 – Station Road (S)	7.6	42.26	0.87	40.9	157.53	1.07
Arm 3 – Broad Rushes	51.7	171.50	1.08	14.7	62.36	0.95
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – Station Road (N)	7.9	18.72	0.83	1.3	5.90	0.45
Arm 2 – Station Road (S)	0.2	6.69	0.11	0.3	5.31	0.13
Arm 3 – Broad Rushes	3.5	14.55	0.75	4.1	18.60	0.82
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – Station Road (N)	5.8	14.99	0.81	3.0	8.25	0.65
Arm 2 – Station Road (S)	0.9	10.50	0.44	0.5	7.25	0.33
Arm 3 – Broad Rushes	5.4	24.81	0.81	8.6	34.84	0.90

13.57 The results show that the proposed development, including for mitigation, will allow the junction to operate within capacity during both peak hours. There would be an overall betterment in junction performance in both 2028 and 2038. Hence no further assessment or mitigation should be required as a result based on the Stage 2A modelling.

13.58 However, for completeness, the junction has also been tested using the Stage 2B forecast flows, which excludes the traffic generated by the draft Local Plan allocations. This information is presented in **Section 14**.

Junction 16 – A453/Kegworth Road Roundabout

13.59 The A453/Kegworth Road roundabout fell outside the AoI from the EMFM modelling, but has been tested for capacity, nonetheless. The agreed base Junctions 11 model for the A453/Kegworth Road roundabout has been tested for capacity using the Stage 2A forecast year flows. **Appendix 61** includes the Junctions 11 output data and a plan showing the location of the junction, whilst **Table 70** summarises the results.

Table 70. A453/Kegworth Road Roundabout Junctions 11 Summary Results – Stage 2A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Arm 1 – A453 Off-slip	0.2	2.69	0.13	0.2	2.94	0.18
Arm 2 – Local Road	0.2	2.6	0.13	0.2	2.79	0.19
Arm 3 – Kegworth Road	0.2	3.3	0.15	0.2	3.19	0.16
2038 forecast year 'without development'						
Arm 1 – A453 Off-slip	0.3	3.3	0.2	0.4	3.83	0.3
Arm 2 – Local Road	0.6	3.5	0.35	1.3	5.32	0.55
Arm 3 – Kegworth Road	0.6	4.86	0.37	0.7	5.89	0.42
2028 forecast year 'with development'						
Arm 1 – A453 Off-slip	0.2	2.69	0.13	0.2	2.9	0.18
Arm 2 – Local Road	0.1	2.58	0.12	0.2	2.81	0.19
Arm 3 – Kegworth Road	0.2	3.41	0.17	0.1	2.85	0.05
2038 forecast year 'with development'						
Arm 1 – A453 Off-slip	0.3	3.34	0.21	0.4	3.12	0.26
Arm 2 – Local Road	0.6	3.53	0.35	1.7	6.2	0.62
Arm 3 – Kegworth Road	0.6	4.89	0.37	0	3.77	0.04
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – A453 Off-slip	0.2	2.68	0.13	0.2	2.89	0.18
Arm 2 – Local Road	0.2	2.62	0.13	0.2	2.81	0.19
Arm 3 – Kegworth Road	0.2	3.24	0.13	0.0	2.82	0.04
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – A453 Off-slip	0.3	3.23	0.20	0.4	3.09	0.25
Arm 2 – Local Road	0.6	3.53	0.35	1.3	5.31	0.55
Arm 3 – Kegworth Road	0.5	4.49	0.31	0.0	3.53	0.03

13.60 The results show that the junction is predicted to operate well within capacity during all scenarios in both peak hours. Therefore, it can be concluded that the existing junction layout will remain suitable to accommodate the forecast year traffic flows Hence no further assessment or mitigation should be required.

Junction 17 – A453/Trent Lane/West Leake dumbbell Roundabout

13.61 The A453/Trent Lane/West Leake roundabouts fell outside the AoI from the EMFM modelling, but have been tested for capacity, nonetheless. The agreed base Junctions 11 model for the A453/Trent Lane/West Leake roundabout has been tested for capacity using the Stage 2A forecast year flows. **Appendix 62** includes the Junctions 11 output data, whilst **Table 71** summarises the results.

Table 71. A453/Trent Lane/West Leake dumbbell Roundabout Junctions 11 Summary Results – Stage 2A

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
J1- Arm 1 – Dumbbell Link	0.5	4.15	0.3	0.3	3.29	0.23
J1- Arm 2 – A453 SWB Off-Slip	0	0	0	0	2.65	0.02
J1- Arm 3 – West Leake Lane	0.7	6.03	0.39	0.5	4.35	0.33
J2- Arm 1 – Barton Lane	0.1	4.32	0.07	0	2.99	0.02
J2- Arm 2 – A453 NEB Off-Slip	0.5	4.05	0.3	0.1	2.75	0.06
J2- Arm 3 – Dumbbell Link	0.3	3.09	0.22	0.2	2.25	0.17
2038 forecast year 'without development'						
J1- Arm 1 – Dumbbell Link	1	5.42	0.48	1	5.42	0.48
J1- Arm 2 – A453 SWB Off-Slip	0	3.19	0.01	0	3.19	0.01
J1- Arm 3 – West Leake Lane	1.1	6.22	0.5	1.1	6.22	0.5
J2- Arm 1 – Barton Lane	0.1	4.29	0.07	0.1	4.29	0.07
J2- Arm 2 – A453 NEB Off-Slip	0.1	3.07	0.08	0.1	3.07	0.08
J2- Arm 3 – Dumbbell Link	0.6	3.19	0.33	0.6	3.19	0.33
2028 forecast year 'with development'						
J1- Arm 1 – Dumbbell Link	0.5	4.03	0.3	0.3	3.29	0.23
J1- Arm 2 – A453 SWB Off-Slip	0	2.89	0.04	0	2.65	0.02
J1- Arm 3 – West Leake Lane	0.7	4.98	0.38	0.5	4.34	0.33
J2- Arm 1 – Barton Lane	0.1	3.68	0.06	0	3	0.02
J2- Arm 2 – A453 NEB Off-Slip	0.1	3.01	0.06	0.1	2.75	0.06
J2- Arm 3 – Dumbbell Link	0.3	2.61	0.2	0.2	2.25	0.17
2038 forecast year 'with development'						
J1- Arm 1 – Dumbbell Link	0.5	3.67	0.31	0.5	3.67	0.31
J1- Arm 2 – A453 SWB Off-Slip	0	2.75	0.01	0	2.75	0.01
J1- Arm 3 – West Leake Lane	0.8	5.18	0.44	0.8	5.18	0.44
J2- Arm 1 – Barton Lane	0	3.14	0.02	0	3.14	0.02
J2- Arm 2 – A453 NEB Off-Slip	0.1	2.72	0.05	0.1	2.72	0.05
J2- Arm 3 – Dumbbell Link	0.3	2.4	0.22	0.3	2.4	0.22
2028 forecast year 'with development' 'with Mitigation'						
J1- Arm 1 – Dumbbell Link	1.1	5.57	0.47	2.8	9.46	0.74

J1- Arm 2 – A453 SWB Off-Slip	1.4	7.21	0.59	0.1	4.16	0.12
J1- Arm 3 – West Leake Lane	0.8	11.89	0.42	0.4	5.51	0.28
J2- Arm 1 – Barton Lane	1.0	5.44	0.46	4.6	14.45	0.82
J2- Arm 2 – A453 NEB Off-Slip	2.0	7.91	0.61	0.1	2.82	0.10
J2- Arm 3 – Dumbbell Link	0.2	3.38	0.14	0.4	2.69	0.25
2038 forecast year 'with development' 'with Mitigation'						
J1- Arm 1 – Dumbbell Link	0.2	3.20	0.12	0.1	2.84	0.11
J1- Arm 2 – A453 SWB Off-Slip	0.7	3.99	0.39	0.2	2.76	0.13
J1- Arm 3 – West Leake Lane	1.2	6.75	0.51	0.8	5.23	0.43
J2- Arm 1 – Barton Lane	0.1	3.76	0.10	0.4	4.02	0.28
J2- Arm 2 – A453 NEB Off-Slip	0.5	4.08	0.30	0.3	3.32	0.22
J2- Arm 3 – Dumbbell Link	0.8	4.06	0.41	0.3	2.66	0.21

13.62 The results show that the junction is predicted to operate well within capacity during all scenarios and in both peak hours. Therefore, it can be concluded that the existing junction layout will remain suitable to accommodate the forecast year traffic. Hence no further assessment or mitigation should be required.

14. HIGHWAY IMPACT ASSESSMENTS: SENSITIVITY TEST (STAGE 2B MODELLING)

Introduction

14.1 The following section presents the results of the detailed junction modelling assessments for the Stage 2B forecast year scenarios using VISSIM, Junctions 11 and LinSig software at the same junctions tested in Section 11 using the Stage 1B modelling outputs. This takes into account the propsoed Highway Works and excludes traffic from the Ratcliffe on Soar redevelopment, EMIP and draft Local Plan allocation sites.

14.2 The summary tables retain the Stage 1B modelling results presented in **Section 11** for comparison and ease of reference. Similar to other scenarios, traffic from the proposed development has been added manually on top of without development flows for robustness.

Junctions 2 to 5 (VISSIM Network)

Introduction

14.3 The modelling results for the Stage 2A scenario demonstrated how the proposed highway mitigation would result in significant benefits to the operation of the Strategic Road Network in the VISSIM model overall.

14.4 Full VISSIM modelling resutls are presented in the VISSIM Forecast Modelling report (BWB document EMG2-BWB-GEN-XX-RP-TR-0019_VISSIM Modelling Forecast Report-S2_P4) at **Appendix 50**. The following details within this TA provide a summary of the Network Performance results to provide an overview of the impacts of the development with the proposed mitigation on the VISSIM network (Stage 2B).

Network Performance

14.5 **Table 72** below sets out the high level network performance comparison on all scenarios for 2028, as the year of opening of the development, which is NH's key assessment year in line with Circular 01/2022. this compares 'without development' (WoD), 'with development' (WD), and 'with development with mitigation' (WDMit) scenarios.

Table 72: 2028 Network Performance Comparison – Stage 2B

Peak Hour	Scenario	Delay (s)	Speed (mph)	Veh Arr (veh)	Latent Delay (s)	Latent Demand (Veh)
AM	2024 Base	52	48.6	18740	1401	1
	WoD	81	44.6	20248	2133	1
	WD	133	38.5	21761	14652	4
	WD Mit	71	45.7	22217	2572	1
	WD – WoD	52	-6.1	1513	12519	3
	Mit – WoD	-10	1.2	1969	439	0
PM	2024 Base	41	52	18541	2336	1
	WoD	72	46.9	21255	56562	11
	WD	98	42.7	22145	155640	66
	WD Mit	71	46.8	22346	126646	55
	WD – WoD	26	-4.2	890	99077	55
	Mit – WoD	-1	-0.1	1091	70084	44

14.6 When comparing the results of the 'with development' scenario including for mitigation against the 'without development' scenario, the average delay reduces significantly in the morning peak hour (10 seconds), and the average speed and vehicles arriving increases significantly (+1.2mph and 1,969 vehicles respectively). The latent demand would be unchanged.

14.7 In the evening peak hour, the average delay decreases slightly by 1 second, the average speed decreases slightly by -0.1mph. The number of vehicles arriving in the network increases by 1,091 vehicles, and the latent demand increases by 44 vehicles, which is a positive overall in that the Strategic Road Network is able to accommodate a higher number of vehicles.

14.8 Overall, there would be benefits on the capacity of the network at 2028 and an improvement to journey times along a number of the routes.

14.9 **Table 73** sets out the network performance comparison on all scenarios for 2038.

Table 73: 2038 Network Performance Comparison – Stage 2B

Peak Hour	Scenario	Delay (s)	Speed (mph)	Veh Arr (veh)	Latent Delay (s)	Latent Demand (Veh)
AM	2024 Base	52	48.6	18740	1401	1
	WoD	164	36.0	21514	445083	502
	WD	203	32.5	21984	849994	726
	WD Mit	93	43.1	23170	4927	1
	WD - WoD	38	-3.4	470	404911	225
	Mit - WoD	-71	7.1	1656	-440156	-501
PM	2024 Base	41	52	18541	2336	1
	WoD	110	42.0	22299	516565	252
	WD	132	38.8	23177	790090	382
	WD Mit	113	41.3	23109	717304	357
	WD - WoD	23	-3.2	878	273525	130
	Mit - WoD	3	-0.7	810	200739	105

14.10 Similarly to the 2028 assessment, the 2038 results show that the average delay reduces, considerably still in the morning peak hour (71 seconds), which results in higher average speeds and an additional 1,656 vehicles arriving through the network area. The latent demand would significantly decrease by 501.

14.11 In the evening peak hour, the average delay increases slightly by 3 seconds, but from a low base (the evening peak operates far better overall than the morning peak hour, which has always been the key peak hour of the two assessed). The average speed decreases slightly by 0.7mph. The number of vehicles arriving in the network increases by 810 vehicles, and the latent demand increases by 105, which is a positive overall in that the Strategic Road Network is able to accommodate a higher number of vehicles.

14.12 Therefore, the proposed Highway Works would significantly improve capacity of the junction and mitigate the impacts of the EMG2 development and meets the requirements of both Paragraph 5.283 of the NPS and Paragraph 116 of the NPPF.

Junction 8 – A453/The Green Priority Junction

14.13 The modelling results for Stages 1A, 1B and 2A confirmed that the A453/The Green junction would exceed capacity. However, it is concluded that this is because EMFM shows the junction operating well within capacity and consequently assigning a greater volume of traffic through it compared to what would occur in reality.

14.14 The agreed base Junctions 11 model has been tested for capacity using the Stage 2B forecast year flows. **Appendix 63** includes the Junctions 11 output data, whilst **Table 74** summarises the modelling results.

Table 74. A453/The Green Junctions 11 Summary Results – Stage 2B

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Steam B-AC – The Green	2.8	26.93	0.75	1.0	14.03	0.49
Stream C-AB – A453 (W)	0.4	4.69	0.17	0.7	6.23	0.31
2038 forecast year 'without development'						
Steam B-AC – The Green	68.0	440.14	1.24	3.4	37.63	0.79
Stream C-AB – A453 (W)	0.0	5.28	0.02	0.7	6.79	0.30
2028 forecast year 'with development'						
Steam B-AC – The Green	78.5	529.37	1.28	1.2	18.04	0.55
Stream C-AB – A453 (W)	0.5	4.35	0.19	0.9	7.21	0.36
2038 forecast year 'with development'						
Steam B-AC – The Green	384.1	2451.51	1.89	7.6	82.63	0.92
Stream C-AB – A453 (W)	0.1	4.65	0.04	0.8	8.51	0.36
2028 forecast year 'with development' 'with Mitigation'						
Steam B-AC – The Green	15.7	113.15	1.00	1.3	20.72	0.57
Stream C-AB – A453 (W)	0.5	4.51	0.19	0.9	7.60	0.37
2038 forecast year 'with development' 'with Mitigation'						
Steam B-AC – The Green	262.9	1728.78	1.70	7.7	88.41	0.93
Stream C-AB – A453 (W)	0.0	5.01	0.02	1.1	9.16	0.42

14.15 The results show that the junction would operate within capacity during all scenarios in the evening peak hour but exceed capacity in the morning peak hour at both the 2028 and 2038 future years, with or without the development. Capacity issues on The Green arm are forecast to be worse in the morning peak in Stage 2B versus Stage 2A because less traffic is forecast to be travelling on the A453 in the former because it does not include for the traffic generated by the draft Local Plan sites and Isley Woodhouse in particular. Because EMFM suggests that this junction works within capacity more traffic is attracted along The Green as a result.

14.16 However, for the reasons presented in previous sections, in reality the impacts will be less because EMFM is overestimating how much traffic will use the junction. Furthermore, when considering that the proposed highway works include capacity improvements at Finger Farm, driver journey times will be much less when routing via the A42 and Finger Farm. Therefore, no mitigation is proposed.

Junction 9 – A453/East Midlands Airport Roundabout

14.17 The previous modelling results show that the A453/East Midlands Airport roundabout is expected to exceed capacity in Stages 1A and 2A but operate within capacity in Stage 1B. This is because traffic from the Isley Woodhouse settlement is having a large impact on the operation of the junction but forms part of the access strategy to that site and is therefore expected to be improved.

14.18 The agreed base Junctions 11 model has been tested for capacity using the Stage 2B forecast year flows. **Appendix 64** includes the Junctions 11 output data, whilst **Table 75** summarises the modelling results.

Table 75. A453/East Midlands Airport Roundabout Junctions 11 Summary Results – Stage 2B

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Arm 1 – Walton Hill	0.2	4.66	0.11	0.9	4.76	0.33
Arm 2 – A453 (E)	1.2	5.38	0.35	1.0	5.38	0.32
Arm 3 – A453 (W)	4.4	17.74	0.78	1.5	9.06	0.52
2038 forecast year 'without development'						
Arm 1 – Walton Hill	0.2	4.23	0.11	0.9	4.83	0.35
Arm 2 – A453 (E)	1.8	6.19	0.43	1.6	6.63	0.46
Arm 3 – A453 (W)	3	12.75	0.66	1.3	8.49	0.46
2028 forecast year 'with development'						
Arm 1 – Walton Hill	0.3	4.8	0.11	0.7	4.75	0.33
Arm 2 – A453 (E)	0.8	5.14	0.31	1.1	5.53	0.35
Arm 3 – A453 (W)	8.9	33.07	0.87	1.9	9.69	0.51
2038 forecast year 'with development'						
Arm 1 – Walton Hill	0.3	4.15	0.12	0.8	5.01	0.37
Arm 2 – A453 (E)	1.4	5.77	0.39	2	7.23	0.5
Arm 3 – A453 (W)	3.2	15.15	0.73	1.0	8.12	0.4
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – Walton Hill	0.2	5.40	0.12	0.6	4.74	0.33
Arm 2 – A453 (E)	1.0	5.10	0.32	1.3	5.62	0.37
Arm 3 – A453 (W)	5.7	22.54	0.83	1.3	8.89	0.46
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – Walton Hill	0.2	4.30	0.11	0.9	4.82	0.37
Arm 2 – A453 (E)	1.3	5.75	0.41	1.8	7.29	0.51
Arm 3 – A453 (W)	3.1	14.85	0.69	1.3	8.71	0.44

14.19 Similar to the Stage 1B modelling, the results show that the junction would operate within capacity in all scenarios at Stage 2B. Therefore, the same conclusions remain in that capacity issues are being driven by the Isley Woodhouse development. The impacts of the proposed development are negligible and no mitigation is required.

Junction 10 – A453/Walton Hill Signal Junction

14.20 The previous modelling results show that the A453/Walton Hill signal junction is expected to exceed capacity in Stages 1A and 2A but operate within capacity in Stage 1B. This is because traffic from the Isley Woodhouse settlement is having a large impact on the operation of the junction, which forms part of the A453 that is being realigned as part of the access strategy and so improved.

14.21 The agreed base LinSig model has been tested for capacity using the Stage 2B forecast year flows. **Appendix 65** includes the LinSig output data, whilst **Table 76** summarises the modelling results.

Table 76. A453/Walton Hill Signal LinSig Summary Results – Stage 2B

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – Local Road (N)	8.9	17.7	68.1	9.3	17.6	67.8
Arm 2 – A453 (E)	8.8	27.7	68.3	9.9	25.8	67.8
Arm 3 – Walton Hill	7.7	26.2	66.2	4.3	31.8	62.4
	PRC over all lanes = 31.7%			PRC over all lanes = 32.7%		
2038 forecast year 'without development'						
Arm 1 – Local Road (N)	10.0	19.1	72.6	10.9	20.6	74.2
Arm 2 – A453 (E)	10.2	26.0	71.7	11.3	25.5	73.2
Arm 3 – Walton Hill	7.6	30.2	72.4	4.3	35.4	66.0
	PRC over all lanes = 23.9%			PRC over all lanes = 21.3%		
2028 forecast year 'with development'						
Arm 1 – Local Road (N)	10.5	19.1	72.0	9.5	18.0	68.7
Arm 2 – A453 (E)	7.0	22.4	54.0	10.3	25.3	68.6
Arm 3 – Walton Hill	8.6	29.3	71.6	4.4	35.1	67.5
	PRC over all lanes = 25.0%			PRC over all lanes = 31.0%		
2038 forecast year 'with development'						
Arm 1 – Local Road (N)	9.5	18.4	70.5	11.2	21.0	73.7
Arm 2 – A453 (E)	9.7	26.9	70.6	11.7	25.8	73.6
Arm 3 – Walton Hill	7.9	28.7	71.4	4.7	40.6	73.8
	PRC over all lanes = 26.0%			PRC over all lanes = 20.6%		
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – Local Road (N)	9.7	18.2	68.5	9.7	18.5	69.1
Arm 2 – A453 (E)	7.9	28.3	66.8	10.3	24.9	68.6
Arm 3 – Walton Hill	8.5	25.7	67.4	4.4	35.2	67.0
	PRC over all lanes = 31.4%			PRC over all lanes = 30.3%		
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – Local Road (N)	9.6	19.4	71.3	11.3	21.2	75.0
Arm 2 – A453 (E)	9.6	25.8	70.0	11.8	25.7	74.8
Arm 3 – Walton Hill	7.9	28.0	69.8	4.4	36.7	67.0
	PRC over all lanes = 23.3%			PRC over all lanes = 19.9%		

14.22 The results show that the junction would operate within capacity in all scenarios, thereby confirming the conclusions of the Stage 1B modelling. The development would therefore not have a severe impact and no mitigation is required.

Junction 12 – M1 Junction 23

14.23 The previous modelling results showed the junction would operate within capacity in all scenarios at the 2028 year of opening but then exceed capacity at the 2038 future year with or without development. However, the impacts of the development would not be severe.

14.24 The agreed base LinSig model has been tested for capacity using the Stage 2B forecast year flows. **Appendix 66** includes the LinSig output data, whilst **Table 77** summarises the modelling results.

Table 77. M1 Junction 23 LinSig Summary Results – Stage 2B

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – M1 SB slip	9.8	30.1	80.2	6.4	29.6	69.6
Arm 2 – A512 (E)	9.9	24.4	69.7	10.6	18.2	71.6
Arm 3 – M1 NB slip	6.2	47.8	75.5	4.6	40.7	65.5
Arm 4 – A512 (W)	9.6	20.9	77.3	5.9	16.1	56.3
	PRC over all lanes = 8.2%			PRC over all lanes = 25.7%		
2038 forecast year 'without development'						
Arm 1 – M1 SB slip	59.8	218.1	110.5	8.5	39.2	84.6
Arm 2 – A512 (E)	25.4	58.5	97.8	15.0	21.6	85.4
Arm 3 – M1 NB slip	9.3	56.5	87.2	12.4	97.4	96.5
Arm 4 – A512 (W)	91.8	192.4	109.2	24.2	43.4	96.6
	PRC over all lanes = -22.8%			PRC over all lanes = -7.3%		
2028 forecast year 'with development'						
Arm 1 – M1 SB slip	10.3	31.2	81.8	7.3	30.3	70.1
Arm 2 – A512 (E)	11.0	26.3	74.6	11.6	20.2	75.7
Arm 3 – M1 NB slip	6.0	46.8	74.1	4.9	44.8	68.1
Arm 4 – A512 (W)	10.6	23.2	81.4	6.8	16.8	61.7
	PRC over all lanes = 7.0%			PRC over all lanes = 18.8%		
2038 forecast year 'with development'						
Arm 1 – M1 SB slip	50.1	173.8	107.4	11.9	46.0	96.8
Arm 2 – A512 (E)	33.7	88.2	101.2	25.4	42.1	96.7
Arm 3 – M1 NB slip	25.7	256.6	110.2	19.7	170.6	104.2
Arm 4 – A512 (W)	95.6	195.7	109.5	78.6	162.0	107.2
	PRC over all lanes = -22.4%			PRC over all lanes = -19.2%		
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – M1 SB slip	10.0	31.9	83.1	6.6	30.3	70.5
Arm 2 – A512 (E)	10.7	24.4	72.2	10.8	18.6	72.8
Arm 3 – M1 NB slip	6.0	46.6	74.1	4.6	41.6	66.1
Arm 4 – A512 (W)	11.1	24.0	83.0	6.3	16.4	59.0
	PRC over all lanes = 8.1%			PRC over all lanes = 23.6%		
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – M1 SB slip	38.4	31.8	104.2	8.7	40.1	85.1
Arm 2 – A512 (E)	24.5	56.1	97.4	15.7	22.4	86.5
Arm 3 – M1 NB slip	15.7	138.4	100.8	9.2	62.6	89.0
Arm 4 – A512 (W)	90.3	179.8	108.5	24.2	45.5	96.8
	PRC over all lanes = -20.8%			PRC over all lanes = -7.6%		

14.25 Similar to previous results, the junction is expected to operate within capacity in all scenarios at the 2028 year of opening, which is the Circular 01/2022 compliant

assessment year. At the 2038 future year, the capacity of the junction is expected to improve the PRC increasing from -22.8% to -20.8% in the morning peak hour and see a negligible impact from -7.3% to -7.6% in the evening peak hour. Therefore, no mitigation is required.

Junction 13 – A50 Junction 1

14.26 The previous modelling results showed that the junction would exceed capacity in all scenarios but the development would not have a severe impact. When including the proposed highway mitigation within Stage 2A the results show there would be a betterment in junction performance in all scenarios except the 2038 future year in the evening peak hour.

14.27 The agreed base LinSig model has been tested for capacity using the Stage 2B forecast year flows. **Appendix 67** includes the LinSig output data, whilst **Table 78** summarises the modelling results.

Table 78. A50 Junction 1 LinSig Summary Results – Stage 2B

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – B5010	1.4	7.4	54.4	1.4	10.4	51.2
Arm 2 – B6540	7.4	17.6	63.5	7.0	16.2	80.0
Arm 3 – A50 slip road (E)	12.7	49.8	94.1	7.1	22.2	76.9
Arm 4 – Ryecroft Road	0.2	8.4	15.8	0.3	7.4	16.1
Arm 5 – Trent Lane	6.2	18.5	71.1	10.1	26.9	88.0
Arm 6 – A50 slip road (W)	7.7	18.2	86.0	6.5	17.2	77.3
	PRC over all lanes = -4.5%			PRC over all lanes = 2.2%		
2038 forecast year 'without development'						
Arm 1 – B5010	1.4	8.3	55.5	1.5	11.4	53.5
Arm 2 – B6540	9.0	16.6	91.3	11.9	21.6	98.9
Arm 3 – A50 slip road (E)	7.7	23.0	78.9	7.2	20.0	74.2
Arm 4 – Ryecroft Road	0.2	8.0	14.6	0.6	9.3	28.3
Arm 5 – Trent Lane	6.7	19.7	74.0	24.0	71.7	100.1
Arm 6 – A50 slip road (W)	7.8	18.5	86.0	6.0	17.0	72.8
	PRC over all lanes =-3.5 %			PRC over all lanes = -11.2%		
2028 forecast year 'with development'						
Arm 1 – B5010	1.6	8.2	58.9	1.1	8.1	45.1
Arm 2 – B6540	7.7	18.0	87.7	7.4	16.3	83.6
Arm 3 – A50 slip road (E)	13.4	53.6	95.0	7.4	22.4	76.8
Arm 4 – Ryecroft Road	0.2	8.8	16.4	0.3	7.3	15.8
Arm 5 – Trent Lane	5.8	17.8	67.5	10.1	26.7	87.8
Arm 6 – A50 slip road (W)	8.7	19.6	92.5	6.4	17.0	75.6
	PRC over all lanes = -5.6%			PRC over all lanes = 2.5%		
2038 forecast year 'with development'						
Arm 1 – B5010	1.6	9.3	58.6	2.2	12.1	56.7

Arm 2 – B6540	10.0	19.3	66.1	15.6	29.8	100.5
Arm 3 – A50 slip road (E)	8.8	26.2	85.0	8.6	23.5	81.1
Arm 4 – Ryecroft Road	0.3	8.3	15.5	1.0	12.2	43.4
Arm 5 – Trent Lane	6.6	17.8	71.7	50.2	145.7	106.2
Arm 6 – A50 slip road (W)	7.7	16.9	84.5	6.1	15.5	71.3
	PRC over all lanes = -9.4%			PRC over all lanes = -18.0%		
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – B5010	1.4	7.6	51.9	1.5	10.5	53.2
Arm 2 – B6540	7.4	15.9	84.6	7.5	18.9	78.9
Arm 3 – A50 slip road (E)	7.7	25.4	80.6	7.4	24.9	78.9
Arm 4 – Ryecroft Road	0.2	8.0	14.6	0.3	6.9	15.2
Arm 5 – Trent Lane	5.7	20.3	67.4	14.2	62.3	96.3
Arm 6 – A50 slip road (W)	7.2	17.9	82.1	7.0	19.7	82.4
	PRC over all lanes = 6.4%			PRC over all lanes = -11.8%		
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – B5010	1.4	8.3	53.4	1.4	10.9	51.3
Arm 2 – B6540	9.1	16.3	67.6	11.6	23.4	98.9
Arm 3 – A50 slip road (E)	5.9	17.3	67.1	6.9	21.3	74.5
Arm 4 – Ryecroft Road	0.2	7.6	13.0	1.0	10.3	41.9
Arm 5 – Trent Lane	6.9	20.1	75.2	22.7	68.0	99.7
Arm 6 – A50 slip road (W)	7.4	18.3	82.9	5.9	17.0	71.0
	PRC over all lanes = -2.2%			PRC over all lanes = -10.7%		

14.28 The results show that the junction would exceed capacity in all scenarios with or without development. However, with the proposed Highway Works included for, the junction would experience improved capacity at the 2028 forecast year of opening in the morning peak hour, with PRC's increasing from -4.5% (Stage 1B) to 6.4% (Stage 2B). There would however be some deterioration in the evening peak hour with the PRC reducing from 2.2% (1B) to -11.8% (2B). Notwithstanding this, the maximum queue lengths on the A50 would be 7.4 and 7.0 pcus at Stage 2B which would remain well within the length of the slip roads. Furthermore, by 2038 there would be benefits on the capacity of the junction in both peak hours. Therefore, no mitigation is required.

Junction 14 – M1 Junction 25

14.29 The previous modelling results showed that the junction would exceed capacity in all scenarios however the impacts of the development would not be severe and when including for the mitigation at Stage 2A there would be an overall betterment of no change to the junction PRC at the 2028 year of opening.

14.30 The agreed base LinSig model has been tested for capacity using the Stage 2B forecast year flows. **Appendix 68** includes the LinSig output data, whilst **Table 79** summarises the modelling results.

Table 79 M1 Junction 25 LinSig Summary Results – Stage 2B

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	DoS (%)	Q (pcu)	Delay (secs)	DoS (%)
2028 forecast year 'without development'						
Arm 1 – M1 slip (N)	108.7	432.5	130.7	75.8	318.8	117.5
Arm 2 – A52 (E)	15.5	33.7	84.3	65.2	279.0	114.1
Arm 3 – Bostocks Lane (S)	85.9	635.8	144.5	41.0	272.5	112.8
Arm 4 – M1 slip (S)	71.2	248.3	114.4	12.3	30.4	87.9
Arm 5 – A52 (W)	5.9	12.2	48.1	5.3	25.8	56.0
Arm 6 – Bostocks Lane (N)	133.8	699.2	154.3	9.4	51.7	91.0
	PRC over all lanes = -71.5%			PRC over all lanes = -30.5%		
2038 forecast year 'without development'						
Arm 1 – M1 slip (N)	153.2	681.8	148.8	243.2	689.2	155.3
Arm 2 – A52 (E)	109.0	660.8	146.9	170.2	745.0	158.1
Arm 3 – Bostocks Lane (S)	12.8	62.4	93.5	160.3	718.1	156.0
Arm 4 – M1 slip (S)	229.7	667.0	149.5	115.5	658.1	148.8
Arm 5 – A52 (W)	8.0	27.6	71.3	75.1	646.5	147.0
Arm 6 – Bostocks Lane (N)	137.3	691.5	153.3	2.9	16.8	62.1
	PRC over all lanes = -70.3%			PRC over all lanes = -75.6%		
2028 forecast year 'with development'						
Arm 1 – M1 slip (N)	19.1	49.7	94.3	74.4	338.9	117.5
Arm 2 – A52 (E)	86.6	401.1	122.7	64.6	276.8	113.9
Arm 3 – Bostocks Lane (S)	67.1	475.1	128.7	40.4	277.4	113.1
Arm 4 – M1 slip (S)	140.0	473.9	138.6	13.6	33.2	90.3
Arm 5 – A52 (W)	86.2	561.4	138.0	5.0	25.5	54.7
Arm 6 – Bostocks Lane (N)	111.6	547.8	137.7	10.0	55.2	91.9
	PRC over all lanes = -54.0%			PRC over all lanes = -30.5%		
2038 forecast year 'with development'						
Arm 1 – M1 slip (N)	53.4	194.2	108.1	261.5	732.4	156.4
Arm 2 – A52 (E)	10.5	28.7	70.5	177.3	793.3	164.6
Arm 3 – Bostocks Lane (S)	73.3	549.8	136.0	161.4	753.7	160.6
Arm 4 – M1 slip (S)	30.7	53.4	98.9	17.7	47.6	95.3
Arm 5 – A52 (W)	5.2	11.5	44.0	7.4	26.5	67.4
Arm 6 – Bostocks Lane (N)	137.0	541.1	96.6	7.7	60.4	89.9
	PRC over all lanes = -52.2%			PRC over all lanes = -82.9%		
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – M1 slip (N)	28.6	92.2	100.5	68.9	297.5	115.0
Arm 2 – A52 (E)	14.7	28.7	79.9	65.7	281.1	114.2
Arm 3 – Bostocks Lane (S)	97.2	818.4	167.7	45.3	316.1	116.2
Arm 4 – M1 slip (S)	8.5	19.7	74.7	14.0	34.3	91.1

Arm 5 – A52 (W)	8.0	20.7	64.2	5.4	26.1	57.5
Arm 6 – Bostocks Lane (N)	148.8	791.1	167.5	11.1	66.3	94.4
	PRC over all lanes = -86.3%			PRC over all lanes = -29.1%		
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – M1 slip (N)	12.3	30.7	83.7	130.2	444.1	126.8
Arm 2 – A52 (E)	12.0	38.9	81.5	83.9	401.7	123.4
Arm 3 – Bostocks Lane (S)	74.4	505.5	132.1	56.2	418.3	124.4
Arm 4 – M1 slip (S)	296.7	782.0	165.6	29.3	65.0	99.5
Arm 5 – A52 (W)	9.2	30.1	76.8	5.1	21.6	50.5
Arm 6 – Bostocks Lane (N)	152.8	780.7	164.9	30.4	164.0	104.8
	PRC over all lanes = -84.0%			PRC over all lanes = -40.9%		

14.31 The results show that there would be an improvement in capacity during both the 2028 and 2038 assessment years in the evening peak hour as a result of the EMG2 Project. There would be some further deterioration in the morning peak hour, with the PRC reducing from -71.5% to -86.3% at the 2028 year of opening. However, queues on the M1 and A52 arms would fall well within the capacity of the slip roads and the worst-case queue on Bostocks Lane would see a negligible increase from 133.8 PCUs to 148.8 PCUs, which would not materially affect the operation of this arm. There would also be an improvement in the operation of the junction in the evening peak hour. Therefore, no mitigation is required.

Junction 15 – Station Road/Broad Rushes Roundabout

14.32 The previous modelling results show that the Station Road/Broad Rushes roundabout is expected to operate within capacity in Stage 2A, when including for the proposed mitigation.

14.33 The agreed base Junctions 11 model has been tested for capacity using the Stage 2B forecast year flows. **Appendix 69** includes the Junctions 11 output data, whilst **Table 80** summarises the modelling results.

Table 80. Station Road/Broad Rushes Roundabout Junctions 11 Summary Results

Arms	Weekday AM Peak			Weekday PM Peak		
	Q (pcu)	Delay (secs)	RFC	Q (pcu)	Delay (secs)	RFC
2028 forecast year 'without development'						
Arm 1 – Station Road (N)	7.0	14.71	0.81	3.3	9.29	0.69
Arm 2 – Station Road (S)	0.9	9.71	0.46	6.3	33.50	0.86
Arm 3 – Broad Rushes	2.9	14.58	0.69	2.9	15.58	0.71
2038 forecast year 'without development'						
Arm 1 – Station Road (N)	5.1	12.22	0.75	2.9	8.13	0.65
Arm 2 – Station Road (S)	1.7	12.32	0.56	6.9	35.60	0.87
Arm 3 – Broad Rushes	3.0	14.15	0.71	3.3	18.88	0.76
2028 forecast year 'with development'						
Arm 1 – Station Road (N)	7.8	17.77	0.83	3.5	8.73	0.69
Arm 2 – Station Road (S)	1.0	9.75	0.46	5.2	29.59	0.85
Arm 3 – Broad Rushes	3.0	16.25	0.71	2.9	15.20	0.72
2038 forecast year 'with development'						
Arm 1 – Station Road (N)	6.6	14.40	0.80	3.7	9.72	0.70
Arm 2 – Station Road (S)	1.8	13.19	0.59	14.0	64.50	0.95
Arm 3 – Broad Rushes	3.1	16.23	0.73	10.0	47.31	0.94
2028 forecast year 'with development' 'with Mitigation'						
Arm 1 – Station Road (N)	5.0	12.70	0.76	3.0	8.56	0.66
Arm 2 – Station Road (S)	1.8	11.57	0.54	5.6	30.47	0.86
Arm 3 – Broad Rushes	2.3	12.72	0.64	4.8	25.17	0.83
2038 forecast year 'with development' 'with Mitigation'						
Arm 1 – Station Road (N)	0.3	4.66	0.11	0.9	5.70	0.34
Arm 2 – Station Road (S)	1.8	7.86	0.55	5.9	24.17	0.85
Arm 3 – Broad Rushes	1.5	6.80	0.46	0.5	4.76	0.28

14.34 The results show that the junction would operate within capacity in all scenarios, thereby confirming the conclusions of the Stage 1B modelling. The development would therefore not have a severe impact and no further mitigation is required.

15. CONSTRUCTION TRAFFIC ASSESSMENT

15.1 AECOM issued the EMFM Forecasting Report for the construction traffic scenario in July 2025, a copy of which is included in **Appendix 74**. This report considers the impacts of the construction traffic forecasts at a 2028 future year on top of the Stage 1A without development flows i.e. including traffic from the Ratcliffe on Soar redevelopment, EMIP and draft Local Plan allocations in the baseline, in line with the planning data assumptions at Proforma v14 and uncertainty log v7 (**Appendix 8**).

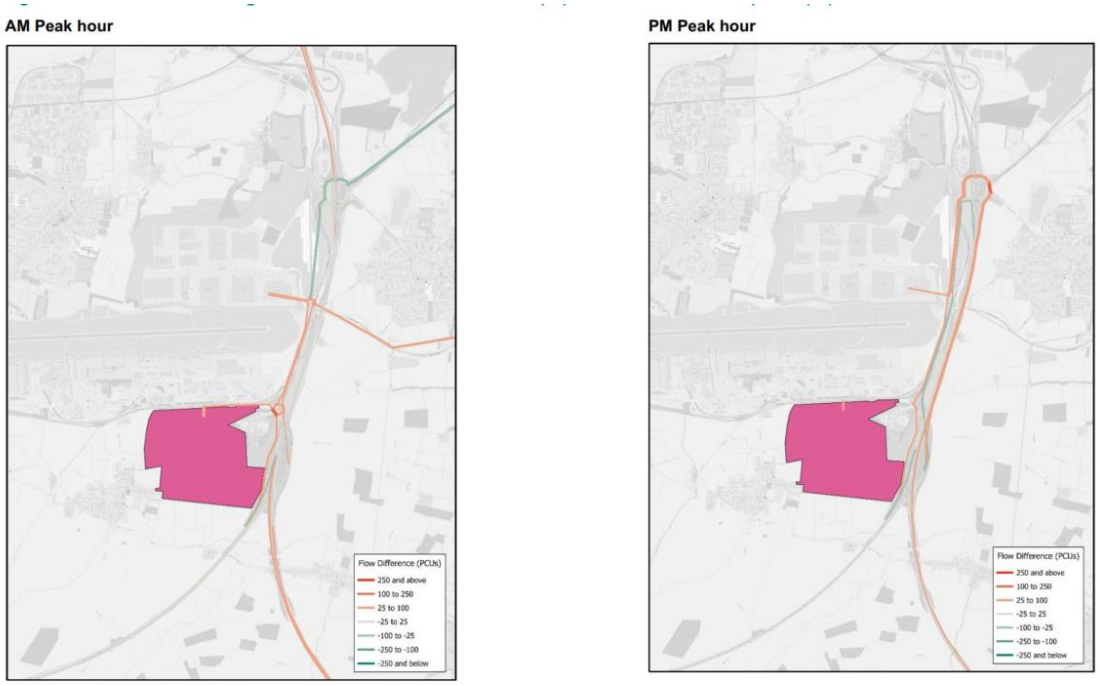
15.2 The traffic flow forecasts during the construction phase were presented to the TWG in Technical Note EMG2-BWB-GEN-XX-RP-TR-0013 Revision P3 (**Appendix 12**). These were extracted by AECOM and input into EMFM as per the extract shown in **Table 81**, with all traffic from 'EMGP2' loaded from the EMG2 Main Site zone and all 'EMGP1' and 'External Highway Works' traffic loaded from the EMG1 zone.

Table 81: Development Trip Generation – Construction Traffic (EMFM Model)

	Car and Van (in vehicles)			Light Vehicle (in vehicles)			HGV (in vehicles)			Total (in vehicles)		
	Departing (Out)	Arriving (In)	Total	Departing (Out)	Arriving (In)	Total	Departing (Out)	Arriving (In)	Total	Departing (Out)	Arriving (In)	Total
EMGP1												
AM Peak hour (08:00 to 09:00)	3	13	**16**	1	1	**2**	4	4	**8**	8	18	**26**
PM Peak hour (17:00 to 18:00)	19	3	**22**	0	0	**0**	1	1	**2**	20	4	**24**
EMGP2												
AM Peak hour (08:00 to 09:00)	7	34	**40**	2	2	**4**	7	7	**14**	16	43	**58**
PM Peak hour (17:00 to 18:00)	51	9	**60**	0	0	**0**	1	1	**2**	52	10	**62**
External Highway Works												
AM Peak hour (08:00 to 09:00)	3	10	**13**	1	1	**2**	5	5	**10**	9	16	**25**
PM Peak hour (17:00 to 18:00)	15	3	**18**	0	0	**0**	1	1	**2**	16	4	**20**
Total Construction Traffic												
AM Peak hour (08:00 to 09:00)	12	57	**68**	3	3	**6**	17	17	**34**	32	77	**108**
PM Peak hour (17:00 to 18:00)	85	14	**99**	1	1	**2**	3	3	**6**	89	18	**107**

15.3 The construction traffic was distributed across the network using the gravity model in EMFM. To reflect the longer distance nature of HGV construction traffic, the trip distribution for HGVs was adjusted such that shorter distance trips of less than 8 kilometres were manually excluded. All HGV assignment avoided routes with existing weight restrictions. Plots showing the forecast flow changes during both peak hours are provided in **Figure 33**.

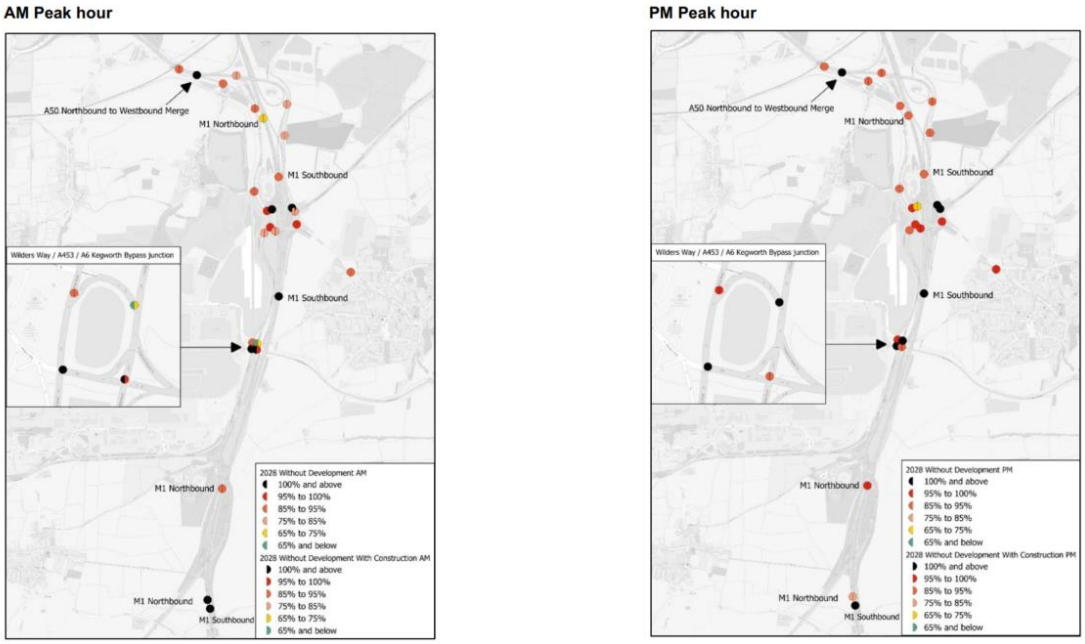
Figure 33. EMFM Forecast Flow Changes (Construction Traffic)



15.4 The plots show that there are increases predicted on the M1 in both peak periods and some evidence of traffic being displaced on the A453 near M1 Junction 24, although this is very few trips. The EMFM forecasting report states that "*the impact of construction traffic on the local road network is forecast to be minimal*".

15.5 The EMFM Forecasting Report provides V/C ratios showing the performance of the worst-case node comparison 'without development' (left half of circle) against 'with construction traffic' (right half of circle). An extract of the V/C ratios for both peak hours is provided at **Figure 34**.

Figure 34. Construction Traffic Modelling Volume-Capacity Ratios



15.6 The EMFM Forecasting Report concludes that the forecast maximum node V/C ratios show little impacts from the construction traffic in both peak hours. Whilst there would be a slight increase at the A453/Wilder's Way/A6 Kegworth Bypass junction in the morning peak hour, this is still expected to operate within capacity (75% V/C ratio). There would be no significant worsening of capacity at any location in the vicinity of the site.

15.7 Overall, it can be concluded that the construction traffic flows forecast to be generated will have a negligible impact on the existing highway network. As a result, no temporary highway mitigation is required, however compliance is required to the measures set out in the CTMP, included as an appendix to the Construction Environmental Management Plan (**Document DCO 6.3A**).

16. SUMMARY AND CONCLUSIONS

16.1 BWB Consulting Ltd (BWB) has been instructed by Segro to provide highways and transportation advice and prepare a Transport Assessment in support of a second phase of its East Midlands Gateway Logistics Park (EMG1), which is a Strategic Rail Freight Interchange located to the north of East Midlands Airport. It also forms part of the Government's East Midlands Freeport designation.

16.2 The proposed second phase to EMG1 (known as EMG2) includes the development of the EMG2 Main Site which has been identified by the Secretary of State as a project of national significance and is the subject of an application for a Development Consent Order (DCO), along with significant highway works some of which are a Nationally Significant Infrastructure Project in their own right. Further development and infrastructure improvements at EMG1 are also proposed which are the subject of a Material Change Order (MCO) to the EMG1 DCO.

16.3 This Transport Assessment has been produced following collaboration with a Transport Working Group (TWG) formed in April 2022. The TWG includes representatives from National Highways (NH), Leicestershire County Council (LCountyC) and Nottinghamshire County Council (NCountyC), alongside other highway authorities, consultant representatives and project team. The purpose of the TWG is to oversee the comprehensive transport modelling work as well as allowing discussions on other aspects of the development including the sustainable transport strategy and package of mitigation required to accommodate EMG2 Project.

16.4 A series of transport related documents and Technical Notes have been produced to agree key details with the TWG. A large number of agreements have been made with NH, LCountyC and NCountyCwith the current positions set out in the Statements of Common Ground..

16.5 The EMG2 Project includes the EMG2 Works which is the built development on the EMG2 Main Site comprising 300,000sqm B2/B8 ground floorspace (assessed as 60,000sqm B2 and 240,000sqm B8) plus a mezzanine allowance of 200,000sqm. The EMG2 Works also include the provision of a new Community Park. The EMG2 Project also includes works on EMG1 comprising additional B8 warehousing development on Plot 16 of 26,500sqm ground floorspace plus a mezzanine allowance 3,500sqm. The EMG1 Works also seek permission to increase the permitted height of the cranes at the EMG1 rail freight terminal and improvements to the public transport interchange, site management building and EMG1 pedestrian crossing (the MCO scheme). Segro is seeking BREEAM 'Excellent' across all warehousing units.

16.6 A Sustainable Transport Strategy has been developed which involves significant on-site and off-site infrastructure improvements to the surrounding active travel routes. This includes the delivery of a new shared footway/cycleway along the A453 between EMG2 and EMG1, along with works to the Hyam's Lane public footpath that bisects the EMG2 Main Site to provide a dedicated cycle link that will form part of an extension to the existing National Cycle Route 15. There are also significant other improvements to crossing facilities on the A453, Public Rights of Way improvements and provision of a purpose-built bus interchange accommodating both existing public bus services and a dedicated electric shuttle service.

16.7 The EMG2 Main Site will be served via a fourth arm from the existing A453/Hunter Road roundabout. There will also be an emergency access route via Hyam's Lane. The EMG1 Works at Plot 16 will be served by the existing EMG1 access via Wilder's Way. All access points have been designed in accordance with adopted design standards within the Leicestershire Highway Design Guide and the Design Manual for Roads and Bridges and achieve the required geometry, visibility and have been tested by way of swept path analysis and junction capacity assessments.

16.8 The EMG2 Works is forecast to generate 929 vehicle trips in the morning peak hour (including 174 HGVs) and 1,065 vehicle trips in the evening peak hour (including 155 HGVs) having adopted a robust methodology to determine such flows originally earlier in the DCO process. The Framework Travel Plan seeks to reduce total vehicle trips by 24%, however all transport modelling excluded the benefits of the Framework Travel Plan to ensure a robust assessment. Furthermore, recent survey data at EMG1 shows that actual trip rates being generated are 33.0% less in the morning peak hour and 45.8% less in the evening peak hour compared to what has been assessed in the transport modelling. hence a worse-case assessment has been adopted in the TA.

16.9 Strategic transport modelling has been undertaken using LCountyC's 2019 East Midlands Freeport Model (EMFM), which is a cordoned part of the larger Pan Regional Transport Model. This underwent a rigorous base model validation exercise before testing the forecast year scenarios. The forecast year modelling was undertaken in four stages, referred to as 'Stage 1A/2A modelling' and 'Stage 1B/2B modelling' which adopt different planning data assumptions in the uncertainty logs and baseline traffic. The key difference is the inclusion (1A/2A) and exclusion (1B/2B) of the Ratcliffe on Soar Power Station redevelopment over and above that permitted in the LDO and draft Local Plan allocations. The two stages are summarised below:

- **Stage 1A modelling** (Proforma v14, Uncertainty Log v7, included at **Appendix 8**) = 2028/2038 forecast years with and without EMG2, including, consented and committed sites as well as draft Local Plan allocation sites, EMIP and full redevelopment of the Ratcliffe on Soar Power Station site, part of which is authorised by a Local Development Order (LDO).

- **Stage 1B modelling** (Proforma v14a, Uncertainty Log v7a, included at **Appendix 38**) = 2028/2038 forecast years with and without EMG2, including consented and committed sites but excluding the draft Local Plan allocation sites, EMIP and Ratcliffe on Soar Power Station site redevelopment proposals beyond which is currently able to proceed under the LDO.

- **Stage 2A modelling** = as per Stage 1A but with the inclusion of the proposed Highway Works, details of which are presented in Section 12.

- **Stage 2B modelling** = as per Stage 1B but with the inclusion of the proposed Highway Works, details of which are presented in Section 12.

16.10 As required by the Highway Authorities the Transport Assessment adopted the Stage 1A/2A modelling outputs as the core scenario as worst-case assessment in terms of traffic impacts. The Stage 1B/2B modelling outputs were adopted as a sensitivity test at a select number of junctions where further analysis was required. A 2028 forecast year of opening and 2038 forecast future year were adopted for the transport modelling.

16.11 The EMFM modelling also tested the forecast traffic flows during the construction stages of the development. This showed that there would be no significant impacts on any part of the network. Consequently, the detailed junction modelling and highway mitigation focussed on the operational impacts of the development.

16.12 To identify impacts from the EMG2 Works, strategic transport modelling using EMFM was undertaken followed by further detailed analysis of key junctions using VISSIM micro-simulation and industry standard LinSig and Junction 11 software. The VISSIM model network included the A453 between the A453/Hunter Road roundabout (EMG2 Main Site access) and M1 Junction 24, including Finger Farm roundabout (M1 Junction 23A) and the A453/A6/EMG1 access junction.

16.13 The transport modelling showed that the EMG2 Works would, without mitigation, have capacity impacts across the VISSIM model network area, particularly at M1 Junction 24 which is expected to experience high levels of congestion and delay. Whilst there are predicted to be capacity issues at other junctions further afield, the impacts of the EMG2 Works were more limited.

16.14 To mitigate the impacts of the additional traffic from the EMG2 Works, a comprehensive package of Highway Works is proposed comprising the following:

- M1 Junction 24 improvements comprising:
  - Construction of a new free-flow link road from the M1 northbound at J24 to provide a direct link to the A50 westbound, which will cross over the A453, and will include the A50 westbound merge alterations;
  - Widening of the A50 eastbound link at J24 and other related works and traffic management measures in this location;
  - Alteration of the western side of the J24 roundabout to provide three lanes from the M1 northbound to A453 northbound through the junction, two lanes from the A453 northbound to the M1 northbound through the junction and removal of the segregated left-turn lane from the A453 northbound to the A50 westbound post feedback from NH;
  - Signing and lining amendments on the east side of the J24 roundabout and the A453 southbound approach;
  - Provision of new M1 northbound exit to the A50 and associated improvements to gantries signage, signals and road markings on the M1; and
  - Changes to the signage on the M1 northbound before J23A to sign the A50 via the new M1 J24 link road rather than via J23A as at present.
- A6 Kegworth Bypass/A453 Junction Improvements providing widening at the EMG1 roundabout to increase junction capacity.
- Finger Farm improvements including widening of the A453 westbound exit to extend the distance of two lanes.

16.15 The proposed Highway Works were tested in EMFM which showed that the Strategic Road Network would be able to accommodate an additional 1,978 vehicles during the

peak hour periods in 2028 and 1,641 vehicles during the peak hour periods in 2038. This reduces traffic on a large number of local roads, as well as the A453 corridor between Finger Farm roundabout and M1 Junction 24. The Highway Works are expected to reduce delays on the M1 Junction 24 circulatory and EMG1 roundabout. Overall, there would be significant benefits to the operation of the Strategic Road Network in the vicinity of the site, as well as benefits on large parts of the local road network.

16.16 The VISSIM micro-simulation modelling demonstrates that, in summary, with the comprehensive mitigation strategy included for, the highway network within the VISSIM model, extending from the EMG2 site access to M1 Junction 24, would, overall, provide significant benefit. The standalone off-site junction capacity assessments confirmed that no further mitigation is required.

16.17 A detailed analysis of the Personal Injury Collision (PIC) records was undertaken across a comprehensive study area surrounding the site. The PIC analysis identified potential safety issues at the following three locations:

- **A453/A6/EMG1 access junction** – a cluster of PICs have been recorded due to turning movements from the A6 to EMG1 colliding with drivers travelling southbound on the A453. One of the PICs was fatal.

- **M1 Junction 24** – a cluster of PICs have been recorded on the M1 northbound off-slip on approach to the roundabout.

- **A453/The Green** – a cluster of PICs have been recorded due to right turning movements from the A453 west into The Green. This appears to be due to the location of the junction within a dip in the carriageway and potential lack of signage or warnings. However, in looking at historic Google Street View records, the tourist sign to the 'Queen's Head' highlighting a left turn into The Green from the east was obstructed by overgrown vegetation until 2023 and since then there have been no PICs occurring through westbound travelling vehicles. There appear to have been improvements to the warning signs for eastbound vehicles between 2017 and 2020, which appears to have slowed the rate of collisions.

16.18 In addition to addressing the capacity impacts of the EMG2 Works, the proposed Highway Works seek to improve safety across the network and at the above three locations in particular. The proposed Highway Works would reduce traffic flows and queueing on the M1 northbound off-slip to Junction 24 and at the A453/A6 Kegworth Bypass roundabout. There should also be no significant worsening on the operation of the A453/The Green junction in reality, even if there is a disconnect between what the standalone Junctions 11 modelling of the junction is showing versus that in EMFM.

16.19 SEGRO has confirmed that they accept a requirement for the proposed Highway Works to be in place prior to occupation of any building on the EMG2 Main Site. This will ensure that there will be no impacts on the surrounding highway network, noting that the development will be built out in phases in line with demand.

16.20 The impact of construction traffic has been undertaken using EMFM which concluded that such traffic flows will have a negligible impact on the existing highway network. The measures and procedures outlined in the Construction Environmental Management

Plan (and supporting Construction Traffic Management Plan) will further ensure that impacts during the construction phase are limited.

16.21 In summary, it is concluded that the EMG2 Project (inclusive of the proposed Highway Works), provide comprehensive highway mitigation, active travel works, public transport improvements and Public Rights of Way works, would comply with the National Policy Statement for National Networks and the National Planning Policy Framework. In particular there would be benefits to the operation and capacity of the existing highway network surrounding the site and improvements to highway safety at locations with existing issues, all of which would be further improved when considering the positive effects of the Framework Travel Plan and associated reduction in traffic. Therefore, the EMG2 Project is considered to comply with current national and local policy requirements and design standards.

APPENDICES

APPENDIX 1: VISSIM Scoping Note (document reference EMG2-BWB-GEN-XX-RP-TR-0003_S2-P3)

EMGP2 VISSIM MODELLING TECHNICAL NOTE 1 – STUDY AREA AND BASE MODELLING METHODOLOGY

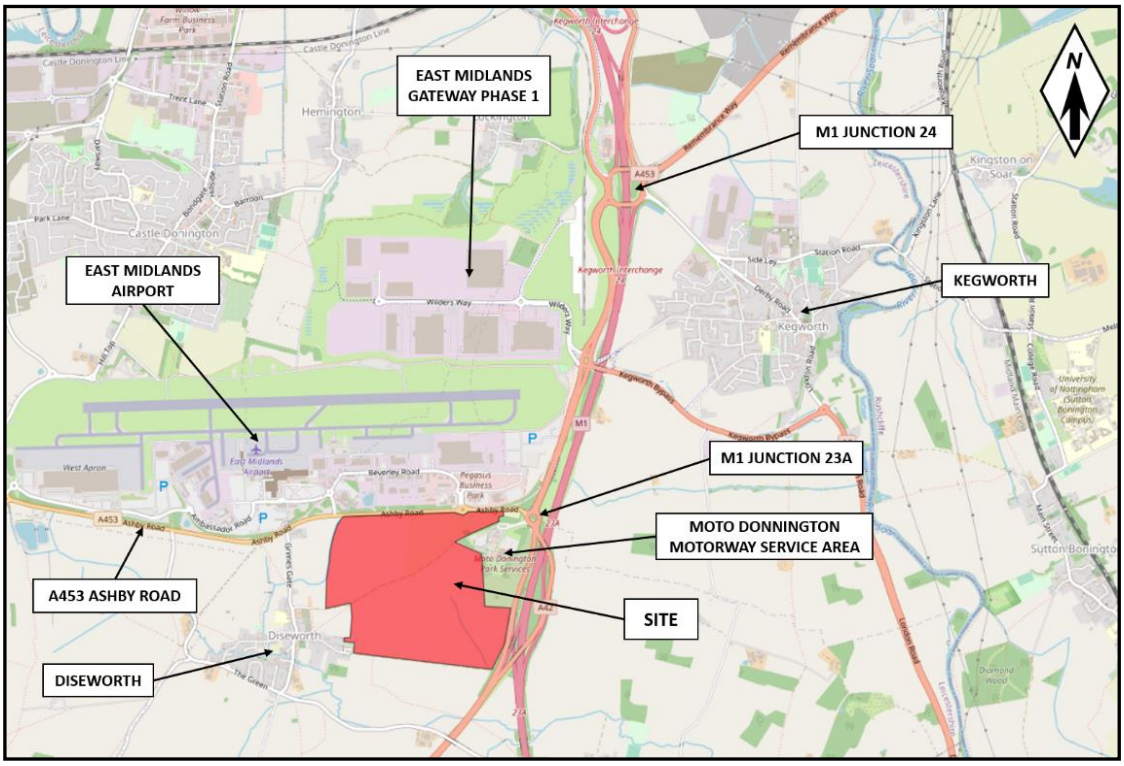
Project Name	**East Midlands Gateway, Phase 2**		
Document Number	EMG2-BWB-GEN-XX-RP-TR-0003	**BWB Ref**	220500
Author	[redacted]	**Status**	S2
Checked	[redacted]	**Revision**	P3
Approved	[redacted]	**Date**	24.02.23

1. INTRODUCTION

1.1 BWB Consulting Ltd have been appointed by SEGRO ("the Applicant") to provide highways and transport planning advice on a proposed Phase 2 Expansion of the East Midlands Gateway (EMG) site. The site is proposed for a B8 led employment development.

1.2 The site has a total area of circa 250 acres located to the south of the A453 and East Midlands Airport itself, to the east of Diseworth village. The M1 Junction 23A lies to the east of the site with the Moto Donnington Motorway Service Area (MSA) directly abutting to the northeast. The proposals are for approximately 3.23 million sqft (300,000sqm) gross floor area (GFA) of development, of which 80% is to be assessed for B8 uses and the remaining 20% for B2 uses, all with ancillary office use. The indicative site location is shown in **Figure 1**.

Figure 1. Site Location



1.3 As part of the proposal, micro-simulation VISSIM modelling of M1 Junction 24 was requested. A VISSIM network model of base year 2012 is available and includes the following junctions:

- A50 junction 1 Sawley Interchange;
- M1 J24a;
- M1 J24;
- A453/EMG Phase 1/Kegworth Bypass signal controlled gyratory;
- M1 J23a Finger Farm roundabout (including M1/A42 on and off slip roads);
- A453/Hunter Road/minor EMG Phase 2 access roundabout
- A453 East Midlands airport internal roundabouts.

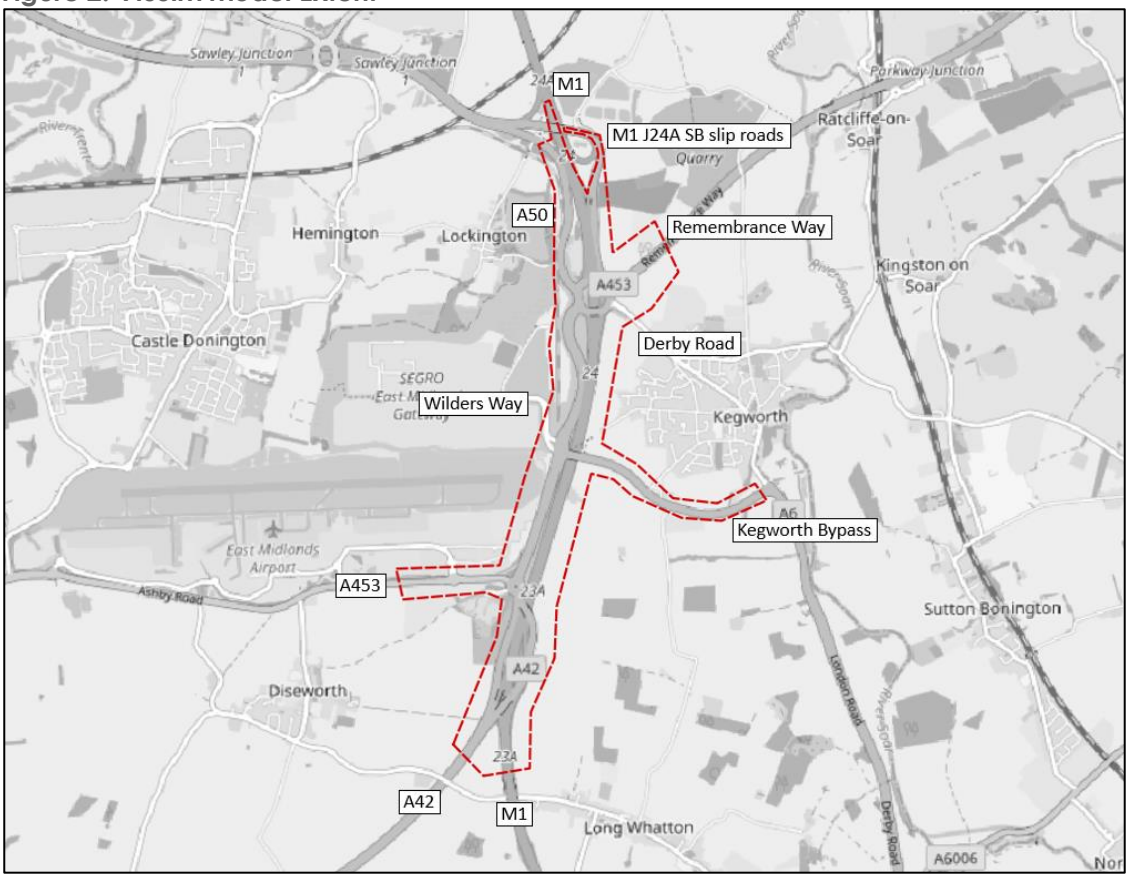
1.4 However the VISSIM model is now outdated and a calibrated/validated base model utilising more recent surveys will be required to examine the impact of the proposed development.

1.5 Therefore, as discussed at the Transport Working Group (TWG) meeting with all local highway authorities, together with Nationla Highways (NH), on 8 December 2022, it is proposed that the VISSIM model is cordoned off to include the following junctions only, from north to south:

- M1 J24a southbound merge onto the M1 and M1 junction 24;
- M1 J24 (including all merges and diverges);
- A453/EMG Phase 1/Kegworth Bypass signal controlled gyratory;
- M1 J23a Finger Farm roundabout (including M1/A42 on and off slip roads);
- A453/Hunter Road/minor EMG Phase 2 access roundabout
- A453/main EMG Phase 2 site access roundabout.

1.6 A figure illustrating the extents of the VISSIM modelling is presented in **Figure 2**.

Figure 2: VISSIM Model Extent



1.7 The proposed approach to be adopted within the VISSIM modelling was set out via email to the TWG on 9 December 2022. As requested, this Technical Note formally sets out the scope of the VISSIM model, focusing on the study area and base modelling methodology in the first instance. This revised version takes into consoderation the comments recived from NH via email on 23 January 2023 and a subsequent meeting with them on 25 January 2023.

2. VISSIM Base Modelling Methodology

Base Model Flows

2.1 Traffic surveys for junctions outlined in paragraph 1.5 have been undertaken in November 2022. A combination of traffic surveys at junctions and webtris data along the M1 and A453 will be utilised to derive an OD matrix for the VISSIM network.

2.2 A figure illustrating survey location and potential webtris data locations is shown in **Figure 2**.

Figure 3: Junction Count Locations



2.3 An initial review of the traffic flow survey has been undertaken and the morning and evening peak hours have been identified as follows:

- AM Peak: 0730 – 0830;
- PM Peak: 1700 – 1800.

2.4 It is proposed that a half an hour warm up and cool down period is added either side of the identified peak hours in the morning and evening respectively.

2.5 A LinSig skeleton model will be developed of the VISSIM network and turning counts will be input at 15 minute intervals to undertake and O-D matrix estimation exercise. Subsequently these will be exported and input into VISSIM. Edge closures and route

closures will be utilised within VISSIM to ensure any unrealistic movements are avoided, i.e. A42 to M1 will not diverge off onto M1 J23A to re-join M1.

2.6 Lights and Heavies vehicle types will be modelled, and flows will be input into VISSIM at 15-minute intervals.

2.7 It is envisaged that dynamic assignment will be utilised within VISSIM for the proposed network.

2.8 It is proposed that the models will be run for 10 iterations subject to Chi2 goodness of fit test which seeks to demonstrate that statistically the different model runs pass the goodness of fit null hypothesis that there is no significant difference in average delays between the seed values, thus demonstrating stability.

Signal Coding

2.9 It is understood that M1J24 and the A453/Kegworth by-pass gyratory operate using MOVA. A copy of the MOVA data set files and logs have been obtained from National Highways. These will be utilised within the VISSIM model using PCMOVA.

Validation & Calibration

2.10 The Design Manual for Roads and Bridges (DMRB) defines model calibration as "*the process of adjusting the parameters used in the various mathematical relationships within the model to reflect the data as well as is necessary to reflect the model objectives*". The model calibration process ensures that model has the ability to exhibit characteristics that accurately compare with observed data.

2.11 A copy of the video footage of the surveyed junctions will be obtained to reflect correct lane usage and driving behaviour as observed.

2.12 DfT Transport Analysis Guidance (TAG) states that the calibration of traffic data in a model should be based on the Geffrey E.Havers (GEH) statistic, and states that modelled flows must have a GEH value of less than 5 in at least 85% of the cases. The latest Transport for London Traffic Modelling Guidelines states that GEH values should be less than 3. Therefore, the model will be assessed against both guidelines for turning count calibration.

2.13 TAG Unit M3.1 states that "*for journey time calibration, the measure which should be used is: the percentage difference between modelled and observed journey times, subject to an absolute maximum difference*". Subsequently, Table 3 of TAG states that the "*modelled times along routes should be within 15% of surveyed times or 1 minute, if higher than 15%.*" The 15% threshold will be used to validate the model.

2.14 It is proposed the TomTom journey time data will be utilised to validate journey time in line with WebTAG guidelines. TomTom data will be obtained for the day of the survey (3rd November 2022) and an average of journey times for neutral days within November 2022. A figure illustrating journey time locations is presented in **Figures 4** and **5**.

Figure 4: Journey Time Routes (1 - 7)



Figure 5: Journey Time Routes (8-14)



3. SUMMARY

3.1 BWB Consulting Ltd have been appointed by SEGRO ("the Applicant") to provide highways and transport planning advice on a proposed Phase 2 Expansion of the East Midlands Gateway site. The site is proposed for a B8 led employment development.

3.2 As part of the proposals and discussions with the TWG, modelling of the M1 Junction 24 was requested to be undertaken using VISSIM. An outdated model of the wider network including M1 Junction 24 is available for use. Therefore, it is proposed that the VISSIM network is cordoned off to the following junctions and revalidated using the methodology contained in this Technical Note:

- M1 J24;
- M1 J24a southbound merge onto the M1 and M1 junction 24;
- A453/EMG Phase 1/Kegworth Bypass signal controlled gyratory;
- M1 J23a Finger Farm roundabout (including M1/A42 on and off slip roads);
- A453/Hunter Road/minor EMG Phase 2 access roundabout;
- A453/EMG Phase 2 site access roundabout.

3.3 Because of the limited timescales available to submit a planning application for the proposals, BWB will continue to develop the VISSIM model on the above basis. However, prompt agreement is kindly sought from the TWG to the proposed approach.

3.4 The next stages would then be to:

i) set out the methodology proposed to furness the traffic flows soon to be provided from the East Midlands Freeport Model (EMFM) Saturn model versus those recorded in November to calculate appropriate base year and 'with development 'traffic flows as discussed briefly at the January 2023 TWG meeting and followed up formally via email on 19 January 2023

ii) issue the validated VISSIM model for agreement

iii) build on the validated VISSIM model and assess the impact of the proposed development, together with the sensitivity test including for the neighbouring Isley Walton site and other Freeport sites, using VISSIM as well as standalone Junctions 10 and LinSig models, for formal inclusion and submission within the outline planning application.

APPENDIX 2: Modelling Furnessing Approach (document reference EMG2-BWB-GEN-XX-RP-TR-0004_S2-P5)

EMGP2 TRAFFIC FLOW TECHNICAL NOTE 2 – FURNESSING AND FORECASTING METHODOLOGY

Project Name	**East Midlands Gateway, Phase 2**		
Document Number	EMG2-BWB-GEN-XX-RP-TR-0004	**BWB Ref**	220500
Author	[redacted]	**Status**	S2
Checked	[redacted]	**Revision**	P5
Approved	[redacted]	**Date**	04.04.25

1. INTRODUCTION

1.1 BWB Consulting Ltd have been appointed by SEGRO ("the Applicant") to provide highways and transport planning advice on a proposed Phase 2 Expansion of the East Midlands Gateway (EMG) site. The site comprises 430,000sqm of industrial development across the following sites:

- 400,000sqm of B2/B8 industrial development on EMG2, including 100,000sqm of B8 mezzanine floorspace.
- 30,000sqm of B8 industrial development on Plot 16 of EMG1.

1.2 It has been agreed with the Transport Working Group for the development impacts to be assessed using the East Midlands Freeport Model (PRTM) – a cordon of the wider Pan Regional Transport Model (PRTM). This Technical Note has been produced to set out the furnessing methodology to derive future forecast traffic flow matrices for each junction being assessed in the Transport Assessment. It therefore facilitates the transition from strategic to local junction modelling.

1.3 This revision of the Technical Note (Revision P4) follows the completion of an update of the PRTM base and future forecast modelling scenarios and output information. It therefore adopts the following structure:

- **Section 2: Proposed Methodology** – sets out the furnessing methodology options and the strategy that will be undertaken to determine the most appropriate methodology to derive the future forecast traffic flows.
- **Section 3: Future Forecast Traffic Flows** – provides more detail on the methodology used to derive future forecast traffic flows.
- **Section 4: Development Traffic** – sets out how the development traffic will be accounted for in the VISSIM modelling
- **Section 5: Committed Traffic** – sets out how the East Midlands Point committed development traffic will be accounted for in the VISSIM modelling
- **Section 6: Traffic Flow Data Set** – sets out the various dataset outputs provided from the PRTM and explains the dataset used in the furnessing calculations.
- **Section 7: VISSIM Modelling** – sets out the methodology of extracting PRTM cordon matrices for the VISSIM modelling work.

- **Section 8: Traffic Flow Furnessing** – sets out the future forecast traffic flows derived using the preferred methodology and for input into the detailed junction models. It also includes an example as to how the flows have been furnessed.

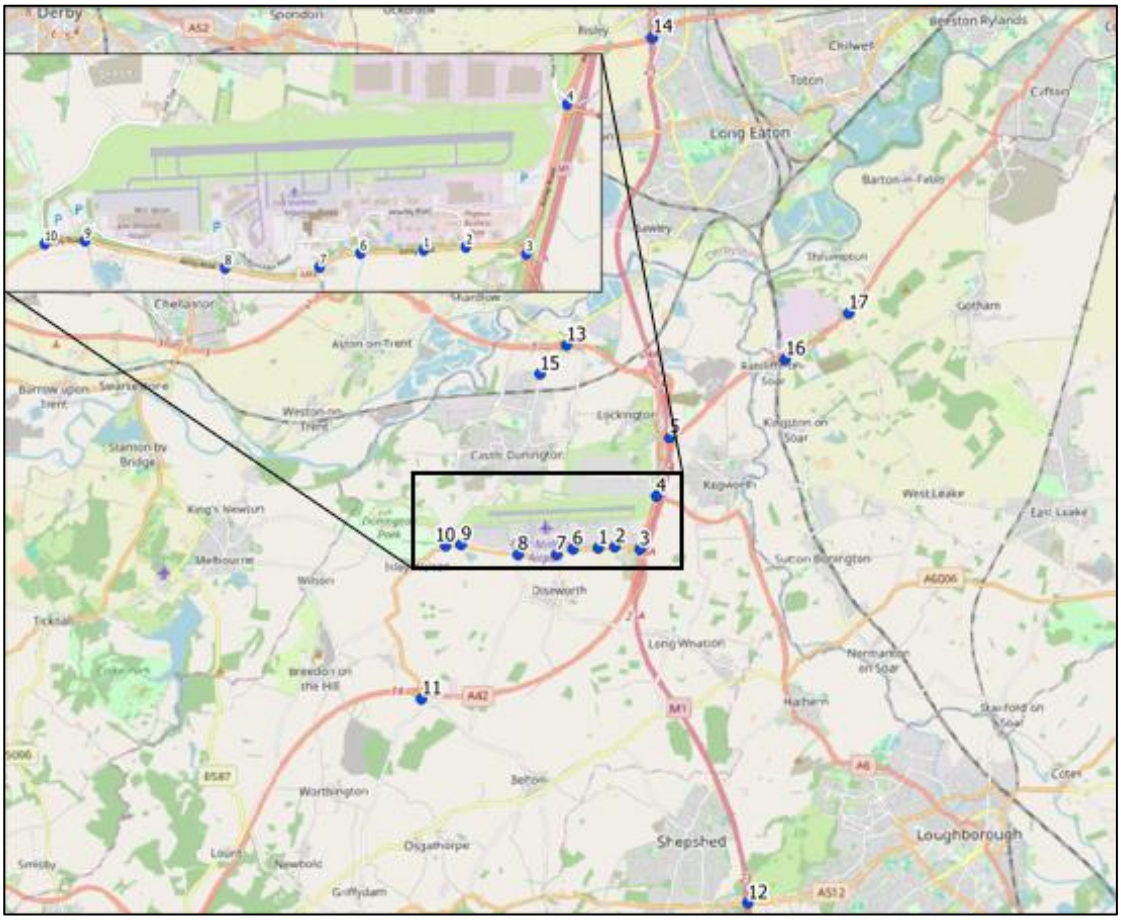
- **Section 9: Summary** – summarises the key conclusions of this Technical Note.

2. PROPOSED METHODOLOGY

Traffic Data and Model Outputs

2.1 Manual classified turning counts were commissioned in November 2022 and May 2023 at 16 junctions across the highway network (with the proposed site access roundabout on the A453 forming the 10th junction). These surveys therefore provide observed turning movements which will be used as part of the furnessing procedure to derive future forecast traffic flows and are listed below. The raw survey data for the 16 exisitng junctions is also appended at the corresponding locations as set out below, whilst the locations are shown at **Figure 1**.

Figure 1. Study Area



November 2023 Surveys

- Junction 2: A453/Hunter Road roundabout (**Appendix 1**)

- Junction 3: Finger Farm roundabout (**Appendix 2**)
- Junction 4: EMGP1 gyratory (**Appendix 3**)
- Junction 5: M1 Junction 24 (**Appendix 4**)
- Junction 6: A453/Grimes Gate priority junction (**Appendix 5**)
- Junction 7: A453/The Green priority junction (**Appendix 6**)
- Junction 8: A453/East Midlands Airport signal junction (**Appendix 7**)
- Junction 9: A453/East Midlands Airport roundabout (**Appendix 8**)
- Junction 10: A453/Walton Hill signal junction (**Appendix 9**)
- Junction 12: M1 Junction 23 (**Appendix 10**)

May 2023 Surveys

- Junction 11: A42 Junction 14 on-slip/A453/Top Brand/Gelscoe Lane Roundabout (**Appendix 11**)
- Junction 13: A50 Junction 1 (**Appendix 12**)
- Junction 14: M1 Junction 25 (**Appendix 13**)
- Junction 15: Station Road/Broad Rushes Roundabout (**Appendix 14**)
- Junction 16: A453/Kegworth Road Roundabouts (**Appendix 15**)
- Junction 17: A453/Barton Lane/West Leake dumbbell Roundabouts (**Appendix 16**)

2.2 The EMFM was updated to a 2019 base year and outputs are being are being provided for 2022, 2023, 2024, 2028 and 2038 scenarios. Hence, an initial comparison will be undertaken between the 2022 observed counts and 2022 flows from the PRTM to understand turning count validation, details of which are provided in the next section.

Traffic Flow Validation

2.3 The first step in understanding the most appropriate furnessing methodology is to compare the 2022 traffic flows from the PRTM against observed counts to provide an indication of the statistical significance of any differences. This has been undertaken using the GEH Statistics formula. The formula is set out below where M is the hourly traffic volume of the PRTM and C is the hourly traffic volume from the observed count.

$$GEH = \sqrt{\frac{2(M-C)^2}{M+C}}$$

2.4 It is generally accepted that a GEH value below 5 represents a good correlation between the two datasets. Details of the analysis for all 10 junctions highlighted in Paragraph 2.1 has been presented in Section 3.

Traffic Flow Furnessing Options

2.5 Orginially, four possible methodologies for furnessing the PRTM model outputs to derive future forecast traffic flows were being considered. The followng details provide a brief overview of each option, highlighting the benefits and potential downfalls of each one.

Option 1 – Extraction of target entry and exit flows directly from PRTM

2.6 Option 1 involves taking the future year traffic flows directly from the PRTM. This option would only be suitable if the 2022 turning counts compare well against the PRTM base year flows i.e. GEH less than 5.

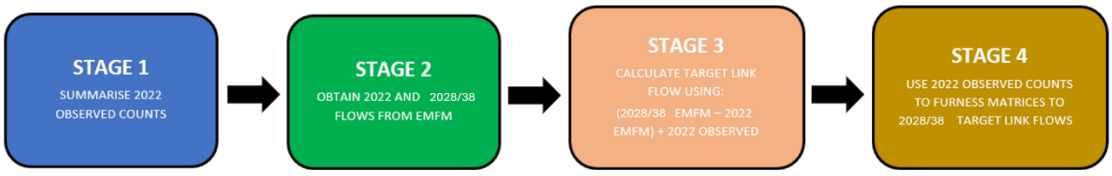
2.7 The benefit of this method is the reduced number of assumptions applied to derive the target trip ends. Notwithstanding this, during a meeting with the Transport Working Group on 12 January 2023, Leicestershire County Council raised concern with this methodology suggesting that whilst the PRTM is well validated against observed link data, it is not calibrated/validated against individual turning movements and hence this option would unlikely be acceptable.

Option 2 – Use 2022 PRTM model base in conjunction with future PRTM flows to calculate percentage growth factors and apply this to the 2022 observed counts

2.8 Option 2 invovles calculating the percentage difference between the 2022 base and 2028/2038 future PRTM flows and applying the percentage growth directly to the 2022 observed counts at turning movement level. This option has the potential to significantly exacerbate future traffic flows and hence will need to be undertaken alongside a manual assessment.

2.9 For example, should the PRTM traffic flows show a turning movement of 1 vehicle in the base year (2022) increasing to 5 movements in the future year (2038), then this equates to a 500% increase. If the 500% increase is applied to a turning movement of 20 vehicles recorded from an observed count then this would result in 100 movements at the future year, which could be a significant overestimate. The four stage methodology invovled with Option 2 is shown in **Figure 2**.

Figure 2: Option 2 Furnessing Methdology

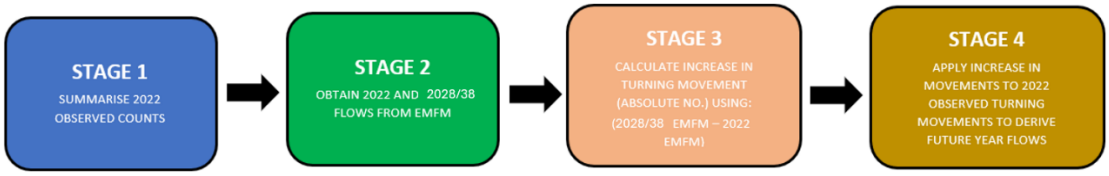


Option 3 – Use 2022 PRTM base in conjunction with future PRTM flows to calculate absolute increases in turning movements and apply this to the 2022 observed counts

2.10 Option 3 calcuates the difference between the 2022 base and 2028/2038 future PRTM flows in absolute numbers and applies the increase directly to the 2022 observed counts. This option would only be suitable if the 2022 observed counts show good levels of

correlation against the 2022 PRTM base flows using the GEH Statistics formula. The four stage furnessing methdology for Option 3 is shown in **Figure 3**.

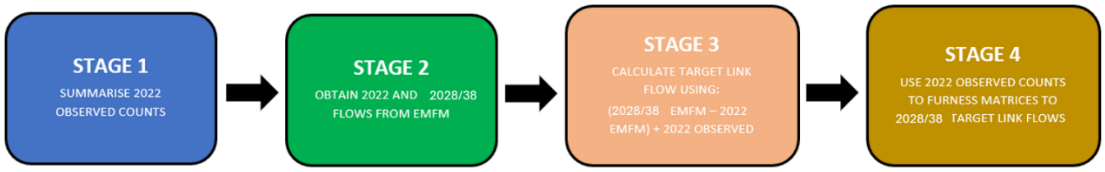
Figure 3: Option 3 Furnessing Methdology



Option 4 – Use 2022 PRTM base in conjunction with future PRTM flows to calculate absolute increases in link flows and apply the increase propotionatley to the 2022 observed turning counts

2.11 Option 4 involves adding the difference in link flows between the 2022 base and 2028/38 future PRTM to the 2022 observed link flows to derive a target link flow. The target link flow is applied proportionally in accordance with the observed turning movements to derive forecast traffic flow matrices. The four stage furnessing methdology for Option 4 is shown in **Figure 4**.

Figure 4: Option 4 Furnessing Methdology



3. FUTURE FORECAST TRAFFIC FLOWS

GEH Statistics

3.1 To start with, a comparison was made between the latest received 2022 PRTM flows and the 2022 observed counts to understand the statistical signifiance of any differences. This was undertaken for Junctions 1 to 9 which formed the original study area. To do this, an Excel spreadsheet was sent separately comparing light and heavy goods vehicle turning movements for both peak hours. The formula set out at Paragraph 2.3 was then applied to compare the two datasets.

3.2 A copy of the calculations is included at **Appendix 17**, which shows that all junctions have turning movements with a GEH value in excess of 5 and hence outside of the critieria for where there is a good level of correlation. On this basis, the furnessing options 1 and 3 detailed in Section 2 have been disregarded.

3.3 The percentage growth between PRTM base and forecast years were calculated; however, this resulted in large overestimations as described in Paragraph 2.11. Option 4 has however still been utilised to furness forecast traffic flow matrices.

Furnessing Methodology

3.4 The furnessing approach for Option 4 has been built using an MS Excel macro using VBA to ensure an extensive spreadsheet is not required to display every iteration of the furnessing. This also ensures that the methodology is consistent between all furnessed matrices. A summary of the process undertaken by the macros is provided below.

- Column adjustment: calculate turning counts across columns using survey data proportions in combination with the target link flow out of each arm.
- Sum row: calculate the sum of each arm row total.
- Row adjustment: calculate turning counts across rows using survey data proportions in combination with the target link flow into each arm.
- Sum column: calculate the sum of each column.
- Round all values in the matrix to the closest integer.
- Update sums for column and row total.
- Repeat the above 'x' number of iterations until the flows converge.

3.5 The macro has been built to run the furnessing 20 times for each matrix, however it should be noted that every time the macro is executed, it runs an additional 20 times. The furnessing spreadsheet therefore has been run for at least 20 iterations. The furnessing methodology has been double constrained, i.e. both origin and destination and the traffic flow matrices are furnessed until link flows are within a GEH of 3.

3.6 Additional matrices are provided to calculate the absolute difference and percentage difference between the forecast and furnessed link flows for each scenario respectively. A review of these indicates that this is considered to be convergent with the accepted furnessing methodology.

3.7 For certain turning movements there is expected to be negative growth. The PRTM rassigns vehicle routes based on delays and cost of journey and therefore some movements may experience a reduction in flows. The negative growth forecast by PRTM will also be taken into account during furnessing as excluding this would overestimate impacts at junctions.

3.8 Due to high volumes of traffic that travel on the motorways and key A-roads there is the potential for these numbers to affect the furnessing outputs. As the furnessing process is based on turning proportions, the large motorway flows could cause the furnessing to assign traffic that would use the junction o the motorway mainline movements instead.

3.9 Therefore, there M1 and A42 mainline flows have been removed and furnessed seperately to avoid any re assignment.

4. DEVELOPMENT TRAFFIC

4.1 Strategic models reroute traffic in response to congestion within the network. To ensure the true impact of the development is modelled and mitigation is provided along the main routes that the development traffic would take, rather than rerouting via smaller junctions. The distribution of development traffic was extracted from the PRTM model, and it is proposed that the assignment of development traffic is assigned manually to exclude for any rerouting of traffic as a result the proposed development.

4.2 It was noticed that in the latest PRTM outputs that 7% of development car trips are originating/travelling to East Midlands Airport. This was queried this with AECOM/LCC NDI and it is because EMA is a zone in PRTM. Therefore, it is proposed to proportionately distribute the 7% of traffic to/from EMA along the seven highest other routes as set out to the TWG.

5. COMMITTED DEVELOPMENT TRAFFIC

5.1 The East Midlands Point comitted development off Finger Farm roundabout has been included in the PRTM modelling however as the development is not operational, there are no surveyed flows associated with the development. As such, the forecast traffic flows associated with the development has been directly extracted from the PRTM VISSIM cordon matrices and will be utilised for assessment in VISSIM.

6. TRAFFIC FLOW DATA SET

6.1 BWB was provided a copy of both 'Actual' and 'Demand' flow datasets by AECOM. Demand flow within SATURN does not assume a fully unconstrained network, both demand and actual flow account for all network constraints i.e. congestion, etc. and include for rerouting within the network.

6.2 Demand flow can be considered as the flow from the model assignment within the modelled period, independent of when the flow arrives i.e. if 100 vehicles are predicted to arrive at a certain junction between 0800-0900, demand flow will be displayed as 100.

6.3 On the contrary, actual flows can be considered as the flow that reaches a particular link or turn during the simulated time, i.e. if 100 vehicles are predicted to arrive at a certain junction between 0800-0900 however 20 vehicles are unable to get to the link within the modelled time due to constraints elsewhere in the network, actual flows will be displayed as 80 vehicles.

6.4 Discussions were held with AECOM and LCC/NDI and it was concluded that 'Actual' flows should be utilised within the modelling therefore all furnessing has been undertaken utilising 'Actual' flow data.

7. VISSIM MODELLING

7.1 A VISSIM model has been developed for the following junctions.

i. M1 J24;

ii. M1 J24a southbound merge onto the M1 and M1 junction 24;

iii. A453/EMG Phase 1/Kegworth Bypass signal controlled gyratory;

iv. M1 J23a Finger Farm roundabout (including M1/A42 on and off slip roads);

v. A453/Hunter Road/minor EMG Phase 2 access roundabout;

vi. A453/EMG Phase 2 site access roundabout.

7.2 Subsequently cordoned model flows have been obtained from AECOM to furness the traffic flows for each of the junctions in the VISSIM network in line with furnessing methodology Option 4 to derive forecast modelling traffic flow matrices.

Post Stage 1a Modelling

7.3 Stage 1a modelling comprises of 2028/38 forecast years with committed development, proposed development and Local Plan allocations

7.4 Upon receiving the Stage 1a VISSIM Corden modelling outputs from AECOM, a review of the data was undertaken to determine if the PRTM model outputs were coherent and that there was no unforeseen increase/decrease in flows on the links within the VISSIM network.

7.5 A review of the Stage 1a VISSIM cordon model was undertaken, which indicated that the 2022 flows provided as part of Stage 1a were lower than that provided previously. A proportion of the reduction in flows between the 2022 datasets were as a result of lower traffic flows accessing/egressing the EMG 1 site having previously considered such informatio in greater detail. The EMG1 traffic flows are more in line with that set out in the planning application. However, in addition to this, reduction in flows were noted primarily on the A42 and M1 S approach arms.

7.6 The agreed furnessing methodology, Option 4, calculates the flow difference between 2022 base and forecast modelling scenarios and adds the increase/decrease in traffic to the observed link flows. Therefore a lower 2022 base would provide a higher furnessed link flow to be modelled in VISSIM.

7.7 Whilst this approach has been retained, an additional comparison has been undertaken between the furnessed link flows and PRTM link flows by way of considering flows forecast to travel along each link in 2038. This is illustrated in **Table 1** below.

		AM Origin Total			PM Origin Total		
Link No	**Link Name**	**Furnessed Target Flows**	**2038 Raw Link Flows**	**Diff**	**Furnessed Target Flows**	**2038 Raw Link Flows**	**Diff**
1	A50	2720	2650	-70	1926	2884	+958
2	M1 North	5957	4558	-1399	5309	4011	-1298
3	A453 Remembrance Way	1769	2163	+394	2112	2364	+252
4	Derby Road	684	857	+173	639	938	+299
5	Hilton Lane	493	524	+31	342	446	+104

6	Keg Worth Bypass	1028	1008	-20	1045	1083	+38
7	M1 South	5253	5160	-93	5710	5286	-424
8	A42	2895	2793	-102	2164	2547	+383
9	A453	614	670	+56	948	959	+11
10	Wilders Way	217	202	-15	655	842	+187
11	Services	259	0	-259	268	0	-268
12	Hunter Road	107	106	-1	263	411	+148

7.8 Based on the above, there are some links that have significant changes in vehicles. As a result, a further option (Option 5) has been considered to furness the flows, where the target link flows have been extrcated the PRTM outputs In 2038 and the turning proportions have been split proportionally using the 2022 observed turning movements.

7.9 Both scenarios will be tested within VISSIM to determine if the mitigation still provides the benefits envisaged within the internal testing.

8. TRAFFIC FLOW FURNESSING

8.1 Future forecast traffic flows for the 2028 and 2038 assessment years have been derived in line with the Option 4 methodology, using outputs from the PRTM and the survey data (noting the junctions included in VISSIM have used separate outputs from the cordon model flows). Option 5 methodology has also been utilised to provide a sensitivity test.

8.2 A copy of the furnessing spreadsheet has been issued separately which show that the vast majority of link flows are converged so that furnessed link flows are within a GEH of 5 of calculated link flows. In calculating the final Passenger Car Unit (PCU) flows, a PCU factor of 2.0 has been applied to all HGVs and 1.0 for light vehicles, which mirrors the PRTM for consistency.

8.3 A worked example of how the traffic flows have been furnessed is shown on the 'Furness Process' tab within the spreadsheets.

9. SUMMARY

9.1 This Technical Note has been produced to set out the furnessing methodology to derive future forecast traffic flow matrices for each junction being assessed in the Transport Assessment.

9.2 To understand how the 2022 PRTM flows compare to the 2022 observed counts at each junction, the GEH Statistics formula has been used to provide an indication of the statistical significance of any differences. This will then provide a gauge as to which of the four furnessing methodologies considered up until this point is most appropriate, which are summarised below:

- **Option 1** – Extraction of target entry and exit flows directly from PRTM
- **Option 2** – Use 2022 PRTM model base in conjunction with future PRTM flows to calculate percentage growth factors and apply this to the 2022 observed counts

- **Option 3** – Use 2022 PRTM base in conjunction with future PRTM flows to calculate absolute increases in turning movements and apply this to the 2022 observed counts
- **Option 4** – Use 2022 PRTM base in conjunction with future PRTM flows to calculate absolute increases in link flows and apply the increase propotionatley to the 2022 observed turning counts

9.3 A comparison of GEH indicated that several movements for all surveyed junctions did not meet the GEH threshold therefore Options 1 and 3 had been discounted.

9.4 Furthermore, a review of the percentage increase between PRTM base and forecast traffic flow matrices was calculated however this resulted in a significant overestimate of traffic flow movements in some instances therefore Option 2 has also been discounted.

9.5 Based on the above, it is considered that Option 4 is the most appropriate furnessing methodology to be utilised in this instance.

9.6 Discussions were undertaken with AECOM and LCC/NDI and it was concluded that 'Actual' flows should be utilised in the forecast modelling scenarios.

9.7 Additionally, NH was consulted on the approach to utilise forecast flows within the VISSIM modelling and it was concluded that a cordon of the VISSIM extent should be used to extract OD flows from PRTM. Subsequently Option 4 furnessing methodology will be used to derive forecast traffic flow matrices.

9.8 A review of the Stage 1a VISSIM cordon model was undertaken, which indicated that the 2022 flows provided as part of Stage 1a were lower than that provided previously. The agreed Option 4 furnessing methodology would provide a higher furnessed link flow to be modelled in VISSIM as a result.

9.9 Nevertheless, this approach has been retained, albeit an additional sensitivity test – **Option 5** - will be undertaken to utilise PRTM link flows as the target flows and proportion these in accordance with the surveyed traffic flows.

9.10 Both scenarios will be tested within VISSIM to determine if the suggested mitigation still provides significant benefits. The final furnessed traffic flows at this stage of the process for the forecast years have been provided within separate spreadsheets.

APPENDIX 1 – A453/Hunter Road Roundabout Turning Count Results

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 3
Approach: Hunter Road

	Left to A453 (E)									Right to A453 (W)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	23	1	0	1	3	28	32.3	0	0	6	0	1	0	0	7	7.5
07:15 - 07:30	0	0	16	0	2	1	0	19	21.3	0	0	2	0	0	0	0	2	2.0
07:30 - 07:45	0	0	17	4	4	0	4	29	35.0	0	0	6	0	0	0	0	6	6.0
07:45 - 08:00	0	0	16	0	0	0	1	17	18.0	0	0	3	2	0	0	0	5	5.0
Hourly Total	**0**	**0**	**72**	**5**	**6**	**2**	**8**	**93**	**106.6**	**0**	**0**	**17**	**2**	**1**	**0**	**0**	**20**	**20.5**
08:00 - 08:15	0	0	23	3	2	3	2	33	39.9	0	0	6	4	0	0	0	10	10.0
08:15 - 08:30	0	0	19	7	0	1	1	28	30.3	0	0	5	0	0	0	0	5	5.0
08:30 - 08:45	0	0	28	4	2	0	2	36	39.0	0	0	5	1	0	0	0	6	6.0
08:45 - 09:00	0	0	9	3	2	2	2	18	23.6	0	0	0	1	0	0	0	1	1.0
Hourly Total	**0**	**0**	**79**	**17**	**6**	**6**	**7**	**115**	**132.8**	**0**	**0**	**16**	**6**	**0**	**0**	**0**	**22**	**22.0**
09:00 - 09:15	0	0	4	1	1	2	2	10	15.1	0	0	0	0	0	0	0	0	0.0
09:15 - 09:30	0	0	11	5	2	0	3	21	25.0	0	0	2	2	2	0	0	6	7.0
09:30 - 09:45	0	0	13	6	2	0	1	22	24.0	0	0	4	1	0	0	0	5	5.0
09:45 - 10:00	0	0	5	3	1	0	4	13	17.5	0	0	2	0	0	1	0	3	4.3
Hourly Total	**0**	**0**	**33**	**15**	**6**	**2**	**10**	**66**	**81.6**	**0**	**0**	**8**	**3**	**2**	**1**	**0**	**14**	**16.3**
TOTAL	**0**	**0**	**184**	**37**	**18**	**10**	**25**	**274**	**321.0**	**0**	**0**	**41**	**11**	**3**	**1**	**0**	**56**	**58.8**
16:00 - 16:15	0	0	118	6	0	3	4	131	138.9	0	0	20	0	0	0	0	20	20.0
16:15 - 16:30	0	0	70	4	1	3	1	79	84.4	0	0	6	0	0	0	1	7	8.0
16:30 - 16:45	0	0	80	7	0	1	1	89	91.3	0	0	12	0	0	0	0	12	12.0
16:45 - 17:00	0	0	64	1	1	1	3	70	74.8	0	0	6	0	0	0	1	7	8.0
Hourly Total	**0**	**0**	**332**	**18**	**2**	**8**	**9**	**369**	**389.4**	**0**	**0**	**44**	**0**	**0**	**0**	**2**	**46**	**48.0**
17:00 - 17:15	0	0	101	3	1	1	2	108	111.8	0	0	14	0	0	0	0	14	14.0
17:15 - 17:30	0	0	85	7	2	2	1	97	101.6	0	0	7	1	0	0	0	8	8.0
17:30 - 17:45	0	0	60	7	2	2	1	72	76.6	0	0	5	0	0	0	0	5	5.0
17:45 - 18:00	0	0	64	8	1	4	0	77	82.7	0	0	7	0	1	0	0	8	8.5
Hourly Total	**0**	**0**	**310**	**25**	**6**	**9**	**4**	**354**	**372.7**	**0**	**0**	**33**	**1**	**1**	**0**	**0**	**35**	**35.5**
18:00 - 18:15	0	0	41	2	0	0	3	46	49.0	0	0	7	0	0	0	0	7	7.0
18:15 - 18:30	0	0	38	3	0	1	2	44	47.3	0	0	1	0	0	0	0	1	1.0
18:30 - 18:45	0	0	29	0	2	8	1	40	52.4	0	0	1	1	0	0	0	2	2.0
18:45 - 19:00	0	0	23	0	1	2	3	29	35.1	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**131**	**5**	**3**	**11**	**9**	**159**	**183.8**	**0**	**0**	**9**	**1**	**0**	**0**	**0**	**10**	**10.0**
TOTAL	**0**	**0**	**773**	**48**	**11**	**28**	**22**	**882**	**945.9**	**0**	**0**	**86**	**2**	**1**	**0**	**2**	**91**	**93.5**

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

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 3
Approach: A453 East

	Ahead to A453 (W)									Right to Hunter Road									U-Turn								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	118	18	6	4	0	146	154.2	0	1	29	1	0	3	1	35	39.3	0	0	0	0	0	0	0	0	0.0
07:15 - 07:30	0	0	99	28	6	3	0	136	142.9	0	0	38	0	2	1	2	43	47.3	0	0	0	0	0	0	0	0	0.0
07:30 - 07:45	0	0	135	15	2	7	0	159	169.1	0	0	54	4	1	3	3	65	72.4	0	0	0	0	0	0	0	0	0.0
07:45 - 08:00	0	0	101	14	5	5	1	126	136.0	0	0	102	3	1	2	2	110	115.1	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**453**	**75**	**19**	**19**	**1**	**567**	**602.2**	**0**	**1**	**223**	**8**	**4**	**9**	**8**	**253**	**274.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
08:00 - 08:15	0	0	102	15	3	5	0	125	133.0	0	1	81	8	2	0	1	93	94.4	0	0	0	0	0	0	0	0	0.0
08:15 - 08:30	0	0	127	16	3	9	0	155	168.2	0	0	108	6	1	0	1	116	117.5	0	0	0	1	0	0	0	1	1.0
08:30 - 08:45	0	0	122	19	8	6	2	157	170.8	0	0	96	5	0	0	2	103	105.0	0	0	2	1	0	0	0	3	3.0
08:45 - 09:00	0	0	97	16	4	4	0	121	128.2	0	0	82	4	1	1	0	88	89.8	0	0	1	0	0	0	0	1	1.0
Hourly Total	**0**	**0**	**448**	**66**	**18**	**24**	**2**	**558**	**600.2**	**0**	**1**	**367**	**23**	**4**	**1**	**4**	**400**	**406.7**	**0**	**0**	**3**	**2**	**0**	**0**	**0**	**5**	**5.0**
09:00 - 09:15	0	0	77	11	7	4	1	100	109.7	0	1	78	6	1	3	3	92	98.8	0	0	1	0	0	0	0	1	1.0
09:15 - 09:30	0	0	58	13	5	5	0	81	90.0	0	0	68	4	1	2	2	77	82.1	0	0	1	1	0	0	0	2	2.0
09:30 - 09:45	0	1	53	8	4	7	0	73	83.5	0	0	31	4	3	2	2	42	48.1	0	0	3	0	0	0	0	3	3.0
09:45 - 10:00	0	2	41	12	6	9	1	71	85.5	0	0	31	7	1	1	2	42	45.8	0	0	3	0	0	0	0	3	3.0
Hourly Total	**0**	**3**	**229**	**44**	**22**	**25**	**2**	**325**	**368.7**	**0**	**1**	**208**	**21**	**6**	**8**	**9**	**253**	**274.8**	**0**	**0**	**8**	**1**	**0**	**0**	**0**	**9**	**9.0**
TOTAL	**0**	**3**	**1130**	**185**	**59**	**68**	**5**	**1450**	**1571.1**	**0**	**3**	**798**	**52**	**14**	**18**	**21**	**906**	**955.6**	**0**	**0**	**11**	**3**	**0**	**0**	**0**	**14**	**14.0**
16:00 - 16:15	0	0	92	14	3	7	0	116	126.6	0	0	18	2	1	1	3	25	29.8	0	0	3	1	1	0	0	5	5.5
16:15 - 16:30	0	0	83	13	1	8	0	105	115.9	0	0	21	3	4	2	2	32	38.6	0	0	1	0	0	0	0	1	1.0
16:30 - 16:45	0	0	92	24	3	4	0	123	129.7	0	0	16	2	0	1	1	20	22.3	0	0	1	2	0	0	0	3	3.0
16:45 - 17:00	0	0	122	27	2	3	1	155	160.9	0	0	18	2	0	2	2	24	28.6	0	0	2	2	0	0	0	4	4.0
Hourly Total	**0**	**0**	**389**	**78**	**9**	**22**	**1**	**499**	**533.1**	**0**	**0**	**73**	**9**	**5**	**6**	**8**	**101**	**119.3**	**0**	**0**	**7**	**5**	**1**	**0**	**0**	**13**	**13.5**
17:00 - 17:15	0	2	120	12	4	2	0	140	143.4	0	0	15	4	2	1	1	23	26.3	0	0	3	0	1	0	0	4	4.5
17:15 - 17:30	0	0	112	15	6	5	0	138	147.5	0	0	27	3	0	3	3	36	42.9	0	0	3	0	0	0	0	3	3.0
17:30 - 17:45	0	0	102	14	3	2	0	121	125.1	0	0	26	2	1	0	2	31	33.5	0	0	1	0	0	0	0	1	1.0
17:45 - 18:00	0	0	98	13	3	1	0	115	117.8	0	0	29	4	1	2	0	36	39.1	0	0	3	0	0	0	0	3	3.0
Hourly Total	**0**	**2**	**432**	**54**	**16**	**10**	**0**	**514**	**533.8**	**0**	**0**	**97**	**13**	**4**	**6**	**6**	**126**	**141.8**	**0**	**0**	**10**	**0**	**1**	**0**	**0**	**11**	**11.5**
18:00 - 18:15	0	0	92	12	2	3	0	109	113.9	0	0	19	4	0	2	2	27	31.6	0	0	2	0	0	0	0	2	2.0
18:15 - 18:30	0	1	103	10	3	2	0	119	122.5	0	0	24	2	0	6	3	35	45.8	0	0	2	0	0	0	0	2	2.0
18:30 - 18:45	0	2	77	6	2	2	0	89	91.4	0	0	13	1	1	1	0	16	17.8	0	0	2	0	0	0	0	2	2.0
18:45 - 19:00	0	0	69	5	2	5	0	81	88.5	0	0	27	3	2	1	3	36	41.3	0	0	0	0	0	1	0	1	2.3
Hourly Total	**0**	**3**	**341**	**33**	**9**	**12**	**0**	**398**	**416.3**	**0**	**0**	**83**	**10**	**3**	**10**	**8**	**114**	**136.5**	**0**	**0**	**6**	**0**	**0**	**1**	**0**	**7**	**8.3**
TOTAL	**0**	**5**	**1162**	**165**	**34**	**44**	**1**	**1411**	**1483.2**	**0**	**0**	**253**	**32**	**12**	**22**	**22**	**341**	**397.6**	**0**	**0**	**23**	**5**	**2**	**1**	**0**	**31**	**33.3**

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

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 3
Approach: A453 West

	Left to Hunter Road									Ahead to A453 (E)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	3	1	1	0	0	5	5.5	0	0	64	11	2	9	0	86	98.7
07:15 - 07:30	0	0	9	1	0	0	0	10	10.0	0	2	99	21	6	7	0	135	145.9
07:30 - 07:45	0	0	3	0	0	0	0	3	3.0	0	1	100	17	5	14	0	137	157.1
07:45 - 08:00	0	0	25	0	1	0	0	26	26.5	0	0	103	17	4	5	1	130	139.5
Hourly Total	**0**	**0**	**40**	**2**	**2**	**0**	**0**	**44**	**45.0**	**0**	**3**	**366**	**66**	**17**	**35**	**1**	**488**	**541.2**
08:00 - 08:15	0	0	10	0	0	0	0	10	10.0	0	0	103	26	3	8	1	141	153.9
08:15 - 08:30	0	0	12	0	0	0	0	12	12.0	0	0	117	28	6	12	1	164	183.6
08:30 - 08:45	0	0	7	1	0	0	0	8	8.0	0	0	66	19	5	12	1	103	122.1
08:45 - 09:00	0	0	8	1	0	0	0	9	9.0	0	0	65	9	4	14	1	93	114.2
Hourly Total	**0**	**0**	**37**	**2**	**0**	**0**	**0**	**39**	**39.0**	**0**	**0**	**351**	**82**	**18**	**46**	**4**	**501**	**573.8**
09:00 - 09:15	0	0	11	1	0	0	0	12	12.0	0	0	48	7	9	7	0	71	84.6
09:15 - 09:30	0	0	3	0	0	0	0	3	3.0	0	1	38	11	4	6	1	61	71.2
09:30 - 09:45	0	0	2	0	0	0	0	2	2.0	0	0	27	11	6	5	1	50	60.5
09:45 - 10:00	0	0	6	0	0	0	0	6	6.0	0	0	37	10	2	7	0	56	66.1
Hourly Total	**0**	**0**	**22**	**1**	**0**	**0**	**0**	**23**	**23.0**	**0**	**1**	**150**	**39**	**21**	**25**	**2**	**238**	**282.4**
TOTAL	**0**	**0**	**99**	**5**	**2**	**0**	**0**	**106**	**107.0**	**0**	**4**	**867**	**187**	**56**	**106**	**7**	**1227**	**1397.4**
16:00 - 16:15	0	0	2	0	0	0	0	2	2.0	0	0	110	18	5	8	0	141	153.9
16:15 - 16:30	0	0	2	0	0	0	0	2	2.0	0	0	98	17	5	1	0	121	124.8
16:30 - 16:45	0	0	4	0	0	0	0	4	4.0	0	0	122	17	2	3	0	144	148.9
16:45 - 17:00	0	0	3	2	0	0	0	5	5.0	0	0	125	15	0	2	1	143	146.6
Hourly Total	**0**	**0**	**11**	**2**	**0**	**0**	**0**	**13**	**13.0**	**0**	**0**	**455**	**67**	**12**	**14**	**1**	**549**	**574.2**
17:00 - 17:15	0	0	6	0	0	0	0	6	6.0	0	0	136	11	1	3	1	152	157.4
17:15 - 17:30	0	0	8	0	0	0	0	8	8.0	0	0	73	4	1	3	0	81	85.4
17:30 - 17:45	0	0	5	3	0	0	0	8	8.0	0	0	135	9	2	3	1	150	155.9
17:45 - 18:00	0	0	6	0	0	0	0	6	6.0	0	0	134	7	1	1	0	143	144.8
Hourly Total	**0**	**0**	**25**	**3**	**0**	**0**	**0**	**28**	**28.0**	**0**	**0**	**478**	**31**	**5**	**10**	**2**	**526**	**543.5**
18:00 - 18:15	0	0	5	0	0	0	0	5	5.0	0	0	94	9	1	2	0	106	109.1
18:15 - 18:30	0	0	6	0	0	0	0	6	6.0	0	0	79	8	2	1	0	90	92.3
18:30 - 18:45	0	0	1	0	0	0	0	1	1.0	0	1	62	6	0	1	0	70	70.7
18:45 - 19:00	0	0	5	1	0	0	0	6	6.0	0	0	55	6	1	2	0	64	67.1
Hourly Total	**0**	**0**	**17**	**1**	**0**	**0**	**0**	**18**	**18.0**	**0**	**1**	**290**	**29**	**4**	**6**	**0**	**330**	**339.2**
TOTAL	**0**	**0**	**53**	**6**	**0**	**0**	**0**	**59**	**59.0**	**0**	**1**	**1223**	**127**	**21**	**30**	**3**	**1405**	**1456.9**

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

APPENDIX 2 – Finger Farm Roundabout Turning Count Results

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 4
Approach: A453 North

	To M1 J23A Access									To Donington Services Access										To A453 (W)									
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	47	13	4	10	0	74	89.0	0	0	4	5	4	11	0	24	40.3	0	1	78	4	2	1	1	87	89.7
07:15 - 07:30	0	0	41	10	1	0	1	53	54.5	0	0	7	0	3	4	0	14	20.7	0	0	77	10	3	3	2	95	102.4
07:30 - 07:45	0	0	63	23	7	12	0	105	124.1	0	1	5	3	0	0	0	9	8.4	0	0	93	6	1	3	3	106	113.4
07:45 - 08:00	0	0	119	42	6	18	0	185	211.4	0	0	9	2	0	3	0	14	17.9	0	0	73	4	2	4	3	86	95.2
Hourly Total	**0**	**0**	**270**	**88**	**18**	**40**	**1**	**417**	**479.0**	**0**	**1**	**25**	**10**	**7**	**18**	**0**	**61**	**87.3**	**0**	**1**	**321**	**24**	**8**	**11**	**9**	**374**	**400.7**
08:00 - 08:15	0	0	122	30	4	10	0	166	181.0	0	0	12	7	1	4	0	24	29.7	0	1	82	9	1	2	1	96	99.5
08:15 - 08:30	0	0	67	20	2	15	0	104	124.5	0	0	16	2	0	2	0	20	22.6	0	0	117	10	2	2	1	132	136.6
08:30 - 08:45	0	0	48	15	7	12	1	83	103.1	0	0	13	2	0	4	0	19	24.2	0	0	122	11	0	2	3	138	143.6
08:45 - 09:00	0	0	49	9	3	12	1	74	92.1	0	0	18	3	0	4	0	25	30.2	0	0	76	12	0	1	0	89	90.3
Hourly Total	**0**	**0**	**286**	**74**	**16**	**49**	**2**	**427**	**500.7**	**0**	**0**	**59**	**14**	**1**	**14**	**0**	**88**	**106.7**	**0**	**1**	**397**	**42**	**3**	**7**	**5**	**455**	**470.0**
09:00 - 09:15	0	0	18	4	8	11	0	41	59.3	0	0	14	4	1	2	0	21	24.1	0	1	81	6	3	3	4	98	106.8
09:15 - 09:30	0	0	28	5	4	9	0	46	59.7	0	0	18	4	2	5	1	30	38.5	0	0	77	8	1	1	1	88	90.8
09:30 - 09:45	0	0	11	4	6	7	0	28	40.1	0	0	19	2	3	6	0	30	39.3	0	1	44	7	0	4	2	58	64.6
09:45 - 10:00	0	0	12	7	3	11	1	34	50.8	0	1	14	5	2	3	0	25	29.3	0	2	37	6	5	4	2	56	64.5
Hourly Total	**0**	**0**	**69**	**20**	**21**	**38**	**1**	**149**	**209.9**	**0**	**1**	**65**	**15**	**8**	**16**	**1**	**106**	**131.2**	**0**	**4**	**239**	**27**	**9**	**12**	**9**	**300**	**326.7**
TOTAL	**0**	**0**	**625**	**182**	**55**	**127**	**4**	**993**	**1189.6**	**0**	**2**	**149**	**39**	**16**	**48**	**1**	**255**	**325.2**	**0**	**6**	**957**	**93**	**20**	**30**	**23**	**1129**	**1197.4**
16:00 - 16:15	0	0	72	14	2	10	0	98	112.0	0	0	12	4	4	5	0	25	33.5	0	0	21	8	0	1	2	32	35.3
16:15 - 16:30	0	0	78	18	4	11	0	111	127.3	0	0	9	5	0	3	0	17	20.9	0	0	39	6	0	1	2	48	51.3
16:30 - 16:45	0	0	81	11	0	6	1	99	107.8	0	0	12	2	0	4	0	18	23.2	0	0	9	9	2	2	1	23	27.6
16:45 - 17:00	0	0	67	6	2	7	0	82	92.1	0	0	14	3	0	3	0	20	23.9	0	0	28	14	0	1	3	46	50.3
Hourly Total	**0**	**0**	**298**	**49**	**8**	**34**	**1**	**390**	**439.2**	**0**	**0**	**47**	**14**	**4**	**15**	**0**	**80**	**101.5**	**0**	**0**	**97**	**37**	**2**	**5**	**8**	**149**	**164.5**
17:00 - 17:15	0	0	95	4	1	3	0	103	107.4	0	0	9	2	3	6	0	20	29.3	0	1	24	6	5	2	1	39	44.5
17:15 - 17:30	0	0	64	5	3	7	0	79	89.6	0	0	12	2	0	5	0	19	25.5	0	0	50	12	3	1	3	69	74.8
17:30 - 17:45	0	0	72	7	1	7	0	87	96.6	0	0	13	0	0	4	0	17	22.2	0	0	21	7	2	2	2	34	39.6
17:45 - 18:00	0	0	77	8	3	10	0	98	112.5	0	0	19	5	0	8	0	32	42.4	0	0	29	4	1	2	0	36	39.1
Hourly Total	**0**	**0**	**308**	**24**	**8**	**27**	**0**	**367**	**406.1**	**0**	**0**	**53**	**9**	**3**	**23**	**0**	**88**	**119.4**	**0**	**1**	**124**	**29**	**11**	**7**	**6**	**178**	**198.0**
18:00 - 18:15	0	0	105	6	2	7	1	121	132.1	0	0	11	0	2	4	0	17	23.2	0	0	40	11	0	4	2	57	64.2
18:15 - 18:30	0	0	58	2	3	5	1	69	78.0	0	1	10	1	1	3	0	16	19.8	0	1	79	9	1	3	3	96	102.8
18:30 - 18:45	0	0	78	3	2	5	0	88	95.5	0	0	11	2	0	2	0	15	17.6	0	1	58	3	2	0	0	64	64.4
18:45 - 19:00	0	0	34	2	1	5	0	42	49.0	0	0	16	6	0	4	0	26	31.2	0	0	47	5	3	1	3	59	64.8
Hourly Total	**0**	**0**	**275**	**13**	**8**	**22**	**2**	**320**	**354.6**	**0**	**1**	**48**	**9**	**3**	**13**	**0**	**74**	**91.8**	**0**	**2**	**224**	**28**	**6**	**8**	**8**	**276**	**296.2**
TOTAL	**0**	**0**	**881**	**86**	**24**	**83**	**3**	**1077**	**1199.9**	**0**	**1**	**148**	**32**	**10**	**51**	**0**	**242**	**312.7**	**0**	**3**	**445**	**94**	**19**	**20**	**22**	**603**	**658.7**

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

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 4
Approach: M1 J23A Access

	To Donington Services Access									To A453 (W)									To A453 (N)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	16	6	3	5	0	**30**	**38.0**	0	0	60	14	2	6	0	**82**	**90.8**	0	0	97	28	7	27	2	**161**	**201.6**
07:15 - 07:30	0	0	13	6	4	5	0	**28**	**36.5**	0	0	53	17	3	1	0	**74**	**76.8**	0	0	172	29	8	19	0	**228**	**256.7**
07:30 - 07:45	0	0	11	7	2	7	1	**28**	**39.1**	0	0	89	10	2	7	0	**108**	**118.1**	0	0	184	38	10	23	2	**257**	**293.9**
07:45 - 08:00	0	0	21	11	2	3	0	**37**	**41.9**	0	0	121	12	2	2	0	**137**	**140.6**	0	1	199	28	9	22	0	**259**	**291.5**
Hourly Total	**0**	**0**	**61**	**30**	**11**	**20**	**1**	**123**	**155.5**	**0**	**0**	**323**	**53**	**9**	**16**	**0**	**401**	**426.3**	**0**	**1**	**652**	**123**	**34**	**91**	**4**	**905**	**1043.7**
08:00 - 08:15	0	0	19	3	2	3	0	**27**	**31.9**	0	0	89	12	3	3	0	**107**	**112.4**	0	0	152	29	8	13	0	**202**	**222.9**
08:15 - 08:30	0	0	17	13	4	8	0	**42**	**54.4**	0	0	107	8	1	7	0	**123**	**132.6**	0	0	163	34	15	22	0	**234**	**270.1**
08:30 - 08:45	0	0	20	7	2	7	0	**36**	**46.1**	0	0	85	13	6	4	1	**109**	**118.2**	0	0	102	15	8	25	1	**151**	**188.5**
08:45 - 09:00	0	0	22	5	0	6	0	**33**	**40.8**	0	0	90	6	3	4	0	**103**	**109.7**	0	0	106	21	10	15	0	**152**	**176.5**
Hourly Total	**0**	**0**	**78**	**28**	**8**	**24**	**0**	**138**	**173.2**	**0**	**0**	**371**	**39**	**13**	**18**	**1**	**442**	**472.9**	**0**	**0**	**523**	**99**	**41**	**75**	**1**	**739**	**858.0**
09:00 - 09:15	0	0	24	8	3	9	0	**44**	**57.2**	0	0	69	8	5	4	0	**86**	**93.7**	0	0	108	18	8	19	0	**153**	**181.7**
09:15 - 09:30	0	0	19	7	1	9	0	**36**	**48.2**	0	0	40	8	4	5	1	**58**	**67.5**	0	0	67	20	6	19	0	**112**	**139.7**
09:30 - 09:45	0	0	22	6	2	10	0	**40**	**54.0**	0	0	31	3	6	5	0	**45**	**54.5**	0	0	74	17	7	9	1	**108**	**124.2**
09:45 - 10:00	0	0	16	6	2	6	0	**30**	**38.8**	0	0	30	11	1	6	0	**48**	**56.3**	0	0	56	15	9	16	0	**96**	**121.3**
Hourly Total	**0**	**0**	**81**	**27**	**8**	**34**	**0**	**150**	**198.2**	**0**	**0**	**170**	**30**	**16**	**20**	**1**	**237**	**272.0**	**0**	**0**	**305**	**70**	**30**	**63**	**1**	**469**	**566.9**
TOTAL	**0**	**0**	**220**	**85**	**27**	**78**	**1**	**411**	**526.9**	**0**	**0**	**864**	**122**	**38**	**54**	**2**	**1080**	**1171.2**	**0**	**1**	**1480**	**292**	**105**	**229**	**6**	**2113**	**2468.6**
16:00 - 16:15	0	0	27	5	2	9	0	**43**	**55.7**	0	0	79	5	4	6	1	**95**	**105.8**	0	0	81	35	9	13	0	**138**	**159.4**
16:15 - 16:30	0	0	20	5	2	3	0	**30**	**34.9**	0	0	59	9	4	8	0	**80**	**92.4**	0	0	97	36	2	16	2	**153**	**176.8**
16:30 - 16:45	0	0	25	6	1	5	0	**37**	**44.0**	0	0	85	17	1	3	0	**106**	**110.4**	0	1	110	27	5	16	0	**159**	**181.7**
16:45 - 17:00	0	0	26	13	2	4	0	**45**	**51.2**	0	0	101	16	2	4	0	**123**	**129.2**	0	1	101	23	4	0	0	**129**	**130.4**
Hourly Total	**0**	**0**	**98**	**29**	**7**	**21**	**0**	**155**	**185.8**	**0**	**0**	**324**	**47**	**11**	**21**	**1**	**404**	**437.8**	**0**	**2**	**389**	**121**	**20**	**45**	**2**	**579**	**648.3**
17:00 - 17:15	0	0	19	6	4	7	0	**36**	**47.1**	0	1	105	7	2	1	0	**116**	**117.7**	0	0	141	19	6	18	0	**184**	**210.4**
17:15 - 17:30	0	0	26	5	0	4	0	**35**	**40.2**	0	0	84	5	2	7	0	**98**	**108.1**	0	0	194	20	7	17	0	**238**	**263.6**
17:30 - 17:45	0	0	17	12	0	6	0	**35**	**42.8**	0	0	95	6	2	0	0	**103**	**104.0**	0	0	174	15	2	11	0	**202**	**217.3**
17:45 - 18:00	0	0	24	2	3	3	0	**32**	**37.4**	0	0	88	11	3	1	0	**103**	**105.8**	0	0	130	7	0	9	1	**147**	**159.7**
Hourly Total	**0**	**0**	**86**	**25**	**7**	**20**	**0**	**138**	**167.5**	**0**	**1**	**372**	**29**	**9**	**9**	**0**	**420**	**435.6**	**0**	**0**	**639**	**61**	**15**	**55**	**1**	**771**	**851.0**
18:00 - 18:15	0	0	23	2	1	6	0	**32**	**40.3**	0	0	60	3	1	0	0	**64**	**64.5**	0	0	105	3	6	14	0	**128**	**149.2**
18:15 - 18:30	0	0	12	4	0	2	0	**18**	**20.6**	0	0	38	1	1	4	0	**44**	**49.7**	0	0	76	6	1	7	0	**90**	**99.6**
18:30 - 18:45	0	0	3	1	1	0	0	**5**	**5.5**	0	0	25	4	1	2	0	**32**	**35.1**	0	0	26	1	1	4	0	**32**	**37.7**
18:45 - 19:00	0	0	32	7	2	4	0	**45**	**51.2**	0	0	39	3	1	6	0	**49**	**57.3**	0	0	93	8	3	9	0	**113**	**126.2**
Hourly Total	**0**	**0**	**70**	**14**	**4**	**12**	**0**	**100**	**117.6**	**0**	**0**	**162**	**11**	**4**	**12**	**0**	**189**	**206.6**	**0**	**0**	**300**	**18**	**11**	**34**	**0**	**363**	**412.7**
TOTAL	**0**	**0**	**254**	**68**	**18**	**53**	**0**	**393**	**470.9**	**0**	**1**	**858**	**87**	**24**	**42**	**1**	**1013**	**1080.0**	**0**	**2**	**1328**	**200**	**46**	**134**	**3**	**1713**	**1912.0**

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

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 4
Approach: Donington Services Access

	To A453 (W)									To A453 (N)									To M1 J23A Access								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	9	1	2	0	0	12	13.0	0	0	8	10	3	8	0	29	40.9	0	0	8	3	1	7	0	19	28.6
07:15 - 07:30	0	0	7	1	2	0	0	10	11.0	0	0	10	8	3	2	0	23	27.1	0	0	9	4	4	6	0	23	32.8
07:30 - 07:45	0	0	7	3	0	0	0	10	10.0	0	0	7	8	2	10	0	27	41.0	0	0	6	2	2	3	0	13	17.9
07:45 - 08:00	0	0	9	1	2	1	0	13	15.3	0	0	8	5	5	14	0	32	52.7	0	0	14	5	0	5	0	24	30.5
Hourly Total	**0**	**0**	**32**	**6**	**6**	**1**	**0**	**45**	**49.3**	**0**	**0**	**33**	**31**	**13**	**34**	**0**	**111**	**161.7**	**0**	**0**	**37**	**14**	**7**	**21**	**0**	**79**	**109.8**
08:00 - 08:15	0	0	12	2	1	0	0	15	15.5	0	0	1	4	3	5	0	13	21.0	0	0	24	5	2	4	0	35	41.2
08:15 - 08:30	0	0	11	5	1	0	0	17	17.5	0	0	4	4	2	7	0	17	27.1	0	0	23	10	1	6	0	40	48.3
08:30 - 08:45	0	0	13	1	2	0	0	16	17.0	0	0	5	7	3	3	0	18	23.4	0	0	21	6	2	6	0	35	43.8
08:45 - 09:00	0	0	14	2	2	0	0	18	19.0	0	0	0	2	1	3	1	7	12.4	0	0	19	3	3	3	0	28	33.4
Hourly Total	**0**	**0**	**50**	**10**	**6**	**0**	**0**	**66**	**69.0**	**0**	**0**	**10**	**17**	**9**	**18**	**1**	**55**	**83.9**	**0**	**0**	**87**	**24**	**8**	**19**	**0**	**138**	**166.7**
09:00 - 09:15	0	0	6	3	0	0	0	9	9.0	0	0	7	6	1	7	0	21	30.6	0	0	27	3	2	5	0	37	44.5
09:15 - 09:30	0	0	10	2	1	1	0	14	15.8	0	0	20	5	3	6	0	34	43.3	0	0	16	7	2	4	0	29	35.2
09:30 - 09:45	0	0	12	2	1	0	0	15	15.5	0	0	10	2	0	6	0	18	25.8	0	0	20	5	4	3	0	32	37.9
09:45 - 10:00	0	0	8	2	1	0	1	12	13.5	0	0	13	8	0	11	0	32	46.3	0	0	12	4	1	6	0	23	31.3
Hourly Total	**0**	**0**	**36**	**9**	**3**	**1**	**1**	**50**	**53.8**	**0**	**0**	**50**	**21**	**4**	**30**	**0**	**105**	**146.0**	**0**	**0**	**75**	**19**	**9**	**18**	**0**	**121**	**148.9**
TOTAL	**0**	**0**	**118**	**25**	**15**	**2**	**1**	**161**	**172.1**	**0**	**0**	**93**	**69**	**26**	**82**	**1**	**271**	**391.6**	**0**	**0**	**199**	**57**	**24**	**58**	**0**	**338**	**425.4**
16:00 - 16:15	0	0	13	4	1	1	0	19	20.8	0	0	23	2	0	5	0	30	36.5	0	0	18	5	2	5	0	30	37.5
16:15 - 16:30	0	0	7	1	1	1	0	10	11.8	0	0	15	4	2	4	0	25	31.2	0	0	21	3	1	6	0	31	39.3
16:30 - 16:45	0	0	15	2	0	0	0	17	17.0	0	1	25	1	5	7	0	39	50.0	0	0	20	5	3	5	0	33	41.0
16:45 - 17:00	0	0	13	1	0	0	0	14	14.0	0	0	10	2	2	4	0	18	24.2	0	0	22	5	0	3	0	30	33.9
Hourly Total	**0**	**0**	**48**	**8**	**2**	**2**	**0**	**60**	**63.6**	**0**	**1**	**73**	**9**	**9**	**20**	**0**	**112**	**141.9**	**0**	**0**	**81**	**18**	**6**	**19**	**0**	**124**	**151.7**
17:00 - 17:15	0	0	9	3	0	0	0	12	12.0	0	0	9	7	0	5	0	21	27.5	0	0	31	4	0	2	0	37	39.6
17:15 - 17:30	0	0	8	1	1	0	0	10	10.5	0	0	21	1	2	1	0	25	27.3	0	0	19	8	2	4	0	33	39.2
17:30 - 17:45	0	0	13	3	0	0	0	16	16.0	0	0	13	0	0	1	0	14	15.3	0	0	22	2	0	4	0	28	33.2
17:45 - 18:00	0	0	13	2	0	0	0	15	15.0	0	0	17	8	0	3	0	28	31.9	0	0	21	2	0	3	0	26	29.9
Hourly Total	**0**	**0**	**43**	**9**	**1**	**0**	**0**	**53**	**53.5**	**0**	**0**	**60**	**16**	**2**	**10**	**0**	**88**	**102.0**	**0**	**0**	**93**	**16**	**2**	**13**	**0**	**124**	**141.9**
18:00 - 18:15	0	0	13	2	1	1	0	17	18.8	0	0	26	4	0	3	0	33	36.9	0	0	12	2	1	5	0	20	27.0
18:15 - 18:30	0	0	12	2	1	1	0	16	17.8	0	0	15	2	0	2	0	19	21.6	0	0	11	3	3	4	0	21	27.7
18:30 - 18:45	0	1	9	0	0	1	0	11	11.7	0	0	17	2	0	4	0	23	28.2	0	0	9	0	0	1	0	10	11.3
18:45 - 19:00	0	0	10	0	0	0	0	10	10.0	0	0	14	2	0	0	0	16	16.0	0	0	13	1	1	3	0	18	22.4
Hourly Total	**0**	**1**	**44**	**4**	**2**	**3**	**0**	**54**	**58.3**	**0**	**0**	**72**	**10**	**0**	**9**	**0**	**91**	**102.7**	**0**	**0**	**45**	**6**	**5**	**13**	**0**	**69**	**88.4**
TOTAL	**0**	**1**	**135**	**21**	**5**	**5**	**0**	**167**	**175.4**	**0**	**1**	**205**	**35**	**11**	**39**	**0**	**291**	**346.6**	**0**	**0**	**219**	**40**	**13**	**45**	**0**	**317**	**382.0**

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

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 4
Approach: A453 West

	To A453 (N)									To M1 J23A Access									To Donington Services Access								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	46	10	0	6	3	65	75.8	0	0	29	1	2	4	0	36	42.2	0	0	12	1	0	0	0	13	13.0
07:15 - 07:30	0	0	85	16	2	6	0	109	117.8	0	1	25	3	5	2	0	36	40.5	0	1	5	2	1	0	0	9	8.9
07:30 - 07:45	0	1	81	11	5	8	3	109	124.3	0	0	32	10	4	6	1	53	63.8	0	0	4	0	0	0	0	4	4.0
07:45 - 08:00	0	0	77	12	0	2	0	91	93.6	0	0	35	5	4	3	2	49	56.9	0	0	7	0	0	0	0	7	7.0
Hourly Total	**0**	**1**	**289**	**49**	**7**	**22**	**6**	**374**	**411.5**	**0**	**1**	**121**	**19**	**15**	**15**	**3**	**174**	**203.4**	**0**	**1**	**28**	**3**	**1**	**0**	**0**	**33**	**32.9**
08:00 - 08:15	0	0	76	12	4	6	2	100	111.8	0	0	48	16	1	5	1	71	79.0	0	0	2	1	0	0	0	3	3.0
08:15 - 08:30	0	0	81	17	3	5	2	108	118.0	0	0	48	19	1	8	0	76	86.9	0	0	7	0	2	0	0	9	10.0
08:30 - 08:45	0	0	60	15	4	7	2	88	101.1	0	0	30	8	3	5	1	47	56.0	0	0	6	1	0	0	0	7	7.0
08:45 - 09:00	0	0	48	7	3	8	3	69	83.9	0	0	24	3	3	7	0	37	47.6	0	0	3	2	0	1	0	6	7.3
Hourly Total	**0**	**0**	**265**	**51**	**14**	**26**	**9**	**365**	**414.8**	**0**	**0**	**150**	**46**	**8**	**25**	**2**	**231**	**269.5**	**0**	**0**	**18**	**4**	**2**	**1**	**0**	**25**	**27.3**
09:00 - 09:15	0	0	26	3	5	8	2	44	58.9	0	0	20	4	4	1	0	29	32.3	0	0	7	1	1	0	0	9	9.5
09:15 - 09:30	0	1	25	9	6	2	4	47	56.0	0	0	21	4	0	4	0	29	34.2	0	0	4	4	0	0	0	8	8.0
09:30 - 09:45	0	0	24	11	7	1	2	45	51.8	0	0	12	3	1	3	0	19	23.4	0	0	7	3	0	1	0	11	12.3
09:45 - 10:00	0	0	31	8	2	4	4	49	59.2	0	0	9	5	0	2	0	16	18.6	0	0	5	0	1	1	0	7	8.8
Hourly Total	**0**	**1**	**106**	**31**	**20**	**15**	**12**	**185**	**225.9**	**0**	**0**	**62**	**16**	**5**	**10**	**0**	**93**	**108.5**	**0**	**0**	**23**	**8**	**2**	**2**	**0**	**35**	**38.6**
TOTAL	**0**	**2**	**660**	**131**	**41**	**63**	**27**	**924**	**1052.2**	**0**	**1**	**333**	**81**	**28**	**50**	**5**	**498**	**581.4**	**0**	**1**	**69**	**15**	**5**	**3**	**0**	**93**	**98.8**
16:00 - 16:15	0	0	161	12	2	3	3	181	188.9	0	0	66	11	2	8	1	88	100.4	0	0	4	2	2	0	0	8	9.0
16:15 - 16:30	0	0	136	12	3	2	1	154	159.1	0	0	25	7	3	2	0	37	41.1	0	0	8	2	0	0	0	10	10.0
16:30 - 16:45	0	0	126	9	0	2	1	138	141.6	0	0	68	15	0	2	0	85	87.6	0	0	9	2	2	0	0	13	14.0
16:45 - 17:00	0	0	133	16	0	1	3	153	157.3	0	0	48	1	1	2	1	53	57.1	0	0	10	1	0	0	0	11	11.0
Hourly Total	**0**	**0**	**556**	**49**	**5**	**8**	**8**	**626**	**646.9**	**0**	**0**	**207**	**34**	**6**	**14**	**2**	**263**	**286.2**	**0**	**0**	**31**	**7**	**4**	**0**	**0**	**42**	**44.0**
17:00 - 17:15	0	0	132	8	2	4	3	149	158.2	0	0	97	4	0	0	0	101	101.0	0	0	11	2	1	0	0	14	14.5
17:15 - 17:30	0	0	113	2	2	1	1	119	122.3	0	0	36	9	1	3	0	49	53.4	0	0	12	0	0	1	0	13	14.3
17:30 - 17:45	0	0	154	8	0	2	2	166	170.6	0	0	30	6	2	3	0	41	45.9	0	0	12	2	2	0	0	16	17.0
17:45 - 18:00	0	0	143	8	1	1	0	153	154.8	0	0	51	6	1	4	0	62	67.7	0	0	7	1	0	0	0	8	8.0
Hourly Total	**0**	**0**	**542**	**26**	**5**	**8**	**6**	**587**	**605.9**	**0**	**0**	**214**	**25**	**4**	**10**	**0**	**253**	**268.0**	**0**	**0**	**42**	**5**	**3**	**1**	**0**	**51**	**53.8**
18:00 - 18:15	0	0	88	7	0	0	3	98	101.0	0	0	41	3	1	2	0	47	50.1	0	0	8	1	0	0	0	9	9.0
18:15 - 18:30	0	0	83	7	1	1	2	94	97.8	0	0	28	4	1	1	0	34	35.8	0	0	8	0	0	0	0	8	8.0
18:30 - 18:45	0	1	74	4	0	7	1	87	96.5	0	0	16	2	1	2	0	21	24.1	0	0	3	0	1	0	0	4	4.5
18:45 - 19:00	0	0	57	3	2	2	3	67	73.6	0	0	16	2	0	3	0	21	24.9	0	0	5	1	0	0	0	6	6.0
Hourly Total	**0**	**1**	**302**	**21**	**3**	**10**	**9**	**346**	**368.9**	**0**	**0**	**101**	**11**	**3**	**8**	**0**	**123**	**134.9**	**0**	**0**	**24**	**2**	**1**	**0**	**0**	**27**	**27.5**
TOTAL	**0**	**1**	**1400**	**96**	**13**	**26**	**23**	**1559**	**1621.7**	**0**	**0**	**522**	**70**	**13**	**32**	**2**	**639**	**689.1**	**0**	**0**	**97**	**14**	**8**	**1**	**0**	**120**	**125.3**

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

APPENDIX 3 – A453/EMGP1 Gyratory Turning Count Results

Road Data Services Ltd

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 1
Approach: A453 North

	Left to A6 Kegworth Bypass									Ahead to A453 (S)										Right to Wilders Way										U-Turn									
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	2	4	0	1	0	7	8.3	0	0	70	10	4	7	1	92	104.1	0	0	90	5	3	7	0	105	115.6	0	0	0	0	0	0	0	0	0.0
07:15 - 07:30	0	0	15	2	2	1	0	20	22.3	0	0	66	12	2	7	0	87	97.1	0	0	107	5	1	7	1	121	131.6	0	0	1	0	0	0	0	1	1.0
07:30 - 07:45	0	0	5	2	2	2	0	11	14.6	0	0	65	8	0	6	0	79	86.8	0	1	106	5	2	5	0	119	125.9	0	0	1	1	0	0	0	2	2.0
07:45 - 08:00	0	0	8	0	2	6	0	16	24.8	0	0	88	12	1	4	0	105	110.7	0	0	83	2	1	7	1	94	104.6	0	0	1	0	0	0	0	1	1.0
Hourly Total	**0**	**0**	**30**	**8**	**6**	**10**	**0**	**54**	**70.0**	**0**	**0**	**289**	**42**	**7**	**24**	**1**	**363**	**398.7**	**0**	**1**	**386**	**17**	**7**	**26**	**2**	**439**	**477.7**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**4**	**4.0**
08:00 - 08:15	0	0	9	2	5	3	0	19	25.4	0	0	95	7	1	5	0	108	115.0	0	0	42	11	5	5	0	63	72.0	0	0	0	0	0	0	0	0	0.0
08:15 - 08:30	0	0	6	1	1	0	0	8	8.5	0	0	91	4	3	3	0	101	106.4	0	0	35	4	3	5	0	47	55.0	0	0	3	0	1	0	0	4	4.5
08:30 - 08:45	0	0	7	1	1	1	0	10	11.8	0	0	107	7	4	0	0	118	120.0	0	1	28	9	1	10	1	50	63.9	0	0	0	0	0	1	0	1	2.3
08:45 - 09:00	0	1	5	3	4	5	0	18	25.9	0	0	87	10	4	5	0	106	114.5	0	0	40	5	1	3	1	50	55.4	0	0	2	0	0	0	0	2	2.0
Hourly Total	**0**	**1**	**27**	**7**	**11**	**9**	**0**	**55**	**71.6**	**0**	**0**	**380**	**28**	**12**	**13**	**0**	**433**	**455.9**	**0**	**1**	**145**	**29**	**10**	**23**	**2**	**210**	**246.3**	**0**	**0**	**5**	**0**	**1**	**1**	**0**	**7**	**8.8**
09:00 - 09:15	0	0	3	1	1	5	0	10	17.0	0	0	87	4	6	5	0	102	111.5	0	0	48	9	0	6	0	63	70.8	0	0	1	0	0	0	0	1	1.0
09:15 - 09:30	0	0	6	1	0	0	0	7	7.0	0	0	74	6	3	14	0	97	116.7	0	0	52	11	3	5	0	71	79.0	0	0	1	1	0	0	0	2	2.0
09:30 - 09:45	0	0	4	3	3	4	0	14	20.7	0	0	56	3	6	8	0	73	86.4	0	0	55	15	0	9	2	81	94.7	0	0	0	0	0	0	0	0	0.0
09:45 - 10:00	0	0	2	2	2	2	0	8	11.6	0	0	54	6	2	5	0	67	74.5	0	0	66	20	1	9	0	96	108.2	0	0	2	0	0	0	0	2	2.0
Hourly Total	**0**	**0**	**15**	**7**	**6**	**11**	**0**	**39**	**56.3**	**0**	**0**	**271**	**19**	**17**	**32**	**0**	**339**	**389.1**	**0**	**0**	**221**	**55**	**4**	**29**	**2**	**311**	**352.7**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**5**	**5.0**
TOTAL	**0**	**1**	**72**	**22**	**23**	**30**	**0**	**148**	**197.9**	**0**	**0**	**940**	**89**	**36**	**69**	**1**	**1135**	**1243.7**	**0**	**2**	**752**	**101**	**21**	**78**	**6**	**960**	**1076.7**	**0**	**0**	**12**	**2**	**1**	**1**	**0**	**16**	**17.8**
16:00 - 16:15	0	0	9	2	1	1	0	13	14.8	0	0	54	11	2	6	1	74	83.8	0	0	10	5	1	3	0	19	23.4	0	0	0	0	0	0	0	0	0.0
16:15 - 16:30	0	0	19	3	2	1	0	25	27.3	0	0	45	14	3	3	0	65	70.4	0	0	10	9	0	4	1	24	30.2	0	0	1	0	0	0	0	1	1.0
16:30 - 16:45	0	0	15	4	1	0	0	20	20.5	0	0	41	8	3	11	0	63	78.8	0	0	16	3	0	4	0	23	28.2	0	0	2	0	0	0	0	2	2.0
16:45 - 17:00	0	1	15	0	1	0	0	17	16.9	0	0	40	6	4	3	0	53	58.9	0	0	15	7	0	6	1	29	37.8	0	0	3	1	0	0	0	4	4.0
Hourly Total	**0**	**1**	**58**	**9**	**5**	**2**	**0**	**75**	**79.5**	**0**	**0**	**180**	**39**	**12**	**23**	**1**	**255**	**291.9**	**0**	**0**	**51**	**24**	**1**	**17**	**2**	**95**	**119.6**	**0**	**0**	**6**	**1**	**0**	**0**	**0**	**7**	**7.0**
17:00 - 17:15	0	0	13	2	0	0	0	15	15.0	0	0	45	8	4	8	1	66	79.4	0	0	19	13	0	4	0	36	41.2	0	0	1	0	0	0	0	1	1.0
17:15 - 17:30	0	0	22	1	1	1	0	25	26.8	0	1	58	1	3	10	0	73	86.9	0	1	31	13	0	6	1	52	60.2	0	0	3	0	0	0	0	3	3.0
17:30 - 17:45	0	1	17	0	2	1	0	21	22.7	0	0	73	4	3	4	0	84	90.7	0	3	54	11	0	4	0	72	75.4	0	0	2	0	0	0	0	2	2.0
17:45 - 18:00	0	0	11	5	0	0	0	16	16.0	0	0	70	2	3	7	0	82	92.6	0	0	66	14	0	3	0	83	86.9	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**1**	**63**	**8**	**3**	**2**	**0**	**77**	**80.5**	**0**	**1**	**246**	**15**	**13**	**29**	**1**	**305**	**349.6**	**0**	**4**	**170**	**51**	**0**	**17**	**1**	**243**	**263.7**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**6**	**6.0**
18:00 - 18:15	0	0	7	0	0	2	0	9	11.6	0	0	42	3	2	7	0	54	64.1	0	1	103	10	0	3	0	117	120.3	0	0	2	0	0	0	0	2	2.0
18:15 - 18:30	0	0	12	3	0	0	0	15	15.0	0	1	59	3	0	4	0	67	71.6	0	1	103	14	0	2	1	121	124.0	0	0	1	0	0	0	0	1	1.0
18:30 - 18:45	0	0	10	0	1	1	0	12	13.8	0	0	84	0	4	4	0	92	99.2	0	0	54	12	0	4	0	70	75.2	0	0	0	0	0	1	0	1	2.3
18:45 - 19:00	0	0	10	0	0	2	0	12	14.6	0	0	80	1	1	4	0	86	91.7	0	0	43	9	0	4	1	57	63.2	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**39**	**3**	**1**	**5**	**0**	**48**	**55.0**	**0**	**1**	**265**	**7**	**7**	**19**	**0**	**299**	**326.6**	**0**	**2**	**303**	**45**	**0**	**13**	**2**	**365**	**382.7**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**4**	**5.3**
TOTAL	**0**	**2**	**160**	**20**	**9**	**9**	**0**	**200**	**215.0**	**0**	**2**	**691**	**61**	**32**	**71**	**2**	**859**	**968.1**	**0**	**6**	**524**	**120**	**1**	**47**	**5**	**703**	**766.0**	**0**	**0**	**15**	**1**	**0**	**1**	**0**	**17**	**18.3**

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

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 1
Approach: A6 Kegworth Bypass

	Left to A453 (S)									Ahead to Wilders Way									Right to A453 (N)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	2	15	3	0	0	0	20	18.8	0	1	87	11	10	2	0	111	118.0	0	0	74	10	8	3	2	97	106.9
07:15 - 07:30	0	0	26	2	1	0	0	29	29.5	0	1	101	16	4	1	1	124	127.7	0	1	65	18	5	0	0	89	90.9
07:30 - 07:45	0	0	29	3	1	0	1	34	35.5	0	0	76	10	2	0	2	90	93.0	0	0	61	10	1	0	0	72	72.5
07:45 - 08:00	0	0	29	5	0	1	0	35	36.3	0	0	109	21	3	3	1	137	143.4	0	0	92	21	4	2	0	119	123.6
Hourly Total	**0**	**2**	**99**	**13**	**2**	**1**	**1**	**118**	**120.1**	**0**	**2**	**373**	**58**	**19**	**6**	**4**	**462**	**482.1**	**0**	**1**	**292**	**59**	**18**	**5**	**2**	**377**	**393.9**
08:00 - 08:15	0	0	35	1	0	0	0	36	36.0	1	0	74	15	3	1	1	95	98.0	0	0	73	13	3	1	0	90	92.8
08:15 - 08:30	0	0	30	2	2	2	1	37	41.6	0	3	69	19	2	1	0	94	94.5	0	3	66	16	1	2	0	88	89.3
08:30 - 08:45	0	1	41	7	1	3	0	53	56.8	0	1	46	14	3	1	1	66	69.2	0	1	43	12	2	2	0	60	63.0
08:45 - 09:00	0	0	31	0	4	0	0	35	37.0	0	0	54	11	6	3	0	74	80.9	0	0	51	10	6	3	0	70	76.9
Hourly Total	**0**	**1**	**137**	**10**	**7**	**5**	**1**	**161**	**171.4**	**1**	**4**	**243**	**59**	**14**	**6**	**2**	**329**	**342.6**	**0**	**4**	**233**	**51**	**12**	**8**	**0**	**308**	**322.0**
09:00 - 09:15	0	0	24	5	0	1	0	30	31.3	0	0	61	13	6	3	3	86	95.9	0	0	54	12	7	3	1	77	85.4
09:15 - 09:30	0	0	17	4	1	0	0	22	22.5	0	0	34	12	3	4	1	54	61.7	0	0	32	12	4	4	0	52	59.2
09:30 - 09:45	0	0	17	5	0	1	0	23	24.3	0	0	30	12	1	2	0	45	48.1	0	0	28	9	1	1	0	39	40.8
09:45 - 10:00	0	0	9	4	0	1	1	15	17.3	0	0	37	19	3	3	0	62	67.4	0	0	26	16	4	3	0	49	54.9
Hourly Total	**0**	**0**	**67**	**18**	**1**	**3**	**1**	**90**	**95.4**	**0**	**0**	**162**	**56**	**13**	**12**	**4**	**247**	**273.1**	**0**	**0**	**140**	**49**	**16**	**11**	**1**	**217**	**240.3**
TOTAL	**0**	**3**	**303**	**41**	**10**	**9**	**3**	**369**	**386.9**	**1**	**6**	**778**	**173**	**46**	**24**	**10**	**1038**	**1097.8**	**0**	**5**	**665**	**159**	**46**	**24**	**3**	**902**	**956.2**
16:00 - 16:15	0	0	20	6	0	0	1	27	28.0	0	0	50	9	7	4	0	70	78.7	0	0	47	13	7	4	0	71	79.7
16:15 - 16:30	0	0	16	5	2	0	0	23	24.0	0	0	77	17	2	5	1	102	110.5	0	1	67	16	2	5	0	91	97.9
16:30 - 16:45	0	0	28	9	0	1	1	39	41.3	0	0	74	20	1	1	2	98	101.8	0	0	76	21	1	1	0	99	100.8
16:45 - 17:00	0	0	17	4	0	0	0	21	21.0	0	0	85	15	2	0	1	103	105.0	0	0	88	16	1	1	0	106	107.8
Hourly Total	**0**	**0**	**81**	**24**	**2**	**1**	**2**	**110**	**114.3**	**0**	**0**	**286**	**61**	**12**	**10**	**4**	**373**	**396.0**	**0**	**1**	**278**	**66**	**11**	**11**	**0**	**367**	**386.2**
17:00 - 17:15	0	0	25	4	2	0	0	31	32.0	0	0	80	13	2	4	1	100	107.2	0	0	76	16	2	2	0	96	99.6
17:15 - 17:30	0	0	33	3	1	0	0	37	37.5	0	0	94	8	2	0	0	104	105.0	0	0	88	9	2	0	0	99	100.0
17:30 - 17:45	0	0	28	3	1	1	0	33	34.8	0	0	90	15	2	0	1	108	110.0	0	1	87	16	2	0	0	106	106.4
17:45 - 18:00	0	0	26	2	3	0	0	31	32.5	0	0	81	6	2	0	1	90	92.0	0	0	81	6	1	0	0	88	88.5
Hourly Total	**0**	**0**	**112**	**12**	**7**	**1**	**0**	**132**	**136.8**	**0**	**0**	**345**	**42**	**8**	**4**	**3**	**402**	**414.2**	**0**	**1**	**332**	**47**	**7**	**2**	**0**	**389**	**394.5**
18:00 - 18:15	0	0	24	4	1	0	0	29	29.5	0	0	71	2	1	1	0	75	76.8	0	0	55	4	1	1	0	61	62.8
18:15 - 18:30	0	0	14	3	0	0	0	17	17.0	0	1	55	6	1	0	2	65	66.9	0	0	45	8	1	0	0	54	54.5
18:30 - 18:45	0	0	24	2	0	0	1	27	28.0	0	0	47	7	0	0	1	55	56.0	0	0	37	6	0	0	0	43	43.0
18:45 - 19:00	0	0	14	3	0	1	0	18	19.3	0	1	30	2	0	0	0	33	32.4	0	1	24	4	0	0	0	29	28.4
Hourly Total	**0**	**0**	**76**	**12**	**1**	**1**	**1**	**91**	**93.8**	**0**	**2**	**203**	**17**	**2**	**1**	**3**	**228**	**232.1**	**0**	**1**	**161**	**22**	**2**	**1**	**0**	**187**	**188.7**
TOTAL	**0**	**0**	**269**	**48**	**10**	**3**	**3**	**333**	**344.9**	**0**	**2**	**834**	**120**	**22**	**15**	**10**	**1003**	**1042.3**	**0**	**3**	**771**	**135**	**20**	**14**	**0**	**943**	**969.4**

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

Rijkin Data Services Ltd

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 1
Approach: A453 South

	Left to Wilders Way									Ahead to A453 (N)									Right to A6 Kegworth Bypass									U-Turn								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	36	1	3	5	2	47	57.0	0	0	102	22	5	8	0	137	149.9	0	0	13	2	1	1	0	17	18.8	0	0	0	0	0	0	0	0	0.0
07:15 - 07:30	0	0	102	3	3	11	1	120	136.8	0	0	143	24	4	15	0	186	207.5	0	0	17	11	1	1	1	31	33.8	0	0	2	0	0	0	0	2	2.0
07:30 - 07:45	0	0	66	2	1	7	3	79	91.6	0	2	162	35	5	19	1	224	251.0	0	0	21	6	1	1	0	29	30.8	0	0	2	0	0	0	0	2	2.0
07:45 - 08:00	0	0	57	2	1	9	1	70	83.2	0	0	184	43	8	20	0	255	285.0	0	0	26	10	1	0	1	38	39.5	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**261**	**8**	**8**	**32**	**7**	**316**	**368.6**	**0**	**2**	**591**	**124**	**22**	**62**	**1**	**802**	**893.4**	**0**	**0**	**77**	**29**	**4**	**3**	**2**	**115**	**122.9**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**4**	**4.0**
08:00 - 08:15	0	0	25	4	1	4	1	35	41.7	0	0	215	40	9	2	1	267	275.1	0	0	24	5	3	0	0	32	33.5	0	0	0	0	0	0	0	0	0.0
08:15 - 08:30	0	0	15	2	3	12	3	35	55.1	0	0	191	49	9	18	1	268	296.9	0	0	17	11	0	0	0	28	28.0	0	0	2	0	0	0	0	2	2.0
08:30 - 08:45	0	0	16	2	1	11	1	31	46.8	0	1	143	30	8	31	0	213	256.7	0	0	17	10	4	2	1	34	39.6	0	0	0	0	0	0	0	0	0.0
08:45 - 09:00	0	0	27	6	1	9	2	45	59.2	0	0	92	24	6	19	0	141	168.7	0	0	23	2	0	0	0	25	25.0	0	0	1	0	0	0	0	1	1.0
Hourly Total	**0**	**0**	**83**	**14**	**6**	**36**	**7**	**146**	**202.8**	**0**	**1**	**641**	**143**	**32**	**70**	**2**	**889**	**997.4**	**0**	**0**	**81**	**28**	**7**	**2**	**1**	**119**	**126.1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**3.0**
09:00 - 09:15	0	0	18	3	3	5	2	31	41.0	0	0	86	28	5	25	0	144	179.0	0	0	18	7	1	1	0	27	28.8	0	0	2	0	0	0	0	2	2.0
09:15 - 09:30	0	0	20	6	1	7	1	35	45.6	0	0	88	22	11	19	0	140	170.2	0	0	26	6	0	2	0	34	36.6	0	0	1	0	0	0	0	1	1.0
09:30 - 09:45	0	0	28	12	1	2	3	46	52.1	0	0	81	19	4	21	0	125	154.3	0	0	22	2	3	1	0	28	30.8	0	0	0	0	0	0	0	0	0.0
09:45 - 10:00	0	0	21	12	2	7	2	44	56.1	0	0	76	17	14	11	0	118	139.3	0	0	7	6	0	1	0	14	15.3	0	0	1	0	0	0	0	1	1.0
Hourly Total	**0**	**0**	**87**	**33**	**7**	**21**	**8**	**156**	**194.8**	**0**	**0**	**331**	**86**	**34**	**76**	**0**	**527**	**642.8**	**0**	**0**	**73**	**21**	**4**	**5**	**0**	**103**	**111.5**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**4**	**4.0**
TOTAL	**0**	**0**	**431**	**55**	**21**	**89**	**22**	**618**	**766.2**	**0**	**3**	**1563**	**353**	**88**	**208**	**3**	**2218**	**2533.6**	**0**	**0**	**231**	**78**	**15**	**10**	**3**	**337**	**360.5**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**11**	**11.0**
16:00 - 16:15	0	0	3	2	1	6	4	16	28.3	0	0	205	50	10	20	0	285	316.0	0	0	26	8	0	0	0	34	34.0	0	0	0	0	0	0	0	0	0.0
16:15 - 16:30	0	0	4	3	0	3	1	11	15.9	0	0	153	37	4	15	0	209	230.5	0	0	31	2	2	1	0	36	38.3	0	0	0	0	0	0	0	0	0.0
16:30 - 16:45	0	1	8	0	2	5	1	17	24.9	0	1	198	39	10	15	0	263	286.9	0	0	28	6	2	0	1	37	39.0	0	0	0	0	0	0	0	0	0.0
16:45 - 17:00	0	0	6	0	1	5	2	14	23.0	0	1	203	38	9	21	0	272	303.2	0	0	35	5	1	1	0	42	43.8	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**1**	**21**	**5**	**4**	**19**	**8**	**58**	**92.1**	**0**	**2**	**759**	**164**	**33**	**71**	**0**	**1029**	**1136.6**	**0**	**0**	**120**	**21**	**5**	**2**	**1**	**149**	**155.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
17:00 - 17:15	0	0	8	0	1	9	2	20	34.2	0	1	243	30	10	23	0	307	341.3	0	0	29	7	1	0	0	37	37.5	0	0	0	0	0	0	0	0	0.0
17:15 - 17:30	0	0	13	0	3	3	3	22	30.4	0	0	206	19	5	17	1	248	273.6	0	0	46	7	1	0	0	54	54.5	0	0	0	0	0	0	0	0	0.0
17:30 - 17:45	0	0	10	0	4	6	1	21	31.8	0	0	211	27	8	11	0	257	275.3	0	0	53	2	0	0	0	55	55.0	0	0	0	0	0	0	0	0	0.0
17:45 - 18:00	0	0	18	1	1	5	2	27	36.0	0	0	179	23	2	10	0	214	228.0	0	1	36	1	1	2	0	41	43.5	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**49**	**1**	**9**	**23**	**8**	**90**	**132.4**	**0**	**1**	**839**	**99**	**25**	**61**	**1**	**1026**	**1118.2**	**0**	**1**	**164**	**17**	**3**	**2**	**0**	**187**	**190.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
18:00 - 18:15	0	0	34	1	1	2	3	41	47.1	0	1	156	23	3	14	1	198	218.1	0	0	30	5	0	1	1	37	39.3	0	0	0	0	0	0	0	0	0.0
18:15 - 18:30	0	1	51	0	0	2	0	54	56.0	0	0	154	9	6	8	0	177	190.4	0	0	24	3	1	0	0	28	28.5	0	0	0	0	0	0	0	0	0.0
18:30 - 18:45	0	0	28	0	0	3	1	32	36.9	0	0	91	6	6	13	0	116	135.9	0	0	23	7	1	0	0	31	31.5	0	0	0	0	0	0	0	0	0.0
18:45 - 19:00	0	0	24	0	0	8	1	33	44.4	0	0	98	10	4	7	0	119	130.1	0	1	27	2	0	1	0	31	31.7	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**1**	**137**	**1**	**1**	**15**	**5**	**160**	**184.4**	**0**	**1**	**499**	**48**	**19**	**42**	**1**	**610**	**674.5**	**0**	**1**	**104**	**17**	**2**	**2**	**1**	**127**	**131.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**0**	**2**	**207**	**7**	**14**	**57**	**21**	**308**	**408.9**	**0**	**4**	**2097**	**311**	**77**	**174**	**2**	**2665**	**2929.3**	**0**	**2**	**388**	**55**	**10**	**6**	**2**	**463**	**476.6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**

PCU Factors	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.3
OGV2	2.3
BUS	2.0

Road Data Services Ltd

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 1
Approach: Wilders Way

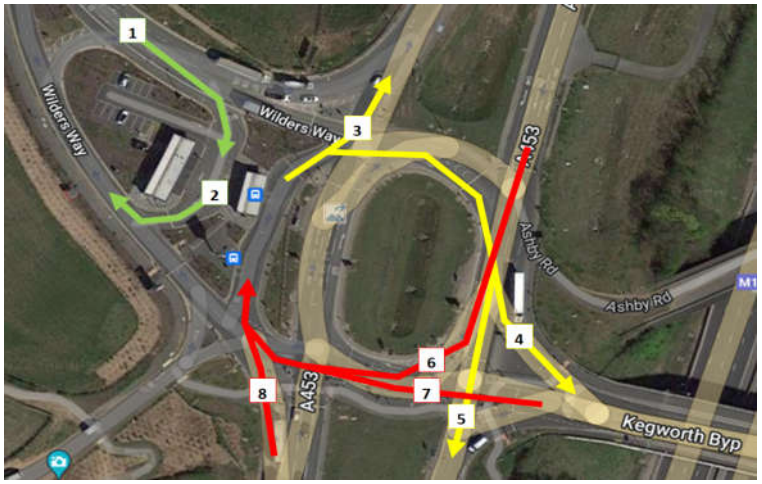
	Left to A453 (N)									Ahead to A6 Kegworth Bypass									Right to A453 (S)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	30	0	2	5	0	37	44.5	0	0	2	0	0	0	0	2	2.0	0	1	12	1	0	7	0	21	29.5
07:15 - 07:30	0	0	8	1	1	5	0	15	22.0	0	0	2	1	1	1	0	5	6.8	0	0	4	1	0	9	0	14	25.7
07:30 - 07:45	0	0	18	1	1	9	0	29	41.2	0	0	2	0	0	2	0	4	6.6	0	0	9	0	3	5	0	17	25.0
07:45 - 08:00	0	0	22	2	0	5	0	29	35.5	0	0	0	0	0	0	0	0	0.0	0	0	13	1	2	6	0	22	30.8
Hourly Total	**0**	**0**	**78**	**4**	**4**	**24**	**0**	**110**	**143.2**	**0**	**0**	**6**	**1**	**1**	**3**	**0**	**11**	**15.4**	**0**	**1**	**38**	**3**	**5**	**27**	**0**	**74**	**111.0**
08:00 - 08:15	0	0	23	3	1	5	0	32	39.0	0	0	0	0	0	0	0	0	0.0	0	0	11	3	0	5	0	19	25.5
08:15 - 08:30	0	0	11	1	2	3	0	17	21.9	0	0	2	1	0	0	0	3	3.0	0	0	13	1	1	7	0	22	31.6
08:30 - 08:45	0	0	8	3	3	6	0	20	29.3	0	0	1	1	0	0	0	2	2.0	0	0	7	1	1	6	0	15	23.3
08:45 - 09:00	0	0	5	2	0	10	0	17	30.0	0	0	1	0	0	0	0	1	1.0	0	0	2	2	0	6	0	10	17.8
Hourly Total	**0**	**0**	**47**	**9**	**6**	**24**	**0**	**86**	**120.2**	**0**	**0**	**4**	**2**	**0**	**0**	**0**	**6**	**6.0**	**0**	**0**	**33**	**7**	**2**	**24**	**0**	**66**	**98.2**
09:00 - 09:15	0	0	3	2	0	8	0	13	23.4	0	0	3	0	0	1	0	4	5.3	0	0	2	1	1	6	1	11	20.3
09:15 - 09:30	0	0	7	1	2	6	0	16	24.8	0	0	0	0	0	0	0	0	0.0	0	0	2	2	1	8	0	13	23.9
09:30 - 09:45	0	0	12	2	0	8	0	22	32.4	0	0	0	1	1	1	0	3	4.8	0	0	3	2	0	9	0	14	25.7
09:45 - 10:00	0	0	31	48	2	6	1	88	97.8	0	0	6	1	1	0	0	8	8.5	0	0	6	6	1	7	2	22	33.6
Hourly Total	**0**	**0**	**53**	**53**	**4**	**28**	**1**	**139**	**178.4**	**0**	**0**	**9**	**2**	**2**	**2**	**0**	**15**	**18.6**	**0**	**0**	**13**	**11**	**3**	**30**	**3**	**60**	**103.5**
TOTAL	**0**	**0**	**178**	**66**	**14**	**76**	**1**	**335**	**441.8**	**0**	**0**	**19**	**5**	**3**	**5**	**0**	**32**	**40.0**	**0**	**1**	**84**	**21**	**10**	**81**	**3**	**200**	**312.7**
16:00 - 16:15	0	1	76	9	1	5	0	92	98.4	0	0	8	0	2	0	0	10	11.0	0	0	27	2	3	5	0	37	45.0
16:15 - 16:30	0	1	54	2	2	2	0	61	64.0	0	0	2	1	0	1	0	4	5.3	0	0	21	2	3	3	0	29	34.4
16:30 - 16:45	0	0	65	6	1	1	0	73	74.8	0	0	9	0	0	0	0	9	9.0	0	0	14	5	0	6	0	25	32.8
16:45 - 17:00	0	0	47	3	4	2	0	56	60.6	0	1	1	3	0	0	0	5	4.4	0	0	19	2	1	5	0	27	34.0
Hourly Total	**0**	**2**	**242**	**20**	**8**	**10**	**0**	**282**	**297.8**	**0**	**1**	**20**	**4**	**2**	**1**	**0**	**28**	**29.7**	**0**	**0**	**81**	**11**	**7**	**19**	**0**	**118**	**146.2**
17:00 - 17:15	0	0	40	7	1	5	0	53	60.0	0	0	2	0	0	0	0	2	2.0	0	0	25	2	3	10	1	41	56.5
17:15 - 17:30	0	0	42	8	0	4	0	54	59.2	0	0	4	1	0	1	0	6	7.3	0	1	26	2	2	5	0	36	42.9
17:30 - 17:45	0	0	58	4	0	7	0	69	78.1	0	1	2	1	0	0	0	4	3.4	0	0	21	2	3	7	0	33	43.6
17:45 - 18:00	0	0	33	4	4	4	0	45	52.2	0	0	6	0	1	0	0	7	7.5	0	1	16	4	3	6	0	30	38.7
Hourly Total	**0**	**0**	**173**	**23**	**5**	**20**	**0**	**221**	**249.5**	**0**	**1**	**14**	**2**	**1**	**1**	**0**	**19**	**20.2**	**0**	**2**	**88**	**10**	**11**	**28**	**1**	**140**	**181.7**
18:00 - 18:15	0	0	203	9	1	2	0	215	218.1	0	0	24	1	0	0	0	25	25.0	0	0	74	1	4	6	1	86	96.8
18:15 - 18:30	0	1	59	2	2	2	0	66	69.0	0	0	10	0	0	0	0	10	10.0	0	0	31	2	1	7	0	41	50.6
18:30 - 18:45	0	2	170	3	2	2	0	179	181.4	0	0	24	2	1	0	0	27	27.5	0	0	63	1	1	4	0	69	74.7
18:45 - 19:00	0	0	49	4	1	0	0	54	54.5	0	0	9	1	0	0	0	10	10.0	0	0	13	3	1	1	0	18	19.8
Hourly Total	**0**	**3**	**481**	**18**	**6**	**6**	**0**	**514**	**523.0**	**0**	**0**	**67**	**4**	**1**	**0**	**0**	**72**	**72.5**	**0**	**0**	**181**	**7**	**7**	**18**	**1**	**214**	**241.9**
TOTAL	**0**	**5**	**896**	**61**	**19**	**36**	**0**	**1017**	**1070.3**	**0**	**2**	**101**	**10**	**4**	**2**	**0**	**119**	**122.4**	**0**	**2**	**350**	**28**	**25**	**65**	**2**	**472**	**569.8**

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

Road Data Services Ltd

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 1
Bus Moves

	Bus Moves							
TIME	Move 1	Move 2	Move 3	Move 4	Move 5	Move 6	Move 7	Move 8
07:00 - 07:15	1	1	0	1	1	0	0	2
07:15 - 07:30	2	3	1	0	3	1	2	1
07:30 - 07:45	1	2	1	1	2	0	2	2
07:45 - 08:00	2	2	0	2	2	1	1	2
Hourly Total	**6**	**8**	**2**	**4**	**8**	**2**	**5**	**7**
08:00 - 08:15	1	1	1	0	1	0	1	1
08:15 - 08:30	2	1	0	1	1	0	0	2
08:30 - 08:45	1	3	0	1	3	1	1	1
08:45 - 09:00	2	0	1	1	0	1	0	2
Hourly Total	**6**	**5**	**2**	**3**	**5**	**2**	**2**	**6**
09:00 - 09:15	1	2	1	1	2	0	2	2
09:15 - 09:30	2	1	0	1	1	0	1	1
09:30 - 09:45	1	2	0	1	2	1	0	3
09:45 - 10:00	2	1	1	1	1	0	0	2
Hourly Total	**6**	**6**	**2**	**4**	**6**	**1**	**3**	**8**
TOTAL	**18**	**19**	**6**	**11**	**19**	**5**	**10**	**21**
16:00 - 16:15	1	2	1	2	2	0	0	3
16:15 - 16:30	2	2	0	1	2	1	1	1
16:30 - 16:45	1	2	1	0	2	0	2	1
16:45 - 17:00	2	1	0	1	1	1	1	2
Hourly Total	**6**	**7**	**2**	**4**	**7**	**2**	**4**	**7**
17:00 - 17:15	1	1	1	1	1	0	1	2
17:15 - 17:30	2	3	1	1	3	1	0	3
17:30 - 17:45	1	1	1	0	1	0	1	1
17:45 - 18:00	2	0	0	1	0	0	1	1
Hourly Total	**6**	**5**	**3**	**3**	**5**	**1**	**3**	**7**
18:00 - 18:15	1	1	0	2	1	0	0	3
18:15 - 18:30	2	3	0	1	3	1	2	1
18:30 - 18:45	1	2	0	1	2	0	1	2
18:45 - 19:00	2	1	1	0	1	1	0	1
Hourly Total	**6**	**7**	**1**	**4**	**7**	**2**	**3**	**7**
TOTAL	**18**	**19**	**6**	**11**	**19**	**5**	**10**	**21**



APPENDIX 4 – M1 Junction 24 Turning Count Results

East Midlands Gateway
Thursday 3rd November 2022
Junction: 5
Approach: M1 J24 North

	To A453 (N)									To Derby Road										To M1 J24 (S)										To A453 (S)										To A50										To Hilton Hotel Lane									
TIME	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	1	138	48	11	9	0	207	223.6	0	0	97	31	8	1	0	137	142.3	0	0	0	0	0	0	0	0	0.0	0	2	94	11	6	12	0	125	142.4	0	0	36	23	2	4	0	65	71.2	0	0	1	0	0	0	0	1	1.0
07:15 - 07:30	0	0	123	36	9	9	1	178	195.2	0	0	97	34	2	0	0	133	134.0	0	0	0	0	0	0	0	0	0.0	0	1	119	11	9	9	0	149	164.6	0	0	40	29	2	7	0	78	88.1	0	0	1	1	0	0	0	2	2.0
07:30 - 07:45	0	0	152	55	8	5	0	220	230.5	0	0	139	38	7	0	0	184	187.5	0	0	0	0	0	0	0	0	0.0	0	0	110	16	2	8	0	136	147.4	0	0	69	14	2	6	0	91	99.8	0	0	3	1	0	0	0	4	4.0
07:45 - 08:00	0	0	146	37	9	7	0	199	212.6	0	0	79	22	0	1	0	102	103.3	0	0	0	0	0	0	0	0	0.0	0	0	124	28	4	13	0	169	187.9	0	0	62	20	4	6	0	92	101.8	0	0	3	0	0	0	0	3	3.0
Hourly Total	**0**	**1**	**559**	**176**	**37**	**30**	**1**	**804**	**861.9**	**0**	**0**	**412**	**125**	**17**	**2**	**0**	**556**	**567.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**3**	**447**	**66**	**21**	**42**	**0**	**579**	**642.3**	**0**	**0**	**207**	**86**	**10**	**23**	**0**	**326**	**360.9**	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**10**	**10.0**
08:00 - 08:15	0	3	151	47	5	18	0	224	248.1	0	0	92	25	6	0	0	123	126.0	0	0	0	0	0	0	0	0	0.0	0	0	100	15	6	4	0	125	133.2	0	0	55	16	2	4	0	77	83.2	0	0	3	0	0	0	0	3	3.0
08:15 - 08:30	0	0	196	33	15	13	0	257	281.4	0	0	85	25	7	0	0	117	120.5	0	0	0	0	0	0	0	0	0.0	0	0	88	10	2	12	0	112	128.6	0	0	40	11	3	7	0	61	71.6	0	0	3	1	0	0	0	4	4.0
08:30 - 08:45	0	1	179	42	16	17	0	255	284.5	0	2	78	29	1	0	0	110	109.3	0	0	1	0	0	0	0	1	1.0	0	0	88	7	4	12	0	111	128.6	0	0	35	13	3	5	1	57	66.0	0	0	2	1	0	0	0	3	3.0
08:45 - 09:00	0	0	157	45	11	16	1	230	257.3	0	1	82	29	7	0	0	119	121.9	0	0	0	0	0	0	0	0	0.0	0	0	62	14	2	10	0	88	102.0	0	0	26	15	2	2	0	45	48.6	0	1	2	1	0	0	0	4	3.4
Hourly Total	**0**	**4**	**683**	**167**	**47**	**64**	**1**	**966**	**1071.3**	**0**	**3**	**337**	**108**	**21**	**0**	**0**	**469**	**477.7**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1.0**	**0**	**0**	**338**	**46**	**14**	**38**	**0**	**436**	**492.4**	**0**	**0**	**156**	**55**	**10**	**18**	**1**	**240**	**269.4**	**0**	**1**	**10**	**3**	**0**	**0**	**0**	**14**	**13.4**
09:00 - 09:15	0	0	117	34	14	21	0	186	220.3	0	0	59	17	1	0	0	77	77.5	0	0	0	0	0	0	0	0	0.0	0	2	55	6	5	12	0	80	96.9	0	1	36	8	4	8	0	57	68.8	0	0	3	1	0	0	0	4	4.0
09:15 - 09:30	0	1	111	21	8	22	0	163	195.0	0	0	53	21	1	2	0	77	80.1	0	0	1	0	0	0	0	1	1.0	0	0	62	10	7	8	0	87	100.9	0	0	28	11	4	6	1	50	60.8	0	0	2	0	0	0	0	2	2.0
09:30 - 09:45	0	0	79	27	6	16	0	128	151.8	0	0	51	23	0	0	0	74	74.0	0	0	0	1	0	0	0	1	1.0	0	0	56	7	3	13	0	79	97.4	0	0	33	8	3	4	0	48	54.7	0	0	3	0	0	0	0	3	3.0
09:45 - 10:00	0	0	74	29	9	17	0	129	155.6	0	0	52	14	4	0	0	70	72.0	0	0	0	0	0	0	0	0	0.0	0	1	46	9	4	10	0	70	84.4	0	0	27	3	2	6	0	38	46.8	0	0	2	1	0	0	0	3	3.0
Hourly Total	**0**	**1**	**381**	**111**	**37**	**76**	**0**	**606**	**722.7**	**0**	**0**	**215**	**75**	**6**	**2**	**0**	**298**	**303.6**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**2.0**	**0**	**3**	**219**	**32**	**19**	**43**	**0**	**316**	**379.6**	**0**	**1**	**124**	**30**	**13**	**24**	**1**	**193**	**231.1**	**0**	**0**	**10**	**2**	**0**	**0**	**0**	**12**	**12.0**
TOTAL	**0**	**6**	**1623**	**454**	**121**	**170**	**2**	**2376**	**2655.9**	**0**	**3**	**964**	**308**	**44**	**4**	**0**	**1323**	**1348.4**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**3**	**3.0**	**0**	**6**	**1004**	**144**	**54**	**123**	**0**	**1331**	**1514.3**	**0**	**1**	**487**	**171**	**33**	**65**	**2**	**759**	**861.4**	**0**	**1**	**28**	**7**	**0**	**0**	**0**	**36**	**35.4**

16:00 - 16:15	0	0	124	30	8	9	0	171	186.7	0	0	88	17	4	0	0	109	111.0	0	0	0	0	0	0	0	0	0.0	0	0	24	3	2	5	0	34	41.5	0	0	32	9	3	3	0	47	52.4	0	0	2	0	0	0	0	2	2.0
16:15 - 16:30	0	0	163	28	3	6	0	200	209.3	0	0	103	20	0	0	0	123	123.0	0	0	1	0	0	0	0	1	1.0	0	0	29	3	2	4	0	38	44.2	0	0	38	6	3	7	0	54	64.6	0	0	1	0	0	0	0	1	1.0
16:30 - 16:45	0	0	154	33	2	9	0	198	210.7	0	0	101	19	1	0	0	121	121.5	0	0	0	0	0	0	0	0	0.0	0	0	24	4	4	5	0	37	45.5	0	0	31	7	4	3	0	45	50.9	0	0	1	0	0	0	0	1	1.0
16:45 - 17:00	0	1	176	27	6	8	0	218	230.8	0	0	92	12	0	0	0	104	104.0	0	0	2	0	0	0	0	2	2.0	0	0	28	3	3	6	0	40	49.3	0	0	33	15	3	4	0	55	61.7	0	0	1	0	0	0	0	1	1.0
Hourly Total	**0**	**1**	**617**	**118**	**19**	**32**	**0**	**787**	**837.5**	**0**	**0**	**384**	**68**	**5**	**0**	**0**	**457**	**459.5**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**3.0**	**0**	**0**	**105**	**13**	**11**	**20**	**0**	**149**	**180.5**	**0**	**0**	**134**	**37**	**13**	**17**	**0**	**201**	**229.6**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**5**	**5.0**
17:00 - 17:15	0	1	181	32	5	10	0	229	243.9	0	0	94	18	1	2	0	115	118.1	0	0	0	0	0	0	0	0	0.0	0	0	27	2	4	9	0	42	55.7	0	0	34	8	2	5	0	49	56.5	0	0	2	0	0	0	0	2	2.0
17:15 - 17:30	0	0	186	34	3	8	0	231	242.9	0	0	143	20	4	0	0	167	169.0	0	0	1	0	0	0	0	1	1.0	0	1	36	2	2	0	0	41	41.4	0	0	52	6	1	6	0	65	73.3	0	0	2	1	0	0	0	3	3.0
17:30 - 17:45	0	0	191	28	2	7	2	230	242.1	0	0	120	19	2	0	0	141	142.0	0	0	2	0	0	0	0	2	2.0	0	2	34	4	0	2	0	42	43.4	0	1	49	9	1	2	0	62	64.5	0	0	2	0	0	0	0	2	2.0
17:45 - 18:00	0	0	191	13	4	9	0	217	230.7	0	1	103	12	5	0	1	122	124.9	0	0	0	1	0	0	0	1	1.0	0	0	48	4	0	5	0	57	63.5	0	0	46	13	2	3	0	64	68.9	0	0	2	1	0	0	0	3	3.0
Hourly Total	**0**	**1**	**749**	**107**	**14**	**34**	**2**	**907**	**959.6**	**0**	**1**	**460**	**69**	**12**	**2**	**1**	**545**	**554.0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**4**	**4.0**	**0**	**3**	**145**	**12**	**6**	**16**	**0**	**182**	**204.0**	**0**	**1**	**181**	**36**	**6**	**16**	**0**	**240**	**263.2**	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**10**	**10.0**
18:00 - 18:15	0	0	173	13	3	5	0	194	202.0	0	0	98	10	0	0	0	108	108.0	0	0	1	0	0	0	0	1	1.0	0	0	55	2	0	7	0	64	73.1	0	0	43	13	1	4	0	61	66.7	0	0	2	0	0	0	0	2	2.0
18:15 - 18:30	0	0	136	11	1	4	0	152	157.7	0	0	103	5	0	0	0	108	108.0	0	0	0	0	0	0	0	0	0.0	0	0	80	4	2	5	0	91	98.5	0	0	47	5	2	3	0	57	61.9	0	0	2	0	0	0	0	2	2.0
18:30 - 18:45	0	0	94	15	4	10	0	123	138.0	0	0	53	5	1	0	0	59	59.5	0	0	0	0	0	0	0	0	0.0	0	1	67	8	1	8	0	85	95.3	0	0	42	5	2	4	0	53	59.2	0	0	2	0	0	0	0	2	2.0
18:45 - 19:00	0	0	95	7	2	6	0	110	118.8	0	0	83	2	0	1	0	86	87.3	0	0	0	0	0	0	0	0	0.0	0	0	53	5	0	7	0	65	74.1	0	0	32	6	2	3	0	43	47.9	0	0	2	0	0	0	0	2	2.0
Hourly Total	**0**	**0**	**498**	**46**	**10**	**25**	**0**	**579**	**616.5**	**0**	**0**	**337**	**22**	**1**	**1**	**0**	**361**	**362.8**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1.0**	**0**	**1**	**255**	**19**	**3**	**27**	**0**	**305**	**341.0**	**0**	**0**	**164**	**29**	**7**	**14**	**0**	**214**	**235.7**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**8**	**8.0**
TOTAL	**0**	**2**	**1864**	**271**	**43**	**91**	**2**	**2273**	**2413.6**	**0**	**1**	**1181**	**159**	**18**	**3**	**1**	**1363**	**1376.3**	**0**	**0**	**7**	**1**	**0**	**0**	**0**	**8**	**8.0**	**0**	**4**	**505**	**44**	**20**	**63**	**0**	**636**	**725.5**	**0**	**1**	**479**	**102**	**26**	**47**	**0**	**655**	**728.5**	**0**	**0**	**21**	**2**	**0**	**0**	**0**	**23**	**23.0**

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

East Midlands Gateway
Thursday 3rd November 2022
Junction: 5
Approach: A453 North

	To Derby Road									To M1 J24 (S)									To A453 (S)									To A50									To Hilton Hotel Lane									To M1 J24 (N)								
TIME	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	1	8	3	0	0	0	12	11.4	0	0	103	29	3	14	0	149	168.7	0	0	69	9	6	6	0	90	100.8	0	0	31	19	4	3	0	57	62.9	0	0	1	0	0	0	0	1	1.0	0	0	24	10	2	1	0	37	39.3
07:15 - 07:30	0	0	10	3	1	0	0	14	14.5	0	0	96	16	3	14	2	131	152.7	0	0	82	8	4	9	2	105	120.7	0	0	29	21	2	7	0	59	69.1	0	0	1	1	0	0	0	2	2.0	0	0	32	10	2	6	0	50	58.8
07:30 - 07:45	0	0	20	4	0	0	0	24	24.0	0	0	68	13	5	6	0	92	102.3	0	4	87	18	2	9	1	121	132.3	0	0	49	13	2	5	0	69	76.5	0	0	3	1	0	0	0	4	4.0	0	0	37	6	2	5	0	50	57.5
07:45 - 08:00	0	1	6	0	1	0	0	8	7.9	0	1	81	16	8	8	0	114	127.8	0	0	89	9	4	9	0	111	124.7	0	1	44	7	8	4	0	64	72.6	0	0	3	0	0	0	0	3	3.0	0	0	30	9	3	4	0	46	52.7
Hourly Total	**0**	**2**	**44**	**10**	**2**	**0**	**0**	**58**	**57.8**	**0**	**1**	**348**	**74**	**19**	**42**	**2**	**486**	**551.5**	**0**	**4**	**327**	**44**	**16**	**33**	**3**	**427**	**478.5**	**0**	**1**	**153**	**60**	**16**	**19**	**0**	**249**	**####**	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**10**	**10.0**	**0**	**0**	**123**	**35**	**9**	**16**	**0**	**183**	**208.3**
08:00 - 08:15	0	0	9	2	0	0	0	11	11.0	0	0	100	21	6	8	0	135	148.4	0	0	81	12	3	4	0	100	106.7	0	0	44	13	1	6	0	64	72.3	0	0	3	0	0	0	0	3	3.0	0	0	41	11	1	3	0	56	60.4
08:15 - 08:30	0	0	15	2	0	0	0	17	17.0	0	0	97	26	11	7	1	142	157.6	0	0	73	8	2	8	1	92	104.4	0	0	32	9	2	6	0	49	57.8	0	0	3	1	0	0	0	4	4.0	0	0	22	6	2	5	0	35	42.5
08:30 - 08:45	0	0	11	2	1	0	0	14	14.5	0	0	98	24	10	8	0	140	155.4	0	0	71	7	3	8	0	89	100.9	0	0	28	13	3	6	1	51	61.3	0	0	2	1	0	0	0	3	3.0	0	0	18	8	5	5	0	36	45.0
08:45 - 09:00	0	0	7	2	1	0	0	10	10.5	0	0	74	18	8	11	1	112	131.3	0	0	49	7	2	5	0	63	70.5	0	0	24	6	2	2	1	35	39.6	0	0	2	1	0	0	0	3	3.0	0	0	13	6	2	2	0	23	26.6
Hourly Total	**0**	**0**	**42**	**8**	**2**	**0**	**0**	**52**	**53.0**	**0**	**0**	**369**	**89**	**35**	**34**	**2**	**529**	**592.7**	**0**	**0**	**274**	**34**	**10**	**25**	**1**	**344**	**382.5**	**0**	**0**	**128**	**41**	**8**	**20**	**2**	**199**	**####**	**0**	**0**	**10**	**3**	**0**	**0**	**0**	**13**	**13.0**	**0**	**0**	**94**	**31**	**10**	**15**	**0**	**150**	**174.5**
09:00 - 09:15	0	0	5	0	2	0	0	7	8.0	0	0	69	20	3	11	2	105	122.8	0	0	40	5	6	7	2	60	74.1	0	0	25	5	4	4	0	38	45.2	0	0	2	1	0	0	0	3	3.0	0	0	19	2	2	3	0	26	30.9
09:15 - 09:30	0	0	4	3	0	1	0	8	9.3	0	0	88	26	2	18	0	134	158.4	0	0	44	5	2	9	0	60	72.7	0	0	19	5	3	5	2	34	44.0	0	0	2	0	0	0	0	2	2.0	0	0	15	4	2	5	0	26	33.5
09:30 - 09:45	0	0	9	3	0	0	0	12	12.0	0	0	70	13	3	12	0	98	115.1	0	0	38	8	6	8	0	60	73.4	0	0	26	6	4	4	0	40	47.2	0	0	2	0	0	0	0	2	2.0	0	0	27	6	0	4	0	37	42.2
09:45 - 10:00	0	0	5	3	0	0	0	8	8.0	0	0	82	24	10	9	0	125	141.7	0	1	42	9	4	12	0	68	85.0	0	1	26	7	2	9	0	45	57.1	0	0	2	1	0	0	0	3	3.0	0	0	20	4	0	6	0	30	37.8
Hourly Total	**0**	**0**	**23**	**9**	**2**	**1**	**0**	**35**	**37.3**	**0**	**0**	**309**	**83**	**18**	**50**	**2**	**462**	**538.0**	**0**	**1**	**164**	**27**	**18**	**36**	**2**	**248**	**305.2**	**0**	**1**	**96**	**23**	**13**	**22**	**2**	**157**	**####**	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**10**	**10.0**	**0**	**0**	**81**	**16**	**4**	**18**	**0**	**119**	**144.4**
TOTAL	**0**	**2**	**109**	**27**	**6**	**1**	**0**	**145**	**148.1**	**0**	**1**	**1026**	**246**	**72**	**126**	**6**	**1477**	**1682.2**	**0**	**5**	**765**	**105**	**44**	**94**	**6**	**1019**	**1166.2**	**0**	**2**	**377**	**124**	**37**	**61**	**4**	**605**	**####**	**0**	**0**	**26**	**7**	**0**	**0**	**0**	**33**	**33.0**	**0**	**0**	**298**	**82**	**23**	**49**	**0**	**452**	**527.2**
16:00 - 16:15	0	1	8	0	1	0	0	10	9.9	0	0	160	23	7	9	1	200	216.2	0	0	43	11	2	7	0	63	73.1	0	1	76	27	6	8	0	118	####	0	0	2	0	0	0	0	2	2.0	0	0	52	26	2	4	0	84	90.2
16:15 - 16:30	0	0	9	1	0	0	0	10	10.0	0	2	167	33	2	10	0	214	226.8	0	0	47	7	2	6	0	62	70.8	0	0	64	26	3	8	0	101	####	0	0	2	0	0	0	0	2	2.0	0	0	51	16	5	6	0	78	88.3
16:30 - 16:45	0	0	13	1	0	0	0	14	14.0	0	2	181	45	9	2	0	239	244.9	0	0	30	6	3	7	0	46	56.6	0	2	52	17	3	6	0	80	88.1	0	0	1	0	0	0	0	1	1.0	0	0	54	25	4	4	0	87	94.2
16:45 - 17:00	0	0	15	3	0	0	0	18	18.0	0	0	193	35	4	4	0	236	243.2	0	1	58	10	1	3	1	74	78.8	0	0	68	23	1	3	0	95	99.4	0	0	2	0	0	0	0	2	2.0	0	0	60	21	2	3	0	86	90.9
Hourly Total	**0**	**1**	**45**	**5**	**1**	**0**	**0**	**52**	**51.9**	**0**	**4**	**701**	**136**	**22**	**25**	**1**	**889**	**931.1**	**0**	**1**	**178**	**34**	**8**	**23**	**1**	**245**	**279.3**	**0**	**3**	**260**	**93**	**13**	**25**	**0**	**394**	**####**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**7**	**7.0**	**0**	**0**	**217**	**88**	**13**	**17**	**0**	**335**	**363.6**
17:00 - 17:15	0	0	10	3	0	0	0	13	13.0	0	1	184	22	2	2	0	211	214.0	0	1	47	3	3	5	0	59	66.4	0	0	66	12	2	1	0	81	83.3	0	0	2	0	0	0	0	2	2.0	0	1	53	15	3	2	0	74	77.5
17:15 - 17:30	0	0	27	1	0	0	0	28	28.0	0	0	175	25	0	8	0	208	218.4	0	1	59	2	6	0	0	68	70.4	0	0	93	17	2	4	0	116	####	0	0	2	1	0	0	0	3	3.0	0	0	58	12	0	6	0	76	83.8
17:30 - 17:45	0	0	18	0	0	0	0	18	18.0	0	0	171	14	4	5	0	194	202.5	0	0	66	6	0	2	0	74	76.6	0	0	89	13	2	5	0	109	####	0	0	2	0	0	0	0	2	2.0	0	0	45	8	0	3	0	56	59.9
17:45 - 18:00	0	1	12	1	1	0	0	15	14.9	0	0	173	12	4	11	0	200	216.3	0	0	81	4	0	8	0	93	103.4	0	0	74	15	4	6	0	99	####	0	0	3	1	0	0	0	4	4.0	0	0	49	6	0	2	0	57	59.6
Hourly Total	**0**	**1**	**67**	**5**	**1**	**0**	**0**	**74**	**73.9**	**0**	**1**	**703**	**73**	**10**	**26**	**0**	**813**	**851.2**	**0**	**2**	**253**	**15**	**9**	**15**	**0**	**294**	**316.8**	**0**	**0**	**322**	**57**	**10**	**16**	**0**	**405**	**####**	**0**	**0**	**9**	**2**	**0**	**0**	**0**	**11**	**11.0**	**0**	**1**	**205**	**41**	**3**	**13**	**0**	**263**	**280.8**
18:00 - 18:15	0	0	17	0	0	0	0	17	17.0	0	0	171	9	3	8	2	193	206.9	0	1	71	2	1	4	0	79	84.1	0	0	54	17	1	2	0	74	77.1	0	0	2	0	0	0	0	2	2.0	0	0	33	8	0	3	0	44	47.9
18:15 - 18:30	0	0	6	1	0	0	0	7	7.0	0	0	144	14	0	6	0	164	171.8	0	0	77	5	2	3	0	87	91.9	0	0	46	6	2	4	0	58	64.2	0	0	3	1	0	0	0	4	4.0	0	0	28	3	1	2	0	34	37.1
18:30 - 18:45	0	0	13	3	1	0	0	17	17.5	0	0	116	9	1	3	0	129	133.4	0	0	63	11	2	4	0	80	86.2	0	0	36	6	2	1	0	45	47.3	0	0	2	0	0	0	0	2	2.0	0	0	40	5	2	2	0	49	52.6
18:45 - 19:00	0	0	7	1	0	1	0	9	10.3	0	0	104	8	1	6	0	119	127.3	0	0	43	9	2	5	0	59	66.5	0	0	23	10	1	2	1	37	41.1	0	0	2	0	0	0	0	2	2.0	0	0	31	4	1	3	0	39	43.4
Hourly Total	**0**	**0**	**43**	**5**	**1**	**1**	**0**	**50**	**51.8**	**0**	**0**	**535**	**40**	**5**	**23**	**2**	**605**	**639.4**	**0**	**1**	**254**	**27**	**7**	**16**	**0**	**305**	**328.7**	**0**	**0**	**159**	**39**	**6**	**9**	**1**	**214**	**####**	**0**	**0**	**9**	**1**	**0**	**0**	**0**	**10**	**10.0**	**0**	**0**	**132**	**20**	**4**	**10**	**0**	**166**	**181.0**
TOTAL	**0**	**2**	**155**	**15**	**3**	**1**	**0**	**176**	**177.6**	**0**	**5**	**1939**	**249**	**37**	**74**	**3**	**2307**	**2421.7**	**0**	**4**	**685**	**76**	**24**	**54**	**1**	**844**	**924.8**	**0**	**3**	**741**	**189**	**29**	**50**	**1**	**1013**	**####**	**0**	**0**	**25**	**3**	**0**	**0**	**0**	**28**	**28.0**	**0**	**1**	**554**	**149**	**20**	**40**	**0**	**764**	**825.4**

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

East Midlands Gateway
Thursday 3rd November 2022
Junction: 5
Approach: Derby Road

	To M1 J24 (S)									To A453 (S)										To A50										To Hilton Hotel Lane										To M1 J24 (N)										To A453 (N)									
TIME	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	18	1	0	1	0	20	21.3	0	0	26	2	0	0	1	29	30.0	0	0	10	2	0	1	0	13	14.3	0	0	0	0	0	0	0	0	0.0	0	0	9	0	0	0	0	9	9.0	0	0	7	2	0	0	0	9	9.0
07:15 - 07:30	0	0	9	3	0	0	0	12	12.0	0	0	27	2	0	0	0	29	29.0	0	0	10	3	1	2	0	16	19.1	0	0	0	0	0	0	0	0	0.0	0	0	9	0	0	0	0	9	9.0	0	0	8	2	1	0	0	11	11.5
07:30 - 07:45	0	0	11	3	0	0	0	14	14.0	0	0	35	2	0	0	0	37	37.0	0	0	18	2	2	1	0	23	25.3	0	0	1	0	0	0	0	1	1.0	0	0	10	0	0	0	0	10	10.0	0	0	12	4	1	0	0	17	17.5
07:45 - 08:00	0	0	7	0	1	1	0	9	10.8	0	0	46	7	0	0	1	54	55.0	0	0	24	5	1	1	0	31	32.8	0	0	1	0	0	0	0	1	1.0	0	0	16	9	0	0	0	25	25.0	0	0	16	4	1	0	0	21	21.5
Hourly Total	**0**	**0**	**45**	**7**	**1**	**2**	**0**	**55**	**58.1**	**0**	**0**	**134**	**13**	**0**	**0**	**2**	**149**	**151.0**	**0**	**0**	**62**	**12**	**4**	**5**	**0**	**83**	**91.5**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**	**0**	**0**	**44**	**9**	**0**	**0**	**0**	**53**	**53.0**	**0**	**0**	**43**	**12**	**3**	**0**	**0**	**58**	**59.5**
08:00 - 08:15	0	0	11	5	2	0	0	18	19.0	0	0	33	3	0	0	0	36	36.0	0	0	20	3	0	2	0	25	27.6	0	0	0	0	0	0	0	0	0.0	0	0	11	2	0	0	0	13	13.0	0	0	17	4	0	0	0	21	21.0
08:15 - 08:30	0	0	11	1	1	0	0	13	13.5	0	0	43	4	0	0	0	47	47.0	0	0	19	3	4	2	0	28	32.6	0	0	0	0	0	0	0	0	0.0	0	0	10	3	0	0	0	13	13.0	0	0	12	4	0	0	0	16	16.0
08:30 - 08:45	0	0	8	4	0	1	0	13	14.3	0	0	32	3	0	0	0	35	35.0	0	0	16	9	3	0	1	29	31.5	0	0	1	0	0	0	0	1	1.0	0	0	11	4	0	0	0	15	15.0	0	0	9	3	1	0	0	13	13.5
08:45 - 09:00	0	0	3	2	0	0	0	5	5.0	0	0	24	2	0	0	0	26	26.0	0	0	13	2	2	1	2	20	24.3	0	0	0	0	0	0	0	0	0.0	0	0	7	3	2	0	0	12	13.0	0	0	9	2	2	0	0	13	14.0
Hourly Total	**0**	**0**	**33**	**12**	**3**	**1**	**0**	**49**	**51.8**	**0**	**0**	**132**	**12**	**0**	**0**	**0**	**144**	**144.0**	**0**	**0**	**68**	**17**	**9**	**5**	**3**	**102**	**116.0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1.0**	**0**	**0**	**39**	**12**	**2**	**0**	**0**	**53**	**54.0**	**0**	**0**	**47**	**13**	**3**	**0**	**0**	**63**	**64.5**
09:00 - 09:15	0	0	10	5	1	1	0	17	18.8	0	0	21	5	0	0	0	26	26.0	0	0	14	3	0	1	0	18	19.3	0	0	0	0	0	0	0	0	0.0	0	0	14	3	0	0	0	17	17.0	0	0	11	2	0	1	0	14	15.3
09:15 - 09:30	0	0	12	0	0	0	0	12	12.0	0	0	22	4	0	0	0	26	26.0	0	0	9	3	1	2	0	15	18.1	0	0	0	0	0	0	0	0	0.0	0	0	6	3	0	0	0	9	9.0	0	0	8	1	1	0	0	10	10.5
09:30 - 09:45	0	0	5	0	1	1	0	7	8.8	0	0	17	2	0	0	0	19	19.0	0	0	10	2	2	0	0	14	15.0	0	0	1	0	0	0	0	1	1.0	0	0	7	2	0	0	0	9	9.0	0	0	5	2	0	0	0	7	7.0
09:45 - 10:00	0	0	6	2	0	2	0	10	12.6	0	1	11	4	0	0	0	16	15.4	0	1	5	4	1	0	0	11	10.9	0	0	0	0	0	0	0	0	0.0	0	0	5	2	0	0	0	7	7.0	0	0	5	2	1	0	0	8	8.5
Hourly Total	**0**	**0**	**33**	**7**	**2**	**4**	**0**	**46**	**52.2**	**0**	**1**	**71**	**15**	**0**	**0**	**0**	**87**	**86.4**	**0**	**1**	**38**	**12**	**4**	**3**	**0**	**58**	**63.3**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1.0**	**0**	**0**	**32**	**10**	**0**	**0**	**0**	**42**	**42.0**	**0**	**0**	**29**	**7**	**2**	**1**	**0**	**39**	**41.3**
TOTAL	**0**	**0**	**111**	**26**	**6**	**7**	**0**	**150**	**162.1**	**0**	**1**	**337**	**40**	**0**	**0**	**2**	**380**	**381.4**	**0**	**1**	**168**	**41**	**17**	**13**	**3**	**243**	**270.8**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**4**	**4.0**	**0**	**0**	**115**	**31**	**2**	**0**	**0**	**148**	**149.0**	**0**	**0**	**119**	**32**	**8**	**1**	**0**	**160**	**165.3**
16:00 - 16:15	0	0	14	0	0	0	0	14	14.0	0	0	20	2	0	0	0	22	22.0	0	0	33	9	0	0	0	42	42.0	0	0	1	0	0	0	0	1	1.0	0	0	23	7	0	0	0	30	30.0	0	0	16	3	0	0	0	19	19.0
16:15 - 16:30	0	0	8	1	2	0	0	11	12.0	0	0	20	2	0	0	0	22	22.0	0	0	27	14	2	0	0	43	44.0	0	0	0	0	0	0	0	0	0.0	0	0	21	6	0	0	0	27	27.0	0	0	13	6	0	0	0	19	19.0
16:30 - 16:45	0	0	10	4	0	0	0	14	14.0	0	0	14	4	0	0	0	18	18.0	0	4	26	9	0	0	0	39	36.6	0	0	0	0	0	0	0	0	0.0	0	0	23	3	0	0	0	26	26.0	0	0	11	7	0	0	0	18	18.0
16:45 - 17:00	0	0	6	2	0	1	0	9	10.3	0	0	22	2	0	0	0	24	24.0	0	0	26	4	0	2	0	32	34.6	0	0	0	0	0	0	0	0	0.0	0	0	20	4	0	0	0	24	24.0	0	0	11	2	0	0	0	13	13.0
Hourly Total	**0**	**0**	**38**	**7**	**2**	**1**	**0**	**48**	**50.3**	**0**	**0**	**76**	**10**	**0**	**0**	**0**	**86**	**86.0**	**0**	**4**	**112**	**36**	**2**	**2**	**0**	**156**	**157.2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1.0**	**0**	**0**	**87**	**20**	**0**	**0**	**0**	**107**	**107.0**	**0**	**0**	**51**	**18**	**0**	**0**	**0**	**69**	**69.0**
17:00 - 17:15	0	0	17	5	0	1	0	23	24.3	0	0	25	0	0	2	0	27	29.6	0	0	31	10	0	1	0	42	43.3	0	0	1	0	0	0	0	1	1.0	0	0	25	6	0	0	0	31	31.0	0	0	9	1	0	0	0	10	10.0
17:15 - 17:30	0	0	8	1	0	0	0	9	9.0	0	1	16	0	0	0	0	17	16.4	0	0	28	4	0	0	0	32	32.0	0	0	0	0	0	0	0	0	0.0	0	0	16	2	0	0	0	18	18.0	0	0	16	1	0	0	0	17	17.0
17:30 - 17:45	0	0	15	0	0	0	0	15	15.0	0	0	25	2	0	0	0	27	27.0	0	0	33	3	1	1	0	38	39.8	0	0	1	0	0	0	0	1	1.0	0	0	19	2	0	0	0	21	21.0	0	0	17	2	0	0	1	20	21.0
17:45 - 18:00	0	0	4	0	0	0	0	4	4.0	0	0	17	0	0	0	0	17	17.0	0	0	16	4	1	2	0	23	26.1	0	0	0	0	0	0	0	0	0.0	0	0	14	3	0	0	0	17	17.0	0	0	8	2	0	0	0	10	10.0
Hourly Total	**0**	**0**	**44**	**6**	**0**	**1**	**0**	**51**	**52.3**	**0**	**1**	**83**	**2**	**0**	**2**	**0**	**88**	**90.0**	**0**	**0**	**108**	**21**	**2**	**4**	**0**	**135**	**141.2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**	**0**	**0**	**74**	**13**	**0**	**0**	**0**	**87**	**87.0**	**0**	**0**	**50**	**6**	**0**	**0**	**1**	**57**	**58.0**
18:00 - 18:15	0	0	14	0	0	0	0	14	14.0	0	0	36	1	0	0	0	37	37.0	0	0	27	5	1	0	0	33	33.5	0	0	1	0	0	0	0	1	1.0	0	0	18	5	0	0	0	23	23.0	0	0	12	4	1	0	0	17	17.5
18:15 - 18:30	0	0	8	1	1	0	0	10	10.5	0	0	28	0	0	0	0	28	28.0	0	0	17	4	0	0	0	21	21.0	0	0	1	0	0	0	0	1	1.0	0	0	12	0	0	0	0	12	12.0	0	0	9	0	0	0	0	9	9.0
18:30 - 18:45	0	0	6	0	0	0	0	6	6.0	0	0	12	1	0	0	0	13	13.0	0	0	10	1	1	0	0	12	12.5	0	0	1	0	0	0	0	1	1.0	0	0	7	1	0	0	0	8	8.0	0	0	10	2	1	0	0	13	13.5
18:45 - 19:00	0	0	3	0	1	0	0	4	4.5	0	0	29	3	0	0	0	32	32.0	0	0	16	4	3	0	0	23	24.5	0	0	0	0	0	0	0	0	0.0	0	0	16	1	0	0	0	17	17.0	0	0	10	1	0	0	1	12	13.0
Hourly Total	**0**	**0**	**31**	**1**	**2**	**0**	**0**	**34**	**35.0**	**0**	**0**	**105**	**5**	**0**	**0**	**0**	**110**	**110.0**	**0**	**0**	**70**	**14**	**5**	**0**	**0**	**89**	**91.5**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**3.0**	**0**	**0**	**53**	**7**	**0**	**0**	**0**	**60**	**60.0**	**0**	**0**	**41**	**7**	**2**	**0**	**1**	**51**	**53.0**
TOTAL	**0**	**0**	**113**	**14**	**4**	**2**	**0**	**133**	**137.6**	**0**	**1**	**264**	**17**	**0**	**2**	**0**	**284**	**286.0**	**0**	**4**	**290**	**71**	**9**	**6**	**0**	**380**	**389.9**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**6**	**6.0**	**0**	**0**	**214**	**40**	**0**	**0**	**0**	**254**	**254.0**	**0**	**0**	**142**	**31**	**2**	**0**	**2**	**177**	**180.0**

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

East Midlands Gateway
Thursday 3rd November 2022
Junction: 5
Approach: M1 J24 South

	To A453 (S)									To A50										To Hilton Hotel Lane										To M1 J24 (N)										To A453 (N)										To Derby Road									
TIME	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	0	0	0	0	0	**0**	**0.0**	0	0	139	42	11	38	0	**230**	**284.9**	0	0	1	0	0	0	0	**1**	**1.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	87	35	9	17	0	**148**	**174.6**	0	0	8	5	1	1	0	**15**	**16.8**
07:15 - 07:30	0	0	0	0	0	0	0	**0**	**0.0**	0	0	181	50	12	32	0	**275**	**322.6**	0	0	2	1	0	0	0	**3**	**3.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	130	39	8	12	0	**189**	**208.6**	0	0	15	6	1	1	0	**23**	**24.8**
07:30 - 07:45	0	0	0	0	0	1	0	**1**	**2.3**	0	0	197	45	15	35	0	**292**	**345.0**	0	0	4	1	0	0	0	**5**	**5.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	119	37	11	18	0	**185**	**213.9**	0	0	17	5	1	2	0	**25**	**28.1**
07:45 - 08:00	0	0	1	1	0	1	0	**3**	**4.3**	0	0	202	40	14	29	0	**285**	**329.7**	0	0	6	0	0	0	0	**6**	**6.0**	0	0	3	1	0	0	0	**4**	**4.0**	0	0	130	30	8	7	0	**175**	**188.1**	0	0	16	2	1	1	0	**20**	**21.8**
Hourly Total	**0**	**0**	**1**	**1**	**0**	**2**	**0**	**4**	**6.6**	**0**	**0**	**719**	**177**	**52**	**134**	**0**	**1082**	**1282.2**	**0**	**0**	**13**	**2**	**0**	**0**	**0**	**15**	**15.0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**4**	**4.0**	**0**	**0**	**466**	**141**	**36**	**54**	**0**	**697**	**785.2**	**0**	**0**	**56**	**18**	**4**	**5**	**0**	**83**	**91.5**
08:00 - 08:15	0	0	1	0	0	0	0	**1**	**1.0**	0	0	186	27	14	37	0	**264**	**319.1**	0	0	4	0	0	0	0	**4**	**4.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	145	36	5	6	0	**192**	**202.3**	0	0	24	5	3	0	0	**32**	**33.5**
08:15 - 08:30	0	0	0	0	0	0	0	**0**	**0.0**	0	0	220	40	21	28	0	**309**	**355.9**	0	0	5	1	0	0	0	**6**	**6.0**	0	0	0	1	0	0	0	**1**	**1.0**	0	0	138	26	4	11	0	**179**	**195.3**	0	0	16	2	2	1	0	**21**	**23.3**
08:30 - 08:45	0	0	1	0	0	0	0	**1**	**1.0**	0	0	203	43	9	29	0	**284**	**326.2**	0	0	9	1	0	0	0	**10**	**10.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	104	18	7	7	0	**136**	**148.6**	0	0	11	1	3	1	0	**16**	**18.8**
08:45 - 09:00	0	0	0	0	0	0	0	**0**	**0.0**	0	0	202	29	9	36	0	**276**	**327.3**	0	0	6	1	0	0	0	**7**	**7.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	89	20	7	6	0	**122**	**133.3**	0	0	9	4	2	0	0	**15**	**16.0**
Hourly Total	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**	**0**	**0**	**811**	**139**	**53**	**130**	**0**	**1133**	**1328.5**	**0**	**0**	**24**	**3**	**0**	**0**	**0**	**27**	**27.0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**1.0**	**0**	**0**	**476**	**100**	**23**	**30**	**0**	**629**	**679.5**	**0**	**0**	**60**	**12**	**10**	**2**	**0**	**84**	**91.6**
09:00 - 09:15	0	0	1	1	0	0	0	**2**	**2.0**	0	0	138	42	10	31	0	**221**	**266.3**	0	0	7	2	0	0	0	**9**	**9.0**	0	0	0	0	1	0	0	**1**	**1.5**	0	0	120	28	9	18	0	**175**	**202.9**	0	0	14	5	2	0	0	**21**	**22.0**
09:15 - 09:30	0	0	1	1	0	1	0	**3**	**4.3**	0	0	161	47	11	29	1	**249**	**293.2**	0	0	3	0	0	0	0	**3**	**3.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	106	27	13	8	0	**154**	**170.9**	0	0	5	2	2	2	0	**11**	**14.6**
09:30 - 09:45	0	0	3	0	2	0	0	**5**	**6.0**	0	0	141	29	16	36	0	**222**	**276.8**	0	0	3	0	0	0	0	**3**	**3.0**	0	0	1	0	0	0	0	**1**	**1.0**	0	1	92	15	6	4	0	**118**	**125.6**	0	0	10	4	3	0	0	**17**	**18.5**
09:45 - 10:00	0	0	1	0	1	0	0	**2**	**2.5**	0	0	121	29	16	30	0	**196**	**243.0**	0	0	4	1	0	0	0	**5**	**5.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	67	24	10	13	0	**114**	**135.9**	0	0	6	4	2	0	0	**12**	**13.0**
Hourly Total	**0**	**0**	**6**	**2**	**3**	**1**	**0**	**12**	**14.8**	**0**	**0**	**561**	**147**	**53**	**126**	**1**	**888**	**1079.3**	**0**	**0**	**17**	**3**	**0**	**0**	**0**	**20**	**20.0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**2**	**2.5**	**0**	**1**	**385**	**94**	**38**	**43**	**0**	**561**	**635.3**	**0**	**0**	**35**	**15**	**9**	**2**	**0**	**61**	**68.1**
TOTAL	**0**	**0**	**9**	**3**	**3**	**3**	**0**	**18**	**23.4**	**0**	**0**	**2091**	**463**	**158**	**390**	**1**	**3103**	**3690.0**	**0**	**0**	**54**	**8**	**0**	**0**	**0**	**62**	**62.0**	**0**	**0**	**4**	**2**	**1**	**0**	**0**	**7**	**7.5**	**0**	**1**	**1327**	**335**	**97**	**127**	**0**	**1887**	**2100.0**	**0**	**0**	**151**	**45**	**23**	**9**	**0**	**228**	**251.2**
16:00 - 16:15	0	0	0	0	0	0	0	**0**	**0.0**	0	0	146	41	11	37	0	**235**	**288.6**	0	0	2	0	0	0	0	**2**	**2.0**	0	0	1	0	0	0	0	**1**	**1.0**	0	0	48	16	3	6	0	**73**	**82.3**	0	0	7	3	0	1	0	**11**	**12.3**
16:15 - 16:30	0	0	0	0	1	0	0	**1**	**1.5**	0	0	138	48	7	34	0	**227**	**274.7**	0	0	1	0	0	0	0	**1**	**1.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	65	17	3	11	2	**98**	**115.8**	0	0	9	5	0	2	0	**16**	**18.6**
16:30 - 16:45	0	0	1	0	0	0	0	**1**	**1.0**	0	0	182	29	7	30	0	**248**	**290.5**	0	0	3	0	0	0	0	**3**	**3.0**	0	0	1	0	0	0	0	**1**	**1.0**	0	0	73	21	6	4	0	**104**	**112.2**	0	0	12	5	1	0	0	**18**	**18.5**
16:45 - 17:00	0	0	1	0	0	0	0	**1**	**1.0**	0	0	174	38	8	23	0	**243**	**276.9**	0	0	2	0	0	0	0	**2**	**2.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	82	21	3	4	0	**110**	**116.7**	0	0	9	4	2	0	0	**15**	**16.0**
Hourly Total	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**3**	**3.5**	**0**	**0**	**640**	**156**	**33**	**124**	**0**	**953**	**1130.7**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**8**	**8.0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**	**0**	**0**	**268**	**75**	**15**	**25**	**2**	**385**	**427.0**	**0**	**0**	**37**	**17**	**3**	**3**	**0**	**60**	**65.4**
17:00 - 17:15	0	0	0	0	0	0	0	**0**	**0.0**	0	0	216	38	4	22	0	**280**	**310.6**	0	0	3	0	0	0	0	**3**	**3.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	91	16	7	7	0	**121**	**133.6**	0	0	11	4	1	2	0	**18**	**21.1**
17:15 - 17:30	0	0	1	0	0	0	0	**1**	**1.0**	0	0	185	25	8	16	0	**234**	**258.8**	0	0	2	1	0	0	0	**3**	**3.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	96	14	1	6	1	**118**	**127.3**	0	0	15	4	0	2	0	**21**	**23.6**
17:30 - 17:45	0	0	1	0	0	1	0	**2**	**3.3**	0	1	225	21	4	24	0	**275**	**307.6**	0	0	3	0	0	0	0	**3**	**3.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	112	21	4	5	3	**145**	**156.5**	0	0	12	4	1	2	0	**19**	**22.1**
17:45 - 18:00	0	0	2	0	0	0	0	**2**	**2.0**	0	0	228	39	8	25	0	**300**	**336.5**	0	0	3	2	0	0	0	**5**	**5.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	122	17	2	3	0	**144**	**148.9**	0	0	12	5	1	0	0	**18**	**18.5**
Hourly Total	**0**	**0**	**4**	**0**	**0**	**1**	**0**	**5**	**6.3**	**0**	**1**	**854**	**123**	**24**	**87**	**0**	**1089**	**1213.5**	**0**	**0**	**11**	**3**	**0**	**0**	**0**	**14**	**14.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**421**	**68**	**14**	**21**	**4**	**528**	**566.3**	**0**	**0**	**50**	**17**	**3**	**6**	**0**	**76**	**85.3**
18:00 - 18:15	0	0	0	1	0	0	0	**1**	**1.0**	0	0	174	20	4	34	0	**232**	**278.2**	0	0	2	0	0	0	0	**2**	**2.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	79	9	3	2	0	**93**	**97.1**	0	0	8	2	0	0	0	**10**	**10.0**
18:15 - 18:30	0	0	2	0	0	0	0	**2**	**2.0**	0	0	94	18	4	11	0	**127**	**143.3**	0	0	2	1	0	0	0	**3**	**3.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	59	5	0	5	0	**69**	**75.5**	0	0	5	1	0	2	0	**8**	**10.6**
18:30 - 18:45	0	0	0	0	0	0	0	**0**	**0.0**	0	0	27	3	0	4	0	**34**	**39.2**	0	0	1	0	0	0	0	**1**	**1.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	29	4	0	1	0	**34**	**35.3**	0	0	2	3	0	0	0	**5**	**5.0**
18:45 - 19:00	0	0	0	1	0	0	0	**1**	**1.0**	0	0	127	18	4	13	0	**162**	**180.9**	0	0	2	0	0	0	0	**2**	**2.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	119	6	1	7	0	**133**	**142.6**	0	0	12	1	0	2	0	**15**	**17.6**
Hourly Total	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**4**	**4.0**	**0**	**0**	**422**	**59**	**12**	**62**	**0**	**555**	**641.6**	**0**	**0**	**7**	**1**	**0**	**0**	**0**	**8**	**8.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**286**	**24**	**4**	**15**	**0**	**329**	**350.5**	**0**	**0**	**27**	**7**	**0**	**4**	**0**	**38**	**43.2**
TOTAL	**0**	**0**	**8**	**2**	**1**	**1**	**0**	**12**	**13.8**	**0**	**1**	**1916**	**338**	**69**	**273**	**0**	**2597**	**2985.8**	**0**	**0**	**26**	**4**	**0**	**0**	**0**	**30**	**30.0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**	**0**	**0**	**975**	**167**	**33**	**61**	**6**	**1242**	**1343.8**	**0**	**0**	**114**	**41**	**6**	**13**	**0**	**174**	**193.9**

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

East Midlands Gateway
Thursday 3rd November 2022
Junction: 5
Approach: A453 South

	To A50									To Hilton Hotel Lane										To M1 J24 (N)										To A453 (N)										To Derby Road										To M1 J24 (S)									
TIME	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	1	128	30	19	17	0	195	226.0	0	0	0	0	0	0	0	0	0.0	0	0	30	2	2	7	0	41	51.1	0	0	23	11	1	2	0	37	40.1	0	0	3	2	1	1	0	7	8.8	0	0	4	2	1	3	0	10	14.4
07:15 - 07:30	0	0	154	30	7	17	0	208	233.6	0	0	0	1	0	0	0	1	1.0	0	0	33	5	0	7	0	45	54.1	0	0	25	9	1	2	1	38	42.1	0	0	4	3	1	1	0	9	10.8	0	0	4	3	1	4	0	12	17.7
07:30 - 07:45	0	0	180	37	10	23	1	251	286.9	0	0	1	0	0	0	0	1	1.0	0	0	43	5	0	4	0	52	57.2	0	0	36	7	2	2	1	48	52.6	0	0	5	2	1	0	0	8	8.5	0	0	4	2	1	3	0	10	14.4
07:45 - 08:00	0	0	180	26	12	19	0	237	267.7	0	0	2	0	0	0	0	2	2.0	0	0	50	10	0	10	0	70	83.0	0	0	55	8	2	5	0	70	77.5	0	0	6	1	0	1	0	8	9.3	0	0	9	2	2	5	0	18	25.5
Hourly Total	**0**	**1**	**642**	**123**	**48**	**76**	**1**	**891**	**1014.2**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**4**	**4.0**	**0**	**0**	**156**	**22**	**2**	**28**	**0**	**208**	**245.4**	**0**	**0**	**139**	**35**	**6**	**11**	**2**	**193**	**212.3**	**0**	**0**	**18**	**8**	**3**	**3**	**0**	**32**	**37.4**	**0**	**0**	**21**	**9**	**5**	**15**	**0**	**50**	**72.0**
08:00 - 08:15	0	1	173	42	13	8	0	237	253.3	0	0	1	0	0	0	0	1	1.0	0	0	37	1	3	10	0	51	65.5	0	0	38	7	3	1	0	49	51.8	0	0	5	2	1	0	0	8	8.5	0	0	8	3	1	1	0	13	14.8
08:15 - 08:30	0	0	183	24	15	10	0	232	252.5	0	0	2	0	0	0	0	2	2.0	0	0	51	7	2	7	0	67	77.1	0	0	51	9	3	2	0	65	69.1	0	0	5	1	0	0	0	6	6.0	0	0	8	2	2	4	0	16	22.2
08:30 - 08:45	0	1	125	18	15	17	1	177	207.0	0	0	0	0	0	0	0	0	0.0	0	0	58	8	0	7	0	73	82.1	0	0	60	9	2	4	0	75	81.2	0	0	6	1	0	1	0	8	9.3	0	0	11	1	2	3	0	17	21.9
08:45 - 09:00	0	0	107	22	10	18	0	157	185.4	0	0	2	0	0	0	0	2	2.0	0	0	51	8	2	12	0	73	89.6	0	0	51	4	2	1	0	58	60.3	0	0	5	2	1	0	0	8	8.5	0	0	6	1	1	2	2	12	17.1
Hourly Total	**0**	**2**	**588**	**106**	**53**	**53**	**1**	**803**	**898.2**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**5**	**5.0**	**0**	**0**	**197**	**24**	**7**	**36**	**0**	**264**	**314.3**	**0**	**0**	**200**	**29**	**10**	**8**	**0**	**247**	**262.4**	**0**	**0**	**21**	**6**	**2**	**1**	**0**	**30**	**32.3**	**0**	**0**	**33**	**7**	**6**	**10**	**2**	**58**	**76.0**
09:00 - 09:15	0	0	101	17	10	23	1	152	187.9	0	0	1	0	0	0	0	1	1.0	0	0	16	3	2	5	0	26	33.5	0	0	16	3	2	6	0	27	35.8	0	0	3	2	1	0	0	6	6.5	0	0	5	2	2	3	0	12	16.9
09:15 - 09:30	0	0	84	17	10	19	1	131	161.7	0	0	0	0	0	0	0	0	0.0	0	0	29	8	2	12	0	51	67.6	0	0	30	5	4	4	0	43	50.2	0	0	2	1	1	0	0	4	4.5	0	0	4	1	2	2	0	9	12.6
09:30 - 09:45	0	0	74	18	14	12	2	120	144.6	0	0	0	0	0	0	0	0	0.0	0	0	22	8	0	9	0	39	50.7	0	0	17	5	3	2	0	27	31.1	0	0	3	2	0	0	0	5	5.0	0	0	5	2	0	2	0	9	11.6
09:45 - 10:00	0	0	63	16	10	12	0	101	121.6	0	0	1	0	0	0	0	1	1.0	0	0	16	2	0	6	0	24	31.8	0	0	17	9	0	7	1	34	44.1	0	0	2	2	0	0	0	4	4.0	0	0	5	2	0	4	0	11	16.2
Hourly Total	**0**	**0**	**322**	**68**	**44**	**66**	**4**	**504**	**615.8**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**	**0**	**0**	**83**	**21**	**4**	**32**	**0**	**140**	**183.6**	**0**	**0**	**80**	**22**	**9**	**19**	**1**	**131**	**161.2**	**0**	**0**	**10**	**7**	**2**	**0**	**0**	**19**	**20.0**	**0**	**0**	**19**	**7**	**4**	**11**	**0**	**41**	**57.3**
TOTAL	**0**	**3**	**1552**	**297**	**145**	**195**	**6**	**2198**	**2528.2**	**0**	**0**	**10**	**1**	**0**	**0**	**0**	**11**	**11.0**	**0**	**0**	**436**	**67**	**13**	**96**	**0**	**612**	**743.3**	**0**	**0**	**419**	**86**	**25**	**38**	**3**	**571**	**635.9**	**0**	**0**	**49**	**21**	**7**	**4**	**0**	**81**	**89.7**	**0**	**0**	**73**	**23**	**15**	**36**	**2**	**149**	**205.3**
16:00 - 16:15	0	0	178	44	14	13	0	249	272.9	0	0	2	0	0	0	0	2	2.0	0	0	95	16	0	4	0	115	120.2	0	0	44	10	0	3	0	57	60.9	0	0	6	2	0	0	0	8	8.0	0	0	5	2	0	2	0	9	11.6
16:15 - 16:30	0	1	181	33	7	12	1	235	254.5	0	0	1	0	0	0	0	1	1.0	0	0	85	8	3	1	0	97	99.8	0	0	48	9	2	1	0	60	62.3	0	0	6	3	0	0	0	9	9.0	0	0	7	2	2	1	0	12	14.3
16:30 - 16:45	0	0	192	55	9	13	0	269	290.4	0	0	1	0	0	0	0	1	1.0	0	0	88	15	6	9	0	118	132.7	0	0	33	10	1	5	0	49	56.0	0	0	5	2	1	0	0	8	8.5	0	0	7	3	1	2	0	13	16.1
16:45 - 17:00	0	0	130	20	7	8	0	165	178.9	0	0	1	0	0	0	0	1	1.0	0	0	94	9	3	2	0	108	112.1	0	0	53	7	1	1	0	62	63.8	0	0	7	2	0	0	0	9	9.0	0	0	7	2	1	2	0	12	15.1
Hourly Total	**0**	**1**	**681**	**152**	**37**	**46**	**1**	**918**	**996.7**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**5**	**5.0**	**0**	**0**	**362**	**48**	**12**	**16**	**0**	**438**	**464.8**	**0**	**0**	**178**	**36**	**4**	**10**	**0**	**228**	**243.0**	**0**	**0**	**24**	**9**	**1**	**0**	**0**	**34**	**34.5**	**0**	**0**	**26**	**9**	**4**	**7**	**0**	**46**	**57.1**
17:00 - 17:15	0	0	204	26	7	16	1	254	279.3	0	0	0	0	0	0	0	0	0.0	0	0	91	16	2	3	0	112	116.9	0	0	44	6	1	4	1	56	62.7	0	0	7	2	0	1	0	10	11.3	0	0	8	2	1	1	0	12	13.8
17:15 - 17:30	0	0	255	26	6	20	0	307	336.0	0	0	1	0	0	0	0	1	1.0	0	0	56	2	0	2	0	60	62.6	0	0	49	4	4	1	0	58	61.3	0	0	9	2	0	0	0	11	11.0	0	0	5	2	0	2	0	9	11.6
17:30 - 17:45	0	1	191	23	4	9	0	228	241.1	0	0	1	0	0	0	0	1	1.0	0	0	60	1	0	3	0	64	67.9	0	0	67	6	0	2	1	76	79.6	0	0	7	2	0	0	0	9	9.0	0	0	6	2	0	2	0	10	12.6
17:45 - 18:00	0	0	181	19	2	8	0	210	221.4	0	0	2	1	0	0	0	3	3.0	0	0	78	5	0	4	0	87	92.2	0	0	59	7	0	0	0	66	66.0	0	0	7	4	0	0	0	11	11.0	0	0	7	3	0	1	0	11	12.3
Hourly Total	**0**	**1**	**831**	**94**	**19**	**53**	**1**	**999**	**1077.8**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**5**	**5.0**	**0**	**0**	**285**	**24**	**2**	**12**	**0**	**323**	**339.6**	**0**	**0**	**219**	**23**	**5**	**7**	**2**	**256**	**269.6**	**0**	**0**	**30**	**10**	**0**	**1**	**0**	**41**	**42.3**	**0**	**0**	**26**	**9**	**1**	**6**	**0**	**42**	**50.3**
18:00 - 18:15	0	1	172	14	5	11	1	204	221.2	0	0	1	0	0	0	0	1	1.0	0	0	86	12	0	0	0	98	98.0	0	1	63	10	0	2	0	76	78.0	0	0	6	2	0	0	0	8	8.0	0	0	8	1	0	1	0	10	11.3
18:15 - 18:30	0	0	106	11	1	6	0	124	132.3	0	0	0	0	0	0	0	0	0.0	0	0	64	5	6	0	0	75	78.0	0	0	57	4	0	0	0	61	61.0	0	0	5	0	0	0	0	5	5.0	0	0	6	1	0	0	0	7	7.0
18:30 - 18:45	0	0	115	7	1	5	0	128	135.0	0	0	2	0	0	0	0	2	2.0	0	0	49	3	0	0	0	52	52.0	0	0	67	4	0	3	1	75	79.9	0	0	4	2	0	0	0	6	6.0	0	0	8	3	0	1	0	12	13.3
18:45 - 19:00	0	0	114	13	2	6	0	135	143.8	0	0	0	0	0	0	0	0	0.0	0	0	41	3	1	5	0	50	57.0	0	0	36	3	3	2	1	45	50.1	0	0	5	1	0	1	0	7	8.3	0	0	6	1	0	1	0	8	9.3
Hourly Total	**0**	**1**	**507**	**45**	**9**	**28**	**1**	**591**	**632.3**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**3.0**	**0**	**0**	**240**	**23**	**7**	**5**	**0**	**275**	**285.0**	**0**	**1**	**223**	**21**	**3**	**7**	**2**	**257**	**269.0**	**0**	**0**	**20**	**5**	**0**	**1**	**0**	**26**	**27.3**	**0**	**0**	**28**	**6**	**0**	**3**	**0**	**37**	**40.9**
TOTAL	**0**	**3**	**2019**	**291**	**65**	**127**	**3**	**2508**	**2706.8**	**0**	**0**	**12**	**1**	**0**	**0**	**0**	**13**	**13.0**	**0**	**0**	**887**	**95**	**21**	**33**	**0**	**1036**	**1089.4**	**0**	**1**	**620**	**80**	**12**	**24**	**4**	**741**	**781.6**	**0**	**0**	**74**	**24**	**1**	**2**	**0**	**101**	**104.1**	**0**	**0**	**80**	**24**	**5**	**16**	**0**	**125**	**148.3**

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

East Midlands Gateway
Thursday 3rd November 2022
Junction: 5
Approach: A50

	To Hilton Hotel Lane								To M1 J24 (N)								To A453 (N)								To Derby Road								To M1 J24 (S)								To A453 (S)							
TIME	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
07:15 - 07:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
07:30 - 07:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
07:45 - 08:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
08:00 - 08:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:15 - 08:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:30 - 08:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:45 - 09:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
09:00 - 09:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
09:15 - 09:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
09:30 - 09:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
09:45 - 10:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
16:00 - 16:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
16:15 - 16:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
16:30 - 16:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
16:45 - 17:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
17:00 - 17:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
17:15 - 17:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
17:30 - 17:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
17:45 - 18:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
18:00 - 18:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
18:15 - 18:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
18:30 - 18:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
18:45 - 19:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**

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

East Midlands Gateway
Thursday 3rd November 2022
Junction: 5
Approach: Hilton Hotel Lane

	To M1 J24 (N)									To A453 (N)									To Derby Road									To M1 J24 (S)									To A453 (S)									To A50								
TIME	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	0	2	0	0	0	2	2.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0
07:15 - 07:30	0	0	1	0	0	0	0	1	1.0	0	0	1	1	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0	0	0	3	0	0	0	0	3	3.0	0	0	1	1	0	0	0	2	2.0
07:30 - 07:45	0	0	1	0	0	0	0	1	1.0	0	0	15	0	0	0	0	15	15.0	0	0	1	0	0	0	0	1	1.0	0	0	5	0	0	0	0	5	5.0	0	0	5	0	0	0	0	5	5.0	0	0	0	0	0	0	0	0	0.0
07:45 - 08:00	0	0	2	0	0	0	0	2	2.0	0	0	10	3	0	0	0	13	13.0	0	0	2	1	0	0	0	3	3.0	0	0	4	0	0	0	0	4	4.0	0	0	2	1	0	0	0	3	3.0	0	0	1	1	0	0	0	2	2.0
Hourly Total	**0**	**0**	**4**	**2**	**0**	**0**	**0**	**6**	**6.0**	**0**	**0**	**27**	**4**	**0**	**0**	**0**	**31**	**31.0**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**5**	**5.0**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**12**	**12.0**	**0**	**0**	**11**	**1**	**0**	**0**	**0**	**12**	**12.0**	**0**	**0**	**3**	**2**	**0**	**0**	**0**	**5**	**5.0**
08:00 - 08:15	0	0	1	0	0	0	0	1	1.0	0	0	20	1	0	0	0	21	21.0	0	0	3	1	0	0	0	4	4.0	0	0	7	1	0	0	0	8	8.0	0	0	2	1	0	0	0	3	3.0	0	0	2	1	0	0	0	3	3.0
08:15 - 08:30	0	0	1	0	0	0	0	1	1.0	0	1	10	3	0	0	0	14	13.4	0	0	1	0	0	0	0	1	1.0	0	0	5	1	0	0	0	6	6.0	0	0	6	0	0	0	0	6	6.0	0	0	2	2	0	0	0	4	4.0
08:30 - 08:45	0	0	1	0	0	0	0	1	1.0	0	0	9	0	0	0	0	9	9.0	0	0	1	0	0	0	0	1	1.0	0	0	3	0	0	0	0	3	3.0	0	0	3	0	0	0	0	3	3.0	0	0	2	5	0	0	0	7	7.0
08:45 - 09:00	0	0	2	2	0	0	0	4	4.0	0	0	1	1	0	0	0	2	2.0	0	1	2	0	0	0	0	3	2.4	0	0	1	0	0	0	0	1	1.0	0	0	2	0	0	0	0	2	2.0	0	0	1	1	0	0	0	2	2.0
Hourly Total	**0**	**0**	**5**	**2**	**0**	**0**	**0**	**7**	**7.0**	**0**	**1**	**40**	**5**	**0**	**0**	**0**	**46**	**45.4**	**0**	**1**	**7**	**1**	**0**	**0**	**0**	**9**	**8.4**	**0**	**0**	**16**	**2**	**0**	**0**	**0**	**18**	**18.0**	**0**	**0**	**13**	**1**	**0**	**0**	**0**	**14**	**14.0**	**0**	**0**	**7**	**9**	**0**	**0**	**0**	**16**	**16.0**
09:00 - 09:15	0	0	1	0	0	0	0	1	1.0	0	0	2	0	0	0	0	2	2.0	0	0	1	0	0	0	0	1	1.0	0	0	2	0	0	0	0	2	2.0	0	0	2	0	0	0	0	2	2.0	0	0	2	0	0	0	0	2	2.0
09:15 - 09:30	0	0	0	0	0	0	0	0	0.0	0	0	1	1	1	0	0	3	3.5	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0
09:30 - 09:45	0	0	2	0	0	0	0	2	2.0	0	0	1	1	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	3	0	0	0	0	3	3.0	0	0	1	0	0	0	0	1	1.0
09:45 - 10:00	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0
Hourly Total	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**3.0**	**0**	**0**	**5**	**2**	**1**	**0**	**0**	**8**	**8.5**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**4**	**4.0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**6**	**6.0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**5**	**5.0**
TOTAL	**0**	**0**	**12**	**4**	**0**	**0**	**0**	**16**	**16.0**	**0**	**1**	**72**	**11**	**1**	**0**	**0**	**85**	**84.9**	**0**	**1**	**13**	**2**	**0**	**0**	**0**	**16**	**15.4**	**0**	**0**	**32**	**2**	**0**	**0**	**0**	**34**	**34.0**	**0**	**0**	**30**	**2**	**0**	**0**	**0**	**32**	**32.0**	**0**	**0**	**15**	**11**	**0**	**0**	**0**	**26**	**26.0**
16:00 - 16:15	0	0	8	1	0	0	0	9	9.0	0	0	5	0	0	0	0	5	5.0	0	0	4	0	0	0	0	4	4.0	0	0	1	0	0	0	0	1	1.0	0	0	2	0	0	0	0	2	2.0	0	0	1	1	0	0	0	2	2.0
16:15 - 16:30	0	0	2	0	0	0	0	2	2.0	0	0	2	0	0	0	0	2	2.0	0	0	2	0	0	0	0	2	2.0	0	0	2	0	0	0	0	2	2.0	0	0	2	0	0	0	0	2	2.0	0	0	2	0	0	0	0	2	2.0
16:30 - 16:45	0	0	6	0	0	0	0	6	6.0	0	0	12	0	0	0	0	12	12.0	0	0	2	0	0	0	0	2	2.0	0	0	4	0	0	0	0	4	4.0	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0
16:45 - 17:00	0	0	5	1	0	0	0	6	6.0	0	0	9	0	0	0	0	9	9.0	0	0	4	0	0	0	0	4	4.0	0	0	2	0	0	0	0	2	2.0	0	0	2	0	0	0	0	2	2.0	0	0	2	0	0	0	0	2	2.0
Hourly Total	**0**	**0**	**21**	**2**	**0**	**0**	**0**	**23**	**23.0**	**0**	**0**	**28**	**0**	**0**	**0**	**0**	**28**	**28.0**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**12**	**12.0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**9**	**9.0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**7**	**7.0**	**0**	**0**	**5**	**1**	**0**	**0**	**0**	**6**	**6.0**
17:00 - 17:15	0	0	7	0	0	0	0	7	7.0	0	0	9	0	0	0	0	9	9.0	0	0	3	0	0	0	0	3	3.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0	0	0	2	0	0	0	0	2	2.0
17:15 - 17:30	0	0	4	1	0	0	0	5	5.0	0	0	6	1	0	0	0	7	7.0	0	0	1	0	0	0	0	1	1.0	0	0	3	0	0	0	0	3	3.0	0	0	2	0	0	0	0	2	2.0	0	0	2	1	0	0	0	3	3.0
17:30 - 17:45	0	0	3	0	0	0	0	3	3.0	0	0	2	0	0	0	0	2	2.0	0	0	2	0	0	0	0	2	2.0	0	0	2	0	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	5	0	0	0	0	5	5.0
17:45 - 18:00	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0	0	0	4	0	0	0	0	4	4.0	0	0	2	0	0	0	0	2	2.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0
Hourly Total	**0**	**0**	**14**	**1**	**0**	**0**	**0**	**15**	**15.0**	**0**	**0**	**19**	**1**	**0**	**0**	**0**	**20**	**20.0**	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**10**	**10.0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**8**	**8.0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**4**	**4.0**	**0**	**0**	**10**	**1**	**0**	**0**	**0**	**11**	**11.0**
18:00 - 18:15	0	0	3	0	0	0	0	3	3.0	0	0	2	0	0	0	0	2	2.0	0	0	1	0	0	0	0	1	1.0	0	0	2	0	0	0	0	2	2.0	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0
18:15 - 18:30	0	0	3	0	0	0	0	3	3.0	0	0	2	0	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	3	0	0	0	0	3	3.0	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0
18:30 - 18:45	0	0	1	1	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0
18:45 - 19:00	0	0	2	0	0	0	0	2	2.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0
Hourly Total	**0**	**0**	**9**	**1**	**0**	**0**	**0**	**10**	**10.0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**5**	**5.0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**6**	**6.0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**5**	**5.0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1.0**
TOTAL	**0**	**0**	**44**	**4**	**0**	**0**	**0**	**48**	**48.0**	**0**	**0**	**52**	**1**	**0**	**0**	**0**	**53**	**53.0**	**0**	**0**	**24**	**0**	**0**	**0**	**0**	**24**	**24.0**	**0**	**0**	**23**	**0**	**0**	**0**	**0**	**23**	**23.0**	**0**	**0**	**16**	**0**	**0**	**0**	**0**	**16**	**16.0**	**0**	**0**	**16**	**2**	**0**	**0**	**0**	**18**	**18.0**

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

APPENDIX 5 – A453/Grimes Gate Priority Junction Turning Count Results

Road Data Services Ltd

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 3
Approach: A453 East

	To Grimes Gate				To A453 (W)			
TIME	LIGHT	HEAVY	TOTAL	PCUs	LIGHT	HEAVY	TOTAL	PCUs
07:00 - 07:15	4	0	4	4.0	50	7	57	66.1
07:15 - 07:30	2	1	3	4.3	55	8	63	73.4
07:30 - 07:45	5	0	5	5.0	53	5	58	64.5
07:45 - 08:00	6	0	6	6.0	63	11	74	88.3
Hourly Total	**17**	**1**	**18**	**19.3**	**221**	**31**	**252**	**292.3**
08:00 - 08:15	4	0	4	4.0	61	9	70	81.7
08:15 - 08:30	5	0	5	5.0	57	6	63	70.8
08:30 - 08:45	7	1	8	9.3	92	11	103	117.3
08:45 - 09:00	3	1	4	5.3	75	6	81	88.8
Hourly Total	**19**	**2**	**21**	**23.6**	**285**	**32**	**317**	**358.6**
09:00 - 09:15	7	0	7	7.0	46	7	53	62.1
09:15 - 09:30	6	0	6	6.0	53	6	59	66.8
09:30 - 09:45	7	1	8	9.3	31	5	36	42.5
09:45 - 10:00	2	1	3	4.3	41	9	50	61.7
Hourly Total	**22**	**2**	**24**	**26.6**	**171**	**27**	**198**	**233.1**
TOTAL	**58**	**5**	**63**	**69.5**	**677**	**90**	**767**	**884.0**
16:00 - 16:15	21	0	21	21.0	86	9	95	106.7
16:15 - 16:30	12	0	12	12.0	63	7	70	79.1
16:30 - 16:45	9	0	9	9.0	75	4	79	84.2
16:45 - 17:00	9	2	11	13.6	78	7	85	94.1
Hourly Total	**51**	**2**	**53**	**55.6**	**302**	**27**	**329**	**364.1**
17:00 - 17:15	15	2	17	19.6	80	6	86	93.8
17:15 - 17:30	20	0	20	20.0	90	6	96	103.8
17:30 - 17:45	20	0	20	20.0	98	6	104	111.8
17:45 - 18:00	15	0	15	15.0	92	6	98	105.8
Hourly Total	**70**	**2**	**72**	**74.6**	**360**	**24**	**384**	**415.2**
18:00 - 18:15	8	1	9	10.3	78	2	80	82.6
18:15 - 18:30	16	0	16	16.0	79	4	83	88.2
18:30 - 18:45	7	1	8	9.3	99	5	104	110.5
18:45 - 19:00	11	0	11	11.0	77	3	80	83.9
Hourly Total	**42**	**2**	**44**	**46.6**	**333**	**14**	**347**	**365.2**
TOTAL	**163**	**6**	**169**	**176.8**	**995**	**65**	**1060**	**1144.5**

PCU Factors:	
LIGHT	1.0
HEAVY	2.3

Road Data Services Ltd

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 3
Approach: Grimes Gate

	To A453 (W)				To A453 (E)			
TIME	LIGHT	HEAVY	TOTAL	PCUs	LIGHT	HEAVY	TOTAL	PCUs
07:00 - 07:15	0	0	0	0.0	12	0	12	12.0
07:15 - 07:30	0	0	0	0.0	15	1	16	17.3
07:30 - 07:45	1	0	1	1.0	15	0	15	15.0
07:45 - 08:00	4	0	4	4.0	21	1	22	23.3
Hourly Total	**5**	**0**	**5**	**5.0**	**63**	**2**	**65**	**67.6**
08:00 - 08:15	0	0	0	0.0	9	0	9	9.0
08:15 - 08:30	1	0	1	1.0	17	0	17	17.0
08:30 - 08:45	2	0	2	2.0	15	1	16	17.3
08:45 - 09:00	7	0	7	7.0	14	0	14	14.0
Hourly Total	**10**	**0**	**10**	**10.0**	**55**	**1**	**56**	**57.3**
09:00 - 09:15	1	0	1	1.0	5	0	5	5.0
09:15 - 09:30	3	0	3	3.0	11	0	11	11.0
09:30 - 09:45	1	0	1	1.0	8	1	9	10.3
09:45 - 10:00	1	1	2	3.3	5	2	7	9.6
Hourly Total	**6**	**1**	**7**	**8.3**	**29**	**3**	**32**	**35.9**
TOTAL	**21**	**1**	**22**	**23.3**	**147**	**6**	**153**	**160.8**
16:00 - 16:15	1	0	1	1.0	5	0	5	5.0
16:15 - 16:30	3	0	3	3.0	4	0	4	4.0
16:30 - 16:45	0	0	0	0.0	3	0	3	3.0
16:45 - 17:00	1	0	1	1.0	9	1	10	11.3
Hourly Total	**5**	**0**	**5**	**5.0**	**21**	**1**	**22**	**23.3**
17:00 - 17:15	2	0	2	2.0	7	0	7	7.0
17:15 - 17:30	3	0	3	3.0	4	0	4	4.0
17:30 - 17:45	3	0	3	3.0	11	0	11	11.0
17:45 - 18:00	1	0	1	1.0	6	0	6	6.0
Hourly Total	**9**	**0**	**9**	**9.0**	**28**	**0**	**28**	**28.0**
18:00 - 18:15	1	0	1	1.0	10	1	11	12.3
18:15 - 18:30	3	0	3	3.0	6	0	6	6.0
18:30 - 18:45	1	0	1	1.0	7	0	7	7.0
18:45 - 19:00	2	0	2	2.0	4	0	4	4.0
Hourly Total	**7**	**0**	**7**	**7.0**	**27**	**1**	**28**	**29.3**
TOTAL	**21**	**0**	**21**	**21.0**	**76**	**2**	**78**	**80.6**

PCU Factors:	
LIGHT	1.0
HEAVY	2.3

Road Data Services Ltd

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 3
Approach: A453 West

	To A453 (E)				To Grimes Gate			
TIME	LIGHT	HEAVY	TOTAL	PCUs	LIGHT	HEAVY	TOTAL	PCUs
07:00 - 07:15	67	12	79	94.6	1	0	1	1.0
07:15 - 07:30	99	16	115	135.8	0	0	0	0.0
07:30 - 07:45	121	13	134	150.9	2	0	2	2.0
07:45 - 08:00	132	8	140	150.4	1	0	1	1.0
Hourly Total	**419**	**49**	**468**	**531.7**	**4**	**0**	**4**	**4.0**
08:00 - 08:15	116	9	125	136.7	3	0	3	3.0
08:15 - 08:30	98	10	108	121.0	1	0	1	1.0
08:30 - 08:45	80	16	96	116.8	7	0	7	7.0
08:45 - 09:00	74	9	83	94.7	2	0	2	2.0
Hourly Total	**368**	**44**	**412**	**469.2**	**13**	**0**	**13**	**13.0**
09:00 - 09:15	61	8	69	79.4	0	0	0	0.0
09:15 - 09:30	42	13	55	71.9	0	0	0	0.0
09:30 - 09:45	38	15	53	72.5	2	0	2	2.0
09:45 - 10:00	42	8	50	60.4	1	0	1	1.0
Hourly Total	**183**	**44**	**227**	**284.2**	**3**	**0**	**3**	**3.0**
TOTAL	**970**	**137**	**1107**	**1285.1**	**20**	**0**	**20**	**20.0**
16:00 - 16:15	69	8	77	87.4	3	0	3	3.0
16:15 - 16:30	60	5	65	71.5	3	0	3	3.0
16:30 - 16:45	93	2	95	97.6	3	0	3	3.0
16:45 - 17:00	45	2	47	49.6	3	0	3	3.0
Hourly Total	**267**	**17**	**284**	**306.1**	**12**	**0**	**12**	**12.0**
17:00 - 17:15	76	2	78	80.6	5	0	5	5.0
17:15 - 17:30	52	7	59	68.1	1	0	1	1.0
17:30 - 17:45	97	4	101	106.2	3	0	3	3.0
17:45 - 18:00	63	2	65	67.6	3	0	3	3.0
Hourly Total	**288**	**15**	**303**	**322.5**	**12**	**0**	**12**	**12.0**
18:00 - 18:15	51	3	54	57.9	1	0	1	1.0
18:15 - 18:30	40	2	42	44.6	2	0	2	2.0
18:30 - 18:45	32	5	37	43.5	1	0	1	1.0
18:45 - 19:00	32	2	34	36.6	3	0	3	3.0
Hourly Total	**155**	**12**	**167**	**182.6**	**7**	**0**	**7**	**7.0**
TOTAL	**710**	**44**	**754**	**811.2**	**31**	**0**	**31**	**31.0**

PCU Factors:	
LIGHT	1.0
HEAVY	2.3

APPENDIX 6 – A453/The Green Priority Junction Turning Count Results

Road Data Services Ltd

East Midlands Gateway
Wednesdsay 23rd November 2022
Junction: 2
Approach: A453 East

	To The Green				To A453 (W)			
TIME	LIGHT	HEAVY	TOTAL	PCUs	LIGHT	HEAVY	TOTAL	PCUs
07:00 - 07:15	3	0	3	3.0	47	7	54	63.1
07:15 - 07:30	1	0	1	1.0	54	8	62	72.4
07:30 - 07:45	0	0	0	0.0	54	5	59	65.5
07:45 - 08:00	0	1	1	2.3	67	10	77	90.0
Hourly Total	**4**	**1**	**5**	**6.3**	**222**	**30**	**252**	**291.0**
08:00 - 08:15	2	0	2	2.0	59	9	68	79.7
08:15 - 08:30	8	0	8	8.0	50	6	56	63.8
08:30 - 08:45	11	0	11	11.0	83	11	94	108.3
08:45 - 09:00	4	0	4	4.0	78	6	84	91.8
Hourly Total	**25**	**0**	**25**	**25.0**	**270**	**32**	**302**	**343.6**
09:00 - 09:15	2	0	2	2.0	45	7	52	61.1
09:15 - 09:30	4	0	4	4.0	52	6	58	65.8
09:30 - 09:45	0	0	0	0.0	32	5	37	43.5
09:45 - 10:00	3	0	3	3.0	39	10	49	62.0
Hourly Total	**9**	**0**	**9**	**9.0**	**168**	**28**	**196**	**232.4**
TOTAL	**38**	**1**	**39**	**40.3**	**660**	**90**	**750**	**867.0**
16:00 - 16:15	7	0	7	7.0	80	9	89	100.7
16:15 - 16:30	0	1	1	2.3	66	6	72	79.8
16:30 - 16:45	3	0	3	3.0	72	4	76	81.2
16:45 - 17:00	5	0	5	5.0	74	7	81	90.1
Hourly Total	**15**	**1**	**16**	**17.3**	**292**	**26**	**318**	**351.8**
17:00 - 17:15	2	0	2	2.0	80	6	86	93.8
17:15 - 17:30	4	0	4	4.0	89	6	95	102.8
17:30 - 17:45	3	0	3	3.0	98	6	104	111.8
17:45 - 18:00	3	0	3	3.0	90	6	96	103.8
Hourly Total	**12**	**0**	**12**	**12.0**	**357**	**24**	**381**	**412.2**
18:00 - 18:15	3	0	3	3.0	76	2	78	80.6
18:15 - 18:30	0	0	0	0.0	82	4	86	91.2
18:30 - 18:45	1	0	1	1.0	99	5	104	110.5
18:45 - 19:00	3	0	3	3.0	76	3	79	82.9
Hourly Total	**7**	**0**	**7**	**7.0**	**333**	**14**	**347**	**365.2**
TOTAL	**34**	**1**	**35**	**36.3**	**982**	**64**	**1046**	**1129.2**

PCU Factors:	
LIGHT	1.0
HEAVY	2.3

Road Data Services Ltd

East Midlands Gateway
Wednesdsay 23rd November 2022
Junction: 2
Approach: The Green

	To A453 (W)				To A453 (E)			
TIME	LIGHT	HEAVY	TOTAL	PCUs	LIGHT	HEAVY	TOTAL	PCUs
07:00 - 07:15	6	1	7	8.3	2	0	2	2.0
07:15 - 07:30	10	0	10	10.0	3	0	3	3.0
07:30 - 07:45	17	0	17	17.0	6	0	6	6.0
07:45 - 08:00	18	0	18	18.0	2	1	3	4.3
Hourly Total	**51**	**1**	**52**	**53.3**	**13**	**1**	**14**	**15.3**
08:00 - 08:15	16	0	16	16.0	3	0	3	3.0
08:15 - 08:30	34	0	34	34.0	5	0	5	5.0
08:30 - 08:45	23	2	25	27.6	2	0	2	2.0
08:45 - 09:00	22	0	22	22.0	3	0	3	3.0
Hourly Total	**95**	**2**	**97**	**99.6**	**13**	**0**	**13**	**13.0**
09:00 - 09:15	10	1	11	12.3	1	0	1	1.0
09:15 - 09:30	9	0	9	9.0	2	0	2	2.0
09:30 - 09:45	6	0	6	6.0	1	0	1	1.0
09:45 - 10:00	11	2	13	15.6	2	0	2	2.0
Hourly Total	**36**	**3**	**39**	**42.9**	**6**	**0**	**6**	**6.0**
TOTAL	**182**	**6**	**188**	**195.8**	**32**	**1**	**33**	**34.3**
16:00 - 16:15	20	0	20	20.0	2	0	2	2.0
16:15 - 16:30	16	0	16	16.0	2	0	2	2.0
16:30 - 16:45	16	0	16	16.0	4	0	4	4.0
16:45 - 17:00	19	1	20	21.3	1	0	1	1.0
Hourly Total	**71**	**1**	**72**	**73.3**	**9**	**0**	**9**	**9.0**
17:00 - 17:15	11	0	11	11.0	5	0	5	5.0
17:15 - 17:30	14	0	14	14.0	2	0	2	2.0
17:30 - 17:45	15	0	15	15.0	3	0	3	3.0
17:45 - 18:00	18	0	18	18.0	4	0	4	4.0
Hourly Total	**58**	**0**	**58**	**58.0**	**14**	**0**	**14**	**14.0**
18:00 - 18:15	13	1	14	15.3	2	0	2	2.0
18:15 - 18:30	8	0	8	8.0	2	0	2	2.0
18:30 - 18:45	10	0	10	10.0	1	0	1	1.0
18:45 - 19:00	9	0	9	9.0	2	0	2	2.0
Hourly Total	**40**	**1**	**41**	**42.3**	**7**	**0**	**7**	**7.0**
TOTAL	**169**	**2**	**171**	**173.6**	**30**	**0**	**30**	**30.0**

PCU Factors:	
LIGHT	1.0
HEAVY	2.3

Road Data Services Ltd

East Midlands Gateway
Wednesdsay 23rd November 2022
Junction: 2
Approach: A453 West

	To A453 (E)				To The Green			
TIME	LIGHT	HEAVY	TOTAL	PCUs	LIGHT	HEAVY	TOTAL	PCUs
07:00 - 07:15	66	12	78	93.6	10	1	11	12.3
07:15 - 07:30	96	16	112	132.8	27	0	27	27.0
07:30 - 07:45	117	13	130	146.9	17	0	17	17.0
07:45 - 08:00	131	7	138	147.1	16	1	17	18.3
Hourly Total	**410**	**48**	**458**	**520.4**	**70**	**2**	**72**	**74.6**
08:00 - 08:15	116	9	125	136.7	14	1	15	16.3
08:15 - 08:30	94	10	104	117.0	22	0	22	22.0
08:30 - 08:45	85	16	101	121.8	12	0	12	12.0
08:45 - 09:00	73	9	82	93.7	18	1	19	20.3
Hourly Total	**368**	**44**	**412**	**469.2**	**66**	**2**	**68**	**70.6**
09:00 - 09:15	60	8	68	78.4	7	0	7	7.0
09:15 - 09:30	40	13	53	69.9	6	0	6	6.0
09:30 - 09:45	39	15	54	73.5	6	0	6	6.0
09:45 - 10:00	41	8	49	59.4	4	1	5	6.3
Hourly Total	**180**	**44**	**224**	**281.2**	**23**	**1**	**24**	**25.3**
TOTAL	**958**	**136**	**1094**	**1270.8**	**159**	**5**	**164**	**170.5**
16:00 - 16:15	70	8	78	88.4	33	0	33	33.0
16:15 - 16:30	61	5	66	72.5	15	0	15	15.0
16:30 - 16:45	92	2	94	96.6	30	0	30	30.0
16:45 - 17:00	47	2	49	51.6	28	0	28	28.0
Hourly Total	**270**	**17**	**287**	**309.1**	**106**	**0**	**106**	**106.0**
17:00 - 17:15	76	2	78	80.6	28	0	28	28.0
17:15 - 17:30	51	7	58	67.1	22	0	22	22.0
17:30 - 17:45	97	4	101	106.2	37	0	37	37.0
17:45 - 18:00	62	2	64	66.6	17	0	17	17.0
Hourly Total	**286**	**15**	**301**	**320.5**	**104**	**0**	**104**	**104.0**
18:00 - 18:15	50	3	53	56.9	14	0	14	14.0
18:15 - 18:30	40	2	42	44.6	9	0	9	9.0
18:30 - 18:45	32	5	37	43.5	5	0	5	5.0
18:45 - 19:00	33	2	35	37.6	8	0	8	8.0
Hourly Total	**155**	**12**	**167**	**182.6**	**36**	**0**	**36**	**36.0**
TOTAL	**711**	**44**	**755**	**812.2**	**246**	**0**	**246**	**246.0**

PCU Factors:	
LIGHT	1.0
HEAVY	2.3

APPENDIX 7 – A453/East Midlands Airport Signal Junction Turning Count Results

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 2
Approach: East Midlands Airport Access

	Left to A453 (E)									Right to A453 (W)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	33	0	0	0	0	33	33.0	0	0	9	5	0	0	0	14	14.0
07:15 - 07:30	0	0	34	4	1	0	0	39	39.5	0	0	7	1	1	0	1	10	11.5
07:30 - 07:45	0	0	19	0	0	0	0	19	19.0	0	0	6	3	0	0	0	9	9.0
07:45 - 08:00	0	0	17	3	1	1	0	22	23.8	0	0	6	4	0	0	0	10	10.0
Hourly Total	**0**	**0**	**103**	**7**	**2**	**1**	**0**	**113**	**115.3**	**0**	**0**	**28**	**13**	**1**	**0**	**1**	**43**	**44.5**
08:00 - 08:15	0	0	23	4	1	0	0	28	28.5	0	0	10	1	0	0	0	11	11.0
08:15 - 08:30	0	0	35	3	1	1	0	40	41.8	0	0	3	2	0	1	1	7	9.3
08:30 - 08:45	0	0	23	1	0	0	1	25	26.0	0	0	4	1	1	0	0	6	6.5
08:45 - 09:00	0	0	14	2	0	1	1	18	20.3	0	0	2	0	0	1	0	3	4.3
Hourly Total	**0**	**0**	**95**	**10**	**2**	**2**	**2**	**111**	**116.6**	**0**	**0**	**19**	**4**	**1**	**2**	**1**	**27**	**31.1**
09:00 - 09:15	0	0	9	0	1	0	0	10	10.5	0	0	5	0	0	0	0	5	5.0
09:15 - 09:30	0	0	5	0	1	0	0	6	6.5	0	0	3	2	0	0	1	6	7.0
09:30 - 09:45	0	0	7	2	1	0	0	10	10.5	0	0	2	0	1	1	0	4	5.8
09:45 - 10:00	0	0	8	3	0	0	0	11	11.0	0	0	1	2	0	1	0	4	5.3
Hourly Total	**0**	**0**	**29**	**5**	**3**	**0**	**0**	**37**	**38.5**	**0**	**0**	**11**	**4**	**1**	**2**	**1**	**19**	**23.1**
TOTAL	**0**	**0**	**227**	**22**	**7**	**3**	**2**	**261**	**270.4**	**0**	**0**	**58**	**21**	**3**	**4**	**3**	**89**	**98.7**
16:00 - 16:15	0	0	66	4	1	0	0	71	71.5	0	0	25	4	1	0	0	30	30.5
16:15 - 16:30	0	0	55	5	0	0	0	60	60.0	0	0	18	6	0	0	0	24	24.0
16:30 - 16:45	0	0	60	5	0	0	0	65	65.0	0	0	26	2	0	0	1	29	30.0
16:45 - 17:00	0	0	69	7	0	0	1	77	78.0	0	0	8	2	0	0	0	10	10.0
Hourly Total	**0**	**0**	**250**	**21**	**1**	**0**	**1**	**273**	**274.5**	**0**	**0**	**77**	**14**	**1**	**0**	**1**	**93**	**94.5**
17:00 - 17:15	0	0	57	3	0	0	1	61	62.0	0	0	18	4	0	0	0	22	22.0
17:15 - 17:30	0	0	27	0	1	0	0	28	28.5	0	0	15	2	0	0	0	17	17.0
17:30 - 17:45	0	0	64	6	0	0	0	70	70.0	0	0	15	0	0	0	0	15	15.0
17:45 - 18:00	0	0	59	4	0	0	0	63	63.0	0	0	10	1	0	0	0	11	11.0
Hourly Total	**0**	**0**	**207**	**13**	**1**	**0**	**1**	**222**	**223.5**	**0**	**0**	**58**	**7**	**0**	**0**	**0**	**65**	**65.0**
18:00 - 18:15	0	0	49	5	0	0	0	54	54.0	0	1	12	2	0	0	1	16	16.4
18:15 - 18:30	0	0	47	6	0	0	0	53	53.0	0	0	6	1	0	0	0	7	7.0
18:30 - 18:45	0	0	44	6	0	0	0	50	50.0	0	0	4	1	0	0	1	6	7.0
18:45 - 19:00	0	0	20	0	0	1	0	21	22.3	0	0	10	2	1	0	0	13	13.5
Hourly Total	**0**	**0**	**160**	**17**	**0**	**1**	**0**	**178**	**179.3**	**0**	**1**	**32**	**6**	**1**	**0**	**2**	**42**	**43.9**
TOTAL	**0**	**0**	**617**	**51**	**2**	**1**	**2**	**673**	**677.3**	**0**	**1**	**167**	**27**	**2**	**0**	**3**	**200**	**203.4**

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

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 2
Approach: A453 East

	Ahead to A453 (W)									Right to East Midlands Airport Access								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	59	12	6	4	0	81	89.2	0	0	65	6	1	0	0	72	72.5
07:15 - 07:30	0	0	36	16	5	3	0	60	66.4	0	0	65	12	1	0	0	78	78.5
07:30 - 07:45	0	0	78	10	2	7	0	97	107.1	0	0	63	5	0	0	0	68	68.0
07:45 - 08:00	0	0	47	10	5	5	1	68	78.0	0	0	57	6	0	0	0	63	63.0
Hourly Total	**0**	**0**	**220**	**48**	**18**	**19**	**1**	**306**	**340.7**	**0**	**0**	**250**	**29**	**2**	**0**	**0**	**281**	**282.0**
08:00 - 08:15	0	0	56	16	3	5	0	80	88.0	0	0	52	3	0	0	0	55	55.0
08:15 - 08:30	0	0	81	14	2	9	0	106	118.7	0	0	51	2	1	0	0	54	54.5
08:30 - 08:45	0	0	72	18	7	4	0	101	109.7	0	0	55	2	1	2	2	62	67.1
08:45 - 09:00	0	0	67	15	4	4	0	90	97.2	0	0	30	2	0	0	0	32	32.0
Hourly Total	**0**	**0**	**276**	**63**	**16**	**22**	**0**	**377**	**413.6**	**0**	**0**	**188**	**9**	**2**	**2**	**2**	**203**	**208.6**
09:00 - 09:15	0	0	55	8	7	4	1	75	84.7	0	0	22	3	0	0	0	25	25.0
09:15 - 09:30	0	0	37	11	6	3	0	57	63.9	0	0	23	4	1	2	0	30	33.1
09:30 - 09:45	0	1	25	8	4	7	0	45	55.5	0	0	32	1	0	0	0	33	33.0
09:45 - 10:00	0	2	22	10	5	9	1	49	63.0	0	0	21	2	1	1	0	25	26.8
Hourly Total	**0**	**3**	**139**	**37**	**22**	**23**	**2**	**226**	**267.1**	**0**	**0**	**98**	**10**	**2**	**3**	**0**	**113**	**117.9**
TOTAL	**0**	**3**	**635**	**148**	**56**	**64**	**3**	**909**	**1021.4**	**0**	**0**	**536**	**48**	**6**	**5**	**2**	**597**	**608.5**
16:00 - 16:15	0	0	75	9	2	7	0	93	103.1	0	0	37	5	1	0	0	43	43.5
16:15 - 16:30	0	0	62	10	1	8	0	81	91.9	0	0	27	3	0	0	1	31	32.0
16:30 - 16:45	0	0	74	21	3	4	0	102	108.7	0	0	30	3	0	0	0	33	33.0
16:45 - 17:00	0	0	86	19	2	3	0	110	114.9	0	0	42	8	0	0	2	52	54.0
Hourly Total	**0**	**0**	**297**	**59**	**8**	**22**	**0**	**386**	**418.6**	**0**	**0**	**136**	**19**	**1**	**0**	**3**	**159**	**162.5**
17:00 - 17:15	0	2	102	11	4	2	0	121	124.4	0	0	32	1	0	0	0	33	33.0
17:15 - 17:30	0	0	87	15	5	4	0	111	118.7	0	0	32	1	1	1	0	35	36.8
17:30 - 17:45	0	0	86	12	2	2	0	102	105.6	0	0	21	2	1	0	0	24	24.5
17:45 - 18:00	0	0	73	9	3	1	0	86	88.8	0	0	32	4	1	0	0	37	37.5
Hourly Total	**0**	**2**	**348**	**47**	**14**	**9**	**0**	**420**	**437.5**	**0**	**0**	**117**	**8**	**3**	**1**	**0**	**129**	**131.8**
18:00 - 18:15	0	0	78	8	2	3	0	91	95.9	0	0	21	4	0	0	0	25	25.0
18:15 - 18:30	0	1	68	8	3	2	0	82	85.5	0	0	36	2	0	0	0	38	38.0
18:30 - 18:45	0	2	51	3	2	2	0	60	62.4	0	0	27	4	0	0	0	31	31.0
18:45 - 19:00	0	0	50	2	2	5	0	59	66.5	0	0	19	3	0	0	0	22	22.0
Hourly Total	**0**	**3**	**247**	**21**	**9**	**12**	**0**	**292**	**310.3**	**0**	**0**	**103**	**13**	**0**	**0**	**0**	**116**	**116.0**
TOTAL	**0**	**5**	**892**	**127**	**31**	**43**	**0**	**1098**	**1166.4**	**0**	**0**	**356**	**40**	**4**	**1**	**3**	**404**	**410.3**

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

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 2
Approach: A453 West

	Left to East Midlands Airport Access									Ahead to A453 (E				
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1
07:00 - 07:15	0	0	18	2	0	0	0	20	20.0	0	0	34	12	3
07:15 - 07:30	0	0	18	1	0	0	1	20	21.0	0	2	74	18	5
07:30 - 07:45	0	0	26	5	0	0	0	31	31.0	0	1	84	17	5
07:45 - 08:00	0	0	31	6	0	1	0	38	39.3	0	0	111	14	4
Hourly Total	**0**	**0**	**93**	**14**	**0**	**1**	**1**	**109**	**111.3**	**0**	**3**	**303**	**61**	**17**
08:00 - 08:15	0	0	24	6	0	0	0	30	30.0	0	0	90	22	2
08:15 - 08:30	0	0	28	1	0	0	0	29	29.0	0	0	94	25	5
08:30 - 08:45	0	0	20	1	2	0	1	24	26.0	0	0	50	19	5
08:45 - 09:00	0	0	18	1	0	0	0	19	19.0	0	0	59	8	4
Hourly Total	**0**	**0**	**90**	**9**	**2**	**0**	**1**	**102**	**104.0**	**0**	**0**	**293**	**74**	**16**
09:00 - 09:15	0	0	11	0	0	0	0	11	11.0	0	0	50	8	8
09:15 - 09:30	0	0	7	1	0	1	0	9	10.3	0	1	36	11	3
09:30 - 09:45	0	0	4	2	1	0	1	8	9.5	0	0	22	9	5
09:45 - 10:00	0	0	9	3	0	0	0	12	12.0	0	0	35	7	2
Hourly Total	**0**	**0**	**31**	**6**	**1**	**1**	**1**	**40**	**42.8**	**0**	**1**	**143**	**35**	**18**
TOTAL	**0**	**0**	**214**	**29**	**3**	**2**	**3**	**251**	**258.1**	**0**	**4**	**739**	**170**	**51**
16:00 - 16:15	0	0	6	1	1	0	0	8	8.5	0	0	46	14	4
16:15 - 16:30	0	0	11	3	0	0	0	14	14.0	0	0	45	12	5
16:30 - 16:45	0	0	10	2	1	0	0	13	13.5	0	0	66	12	2
16:45 - 17:00	0	0	8	3	0	0	1	12	13.0	0	0	59	10	0
Hourly Total	**0**	**0**	**35**	**9**	**2**	**0**	**1**	**47**	**49.0**	**0**	**0**	**216**	**48**	**11**
17:00 - 17:15	0	0	9	0	0	0	0	9	9.0	0	0	85	8	1
17:15 - 17:30	0	0	6	1	0	0	0	7	7.0	0	0	54	4	0
17:30 - 17:45	0	0	9	0	0	0	1	10	11.0	0	0	76	6	2
17:45 - 18:00	0	0	11	1	0	0	1	13	14.0	0	0	81	3	1
Hourly Total	**0**	**0**	**35**	**2**	**0**	**0**	**2**	**39**	**41.0**	**0**	**0**	**296**	**21**	**4**
18:00 - 18:15	0	0	6	0	0	0	0	6	6.0	0	0	50	4	1
18:15 - 18:30	0	0	6	2	0	0	0	8	8.0	0	0	38	2	2
18:30 - 18:45	0	0	6	1	0	0	0	7	7.0	0	1	19	0	0
18:45 - 19:00	0	0	9	2	1	0	0	12	12.5	0	0	40	7	1
Hourly Total	**0**	**0**	**27**	**5**	**1**	**0**	**0**	**33**	**33.5**	**0**	**1**	**147**	**13**	**4**
TOTAL	**0**	**0**	**97**	**16**	**3**	**0**	**3**	**119**	**123.5**	**0**	**1**	**659**	**82**	**19**

APPENDIX 8 – A453/East Midlands Airport Roundabout Turning Count Results

Road Data Services Ltd

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 1
Approach: Northern Arm

	To A453 (E)				To A453 (W)			
TIME	LIGHT	HEAVY	TOTAL	PCUs	LIGHT	HEAVY	TOTAL	PCUs
07:00 - 07:15	21	3	24	27.9	13	4	17	22.2
07:15 - 07:30	10	3	13	16.9	12	1	13	14.3
07:30 - 07:45	8	4	12	17.2	4	6	10	17.8
07:45 - 08:00	11	4	15	20.2	7	5	12	18.5
Hourly Total	**50**	**14**	**64**	**82.2**	**36**	**16**	**52**	**72.8**
08:00 - 08:15	13	1	14	15.3	13	2	15	17.6
08:15 - 08:30	10	2	12	14.6	4	3	7	10.9
08:30 - 08:45	5	3	8	11.9	9	4	13	18.2
08:45 - 09:00	5	2	7	9.6	8	4	12	17.2
Hourly Total	**33**	**8**	**41**	**51.4**	**34**	**13**	**47**	**63.9**
09:00 - 09:15	5	2	7	9.6	5	4	9	14.2
09:15 - 09:30	1	5	6	12.5	6	1	7	8.3
09:30 - 09:45	5	5	10	16.5	10	2	12	14.6
09:45 - 10:00	5	3	8	11.9	7	2	9	11.6
Hourly Total	**16**	**15**	**31**	**50.5**	**28**	**9**	**37**	**48.7**
TOTAL	**99**	**37**	**136**	**184.1**	**98**	**38**	**136**	**185.4**
16:00 - 16:15	22	6	28	35.8	55	2	57	59.6
16:15 - 16:30	5	4	9	14.2	40	2	42	44.6
16:30 - 16:45	50	1	51	52.3	64	3	67	70.9
16:45 - 17:00	29	1	30	31.3	47	3	50	53.9
Hourly Total	**106**	**12**	**118**	**133.6**	**206**	**10**	**216**	**229.0**
17:00 - 17:15	31	1	32	33.3	62	1	63	64.3
17:15 - 17:30	18	3	21	24.9	18	3	21	24.9
17:30 - 17:45	67	3	70	73.9	88	2	90	92.6
17:45 - 18:00	28	2	30	32.6	39	1	40	41.3
Hourly Total	**144**	**9**	**153**	**164.7**	**207**	**7**	**214**	**223.1**
18:00 - 18:15	16	2	18	20.6	25	1	26	27.3
18:15 - 18:30	9	1	10	11.3	12	2	14	16.6
18:30 - 18:45	10	2	12	14.6	24	5	29	35.5
18:45 - 19:00	9	2	11	13.6	11	2	13	15.6
Hourly Total	**44**	**7**	**51**	**60.1**	**72**	**10**	**82**	**95.0**
TOTAL	**294**	**28**	**322**	**358.4**	**485**	**27**	**512**	**547.1**

PCU Factors:	
LIGHT	1.0
HEAVY	2.3

Road Data Services Ltd

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 1
Approach: A453 East

	To A453 (W)				To Northern Arm			
TIME	LIGHT	HEAVY	TOTAL	PCUs	LIGHT	HEAVY	TOTAL	PCUs
07:00 - 07:15	32	3	35	38.9	19	5	24	30.5
07:15 - 07:30	31	5	36	42.5	31	3	34	37.9
07:30 - 07:45	43	4	47	52.2	28	1	29	30.3
07:45 - 08:00	47	8	55	65.4	38	2	40	42.6
Hourly Total	**153**	**20**	**173**	**199.0**	**116**	**11**	**127**	**141.3**
08:00 - 08:15	48	6	54	61.8	27	3	30	33.9
08:15 - 08:30	67	5	72	78.5	17	1	18	19.3
08:30 - 08:45	62	10	72	85.0	44	3	47	50.9
08:45 - 09:00	67	4	71	76.2	33	2	35	37.6
Hourly Total	**244**	**25**	**269**	**301.5**	**121**	**9**	**130**	**141.7**
09:00 - 09:15	44	4	48	53.2	11	4	15	20.2
09:15 - 09:30	42	4	46	51.2	19	2	21	23.6
09:30 - 09:45	27	1	28	29.3	11	4	15	20.2
09:45 - 10:00	39	7	46	55.1	11	5	16	22.5
Hourly Total	**152**	**16**	**168**	**188.8**	**52**	**15**	**67**	**86.5**
TOTAL	**549**	**61**	**610**	**689.3**	**289**	**35**	**324**	**369.5**
16:00 - 16:15	94	4	98	103.2	6	5	11	17.5
16:15 - 16:30	69	4	73	78.2	11	2	13	15.6
16:30 - 16:45	74	1	75	76.3	12	3	15	18.9
16:45 - 17:00	75	6	81	88.8	14	2	16	18.6
Hourly Total	**312**	**15**	**327**	**346.5**	**43**	**12**	**55**	**70.6**
17:00 - 17:15	77	2	79	81.6	12	4	16	21.2
17:15 - 17:30	92	4	96	101.2	11	2	13	15.6
17:30 - 17:45	85	2	87	89.6	24	4	28	33.2
17:45 - 18:00	88	3	91	94.9	20	3	23	26.9
Hourly Total	**342**	**11**	**353**	**367.3**	**67**	**13**	**80**	**96.9**
18:00 - 18:15	65	2	67	69.6	22	1	23	24.3
18:15 - 18:30	46	1	47	48.3	44	3	47	50.9
18:30 - 18:45	58	0	58	58.0	51	5	56	62.5
18:45 - 19:00	40	0	40	40.0	45	3	48	51.9
Hourly Total	**209**	**3**	**212**	**215.9**	**162**	**12**	**174**	**189.6**
TOTAL	**863**	**29**	**892**	**929.7**	**272**	**37**	**309**	**357.1**

PCU Factors:	
LIGHT	1.0
HEAVY	2.3

Road Data Services Ltd

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 1
Approach: A453 West

	To Northern Arm				To A453 (E)			
TIME	LIGHT	HEAVY	TOTAL	PCUs	LIGHT	HEAVY	TOTAL	PCUs
07:00 - 07:15	41	3	44	47.9	55	10	65	78.0
07:15 - 07:30	40	4	44	49.2	113	13	126	142.9
07:30 - 07:45	62	5	67	73.5	126	9	135	146.7
07:45 - 08:00	51	3	54	57.9	136	4	140	145.2
Hourly Total	**194**	**15**	**209**	**228.5**	**430**	**36**	**466**	**512.8**
08:00 - 08:15	35	2	37	39.6	117	9	126	137.7
08:15 - 08:30	60	6	66	73.8	106	8	114	124.4
08:30 - 08:45	88	5	93	99.5	92	13	105	121.9
08:45 - 09:00	57	2	59	61.6	86	8	94	104.4
Hourly Total	**240**	**15**	**255**	**274.5**	**401**	**38**	**439**	**488.4**
09:00 - 09:15	31	4	35	40.2	62	6	68	75.8
09:15 - 09:30	19	1	20	21.3	45	8	53	63.4
09:30 - 09:45	24	4	28	33.2	40	10	50	63.0
09:45 - 10:00	13	3	16	19.9	40	6	46	53.8
Hourly Total	**87**	**12**	**99**	**114.6**	**187**	**30**	**217**	**256.0**
TOTAL	**521**	**42**	**563**	**617.6**	**1018**	**104**	**1122**	**1257.2**
16:00 - 16:15	8	1	9	10.3	81	2	83	85.6
16:15 - 16:30	13	0	13	13.0	71	1	72	73.3
16:30 - 16:45	9	4	13	18.2	72	1	73	74.3
16:45 - 17:00	15	4	19	24.2	46	1	47	48.3
Hourly Total	**45**	**9**	**54**	**65.7**	**270**	**5**	**275**	**281.5**
17:00 - 17:15	17	3	20	23.9	73	1	74	75.3
17:15 - 17:30	32	1	33	34.3	55	4	59	64.2
17:30 - 17:45	34	1	35	36.3	67	1	68	69.3
17:45 - 18:00	27	7	34	43.1	51	0	51	51.0
Hourly Total	**110**	**12**	**122**	**137.6**	**246**	**6**	**252**	**259.8**
18:00 - 18:15	27	3	30	33.9	48	1	49	50.3
18:15 - 18:30	35	3	38	41.9	40	1	41	42.3
18:30 - 18:45	69	2	71	73.6	27	3	30	33.9
18:45 - 19:00	49	4	53	58.2	32	0	32	32.0
Hourly Total	**180**	**12**	**192**	**207.6**	**147**	**5**	**152**	**158.5**
TOTAL	**335**	**33**	**368**	**410.9**	**663**	**16**	**679**	**699.8**

PCU Factors:	
LIGHT	1.0
HEAVY	2.3

APPENDIX 9 – A453/Walton Hill Signal Junction Turning Count Results

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 1
Approach: Northern Arm

	Left to A453									Right to Walton Hill								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	1	1	66	9	6	0	1	84	86.6	0	2	27	4	1	0	0	34	33.3
07:15 - 07:30	0	2	66	9	1	0	1	79	79.3	0	0	37	7	1	1	0	46	47.8
07:30 - 07:45	0	1	107	8	2	2	4	124	131.0	0	1	43	12	7	2	0	65	70.5
07:45 - 08:00	0	0	97	12	5	2	3	119	127.1	0	0	48	6	2	1	0	57	59.3
Hourly Total	**1**	**4**	**336**	**38**	**14**	**4**	**9**	**406**	**424.0**	**0**	**3**	**155**	**29**	**11**	**4**	**0**	**202**	**210.9**
08:00 - 08:15	0	0	90	16	3	2	2	113	119.1	0	1	55	13	3	2	0	74	77.5
08:15 - 08:30	0	0	92	7	11	8	1	119	135.9	0	0	51	11	1	5	0	68	75.0
08:30 - 08:45	0	0	86	9	7	3	3	108	118.4	0	1	50	7	2	1	0	61	62.7
08:45 - 09:00	0	1	65	10	1	1	3	81	85.2	0	4	33	5	5	4	0	51	56.3
Hourly Total	**0**	**1**	**333**	**42**	**22**	**14**	**9**	**421**	**458.6**	**0**	**6**	**189**	**36**	**11**	**12**	**0**	**254**	**271.5**
09:00 - 09:15	1	0	26	6	4	1	4	42	48.5	0	0	37	8	4	3	0	52	57.9
09:15 - 09:30	0	1	33	5	2	1	1	43	45.7	2	0	28	7	2	4	0	43	47.6
09:30 - 09:45	0	0	22	3	2	3	3	33	40.9	0	0	28	9	0	1	0	38	39.3
09:45 - 10:00	0	0	19	2	2	0	3	26	30.0	0	0	25	8	4	1	0	38	41.3
Hourly Total	**1**	**1**	**100**	**16**	**10**	**5**	**11**	**144**	**165.1**	**2**	**0**	**118**	**32**	**10**	**9**	**0**	**171**	**186.1**
TOTAL	**2**	**6**	**769**	**96**	**46**	**23**	**29**	**971**	**1047.7**	**2**	**9**	**462**	**97**	**32**	**25**	**0**	**627**	**668.5**
16:00 - 16:15	0	2	42	8	2	2	2	58	62.4	0	0	62	15	5	2	0	84	89.1
16:15 - 16:30	0	2	39	11	2	1	1	56	58.1	1	1	59	12	0	0	0	73	71.6
16:30 - 16:45	0	0	35	5	2	2	1	45	49.6	0	0	68	10	0	1	0	79	80.3
16:45 - 17:00	1	3	37	5	1	1	2	50	51.2	0	1	41	8	0	2	1	53	56.0
Hourly Total	**1**	**7**	**153**	**29**	**7**	**6**	**6**	**209**	**221.3**	**1**	**2**	**230**	**45**	**5**	**5**	**1**	**289**	**297.0**
17:00 - 17:15	0	0	51	9	1	2	2	65	70.1	0	0	81	4	1	2	0	88	91.1
17:15 - 17:30	0	0	43	10	0	1	1	55	57.3	0	0	67	5	0	1	0	73	74.3
17:30 - 17:45	0	0	47	4	0	0	0	51	51.0	1	2	51	9	0	1	0	64	63.3
17:45 - 18:00	1	0	43	1	0	0	3	48	50.2	0	0	56	2	1	0	0	59	59.5
Hourly Total	**1**	**0**	**184**	**24**	**1**	**3**	**6**	**219**	**228.6**	**1**	**2**	**255**	**20**	**2**	**4**	**0**	**284**	**288.2**
18:00 - 18:15	0	0	49	1	0	0	2	52	54.0	0	0	53	4	0	0	0	57	57.0
18:15 - 18:30	0	1	49	9	0	1	2	62	64.7	0	0	45	1	0	0	0	46	46.0
18:30 - 18:45	1	2	64	4	1	1	2	75	76.8	0	0	17	2	2	0	0	21	22.0
18:45 - 19:00	0	0	52	4	1	1	2	60	63.8	0	0	39	3	1	0	0	43	43.5
Hourly Total	**1**	**3**	**214**	**18**	**2**	**3**	**8**	**249**	**259.3**	**0**	**0**	**154**	**10**	**3**	**0**	**0**	**167**	**168.5**
TOTAL	**3**	**10**	**551**	**71**	**10**	**12**	**20**	**677**	**709.2**	**2**	**4**	**639**	**75**	**10**	**9**	**1**	**740**	**753.7**

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

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 1
Approach: A453

	Ahead to Walton Hill									Right to Northern Arm									
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	20	4	1	3	0	28	32.4	0	0	19	5	1	0	3	28	31.5
07:15 - 07:30	0	0	25	7	1	3	0	36	40.4	0	0	21	7	4	1	0	33	36.3
07:30 - 07:45	0	0	23	9	4	3	1	40	46.9	0	0	27	5	1	1	2	36	39.8
07:45 - 08:00	0	0	24	8	2	4	0	38	44.2	0	0	35	10	2	3	2	52	58.9
Hourly Total	**0**	**0**	**92**	**28**	**8**	**13**	**1**	**142**	**163.9**	**0**	**0**	**102**	**27**	**8**	**5**	**7**	**149**	**166.5**
08:00 - 08:15	0	0	27	3	1	3	0	34	38.4	0	1	29	14	3	2	3	52	58.5
08:15 - 08:30	0	0	35	4	2	8	0	49	60.4	0	0	34	10	2	3	1	50	55.9
08:30 - 08:45	0	0	38	5	1	4	0	48	53.7	0	1	25	6	3	1	1	37	40.2
08:45 - 09:00	0	0	19	5	1	4	0	29	34.7	0	0	30	10	1	3	2	46	52.4
Hourly Total	**0**	**0**	**119**	**17**	**5**	**19**	**0**	**160**	**187.2**	**0**	**2**	**118**	**40**	**9**	**9**	**7**	**185**	**207.0**
09:00 - 09:15	0	0	28	7	1	3	0	39	43.4	0	0	19	5	5	1	1	31	35.8
09:15 - 09:30	0	0	13	5	4	1	0	23	26.3	0	0	15	5	2	2	2	26	31.6
09:30 - 09:45	0	0	17	3	1	4	0	25	30.7	0	0	25	6	4	0	1	36	39.0
09:45 - 10:00	0	0	10	6	1	6	1	24	33.3	0	2	21	6	2	1	1	33	35.1
Hourly Total	**0**	**0**	**68**	**21**	**7**	**14**	**1**	**111**	**133.7**	**0**	**2**	**80**	**22**	**13**	**4**	**5**	**126**	**141.5**
TOTAL	**0**	**0**	**279**	**66**	**20**	**46**	**2**	**413**	**484.8**	**0**	**4**	**300**	**89**	**30**	**18**	**19**	**460**	**515.0**
16:00 - 16:15	0	1	63	3	3	5	0	75	82.4	0	0	62	4	0	2	2	70	74.6
16:15 - 16:30	0	0	60	7	2	3	1	73	78.9	0	0	57	9	0	2	3	71	76.6
16:30 - 16:45	0	0	92	13	2	3	0	110	114.9	1	0	61	5	1	1	1	70	72.0
16:45 - 17:00	0	0	62	8	0	0	0	70	70.0	0	1	65	3	0	0	2	71	72.4
Hourly Total	**0**	**1**	**277**	**31**	**7**	**11**	**1**	**328**	**346.2**	**1**	**1**	**245**	**21**	**1**	**5**	**8**	**282**	**295.6**
17:00 - 17:15	0	0	78	3	2	1	0	84	86.3	0	2	85	7	0	0	1	95	94.8
17:15 - 17:30	0	0	56	5	0	1	1	63	65.3	0	0	62	8	2	0	2	74	77.0
17:30 - 17:45	0	0	72	0	1	3	0	76	80.4	1	1	78	5	0	0	1	86	85.6
17:45 - 18:00	0	0	53	3	0	0	0	56	56.0	0	0	74	3	0	0	3	80	83.0
Hourly Total	**0**	**0**	**259**	**11**	**3**	**5**	**1**	**279**	**288.0**	**1**	**3**	**299**	**23**	**2**	**0**	**7**	**335**	**340.4**
18:00 - 18:15	0	0	49	2	0	0	0	51	51.0	0	1	37	1	0	1	1	41	42.7
18:15 - 18:30	0	2	36	0	1	0	0	39	38.3	0	2	38	6	0	1	2	49	51.1
18:30 - 18:45	0	2	30	1	0	0	1	34	33.8	0	0	27	4	1	0	0	32	32.5
18:45 - 19:00	0	0	29	1	2	0	0	32	33.0	0	0	26	2	0	0	0	28	28.0
Hourly Total	**0**	**4**	**144**	**4**	**3**	**0**	**1**	**156**	**156.1**	**0**	**3**	**128**	**13**	**1**	**2**	**3**	**150**	**154.3**
TOTAL	**0**	**5**	**680**	**46**	**13**	**16**	**3**	**763**	**790.3**	**2**	**7**	**672**	**57**	**4**	**7**	**18**	**767**	**790.3**

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

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 1
Approach: Walton Hill

	Left to Northern Arm									Ahead to A453								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	1	0	33	12	2	0	0	48	48.2	0	0	45	6	1	6	1	59	68.3
07:15 - 07:30	1	0	45	12	1	1	0	60	61.0	0	1	64	8	2	5	0	80	86.9
07:30 - 07:45	0	0	49	10	4	1	0	64	67.3	0	0	81	8	3	9	0	101	114.2
07:45 - 08:00	0	0	60	20	1	3	0	84	88.4	0	0	90	6	1	4	0	101	106.7
Hourly Total	**2**	**0**	**187**	**54**	**8**	**5**	**0**	**256**	**264.9**	**0**	**1**	**280**	**28**	**7**	**24**	**1**	**341**	**376.1**
08:00 - 08:15	0	0	54	8	2	0	0	64	65.0	0	0	70	7	2	5	0	84	91.5
08:15 - 08:30	0	0	74	9	3	1	0	87	89.8	0	0	62	16	5	3	1	87	94.4
08:30 - 08:45	0	0	58	4	3	2	1	68	73.1	0	0	57	3	3	6	0	69	78.3
08:45 - 09:00	0	0	49	3	3	3	0	58	63.4	0	0	66	4	4	6	0	80	89.8
Hourly Total	**0**	**0**	**235**	**24**	**11**	**6**	**1**	**277**	**291.3**	**0**	**0**	**255**	**30**	**14**	**20**	**1**	**320**	**354.0**
09:00 - 09:15	0	0	28	3	6	3	0	40	46.9	0	0	47	10	4	6	0	67	76.8
09:15 - 09:30	0	0	36	3	3	2	0	44	48.1	0	0	31	6	3	2	2	44	50.1
09:30 - 09:45	0	1	30	5	5	0	0	41	42.9	0	0	25	6	1	2	0	34	37.1
09:45 - 10:00	0	1	38	5	1	3	0	48	51.8	0	0	31	5	2	3	0	41	45.9
Hourly Total	**0**	**2**	**132**	**16**	**15**	**8**	**0**	**173**	**189.7**	**0**	**0**	**134**	**27**	**10**	**13**	**2**	**186**	**209.9**
TOTAL	**2**	**2**	**554**	**94**	**34**	**19**	**1**	**706**	**745.9**	**0**	**1**	**669**	**85**	**31**	**57**	**4**	**847**	**940.0**
16:00 - 16:15	0	0	37	9	0	2	0	48	50.6	0	0	33	6	1	1	0	41	42.8
16:15 - 16:30	0	1	47	6	0	1	0	55	55.7	0	0	25	12	3	0	0	40	41.5
16:30 - 16:45	0	2	36	7	0	0	0	45	43.8	0	0	23	11	0	0	0	34	34.0
16:45 - 17:00	0	0	57	7	0	1	0	65	66.3	0	0	30	5	0	0	1	36	37.0
Hourly Total	**0**	**3**	**177**	**29**	**0**	**4**	**0**	**213**	**216.4**	**0**	**0**	**111**	**34**	**4**	**1**	**1**	**151**	**155.3**
17:00 - 17:15	0	1	49	1	1	0	0	52	51.9	0	0	41	3	0	0	0	44	44.0
17:15 - 17:30	0	0	51	3	1	1	0	56	57.8	0	0	35	1	0	0	0	36	36.0
17:30 - 17:45	0	0	50	6	2	0	0	58	59.0	0	1	54	3	0	1	1	60	61.7
17:45 - 18:00	0	1	45	6	2	0	0	54	54.4	0	0	41	2	1	0	0	44	44.5
Hourly Total	**0**	**2**	**195**	**16**	**6**	**1**	**0**	**220**	**223.1**	**0**	**1**	**171**	**9**	**1**	**1**	**1**	**184**	**186.2**
18:00 - 18:15	0	0	36	2	1	0	0	39	39.5	0	0	29	2	2	0	1	34	36.0
18:15 - 18:30	0	0	32	4	0	1	0	37	38.3	0	0	23	0	0	0	0	23	23.0
18:30 - 18:45	0	1	27	3	1	0	0	32	31.9	0	0	39	2	1	1	0	43	44.8
18:45 - 19:00	0	0	28	1	0	0	0	29	29.0	0	0	39	4	0	0	0	43	43.0
Hourly Total	**0**	**1**	**123**	**10**	**2**	**1**	**0**	**137**	**138.7**	**0**	**0**	**130**	**8**	**3**	**1**	**1**	**143**	**146.8**
TOTAL	**0**	**6**	**495**	**55**	**8**	**6**	**0**	**570**	**578.2**	**0**	**1**	**412**	**51**	**8**	**3**	**3**	**478**	**488.3**

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

APPENDIX 10 – M1 Junction 23 Turning Count Results

Road Data Services Ltd

East Midlands Gateway
Wednesday 2nd November 2022
Junction: 6
Approach: M1 J23 Slip Road North

	To A512									To M1 J23 Slip Road (S)									To Ashby Road East								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	41	28	1	1	2	73	76.8	0	0	0	0	0	0	0	0	0.0	0	0	26	9	0	4	0	39	44.2
07:15 - 07:30	0	0	59	16	6	2	0	83	88.6	0	0	0	0	0	0	0	0	0.0	0	0	27	22	2	1	0	52	54.3
07:30 - 07:45	0	0	115	19	2	0	0	136	137.0	0	0	0	0	0	0	0	0	0.0	0	0	33	17	7	0	0	57	60.5
07:45 - 08:00	0	1	189	31	6	1	0	228	231.7	0	0	0	0	0	0	0	0	0.0	0	0	68	18	9	4	0	99	108.7
Hourly Tota	**0**	**1**	**404**	**94**	**15**	**4**	**2**	**520**	**534.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**154**	**66**	**18**	**9**	**0**	**247**	**267.7**
08:00 - 08:15	0	0	153	39	8	3	0	203	210.9	0	0	0	0	0	0	0	0	0.0	0	0	53	24	6	3	0	86	92.9
08:15 - 08:30	0	1	170	23	2	5	0	201	207.9	0	0	0	0	0	0	0	0	0.0	0	0	58	18	7	8	0	91	104.9
08:30 - 08:45	0	0	165	24	9	8	0	206	220.9	0	0	0	0	0	0	0	0	0.0	0	0	39	16	9	2	0	66	73.1
08:45 - 09:00	0	0	131	17	0	3	0	151	154.9	0	0	0	0	0	0	0	0	0.0	0	0	61	17	1	4	1	84	90.7
Hourly Tota	**0**	**1**	**619**	**103**	**19**	**19**	**0**	**761**	**794.6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**211**	**75**	**23**	**17**	**1**	**327**	**361.6**
09:00 - 09:15	0	0	92	17	2	6	2	119	129.8	0	0	0	0	0	0	0	0	0.0	0	0	42	10	4	5	0	61	69.5
09:15 - 09:30	0	0	84	13	7	4	3	111	122.7	0	0	0	0	0	0	0	0	0.0	0	0	46	16	2	7	0	71	81.1
09:30 - 09:45	0	0	83	16	5	1	0	105	108.8	0	0	0	0	0	0	0	0	0.0	0	0	25	12	2	7	0	46	56.1
09:45 - 10:00	0	0	74	20	5	3	1	103	110.4	0	0	0	0	0	0	0	0	0.0	0	0	25	4	4	4	0	37	44.2
Hourly Tota	**0**	**0**	**333**	**66**	**19**	**14**	**6**	**438**	**471.7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**138**	**42**	**12**	**23**	**0**	**215**	**250.9**
TOTAL	**0**	**2**	**1356**	**263**	**53**	**37**	**8**	**1719**	**1800.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**503**	**183**	**53**	**49**	**1**	**789**	**880.2**
16:00 - 16:15	0	0	58	11	3	3	1	76	82.4	0	0	0	0	0	0	0	0	0.0	0	0	28	8	1	3	1	41	46.4
16:15 - 16:30	0	0	83	17	2	0	0	102	103.0	0	0	0	0	0	0	0	0	0.0	0	0	30	17	2	5	0	54	61.5
16:30 - 16:45	0	1	88	20	3	1	0	113	115.2	0	0	0	0	0	0	0	0	0.0	0	0	44	12	5	5	0	66	75.0
16:45 - 17:00	0	1	100	11	2	1	1	116	118.7	0	0	0	0	0	0	0	0	0.0	0	1	36	10	2	4	0	53	58.6
Hourly Tota	**0**	**2**	**329**	**59**	**10**	**5**	**2**	**407**	**419.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**138**	**47**	**10**	**17**	**1**	**214**	**241.5**
17:00 - 17:15	0	0	91	14	0	2	0	107	109.6	0	0	0	0	0	0	0	0	0.0	0	0	36	9	0	1	0	46	47.3
17:15 - 17:30	0	0	107	12	1	0	0	120	120.5	0	0	0	0	0	0	0	0	0.0	0	0	37	6	2	7	0	52	62.1
17:30 - 17:45	0	0	70	8	1	1	0	80	81.8	0	0	0	0	0	0	0	0	0.0	0	0	38	5	0	3	0	46	49.9
17:45 - 18:00	0	0	83	9	0	2	0	94	96.6	0	0	0	0	0	0	0	0	0.0	0	0	22	2	1	2	0	27	30.1
Hourly Tota	**0**	**0**	**351**	**43**	**2**	**5**	**0**	**401**	**408.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**133**	**22**	**3**	**13**	**0**	**171**	**189.4**
18:00 - 18:15	0	0	71	12	1	1	0	85	86.8	0	0	0	0	0	0	0	0	0.0	0	0	33	5	2	1	0	41	43.3
18:15 - 18:30	0	0	99	6	1	0	1	107	108.5	0	0	0	0	0	0	0	0	0.0	0	0	59	1	2	3	0	65	69.9
18:30 - 18:45	0	0	65	7	0	1	0	73	74.3	0	0	0	0	0	0	0	0	0.0	0	0	41	6	3	4	0	54	60.7
18:45 - 19:00	0	0	84	6	2	0	1	93	95.0	0	0	0	0	0	0	0	0	0.0	0	0	34	11	1	3	0	49	53.4
Hourly Tota	**0**	**0**	**319**	**31**	**4**	**2**	**2**	**358**	**364.6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**167**	**23**	**8**	**11**	**0**	**209**	**227.3**
TOTAL	**0**	**2**	**999**	**133**	**16**	**12**	**4**	**1166**	**1192.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**438**	**92**	**21**	**41**	**1**	**594**	**658.2**

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

Road Data Services Ltd

East Midlands Gateway
Wednesday 2nd November 2022
Junction: 6
Approach: A512

	To M1 J23 Slip Road (S)									To Ashby Road East									To M1 J23 Slip Road (N)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	42	7	4	1	0	54	57.3	0	1	39	11	3	0	1	55	56.9	0	0	90	20	2	4	0	116	122.2
07:15 - 07:30	0	0	28	9	2	0	0	39	40.0	0	1	52	14	3	1	0	71	73.2	0	0	106	24	3	4	0	137	143.7
07:30 - 07:45	0	0	30	5	2	1	0	38	40.3	0	0	65	8	4	4	1	82	90.2	0	1	121	13	4	1	0	140	142.7
07:45 - 08:00	0	0	21	7	1	2	1	32	36.1	0	0	79	14	2	1	2	98	102.3	0	0	100	14	3	5	0	122	130.0
Hourly Tota	0	0	121	28	9	4	1	163	173.7	0	2	235	47	12	6	4	306	322.6	0	1	417	71	12	14	0	515	538.6
08:00 - 08:15	0	0	35	3	2	3	0	43	47.9	0	0	101	12	5	0	0	118	120.5	0	1	82	10	3	4	0	100	106.1
08:15 - 08:30	0	0	22	4	4	1	0	31	34.3	0	0	51	8	0	0	1	60	61.0	0	0	90	12	3	2	0	107	111.1
08:30 - 08:45	0	0	19	7	2	6	3	37	48.8	0	0	72	14	2	4	0	92	98.2	0	0	81	7	1	3	1	93	98.4
08:45 - 09:00	0	0	19	7	3	3	1	33	39.4	0	0	59	18	0	0	2	79	81.0	0	1	70	9	2	3	0	85	89.3
Hourly Tota	0	0	95	21	11	13	4	144	170.4	0	0	283	52	7	4	3	349	360.7	0	2	323	38	9	12	1	385	404.9
09:00 - 09:15	0	0	19	12	3	2	1	37	42.1	0	0	45	20	3	2	1	71	76.1	0	1	76	15	3	1	0	96	98.2
09:15 - 09:30	0	0	19	2	6	2	0	29	34.6	0	0	45	14	3	0	2	64	67.5	0	0	57	11	2	5	0	75	82.5
09:30 - 09:45	0	0	28	7	7	4	2	48	58.7	0	0	42	14	1	3	0	60	64.4	0	0	64	12	4	5	0	85	93.5
09:45 - 10:00	0	0	22	9	3	2	0	36	40.1	0	0	46	13	4	1	1	65	69.3	0	1	53	10	6	2	0	72	77.0
Hourly Tota	0	0	88	30	19	10	3	150	175.5	0	0	178	61	11	6	4	260	277.3	0	2	250	48	15	13	0	328	351.2
TOTAL	0	0	304	79	39	27	8	457	519.6	0	2	696	160	30	16	11	915	960.6	0	5	990	157	36	39	1	1228	1294.7
16:00 - 16:15	0	0	102	14	2	1	0	119	121.3	0	0	127	16	2	1	2	148	152.3	0	0	102	16	3	0	3	124	128.5
16:15 - 16:30	0	1	99	12	0	1	1	114	115.7	0	0	113	10	2	2	2	129	134.6	0	0	121	11	4	2	1	139	144.6
16:30 - 16:45	0	0	79	16	1	3	0	99	103.4	1	1	121	14	1	1	0	139	139.4	0	0	120	22	1	1	0	144	145.8
16:45 - 17:00	0	1	95	12	0	0	0	108	107.4	0	2	134	15	1	2	0	154	155.9	0	0	126	18	2	2	2	150	155.6
Hourly Tota	0	2	375	54	3	5	1	440	447.8	1	3	495	55	6	6	4	570	582.2	0	0	469	67	10	5	6	557	574.5
17:00 - 17:15	0	0	90	11	0	0	1	102	103.0	0	0	162	13	0	1	3	179	183.3	0	0	112	16	1	2	1	132	136.1
17:15 - 17:30	0	0	87	8	1	1	1	98	100.8	0	1	92	10	0	0	0	103	102.4	0	0	135	14	1	3	1	154	159.4
17:30 - 17:45	0	0	78	4	1	0	0	83	83.5	0	0	124	13	1	3	1	142	147.4	0	0	91	4	1	0	0	96	96.5
17:45 - 18:00	0	0	53	10	0	0	0	63	63.0	0	0	72	9	0	0	3	84	87.0	0	0	91	6	1	0	0	98	98.5
Hourly Tota	0	0	308	33	2	1	2	346	350.3	0	1	450	45	1	4	7	508	520.1	0	0	429	40	4	5	2	480	490.5
18:00 - 18:15	0	0	52	3	0	0	0	55	55.0	0	7	83	17	1	3	2	113	115.2	0	1	62	6	0	0	0	69	68.4
18:15 - 18:30	0	0	38	4	0	1	3	46	50.3	0	0	104	15	0	0	2	121	123.0	0	1	48	4	3	0	0	56	56.9
18:30 - 18:45	0	0	40	2	2	0	0	44	45.0	0	0	61	9	0	0	1	71	72.0	0	1	50	6	0	1	0	58	58.7
18:45 - 19:00	0	0	24	2	0	0	1	27	28.0	0	0	56	7	0	1	1	65	67.3	0	0	47	5	1	1	1	55	57.8
Hourly Tota	0	0	154	11	2	1	4	172	178.3	0	7	304	48	1	4	6	370	377.5	0	3	207	21	4	2	1	238	241.8
TOTAL	0	2	837	98	7	7	7	958	976.4	1	11	1249	148	8	14	17	1448	1479.8	0	3	1105	128	18	12	9	1275	1306.8

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

Road Data Services Ltd

East Midlands Gateway
Wednesday 2nd November 2022
Junction: 6
Approach: M1 J23 Slip Road South

	To Ashby Road East									To M1 J23 Slip Road (N)									To A512								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	15	2	2	4	0	23	29.2	0	0	0	0	0	0	0	0	0.0	0	0	30	9	3	0	0	42	43.5
07:15 - 07:30	0	1	24	7	1	0	0	33	32.9	0	0	0	0	0	0	0	0	0.0	0	0	49	6	6	0	0	61	64.0
07:30 - 07:45	0	0	34	8	2	2	0	46	49.6	0	0	0	0	0	0	0	0	0.0	0	0	60	10	6	3	0	79	85.9
07:45 - 08:00	0	0	37	7	1	3	0	48	52.4	0	0	0	0	0	0	0	0	0.0	0	1	74	8	2	2	0	87	90.0
Hourly Tota	**0**	**1**	**110**	**24**	**6**	**9**	**0**	**150**	**164.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**213**	**33**	**17**	**5**	**0**	**269**	**283.4**
08:00 - 08:15	0	0	33	9	5	4	0	51	58.7	0	0	0	0	0	0	0	0	0.0	0	0	92	13	2	2	0	109	112.6
08:15 - 08:30	0	0	21	11	1	4	0	37	42.7	0	0	0	0	0	0	0	0	0.0	0	0	109	16	2	1	0	128	130.3
08:30 - 08:45	0	0	17	7	1	4	0	29	34.7	0	0	0	0	0	0	0	0	0.0	0	0	105	6	2	2	1	116	120.6
08:45 - 09:00	0	0	19	5	1	2	0	27	30.1	0	0	0	0	0	0	0	0	0.0	0	0	80	8	3	1	0	92	94.8
Hourly Tota	**0**	**0**	**90**	**32**	**8**	**14**	**0**	**144**	**166.2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**386**	**43**	**9**	**6**	**1**	**445**	**458.3**
09:00 - 09:15	0	0	16	9	3	3	0	31	36.4	0	0	0	0	0	0	0	0	0.0	0	0	76	5	4	0	0	85	87.0
09:15 - 09:30	0	0	13	10	2	2	0	27	30.6	0	0	0	0	0	0	0	0	0.0	0	0	55	7	3	1	0	66	68.8
09:30 - 09:45	0	0	14	3	1	1	1	20	22.8	0	0	0	0	0	0	0	0	0.0	0	0	36	6	4	3	1	50	56.9
09:45 - 10:00	0	0	18	5	0	2	0	25	27.6	0	0	0	0	0	0	0	0	0.0	0	0	34	8	2	4	0	48	54.2
Hourly Tota	**0**	**0**	**61**	**27**	**6**	**8**	**1**	**103**	**117.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**201**	**26**	**13**	**8**	**1**	**249**	**266.9**
TOTAL	**0**	**1**	**261**	**83**	**20**	**31**	**1**	**397**	**447.7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**800**	**102**	**39**	**19**	**2**	**963**	**1008.6**
16:00 - 16:15	0	0	12	5	2	4	0	23	29.2	0	0	0	0	0	0	0	0	0.0	0	0	28	2	2	0	1	33	35.0
16:15 - 16:30	0	0	34	7	2	4	0	47	53.2	0	0	0	0	0	0	0	0	0.0	0	0	28	10	2	1	0	41	43.3
16:30 - 16:45	0	0	32	7	3	2	0	44	48.1	0	0	0	0	0	0	0	0	0.0	0	0	47	5	0	4	0	56	61.2
16:45 - 17:00	0	0	22	3	2	1	0	28	30.3	0	0	0	0	0	0	0	0	0.0	0	0	28	3	1	0	0	32	32.5
Hourly Tota	**0**	**0**	**100**	**22**	**9**	**11**	**0**	**142**	**160.8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**131**	**20**	**5**	**5**	**1**	**162**	**172.0**
17:00 - 17:15	0	0	17	3	1	6	0	27	35.3	0	0	0	0	0	0	0	0	0.0	0	0	47	3	1	0	1	52	53.5
17:15 - 17:30	0	0	38	4	3	5	0	50	58.0	0	0	0	0	0	0	0	0	0.0	0	0	50	4	1	1	0	56	57.8
17:30 - 17:45	0	0	30	4	1	2	0	37	40.1	0	0	0	0	0	0	0	0	0.0	0	0	44	2	2	1	0	49	51.3
17:45 - 18:00	0	0	24	2	3	2	0	31	35.1	0	0	0	0	0	0	0	0	0.0	0	0	32	3	2	0	0	37	38.0
Hourly Tota	**0**	**0**	**109**	**13**	**8**	**15**	**0**	**145**	**168.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**173**	**12**	**6**	**2**	**1**	**194**	**200.6**
18:00 - 18:15	0	0	20	6	2	2	0	30	33.6	0	0	0	0	0	0	0	0	0.0	0	0	41	0	1	1	0	43	44.8
18:15 - 18:30	0	0	31	3	2	1	0	37	39.3	0	0	0	0	0	0	0	0	0.0	0	0	34	3	0	0	0	37	37.0
18:30 - 18:45	0	0	29	3	1	3	0	36	40.4	0	0	0	0	0	0	0	0	0.0	0	0	23	4	0	0	0	27	27.0
18:45 - 19:00	0	0	24	0	1	1	0	26	27.8	0	0	0	0	0	0	0	0	0.0	0	0	22	3	1	0	0	26	26.5
Hourly Tota	**0**	**0**	**104**	**12**	**6**	**7**	**0**	**129**	**141.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**120**	**10**	**2**	**1**	**0**	**133**	**135.3**
TOTAL	**0**	**0**	**313**	**47**	**23**	**33**	**0**	**416**	**470.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**424**	**42**	**13**	**8**	**2**	**489**	**507.9**

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

Road Data Services Ltd

East Midlands Gateway
Wednesday 2nd November 2022
Junction: 6
Approach: Ashby Road East

	To M1 J23 Slip Road (N)									To A512									To M1 J23 Slip Road (S)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	1	58	23	2	8	0	92	102.8	0	0	74	13	1	1	1	90	92.8	0	0	38	11	1	2	0	52	55.1
07:15 - 07:30	0	0	55	13	2	10	0	80	94.0	0	1	75	21	2	2	1	102	106.0	0	0	28	7	1	3	0	39	43.4
07:30 - 07:45	0	0	70	17	2	7	0	96	106.1	0	1	135	17	5	1	1	160	164.2	0	0	27	9	0	1	0	37	38.3
07:45 - 08:00	0	0	52	9	1	3	0	65	69.4	0	1	165	15	4	1	2	188	192.7	0	0	20	9	4	3	0	36	41.9
Hourly Tota	**0**	**1**	**235**	**62**	**7**	**28**	**0**	**333**	**372.3**	**0**	**3**	**449**	**66**	**12**	**5**	**5**	**540**	**555.7**	**0**	**0**	**113**	**36**	**6**	**9**	**0**	**164**	**178.7**
08:00 - 08:15	0	0	44	10	6	1	0	61	65.3	0	0	137	15	0	0	4	156	160.0	0	0	21	2	2	1	0	26	28.3
08:15 - 08:30	0	0	30	10	3	1	0	44	46.8	0	2	162	21	6	6	2	199	210.6	0	0	16	4	0	1	0	21	22.3
08:30 - 08:45	0	0	31	7	2	1	0	41	43.3	0	0	149	13	5	8	1	176	189.9	0	0	15	3	2	4	0	24	30.2
08:45 - 09:00	0	0	39	8	2	2	0	51	54.6	0	0	114	15	6	1	1	137	142.3	0	1	19	1	4	4	0	29	35.6
Hourly Tota	**0**	**0**	**144**	**35**	**13**	**5**	**0**	**197**	**210.0**	**0**	**2**	**562**	**64**	**17**	**15**	**8**	**668**	**702.8**	**0**	**1**	**71**	**10**	**8**	**10**	**0**	**100**	**116.4**
09:00 - 09:15	0	0	27	6	3	6	0	42	51.3	0	1	102	15	5	2	0	125	129.5	0	0	15	1	2	2	0	20	23.6
09:15 - 09:30	0	1	15	6	1	5	1	29	36.4	1	0	88	13	8	3	1	114	122.1	0	0	10	5	1	2	0	18	21.1
09:30 - 09:45	0	0	30	6	2	4	0	42	48.2	0	1	95	11	6	1	1	115	119.7	0	0	12	3	1	4	0	20	25.7
09:45 - 10:00	0	0	7	8	5	2	0	22	27.1	0	1	109	16	0	1	1	128	129.7	0	0	10	6	2	6	0	24	32.8
Hourly Tota	**0**	**1**	**79**	**26**	**11**	**17**	**1**	**135**	**163.0**	**1**	**3**	**394**	**55**	**19**	**7**	**3**	**482**	**501.0**	**0**	**0**	**47**	**15**	**6**	**14**	**0**	**82**	**103.2**
TOTAL	**0**	**2**	**458**	**123**	**31**	**50**	**1**	**665**	**745.3**	**1**	**8**	**1405**	**185**	**48**	**27**	**16**	**1690**	**1759.5**	**0**	**1**	**231**	**61**	**20**	**33**	**0**	**346**	**398.3**
16:00 - 16:15	0	0	55	15	3	1	0	74	76.8	0	0	85	11	1	0	1	98	99.5	0	0	34	8	1	1	0	44	45.8
16:15 - 16:30	0	1	44	9	1	3	0	58	61.8	1	0	84	17	0	0	1	103	103.2	0	0	33	9	0	1	0	43	44.3
16:30 - 16:45	0	0	38	15	1	1	1	56	58.8	0	0	88	10	0	0	0	98	98.0	0	0	31	10	2	5	0	48	55.5
16:45 - 17:00	0	0	31	7	3	0	0	41	42.5	0	0	79	11	0	0	1	91	92.0	0	0	24	7	1	2	0	34	37.1
Hourly Tota	**0**	**1**	**168**	**46**	**8**	**5**	**1**	**229**	**239.9**	**1**	**0**	**336**	**49**	**1**	**0**	**3**	**390**	**392.7**	**0**	**0**	**122**	**34**	**4**	**9**	**0**	**169**	**182.7**
17:00 - 17:15	0	0	47	9	1	1	0	58	59.8	0	1	89	11	0	0	1	102	102.4	0	0	28	5	2	0	0	35	36.0
17:15 - 17:30	0	0	49	8	2	1	0	60	62.3	0	1	104	13	0	1	0	119	119.7	0	0	28	2	0	0	0	30	30.0
17:30 - 17:45	0	0	41	8	0	0	0	49	49.0	0	0	74	5	0	0	3	82	85.0	0	0	29	4	0	0	0	33	33.0
17:45 - 18:00	0	0	35	7	0	2	0	44	46.6	0	0	72	3	2	1	0	78	80.3	0	0	17	1	0	0	0	18	18.0
Hourly Tota	**0**	**0**	**172**	**32**	**3**	**4**	**0**	**211**	**217.7**	**0**	**2**	**339**	**32**	**2**	**2**	**4**	**381**	**387.4**	**0**	**0**	**102**	**12**	**2**	**0**	**0**	**116**	**117.0**
18:00 - 18:15	0	0	25	4	1	2	0	32	35.1	0	0	72	14	0	1	1	88	90.3	0	0	20	2	1	1	0	24	25.8
18:15 - 18:30	0	0	23	3	0	0	0	26	26.0	0	1	55	5	0	0	3	64	66.4	0	0	16	3	0	2	0	21	23.6
18:30 - 18:45	0	0	17	0	0	0	0	17	17.0	0	0	84	9	0	0	2	95	97.0	0	0	10	3	0	1	1	15	17.3
18:45 - 19:00	0	0	18	1	1	0	0	20	20.5	0	0	75	7	1	0	0	83	83.5	0	0	10	2	0	1	0	13	14.3
Hourly Tota	**0**	**0**	**83**	**8**	**2**	**2**	**0**	**95**	**98.6**	**0**	**1**	**286**	**35**	**1**	**1**	**6**	**330**	**337.2**	**0**	**0**	**56**	**10**	**1**	**5**	**1**	**73**	**81.0**
TOTAL	**0**	**1**	**423**	**86**	**13**	**11**	**1**	**535**	**556.2**	**1**	**3**	**961**	**116**	**4**	**3**	**13**	**1101**	**1117.3**	**0**	**0**	**280**	**56**	**7**	**14**	**1**	**358**	**380.7**

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

APPENDIX 11 – A42/A453A/Top Brand Junction Turning Count Results

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 8
Approach: A453

	To Gelscoe Lane									To Top Brand									To A42 Entry Slip Road								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	3	0	0	0	0	3	3.0	0	0	10	0	0	1	0	11	12.3	0	0	6	5	2	1	0	14	16.3
07:15 - 07:30	1	0	11	1	0	0	0	13	12.2	0	1	7	3	0	8	0	19	28.8	0	0	18	2	1	0	0	21	21.5
07:30 - 07:45	0	0	11	2	1	0	0	14	14.5	0	1	14	5	0	4	0	24	28.6	0	0	9	1	1	0	0	11	11.5
07:45 - 08:00	0	0	11	2	0	0	0	13	13.0	0	0	12	2	0	6	0	20	27.8	0	0	17	2	1	0	0	20	20.5
Hourly Total	**1**	**0**	**36**	**5**	**1**	**0**	**0**	**43**	**42.7**	**0**	**2**	**43**	**10**	**0**	**19**	**0**	**74**	**97.5**	**0**	**0**	**50**	**10**	**5**	**1**	**0**	**66**	**69.8**
08:00 - 08:15	0	0	5	1	0	0	0	6	6.0	0	0	9	2	0	10	0	21	34.0	0	0	10	1	2	2	0	15	18.6
08:15 - 08:30	0	0	9	0	0	0	0	9	9.0	0	0	18	5	1	8	0	32	42.9	0	0	18	3	1	1	0	23	24.8
08:30 - 08:45	0	0	8	3	1	0	0	12	12.5	0	0	10	5	1	11	0	27	41.8	0	0	7	4	0	1	0	12	13.3
08:45 - 09:00	0	0	6	2	0	0	0	8	8.0	0	0	5	3	0	6	0	14	21.8	0	0	12	1	1	1	0	15	16.8
Hourly Total	**0**	**0**	**28**	**6**	**1**	**0**	**0**	**35**	**35.5**	**0**	**0**	**42**	**15**	**2**	**35**	**0**	**94**	**140.5**	**0**	**0**	**47**	**9**	**4**	**5**	**0**	**65**	**73.5**
09:00 - 09:15	0	0	6	1	0	0	0	7	7.0	0	0	7	2	0	6	0	15	22.8	0	0	8	3	0	0	0	11	11.0
09:15 - 09:30	0	0	3	2	0	1	0	6	7.3	0	0	5	2	0	7	0	14	23.1	0	0	1	1	0	1	0	3	4.3
09:30 - 09:45	0	0	3	4	2	0	0	9	10.0	0	0	4	2	1	6	0	13	21.3	0	0	8	1	1	0	0	10	10.5
09:45 - 10:00	1	0	3	0	0	0	0	4	3.2	0	0	5	0	0	15	0	20	39.5	0	0	3	2	1	2	0	8	11.1
Hourly Total	**1**	**0**	**15**	**7**	**2**	**1**	**0**	**26**	**27.5**	**0**	**0**	**21**	**6**	**1**	**34**	**0**	**62**	**106.7**	**0**	**0**	**20**	**7**	**2**	**3**	**0**	**32**	**36.9**
TOTAL	**2**	**0**	**79**	**18**	**4**	**1**	**0**	**104**	**105.7**	**0**	**2**	**106**	**31**	**3**	**88**	**0**	**230**	**344.7**	**0**	**0**	**117**	**26**	**11**	**9**	**0**	**163**	**180.2**
16:00 - 16:15	0	0	8	0	0	0	0	8	8.0	0	0	15	4	0	3	0	22	25.9	0	0	23	5	0	0	0	28	28.0
16:15 - 16:30	0	0	4	3	0	0	0	7	7.0	0	0	12	4	1	3	0	20	24.4	0	0	22	4	1	1	0	28	29.8
16:30 - 16:45	0	0	7	3	0	0	0	10	10.0	0	0	23	1	1	0	0	25	25.5	0	0	31	5	1	0	1	38	39.5
16:45 - 17:00	0	0	3	0	0	0	0	3	3.0	0	0	7	8	0	1	0	16	17.3	0	0	16	2	1	0	0	19	19.5
Hourly Total	**0**	**0**	**22**	**6**	**0**	**0**	**0**	**28**	**28.0**	**0**	**0**	**57**	**17**	**2**	**7**	**0**	**83**	**93.1**	**0**	**0**	**92**	**16**	**3**	**1**	**1**	**113**	**116.8**
17:00 - 17:15	0	0	11	1	0	0	0	12	12.0	0	1	26	2	0	0	0	29	28.4	0	0	18	10	0	0	0	28	28.0
17:15 - 17:30	0	0	4	0	0	0	0	4	4.0	0	0	24	0	0	0	0	24	24.0	0	0	33	4	1	0	0	38	38.5
17:30 - 17:45	0	0	8	1	0	0	0	9	9.0	0	0	20	4	0	0	0	24	24.0	0	0	21	2	0	1	0	24	25.3
17:45 - 18:00	0	0	6	0	0	0	0	6	6.0	0	1	12	1	0	0	0	14	13.4	0	0	11	3	0	0	0	14	14.0
Hourly Total	**0**	**0**	**29**	**2**	**0**	**0**	**0**	**31**	**31.0**	**0**	**2**	**82**	**7**	**0**	**0**	**0**	**91**	**89.8**	**0**	**0**	**83**	**19**	**1**	**1**	**0**	**104**	**105.8**
18:00 - 18:15	0	0	10	2	0	0	0	12	12.0	0	0	20	0	0	1	0	21	22.3	0	0	22	4	0	2	0	28	30.6
18:15 - 18:30	0	0	8	0	0	0	0	8	8.0	0	0	9	0	0	1	0	10	11.3	0	0	10	2	0	1	0	13	14.3
18:30 - 18:45	0	0	10	2	0	0	0	12	12.0	0	0	16	2	0	0	0	18	18.0	0	0	9	1	2	1	0	13	15.3
18:45 - 19:00	0	0	8	1	0	0	0	9	9.0	0	0	8	0	0	1	0	9	10.3	0	0	11	0	0	1	0	12	13.3
Hourly Total	**0**	**0**	**36**	**5**	**0**	**0**	**0**	**41**	**41.0**	**0**	**0**	**53**	**2**	**0**	**3**	**0**	**58**	**61.9**	**0**	**0**	**52**	**7**	**2**	**5**	**0**	**66**	**73.5**
TOTAL	**0**	**0**	**87**	**13**	**0**	**0**	**0**	**100**	**100.0**	**0**	**2**	**192**	**26**	**2**	**10**	**0**	**232**	**244.8**	**0**	**0**	**227**	**42**	**6**	**7**	**1**	**283**	**296.1**

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

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 8
Approach: Gelscoe Lane

	To Top Brand									To A42 Entry Slip Road									To A453								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	2	0	0	0	0	2	2.0	0	0	5	0	0	0	0	5	5.0	0	0	1	0	0	0	0	1	1.0
07:15 - 07:30	0	0	1	0	0	0	0	1	1.0	0	0	5	0	1	0	0	6	6.5	0	0	2	0	0	0	0	2	2.0
07:30 - 07:45	0	0	3	0	0	0	0	3	3.0	0	0	9	0	0	0	0	9	9.0	0	0	3	1	0	0	0	4	4.0
07:45 - 08:00	0	0	3	0	1	0	0	4	4.5	0	0	3	0	0	0	0	3	3.0	0	0	6	0	0	0	0	6	6.0
Hourly Total	**0**	**0**	**9**	**0**	**1**	**0**	**0**	**10**	**10.5**	**0**	**0**	**22**	**0**	**1**	**0**	**0**	**23**	**23.5**	**0**	**0**	**12**	**1**	**0**	**0**	**0**	**13**	**13.0**
08:00 - 08:15	0	0	3	0	0	0	0	3	3.0	0	0	4	0	2	0	0	6	7.0	0	0	5	0	0	0	0	5	5.0
08:15 - 08:30	0	0	0	1	0	0	0	1	1.0	0	0	4	0	0	0	0	4	4.0	0	0	4	0	0	0	0	4	4.0
08:30 - 08:45	0	0	3	0	0	0	0	3	3.0	0	0	1	0	0	0	0	1	1.0	0	0	4	1	0	0	0	5	5.0
08:45 - 09:00	0	0	0	0	0	0	0	0	0.0	0	0	3	0	1	0	0	4	4.5	0	0	7	0	0	0	0	7	7.0
Hourly Total	**0**	**0**	**6**	**1**	**0**	**0**	**0**	**7**	**7.0**	**0**	**0**	**12**	**0**	**3**	**0**	**0**	**15**	**16.5**	**0**	**0**	**20**	**1**	**0**	**0**	**0**	**21**	**21.0**
09:00 - 09:15	0	0	1	1	0	0	0	2	2.0	0	0	2	1	0	0	0	3	3.0	0	0	6	0	0	0	0	6	6.0
09:15 - 09:30	0	0	0	0	0	0	0	0	0.0	0	0	5	0	0	0	0	5	5.0	0	0	1	1	0	0	0	2	2.0
09:30 - 09:45	0	0	4	0	0	0	0	4	4.0	0	0	3	0	0	0	0	3	3.0	0	0	2	0	0	0	0	2	2.0
09:45 - 10:00	0	0	0	0	0	0	0	0	0.0	0	0	3	0	1	0	0	4	4.5	0	0	3	0	0	0	0	3	3.0
Hourly Total	**0**	**0**	**5**	**1**	**0**	**0**	**0**	**6**	**6.0**	**0**	**0**	**13**	**1**	**1**	**0**	**0**	**15**	**15.5**	**0**	**0**	**12**	**1**	**0**	**0**	**0**	**13**	**13.0**
TOTAL	**0**	**0**	**20**	**2**	**1**	**0**	**0**	**23**	**23.5**	**0**	**0**	**47**	**1**	**5**	**0**	**0**	**53**	**55.5**	**0**	**0**	**44**	**3**	**0**	**0**	**0**	**47**	**47.0**
16:00 - 16:15	0	0	6	2	0	0	0	8	8.0	0	0	4	0	0	0	0	4	4.0	0	0	3	1	0	0	0	4	4.0
16:15 - 16:30	0	0	6	0	0	0	0	6	6.0	0	0	1	1	0	0	0	2	2.0	0	1	4	2	0	0	0	7	6.4
16:30 - 16:45	0	0	6	0	0	0	0	6	6.0	0	0	6	1	0	0	0	7	7.0	0	0	5	1	0	0	0	6	6.0
16:45 - 17:00	0	0	3	0	0	0	0	3	3.0	0	0	0	1	0	0	0	1	1.0	0	0	6	1	0	0	0	7	7.0
Hourly Total	**0**	**0**	**21**	**2**	**0**	**0**	**0**	**23**	**23.0**	**0**	**0**	**11**	**3**	**0**	**0**	**0**	**14**	**14.0**	**0**	**1**	**18**	**5**	**0**	**0**	**0**	**24**	**23.4**
17:00 - 17:15	0	0	4	0	0	0	0	4	4.0	0	0	7	1	0	0	0	8	8.0	1	0	9	0	0	0	0	10	9.2
17:15 - 17:30	0	0	4	0	0	0	0	4	4.0	0	0	4	1	0	0	0	5	5.0	0	0	6	2	0	0	0	8	8.0
17:30 - 17:45	0	0	2	0	0	0	0	2	2.0	0	0	3	1	0	0	0	4	4.0	0	0	4	0	0	0	0	4	4.0
17:45 - 18:00	0	0	2	1	0	0	0	3	3.0	0	0	2	0	0	0	0	2	2.0	0	0	1	1	0	0	0	2	2.0
Hourly Total	**0**	**0**	**12**	**1**	**0**	**0**	**0**	**13**	**13.0**	**0**	**0**	**16**	**3**	**0**	**0**	**0**	**19**	**19.0**	**1**	**0**	**20**	**3**	**0**	**0**	**0**	**24**	**23.2**
18:00 - 18:15	0	0	1	0	0	0	0	1	1.0	0	0	1	2	0	0	0	3	3.0	0	0	4	0	0	0	0	4	4.0
18:15 - 18:30	0	0	1	1	0	0	0	2	2.0	0	0	2	0	0	0	0	2	2.0	0	0	3	0	0	0	0	3	3.0
18:30 - 18:45	0	0	0	0	0	0	0	0	0.0	0	0	2	1	0	0	0	3	3.0	0	0	5	1	0	0	0	6	6.0
18:45 - 19:00	0	0	2	0	0	0	0	2	2.0	0	0	3	0	0	0	0	3	3.0	0	0	5	0	0	0	0	5	5.0
Hourly Total	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**5**	**5.0**	**0**	**0**	**8**	**3**	**0**	**0**	**0**	**11**	**11.0**	**0**	**0**	**17**	**1**	**0**	**0**	**0**	**18**	**18.0**
TOTAL	**0**	**0**	**37**	**4**	**0**	**0**	**0**	**41**	**41.0**	**0**	**0**	**35**	**9**	**0**	**0**	**0**	**44**	**44.0**	**1**	**1**	**55**	**9**	**0**	**0**	**0**	**66**	**64.6**

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

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 8
Approach: Top Brand

	To A42 Entry Slip Road									To A453									To Gelscoe Lane								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	1	0	0	6	0	7	14.8	0	0	9	2	1	4	0	16	21.7	0	0	2	0	0	1	0	3	4.3
07:15 - 07:30	0	0	0	2	0	6	0	8	15.8	0	0	18	4	2	9	0	33	45.7	0	0	9	2	0	0	0	11	11.0
07:30 - 07:45	0	0	0	0	0	2	0	2	4.6	0	0	31	2	0	13	0	46	62.9	0	0	5	0	0	0	0	5	5.0
07:45 - 08:00	0	0	1	0	0	7	0	8	17.1	0	0	23	4	0	6	1	34	42.8	0	0	5	2	0	0	0	7	7.0
Hourly Total	**0**	**0**	**2**	**2**	**0**	**21**	**0**	**25**	**52.3**	**0**	**0**	**81**	**12**	**3**	**32**	**1**	**129**	**173.1**	**0**	**0**	**21**	**4**	**0**	**1**	**0**	**26**	**27.3**
08:00 - 08:15	0	0	0	0	0	4	0	4	9.2	0	0	22	2	1	4	0	29	34.7	0	0	7	0	0	0	0	7	7.0
08:15 - 08:30	0	0	1	0	1	5	0	7	14.0	0	1	15	1	1	7	1	26	36.0	0	0	3	1	0	0	0	4	4.0
08:30 - 08:45	0	0	0	0	1	3	0	4	8.4	0	0	13	3	2	5	0	23	30.5	0	0	4	0	0	0	0	4	4.0
08:45 - 09:00	0	0	0	0	0	8	0	8	18.4	0	0	20	4	0	4	0	28	33.2	0	0	2	1	0	0	0	3	3.0
Hourly Total	**0**	**0**	**1**	**0**	**2**	**20**	**0**	**23**	**50.0**	**0**	**1**	**70**	**10**	**4**	**20**	**1**	**106**	**134.4**	**0**	**0**	**16**	**2**	**0**	**0**	**0**	**18**	**18.0**
09:00 - 09:15	0	0	0	0	0	1	0	1	2.3	0	0	6	1	0	3	0	10	13.9	0	0	1	0	0	0	0	1	1.0
09:15 - 09:30	0	0	0	0	0	6	0	6	13.8	0	0	8	4	0	5	0	17	23.5	0	0	4	0	0	0	0	4	4.0
09:30 - 09:45	0	0	0	0	0	4	0	4	9.2	0	0	7	2	0	2	0	11	13.6	0	0	7	0	0	0	0	7	7.0
09:45 - 10:00	0	0	0	0	0	5	0	5	11.5	0	0	7	1	0	1	0	9	10.3	0	0	4	0	0	0	0	4	4.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**16**	**36.8**	**0**	**0**	**28**	**8**	**0**	**11**	**0**	**47**	**61.3**	**0**	**0**	**16**	**0**	**0**	**0**	**0**	**16**	**16.0**
TOTAL	**0**	**0**	**3**	**2**	**2**	**57**	**0**	**64**	**139.1**	**0**	**1**	**179**	**30**	**7**	**63**	**2**	**282**	**368.8**	**0**	**0**	**53**	**6**	**0**	**1**	**0**	**60**	**61.3**
16:00 - 16:15	0	0	2	0	0	1	0	3	4.3	0	0	10	2	0	0	0	12	12.0	0	0	4	0	2	0	0	6	7.0
16:15 - 16:30	0	0	1	0	0	0	0	1	1.0	0	0	11	2	1	0	0	14	14.5	0	0	3	1	0	0	0	4	4.0
16:30 - 16:45	0	0	1	0	0	0	0	1	1.0	0	0	15	1	0	0	0	16	16.0	0	0	5	2	0	0	0	7	7.0
16:45 - 17:00	0	0	2	0	0	0	0	2	2.0	0	1	7	0	0	0	0	8	7.4	0	0	1	2	0	0	0	3	3.0
Hourly Total	**0**	**0**	**6**	**0**	**0**	**1**	**0**	**7**	**8.3**	**0**	**1**	**43**	**5**	**1**	**0**	**0**	**50**	**49.9**	**0**	**0**	**13**	**5**	**2**	**0**	**0**	**20**	**21.0**
17:00 - 17:15	0	0	1	0	0	0	0	1	1.0	1	0	14	3	0	1	0	19	19.5	0	0	1	0	0	0	0	1	1.0
17:15 - 17:30	0	0	1	0	0	0	0	1	1.0	0	0	12	1	0	0	0	13	13.0	0	0	3	0	0	0	0	3	3.0
17:30 - 17:45	0	0	0	0	0	0	0	0	0.0	0	0	11	0	0	1	0	12	13.3	0	0	1	0	0	0	0	1	1.0
17:45 - 18:00	0	0	0	0	0	0	0	0	0.0	0	0	11	0	0	0	0	11	11.0	0	0	2	0	0	0	0	2	2.0
Hourly Total	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**	**1**	**0**	**48**	**4**	**0**	**2**	**0**	**55**	**56.8**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**7**	**7.0**
18:00 - 18:15	0	0	0	0	0	0	0	0	0.0	0	0	13	0	0	2	0	15	17.6	0	0	3	1	0	0	0	4	4.0
18:15 - 18:30	0	0	1	0	0	0	0	1	1.0	0	1	12	1	0	0	0	14	13.4	0	0	1	0	0	0	0	1	1.0
18:30 - 18:45	0	0	0	0	0	0	0	0	0.0	0	1	5	1	0	0	0	7	6.4	0	0	0	0	0	0	0	0	0.0
18:45 - 19:00	0	0	0	0	0	0	0	0	0.0	0	0	12	1	0	2	0	15	17.6	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1.0**	**0**	**2**	**42**	**3**	**0**	**4**	**0**	**51**	**55.0**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**5**	**5.0**
TOTAL	**0**	**0**	**9**	**0**	**0**	**1**	**0**	**10**	**11.3**	**1**	**3**	**133**	**12**	**1**	**6**	**0**	**156**	**161.7**	**0**	**0**	**24**	**6**	**2**	**0**	**0**	**32**	**33.0**

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

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 8
Approach: A42 Entry Slip Road

	To A453									To Gelscoe Lane									To Top Brand								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
07:15 - 07:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
07:30 - 07:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
07:45 - 08:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
08:00 - 08:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:15 - 08:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:30 - 08:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:45 - 09:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
09:00 - 09:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
09:15 - 09:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
09:30 - 09:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
09:45 - 10:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
16:00 - 16:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
16:15 - 16:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
16:30 - 16:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
16:45 - 17:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
17:00 - 17:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
17:15 - 17:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
17:30 - 17:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
17:45 - 18:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
18:00 - 18:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
18:15 - 18:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
18:30 - 18:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
18:45 - 19:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**

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

APPENDIX 12 – A50 Junction 1 Turning Count Results

Road Data Services Ltd

East Midlands Airport
Thursday 21st September 2023
Junction: 3
Approach: B5010

	To B6540									To A50 J1 Slip Road (E)									To Ryecroft Road									To Trent Lane									To A50 J1 Slip Road (W)								
TIME	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	1	1	0	1	0	0	3	2.9	0	0	19	8	0	0	0	27	27.0	0	0	1	0	0	0	0	1	1.0	0	0	10	1	0	0	1	12	13.0	0	0	11	2	0	0	0	13	13.0
07:15 - 07:30	0	0	3	1	0	0	0	4	4.0	0	0	14	7	0	0	0	21	21.0	0	0	0	0	0	0	0	0	0.0	0	0	12	2	0	0	1	15	16.0	0	0	13	2	0	0	0	15	15.0
07:30 - 07:45	0	0	13	3	0	0	0	16	16.0	0	0	19	4	0	0	0	23	23.0	0	0	1	0	0	0	0	1	1.0	0	1	17	5	0	0	0	23	22.4	0	0	16	4	0	0	0	20	20.0
07:45 - 08:00	0	0	9	4	0	0	0	13	13.0	0	0	12	4	1	0	0	17	17.5	0	0	1	0	0	0	0	1	1.0	0	1	22	2	1	0	1	27	27.9	0	0	16	2	0	0	0	18	18.0
Hourly Total	**0**	**1**	**26**	**8**	**1**	**0**	**0**	**36**	**35.9**	**0**	**0**	**64**	**23**	**1**	**0**	**0**	**88**	**88.5**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**3.0**	**0**	**2**	**61**	**10**	**1**	**0**	**3**	**77**	**79.3**	**0**	**0**	**56**	**10**	**0**	**0**	**0**	**66**	**66.0**
08:00 - 08:15	0	0	12	2	1	0	2	17	19.5	0	0	24	2	0	0	0	26	26.0	0	0	1	0	0	0	0	1	1.0	0	1	13	1	0	0	1	16	16.4	0	0	11	5	0	0	0	16	16.0
08:15 - 08:30	0	1	11	4	0	0	0	16	15.4	0	0	18	3	0	0	0	21	21.0	0	0	2	0	0	0	0	2	2.0	0	0	20	4	0	0	1	25	26.0	0	0	16	2	0	0	0	18	18.0
08:30 - 08:45	0	0	12	5	0	0	0	17	17.0	0	0	14	1	0	0	0	15	15.0	0	0	2	0	0	0	0	2	2.0	0	0	17	0	0	0	0	17	17.0	0	0	11	1	0	0	0	12	12.0
08:45 - 09:00	0	0	12	3	1	0	0	16	16.5	0	0	15	2	0	0	0	17	17.0	0	0	1	0	0	0	0	1	1.0	0	0	14	2	0	0	1	17	18.0	0	0	10	0	0	0	0	10	10.0
Hourly Total	**0**	**1**	**47**	**14**	**2**	**0**	**2**	**66**	**68.4**	**0**	**0**	**71**	**8**	**0**	**0**	**0**	**79**	**79.0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**6**	**6.0**	**0**	**1**	**64**	**7**	**0**	**0**	**3**	**75**	**77.4**	**0**	**0**	**48**	**8**	**0**	**0**	**0**	**56**	**56.0**
09:00 - 09:15	0	0	12	2	1	0	0	15	15.5	0	0	11	8	1	0	0	20	20.5	0	0	2	0	0	0	0	2	2.0	0	0	11	1	1	0	0	13	13.5	0	0	8	1	0	0	0	9	9.0
09:15 - 09:30	0	0	8	1	0	0	0	9	9.0	0	0	10	3	1	0	0	14	14.5	0	0	1	0	0	0	0	1	1.0	0	0	9	3	1	0	2	15	17.5	0	0	4	2	0	0	0	6	6.0
09:30 - 09:45	0	1	14	4	0	0	0	19	18.4	0	0	11	5	1	0	0	17	17.5	0	0	1	0	0	0	0	1	1.0	0	0	10	1	1	0	0	12	12.5	0	0	8	1	0	0	0	9	9.0
09:45 - 10:00	0	0	16	5	0	0	0	21	21.0	0	0	9	3	1	0	0	13	13.5	1	0	1	0	0	0	0	2	1.2	0	0	7	1	0	0	0	8	8.0	0	0	6	1	0	0	0	7	7.0
Hourly Total	**0**	**1**	**50**	**12**	**1**	**0**	**0**	**64**	**63.9**	**0**	**0**	**41**	**19**	**4**	**0**	**0**	**64**	**66.0**	**1**	**0**	**5**	**0**	**0**	**0**	**0**	**6**	**5.2**	**0**	**0**	**37**	**6**	**3**	**0**	**2**	**48**	**51.5**	**0**	**0**	**26**	**5**	**0**	**0**	**0**	**31**	**31.0**
TOTAL	**0**	**3**	**123**	**34**	**4**	**0**	**2**	**166**	**168.2**	**0**	**0**	**176**	**50**	**5**	**0**	**0**	**231**	**233.5**	**1**	**0**	**14**	**0**	**0**	**0**	**0**	**15**	**14.2**	**0**	**3**	**162**	**23**	**4**	**0**	**8**	**200**	**208.2**	**0**	**0**	**130**	**23**	**0**	**0**	**0**	**153**	**153.0**
16:00 - 16:15	0	0	13	3	0	0	0	16	16.0	0	0	24	4	0	0	0	28	28.0	1	0	0	0	0	0	0	1	0.2	0	0	15	2	0	0	0	17	17.0	0	0	14	2	0	0	0	16	16.0
16:15 - 16:30	0	0	17	0	0	0	0	17	17.0	0	0	18	3	0	0	0	21	21.0	0	0	1	0	0	0	0	1	1.0	0	2	15	2	0	0	2	21	21.8	0	0	12	1	0	0	0	13	13.0
16:30 - 16:45	0	0	11	0	2	0	0	13	14.0	0	0	15	2	0	0	0	17	17.0	0	0	1	0	0	0	0	1	1.0	0	1	14	2	1	0	1	19	19.9	0	0	17	3	0	0	0	20	20.0
16:45 - 17:00	0	1	9	3	0	0	0	13	12.4	0	0	16	2	0	0	0	18	18.0	0	0	1	0	0	0	0	1	1.0	0	0	15	1	0	0	1	17	18.0	0	0	16	1	0	0	0	17	17.0
Hourly Total	**0**	**1**	**50**	**6**	**2**	**0**	**0**	**59**	**59.4**	**0**	**0**	**73**	**11**	**0**	**0**	**0**	**84**	**84.0**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**4**	**3.2**	**0**	**3**	**59**	**7**	**1**	**0**	**4**	**74**	**76.7**	**0**	**0**	**59**	**7**	**0**	**0**	**0**	**66**	**66.0**
17:00 - 17:15	0	1	7	3	0	0	0	11	10.4	0	0	14	4	0	0	0	18	18.0	0	0	1	0	0	0	0	1	1.0	0	0	15	3	0	0	0	18	18.0	0	0	30	3	0	0	0	33	33.0
17:15 - 17:30	0	0	12	1	0	0	0	13	13.0	0	0	13	1	0	0	0	14	14.0	0	0	1	0	0	0	0	1	1.0	0	0	11	1	0	0	0	12	12.0	0	0	12	1	0	0	0	13	13.0
17:30 - 17:45	0	0	12	4	0	0	0	16	16.0	0	0	13	4	0	0	0	17	17.0	0	0	0	0	0	0	0	0	0.0	0	0	13	2	1	0	0	16	16.5	0	1	14	3	0	0	0	18	17.4
17:45 - 18:00	0	0	9	2	0	0	0	11	11.0	0	0	9	3	0	0	0	12	12.0	0	0	1	0	0	0	0	1	1.0	0	0	11	3	1	0	1	16	17.5	0	0	11	4	0	0	0	15	15.0
Hourly Total	**0**	**1**	**40**	**10**	**0**	**0**	**0**	**51**	**50.4**	**0**	**0**	**49**	**12**	**0**	**0**	**0**	**61**	**61.0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**3.0**	**0**	**0**	**50**	**9**	**2**	**0**	**1**	**62**	**64.0**	**0**	**1**	**67**	**11**	**0**	**0**	**0**	**79**	**78.4**
18:00 - 18:15	0	2	10	3	0	0	0	15	13.8	0	0	17	2	0	0	0	19	19.0	0	0	0	0	0	0	0	0	0.0	0	0	18	1	0	0	2	21	23.0	0	0	13	1	0	0	0	14	14.0
18:15 - 18:30	0	0	7	1	0	0	0	8	8.0	0	0	8	2	0	0	0	10	10.0	0	0	0	0	0	0	0	0	0.0	0	0	10	2	0	0	0	12	12.0	0	0	5	1	0	0	0	6	6.0
18:30 - 18:45	0	0	16	2	0	0	0	18	18.0	0	0	6	0	0	0	0	6	6.0	0	0	0	0	0	0	0	0	0.0	0	0	9	1	0	0	0	10	10.0	0	0	5	1	0	0	0	6	6.0
18:45 - 19:00	0	0	10	0	0	0	0	10	10.0	0	0	7	2	0	0	0	9	9.0	0	0	1	0	0	0	0	1	1.0	0	0	10	0	0	0	0	10	10.0	0	0	8	0	0	0	0	8	8.0
Hourly Total	**0**	**2**	**43**	**6**	**0**	**0**	**0**	**51**	**49.8**	**0**	**0**	**38**	**6**	**0**	**0**	**0**	**44**	**44.0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1.0**	**0**	**0**	**47**	**4**	**0**	**0**	**2**	**53**	**55.0**	**0**	**0**	**31**	**3**	**0**	**0**	**0**	**34**	**34.0**
TOTAL	**0**	**4**	**133**	**22**	**2**	**0**	**0**	**161**	**159.6**	**0**	**0**	**160**	**29**	**0**	**0**	**0**	**189**	**189.0**	**1**	**0**	**7**	**0**	**0**	**0**	**0**	**8**	**7.2**	**0**	**3**	**156**	**20**	**3**	**0**	**7**	**189**	**195.7**	**0**	**1**	**157**	**21**	**0**	**0**	**0**	**179**	**178.4**

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

Road Data Services Ltd

East Midlands Airport
Thursday 21st September 2023
Junction: 3
Approach: B6540

	To A50 J1 Slip Road (E)									To Ryecroft Road									To Trent Lane									To A50 J1 Slip Road (W)									To B5010								
TIME	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	36	11	1	5	0	53	60.0	0	0	1	0	0	0	0	1	1.0	0	6	31	3	0	0	2	42	40.4	0	0	39	10	2	4	0	55	61.2	0	1	6	1	0	0	0	8	7.4
07:15 - 07:30	0	1	65	15	2	7	0	90	99.5	0	0	2	0	0	0	0	2	2.0	0	1	40	4	2	1	2	50	53.7	0	0	48	5	2	2	0	57	60.6	0	0	6	1	0	0	0	7	7.0
07:30 - 07:45	0	1	66	13	1	3	0	84	87.8	0	0	3	0	0	0	0	3	3.0	0	2	51	6	1	0	1	61	61.3	0	0	49	2	1	2	0	54	57.1	0	0	10	0	0	0	0	10	10.0
07:45 - 08:00	0	1	56	18	4	1	0	80	82.7	0	0	2	0	0	0	0	2	2.0	0	2	47	5	2	0	0	56	55.8	0	0	31	9	0	0	0	40	40.0	0	0	8	3	0	0	0	11	11.0
Hourly Total	**0**	**3**	**223**	**57**	**8**	**16**	**0**	**307**	**330.0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**8**	**8.0**	**0**	**11**	**169**	**18**	**5**	**1**	**5**	**209**	**211.2**	**0**	**0**	**167**	**26**	**5**	**8**	**0**	**206**	**218.9**	**0**	**1**	**30**	**5**	**0**	**0**	**0**	**36**	**35.4**
08:00 - 08:15	0	1	59	8	5	2	0	75	79.5	0	0	3	0	0	0	0	3	3.0	0	1	44	2	0	1	0	48	48.7	0	0	29	7	0	2	0	38	40.6	0	0	5	1	0	0	0	6	6.0
08:15 - 08:30	0	0	41	5	4	3	0	53	58.9	0	0	3	0	0	0	0	3	3.0	0	0	55	8	1	0	1	65	66.5	0	0	43	6	3	3	0	55	60.4	0	0	8	2	0	0	0	10	10.0
08:30 - 08:45	0	0	43	8	4	1	0	56	59.3	0	0	3	1	0	0	0	4	4.0	0	0	58	2	0	2	0	62	64.6	0	0	34	10	0	0	1	45	46.0	0	0	10	1	0	0	0	11	11.0
08:45 - 09:00	0	0	27	14	2	5	0	48	55.5	0	0	3	1	0	0	0	4	4.0	0	0	40	7	2	0	1	50	52.0	0	0	28	6	0	2	0	36	38.6	0	0	5	3	0	0	1	9	10.0
Hourly Total	**0**	**1**	**170**	**35**	**15**	**11**	**0**	**232**	**253.2**	**0**	**0**	**12**	**2**	**0**	**0**	**0**	**14**	**14.0**	**0**	**1**	**197**	**19**	**3**	**3**	**2**	**225**	**231.8**	**0**	**0**	**134**	**29**	**3**	**7**	**1**	**174**	**185.6**	**0**	**0**	**28**	**7**	**0**	**0**	**1**	**36**	**37.0**
09:00 - 09:15	0	0	39	2	1	3	0	45	49.4	0	0	5	1	0	0	0	6	6.0	0	0	33	3	1	1	1	39	41.8	0	0	29	7	2	2	0	40	43.6	0	0	4	1	0	0	0	5	5.0
09:15 - 09:30	0	0	21	9	2	4	0	36	42.2	0	0	3	0	0	0	0	3	3.0	0	0	39	8	2	0	2	51	54.0	0	0	18	6	0	2	0	26	28.6	0	0	8	4	0	0	0	12	12.0
09:30 - 09:45	0	1	26	15	3	0	0	45	45.9	0	0	2	1	0	0	0	3	3.0	0	0	24	7	2	2	1	36	40.6	0	0	21	8	0	7	0	36	45.1	0	0	7	2	0	0	1	10	11.0
09:45 - 10:00	0	0	19	6	1	6	0	32	40.3	0	0	2	0	0	0	0	2	2.0	0	0	20	2	2	0	1	25	27.0	0	1	22	6	0	3	0	32	35.3	0	0	8	1	0	0	0	9	9.0
Hourly Total	**0**	**1**	**105**	**32**	**7**	**13**	**0**	**158**	**177.8**	**0**	**0**	**12**	**2**	**0**	**0**	**0**	**14**	**14.0**	**0**	**0**	**116**	**20**	**7**	**3**	**5**	**151**	**163.4**	**0**	**1**	**90**	**27**	**2**	**14**	**0**	**134**	**152.6**	**0**	**0**	**27**	**8**	**0**	**0**	**1**	**36**	**37.0**
TOTAL	**0**	**5**	**498**	**124**	**30**	**40**	**0**	**697**	**761.0**	**0**	**0**	**32**	**4**	**0**	**0**	**0**	**36**	**36.0**	**0**	**12**	**482**	**57**	**15**	**7**	**12**	**585**	**606.4**	**0**	**1**	**391**	**82**	**10**	**29**	**1**	**514**	**557.1**	**0**	**1**	**85**	**20**	**0**	**0**	**2**	**108**	**109.4**
16:00 - 16:15	0	0	36	8	1	6	0	51	59.3	0	0	1	1	0	0	0	2	2.0	0	1	27	6	0	2	3	39	44.0	0	1	26	8	0	2	0	37	39.0	0	0	8	2	0	0	0	10	10.0
16:15 - 16:30	0	1	33	8	2	6	0	50	58.2	0	0	2	1	0	0	0	3	3.0	0	1	36	4	1	1	0	43	44.2	0	0	32	6	0	1	0	39	40.3	0	0	14	2	0	0	0	16	16.0
16:30 - 16:45	0	0	34	5	1	4	0	44	49.7	0	0	2	0	0	0	0	2	2.0	0	0	36	9	0	1	0	46	47.3	0	0	41	8	0	4	0	53	58.2	0	0	11	2	0	0	0	13	13.0
16:45 - 17:00	0	1	42	8	3	6	0	60	68.7	0	0	3	0	0	0	0	3	3.0	0	0	45	4	0	0	2	51	53.0	0	1	46	2	0	0	0	49	48.4	0	1	17	3	0	0	0	21	20.4
Hourly Total	**0**	**2**	**145**	**29**	**7**	**22**	**0**	**205**	**235.9**	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**10**	**10.0**	**0**	**2**	**144**	**23**	**1**	**4**	**5**	**179**	**188.5**	**0**	**2**	**145**	**24**	**0**	**7**	**0**	**178**	**185.9**	**0**	**1**	**50**	**9**	**0**	**0**	**0**	**60**	**59.4**
17:00 - 17:15	0	2	55	9	0	6	1	73	80.6	0	0	2	0	0	0	0	2	2.0	0	1	28	4	1	1	2	37	40.2	0	2	41	5	0	1	0	49	49.1	0	1	14	2	0	0	0	17	16.4
17:15 - 17:30	0	0	44	2	2	2	0	50	53.6	0	0	2	1	0	0	0	3	3.0	0	2	38	4	0	2	2	48	51.4	0	2	40	6	0	2	0	50	51.4	0	0	12	4	0	0	0	16	16.0
17:30 - 17:45	0	0	62	5	0	5	0	72	78.5	0	0	0	0	0	0	0	0	0.0	0	2	29	3	1	1	0	36	36.6	0	2	34	4	0	0	0	40	38.8	0	1	18	1	0	0	0	20	19.4
17:45 - 18:00	0	0	39	3	0	4	0	46	51.2	0	0	1	0	0	0	0	1	1.0	0	0	35	3	0	1	1	40	42.3	0	0	34	4	0	1	0	39	40.3	0	0	12	4	0	0	0	16	16.0
Hourly Total	**0**	**2**	**200**	**19**	**2**	**17**	**1**	**241**	**263.9**	**0**	**0**	**5**	**1**	**0**	**0**	**0**	**6**	**6.0**	**0**	**5**	**130**	**14**	**2**	**5**	**5**	**161**	**170.5**	**0**	**6**	**149**	**19**	**0**	**4**	**0**	**178**	**179.6**	**0**	**2**	**56**	**11**	**0**	**0**	**0**	**69**	**67.8**
18:00 - 18:15	0	0	48	6	0	6	0	60	67.8	0	0	0	0	0	0	0	0	0.0	0	3	35	7	0	0	2	47	47.2	0	0	26	1	0	0	0	27	27.0	0	0	12	2	0	0	0	14	14.0
18:15 - 18:30	0	0	31	7	1	3	1	43	48.4	0	0	1	1	0	0	0	2	2.0	0	0	42	5	0	0	1	48	49.0	0	0	25	2	0	0	0	27	27.0	0	0	16	6	0	0	0	22	22.0
18:30 - 18:45	0	0	31	4	0	3	0	38	41.9	0	0	1	0	0	0	0	1	1.0	0	0	47	2	0	1	2	52	55.3	0	0	22	1	0	0	0	23	23.0	0	0	13	1	0	0	0	14	14.0
18:45 - 19:00	0	0	27	8	0	4	0	39	44.2	0	0	1	0	0	0	0	1	1.0	0	1	34	6	0	1	1	43	44.7	0	0	25	3	0	1	0	29	30.3	0	1	11	2	0	0	0	14	13.4
Hourly Total	**0**	**0**	**137**	**25**	**1**	**16**	**1**	**180**	**202.3**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**4**	**4.0**	**0**	**4**	**158**	**20**	**0**	**2**	**6**	**190**	**196.2**	**0**	**0**	**98**	**7**	**0**	**1**	**0**	**106**	**107.3**	**0**	**1**	**52**	**11**	**0**	**0**	**0**	**64**	**63.4**
TOTAL	**0**	**4**	**482**	**73**	**10**	**55**	**2**	**626**	**702.1**	**0**	**0**	**16**	**4**	**0**	**0**	**0**	**20**	**20.0**	**0**	**11**	**432**	**57**	**3**	**11**	**16**	**530**	**555.2**	**0**	**8**	**392**	**50**	**0**	**12**	**0**	**462**	**472.8**	**0**	**4**	**158**	**31**	**0**	**0**	**0**	**193**	**190.6**

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

Road Data Services Ltd

East Midlands Airport
Thursday 21st September 2023
Junction: 3
Approach: A50 J1 Slip Road East

	To Ryecroft Road									To Trent Lane									To A50 J1 Slip Road (W)									To B5010									To B6540								
TIME	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	0	0	1	0	0	1	1.5	0	0	41	17	2	1	1	62	65.3	0	0	0	0	0	0	0	0	0.0	0	0	7	2	0	0	0	9	9.0	0	0	25	7	1	4	0	37	42.7
07:15 - 07:30	0	0	0	0	0	0	0	0	0.0	0	1	57	11	7	1	0	77	81.2	0	0	0	0	0	0	0	0	0.0	0	0	6	2	0	0	0	8	8.0	0	0	39	7	1	4	0	51	56.7
07:30 - 07:45	0	0	4	1	0	0	0	5	5.0	0	0	43	16	2	5	2	68	77.5	0	0	0	0	0	0	0	0	0.0	0	0	8	3	0	0	0	11	11.0	0	0	33	5	3	2	0	43	47.1
07:45 - 08:00	0	0	3	1	0	0	0	4	4.0	0	0	84	24	4	3	1	116	122.9	0	0	0	0	0	0	0	0	0.0	0	0	14	5	2	0	0	21	22.0	0	0	55	7	2	5	0	69	76.5
Hourly Total	**0**	**0**	**7**	**2**	**1**	**0**	**0**	**10**	**10.5**	**0**	**1**	**225**	**68**	**15**	**10**	**4**	**323**	**346.9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**35**	**12**	**2**	**0**	**0**	**49**	**50.0**	**0**	**0**	**152**	**26**	**7**	**15**	**0**	**200**	**223.0**
08:00 - 08:15	0	0	1	0	0	0	0	1	1.0	0	1	79	18	5	2	0	105	109.5	0	0	0	0	0	0	0	0	0.0	0	0	11	2	0	0	0	13	13.0	0	0	39	4	2	10	0	55	69.0
08:15 - 08:30	0	0	3	0	0	0	0	3	3.0	0	0	77	9	5	4	1	96	104.7	0	0	0	0	0	0	0	0	0.0	0	0	10	5	1	0	0	16	16.5	0	0	46	10	5	6	0	67	77.3
08:30 - 08:45	0	0	3	0	0	0	0	3	3.0	0	0	75	16	1	8	0	100	110.9	0	0	0	0	0	0	0	0	0.0	0	0	16	7	0	1	0	24	25.3	0	1	45	5	2	5	0	58	64.9
08:45 - 09:00	0	0	5	1	0	0	1	7	8.0	0	0	73	14	7	6	0	100	111.3	0	0	0	0	0	0	0	0	0.0	0	0	13	4	1	0	0	18	18.5	0	0	48	10	2	6	0	66	74.8
Hourly Total	**0**	**0**	**12**	**1**	**0**	**0**	**1**	**14**	**15.0**	**0**	**1**	**304**	**57**	**18**	**20**	**1**	**401**	**436.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**50**	**18**	**2**	**1**	**0**	**71**	**73.3**	**0**	**1**	**178**	**29**	**11**	**27**	**0**	**246**	**286.0**
09:00 - 09:15	0	0	4	1	0	0	0	5	5.0	0	0	60	16	6	4	0	86	94.2	0	0	0	0	0	0	0	0	0.0	0	0	6	4	1	0	0	11	11.5	0	0	45	19	0	4	0	68	73.2
09:15 - 09:30	0	0	4	0	1	0	0	5	5.5	0	0	32	10	9	3	0	54	62.4	0	0	0	0	0	0	0	0	0.0	0	0	9	4	0	0	0	13	13.0	0	0	53	13	2	5	0	73	80.5
09:30 - 09:45	0	0	2	1	0	0	0	3	3.0	0	0	36	6	9	6	0	57	69.3	0	0	0	0	0	0	0	0	0.0	0	0	13	2	1	0	0	16	16.5	0	0	40	11	5	4	0	60	67.7
09:45 - 10:00	0	0	1	1	0	0	0	2	2.0	0	0	25	11	2	0	1	39	41.0	0	0	0	0	0	0	0	0	0.0	0	0	10	5	0	0	0	15	15.0	0	1	34	4	4	7	0	50	60.5
Hourly Total	**0**	**0**	**11**	**3**	**1**	**0**	**0**	**15**	**15.5**	**0**	**0**	**153**	**43**	**26**	**13**	**1**	**236**	**266.9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**38**	**15**	**2**	**0**	**0**	**55**	**56.0**	**0**	**1**	**172**	**47**	**11**	**20**	**0**	**251**	**281.9**
TOTAL	**0**	**0**	**30**	**6**	**2**	**0**	**1**	**39**	**41.0**	**0**	**2**	**682**	**168**	**59**	**43**	**6**	**960**	**1050.2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**123**	**45**	**6**	**1**	**0**	**175**	**179.3**	**0**	**2**	**502**	**102**	**29**	**62**	**0**	**697**	**790.9**
16:00 - 16:15	0	0	4	0	0	1	0	5	6.3	0	0	37	11	2	8	0	58	69.4	0	0	0	0	0	0	0	0	0.0	0	0	11	4	0	0	0	15	15.0	0	0	39	10	1	5	0	55	62.0
16:15 - 16:30	0	0	1	1	0	0	0	2	2.0	0	0	49	8	4	6	0	67	76.8	0	0	0	0	0	0	0	0	0.0	0	0	20	4	0	0	0	24	24.0	0	1	47	12	2	3	0	65	69.3
16:30 - 16:45	0	0	2	1	0	1	0	4	5.3	0	1	59	13	3	5	0	81	88.4	0	0	0	0	0	0	0	0	0.0	0	0	18	4	1	0	0	23	23.5	0	3	50	10	4	3	0	70	74.1
16:45 - 17:00	0	0	1	0	0	0	0	1	1.0	0	0	59	6	4	1	0	70	73.3	0	0	0	0	0	0	0	0	0.0	0	0	22	5	0	0	0	27	27.0	0	0	57	9	0	4	0	70	75.2
Hourly Total	**0**	**0**	**8**	**2**	**0**	**2**	**0**	**12**	**14.6**	**0**	**1**	**204**	**38**	**13**	**20**	**0**	**276**	**307.9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**71**	**17**	**1**	**0**	**0**	**89**	**89.5**	**0**	**4**	**193**	**41**	**7**	**15**	**0**	**260**	**280.6**
17:00 - 17:15	0	0	1	0	0	0	0	1	1.0	0	0	48	11	6	1	0	66	70.3	0	0	0	0	0	0	0	0	0.0	0	0	27	3	0	0	0	30	30.0	0	0	52	3	2	1	0	58	60.3
17:15 - 17:30	0	0	3	0	0	1	0	4	5.3	0	0	61	9	2	5	0	77	84.5	0	0	0	0	0	0	0	0	0.0	0	0	21	4	0	0	0	25	25.0	0	0	57	6	0	5	0	68	74.5
17:30 - 17:45	0	0	3	0	0	0	0	3	3.0	0	0	53	11	3	5	0	72	80.0	0	0	0	0	0	0	0	0	0.0	0	0	27	4	0	0	0	31	31.0	0	0	66	4	0	3	0	73	76.9
17:45 - 18:00	0	0	4	1	1	0	0	6	6.5	0	0	64	5	2	8	2	81	94.4	0	0	0	0	0	0	0	0	0.0	0	0	25	6	2	0	0	33	34.0	0	0	50	9	1	4	0	64	69.7
Hourly Total	**0**	**0**	**11**	**1**	**1**	**1**	**0**	**14**	**15.8**	**0**	**0**	**226**	**36**	**13**	**19**	**2**	**296**	**329.2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**100**	**17**	**2**	**0**	**0**	**119**	**120.0**	**0**	**0**	**225**	**22**	**3**	**13**	**0**	**263**	**281.4**
18:00 - 18:15	0	0	4	0	0	0	0	4	4.0	0	1	64	4	4	1	0	74	76.7	0	0	0	0	0	0	0	0	0.0	0	0	20	1	0	0	0	21	21.0	0	0	45	13	1	4	0	63	68.7
18:15 - 18:30	0	0	4	0	0	0	0	4	4.0	0	0	37	4	0	4	0	45	50.2	0	0	0	0	0	0	0	0	0.0	0	0	14	4	0	0	0	18	18.0	0	0	44	5	0	7	0	56	65.1
18:30 - 18:45	0	0	1	0	0	0	0	1	1.0	0	0	50	4	4	2	0	60	64.6	0	0	0	0	0	0	0	0	0.0	0	1	14	2	0	0	0	17	16.4	0	0	26	2	1	2	0	31	34.1
18:45 - 19:00	0	0	1	1	0	0	0	2	2.0	0	0	35	4	2	1	0	42	44.3	0	0	0	0	0	0	0	0	0.0	0	0	11	2	0	0	0	13	13.0	0	0	31	2	2	2	0	37	40.6
Hourly Total	**0**	**0**	**10**	**1**	**0**	**0**	**0**	**11**	**11.0**	**0**	**1**	**186**	**16**	**10**	**8**	**0**	**221**	**235.8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**59**	**9**	**0**	**0**	**0**	**69**	**68.4**	**0**	**0**	**146**	**22**	**4**	**15**	**0**	**187**	**208.5**
TOTAL	**0**	**0**	**29**	**4**	**1**	**3**	**0**	**37**	**41.4**	**0**	**2**	**616**	**90**	**36**	**47**	**2**	**793**	**872.9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**230**	**43**	**3**	**0**	**0**	**277**	**277.9**	**0**	**4**	**564**	**85**	**14**	**43**	**0**	**710**	**770.5**

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

Road Data Services Ltd

East Midlands Airport
Thursday 21st September 2023
Junction: 3
Approach: Ryecroft Road

	To Trent Lane									To A50 J1 Slip Road (W)									To B5010									To B6540									To A50 J1 Slip Road (E)								
TIME	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	2	1	0	0	0	3	3.0	0	0	2	1	0	0	0	3	3.0	0	0	0	0	0	0	0	0	0.0	0	0	2	1	0	0	0	3	3.0	0	0	3	2	0	0	0	5	5.0
07:15 - 07:30	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0	0	0	3	0	0	0	0	3	3.0
07:30 - 07:45	0	0	1	1	0	0	1	3	4.0	0	0	4	1	0	0	0	5	5.0	0	0	1	0	0	0	0	1	1.0	0	0	3	0	0	0	0	3	3.0	0	0	2	1	0	0	0	3	3.0
07:45 - 08:00	0	0	2	1	0	0	0	3	3.0	0	0	2	1	0	0	0	3	3.0	0	0	1	0	0	0	0	1	1.0	0	0	3	1	0	0	0	4	4.0	0	0	4	1	0	0	0	5	5.0
Hourly Total	**0**	**0**	**5**	**3**	**0**	**0**	**1**	**9**	**10.0**	**0**	**0**	**9**	**3**	**0**	**0**	**0**	**12**	**12.0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**	**0**	**0**	**9**	**2**	**0**	**0**	**0**	**11**	**11.0**	**0**	**0**	**12**	**4**	**0**	**0**	**0**	**16**	**16.0**
08:00 - 08:15	0	0	2	0	0	0	0	2	2.0	0	0	1	2	0	0	0	3	3.0	0	0	0	0	0	0	0	0	0.0	0	0	1	1	0	0	0	2	2.0	0	0	1	0	0	0	0	1	1.0
08:15 - 08:30	0	0	6	0	0	0	0	6	6.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0	0	0	5	1	0	0	0	6	6.0
08:30 - 08:45	0	0	2	0	0	0	0	2	2.0	0	0	2	0	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0	0	0	1	0	0	0	0	1	1.0
08:45 - 09:00	0	0	2	2	0	0	0	4	4.0	0	0	2	0	0	0	0	2	2.0	0	0	1	1	0	0	0	2	2.0	0	0	2	1	0	0	0	3	3.0	0	0	4	1	0	0	0	5	5.0
Hourly Total	**0**	**0**	**12**	**2**	**0**	**0**	**0**	**14**	**14.0**	**0**	**0**	**6**	**2**	**0**	**0**	**0**	**8**	**8.0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**3**	**3.0**	**0**	**0**	**6**	**2**	**0**	**0**	**0**	**8**	**8.0**	**0**	**0**	**11**	**2**	**0**	**0**	**0**	**13**	**13.0**
09:00 - 09:15	0	0	1	0	0	1	0	2	3.3	0	0	3	0	0	0	0	3	3.0	0	0	1	0	0	0	0	1	1.0	0	0	3	0	0	0	0	3	3.0	0	0	3	1	0	0	0	4	4.0
09:15 - 09:30	0	0	2	0	0	0	0	2	2.0	0	0	2	1	0	0	0	3	3.0	0	0	1	1	0	0	0	2	2.0	0	0	4	2	0	0	0	6	6.0	0	0	3	0	0	0	0	3	3.0
09:30 - 09:45	0	0	2	1	0	0	0	3	3.0	0	0	1	1	0	0	0	2	2.0	0	0	1	0	0	0	0	1	1.0	0	0	1	1	0	0	0	2	2.0	0	0	2	1	0	0	0	3	3.0
09:45 - 10:00	0	0	2	0	0	0	0	2	2.0	0	0	2	0	0	0	0	2	2.0	0	0	1	0	0	0	0	1	1.0	0	0	4	0	0	0	0	4	4.0	0	0	1	0	0	0	0	1	1.0
Hourly Total	**0**	**0**	**7**	**1**	**0**	**1**	**0**	**9**	**10.3**	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**10**	**10.0**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**5**	**5.0**	**0**	**0**	**12**	**3**	**0**	**0**	**0**	**15**	**15.0**	**0**	**0**	**9**	**2**	**0**	**0**	**0**	**11**	**11.0**
TOTAL	**0**	**0**	**24**	**6**	**0**	**1**	**1**	**32**	**34.3**	**0**	**0**	**23**	**7**	**0**	**0**	**0**	**30**	**30.0**	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**10**	**10.0**	**0**	**0**	**27**	**7**	**0**	**0**	**0**	**34**	**34.0**	**0**	**0**	**32**	**8**	**0**	**0**	**0**	**40**	**40.0**
16:00 - 16:15	0	0	3	1	0	0	0	4	4.0	0	0	5	1	0	0	0	6	6.0	0	0	2	0	0	0	0	2	2.0	0	0	4	1	0	0	0	5	5.0	0	0	3	1	0	0	0	4	4.0
16:15 - 16:30	0	0	5	0	0	0	0	5	5.0	0	0	2	1	0	0	0	3	3.0	0	0	1	0	0	0	0	1	1.0	0	0	2	0	0	0	0	2	2.0	0	0	2	1	0	0	0	3	3.0
16:30 - 16:45	0	0	1	0	0	0	0	1	1.0	0	0	2	0	0	0	0	2	2.0	0	0	1	0	0	0	0	1	1.0	0	0	2	0	0	0	0	2	2.0	0	0	4	0	0	0	0	4	4.0
16:45 - 17:00	0	0	1	1	0	0	0	2	2.0	0	0	4	1	0	0	0	5	5.0	0	0	2	0	0	0	0	2	2.0	0	0	4	1	0	0	0	5	5.0	0	0	5	0	0	0	0	5	5.0
Hourly Total	**0**	**0**	**10**	**2**	**0**	**0**	**0**	**12**	**12.0**	**0**	**0**	**13**	**3**	**0**	**0**	**0**	**16**	**16.0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**6**	**6.0**	**0**	**0**	**12**	**2**	**0**	**0**	**0**	**14**	**14.0**	**0**	**0**	**14**	**2**	**0**	**0**	**0**	**16**	**16.0**
17:00 - 17:15	0	0	1	0	0	0	0	1	1.0	0	0	6	0	0	0	0	6	6.0	0	0	2	0	0	0	0	2	2.0	0	0	4	1	0	0	0	5	5.0	0	0	6	1	0	0	0	7	7.0
17:15 - 17:30	0	0	3	0	0	0	0	3	3.0	0	0	3	0	0	0	0	3	3.0	0	0	1	0	0	0	0	1	1.0	0	0	3	2	0	0	0	5	5.0	0	0	1	0	0	0	0	1	1.0
17:30 - 17:45	0	0	4	1	0	1	0	6	7.3	0	0	3	0	0	0	0	3	3.0	0	0	1	0	0	0	0	1	1.0	0	0	2	0	0	0	0	2	2.0	0	0	4	0	0	0	0	4	4.0
17:45 - 18:00	0	0	0	0	0	0	0	0	0.0	0	0	3	0	0	0	0	3	3.0	0	0	1	0	0	0	0	1	1.0	0	0	2	1	0	0	0	3	3.0	0	0	5	0	0	0	0	5	5.0
Hourly Total	**0**	**0**	**8**	**1**	**0**	**1**	**0**	**10**	**11.3**	**0**	**0**	**15**	**0**	**0**	**0**	**0**	**15**	**15.0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**5**	**5.0**	**0**	**0**	**11**	**4**	**0**	**0**	**0**	**15**	**15.0**	**0**	**0**	**16**	**1**	**0**	**0**	**0**	**17**	**17.0**
18:00 - 18:15	0	0	2	0	0	0	0	2	2.0	0	0	4	0	0	0	0	4	4.0	0	0	1	0	0	0	0	1	1.0	0	0	1	0	0	0	0	1	1.0	0	0	3	0	0	0	0	3	3.0
18:15 - 18:30	0	0	1	0	0	0	0	1	1.0	0	0	2	0	0	0	0	2	2.0	0	0	2	1	0	0	0	3	3.0	2	0	4	0	0	0	0	6	4.4	0	0	3	0	0	0	0	3	3.0
18:30 - 18:45	0	0	2	1	0	0	0	3	3.0	0	0	2	0	0	0	0	2	2.0	0	0	1	0	0	0	0	1	1.0	0	0	2	0	0	0	0	2	2.0	0	0	2	0	1	0	0	3	3.5
18:45 - 19:00	0	0	1	0	0	0	0	1	1.0	0	0	2	2	0	0	0	4	4.0	0	0	1	0	0	0	0	1	1.0	0	0	3	1	0	0	0	4	4.0	0	0	2	0	0	0	0	2	2.0
Hourly Total	**0**	**0**	**6**	**1**	**0**	**0**	**0**	**7**	**7.0**	**0**	**0**	**10**	**2**	**0**	**0**	**0**	**12**	**12.0**	**0**	**0**	**5**	**1**	**0**	**0**	**0**	**6**	**6.0**	**2**	**0**	**10**	**1**	**0**	**0**	**0**	**13**	**11.4**	**0**	**0**	**10**	**0**	**1**	**0**	**0**	**11**	**11.5**
TOTAL	**0**	**0**	**24**	**4**	**0**	**1**	**0**	**29**	**30.3**	**0**	**0**	**38**	**5**	**0**	**0**	**0**	**43**	**43.0**	**0**	**0**	**16**	**1**	**0**	**0**	**0**	**17**	**17.0**	**2**	**0**	**33**	**7**	**0**	**0**	**0**	**42**	**40.4**	**0**	**0**	**40**	**3**	**1**	**0**	**0**	**44**	**44.5**

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

Road Data Services Ltd

East Midlands Airport
Thursday 21st September 2023
Junction: 3
Approach: Trent Lane

	To A50 J1 Slip Road (W)									To B5010									To B6540									To A50 J1 Slip Road (E)									To Ryecroft Road								
TIME	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	38	14	2	4	0	58	64.2	0	0	5	1	0	0	0	6	6.0	0	0	15	2	0	1	1	19	21.3	0	0	38	8	2	3	0	51	55.9	0	0	1	0	0	0	0	1	1.0
07:15 - 07:30	0	0	44	12	8	7	0	71	84.1	0	0	4	1	0	0	1	6	7.0	0	0	13	2	1	1	1	18	20.8	0	0	43	7	4	2	0	56	60.6	0	0	1	0	0	0	0	1	1.0
07:30 - 07:45	0	0	70	13	6	1	0	90	94.3	0	0	8	1	1	0	1	11	12.5	0	0	26	4	2	0	1	33	35.0	0	0	57	10	7	0	0	74	77.5	0	0	3	0	0	0	0	3	3.0
07:45 - 08:00	0	0	62	15	3	3	0	83	88.4	0	0	8	2	2	0	0	12	13.0	0	0	30	3	2	1	1	37	40.3	0	0	45	8	4	3	0	60	65.9	0	0	2	0	0	0	0	2	2.0
Hourly Total	**0**	**0**	**214**	**54**	**19**	**15**	**0**	**302**	**331.0**	**0**	**0**	**25**	**5**	**3**	**0**	**2**	**35**	**38.5**	**0**	**0**	**84**	**11**	**5**	**3**	**4**	**107**	**117.4**	**0**	**0**	**183**	**33**	**17**	**8**	**0**	**241**	**259.9**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**7**	**7.0**
08:00 - 08:15	0	0	69	4	1	3	0	77	81.4	0	0	7	1	0	0	2	10	12.0	1	0	19	10	1	1	2	34	37.0	0	0	59	5	6	7	0	77	89.1	0	0	4	1	0	0	0	5	5.0
08:15 - 08:30	0	0	55	11	4	3	0	73	78.9	0	0	5	3	1	0	0	9	9.5	0	0	19	6	1	0	2	28	30.5	0	0	38	8	4	0	0	50	52.0	0	0	2	0	0	0	0	2	2.0
08:30 - 08:45	0	0	37	5	2	2	0	46	49.6	0	0	8	3	0	0	0	11	11.0	0	0	18	3	1	1	0	23	24.8	0	0	33	9	4	2	0	48	52.6	0	0	3	1	0	0	0	4	4.0
08:45 - 09:00	0	0	40	5	2	2	0	49	52.6	0	0	6	3	1	0	2	12	14.5	0	1	18	6	0	1	0	26	26.7	0	0	45	8	2	4	0	59	65.2	0	0	4	0	0	0	0	4	4.0
Hourly Total	**0**	**0**	**201**	**25**	**9**	**10**	**0**	**245**	**262.5**	**0**	**0**	**26**	**10**	**2**	**0**	**4**	**42**	**47.0**	**1**	**1**	**74**	**25**	**3**	**3**	**4**	**111**	**119.0**	**0**	**0**	**175**	**30**	**16**	**13**	**0**	**234**	**258.9**	**0**	**0**	**13**	**2**	**0**	**0**	**0**	**15**	**15.0**
09:00 - 09:15	0	1	33	13	2	2	0	51	54.0	0	0	4	0	1	0	0	5	5.5	0	1	27	0	0	1	0	29	29.7	0	0	36	3	5	5	0	49	58.0	0	0	5	0	0	0	0	5	5.0
09:15 - 09:30	0	0	28	8	1	1	0	38	39.8	0	0	4	2	0	0	3	9	12.0	0	1	17	6	0	1	0	25	25.7	0	0	26	5	5	5	0	41	50.0	0	0	3	1	0	0	0	4	4.0
09:30 - 09:45	0	0	32	10	0	3	0	45	48.9	0	0	7	1	1	0	1	10	11.5	0	0	17	3	1	1	2	24	27.8	0	0	31	13	7	4	0	55	63.7	0	0	3	0	0	0	0	3	3.0
09:45 - 10:00	0	0	27	7	3	1	0	38	40.8	0	0	5	2	0	0	0	7	7.0	0	0	15	2	1	1	1	20	22.8	0	0	21	9	7	7	0	44	56.6	0	0	2	0	0	0	0	2	2.0
Hourly Total	**0**	**1**	**120**	**38**	**6**	**7**	**0**	**172**	**183.5**	**0**	**0**	**20**	**5**	**2**	**0**	**4**	**31**	**36.0**	**0**	**2**	**76**	**11**	**2**	**4**	**3**	**98**	**106.0**	**0**	**0**	**114**	**30**	**24**	**21**	**0**	**189**	**228.3**	**0**	**0**	**13**	**1**	**0**	**0**	**0**	**14**	**14.0**
TOTAL	**0**	**1**	**535**	**117**	**34**	**32**	**0**	**719**	**777.0**	**0**	**0**	**71**	**20**	**7**	**0**	**10**	**108**	**121.5**	**1**	**3**	**234**	**47**	**10**	**10**	**11**	**316**	**342.4**	**0**	**0**	**472**	**93**	**57**	**42**	**0**	**664**	**747.1**	**0**	**0**	**33**	**3**	**0**	**0**	**0**	**36**	**36.0**
16:00 - 16:15	0	0	99	18	4	3	0	124	129.9	0	1	17	2	0	0	0	20	19.4	0	2	53	4	0	2	3	64	68.4	0	0	98	20	3	2	0	123	127.1	0	0	4	2	0	0	0	6	6.0
16:15 - 16:30	0	0	67	8	3	2	0	80	84.1	0	0	19	3	0	0	0	22	22.0	0	4	43	6	1	0	0	54	52.1	0	0	66	15	4	3	0	88	93.9	0	0	4	0	0	0	0	4	4.0
16:30 - 16:45	0	1	84	14	1	2	0	102	104.5	0	0	22	3	0	0	0	25	25.0	0	3	57	5	0	0	0	65	63.2	0	0	88	13	0	1	0	102	103.3	0	0	4	0	0	0	0	4	4.0
16:45 - 17:00	0	1	82	8	1	2	0	94	96.5	0	1	19	3	0	0	3	26	28.4	0	4	44	3	2	1	3	57	59.9	0	0	66	11	2	3	0	82	86.9	0	0	5	1	0	0	0	6	6.0
Hourly Total	**0**	**2**	**332**	**48**	**9**	**9**	**0**	**400**	**415.0**	**0**	**2**	**77**	**11**	**0**	**0**	**3**	**93**	**94.8**	**0**	**13**	**197**	**18**	**3**	**3**	**6**	**240**	**243.6**	**0**	**0**	**318**	**59**	**9**	**9**	**0**	**395**	**411.2**	**0**	**0**	**17**	**3**	**0**	**0**	**0**	**20**	**20.0**
17:00 - 17:15	0	0	137	5	3	5	0	150	158.0	0	1	29	2	0	0	0	32	31.4	0	4	62	3	0	1	0	70	68.9	0	0	119	7	2	2	0	130	133.6	0	0	5	2	0	0	0	7	7.0
17:15 - 17:30	0	1	92	6	2	2	0	103	106.0	0	0	20	5	0	0	0	25	25.0	0	2	49	7	0	1	1	60	61.1	0	0	87	10	4	3	0	104	109.9	0	0	4	0	0	0	0	4	4.0
17:30 - 17:45	0	2	120	3	1	0	0	126	125.3	0	2	24	2	0	0	0	28	26.8	0	1	56	4	0	0	2	63	64.4	0	0	90	7	1	2	0	100	103.1	0	0	2	1	0	0	0	3	3.0
17:45 - 18:00	0	0	92	11	0	3	0	106	109.9	0	1	18	3	0	0	0	22	21.4	0	0	33	4	0	0	0	37	37.0	0	0	57	6	0	2	0	65	67.6	0	0	3	0	0	0	0	3	3.0
Hourly Total	**0**	**3**	**441**	**25**	**6**	**10**	**0**	**485**	**499.2**	**0**	**4**	**91**	**12**	**0**	**0**	**0**	**107**	**104.6**	**0**	**7**	**200**	**18**	**0**	**2**	**3**	**230**	**231.4**	**0**	**0**	**353**	**30**	**7**	**9**	**0**	**399**	**414.2**	**0**	**0**	**14**	**3**	**0**	**0**	**0**	**17**	**17.0**
18:00 - 18:15	0	2	101	6	2	1	0	112	113.1	0	0	23	1	0	0	3	27	30.0	0	3	47	2	1	0	2	55	55.7	0	0	73	3	0	0	1	77	78.0	0	0	2	0	0	0	0	2	2.0
18:15 - 18:30	0	2	62	6	0	1	0	71	71.1	0	0	15	3	0	0	0	18	18.0	0	3	38	3	1	1	0	46	46.0	0	1	70	6	1	2	0	80	82.5	0	0	1	0	0	0	0	1	1.0
18:30 - 18:45	0	0	99	5	1	2	0	107	110.1	0	1	22	2	0	0	1	26	26.4	0	2	35	2	0	1	1	41	42.1	0	0	54	2	2	1	0	59	61.3	0	0	2	0	0	0	0	2	2.0
18:45 - 19:00	0	0	38	6	1	1	0	46	47.8	0	0	11	0	0	0	0	11	11.0	0	2	29	0	0	0	1	32	31.8	0	0	37	0	2	0	0	39	40.0	0	0	3	0	0	0	0	3	3.0
Hourly Total	**0**	**4**	**300**	**23**	**4**	**5**	**0**	**336**	**342.1**	**0**	**1**	**71**	**6**	**0**	**0**	**4**	**82**	**85.4**	**0**	**10**	**149**	**7**	**2**	**2**	**4**	**174**	**175.6**	**0**	**1**	**234**	**11**	**5**	**3**	**1**	**255**	**261.8**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**8**	**8.0**
TOTAL	**0**	**9**	**1073**	**96**	**19**	**24**	**0**	**1221**	**1256.3**	**0**	**7**	**239**	**29**	**0**	**0**	**7**	**282**	**284.8**	**0**	**30**	**546**	**43**	**5**	**7**	**13**	**644**	**650.6**	**0**	**1**	**905**	**100**	**21**	**21**	**1**	**1049**	**1087.2**	**0**	**0**	**39**	**6**	**0**	**0**	**0**	**45**	**45.0**

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

Road Data Services Ltd

East Midlands Airport
Thursday 21st September 2023
Junction: 3
Approach: A50 J1 Slip Road West

	To B5010									To B6540									To A50 J1 Slip Road (E)									To Ryecroft Road									To Trent Lane								
TIME	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCL	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	2	0	0	0	0	2	2.0	0	0	27	9	1	1	0	38	39.8	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0	0	0	40	10	4	3	0	57	62.9
07:15 - 07:30	0	0	0	1	0	0	0	1	1.0	0	0	33	8	1	2	0	44	47.1	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0	0	0	76	12	3	3	0	94	99.4
07:30 - 07:45	0	0	0	0	0	0	0	0	0.0	0	0	47	4	2	6	0	59	67.8	0	0	0	0	0	0	0	0	0.0	0	0	4	1	0	0	0	5	5.0	0	1	79	14	3	6	0	103	111.7
07:45 - 08:00	0	0	4	2	0	0	0	6	6.0	0	0	35	7	1	4	0	47	52.7	0	0	0	0	0	0	0	0	0.0	0	0	3	0	0	0	0	3	3.0	0	0	91	10	3	1	0	105	107.8
Hourly Total	**0**	**0**	**6**	**3**	**0**	**0**	**0**	**9**	**9.0**	**0**	**0**	**142**	**28**	**5**	**13**	**0**	**188**	**207.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**10**	**1**	**0**	**0**	**0**	**11**	**11.0**	**0**	**1**	**286**	**46**	**13**	**13**	**0**	**359**	**381.8**
08:00 - 08:15	0	0	3	1	0	0	0	4	4.0	0	0	40	11	2	9	0	62	74.7	0	0	0	0	0	0	0	0	0.0	0	0	4	0	0	0	0	4	4.0	0	0	72	14	4	3	0	93	98.9
08:15 - 08:30	0	0	4	0	0	0	0	4	4.0	0	0	37	8	1	3	0	49	53.4	0	0	0	0	0	0	0	0	0.0	0	0	3	0	0	0	0	3	3.0	0	0	88	16	6	6	0	116	126.8
08:30 - 08:45	0	0	7	3	0	0	0	10	10.0	0	0	39	7	1	2	0	49	52.1	0	0	0	0	0	0	0	0	0.0	0	0	4	1	0	0	0	5	5.0	0	0	90	8	3	2	0	103	107.1
08:45 - 09:00	0	0	1	1	0	0	0	2	2.0	0	0	44	6	0	5	0	55	61.5	0	0	0	0	0	0	0	0	0.0	0	0	6	1	0	1	0	8	9.3	0	0	84	6	4	5	0	99	107.5
Hourly Total	**0**	**0**	**15**	**5**	**0**	**0**	**0**	**20**	**20.0**	**0**	**0**	**160**	**32**	**4**	**19**	**0**	**215**	**241.7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**17**	**2**	**0**	**1**	**0**	**20**	**21.3**	**0**	**0**	**334**	**44**	**17**	**16**	**0**	**411**	**440.3**
09:00 - 09:15	0	0	0	2	0	0	0	2	2.0	0	0	28	3	3	1	0	35	37.8	0	0	0	0	0	0	0	0	0.0	0	0	4	1	0	0	0	5	5.0	0	0	34	11	5	5	0	55	64.0
09:15 - 09:30	0	0	4	1	0	0	0	5	5.0	0	0	23	8	0	7	0	38	47.1	0	0	0	0	0	0	0	0	0.0	0	0	4	1	0	0	0	5	5.0	0	0	42	7	3	7	0	59	69.6
09:30 - 09:45	0	0	4	1	0	0	0	5	5.0	0	0	20	8	1	2	0	31	34.1	0	0	0	0	0	0	0	0	0.0	0	0	3	0	0	0	0	3	3.0	0	0	32	9	2	4	0	47	53.2
09:45 - 10:00	0	0	4	2	0	0	0	6	6.0	0	1	30	10	1	4	0	46	51.1	0	0	0	0	0	0	0	0	0.0	0	0	2	1	0	0	0	3	3.0	0	0	31	5	1	2	0	39	42.1
Hourly Total	**0**	**0**	**12**	**6**	**0**	**0**	**0**	**18**	**18.0**	**0**	**1**	**101**	**29**	**5**	**14**	**0**	**150**	**170.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**13**	**3**	**0**	**0**	**0**	**16**	**16.0**	**0**	**0**	**139**	**32**	**11**	**18**	**0**	**200**	**228.9**
TOTAL	**0**	**0**	**33**	**14**	**0**	**0**	**0**	**47**	**47.0**	**0**	**1**	**403**	**89**	**14**	**46**	**0**	**553**	**619.2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**40**	**6**	**0**	**1**	**0**	**47**	**48.3**	**0**	**1**	**759**	**122**	**41**	**47**	**0**	**970**	**1051.0**
16:00 - 16:15	0	0	6	0	0	0	0	6	6.0	0	0	45	8	2	0	0	55	56.0	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0	0	0	53	7	2	4	0	66	72.2
16:15 - 16:30	0	0	5	0	0	0	0	5	5.0	0	0	41	8	1	3	0	53	57.4	0	0	0	0	0	0	0	0	0.0	0	0	2	1	0	0	0	3	3.0	0	0	52	11	4	5	0	72	80.5
16:30 - 16:45	0	0	5	1	0	0	0	6	6.0	0	1	38	7	0	1	0	47	47.7	0	0	0	0	0	0	0	0	0.0	0	0	4	2	0	0	0	6	6.0	0	0	57	7	3	3	0	70	75.4
16:45 - 17:00	0	0	5	0	0	0	0	5	5.0	0	0	37	6	0	1	0	44	45.3	0	0	0	0	0	0	0	0	0.0	0	0	3	1	0	0	0	4	4.0	0	0	55	9	1	4	0	69	74.7
Hourly Total	**0**	**0**	**21**	**1**	**0**	**0**	**0**	**22**	**22.0**	**0**	**1**	**161**	**29**	**3**	**5**	**0**	**199**	**206.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**11**	**4**	**0**	**0**	**0**	**15**	**15.0**	**0**	**0**	**217**	**34**	**10**	**16**	**0**	**277**	**302.8**
17:00 - 17:15	0	0	4	2	0	0	0	6	6.0	0	1	31	7	1	1	0	41	42.2	0	0	0	0	0	0	0	0	0.0	0	0	4	0	0	0	0	4	4.0	0	0	74	8	4	3	0	89	94.9
17:15 - 17:30	0	1	4	0	0	0	0	5	4.4	0	1	41	7	0	2	0	51	53.0	0	0	0	0	0	0	0	0	0.0	0	0	3	1	0	0	0	4	4.0	0	0	63	10	0	2	0	75	77.6
17:30 - 17:45	0	0	5	0	0	0	0	5	5.0	0	0	50	7	0	1	0	58	59.3	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0	0	2	95	4	1	2	0	104	105.9
17:45 - 18:00	0	0	4	0	0	0	0	4	4.0	0	0	36	6	0	1	0	43	44.3	0	0	0	0	0	0	0	0	0.0	0	0	3	1	0	0	0	4	4.0	0	0	85	6	3	3	0	97	102.4
Hourly Total	**0**	**1**	**17**	**2**	**0**	**0**	**0**	**20**	**19.4**	**0**	**2**	**158**	**27**	**1**	**5**	**0**	**193**	**198.8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**12**	**2**	**0**	**0**	**0**	**14**	**14.0**	**0**	**2**	**317**	**28**	**8**	**10**	**0**	**365**	**380.8**
18:00 - 18:15	0	0	6	1	0	0	0	7	7.0	0	0	43	4	0	2	0	49	51.6	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0	0	3	67	4	0	2	0	76	76.8
18:15 - 18:30	0	0	3	0	0	0	0	3	3.0	0	0	25	2	2	0	0	29	30.0	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0	0	2	62	4	0	0	0	68	66.8
18:30 - 18:45	0	0	5	0	0	0	0	5	5.0	0	2	31	1	0	1	0	35	35.1	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0	0	0	58	3	0	3	0	64	67.9
18:45 - 19:00	0	0	6	0	0	0	0	6	6.0	0	1	18	2	0	0	0	21	20.4	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0	0	0	49	2	0	0	0	51	51.0
Hourly Total	**0**	**0**	**20**	**1**	**0**	**0**	**0**	**21**	**21.0**	**0**	**3**	**117**	**9**	**2**	**3**	**0**	**134**	**137.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**6**	**6.0**	**0**	**5**	**236**	**13**	**0**	**5**	**0**	**259**	**262.5**
TOTAL	**0**	**1**	**58**	**4**	**0**	**0**	**0**	**63**	**62.4**	**0**	**6**	**436**	**65**	**6**	**13**	**0**	**526**	**542.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**29**	**6**	**0**	**0**	**0**	**35**	**35.0**	**0**	**7**	**770**	**75**	**18**	**31**	**0**	**901**	**946.1**

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

APPENDIX 13 – M1 Junction 25 Turning Count Results

Road Data Services Ltd

East Midlands Airport
Tuesday 26th September 2023
Junction: 1
Approach: M1 J25 Slip Road North

	To A52 (E)									To Bostocks Lane (E)									To M1 J25 Slip Road (S)									To A52 (W)									To Bostocks Lane (W)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	28	14	1	3	0	46	50.4	0	1	39	7	8	1	0	56	60.7	0	0	0	0	0	0	0	0	0.0	0	0	104	45	8	4	0	161	170.2	0	1	13	6	2	2	0	24	27.0
07:15 - 07:30	0	0	47	19	2	0	0	68	69.0	0	0	50	26	2	2	0	80	83.6	0	0	0	0	0	0	0	0	0.0	0	0	126	37	5	4	0	172	179.7	0	0	29	7	2	2	0	40	43.6
07:30 - 07:45	0	0	59	25	1	1	0	86	87.8	0	2	37	9	5	1	0	54	56.6	0	0	0	0	0	0	0	0	0.0	0	0	121	41	9	2	0	173	180.1	0	0	20	12	1	1	0	34	35.8
07:45 - 08:00	0	0	54	22	2	2	0	80	83.6	0	1	67	20	4	1	0	93	95.7	0	0	0	0	0	0	0	0	0.0	0	1	111	33	5	4	0	154	161.1	0	0	27	4	2	0	0	33	34.0
Hourly Total	**0**	**0**	**188**	**80**	**6**	**6**	**0**	**280**	**290.8**	**0**	**4**	**193**	**62**	**19**	**5**	**0**	**283**	**296.6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**462**	**156**	**27**	**14**	**0**	**660**	**691.1**	**0**	**1**	**89**	**29**	**7**	**5**	**0**	**131**	**140.4**
08:00 - 08:15	0	0	58	18	2	2	0	80	83.6	0	0	66	14	6	0	0	86	89.0	0	0	0	0	0	0	0	0	0.0	0	1	111	28	6	0	0	146	148.4	0	0	28	9	6	0	0	43	46.0
08:15 - 08:30	0	0	73	14	4	3	0	94	99.9	0	1	36	15	1	2	0	55	57.5	0	0	0	0	0	0	0	0	0.0	0	0	98	31	5	2	0	136	141.1	0	0	29	9	1	0	0	39	39.5
08:30 - 08:45	0	1	78	16	4	2	0	101	105.0	0	1	60	19	4	5	0	89	96.9	0	0	0	0	0	0	0	0	0.0	0	0	100	20	5	1	0	126	129.8	0	0	30	5	2	1	0	38	40.3
08:45 - 09:00	0	0	35	7	4	3	0	49	54.9	0	0	22	6	0	0	0	28	28.0	0	0	0	0	0	0	0	0	0.0	0	0	52	17	1	2	0	72	75.1	0	0	17	4	1	4	0	26	31.7
Hourly Total	**0**	**1**	**244**	**55**	**14**	**10**	**0**	**324**	**343.4**	**0**	**2**	**184**	**54**	**11**	**7**	**0**	**258**	**271.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**361**	**96**	**17**	**5**	**0**	**480**	**494.4**	**0**	**0**	**104**	**27**	**10**	**5**	**0**	**146**	**157.5**
09:00 - 09:15	0	0	25	9	4	0	0	38	40.0	0	0	27	12	1	1	0	41	42.8	0	0	0	0	0	0	0	0	0.0	0	0	51	14	2	2	0	69	72.6	0	0	16	6	1	1	0	24	25.8
09:15 - 09:30	0	0	55	10	3	0	0	68	69.5	0	0	32	6	0	0	0	38	38.0	0	0	0	0	0	0	0	0	0.0	0	0	50	18	7	1	0	76	80.8	0	0	21	9	2	1	0	33	35.3
09:30 - 09:45	0	0	42	7	3	0	0	52	53.5	0	0	21	5	0	1	0	27	28.3	0	0	0	0	0	0	0	0	0.0	0	0	63	13	5	7	0	88	99.6	0	0	24	7	3	1	0	35	37.8
09:45 - 10:00	0	0	27	8	3	3	0	41	46.4	0	0	27	13	2	0	0	42	43.0	0	0	0	0	0	0	0	0	0.0	0	0	25	13	6	4	0	48	56.2	0	0	15	5	2	1	0	23	25.3
Hourly Total	**0**	**0**	**149**	**34**	**13**	**3**	**0**	**199**	**209.4**	**0**	**0**	**107**	**36**	**3**	**2**	**0**	**148**	**152.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**189**	**58**	**20**	**14**	**0**	**281**	**309.2**	**0**	**0**	**76**	**27**	**8**	**4**	**0**	**115**	**124.2**
TOTAL	**0**	**1**	**581**	**169**	**33**	**19**	**0**	**803**	**843.6**	**0**	**6**	**484**	**152**	**33**	**14**	**0**	**689**	**720.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**2**	**1012**	**310**	**64**	**33**	**0**	**1421**	**1494.7**	**0**	**1**	**269**	**83**	**25**	**14**	**0**	**392**	**422.1**
16:00 - 16:15	0	0	33	17	3	2	0	55	59.1	0	0	40	13	0	0	0	53	53.0	0	0	0	0	0	0	0	0	0.0	0	0	59	19	2	3	1	84	89.9	0	0	16	13	3	0	0	32	33.5
16:15 - 16:30	0	0	49	16	2	1	0	68	70.3	0	0	60	13	2	0	0	75	76.0	0	0	0	0	0	0	0	0	0.0	0	0	63	20	2	6	0	91	99.8	0	0	20	6	2	1	0	29	31.3
16:30 - 16:45	0	2	57	13	2	0	0	74	73.8	0	0	47	11	0	0	0	58	58.0	0	0	0	0	0	0	0	0	0.0	0	0	60	8	1	2	0	71	74.1	0	0	28	15	2	1	0	46	48.3
16:45 - 17:00	0	0	55	4	0	0	0	59	59.0	0	0	41	11	0	0	1	53	54.0	0	0	0	0	0	0	0	0	0.0	0	0	61	18	2	0	0	81	82.0	0	0	27	9	1	0	0	37	37.5
Hourly Total	**0**	**2**	**194**	**50**	**7**	**3**	**0**	**256**	**262.2**	**0**	**0**	**188**	**48**	**2**	**0**	**1**	**239**	**241.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**243**	**65**	**7**	**11**	**1**	**327**	**345.8**	**0**	**0**	**91**	**43**	**8**	**2**	**0**	**144**	**150.6**
17:00 - 17:15	0	1	38	14	3	0	0	56	56.9	0	0	42	15	2	0	0	59	60.0	0	0	0	0	0	0	0	0	0.0	0	0	54	12	2	2	0	70	73.6	0	0	24	12	0	2	0	38	40.6
17:15 - 17:30	0	0	62	5	2	0	0	69	70.0	0	0	67	12	0	0	0	79	79.0	0	0	0	0	0	0	0	0	0.0	0	0	73	7	1	4	0	85	90.7	0	0	32	10	4	2	0	48	52.6
17:30 - 17:45	0	0	57	10	0	1	0	68	69.3	0	0	52	8	0	0	0	60	60.0	0	0	0	0	0	0	0	0	0.0	0	0	45	6	2	2	0	55	58.6	0	0	26	7	2	1	0	36	38.3
17:45 - 18:00	0	1	63	10	1	1	0	76	77.2	0	1	48	8	1	0	0	58	57.9	0	0	0	0	0	0	0	0	0.0	0	0	54	8	1	0	1	64	65.5	0	1	23	4	1	0	0	29	28.9
Hourly Total	**0**	**2**	**220**	**39**	**6**	**2**	**0**	**269**	**273.4**	**0**	**1**	**209**	**43**	**3**	**0**	**0**	**256**	**256.9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**226**	**33**	**6**	**8**	**1**	**274**	**288.4**	**0**	**1**	**105**	**33**	**7**	**5**	**0**	**151**	**160.4**
18:00 - 18:15	0	0	47	6	0	1	0	54	55.3	0	0	39	8	2	0	0	49	50.0	0	0	0	0	0	0	0	0	0.0	0	0	45	9	0	0	0	54	54.0	0	0	25	4	2	2	0	33	36.6
18:15 - 18:30	0	0	41	5	0	0	0	46	46.0	0	0	54	5	3	1	0	63	65.8	0	0	0	0	0	0	0	0	0.0	0	0	41	8	0	2	0	51	53.6	0	0	18	2	0	2	0	22	24.6
18:30 - 18:45	0	0	31	2	0	0	0	33	33.0	0	0	42	3	0	4	0	49	54.2	0	0	0	0	0	0	0	0	0.0	0	0	36	8	2	0	0	46	47.0	0	0	14	3	2	0	0	19	20.0
18:45 - 19:00	0	0	33	5	1	1	0	40	41.8	0	0	32	2	0	7	0	41	50.1	0	0	0	0	0	0	0	0	0.0	0	0	33	6	0	0	0	39	39.0	0	0	16	2	0	0	0	18	18.0
Hourly Total	**0**	**0**	**152**	**18**	**1**	**2**	**0**	**173**	**176.1**	**0**	**0**	**167**	**18**	**5**	**12**	**0**	**202**	**220.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**155**	**31**	**2**	**2**	**0**	**190**	**193.6**	**0**	**0**	**73**	**11**	**4**	**4**	**0**	**92**	**99.2**
TOTAL	**0**	**4**	**566**	**107**	**14**	**7**	**0**	**698**	**711.7**	**0**	**1**	**564**	**109**	**10**	**12**	**1**	**697**	**718.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**624**	**129**	**15**	**21**	**2**	**791**	**827.8**	**0**	**1**	**269**	**87**	**19**	**11**	**0**	**387**	**410.2**

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

Road Data Services Ltd

East Midlands Airport
Tuesday 26th September 2023
Junction: 1
Approach: A52 East

	To Bostocks Lane (E)									To M1 J25 Slip Road (S)									To A52 (W)									To Bostocks Lane (W)									To M1 J25 Slip Road (N)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	12	3	0	0	0	15	15.0	0	0	123	21	2	2	0	148	151.6	0	0	0	0	0	0	0	0	0.0	0	0	9	2	0	0	1	12	13.0	0	0	40	12	2	1	0	55	57.3
07:15 - 07:30	0	0	35	9	0	0	0	44	44.0	0	1	94	20	2	1	0	118	119.7	0	0	0	0	0	0	0	0	0.0	0	0	16	2	1	1	0	20	21.8	0	0	73	10	5	0	0	88	90.5
07:30 - 07:45	0	0	36	0	0	1	0	37	38.3	0	0	97	20	3	0	1	121	123.5	0	0	0	0	0	0	0	0	0.0	0	0	22	4	1	0	0	27	27.5	0	0	90	15	2	2	0	109	112.6
07:45 - 08:00	0	0	36	5	0	0	0	41	41.0	0	0	99	27	6	3	2	137	145.9	0	0	0	0	0	0	0	0	0.0	0	0	17	2	1	0	0	20	20.5	0	1	59	9	5	0	0	74	75.9
Hourly Total	**0**	**0**	**119**	**17**	**0**	**1**	**0**	**137**	**138.3**	**0**	**1**	**413**	**88**	**13**	**6**	**3**	**524**	**540.7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**64**	**10**	**3**	**1**	**1**	**79**	**82.8**	**0**	**1**	**262**	**46**	**14**	**3**	**0**	**326**	**336.3**
08:00 - 08:15	0	0	40	8	1	0	0	49	49.5	0	2	103	7	3	3	0	118	122.2	0	0	0	0	0	0	0	0	0.0	0	0	12	3	1	0	0	16	16.5	0	0	46	7	3	2	0	58	62.1
08:15 - 08:30	0	0	57	7	1	1	0	66	67.8	0	1	64	12	2	1	0	80	81.7	0	0	0	0	0	0	0	0	0.0	0	0	29	3	1	0	0	33	33.5	0	0	68	9	1	4	0	82	87.7
08:30 - 08:45	0	0	39	2	0	0	0	41	41.0	0	0	69	17	3	3	0	92	97.4	0	0	0	0	0	0	0	0	0.0	0	0	16	5	1	1	0	23	24.8	0	0	48	7	2	1	0	58	60.3
08:45 - 09:00	0	0	29	6	2	1	0	38	40.3	0	0	69	12	5	2	0	88	93.1	0	0	0	0	0	0	0	0	0.0	0	0	27	3	1	1	0	32	33.8	0	0	36	7	1	3	0	47	51.4
Hourly Total	**0**	**0**	**165**	**23**	**4**	**2**	**0**	**194**	**198.6**	**0**	**3**	**305**	**48**	**13**	**9**	**0**	**378**	**394.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**84**	**14**	**4**	**2**	**0**	**104**	**108.6**	**0**	**0**	**198**	**30**	**7**	**10**	**0**	**245**	**261.5**
09:00 - 09:15	0	0	25	2	1	0	0	28	28.5	0	1	46	10	2	6	2	67	77.2	0	0	0	0	0	0	0	0	0.0	0	0	14	3	1	1	0	19	20.8	0	0	39	8	4	1	1	53	57.3
09:15 - 09:30	0	0	20	11	1	0	0	32	32.5	0	0	60	9	4	1	0	74	77.3	0	0	0	0	0	0	0	0	0.0	0	0	13	3	1	1	0	18	19.8	0	0	33	7	3	1	0	44	46.8
09:30 - 09:45	0	0	28	4	0	0	0	32	32.0	0	0	39	10	6	2	0	57	62.6	0	0	0	0	0	0	0	0	0.0	0	0	20	5	1	1	0	27	28.8	0	0	41	7	2	1	1	52	55.3
09:45 - 10:00	0	0	26	5	0	0	0	31	31.0	0	0	38	6	2	2	0	48	51.6	0	0	0	0	0	0	0	0	0.0	0	0	12	2	1	1	0	16	17.8	0	0	18	4	1	1	0	24	25.8
Hourly Total	**0**	**0**	**99**	**22**	**2**	**0**	**0**	**123**	**124.0**	**0**	**1**	**183**	**35**	**14**	**11**	**2**	**246**	**268.7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**59**	**13**	**4**	**4**	**0**	**80**	**87.2**	**0**	**0**	**131**	**26**	**10**	**4**	**2**	**173**	**185.2**
TOTAL	**0**	**0**	**383**	**62**	**6**	**3**	**0**	**454**	**460.9**	**0**	**5**	**901**	**171**	**40**	**26**	**5**	**1148**	**1203.8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**207**	**37**	**11**	**7**	**1**	**263**	**278.6**	**0**	**1**	**591**	**102**	**31**	**17**	**2**	**744**	**783.0**
16:00 - 16:15	0	2	66	13	3	0	0	84	84.3	0	1	87	10	4	0	0	102	103.4	0	0	0	0	0	0	0	0	0.0	0	0	23	5	1	0	0	29	29.5	0	1	51	20	4	0	0	76	77.4
16:15 - 16:30	0	1	84	9	1	0	0	95	94.9	0	0	89	16	3	1	1	110	113.8	0	0	0	0	0	0	0	0	0.0	0	1	17	4	1	1	0	24	25.2	0	0	56	13	2	0	0	71	72.0
16:30 - 16:45	0	0	82	11	2	0	0	95	96.0	0	0	61	14	4	1	0	80	83.3	0	0	0	0	0	0	0	0	0.0	0	0	27	13	1	1	0	42	43.8	0	1	83	20	2	0	0	106	106.4
16:45 - 17:00	0	1	89	9	0	0	0	99	98.4	0	0	76	15	1	1	0	93	94.8	0	0	0	0	0	0	0	0	0.0	0	0	32	5	1	1	0	39	40.8	0	2	92	11	3	0	0	108	108.3
Hourly Total	**0**	**4**	**321**	**42**	**6**	**0**	**0**	**373**	**373.6**	**0**	**1**	**313**	**55**	**12**	**3**	**1**	**385**	**395.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**99**	**27**	**4**	**3**	**0**	**134**	**139.3**	**0**	**4**	**282**	**64**	**11**	**0**	**0**	**361**	**364.1**
17:00 - 17:15	0	0	88	8	2	0	0	98	99.0	0	0	88	13	2	3	0	106	110.9	0	0	0	0	0	0	0	0	0.0	0	0	29	6	0	1	0	36	37.3	0	0	84	18	3	3	1	109	115.4
17:15 - 17:30	0	0	98	9	1	0	0	108	108.5	0	0	103	14	0	1	0	118	119.3	0	0	0	0	0	0	0	0	0.0	0	0	22	6	0	0	0	28	28.0	0	0	70	11	0	1	0	82	83.3
17:30 - 17:45	0	1	87	10	0	0	0	98	97.4	0	0	79	7	1	1	0	88	89.8	0	0	0	0	0	0	0	0	0.0	0	0	26	4	1	1	0	32	33.8	0	0	60	12	1	0	0	73	73.6
17:45 - 18:00	0	0	97	9	0	0	0	106	106.0	0	0	95	6	0	0	1	102	103.0	0	0	0	0	0	0	0	0	0.0	0	0	28	3	0	0	0	31	31.0	0	0	58	5	0	0	0	63	63.0
Hourly Total	**0**	**1**	**370**	**36**	**3**	**0**	**0**	**410**	**410.9**	**0**	**0**	**365**	**40**	**3**	**5**	**1**	**414**	**423.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**105**	**19**	**1**	**2**	**0**	**127**	**130.1**	**0**	**0**	**272**	**46**	**4**	**4**	**1**	**327**	**335.2**
18:00 - 18:15	0	1	75	11	1	0	1	89	89.9	0	0	48	6	2	2	0	58	61.6	0	0	0	0	0	0	0	0	0.0	0	0	24	2	1	1	0	28	29.8	0	0	47	3	3	2	0	55	59.1
18:15 - 18:30	0	0	79	6	1	0	0	86	86.5	0	0	41	5	2	3	0	51	55.9	0	0	0	0	0	0	0	0	0.0	0	0	17	2	0	2	0	21	23.6	0	0	32	2	0	2	0	36	38.6
18:30 - 18:45	0	0	48	5	0	0	0	53	53.0	0	0	51	4	0	0	0	55	55.0	0	0	0	0	0	0	0	0	0.0	0	1	21	4	0	0	0	26	25.4	0	0	34	4	0	0	0	38	38.0
18:45 - 19:00	0	0	62	3	1	0	1	67	68.5	0	0	35	4	0	3	0	42	45.9	0	0	0	0	0	0	0	0	0.0	0	0	17	3	0	0	0	20	20.0	0	0	31	4	0	0	0	35	35.0
Hourly Total	**0**	**1**	**264**	**25**	**3**	**0**	**2**	**295**	**297.9**	**0**	**0**	**175**	**19**	**4**	**8**	**0**	**206**	**218.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**79**	**11**	**1**	**3**	**0**	**95**	**98.8**	**0**	**0**	**144**	**13**	**3**	**4**	**0**	**164**	**170.7**
TOTAL	**0**	**6**	**955**	**103**	**12**	**0**	**2**	**1078**	**1082.4**	**0**	**1**	**853**	**114**	**19**	**16**	**2**	**1005**	**1036.7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**2**	**283**	**57**	**6**	**8**	**0**	**356**	**368.2**	**0**	**4**	**698**	**123**	**18**	**8**	**1**	**852**	**870.0**

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

Road Data Services Ltd

East Midlands Airport
Tuesday 26th September 2023
Junction: 1
Approach: Bostocks Lane East

	To M1 J25 Slip Road (S)									To A52 (W)									To Bostocks Lane (W)									To M1 J25 Slip Road (N)									To A52 (E)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	43	9	0	2	0	54	56.6	0	0	62	9	2	0	0	73	74.0	0	0	9	2	0	0	0	11	11.0	0	0	38	21	2	0	0	61	62.0	0	0	21	3	0	0	0	24	24.0
07:15 - 07:30	0	0	52	8	3	0	0	63	64.5	0	1	38	8	1	0	0	48	47.9	0	0	8	3	0	0	0	11	11.0	0	0	46	15	1	0	0	62	62.5	0	1	35	1	0	0	0	37	36.4
07:30 - 07:45	0	1	34	8	2	2	0	47	50.0	0	0	49	6	1	0	0	56	56.5	0	0	9	2	0	0	0	11	11.0	0	0	37	7	1	0	0	45	45.5	0	0	35	5	0	0	0	40	40.0
07:45 - 08:00	0	0	54	8	0	1	0	63	64.3	0	1	50	6	1	0	0	58	57.9	0	0	11	2	1	0	0	14	14.5	0	0	41	11	1	0	0	53	53.5	0	0	29	2	1	0	0	32	32.5
Hourly Total	**0**	**1**	**183**	**33**	**5**	**5**	**0**	**227**	**235.4**	**0**	**2**	**199**	**29**	**5**	**0**	**0**	**235**	**236.3**	**0**	**0**	**37**	**9**	**1**	**0**	**0**	**47**	**47.5**	**0**	**0**	**162**	**54**	**5**	**0**	**0**	**221**	**223.5**	**0**	**1**	**120**	**11**	**1**	**0**	**0**	**133**	**132.9**
08:00 - 08:15	0	1	57	7	2	3	0	70	74.3	0	0	45	6	1	0	0	52	52.5	0	0	9	4	1	0	0	14	14.5	0	0	43	10	7	1	0	61	65.8	0	0	25	6	2	1	0	34	36.3
08:15 - 08:30	0	0	39	6	1	1	0	47	48.8	0	0	47	7	0	0	0	54	54.0	0	0	14	2	0	0	0	16	16.0	0	0	33	6	0	0	0	39	39.0	0	0	54	3	0	0	0	57	57.0
08:30 - 08:45	0	0	27	8	3	3	0	41	46.4	0	0	42	7	1	0	0	50	50.5	0	0	12	2	0	0	0	14	14.0	0	0	37	4	1	0	0	42	42.5	0	0	40	4	1	0	0	45	45.5
08:45 - 09:00	0	0	39	6	0	0	0	45	45.0	0	0	53	9	1	1	0	64	65.8	0	0	14	2	1	1	0	18	19.8	0	0	24	3	5	1	3	36	42.8	0	0	51	4	1	1	0	57	58.8
Hourly Total	**0**	**1**	**162**	**27**	**6**	**7**	**0**	**203**	**214.5**	**0**	**0**	**187**	**29**	**3**	**1**	**0**	**220**	**222.8**	**0**	**0**	**49**	**10**	**2**	**1**	**0**	**62**	**64.3**	**0**	**0**	**137**	**23**	**13**	**2**	**3**	**178**	**190.1**	**0**	**0**	**170**	**17**	**4**	**2**	**0**	**193**	**197.6**
09:00 - 09:15	0	0	33	5	2	0	0	40	41.0	0	0	41	7	1	0	0	49	49.5	0	0	14	4	1	0	0	19	19.5	0	0	36	14	4	1	1	56	60.3	0	0	51	3	2	0	0	56	57.0
09:15 - 09:30	0	0	19	4	6	2	0	31	36.6	0	0	43	6	1	0	0	50	50.5	0	0	16	4	0	1	0	21	22.3	0	0	42	13	2	1	3	61	66.3	0	0	40	5	1	0	0	46	46.5
09:30 - 09:45	0	0	16	5	1	3	0	25	29.4	0	0	36	6	2	0	0	44	45.0	0	0	13	3	1	0	0	17	17.5	0	0	27	7	2	0	3	39	43.0	0	0	37	3	1	0	0	41	41.5
09:45 - 10:00	0	0	16	3	0	1	0	20	21.3	0	0	32	9	2	0	0	43	44.0	0	0	16	3	1	0	0	20	20.5	0	0	26	13	2	0	0	41	42.0	0	1	45	5	2	0	0	53	53.4
Hourly Total	**0**	**0**	**84**	**17**	**9**	**6**	**0**	**116**	**128.3**	**0**	**0**	**152**	**28**	**6**	**0**	**0**	**186**	**189.0**	**0**	**0**	**59**	**14**	**3**	**1**	**0**	**77**	**79.8**	**0**	**0**	**131**	**47**	**10**	**2**	**7**	**197**	**211.6**	**0**	**1**	**173**	**16**	**6**	**0**	**0**	**196**	**198.4**
TOTAL	**0**	**2**	**429**	**77**	**20**	**18**	**0**	**546**	**578.2**	**0**	**2**	**538**	**86**	**14**	**1**	**0**	**641**	**648.1**	**0**	**0**	**145**	**33**	**6**	**2**	**0**	**186**	**191.6**	**0**	**0**	**430**	**124**	**28**	**4**	**10**	**596**	**625.2**	**0**	**2**	**463**	**44**	**11**	**2**	**0**	**522**	**528.9**
16:00 - 16:15	0	0	12	8	0	0	0	20	20.0	0	0	44	3	0	0	0	47	47.0	0	0	14	2	1	0	0	17	17.5	0	1	24	7	2	0	0	34	34.4	0	1	22	2	0	0	0	25	24.4
16:15 - 16:30	0	0	10	2	0	1	0	13	14.3	0	0	32	3	0	0	0	35	35.0	0	1	9	2	1	0	0	13	12.9	0	0	32	6	0	0	0	38	38.0	0	0	13	2	1	0	0	16	16.5
16:30 - 16:45	0	0	32	5	0	4	0	41	46.2	0	0	44	3	0	0	0	47	47.0	0	0	19	5	0	0	0	24	24.0	0	2	64	7	2	0	0	75	74.8	0	0	40	4	1	0	0	45	45.5
16:45 - 17:00	0	0	23	1	0	1	0	25	26.3	0	0	40	6	0	0	0	46	46.0	0	0	18	4	0	0	0	22	22.0	0	1	58	11	2	0	0	72	72.4	0	0	39	3	0	0	0	42	42.0
Hourly Total	**0**	**0**	**77**	**16**	**0**	**6**	**0**	**99**	**106.8**	**0**	**0**	**160**	**15**	**0**	**0**	**0**	**175**	**175.0**	**0**	**1**	**60**	**13**	**2**	**0**	**0**	**76**	**76.4**	**0**	**4**	**178**	**31**	**6**	**0**	**0**	**219**	**219.6**	**0**	**1**	**114**	**11**	**2**	**0**	**0**	**128**	**128.4**
17:00 - 17:15	0	0	48	6	0	1	0	55	56.3	0	0	49	3	0	0	0	52	52.0	0	0	18	3	0	0	0	21	21.0	0	0	57	8	1	0	0	66	66.5	0	0	38	3	1	0	0	42	42.5
17:15 - 17:30	0	0	39	7	1	0	0	47	47.5	0	0	46	2	0	0	0	48	48.0	0	0	19	3	0	0	0	22	22.0	0	0	70	5	0	0	0	75	75.0	0	0	45	7	0	0	0	52	52.0
17:30 - 17:45	0	0	29	4	0	1	0	34	35.3	0	2	49	5	0	0	0	56	54.8	0	0	29	5	1	0	0	35	35.5	0	0	65	12	1	0	0	78	78.5	0	1	53	5	0	0	0	59	58.4
17:45 - 18:00	0	0	24	2	0	0	1	27	28.0	0	0	48	6	0	0	1	55	56.0	0	0	22	2	0	0	0	24	24.0	0	0	44	3	0	0	1	48	49.0	0	0	39	2	0	0	2	43	45.0
Hourly Total	**0**	**0**	**140**	**19**	**1**	**2**	**1**	**163**	**167.1**	**0**	**2**	**192**	**16**	**0**	**0**	**1**	**211**	**210.8**	**0**	**0**	**88**	**13**	**1**	**0**	**0**	**102**	**102.5**	**0**	**0**	**236**	**28**	**2**	**0**	**1**	**267**	**269.0**	**0**	**1**	**175**	**17**	**1**	**0**	**2**	**196**	**197.9**
18:00 - 18:15	0	0	20	3	0	2	0	25	27.6	0	0	34	3	0	0	0	37	37.0	0	0	19	3	1	0	0	23	23.5	0	0	35	10	1	0	0	46	46.5	0	0	34	3	0	0	0	37	37.0
18:15 - 18:30	0	0	15	3	0	0	0	18	18.0	0	0	39	4	0	0	0	43	43.0	0	1	15	2	0	0	0	18	17.4	0	0	29	2	0	0	0	31	31.0	0	0	31	2	0	0	0	33	33.0
18:30 - 18:45	0	0	19	1	2	0	0	22	23.0	0	0	33	6	0	0	1	40	41.0	0	1	14	3	0	0	0	18	17.4	0	0	19	3	0	0	0	22	22.0	0	1	44	4	0	0	0	49	48.4
18:45 - 19:00	0	0	13	3	0	2	0	18	20.6	0	0	30	4	0	0	0	34	34.0	0	0	15	2	0	0	0	17	17.0	0	0	27	2	0	0	0	29	29.0	0	0	35	1	0	0	0	36	36.0
Hourly Total	**0**	**0**	**67**	**10**	**2**	**4**	**0**	**83**	**89.2**	**0**	**0**	**136**	**17**	**0**	**0**	**1**	**154**	**155.0**	**0**	**2**	**63**	**10**	**1**	**0**	**0**	**76**	**75.3**	**0**	**0**	**110**	**17**	**1**	**0**	**0**	**128**	**128.5**	**0**	**1**	**144**	**10**	**0**	**0**	**0**	**155**	**154.4**
TOTAL	**0**	**0**	**284**	**45**	**3**	**12**	**1**	**345**	**363.1**	**0**	**2**	**488**	**48**	**0**	**0**	**2**	**540**	**540.8**	**0**	**3**	**211**	**36**	**4**	**0**	**0**	**254**	**254.2**	**0**	**4**	**524**	**76**	**9**	**0**	**1**	**614**	**617.1**	**0**	**3**	**433**	**38**	**3**	**0**	**2**	**479**	**480.7**

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

Road Data Services Ltd

East Midlands Airport
Tuesday 26th September 2023
Junction: 1
Approach: M1 J25 Slip Road South

	To A52 (W)									To Bostocks Lane (W)										To M1 J25 Slip Road (N)										To A52 (E)										To Bostocks Lane (E)									
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	36	14	4	4	0	58	65.2	0	0	15	6	0	2	0	23	25.6	0	0	0	0	0	0	0	0	0.0	0	0	51	10	2	4	0	67	73.2	0	0	11	5	3	1	0	20	22.8
07:15 - 07:30	0	0	48	15	0	4	0	67	72.2	0	0	15	13	2	4	0	34	40.2	0	0	0	0	0	0	0	0	0.0	0	0	62	12	3	1	0	78	80.8	0	0	27	4	2	1	0	34	36.3
07:30 - 07:45	0	0	50	16	2	5	0	73	80.5	0	0	18	11	5	4	0	38	45.7	0	0	0	0	0	0	0	0	0.0	0	0	64	18	5	6	0	93	103.3	0	0	41	7	4	2	0	54	58.6
07:45 - 08:00	0	1	50	18	2	2	0	73	76.0	0	0	31	10	2	7	0	50	60.1	0	0	0	0	0	0	0	0	0.0	0	0	83	17	7	2	1	110	117.1	0	0	40	4	3	2	0	49	53.1
Hourly Total	**0**	**1**	**184**	**63**	**8**	**15**	**0**	**271**	**293.9**	**0**	**0**	**79**	**40**	**9**	**17**	**0**	**145**	**171.6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**260**	**57**	**17**	**13**	**1**	**348**	**374.4**	**0**	**0**	**119**	**20**	**12**	**6**	**0**	**157**	**170.8**
08:00 - 08:15	0	0	62	11	6	2	0	81	86.6	0	0	32	10	4	1	0	47	50.3	0	0	0	0	0	0	0	0	0.0	0	0	80	24	3	8	0	115	126.9	0	0	33	6	2	4	0	45	51.2
08:15 - 08:30	0	0	56	5	0	3	0	64	67.9	0	0	25	11	2	1	0	39	41.3	0	0	0	0	0	0	0	0	0.0	0	0	75	18	2	5	0	100	107.5	0	0	39	10	2	1	0	52	54.3
08:30 - 08:45	0	0	36	7	3	2	0	48	52.1	0	0	17	7	2	1	0	27	29.3	0	0	0	0	0	0	0	0	0.0	0	0	65	14	5	2	0	86	91.1	0	0	31	4	4	2	0	41	45.6
08:45 - 09:00	0	0	30	3	2	4	0	39	45.2	0	0	22	6	3	2	0	33	37.1	0	0	0	0	0	0	0	0	0.0	0	0	79	6	6	8	0	99	112.4	0	0	16	7	3	0	0	26	27.5
Hourly Total	**0**	**0**	**184**	**26**	**11**	**11**	**0**	**232**	**251.8**	**0**	**0**	**96**	**34**	**11**	**5**	**0**	**146**	**158.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**299**	**62**	**16**	**23**	**0**	**400**	**437.9**	**0**	**0**	**119**	**27**	**11**	**7**	**0**	**164**	**178.6**
09:00 - 09:15	0	0	34	3	2	1	0	40	42.3	0	0	13	13	2	3	0	31	35.9	0	0	0	0	0	0	0	0	0.0	0	0	51	11	5	1	0	68	71.8	0	0	23	4	1	3	0	31	35.4
09:15 - 09:30	0	0	27	4	1	3	0	35	39.4	0	0	16	8	2	7	0	33	43.1	0	0	0	0	0	0	0	0	0.0	0	0	47	15	5	3	0	70	76.4	0	0	16	4	2	0	0	22	23.0
09:30 - 09:45	0	0	27	7	2	4	0	40	46.2	0	0	18	12	7	3	0	40	47.4	0	0	0	0	0	0	0	0	0.0	0	0	51	9	3	8	0	71	82.9	0	0	22	9	3	2	0	36	40.1
09:45 - 10:00	0	0	19	4	3	1	0	27	29.8	0	0	17	10	1	4	0	32	37.7	0	0	0	0	0	0	0	0	0.0	0	0	45	13	4	6	0	68	77.8	0	0	15	4	2	1	0	22	24.3
Hourly Total	**0**	**0**	**107**	**18**	**8**	**9**	**0**	**142**	**157.7**	**0**	**0**	**64**	**43**	**12**	**17**	**0**	**136**	**164.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**194**	**48**	**17**	**18**	**0**	**277**	**308.9**	**0**	**0**	**76**	**21**	**8**	**6**	**0**	**111**	**122.8**
TOTAL	**0**	**1**	**475**	**107**	**27**	**35**	**0**	**645**	**703.4**	**0**	**0**	**239**	**117**	**32**	**39**	**0**	**427**	**493.7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**753**	**167**	**50**	**54**	**1**	**1025**	**1121.2**	**0**	**0**	**314**	**68**	**31**	**19**	**0**	**432**	**472.2**
16:00 - 16:15	0	0	32	11	3	2	0	48	52.1	0	0	47	18	1	5	0	71	78.0	0	0	0	0	0	0	0	0	0.0	0	0	88	18	4	0	1	111	114.0	0	0	33	9	0	0	0	42	42.0
16:15 - 16:30	0	0	34	4	0	1	0	39	40.3	0	2	56	20	4	7	0	89	98.9	0	0	0	0	0	0	0	0	0.0	0	0	79	21	3	4	0	107	113.7	0	0	38	13	0	0	0	51	51.0
16:30 - 16:45	0	0	27	9	1	2	0	39	42.1	0	0	45	16	3	2	0	66	70.1	0	0	0	0	0	0	0	0	0.0	0	0	98	17	6	2	0	123	128.6	0	0	42	7	0	0	0	49	49.0
16:45 - 17:00	0	0	39	7	0	3	0	49	52.9	0	0	60	15	2	2	0	79	82.6	0	0	0	0	0	0	0	0	0.0	0	0	125	18	2	2	0	147	150.6	0	0	48	5	2	0	0	55	56.0
Hourly Total	**0**	**0**	**132**	**31**	**4**	**8**	**0**	**175**	**187.4**	**0**	**2**	**208**	**69**	**10**	**16**	**0**	**305**	**329.6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**390**	**74**	**15**	**8**	**1**	**488**	**506.9**	**0**	**0**	**161**	**34**	**2**	**0**	**0**	**197**	**198.0**
17:00 - 17:15	0	0	34	2	1	0	0	37	37.5	0	1	51	15	3	2	0	72	75.5	0	0	0	0	0	0	0	0	0.0	0	1	110	15	7	2	1	136	142.5	0	1	52	8	1	0	1	63	63.9
17:15 - 17:30	0	0	30	1	0	1	0	32	33.3	0	0	37	5	1	1	0	44	45.8	0	0	0	0	0	0	0	0	0.0	0	1	87	11	1	0	0	100	99.9	0	0	36	4	0	0	0	40	40.0
17:30 - 17:45	0	0	24	6	1	0	0	31	31.5	0	0	53	10	2	4	0	69	75.2	0	0	0	0	0	0	0	0	0.0	0	0	104	13	2	0	0	119	120.0	0	0	47	5	1	0	0	53	53.5
17:45 - 18:00	0	0	26	1	1	3	0	31	35.4	0	0	73	9	2	2	0	86	89.6	0	0	0	0	0	0	0	0	0.0	0	0	130	11	0	2	0	143	145.6	0	0	50	6	1	0	0	57	57.5
Hourly Total	**0**	**0**	**114**	**10**	**3**	**4**	**0**	**131**	**137.7**	**0**	**1**	**214**	**39**	**8**	**9**	**0**	**271**	**286.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**2**	**431**	**50**	**10**	**4**	**1**	**498**	**508.0**	**0**	**1**	**185**	**23**	**3**	**0**	**1**	**213**	**214.9**
18:00 - 18:15	0	0	34	3	1	2	0	40	43.1	0	0	64	11	2	5	0	82	89.5	0	0	0	0	0	0	0	0	0.0	0	0	121	12	4	5	0	142	150.5	0	0	50	3	1	1	0	55	56.8
18:15 - 18:30	0	0	31	4	1	0	0	36	36.5	0	0	33	9	5	2	0	49	54.1	0	0	0	0	0	0	0	0	0.0	0	0	80	6	0	3	0	89	92.9	0	0	35	6	0	1	0	42	43.3
18:30 - 18:45	0	0	20	4	0	1	0	25	26.3	0	0	21	3	0	3	0	27	30.9	0	0	0	0	0	0	0	0	0.0	0	0	78	5	1	2	0	86	89.1	0	0	21	3	0	0	0	24	24.0
18:45 - 19:00	0	0	27	5	0	1	1	34	36.3	0	0	26	5	2	0	0	33	34.0	0	0	0	0	0	0	0	0	0.0	0	0	70	2	0	0	0	72	72.0	0	0	30	5	2	0	0	37	38.0
Hourly Total	**0**	**0**	**112**	**16**	**2**	**4**	**1**	**135**	**142.2**	**0**	**0**	**144**	**28**	**9**	**10**	**0**	**191**	**208.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**349**	**25**	**5**	**10**	**0**	**389**	**404.5**	**0**	**0**	**136**	**17**	**3**	**2**	**0**	**158**	**162.1**
TOTAL	**0**	**0**	**358**	**57**	**9**	**16**	**1**	**441**	**467.3**	**0**	**3**	**566**	**136**	**27**	**35**	**0**	**767**	**824.2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**2**	**1170**	**149**	**30**	**22**	**2**	**1375**	**1419.4**	**0**	**1**	**482**	**74**	**8**	**2**	**1**	**568**	**575.0**

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

Road Data Services Ltd

East Midlands Airport
Tuesday 26th September 2023
Junction: 1
Approach: A52 West

	To Bostocks Lane (W)									To M1 J25 Slip Road (N)										To A52 (E)										To Bostocks Lane (E)										To M1 J25 Slip Road (S)									
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	9	4	4	1	0	18	21.3	0	0	61	16	2	3	0	82	86.9	0	0	0	0	0	0	0	0	0.0	0	0	9	2	2	1	0	14	16.3	0	0	43	15	6	2	0	66	71.6
07:15 - 07:30	0	0	21	4	1	1	0	27	28.8	0	0	48	30	2	3	1	84	89.9	0	0	0	0	0	0	0	0	0.0	0	0	19	2	1	1	1	24	26.8	0	0	59	8	3	1	0	71	73.8
07:30 - 07:45	0	0	13	3	4	2	0	22	26.6	0	0	53	12	6	2	0	73	78.6	0	0	0	0	0	0	0	0	0.0	0	0	33	3	1	1	0	38	39.8	0	0	81	12	4	2	0	99	103.6
07:45 - 08:00	0	0	29	9	1	0	0	39	39.5	0	1	79	28	5	5	0	118	126.4	0	0	0	0	0	0	0	0	0.0	0	1	26	2	1	1	0	31	32.2	0	0	57	6	6	1	0	70	74.3
Hourly Total	**0**	**0**	**72**	**20**	**10**	**4**	**0**	**106**	**116.2**	**0**	**1**	**241**	**86**	**15**	**13**	**1**	**357**	**381.8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**87**	**9**	**5**	**4**	**1**	**107**	**115.1**	**0**	**0**	**240**	**41**	**19**	**6**	**0**	**306**	**323.3**
08:00 - 08:15	0	0	29	6	4	0	0	39	41.0	0	0	67	18	6	1	0	92	96.3	0	0	0	0	0	0	0	0	0.0	0	0	19	4	1	1	0	25	26.8	0	0	60	15	3	4	0	82	88.7
08:15 - 08:30	0	0	22	7	3	0	1	33	35.5	0	0	46	11	2	2	0	61	64.6	0	0	0	0	0	0	0	0	0.0	0	0	36	4	1	0	0	41	41.5	0	1	73	20	4	2	0	100	104.0
08:30 - 08:45	0	0	12	1	0	0	0	13	13.0	0	0	46	17	8	2	0	73	79.6	0	0	0	0	0	0	0	0	0.0	0	1	27	6	2	1	0	37	38.7	0	0	64	13	7	2	0	86	92.1
08:45 - 09:00	0	0	19	5	1	2	0	27	30.1	0	0	50	11	4	3	0	68	73.9	0	0	0	0	0	0	0	0	0.0	0	0	17	4	0	0	0	21	21.0	0	0	37	15	3	2	0	57	61.1
Hourly Total	**0**	**0**	**82**	**19**	**8**	**2**	**1**	**112**	**119.6**	**0**	**0**	**209**	**57**	**20**	**8**	**0**	**294**	**314.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**99**	**18**	**4**	**2**	**0**	**124**	**128.0**	**0**	**1**	**234**	**63**	**17**	**10**	**0**	**325**	**345.9**
09:00 - 09:15	0	0	11	4	0	0	0	15	15.0	0	0	35	15	3	7	0	60	70.6	0	0	0	0	0	0	0	0	0.0	0	0	22	3	1	1	0	27	28.8	0	0	43	11	2	4	0	60	66.2
09:15 - 09:30	0	0	11	6	3	2	0	22	26.1	0	0	35	16	3	5	0	59	67.0	0	0	0	0	0	0	0	0	0.0	0	0	14	4	0	0	0	18	18.0	0	0	44	9	4	2	0	59	63.6
09:30 - 09:45	0	1	13	3	4	1	0	22	24.7	0	0	30	9	5	4	0	48	55.7	0	0	0	0	0	0	0	0	0.0	0	0	17	4	0	1	0	22	23.3	0	0	44	7	4	2	0	57	61.6
09:45 - 10:00	0	0	9	6	0	2	0	17	19.6	0	0	24	10	2	0	0	36	37.0	0	0	0	0	0	0	0	0	0.0	0	0	14	3	2	0	0	19	20.0	0	0	24	8	4	0	0	36	38.0
Hourly Total	**0**	**1**	**44**	**19**	**7**	**5**	**0**	**76**	**85.4**	**0**	**0**	**124**	**50**	**13**	**16**	**0**	**203**	**230.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**67**	**14**	**3**	**2**	**0**	**86**	**90.1**	**0**	**0**	**155**	**35**	**14**	**8**	**0**	**212**	**229.4**
TOTAL	**0**	**1**	**198**	**58**	**25**	**11**	**1**	**294**	**321.2**	**0**	**1**	**574**	**193**	**48**	**37**	**1**	**854**	**926.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**2**	**253**	**41**	**12**	**8**	**1**	**317**	**333.2**	**0**	**1**	**629**	**139**	**50**	**24**	**0**	**843**	**898.6**
16:00 - 16:15	0	0	18	7	1	1	0	27	28.8	0	0	102	42	2	2	0	148	151.6	0	0	0	0	0	0	0	0	0.0	0	0	30	5	0	0	0	35	35.0	0	0	41	9	0	2	0	52	54.6
16:15 - 16:30	0	1	15	0	2	0	0	18	18.4	0	0	116	26	3	2	0	147	151.1	0	0	0	0	0	0	0	0	0.0	0	0	25	4	0	0	0	29	29.0	0	0	53	10	3	4	0	70	76.7
16:30 - 16:45	0	0	17	4	1	1	0	23	24.8	0	0	103	21	2	3	0	129	133.9	0	0	0	0	0	0	0	0	0.0	0	0	27	7	0	0	0	34	34.0	0	0	46	9	2	4	0	61	67.2
16:45 - 17:00	0	0	30	4	1	1	0	36	37.8	0	1	113	13	5	2	0	134	138.5	0	0	0	0	0	0	0	0	0.0	0	1	25	3	0	0	0	29	28.4	0	0	47	5	1	3	0	56	60.4
Hourly Total	**0**	**1**	**80**	**15**	**5**	**3**	**0**	**104**	**109.8**	**0**	**1**	**434**	**102**	**12**	**9**	**0**	**558**	**575.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**107**	**19**	**0**	**0**	**0**	**127**	**126.4**	**0**	**0**	**187**	**33**	**6**	**13**	**0**	**239**	**258.9**
17:00 - 17:15	0	0	26	3	1	0	0	30	30.5	0	0	98	22	3	2	0	125	129.1	0	0	0	0	0	0	0	0	0.0	0	1	33	5	1	0	0	40	39.9	0	0	59	8	1	2	0	70	73.1
17:15 - 17:30	0	0	20	2	0	0	0	22	22.0	0	0	114	12	1	1	0	128	129.8	0	0	0	0	0	0	0	0	0.0	0	0	31	4	0	0	0	35	35.0	0	0	73	8	1	1	0	83	84.8
17:30 - 17:45	0	0	21	4	2	1	0	28	30.3	0	0	113	13	1	0	0	127	127.5	0	0	0	0	0	0	0	0	0.0	0	0	35	4	0	0	0	39	39.0	0	0	64	5	1	0	0	70	70.5
17:45 - 18:00	0	0	32	2	2	0	0	36	37.0	0	0	96	15	2	3	0	116	120.9	0	0	0	0	0	0	0	0	0.0	0	0	30	3	1	0	0	34	34.5	0	0	58	6	1	3	2	70	76.4
Hourly Total	**0**	**0**	**99**	**11**	**5**	**1**	**0**	**116**	**119.8**	**0**	**0**	**421**	**62**	**7**	**6**	**0**	**496**	**507.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**129**	**16**	**2**	**0**	**0**	**148**	**148.4**	**0**	**0**	**254**	**27**	**4**	**6**	**2**	**293**	**304.8**
18:00 - 18:15	0	0	17	0	1	0	0	18	18.5	0	0	112	18	2	3	0	135	139.9	0	0	0	0	0	0	0	0	0.0	0	0	38	2	1	1	0	42	43.8	0	0	49	4	1	1	0	55	56.8
18:15 - 18:30	0	0	19	0	0	0	0	19	19.0	0	0	63	7	0	0	0	70	70.0	0	0	0	0	0	0	0	0	0.0	0	0	35	2	0	0	0	37	37.0	0	0	32	4	0	0	0	36	36.0
18:30 - 18:45	0	0	21	5	0	0	0	26	26.0	0	0	58	3	4	2	0	67	71.6	0	0	0	0	0	0	0	0	0.0	0	0	38	3	0	0	0	41	41.0	0	0	29	4	2	0	0	35	36.0
18:45 - 19:00	0	0	12	2	0	0	0	14	14.0	0	0	54	10	0	0	0	64	64.0	0	0	0	0	0	0	0	0	0.0	0	0	27	3	0	0	0	30	30.0	0	0	26	3	0	0	0	29	29.0
Hourly Total	**0**	**0**	**69**	**7**	**1**	**0**	**0**	**77**	**77.5**	**0**	**0**	**287**	**38**	**6**	**5**	**0**	**336**	**345.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**138**	**10**	**1**	**1**	**0**	**150**	**151.8**	**0**	**0**	**136**	**15**	**3**	**1**	**0**	**155**	**157.8**
TOTAL	**0**	**1**	**248**	**33**	**11**	**4**	**0**	**297**	**307.1**	**0**	**1**	**1142**	**202**	**25**	**20**	**0**	**1390**	**1427.9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**2**	**374**	**45**	**3**	**1**	**0**	**425**	**426.6**	**0**	**0**	**577**	**75**	**13**	**20**	**2**	**687**	**721.5**

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

Road Data Services Ltd

East Midlands Airport
Tuesday 26th September 2023
Junction: 1
Approach: Bostocks Lane West

	To M1 J25 Slip Road (N)									To A52 (E)									To Bostocks Lane (E)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	26	9	1	0	0	36	36.5	0	0	31	3	2	1	0	37	39.3	0	0	6	3	2	0	0	11	12.0
07:15 - 07:30	0	0	34	12	1	0	0	47	47.5	0	0	24	5	1	2	0	32	35.1	0	0	12	3	1	1	0	17	18.8
07:30 - 07:45	0	0	35	8	3	1	0	47	49.8	0	0	23	6	1	1	0	31	32.8	0	0	14	2	1	0	0	17	17.5
07:45 - 08:00	0	0	48	9	2	3	0	62	66.9	0	0	29	4	3	1	0	37	39.8	0	0	15	3	2	0	0	20	21.0
Hourly Total	**0**	**0**	**143**	**38**	**7**	**4**	**0**	**192**	**200.7**	**0**	**0**	**107**	**18**	**7**	**5**	**0**	**137**	**147.0**	**0**	**0**	**47**	**11**	**6**	**1**	**0**	**65**	**69.3**
08:00 - 08:15	0	0	35	7	2	1	0	45	47.3	0	0	36	6	2	0	0	44	45.0	0	0	15	3	1	0	0	19	19.5
08:15 - 08:30	0	0	37	6	3	0	0	46	47.5	0	0	30	5	1	1	2	39	42.8	0	0	17	4	1	0	0	22	22.5
08:30 - 08:45	0	0	34	5	5	1	0	45	48.8	0	0	31	5	2	1	0	39	41.3	0	0	16	4	2	1	0	23	25.3
08:45 - 09:00	0	0	4	2	2	0	0	8	9.0	0	0	17	1	1	1	0	20	21.8	0	0	19	1	0	0	0	20	20.0
Hourly Total	**0**	**0**	**110**	**20**	**12**	**2**	**0**	**144**	**152.6**	**0**	**0**	**114**	**17**	**6**	**3**	**2**	**142**	**150.9**	**0**	**0**	**67**	**12**	**4**	**1**	**0**	**84**	**87.3**
09:00 - 09:15	0	0	24	4	2	2	0	32	35.6	0	0	21	3	3	1	0	28	30.8	0	0	10	2	1	1	0	14	15.8
09:15 - 09:30	0	0	21	7	1	0	0	29	29.5	0	0	11	3	1	0	0	15	15.5	0	0	5	1	0	0	0	6	6.0
09:30 - 09:45	0	0	10	4	3	1	0	18	20.8	0	0	18	4	1	0	0	23	23.5	0	0	8	3	0	0	0	11	11.0
09:45 - 10:00	0	0	9	5	5	2	0	21	26.1	0	0	20	3	1	2	0	26	29.1	0	0	12	2	1	0	0	15	15.5
Hourly Total	**0**	**0**	**64**	**20**	**11**	**5**	**0**	**100**	**112.0**	**0**	**0**	**70**	**13**	**6**	**3**	**0**	**92**	**98.9**	**0**	**0**	**35**	**8**	**2**	**1**	**0**	**46**	**48.3**
TOTAL	**0**	**0**	**317**	**78**	**30**	**11**	**0**	**436**	**465.3**	**0**	**0**	**291**	**48**	**19**	**11**	**2**	**371**	**396.8**	**0**	**0**	**149**	**31**	**12**	**3**	**0**	**195**	**204.9**
16:00 - 16:15	0	0	33	10	1	0	0	44	44.5	0	0	32	6	2	0	0	40	41.0	0	0	13	4	0	0	0	17	17.0
16:15 - 16:30	0	0	28	5	0	0	0	33	33.0	0	0	32	3	2	0	0	37	38.0	0	1	16	3	0	0	0	20	19.4
16:30 - 16:45	0	0	31	5	1	1	0	38	39.8	0	0	25	8	1	0	0	34	34.5	0	0	12	3	0	0	0	15	15.0
16:45 - 17:00	0	0	38	8	1	0	0	47	47.5	0	0	28	2	0	1	0	31	32.3	0	0	10	2	0	0	0	12	12.0
Hourly Total	**0**	**0**	**130**	**28**	**3**	**1**	**0**	**162**	**164.8**	**0**	**0**	**117**	**19**	**5**	**1**	**0**	**142**	**145.8**	**0**	**1**	**51**	**12**	**0**	**0**	**0**	**64**	**63.4**
17:00 - 17:15	0	0	56	12	1	1	0	70	71.8	0	0	24	5	0	0	0	29	29.0	0	0	11	2	0	0	1	14	15.0
17:15 - 17:30	0	0	42	8	0	1	0	51	52.3	0	0	25	7	0	0	0	32	32.0	0	0	10	2	0	0	0	12	12.0
17:30 - 17:45	0	0	26	3	2	0	0	31	32.0	0	0	28	3	0	0	0	31	31.0	0	0	14	2	0	0	0	16	16.0
17:45 - 18:00	0	0	24	4	0	1	0	29	30.3	0	0	21	2	0	0	0	23	23.0	0	0	8	2	0	0	0	10	10.0
Hourly Total	**0**	**0**	**148**	**27**	**3**	**3**	**0**	**181**	**186.4**	**0**	**0**	**98**	**17**	**0**	**0**	**0**	**115**	**115.0**	**0**	**0**	**43**	**8**	**0**	**0**	**1**	**52**	**53.0**
18:00 - 18:15	0	0	25	3	1	1	0	30	31.8	0	0	24	4	0	0	0	28	28.0	0	0	16	1	0	0	0	17	17.0
18:15 - 18:30	0	0	22	2	1	1	0	26	27.8	0	0	28	2	0	0	0	30	30.0	0	1	13	2	0	0	0	16	15.4
18:30 - 18:45	0	0	13	1	0	0	0	14	14.0	0	1	32	2	0	0	0	35	34.4	0	0	11	2	0	0	0	13	13.0
18:45 - 19:00	0	0	10	0	0	0	0	10	10.0	0	0	23	1	0	0	0	24	24.0	0	0	12	1	0	0	0	13	13.0
Hourly Total	**0**	**0**	**70**	**6**	**2**	**2**	**0**	**80**	**83.6**	**0**	**1**	**107**	**9**	**0**	**0**	**0**	**117**	**116.4**	**0**	**1**	**52**	**6**	**0**	**0**	**0**	**59**	**58.4**
TOTAL	**0**	**0**	**348**	**61**	**8**	**6**	**0**	**423**	**434.8**	**0**	**1**	**322**	**45**	**5**	**1**	**0**	**374**	**377.2**	**0**	**2**	**146**	**26**	**0**	**0**	**1**	**175**	**174.8**

	To M1 J25 Slip Road (S)									To A52 (W)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	37	24	7	2	0	70	76.1	0	0	16	7	2	2	0	27	30.6
07:15 - 07:30	0	0	41	19	4	3	0	67	72.9	0	0	26	5	2	1	0	34	36.3
07:30 - 07:45	0	0	32	14	1	1	0	48	49.8	0	0	41	9	1	2	0	53	56.1
07:45 - 08:00	0	0	42	17	6	2	0	67	72.6	0	0	36	4	3	0	0	43	44.5
Hourly Total	**0**	**0**	**152**	**74**	**18**	**8**	**0**	**252**	**271.4**	**0**	**0**	**119**	**25**	**8**	**5**	**0**	**157**	**167.5**
08:00 - 08:15	0	1	61	11	6	0	0	79	81.4	0	0	29	6	1	0	1	37	38.5
08:15 - 08:30	0	0	32	12	6	7	0	57	69.1	0	0	43	7	2	0	0	52	53.0
08:30 - 08:45	0	0	38	9	8	2	0	57	63.6	0	0	27	8	2	1	1	39	42.3
08:45 - 09:00	0	0	27	8	2	3	0	40	44.9	0	0	22	3	1	1	0	27	28.8
Hourly Total	**0**	**1**	**158**	**40**	**22**	**12**	**0**	**233**	**259.0**	**0**	**0**	**121**	**24**	**6**	**2**	**2**	**155**	**162.6**
09:00 - 09:15	0	0	19	12	3	4	0	38	44.7	0	0	19	4	2	2	0	27	30.6
09:15 - 09:30	0	0	14	5	1	0	0	20	20.6	0	0	17	3	1	0	0	21	21.5
09:30 - 09:45	0	0	15	5	4	1	0	25	28.3	0	0	22	5	2	1	0	30	32.3
09:45 - 10:00	0	0	16	11	1	4	0	32	37.7	0	0	11	3	1	1	0	16	17.8
Hourly Total	**0**	**0**	**64**	**33**	**9**	**9**	**0**	**115**	**131.2**	**0**	**0**	**69**	**15**	**6**	**4**	**0**	**94**	**102.2**
TOTAL	**0**	**1**	**374**	**147**	**49**	**29**	**0**	**600**	**661.6**	**0**	**0**	**309**	**64**	**20**	**11**	**2**	**406**	**432.3**
16:00 - 16:15	0	0	19	8	3	0	0	30	31.5	0	0	20	4	0	0	0	24	24.0
16:15 - 16:30	0	0	28	10	4	0	0	42	44.0	0	0	16	4	0	0	0	20	20.0
16:30 - 16:45	0	0	22	4	2	1	0	29	31.3	0	0	20	4	1	2	0	27	30.1
16:45 - 17:00	0	0	21	4	1	3	0	29	33.4	0	0	16	2	1	1	0	20	21.8
Hourly Total	**0**	**0**	**90**	**26**	**10**	**4**	**0**	**130**	**140.2**	**0**	**0**	**72**	**14**	**2**	**3**	**0**	**91**	**95.9**
17:00 - 17:15	0	0	24	5	0	2	0	31	33.6	0	0	19	3	0	0	0	22	22.0
17:15 - 17:30	0	0	25	4	0	1	0	30	31.3	0	0	13	2	0	1	0	16	17.3
17:30 - 17:45	0	0	23	5	0	0	0	28	28.0	0	0	15	2	0	0	0	17	17.0
17:45 - 18:00	0	0	17	1	2	0	0	20	21.0	0	0	14	2	0	0	0	16	16.0
Hourly Total	**0**	**0**	**89**	**15**	**2**	**3**	**0**	**109**	**113.9**	**0**	**0**	**61**	**9**	**0**	**1**	**0**	**71**	**72.3**
18:00 - 18:15	0	0	19	5	0	0	0	24	24.0	0	0	19	1	0	0	0	20	20.0
18:15 - 18:30	0	0	16	2	0	0	0	18	18.0	0	0	14	2	0	0	0	16	16.0
18:30 - 18:45	0	0	9	2	0	0	0	11	11.0	0	0	12	3	0	0	0	15	15.0
18:45 - 19:00	0	0	13	1	0	0	0	14	14.0	0	0	14	2	0	0	0	16	16.0
Hourly Total	**0**	**0**	**57**	**10**	**0**	**0**	**0**	**67**	**67.0**	**0**	**0**	**59**	**8**	**0**	**0**	**0**	**67**	**67.0**
TOTAL	**0**	**0**	**236**	**51**	**12**	**7**	**0**	**306**	**321.1**	**0**	**0**	**192**	**31**	**2**	**4**	**0**	**229**	**235.2**

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

APPENDIX 14 – Station Road/Broad Rushes Roundabout Junction Turning Count Results

Road Data Services Ltd

East Midlands Airport
Wednesday 27th September 2023
Junction: 2
Approach: Station Road North

	Ahead to Station Road (S)									Right to Broad Rushes								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	1	50	23	3	1	2	80	84.2	0	0	44	13	6	4	0	67	75.2
07:15 - 07:30	0	0	85	19	4	1	3	112	118.3	0	1	67	7	4	11	0	90	105.7
07:30 - 07:45	0	2	102	24	6	0	1	135	137.8	0	0	78	11	2	4	0	95	101.2
07:45 - 08:00	1	2	120	13	9	3	4	152	162.4	0	0	98	11	5	7	0	121	132.6
Hourly Total	**1**	**5**	**357**	**79**	**22**	**5**	**10**	**479**	**502.7**	**0**	**1**	**287**	**42**	**17**	**26**	**0**	**373**	**414.7**
08:00 - 08:15	2	2	106	25	4	4	2	145	151.4	0	1	80	17	6	5	0	109	117.9
08:15 - 08:30	0	0	135	15	3	1	3	157	162.8	0	0	111	11	5	7	0	134	145.6
08:30 - 08:45	0	0	103	20	4	1	0	128	131.3	0	1	91	15	7	8	0	122	135.3
08:45 - 09:00	0	1	85	23	2	1	3	115	119.7	0	1	96	12	5	11	0	125	141.2
Hourly Total	**2**	**3**	**429**	**83**	**13**	**7**	**8**	**545**	**565.2**	**0**	**3**	**378**	**55**	**23**	**31**	**0**	**490**	**540.0**
09:00 - 09:15	0	3	74	20	3	2	2	104	108.3	0	2	47	12	6	9	0	76	89.5
09:15 - 09:30	0	1	76	19	2	1	3	102	106.7	0	0	28	10	4	8	0	50	62.4
09:30 - 09:45	0	0	67	19	6	4	0	96	104.2	0	0	35	6	5	12	0	58	76.1
09:45 - 10:00	0	1	73	12	4	0	3	93	97.4	0	2	39	5	6	10	0	62	76.8
Hourly Total	**0**	**5**	**290**	**70**	**15**	**7**	**8**	**395**	**416.6**	**0**	**4**	**149**	**33**	**21**	**39**	**0**	**246**	**304.8**
TOTAL	**3**	**13**	**1076**	**232**	**50**	**19**	**26**	**1419**	**1484.5**	**0**	**8**	**814**	**130**	**61**	**96**	**0**	**1109**	**1259.5**
16:00 - 16:15	0	0	95	12	5	1	2	115	120.8	0	0	36	15	5	5	0	61	70.0
16:15 - 16:30	0	0	97	12	4	1	1	115	119.3	0	0	46	7	2	7	0	62	72.1
16:30 - 16:45	0	1	91	11	5	1	2	111	116.2	0	3	50	16	0	9	0	78	87.9
16:45 - 17:00	0	2	104	13	1	2	3	125	129.9	0	0	60	7	2	8	0	77	88.4
Hourly Total	**0**	**3**	**387**	**48**	**15**	**5**	**8**	**466**	**486.2**	**0**	**3**	**192**	**45**	**9**	**29**	**0**	**278**	**318.4**
17:00 - 17:15	0	0	112	14	1	0	1	128	129.5	0	0	70	11	2	5	0	88	95.5
17:15 - 17:30	0	0	189	7	0	0	3	199	202.0	0	3	80	4	2	3	0	92	95.1
17:30 - 17:45	0	2	99	6	1	1	1	110	111.6	0	0	119	5	1	4	0	129	134.7
17:45 - 18:00	0	2	86	10	1	0	3	102	104.3	0	1	95	8	1	4	0	109	114.1
Hourly Total	**0**	**4**	**486**	**37**	**3**	**1**	**8**	**539**	**547.4**	**0**	**4**	**364**	**28**	**6**	**16**	**0**	**418**	**439.4**
18:00 - 18:15	0	4	80	7	0	0	1	92	90.6	0	1	85	3	3	2	0	94	97.5
18:15 - 18:30	0	1	74	9	3	0	3	90	93.9	0	0	57	9	1	4	0	71	76.7
18:30 - 18:45	0	0	103	6	1	0	1	111	112.5	0	0	49	4	0	11	0	64	78.3
18:45 - 19:00	0	0	68	6	1	1	1	77	79.8	0	0	32	4	0	2	0	38	40.6
Hourly Total	**0**	**5**	**325**	**28**	**5**	**1**	**6**	**370**	**376.8**	**0**	**1**	**223**	**20**	**4**	**19**	**0**	**267**	**293.1**
TOTAL	**0**	**12**	**1198**	**113**	**23**	**7**	**22**	**1375**	**1410.4**	**0**	**8**	**779**	**93**	**19**	**64**	**0**	**963**	**1050.9**

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

Road Data Services Ltd

East Midlands Airport
Wednesday 27th September 2023
Junction: 2
Approach: Station Road South

	Left to Broad Rushes									Ahead to Station Road (N)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	2	1	0	0	0	3	3.0	0	0	40	10	2	3	0	55	59.9
07:15 - 07:30	0	0	2	1	0	0	0	3	3.0	0	0	33	13	4	0	2	52	56.0
07:30 - 07:45	0	0	4	0	0	0	0	4	4.0	0	0	73	14	3	0	2	92	95.5
07:45 - 08:00	0	0	2	2	0	0	0	4	4.0	0	0	53	15	4	0	1	73	76.0
Hourly Total	**0**	**0**	**10**	**4**	**0**	**0**	**0**	**14**	**14.0**	**0**	**0**	**199**	**52**	**13**	**3**	**5**	**272**	**287.4**
08:00 - 08:15	0	0	5	1	0	0	0	6	6.0	0	1	51	10	4	0	4	70	75.4
08:15 - 08:30	0	0	5	1	0	1	0	7	8.3	0	0	64	12	8	2	0	86	92.6
08:30 - 08:45	0	0	6	1	0	0	0	7	7.0	0	0	51	10	4	3	2	70	77.9
08:45 - 09:00	0	0	4	2	0	0	0	6	6.0	0	0	64	16	6	1	3	90	97.3
Hourly Total	**0**	**0**	**20**	**5**	**0**	**1**	**0**	**26**	**27.3**	**0**	**1**	**230**	**48**	**22**	**6**	**9**	**316**	**343.2**
09:00 - 09:15	0	0	2	0	0	0	0	2	2.0	0	0	51	13	2	2	1	69	73.6
09:15 - 09:30	0	0	0	1	0	0	0	1	1.0	5	0	56	19	3	4	2	89	93.7
09:30 - 09:45	0	0	0	0	0	0	0	0	0.0	0	1	56	17	2	0	4	80	84.4
09:45 - 10:00	0	0	2	2	0	0	0	4	4.0	0	0	59	11	6	0	0	76	79.0
Hourly Total	**0**	**0**	**4**	**3**	**0**	**0**	**0**	**7**	**7.0**	**5**	**1**	**222**	**60**	**13**	**6**	**7**	**314**	**330.7**
TOTAL	**0**	**0**	**34**	**12**	**0**	**1**	**0**	**47**	**48.3**	**5**	**2**	**651**	**160**	**48**	**15**	**21**	**902**	**961.3**
16:00 - 16:15	0	0	2	0	0	0	0	2	2.0	0	2	122	10	3	0	3	140	143.3
16:15 - 16:30	0	0	2	1	0	0	0	3	3.0	0	0	115	24	5	0	1	145	148.5
16:30 - 16:45	0	0	0	0	1	0	0	1	1.5	2	1	125	17	2	0	2	149	149.8
16:45 - 17:00	0	0	2	0	0	0	0	2	2.0	1	3	95	9	4	0	2	114	115.4
Hourly Total	**0**	**0**	**6**	**1**	**1**	**0**	**0**	**8**	**8.5**	**3**	**6**	**457**	**60**	**14**	**0**	**8**	**548**	**557.0**
17:00 - 17:15	0	0	3	0	0	0	0	3	3.0	1	2	195	23	1	0	2	224	224.5
17:15 - 17:30	0	0	4	1	0	0	0	5	5.0	0	0	119	10	1	1	2	133	136.8
17:30 - 17:45	0	1	1	2	0	0	0	4	3.4	1	3	97	11	0	0	3	115	115.4
17:45 - 18:00	0	0	0	0	0	0	0	0	0.0	0	2	99	13	0	0	1	115	114.8
Hourly Total	**0**	**1**	**8**	**3**	**0**	**0**	**0**	**12**	**11.4**	**2**	**7**	**510**	**57**	**2**	**1**	**8**	**587**	**591.5**
18:00 - 18:15	0	0	2	1	0	0	0	3	3.0	0	4	89	10	0	0	3	106	106.6
18:15 - 18:30	0	0	1	0	0	0	0	1	1.0	0	5	86	5	0	0	0	96	93.0
18:30 - 18:45	0	0	2	0	0	0	0	2	2.0	0	6	64	3	1	0	3	77	76.9
18:45 - 19:00	0	0	1	0	0	0	0	1	1.0	0	0	66	2	1	0	1	70	71.5
Hourly Total	**0**	**0**	**6**	**1**	**0**	**0**	**0**	**7**	**7.0**	**0**	**15**	**305**	**20**	**2**	**0**	**7**	**349**	**348.0**
TOTAL	**0**	**1**	**20**	**5**	**1**	**0**	**0**	**27**	**26.9**	**5**	**28**	**1272**	**137**	**18**	**1**	**23**	**1484**	**1496.5**

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

Road Data Services Ltd

East Midlands Airport
Wednesday 27th September 2023
Junction: 2
Approach: Broad Rushes

	Left to Station Road (N)									Right to Station Road (S)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	36	4	6	4	0	50	58.2	0	0	0	0	0	0	0	0	0.0
07:15 - 07:30	0	0	59	17	10	6	0	92	104.8	0	0	0	0	0	0	0	0	0.0
07:30 - 07:45	0	0	72	12	4	10	0	98	113.0	0	0	3	0	1	0	0	4	4.5
07:45 - 08:00	0	0	75	9	5	10	0	99	114.5	0	0	1	0	0	0	0	1	1.0
Hourly Total	**0**	**0**	**242**	**42**	**25**	**30**	**0**	**339**	**390.5**	**0**	**0**	**4**	**0**	**1**	**0**	**0**	**5**	**5.5**
08:00 - 08:15	0	0	79	8	1	10	0	98	111.5	0	0	2	1	0	0	0	3	3.0
08:15 - 08:30	0	0	42	11	9	4	0	66	75.7	0	0	3	0	0	0	0	3	3.0
08:30 - 08:45	0	0	54	7	1	9	0	71	83.2	0	0	4	1	0	0	0	5	5.0
08:45 - 09:00	0	0	51	13	6	6	0	76	86.8	0	0	5	1	1	0	0	7	7.5
Hourly Total	**0**	**0**	**226**	**39**	**17**	**29**	**0**	**311**	**357.2**	**0**	**0**	**14**	**3**	**1**	**0**	**0**	**18**	**18.5**
09:00 - 09:15	0	0	39	8	5	7	0	59	70.6	0	0	2	0	1	0	0	3	3.5
09:15 - 09:30	0	0	31	16	4	6	0	57	66.8	0	0	1	1	0	0	0	2	2.0
09:30 - 09:45	0	0	33	6	8	10	0	57	74.0	0	0	4	1	0	0	0	5	5.0
09:45 - 10:00	0	0	37	8	5	6	0	56	66.3	0	0	1	0	0	0	0	1	1.0
Hourly Total	**0**	**0**	**140**	**38**	**22**	**29**	**0**	**229**	**277.7**	**0**	**0**	**8**	**2**	**1**	**0**	**0**	**11**	**11.5**
TOTAL	**0**	**0**	**608**	**119**	**64**	**88**	**0**	**879**	**1025.4**	**0**	**0**	**26**	**5**	**3**	**0**	**0**	**34**	**35.5**
16:00 - 16:15	0	4	130	17	1	10	0	162	173.1	0	0	3	1	0	0	0	4	4.0
16:15 - 16:30	1	3	87	8	3	9	0	111	121.6	0	0	3	0	0	0	0	3	3.0
16:30 - 16:45	0	3	85	11	1	3	0	103	105.6	0	0	3	0	0	0	0	3	3.0
16:45 - 17:00	0	2	90	7	5	5	0	109	116.8	0	0	3	0	0	0	0	3	3.0
Hourly Total	**1**	**12**	**392**	**43**	**10**	**27**	**0**	**485**	**517.1**	**0**	**0**	**12**	**1**	**0**	**0**	**0**	**13**	**13.0**
17:00 - 17:15	0	2	132	12	0	3	0	149	151.7	0	0	3	0	0	0	0	3	3.0
17:15 - 17:30	0	1	90	3	2	2	0	98	101.0	0	0	3	1	0	0	0	4	4.0
17:30 - 17:45	0	0	130	7	2	5	0	144	151.5	0	0	10	0	0	0	0	10	10.0
17:45 - 18:00	0	0	73	6	1	2	0	82	85.1	0	0	4	0	0	0	0	4	4.0
Hourly Total	**0**	**3**	**425**	**28**	**5**	**12**	**0**	**473**	**489.3**	**0**	**0**	**20**	**1**	**0**	**0**	**0**	**21**	**21.0**
18:00 - 18:15	1	4	175	8	1	2	0	191	190.9	0	0	2	0	0	0	0	2	2.0
18:15 - 18:30	0	1	66	2	4	2	0	75	79.0	0	0	3	0	0	0	0	3	3.0
18:30 - 18:45	0	2	108	4	1	4	0	119	123.5	0	0	2	0	0	0	0	2	2.0
18:45 - 19:00	0	0	45	5	0	3	0	53	56.9	0	0	1	0	0	0	0	1	1.0
Hourly Total	**1**	**7**	**394**	**19**	**6**	**11**	**0**	**438**	**450.3**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**8**	**8.0**
TOTAL	**2**	**22**	**1211**	**90**	**21**	**50**	**0**	**1396**	**1456.7**	**0**	**0**	**40**	**2**	**0**	**0**	**0**	**42**	**42.0**

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

APPENDIX 15 – A453/Kegworth Road Roundabout Junction Turning Count Results

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 4
Approach: A453 Exit Slip Road

	To Kegworth Road (E)									To Kegworth Road (S)									To A453 Entry Slip Road								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	14	4	0	0	0	18	18.0	0	0	4	0	0	0	0	4	4.0	0	0	0	0	0	0	0	0	0.0
07:15 - 07:30	0	0	11	2	0	0	0	13	13.0	0	0	2	1	0	1	0	4	5.3	0	0	0	0	0	0	0	0	0.0
07:30 - 07:45	0	0	11	0	0	0	0	11	11.0	0	0	7	0	0	0	0	7	7.0	0	0	0	0	0	0	0	0	0.0
07:45 - 08:00	0	0	10	1	0	0	0	11	11.0	0	0	4	2	0	0	0	6	6.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**46**	**7**	**0**	**0**	**0**	53	53.0	**0**	**0**	**17**	**3**	**0**	**1**	**0**	21	22.3	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	0.0
08:00 - 08:15	0	0	8	2	1	0	0	11	11.5	0	0	3	2	0	0	0	5	5.0	0	0	0	0	0	0	0	0	0.0
08:15 - 08:30	0	0	5	0	0	0	0	5	5.0	0	0	6	1	1	0	0	8	8.5	0	0	0	0	0	0	0	0	0.0
08:30 - 08:45	0	0	4	0	0	1	0	5	6.3	0	0	2	3	1	0	0	6	6.5	0	0	0	0	0	0	0	0	0.0
08:45 - 09:00	0	0	5	0	0	0	0	5	5.0	0	0	3	0	0	0	0	3	3.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**22**	**2**	**1**	**1**	**0**	26	27.8	**0**	**0**	**14**	**6**	**2**	**0**	**0**	22	23.0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	0.0
09:00 - 09:15	0	0	2	0	0	0	0	2	2.0	0	0	2	0	0	0	1	3	4.0	0	0	0	0	0	0	0	0	0.0
09:15 - 09:30	0	0	5	2	0	0	0	7	7.0	0	0	1	1	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0
09:30 - 09:45	0	0	3	0	0	0	0	3	3.0	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0
09:45 - 10:00	0	0	2	3	0	0	0	5	5.0	0	0	1	0	0	1	0	2	3.3	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**12**	**5**	**0**	**0**	**0**	17	17.0	**0**	**0**	**5**	**1**	**0**	**1**	**1**	8	10.3	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	0.0
TOTAL	**0**	**0**	**80**	**14**	**1**	**1**	**0**	96	97.8	**0**	**0**	**36**	**10**	**2**	**2**	**1**	51	55.6	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	0.0
16:00 - 16:15	0	0	1	1	0	0	0	2	2.0	0	0	6	1	0	0	0	7	7.0	0	0	0	0	0	0	0	0	0.0
16:15 - 16:30	0	0	3	1	0	0	0	4	4.0	0	0	9	2	0	0	0	11	11.0	0	0	0	0	0	0	0	0	0.0
16:30 - 16:45	0	0	5	0	0	0	0	5	5.0	0	0	9	2	0	0	0	11	11.0	0	0	0	0	0	0	0	0	0.0
16:45 - 17:00	0	0	6	0	0	0	0	6	6.0	0	0	4	1	1	0	0	6	6.5	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**15**	**2**	**0**	**0**	**0**	17	17.0	**0**	**0**	**28**	**6**	**1**	**0**	**0**	35	35.5	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	0.0
17:00 - 17:15	0	0	1	1	0	0	0	2	2.0	0	0	8	2	0	0	0	10	10.0	0	0	0	0	0	0	0	0	0.0
17:15 - 17:30	0	0	3	0	0	0	0	3	3.0	0	0	6	1	0	0	0	7	7.0	0	0	0	0	0	0	0	0	0.0
17:30 - 17:45	0	0	1	0	0	0	1	2	3.0	0	0	8	2	0	0	0	10	10.0	0	0	0	0	0	0	0	0	0.0
17:45 - 18:00	0	0	6	2	0	0	1	9	10.0	0	0	9	0	0	0	0	9	9.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**11**	**3**	**0**	**0**	**2**	16	18.0	**0**	**0**	**31**	**5**	**0**	**0**	**0**	36	36.0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	0.0
18:00 - 18:15	0	0	5	0	0	0	0	5	5.0	0	0	6	0	0	0	0	6	6.0	0	0	0	0	0	0	0	0	0.0
18:15 - 18:30	0	0	1	0	0	0	0	1	1.0	0	0	4	0	0	0	0	4	4.0	0	0	0	0	0	0	0	0	0.0
18:30 - 18:45	0	0	0	0	0	0	0	0	0.0	0	0	6	0	0	0	0	6	6.0	0	0	0	0	0	0	0	0	0.0
18:45 - 19:00	0	0	3	1	0	0	0	4	4.0	0	0	0	1	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**9**	**1**	**0**	**0**	**0**	10	10.0	**0**	**0**	**16**	**1**	**0**	**0**	**0**	17	17.0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	0.0
TOTAL	**0**	**0**	**35**	**6**	**0**	**0**	**2**	43	45.0	**0**	**0**	**75**	**12**	**1**	**0**	**0**	88	88.5	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	0.0

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

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 4
Approach: Kegworth Road East

	To Kegworth Road (S)									To A453 Entry Slip Road									To A453 Exit Slip Road								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	0	1	0	0	0	1	1.0	0	0	5	2	0	0	0	7	7.0	0	0	0	0	0	0	0	0	0.0
07:15 - 07:30	0	0	1	3	0	0	0	4	4.0	0	1	2	0	0	0	0	3	2.4	0	0	0	0	0	0	0	0	0.0
07:30 - 07:45	0	0	3	1	0	0	0	4	4.0	0	0	4	0	0	0	0	4	4.0	0	0	0	0	0	0	0	0	0.0
07:45 - 08:00	0	0	6	0	0	0	0	6	6.0	0	0	13	0	0	0	0	13	13.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**10**	**5**	**0**	**0**	**0**	**15**	**15.0**	**0**	**1**	**24**	**2**	**0**	**0**	**0**	**27**	**26.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
08:00 - 08:15	0	0	6	1	0	0	0	7	7.0	0	0	5	0	0	1	0	6	7.3	0	0	0	0	0	0	0	0	0.0
08:15 - 08:30	0	0	1	2	0	0	0	3	3.0	0	0	2	0	1	0	0	3	3.5	0	0	0	0	0	0	0	0	0.0
08:30 - 08:45	0	0	2	1	0	0	0	3	3.0	0	0	3	0	1	0	0	4	4.5	0	0	0	0	0	0	0	0	0.0
08:45 - 09:00	0	0	1	1	0	0	0	2	2.0	0	0	6	2	1	0	0	9	9.5	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**10**	**5**	**0**	**0**	**0**	**15**	**15.0**	**0**	**0**	**16**	**2**	**3**	**1**	**0**	**22**	**24.8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
09:00 - 09:15	1	0	0	1	0	0	0	2	1.2	0	0	6	1	0	0	0	7	7.0	0	0	0	0	0	0	0	0	0.0
09:15 - 09:30	0	0	0	1	0	0	0	1	1.0	0	0	1	0	0	1	0	2	3.3	0	0	0	0	0	0	0	0	0.0
09:30 - 09:45	0	0	3	0	0	0	0	3	3.0	0	0	3	0	0	0	0	3	3.0	0	0	0	0	0	0	0	0	0.0
09:45 - 10:00	0	0	1	1	0	0	0	2	2.0	0	0	8	0	0	0	0	8	8.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**1**	**0**	**4**	**3**	**0**	**0**	**0**	**8**	**7.2**	**0**	**0**	**18**	**1**	**0**	**1**	**0**	**20**	**21.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**1**	**0**	**24**	**13**	**0**	**0**	**0**	**38**	**37.2**	**0**	**1**	**58**	**5**	**3**	**2**	**0**	**69**	**72.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
16:00 - 16:15	0	3	3	2	0	0	0	8	6.2	0	0	32	2	0	0	0	34	34.0	0	0	0	0	0	0	0	0	0.0
16:15 - 16:30	0	0	3	0	0	0	0	3	3.0	0	0	14	2	0	0	0	16	16.0	0	0	0	0	0	0	0	0	0.0
16:30 - 16:45	0	0	2	1	0	0	0	3	3.0	0	1	13	5	0	0	0	19	18.4	0	0	0	0	0	0	0	0	0.0
16:45 - 17:00	0	0	5	0	0	0	0	5	5.0	0	0	33	2	0	0	0	35	35.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**3**	**13**	**3**	**0**	**0**	**0**	**19**	**17.2**	**0**	**1**	**92**	**11**	**0**	**0**	**0**	**104**	**103.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
17:00 - 17:15	0	0	4	0	0	0	0	4	4.0	0	0	30	1	0	0	0	31	31.0	0	0	0	0	0	0	0	0	0.0
17:15 - 17:30	1	0	8	0	0	0	0	9	8.2	0	0	7	2	0	0	0	9	9.0	0	0	0	0	0	0	0	0	0.0
17:30 - 17:45	0	0	1	0	0	0	0	1	1.0	0	0	11	2	1	2	0	16	19.1	0	0	0	0	0	0	0	0	0.0
17:45 - 18:00	0	0	5	1	0	0	2	8	10.0	0	0	13	2	0	0	0	15	15.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**1**	**0**	**18**	**1**	**0**	**0**	**2**	**22**	**23.2**	**0**	**0**	**61**	**7**	**1**	**2**	**0**	**71**	**74.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
18:00 - 18:15	0	0	0	0	0	0	1	1	2.0	0	0	20	1	0	0	0	21	21.0	0	0	0	0	0	0	0	0	0.0
18:15 - 18:30	0	0	5	1	0	0	0	6	6.0	0	0	22	1	1	0	1	25	26.5	0	0	0	0	0	0	0	0	0.0
18:30 - 18:45	0	0	4	0	0	0	0	4	4.0	0	0	5	2	1	0	0	8	8.5	0	0	0	0	0	0	0	0	0.0
18:45 - 19:00	0	0	2	0	0	0	1	3	4.0	0	0	27	1	0	0	0	28	28.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**11**	**1**	**0**	**0**	**2**	**14**	**16.0**	**0**	**0**	**74**	**5**	**2**	**0**	**1**	**82**	**84.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**1**	**3**	**42**	**5**	**0**	**0**	**4**	**55**	**56.4**	**0**	**1**	**227**	**23**	**3**	**2**	**1**	**257**	**261.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**

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

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 4
Approach: Kegworth Road South

	To A453 Entry Slip Road									To A453 Exit Slip Road									To Kegworth Road (E)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0	0	0	9	3	0	0	0	12	12.0
07:15 - 07:30	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0	0	0	7	1	0	0	0	8	8.0
07:30 - 07:45	0	1	3	1	0	0	0	5	4.4	0	0	0	0	0	0	0	0	0.0	0	0	11	3	0	0	1	15	16.0
07:45 - 08:00	0	0	0	0	0	1	0	1	2.3	0	0	0	0	0	0	0	0	0.0	3	0	15	3	0	0	0	21	18.6
Hourly Total	**0**	**1**	**5**	**1**	**0**	**1**	**0**	**8**	**8.7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**3**	**0**	**42**	**10**	**0**	**0**	**1**	**56**	**54.6**
08:00 - 08:15	0	0	1	1	0	1	0	3	4.3	0	0	0	0	0	0	0	0	0.0	0	0	10	1	0	0	0	11	11.0
08:15 - 08:30	0	0	3	0	0	0	0	3	3.0	0	0	0	0	0	0	0	0	0.0	1	0	6	2	0	0	0	9	8.2
08:30 - 08:45	0	0	3	0	1	0	0	4	4.5	0	0	0	0	0	0	0	0	0.0	0	0	3	0	0	0	0	3	3.0
08:45 - 09:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	5	2	0	0	1	8	9.0
Hourly Total	**0**	**0**	**7**	**1**	**1**	**1**	**0**	**10**	**11.8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**1**	**0**	**24**	**5**	**0**	**0**	**1**	**31**	**31.2**
09:00 - 09:15	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0	0	0	1	1	0	0	0	2	2.0
09:15 - 09:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	10	0	0	0	0	10	10.0
09:30 - 09:45	0	0	1	1	1	0	0	3	3.5	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0
09:45 - 10:00	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0	0	0	6	1	0	0	0	7	7.0
Hourly Total	**0**	**0**	**3**	**1**	**1**	**0**	**0**	**5**	**5.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**19**	**2**	**0**	**0**	**0**	**21**	**21.0**
TOTAL	**0**	**1**	**15**	**3**	**2**	**2**	**0**	**23**	**26.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**4**	**0**	**85**	**17**	**0**	**0**	**2**	**108**	**106.8**
16:00 - 16:15	0	0	3	0	0	0	0	3	3.0	0	0	0	0	0	0	0	0	0.0	0	0	3	3	1	0	0	7	7.5
16:15 - 16:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	6	0	0	0	0	6	6.0
16:30 - 16:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	13	3	0	0	0	16	16.0
16:45 - 17:00	0	0	0	2	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	4	0	1	0	0	5	5.5
Hourly Total	**0**	**0**	**3**	**2**	**0**	**0**	**0**	**5**	**5.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**26**	**6**	**2**	**0**	**0**	**34**	**35.0**
17:00 - 17:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	10	1	0	0	0	11	11.0
17:15 - 17:30	0	0	1	1	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	1	0	4	2	0	0	0	7	6.2
17:30 - 17:45	0	0	2	0	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	9	3	0	0	0	12	12.0
17:45 - 18:00	0	0	2	0	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	5	1	0	0	0	6	6.0
Hourly Total	**0**	**0**	**5**	**1**	**0**	**0**	**0**	**6**	**6.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**1**	**0**	**28**	**7**	**0**	**0**	**0**	**36**	**35.2**
18:00 - 18:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	10	1	0	0	1	12	13.0
18:15 - 18:30	0	0	0	1	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0	0	0	5	1	0	0	0	6	6.0
18:30 - 18:45	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0	1	0	10	1	0	0	0	12	11.2
18:45 - 19:00	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0	0	0	9	2	0	0	0	11	11.0
Hourly Total	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**3**	**3.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**1**	**0**	**34**	**5**	**0**	**0**	**1**	**41**	**41.2**
TOTAL	**0**	**0**	**10**	**4**	**0**	**0**	**0**	**14**	**14.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**2**	**0**	**88**	**18**	**2**	**0**	**1**	**111**	**111.4**

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

APPENDIX 16 – A453/Barton Lane/West Leake Lane Roundabouts Junction Turning Count Results

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 6
Approach: Barton Lane North

	To A453 Entry Slip Road									To Barton Lane (S)									To A453 Exit Slip Road								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	2	0	0	0	0	**2**	**2.0**	0	0	5	1	0	0	0	**6**	**6.0**	0	0	0	0	0	0	0	**0**	**0.0**
07:15 - 07:30	0	0	0	0	0	0	0	**0**	**0.0**	0	0	1	2	0	0	1	**4**	**5.0**	0	0	0	0	0	0	0	**0**	**0.0**
07:30 - 07:45	0	0	0	0	0	0	0	**0**	**0.0**	0	0	9	4	1	2	0	**16**	**19.1**	0	0	0	0	0	0	0	**0**	**0.0**
07:45 - 08:00	0	0	0	0	0	0	0	**0**	**0.0**	0	0	6	5	1	1	0	**13**	**14.8**	0	0	0	0	0	0	0	**0**	**0.0**
Hourly Total	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**	**0**	**0**	**21**	**12**	**2**	**3**	**1**	**39**	**44.9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
08:00 - 08:15	0	0	0	0	0	0	0	**0**	**0.0**	0	0	8	1	1	0	1	**11**	**12.5**	0	0	0	0	0	0	0	**0**	**0.0**
08:15 - 08:30	0	0	0	0	0	0	0	**0**	**0.0**	0	0	10	3	0	3	0	**16**	**19.9**	0	0	0	0	0	0	0	**0**	**0.0**
08:30 - 08:45	0	0	0	0	0	0	0	**0**	**0.0**	0	0	10	3	1	0	0	**14**	**14.5**	0	0	0	0	0	0	0	**0**	**0.0**
08:45 - 09:00	0	0	0	0	0	0	0	**0**	**0.0**	0	0	5	1	0	2	0	**8**	**10.6**	0	0	0	0	0	0	0	**0**	**0.0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**33**	**8**	**2**	**5**	**1**	**49**	**57.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
09:00 - 09:15	0	0	0	0	0	0	0	**0**	**0.0**	0	0	1	1	1	1	0	**4**	**5.8**	0	0	0	0	0	0	0	**0**	**0.0**
09:15 - 09:30	0	0	0	0	0	0	0	**0**	**0.0**	0	0	4	2	0	0	0	**6**	**6.0**	0	0	0	0	0	0	0	**0**	**0.0**
09:30 - 09:45	0	0	0	0	0	0	0	**0**	**0.0**	0	0	5	2	0	0	1	**8**	**9.0**	0	0	0	0	0	0	0	**0**	**0.0**
09:45 - 10:00	0	0	0	0	0	0	0	**0**	**0.0**	0	0	3	1	0	0	0	**4**	**4.0**	0	0	0	0	0	0	0	**0**	**0.0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**13**	**6**	**1**	**1**	**1**	**22**	**24.8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**	**0**	**0**	**67**	**26**	**5**	**9**	**3**	**110**	**127.2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
16:00 - 16:15	0	0	3	0	0	0	0	**3**	**3.0**	0	0	7	1	0	0	0	**8**	**8.0**	0	0	0	0	0	0	0	**0**	**0.0**
16:15 - 16:30	0	0	0	0	0	0	0	**0**	**0.0**	0	0	9	1	0	0	0	**10**	**10.0**	0	0	0	0	0	0	0	**0**	**0.0**
16:30 - 16:45	0	0	1	0	0	0	0	**1**	**1.0**	1	0	3	0	0	0	0	**4**	**3.2**	0	0	0	0	0	0	0	**0**	**0.0**
16:45 - 17:00	0	0	0	0	0	0	0	**0**	**0.0**	0	0	4	0	0	0	0	**4**	**4.0**	0	0	0	0	0	0	0	**0**	**0.0**
Hourly Total	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**4**	**4.0**	**1**	**0**	**23**	**2**	**0**	**0**	**0**	**26**	**25.2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
17:00 - 17:15	0	0	0	0	0	0	0	**0**	**0.0**	0	0	1	0	0	0	0	**1**	**1.0**	0	0	0	0	0	0	0	**0**	**0.0**
17:15 - 17:30	0	0	0	0	0	0	0	**0**	**0.0**	1	0	5	0	0	0	0	**6**	**5.2**	0	0	0	0	0	0	0	**0**	**0.0**
17:30 - 17:45	0	0	0	0	0	0	0	**0**	**0.0**	0	0	3	1	0	0	1	**5**	**6.0**	0	0	0	0	0	0	0	**0**	**0.0**
17:45 - 18:00	0	0	1	0	0	0	0	**1**	**1.0**	0	0	4	2	0	0	0	**6**	**6.0**	0	0	0	0	0	0	0	**0**	**0.0**
Hourly Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1.0**	**1**	**0**	**13**	**3**	**0**	**0**	**1**	**18**	**18.2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
18:00 - 18:15	0	0	1	0	0	0	0	**1**	**1.0**	0	0	5	0	0	0	0	**5**	**5.0**	0	0	0	0	0	0	0	**0**	**0.0**
18:15 - 18:30	0	0	0	0	0	0	0	**0**	**0.0**	0	0	3	1	0	0	0	**4**	**4.0**	0	0	0	0	0	0	0	**0**	**0.0**
18:30 - 18:45	0	0	1	0	0	0	0	**1**	**1.0**	0	0	3	1	0	0	0	**4**	**4.0**	0	0	0	0	0	0	0	**0**	**0.0**
18:45 - 19:00	0	0	0	0	0	0	0	**0**	**0.0**	0	0	3	0	0	0	0	**3**	**3.0**	0	0	0	0	0	0	0	**0**	**0.0**
Hourly Total	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**	**0**	**0**	**14**	**2**	**0**	**0**	**0**	**16**	**16.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**7**	**7.0**	**2**	**0**	**50**	**7**	**0**	**0**	**1**	**60**	**59.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**

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

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 6
Approach: A453 Entry Slip Road

	To Barton Lane (S)									To A453 Exit Slip Road									To Barton Lane (N)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
07:15 - 07:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
07:30 - 07:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
07:45 - 08:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
08:00 - 08:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:15 - 08:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:30 - 08:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:45 - 09:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
09:00 - 09:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
09:15 - 09:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
09:30 - 09:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
09:45 - 10:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
16:00 - 16:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
16:15 - 16:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
16:30 - 16:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
16:45 - 17:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
17:00 - 17:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
17:15 - 17:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
17:30 - 17:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
17:45 - 18:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
18:00 - 18:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
18:15 - 18:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
18:30 - 18:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
18:45 - 19:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**

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

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 6
Approach: Barton Lane South

	To A453 Exit Slip Road									To Barton Lane (N)									To A453 Entry Slip Road								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	0	0	0	0	0	0	0.0	0	0	5	1	1	0	0	7	7.5	0	0	2	0	2	1	0	5	7.3
07:15 - 07:30	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0	0	0	6	1	1	1	0	9	10.8
07:30 - 07:45	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0	0	0	13	1	0	2	1	17	20.6
07:45 - 08:00	0	0	0	0	0	0	0	0	0.0	0	0	2	1	0	0	0	3	3.0	0	0	11	1	0	4	0	16	21.2
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**9**	**2**	**1**	**0**	**0**	**12**	**12.5**	**0**	**0**	**32**	**3**	**3**	**8**	**1**	**47**	**59.9**
08:00 - 08:15	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	2	0	3	5.6	0	0	15	3	0	0	0	18	18.0
08:15 - 08:30	0	0	0	0	0	0	0	0	0.0	0	0	2	1	0	0	0	3	3.0	0	0	13	0	0	0	1	14	15.0
08:30 - 08:45	0	0	0	0	0	0	0	0	0.0	0	0	3	0	0	1	0	4	5.3	0	0	10	0	0	0	0	10	10.0
08:45 - 09:00	0	0	0	0	0	0	0	0	0.0	0	0	3	1	0	1	0	5	6.3	0	0	9	1	0	0	1	11	12.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**9**	**2**	**0**	**4**	**0**	**15**	**20.2**	**0**	**0**	**47**	**4**	**0**	**0**	**2**	**53**	**55.0**
09:00 - 09:15	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0	0	0	4	1	0	0	0	5	5.0
09:15 - 09:30	0	0	0	0	0	0	0	0	0.0	0	0	3	0	0	1	0	4	5.3	0	0	3	0	1	0	1	5	6.5
09:30 - 09:45	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	1	0	3	4.3	0	0	5	0	0	0	0	5	5.0
09:45 - 10:00	0	0	0	0	0	0	0	0	0.0	0	0	0	1	1	0	1	3	4.5	0	0	4	0	0	2	0	6	8.6
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**7**	**1**	**1**	**2**	**1**	**12**	**16.1**	**0**	**0**	**16**	**1**	**1**	**2**	**1**	**21**	**25.1**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**25**	**5**	**2**	**6**	**1**	**39**	**48.8**	**0**	**0**	**95**	**8**	**4**	**10**	**4**	**121**	**140.0**
16:00 - 16:15	0	0	0	0	0	0	0	0	0.0	0	0	3	1	1	0	0	5	5.5	0	0	6	4	0	0	0	10	10.0
16:15 - 16:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	1	8	2	0	0	1	12	12.4
16:30 - 16:45	0	0	0	0	0	0	0	0	0.0	0	0	1	1	0	0	0	2	2.0	0	1	7	0	0	1	0	9	9.7
16:45 - 17:00	0	0	0	0	0	0	0	0	0.0	0	0	3	0	0	0	0	3	3.0	0	0	7	1	0	0	0	8	8.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**7**	**2**	**1**	**0**	**0**	**10**	**10.5**	**0**	**2**	**28**	**7**	**0**	**1**	**1**	**39**	**40.1**
17:00 - 17:15	0	0	0	0	0	0	0	0	0.0	0	0	0	2	0	0	0	2	2.0	0	0	13	1	0	1	1	16	18.3
17:15 - 17:30	0	0	0	0	0	0	0	0	0.0	0	0	2	1	0	0	0	3	3.0	0	0	15	2	0	0	1	18	19.0
17:30 - 17:45	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0	0	0	13	1	0	0	0	14	14.0
17:45 - 18:00	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0	0	0	6	0	0	0	0	6	6.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**5**	**3**	**0**	**0**	**0**	**8**	**8.0**	**0**	**0**	**47**	**4**	**0**	**1**	**2**	**54**	**57.3**
18:00 - 18:15	0	0	0	0	0	0	0	0	0.0	0	0	3	0	0	0	0	3	3.0	0	0	5	1	0	1	1	8	10.3
18:15 - 18:30	0	0	0	0	0	0	0	0	0.0	0	0	3	0	0	0	0	3	3.0	0	0	4	1	0	1	0	6	7.3
18:30 - 18:45	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0	0	0	1	0	0	0	0	1	1.0
18:45 - 19:00	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0	0	0	5	1	0	0	0	6	6.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**9**	**9.0**	**0**	**0**	**15**	**3**	**0**	**2**	**1**	**21**	**24.6**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**21**	**5**	**1**	**0**	**0**	**27**	**27.5**	**0**	**2**	**90**	**14**	**0**	**4**	**4**	**114**	**122.0**

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

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 6
Approach: A453 Exit Slip Road

	To Barton Lane (N)									To A453 Entry Slip Road									To Barton Lane (S)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	4	1	1	3	0	9	13.4	0	0	0	0	0	0	0	0	0.0	0	0	24	14	2	5	0	45	52.5
07:15 - 07:30	0	0	4	0	0	0	0	4	4.0	0	0	0	0	0	0	0	0	0.0	0	1	25	13	3	5	0	47	54.4
07:30 - 07:45	0	0	1	4	0	1	0	6	7.3	0	0	0	0	0	0	0	0	0.0	0	0	30	11	1	3	0	45	49.4
07:45 - 08:00	0	0	4	2	0	1	0	7	8.3	0	0	0	0	0	0	0	0	0.0	0	0	28	17	2	5	0	52	59.5
Hourly Total	**0**	**0**	**13**	**7**	**1**	**5**	**0**	**26**	**33.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**107**	**55**	**8**	**18**	**0**	**189**	**215.8**
08:00 - 08:15	0	0	3	2	0	0	0	5	5.0	0	0	0	0	0	0	0	0	0.0	0	0	39	11	1	5	0	56	63.0
08:15 - 08:30	0	0	4	0	1	0	0	5	5.5	0	0	0	0	0	0	0	0	0.0	0	0	49	9	7	8	0	73	86.9
08:30 - 08:45	0	0	10	4	1	0	0	15	15.5	0	0	0	0	0	0	0	0	0.0	0	0	42	6	3	7	0	58	68.6
08:45 - 09:00	0	0	8	5	2	1	0	16	18.3	0	0	0	0	0	0	0	0	0.0	0	0	40	13	5	3	0	61	67.4
Hourly Total	**0**	**0**	**25**	**11**	**4**	**1**	**0**	**41**	**44.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**170**	**39**	**16**	**23**	**0**	**248**	**285.9**
09:00 - 09:15	0	0	28	8	1	1	0	38	39.8	0	0	0	0	0	0	0	0	0.0	0	0	34	12	2	7	0	55	65.1
09:15 - 09:30	0	0	5	5	1	1	0	12	13.8	0	0	0	0	0	0	0	0	0.0	0	0	26	7	2	5	0	40	47.5
09:30 - 09:45	0	0	7	2	2	0	0	11	12.0	0	0	0	0	0	0	0	0	0.0	0	0	8	2	1	1	0	12	13.8
09:45 - 10:00	0	0	4	0	0	0	0	4	4.0	0	0	0	0	0	0	0	0	0.0	0	0	5	5	0	3	0	13	16.9
Hourly Total	**0**	**0**	**44**	**15**	**4**	**2**	**0**	**65**	**69.6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**73**	**26**	**5**	**16**	**0**	**120**	**143.3**
TOTAL	**0**	**0**	**82**	**33**	**9**	**8**	**0**	**132**	**146.9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**350**	**120**	**29**	**57**	**0**	**557**	**645.0**
16:00 - 16:15	0	0	2	1	0	0	0	3	3.0	0	0	0	0	0	0	0	0	0.0	0	0	17	5	0	5	1	28	35.5
16:15 - 16:30	0	0	1	2	0	0	0	3	3.0	0	0	0	0	0	0	0	0	0.0	0	1	30	4	0	3	0	38	41.3
16:30 - 16:45	0	0	4	1	0	0	0	5	5.0	0	0	0	0	0	0	0	0	0.0	0	0	36	2	1	4	0	43	48.7
16:45 - 17:00	0	1	2	0	0	0	0	3	2.4	0	0	0	0	0	0	0	0	0.0	0	0	50	8	0	4	0	62	67.2
Hourly Total	**0**	**1**	**9**	**4**	**0**	**0**	**0**	**14**	**13.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**133**	**19**	**1**	**16**	**1**	**171**	**192.7**
17:00 - 17:15	0	0	3	0	0	0	0	3	3.0	0	0	0	0	0	0	0	0	0.0	0	0	34	8	0	1	0	43	44.3
17:15 - 17:30	0	1	2	0	0	0	0	3	2.4	0	0	0	0	0	0	0	0	0.0	0	0	47	5	1	1	0	54	55.8
17:30 - 17:45	0	0	2	1	0	0	1	4	5.0	0	0	0	0	0	0	0	0	0.0	0	0	45	2	0	2	0	49	51.6
17:45 - 18:00	0	0	2	0	0	0	0	2	2.0	0	0	0	0	0	0	0	0	0.0	0	0	38	3	0	0	0	41	41.0
Hourly Total	**0**	**1**	**9**	**1**	**0**	**0**	**1**	**12**	**12.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**164**	**18**	**1**	**4**	**0**	**187**	**192.7**
18:00 - 18:15	0	0	3	0	0	0	0	3	3.0	0	0	0	0	0	0	0	0	0.0	0	0	23	3	0	0	0	26	26.0
18:15 - 18:30	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0	0	0	27	2	0	1	0	30	31.3
18:30 - 18:45	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0	0	0	13	3	1	2	0	19	22.1
18:45 - 19:00	0	0	4	0	0	0	0	4	4.0	0	0	0	0	0	0	0	0	0.0	0	0	17	2	0	4	0	23	28.2
Hourly Total	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**9**	**9.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**80**	**10**	**1**	**7**	**0**	**98**	**107.6**
TOTAL	**0**	**2**	**27**	**5**	**0**	**0**	**1**	**35**	**34.8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**377**	**47**	**3**	**27**	**1**	**456**	**493.0**

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

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 7
Approach: Barton Lane

	To A453 Exit Slip Road									To West Leake Lane									To A453 Entry Slip Road								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	0	0	0	0	0	0	0.0	0	0	28	12	2	5	0	47	54.5	0	0	1	3	0	0	0	4	4.0
07:15 - 07:30	0	0	0	0	0	0	0	0	0.0	0	1	20	13	1	5	1	41	48.4	0	0	6	2	2	0	0	10	11.0
07:30 - 07:45	0	0	0	0	0	0	0	0	0.0	0	0	35	10	2	4	0	51	57.2	0	0	4	5	0	1	0	10	11.3
07:45 - 08:00	0	0	0	0	0	0	0	0	0.0	0	0	29	21	1	6	0	57	65.3	0	0	5	1	2	0	0	8	9.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**112**	**56**	**6**	**20**	**1**	**196**	**225.4**	**0**	**0**	**16**	**11**	**4**	**1**	**0**	**32**	**35.3**
08:00 - 08:15	0	0	0	0	0	0	0	0	0.0	0	0	41	11	2	5	1	60	68.5	0	0	6	1	0	0	0	7	7.0
08:15 - 08:30	0	0	0	0	0	0	0	0	0.0	0	0	47	11	6	7	0	71	83.1	0	0	12	1	1	4	0	18	23.7
08:30 - 08:45	0	0	0	0	0	0	0	0	0.0	0	0	41	9	2	6	0	58	66.8	0	0	11	0	2	1	0	14	16.3
08:45 - 09:00	0	0	0	0	0	0	0	0	0.0	0	0	40	13	5	4	0	62	69.7	0	0	5	1	0	1	0	7	8.3
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**169**	**44**	**15**	**22**	**1**	**251**	**288.1**	**0**	**0**	**34**	**3**	**3**	**6**	**0**	**46**	**55.3**
09:00 - 09:15	0	0	0	0	0	0	0	0	0.0	0	0	25	10	1	8	0	44	54.9	0	0	10	3	2	0	0	15	16.0
09:15 - 09:30	0	0	0	0	0	0	0	0	0.0	0	0	23	9	2	5	0	39	46.5	0	0	7	0	0	0	0	7	7.0
09:30 - 09:45	0	0	0	0	0	0	0	0	0.0	0	0	5	1	0	1	1	8	10.3	0	0	8	3	1	0	0	12	12.5
09:45 - 10:00	0	0	0	0	0	0	0	0	0.0	0	0	5	3	0	3	0	11	14.9	0	0	3	3	0	0	0	6	6.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**58**	**23**	**3**	**17**	**1**	**102**	**126.6**	**0**	**0**	**28**	**9**	**3**	**0**	**0**	**40**	**41.5**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**1**	**339**	**123**	**24**	**59**	**3**	**549**	**640.1**	**0**	**0**	**78**	**23**	**10**	**7**	**0**	**118**	**132.1**
16:00 - 16:15	0	0	0	0	0	0	0	0	0.0	0	0	20	5	0	5	1	31	38.5	0	0	4	1	0	0	0	5	5.0
16:15 - 16:30	0	0	0	0	0	0	0	0	0.0	0	1	35	4	0	3	0	43	46.3	0	0	4	1	0	0	0	5	5.0
16:30 - 16:45	0	0	0	0	0	0	0	0	0.0	1	0	38	1	1	4	0	45	49.9	0	0	1	1	0	0	0	2	2.0
16:45 - 17:00	0	0	0	0	0	0	0	0	0.0	0	0	51	8	0	4	0	63	68.2	0	0	3	0	0	0	0	3	3.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**1**	**1**	**144**	**18**	**1**	**16**	**1**	**182**	**202.9**	**0**	**0**	**12**	**3**	**0**	**0**	**0**	**15**	**15.0**
17:00 - 17:15	0	0	0	0	0	0	0	0	0.0	0	0	32	8	0	1	0	41	42.3	0	0	3	0	0	0	0	3	3.0
17:15 - 17:30	0	0	0	0	0	0	0	0	0.0	1	0	50	3	1	1	0	56	57.0	0	0	2	2	0	0	0	4	4.0
17:30 - 17:45	0	0	0	0	0	0	0	0	0.0	0	0	44	2	0	2	1	49	52.6	0	0	4	1	0	0	0	5	5.0
17:45 - 18:00	0	0	0	0	0	0	0	0	0.0	0	0	39	5	0	0	0	44	44.0	0	0	3	0	0	0	0	3	3.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**1**	**0**	**165**	**18**	**1**	**4**	**1**	**190**	**195.9**	**0**	**0**	**12**	**3**	**0**	**0**	**0**	**15**	**15.0**
18:00 - 18:15	0	0	0	0	0	0	0	0	0.0	0	0	24	3	0	0	0	27	27.0	0	0	4	0	0	0	0	4	4.0
18:15 - 18:30	0	0	0	0	0	0	0	0	0.0	0	0	27	3	0	1	0	31	32.3	0	0	3	0	0	0	0	3	3.0
18:30 - 18:45	0	0	0	0	0	0	0	0	0.0	0	0	13	4	1	2	0	20	23.1	0	0	3	0	0	0	0	3	3.0
18:45 - 19:00	0	0	0	0	0	0	0	0	0.0	0	0	20	1	0	4	0	25	30.2	0	0	0	1	0	0	0	1	1.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**84**	**11**	**1**	**7**	**0**	**103**	**112.6**	**0**	**0**	**10**	**1**	**0**	**0**	**0**	**11**	**11.0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**2**	**1**	**393**	**47**	**3**	**27**	**2**	**475**	**511.4**	**0**	**0**	**34**	**7**	**0**	**0**	**0**	**41**	**41.0**

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

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 7
Approach: A453 Exit Slip Road

	To West Leake Lane									To A453 Entry Slip Road									To Barton Lane								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	1	2	0	0	0	3	3.0	0	0	0	0	0	0	0	0	0.0	0	0	3	1	0	0	0	4	4.0
07:15 - 07:30	0	0	4	2	2	1	0	9	11.3	0	0	0	0	0	0	0	0	0.0	0	0	0	1	1	0	0	2	2.5
07:30 - 07:45	0	1	3	3	0	0	0	7	6.4	0	0	0	0	0	0	0	0	0.0	0	0	3	0	0	0	0	3	3.0
07:45 - 08:00	0	0	8	4	0	1	0	13	14.3	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0
Hourly Total	**0**	**1**	**16**	**11**	**2**	**2**	**0**	**32**	**35.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**8**	**2**	**1**	**0**	**0**	**11**	**11.5**
08:00 - 08:15	0	0	14	0	0	0	0	14	14.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:15 - 08:30	0	0	8	1	0	0	2	11	13.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:30 - 08:45	0	0	5	3	1	0	1	10	11.5	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:45 - 09:00	0	0	11	1	1	0	0	13	13.5	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0
Hourly Total	**0**	**0**	**38**	**5**	**2**	**0**	**3**	**48**	**52.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**
09:00 - 09:15	0	0	12	2	0	1	0	15	16.3	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
09:15 - 09:30	0	0	6	3	1	1	1	12	14.8	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0
09:30 - 09:45	0	0	7	4	1	2	0	14	17.1	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
09:45 - 10:00	0	0	4	2	1	0	1	8	9.5	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**29**	**11**	**3**	**4**	**2**	**49**	**57.7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2.0**
TOTAL	**0**	**1**	**83**	**27**	**7**	**6**	**5**	**129**	**144.7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**12**	**2**	**1**	**0**	**0**	**15**	**15.5**
16:00 - 16:15	0	0	1	2	0	1	1	5	7.3	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0
16:15 - 16:30	0	0	10	2	0	2	0	14	16.6	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0
16:30 - 16:45	0	0	5	4	1	1	1	12	14.8	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
16:45 - 17:00	0	0	18	1	0	0	0	19	19.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**34**	**9**	**1**	**4**	**2**	**50**	**57.7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**3.0**
17:00 - 17:15	0	0	13	1	0	0	0	14	14.0	0	0	0	0	0	0	0	0	0.0	0	0	1	1	0	0	0	2	2.0
17:15 - 17:30	0	0	13	0	0	0	1	14	15.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
17:30 - 17:45	0	0	10	1	0	0	0	11	11.0	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0
17:45 - 18:00	0	0	11	1	0	1	0	13	14.3	0	0	0	0	0	0	0	0	0.0	0	0	1	0	0	0	0	1	1.0
Hourly Total	**0**	**0**	**47**	**3**	**0**	**1**	**1**	**52**	**54.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**4**	**4.0**
18:00 - 18:15	0	0	5	0	0	1	0	6	7.3	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
18:15 - 18:30	0	0	11	0	0	1	1	13	15.3	0	0	0	0	0	0	0	0	0.0	0	0	3	1	0	1	0	5	6.3
18:30 - 18:45	0	0	10	1	0	0	0	11	11.0	0	0	0	0	0	0	0	0	0.0	0	0	2	0	0	0	0	2	2.0
18:45 - 19:00	0	0	4	0	0	1	0	5	6.3	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**30**	**1**	**0**	**3**	**1**	**35**	**39.9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**5**	**1**	**0**	**1**	**0**	**7**	**8.3**
TOTAL	**0**	**0**	**111**	**13**	**1**	**8**	**4**	**137**	**151.9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**11**	**2**	**0**	**1**	**0**	**14**	**15.3**

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

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 7
Approach: West Leake Lane

	To A453 Entry Slip Road									To Barton Lane									To A453 Exit Slip Road								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	35	4	3	3	0	45	50.4	0	0	4	0	3	1	0	8	10.8	0	0	0	0	0	0	0	0	0.0
07:15 - 07:30	0	0	25	5	0	5	0	35	41.5	0	0	7	0	0	1	0	8	9.3	0	0	0	0	0	0	0	0	0.0
07:30 - 07:45	0	0	34	13	1	3	0	51	55.4	0	0	11	1	0	2	1	15	18.6	0	0	0	0	0	0	0	0	0.0
07:45 - 08:00	0	1	57	4	0	8	0	70	79.8	0	0	11	2	0	4	0	17	22.2	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**1**	**151**	**26**	**4**	**19**	**0**	**201**	**227.1**	**0**	**0**	**33**	**3**	**3**	**8**	**1**	**48**	**60.9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
08:00 - 08:15	0	0	63	7	2	8	0	80	91.4	0	0	16	3	0	2	0	21	23.6	0	0	0	0	0	0	0	0	0.0
08:15 - 08:30	0	0	36	6	0	3	0	45	48.9	0	0	15	1	0	0	1	17	18.0	0	0	0	0	0	0	0	0	0.0
08:30 - 08:45	0	1	40	7	0	6	0	54	61.2	0	0	13	0	0	1	0	14	15.3	0	0	0	0	0	0	0	0	0.0
08:45 - 09:00	0	1	31	8	2	4	0	46	51.6	0	0	10	2	0	1	1	14	16.3	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**2**	**170**	**28**	**4**	**21**	**0**	**225**	**253.1**	**0**	**0**	**54**	**6**	**0**	**4**	**2**	**66**	**73.2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
09:00 - 09:15	0	0	32	6	0	7	0	45	54.1	0	0	6	1	0	0	0	7	7.0	0	0	0	0	0	0	0	0	0.0
09:15 - 09:30	0	0	22	7	1	6	0	36	44.3	0	0	4	0	1	1	1	7	9.8	0	0	0	0	0	0	0	0	0.0
09:30 - 09:45	0	0	25	2	0	6	0	33	40.8	0	0	7	0	0	1	0	8	9.3	0	0	0	0	0	0	0	0	0.0
09:45 - 10:00	0	0	18	6	2	6	0	32	40.8	0	0	4	1	1	2	1	9	13.1	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**97**	**21**	**3**	**25**	**0**	**146**	**180.0**	**0**	**0**	**21**	**2**	**2**	**4**	**2**	**31**	**39.2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**0**	**3**	**418**	**75**	**11**	**65**	**0**	**572**	**660.2**	**0**	**0**	**108**	**11**	**5**	**16**	**5**	**145**	**173.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
16:00 - 16:15	0	0	37	16	3	0	0	56	57.5	0	0	8	5	1	0	0	14	14.5	0	0	0	0	0	0	0	0	0.0
16:15 - 16:30	0	0	39	13	2	3	0	57	61.9	0	1	6	2	0	0	1	10	10.4	0	0	0	0	0	0	0	0	0.0
16:30 - 16:45	0	0	37	11	2	2	0	52	55.6	0	1	8	1	0	1	0	11	11.7	0	0	0	0	0	0	0	0	0.0
16:45 - 17:00	0	1	36	5	0	5	0	47	52.9	0	0	10	1	0	0	0	11	11.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**1**	**149**	**45**	**7**	**10**	**0**	**212**	**227.9**	**0**	**2**	**32**	**9**	**1**	**1**	**1**	**46**	**47.6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
17:00 - 17:15	0	0	37	16	1	1	0	55	56.8	0	0	12	2	0	1	1	16	18.3	0	0	0	0	0	0	0	0	0.0
17:15 - 17:30	0	0	37	4	1	2	0	44	47.1	0	0	17	3	0	0	1	21	22.0	0	0	0	0	0	0	0	0	0.0
17:30 - 17:45	0	0	38	2	0	2	0	42	44.6	0	0	14	1	0	0	0	15	15.0	0	0	0	0	0	0	0	0	0.0
17:45 - 18:00	0	0	33	8	1	4	0	46	51.7	0	0	6	0	0	0	0	6	6.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**145**	**30**	**3**	**9**	**0**	**187**	**200.2**	**0**	**0**	**49**	**6**	**0**	**1**	**2**	**58**	**61.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
18:00 - 18:15	0	1	24	0	0	0	0	25	24.4	0	0	8	1	0	1	1	11	13.3	0	0	0	0	0	0	0	0	0.0
18:15 - 18:30	0	0	13	1	3	5	0	22	30.0	0	0	4	0	0	0	0	4	4.0	0	0	0	0	0	0	0	0	0.0
18:30 - 18:45	0	1	8	2	0	2	0	13	15.0	0	0	1	0	0	0	0	1	1.0	0	0	0	0	0	0	0	0	0.0
18:45 - 19:00	0	0	12	1	0	2	0	15	17.6	0	0	6	1	0	0	0	7	7.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**2**	**57**	**4**	**3**	**9**	**0**	**75**	**87.0**	**0**	**0**	**19**	**2**	**0**	**1**	**1**	**23**	**25.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**0**	**3**	**351**	**79**	**13**	**28**	**0**	**474**	**515.1**	**0**	**2**	**100**	**17**	**1**	**3**	**4**	**127**	**134.2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**

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

Road Data Services Ltd

East Midlands Airport
Wednesday 20th September 2023
Junction: 7
Approach: A453 Entry Slip Road

	To Barton Lane									To A453 Exit Slip Road									To West Leake Lane								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
07:15 - 07:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
07:30 - 07:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
07:45 - 08:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
08:00 - 08:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:15 - 08:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:30 - 08:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
08:45 - 09:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
09:00 - 09:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
09:15 - 09:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
09:30 - 09:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
09:45 - 10:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
16:00 - 16:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
16:15 - 16:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
16:30 - 16:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
16:45 - 17:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
17:00 - 17:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
17:15 - 17:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
17:30 - 17:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
17:45 - 18:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
18:00 - 18:15	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
18:15 - 18:30	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
18:30 - 18:45	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
18:45 - 19:00	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**

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

APPENDIX 17 – GEH Comparison

J1 - A453 / Walton Hill

Junction Arm	
A	Northern Arm
B	A453
C	Walton Hill

2022 Observed Flows (Lights AM)

	A	B	C
A	0	430	241
B	165	0	133
C	284	340	0

2022 Saturn Actual Flows (Lights AM)

	A	B	C
A	0	721	337
B	131	0	228
C	399	320	0

GEH Comparison

	A	B	C
A	0	12	6
B	3	0	7
C	6	1	0

J2 - A453 / East Midland Airport Access

Junction Arm	
A	East Midlands Airport Access
B	A453 (E)
C	A453(W)

2022 Observed Flows (Lights AM)

	A	B	C
A	0	104	35
B	239	0	312
C	127	458	0

2022 Saturn Actual Flows (Lights AM)

	A	B	C
A	0	4	67
B	58	0	291
C	267	776	0

GEH Comparison

	A	B	C
A	0	14	4
B	15	0	1
C	10	13	0

J3 - A453 / Hunter Road

Junction Arm	
A	Hunter Road
B	A453 (E)
C	A453 (W)

2022 Observed Flows (Lights AM)

	A	B	C
A	0	89	26
B	367	0	525
C	50	512	0

2022 Saturn Actual Flows (Lights AM)

	A	B	C
A	0	155	0
B	543	0	281
C	0	578	0

GEH Comparison

	A	B	C
A	0	6	7
B	8	0	12
C	10	3	0

J4 - A453 / M1 J23A Access / Donnington Services

Junction Arm	
A	A453 (N)
B	M1 J23A Access
C	Donnington Services Access
D	A453 (W)

2022 Observed Flows (Lights AM)

	A	B	C	D
A	0	486	57	395
B	828	0	102	448
C	41	89	0	50
D	368	213	21	0

2022 Saturn Actual Flows (Lights AM)

	A	B	C	D
A	0	145	0	211
B	1276	0	0	608
C	0	0	0	0
D	351	381	0	0

GEH Comparison

	A	B	C	D
A	0	19	11	11
B	14	0	14	7
C	9	13	0	10
D	1	10	6	0

J5 - A453 / Derby Road / M1 J24 / A50

Junction Arm	
A	M1 J24 (N)
B	A453 (N)
C	Derby Road
D	M1 J24 (S)
E	A453 (S)
F	A50
G	Hilton Hotel Lane

2022 Observed Flows (Lights AM)

	A	B	C	D	E	F	G
A	0	820	505	0	491	287	14
B	162	0	59	423	381	212	14
C	61	73	0	49	173	94	2
D	5	661	87	0	3	957	21
E	204	211	27	38	0	846	6
F						0	
G	5	63	9	23	17	9	0

2022 Saturn Actual Flows (Lights AM)

	A	B	C	D	E	F	G
A	0	440	521	0	87	0	0
B	136	0	1	660	68	507	64
C	183	0	0	122	0	370	20
D	0	802	84	0	4	545	75
E	163	84	1	0	0	1024	7
F	0	0	0	0	0	0	0
G	13	203	159	16	1	0	0

GEH Comparison

	A	B	C	D	E	F	G
A	0	15	1	0	24	24	5
B	2	0	11	10	21	16	8
C	11	12	0	8	19	18	5
D	3	5	0	0	1	15	8
E	3	10	7	9	0	6	0
F	0	0	0	0	0	0	0
G	3	12	16	2	5	4	0

J6 - A453 / Northon Arm

Junction Arm	
A	Northern Arm
B	A453 (E)
C	A453 (W)

2022 Observed Flows (Lights AM)

	A	B	C
A	0	42	28
B	205	0	110
C	208	485	0

2022 Saturn Actual Flows (Lights AM)

	A	B	C
A	0	119	77
B	118	0	164
C	344	458	0

GEH Comparison

	A	B	C
A	0	9	7
B	7	0	5
C	8	1	0

J7 - A453 / The Green

Junction Arm	
A	A453 (E)
B	The Green
C	A453 (W)

2022 Observed Flows (Lights AM)

	A	B	C
A	0	10	230
B	16	0	85
C	458	69	0

2022 Saturn Actual Flows (Lights AM)

	A	B	C
A	0	33	172
B	200	0	177
C	560	219	0

GEH Comparison

	A	B	C
A	0	5	4
B	18	0	8
C	5	13	0

J8 - A453 / Grimes Gate

Junction Arm	
A	A453 (E)
B	Grimes Gate
C	A453 (W)

2022 Observed Flows (Lights AM)

	A	B	C
A	0	20	234
B	62	0	6
C	467	7	0

2022 Saturn Actual Flows (Lights AM)

	A	B	C
A	0	36	205
B	43	0	0
C	760	0	0

GEH Comparison

	A	B	C
A	0	3	2
B	3	0	3
C	12	4	0

J9 - A453 / A6 Kegworth Bypass / Wilders Way

Junction Arm	
A	A453 (N)
B	A6 Kegworth Bypass
C	A453 (S)
D	Wilders Way

2022 Observed Flows (Lights AM)

	A	B	C	D
A	0	26	275	250
B	270	0	102	305
C	681	92	2	156
D	69	2	37	0

2022 Saturn Actual Flows (Lights AM)

	A	B	C	D
A	0	4	145	3
B	179	0	186	269
C	1098	155	0	370
D	20	15	29	0

GEH Comparison

	A	B	C	D
A	0	6	9	22
B	6	0	7	2
C	14	6	0	13
D	7	4	1	0

J10 - M1 J23 Slip Road / A512 / Ashby Road East

Junction Arm	
A	M1 J23 Slip Road (N)
B	A512
C	M1 J23 Slip Road (S)
D	Ashby Road (E)

2022 Observed Flows (Lights AM)

	A	B	C	D
A	0	741	0	289
B	444	0	127	338
C	0	383	0	0
D	242	671	108	0

2022 Saturn Actual Flows (Lights AM)

	A	B	C	D
A	0	217	0	431
B	155	0	124	713
C	0	125	0	337
D	312	219	215	0

GEH Comparison

	A	B	C	D
A	0	24	0	7
B	17	0	0	16
C	0	16	0	26
D	4	21	8	0

J1 - A453 / Walton Hill

Junction Arm	
A	Northern Arm
B	A453
C	Walton Hill

2022 Observed Flows (Lights PM)

	A	B	C
A	0	208	277
B	325	0	270
C	213	181	0

2022 Saturn Actual Flows (Lights PM)

	A	B	C
A	0	245	353
B	382	0	284
C	322	193	0

GEH Comparison

	A	B	C
A	0	2	4
B	3	0	1
C	7	1	0

J2 - A453 / East Midland Airport Access

Junction Arm	
A	East Midlands Airport Access
B	A453 (E)
C	A453(W)

2022 Observed Flows (Lights PM)

	A	B	C
A	0	220	65
B	125	0	397
C	37	317	0

2022 Saturn Actual Flows (Lights PM)

	A	B	C
A	0	57	252
B	10	0	415
C	95	337	0

GEH Comparison

	A	B	C
A	0	14	15
B	14	0	1
C	7	1	0

J3 - A453 / Hunter Road

Junction Arm	
A	Hunter Road
B	A453 (E)
C	A453 (W)

2022 Observed Flows (Lights PM)

	A	B	C
A	0	335	34
B	110	0	488
C	28	509	0

2022 Saturn Actual Flows (Lights PM)

	A	B	C
A	0	476	0
B	136	0	447
C	0	582	0

GEH Comparison

	A	B	C
A	0	7	8
B	2	0	2
C	7	3	0

J4 - A453 / M1 J23A Access / Donnington Services

Junction Arm	
A	A453 (N)
B	M1 J23A Access
C	Donnington Services Access
D	A453 (W)

2022 Observed Flows (Lights PM)

	A	B	C	D
A	0	332	62	154
B	700	0	111	402
C	76	109	0	52
D	568	239	47	0

2022 Saturn Actual Flows (Lights PM)

	A	B	C	D
A	0	385	0	209
B	1201	0	0	338
C	0	0	0	0
D	491	566	0	0

GEH Comparison

	A	B	C	D
A	0	3	11	4
B	16	0	15	3
C	0	15	0	10
D	3	16	10	0

J5 - A453 / Derby Road / M1 J24 / A50

Junction Arm	
A	M1 J24 (N)
B	A453 (N)
C	Derby Road
D	M1 J24 (S)
E	A453 (S)
F	A50
G	Hilton Hotel Lane

2022 Observed Flows (Lights PM)

	A	B	C	D	E	F	G
A	0	857	530	4	160	218	10
B	247	0	73	777	270	379	11
C	87	56	0	50	86	129	2
D	0	489	67	0	4	978	14
E	309	242	40	35	0	926	5
F	0	0	0	0	0	0	0
G	15	20	10	8	4	11	0

2022 Saturn Actual Flows (Lights PM)

	A	B	C	D	E	F	G
A	0	754	578	0	233	0	0
B	138	0	0	936	164	644	68
C	285	0	0	0	0	347	22
D	0	662	112	0	83	584	55
E	271	116	24	81	0	1156	19
F	0	0	0	0	0	0	0
G	39	58	21	27	8	0	0

GEH Comparison

	A	B	C	D	E	F	G
A	0	4	2	3	5	21	4
B	8	0	12	5	7	12	9
C	15	11	0	10	13	14	6
D	0	7	5	0	12	14	7
E	2	9	3	6	0	7	4
F	0	0	0	0	0	0	0
G	5	6	3	5	2	5	0

J6 - A453 / Northern Arm

Junction Arm	
A	Northern Arm
B	A453 (E)
C	A453 (W)

2022 Observed Flows (Lights PM)

	A	B	C
A	0	144	207
B	67	0	342
C	110	246	0

2022 Saturn Actual Flows (Lights PM)

	A	B	C
A	0	46	309
B	110	0	273
C	332	116	0

GEH Comparison

	A	B	C
A	0	10	6
B	5	0	4
C	15	10	0

J7 - A453 / The Green

Junction Arm	
A	A453 (E)
B	The Green
C	A453 (W)

2022 Observed Flows (Lights PM)

	A	B	C
A	0	12	357
B	14	0	58
C	286	104	0

2022 Saturn Actual Flows (Lights PM)

	A	B	C
A	0	130	285
B	97	0	139
C	241	153	0

GEH Comparison

	A	B	C
A	0	14	4
B	11	0	8
C	3	4	0

J8 - A453 / Grimes Gate

Junction Arm	
A	A453 (E)
B	Grimes Gate
C	A453 (W)

2022 Observed Flows (Lights PM)

	A	B	C
A	0	70	360
B	28	0	9
C	288	12	0

2022 Saturn Actual Flows (Lights PM)

	A	B	C
A	0	27	415
B	17	0	0
C	338	0	0

GEH Comparison

	A	B	C
A	0	6	3
B	2	0	4
C	3	5	0

J9 - A453 / A6 Kegworth Bypass / Wilders Way

Junction Arm	
A	A453 (N)
B	A6 Kegworth Bypass
C	A453 (S)
D	Wilders Way

2022 Observed Flows (Lights PM)

	A	B	C	D
A	5	57	209	193
B	288	0	95	294
C	665	146	0	42
D	149	15	73	0

2022 Saturn Actual Flows (Lights PM)

	A	B	C	D
A	0	238	198	42
B	393	0	355	27
C	1516	61	0	87
D	373	126	173	0

GEH Comparison

	A	B	C	D
A	0	15	1	14
B	6	0	17	21
C	26	8	0	6
D	14	13	9	0

J10 - M1 J23 Slip Road / A512 / Ashby Road East

Junction Arm	
A	M1 J23 Slip Road (N)
B	A512
C	M1 J23 Slip Road (S)
D	Ashby Road (E)

2022 Observed Flows (Lights PM)

	A	B	C	D
A	0	394	0	155
B	469	0	341	496
C	0	185	0	122
D	204	373	114	0

2022 Saturn Actual Flows (Lights PM)

	A	B	C	D
A	0	305	0	348
B	258	0	119	401
C	0	182	0	243
D	311	467	340	0

GEH Comparison

	A	B	C	D
A	0	5	0	12
B	11	0	15	4
C	0	0	0	9
D	7	5	15	0

J1 - A453 / Walton Hill

Junction Arm	
A	Northern Arm
B	A453
C	Walton Hill

2022 Observed Flows (Heavies AM)

	A	B	C
A	0	45	23
B	25	0	28
C	15	33	0

2022 Saturn Actual Flows (Heavies AM)

	A	B	C
A	0	0	4
B	0	0	20
C	1	40	0

GEH Comparison

	A	B	C
A	0	9	5
B	7	0	2
C	5	1	0

J2 - A453 / East Midland Airport Access

Junction Arm	
A	East Midlands Airport Access
B	A453 (E)
C	A453(W)

2022 Observed Flows (Heavies AM)

	A	B	C
A	0	5	2
B	1	0	39
C	1	1	0

2022 Saturn Actual Flows (Heavies AM)

	A	B	C
A	0	0	3
B	0	0	17
C	8	32	0

GEH Comparison

	A	B	C
A	0	3	1
B	1	0	4
C	3	8	0

J3 - A453 / Hunter Road

Junction Arm	
A	Hunter Road
B	A453 (E)
C	A453 (W)

2022 Observed Flows (Heavies AM)

	A	B	C
A	0	18	0
B	17	0	40
C	1	60	0

2022 Saturn Actual Flows (Heavies AM)

	A	B	C
A	0	8	0
B	36	0	39
C	0	34	0

GEH Comparison

	A	B	C
A	0	3	####
B	4	0	0
C	1	4	0

J4 - A453 / M1 J23A Access / Donnington

Junction Arm	
A	A453 (N)
B	M1 J23A Access
C	Donnington Services Access
D	A453 (W)

2022 Observed Flows (Heavies AM)

	A	B	C	D
A	0	74	10	25
B	124	0	32	27
C	48	23	0	5
D	40	36	2	0

2022 Saturn Actual Flows (Heavies AM)

	A	B	C	D
A	0	65	0	20
B	362	0	0	54
C	0	0	0	0
D	39	3	0	0

GEH Comparison

	A	B	C	D
A	0	1	4	1
B	15	0	8	4
C	10	7	0	3
D	0	7	2	0

J5 - A453 / Derby Road / M1 J24 / A50

Junction Arm	
A	M1 J24 (N)
B	A453 (N)
C	Derby Road
D	M1 J24 (S)
E	A453 (S)
F	A50
G	Hilton Hotel Lane

2022 Observed Flows (Heavies AM)

	A	B	C	D	E	F	G
A	0	80	21	0	51	34	0
B	25	0	1	60	43	34	0
C	0	2	0	5	1	13	0
D	0	70	11	0	2	193	0
E	36	21	3	19	0	111	0
F						0	
G	0	0	0	0	0	0	0

2022 Saturn Actual Flows (Heavies AM)

	A	B	C	D	E	F	G
A	0	103	3	0	306	0	2
B	11	0	0	75	80	87	0
C	0	0	0	0	0	0	0
D	0	90	0	0	0	109	3
E	177	50	0	0	0	169	2
F	0	0	0	0	0	0	0
G	0	0	0	1	1	1	0

GEH Comparison

	A	B	C	D	E	F	G
A	0	2	5	0	19	8	2
B	3	0	1	2	5	7	0
C	0	2	0	3	1	5	0
D	0	2	5	0	2	7	2
E	14	5	2	6	0	5	2
F	0	0	0	0	0	0	0
G	0	0	0	1	1	1	0

J6 - A453 / Northan Arm

Junction Arm	
A	Northern Arm
B	A453 (E)
C	A453 (W)

2022 Observed Flows (Heavies AM)

	A	B	C
A	0	11	16
B	7	0	23
C	16	30	0

2022 Saturn Actual Flows (Heavies AM)

	A	B	C
A	0	3	29
B	0	0	5
C	17	22	0

GEH Comparison

	A	B	C
A	0	3	3
B	4	0	5
C	0	2	0

J7 - A453 / The Green

Junction Arm	
A	A453 (E)
B	The Green
C	A453 (W)

2022 Observed Flows (Heavies AM)

	A	B	C
A	0	1	30
B	1	0	0
C	39	2	0

2022 Saturn Actual Flows (Heavies AM)

	A	B	C
A	0	0	17
B	0	0	0
C	32	0	0

GEH Comparison

	A	B	C
A	0	1	3
B	1	0	0
C	1	2	0

J8 - A453 / Grimes Gate

Junction Arm	
A	A453 (E)
B	Grimes Gate
C	A453 (W)

2022 Observed Flows (Heavies AM)

	A	B	C
A	0	0	31
B	1	0	0
C	40	0	0

2022 Saturn Actual Flows (Heavies AM)

	A	B	C
A	0	0	17
B	0	0	0
C	32	0	0

GEH Comparison

	A	B	C
A	0	0	3
B	1	0	0
C	1	0	0

J9 - A453 / A6 Kegworth Bypass / Wilders Way

Junction Arm	
A	A453 (N)
B	A6 Kegworth Bypass
C	A453 (S)
D	Wilders Way

2022 Observed Flows (Heavies AM)

	A	B	C	D
A	3	20	17	26
B	11	0	3	16
C	65	7	0	28
D	21	2	21	0

2022 Saturn Actual Flows (Heavies AM)

	A	B	C	D
A	0	25	18	326
B	54	0	3	22
C	45	33	0	323
D	308	66	68	0

GEH Comparison

	A	B	C	D
A	0	1	0	23
B	8	0	0	1
C	3	6	0	22
D	22	11	7	0

J10 - M1 J23 Slip Road / A512 / Ashby Road East

Junction Arm	
A	M1 J23 Slip Road (N)
B	A512
C	M1 J23 Slip Road (S)
D	Ashby Road (E)

2022 Observed Flows (Heavies AM)

	A	B	C	D
A	0	27	0	44
B	25	0	17	20
C	0	20	0	22
D	24	32	12	0

2022 Saturn Actual Flows (Heavies AM)

	A	B	C	D
A	0	6	0	103
B	12	0	2	47
C	0	2	0	14
D	13	47	15	0

GEH Comparison

	A	B	C	D
A	0	5	0	7
B	3	0	5	5
C	0	5	0	2
D	3	2	1	0

J1 - A453 / Walton Hill

Junction Arm	
A	Northern Arm
B	A453
C	Walton Hill

2022 Observed Flows (Heavies PM)

	A	B	C
A	0	10	6
B	9	0	9
C	7	3	0

2022 Saturn Actual Flows (Heavies PM)

	A	B	C
A	0	0	0
B	0	0	20
C	0	11	0

GEH Comparison

	A	B	C
A	0	4	3
B	4	0	3
C	4	3	0

J2 - A453 / East Midland Airport Access

Junction Arm	
A	East Midlands Airport Access
B	A453 (E)
C	A453(W)

2022 Observed Flows (Heavies PM)

	A	B	C
A	0	2	0
B	4	0	23
C	2	15	0

2022 Saturn Actual Flows (Heavies PM)

	A	B	C
A	0	0	3
B	0	0	17
C	1	10	0

GEH Comparison

	A	B	C
A	0	2	2
B	3	0	1
C	1	1	0

J3 - A453 / Hunter Road

Junction Arm	
A	Hunter Road
B	A453 (E)
C	A453 (W)

2022 Observed Flows (Heavies PM)

	A	B	C
A	0	19	1
B	16	1	26
C	0	17	0

2022 Saturn Actual Flows (Heavies PM)

	A	B	C
A	0	7	0
B	4	0	20
C	0	24	0

GEH Comparison

	A	B	C
A	0	3	1
B	4	0	1
C	0	2	0

J4 - A453 / M1 J23A Access / Donnington

Junction Arm	
A	A453 (N)
B	M1 J23A Access
C	Donnington Services Access
D	A453 (W)

2022 Observed Flows (Heavies PM)

	A	B	C	D
A	0	35	26	24
B	71	0	27	18
C	12	15	0	1
D	19	14	4	0

2022 Saturn Actual Flows (Heavies PM)

	A	B	C	D
A	0	91	0	13
B	207	0	0	8
C	0	0	0	0
D	29	2	0	0

GEH Comparison

	A	B	C	D
A	0	7	7	3
B	12	0	7	3
C	5	5	0	1
D	2	4	3	0

J5 - A453 / Derby Road / M1 J24 / A50

Junction Arm	
A	M1 J24 (N)
B	A453 (N)
C	Derby Road
D	M1 J24 (S)
E	A453 (S)
F	A50
G	Hilton Hotel Lane

2022 Observed Flows (Heavies PM)

	A	B	C	D	E	F	G
A	0	50	15	0	22	22	0
B	16	0	1	36	24	26	0
C	0	1	0	1	2	6	0
D	0	39	9	0	1	111	0
E	14	14	1	7	0	73	0
F						0	
G	0	0	0	0	0	0	0

2022 Saturn Actual Flows (Heavies PM)

	A	B	C	D	E	F	G
A	0	54	0	0	167	0	1
B	4	0	0	65	52	52	0
C	0	0	0	0	0	0	0
D	0	45	0	0	0	48	1
E	121	70	0	0	0	162	1
F	0	0	0	0	0	0	0
G	0	0	0	1	1	0	0

GEH Comparison

	A	B	C	D	E	F	G
A	0	1	5	0	15	7	1
B	4	0	1	4	5	4	0
C	0	1	0	1	2	3	0
D	0	1	4	0	1	7	1
E	13	9	1	4	0	8	1
F	0	0	0	0	0	0	0
G	0	0	0	1	1	0	0

J6 - A453 / Northon Arm

Junction Arm	
A	Northern Arm
B	A453 (E)
C	A453 (W)

2022 Observed Flows (Heavies PM)

	A	B	C
A	0	9	7
B	13	0	11
C	12	6	0

2022 Saturn Actual Flows (Heavies PM)

	A	B	C
A	0	0	10
B	0	0	14
C	17	4	0

GEH Comparison

	A	B	C
A	0	4	1
B	5	0	1
C	1	1	0

J7 - A453 / The Green

Junction Arm	
A	A453 (E)
B	The Green
C	A453 (W)

2022 Observed Flows (Heavies PM)

	A	B	C
A	0	0	24
B	0	0	0
C	15	0	0

2022 Saturn Actual Flows (Heavies PM)

	A	B	C
A	0	0	17
B	0	0	0
C	10	0	0

GEH Comparison

	A	B	C
A	0	0	2
B	0	0	0
C	1	0	0

J8 - A453 / Grimes Gate

Junction Arm	
A	A453 (E)
B	Grimes Gate
C	A453 (W)

2022 Observed Flows (Heavies PM)

	A	B	C
A	0	2	24
B	0	0	0
C	15	0	0

2022 Saturn Actual Flows (Heavies PM)

	A	B	C
A	0	0	17
B	0	0	0
C	10	0	0

GEH Comparison

	A	B	C
A	0	2	2
B	0	0	0
C	1	0	0

J9 - A453 / A6 Kegworth Bypass / Wilders Way

Junction Arm	
A	A453 (N)
B	A6 Kegworth Bypass
C	A453 (S)
D	Wilders Way

2022 Observed Flows (Heavies PM)

	A	B	C	D
A	0	5	30	14
B	5	0	6	8
C	54	4	0	28
D	19	2	26	0

2022 Saturn Actual Flows (Heavies PM)

	A	B	C	D
A	0	27	14	176
B	46	0	1	46
C	26	13	0	192
D	420	118	114	0

GEH Comparison

	A	B	C	D
A	0	6	3	17
B	8	0	3	7
C	4	3	0	16
D	27	15	11	0

J10 - M1 J23 Slip Road / A512 / Ashby Road East

Junction Arm	
A	M1 J23 Slip Road (N)
B	A512
C	M1 J23 Slip Road (S)
D	Ashby Road (E)

2022 Observed Flows (Heavies PM)

	A	B	C	D
A	0	7	0	16
B	11	0	5	12
C	0	9	0	23
D	7	8	2	0

2022 Saturn Actual Flows (Heavies PM)

	A	B	C	D
A	0	5	0	17
B	9	0	0	26
C	0	3	0	5
D	16	22	4	0

GEH Comparison

	A	B	C	D
A	0	1	0	0
B	1	0	3	3
C	0	2	0	5
D	3	4	1	0

APPENDIX 3: Walking, Cycling and Horse-Riding Assessment and Review Assessment Report (document reference EMG2-BWB-GEN-XX-RP-TR-0005_S2-P6)

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TRANSPORT & INFRASTRUCTURE PLANNING

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EAST MIDLANDS GATEWAY 2 (EMG2)
North West Leicestershire
Walking, Cycling & Horse-riding Assessment Report

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1. INTRODUCTION

Background and scope of assessment

1.1 This report has been produced in accordance with the requirements of DMRB GG 142 Walking, Cycling and Horse-Riding Assessment Review (WCHAR) to inform the design of the proposed site and highway improvement works proposed as part of the proposed Phase 2 expansion of the East Midlands Gateway (EMG) site largely located to the south of the A453 and East Midlands Airport in Leicestershire. The purpose of GG 142 is to facilitate the inclusion of all walking, cycling & horse-riding modes in the scheme design process from the earliest stage, enabling the design team to identify opportunities for improved facilities and integration with the local and national network(s) throughout the design process.

1.2 The purpose of this report is to provide an assessment of the existing facilities and provision for pedestrians, cyclists and equestrians that will help inform decision making throughout the design process. It provides an update to the report produced in February 2023 and now covers all the area of the East Midlands Gateway 2 (EMG2) main site, the highway works and East Midlands Gateway 1 (EMG1) works.

1.3 In accordance GG 142, the scale of the highway works has been assessed (by the Lead Assessor) and is considered to qualify as a 'large' Scheme, for the purpose of this assessment.

1.4 Where appropriate, opportunities for improvements have been identified which will be considered through the design process, and re-visited during the GG 142 process, through the production of the Review Reports at the appropriate stages.

Proposed Highway Scheme

EMG2 Main Site, Highway Works and EMG1 Works

1.5 The EMG2 Scheme forms a second phase of East Midlands Gateway, EMG2 is located to the south of the A453 and East Midlands Airport in Leicestershire (with the first East Midlands Gateway Scheme located north of the Airport)

1.6 EMG2 comprises the following components:

- EMG2 Main Site – a comprehensive multi-unit logistics and advanced manufacturing development located south of East Midlands Airport and the A453, and west of the M1 motorway;
- Highways Works – works to the highway network including significant improvements at Junction 24 of the M1 (referred to as J24 Improvements) and the road network interacting with that junction; and
- EMG1 Works – additional warehousing on Plot 16 together with works to increase the permitted height of the cranes at the rail-freight terminal, improvements to the public transport interchange and site management building.

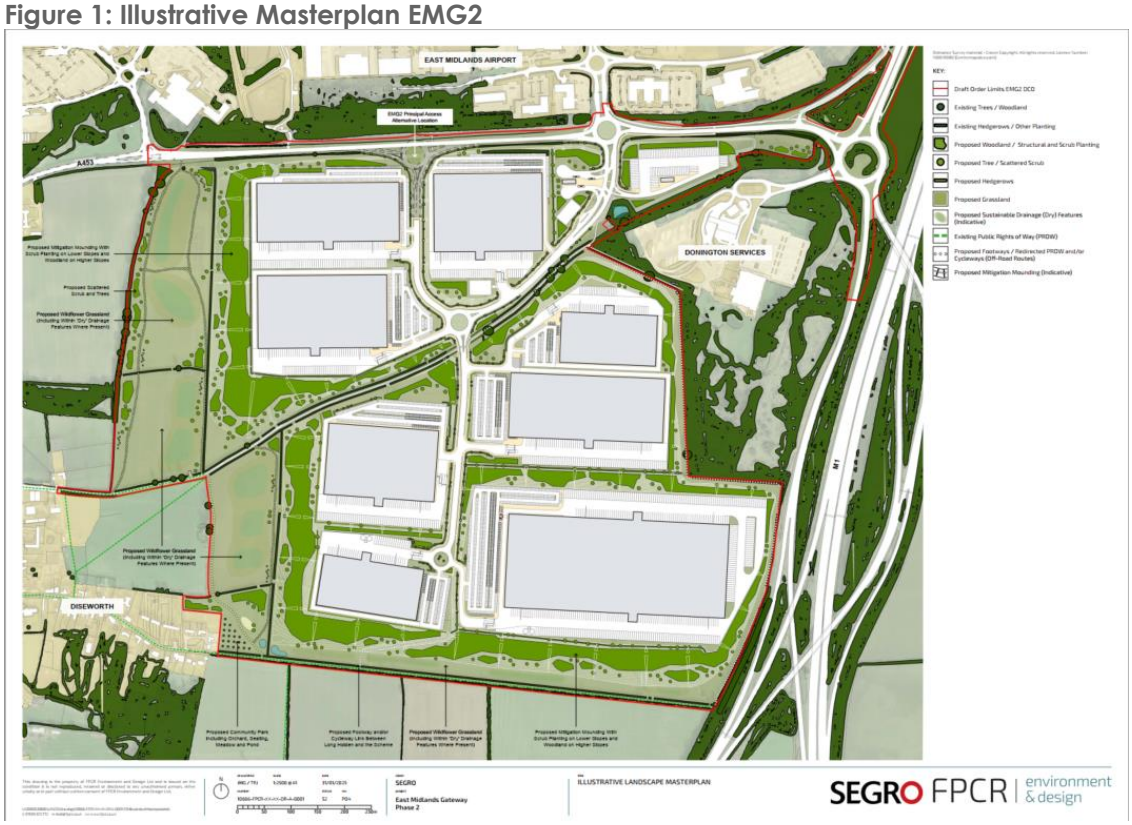
1.7 The following section provides more details on the proposals, focusing on the quantum of development, access to the EMG2 main site, sustainable and active travel improvements.

EMG2 Main Site

1.8 The illustrative masterplan for the EMG2 Main Site is shown in **Figure 1** and a copy is included at **Appendix 1**, In summary the EMG2 Main Site proposals include:

- A maximum of 300,000 sq.m. of employment floorspace (GIA) overall, with an additional allowance of 100,000 sq.m. in the form of internal mezzanines across the site. The development will primarily comprise logistics facilities (Use Class B8) with up to 20% of the floorspace capable of being used for general industrial uses (Use Class B2).
- Vehicular access would be from the A453 via a new arm off the Hunter Road roundabout (the EMG2 Access Works), with a possible alternative principal access (new roundabout) further to the west along the A453.
- Hyam's Lane is to be retained and its surface upgraded to provide enhanced pedestrian/cycle connectivity through the site.
- A bus interchange terminal at the site entrance which replicates and builds upon the successful sustainable travel strategy for the EMG1 site.

Figure 1: Illustrative Masterplan EMG2



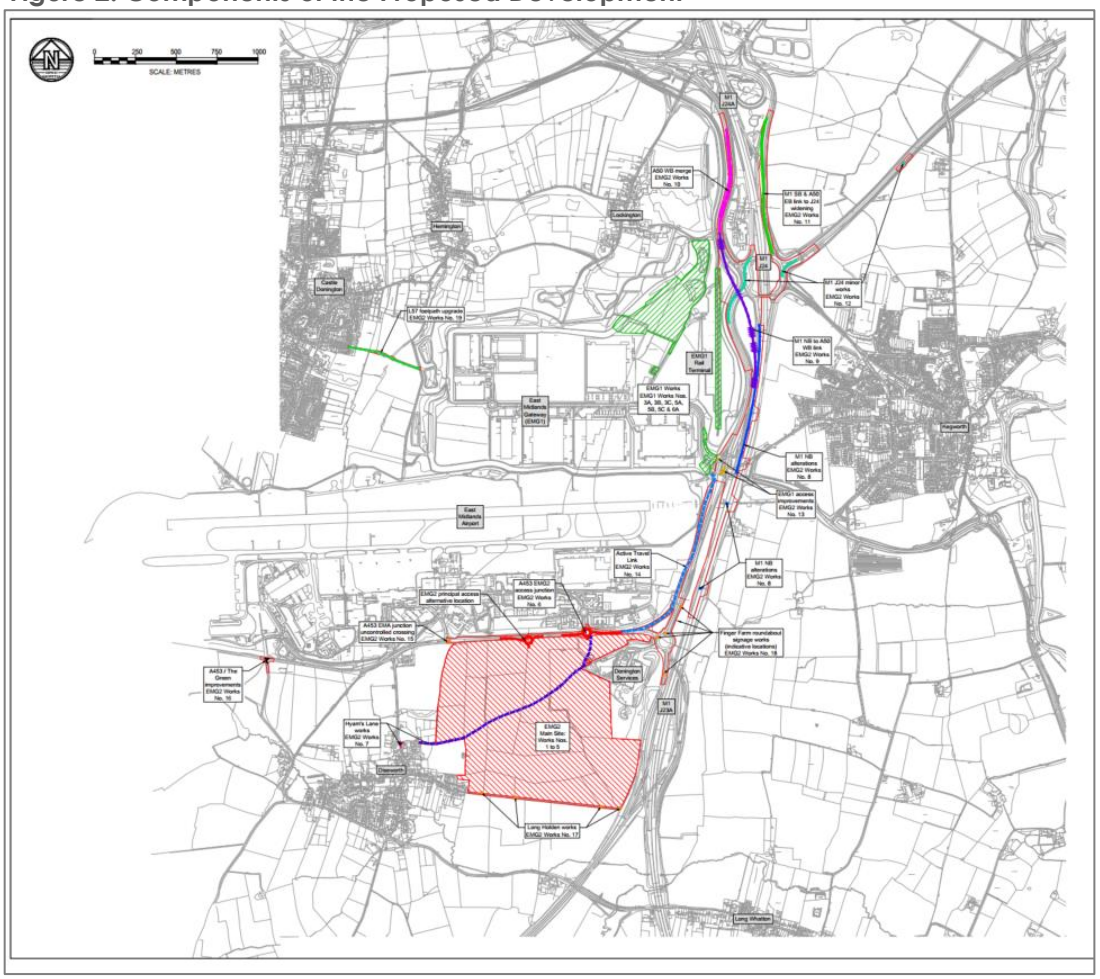
Highway Works

1.9 **Figure 2** shows a composite of the highway improvements associated with EMG1 and 2, this along with other relevant drawings are included at **Appendix 1**. A package of

highways works is proposed including site access, substantial improvements around J24 of the M1 as well as more minor works on the local highways network and pedestrian/cycle route enhancements. In additional to the EMG2 access junction (EMG2 Works No 6), these works will include:

- Junction 24 Improvements comprising:
    - M1 northbound to A50 westbound link (EMG2 Works No. 9), and will include the A50 westbound merge (EMG2 Works No. 10) alterations;
    - M1 southbound and A50 eastbound link to J24 widening (EMG2 Works No. 11)
    - M1 J24 minor works (EMG2 Works No.12
    - M1 northbound alterations (EMG2 Works No. 8)
- EMG1 Access Improvements (EMG2 Works No. 13)
- Active Travel works comprising:
    - Active Travel Link (EMG2 Works No. 14)
    - Hyam's Lane Works (EMG2 Works No. 7)
- A453/The Green Improvements (EMG2 Works No. 16)
- A453/East Midlands Airport (EMA) junction uncontrolled crossing (EMG2 Works No. 15).

Figure 2: Components of the Proposed Development



EMG1 Works

1.10 The illustrative masterplan for the EMG1 is shown in **Figure 3** and a copy also included at **Appendix 1.** In summary the EMG1 Works includes:

- the provision of a maximum of 26,500 sq.m (approximately 285,000 sq.ft) (GIA) of additional warehousing on Plot 16 which lies adjacent to the rail freight terminal, with an additional 3,500 sq.m allowance in the form of internal mezzanine space. In addition,
- the EMG1 Management Suite will be expanded and,
- enhancements to the Public Transport Interchange are proposed.

Figure 3: Illustrative Masterplan EMG1



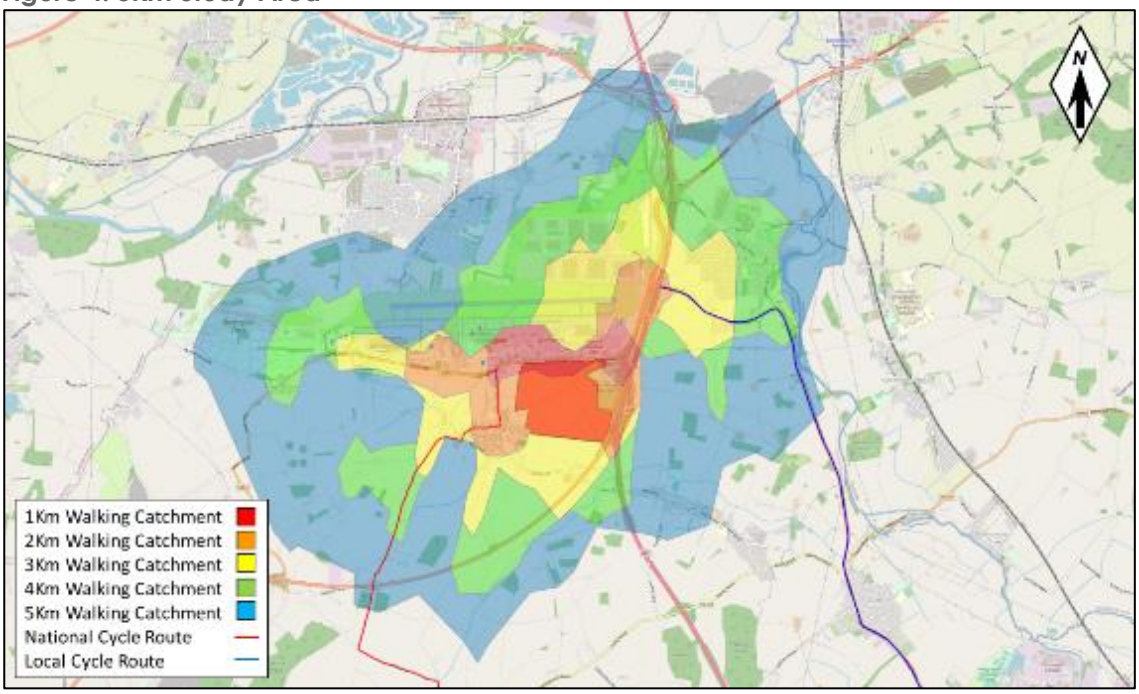
1.11 It is intended that the information within this WCHAR will help inform the design team as to the needs of, and issues faced by pedestrians, cyclists and equestrians as the Scheme progresses.

1.12 The process set out in this report is not influenced or constrained by the Scheme proposals – the information provided within it provides background information to assist the wider design team.

Scope and Study Area

1.13 **Figure 4** shows the broad study area for this WCHAR assessment. The assessment area has been set by the Lead Assessor and in line with the guidance contained in GG 142 has an approximate radius of 5km from the centre of the EMG2 Scheme. The study area covers the EMG1 and EMG2 sites, A453 and the surrounding areas and links to Diseworth and other areas in close proximity to the site.

Figure 4: 5km Study Area



2. WALKING, CYCLING AND HORSE RIDING ASSESSMENT

Introduction

2.1 This Chapter summarises the findings of the assessment set out in Section 4 of GG 142. The findings under each topic area are summarised in the subheadings below and any potential opportunities for improvements are summarised in Section 3 of this report.

Review of Walking, Cycling and Horse Riding Policies and Strategies

2.2 A variety of policies and strategies have been reviewed as part of this assessment, as detailed below:

- National Planning Policy Framework (Revised December 2024)
- Circular 01/2022 - The Strategic Road Network and the Delivery of Sustainable Development, Department for Transport
- Planning Practice Guidance: Travel Plans, Transport Assessments and Statements in Decision Making (2014)
- Moving the Nation (Bicycle Association, Cycling UK, the Ramblers, British Cycling, Living Streets and Sustrans June 2018)
- Cycling and Walking Investment Strategy (DfT 2017)
- Cycling and Walking Investment Strategy Review (DfT 2018)
- Gear Change – A bold vision for cycling and walking (DfT 2020)
- The Second Cycling and Walking Strategy Review (DfT 2022)
- Decarbonising Transport – Setting the Challenge (DfT 2020)
- Decarbonising Transport – A Better, Greener Britain
- Inclusive Mobility – A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure (DfT 2021)
- Designing for Walking
- Planning and Cycling
- North West Leicestershire Local Plan
- North West Leicestershire Local Plan Substantive Review
- Leicestershire County Council Local Transport Plan
- North West Leicestershire Cycling Network Plan
- National Highways Cycling Strategy and Key Performance Indicators (KPIs)
- Cycle infrastructure design (LTN 1/20)

Personal Injury Collision Data

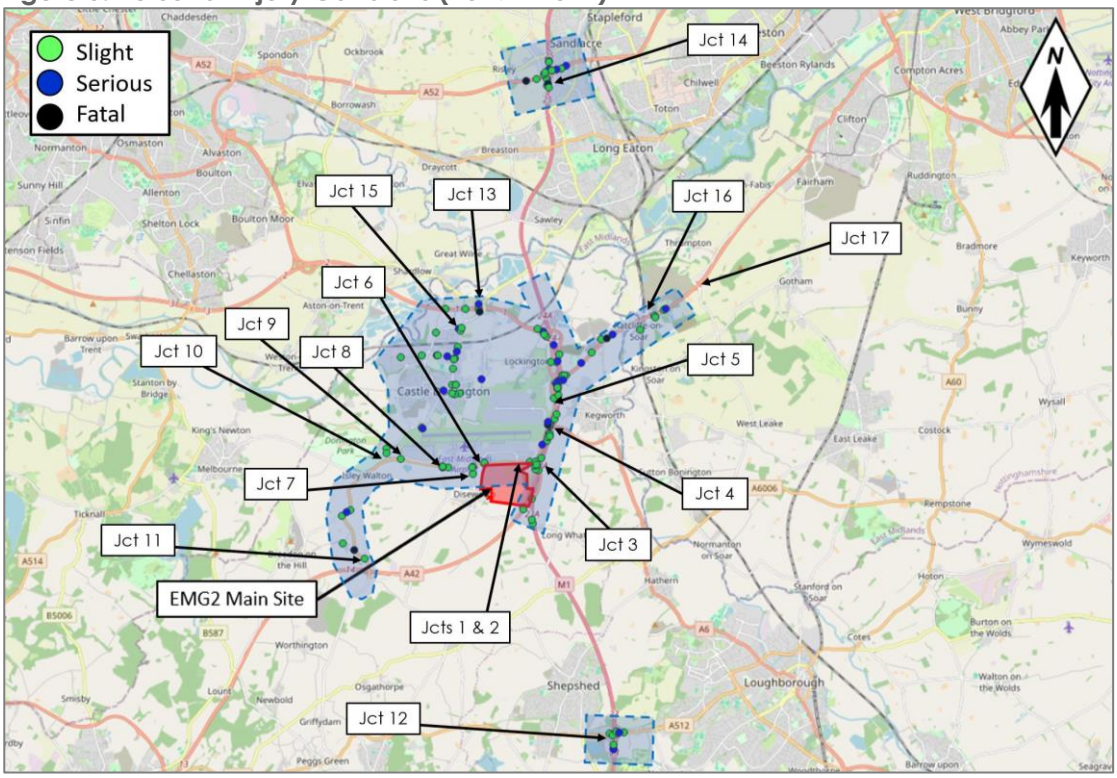
2.3 In line with paragraph 4.9 of GG 142, Personal Injury Collision (PIC) data for the latest available six-year period has been reviewed.

2.4 A broad analysis of the data was carried out, to identify any issues or trends that may affect pedestrians, cyclists, and equestrians.

2.5 **Figure 5** shows the study area of the highway network, which includes roads on both the Strategic Road Network and local road network. PIC data has been obtained for the latest six-year period between 1 January 2019 and 23 October 2024. A total of 175 PICs were recorded within the study area, of which 125 were classified as slight, 42 as serious and 8 as fatal.

2.6 A copy of the data is included within Highway Safety and Road Casualty Position Statement (document reference EMG2-BWB-GEN-XX-RP-TR-0015) included at **Appendix 2**.

Figure 5: Personal Injury Collisions (2019 – 2024)



2.7 **Table 1** summarises the number of PICs that have occurred for each year between 2019 and 2024.

Table 1: Number of Personal Injury Collisions by year (2019 to 2024)

	2019	2020	2021	2022	2023	2024
Slight	21	9	26	31	19	19
Serious	2	8	8	7	9	8
Fatal	0	2	0	0	3	3
Total	**23**	**19**	**34**	**38**	**31**	**30**

2.8 The details show that there has been a relatively consistent number of PICs during each of the years assessed, equating to 29 per annum on average. There was a slight

reduction in PICs during 2020 possibly due to the Covid-19 Pandemic and significant reductions in traffic flows and journeys during that time.

2.9 **Figure 5** shows that the following PICs have occurred at the study area junctions.

- Junctions 1 & 2, EMG2 Site frontage and A453/Hunter Road Roundabout - across the site frontage and at the A453/Hunter Road roundabout, the records confirm there have been no PICs within this location over the latest 6-year period.
- Junction 3, Finger Farm Roundabout - 11 PICs have been recorded over the latest 6-year period, 10 of which were classified as slight and one as serious, none of which involved vulnerable road users.
- Junction 4, A453/EMG1 access junction - there have been seven recorded PICs over the latest 6-year period. Of the seven recorded PICs, four were classified as slight, two were classified as serious and one was classified as fatal, none of which involved vulnerable road users.
- Junction 5, M1 Junctions 24 and 24A - there have been 22 recorded PICs over the latest 6-year period. Of these, 16 were classified as slight and 6 were classified as serious, with no fatal collisions. One serious PIC involved a motorcycle, which occurred in October 2023, when weather conditions were described as fine / dry. The proposed Scheme is proposing significant improvements at junction 24 which have the potential to improve safety for all road users.
- Junction 6, A453/East Midlands Airport Signal Junction - there have been three recorded PICs over the latest 6-year period. Two of the PICs were classified as slight and the remaining PIC was classified as fatal, fatal, none of which involved vulnerable road users.
- Junction 7, A453/Grimes Gate Priority Junction - there have been two recorded PICs over the latest 6-year period. Both the PICs were classified as slight, one of which involved a motorcycle. This occurred in May 2023, weather conditions were described as fine / dry. It is concluded that there are no significant highway issues at the junction.
- Junction 8, A453/The Green Priority Junction - there have been four recorded PICs over the latest 6-year period. All the four PICs were classified as slight, none of which involved vulnerable road users.
- Junction 9, A453/East Midlands Airport Roundabout - there has been a single recorded PIC over the latest 6-year period, which was classified as slight and did not involve vulnerable road users.
- Junction 10, A453/Walton Hill Signal Junction (Leicestershire) - there have been two recorded PICs over the latest 6-year period both of which were classified as slight, neither of which involved vulnerable road users.
- Junction 11, A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Roundabout - there have been three recorded PICs over the latest 6-year period with two PICs being slight and one as fatal in severity, none of which involved vulnerable road users.
- Junction 12, M1 Junction 23 - there have been nine recorded PICs over the latest 6-year period, seven of which were classified as slight and the remaining two as serious, none of which involved vulnerable road users.

- Junction 13, A50 Junction 1 - there have been five recorded PICs over the latest 6-year period, three of which were classified as slight, one as serious and one as fatal, none of which involved vulnerable road users.
- Junction 14, M1 Junction 25 - there have been 18 recorded PICs over the latest 6-year period, 12 of which were classified as slight, four were classified as serious and two fatal. One of the fatal PICs, which occurred in April 2023, when weather conditions were described as raining and wet, involved a pedestrian walking on the slip road during hours of darkness. Both fatal PICs appear to be isolated incidents and not related to any physical defects of the junction.
- Junction 15, Station Road/Broad Rushes Roundabout - there have been three recorded PICs over the latest 6-year period, two of which were classified as slight and one as serious. The PIC recorded as serious occurred in June 2020 and involved a pedal cyclist, weather conditions were recorded as fine / dry. The two PICs recorded as slight occurring in August 2021 and September 2022 both involved motorcycles. Weather conditions were recorded as other / dry and wet / damp respectively. It is concluded however that, there are no trends and these PICs were due to overtaking, and movements on the circulatory.
- Junction 16, A453/Kegworth Road dumbbell Roundabouts - there have been five recorded PICs over the latest 6-year period, four of which were classified as slight and one as serious, none of which involve vulnerable road users.
- Junction 17, A453/Barton Lane/West Leake dumbbell Roundabouts - there have been no recorded PICs at this junction over the latest six-year period.

2.10 In addition to the above the following links were also analysed:

- M1 Mainline between Junctions 23A and 24 - there have been five recorded PICs over the latest 6-year period, all of which were classified as slight, none of which involved vulnerable road users.
- A453/Moor Lane – there have been three recorded PICs over the latest 6-year period, two of which were classified as slight and one serious, none of which involved vulnerable road users.
- A453 Remembrance Way - there has been one fatal PIC recorded approximately 1.5km to the east of M1 Junction 24 and did not involve any vulnerable road users.

2.11 Analysis of the data has revealed that the road conditions were a mixture of wet and dry during the PICs. Additionally, of the PICs occurring within the study area, the majority were at the Finger Farm roundabout and M1 J24. Most PICs are determined to be shunts, head-on and side-swipe collisions.

2.12 The data gives no evidence of equestrian involvement, with a single PIC involving a pedestrian, which was recorded as fatal and occurred in the early hours (04:42 hours) on the 28 April 2023 on the M1 northbound off-slip. A single PIC involving a cyclist was also recorded on the 23 June 2020 at the Station Road/Broad Rushes roundabout in Castle Donington, this was recorded as serious. The data does not suggest that there are any specific safety concerns for such users.

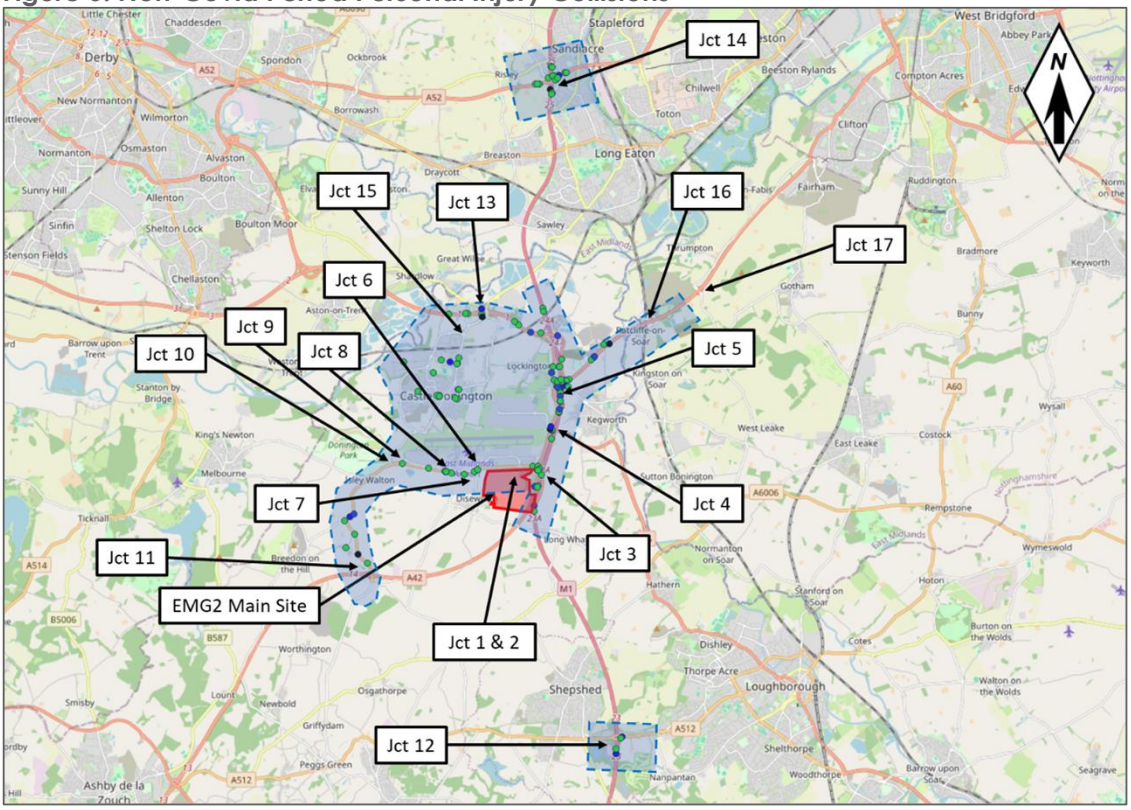
2.13 Due to the Covid restrictions a sensitivity test review has been undertaken for collisions occurring within 2017 and 2018 within the same study area (using data from the online Crashmap database) and removing the main Covid period years of 2020 - 2021. This is

summarised in **Table 2** and illustrated in **Figure 6**. A total of 187 PICs were recorded within the study area, of which 142 were classified as slight, 39 as serious and 6 as fatal.

Table 2: Number of Personal Injury Collisions by year for non-Covid Period

	2017	2018	2019	2022	2023	2024
Slight	23	29	21	31	19	19
Serious	7	6	2	7	9	8
Fatal	0	0	0	0	3	3
Total	**30**	**35**	**23**	**38**	**31**	**30**

Figure 6: Non-Covid Period Personal Injury Collisions



2.14 As shown above, the number of PICs that occurred during 2017 and 2018 is broadly similar to each year of the 5 year period shown in **Table 1**, with the exception of 2020 which is slightly lower (which is likely to be due to Covid). It is also noted the PICs in **Table 2** for the 2017 and 2018 years included:

- 2 pedestrian collisions (both slight), one on Park Lane in central Castle Donington and the other at junction 23 of the M1; and
- 2 pedal cycle collisions (both slight) one on the A453 south of the DHL aviation unit and one on Park Lane in central Castle Donington.

2.15 When comparing the non-Covid 6-year period with the most recently available 6-year period (as above), this demonstrates that there are no significant differences between the number/frequency of collisions between the two datasets. There is a slight reduction in the number of collisions in the non-Covid assessment at all of the junctions except for Junction 8 - A453/The Green Priority Junction, which has increased by two to six collisions with 4 slight and 2 serious.

Multi-modal transport services and interchange information

Bus Services

2.16 There are four existing bus services which pass by the site, the skylink Express, skylink Nottingham, skylink Derby and Airway 9. These services provide bus connectivity between key cities such as Nottingham, Derby and Leicester, EMA and EMG1. It is the intention for these services to call at the EMG2 Main Site bus interchange from first occupation. Discussions with the local bus operator, trentbarton, have already begun to ensure this comes to fruition.

2.17 In addition, there are further stops within the western part of East Midlands Airport approximately 850 metres from the EMG2 main site which are served by an additional route (My15).

2.18 **Table 3** provides a summary of the existing bus services close to the Scheme.

Table 3: Existing Bus Services Routes and Frequencies

Service	Route	Frequency
skylink Derby	Leicester – Loughborough - Kegworth – EMG – EMA1 – Castle Donington - Derby	4 buses per hour
skylink Express	Nottingham - Clifton - non-stop to EMG1	2 buses per hour
skylink Nottingham	Nottingham - Long Eaton - Castle Donington – EMA – EMG1	3 buses per hour (2 buses per hour at EMG)
	EMA – Diseworth – Long Whatton - Coalville	1 bus per hour
	EMG1 - Loughborough	1 bus per hour (at Loughborough, 08:00 – 19:00)
Airway 9	Horninglow – Burton – Ashby – Melbourne – EMA – EMG1	1 bus per hour
My15	Ilkeston – Stapleford – Old Sawley – Castle Donington - EMA	2 buses per hour

2.19 The above bus services travel to various settlements in the vicinity of the site, including Nottingham, Ilkeston, Stapleford, Long Eaton, Leicester, Loughborough, Coalville, Ashby-de-la-Zouch, Swadlincote, Burton-upon-Trent and Derby.

2.20 **Figure 7** illustrates the routes of the services described in **Table 3**, with **Figure 8** illustrating the routes of the services in relation to the Scheme.

Figure 7: Existing Bus Routes

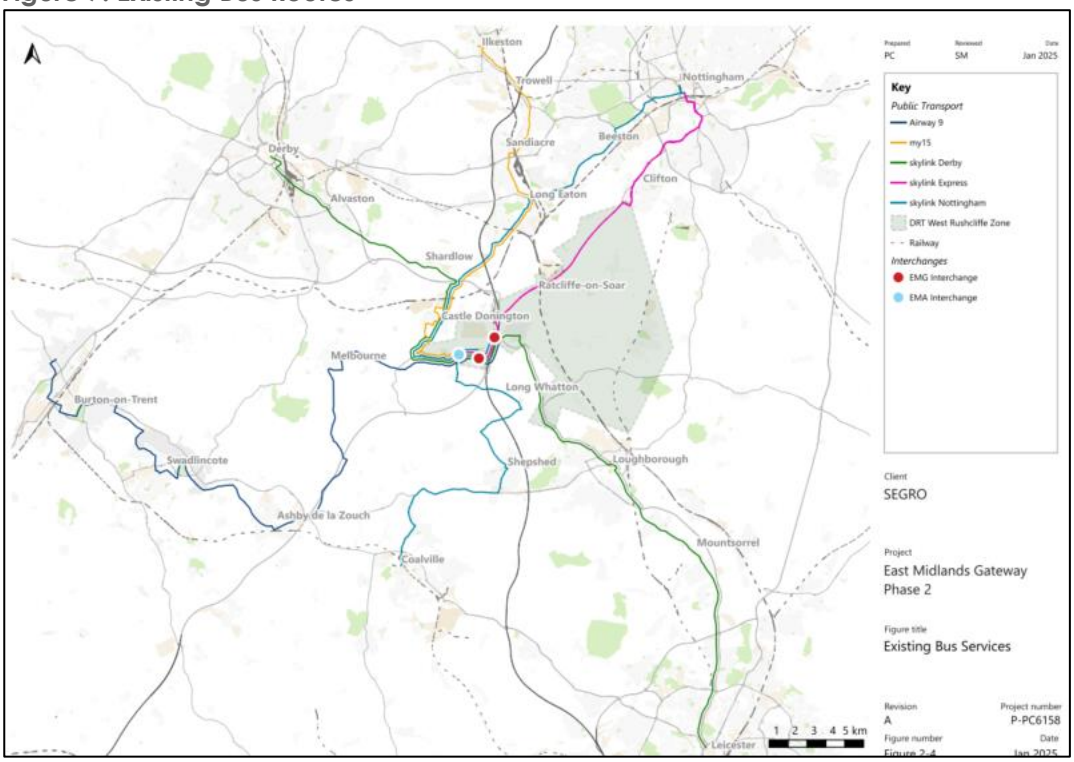
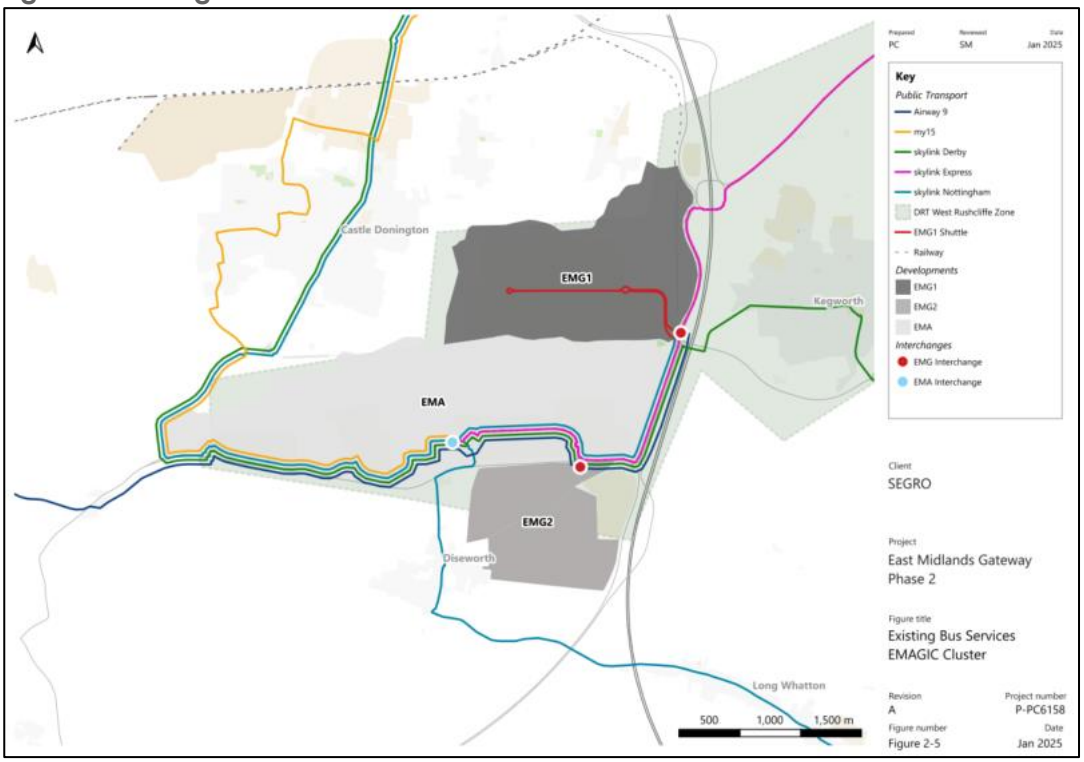


Figure 8: Existing Bus Services



2.21 The nearest current transport interchange to the EMG2 main site is located within the EMA Interchange, as indicated in **Figure 8.** Facilities include real-time bus information and seating.

2.22 In addition, to the above there is also a bus interchange within EMG1, this transport hub provides access to the free on-site shuttle service. The shuttle operates on a loop from the interchange and calling at each unit along the EMG1 estate road. A covered bus shelter is provided outside of each unit.

2.23 A purpose built bus interchange will be provided within the northeast part of the EMG2 main site accessed via the A453/Hunter Road roundabout, which is close to the proposed access from the existing roundabout on the A453 and Pegasus Business Park as shown in **Figure 7**. The location of the EMG2 Main Site bus interchange has been determined following discussions with key local bus operators (trentbarton) and Highway Development Management officers from the local highway authority. The location of this interchange allows for the interception of existing bus services travelling both along the A453 and via Pegasus Park.

2.24 The EMG2 Main Site bus interchange will act as the hub for a new EMG2 Gateway Shuttle service. The shuttle will connect employees arriving commercial bus services at the EMG2 Main Site bus interchange to their workplace. The hours of operation for the shuttle service will align with the occupier's shifts. Initially this is likely to be focused on the morning and afternoon shift changeover, however as the site is built out this will be extended to meet demand. During its hours of operation, the shuttle will operate on a continuous loop between the EMG2 Main Site bus interchange and the bus stops along the estate road, providing a 'turn up and go' service for employees on-site. Provision will be made for EV bus charging points at the interchange and at EMG1 through expanding the facilities there, to facilitate the use of an electric vehicle for the shuttle service.

2.25 The EMG2 Main Site bus interchange building will be equipped with real-time bus information, seating, lighting, heating, and toilets, to create a safe and comfortable waiting area for employees. This is similar to the provision of the EMG1 interchange. **Figure 9** shows the Bus Interchange at EMG1 and an EMG1 Bus stop,

Figure 9: Bus Stop and Interchange Facilities EMG1



Rail Services

2.26 The East Midlands Parkway Railway Station is located approximately 5.5 kilometres from the site to the west of the Ratcliffe on Soar Power Station on the section of the A453 to the east of M1 Junction 24 towards Nottingham. It lies on the East Midlands Railway line, which links London St Pancras with the East Midlands (Nottingham, Leicester, Lincoln, Derby) and Sheffield in South Yorkshire. East Midlands Parkway is served by three train lines, the East Midlands Railway Intercity, which travels between London St Pancras and

Sheffield (via Leicester) or London St Pancras and Nottingham (with limited services continuing to Lincoln). Generally, the above services operate at a combined frequency of one train every 10 minutes in any given direction.

Key trip generators and local amenities

2.27 In line with paragraph 4.12 of GG 142 the assessment includes an analysis of local trip generators and amenities in the WCHAR study area to identify likely desire lines for pedestrians, cyclists and equestrians.

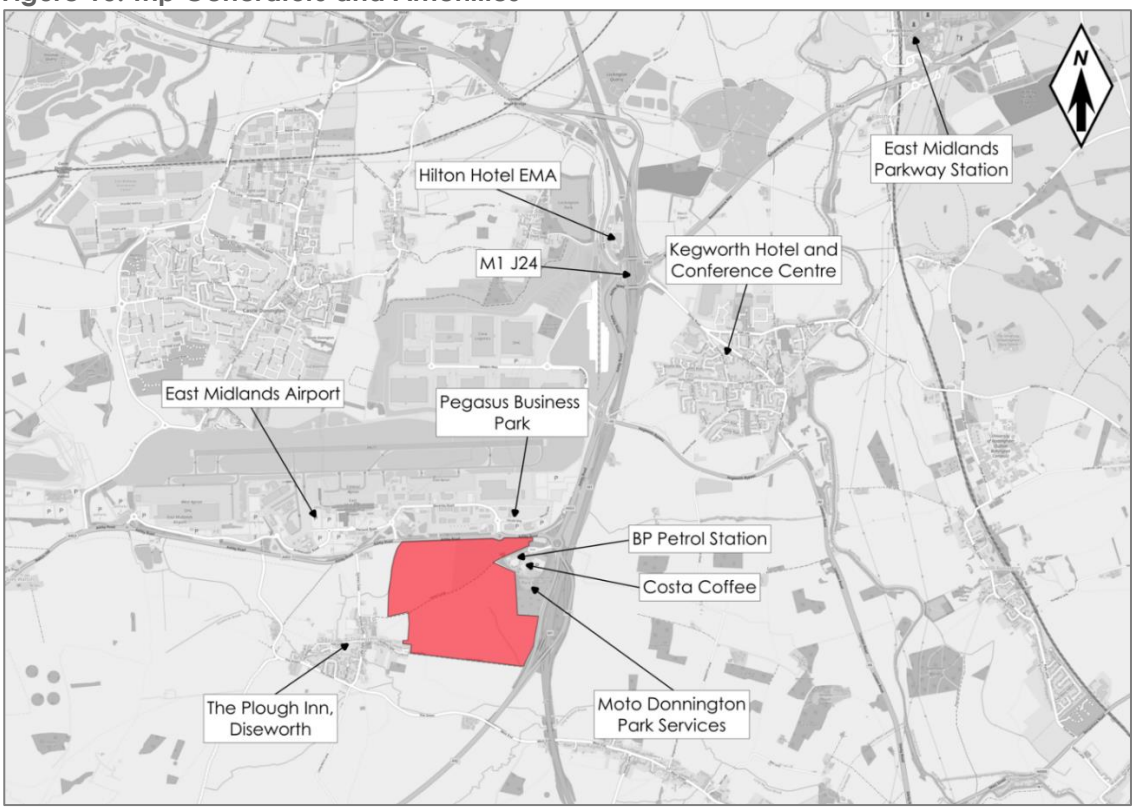
Existing Key Trip Generators

2.28 There are a variety of trip generators in the study area that could generate pedestrian, cyclist and/or equestrian trips, including:

- Pegasus Business Park
- Moto Donington Park Motorway Service Area (MSA) – which includes a BP petrol station and Costa Coffee
- East Midlands Airport
- Diseworth, including The Plough Inn
- Hilton Hotel East Midlands Airport
- Kegworth, including the Hotel and Conference Centre and other local amenities
- East Midlands Parkway Station

2.29 The locations of these trip generators in relation to the proposed Scheme are included in **Figure 10**.

Figure 10: Trip Generators and Amenities



Future Trip Generators

2.30 It is considered that the following key developments may generate pedestrian and cycle trips within the same part of the network as the EMG2 site. These are referred to as:

- EM Point near Finger Farm (22/01116/FULM)- three proposed industrial units with a combined floor area of 3,846 sqm – modal split information was not included within the Transport Assessment, but a development of this size would generate minimal pedestrian and cycle trips if ultimately built out.
- Land south of A50 J1 (19/01496/OUTM) - 92,500 sqm of development land for employment (B1 / B2 / B8) use) – the Transport Assessment shows that the development would potentially generate 223 daily pedestrian trips in the (including bus and train trips) 43 daily cycle trips. In the peak periods a maximum of 20 pedestrian trips
- The Isley Woodhouse new sustainable settlement located to the south of East Midlands Airport and Donington Park for which a planning application is expected during 2025.

Site Visit

2.31 In line with Paragraph 4.12 of GG 142, a site visit was conducted on 6 September 2022 between 10:00 and 12:00 hours when the weather conditions were dry to consider any weekday leisure trips. The site visit consisted of walking along the site frontage on the A453 and along Hyams Lane between Diseworth village and the Moto Donington MSA. **Figure 11** shows the study area. In addition, a drive by up to EMG1 was also undertaken.

2.32 The primary findings of the site visit were:

- A footway exists along the northern side of the A453 between the signal controlled junction to East Midlands Airport and Finger Farm roundabout.
- There is an existing uncontrolled crossing across the A453 at Finger Farm which connects to a footway along the eastern side of the carriageway up to EMG1 where various signal-controlled crossings exist leading into EMG1 itself and Kegworth village.
- Hyams Lane comprises a public footpath and is an informal track that extends from Diseworth to the Moto Donington Services. Hyams Lane also provides a pedestrian connection onto the A453 in between the A453/Hunter Road and Finger Farm roundabouts. During the site visit no pedestrians were observed using the footpath and because of overgrown vegetation at its eastern end close to the service station, it appeared to be lightly used.

Figure 11: Site Visit Study Area



2.33 In addition, to the above the following site visits have also been carried out:

- EMG2 Site visit Hyam's Lane, Moto services area and footpath L45: 7th May 2024 between 1300 and 1500 hours; and
- EMG1 site visit, 9th July 2024 at a similar time, but purposefully aligned with some of the shift changeovers.

Liaison with key stakeholders

2.34 A Transport Working Group (TWG) has been established to oversee the transport and highway matters associated with the Scheme.

2.35 Regular, typically monthly Transport Working Group meetings have taken place with key highway authorities since April 2022. This includes National Highways (NH), Leicestershire

County Council (LCountyC), Leicester City Council (LCityC), Nottinghamshire County Council (NCountyC), Nottingham City Council (NCityC), Derbyshire County Council (DCountyC), Derby City Council (DCityC) and NH representatives from Jacobs, and ITP (Travel Planners).

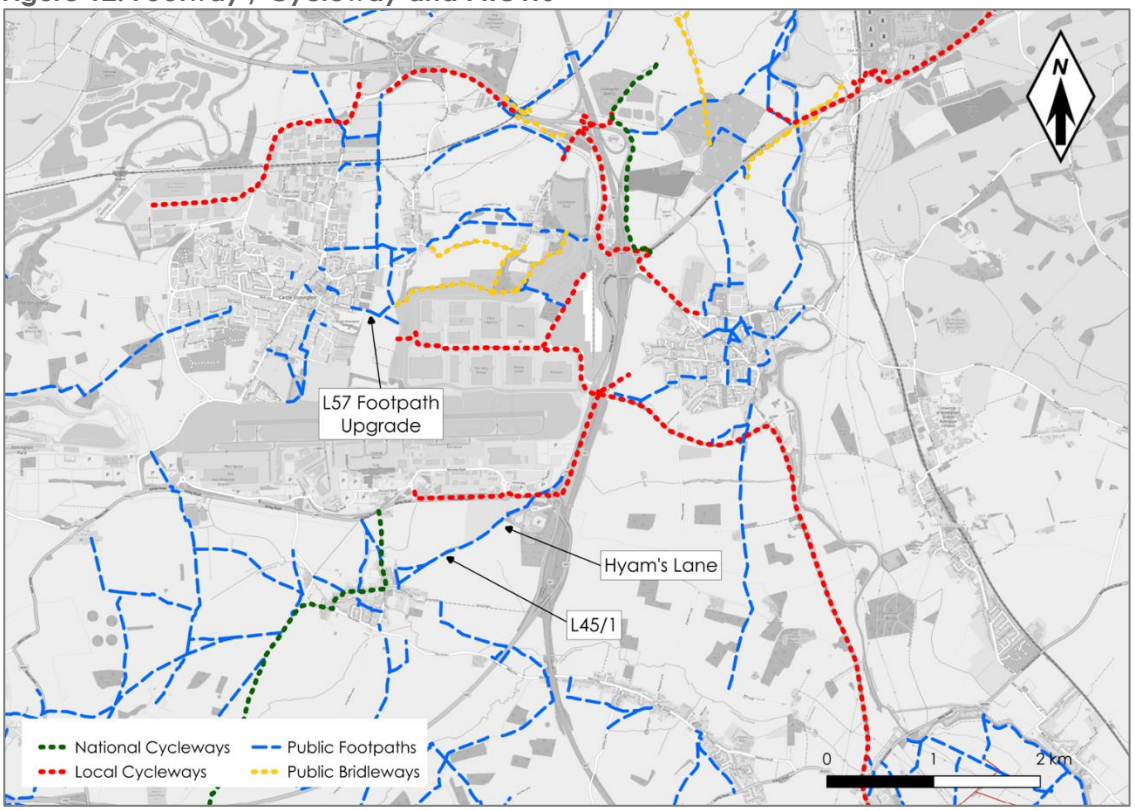
2.36 This has included agenda items on sustainable travel improvements including access designs, pedestrian/cycle infrastructure improvements and bus interchange/shuttle service. This includes the improvements to Hyams Lane (low level lighting, better surfacing etc and discussions on improvements to Long Holden (footpath to south of site) and providing a connection to Long Whatton.

Existing walking, cycling and horse-riding facilities

2.37 In line with paragraph 4.15 of GG 142, an assessment of existing walking, cycling and equestrian links has been undertaken. The assessment includes the current condition and effectiveness of those facilities deemed to be relevant to the highway Scheme. It also provides detail as to how they link into the County and Strategic Road Networks.

2.38 **Figure 12** shows the locations of all Public Rights of Way in the vicinity of the site including the alignment of Hyam's Lane which bisects the site. This link extends into Diseworth to the west of the site where it connects to an existing footway on Grimes Gate within Diseworth village.

Figure 12: Footway / Cycleway and PROWs



2.39 As part of the package of improvements associated with EMG2 Main Site, there will be multiple pedestrian and cyclist access points. Consideration has also been given to

ensuring the EMG2 Main Site connects with EMG1, EMA and residential areas surrounding the development. These access points are described below:

- A new shared use footway/cycleway along the length of the EMG2 Main Site estate road providing pedestrian and cyclist access to each employment unit and ensuring they are separated from the vehicle and HGV traffic.
- The existing Public Right of Way (PRoW) (L45) which bisects the EMG2 Main Site with a north-east to south-west alignment, and currently follows the southern boundary of Hyam's Lane, will become integrated into Hyam's Lane. This will be surfaced as part of the works to improve cyclist access. This route provides connectivity towards Kegworth and EMG1 to the north-east and Diseworth to the south-west.
- A new Toucan crossing point will be installed for pedestrians and cyclists to safely cross the A453 to/from the EMG2 Main Site, unlocking connections to EMG1, Kegworth and beyond.
- A new shared use cycle track from the EMG2 Main Site bus interchange to the proposed A453 toucan crossing.
- A new dedicated shared use cycle track north of the new toucan crossing alongside the A453 will connect the EMG2 Main Site to EMG1 for pedestrians and cyclists and provide an improved route for cyclists in the wider area such as between Kegworth and EMA.

2.40 Wider improvements to Public Rights of Way in the area surrounding the Scheme, include:

- A new footpath from the western end of Hyam's Lane and PRoW L45/L46 northwards through the proposed community park connecting to the A453 Ashby Road by the Airport entrance junction via the western edge of the EMG2 Main Site. Currently there is no off-road pedestrian access for this route;
- A new footpath from the western end of Hyam's Lane and PRoW L45/46 southwards through the proposed community park connecting to Long Holden and PRoW L48 via the western edge of the EMG2 Main Site, connecting these two PRoWs and creating a valuable new publicly accessible route all the way from PRoW L48 to the airport via an uncontrolled crossing of the A453 at the Airport access junction;
- A new footpath from the eastern end of Hyam's Lane, and PRoW L45 southwards connecting to Long Holden via the eastern edge of the EMG2 Main Site, creating a further valuable new publicly accessible route and a circular walk around the southern part of the EMG2 Main Site; and
- In addition to the active travel improvements to/from the EMG2 Main Site, proposals within the DCO boundary also include surfacing the L57 PRoW which connects Diseworth Lane, to the west of EMG1 and Castle Donington, for improved connectivity for cyclists to link Castle Donington to both EMG1 and EMG2.

2.41 **Figures 13** and **14** provide details of the above improvements.

Figure 13: Active Travel Infrastructure Context

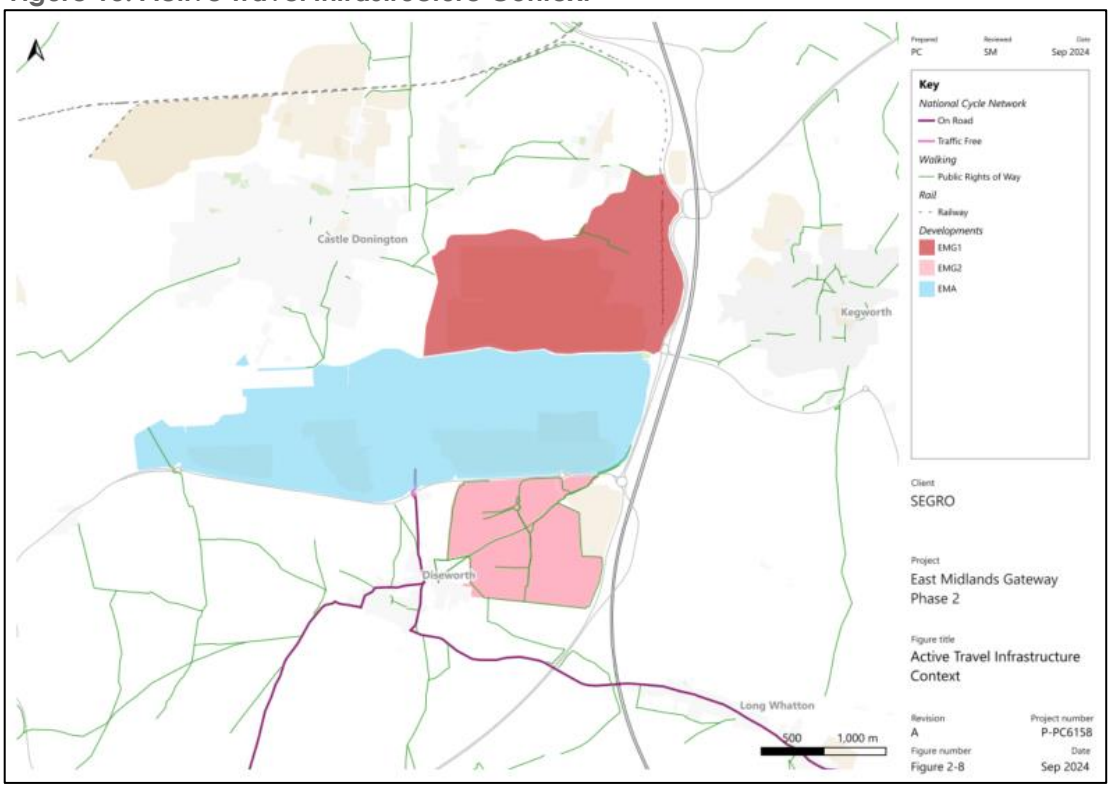
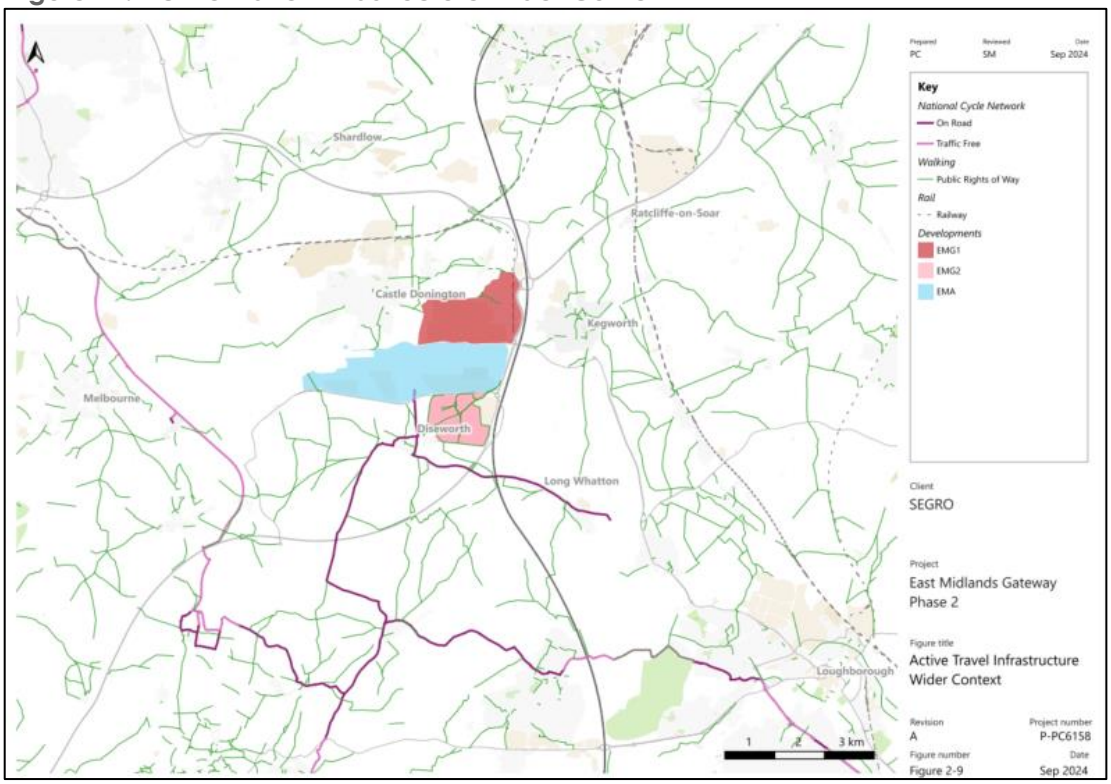


Figure 14: Active Travel Infrastructure Wider Context

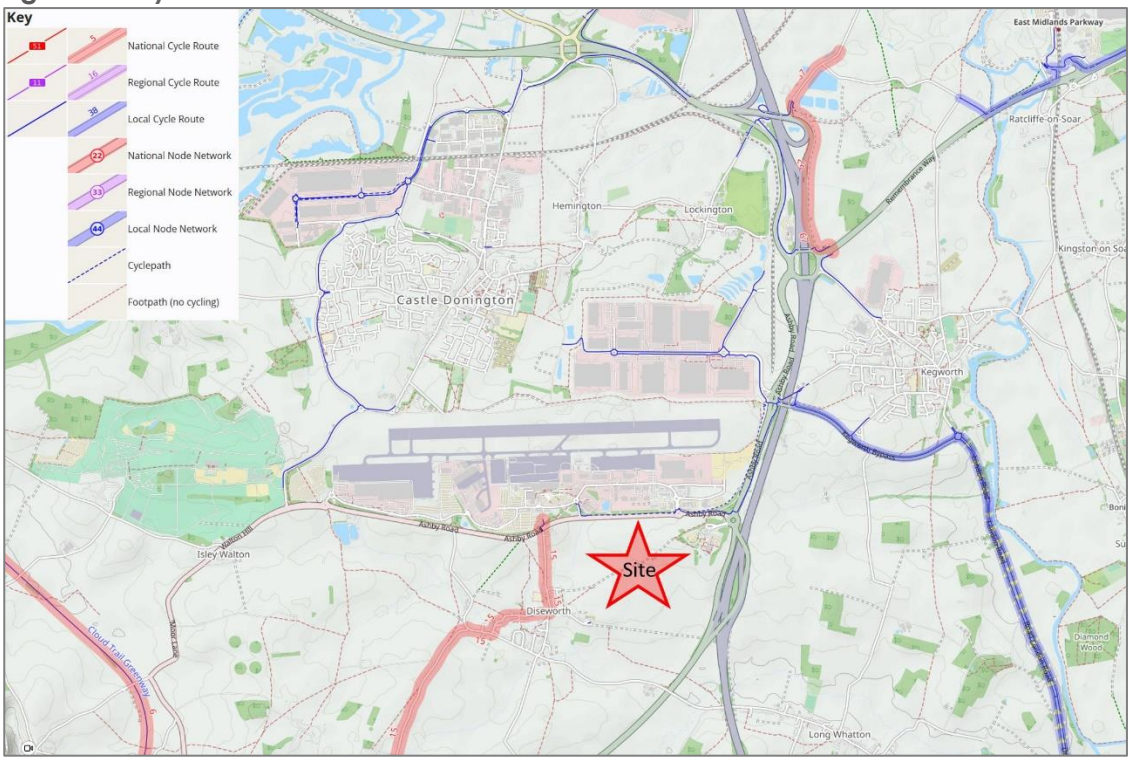


Cyclist Facilities

2.42 **Figure 15** shows the local cycle routes and the National Cycle Network, which includes a cycle link along the A453 between the site frontage and EMG1/Kegworth. It also shows how this link connects to roads recommended for cycling (quieter routes) which are predominantly on-road routes that extend to villages further afield. It also shows the start of Route 15 of the National Cycle Network which commences on Grimes Gate to the south of the A453 and extends south through and out past Diseworth village. Furthermore, a shared cycle/footway routes from the Willow Farm Business Park, Trent Lane Industrial Estate and East Midlands Distribution Centre to the A453 (circa 2km west of the EMG2 site) via the western side of Castle Donington.

2.43 Further afield, Route 15 of the National Cycle Network continues south through Diseworth over the A42 towards Belton village before connecting to Route 6 of the National Cycle Network that extends east towards Shepshed and Loughborough or west to smaller villages such as Osgathorpe. Alternatively, Route 15 connects to Route 52 of the National Cycle Network that extends to the south towards Thringstone.

Figure 15: Cycle Routes



Equestrian Facilities

2.44 The are a number of bridleways within 2 to 3 kilometres, including L31/1 and L30/4 to the south of the A42 and L106/1 and L103/3 to the north both of which run through EMG1. There are no bridleways that provide a direct uninterrupted link to the development site. It is understood that the nearest stable to the site is Hemington House Farm, Hemington, Nr Castle Donington, Derbyshire, DE74 2NA, which is listed as a livery yard in the British Equestrian Directory. Further facilities, such as Breaston Equestrian Centre and Elvaston Castle Riding Centre are located circa 8 kilometres from the site.

Existing Walking, Cycling and Equestrian Provision Summary

2.45 There is a reasonable level of existing high quality pedestrian and cycle provision to the north of the site along the eastern side of the A453, though the crossing facility across the northern arm of the Finger Farm Roundabout is uncontrolled and potentially less suitable for less able bodied persons given two lanes of traffic are required to be crossed on either side of the carriageway. Also, there is no equivalent high quality provision on the western side of the A453, which provides the most direct desire line between the site and EMG1.

2.46 There is also no current crossing provision from the site over the A453. Pedestrian/cycle provision through the site is currently limited to Hyman's Lane which has not dedicated/surfaced pedestrian/cycle provision.

2.47 Connections to the south, towards Long Whatton and onwards to the Loughborough area are limited, i.e. users must route on carriageway as there are no dedicated facilities without first routing north to the Kegworth bypass before routing south again (i.e. does not follow the more direct route).

2.48 There are no equestrian facilities in the immediate vicinity of the site.

Walking, cycling and horse-riding survey

2.49 It was determined by the Lead Assessor that there was no existing walking, cycling or equestrian survey data available within the vicinity of the site. As such, in line with paragraph 4.19 of GG 142 survey data has been collected, which includes current usage figures for pedestrians, cyclists and equestrians and are likely to comprise movements from people travelling from nearby villages (Diseworth, Kegworth, Long Whatton and Castle Donington, as well as trips to/from East Midland Airport and EMG1.

2.50 The original surveys were carried out on Wednesday 23 November 2022 and Saturday 26 November 2022. They were carried out over a 12 hour (0700 to 1900 hours) period. Surveys were carried out along the A453 between the site and EMGP1 (Link 1) plus along Hyams Lane (Link 4). Whilst just over 2 years have passed since said surveys were undertaken nothing has changed on the ground which would prejudice the results. The results of the survey are included at **Appendix 3**.

2.51 In addition, to the above, a copy of the classified turning counts carried out at the East Midlands Gateway Phase 1 signal junction and the Finger Farm Roundabout carried out on 3 November 2022 which picks up cyclists within the carriageway is included at **Appendix 4**.

2.52 To inform the updated report, surveys were also carried out on Thursday 30th January 2025 and Saturday 1st February 2025. They were carried out over a 12 hour (0700 to 1900 hours) period. Surveys were carried out along the northern footway/cycleway at the M1 Junction 24 roundabout. The results of this survey are also included at **Appendix 3**.

2.53 **Figure 16** shows the areas surveyed, with **Figures 17** to **23** showing the details of the surveyed routes at each location. **Tables 4** to **19** provide a summary of the survey results for the traditional network peak periods and daily totals. It should be noted that the tables summarise the total movements recorded, not necessarily the total number of individual pedestrians, cyclists and equestrians.

Figure 16: Survey Area

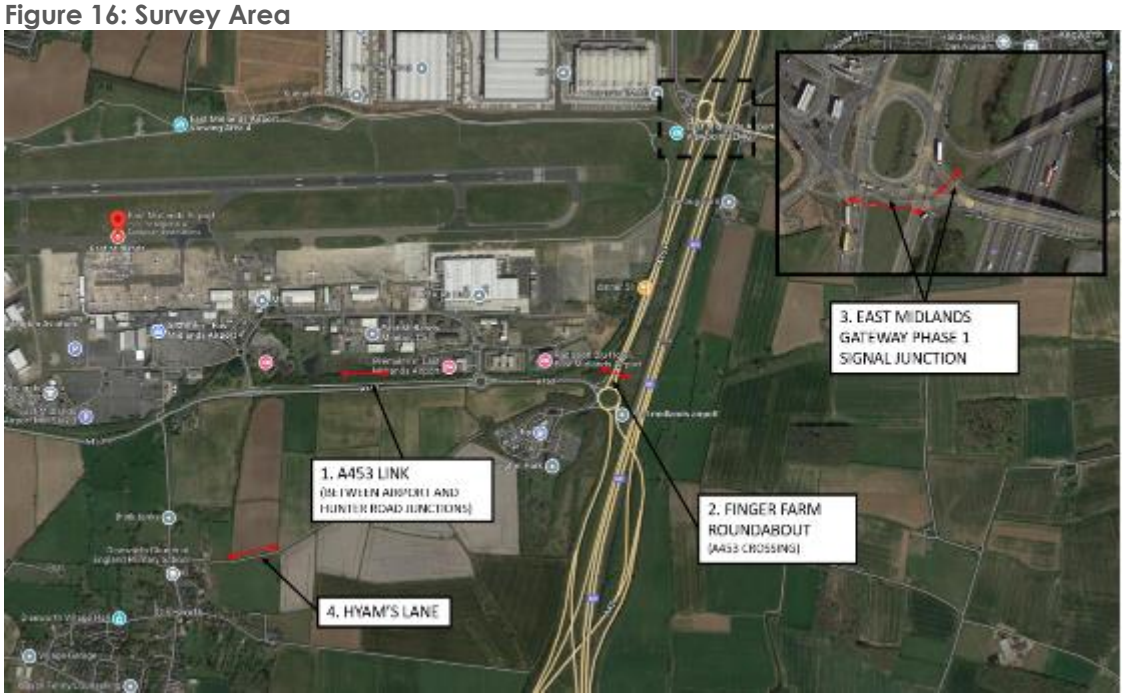


Figure 17: Link 1 - A453 Link (Between the Airport and Hunter Road Junctions)



Table 4: Pedestrian Link 1 – Site 1 A453 Link (Wednesday 23rd November 2022)

Time Period	Eastbound					Westbound				
	Pedestrian	Cyclist	E - Scooter	Equestrian	Total	Pedestrian	Cyclist	E - Scooter	Equestrian	Total
08:00 - 09:00	0	0	0	0	0	0	1	0	0	1
12:00 - 14:00	22	0	0	0	22	3	0	0	0	3
17:00 - 18:00	0	0	0	0	0	2	0	0	0	2
Daily	27	0	0	0	27	21	1	0	0	22

Table 5: Pedestrian Link 1 - Site 1 A453 Link (Saturday 26th of November)

Time Period	Eastbound					Westbound				
	Pedestrian	Cyclist	E - Scooter	Equestrian	Total	Pedestrian	Cyclist	E - Scooter	Equestrian	Total
08:00 - 09:00	0	0	0	0	0	0	0	0	0	0
12:00 - 14:00	3	0	0	0	3	1	0	0	0	1
17:00 - 18:00	2	0	0	0	2	2	0	0	0	2
Daily	12	1	0	0	13	10	0	0	0	10

2.54 It can be seen from **Tables 4** and **5** that during the traditional peak periods there were limited pedestrian and cyclist activity, with no horse riders being observed.

2.55 During the average weekday a total of 27 pedestrian movements and no cyclist movements were observed eastbound and 22 pedestrian movements and 1 cyclist and movement observed westbound.

2.56 During the average weekend a total of 12 pedestrian movements and 1 cyclist movement were observed eastbound and 10 pedestrian movements and 0 cyclist movements observed westbound.

Figure 18: Link 2 - Finger Farm Roundabout (A453 crossing)



Table 6: Pedestrian Link 2 - Finger Farm Roundabout (Wednesday 23rd November 2022)

Time Period	Eastbound					Westbound				
	Pedestrian	Cyclist	E – Scooter	Equestrian	Total	Pedestrian	Cyclist	E - Scooter	Equestrian	Total
08:00 - 09:00	0	1	0	0	1	0	0	0	0	0
12:00 - 14:00	2	0	0	0	2	0	0	0	0	0
17:00 - 18:00	0	0	0	0	0	0	1	0	0	1
Daily	2	3	0	0	5	2	2	0	0	4

Table 7: Pedestrian Link 2 Finger Farm Roundabout (Saturday 26th November 2022)

Time Period	Eastbound					Westbound				
	Pedestrian	Cyclist	E – Scooter	Equestrian	Total	Pedestrian	Cyclist	E - Scooter	Equestrian	Total
08:00 - 09:00	0	0	0	0	0	4	0	0	0	4
12:00 - 14:00	0	0	0	0	0	0	0	0	0	0
17:00 - 18:00	0	0	0	0	0	12	0	0	0	12
Daily	1	0	0	0	1	1	4	0	0	5

2.57 It can be seen from **Tables 6** and **7** that during the traditional peak periods there were limited pedestrian and cyclist activity, with no horse riders being observed.

2.58 During the average weekday a total of 2 pedestrian movements and 3 cyclist movements were observed eastbound and 2 pedestrian movements and 2 cyclist movements observed westbound.

2.59 During the average weekend a single pedestrian movement was observed eastbound and 1 pedestrian movement and 4 cyclist movements observed westbound.

Figure 19: Link 3 – East Midlands Gateway Phase 1 Signal Junction



Table 8: Site 3A East Midlands Gateway Crossing A453 (Wednesday 23rd November 2022)

Time Period	Eastbound					Westbound				
	Pedestrian	Cyclist	E - Scooter	Equestrian	Total	Pedestrian	Cyclist	E - Scooter	Equestrian	Total
08:00 - 09:00	1	0	0	0	1	2	0	0	0	2
12:00 - 14:00	3	3	0	0	6	3	0	0	0	3
17:00 - 18:00	1	0	0	0	1	1	1	0	0	2
Daily	7	5	0	0	12	6	1	0	0	7

Table 9: Pedestrian Link 3A - East Midlands Gateway Crossing A453 (Saturday 26th November 2022)

Time Period	Eastbound					Westbound				
	Pedestrian	Cyclist	E - Scooter	Equestrian	Total	Pedestrian	Cyclist	E - Scooter	Equestrian	Total
08:00 - 09:00	1	1	0	0	2	2	0	0	0	2
12:00 - 14:00	1	3	0	0	4	0	0	0	0	0
17:00 - 18:00	1	1	0	0	2	0	0	0	0	0
Daily	11	6	1	0	18	16	11	1	0	28

2.60 It can be seen from **Tables 8** and **9** that during the traditional peak periods there were limited pedestrian and cyclist activity, with no horse riders observed.

2.61 During the average weekday a total of 7 pedestrian movements and 5 cyclist movements were observed eastbound and 6 pedestrian movements and one cyclist movement observed westbound.

2.62 During the average weekend a total of 11 pedestrian movements, 6 cyclist and 1 E-scooter movements were observed eastbound and 16 pedestrian movements, 11 cyclist and 1 E-scooter movement were observed westbound.

Table 10: Site 3B East Midlands Gateway Crossing A6 Kegworth Bypass (Wednesday 23rd November 2022)

Time Period	Northbound					Southbound				
	Pedestrian	Cyclist	E - Scooter	Equestrian	Total	Pedestrian	Cyclist	E - Scooter	Equestrian	Total
08:00 - 09:00	1	1	0	0	2	2	0	0	0	2
12:00 - 14:00	1	3	0	0	4	4	0	0	0	4
17:00 - 18:00	1	1	0	0	2	1	0	0	0	1
Daily	5	10	0	0	15	9	4	0	0	13

Table 11: Pedestrian Link 3B - East Midlands Gateway Crossing A6 Kegworth Bypass (Saturday 26th November 2022)

Time Period	Northbound					Southbound				
	Pedestrian	Cyclist	E - Scooter	Equestrian	Total	Pedestrian	Cyclist	E - Scooter	Equestrian	Total
08:00 - 09:00	0	0	0	0	0	0	0	0	0	0
12:00 - 14:00	3	0	0	0	3	7	0	0	0	7
17:00 - 18:00	1	0	0	0	1	0	0	0	0	0
Daily	9	5	1	0	15	8	14	1	0	23

2.63 It can be seen from **Tables 10** and **11** that during the traditional peak periods there were limited pedestrian and cyclist activity, with no horse riders observed.

2.64 During the average weekday a total of 5 pedestrian movements and 10 cyclist movements were observed northbound and 9 pedestrian movements and 4 cyclist movement observed southbound.

2.65 During the average weekend a total of 9 pedestrian movements, 5 cyclist and 1 E-scooter movements were observed northbound and 8 pedestrian movements, 14 cyclist and two E-scooter movements were observed southbound.

Figure 20: Link 4 – Hyam's Lane



Table 12: Pedestrian Link 4 Hyams Lane (Wednesday 23rd November 2022)

Time Period	Eastbound					Westbound				
	Pedestrian	Cyclist	E - Scooter	Equestrian	Total	Pedestrian	Cyclist	E - Scooter	Equestrian	Total
08:00 - 09:00	0	0	0	0	0	0	0	0	0	0
12:00 - 14:00	1	0	0	0	1	1	0	0	0	1
17:00 - 18:00	0	0	0	0	0	0	0	0	0	0
Daily	2	0	0	0	2	2	0	0	0	2

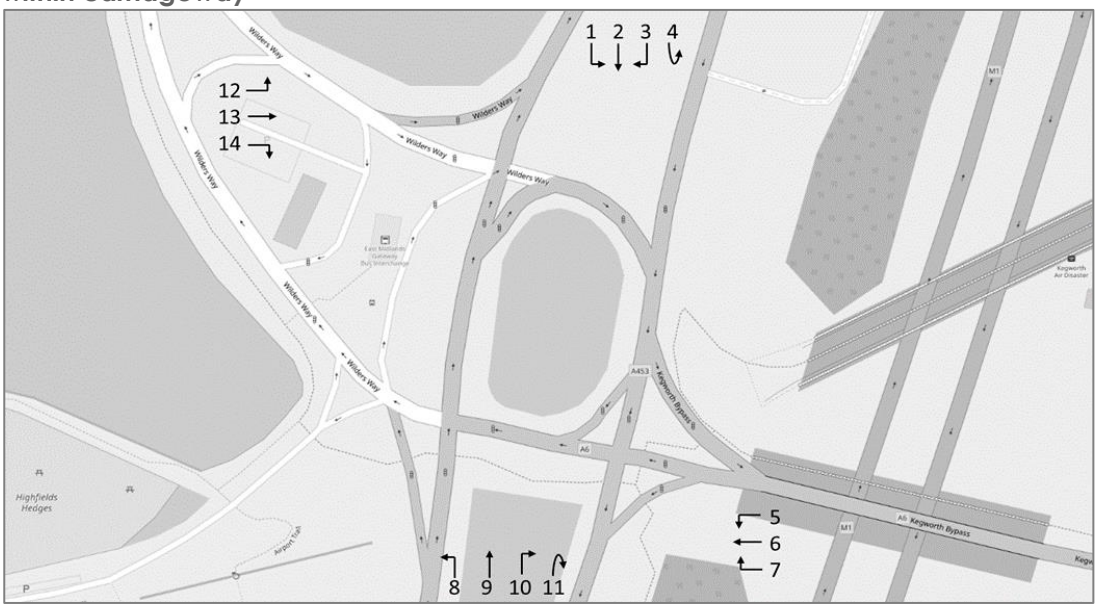
Table 13: Pedestrian Link 4 Hyams Lane (Saturday 26th November 2022)

Time Period	Eastbound					Westbound				
	Pedestrian	Cyclist	E - Scooter	Equestrian	Total	Pedestrian	Cyclist	E - Scooter	Equestrian	Total
08:00 - 09:00	0	0	0	0	0	0	0	0	0	0
12:00 - 14:00	1	0	0	0	1	3	0	0	0	3
17:00 - 18:00	0	0	0	0	0	0	0	0	0	0
Daily	8	0	0	0	8	6	0	0	0	6

2.66 It can be seen from **Tables 12** and **13** that during the traditional peak periods there were no pedestrian, cyclist or equestrian movements observed.

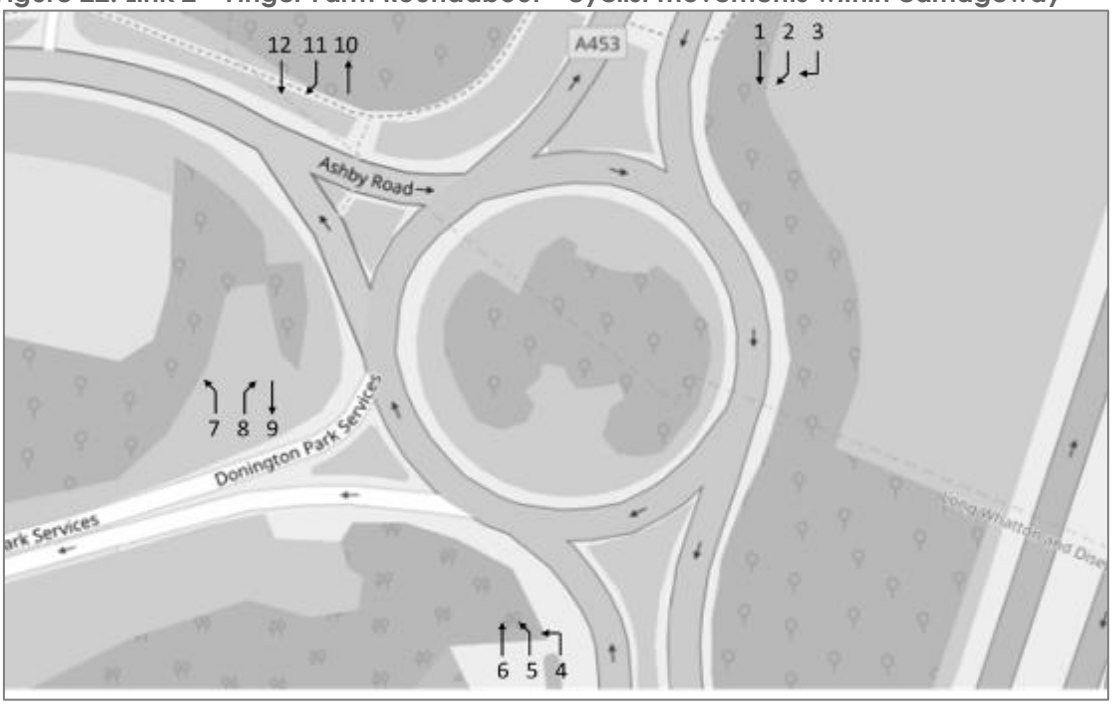
2.67 During the average weekday there were 2 pedestrian movements recorded in each direction. During the average weekend a total of 8 pedestrians were observed eastbound and 6 pedestrian movements were observed westbound.

Figure 21: Link 3 – East Midlands Gateway Phase 1 signal junction– cyclist movements within carriageway



2.68 The survey results included at **Appendix 4**, indicate that a single cyclist movement was recorded within the carriageway at this junction in the morning peak; the cyclist was travelling straight ahead from the A6 Kegworth Bypass to Wilders Way (Movement 6).

Figure 22: Link 2 – Finger Farm Roundabout - cyclist movements within carriageway



2.69 The survey results included at **Appendix 4**, indicate that no cyclist movements were recorded within the carriageway at this junction.

Figure 23: Link 5 Surveys along Footway at M1 Junction 24

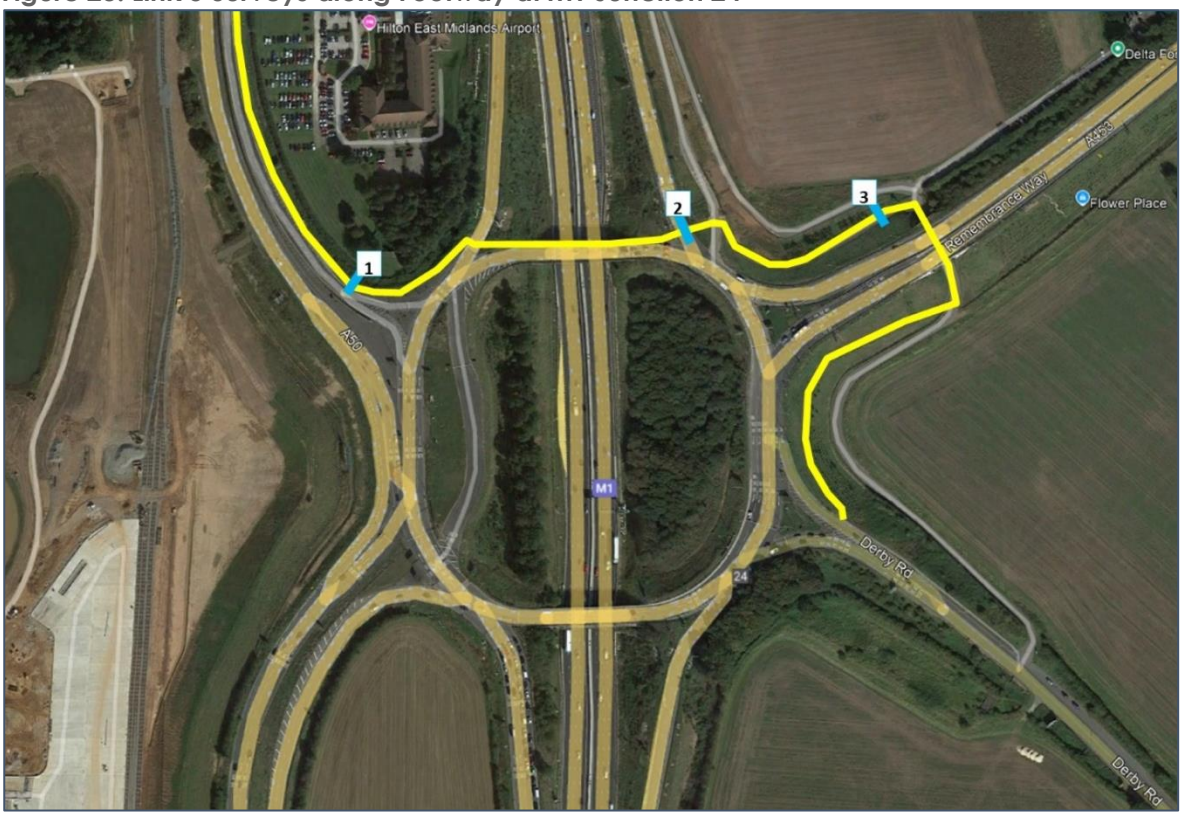


Table 14: Location 1 – Thursday 30th January 2025

Time Period	Eastbound			Westbound		
	Pedestrian	Cyclist	Total	Pedestrian	Cyclist	Total
08:00 - 09:00	0	0	0	0	1	1
12:00 - 14:00	1	2	3	1	0	1
17:00 - 18:00	0	2	2	0	0	0
Daily	2	11	13	2	4	6

Table 15: Location 1 – Saturday 1st February 2025

Time Period	Eastbound			Westbound		
	Pedestrian	Cyclist	Total	Pedestrian	Cyclist	Total
08:00 - 09:00	0	0	0	0	0	0
12:00 - 14:00	0	2	2	0	2	2
17:00 - 18:00	2	0	2	4	0	4
Daily	3	10	13	6	4	10

2.70 It can be seen from **Table 14** and **Table 15** that during the traditional peak periods there were limited pedestrian and cyclist activity, During the average weekday a total of 2 pedestrian movements and 11 cyclist movements were observed eastbound and 2 pedestrian movements and 4 cyclist movements observed westbound. During the average weekend a total of 3 pedestrian movements and 10 cyclist movement were observed eastbound and 6 pedestrian movements and 4 cyclist movements observed westbound.

Table 16: Pedestrian Link 2 Kegworth Interchange M1 J24 (Thursday 30th January 2025)

Time Period	Eastbound			Westbound		
	Pedestrian	Cyclist	Total	Pedestrian	Cyclist	Total
08:00 - 09:00	0	0	0	0	1	1

Time Period	Eastbound			Westbound		
	Pedestrian	Cyclist	Total	Pedestrian	Cyclist	Total
12:00 - 14:00	1	2	3	1	0	1
17:00 - 18:00	0	2	2	0	0	0
Daily	1	31	32	1	23	24

Table 17: Pedestrian Link 2 Kegworth Interchange M1 J24 (Saturday 1st February 2025)

Time Period	Eastbound			Westbound		
	Pedestrian	Cyclist	Total	Pedestrian	Cyclist	Total
08:00 - 09:00	0	0	0	0	0	0
12:00 - 14:00	0	1	1	0	2	2
17:00 - 18:00	2	0	2	4	0	4
Daily	3	31	34	6	25	31

2.71 It can be seen from **Table 16** and **17** that during the traditional peak periods there were limited pedestrian and cyclist activity, During the average weekday a total of 1 pedestrian movement and 31 cyclist movements were observed eastbound and 1 pedestrian movement and 23 cyclist movements observed westbound. During the average weekend a total of 3 pedestrian movements and 31 cyclist movement were observed eastbound and 6 pedestrian movements and 25 cyclist movements observed westbound.

Table 18: Pedestrian Link 3 Kegworth Interchange M1 J24 (Thursday 30th January 2025)

Time Period	Eastbound			Westbound		
	Pedestrian	Cyclist	Total	Pedestrian	Cyclist	Total
08:00 - 09:00	0	0	0	0	1	1
12:00 - 14:00	1	2	3	1	0	1
17:00 - 18:00	0	2	2	0	0	0
Daily	1	31	32	1	23	24

Table 19: Pedestrian Link 3 Kegworth Interchange M1 J24 (Saturday 1st February 2025)

Time Period	Eastbound			Westbound		
	Pedestrian	Cyclist	Total	Pedestrian	Cyclist	Total
08:00 - 09:00	0	0	0	0	0	0
12:00 - 14:00	0	1	1	0	2	2
17:00 - 18:00	2	0	2	4	0	4
Daily	3	31	34	6	25	31

2.72 It can be seen from **Table 18** and **19** that during the traditional peak periods there were limited pedestrian and cyclist activity, During the average weekday no pedestrian movements and 12 cyclist movements were observed eastbound and 1 pedestrian movement and 5 cyclist movements observed westbound. During the average weekend a total of 3 pedestrian movements and 10 cyclist movement were observed eastbound and 5 pedestrian movements and 4 cyclist movements observed westbound.

Liaison with local user groups and wider public

2.73 In line with the requirements of GG 142 paragraph 4.20, discussions with local user groups have either been held, or will continue to be held by the Project team, including LCountyC, NCountyC, DCountyC Transforming Cities Team, Sustrans, Long Whatton and

Diseworth Parish Council, Kegworth Parish Council, Castle Donington Parish Council and Trent Barton with regards to bus improvements.

2.74 A public consultation event has been held between 3 February and 17 March 2025, with two public exhibitions and an online webinar held during this period, details of which are set out below:

- Exhibition One – 10 February 15:00 to 19:00 – Diseworth Village Hall
- Exhibition Two – 25 February 15:00 to 19:00 – Hilton East Midlands Airport
- Webinar – 4 March 18:00 to 19:30

2.75 In terms of pedestrian and cycle links during the public consultation event a query was raised with regards to the quality of the pedestrian / cycle routes south from Diseworth – It was highlighted by a number of residents that the pedestrian / cycle connection between EMG2, Diseworth and Long Whatton south to Loughborough despite being named as part of the National Cycle Network, is considered to be of poor quality. There is no path or off-road cycle facilities and for a 60mph road it was felt that there would be few people who could use active travel along the route safely.

2.76 Feedback from the Diseworth exhibition was that there are a number of local individuals in Diseworth who ride horses along both Hyam's Lane and Long Holden.

3. USER OPPORTUNITIES

3.1 The opportunities highlighted in **Table 20** are deemed relevant to the Scheme and should be considered by the Design Team Leader throughout the progression of the Scheme design, together with any further opportunities that may arise through the ongoing development of the design phases. The Lead Assessor confirms that all relevant opportunities for the highway Scheme have been fully considered.

Table 20: Identified user opportunities

General Opportunities
Opportunity 1 Consider the provision of a shared footway /cycleway within the site.
Opportunity 2 Consider providing a footway/cycleway along the western side of the A453 to provide a connection between EMG2 and EMG1 which would provide wider connectivity between the surrounding areas such as EMA and Kegworth.
Opportunity 3 Consider providing appropriate pedestrian and cyclist crossing facilities along the access roads within EMG2 to provide safe crossing opportunities.
Opportunity 4 Consider providing appropriate pedestrian and cyclist crossing points on the A453 at the EMA junction and to east of the proposed site access, to enhance

connectivity to EMG1 and EMA to provide a safe crossing facility for pedestrians and cyclists.
Opportunity 5 Consider upgrading Footpath Link 57 to connect Castle Donington to EMG1 and then onto EMG2 via EMG1 and the new A453 link.
Strategic Opportunities
Opportunity 6 Consideration should be given to ensuring that the proposals take into consideration the existing PROWs including Hyam's Lane and National and local cycle links and how the development proposals can tie into them to enhance connectivity to Long Holden.
Opportunity 7 Consideration should be given to making Hyam's Lane part of NCN15 and then extending the link through the site, up the A453 to EMG1 and to Kegworth (see opportunity 2).
Opportunity 8 Consideration should be given to whether any improvements could be made to the pedestrian / cycle routes south from Diseworth that would provide a shorter connection to Loughborough for employees (as well as benefits for residents).
Pedestrian Specific Opportunities
Opportunity 9 Consider how wider connectivity of Hyam's Lane (which is being retained within the site) can be enhanced, this could include: - additional south-easterly connection from Hyam's Lane to the Country Park (adjacent to the Moto Donington Services). - an additional northerly connection from Hyam's Lane to the proposed EMG2 Bus Interchange. - an additional southerly connection from Hyam's Lane to Long Holden, this connection provides access directly into the EMG2 estate.
Cyclist Specific Opportunities
Opportunity 10 Consider whether existing footways in the vicinity of the site can be upgraded to shared cycleway / footways to enhance connectivity.
Equestrian Specific Opportunities
In terms of equestrian specific opportunities, no such opportunities have been identified.

4. WALKING, CYCLING AND HORSE RIDING ASSESSMENT TEAM

4.1 As Lead Assessor, I confirm that this Walking, Cycling and Horse-Riding Assessment Report has been compiled in accordance with DMRB HD GG 142 and thus contains the appropriate information for the wider design team.

4.2 The Walking, Cycling and Horse-Riding Assessment was undertaken by the following assessment and review Team:

Table 21: Walking, Cycling and Horse Riding Lead Assessor

Name	**Paul Wilson**
Position	Director
Organisation	BWB Consulting Limited
Signed	[redacted]
Date	28 July 2025

Table 22: Walking, Cycling and Horse Riding Assessor

Name	**Sara Terrey**
Position	Associate Director
Organisation	BWB Consulting Limited
Signed	[redacted]
Date	21 March 2025

Design Team Leader

4.3 As Design Team Leader, I confirm that the assessment has been undertaken at the appropriate stage of the Scheme development.

4.4 I confirm that in my professional opinion the appointed Lead Assessor has the appropriate experience for the role making reference to the expected competencies contained in GG 142.

Table 23: Design Team Leader

Name	**Simon Hilditch**
Position	Director (Infrastructure Design
Organisation	BWB Consulting Limited
Signed & dated	28 July 2025

APPENDICES

APPENDIX 1: Illustrative Masterplans and Components of the Proposed Development



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KEY:

- Draft Order Limits EMG2 DCO
- Existing Trees / Woodland
- Existing Hedgerows / Other Planting
- Proposed Woodland / Structural and Scrub Planting
- Proposed Tree / Scattered Scrub
- Proposed Hedgerows
- Proposed Grassland
- Proposed Sustainable Drainage (Dry) Features (Indicative)
- Existing Public Rights of Way (PROW)
- Proposed Footways / Redirected PROW and/or Cycleways (Off-Road Routes)
- Proposed Mitigation Mounding (Indicative)

This drawing is the property of FPCR Environment and Design Ltd and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part without written consent of FPCR Environment and Design Ltd.

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t: 01509 672772 e: mail@fpcr.co.uk w: www.fpcr.co.uk

N

drwn/chkd	scale	date
JMG / TRJ	1:2500 @ A1	31/01/2025
number	status	rev
10666-FPCR-XX-XX-DR-A-0001	S2	P04

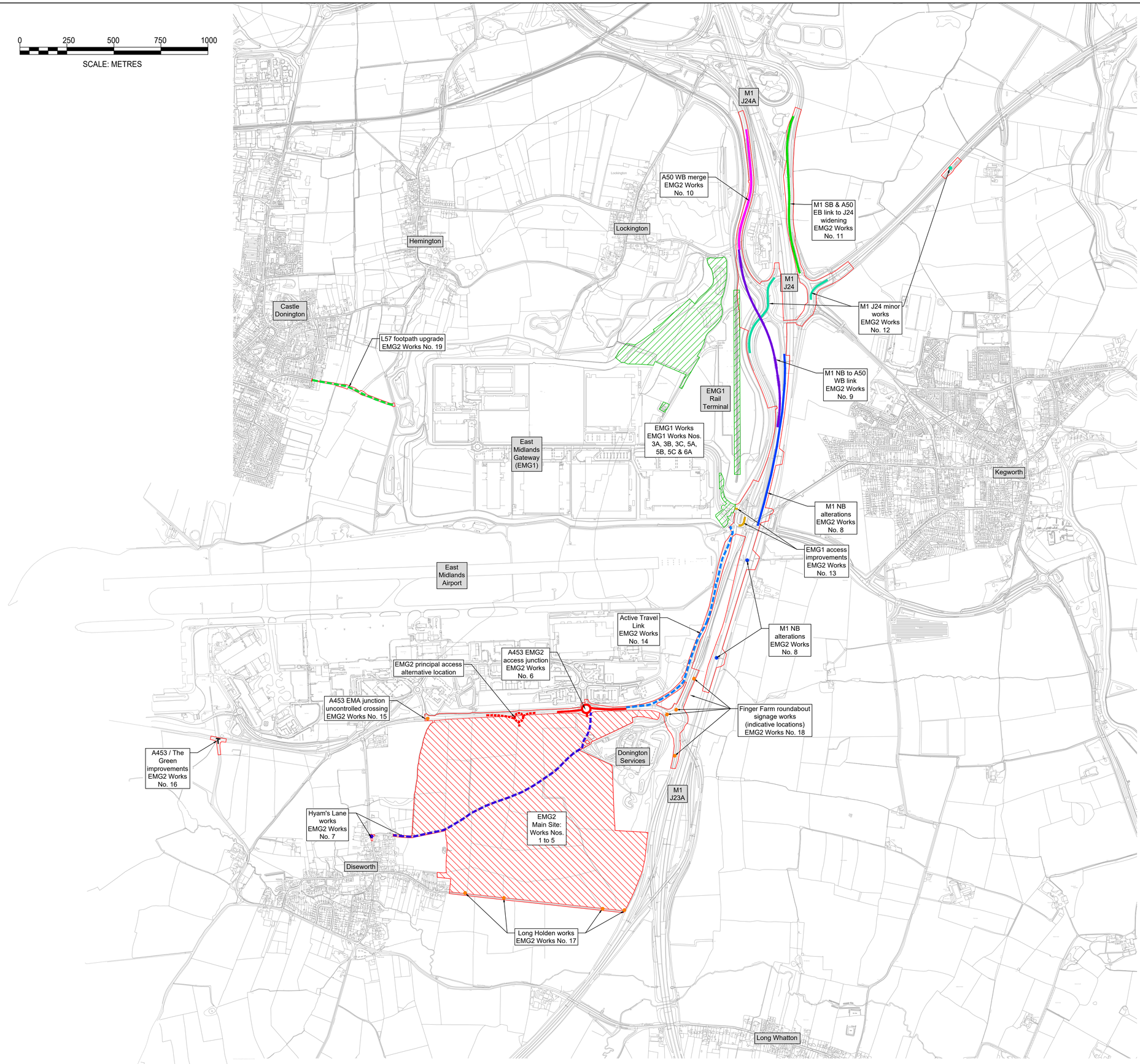
0 50 100 150 200 250m

client
SEGRO

project
East Midlands Gateway Phase 2

title
ILLUSTRATIVE LANDSCAPE MASTERPLAN

SEGRO FPCR | environment & design



Legend

- DRAFT EMG2 DCO order limits
- DRAFT EMG1 MCO order limits

The Scheme is comprised of components (1) to (7):

The Highway Works are comprised of components (3) to (7)

(1) "EMG2 Main Site"

- The Commercial and Employment
- A453 EMG2 access junction works

(2) "EMG1 works"

- Changes to EMG1

(3) "J24 improvements"

- M1 NB works
- M1 NB to A50 WB link
- A50 WB merge
- M1 SB & A50 EB to J24 link widening
- Minor works (signing and lining)

(4) "Active travel works"

- Active Travel link
- Hyam's Lane works
- L57 footpath upgrade

(5) "A453 / The Green improvements"

(6) "EMG1 access improvements"

(7) Other works as described

Rev	Date	Details of issue / revision	Drw	Rev
P05	28.01.25	Minor Amendment	SRH	SRH
P04	10.01.25	Works 18 & 19 added	SRH	SRH
P03	05.12.24	Various updates	SRH	SRH
P02	02.12.24	Works nos. added	SRH	SRH
P01	15.11.24	Issued for comment	SRH	SRH

ISSUES & REVISIONS

SEGRO

THE EAST MIDLANDS GATEWAY PHASE 2 AND HIGHWAY ORDER 202[ ] AND THE EAST MIDLANDS GATEWAY RAIL FREIGHT INTERCHANGE AND HIGHWAY (AMENDMENT) ORDER 202[ ]

Drawing Title

COMPONENTS OF THE PROPOSED DEVELOPMENT

Scale	1:10,000	Drawn	S. Hilditch
Size	A1	Reviewed	S. Hilditch

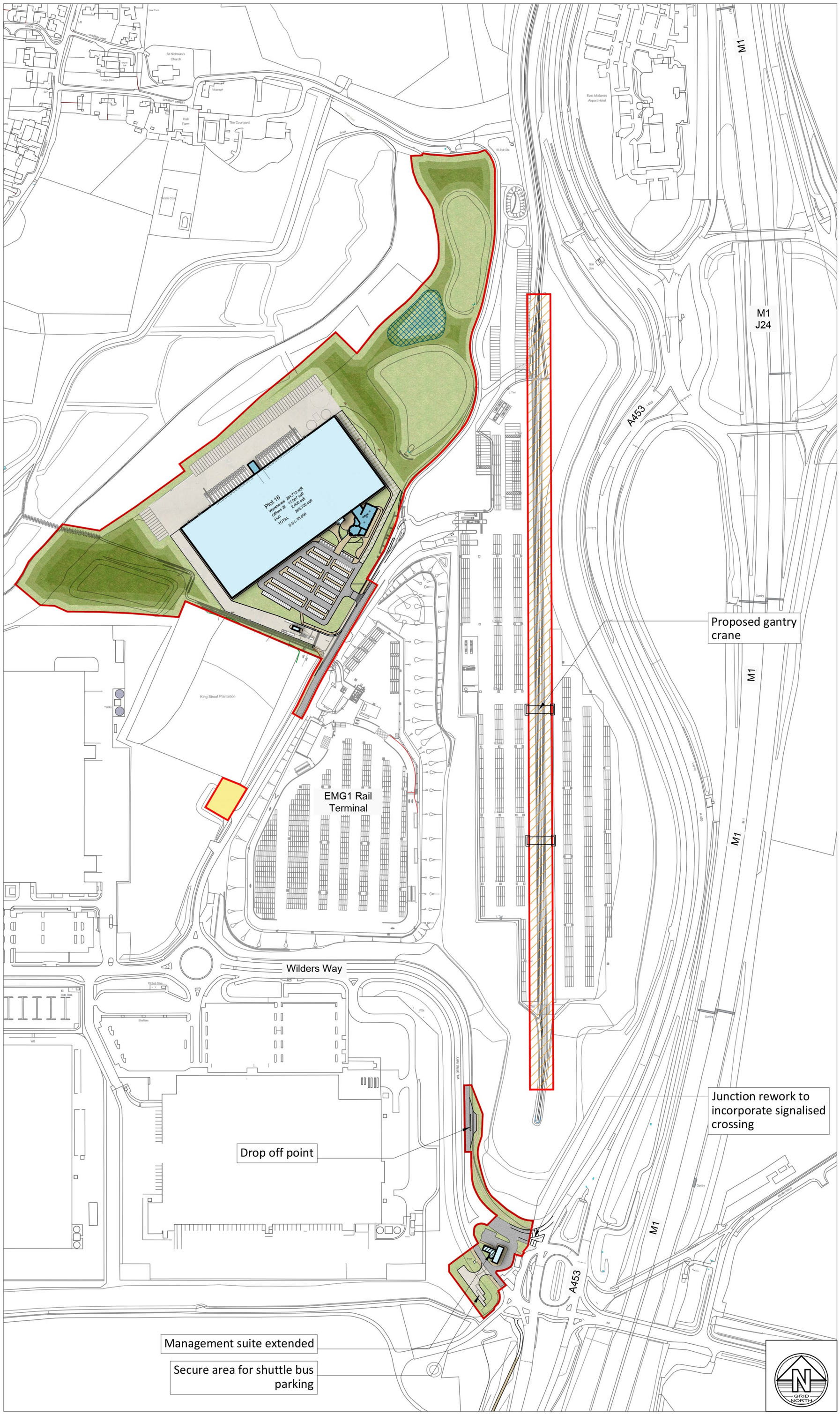
Regulation: **5(2) (0)**

Document: **2.7 / MCO2.7**

Drawing Status: **CONSULTATION DRAFT**

Drawing No.: **EMG2-BWB-GEN-XX-SK-CH-SK023**

Revision: **P05**



Illustrative Masterplan
Scale 1:2,500

DRAFT

50m SCALE 1:2500

- Dimensions are in millimeters, unless stated otherwise.
- Scaling of this drawing is not recommended.
- It is the recipients responsibility to print this document to the correct scale.
- All relevant drawings and specifications should be read in conjunction with this drawing.

Schedule of Accommodation

Total GIA	**-**	**283,720 ft²**	**(26,358 m²)**
Plot 16			
Warehouse Area	-	264,713 ft²	(24,592 m²)
Office Area (incl. GF core)	-	17,007 ft²	(1,580 m²)
Transport Office's	-	2,000 ft²	(186 m²)
Unit 16 GIA	**-**	**283,720 ft²**	**(26,358 m²)**

Key

- EMG1 MCO order limits
- Gantry crane height increase (24m Maximum height)
- Sub-station upgrade works
- Indicative location of proposed SUD's within open land/landscaping

Rev	Date	Details of issue / revision	Drw	Rev
P2	28.01.25	Title block changes	LM	MS
P1	27.01.25	Preliminary Issue	LM	MS

ISSUES & REVISIONS

SEGRO

THE EAST MIDLANDS GATEWAY RAIL FREIGHT INTERCHANGE AND HIGHWAY (AMENDMENT) ORDER 202[ ]

Drawing Title

ILLUSTRATIVE MASTERPLAN

Scale	1:2500	Drawn	LM
Size	A1	Reviewed	MS

Regulation
4(2)(e) and 16(2)(j)

Document
MCO 2.6

Drawing Status
CONSULTATION DRAFT

Drawing No.
EMG1-UMC-SI-01-DR-A-0085

Revision
P2

APPENDIX 2: Personal Injury Collision Data

HIGHWAY SAFETY & ROAD CASUALTY POSITION STATEMENT

EAST MIDLANDS GATEWAY PHASE 2

PROJECT NAME	**East Midlands Gateway Phase 2 – Highway Safety & Road Casualty Position Statement**		
DOCUMENT NUMBER	EMG2-BWB-GEN-XX-RP-TR-0015	**BWB REF**	220500
AUTHOR	[redacted]	**STATUS**	S2
CHECKED	[redacted]	**REVISION**	P1
APPROVED	Paul Wilson	**DATE**	14/03/25

1. INTRODUCTION

1.1 BWB Consulting Ltd (BWB) is commissioned by Segro to provide highways and transportation advice on a Phase 2 expansion of the East Midlands Gateway employment development (EMG2). The site is being proposed for a large B2/B8 industrial development and forms part of the Government's East Midlands Freeport initiative.

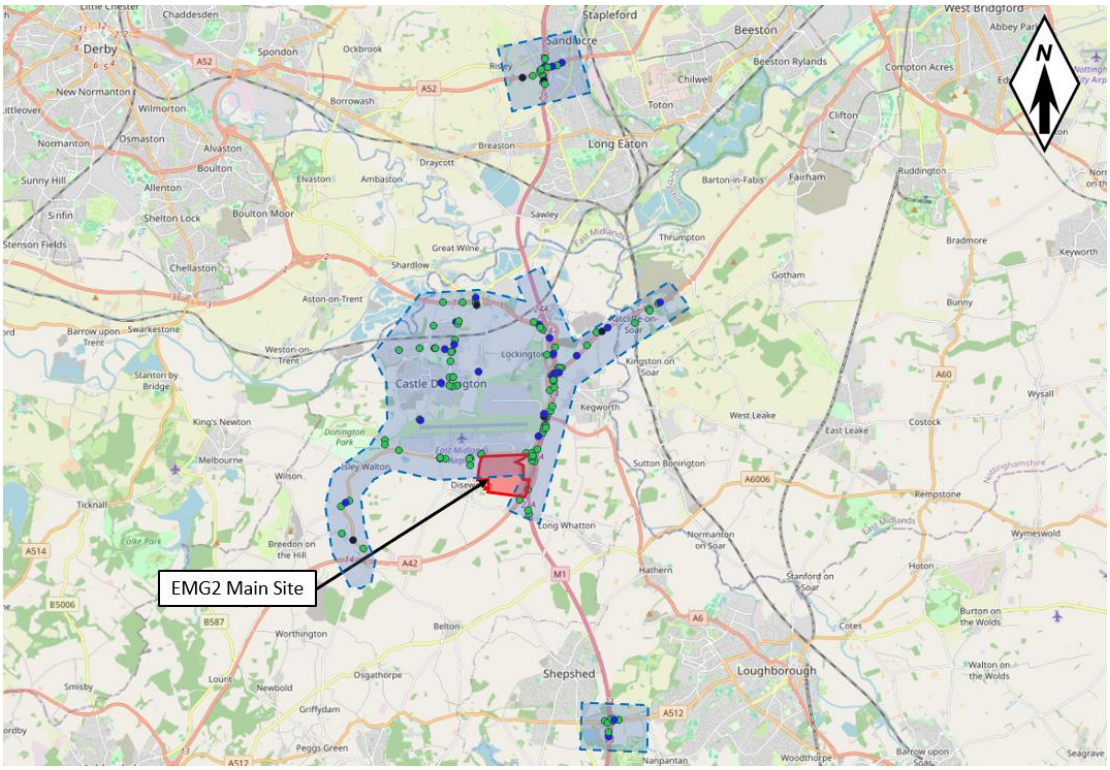
1.2 As part of the Transport Assessment process, detailed Personal Injury Collision (PIC) data has been obtained from the relevant highway authorities of key junctions and links on the surrounding highway network which form the initial proposed study area. The PIC data has been analysed to identify whether there are any existing safety issues that could be unacceptably impacted by additional traffic from the proposed development and therefore whether any further assessment is required as part of the Transport Assessment.

1.3 The assessment seeks to provide an understanding of where safety issues are already present on the network, for the EMG2 development to consider from the outset when proposing highway mitigation to minimise and improve the risk of collisions and road casualties. It follows advice contained within the National Networks National Policy Statement (March 2024), and in particular Paragraphs 4.57 to 4.61 which relate to 'road safety' and are included at **Appendix 1**.

1.4 **Figure 1** shows the study area of the highway network, which includes roads on both the Strategic Road Network and local road network. PIC data has been obtained for the latest six-year period between 1 January 2019 and 23 October 2024 A total of 175 PICs were recorded within the study area, of which 125 were classified as slight, 42 as serious and 8 as fatal. The raw PIC data is included in the following appendices:

- **Appendix 2** – Leicestershire County Council network
- **Appendix 3** – M1 Junction 25 (Derbyshire)
- **Appendix 4** – A453 Remembrance Way (Nottinghamshire)

Figure 1. Personal Injury Collision Study Area



1.5 **Table 1** summarises the number of PICs that have occurred each year since 2019.

Table 1. Number of Personal Injury Collisions by year

	2019	2020	2021	2022	2023	2024
Slight	21	9	26	31	19	19
Serious	2	8	8	7	9	8
Fatal	0	2	0	0	3	3
Total	**23**	**19**	**34**	**38**	**31**	**30**

1.6 The details show that there has been a relatively consistent number of PICs during each of the years assessed, equating to 29 per annum. There was a slight reduction in PICs during 2020 possibly due to the Covid-19 Pandemic and significant reductions in traffic flows and journeys during that time.

1.7 Section 2 of this Technical Note analyses the PIC data individually at the following locations/junctions, seeking to understand whether there are any existing safety problems that need assessing in further detail within the Transport Assessment:

- Junctions 1 & 2) Site frontage and A453/Hunter Road Roundabout
- Junction 3) Finger Farm Roundabout
- Junction 4) A453/EMG1 access junction

- Junction 5) M1 Junction 24
- Junction 6) A453/East Midlands Airport Signal Junction
- Junction 7) A453/Grimes Gate Priority Junction
- Junction 8) A453/The Green Priority Junction
- Junction 9) A453/East Midlands Airport Roundabout
- Junction 10) A453/Walton Hill Signal Junction (Leicestershire)
- Junction 11) A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Roundabout
- Junction 12) M1 Junction 23
- Junction 13) A50 Junction 1
- Junction 14) M1 Junction 25
- Junction 15) Station Road/Broad Rushes Roundabout
- Junction 16) A453/Kegworth Road dumbbell Roundabouts
- Junction 17) A453/Barton Lane/West Leake dumbbell Roundabouts

2. PERSONAL INJURY COLLISION DATA ANALYSIS

Junctions 1 & 2: Site Frontage and A453/Hunter Road Roundabout

2.1 **Figure 2** shows an extract of the PIC records across the site frontage and at the A453/Hunter Road roundabout. The records confirm there have been no PICs within this location over the latest 6-year period. Therefore, it can be concluded that there are no existing safety problems at this location and no further assessment is required.

Figure 2. Personal Injury Collisions at the site frontage and A453/Hunter Road Roundabout



J3 – Finger Farm Roundabout

2.2 **Figure 3** shows an extract of the PIC records at and in the vicinity of Finger Farm roundabout confirming that 11 PICs have been recorded over the latest 6-year period, 10 of which were classified as slight and one as serious. **Table 2** provides a summary of each recorded PIC.

Figure 3. Personal Injury Collisions at Finger Farm Roundabout

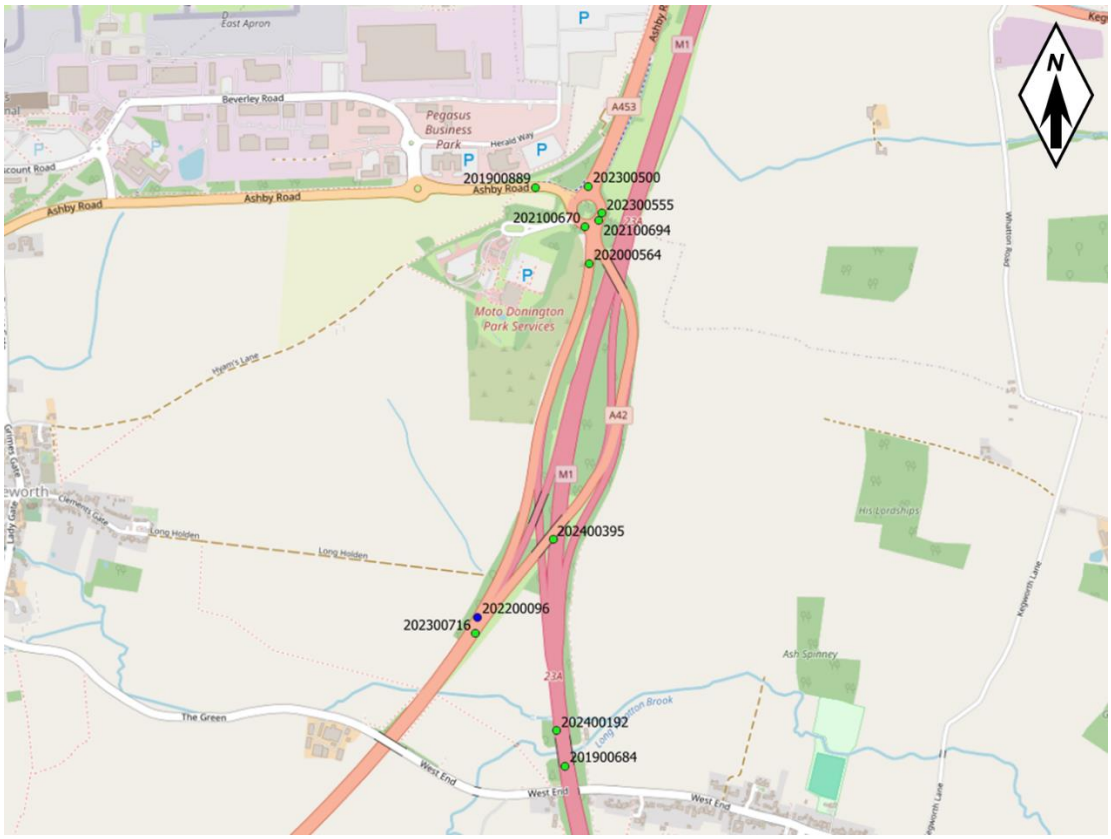


Table 2. Personal Injury Collision Data Summary (Finger Farm Roundabout)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
201900889	17/09/2019	Fine / Dry	Slight	V1, V3, V4, V5 and V6 were traveling westbound on the A453. V2 was traveling eastbound on the A453 causing rear end shunt collisions
201900684	29/06/2019	Fine / Dry	Slight	V1 was travelling ahead on the M1 northbound and V2 was changing lanes to the right
202000564	19/03/2020	Wet / Damp	Slight	V1 (car) was parked on the M1/A42 slip road and V2 (7.5T goods vehicle) was overtaking on the off/side
202100670	03/09/2021	Fine / Dry	Slight	V1 was entering the roundabout from the M1/A42 slip road heading towards the A453 westbound when it collided into the kerb. The collision occurred during hours of darkness, but no other vehicles were involved
202100694	10/09/2021	Wet / Damp	Slight	V1 was travelling on the roundabout circulatory from the A453 (west) to the A42 on-slip. V2 was travelling from the same direction towards Donington Park services and collided with V1 which was held up
202200096	30/01/2022	Fine / Dry	Serious	V2 was travelling northbound on the A42 off slip road to the A453. V1 was traveling in the same direction and collided with V2 when changing lanes to the left
202300500	09/06/2023	Fine / Dry	Slight	V1 was changing lane heading northbound on the A453 and collided with V2 which joined the roundabout from the A453 northbound entry
202300555	07/07/2023	Fine / Dry	Slight	V1 was travelling southbound to the A42 and collided with V2 which was changing lane and travelling in the same direction
202300716	16/08/2023	Fine / Dry	Slight	V2 and V3 were travelling southbound on the M1 J23A on slip. V1 was travelling in the same direction and collided when overtaking a vehicle on its offside
202400192	23/02/2024	Fine / Dry	Slight	V1 was travelling northbound on the M1 approaching J23A and V2 was travelling in the same direction and collided when overtaking a vehicle on its offside
202400395	06/05/2024	Fine / Dry	Slight	V1 was travelling northbound on the M1 and lost control

2.3 The details show that the 11 recorded PICs occurred at different locations of the roundabout and on approach to J23A from the M1 and M42. The PICs were caused due to a number of reasons (rear end shunts, overtaking, lane changing and driver error). There have been no clusters of PICs occur at any specific location of the roundabout or the network in the vicinity of M1J23A and therefore given this is a junction on part of the Strategic Road Network that accommodates a high volume of traffic, it is considered that there are no significant safety problems at this location and no further assessment will be undertaken in the Transport Assessment.

J4 – A453/EMG1 Access Junction

2.4 **Figure 4** shows a detailed extract of the PIC records at the A453/EMG1 signal gyratory confirming there have been seven recorded PICs over the latest 6-year period. Of the seven recorded PICs, three were classified as slight, two were classified as serious and one was classified as fatal. **Table 3** provides a summary of each recorded PIC.

Figure 4. Personal Injury Collisions at A453/EMG1 Access Junction

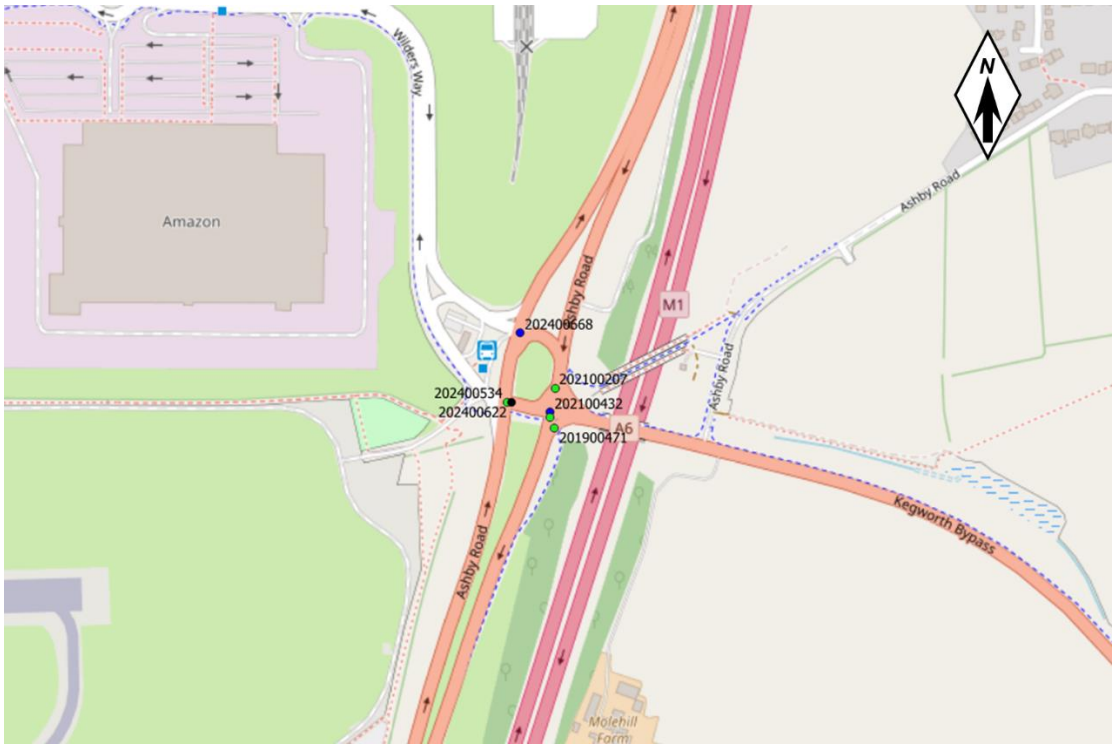


Table 3. Personal Injury Collision Data Summary (A453/EMG1 Access Junction)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
201900471	13/052019	Fine / Dry	Slight	V1 and V2 were entering the roundabout from the A6 to the A453 north and V3 was mid roundabout travelling ahead from the A453 north to A453 south
202100207	08/04/2021	Fine / Dry	Slight	V1 was leaving the roundabout travelling from the A453 north to the A453 south, whilst V2 was leaving the roundabout turning right from EMG1 to the A453 south
202100432	16/06/2021	Fine / Dry	Serious	V1 was travelling ahead at the roundabout from the A453 north to the A453 south and V2 and V3 were entering the roundabout from the A6 to EMG1
202400038	13/01/2024	Fine / Dry	Slight	V1 was on the roundabout circulatory travelling south on the A453. V2 was also mid-junction on the roundabout travelling from the A6 to EMG1
202400534	12/06/2024	Fine / Dry	Slight	V1 was mid junction slowing down and travelling from the A453 south to A453 north. V2 was also mid junction travelling in the same direction from the A453 south to A453 north causing a rear end shunt collision,
202400622	05/07/2024	Fine / Dry	Fatal	V1 was travelling northbound on the A453 and collided with V2 which was travelling from the A6 to EMG1 but held up on the roundabout.
202400668	21/07/2024	Fine / Dry	Serious	V1 was entering the roundabout travelling from EMG1 to the A6. V2 was travelling from the A453 south to A453 north

2.5 The majority of the seven PICs were a result of a collision due to conflicting turning movements at the junction, one of which resulted in fatal injuries (accident number: 202400622). The majority of the PICs were due to turning movements between drivers travelling ahead on the A453 and others travelling from EMG1 or the A6, with a higher number of PICs occurring on the gyratory circulatory close to the A6 entry. With this in mind and given one of the PICs resulted in fatal injuries, further analysis of this junction, and in particular the movement from the A6 to EMG1, will be undertaken in the Transport Assessment. This will provide a greater understanding as to whether there is an issue with visibility to the signals or the intergreen time, as the movements causing collisions should be operating under different phases.

2.6 The proposed highway works include for some changes to the layout of the junction by providing two right turning lanes from the A453 southbound into EMG1. These works present an opportunity to make changes to the traffic signals to improve safety of the junction and the further analysis within the Transport Assessment discussed above will inform this work.

J5 – M1 J24

2.7 **Figure 5** shows a detailed extract of the PIC records at M1 Junction 24 confirming there have been 16 recorded PICs over the latest 6-year period. Of the 22 recorded PICs, 16 were classified as slight and 6 were classified as serious, with no fatal collisions. **Table 4** summarises each of the recorded PICs in further detail.

Figure 5. Personal Injury Collisions at M1 Junction 24

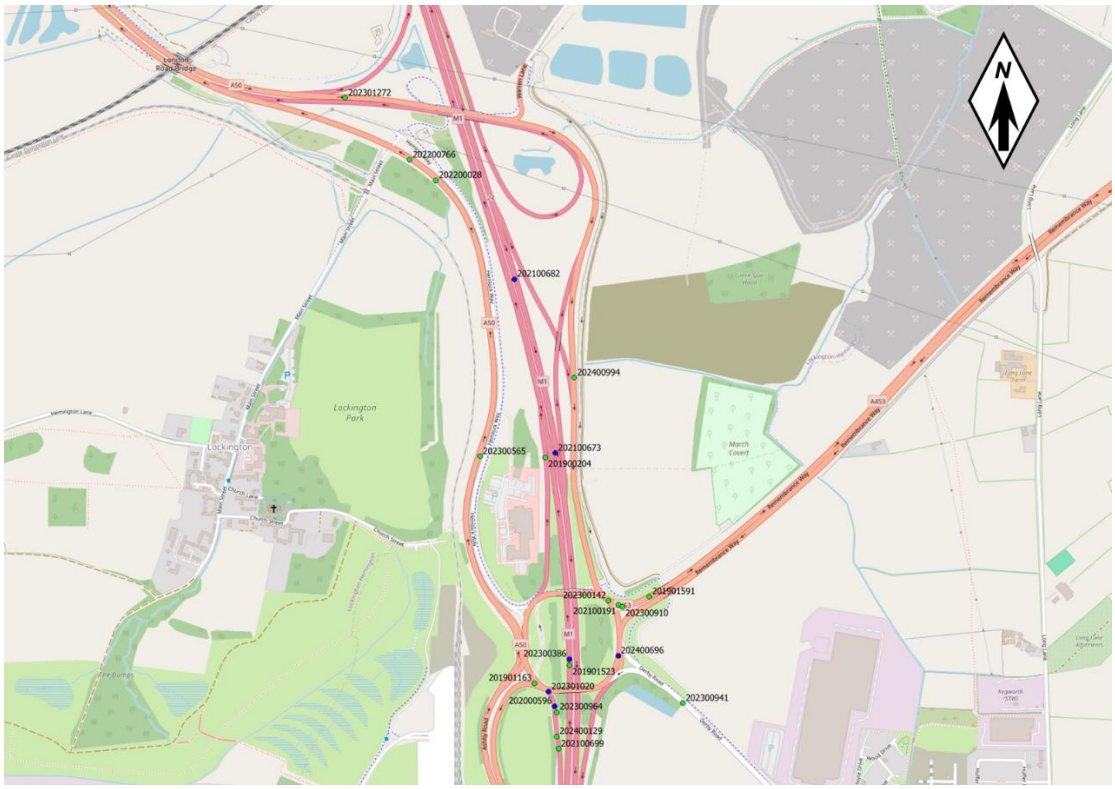


Table 4. Personal Injury Collision Data Summary (M1 J24)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
201900204	06/02/2019	Wet / Damp	Slight	V1, V2 and V4 were approaching the junction from the M1 northbound exit slip. V3 was leaving the motorway from the same direction causing a rear end shunt collision
201901163	22/10/2019	Fine / Dry	Slight	V1 was leaving the roundabout travelling to the A50. V2 was also leaving the roundabout to the A50 but changed lanes causing a collision
201901523	23/02/2019	Fine / Dry	Slight	V1 and V2 were travelling southbound on the M1 mainline away from the junction and collided
201901591	22/10/2019	Fine / Dry	Slight	V1 and V2 were travelling from the A453 south to the A453 north and collided (exact location unknown when collision occurred)

202000596	05/08/2020	Fine / Dry	Serious	V1 was approaching the junction on the M1 northbound exit slip. V2, V3 and V4 were approaching the junction from the same direction but held up causing a rear end shunt collision
202100191	12/04/2021	Fine / Dry	Slight	V1 was leaving the roundabout turning left from M1 southbound off-slip to the A453 Remembrance Way when a collision occurred. This was the only vehicle involved
202100673	03/09/2021	Fine / Dry	Serious	V1 and V2 were approaching the junction on the M1 mainline heading southbound. V3 was also approaching the junction from the same direction and changing lane when a collision occurred
202100682	06/09/2021	Fine / Dry	Serious	V1 and V2 were going ahead on the M1 southbound approaching junction 24 when a collision occurred
202100699	11/09/2021	Fine / Dry	Slight	V1 and V2 were leaving the M1 on the northbound off-slip. The exact reason for the collision is unknown but it occurred away from the roundabout
202200028	15/01/2022	Frost / Ice	Slight	V1 and V2 were going ahead south to northwest on A50 northbound slip road when a collision occurred
202200766	28/06/2022	Fine / Dry	Slight	V2 was going ahead and V2 was overtaking going westbound on the A50 when a collision occurred
202300142	18/02/2023	Fine / Dry	Slight	V1 was leaving the roundabout travelling to the A453 Remembrance Way. There was no other vehicle involved
202300386	25/05/2023	Fine / Dry	Serious	V1 and V2 were both travelling northbound on the M1 mainline away from the junction
202300565	10/07/2023	Wet / Damp	Slight	V1 (goods vehicle) was travelling northbound on the A50 and was changing lanes to the left and collided with V2 (car) travelling in the same direction
202300910	25/09/2023	Fine / Dry	Slight	V1 was leaving the roundabout travelling from the M1 southbound off-slip to the A453 Remembrance Way.V2 was travelling in the same direction and changed lane causing a collision
202300941	04/10/2023	Fine / Dry	Slight	V1 and V2 were both travelling northwestbound on Derby Road approaching the junction from a distance.
202300964	06/10/2023	Wet / Damp	Slight	V1 and V2 were travelling on the northbound off-slip towards the roundabout
202301020	22/10/2023	Fine / Dry	Serious	V1 was on the roundabout travelling to the A50. V2 (Motorcycle) was entering the roundabout, travelling ahead from the A453 south to the M1 northbound
202301272	22/12/2023	Wet / Damp	Slight	V1 was traveling on the A50 slip road to the M1 southbound when a collision occurred

202400129	29/01/2024	Fine / Dry	Slight	V1 and V2 were approaching the junction from the M1 northbound off-slip. V1 was held up causing a rear end shunt collision with V1
202400696	31/07/2024	Fine / Dry	Serious	V1 was leaving the roundabout travelling to the M1 southbound. V2 was turning right from the M1 southbound to the A453 Remembrance Way but collided with V1 that was changing lanes.
202400994	18/10/2024	Fine / Dry	Slight	V1 was going ahead and V2 was changing lanes to the right on the A50 M1 slip road when a collision occurred

2.8 The details show that a cluster of PICs has formed along the M1 northbound off-slip. There appear to be no other locations where clusters of PICs have occurred. A total of six PICs have occurred on the M1 northbound off-slip, which were predominantly due rear end shunt type collisions. Whilst the majority of EMG2 development traffic travelling northbound on the M1 is likely to exit at Junction 23a at Finger Farm given this is the quickest route, further assessment of highway safety on this arm will be undertaken in the Transport Assessment for completeness.

2.9 The scheme is proposing a significant improvement to M1 junction 24 by providing a free-flow link from the M1 northbound to A50 westbound. This is forecast to improve capacity and remove queuing from the M1 mainline and will transfer a significant number of vehicles away from the current slip road onto the new link, thus reducing queuing on the slip road. This work clearly has the potential to positively improve safety of the strategic road network.

2.10 Furthermore, during the Public Consultation events, comments were raised regarding potential safety issues on the A50 northbound weaving from Junction 24. The PIC records confirm that there has been a single isolated PIC occur on this section of the network during the study period, which was classified as slight. Whilst this was a result of a goods vehicle changing lanes, it shows that the number of PICs recorded on this part of the network are low and there are no on-going issues or clusters of PICs that suggest there are any significant safety problems at this location.

J6 – A453/East Midlands Airport Signal-Controlled Junction

2.11 **Figure 6** shows a detailed extract of the PICs that have been recorded at the A453/East Midlands Airport signal-controlled junction confirming there has been three recorded PIC over the latest 6-year period. Two of the PICs were classified as slight and the remaining PIC was classified as fatal. **Table 5** provides a summary of the recorded PICs.

Figure 6. Personal Injury Collisions at A453/East Midlands Airport Junction

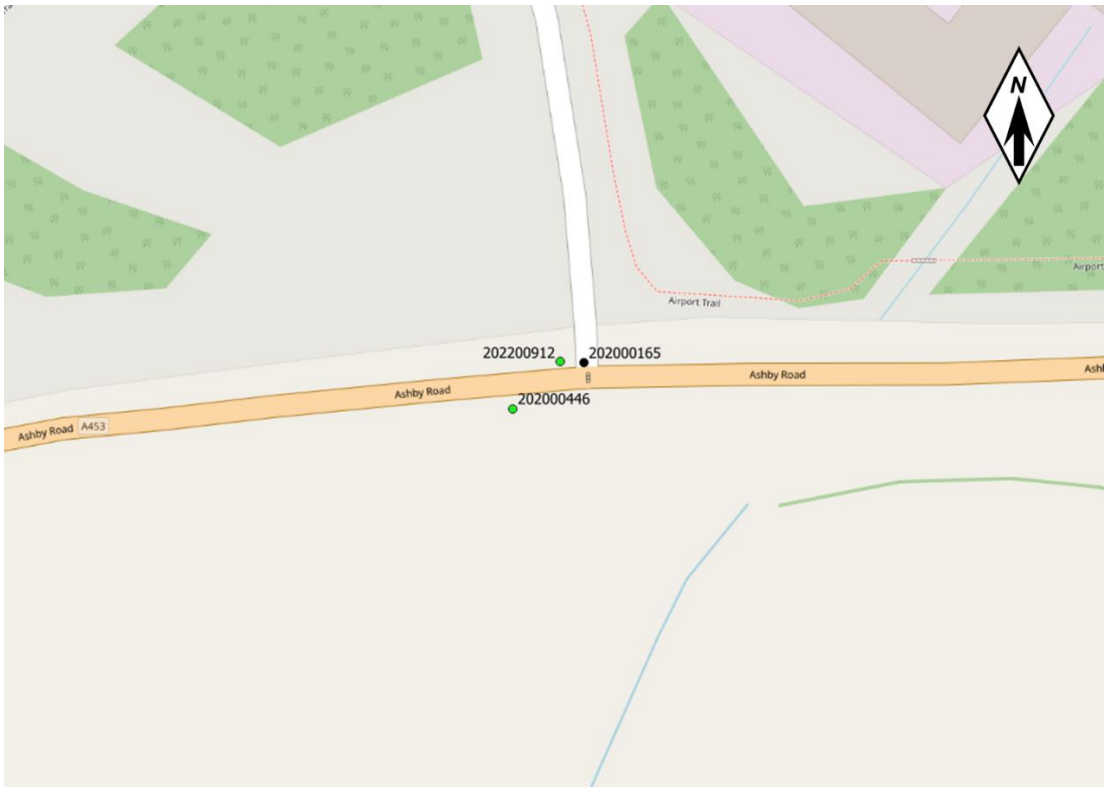


Table 5. Personal Injury Collision Data Summary (A453/East Midlands Airport Signal-Controlled Junction)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
202000165	21/01/2020	Wet / Damp	Fatal	V1 was turning right from the A453 into the airport and V2 was travelling eastbound on A453
202000446	25/07/2020	Fine / Dry	Slight	V1 was travelling westbound on the A453 and V2 was changing lanes travelling in the same direction
202200912	26/10/2022	Wet / Damp	Slight	V1 was turning right from the A453 into the airport and V2 was travelling eastbound on the A453.

2.12 The details show that of the three PICs, two were due to a vehicle turning right from the A453 into the airport colliding with an eastbound travelling vehicle. The right turn into the airport operates from a separately signalled green phase, with eastbound drivers held on a red signal in the same stage. As the junction is signal controlled and these movements occur in different stages, right turning vehicles are not required to give way to eastbound traffic. It therefore appears that one of the drivers has contravened a red signal causing the collision.

2.13 Whilst one of these PICs was fatal, it occurred during wet conditions and invovled a heavy goods vehicle. When considering there have only been two PICs occur due to

this manoeuvre over a 6-year period, both during wet weather conditions, it is considered that there are no significant safety problems at this junction that warrant further consideration in the Transport Assessment.

2.14 In addition, whilst there are no existing safety problems, the proposals involve installing a new pedestrian crossing at the junction and therefore further assessment of the location and type of crossing from an operational and safety perspective will be undertaken in the Transport Assessment.

J7 – A453/Grimes Gate Priority-Controlled Junction

2.15 **Figure 7** shows a detailed extract of the PIC records at the A453/Grimes Gate junction confirming there have been two recorded PICs over the latest 6-year period. Both the PICs were classified as slight. **Table 6** provides a summary of the recorded PICs.

Figure 7. Personal Injury Collisions at A453/Grimes Gate Junction

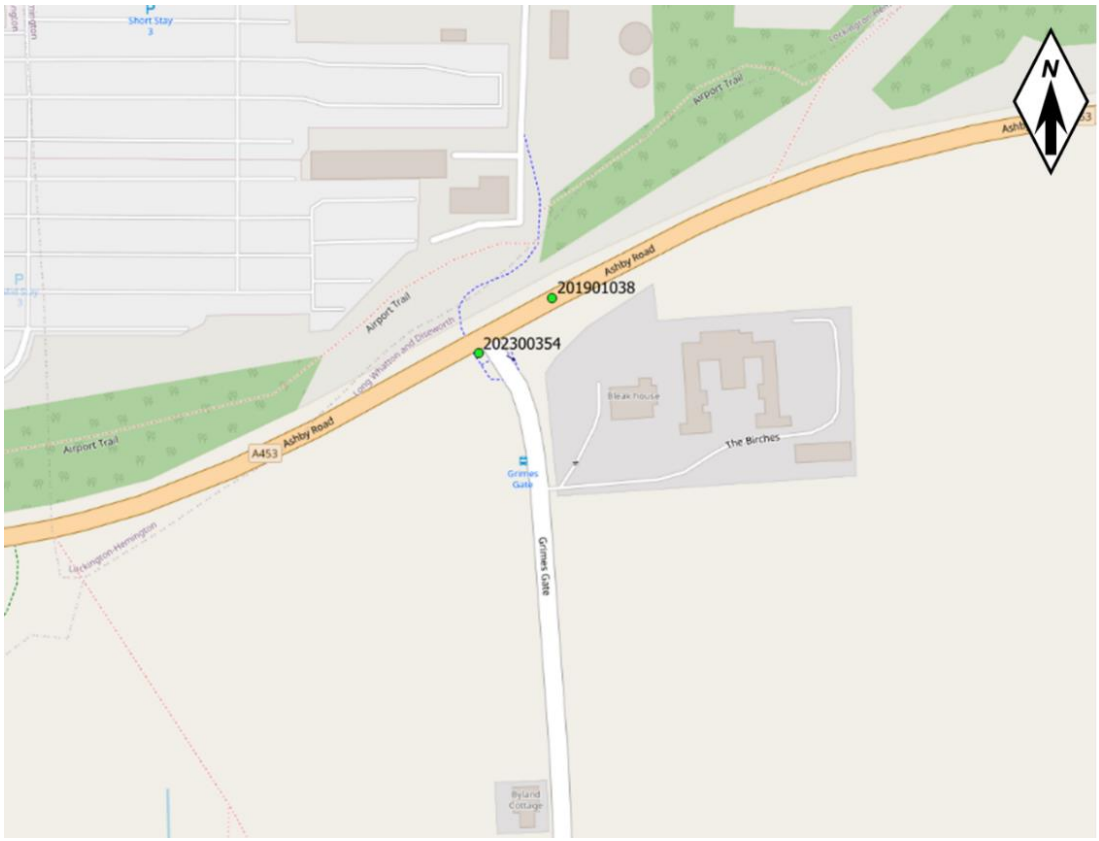


Table 6. Personal Injury Collision Data Summary (A453/Grimes Gate Priority-Controlled Junction)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
201901038	17/11/2019	Wet / Damp	Slight	V1 and V2 were travelling northeastbound on the A453. V1 attempted to overtake V2 causing a collision
202300354	15/05/2023	Fine / Dry	Slight	V1 (Motorcycle) was travelling northeastbound on the A453. V2 was travelling in the same direction resulting in a rear end shunt

2.16 The details show that there have been two recorded PICs, although only one was at the junction itself. With this and given both PICs were classified as slight and appear to be isolated incidents occurring 3.5 years apart, it is considered that there are no significant safety problems at this junction and no further assessment of highway safety will be undertaken within the Transport Assessment.

J8 – A453/The Green Priority-Controlled Junction

2.17 **Figure 8** shows a detailed extract of the PIC records at the A453/The Green junction confirming there have been four recorded PICs over the latest 6-year period. All the four PICs were classified as slight. **Table 7** provides a summary of the recorded PICs.

Figure 8. Personal Injury Collisions at A453/The Green Junction



Table 7. Personal Injury Collision Data Summary (A453/The Green Junction)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
201901277	27/06/2019	Fine / Dry	Slight	V1 was turning right from the A453 into The Green. V2 was travelling westbound on the A453 and V3 was waiting to turn right from The Green to the A453 east
202200634	02/08/2022	Wet / Damp	Slight	V1 was attempting to stop when travelling eastbound on the A453. V2 and V3 were travelling in the same direction and collided with V1.
202200862	10/10/2022	Wet / Damp	Slight	V1 (Goods 7.5 Tonnes MGW) was travelling eastbound on the A453. V2 was waiting to turn right from the A453 into The Green
202400733	13/08/2024	Fine / Dry	Slight	V1 was turning right from the A453 into The Green. V2 was travelling westbound on the A453 and collided into the rear

2.18 The details show all four PICs were due to right turning movements from the A453 into The Green either through side on collisions with opposing vehicles or rear end shunts. All four collisions were classified as slight and occurred in daylight conditions, meaning there appear to be no issues caused during hours of darkness. Two of the four PICs

occurred during wet conditions. The junction is located within a dip on the A453 with approaching vehicles travelling downhill from both sides. Looking at historic Google Street View records, the tourist sign to the 'Queen's Head' highlighting a left turn into The Green from the east was obstructed by overgrown vegetation until 2023 and since then there have been no PICs occurring through westbound travelling vehicles. There appear to have been improvements to the warning signs for eastbound vehicles between 2017 and 2020. Whilst improvements to signage and visibility have occurred over the last 5 years, given that four PICs have occurred due to right turning movements, further assessment of highway safety will be undertaken in the Transport Assessment at this location.

J9 – A453/East Midlands Airport Roundabout

2.19 **Figure 9** shows a detailed extract of the PIC records at the A453/East Midlands Airport roundabout confirming there has been a single recorded PIC over the latest 6-year period, which was classified as slight. **Table 8** provides a summary of the recorded PIC.

Figure 9. Personal Injury Collisions at A453/East Midlands Airport Junction



Table 8. Personal Injury Collision Data Summary (A453/East Midlands Airport Roundabout)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
202200609	25/07/2022	Wet / Damp	Slight	V1 was leaving the roundabout travelling eastbound on A453 and lost control

2.20 The details show that there has only been one recorded PIC at the A453/East Midlands Airport roundabout and invovled a single vehicle that lost control. The PIC was classified as slight. With the low number of PICs at the junction, it is considered that there are no significant highway safety impacts and no further assessment will be undertaken within the Transport Assessment.

J10 – A453/Walton Hill Signal-Controlled Junction

2.21 **Figure 10** shows a detailed extract of the PIC records across the A453/Walton Hill signal-controlled junction confirming there have been two recorded PICs over the latest 6-year period both of which were classified as slight. **Table 9** provides a summary of the recorded PICs.

Figure 10. Personal Injury Collisions at A453/Walton Hill Signal-Controlled Junction



Table 9. Personal Injury Collision Data Summary (A453/Walton Hill Signal-Controlled Junction)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
202100382	02/06/2021	Fine / Dry	Slight	V1 and V3 were travelling southbound around a left hand bend and collided with V2 which was travelling northbound
202100781	03/10/2021	Fine / Dry	Slight	V1 was turning right from Walton Hill into the SuperBike Factory and collided with V2 which was turning right from the SuperBike Factory onto Walton Hill

2.22 The details show that there have only been two recorded PICs at the A453/Walton Hill junction both of which were classified as slight. The causation of the PICs was due to turning movements from different arms. With this and given the low number of PICs at the junction over a 6-year period, it is considered that there are no significant highway safety impacts, and no further assessment will be undertaken within the Transport Assessment.

J11 – A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Roundabout

2.23 **Figure 11** shows a detailed extract of the PIC records at the A42 Junction 14 on-slip/Top Brand/Gelscoe Lane roundabout and on approach from the A453. It confirms there have been three recorded PICs over the latest 6-year period with two PICs being slight and one as fatal in severity. **Table 10** provides a summary of the recorded PICs

Figure 11. Personal Injury Collisions at A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Roundabout

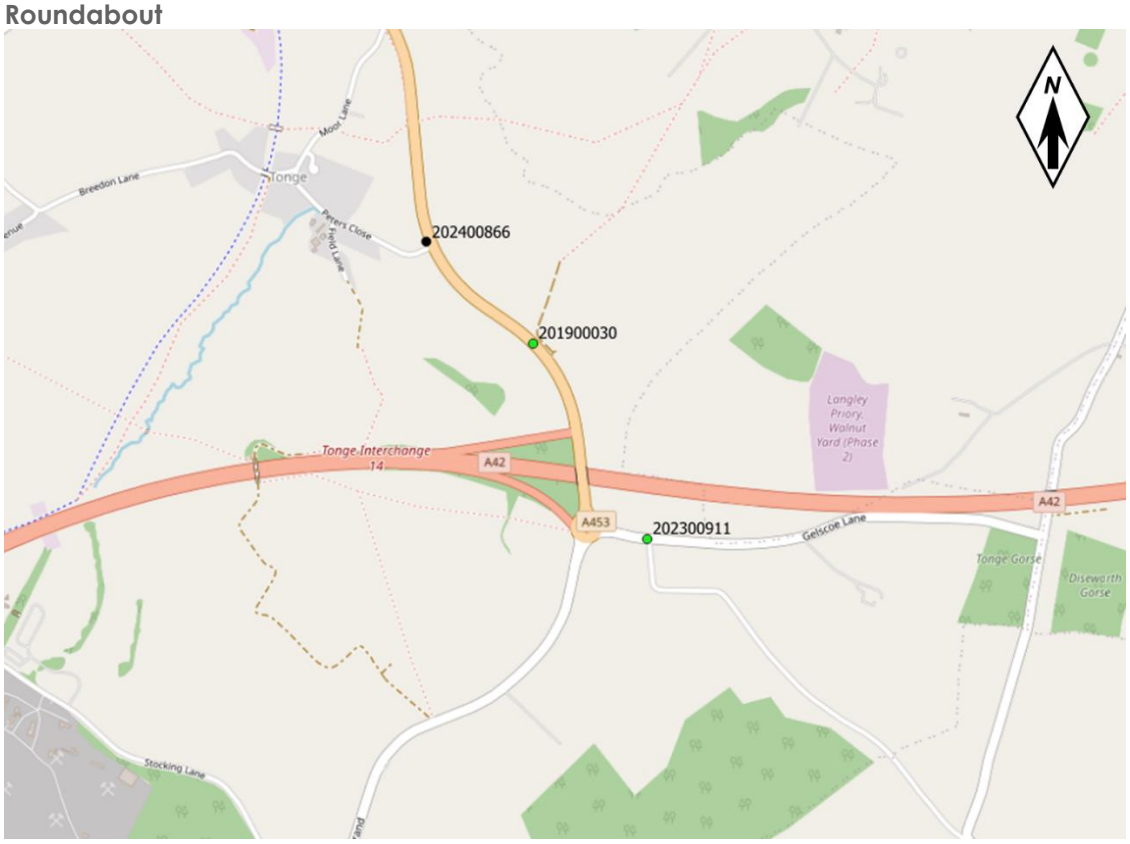


Table 10. Personal Injury Collision Data Summary (A453/Walton Hill Signal-Controlled Junction)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
201900030	16/01/2019	Wet / Damp	Slight	V1 was travelling northbound on the A453 around the left-hand bend and collided with V2 which was travelling southbound on the A453
202300911	29/09/2023	Fine / Dry	Slight	V2 was joining Gelscoe Lane after travelling through the roundabout in the eastbound direction and collided with V1 which was turning left at the roundabout from Top Brand to the A42
202400866	17/09/2024	Fine / Dry	Fatal	V1 was travelling northbound on the A453 and lost control. No other vehicles were involved

2.24 The details show that there have been three recorded PICs on the network in the vicinity of the A42/Top Brand/Gelscoe Lane junction. All three was isolated incidents with two classified as slight. There has been a single fatality occur on 17/09/24 which involved a single vehicle travelling northbound on the A453 and appears to be due to loss of control. Whilst regrettable, this is the only PIC that has occurred at this location during the 6-year period and so it is considered in isolated incident. Consequently, there are

considered to be no significant highway safety issues at this location and no further assessment of highway safety will be undertaken within the Transport Assessment.

J12 – M1 Junction 23

2.25 **Figure 12** shows a detailed extract of the PIC records at M1 Junction 23 confirming there have been nine recorded PICs over the latest 6-year period, seven of which were classified as slight and the remaining two as serious. **Table 11** summarises each of the recorded PICs in further detail.

Figure 12. Personal Injury Collisions at M1 Junction 23



Table 11. Personal Injury Collision Data Summary (M1 Junction 23)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
202000492	09/02/2020	Wet / Damp	Slight	V1 and V2 were approaching the junction from Ashby Road East and collided whilst stopping at the junction
202000881	10/11/2020	Fine / Dry	Slight	V1 and V2 collided when attempting to decelerate when approaching the roundabout from the A512
202100046	25/01/2021	Frost / Ice	Slight	V1 and V2 collided when decelerating on approach to the junction from the M1 northbound off-slip
202100568	30/07/2021	Wet / Damp	Slight	V1 was travelling eastbound on the A512 away from the roundabout and lost control. No other vehicle was involved.
202200748	06/09/2022	Wet / Damp	Slight	V1 was changing lane on the M1 northbound off-slip and collided with V2 travelling in the same direction.
202201031	20/11/2022	Fine / Dry	Slight	V1 was changing lane on the roundabout travelling to the A512 and collided with V2 which was travelling in the same direction
202400235	15/03/2024	Fine / Dry	Serious	V1 was changing lanes on the M1 northbound off-slip and collided with V2 travelling in the same direction
202400297	04/04/2024	Fine / Dry	Slight	V1 was exiting the M1 onto the northbound off-slip and collided with V2 travelling in the same direction
202400698	01/08/2024	Fine / Dry	Serious	V1 (goods vehicle over 3.5T) was held up approaching the roundabout travelling from the A512 to Ashby Road East and collided with V2 entering the roundabout from north to south

2.26 The details show that of the nine recorded PICs, three were recorded at the A512 (albeit one was travelling away from the junction), four PICs were recorded on the M1 northbound off slip, whilst the remaining three PICs occurred on the circulatory and Ashby Road East arm. Two of the PICs were due to vehicles changing lanes on the M1 northbound off-slip, however this arm would not be impacted by the proposed development. Overall, there is no specific location where a cluster of PICs have occurred and the details show a mix of causes with no specific trends. On this basis and given this is a junction on the Strategic Road Network that carries a significant volume of traffic, it is considered that there are no on-going highway safety issues at this junction and no further assessment will be undertaken in the Transport Assessment.

J13 – A50 Junction 1

2.27 **Figure 13** shows a detailed extract of the PIC records at A50 Junction 1 confirming there have been five recorded PICs over the latest 6-year period, three of which were classified as slight, one as serious and one as fatal. **Table 12** summarises each of the recorded PICs in further detail.

Figure 13. Personal Injury Collisions at A50 Junction 1

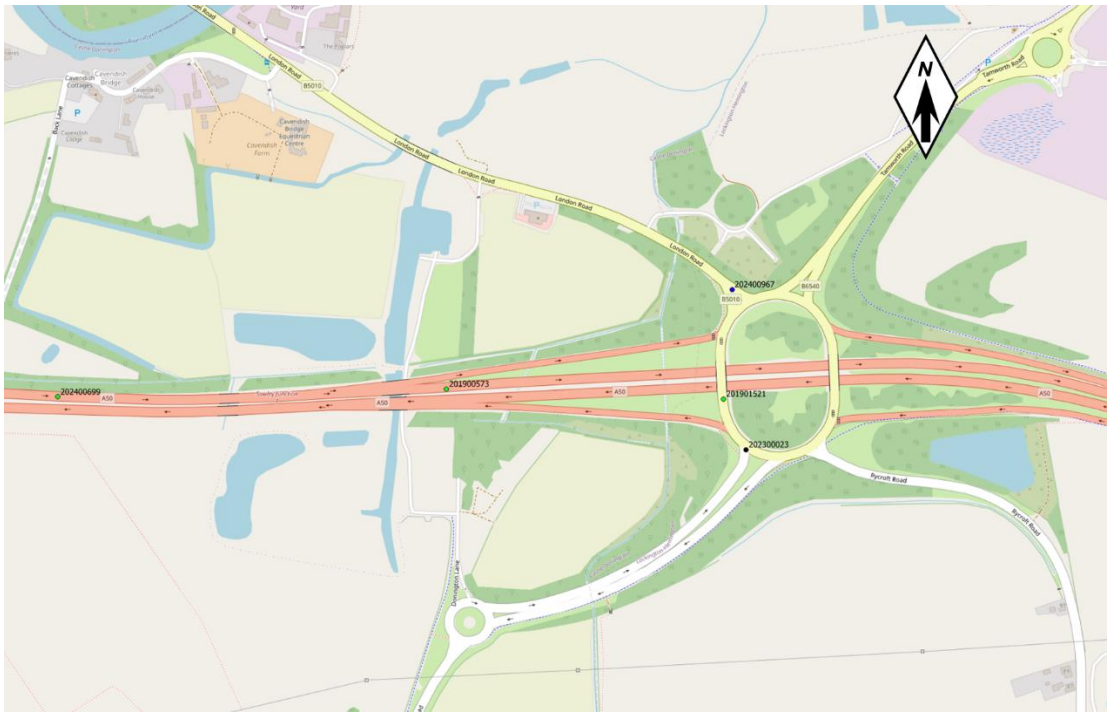


Table 12. Personal Injury Collision Data Summary (A50 Junction 1)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
201900573	19/03/2019	Fine / Dry	Slight	V1 was moving into the left/nearside lane travelling eastbound on the A50 mainline. No other vehicles were invovled
201901521	18/02/2019	Fine / Dry	Slight	V1 and V2 collided when travelling north on the roundabout circulatory
202300023	09/01/2023	Fine / Dry	Fatal	V1 was travelling to the A50 westbound on-slip and collided with V2 which was joining the roundabout from Trent Lane
202400699	30/07/2024	Fine / Dry	Slight	V1 was travelling eastbound on the A50 main line away from the junction. No other vehicles were involved
202400967	15/10/2024	Fine / Dry	Serious	V1 was changing lane when approaching the roundabout from London Road and collided with V2 travelling in the same direction

2.28 The details show that all five PICs occurred at different parts of the junction, or on the A50 mainline. A number of the PICs occurred through driver error when changing lanes. Whilst there has been a single fatal collision close to the Trent Lane entry to the roundabout, this appears to be an isolated incident. Furthermore, there is an approved scheme to signalise this arm of the junction, which would negate the need for drivers to give-way at this location and therefore remove conflicting movements. Overall, it is

considered that there are no significant safety issues and therefore no further assessment will be undertaken at this junction within the Transport Assessment.

J14 – M1 Junction 25

2.29 **Figure 14** shows a detailed extract of the PIC records at M1 Junction 25 confirming there have been 18 recorded PICs over the latest 6-year period, 12 of which were classified as slight, four were classified as serious and two fatal. **Table 13** summarises each of the recorded PICs in further detail.

Figure 14. Personal Injury Collisions at M1 Junction 25

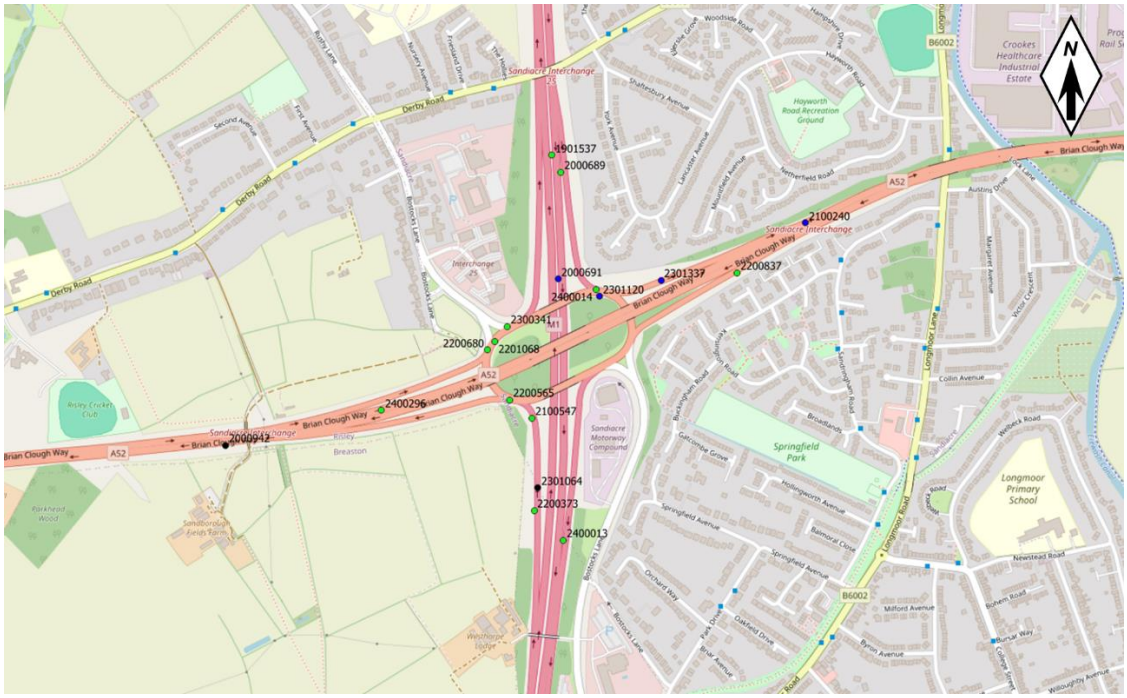


Table 13. Personal Injury Collision Data Summary (M1 J25)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
1901537	02/10/2019	Fine / Dry	Slight	V1 was changing lanes travelling on the A52 northbound on-slip and collided with V2 travelling in the same direction
2000689	20/05/2020	Fine / Dry	Slight	V1 attempts to move from lane 2 into lane 1 to leave the motorway and between two HGVs, misses the exit and collides with the barrier
2000691	18/06/2020	Wet / Damp	Serious	V1 was travelling on the M1 southbound mainline and lost control in lane 4 and collided with the central reservation causing it veer across the motorway and into V2
2000942	22/08/2020	Fine / Dry	Fatal	V1 was travelling westbound on the A52 at 16:55 and veered to nearside for unknown reasons, lost control and collided with a tree

2100240	24/10/2020	Raining / Flood	Serious	V2 was merging onto the A52 eastbound. V1 was travelling eastbound on the A52 mainline. V2 and collides with a nearside barrier and rebounds into the carriageway. V1 collides with rear of V2
2100547	29/03/2021	Fine / Dry	Slight	V2 was stationary at the traffic lights in lane 2 on M1 northbound off-slip. V1 moved into lane 2 colliding with rear of V2
2200373	01/03/2022	Fine / Dry	Slight	V2 was travelling on the M1 northbound off-slip to join the A52 and was held up in queuing traffic. V1 approached from the rear and collided with V2
2200565	03/04/2022	Fine / Dry	Slight	V2 was on the roundabout circulatory and missed the exit and proceeded to travel around roundabout for second time. V1 was in the wrong lane and cut across the path of V2
2200680	23/04/2022	Fine / Dry	Slight	V2 was travelling to Bostocks Lane north in the inside lane, V1 entered the roundabout heading to the A52 eastbound and collided withV2
2200837	19/05/2022	Fine / Dry	Slight	V1 was approaching the A52 westbound off-slip and fails to see V2 and V3 already stationary due to build up of traffic on exit slip. V1 collides with the rear of V2, which is pushed forward into rear of V3.
2201068	24/06/2022	Fine / Dry	Slight	V2 was on the roundabout circulatory and started to move on a green signal. V1 overtook V2 and changed lanes; proceeded then to change lanes again and then collided with V2.
2300341	26/02/2023	Fine / Dry	Slight	V1 was travelling southbound from Bostocks Lane north towards the roundabout when V2 collided with the rear of V1.
2301064	28/04/2023	Raining / Wet	Fatal	Unknown vehicle has collided with a male pedestrian in the early hours (04:42am) on the M1 northbound off-slip.
231120	22/07/2023	Raining / Wet	Serious	V1 was travelling from Bostock Lane north to Bostock Lane south at excessive speed and failed to stop at the junction and collides with furniture and trees
2301337	27/08/2023	Fine / Dry	Serious	V1 was going ahead southwest to northeast when it was cut up by V2 causing V1 to take evasive action, leaving the carriageway nearside and rolled.
2400013	05/11/2023	Fine / Dry	Slight	V1 was travelling southbound on the M1 mainline and collided with V2 which was changing lanes
2400014	22/11/2023	Fine / Dry	Slight	V1 was held turning left from the M1 north to the A52 eastbound. V2 was travelling in the same direction and collided with the rear of V1. The collision occurred during hours of darkness

2400296	22/02/2024	Wet / Damp	Slight	V1 was travelling eastbound on the A52 mainline and collided with the rear of V2 in slow moving traffic.

2.30 The details show that whilst there has been a total of 18 recorded PICs, there are no specific locations where clusters of PICS have occurred. Whilst two fatal PICs have occurred, one involved a single driver losing control for unknown reasons, whilst the second involved a pedestrian walking on the slip road during hours of darkness. The fatal PICs therefore appear to be isolated incidents and not related to any physical defects of the junction. The remaining PICs are spread across all areas of the junction, with three PICs at the Bostocks Lane (N) arm, all of which were classified as slight and were a result of rear end shunt, changing lanes and turning movements on the circulatory and therefore show no patterns. With this and given the junction forms part of the Strategic Road Network, with the M1 and accommodates a significant amount of traffic, it is considered that there are no significant safety problems and no further assessment into highway safety will be undertaken as part of the Transport Assessment.

J15 – Station Road/Broad Rushes Roundabout

2.31 **Figure 15** shows a detailed extract of the PIC records at Station Road/Broad Rushes roundabout in Castle Donington confirming there have been three recorded PICs over the latest 6-year period, two of which were classified as slight and one as serious. **Table 14** summarises each of the recorded PICs in further detail.

Figure 15. Personal Injury Collisions at Station Road/Broad Rushes Roundabout

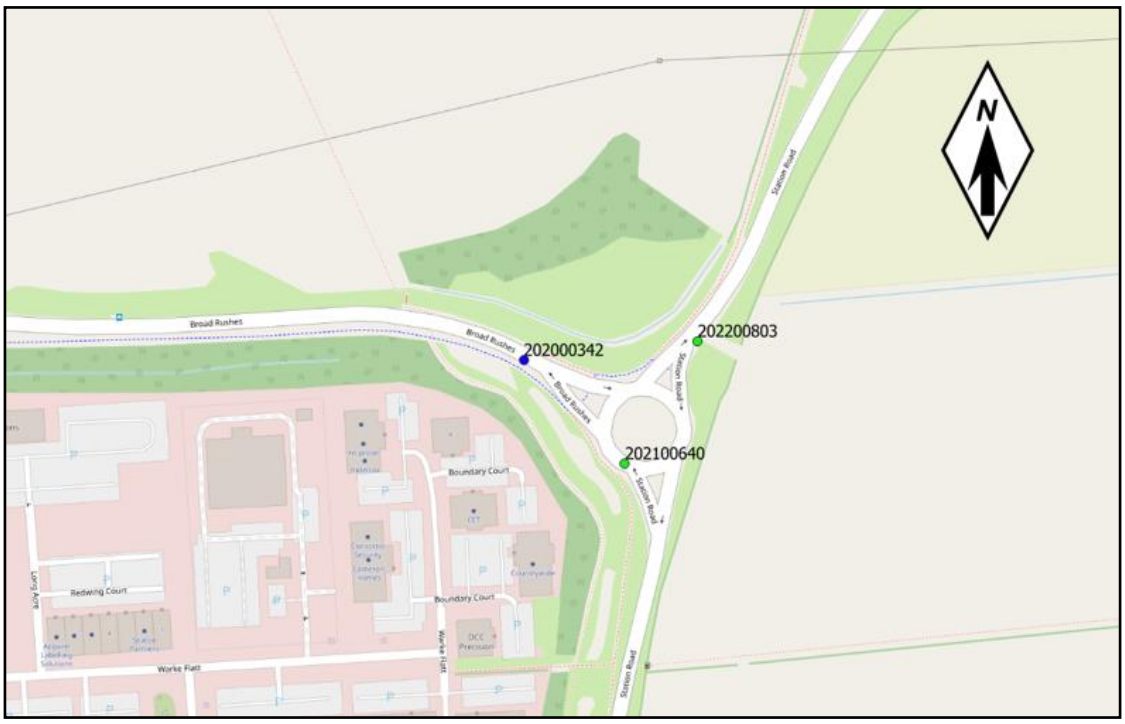


Table 14. Personal Injury Collision Data Summary (Station Road/Broad Rushes Roundabout)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
202000342	23/06/2020	Fine / Dry	Serious	V1 (goods vehicle) collided with V2 (pedal cyclist) when attempting to overtake on Broad Rushes travelling east towards the roundabout
202100640	21/08/2021	Other / Dry	Slight	V1 was on the circulatory exiting at Broad Rushes and decided to change lane to the right and collided with V2 (motorcycle) that was travelling in the same direction
202200803	26/09/2022	Wet / Damp	Slight	V1 (motorcycle) was travelling towards the roundabout from Station Road N and collided with V2 (car) travelling north on Station Road N

2.32 The details show that there have been three recorded PICs at the Station Road/Broad Rushes roundabout, all of which occurred at different locations. Whilst they all involve pedal cyclists or motorcyclists, there are no trends and were due to overtaking, and movements on the circulatory. There appear to be no trends behind the PICs or any specific locations where clusters of PICs have formed. On this basis it is considered that there are no on-going highway safety problems at this location and no further assessment will be undertaken within the Transport Assessment.

J16 – A453/Kegworth Road Dumbbell Roundabouts

2.33 **Figure 16** shows a detailed extract of the PIC records near the A453/Kegworth Road dumbbell roundabouts confirming there have been five recorded PICs over the latest 6-year period, four of which were classified as slight and one as serious. **Table 15** summarises each of the recorded PICs in further detail.

Figure 16. Personal Injury Collisions at A453/Kegworth Road Dumbbell Roundabouts



Table 15. Personal Injury Collision Data Summary (A453/Kegworth Road Dumbbell Roundabouts

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
2D184622	07/10/2022	Fine / Dry	Slight	V1 was travelling northbound on Kegworth Road and lost control when negotiating the right-hand bend at its junction With Main Street
2D012221	24/01/2021	Snow	Slight	V1 was turning right at the roundabout from the north to Kegworth Road to the west and lost control
2D019922	06/02/2022	Fine / Dry	Slight	V2 was travelling southbound on the access road from Ratcliffe on Soar and collided with V2 travelling northbound on the same road
2D252119	19/12/2019	Fine / Dry	Slight	V1 was travelling northeastbound on the A453 and V2 was travelling in the same direction and collided with the rear of V1.
2D077923	28/05/2023	Fine, Dry	Serious	V1 was traveling northeastbound on A453 lost control, left the road and skidded.

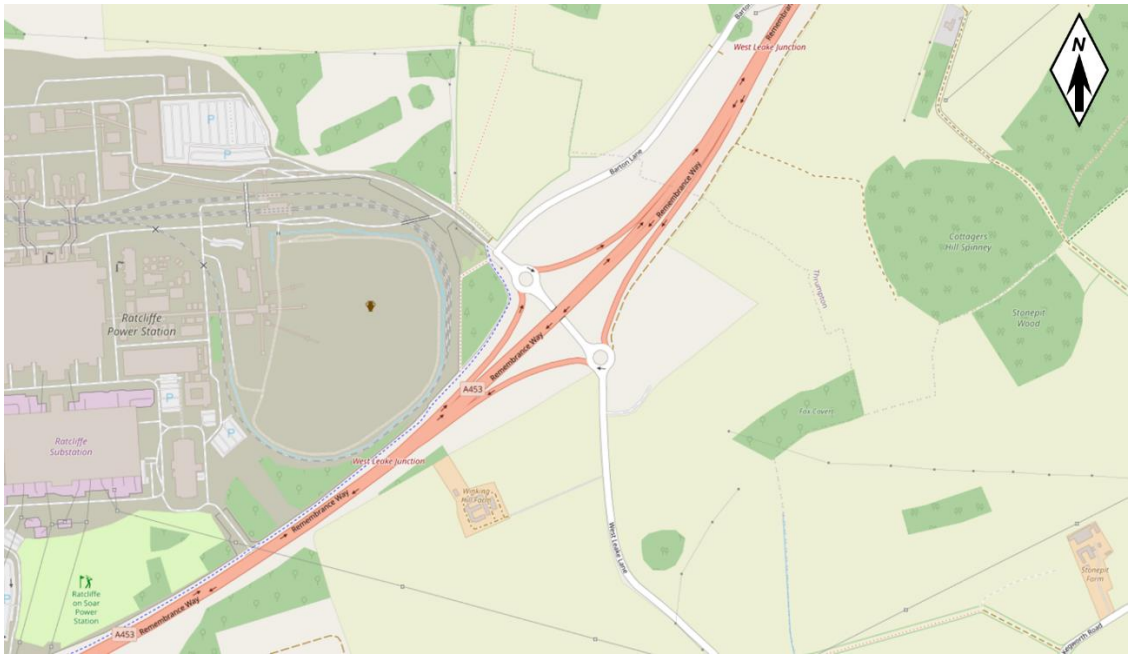
2.34 The details show that of five recorded PICs, only one occurred at the roundabouts themselves, two were on the A453 mainline, one on Kegworth Road, and another on the Ratcliffe Power Station access road. Four PICs were classified as slight and another

as serious. There are no patterns or locations where a cluster of PICs have occurred and on this basis, it is considered that there are no significant safety problems at the junction and no further assessment will be undertaken as part of the Transport Assessment.

J17 – A453/Barton Lane/West Leake Dumbbell Roundabouts

2.35 **Figure 17** shows a detailed extract of the PIC records across the A453/Barton Lane/West Leake Dumbbell roundabouts confirming there have been no recorded PICs over the latest 6-year period. It can therefore be concluded that there are no safety problems at this location and no further assessment will be undertaken within the Transport Assessment.

Figure 17. Personal Injury Collisions at A453/Barton Lane/West Leake Lane Roundabouts



Other Locations of Personal Injury Collision Clusters

M1 Mainline between Junctions 23A and 24

2.36 **Figure 18** shows a detailed extract of the PIC records on the M1 mainline between Junction 23A and Junction 24 confirming there have been five recorded PICs over the latest 6-year period, all of which were classified as slight. **Table 16** summarises each of the recorded PICs in further detail.

Figure 18. Personal Injury Collisions on M1 Mainline

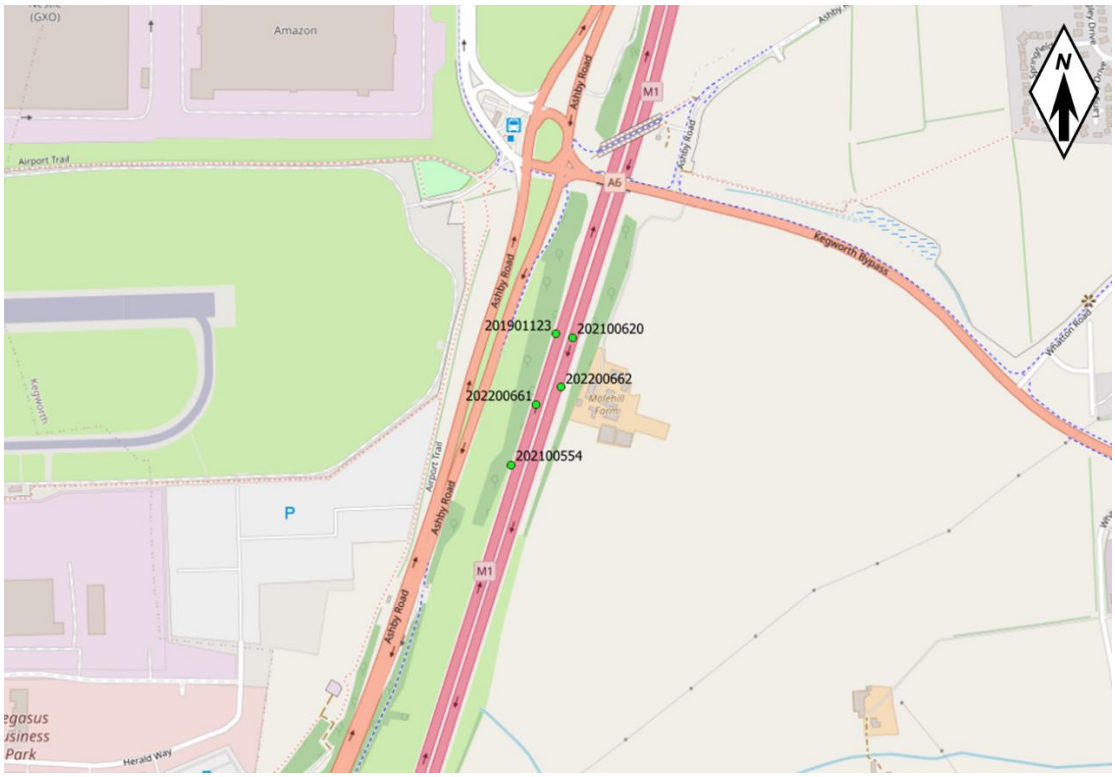


Table 16. Personal Injury Collision Data Summary (M1 Mainline)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
201901123	24/12/2019	Wet / Damp	Slight	V1 was travelling northbound on the M1 and lost control. No other vehicles were involved
202100554	27/07/2021	Wet / Damp	Slight	V1 and V2 were travelling northbound on the M1 and collided when V1 was changing lanes to the left
202100620	16/08/2021	Fine / Dry	Slight	V1 was travelling southbound on the M1 and collided with the rear of V2 which was being held up travelling in the same direction
202200661	11/08/2022	Fine / Dry	Slight	V1, V2, V3 and V4 were travelling northbound and collided with rear end shunts
202200662	11/08/2022	Fine / Dry	Slight	V1 was travelling southbound on the M1 and collided with V2 travelling in the same direction when changing lanes to the right

2.37 The details show that all five recorded PICs were classified as slight and caused due to a mixture of lane changing, rear end shunts and loss of control. The PICs were also balanced across the northbound and southbound carriageways. As such, there appear to be no common causal factors behind the PICs with the latest occurring in August 2022 and since then there has not been a single recorded PIC on this part of the network. On this basis, it is considered that there are no significant safety problems on this part of

the M1 mainline and no further assessment will be undertaken as part of the Transport Assessment.

A453/Moor Lane

2.38 **Figure 19** shows a detailed extract of the PIC records at the A453/Moor Lane confirming there have been three recorded PICs over the latest 6-year period, two of which were classified as slight and one serious. **Table 17** summarises each of the recorded PICs in further detail.

Figure 19. Personal Injury Collisions at A453/Moor Lane

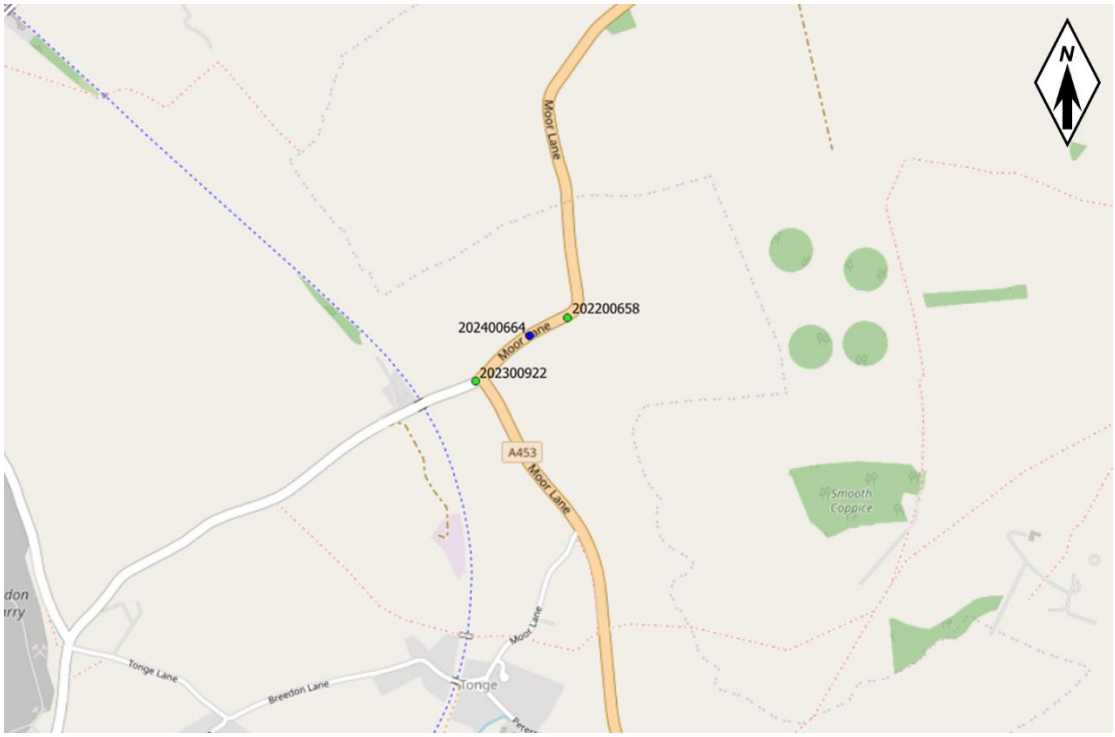


Table 17. Personal Injury Collision Data Summary (A453/Moor Lane)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
202200658	10/08/2022	Fine / Dry	Slight	V1 was travelling southbound on the A453 around a right-hand bend losing control. The driver was a motorcyclist
202300922	01/10/2023	Wet / Damp	Slight	V1 and V2 were traveling eastbound on the A453 approaching the junction and collided due to a rear end shunt
202400664	19/07/2024	Fine / Dry	Serious	V1 was travelling southbound on the A453 and collided with V2 travelling northbound on the A453. The PIC was located away from the junction with Moor Lane

2.39 The details show that all three PICs were located on different parts of the network. One of the PICs was due to a motorcyclist losing control, whilst another was due to a rear end shunt between two cars and a third due to a head on collision. There are no patterns behind the PICs and consequently they appear to be isolated incidents. On this basis, it is considered that there are no significant safety problems on this part of the network and no further assessment will be undertaken as part of the Transport Assessment.

A453 Remembrance Way

2.40 **Figure 20** shows a detailed extract of the PIC records on the A453 Remembrance Way confirming there has been one fatal PIC recorded approximately 1.5km to the east of M1 Junction 24. **Table 18** summarises this PICs in further detail.

Figure 20. Personal Injury Collisions on Remembrance Way

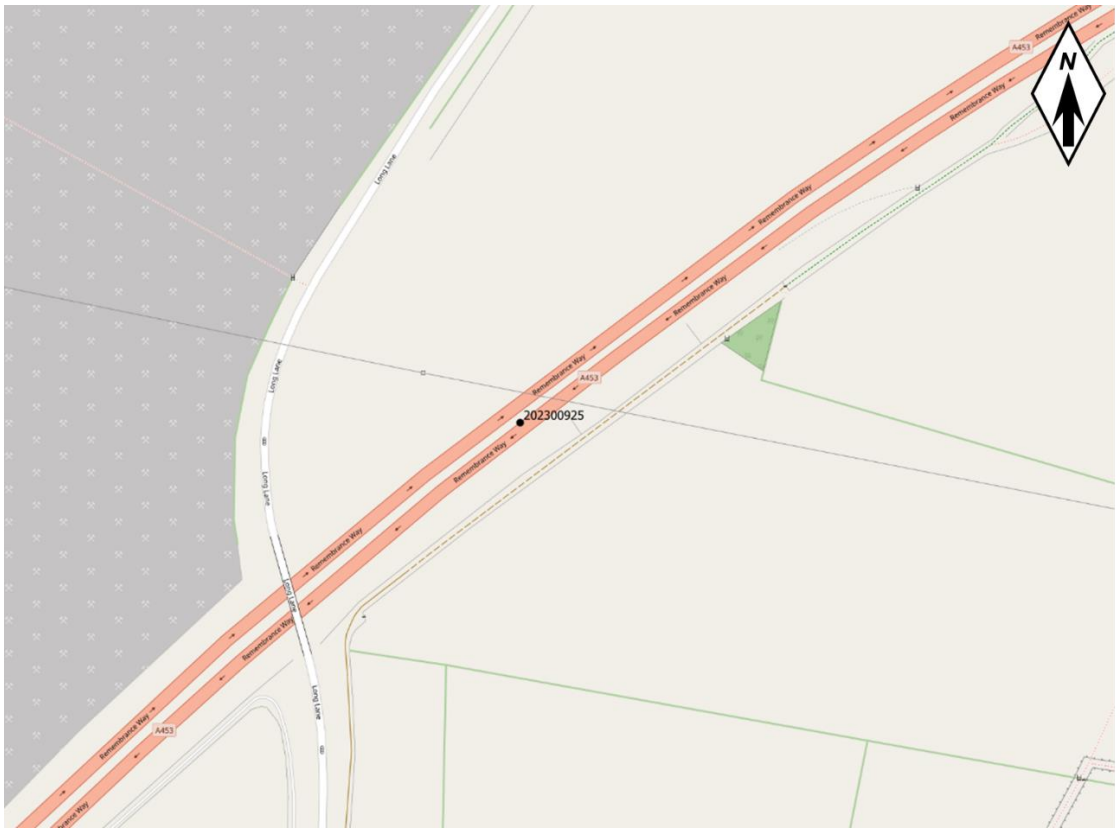


Table 18. Personal Injury Collision Data Summary (Remembrance Way)

Accident Number	Day/ Date	Weather / Road Surface	Severity	Description
202300925	01/10/2023	Wet / Damp	Fatal	V1 was travelling southwestbound on the A453 but held up and collided with V2 which was travelling in the same direction to the rear

2.41 The details show that this PIC occurred due to a rear end shunt collision on the A453 as a vehicle was held up approaching Junction 24. Whilst this resulted in fatal injuries, it appears to be an isolated incident with no other PICs occurring on this part of the network during the 6-year period. Therefore, whilst regrettable it is considered that there are no significant safety problems on this part of the network so whilst no further assessment of the highway safety will be undertaken at this location within the Transport Assessment consideration will be given to capacity improvements at Junction 24.

3. SUMMARY AND NEXT STEPS

3.1 This Highway Safety and Road Casualty Position Statement has reviewed Personal Injury Collision (PIC) data across the Strategic Road Network and local highway network in the vicinity of the East Midlands Gateway 2 development to understand whether there are any existing safety problems that could be exacerbated by the proposed development and hence require further consideration within the Transport Assessment. The PIC data was obtained from the relevant highway authorities for the latest 6-year period between 2019 and 2024.

3.2 It follows advice contained within the National Networks National Policy Statement (March 2024), and in particular Paragraphs 4.57 to 4.61 which relate to 'road safety'.

3.3 The PIC analysis has identified the following key locations where there could potentially be existing safety issues that require further consideration in the Transport Assessment:

- **EMG1 access junction** – a cluster of PICs have been recorded due to turning movements from the A6 to EMG1 colliding with drivers travelling southbound on the A453. One of the PICs was fatal.

- **M1 Junction 24** – a cluster of PICs have been recorded on the M1 northbound off-slip on approach to the roundabout. There are no known existing safety issues with the A50 northbound weaving section from Junction 24 as alluded to during the Public Consultation events.

- **A453/The Green** – a cluster of PICs have been recorded due to right turning movements from the A453 west into The Green. This appears to be due to the location of the junction within a dip in the carriageway and potential lack of signage or warnings.

3.4 The Transport Assessment will review these three locations in further detail to understand whether the proposed development is likely to generate traffic increases that could exacerbate any issues. Where traffic increases are expected, mitigation will be proposed to address any highway safety issues and ensure the proposed development would have no unacceptable impacts in accordance with the requirements of the National Planning Policy Framework and National Networks National Policy Statement.

3.5 The following proposals are being considered and proposed by the proposed development which should have a benefit from a highway safety perspective on the three key locations:

- Provision of a new free flow link between the M1 northbound and A50, which should reduce traffic on the M1 northbound off-slip and the level of congestion approaching the junction.

- Works to the EMG1 access junction by providing two lanes into EMG1 for vehicles travelling southbound on the A453. This presents an opportunity to make changes to the traffic signals to improve safety of the junction.

- Whilst not formally included in the proposed mitigation package at this stage of the process, further consideration of the A453/The Green junction will be undertaken such as the provision of additional signage and/or carriageway surfacing markings to improve the safety associated with right turning vehicles.

3.6 The remaining junctions and links across the study area appear to have no significant safety problems that should not be materially impacted by the proposed development, however highway safety will be considered as part of any new infrastructure improvements being proposed.

3.7 From a highway safety perspective, the details in this report will be taken and considered further in the following stages of work:

- Further analysis in the Transport Assessment
- Stage 1 Road Safety Audit
- Safety risk assessments to GG 104 for departures from standard on the Strategic Road Network
- Stages 2, 3 and 4 Road Safety Audits
- Walking, Cycling and Horse-Riding Assessments and Reviews

3.8 It therefore forms the first stage in an on-going process to consider and improve highway safety and road casualties on the surrounding network that could be impacted by the proposed development.

Appendix 1. National Networks National Policy Statement Road Safety Extracts

Department for Transport

National Networks National Policy Statement



March 2024

added would make that development unacceptable, particularly in relation to statutory environmental quality limits

4.52 The Secretary of State should not refuse consent because of pollution impacts unless there is good reason to believe that any relevant necessary operational pollution control permits or licences, or other consents would not be granted.

Common law nuisance and statutory nuisance

4.53 Section 158 of the Planning Act 2008 provides a defence of statutory authority in civil or criminal proceedings for nuisance. Such a defence is also available in respect of anything else authorised by an order granting development consent. This would include a defence for proceedings for nuisance under Part III of the Environmental Protection Act 1990 ("the 1990 Act") (statutory nuisance) but only to the extent that the nuisance is the inevitable consequence of what has been authorised.

4.54 The defence does not extinguish the local authority's duties under Part III of the 1990 Act to inspect its area and take reasonable steps to investigate complaints of statutory nuisance, and to serve an abatement notice where satisfied of its existence, likely occurrence or recurrence.

4.55 It is very important that, during the examination of a nationally significant infrastructure project, possible sources of nuisance under section 79(1) of the 1990 Act, and how they may be mitigated or limited, are considered by the Examining Authority so they can recommend appropriate requirements that the Secretary of State might include in any subsequent order granting development consent. More information on the consideration of possible sources of nuisance is at paragraphs 5.117 to 5.125.

4.56 When considering whether to include exceptions to the defence in an order granting development consent (section 158(3) of the Planning Act 2008), the Secretary of State should have regard to whether any nuisance is an inevitable consequence of the development.

Safety

Road Safety

4.57 Highways developments provide an opportunity to make significant safety improvements and significant incident reduction benefits when they are well designed. Some developments may have safety as a key objective, but even where safety is not the main aim of a development, the opportunity should be taken to improve safety, including introducing the most modern and effective safety measures where proportionate. Consideration should also be given to wider transport objectives, including expanding active travel, and creating safe and pleasant walking, wheeling and cycling environments. In developing roads schemes the applicant should have due regard to the needs of drivers and riders and the imperative to ensure road user safety. Schemes should be developed with a mindset that accounts for the need for motorists to rest, particularly Heavy Goods Vehicle drivers who need safe and secure roadside

facilities that also cater for their welfare needs including the appropriate provision of high-quality washrooms, a catering offer and access to alternative fuel and digital infrastructure.

4.58 The applicant should undertake an objective assessment of the impact of the proposed development on safety including the impact of any mitigation measures. This should use the methodology outlined in the guidance from Department for Transport's Transport Analysis Guidance and from National Highways. They should also put in place arrangements for undertaking the road safety audit process and ensuring their implementation. Road safety audits are a mandatory requirement for highway improvement schemes in the UK (including motorways). Road safety audits are intended to ensure that operational road safety experience is applied during the design and construction process so that the number and severity of collisions is as low as is reasonably practicable.

4.59 The applicant should be able to demonstrate that their scheme is consistent with government Road Safety policy and with the National Highways Safety Framework for the Strategic Road Network. Applicants must show that they have taken all steps that are reasonably required to minimise the risk of death and injury arising from their development, including:

- contributing to an overall reduction in road casualties
- contributing to an overall reduction in the number of unplanned incidents
- contributing to improvements in road safety for pedestrians and cyclists[95]

4.60 The applicant must also demonstrate that:

- they have considered the safety implications of their project from the outset
- they are putting in place rigorous processes for monitoring and evaluating safety

4.61 The Secretary of State should not grant development consent unless satisfied that all reasonable steps have been taken and will be taken to:

- minimise the risk of road casualties arising from the scheme
- contribute to improvements in the safety of the strategic road network

Rail Safety

4.62 It is the government's policy, supported by legislation, to ensure that the risks of passenger and workforce accidents are reduced so far as reasonably practicable. Rail schemes should take account of this and seek to further improve safety at every opportunity and where there is value for money in doing so.

4.63 The rail industry is required by law to consider the impact on safety of any proposed changes to the rail network through rigorous risk assessment. The principle of "so far as is reasonably practicable" is applied through the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended) which are enforced by the Office of Rail and Road[96]. The rail industry is also required by legislation to comply with applicable Common Safety Methods. This

Appendix 2. Personal Injury Collision Data (Leicestershire County Council network)

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection: **Notes:**

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201900030	16/01/2019	442450	322838	Other	Wet/Damp	Darkness: no street lighting	Slight

Location: A453 BREEDON ON THE HILL APPROX 250 NORTH WEST JW A42

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead left bend	S	NW
Van / Goods 3.5 tonnes mgw and under	Not at, or within 20M of Jct	Going ahead other	NW	SE

Casualties:

Class	Severity
Driver / Rider	Slight
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201900204	06/02/2019	447466	328064	Fine without high winds	Wet/Damp	Daylight	Slight

Location: M1 LOCKINGTON-HEMINGTON JW M1 NORTHBOUND ON-SLIP JUNCTION 24

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Jct Approach	Going ahead other	S	N
Van / Goods 3.5 tonnes mgw and under	Jct Approach	Going ahead other	S	N
Goods 7.5 tonnes mgw and over	Entering from slip road	Going ahead left bend	S	N
Car	Jct Approach	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201900471	13/05/2019	447300	326389	Fine without high winds	Dry	Daylight	Slight

Location: A453 ASHBY ROAD KEGWORTH ROUNDABOUT JW KEGWORTH BYPASS

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering roundabout	Starting	E	NE
Car	Entering roundabout	Starting	E	NE
Goods 7.5 tonnes mgw and over	Mid Junction - on roundabout or main road	Going ahead other	NE	SW

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201900573	19/03/2019	445040	329440	Fine without high winds	Dry	Daylight	Slight

Location: A50 EASTBOUND CASTLE DONINGTON AT JUNCTION 1 SLIPROAD.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Goods over 3.5 tonnes and under 7.5 tonnes mgw	Mid Junction - on roundabout or main road	Changing lane to left	W	E

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201900684	29/06/2019	446885	323821	Fine without high winds	Dry	Darkness: no street lighting	Slight

Location: M1 NORTHBOUND LONG WHATTON & DISEWORTH MARKER POST 181/4A

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201900692	23/07/2019	444777	328130	Fine without high winds	Dry	Daylight	Slight

Location: C8214 STATION ROAD CASTLE DONINGTON JW TRENT LANE

Vehicles:

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

Casualties:

Class	Severity
Pedestrian	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201900725	23/07/2019	444590	328170	Fine without high winds	Dry	Daylight	Serious

Location: TRENT LANE CASTLE DONINGTON JW WILLOW ROAD.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving main road	Turning right	E	N
Motorcycle over 500cc	Mid Junction - on roundabout or main road	Going ahead other	E	W

Casualties:

Class	Severity
Driver / Rider	Serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201900830	28/08/2019	448900	319585	Other	Wet/Damp	Darkness: street lights present and lit	Serious

Location: M1 NORTHBOUND SHEPSHED AT MARKER 176/7.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201900889	17/09/2019	446785	325441	Fine without high winds	Dry	Daylight	Slight

Location: A453 ASHBY ROAD LONG WHATTON AND DISEWORTH 500M EAST OF BEVERLEY ROAD JUNCTION

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Van / Goods 3.5 tonnes mgw and under	Not at, or within 20M of Jct	Going ahead other	E	W
Car	Not at, or within 20M of Jct	Going ahead other	W	E
Taxi/Private hire car	Not at, or within 20M of Jct	Going ahead but held up	E	W
Car	Not at, or within 20M of Jct	Going ahead but held up	E	W
Other vehicle - specify	Not at, or within 20M of Jct	Going ahead but held up	E	W
Other vehicle - specify	Not at, or within 20M of Jct	Going ahead but held up	E	W

Casualties:

Class	Severity
Driver / Rider	Slight
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201901038	17/11/2019	445284	325302	Raining without high winds	Wet/Damp	Darkness: no street lighting	Slight

Location: A453 ASHBY ROAD CASTLE DONINGTON 30 METRES NORTH EAST OF C8204 GRIMES GATE

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Overtaking moving vehicle O/S	SW	NE
Goods 7.5 tonnes mgw and over	Not at, or within 20M of Jct	Going ahead other	SW	NE

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201901123	24/12/2019	447291	326175	Raining without high winds	Wet/Damp	Darkness: no street lighting	Slight

Location: M1 NORTHBOUND KEGWORTH MARKER POST 183/8A

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201901126	27/12/2019	447019	325205	Fine without high winds	Dry	Daylight	Slight

Location: M1 SOUTHBOUND MARKER POST 182/8B

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201901163	22/10/2019	447445	327510	Fine without high winds	Dry	Daylight	Slight

Location: A453 KEGWORTH INTERCHANGE KEGWORTH.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving roundabout	Going ahead other	E	W
Goods 7.5 tonnes mgw and over	Leaving roundabout	Changing lane to left	E	W

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201901190	13/11/2019	443367	328149	Fine without high winds	Dry	Darkness: street lighting unknown	Slight

Location: ARUNDEL AVENUE CASTLE DONINGTON EXACT LOCATION UNKNOWN

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead other	E	W
Car	Not at, or within 20M of Jct	Stopping	E	W

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201901200	13/11/2019	446680	323740	Fine without high winds	Wet/Damp	Daylight	Slight

Location: C8214 WEST END LONG WHATTON 50M W LONG MEADOW LANE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead left bend	NW	E
Car	Not at, or within 20M of Jct	Going ahead right bend	E	NW

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201901277	27/06/2019	444495	325270	Fine without high winds	Dry	Daylight	Slight

Location: A453 ASHBY ROAD CASTLE DONINGTON JW ROAD TO DISEWORTH.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving main road	Turning right	W	S
Car	Mid Junction - on roundabout or main road	Going ahead other	E	W
Car	Jct Approach	Waiting to turn right	S	E

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201901521	18/02/2019	445400	329430	Fine without high winds	Dry	Daylight	Slight

Location: A50 ROUNDABOUT LOCKINGTON EXACT LOCATION UNKNOWN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Going ahead other	S	N
Car	Mid Junction - on roundabout or main road	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201901523	23/02/2019	447530	327555	Fine without high winds	Dry	Darkness: street lighting unknown	Slight

Location: M1 KEGWORTH NR JUNCTION 24. EXACT LOCATION UNKNOWN.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight
Vehicle Passenger	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201901547	28/04/2019	444640	325250	Fine without high winds	Dry	Daylight	Slight

Location: A453 CASTLE DONINGTON EXACT LOCATION UNKNOWN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Van / Goods 3.5 tonnes mgw and under	Not at, or within 20M of Jct	Going ahead other	E	W
Car	Not at, or within 20M of Jct	Going ahead other	E	W

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201901566	13/07/2019	448645	328665	Fine without high winds	Dry	Daylight	Slight

Location: LONG LANE KEGWORTH EXACT LOCATION UNKNOWN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead other	N	S
Pedal Cycle (Including pedal assisted electric bicycles)	Not at, or within 20M of Jct	Going ahead other	N	S

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201901591	22/10/2019	447725	327725	Fine without high winds	Dry	Daylight	Slight

Location: A453 KEGWORTH NR M1. EXACT LOCATION UNKNOWN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Goods vehicle - unknown weight	Not at, or within 20M of Jct	Going ahead other	SW	NE
Car	Not at, or within 20M of Jct	Going ahead other	SW	NE

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202000018	17/01/2020	448125	328034	Fine without high winds	Dry	Darkness: no street lighting	Serious

Location: A453 GREEN LANE 90 METRES SOUTH WEST OF DOWELL'S BARN

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Goods over 3.5 tonnes and under 7.5 tonnes mgw	Not at, or within 20M of Jct	Parked	Parked	Parked
Van / Goods 3.5 tonnes mgw and under	Not at, or within 20M of Jct	Going ahead other	NE	SW
Car	Not at, or within 20M of Jct	Going ahead other	NE	SW

Casualties:

Class	Severity
Driver / Rider	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202000165	21/01/2020	445595	325390	Fine without high winds	Wet/Damp	Darkness: street lights present and lit	Fatal

Location: A453 ASHBY ROAD LONG WHATTON AT ENTRANCE TO AIRPORT.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving main road	Turning right	E	N
Agricultural vehicle	Mid Junction - on roundabout or main road	Going ahead other	W	E

Casualties:

Class	Severity
Vehicle Passenger	Fatal
Driver / Rider	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202000342	23/06/2020	444875	328915	Fine without high winds	Dry	Daylight	Serious

Location: BROAD RUSHES CASTLE DONINTON EXACT LOCATION UNKNOWN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Goods vehicle - unknown weight	Not at, or within 20M of Jct	Overtaking moving vehicle O/S	W	E
Pedal Cycle (Including pedal assisted electric bicycles)	Not at, or within 20M of Jct	Going ahead other	W	E

Casualties:

Class	Severity
Driver / Rider	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202000434	22/07/2020	444770	328105	Fine without high winds	Dry	Daylight	Serious

Location: C8214 STATION ROAD CASTLE DONINGTON JW TRENT LANE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving main road	Turning right	N	Parked
Pedal Cycle (Including pedal assisted electric bicycles)	Mid Junction - on roundabout or main road	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202000446	25/07/2020	445580	325380	Fine without high winds	Dry	Daylight	Slight

Location: A453 LONG WHATTON AT ENTRANCE TO AIRPORT.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Cleared junction or waiting/parked at junction exit	Going ahead other	E	W
Car	Cleared junction or waiting/parked at junction exit	Changing lane to left	E	W

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202000492	09/02/2020	448975	318305	Raining with high winds	Wet/Damp	Darkness: street lights present and lit	Slight

Location: A512 ASHBY ROAD EAST SHEPSHED AT JUNCTION 23 ROUNDABOUT.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Jct Approach	Stopping	W	E
Car	Jct Approach	Stopping	W	E

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202000564	19/03/2020	446940	325230	Fine without high winds	Wet/Damp	Darkness: street lighting unknown	Slight

Location: A42 NORTHBOUND EXIT SLIPROAD FROM JUNCTION 23A.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Parked	Parked	Parked
Goods 7.5 tonnes mgw and over	Not at, or within 20M of Jct	Overtaking stat vehicle O/S	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202000589	09/08/2020	448225	327082	Fine without high winds	Dry	Daylight	Slight

Location: A6 DERBY ROAD KEGWORTH EXACT LOCATION NOT GIVEN.

Vehicles:

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

Casualties:

Class	Severity
Pedestrian	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202000596	05/08/2020	447495	327455	Fine without high winds	Dry	Daylight	Serious

Location: M1 NORTHBOUND KEGWORTH AT J24 OFFSLIP.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Goods 7.5 tonnes mgw and over	Jct Approach	Stopping	S	N
Car	Jct Approach	Going ahead but held up	S	N
Van / Goods 3.5 tonnes mgw and under	Jct Approach	Going ahead but held up	S	N
Goods 7.5 tonnes mgw and over	Jct Approach	Going ahead but held up	S	N

Casualties:

Class	Severity
Driver / Rider	Slight
Vehicle Passenger	Serious
Vehicle Passenger	Slight
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202000627	20/08/2020	445290	325090	Fine without high winds	Dry	Daylight	Slight

Location: C8204 GRIMES GATE DISEWORTH AT ENTRANCE TO BYLANDS COTTAGE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering main road	Reversing	W	E
Motorcycle over 500cc	Mid Junction - on roundabout or main road	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202000881	10/11/2020	449195	318315	Fine without high winds	Dry	Darkness: street lights present but unlit	Slight

Location: A512 ASHBY ROAD LOUGHBOROUGH JW M1 JUNCTION 23.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering roundabout	Stopping	E	W
Car	Entering roundabout	Stopping	E	W

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202001164	14/10/2020	444300	328215	Fine without high winds	Dry	Daylight	Serious

Location: TRENT LANE CASTLE DONINGTON EXACT LOCATION & DIRECTIONS UNKNOWN.

Vehicles:

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

Casualties:

Class	Severity
Pedestrian	Serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202001233	04/12/2020	447100	328845	Fine without high winds	Dry	Daylight	Serious

Location: MAIN STREET LOCKINGTON JW WARREN LANE EXACT LOCATION & DIRECTION UNKNOWN.

Vehicles:

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

Casualties:

Class	Severity
Vehicle Passenger	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

Notes:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202001238	10/12/2020	444745	327865	Fine without high winds	Dry	Darkness: street lighting unknown	Slight

Location: C8214 STATION ROAD CASTLE DONINGTON EXACT LOCATION & DIRECTIONS UNKNOWN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Motor Cycle over 50 cc and up to 125cc	Not at, or within 20M of Jct	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202001249	17/12/2020	444855	328425	Fine without high winds	Dry	Daylight	Slight

Location: C8214 STATION ROAD CASTLE DONINGTON EXACT LOCATION & DIRECTIONS UNKNOWN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead other	S	N
Pedal Cycle (Including pedal assisted electric bicycles)	Not at, or within 20M of Jct	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100046	25/01/2021	449035	318250	Other	Frost/Ice	Daylight	Slight

Location: M1 NORTHBOUND EXIT SLIPROAD SHEPSHED AT JUNCTION 23 ROUNDABOUT.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Jct Approach	Stopping	S	N
Car	Jct Approach	Stopping	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100116	08/03/2021	446820	330620	Fine without high winds	Dry	Darkness: no street lighting	Slight

Location: B6540 TAMWORTH ROAD LOCKINGTON-HEMINGTON EXACT LOCATION & DIRECTIONS UNKNOWN.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100148	23/03/2021	448250	326730	Fine without high winds	Dry	Daylight	Slight

Location: C8211 ASHBY ROAD KEGWORTH NEXT TO NUMBER 22.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Van / Goods 3.5 tonnes mgw and under	Leaving main road	Reversing	S	N

Casualties:

Class	Severity
Pedestrian	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100163	31/03/2021	447430	326555	Fine without high winds	Dry	Daylight	Slight

Location: M1 SOUTHBOUND KEGWORTH AT MARLER 184/2.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Van / Goods 3.5 tonnes mgw and under	Not at, or within 20M of Jct	Going ahead other	N	S
Goods vehicle - unknown weight	Not at, or within 20M of Jct	Going ahead other	N	S

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

Notes:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100191	12/04/2021	447650	327705	Fine without high winds	Dry	Darkness: street lights present and lit	Slight

Location: A453 REMEMBRANCE WAY KEGWORTH AT EXIT FROM M1 JUNCTION 24 ROUNDABOUT

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving roundabout	Turning left	N	NE

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100207	08/04/2021	447300	326430	Fine without high winds	Dry	Darkness: street lights present and lit	Slight

Location: A453 KEGWORTH ON ROUNDABOUT WITH KEGWORTH BY-PASS

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving roundabout	Going ahead other	N	S
Car	Leaving roundabout	Turning right	W	S

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100249	25/04/2021	448965	319387	Fine without high winds	Dry	Daylight	Slight

Location: M1 SOUTHBOUND SHEPSHED AT MARKER 176/5.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Taxi/Private hire car	Not at, or within 20M of Jct	Changing lane to right	N	S
Car	Not at, or within 20M of Jct	Going ahead other	N	S
Car	Not at, or within 20M of Jct	Going ahead other	Parked	Parked
Goods vehicle - unknown weight	Not at, or within 20M of Jct	Going ahead other	N	S

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100259	29/04/2021	444775	328105	Fine without high winds	Dry	Daylight	Slight

Location: C8214 STATION ROAD CASTLE DONINGTON JW TRENT LANE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering main road	Turning right	W	S
Pedal Cycle (Including pedal assisted electric bicycles)	Mid Junction - on roundabout or main road	Going ahead other	N	S

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100273	05/05/2021	444285	328805	Fine without high winds	Wet/Damp	Daylight	Slight

Location: BROAD RUSHES CASTLE DONINGTON JW BACK LANE.

Vehicles:

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

Casualties:

Class	Severity
Pedestrian	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100299	12/05/2021	446365	330255	Fine without high winds	Wet/Damp	Daylight	Serious

Location: B6540 TAMWORTH ROAD LOCKINGTON EXACT LOCATION UNKNOWN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Overtaking moving vehicle O/S	NE	SW
Pedal Cycle (Including pedal assisted electric bicycles)	Not at, or within 20M of Jct	Going ahead other	NE	SW

Casualties:

Class	Severity
Driver / Rider	Serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100303	12/05/2021	447410	327110	Fine without high winds	Dry	Daylight	Slight

Location: A453 KEGWORTH APPROACHING JW A50.EXACT LOCATION NOT PROVIDED.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Motor Cycle over 50 cc and up to 125cc	Not at, or within 20M of Jct	Going ahead left bend	S	NW

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100367	28/05/2021	447515	327190	Fine without high winds	Dry	Daylight	Slight

Location: M1 NORTHBOUND KEGWORTH AT MP185/0.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Jct Approach	Changing lane to right	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100382	02/06/2021	443010	325745	Fine without high winds	Dry	Daylight	Slight

Location: C8214 HILL TOP CASTLE DONINGTON OUTSIDE ENTRANCE TO RACE TRACK.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead left bend	NE	S
Car	Not at, or within 20M of Jct	Going ahead other	S	N
Motorcycle over 500cc	Not at, or within 20M of Jct	Going ahead left bend	NE	S

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100407	10/06/2021	447760	322145	Fine without high winds	Dry	Daylight	Serious

Location: M1 SOUTHBOUND LONG WHATTON AT MARKER 179/5

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Motorcycle over 500cc	Not at, or within 20M of Jct	Going ahead other	NW	SE
Car	Not at, or within 20M of Jct	Going ahead other	NW	SE
Goods vehicle - unknown weight	Not at, or within 20M of Jct	Changing lane to right	NW	SE

Casualties:

Class	Severity
Driver / Rider	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100432	16/06/2021	447295	326405	Fine without high winds	Dry	Daylight	Serious

Location: A453 KEGWORTH JW KEGWORTH BY-PASS.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving roundabout	Going ahead other	N	S
Car	Entering roundabout	Starting	E	W
Car	Entering roundabout	Starting	E	W

Casualties:

Class	Severity
Driver / Rider	Serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100476	27/06/2021	447475	326690	Fine without high winds	Dry	Daylight	Slight

Location: M1 SOUTHBOUND KEGWORTH EXACT LOCATION UNKNOWN.

Vehicles:

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

Casualties:

Class	Severity
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100554	27/07/2021	447230	325990	Raining without high winds	Wet/Damp	Daylight	Slight

Location: M1 NORTHBOUND KEGWORTH APPROX 1 MILE S JUNCTION 24.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100568	30/07/2021	449350	318345	Fine without high winds	Wet/Damp	Daylight	Slight

Location: A512 ASHBY ROAD LOUGHBOROUGH APPROX 150M E M1.

Vehicles:

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

Casualties:

Class	Severity
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100620	16/08/2021	447315	326170	Fine without high winds	Dry	Daylight	Slight

Location: M1 SOUTHBOUND KEGWORTH AT MARKER 183/8.

Vehicles:

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

Casualties:

Class	Severity
Vehicle Passenger	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100635	21/08/2021	448650	326885	Fine without high winds	Dry	Darkness: street lights present and lit	Slight

Location: BOROUGH STREET KEGWORTH EXACT LOCATION UNKNOWN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead left bend	NE	S

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100640	21/08/2021	444925	328865	Other	Dry	Daylight	Slight

Location: C8214 STATION ROAD CASTLE DONINGTON JW BROAD RUSHES.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving roundabout	Changing lane to right	N	W
Motorcycle over 500cc	Leaving roundabout	Turning right	N	W

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100670	03/09/2021	446927	325332	Fine without high winds	Dry	Darkness: street lights present and lit	Slight

Location: A453 FINGER FARM ROUNDABOUT LONG WHATTON AT EXIT FROM A42.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering roundabout	Going ahead left bend	S	NW

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100673	03/09/2021	447490	328075	Fine without high winds	Dry	Daylight	Serious

Location: M1 SOUTHBOUND LOCKINGTON NR J24 SLIPROAD.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Motor Cycle over 125 cc and up to 500cc	Jct Approach	Going ahead other	N	S
Motor Cycle over 125 cc and up to 500cc	Jct Approach	Going ahead other	N	S
Car	Jct Approach	Changing lane to right	N	S

Casualties:

Class	Severity
Driver / Rider	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100682	06/09/2021	447385	328500	Fine without high winds	Dry	Daylight	Serious

Location: M1 SOUTHBOUND KEGWORTH APPROACHING J24.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead other	N	S
Motorcycle over 500cc	Not at, or within 20M of Jct	Going ahead other	N	S

Casualties:

Class	Severity
Driver / Rider	Serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100694	10/09/2021	446965	325350	Fine without high winds	Wet/Damp	Daylight	Slight

Location: A453 JUNCTION 23A ROUNDABOUT LONG WHATTON.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Van / Goods 3.5 tonnes mgw and under	Mid Junction - on roundabout or main road	Going ahead but held up	NW	S
Car	Leaving roundabout	Starting	NW	SW

Casualties:

Class	Severity
Pedestrian	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100699	11/09/2021	447505	327350	Fine without high winds	Dry	Daylight	Slight

Location: M1 JUNCTION 24 NORTHBOUND OFF SLIPROAD KEGWORTH.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Goods vehicle - unknown weight	Not at, or within 20M of Jct	Going ahead other	S	N
Car	Not at, or within 20M of Jct	Going ahead but held up	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100773	28/09/2021	444505	327285	Fine without high winds	Dry	Daylight	Serious

Location: MARKET STREET CASTLE DONINGTON JW BONDGATE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving main road	Turning left	N	E

Casualties:

Class	Severity
Pedestrian	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100781	03/10/2021	443015	325625	Fine without high winds	Dry	Daylight	Slight

Location: C8214 HILL TOP CASTLE DONINGTON AT ENTRANCE TO DONINGTON PARK.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving main road	Turning right	N	W
Motorcycle over 500cc	Leaving main road	Turning right	W	S

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100812	13/10/2021	447120	331070	Fine without high winds	Dry	Darkness: street lights present and lit	Slight

Location: B6540 TAMWORTH ROAD LOCKINGTON-HEMINGTON AT RIVER BRIDGE.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202100872	29/10/2021	445490	327580	Fine without high winds	Wet/Damp	Darkness: no street lighting	Serious

Location: C9204 HEMINGTON HILL HEMINGTON ON BEND E OF NUMBER 11.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Going ahead right bend	NE	W
Pedal Cycle (Including pedal assisted electric bicycles)	Mid Junction - on roundabout or main road	Going ahead left bend	W	NE

Casualties:

Class	Severity
Driver / Rider	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202101522	26/03/2021	449000	319225	Fine without high winds	Dry	Darkness: street lighting unknown	Serious

Location: M1 SHEPSHED BETWEEN J22 & J23.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Serious
Driver / Rider	Slight
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200028	15/01/2022	447190	328740	Fog or mist	Frost/Ice	Darkness: street lights present and lit	Slight

Location: A50 NORTHBOUND SLIPROAD LOCKINGTON-HEMINGTON EXACT LOCATION NOT GIVEN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead left bend	S	NW
Car	Not at, or within 20M of Jct	Going ahead left bend	S	NW

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200046	18/01/2022	447995	321770	Fine without high winds	Wet/Damp	Darkness: street lights present and lit	Slight

Location: M1 SOUTHBOUND LOCKINGTON-HEMINGTON AT MARKER 179/0

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Van / Goods 3.5 tonnes mgw and under	Not at, or within 20M of Jct	Going ahead other	NW	SE
Goods vehicle - unknown weight	Not at, or within 20M of Jct	Going ahead other	NW	SE

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200063	21/01/2022	448720	320160	Fine without high winds	Dry	Daylight	Slight

Location: M1 NORTHBOUND SHEPSHED AT MARKER 177/3

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200072	24/01/2022	448805	326635	Fine without high winds	Dry	Darkness: street lights present and lit	Slight

Location: A50 LONDON ROAD KEGWORTH JW NOTTINGHAM ROAD.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering main road	Turning left	N	S
Van / Goods 3.5 tonnes mgw and under	Mid Junction - on roundabout or main road	Going ahead left bend	S	NW

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200093	29/01/2022	447115	325880	Raining without high winds	Wet/Damp	Darkness: no street lighting	Serious

Location: A453 SOUTHBOUND KEGWORTH APPROX 500M N JUNCTION 23A ROUNDABOUT.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Van / Goods 3.5 tonnes mgw and under	Not at, or within 20M of Jct	Going ahead other	N	S

Casualties:

Class	Severity
Driver / Rider	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200096	30/01/2022	446635	324235	Fine without high winds	Dry	Darkness: street lights present and lit	Serious

Location: A42 NORTHBOUND LONG WHATTON ON SLIPROAD FOR A453.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Changing lane to left	SW	NE
Car	Not at, or within 20M of Jct	Going ahead other	SW	NE

Casualties:

Class	Severity
Driver / Rider	Serious
Driver / Rider	Slight
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200193	05/03/2022	446940	330740	Fine without high winds	Wet/Damp	Darkness: street lights present and lit	Slight

Location: B6540 TAMWORTH ROAD LOCKINGTON JW WARREN LANE.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200202	08/03/2022	443940	326310	Fine without high winds	Frost/Ice	Darkness: no street lighting	Slight

Location: C8214 HILL TOP CASTLE DONINGTON OUTSIDE HILL TOP FARM.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Turning left	W	NE

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200264	29/03/2022	448540	326865	Fine without high winds	Dry	Daylight	Serious

Location: A6 DERBY ROAD KEGWORTH OUTSIDE NUMBER 52.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Van / Goods 3.5 tonnes mgw and under	Not at, or within 20M of Jct	Going ahead other	SE	NW

Casualties:

Class	Severity
Pedestrian	Serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200286	06/04/2022	446370	330260	Fine without high winds	Dry	Daylight	Slight

Location: B6540 TAMWORTH ROAD LOCKINGTON APPROX 200M SW NETHERFIELD LANE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	U-turn	SW	SW
Motor Cycle over 125 cc and up to 500cc	Not at, or within 20M of Jct	Overtaking moving vehicle O/S	SW	NE

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200346	30/04/2022	443945	326280	Fine without high winds	Dry	Daylight	Serious

Location: C8214 HILL TOP CASTLE DONINGTON AT ROUNDABOUT NR ENTRANCE TO AEROPARK.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Motorcycle over 500cc	Leaving roundabout	Turning right	N	W

Casualties:

Class	Severity
Driver / Rider	Serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200400	16/05/2022	447100	325540	Fine without high winds	Dry	Daylight	Slight

Location: M1 NORTHBOUND KEGWORTH APPROX 1500M S JUNCTION 24.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Goods 7.5 tonnes mgw and over	Not at, or within 20M of Jct	Changing lane to left	S	N
Car	Not at, or within 20M of Jct	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200447	02/06/2022	444725	327435	Fine without high winds	Dry	Darkness: street lights present and lit	Slight

Location: BOROUGH STREET CASTLE DONINGTON OPPOSITE NUMBER 46

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Going ahead other	SW	NE
Car	Entering main road	Turning left	NW	NE
Car	Cleared junction or waiting/parked at junction exit	Parked	Parked	Parked

Casualties:

Class	Severity
Driver / Rider	Slight
Vehicle Passenger	Slight
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200477	14/06/2022	448160	327127	Fine without high winds	Dry	Daylight	Slight

Location: A6 DERBY ROAD KEGWORTH JW SIDE LEY.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200609	25/07/2022	443395	325480	Fine without high winds	Wet/Damp	Darkness: street lights present and lit	Slight

Location: A453 CASTLE DONINGTON AT DHL ROUNDABOUT.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving roundabout	Going ahead other	W	E

Casualties:

Class	Severity
Driver / Rider	Slight
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200623	30/07/2022	448930	328790	Fine without high winds	Wet/Damp	Daylight	Serious

Location: A453 SOUTHBOUND KEGWORTH APPROX 250M SW RIVER BRIDGE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Overtaking moving vehicle O/S	NE	SW

Casualties:

Class	Severity
Driver / Rider	Serious
Vehicle Passenger	Serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200634	02/08/2022	444485	325280	Other	Wet/Damp	Daylight	Slight

Location: A453 ASHBY ROAD CASTLE DONINGTON JW THE GREEN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Goods 7.5 tonnes mgw and over	Jct Approach	Stopping	W	E
Van / Goods 3.5 tonnes mgw and under	Jct Approach	Going ahead but held up	W	E
Car	Mid Junction - on roundabout or main road	Waiting to turn right	W	S

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200658	10/08/2022	442060	324115	Fine without high winds	Dry	Daylight	Slight

Location: A453 BREEDON ON THE HILL APPROX 250M NE MOOR LANE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Motorcycle over 500cc	Not at, or within 20M of Jct	Going ahead right bend	N	SW

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200661	11/08/2022	447265	326075	Fine without high winds	Dry	Daylight	Slight

Location: M1 NORTHBOUND KEGWORTH AT MARKER 183/7.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead other	S	N
Car	Not at, or within 20M of Jct	Going ahead other	S	N
Car	Not at, or within 20M of Jct	Going ahead other	S	N
Goods 7.5 tonnes mgw and over	Not at, or within 20M of Jct	Going ahead other	S	N
Car	Not at, or within 20M of Jct	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200662	11/08/2022	447300	326100	Fine without high winds	Dry	Daylight	Slight

Location: M1 SOUTHBOUND KEGWORTH EXACT LOCATION NOT GIVEN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Changing lane to right	N	S
Goods 7.5 tonnes mgw and over	Not at, or within 20M of Jct	Going ahead other	N	S

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200748	06/09/2022	449080	317910	Raining without high winds	Wet/Damp	Darkness: street lights present and lit	Slight

Location: M1 NORTHBOUND SHEPSHED AT EXIT SLIPROAD FOR JUNCTION 23.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Changing lane to right	S	N
Car	Mid Junction - on roundabout or main road	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200766	28/06/2022	447125	328790	Fine without high winds	Dry	Daylight	Slight

Location: A50 WESTBOUND LOCKINGTON EXACT LOCATION UNKNOWN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Motor Cycle over 50 cc and up to 125cc	Not at, or within 20M of Jct	Overtaking moving vehicle O/S	SE	NW
Car	Not at, or within 20M of Jct	Going ahead other	SE	NW

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200803	26/09/2022	444960	328925	Raining without high winds	Wet/Damp	Daylight	Slight

Location: STATION ROAD CASTLE DONINGTON JW BROAD RUSHES.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Motor Cycle over 125 cc and up to 500cc	Jct Approach	Going ahead other	N	S
Car	Leaving roundabout	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200830	04/10/2022	448330	327135	Fine without high winds	Dry	Darkness: street lights present and lit	Slight

Location: C8207 SIDE LEY KEGWORTH OUTSIDE NUMBER 87.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering main road	Reversing	S	W

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200835	23/09/2022	448965	319290	Fine without high winds	Dry	Daylight	Serious

Location: M1 NORTHBOUND SHEPSHED AT MP 176/4.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Serious
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200862	10/10/2022	444490	325278	Fine without high winds	Wet/Damp	Daylight	Slight

Location: A453 ASHBY ROAD CASTLE DONINGTON JW THE GREEN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Goods 7.5 tonnes mgw and over	Jct Approach	Going ahead other	W	E
Car	Mid Junction - on roundabout or main road	Waiting to turn right	W	S

Casualties:

Class	Severity
Vehicle Passenger	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200912	26/10/2022	445590	325390	Fine without high winds	Wet/Damp	Daylight	Slight

Location: A453 ASHBY ROAD LONG WHATTON AT ENTRANCE TO EAST MIDLANDS AIRPORT.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving main road	Turning right	E	N
Goods vehicle - unknown weight	Mid Junction - on roundabout or main road	Going ahead other	W	E

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200926	31/10/2022	443920	328195	Raining without high winds	Wet/Damp	Darkness: street lights present and lit	Slight

Location: ARUNDEL AVENUE CASTLE DONINGTON EXACT LOCATION NOT GIVEN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead right bend	NE	W
Car	Not at, or within 20M of Jct	Going ahead other	W	E

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202200985	11/11/2022	444920	327200	Fine without high winds	Dry	Darkness: street lights present and lit	Slight

Location: EASTWAY CASTLE DONINGTON NR NUMBER 30.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Motor Cycle over 50 cc and up to 125cc	Not at, or within 20M of Jct	Going ahead other	W	E
Car	Not at, or within 20M of Jct	Parked	Parked	Parked

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202201031	20/11/2022	449150	318368	Fine without high winds	Dry	Daylight	Slight

Location: A512 ASHBY ROAD SHEPSHED ON M1 ROUNDABOUT.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Changing lane to right	W	E
Car	Mid Junction - on roundabout or main road	Going ahead other	W	E

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202201105	20/12/2022	444830	328315	Fine without high winds	Wet/Damp	Darkness: street lights present and lit	Serious

Location: C8214 STATION ROAD CASTLE DONINGTON AT ENTRANCE TO PETROL STATION.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Waiting to turn right	S	E
Car	Mid Junction - on roundabout or main road	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300023	09/01/2023	445430	329365	Fine without high winds	Dry	Darkness: street lights present and lit	Fatal

Location: A50 ROUNDABOUT LOCKINGTON-HEMINGTON JW TRENT LANE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Motorcycle over 500cc	Mid Junction - on roundabout or main road	Going ahead other	E	W
Car	Entering roundabout	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Fatal

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300142	18/02/2023	447625	327715	Fine without high winds	Dry	Darkness: street lights present and lit	Slight

Location: M1 JUNCTION 24 ROUNDABOUT KEGWORTH NR EXIT FOR A453 TO NOTTINGHAM.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving roundabout	Going ahead other	W	E

Casualties:

Class	Severity
Driver / Rider	Slight
Vehicle Passenger	Slight
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300354	15/05/2023	445255	325280	Fine without high winds	Dry	Daylight	Slight

Location: A453 ASHBY ROAD LONG WHATTON JW GRIMES GATE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Motorcycle over 500cc	Mid Junction - on roundabout or main road	Going ahead other	SW	NE
Car	Mid Junction - on roundabout or main road	Going ahead other	SW	NE

Casualties:

Class	Severity
Driver / Rider	Slight
Pedestrian	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300386	25/05/2023	447530	327570	Fine without high winds	Dry	Daylight	Serious

Location: M1 NORTHBOUND KEGWORTH NR JUNCTION 24

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Serious
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300409	25/05/2023	448670	320300	Fine without high winds	Dry	Daylight	Slight

Location: M1 NORTHBOUND BETWEEN J23 & 23A. EXACT LOCATION UNKNOWN.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300500	09/06/2023	446935	325445	Fine without high winds	Dry	Daylight	Slight

Location: A453 NORTHBOUND KEGWORTH AT EXIT FROM DONINGTON SERVICES ROUNDABOUT.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Cleared junction or waiting/parked at junction exit	Changing lane to left	S	N
Goods vehicle - unknown weight	Cleared junction or waiting/parked at junction exit	Starting	S	N

Casualties:

Class	Severity
Vehicle Passenger	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300546	08/06/2023	447095	330925	Fine without high winds	Dry	Daylight	Serious

Location: B6540 TAMWORTH ROAD LOCKINGTON S OF MARINA BRIDGE.

Vehicles:

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

Casualties:

Class	Severity
Pedestrian	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300555	07/07/2023	446975	325370	Fine without high winds	Dry	Daylight	Slight

Location: A453 FINGER FARM ROUNDABOUT KEGWORTH.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Going ahead other	N	S
Motor Cycle over 50 cc and up to 125cc	Mid Junction - on roundabout or main road	Changing lane to right	N	W

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300565	10/07/2023	447305	328065	Raining without high winds	Wet/Damp	Daylight	Slight

Location: A50 NORTHBOUND LOCKINGTON APPROX 150M N CHURCH STREET.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Goods 7.5 tonnes mgw and over	Not at, or within 20M of Jct	Changing lane to left	S	N
Car	Not at, or within 20M of Jct	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300587	18/03/2023	444810	327445	Fine without high winds	Wet/Damp	Darkness: street lights present and lit	Slight

Location: C9204 CLAPGUN STREET CASTLE DONINGTON JW THE HOLLOW.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Van / Goods 3.5 tonnes mgw and under	Entering main road	Turning right	NW	SW

Casualties:

Class	Severity
Pedestrian	Slight
Pedestrian	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300716	16/08/2023	446630	324190	Fine without high winds	Dry	Darkness: street lights present and lit	Slight

Location: M1 SOUTHBOUND LONG WHATTON NR J23 ON SLIP.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Overtaking moving vehicle O/S	NE	SW
Car	Not at, or within 20M of Jct	Going ahead other	NE	SW
Goods vehicle - unknown weight	Not at, or within 20M of Jct	Going ahead other	NE	SW

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300893	25/09/2023	448055	321620	Fine without high winds	Dry	Darkness: street lighting unknown	Slight

Location: M1 NORTHBOUND LONG WHATTON AT MP 178/9.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Changing lane to left	SE	NW
Goods 7.5 tonnes mgw and over	Not at, or within 20M of Jct	Going ahead other	SE	NW

Casualties:

Class	Severity
Vehicle Passenger	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300910	25/09/2023	447660	327700	Fine without high winds	Dry	Daylight	Slight

Location: A453 KEGWORTH INTERCHANGE AT EXIT FOR REMEMBRANCE WAY.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving roundabout	Going ahead other	N	E
Van / Goods 3.5 tonnes mgw and under	Leaving roundabout	Changing lane to left	N	E

Casualties:

Class	Severity
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300911	29/09/2023	442730	322370	Fine without high winds	Dry	Daylight	Slight

Location: GELSCOE LANE.BREEDON ON THE HILL EXACT LOCATION UNKNOWN

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering main road	Turning left	S	W
Motorcycle over 500cc	Mid Junction - on roundabout or main road	Going ahead other	E	W

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300922	01/10/2023	441840	323960	Fine without high winds	Wet/Damp	Daylight	Slight

Location: A453 BREEDON ON THE HILL JW MOOR LANE

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Jct Approach	Going ahead other	SW	NE
Car	Jct Approach	Going ahead other	SW	NE

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300925	01/10/2023	448790	328690	Fine without high winds	Wet/Damp	Daylight	Fatal

Location: A453 REMEBRANCE WAY KEGWORTH APPROX 150M NE LONG LANE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead but held up	NE	SW
Goods vehicle - unknown weight	Not at, or within 20M of Jct	Going ahead other	NE	SW

Casualties:

Class	Severity
Driver / Rider	Fatal

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300941	04/10/2023	447810	327465	Fine without high winds	Dry	Daylight	Slight

Location: A6 DERBY ROAD KEGWORTH AT ENTRANCE TO PAINTBALL CENTRE.

Vehicles:

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

Casualties:

Class	Severity
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300964	06/10/2023	447500	327440	Raining without high winds	Wet/Damp	Daylight	Slight

Location: M1 NORTHBOUND EXIT SLIPROAD FOR JUNCTION 24.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202300979	27/09/2023	449470	324550	Fine without high winds	Dry	Daylight	Serious

Location: A6 LONDON ROAD LONG WHATTON EXACT LOCATION UNKNOWN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Stopping	S	N
Van / Goods 3.5 tonnes mgw and under	Not at, or within 20M of Jct	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202301020	22/10/2023	447480	327490	Fine without high winds	Dry	Daylight	Serious

Location: A453 JUNCTION 24 ROUNDABOUT KEGWORTH AT EXIT FROM M1 NORTHBOUND.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Going ahead other	E	W
Motorcycle over 500cc	Entering roundabout	Going ahead other	S	N

Casualties:

Class	Severity
Driver / Rider	Serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202301106	04/11/2023	447490	322555	Raining without high winds	Wet/Damp	Darkness: street lights present and lit	Slight

Location: M1 SOUTHBOUND LONG WHATTON AT MP 180/0.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202301253	15/12/2023	448865	326120	Fine without high winds	Dry	Darkness: street lights present but unlit	Serious

Location: A6 KEGWORTH AT ROUNDABOUT WITH KEGWORTH BY-PASS.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering roundabout	Going ahead other	SW	NE

Casualties:

Class	Severity
Driver / Rider	Serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202301262	18/12/2023	444580	322660	Fine without high winds	Wet/Damp	Daylight	Serious

Location: A42 NORTHBOUND LONG WHATTON NR MP 84/5.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Goods 7.5 tonnes mgw and over	Not at, or within 20M of Jct	Starting	SW	NE
Goods 7.5 tonnes mgw and over	Not at, or within 20M of Jct	Going ahead other	SW	NE

Casualties:

Class	Severity
Driver / Rider	Serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202301272	22/12/2023	446965	328940	Raining without high winds	Wet/Damp	Darkness: street lights present and lit	Slight

Location: A50 LOCKINGTON ON SLIPROAD TO M1 SOUTH.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400009	04/01/2024	444815	327445	Fine without high winds	Dry	Darkness: street lights present and lit	Slight

Location: C9402 CLAPGUN STREET CASTLE DONINGTON JW THE HOLLOW.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving main road	Turning right	W	S

Casualties:

Class	Severity
Pedestrian	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400038	13/01/2024	447295	326400	Fine without high winds	Dry	Daylight	Slight

Location: A453 KEGWORTH INTERCHANGE KEGWORTH.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Starting	N	S
Car	Mid Junction - on roundabout or main road	Starting	E	W

Casualties:

Class	Severity
Vehicle Passenger	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400129	29/01/2024	447500	327380	Fine without high winds	Dry	Darkness: street lights present and lit	Slight

Location: M1 NORTHBOUND KEGWORTH APPROACHING J24 EXIT.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400144	09/02/2024	448715	327155	Raining without high winds	Wet/Damp	Daylight	Slight

Location: C8207 STATION ROAD KEGWORTH JW LONG LANE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Van / Goods 3.5 tonnes mgw and under	Mid Junction - on roundabout or main road	Going ahead	E	W
Car	Entering main road	Going ahead	S	N

Casualties:

Class	Severity
Vehicle Passenger	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400163	16/02/2024	445260	322965	Raining without high winds	Wet/Damp	Darkness: no street lighting	Slight

Location: A42 NORTHBOUND LONG WHATTON & DIESWORTH NE OF LONGMERE LANE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead	SW	NE
Goods 7.5 tonnes mgw and over	Not at, or within 20M of Jct	Going ahead	SW	NE

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400192	23/02/2024	446860	323920	Fine without high winds	Dry	Daylight	Slight

Location: M1 NORTHBOUND LONG WHATTON APPROACHING J23.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead	S	N
Goods vehicle - unknown weight	Not at, or within 20M of Jct	Overtaking moving vehicle O/S	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400235	15/03/2024	449080	317880	Fine without high winds	Dry	Daylight	Less serious

Location: M1 NORTHBOUND LOUGHBOROUGH APPROACHING J23.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Changing lane to left	S	N
Car	Not at, or within 20M of Jct	Going ahead	S	N

Casualties:

Class	Severity
Driver / Rider	Less serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400243	17/03/2024	448380	328325	Raining without high winds	Wet/Damp	Daylight	Slight

Location: A453 NORTHBOUND KEGWORTH APPROX 400M SW LONG LANE BRIDGE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead	SW	NE

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400297	04/04/2024	449070	318005	Fine without high winds	Dry	Daylight	Slight

Location: M1 NORTHBOUND SHEPSHED ON SLIPROAD TO J23.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving main road	Going ahead	S	N
Car	Leaving main road	Going ahead	S	N

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400337	18/04/2024	444785	327193	Fine without high winds	Dry	Daylight	Slight

Location: EASTWAY CASTLE DONINGTON OUTSIDE SCHOOL.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering main road	Turning right	S	E
Pedal Cycle (Including pedal assisted electric bicycles)	Mid Junction - on roundabout or main road	Going ahead	W	E

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400395	06/05/2024	446845	324455	Fine without high winds	Dry	Daylight	Slight

Location: M1 NORTHBOUND LONG WHATTON.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400439	14/05/2024	449040	319030	Fine without high winds	Dry	Daylight	Less serious

Location: M1 SOUTHBOUND SHEPSHED EXACT LOCATION UNKNOWN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead	N	S
Goods vehicle - unknown weight	Not at, or within 20M of Jct	Going ahead	N	S

Casualties:

Class	Severity
Vehicle Passenger	Less serious
Driver / Rider	Less serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400534	12/06/2024	447250	326415	Fine without high winds	Dry	Daylight	Slight

Location: A453 KEGWORTH INTERCHANGE JW WILDERS WAY.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Stopping	S	N
Car	Mid Junction - on roundabout or main road	Going ahead	S	N
Car	Mid Junction - on roundabout or main road	Starting	E	W

Casualties:

Class	Severity
Driver / Rider	Slight
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400611	27/06/2024	444770	328110	Fine without high winds	Dry	Daylight	Slight

Location: C8214 STATION ROAD CASTLE DONINGTON JW TRENT LANE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Starting	S	N
Car	Entering main road	Starting	W	E

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400622	05/07/2024	447255	326415	Fine without high winds	Dry	Daylight	Fatal

Location: A453 KEGWORTH INTERCHANGE JW WILDERS WAY.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Going ahead	S	N
Goods vehicle - unknown weight	Mid Junction - on roundabout or main road	Going ahead but held up	E	W

Casualties:

Class	Severity
Driver / Rider	Very serious
Vehicle Passenger	Moderately serious
Vehicle Passenger	Fatal
Vehicle Passenger	Slight
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400664	19/07/2024	441970	324070	Fine without high winds	Dry	Darkness: no street lighting	Moderately serious

Location: A453 BREEDON ON THE HILL BETWEEN TONGE & ISLEY WALTON.

Vehicles:

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

Casualties:

Class	Severity
Vehicle Passenger	Less serious
Vehicle Passenger	Moderately serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400668	21/07/2024	447263	326487	Fine without high winds	Dry	Daylight	Less serious

Location: A453 KEGWORTH INTERCHANGE JW WILDERS WAY.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering roundabout	Going ahead	W	E
Car	Mid Junction - on roundabout or main road	Going ahead	S	N

Casualties:

Class	Severity
Driver / Rider	Less serious
Driver / Rider	Less serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400696	31/07/2024	447650	327580	Fine without high winds	Dry	Daylight	Less serious

Location: M1 JUNCTION 24 ROUNDABOUT KEGOWORTH. EXACT LOCATION UNKNOWN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving roundabout	Changing lane to left	N	S
Motorcycle over 500cc	Mid Junction - on roundabout or main road	Turning right	N	W

Casualties:

Class	Severity
Driver / Rider	Less serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

Notes:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400698	01/08/2024	449220	318330	Fine without high winds	Dry	Daylight	Less serious

Location: A512 ASHBY ROAD EAST SHEPSHED AT J23 ROUNDABOUT.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Van / Goods 3.5 tonnes mgw and under	Jct Approach	Going ahead but held up	E	W
Car	Entering roundabout	Going ahead	N	S

Casualties:

Class	Severity
Driver / Rider	Slight
Vehicle Passenger	Slight
Driver / Rider	Less serious
Vehicle Passenger	Slight
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400699	30/07/2024	444535	329425	Fine without high winds	Dry	Daylight	Slight

Location: A50 CASTLE DONINGTON APPROX 500M E COUNTY BOUNDARY.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead	W	E

Casualties:

Class	Severity
Vehicle Passenger	Slight
Vehicle Passenger	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400700	01/08/2024	449765	323875	Fine without high winds	Dry	Daylight	Fatal

Location: A6 SOUTHBOUND LONG WHATTON APPROX 250M S SOUTH LODGE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead	N	S
Pedal Cycle (Including pedal assisted electric bicycles)	Not at, or within 20M of Jct	Starting	E	W

Casualties:

Class	Severity
Driver / Rider	Fatal

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

Notes:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400733	13/08/2024	444480	325280	Fine without high winds	Dry	Daylight	Slight

Location: A453 ASHBY ROAD CASTLE DONINGTON JW THE GREEN.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Jct Approach	Going ahead	W	E
Car	Leaving main road	Turning right	W	S

Casualties:

Class	Severity
Driver / Rider	Slight
Vehicle Passenger	Slight
Driver / Rider	Slight
Vehicle Passenger	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400838	12/09/2024	448485	318280	Raining without high winds	Wet/Damp	Daylight	Less serious

Location: A512 ASHBY ROAD EAST SHEPSHED AT EXIT FROM TRUCK STOP.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering main road	Turning left	N	E
Pedal Cycle (Including pedal assisted electric bicycles)	Mid Junction - on roundabout or main road	Going ahead	E	W

Casualties:

Class	Severity
Driver / Rider	Less serious

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400866	17/09/2024	442190	323080	Fine without high winds	Dry	Daylight	Fatal

Location: A453 BREEDON ON THE HILL JW MOOR LANE.

Vehicles:

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

Casualties:

Class	Severity
Driver / Rider	Fatal

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400916	27/09/2024	444730	327215	Fine without high winds	Dry	Daylight	Slight

Location: EASTWAY CASTLE DONINGTON OUTSIDE SCHOOL.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Not at, or within 20M of Jct	Going ahead	NW	SE

Casualties:

Class	Severity
Pedestrian	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400917	03/10/2024	444345	328210	Fine without high winds	Dry	Daylight	Slight

Location: TRENT LANE CASTLE DONINGTON JW MAPLE ROAD.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Going ahead	W	E
Car	Leaving main road	Turning right	E	N

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400930	05/10/2024	441870	323250	Fine without high winds	Dry	Darkness: no street lighting	Slight

Location: MOOR LANE TONGE (BREEDON ON THE HILL) JW DOVECOTE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Going ahead	SE	N

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400967	15/10/2024	445410	329572	Fine without high winds	Dry	Darkness: street lights present and lit	Less serious

Location: LONDON ROAD LOCKINGTON-HEMINGTON AT A50 ROUNDABOUT.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Van / Goods 3.5 tonnes mgw and under	Jct Approach	Changing lane to left	NW	SE
Car	Not at, or within 20M of Jct	Going ahead	NW	SE

Casualties:

Class	Severity
Driver / Rider	Less serious

Accidents between dates **01/01/2019** **and** **23/10/2024** (70) months

Selection:

; Refined using Accidents within selected Polygons -Data Requests 2024 ("BWB East Midlands Airport 17.12.2024")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202400994	18/10/2024	447535	328260	Fine without high winds	Dry	Daylight	Slight

Location: A50 SOUTHBOUND LOCKINGTON AT M1 SLIPROAD.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Going ahead	N	S
Car	Mid Junction - on roundabout or main road	Changing lane to right	N	S

Casualties:

Class	Severity
Driver / Rider	Slight
Vehicle Passenger	Slight

Number of records in selection: **151**

Appendix 3. Personal Injury Collision Data (M1 Junction 25 Derbyshire)

Details of Personal Injury Accidents for Period - **01/08/2019** **to** **31/07/2024** (60) months

Selection:
Selected using Manual Selection

Notes:

Police Ref. / Road No. / 2nd Road No. / Grid Ref.	Day / Date / Time / D/L / R.S.C / Weather / Speed / Account of Accident	Location Description	Vehicles: Veh No / Type / Manv / Dir / Class						Casualties: Sev
1901537	Wednesday 02/10/2019	SANDIACRE, M1, A52 SLIP ROAD - (IPQA)	Veh 1	Goods > 7.5t	Change lane to right	S	to N		
R1: M 1	0715hrs		Veh 2	Car	Going ahead	S	to N	Dri	Slight
	Daylight:street lights present								
E 447,178	Dry								
N 335,964	Fine without high winds								
	70 mph								

V1 MOVES LANE AND COLLIDES WITH V2 - (IPQA).

2000689	Wednesday 20/05/2020	SANDIACRE - M1 split with exit slip road, S/B Jnc 25. (2022)	Veh 1	Car	Change lane to left	N	to S	Dri	Slight
R1: M 1	1655hrs								
R2: M 1	Daylight:street lights present								
E 447,195	Dry								
N 335,933	Fine without high winds								
	70 mph								

V1 ATTEMPTS TO GO FROM LN 2/3 INTO LN 1/3 TO LEAVE THE M/WAY. V1 CHANGING LANES FROM 2/3, BETWEEN TWO HGV'S IN LN 1/3 MISSES THE EXIT AND COLLIDES INTO ARMCO BARRIER BETWEEN M/WAY AND EXIT SLIP ON THE N/SIDE (2022)

2000691	Thursday 18/06/2020	SANDIACRE-M1 M/WAY S/B J25 (5894)	Veh 1	Car	Going ahead	N	to S	Dri	Slight
R1: M 1	1247hrs		Veh 2	Car	Going ahead	N	to S	FSP	Serious
	Daylight:street lights present								
E 447,192	Wet/Damp								
N 335,738	Raining without high winds								
	70 mph								

V1 LOSES CONTROL IN LANE 4 IN WET ROAD CONDITIONS AND COLLIDES WITH CENTRAL RESERVATION CAUSING IT VEER ACROSS THE M/WAY INTO LANE 1 AND DURING THIS COLLIDES WITH V2 (5894)

Details of Personal Injury Accidents for Period - **01/08/2019** **to** **31/07/2024** (60) months

Selection:
Selected using Manual Selection

Notes:

Police Ref. / Road No. / 2nd Road No. / Grid Ref.	Day / Date / Time / D/L / R.S.C / Weather / Speed / Account of Accident	Location Description	Vehicles: Veh No / Type / Manv / Dir / Class					Casualties: Sev
2000942	Saturday	Long Eaton - A52 (IPQA)	Veh 1	Car	Going ahead	E to W	Dri	Fatal
	22/08/2020		Veh 1	Car	Going ahead	E to W	FSP	Fatal
R1: A 52	1655hrs							
	Daylight:street lights present							
E 446,584	Dry							
N 335,428	Fine without high winds							
	70 mph							

V1 TRAV WESTBOUND VEERS TO NEARSIDE FOR UNKNOWN REASONS AND GOES OFF ROAD INTO TREES BEFORE DEFLECTED BACK INTO ROAD. BOTH OCCS FATAL AT SCENE (16779)

2100240	Saturday	SANDIACRE - A52e J/W M1 R/B J25 Slip (2022)	Veh 1	Car	Going ahead	SW to NE	Dri	Slight
	24/10/2020		Veh 2	Car	Change lane to right	SW to NE	Dri	Serious
R1: A 52	1414hrs		Veh 2	Car	Change lane to right	SW to NE	FSP	Slight
R2: A 52	Daylight:street lights present							
E 447,645	Flood							
N 335,845	Raining without high winds							
	70 mph							

V2 S'ROAD MERGING A52 INTO L2. V1 AT SPEED A52 L2. V2 PANICKS,STEERS TO L1 & AQUAPLANES. V1 HITS N/S/BARRIER,REBOUNDS TO L2. V1 FNT COLLIDES REAR V2,V2 COLLIDES CNTRL BARRIER,VEERING TO N/S/BARRIER (2022)

2100547	Monday	SANDIACRE-M1 N/B EXIT SLIP RD J25 (5894)	Veh 1	Car	Change lane to right	SE to NW		
	29/03/2021		Veh 2	Car	Wait go ahead held	SE to NW	Dri	Slight
R1: M 1	1230hrs							
	Daylight:street lights present							
E 447,147	Dry							
N 335,483	Fine without high winds							
	60 mph							

V2 WAS STATIONARY AT T/LIGHTS IN LANE 2 ON N/B EXIT SLIP RD WHEN V1 MOVED INTO LANE 2 COLLIDING WITH R/N/S/ OF V2 (5894)

Details of Personal Injury Accidents for Period - **01/08/2019** **to** **31/07/2024** (60) months

Selection:
Selected using Manual Selection

Notes:

Police Ref. / Road No. / 2nd Road No. / Grid Ref.	Day / Date / Time / D/L / R.S.C / Weather / Speed / Account of Accident	Location Description	Vehicles: Veh No / Type / Manv / Dir / Class				Casualties: Sev
2200373	Tuesday 01/03/2022 1630hrs	LONG EATON- SLIP ROAD NR TO MPOST,M1,A,193.1,J25 ASIDE (17706)	Veh 1	Car	Going ahead	SE to NW	
R1: M 1	Daylight:street lights present		Veh 2	Car	Wait go ahead held	SE to NW Dri	Slight
E 447,152	Dry						
N 335,314	Fine without high winds						
	60 mph						

V2 LEFT M1 TO JOIN A52, QUEUING TRAFFIC. V1 HAS APPROACHED FROM REAR AND HIT V2 ON THE REAR CAUSING DAMAGE AND MINOR INJURY TO DRIVER OF V2(17706)

2200565	Sunday 03/04/2022 1800hrs	SANDIACRE-R/ABOUT JCT 25 M1 J/W A52(17706)	Veh 1	Minibus	Change lane to left	SE to SW	
R1: A 52			Veh 2	Car	Going ahead	SE to NE Dri	Slight
R2: A 52	Daylight:street lights present						
E 447,105	Dry						
N 335,516	Fine without high winds						
	60 mph						

V2 MISSED TURN AND PROCEEDED TO GO AROUND R/ABOUT FOR SECOND TIME; V1 WAS IN WRONG LANE, CUT ACROSS THE PATH OF V2 AND COLLIDED WITH SAME (17706)

2200680	Saturday 23/04/2022 1304hrs	SANDIACRE-R/ABOUT A52 J/W BOSTOCKS LANE (17706)	Veh 1	Car	Going ahead	SE to NW	
R1: A 52			Veh 2	Car	Going ahead	SW to NE Dri	Slight
R2: C	Daylight:street lights present						
E 447,064	Dry						
N 335,607	Fine without high winds						
	60 mph						

V2 IN THE INSIDE LANE , V1 CAME OUT OF NO WHERE ON R/H SIDE STRAIGHT INTO V2, CUTTING ACROSS THE PATH OF V2; V2 LEFT THE SCENE WITHOUT STOPPING (17706)

Details of Personal Injury Accidents for Period - **01/08/2019** **to** **31/07/2024** (60) months

Selection:
Selected using Manual Selection

Notes:

Police Ref. / Road No. / 2nd Road No. / Grid Ref.	Day / Date / Time / D/L / R.S.C / Weather / Speed / Account of Accident	Location Description	Vehicles: Veh No / Type / Manv / Dir / Class				Casualties: Sev
2200837	Thursday 19/05/2022 1622hrs	DERBY- A52 EXIT SLIP RD WESTBOUND TO M1 JCT 25 (17706)	Veh 1	Car	Going ahead	NE to SW	
			Veh 2	Car	Stopping	NE to SW Dri	Slight
R1: A 52			Veh 2	Car	Stopping	NE to SW FSP	Slight
R2: A 52	Daylight:street lights present		Veh 3	Car	Stopping	NE to SW	
E 447,521	Dry						
N 335,753	Fine without high winds						
	70 mph						

V1 APPROACHING EXIT SLIP TO J25. FAILS TO SEE V2 AND V3 ALREADY STATIONARY DUE TO BUILD UP OF TRAFFIC ON EXIT SLIP V1 COLLIDES WITH REAR OF V 2, WHICH IS PUSHED FORWARD INTO REAR OF V3(17706)

2201068	Friday 24/06/2022 1600hrs	SANDIACRE-A52 R/ABOUT J/W BOSTOCK'S LANE (17706)	Veh 1	Car	Change lane to left	SW to NE	
			Veh 2	Taxi	Going ahead	SW to NE Dri	Slight
R1: A 52			Veh 2	Taxi	Going ahead	SW to NE FSP	Slight
R2: C	Daylight:street lights present						
E 447,077	Dry						
N 335,622	Fine without high winds						
	60 mph						

V2 ON R/ABOUT AND MOVED OFF FROM GREEN T/LIGHTS WHEN V1 OVERTOOK V2 AND CHANGED LANES; PROCEEDED THEN TO CHANGE LANES AGAIN AND THEN COLLIDED WITH V2; V1 FAILED TO STOP AND EXCHANGE DETAILS(17706)

2300341	Sunday 26/02/2023 1220hrs	SANDIACRE-A52 R/ABOUT J/W BOSTOCK'S LANE (17706)	Veh 1	Car	Going ahead	NW to NE Dri	Slight
			Veh 1	Car	Going ahead	NW to NE FSP	Slight
R1: A 52			Veh 2	Car	Going ahead	NW to NE	
R2: U	Daylight:street lights present						
E 447,100	Dry						
N 335,650	Fine without high winds						
	60 mph						

V1 WAS TRAVELLING DOWN BOSTOCKS LANE TO J/W R/ABOUT WHEN V2 COLLIDED WITH THE REAR OF V1 CAUSING SLIGHT INJURY/DAMAGE(17706)

Details of Personal Injury Accidents for Period - **01/08/2019** **to** **31/07/2024** (60) months

Selection:
Selected using Manual Selection

Notes:

Police Ref. / Road No. / 2nd Road No. / Grid Ref.	Day / Date / Time / D/L / R.S.C / Weather / Speed / Account of Accident	Location Description	Vehicles: Veh No / Type / Manv / Dir / Class					Casualties: Sev
2301064	Friday 28/04/2023	SANDIACRE - M1 EXIT SLIP ROAD (DQ)	Veh 1	Car	Going ahead	S to N	Ped	Fatal
R1: M 1	0442hrs							
	Darkness: street lights present a							
E 447,159	Wet/Damp							
N 335,356	Raining without high winds							
	70 mph							

UNKNOWN VEHICLE HAS COLLIDED WITH MALE PEDESTRIAN IN UNKNOWN CIRCUMSTANCES EARLY AM, ON THE NORTHBOUND EXIT SLIP ROAD IN LANE 2. (INVESTIGATION RETAINED BY NOTTS POLICE (DQ)

2301120	Saturday 22/07/2023	SANDIACRE- M1 EXIT SLIP RD J/W A52 (18144)	Veh 1	Car	Going ahead	NW to SE	FSP	Serious
			Veh 1	Car	Going ahead	NW to SE	Dri	Serious
R1: A 52	0400hrs							
R2: M 1	Darkness: street lights present a							
E 447,268	Wet/Damp							
N 335,707	Raining without high winds							
	70 mph							

V1 TRAVELLING AT EXCESSIVE SPEED FAILS TO STOP AT JUNCTION AND COLLIDES WITH FURNITURE AND TREES CAUSING SERIOUS INJURIES (18144).

2301337	Sunday 27/08/2023	SANDIACRE - A52 (E) ENTRY S/RD - APPROX 1M N/E L/POST EL1465 - W3W ///JAWS.SPARKLES.MODEST	Veh 1	Car	Going ahead	SW to NE	Dri	Serious
			Veh 2	Car	Going ahead	SW to NE		
R1: A 52	1150hrs							
R2: A 52	Daylight:street lights present							
E 447,381	Dry							
N 335,738	Fine without high winds							
	70 mph							

DRIVER OF V1 REPORTS BEING CUT UP BY V2 CAUSING HIM TO TAKE EVASIVE ACTION - LEFT C/WAY N/SIDE AND ROLLED (5869) K

Details of Personal Injury Accidents for Period - **01/08/2019** **to** **31/07/2024** (60) months

Selection:
Selected using Manual Selection

Notes:

Police Ref. / Road No. / 2nd Road No. / Grid Ref.	Day / Date / Time / D/L / R.S.C / Weather / Speed / Account of Accident	Location Description	Vehicles: Veh No / Type / Manv / Dir / Class						Casualties: Sev
2400013 **R1: M 1** **R2: M 1** **E 447,206** **N 335,261**	Sunday 05/11/2023 1410hrs Daylight:street lights present Dry Fine without high winds 70 mph	SANDIACRE - M1 J/W M1 STH ENTRY S/RD (5869)	Veh 1 Veh 2	Car Goods Unknown C	Going ahead Change lane to left	N to S N to S	Dri		Slight
	VEHICLE 1 MOVED INTO LANE 1 ON THE MOTORWAY AND COLLIDED WITH VEHICLE 2								
2400014 **R1: A 52** **R2: M 1** **E 447,262** **N 335,719**	Wednesday 22/11/2023 2030hrs Darkness: street lighting unkno Dry Unknown 60 mph	SANDIACRE - M1 S/RD J/W M1/A52 R/BT JCTN 25 (5869)	Veh 1 Veh 2	Car Car	Wait go ahead held Going ahead	N to SE N to SE	Dri		Slight
	V2 COLLIDED WITH REAR OF V1								
2400296 **R1: A 52** **E 446,870** **N 335,495**	Thursday 22/02/2024 1645hrs Darkness: street lights present a Wet/Damp Fine without high winds 70 mph	RISLEY- BRIAN CLOUGH WAY EASTBOUND NR TO EXIT JCT 25 M1 (18144)	Veh 1 Veh 2	Car Car	Going ahead Stopping	W to E W to E	Dri		Slight
	V1 COLLIDED WITH THE REAR OF V2 IN SLOW MOVING TRAFFIC CAUSING SLIGHT INJURIES (18144).								

Appendix 4. Personal Injury Collision Data (A453 Remembrance Way Nottinghamshire)

Accident Details Report

Total number of reports = **7**

Total number of pages (including this page) = **8**

ROAD TRAFFIC INJURY ACCIDENT RECORDS - DISCLAIMER

These details are a record of the personal injury accidents reported to the Police. Every endeavour is made to ensure the accuracy and completeness of these records, which have been transcribed from the original Police Reports. The data is then entered and held on computer.

Occasions may arise when information from the Police, relevant to a particular accident, may not be available for several months and will therefore not be included.

No. **1**	District Rushcliffe	**Accident Details**	VRUs	Grid Reference [redacted] [redacted]
SEVERITY **SLIGHT**	Ref.No [redacted]			Police Officer Attend: Yes

[redacted]

No. **2**	District Rushcliffe	**Accident Details**	VRUs	Grid Reference [redacted] [redacted]
SEVERITY **SLIGHT**	Ref.No [redacted]			Police Officer Attend: Yes

[redacted]

No. **3**	District Rushcliffe	**Accident Details**	VRUs	Grid Reference [redacted] / [redacted]
SEVERITY **SLIGHT**	Ref.No [redacted]			Police Officer Attend: Yes

[redacted]

No. **4**	District Rushcliffe	**Accident Details**	VRUs	Grid Reference [redacted] / [redacted]
SEVERITY **SLIGHT**	Ref.No [redacted]			Police Officer Attend: Yes

[redacted]

No. **5**	District Rushcliffe	**Accident Details**	VRUs [redacted]	Grid Reference [redacted]
SEVERITY **SERIOUS**	Ref.No [redacted]			Police Officer Attend: Yes

[redacted]

No. **6**	District Rushcliffe	**Accident Details**	VRUs [redacted]	Grid Reference [redacted]
SEVERITY **FATAL**	Ref.No [redacted]			Police Officer Attend: Yes

[redacted]

No. **7**	District Rushcliffe	**Accident Details**	VRUs	Grid Reference [redacted] [redacted]
SEVERITY **SLIGHT**	Ref.No [redacted]			Police Officer Attend: Yes

[redacted]

APPENDIX 3: NMU Survey Data

Road Data Services Ltd

East Midlands Gateway NMU
Site 1 (A453 Link)

Weekday

	Eastbound					Westbound				
TIME	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL
07:00 - 07:15	0	0	0	0	**0**	0	0	0	0	**0**
07:15 - 07:30	0	0	0	0	**0**	0	0	0	0	**0**
07:30 - 07:45	0	0	0	0	**0**	0	0	0	0	**0**
07:45 - 08:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
08:00 - 08:15	0	0	0	0	**0**	0	1	0	0	**1**
08:15 - 08:30	0	0	0	0	**0**	0	0	0	0	**0**
08:30 - 08:45	0	0	0	0	**0**	0	0	0	0	**0**
08:45 - 09:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**
09:00 - 09:15	0	0	0	0	**0**	0	0	0	0	**0**
09:15 - 09:30	0	0	0	0	**0**	0	0	0	0	**0**
09:30 - 09:45	0	0	0	0	**0**	0	0	0	0	**0**
09:45 - 10:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
10:00 - 10:15	0	0	0	0	**0**	0	0	0	0	**0**
10:15 - 10:30	0	0	0	0	**0**	0	0	0	0	**0**
10:30 - 10:45	0	0	0	0	**0**	1	0	0	0	**1**
10:45 - 11:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**
11:00 - 11:15	0	0	0	0	**0**	0	0	0	0	**0**
11:15 - 11:30	0	0	0	0	**0**	0	0	0	0	**0**
11:30 - 11:45	0	0	0	0	**0**	0	0	0	0	**0**
11:45 - 12:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
12:00 - 12:15	0	0	0	0	**0**	7	0	0	0	**7**
12:15 - 12:30	0	0	0	0	**0**	3	0	0	0	**3**
12:30 - 12:45	0	0	0	0	**0**	4	0	0	0	**4**
12:45 - 13:00	10	0	0	0	**10**	0	0	0	0	**0**
Hourly Total	**10**	**0**	**0**	**0**	**10**	**14**	**0**	**0**	**0**	**14**
13:00 - 13:15	4	0	0	0	**4**	0	0	0	0	**0**
13:15 - 13:30	4	0	0	0	**4**	0	0	0	0	**0**
13:30 - 13:45	2	0	0	0	**2**	3	0	0	0	**3**
13:45 - 14:00	2	0	0	0	**2**	0	0	0	0	**0**
Hourly Total	**12**	**0**	**0**	**0**	**12**	**3**	**0**	**0**	**0**	**3**
14:00 - 14:15	3	0	0	0	**3**	0	0	0	0	**0**
14:15 - 14:30	0	0	0	0	**0**	0	0	0	0	**0**
14:30 - 14:45	0	0	0	0	**0**	0	0	0	0	**0**
14:45 - 15:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**3**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**
15:00 - 15:15	0	0	0	0	**0**	0	0	0	0	**0**
15:15 - 15:30	0	0	0	0	**0**	2	0	0	0	**2**
15:30 - 15:45	1	0	0	0	**1**	0	0	0	0	**0**
15:45 - 16:00	1	0	0	0	**1**	1	0	0	0	**1**
Hourly Total	**2**	**0**	**0**	**0**	**2**	**3**	**0**	**0**	**0**	**3**
16:00 - 16:15	0	0	0	0	**0**	0	0	0	0	**0**
16:15 - 16:30	0	0	0	0	**0**	0	0	0	0	**0**
16:30 - 16:45	0	0	0	0	**0**	0	0	0	0	**0**
16:45 - 17:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
17:00 - 17:15	0	0	0	0	**0**	0	0	0	0	**0**
17:15 - 17:30	0	0	0	0	**0**	0	0	0	0	**0**
17:30 - 17:45	0	0	0	0	**0**	0	0	0	0	**0**
17:45 - 18:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
18:00 - 18:15	0	0	0	0	**0**	0	0	0	0	**0**
18:15 - 18:30	0	0	0	0	**0**	0	0	0	0	**0**
18:30 - 18:45	0	0	0	0	**0**	0	0	0	0	**0**
18:45 - 19:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL	**27**	**0**	**0**	**0**	**27**	**21**	**1**	**0**	**0**	**22**

Saturday

	Eastbound					Westbound				
	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL
07:00 - 07:15	0	0	0	0	**0**	0	0	0	0	**0**
07:15 - 07:30	0	0	0	0	**0**	0	0	0	0	**0**
07:30 - 07:45	0	0	0	0	**0**	0	0	0	0	**0**
07:45 - 08:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
08:00 - 08:15	0	0	0	0	**0**	0	0	0	0	**0**
08:15 - 08:30	0	0	0	0	**0**	0	0	0	0	**0**
08:30 - 08:45	0	0	0	0	**0**	0	0	0	0	**0**
08:45 - 09:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
09:00 - 09:15	1	0	0	0	**1**	2	0	0	0	**2**
09:15 - 09:30	0	0	0	0	**0**	2	0	0	0	**2**
09:30 - 09:45	0	0	0	0	**0**	0	0	0	0	**0**
09:45 - 10:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**1**	**0**	**0**	**0**	**1**	**4**	**0**	**0**	**0**	**4**
10:00 - 10:15	0	0	0	0	**0**	0	0	0	0	**0**
10:15 - 10:30	0	0	0	0	**0**	0	0	0	0	**0**
10:30 - 10:45	0	0	0	0	**0**	0	0	0	0	**0**
10:45 - 11:00	1	0	0	0	**1**	0	0	0	0	**0**
Hourly Total	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
11:00 - 11:15	0	0	0	0	**0**	0	0	0	0	**0**
11:15 - 11:30	0	1	0	0	**1**	0	0	0	0	**0**
11:30 - 11:45	0	0	0	0	**0**	1	0	0	0	**1**
11:45 - 12:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**
12:00 - 12:15	0	0	0	0	**0**	1	0	0	0	**1**
12:15 - 12:30	0	0	0	0	**0**	0	0	0	0	**0**
12:30 - 12:45	1	0	0	0	**1**	0	0	0	0	**0**
12:45 - 13:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**1**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**
13:00 - 13:15	0	0	0	0	**0**	0	0	0	0	**0**
13:15 - 13:30	1	0	0	0	**1**	0	0	0	0	**0**
13:30 - 13:45	0	0	0	0	**0**	0	0	0	0	**0**
13:45 - 14:00	1	0	0	0	**1**	0	0	0	0	**0**
Hourly Total	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**
14:00 - 14:15	1	0	0	0	**1**	0	0	0	0	**0**
14:15 - 14:30	1	0	0	0	**1**	0	0	0	0	**0**
14:30 - 14:45	1	0	0	0	**1**	0	0	0	0	**0**
14:45 - 15:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**3**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**
15:00 - 15:15	0	0	0	0	**0**	0	0	0	0	**0**
15:15 - 15:30	0	0	0	0	**0**	0	0	0	0	**0**
15:30 - 15:45	0	0	0	0	**0**	0	0	0	0	**0**
15:45 - 16:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
16:00 - 16:15	0	0	0	0	**0**	0	0	0	0	**0**
16:15 - 16:30	2	0	0	0	**2**	0	0	0	0	**0**
16:30 - 16:45	0	0	0	0	**0**	0	0	0	0	**0**
16:45 - 17:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**
17:00 - 17:15	0	0	0	0	**0**	0	0	0	0	**0**
17:15 - 17:30	0	0	0	0	**0**	0	0	0	0	**0**
17:30 - 17:45	2	0	0	0	**2**	0	0	0	0	**0**
17:45 - 18:00	0	0	0	0	**0**	2	0	0	0	**2**
Hourly Total	**2**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**2**
18:00 - 18:15	0	0	0	0	**0**	0	0	0	0	**0**
18:15 - 18:30	0	0	0	0	**0**	1	0	0	0	**1**
18:30 - 18:45	0	0	0	0	**0**	0	0	0	0	**0**
18:45 - 19:00	0	0	0	0	**0**	1	0	0	0	**1**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**
TOTAL	**12**	**1**	**0**	**0**	**13**	**10**	**0**	**0**	**0**	**10**

Road Data Services Ltd

East Midlands Gateway NMU
Site 2 (Finger Farm Roundabout)

Weekday

	Eastbound					Westbound				
TIME	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL
07:00 - 07:15	0	1	0	0	**1**	0	0	0	0	**0**
07:15 - 07:30	0	0	0	0	**0**	0	0	0	0	**0**
07:30 - 07:45	0	0	0	0	**0**	0	0	0	0	**0**
07:45 - 08:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
08:00 - 08:15	0	1	0	0	**1**	0	1	0	0	**1**
08:15 - 08:30	0	0	0	0	**0**	0	0	0	0	**0**
08:30 - 08:45	0	0	0	0	**0**	0	0	0	0	**0**
08:45 - 09:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**1**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**1**
09:00 - 09:15	0	0	0	0	**0**	0	0	0	0	**0**
09:15 - 09:30	0	0	0	0	**0**	0	0	0	0	**0**
09:30 - 09:45	0	0	0	0	**0**	0	0	0	0	**0**
09:45 - 10:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
10:00 - 10:15	0	0	0	0	**0**	0	0	0	0	**0**
10:15 - 10:30	0	0	0	0	**0**	0	0	0	0	**0**
10:30 - 10:45	0	0	0	0	**0**	0	0	0	0	**0**
10:45 - 11:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
11:00 - 11:15	0	0	0	0	**0**	0	0	0	0	**0**
11:15 - 11:30	0	0	0	0	**0**	0	0	0	0	**0**
11:30 - 11:45	0	0	0	0	**0**	0	0	0	0	**0**
11:45 - 12:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
12:00 - 12:15	0	0	0	0	**0**	0	0	0	0	**0**
12:15 - 12:30	0	0	0	0	**0**	0	0	0	0	**0**
12:30 - 12:45	0	0	0	0	**0**	0	0	0	0	**0**
12:45 - 13:00	1		0	0	**1**	0	0	0	0	**0**
Hourly Total	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
13:00 - 13:15	0	0	0	0	**0**	0	0	0	0	**0**
13:15 - 13:30	1	0	0	0	**1**	0	0	0	0	**0**
13:30 - 13:45	0	0	0	0	**0**	0	0	0	0	**0**
13:45 - 14:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
14:00 - 14:15	0	0	0	0	**0**	0	0	0	0	**0**
14:15 - 14:30	0	0	0	0	**0**	0	0	0	0	**0**
14:30 - 14:45	0	0	0	0	**0**	1	0	0	0	**1**
14:45 - 15:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**
15:00 - 15:15	0	0	0	0	**0**	0	0	0	0	**0**
15:15 - 15:30	0	0	0	0	**0**	1	0	0	0	**1**
15:30 - 15:45	0	0	0	0	**0**	0	0	0	0	**0**
15:45 - 16:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**
16:00 - 16:15	0	1	0	0	**1**	0	0	0	0	**0**
16:15 - 16:30	0	0	0	0	**0**	0	0	0	0	**0**
16:30 - 16:45	0	0	0	0	**0**	0	0	0	0	**0**
16:45 - 17:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
17:00 - 17:15	0	0	0	0	**0**	0	1	0	0	**1**
17:15 - 17:30	0	0	0	0	**0**	0	0	0	0	**0**
17:30 - 17:45	0	0	0	0	**0**	0	0	0	0	**0**
17:45 - 18:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**
18:00 - 18:15	0	0	0	0	**0**	0	0	0	0	**0**
18:15 - 18:30	0	0	0	0	**0**	0	0	0	0	**0**
18:30 - 18:45	0	0	0	0	**0**	0	0	0	0	**0**
18:45 - 19:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL	**2**	**3**	**0**	**0**	**5**	**2**	**2**	**0**	**0**	**4**

Saturday

	Eastbound					Westbound				
	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL
0	0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	0	**0**	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	0	**0**	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1		0	0	**1**	0	2	0	0	**2**
0	0	0	0	**0**	1	0	0	0	**1**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
1	**0**	**0**	**0**	**1**	**1**	**2**	**0**	**0**	**3**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	1	0	0	**1**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1	**0**	**0**	**0**	**1**	**1**	**4**	**0**	**0**	**5**

Road Data Services Ltd

East Midlands Gateway NMU
Site 3 (East Midlands Gateway)

Weekday (Crossing A453)

	Eastbound					Westbound				
TIME	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL
07:00 - 07:15	0	0	0	0	**0**	0	0	0	0	**0**
07:15 - 07:30	0	0	0	0	**0**	0	0	0	0	**0**
07:30 - 07:45	0	0	0	0	**0**	0	0	0	0	**0**
07:45 - 08:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
08:00 - 08:15	0	0	0	0	**0**	0	0	0	0	**0**
08:15 - 08:30	0	0	0	0	**0**	0	0	0	0	**0**
08:30 - 08:45	1	0	0	0	**1**	1	0	0	0	**1**
08:45 - 09:00	0	0	0	0	**0**	1	0	0	0	**1**
Hourly Total	**1**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**2**
09:00 - 09:15	0	0	0	0	**0**	0	0	0	0	**0**
09:15 - 09:30	0	0	0	0	**0**	0	0	0	0	**0**
09:30 - 09:45	0	0	0	0	**0**	0	0	0	0	**0**
09:45 - 10:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
10:00 - 10:15	0	0	0	0	**0**	0	0	0	0	**0**
10:15 - 10:30	0	0	0	0	**0**	0	0	0	0	**0**
10:30 - 10:45	0	0	0	0	**0**	0	1	0	0	**1**
10:45 - 11:00	0	0	0	0	**0**	1	0	0	0	**1**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**2**
11:00 - 11:15	0	0	0	0	**0**	0	0	0	0	**0**
11:15 - 11:30	0	0	0	0	**0**	0	0	0	0	**0**
11:30 - 11:45	1	0	0	0	**1**	0	0	0	0	**0**
11:45 - 12:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
12:00 - 12:15	0	1	0	0	**1**	0	0	0	0	**0**
12:15 - 12:30	1	0	0	0	**1**	0	0	0	0	**0**
12:30 - 12:45	0	0	0	0	**0**	0	0	0	0	**0**
12:45 - 13:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**1**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**
13:00 - 13:15	2	0	0	0	**2**	0	0	0	0	**0**
13:15 - 13:30	0	0	0	0	**0**	2	0	0	0	**2**
13:30 - 13:45	0	1	0	0	**1**	1	0	0	0	**1**
13:45 - 14:00	0	1	0	0	**1**	0	0	0	0	**0**
Hourly Total	**2**	**2**	**0**	**0**	**4**	**3**	**0**	**0**	**0**	**3**
14:00 - 14:15	0	0	0	0	**0**	0	0	0	0	**0**
14:15 - 14:30	0	1	0	0	**1**	0	0	0	0	**0**
14:30 - 14:45	0	0	0	0	**0**	0	0	0	0	**0**
14:45 - 15:00	1	0	0	0	**1**	0	0	0	0	**0**
Hourly Total	**1**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**
15:00 - 15:15	0	0	0	0	**0**	0	0	0	0	**0**
15:15 - 15:30	0	0	0	0	**0**	0	0	0	0	**0**
15:30 - 15:45	0	0	0	0	**0**	0	0	0	0	**0**
15:45 - 16:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
16:00 - 16:15	0	0	0	0	**0**	0	1	0	0	**1**
16:15 - 16:30	0	0	0	0	**0**	0	0	0	0	**0**
16:30 - 16:45	0	0	0	0	**0**	0	0	0	0	**0**
16:45 - 17:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**
17:00 - 17:15	1	0	0	0	**1**	1	0	0	0	**1**
17:15 - 17:30	0	0	0	0	**0**	0	0	0	0	**0**
17:30 - 17:45	0	0	0	0	**0**	0	1	0	0	**1**
17:45 - 18:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**1**	**0**	**0**	**0**	**1**	**1**	**1**	**0**	**0**	**2**
18:00 - 18:15	0	0	0	0	**0**	0	2	0	0	**2**
18:15 - 18:30	0	0	0	0	**0**	0	0	0	0	**0**
18:30 - 18:45	0	1	0	0	**1**	0	0	0	0	**0**
18:45 - 19:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**1**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**2**
TOTAL	**7**	**5**	**0**	**0**	**12**	**7**	**5**	**0**	**0**	**12**

Weekday (Crossing A6 Kegworth Bypass)

	Northbound					Southbound				
	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL
	0	1	0	0	**1**	0	0	0	0	**0**
	0	0	0	0	**0**	0	0	0	0	**0**
	0	0	0	0	**0**	0	0	0	0	**0**
	0	0	0	0	**0**	0	0	0	0	**0**
	0	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
	0	1	0	0	**1**	0	0	0	0	**0**
	0	0	0	0	**0**	0	0	0	0	**0**
	1	0	0	0	**1**	1	0	0	0	**1**
	0	0	0	0	**0**	1	0	0	0	**1**
	1	**1**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**2**
	0	0	0	0	**0**	0	0	0	0	**0**
	0	0	0	0	**0**	0	0	0	0	**0**
	0	0	0	0	**0**	0	0	0	0	**0**
	0	0	0	0	**0**	0	0	0	0	**0**
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0

Road Data Services Ltd

East Midlands Gateway NMU
Site 4 (Hyam's Lane)

Weekday

	Eastbound					Westbound				
TIME	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL
07:00 - 07:15	0	0	0	0	**0**	0	0	0	0	**0**
07:15 - 07:30	0	0	0	0	**0**	0	0	0	0	**0**
07:30 - 07:45	0	0	0	0	**0**	0	0	0	0	**0**
07:45 - 08:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
08:00 - 08:15	0	0	0	0	**0**	0	0	0	0	**0**
08:15 - 08:30	0	0	0	0	**0**	0	0	0	0	**0**
08:30 - 08:45	0	0	0	0	**0**	0	0	0	0	**0**
08:45 - 09:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
09:00 - 09:15	0	0	0	0	**0**	0	0	0	0	**0**
09:15 - 09:30	0	0	0	0	**0**	0	0	0	0	**0**
09:30 - 09:45	0	0	0	0	**0**	0	0	0	0	**0**
09:45 - 10:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
10:00 - 10:15	0	0	0	0	**0**	0	0	0	0	**0**
10:15 - 10:30	0	0	0	0	**0**	0	0	0	0	**0**
10:30 - 10:45	0	0	0	0	**0**	0	0	0	0	**0**
10:45 - 11:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
11:00 - 11:15	0	0	0	0	**0**	0	0	0	0	**0**
11:15 - 11:30	0	0	0	0	**0**	0	0	0	0	**0**
11:30 - 11:45	0	0	0	0	**0**	0	0	0	0	**0**
11:45 - 12:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
12:00 - 12:15	0	0	0	0	**0**	0	0	0	0	**0**
12:15 - 12:30	0	0	0	0	**0**	0	0	0	0	**0**
12:30 - 12:45	0	0	0	0	**0**	0	0	0	0	**0**
12:45 - 13:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
13:00 - 13:15	0	0	0	0	**0**	0	0	0	0	**0**
13:15 - 13:30	0	0	0	0	**0**	0	0	0	0	**0**
13:30 - 13:45	1	0	0	0	**1**	0	0	0	0	**0**
13:45 - 14:00	0	0	0	0	**0**	1	0	0	0	**1**
Hourly Total	**1**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**
14:00 - 14:15	0	0	0	0	**0**	0	0	0	0	**0**
14:15 - 14:30	0	0	0	0	**0**	0	0	0	0	**0**
14:30 - 14:45	0	0	0	0	**0**	0	0	0	0	**0**
14:45 - 15:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
15:00 - 15:15	0	0	0	0	**0**	0	0	0	0	**0**
15:15 - 15:30	0	0	0	0	**0**	0	0	0	0	**0**
15:30 - 15:45	0	0	0	0	**0**	0	0	0	0	**0**
15:45 - 16:00	1	0	0	0	**1**	0	0	0	0	**0**
Hourly Total	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
16:00 - 16:15	0	0	0	0	**0**	0	0	0	0	**0**
16:15 - 16:30	0	0	0	0	**0**	1	0	0	0	**1**
16:30 - 16:45	0	0	0	0	**0**	0	0	0	0	**0**
16:45 - 17:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**
17:00 - 17:15	0	0	0	0	**0**	0	0	0	0	**0**
17:15 - 17:30	0	0	0	0	**0**	0	0	0	0	**0**
17:30 - 17:45	0	0	0	0	**0**	0	0	0	0	**0**
17:45 - 18:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
18:00 - 18:15	0	0	0	0	**0**	0	0	0	0	**0**
18:15 - 18:30	0	0	0	0	**0**	0	0	0	0	**0**
18:30 - 18:45	0	0	0	0	**0**	0	0	0	0	**0**
18:45 - 19:00	0	0	0	0	**0**	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL	**2**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**2**

Saturday

	Eastbound					Westbound				
PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL	PEDESTRIAN	CYCLE	E-SCOOTER	EQUESTRIAN	TOTAL
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1	0	0	0	**1**	1	0	0	0	**1**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
1	0	0	0	**1**	1	0	0	0	**1**
1	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	2	0	0	0	**2**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1	0	0	0	**1**	0	0	0	0	**0**
2	0	0	0	**2**	1	0	0	0	**1**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
3	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**1**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	0	0	0	**0**	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8	**0**	**0**	**0**	**8**	**6**	**0**	**0**	**0**	**6**

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 4
Approach: A453 North

	To M1 J23A Access									To Donington Services Access									To A453 (W)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	47	13	4	10	0	**74**	**89.0**	0	0	4	5	4	11	0	**24**	**40.3**	0	1	78	4	2	1	1	**87**	**89.7**
07:15 - 07:30	0	0	41	10	1	0	1	**53**	**54.5**	0	0	7	0	3	4	0	**14**	**20.7**	0	0	77	10	3	3	2	**95**	**102.4**
07:30 - 07:45	0	0	63	23	7	12	0	**105**	**124.1**	0	1	5	3	0	0	0	**9**	**8.4**	0	0	93	6	1	3	3	**106**	**113.4**
07:45 - 08:00	0	0	119	42	6	18	0	**185**	**211.4**	0	0	9	2	0	3	0	**14**	**17.9**	0	0	73	4	2	4	3	**86**	**95.2**
Hourly Total	**0**	**0**	**270**	**88**	**18**	**40**	**1**	**417**	**479.0**	**0**	**1**	**25**	**10**	**7**	**18**	**0**	**61**	**87.3**	**0**	**1**	**321**	**24**	**8**	**11**	**9**	**374**	**400.7**
08:00 - 08:15	0	0	122	30	4	10	0	**166**	**181.0**	0	0	12	7	1	4	0	**24**	**29.7**	0	1	82	9	1	2	1	**96**	**99.5**
08:15 - 08:30	0	0	67	20	2	15	0	**104**	**124.5**	0	0	16	2	0	2	0	**20**	**22.6**	0	0	117	10	2	2	1	**132**	**136.6**
08:30 - 08:45	0	0	48	15	7	12	1	**83**	**103.1**	0	0	13	2	0	4	0	**19**	**24.2**	0	0	122	11	0	2	3	**138**	**143.6**
08:45 - 09:00	0	0	49	9	3	12	1	**74**	**92.1**	0	0	18	3	0	4	0	**25**	**30.2**	0	0	76	12	0	1	0	**89**	**90.3**
Hourly Total	**0**	**0**	**286**	**74**	**16**	**49**	**2**	**427**	**500.7**	**0**	**0**	**59**	**14**	**1**	**14**	**0**	**88**	**106.7**	**0**	**1**	**397**	**42**	**3**	**7**	**5**	**455**	**470.0**
09:00 - 09:15	0	0	18	4	8	11	0	**41**	**59.3**	0	0	14	4	1	2	0	**21**	**24.1**	0	1	81	6	3	3	4	**98**	**106.8**
09:15 - 09:30	0	0	28	5	4	9	0	**46**	**59.7**	0	0	18	4	2	5	1	**30**	**38.5**	0	0	77	8	1	1	1	**88**	**90.8**
09:30 - 09:45	0	0	11	4	6	7	0	**28**	**40.1**	0	0	19	2	3	6	0	**30**	**39.3**	0	1	44	7	0	4	2	**58**	**64.6**
09:45 - 10:00	0	0	12	7	3	11	1	**34**	**50.8**	0	1	14	5	2	3	0	**25**	**29.3**	0	2	37	6	5	4	2	**56**	**64.5**
Hourly Total	**0**	**0**	**69**	**20**	**21**	**38**	**1**	**149**	**209.9**	**0**	**1**	**65**	**15**	**8**	**16**	**1**	**106**	**131.2**	**0**	**4**	**239**	**27**	**9**	**12**	**9**	**300**	**326.7**
TOTAL	**0**	**0**	**625**	**182**	**55**	**127**	**4**	**993**	**1189.6**	**0**	**2**	**149**	**39**	**16**	**48**	**1**	**255**	**325.2**	**0**	**6**	**957**	**93**	**20**	**30**	**23**	**1129**	**1197.4**
16:00 - 16:15	0	0	72	14	2	10	0	**98**	**112.0**	0	0	12	4	4	5	0	**25**	**33.5**	0	0	21	8	0	1	2	**32**	**35.3**
16:15 - 16:30	0	0	78	18	4	11	0	**111**	**127.3**	0	0	9	5	0	3	0	**17**	**20.9**	0	0	39	6	0	1	2	**48**	**51.3**
16:30 - 16:45	0	0	81	11	0	6	1	**99**	**107.8**	0	0	12	2	0	4	0	**18**	**23.2**	0	0	9	9	2	2	1	**23**	**27.6**
16:45 - 17:00	0	0	67	6	2	7	0	**82**	**92.1**	0	0	14	3	0	3	0	**20**	**23.9**	0	0	28	14	0	1	3	**46**	**50.3**
Hourly Total	**0**	**0**	**298**	**49**	**8**	**34**	**1**	**390**	**439.2**	**0**	**0**	**47**	**14**	**4**	**15**	**0**	**80**	**101.5**	**0**	**0**	**97**	**37**	**2**	**5**	**8**	**149**	**164.5**
17:00 - 17:15	0	0	95	4	1	3	0	**103**	**107.4**	0	0	9	2	3	6	0	**20**	**29.3**	0	1	24	6	5	2	1	**39**	**44.5**
17:15 - 17:30	0	0	64	5	3	7	0	**79**	**89.6**	0	0	12	2	0	5	0	**19**	**25.5**	0	0	50	12	3	1	3	**69**	**74.8**
17:30 - 17:45	0	0	72	7	1	7	0	**87**	**96.6**	0	0	13	0	0	4	0	**17**	**22.2**	0	0	21	7	2	2	2	**34**	**39.6**
17:45 - 18:00	0	0	77	8	3	10	0	**98**	**112.5**	0	0	19	5	0	8	0	**32**	**42.4**	0	0	29	4	1	2	0	**36**	**39.1**
Hourly Total	**0**	**0**	**308**	**24**	**8**	**27**	**0**	**367**	**406.1**	**0**	**0**	**53**	**9**	**3**	**23**	**0**	**88**	**119.4**	**0**	**1**	**124**	**29**	**11**	**7**	**6**	**178**	**198.0**
18:00 - 18:15	0	0	105	6	2	7	1	**121**	**132.1**	0	0	11	0	2	4	0	**17**	**23.2**	0	0	40	11	0	4	2	**57**	**64.2**
18:15 - 18:30	0	0	58	2	3	5	1	**69**	**78.0**	0	1	10	1	1	3	0	**16**	**19.8**	0	1	79	9	1	3	3	**96**	**102.8**
18:30 - 18:45	0	0	78	3	2	5	0	**88**	**95.5**	0	0	11	2	0	2	0	**15**	**17.6**	0	1	58	3	2	0	0	**64**	**64.4**
18:45 - 19:00	0	0	34	2	1	5	0	**42**	**49.0**	0	0	16	6	0	4	0	**26**	**31.2**	0	0	47	5	3	1	3	**59**	**64.8**
Hourly Total	**0**	**0**	**275**	**13**	**8**	**22**	**2**	**320**	**354.6**	**0**	**1**	**48**	**9**	**3**	**13**	**0**	**74**	**91.8**	**0**	**2**	**224**	**28**	**6**	**8**	**8**	**276**	**296.2**
TOTAL	**0**	**0**	**881**	**86**	**24**	**83**	**3**	**1077**	**1199.9**	**0**	**1**	**148**	**32**	**10**	**51**	**0**	**242**	**312.7**	**0**	**3**	**445**	**94**	**19**	**20**	**22**	**603**	**658.7**

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

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 4
Approach: M1 J23A Access

	To Donington Services Access									To A453 (W)									To A453 (N)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	16	6	3	5	0	**30**	**38.0**	0	0	60	14	2	6	0	**82**	**90.8**	0	0	97	28	7	27	2	**161**	**201.6**
07:15 - 07:30	0	0	13	6	4	5	0	**28**	**36.5**	0	0	53	17	3	1	0	**74**	**76.8**	0	0	172	29	8	19	0	**228**	**256.7**
07:30 - 07:45	0	0	11	7	2	7	1	**28**	**39.1**	0	0	89	10	2	7	0	**108**	**118.1**	0	0	184	38	10	23	2	**257**	**293.9**
07:45 - 08:00	0	0	21	11	2	3	0	**37**	**41.9**	0	0	121	12	2	2	0	**137**	**140.6**	0	1	199	28	9	22	0	**259**	**291.5**
Hourly Total	**0**	**0**	**61**	**30**	**11**	**20**	**1**	**123**	**155.5**	**0**	**0**	**323**	**53**	**9**	**16**	**0**	**401**	**426.3**	**0**	**1**	**652**	**123**	**34**	**91**	**4**	**905**	**1043.7**
08:00 - 08:15	0	0	19	3	2	3	0	**27**	**31.9**	0	0	89	12	3	3	0	**107**	**112.4**	0	0	152	29	8	13	0	**202**	**222.9**
08:15 - 08:30	0	0	17	13	4	8	0	**42**	**54.4**	0	0	107	8	1	7	0	**123**	**132.6**	0	0	163	34	15	22	0	**234**	**270.1**
08:30 - 08:45	0	0	20	7	2	7	0	**36**	**46.1**	0	0	85	13	6	4	1	**109**	**118.2**	0	0	102	15	8	25	1	**151**	**188.5**
08:45 - 09:00	0	0	22	5	0	6	0	**33**	**40.8**	0	0	90	6	3	4	0	**103**	**109.7**	0	0	106	21	10	15	0	**152**	**176.5**
Hourly Total	**0**	**0**	**78**	**28**	**8**	**24**	**0**	**138**	**173.2**	**0**	**0**	**371**	**39**	**13**	**18**	**1**	**442**	**472.9**	**0**	**0**	**523**	**99**	**41**	**75**	**1**	**739**	**858.0**
09:00 - 09:15	0	0	24	8	3	9	0	**44**	**57.2**	0	0	69	8	5	4	0	**86**	**93.7**	0	0	108	18	8	19	0	**153**	**181.7**
09:15 - 09:30	0	0	19	7	1	9	0	**36**	**48.2**	0	0	40	8	4	5	1	**58**	**67.5**	0	0	67	20	6	19	0	**112**	**139.7**
09:30 - 09:45	0	0	22	6	2	10	0	**40**	**54.0**	0	0	31	3	6	5	0	**45**	**54.5**	0	0	74	17	7	9	1	**108**	**124.2**
09:45 - 10:00	0	0	16	6	2	6	0	**30**	**38.8**	0	0	30	11	1	6	0	**48**	**56.3**	0	0	56	15	9	16	0	**96**	**121.3**
Hourly Total	**0**	**0**	**81**	**27**	**8**	**34**	**0**	**150**	**198.2**	**0**	**0**	**170**	**30**	**16**	**20**	**1**	**237**	**272.0**	**0**	**0**	**305**	**70**	**30**	**63**	**1**	**469**	**566.9**
TOTAL	**0**	**0**	**220**	**85**	**27**	**78**	**1**	**411**	**526.9**	**0**	**0**	**864**	**122**	**38**	**54**	**2**	**1080**	**1171.2**	**0**	**1**	**1480**	**292**	**105**	**229**	**6**	**2113**	**2468.6**
16:00 - 16:15	0	0	27	5	2	9	0	**43**	**55.7**	0	0	79	5	4	6	1	**95**	**105.8**	0	0	81	35	9	13	0	**138**	**159.4**
16:15 - 16:30	0	0	20	5	2	3	0	**30**	**34.9**	0	0	59	9	4	8	0	**80**	**92.4**	0	0	97	36	2	16	2	**153**	**176.8**
16:30 - 16:45	0	0	25	6	1	5	0	**37**	**44.0**	0	0	85	17	1	3	0	**106**	**110.4**	0	1	110	27	5	16	0	**159**	**181.7**
16:45 - 17:00	0	0	26	13	2	4	0	**45**	**51.2**	0	0	101	16	2	4	0	**123**	**129.2**	0	1	101	23	4	0	0	**129**	**130.4**
Hourly Total	**0**	**0**	**98**	**29**	**7**	**21**	**0**	**155**	**185.8**	**0**	**0**	**324**	**47**	**11**	**21**	**1**	**404**	**437.8**	**0**	**2**	**389**	**121**	**20**	**45**	**2**	**579**	**648.3**
17:00 - 17:15	0	0	19	6	4	7	0	**36**	**47.1**	0	1	105	7	2	1	0	**116**	**117.7**	0	0	141	19	6	18	0	**184**	**210.4**
17:15 - 17:30	0	0	26	5	0	4	0	**35**	**40.2**	0	0	84	5	2	7	0	**98**	**108.1**	0	0	194	20	7	17	0	**238**	**263.6**
17:30 - 17:45	0	0	17	12	0	6	0	**35**	**42.8**	0	0	95	6	2	0	0	**103**	**104.0**	0	0	174	15	2	11	0	**202**	**217.3**
17:45 - 18:00	0	0	24	2	3	3	0	**32**	**37.4**	0	0	88	11	3	1	0	**103**	**105.8**	0	0	130	7	0	9	1	**147**	**159.7**
Hourly Total	**0**	**0**	**86**	**25**	**7**	**20**	**0**	**138**	**167.5**	**0**	**1**	**372**	**29**	**9**	**9**	**0**	**420**	**435.6**	**0**	**0**	**639**	**61**	**15**	**55**	**1**	**771**	**851.0**
18:00 - 18:15	0	0	23	2	1	6	0	**32**	**40.3**	0	0	60	3	1	0	0	**64**	**64.5**	0	0	105	3	6	14	0	**128**	**149.2**
18:15 - 18:30	0	0	12	4	0	2	0	**18**	**20.6**	0	0	38	1	1	4	0	**44**	**49.7**	0	0	76	6	1	7	0	**90**	**99.6**
18:30 - 18:45	0	0	3	1	1	0	0	**5**	**5.5**	0	0	25	4	1	2	0	**32**	**35.1**	0	0	26	1	1	4	0	**32**	**37.7**
18:45 - 19:00	0	0	32	7	2	4	0	**45**	**51.2**	0	0	39	3	1	6	0	**49**	**57.3**	0	0	93	8	3	9	0	**113**	**126.2**
Hourly Total	**0**	**0**	**70**	**14**	**4**	**12**	**0**	**100**	**117.6**	**0**	**0**	**162**	**11**	**4**	**12**	**0**	**189**	**206.6**	**0**	**0**	**300**	**18**	**11**	**34**	**0**	**363**	**412.7**
TOTAL	**0**	**0**	**254**	**68**	**18**	**53**	**0**	**393**	**470.9**	**0**	**1**	**858**	**87**	**24**	**42**	**1**	**1013**	**1080.0**	**0**	**2**	**1328**	**200**	**46**	**134**	**3**	**1713**	**1912.0**

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

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 4
Approach: Donington Services Access

	To A453 (W)									To A453 (N)										To M1 J23A Access									
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs		CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	
07:00 - 07:15	0	0	9	1	2	0	0	**12**	**13.0**	0	0	8	10	3	8	0	**29**	**40.9**		0	0	8	3	1	7	0	**19**	**28.6**	
07:15 - 07:30	0	0	7	1	2	0	0	**10**	**11.0**	0	0	10	8	3	2	0	**23**	**27.1**		0	0	9	4	4	6	0	**23**	**32.8**	
07:30 - 07:45	0	0	7	3	0	0	0	**10**	**10.0**	0	0	7	8	2	10	0	**27**	**41.0**		0	0	6	2	2	3	0	**13**	**17.9**	
07:45 - 08:00	0	0	9	1	2	1	0	**13**	**15.3**	0	0	8	5	5	14	0	**32**	**52.7**		0	0	14	5	0	5	0	**24**	**30.5**	
Hourly Total	**0**	**0**	**32**	**6**	**6**	**1**	**0**	**45**	**49.3**	**0**	**0**	**33**	**31**	**13**	**34**	**0**	**111**	**161.7**		**0**	**0**	**37**	**14**	**7**	**21**	**0**	**79**	**109.8**	
08:00 - 08:15	0	0	12	2	1	0	0	**15**	**15.5**	0	0	1	4	3	5	0	**13**	**21.0**		0	0	24	5	2	4	0	**35**	**41.2**	
08:15 - 08:30	0	0	11	5	1	0	0	**17**	**17.5**	0	0	4	4	2	7	0	**17**	**27.1**		0	0	23	10	1	6	0	**40**	**48.3**	
08:30 - 08:45	0	0	13	1	2	0	0	**16**	**17.0**	0	0	5	7	3	3	0	**18**	**23.4**		0	0	21	6	2	6	0	**35**	**43.8**	
08:45 - 09:00	0	0	14	2	2	0	0	**18**	**19.0**	0	0	0	2	1	3	1	**7**	**12.4**		0	0	19	3	3	3	0	**28**	**33.4**	
Hourly Total	**0**	**0**	**50**	**10**	**6**	**0**	**0**	**66**	**69.0**	**0**	**0**	**10**	**17**	**9**	**18**	**1**	**55**	**83.9**		**0**	**0**	**87**	**24**	**8**	**19**	**0**	**138**	**166.7**	
09:00 - 09:15	0	0	6	3	0	0	0	**9**	**9.0**	0	0	7	6	1	7	0	**21**	**30.6**		0	0	27	3	2	5	0	**37**	**44.5**	
09:15 - 09:30	0	0	10	2	1	1	0	**14**	**15.8**	0	0	20	5	3	6	0	**34**	**43.3**		0	0	16	7	2	4	0	**29**	**35.2**	
09:30 - 09:45	0	0	12	2	1	0	0	**15**	**15.5**	0	0	10	2	0	6	0	**18**	**25.8**		0	0	20	5	4	3	0	**32**	**37.9**	
09:45 - 10:00	0	0	8	2	1	0	1	**12**	**13.5**	0	0	13	8	0	11	0	**32**	**46.3**		0	0	12	4	1	6	0	**23**	**31.3**	
Hourly Total	**0**	**0**	**36**	**9**	**3**	**1**	**1**	**50**	**53.8**	**0**	**0**	**50**	**21**	**4**	**30**	**0**	**105**	**146.0**		**0**	**0**	**75**	**19**	**9**	**18**	**0**	**121**	**148.9**	
TOTAL	**0**	**0**	**118**	**25**	**15**	**2**	**1**	**161**	**172.1**	**0**	**0**	**93**	**69**	**26**	**82**	**1**	**271**	**391.6**		**0**	**0**	**199**	**57**	**24**	**58**	**0**	**338**	**425.4**	
16:00 - 16:15	0	0	13	4	1	1	0	**19**	**20.8**	0	0	23	2	0	5	0	**30**	**36.5**		0	0	18	5	2	5	0	**30**	**37.5**	
16:15 - 16:30	0	0	7	1	1	1	0	**10**	**11.8**	0	0	15	4	2	4	0	**25**	**31.2**		0	0	21	3	1	6	0	**31**	**39.3**	
16:30 - 16:45	0	0	15	2	0	0	0	**17**	**17.0**	0	1	25	1	5	7	0	**39**	**50.0**		0	0	20	5	3	5	0	**33**	**41.0**	
16:45 - 17:00	0	0	13	1	0	0	0	**14**	**14.0**	0	0	10	2	2	4	0	**18**	**24.2**		0	0	22	5	0	3	0	**30**	**33.9**	
Hourly Total	**0**	**0**	**48**	**8**	**2**	**2**	**0**	**60**	**63.6**	**0**	**1**	**73**	**9**	**9**	**20**	**0**	**112**	**141.9**		**0**	**0**	**81**	**18**	**6**	**19**	**0**	**124**	**151.7**	
17:00 - 17:15	0	0	9	3	0	0	0	**12**	**12.0**	0	0	9	7	0	5	0	**21**	**27.5**		0	0	31	4	0	2	0	**37**	**39.6**	
17:15 - 17:30	0	0	8	1	1	0	0	**10**	**10.5**	0	0	21	1	2	1	0	**25**	**27.3**		0	0	19	8	2	4	0	**33**	**39.2**	
17:30 - 17:45	0	0	13	3	0	0	0	**16**	**16.0**	0	0	13	0	0	1	0	**14**	**15.3**		0	0	22	2	0	4	0	**28**	**33.2**	
17:45 - 18:00	0	0	13	2	0	0	0	**15**	**15.0**	0	0	17	8	0	3	0	**28**	**31.9**		0	0	21	2	0	3	0	**26**	**29.9**	
Hourly Total	**0**	**0**	**43**	**9**	**1**	**0**	**0**	**53**	**53.5**	**0**	**0**	**60**	**16**	**2**	**10**	**0**	**88**	**102.0**		**0**	**0**	**93**	**16**	**2**	**13**	**0**	**124**	**141.9**	
18:00 - 18:15	0	0	13	2	1	1	0	**17**	**18.8**	0	0	26	4	0	3	0	**33**	**36.9**		0	0	12	2	1	5	0	**20**	**27.0**	
18:15 - 18:30	0	0	12	2	1	1	0	**16**	**17.8**	0	0	15	2	0	2	0	**19**	**21.6**		0	0	11	3	3	4	0	**21**	**27.7**	
18:30 - 18:45	0	1	9	0	0	1	0	**11**	**11.7**	0	0	17	2	0	4	0	**23**	**28.2**		0	0	9	0	0	1	0	**10**	**11.3**	
18:45 - 19:00	0	0	10	0	0	0	0	**10**	**10.0**	0	0	14	2	0	0	0	**16**	**16.0**		0	0	13	1	1	3	0	**18**	**22.4**	
Hourly Total	**0**	**1**	**44**	**4**	**2**	**3**	**0**	**54**	**58.3**	**0**	**0**	**72**	**10**	**0**	**9**	**0**	**91**	**102.7**		**0**	**0**	**45**	**6**	**5**	**13**	**0**	**69**	**88.4**	
TOTAL	**0**	**1**	**135**	**21**	**5**	**5**	**0**	**167**	**175.4**	**0**	**1**	**205**	**35**	**11**	**39**	**0**	**291**	**346.6**		**0**	**0**	**219**	**40**	**13**	**45**	**0**	**317**	**382.0**	

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

Road Data Services Ltd

East Midlands Gateway
Thursday 3rd November 2022
Junction: 4
Approach: A453 West

	To A453 (N)									To M1 J23A Access										To Donington Services Access								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs		CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	46	10	0	6	3	**65**	**75.8**	0	0	29	1	2	4	0	**36**	**42.2**		0	0	12	1	0	0	0	**13**	**13.0**
07:15 - 07:30	0	0	85	16	2	6	0	**109**	**117.8**	0	1	25	3	5	2	0	**36**	**40.5**		0	1	5	2	1	0	0	**9**	**8.9**
07:30 - 07:45	0	1	81	11	5	8	3	**109**	**124.3**	0	0	32	10	4	6	1	**53**	**63.8**		0	0	4	0	0	0	0	**4**	**4.0**
07:45 - 08:00	0	0	77	12	0	2	0	**91**	**93.6**	0	0	35	5	4	3	2	**49**	**56.9**		0	0	7	0	0	0	0	**7**	**7.0**
Hourly Total	**0**	**1**	**289**	**49**	**7**	**22**	**6**	**374**	**411.5**	**0**	**1**	**121**	**19**	**15**	**15**	**3**	**174**	**203.4**		**0**	**1**	**28**	**3**	**1**	**0**	**0**	**33**	**32.9**
08:00 - 08:15	0	0	76	12	4	6	2	**100**	**111.8**	0	0	48	16	1	5	1	**71**	**79.0**		0	0	2	1	0	0	0	**3**	**3.0**
08:15 - 08:30	0	0	81	17	3	5	2	**108**	**118.0**	0	0	48	19	1	8	0	**76**	**86.9**		0	0	7	0	2	0	0	**9**	**10.0**
08:30 - 08:45	0	0	60	15	4	7	2	**88**	**101.1**	0	0	30	8	3	5	1	**47**	**56.0**		0	0	6	1	0	0	0	**7**	**7.0**
08:45 - 09:00	0	0	48	7	3	8	3	**69**	**83.9**	0	0	24	3	3	7	0	**37**	**47.6**		0	0	3	2	0	1	0	**6**	**7.3**
Hourly Total	**0**	**0**	**265**	**51**	**14**	**26**	**9**	**365**	**414.8**	**0**	**0**	**150**	**46**	**8**	**25**	**2**	**231**	**269.5**		**0**	**0**	**18**	**4**	**2**	**1**	**0**	**25**	**27.3**
09:00 - 09:15	0	0	26	3	5	8	2	**44**	**58.9**	0	0	20	4	4	1	0	**29**	**32.3**		0	0	7	1	1	0	0	**9**	**9.5**
09:15 - 09:30	0	1	25	9	6	2	4	**47**	**56.0**	0	0	21	4	0	4	0	**29**	**34.2**		0	0	4	4	0	0	0	**8**	**8.0**
09:30 - 09:45	0	0	24	11	7	1	2	**45**	**51.8**	0	0	12	3	1	3	0	**19**	**23.4**		0	0	7	3	0	1	0	**11**	**12.3**
09:45 - 10:00	0	0	31	8	2	4	4	**49**	**59.2**	0	0	9	5	0	2	0	**16**	**18.6**		0	0	5	0	1	1	0	**7**	**8.8**
Hourly Total	**0**	**1**	**106**	**31**	**20**	**15**	**12**	**185**	**225.9**	**0**	**0**	**62**	**16**	**5**	**10**	**0**	**93**	**108.5**		**0**	**0**	**23**	**8**	**2**	**2**	**0**	**35**	**38.6**
TOTAL	**0**	**2**	**660**	**131**	**41**	**63**	**27**	**924**	**1052.2**	**0**	**1**	**333**	**81**	**28**	**50**	**5**	**498**	**581.4**		**0**	**1**	**69**	**15**	**5**	**3**	**0**	**93**	**98.8**
16:00 - 16:15	0	0	161	12	2	3	3	**181**	**188.9**	0	0	66	11	2	8	1	**88**	**100.4**		0	0	4	2	2	0	0	**8**	**9.0**
16:15 - 16:30	0	0	136	12	3	2	1	**154**	**159.1**	0	0	25	7	3	2	0	**37**	**41.1**		0	0	8	2	0	0	0	**10**	**10.0**
16:30 - 16:45	0	0	126	9	0	2	1	**138**	**141.6**	0	0	68	15	0	2	0	**85**	**87.6**		0	0	9	2	2	0	0	**13**	**14.0**
16:45 - 17:00	0	0	133	16	0	1	3	**153**	**157.3**	0	0	48	1	1	2	1	**53**	**57.1**		0	0	10	1	0	0	0	**11**	**11.0**
Hourly Total	**0**	**0**	**556**	**49**	**5**	**8**	**8**	**626**	**646.9**	**0**	**0**	**207**	**34**	**6**	**14**	**2**	**263**	**286.2**		**0**	**0**	**31**	**7**	**4**	**0**	**0**	**42**	**44.0**
17:00 - 17:15	0	0	132	8	2	4	3	**149**	**158.2**	0	0	97	4	0	0	0	**101**	**101.0**		0	0	11	2	1	0	0	**14**	**14.5**
17:15 - 17:30	0	0	113	2	2	1	1	**119**	**122.3**	0	0	36	9	1	3	0	**49**	**53.4**		0	0	12	0	0	1	0	**13**	**14.3**
17:30 - 17:45	0	0	154	8	0	2	2	**166**	**170.6**	0	0	30	6	2	3	0	**41**	**45.9**		0	0	12	2	2	0	0	**16**	**17.0**
17:45 - 18:00	0	0	143	8	1	1	0	**153**	**154.8**	0	0	51	6	1	4	0	**62**	**67.7**		0	0	7	1	0	0	0	**8**	**8.0**
Hourly Total	**0**	**0**	**542**	**26**	**5**	**8**	**6**	**587**	**605.9**	**0**	**0**	**214**	**25**	**4**	**10**	**0**	**253**	**268.0**		**0**	**0**	**42**	**5**	**3**	**1**	**0**	**51**	**53.8**
18:00 - 18:15	0	0	88	7	0	0	3	**98**	**101.0**	0	0	41	3	1	2	0	**47**	**50.1**		0	0	8	1	0	0	0	**9**	**9.0**
18:15 - 18:30	0	0	83	7	1	1	2	**94**	**97.8**	0	0	28	4	1	1	0	**34**	**35.8**		0	0	8	0	0	0	0	**8**	**8.0**
18:30 - 18:45	0	1	74	4	0	7	1	**87**	**96.5**	0	0	16	2	1	2	0	**21**	**24.1**		0	0	3	0	1	0	0	**4**	**4.5**
18:45 - 19:00	0	0	57	3	2	2	3	**67**	**73.6**	0	0	16	2	0	3	0	**21**	**24.9**		0	0	5	1	0	0	0	**6**	**6.0**
Hourly Total	**0**	**1**	**302**	**21**	**3**	**10**	**9**	**346**	**368.9**	**0**	**0**	**101**	**11**	**3**	**8**	**0**	**123**	**134.9**		**0**	**0**	**24**	**2**	**1**	**0**	**0**	**27**	**27.5**
TOTAL	**0**	**1**	**1400**	**96**	**13**	**26**	**23**	**1559**	**1621.7**	**0**	**0**	**522**	**70**	**13**	**32**	**2**	**639**	**689.1**		**0**	**0**	**97**	**14**	**8**	**1**	**0**	**120**	**125.3**

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

APPENDIX 4: Traffic Survey Data

Road Data Services Ltd

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 1
Approach: A453 North

	Left to A6 Kegworth Bypass									Ahead to A453 (S)									Right to Wilders Way								U-Turn							
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	2	4	0	1	0	7	8.3	0	0	70	10	4	7	1	92	104.1	0	0	90	5	3	7	0	105	115.6	0	0	0	0	0	0	0	0	0.0
07:15 - 07:30	0	0	15	2	2	1	0	20	22.3	0	0	66	12	2	7	0	87	97.1	0	0	107	5	1	7	1	121	131.6	0	0	1	0	0	0	0	1	1.0
07:30 - 07:45	0	0	5	2	2	2	0	11	14.6	0	0	65	8	0	6	0	79	86.8	0	1	106	5	2	5	0	119	125.9	0	0	1	1	0	0	0	2	2.0
07:45 - 08:00	0	0	8	0	2	6	0	16	24.8	0	0	88	12	1	4	0	105	110.7	0	0	83	2	1	7	1	94	104.6	0	0	1	0	0	0	0	1	1.0
Hourly Total	**0**	**0**	**30**	**8**	**6**	**10**	**0**	**54**	**70.0**	**0**	**0**	**289**	**42**	**7**	**24**	**1**	**363**	**398.7**	**0**	**1**	**386**	**17**	**7**	**26**	**2**	**439**	**477.7**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**4**	**4.0**
08:00 - 08:15	0	0	9	2	5	3	0	19	25.4	0	0	95	7	1	5	0	108	115.0	0	0	42	11	5	5	0	63	72.0	0	0	0	0	0	0	0	0	0.0
08:15 - 08:30	0	0	6	1	1	0	0	8	8.5	0	0	91	4	3	3	0	101	106.4	0	0	35	4	3	5	0	47	55.0	0	0	3	0	1	0	0	4	4.5
08:30 - 08:45	0	0	7	1	1	1	0	10	11.8	0	0	107	7	4	0	0	118	120.0	0	1	28	9	1	10	1	50	63.9	0	0	0	0	0	1	0	1	2.3
08:45 - 09:00	0	1	5	3	4	5	0	18	25.9	0	0	87	10	4	5	0	106	114.5	0	0	40	5	1	3	1	50	55.4	0	0	2	0	0	0	0	2	2.0
Hourly Total	**0**	**1**	**27**	**7**	**11**	**9**	**0**	**55**	**71.6**	**0**	**0**	**380**	**28**	**12**	**13**	**0**	**433**	**455.9**	**0**	**1**	**145**	**29**	**10**	**23**	**2**	**210**	**246.3**	**0**	**0**	**5**	**0**	**1**	**1**	**0**	**7**	**8.8**
09:00 - 09:15	0	0	3	1	1	5	0	10	17.0	0	0	87	4	6	5	0	102	111.5	0	0	48	9	0	6	0	63	70.8	0	0	1	0	0	0	0	1	1.0
09:15 - 09:30	0	0	6	1	0	0	0	7	7.0	0	0	74	6	3	14	0	97	116.7	0	0	52	11	3	5	0	71	79.0	0	0	1	1	0	0	0	2	2.0
09:30 - 09:45	0	0	4	3	3	4	0	14	20.7	0	0	56	3	6	8	0	73	86.4	0	0	55	15	0	9	2	81	94.7	0	0	0	0	0	0	0	0	0.0
09:45 - 10:00	0	0	2	2	2	2	0	8	11.6	0	0	54	6	2	5	0	67	74.5	0	0	66	20	1	9	0	96	108.2	0	0	2	0	0	0	0	2	2.0
Hourly Total	**0**	**0**	**15**	**7**	**6**	**11**	**0**	**39**	**56.3**	**0**	**0**	**271**	**19**	**17**	**32**	**0**	**339**	**389.1**	**0**	**0**	**221**	**55**	**4**	**29**	**2**	**311**	**352.7**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**5**	**5.0**
TOTAL	**0**	**1**	**72**	**22**	**23**	**30**	**0**	**148**	**197.9**	**0**	**0**	**940**	**89**	**36**	**69**	**1**	**1135**	**1243.7**	**0**	**2**	**752**	**101**	**21**	**78**	**6**	**960**	**1076.7**	**0**	**0**	**12**	**2**	**1**	**1**	**0**	**16**	**17.8**
16:00 - 16:15	0	0	9	2	1	1	0	13	14.8	0	0	54	11	2	6	1	74	83.8	0	0	10	5	1	3	0	19	23.4	0	0	0	0	0	0	0	0	0.0
16:15 - 16:30	0	0	19	3	2	1	0	25	27.3	0	0	45	14	3	3	0	65	70.4	0	0	10	9	0	4	1	24	30.2	0	0	1	0	0	0	0	1	1.0
16:30 - 16:45	0	0	15	4	1	0	0	20	20.5	0	0	41	8	3	11	0	63	78.8	0	0	16	3	0	4	0	23	28.2	0	0	2	0	0	0	0	2	2.0
16:45 - 17:00	0	1	15	0	1	0	0	17	16.9	0	0	40	6	4	3	0	53	58.9	0	0	15	7	0	6	1	29	37.8	0	0	3	1	0	0	0	4	4.0
Hourly Total	**0**	**1**	**58**	**9**	**5**	**2**	**0**	**75**	**79.5**	**0**	**0**	**180**	**39**	**12**	**23**	**1**	**255**	**291.9**	**0**	**0**	**51**	**24**	**1**	**17**	**2**	**95**	**119.6**	**0**	**0**	**6**	**1**	**0**	**0**	**0**	**7**	**7.0**
17:00 - 17:15	0	0	13	2	0	0	0	15	15.0	0	0	45	8	4	8	1	66	79.4	0	0	19	13	0	4	0	36	41.2	0	0	1	0	0	0	0	1	1.0
17:15 - 17:30	0	0	22	1	1	1	0	25	26.8	0	1	58	1	3	10	0	73	86.9	0	1	31	13	0	6	1	52	60.2	0	0	3	0	0	0	0	3	3.0
17:30 - 17:45	0	1	17	0	2	1	0	21	22.7	0	0	73	4	3	4	0	84	90.7	0	3	54	11	0	4	0	72	75.4	0	0	2	0	0	0	0	2	2.0
17:45 - 18:00	0	0	11	5	0	0	0	16	16.0	0	0	70	2	3	7	0	82	92.6	0	0	66	14	0	3	0	83	86.9	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**1**	**63**	**8**	**3**	**2**	**0**	**77**	**80.5**	**0**	**1**	**246**	**15**	**13**	**29**	**1**	**305**	**349.6**	**0**	**4**	**170**	**51**	**0**	**17**	**1**	**243**	**263.7**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**6**	**6.0**
18:00 - 18:15	0	0	7	0	0	2	0	9	11.6	0	0	42	3	2	7	0	54	64.1	0	1	103	10	0	3	0	117	120.3	0	0	2	0	0	0	0	2	2.0
18:15 - 18:30	0	0	12	3	0	0	0	15	15.0	0	1	59	3	0	4	0	67	71.6	0	1	103	14	0	2	1	121	124.0	0	0	1	0	0	0	0	1	1.0
18:30 - 18:45	0	0	10	0	1	1	0	12	13.8	0	0	84	0	4	4	0	92	99.2	0	0	54	12	0	4	0	70	75.2	0	0	0	0	0	1	0	1	2.3
18:45 - 19:00	0	0	10	0	0	2	0	12	14.6	0	0	80	1	1	4	0	86	91.7	0	0	43	9	0	4	1	57	63.2	0	0	0	0	0	0	0	0	0.0
Hourly Total	**0**	**0**	**39**	**3**	**1**	**5**	**0**	**48**	**55.0**	**0**	**1**	**265**	**7**	**7**	**19**	**0**	**299**	**326.6**	**0**	**2**	**303**	**45**	**0**	**13**	**2**	**365**	**382.7**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**4**	**5.3**
TOTAL	**0**	**2**	**160**	**20**	**9**	**9**	**0**	**200**	**215.0**	**0**	**2**	**691**	**61**	**32**	**71**	**2**	**859**	**968.1**	**0**	**6**	**524**	**120**	**1**	**47**	**5**	**703**	**766.0**	**0**	**0**	**15**	**1**	**0**	**1**	**0**	**17**	**18.3**

Road Data Services Ltd

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 1
Approach: A6 Kegworth Bypass

	Left to A453 (S)									Ahead to Wilders Way									Right to A453 (N)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	2	15	3	0	0	0	20	18.8	0	1	87	11	10	2	0	111	118.0	0	0	74	10	8	3	2	97	106.9
07:15 - 07:30	0	0	26	2	1	0	0	29	29.5	0	1	101	16	4	1	1	124	127.7	0	1	65	18	5	0	0	89	90.9
07:30 - 07:45	0	0	29	3	1	0	1	34	35.5	0	0	76	10	2	0	2	90	93.0	0	0	61	10	1	0	0	72	72.5
07:45 - 08:00	0	0	29	5	0	1	0	35	36.3	0	0	109	21	3	3	1	137	143.4	0	0	92	21	4	2	0	119	123.6
Hourly Total	**0**	**2**	**99**	**13**	**2**	**1**	**1**	**118**	**120.1**	**0**	**2**	**373**	**58**	**19**	**6**	**4**	**462**	**482.1**	**0**	**1**	**292**	**59**	**18**	**5**	**2**	**377**	**393.9**
08:00 - 08:15	0	0	35	1	0	0	0	36	36.0	1	0	74	15	3	1	1	95	98.0	0	0	73	13	3	1	0	90	92.8
08:15 - 08:30	0	0	30	2	2	2	1	37	41.6	0	3	69	19	2	1	0	94	94.5	0	3	66	16	1	2	0	88	89.3
08:30 - 08:45	0	1	41	7	1	3	0	53	56.8	0	1	46	14	3	1	1	66	69.2	0	1	43	12	2	2	0	60	63.0
08:45 - 09:00	0	0	31	0	4	0	0	35	37.0	0	0	54	11	6	3	0	74	80.9	0	0	51	10	6	3	0	70	76.9
Hourly Total	**0**	**1**	**137**	**10**	**7**	**5**	**1**	**161**	**171.4**	**1**	**4**	**243**	**59**	**14**	**6**	**2**	**329**	**342.6**	**0**	**4**	**233**	**51**	**12**	**8**	**0**	**308**	**322.0**
09:00 - 09:15	0	0	24	5	0	1	0	30	31.3	0	0	61	13	6	3	3	86	95.9	0	0	54	12	7	3	1	77	85.4
09:15 - 09:30	0	0	17	4	1	0	0	22	22.5	0	0	34	12	3	4	1	54	61.7	0	0	32	12	4	4	0	52	59.2
09:30 - 09:45	0	0	17	5	0	1	0	23	24.3	0	0	30	12	1	2	0	45	48.1	0	0	28	9	1	1	0	39	40.8
09:45 - 10:00	0	0	9	4	0	1	1	15	17.3	0	0	37	19	3	3	0	62	67.4	0	0	26	16	4	3	0	49	54.9
Hourly Total	**0**	**0**	**67**	**18**	**1**	**3**	**1**	**90**	**95.4**	**0**	**0**	**162**	**56**	**13**	**12**	**4**	**247**	**273.1**	**0**	**0**	**140**	**49**	**16**	**11**	**1**	**217**	**240.3**
TOTAL	**0**	**3**	**303**	**41**	**10**	**9**	**3**	**369**	**386.9**	**1**	**6**	**778**	**173**	**46**	**24**	**10**	**1038**	**1097.8**	**0**	**5**	**665**	**159**	**46**	**24**	**3**	**902**	**956.2**
16:00 - 16:15	0	0	20	6	0	0	1	27	28.0	0	0	50	9	7	4	0	70	78.7	0	0	47	13	7	4	0	71	79.7
16:15 - 16:30	0	0	16	5	2	0	0	23	24.0	0	0	77	17	2	5	1	102	110.5	0	1	67	16	2	5	0	91	97.9
16:30 - 16:45	0	0	28	9	0	1	1	39	41.3	0	0	74	20	1	1	2	98	101.8	0	0	76	21	1	1	0	99	100.8
16:45 - 17:00	0	0	17	4	0	0	0	21	21.0	0	0	85	15	2	0	1	103	105.0	0	0	88	16	1	1	0	106	107.8
Hourly Total	**0**	**0**	**81**	**24**	**2**	**1**	**2**	**110**	**114.3**	**0**	**0**	**286**	**61**	**12**	**10**	**4**	**373**	**396.0**	**0**	**1**	**278**	**66**	**11**	**11**	**0**	**367**	**386.2**
17:00 - 17:15	0	0	25	4	2	0	0	31	32.0	0	0	80	13	2	4	1	100	107.2	0	0	76	16	2	2	0	96	99.6
17:15 - 17:30	0	0	33	3	1	0	0	37	37.5	0	0	94	8	2	0	0	104	105.0	0	0	88	9	2	0	0	99	100.0
17:30 - 17:45	0	0	28	3	1	1	0	33	34.8	0	0	90	15	2	0	1	108	110.0	0	1	87	16	2	0	0	106	106.4
17:45 - 18:00	0	0	26	2	3	0	0	31	32.5	0	0	81	6	2	0	1	90	92.0	0	0	81	6	1	0	0	88	88.5
Hourly Total	**0**	**0**	**112**	**12**	**7**	**1**	**0**	**132**	**136.8**	**0**	**0**	**345**	**42**	**8**	**4**	**3**	**402**	**414.2**	**0**	**1**	**332**	**47**	**7**	**2**	**0**	**389**	**394.5**
18:00 - 18:15	0	0	24	4	1	0	0	29	29.5	0	0	71	2	1	1	0	75	76.8	0	0	55	4	1	1	0	61	62.8
18:15 - 18:30	0	0	14	3	0	0	0	17	17.0	0	1	55	6	1	0	2	65	66.9	0	0	45	8	1	0	0	54	54.5
18:30 - 18:45	0	0	24	2	0	0	1	27	28.0	0	0	47	7	0	0	1	55	56.0	0	0	37	6	0	0	0	43	43.0
18:45 - 19:00	0	0	14	3	0	1	0	18	19.3	0	1	30	2	0	0	0	33	32.4	0	1	24	4	0	0	0	29	28.4
Hourly Total	**0**	**0**	**76**	**12**	**1**	**1**	**1**	**91**	**93.8**	**0**	**2**	**203**	**17**	**2**	**1**	**3**	**228**	**232.1**	**0**	**1**	**161**	**22**	**2**	**1**	**0**	**187**	**188.7**
TOTAL	**0**	**0**	**269**	**48**	**10**	**3**	**3**	**333**	**344.9**	**0**	**2**	**834**	**120**	**22**	**15**	**10**	**1003**	**1042.3**	**0**	**3**	**771**	**135**	**20**	**14**	**0**	**943**	**969.4**

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

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 1
Approach: A453 South

	Left to Wilders Way									Ahead to A453 (N)									Right to A6 Kegworth Bypass									U-Turn								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	36	1	3	5	2	**47**	**57.0**	0	0	102	22	5	8	0	**137**	**149.9**	0	0	13	2	1	1	0	**17**	**18.8**	0	0	0	0	0	0	0	**0**	**0.0**
07:15 - 07:30	0	0	102	3	3	11	1	**120**	**136.8**	0	0	143	24	4	15	0	**186**	**207.5**	0	0	17	11	1	1	1	**31**	**33.8**	0	0	2	0	0	0	0	**2**	**2.0**
07:30 - 07:45	0	0	66	2	1	7	3	**79**	**91.6**	0	2	162	35	5	19	1	**224**	**251.0**	0	0	21	6	1	1	0	**29**	**30.8**	0	0	2	0	0	0	0	**2**	**2.0**
07:45 - 08:00	0	0	57	2	1	9	1	**70**	**83.2**	0	0	184	43	8	20	0	**255**	**285.0**	0	0	26	10	1	0	1	**38**	**39.5**	0	0	0	0	0	0	0	**0**	**0.0**
Hourly Total	**0**	**0**	**261**	**8**	**8**	**32**	**7**	**316**	**368.6**	**0**	**2**	**591**	**124**	**22**	**62**	**1**	**802**	**893.4**	**0**	**0**	**77**	**29**	**4**	**3**	**2**	**115**	**122.9**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**4**	**4.0**
08:00 - 08:15	0	0	25	4	1	4	1	**35**	**41.7**	0	0	215	40	9	2	1	**267**	**275.1**	0	0	24	5	3	0	0	**32**	**33.5**	0	0	0	0	0	0	0	**0**	**0.0**
08:15 - 08:30	0	0	15	2	3	12	3	**35**	**55.1**	0	0	191	49	9	18	1	**268**	**296.9**	0	0	17	11	0	0	0	**28**	**28.0**	0	0	2	0	0	0	0	**2**	**2.0**
08:30 - 08:45	0	0	16	2	1	11	1	**31**	**46.8**	0	1	143	30	8	31	0	**213**	**256.7**	0	0	17	10	4	2	1	**34**	**39.6**	0	0	0	0	0	0	0	**0**	**0.0**
08:45 - 09:00	0	0	27	6	1	9	2	**45**	**59.2**	0	0	92	24	6	19	0	**141**	**168.7**	0	0	23	2	0	0	0	**25**	**25.0**	0	0	1	0	0	0	0	**1**	**1.0**
Hourly Total	**0**	**0**	**83**	**14**	**6**	**36**	**7**	**146**	**202.8**	**0**	**1**	**641**	**143**	**32**	**70**	**2**	**889**	**997.4**	**0**	**0**	**81**	**28**	**7**	**2**	**1**	**119**	**126.1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**3.0**
09:00 - 09:15	0	0	18	3	3	5	2	**31**	**41.0**	0	0	86	28	5	25	0	**144**	**179.0**	0	0	18	7	1	1	0	**27**	**28.8**	0	0	2	0	0	0	0	**2**	**2.0**
09:15 - 09:30	0	0	20	6	1	7	1	**35**	**45.6**	0	0	88	22	11	19	0	**140**	**170.2**	0	0	26	6	0	2	0	**34**	**36.6**	0	0	1	0	0	0	0	**1**	**1.0**
09:30 - 09:45	0	0	28	12	1	2	3	**46**	**52.1**	0	0	81	19	4	21	0	**125**	**154.3**	0	0	22	2	3	1	0	**28**	**30.8**	0	0	0	0	0	0	0	**0**	**0.0**
09:45 - 10:00	0	0	21	12	2	7	2	**44**	**56.1**	0	0	76	17	14	11	0	**118**	**139.3**	0	0	7	6	0	1	0	**14**	**15.3**	0	0	1	0	0	0	0	**1**	**1.0**
Hourly Total	**0**	**0**	**87**	**33**	**7**	**21**	**8**	**156**	**194.8**	**0**	**0**	**331**	**86**	**34**	**76**	**0**	**527**	**642.8**	**0**	**0**	**73**	**21**	**4**	**5**	**0**	**103**	**111.5**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**4**	**4.0**
TOTAL	**0**	**0**	**431**	**55**	**21**	**89**	**22**	**618**	**766.2**	**0**	**3**	**1563**	**353**	**88**	**208**	**3**	**2218**	**2533.6**	**0**	**0**	**231**	**78**	**15**	**10**	**3**	**337**	**360.5**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**11**	**11.0**
16:00 - 16:15	0	0	3	2	1	6	4	**16**	**28.3**	0	0	205	50	10	20	0	**285**	**316.0**	0	0	26	8	0	0	0	**34**	**34.0**	0	0	0	0	0	0	0	**0**	**0.0**
16:15 - 16:30	0	0	4	3	0	3	1	**11**	**15.9**	0	0	153	37	4	15	0	**209**	**230.5**	0	0	31	2	2	1	0	**36**	**38.3**	0	0	0	0	0	0	0	**0**	**0.0**
16:30 - 16:45	0	1	8	0	2	5	1	**17**	**24.9**	0	1	198	39	10	15	0	**263**	**286.9**	0	0	28	6	2	0	1	**37**	**39.0**	0	0	0	0	0	0	0	**0**	**0.0**
16:45 - 17:00	0	0	6	0	1	5	2	**14**	**23.0**	0	1	203	38	9	21	0	**272**	**303.2**	0	0	35	5	1	1	0	**42**	**43.8**	0	0	0	0	0	0	0	**0**	**0.0**
Hourly Total	**0**	**1**	**21**	**5**	**4**	**19**	**8**	**58**	**92.1**	**0**	**2**	**759**	**164**	**33**	**71**	**0**	**1029**	**1136.6**	**0**	**0**	**120**	**21**	**5**	**2**	**1**	**149**	**155.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
17:00 - 17:15	0	0	8	0	1	9	2	**20**	**34.2**	0	1	243	30	10	23	0	**307**	**341.3**	0	0	29	7	1	0	0	**37**	**37.5**	0	0	0	0	0	0	0	**0**	**0.0**
17:15 - 17:30	0	0	13	0	3	3	3	**22**	**30.4**	0	0	206	19	5	17	1	**248**	**273.6**	0	0	46	7	1	0	0	**54**	**54.5**	0	0	0	0	0	0	0	**0**	**0.0**
17:30 - 17:45	0	0	10	0	4	6	1	**21**	**31.8**	0	0	211	27	8	11	0	**257**	**275.3**	0	0	53	2	0	0	0	**55**	**55.0**	0	0	0	0	0	0	0	**0**	**0.0**
17:45 - 18:00	0	0	18	1	1	5	2	**27**	**36.0**	0	0	179	23	2	10	0	**214**	**228.0**	0	1	36	1	1	2	0	**41**	**43.5**	0	0	0	0	0	0	0	**0**	**0.0**
Hourly Total	**0**	**0**	**49**	**1**	**9**	**23**	**8**	**90**	**132.4**	**0**	**1**	**839**	**99**	**25**	**61**	**1**	**1026**	**1118.2**	**0**	**1**	**164**	**17**	**3**	**2**	**0**	**187**	**190.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
18:00 - 18:15	0	0	34	1	1	2	3	**41**	**47.1**	0	1	156	23	3	14	1	**198**	**218.1**	0	0	30	5	0	1	1	**37**	**39.3**	0	0	0	0	0	0	0	**0**	**0.0**
18:15 - 18:30	0	1	51	0	0	2	0	**54**	**56.0**	0	0	154	9	6	8	0	**177**	**190.4**	0	0	24	3	1	0	0	**28**	**28.5**	0	0	0	0	0	0	0	**0**	**0.0**
18:30 - 18:45	0	0	28	0	0	3	1	**32**	**36.9**	0	0	91	6	6	13	0	**116**	**135.9**	0	0	23	7	1	0	0	**31**	**31.5**	0	0	0	0	0	0	0	**0**	**0.0**
18:45 - 19:00	0	0	24	0	0	8	1	**33**	**44.4**	0	0	98	10	4	7	0	**119**	**130.1**	0	1	27	2	0	1	0	**31**	**31.7**	0	0	0	0	0	0	0	**0**	**0.0**
Hourly Total	**0**	**1**	**137**	**1**	**1**	**15**	**5**	**160**	**184.4**	**0**	**1**	**499**	**48**	**19**	**42**	**1**	**610**	**674.5**	**0**	**1**	**104**	**17**	**2**	**2**	**1**	**127**	**131.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**
TOTAL	**0**	**2**	**207**	**7**	**14**	**57**	**21**	**308**	**408.9**	**0**	**4**	**2097**	**311**	**77**	**174**	**2**	**2665**	**2929.3**	**0**	**2**	**388**	**55**	**10**	**6**	**2**	**463**	**476.6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**

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

Road Data Services Ltd

East Midlands Gateway
Wednesday 23rd November 2022
Junction: 1
Approach: Wilders Way

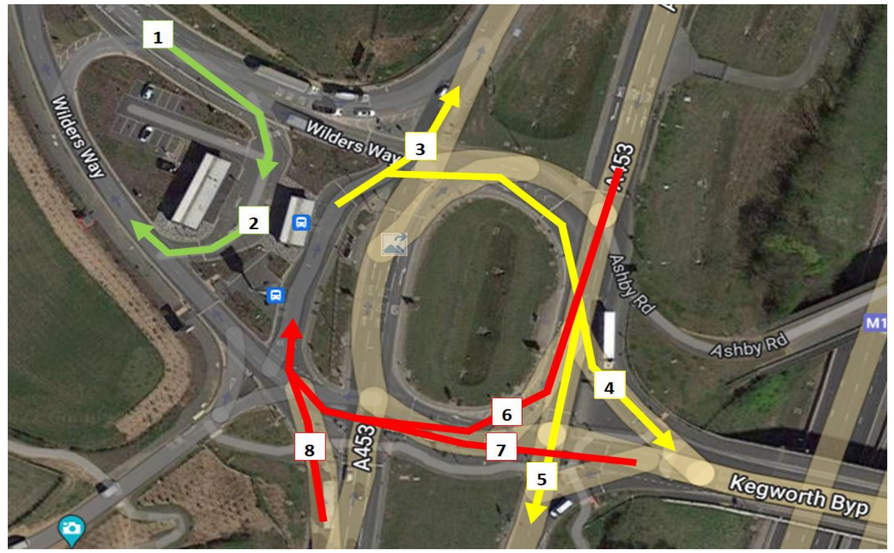
	Left to A453 (N)									Ahead to A6 Kegworth Bypass									Right to A453 (S)								
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	30	0	2	5	0	**37**	**44.5**	0	0	2	0	0	0	0	**2**	**2.0**	0	1	12	1	0	7	0	**21**	**29.5**
07:15 - 07:30	0	0	8	1	1	5	0	**15**	**22.0**	0	0	2	1	1	1	0	**5**	**6.8**	0	0	4	1	0	9	0	**14**	**25.7**
07:30 - 07:45	0	0	18	1	1	9	0	**29**	**41.2**	0	0	2	0	0	2	0	**4**	**6.6**	0	0	9	0	3	5	0	**17**	**25.0**
07:45 - 08:00	0	0	22	2	0	5	0	**29**	**35.5**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	13	1	2	6	0	**22**	**30.8**
Hourly Total	**0**	**0**	**78**	**4**	**4**	**24**	**0**	**110**	**143.2**	**0**	**0**	**6**	**1**	**1**	**3**	**0**	**11**	**15.4**	**0**	**1**	**38**	**3**	**5**	**27**	**0**	**74**	**111.0**
08:00 - 08:15	0	0	23	3	1	5	0	**32**	**39.0**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	11	3	0	5	0	**19**	**25.5**
08:15 - 08:30	0	0	11	1	2	3	0	**17**	**21.9**	0	0	2	1	0	0	0	**3**	**3.0**	0	0	13	1	1	7	0	**22**	**31.6**
08:30 - 08:45	0	0	8	3	3	6	0	**20**	**29.3**	0	0	1	1	0	0	0	**2**	**2.0**	0	0	7	1	1	6	0	**15**	**23.3**
08:45 - 09:00	0	0	5	2	0	10	0	**17**	**30.0**	0	0	1	0	0	0	0	**1**	**1.0**	0	0	2	2	0	6	0	**10**	**17.8**
Hourly Total	**0**	**0**	**47**	**9**	**6**	**24**	**0**	**86**	**120.2**	**0**	**0**	**4**	**2**	**0**	**0**	**0**	**6**	**6.0**	**0**	**0**	**33**	**7**	**2**	**24**	**0**	**66**	**98.2**
09:00 - 09:15	0	0	3	2	0	8	0	**13**	**23.4**	0	0	3	0	0	1	0	**4**	**5.3**	0	0	2	1	1	6	1	**11**	**20.3**
09:15 - 09:30	0	0	7	1	2	6	0	**16**	**24.8**	0	0	0	0	0	0	0	**0**	**0.0**	0	0	2	2	1	8	0	**13**	**23.9**
09:30 - 09:45	0	0	12	2	0	8	0	**22**	**32.4**	0	0	0	1	1	1	0	**3**	**4.8**	0	0	3	2	0	9	0	**14**	**25.7**
09:45 - 10:00	0	0	31	48	2	6	1	**88**	**97.8**	0	0	6	1	1	0	0	**8**	**8.5**	0	0	6	6	1	7	2	**22**	**33.6**
Hourly Total	**0**	**0**	**53**	**53**	**4**	**28**	**1**	**139**	**178.4**	**0**	**0**	**9**	**2**	**2**	**2**	**0**	**15**	**18.6**	**0**	**0**	**13**	**11**	**3**	**30**	**3**	**60**	**103.5**
TOTAL	**0**	**0**	**178**	**66**	**14**	**76**	**1**	**335**	**441.8**	**0**	**0**	**19**	**5**	**3**	**5**	**0**	**32**	**40.0**	**0**	**1**	**84**	**21**	**10**	**81**	**3**	**200**	**312.7**
16:00 - 16:15	0	1	76	9	1	5	0	**92**	**98.4**	0	0	8	0	2	0	0	**10**	**11.0**	0	0	27	2	3	5	0	**37**	**45.0**
16:15 - 16:30	0	1	54	2	2	2	0	**61**	**64.0**	0	0	2	1	0	1	0	**4**	**5.3**	0	0	21	2	3	3	0	**29**	**34.4**
16:30 - 16:45	0	0	65	6	1	1	0	**73**	**74.8**	0	0	9	0	0	0	0	**9**	**9.0**	0	0	14	5	0	6	0	**25**	**32.8**
16:45 - 17:00	0	0	47	3	4	2	0	**56**	**60.6**	0	1	1	3	0	0	0	**5**	**4.4**	0	0	19	2	1	5	0	**27**	**34.0**
Hourly Total	**0**	**2**	**242**	**20**	**8**	**10**	**0**	**282**	**297.8**	**0**	**1**	**20**	**4**	**2**	**1**	**0**	**28**	**29.7**	**0**	**0**	**81**	**11**	**7**	**19**	**0**	**118**	**146.2**
17:00 - 17:15	0	0	40	7	1	5	0	**53**	**60.0**	0	0	2	0	0	0	0	**2**	**2.0**	0	0	25	2	3	10	1	**41**	**56.5**
17:15 - 17:30	0	0	42	8	0	4	0	**54**	**59.2**	0	0	4	1	0	1	0	**6**	**7.3**	0	1	26	2	2	5	0	**36**	**42.9**
17:30 - 17:45	0	0	58	4	0	7	0	**69**	**78.1**	0	1	2	1	0	0	0	**4**	**3.4**	0	0	21	2	3	7	0	**33**	**43.6**
17:45 - 18:00	0	0	33	4	4	4	0	**45**	**52.2**	0	0	6	0	1	0	0	**7**	**7.5**	0	1	16	4	3	6	0	**30**	**38.7**
Hourly Total	**0**	**0**	**173**	**23**	**5**	**20**	**0**	**221**	**249.5**	**0**	**1**	**14**	**2**	**1**	**1**	**0**	**19**	**20.2**	**0**	**2**	**88**	**10**	**11**	**28**	**1**	**140**	**181.7**
18:00 - 18:15	0	0	203	9	1	2	0	**215**	**218.1**	0	0	24	1	0	0	0	**25**	**25.0**	0	0	74	1	4	6	1	**86**	**96.8**
18:15 - 18:30	0	1	59	2	2	2	0	**66**	**69.0**	0	0	10	0	0	0	0	**10**	**10.0**	0	0	31	2	1	7	0	**41**	**50.6**
18:30 - 18:45	0	2	170	3	2	2	0	**179**	**181.4**	0	0	24	2	1	0	0	**27**	**27.5**	0	0	63	1	1	4	0	**69**	**74.7**
18:45 - 19:00	0	0	49	4	1	0	0	**54**	**54.5**	0	0	9	1	0	0	0	**10**	**10.0**	0	0	13	3	1	1	0	**18**	**19.8**
Hourly Total	**0**	**3**	**481**	**18**	**6**	**6**	**0**	**514**	**523.0**	**0**	**0**	**67**	**4**	**1**	**0**	**0**	**72**	**72.5**	**0**	**0**	**181**	**7**	**7**	**18**	**1**	**214**	**241.9**
TOTAL	**0**	**5**	**896**	**61**	**19**	**36**	**0**	**1017**	**1070.3**	**0**	**2**	**101**	**10**	**4**	**2**	**0**	**119**	**122.4**	**0**	**2**	**350**	**28**	**25**	**65**	**2**	**472**	**569.8**

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

Road Data Services Ltd

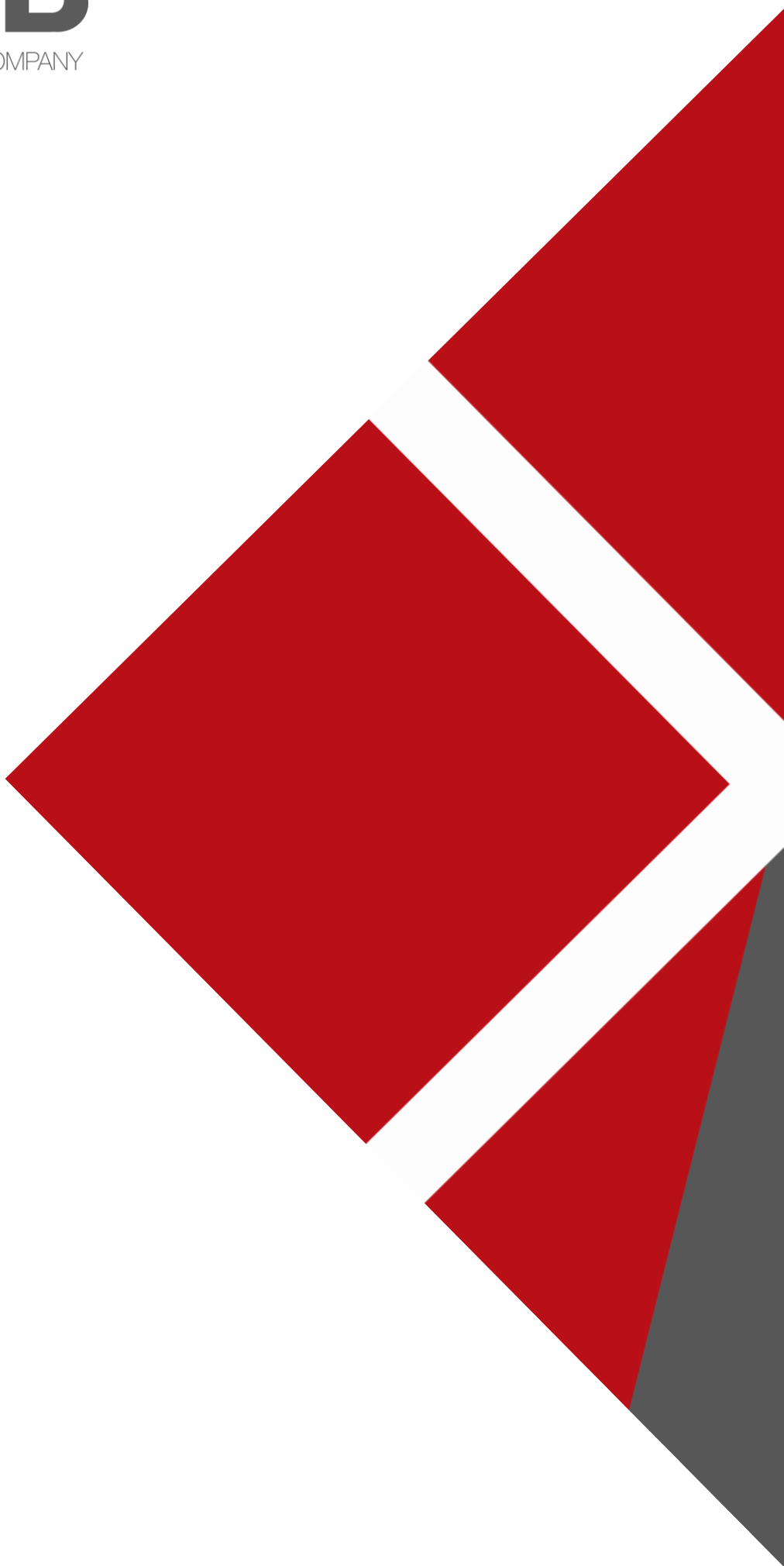
East Midlands Gateway
Wednesday 23rd November 2022
Junction: 1
Bus Moves

	Bus Moves							
TIME	Move 1	Move 2	Move 3	Move 4	Move 5	Move 6	Move 7	Move 8
07:00 - 07:15	1	1	0	1	1	0	0	2
07:15 - 07:30	2	3	1	0	3	1	2	1
07:30 - 07:45	1	2	1	1	2	0	2	2
07:45 - 08:00	2	2	0	2	2	1	1	2
Hourly Total	**6**	**8**	**2**	**4**	**8**	**2**	**5**	**7**
08:00 - 08:15	1	1	1	0	1	0	1	1
08:15 - 08:30	2	1	0	1	1	0	0	2
08:30 - 08:45	1	3	0	1	3	1	1	1
08:45 - 09:00	2	0	1	1	0	1	0	2
Hourly Total	**6**	**5**	**2**	**3**	**5**	**2**	**2**	**6**
09:00 - 09:15	1	2	1	1	2	0	2	2
09:15 - 09:30	2	1	0	1	1	0	1	1
09:30 - 09:45	1	2	0	1	2	1	0	3
09:45 - 10:00	2	1	1	1	1	0	0	2
Hourly Total	**6**	**6**	**2**	**4**	**6**	**1**	**3**	**8**
TOTAL	**18**	**19**	**6**	**11**	**19**	**5**	**10**	**21**
16:00 - 16:15	1	2	1	2	2	0	0	3
16:15 - 16:30	2	2	0	1	2	1	1	1
16:30 - 16:45	1	2	1	0	2	0	2	1
16:45 - 17:00	2	1	0	1	1	1	1	2
Hourly Total	**6**	**7**	**2**	**4**	**7**	**2**	**4**	**7**
17:00 - 17:15	1	1	1	1	1	0	1	2
17:15 - 17:30	2	3	1	1	3	1	0	3
17:30 - 17:45	1	1	1	0	1	0	1	1
17:45 - 18:00	2	0	0	1	0	0	1	1
Hourly Total	**6**	**5**	**3**	**3**	**5**	**1**	**3**	**7**
18:00 - 18:15	1	1	0	2	1	0	0	3
18:15 - 18:30	2	3	0	1	3	1	2	1
18:30 - 18:45	1	2	0	1	2	0	1	2
18:45 - 19:00	2	1	1	0	1	1	0	1
Hourly Total	**6**	**7**	**1**	**4**	**7**	**2**	**3**	**7**
TOTAL	**18**	**19**	**6**	**11**	**19**	**5**	**10**	**21**



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APPENDIX 4: VISSIM Local Model Validation Report (document reference EMG2-BWB-GEN-XX-RP-TR-0006_S2-P4)

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East Midlands Gateway, Phase 2

Local Model Validation Report (LMVR)

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APPENDICES

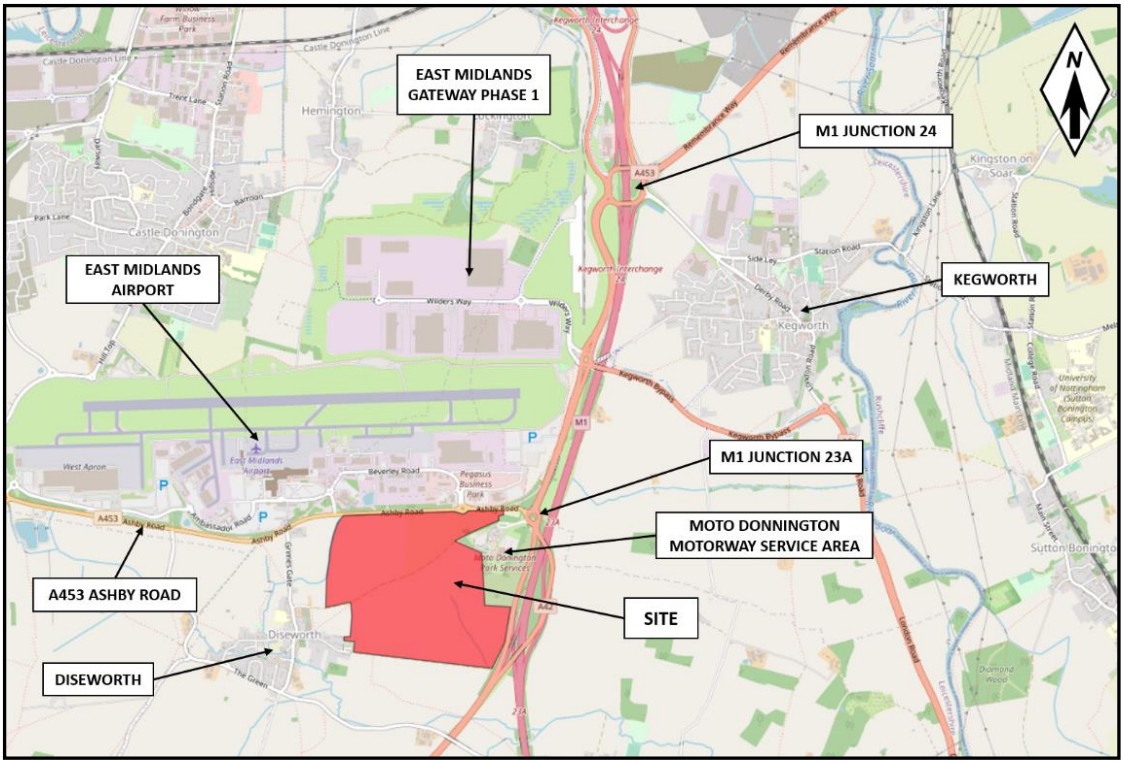
APPENDIX 1: TURNING COUNT CALIBRATION

1. INTRODUCTION

1.1 BWB Consulting Ltd (BWB) has been appointed by SEGRO (the Applicant) to produce a microsimulation traffic model of the M1 Junction 24, in support of an outline planning application for the Phase 2 Expansion of East Midlands Gateway (EMG) site.

1.2 The gross floor area (GFA) of the proposed scheme is approximately 3.23 million sqft (300,000sqm) comprising of 80% B8 use and 20% for B2 use, all with ancillary office use. The location of the proposed development is show in **Figure 1**.

Figure 1. Site Location



1.3 As part of East Midlands Gateway Phase 1, BWB obtained a copy of the M1 J24 VISSIM model network from National Highways in 2014. The model was validated and calibrated by AECOM to a base year of 2012. This model was utilised by BWB to assess the proposed highway network changes including improvements to M1 J24 as part of the EMG Phase 1. However, the model is now outdated and the proposed migitation as well as the scheme have been constructed on site since and is operational.

1.4 Therefore, to assess the impact of EMG Phase 2, a revalidation of the base model was required, this technical note has been produced to outline the modelling methodology undertaken as well as provide details of model calibration and validation.

Report Structure

1.5 Following this introduction, the remainder of this report is structured as follows:

- **Section 2:** Network Development, sets out the modelling parameters associated with the baseline model;

- **Section 3:** Model calibration, including comparison of manual turning count data against modelled flows.

- **Section 4:** Model validation comparing surveyed journey times with modelled journey times.

- **Section 5:** Summary and Conclusions.

2. NETWORK DEVELOPMENT

Model Approach

2.1 The PTV software package VISSIM is a microscopic, time-step, behaviour-based simulation tool developed to model traffic and public transport operations. VISSIM models individual vehicles and presents these movements visually, assisting in model validation and in the assessment of the performance of network improvement options.

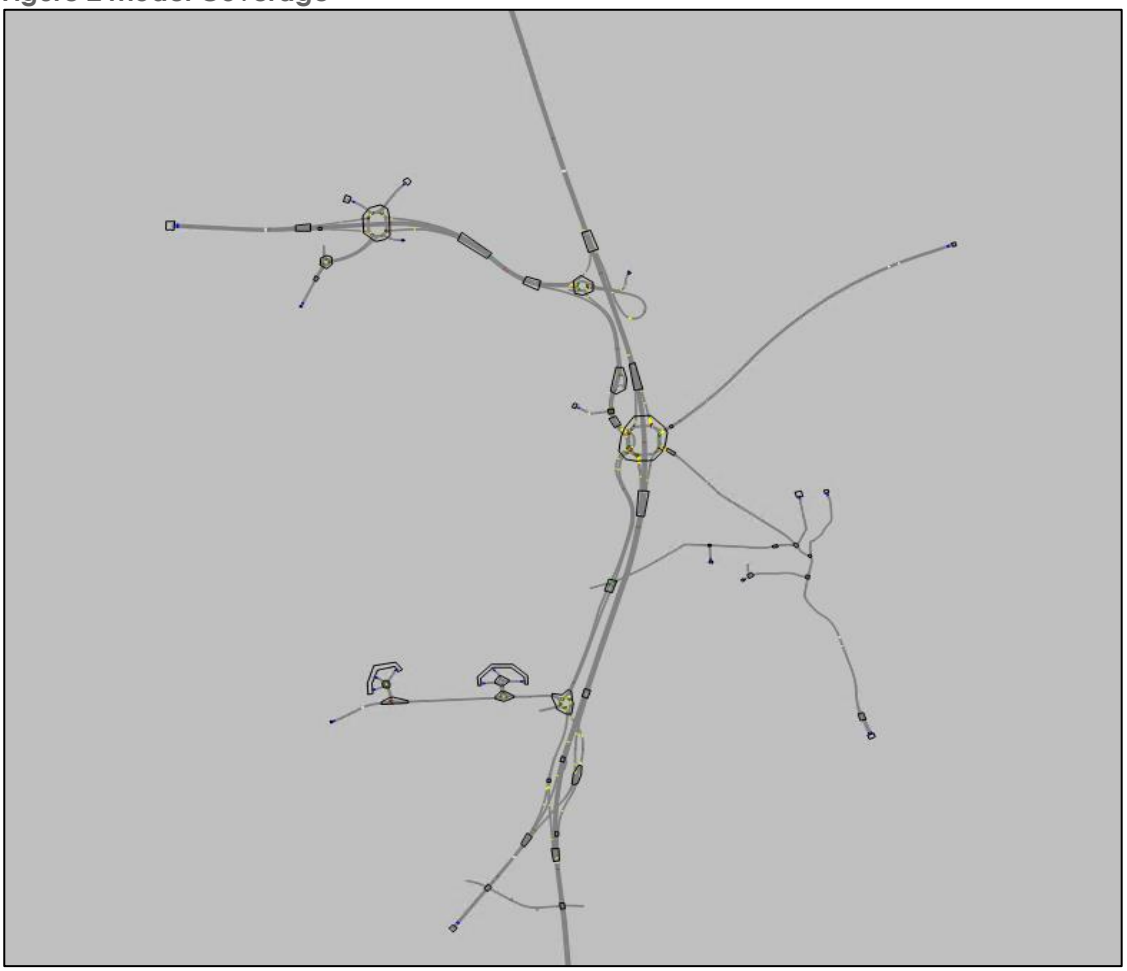
2.2 VISSIM provides output information such as queues, delays, and journey times on identified routes and other specific information. VISSIM also enables 3D videos to be produced providing a powerful visual simulation of the highway network.

2.3 The existing VISSIM model has utilised dynamics assignment for traffic flow input, therefore the this has been retained.

Model Coverage

2.4 The extents of the existing VISSIM model has been illustrated in **Figure 2** below.

Figure 2 Model Coverage



2.5 The existing model comprises of the following junctions.

i. A50 junction 1 Sawley Interchange;
ii. M1 J24a;
iii. M1 J24;
iv. A453/EMG Phase 1/Kegworth Bypass signal controlled gyratory;
v. M1 J23a Finger Farm roundabout (including M1/A42 on and off slip roads);
vi. A453/Hunter Road/minor EMG Phase 2 access roundabout
vii. A453 East Midlands airport internal roundabouts.

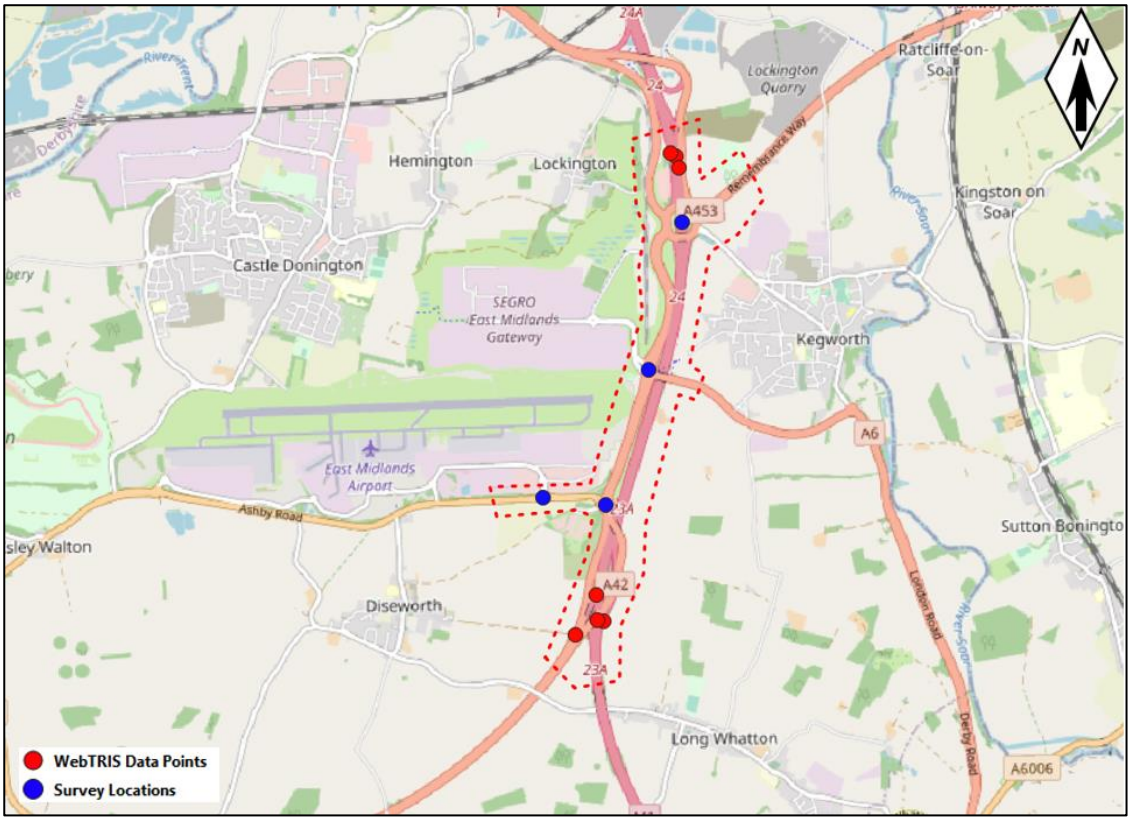
2.6 Following discussions with NH, it was agreed that the model will be cordoned of to the following junctions:

i. M1 J24;
ii. M1 J24a southbound merge onto the M1 and M1 junction 24;
iii. A453/EMG Phase 1/Kegworth Bypass signal controlled gyratory;
iv. M1 J23a Finger Farm roundabout (including M1/A42 on and off slip roads);
v. A453/Hunter Road/minor EMG Phase 2 access roundabout;
vi. A453/EMG Phase 2 site access roundabout.

Survey Data

2.7 Manual turning count surveys were undertaken on 3rd November 2023 for all junctions outlined in Paragraph 2.4. with the exception of the A453/Kegworth Bypass junction which was undertaken on 23rd November 2023. **Figure 3** illustrates locations of surveys undertaken and data points that are available on the WebTRIS website.

Figure 3: Survey and WebTRIS Data Locations



2.8 The survey data has been compared to a neutal month which was obtained from the Webtris website for a number of available data points around J24. The **Tables 1** and **2** sets our the GEH comapison between the survey data and the Webtris data.

Table 1: Survey Comparison AM

Appoarch/Exit	Traffic Flows (Veh)			GEH Comparison	
	Survey	2022 (Webtris)	2023 (Webtris)	2022 vs Survey	2023 vs Survey
M1 S Approach	1876	1811	1859	1.51	0.39
M1 S Exit	655	689	691	1.31	1.39
A453 Exit Towards EMG1	944	954	1014	0.32	2.24

Table 2: Survey Comparison PM

Appoarch/Exit	Traffic Flows (Veh)			GEH Comparison	
	Survey	2022 (Webtris)	2023 (Webtris)	2022 vs Survey	2023 vs Survey
M1 S Approach	1712	1715	1769	0.07	1.37
M1 S Exit	955	984	1002	0.93	1.50
A453 Exit Towards EMG1	615	666	699	2.02	3.28

2.9 The tables above illistriaght that the survey data is within a GEH 5 when comparing the neutal month from webtris and therefore, the survey data is acceptable.

2.10 The network peak hours were calculated as 0730-0830 and 1700-1800 in the morning and evening period respectively.

2.11 TomTom journey time data was obtained for all neutral days within the month of November 2022. Ths has been utilised for journey time validation purposes.

Model Time Periods

2.12 The modelled time periods include half an of hour warm up and cool down period either side of the peak hours. Subsequently, the model covers the following time periods:

- Weekday morning period from 0700-0900; and
- Weekday evening period from 1630-1830.

Traffic Flow Calculations

2.13 The traffic survey were utlised to generate traffic flow diagrams for each 15 minute interval with the time periods set out above for both light and heavy vehicles respectively. As the EMG gyratory junction was surveyed on a different day, there where significant discrepencies in flows northbound/southbound along the A453 therefore the flows have factored in accordance with flows approaching M1 J24 and Finger Farm Roundabout to ensure consistency for OD matrix estimation

2.14 The flows for the ahead and merge/diverge proportions have been calculated using counts that are avabilble on the WebTRIS website. **Tables 1** and **2** illustrate the calculations undertaken to derive the flows along the motorway as well as the split of traffic at the merges and diverges.

Table 3: Hourly WebTRIS Flows

Time Periods	WebTRIS				Divided By 4 (each 15 interval)			
	Northbound		Southbound		Northbound		Southbound	
	Lights	Heavies	Lights	Heavies	Lights	Heavies	Lights	Heavies
07:00-08:00	2275	605	4471	643	569	151	1118	161
08:00-09:00	2463	442	4069	581	616	111	1017	145
16:00-17:00	4132	502	3740	518	1033	126	935	130
17:00-18:00	4127	416	3863	491	1032	104	966	123
18:00-19:00	3307	290	3113	410	827	73	778	103

Table 4: 15-minute WebTRIS Flows

Time Periods	WebTRIS				% Split				Inputs into VISSIM			
	Northbound		Southbound		Northbound		Southbound					
	A42	M1	A42	M1	A42	M1	A42	M1	B-G	B-H	G-B	H-B
07:00 - 07:15	463	942	446	1028	33%	67%	30%	70%	780	338	381	187
07:15 - 07:30	441	895	477	1024	33%	67%	32%	68%	763	355	381	188
07:30 - 07:45	466	926	455	937	33%	67%	33%	67%	752	365	378	190
07:45 - 08:00	428	794	455	921	35%	65%	33%	67%	748	370	370	199
08:00 - 08:15	374	777	432	790	32%	68%	35%	65%	658	360	416	200
08:15 - 08:30	360	727	388	714	33%	67%	35%	65%	659	358	412	204
08:30 - 08:45	368	688	395	760	35%	65%	34%	66%	669	348	401	215
08:45 - 09:00	358	645	371	719	36%	64%	34%	66%	671	346	396	220
16:30 - 16:45	646	1148	547	902	36%	64%	38%	62%	582	353	661	372
16:45 - 17:00	525	1079	517	945	33%	67%	35%	65%	604	331	695	338
17:00 - 17:15	545	1145	542	944	32%	68%	36%	64%	614	352	699	333
17:15 - 17:30	571	1196	539	974	32%	68%	36%	64%	622	344	698	333
17:30 - 17:45	497	1301	579	887	28%	72%	39%	61%	584	381	747	285
17:45 - 18:00	615	1140	494	829	35%	65%	37%	63%	605	361	670	362
18:00 - 18:15	524	1040	442	795	34%	66%	36%	64%	500	278	550	277
18:15 - 18:30	464	945	417	718	33%	67%	37%	63%	492	286	554	272

HGVs												
Time Periods	WebTRIS				% Split				Inputs into VISSIM			
	Northbound		Southbound		Northbound		Southbound					
	A42	M1	A42	M1	A42	M1	A42	M1	B-G	B-H	G-B	H-B
07:00 - 07:15	75	102	68	96	42%	58%	41%	59%	94	67	87	64
07:15 - 07:30	62	115	66	105	35%	65%	39%	61%	99	62	98	53
07:30 - 07:45	57	119	56	115	32%	68%	33%	67%	108	53	102	49
07:45 - 08:00	65	102	54	112	39%	61%	33%	67%	108	52	92	59
08:00 - 08:15	40	120	58	129	25%	75%	31%	69%	100	45	83	28
08:15 - 08:30	55	108	60	125	34%	66%	32%	68%	98	47	73	37
08:30 - 08:45	58	121	85	123	32%	68%	41%	59%	86	59	75	36
08:45 - 09:00	80	103	71	104	44%	56%	41%	59%	86	59	62	48
16:30 - 16:45	80	107	64	89	43%	57%	42%	58%	75	54	72	54
16:45 - 17:00	55	88	55	81	38%	62%	40%	60%	77	52	77	48
17:00 - 17:15	49	108	54	116	31%	69%	32%	68%	84	39	72	32
17:15 - 17:30	41	92	45	117	31%	69%	28%	72%	89	34	72	32
17:30 - 17:45	47	83	50	89	36%	64%	36%	64%	79	44	66	38
17:45 - 18:00	43	91	57	104	32%	68%	35%	65%	79	43	71	33
18:00 - 18:15	36	59	58	88	38%	62%	40%	60%	62	41	45	27
18:15 - 18:30	49	51	40	77	49%	51%	34%	66%	67	35	37	36

2.15 Each 15-minute interval has been inputed into a skeleton LinSig model of the assessment area for both lights and heavies vehicles to allow LinSig's matrix estimation function to generate OD matrices that can be inputted into VISSIM.

Traffic Signals

2.16 A copy of the MOVA files for M1 J24 and the EMG gyratory were obtained from NH and the model has been updated to utilise the latest files.

2.17 PCMOVA has been utilised to replicate the the signal operation of the M1 J24 and EMG gyratory. The video footage of the junction was compared with the signal operation in VISSIM and it was concluded that this was reflective of on site behaviour.

2.18 MOVA data sets were not available for EMG West Steam 3, East Stream 3 and M1 J24 West Stream 4, therefore, VisVAP program has been ustilised to set up the exit/crossing signal controllers and subsequently link them to the respective MOVA junctions using detectors.

3. Network Development

3.1 A number of changes have been made to the original base model to ensure calibration & validation of the model. These include changes to reduced speed areas, desired speed distributions, priority rules, conflict area and link/flare usage. Details of these have been provided below.

Desired Speed Distribution And Reduced Speed Area

3.2 Initial review of the desired speed distributions utilised in the EMG Phase 1 model had been undertaken and it was noted that the speed distributions for 30, 60 and 70mph were affecting the journey times of vehicles in the model. Therefore, DfT data for the most recent year available (2021) has been obtained and new desired speed distributions have been calculated in coded into VISSIM.

3.3 Reduced speed areas have been retained and checked in accordance streetview, from the initial model apart from the road that connects the A50 to the M1/M1 J24. The TomTom Journey Data has been review and it was noted that the average speed traveling along this link is lower than what is sign posted and therefore amended to reflect this in the model.

3.4 A number of reduced speed area have been coded on to EMG gyratory around the bus stops.

Priority Rules & Conflict Areas

M1 J24

3.5 The existing priority rules and conflict areas have largely been unaltered apart from a small number of priority rules at the M1 J24 on the M1 northbound Off-Slip entry. The priority rules that have been amended are as follows:

- 495, 496, 497, 498

3.6 A few priority rules have been added on the M1 southbound Off-Slip entry. The priority rules that have been added are as follows:

- 501, 502, 502, 504

EMG Gyratory

3.7 The existing priority rules and conflict areas have largely been unaltered apart from a small number of priority rules at the EMG gyratory. The priority rules that have been amended are as follows:

- 469, 489, 509

3.8 The above alterations have been undertaken to ensure no overrunning of vehicles along the circulatory carriageway.

Public Transport

3.9 A number of bus services were identified within the study area therefore these have been coded into VISSIM in accordance with the respectively timetables and route maps. The following services are included within the model:

- EMG Shuttle Bus
- 9 – EMA – Queens Hospital
- Skylink Derby – Leicester – Derby
- Skylink Derby – Derby – Leicester
- Skylink Nottingham – Nottingham – Loughborough
- Skylink Nottingham – Loughborough – Nottingham
- Skylink Express – Nottingham – EMA
- Skylink Express – Nottingham – EMA

4. Model Changes

4.1 A copy of the VISSIM model was submitted to National Highways on 31 March 2023 subsequently comments were received on 3 May 2023. Following this, a revised copy of the VISSIM models were submitted on 11 July 2023 to ensure network parameters were acceptable prior to rerunning the models for validation. Details of the changes made are provided below.

Comment 1: "Driver behaviour parameter should retain default values unless a reasonable justification for the changes made is provided."

Amendment 1: The driver behaviour parameters have been reverted back to defult

Comment 2: "It is considered that Wiedemann 74 is not suitable for use on motorway, or even dual carriageway links (away from junctions) and that a behaviour type based on Wiedemann 99 should be used."

Amendment 2: Motorway link and dual carriageway links have been amended to Wiedemann 99

Comment 3: "The Behaviour at Amber/Red Signal for Driver Behaviour types should be changed to 'stop' rather than 'go' as current modelled."

Amendment 3: Behaviour at Amber/Red Signal for Driver Behaviour types set to 'stop'

Comment 4: "The various discrepancies between the on-street highway layout and that in the model should be reviewed and corrected."

Amendment 4: Link arrangements have been reviews and amended to reflectexactly whats on the ground.

Comment 5: "The coded vehicle entry speed from Parking Lots and DSDs throughout the network need to be revised to ensure consistent implied vehicles speeds on the same stretch of highway."

Amendment 5: All Parking Lots and DSD have been reviewed and amended where needed to provide more realistic vehicle speeds throughout the network.

Comment 6: "The omission of RDAs in the locations listed in this review should be investigated and appropriate RDAs added to the network."

Amendment 6: RDAs have been review and added/amended throughout the network

Comment 7: "All discrepancies between the controller information and the modelled controller parameters, in particular the inter-green values, should be checked and corrected as appropriate."

Amendment 7: All Signal spec checked and amended where required including intergreens

Comment 8: "There appears to be differences in the call/cancel times between the controller information and those used in the model. These should be checked and corrected as appropriate."

Amendment 8: call/cancel times have been amended

Comment 9: "The dummy connector on the AS453 eastbound entry to Hunter Roundabout should be deleted, mainly to ensure vehicles entering the roundabout correctly give-way."

Amendment 9: call/cancel times have been amended

4.2 Further to the above, some slight modifications were requested for the models, and these changes have been incorporated into the updated VISSIM model.

5. ADDITIONAL MODEL CHANGES

5.1 Initial runs of the forecast modelling indicated some calibration issues, therefore, additional changes have been made to the base model. These amendments are set out below.

VISSIM Version

5.2 VISSIM base model revalidated in VISSIM 24. VISSIM 24 utilises all cores therefore this will reduce computation time of forecast modelling runs.

Links

M1 J24

5.3 M1 NB exit altered (Link 10079) to one lane to reflect existing layout.

5.4 Altered the M1 south approach circulatory from 2 x 2-lane links (Link 17 & Link 194) to 1 x 4-lane link (Link 17). This allows better lane utilisation.

5.5 M1 N approach lane connectors (Link 10016) to A453 Remembrance Way from 1 lane connectors to a 2-lane connector to reflect video observation as well as road markings.

EMG Gyratory

5.6 Altered the EMG approach from 2x2-lane links to 1x4-lane link as the former caused convergence issues in the forecast modelling scenarios.

- Links Amended: 48, 70, 83, 576, 10481, 10482, 10487

Flare lengths

5.7 Flare lenths and allignments have also been reviewed and amended, the northbound approach to Finger Farm Roundabout (Link 136) and the eastbound approach to Hunters Road Roundabout (Link 212).

Signals

5.8 MOVA changes at M1 J24 special conditioning amended from call/cancel to delay/persistence. Signal linkage issues were noted in the forecast modelling scenarios.

A review of the video footage indicated that the call/cancel special conditioning did not reflect the signal operation well, particularly on the southwestern quadrant of the junction. Therefore special conditioning was amended to delay/persistence which reflected the operation better.

5.9 BWB have had discussions with a MOVA engineer who indicated that typically if links are set to simple traffic, these are not utilised on-site. Therefore detectors associated with simple traffic at the EMG gyratory have been removed.

Priority Rules

5.10 Some of the priority were slightly misaligned at the Finger Farm Roundabout causing vehicles to change lanes at the approach to the circulatory. Therefore, these have been repositioned to ensure no unnecessary lane changes.

Route Clousures

5.11 When undertaking the forecast modelling a calibration issue presented itself where traffic coming from the M1 south would come off the M1 travel up the A453 to Junction 24 in the AM. This is not realistic and therefore a route closure has veen added to stop vehicles doing this movement. This route closure will be used in all AM forecast modelling to remain consistent.

Route Costs

5.12 There are 2 routes to access the A50 via Junction 24 for vehicles travelling northbound from the the M1 and the A42, one route is to travel up the M1 and the other route is via the A453. As the model is a dynamic model and when running the models for calibration VISSIM assigns flows to each of these routes depending on where delay is in the model.

5.13 The GEH at Junction 24 for the 2 routes were unbalanced where VISSIM was assigning too many vehicles to use the A453 compared to the M1 and therefore, as a result a cost has been assigned to link number 184 of 75/km. this value provides the best split of traffic between the 2 routes and provides a cohesive GEH at J24. The will remain consistent between all forecast modelling scenarios.

6. MODEL CALIBRATION

Traffic Data

6.1 A skeleton LinSig model of the VISSIM network was built and Lights/Heavies turning movements were input into LinSig at 15-minute intervals. LinSig matrix estimation was subsequently used to generate synthetic OD matrices for input into the VISSIM model.

Convergence

6.2 The base model has been developed using dynamic assignment therefore models have been converged prior to extracting results from the model. TfL traffic modelling guidelines indicates that a model is converged if:

- 95% of all path traffic volumes change by less than 5% for at least four consecutive iterations; and
- 95% of travel times on all paths change by less than 20% for at least four consecutive iterations.

6.3 A summary of the convergence is presented in **Table 5** below.

Table 5: Model Convergence Summary

Sim Run	Traffic Volume		Travel Time on Paths	
	AM	PM	AM	PM
1	96%	99%	98%	98%
2	96%	98%	98%	97%
3	97%	98%	97%	96%
4	96%	97%	96%	95%
5	98%	96%	95%	97%
6	96%	95%	99%	96%
7	99%	98%	98%	98%
8	98%	99%	97%	99%
9	98%	97%	98%	99%
10	99%	98%	97%	99%

6.4 Based on the above, it is considered that both morning and evening peak hour models are converged.

Simulation

6.5 Ten iterations of each of the models were run starting at a random seed of 42 and increasing by 5 each interaction. The network performance parameter 'average delay per vehicle' was obtained for each run. The mean of the 10 runs was found for each option and the average was selected for calibration. The results of this process are presented in **Table 6** below.

Table 6: Network Performance

Seed Value	AM PEAK	PM PEAK
	Average Delay per Vehicle	Average Delay per Vehicle
42	52.774	43.351
47	49.629	42.303
52	50.065	44.313
57	52.982	46.324
62	54.638	42.574
67	53.609	41.910
72	54.941	42.829
77	52.246	41.791
82	50.938	41.322
87	52.155	42.929
Average	52.40	42.96
SD	1.70	1.38
Confidence	1.05	0.86

6.6 The stability of the models was judged using the Chi2 goodness of fit test which seeks to demonstrate that statistically the different model runs pass the goodness of fit null hypothesis that there is no significant difference in average delays between the seed values, thus demonstrating stability.

6.7 **Table 7** below demonstrate that, using the Chi2 distribution, in the morning and evening peak models pass the Chi2 goodness of fit test for respective degrees of freedom. The models therefore exhibit suitable stability/repeatability and are fit for purpose.

Table 7: Summary of Seed Stability Assessment

	MORNING PEAK					EVENING PEAK				
Seed	Observed	Expected	o-e	(o-e)2	(o-e)2/e	Observed	Expected	o-e	(o-e)2	(o-e)2/e
42	52.774	52.398	0.376	0	0.003	43.351	42.965	0.387	0.149	0.003
47	49.629	52.398	-2.769	8	0.146	42.303	42.965	-0.662	0.438	0.010
52	50.065	52.398	-2.333	5	0.104	44.313	42.965	1.349	1.819	0.042
57	52.982	52.398	0.584	0	0.007	46.324	42.965	3.360	11.287	0.263
62	54.638	52.398	2.241	5	0.096	42.574	42.965	-0.391	0.153	0.004
67	53.609	52.398	1.211	1	0.028	41.910	42.965	-1.055	1.113	0.026
72	54.941	52.398	2.544	6	0.124	42.829	42.965	-0.136	0.018	0.000
77	52.246	52.398	-0.152	0	0.000	41.791	42.965	-1.173	1.377	0.032
82	50.938	52.398	-1.459	2	0.041	41.322	42.965	-1.643	2.698	0.063
87	52.155	52.398	-0.243	0	0.001	42.929	42.965	-0.036	0.001	0.000
					0.549					0.443
	chi critical	0.05				chi critical	0.05			
	DF	(n-1)	9	=	16.919	DF	(n-1)	9	=	16.919
					Pass as 0.549 is less than 16.919					**Pass as 0.443 is less than 16.919**

Network Performance

6.8 **Table 8** presents a summary of the average Network Performance information.

Table 8: Network Performance

	AM	PM
Average Delay (s)	52	43
Average Speed (mph)	49	51
Vehicles Arrived	18194	18535
Latent Demand	1	0.6

6.9 **Table 8** illustrates that there is minimal latent demand in the morning peak hour period however a review of the error logs indicate that by the end of the cool down period, all vehicles are able to enter the VISSIM network.

Calibration Methodology

6.10 The Design Manual for Roads and Bridges (DMRB) defines model calibration as "the process of adjusting the parameters used in the various mathematical relationships within the model to reflect the data as well as is necessary to reflect the model objectives". The model calibration process ensures that model has the ability to exhibit characteristics that accurately compare with observed data.

6.11 The model calibration has been undertaken over a model period of 1.0 hour in the morning peak (07:30 – 08:30) and 1 hour in the evening peak (17:00 – 18:00). These periods of calibration do not include the 'warm up' and 'cool down' period before and after the identified 07:30 – 08:30 and 17:00 – 18:00 morning and evening peak hours.

Traffic Flow Calibration

6.12 The Design Manual for Roads and Bridges (DMRB) defines model calibration as "the process of adjusting the parameters used in the various mathematical relationships within the model to reflect the data as well as is necessary to reflect the model objectives". The model calibration process ensures that the model has the ability to exhibit characteristics that accurately compare with observed data.

6.13 DfT Transport Analysis Guidance (TAG) states that the calibration of traffic data in a model should be based on the Geffrey E.Havers (GEH) statistic, and states that modelled flows must have a GEH value of less than 5 in at least 85% of the cases.

6.14 The turning count calibration for the base model has been based on the average of all simulation runs. **Table** 9 provides a summary of the comparison between the observed and modelled total turning movements within the model.

Table 9: Summary of Traffic Flow Calibration

	Total Turns	Counts GEH<5
Morning Peak	59	92%
Evening Peak	59	93%

3.1 The above table represent a pass rate of over 85% for a GEH of less than 5 in both peak hour periods. The model is therefore considered to be fit for purpose. A copy of the full output is presented in **Appendix 1**.

7. MODEL VALIDATION

Introduction

7.1 TAG Unit M3.1 states that "for journey time calibration, the measure which should be used is: the percentage difference between modelled and observed journey times, subject to an absolute maximum difference". Subsequently, Table 3 of TAG states that the "modelled times along routes should be within 15% of surveyed times or 1 minute, if higher than 15%."

Travel Time Survey

7.2 TomTom journey time survey was obtained at 15 minute intervals for the neutral days within the month of November 2023 during the peak hours.

7.3 **Figure 4** and **5** provides routes utilised for journey time validation.

Figure 4: Journey Time Routes (1 - 10)

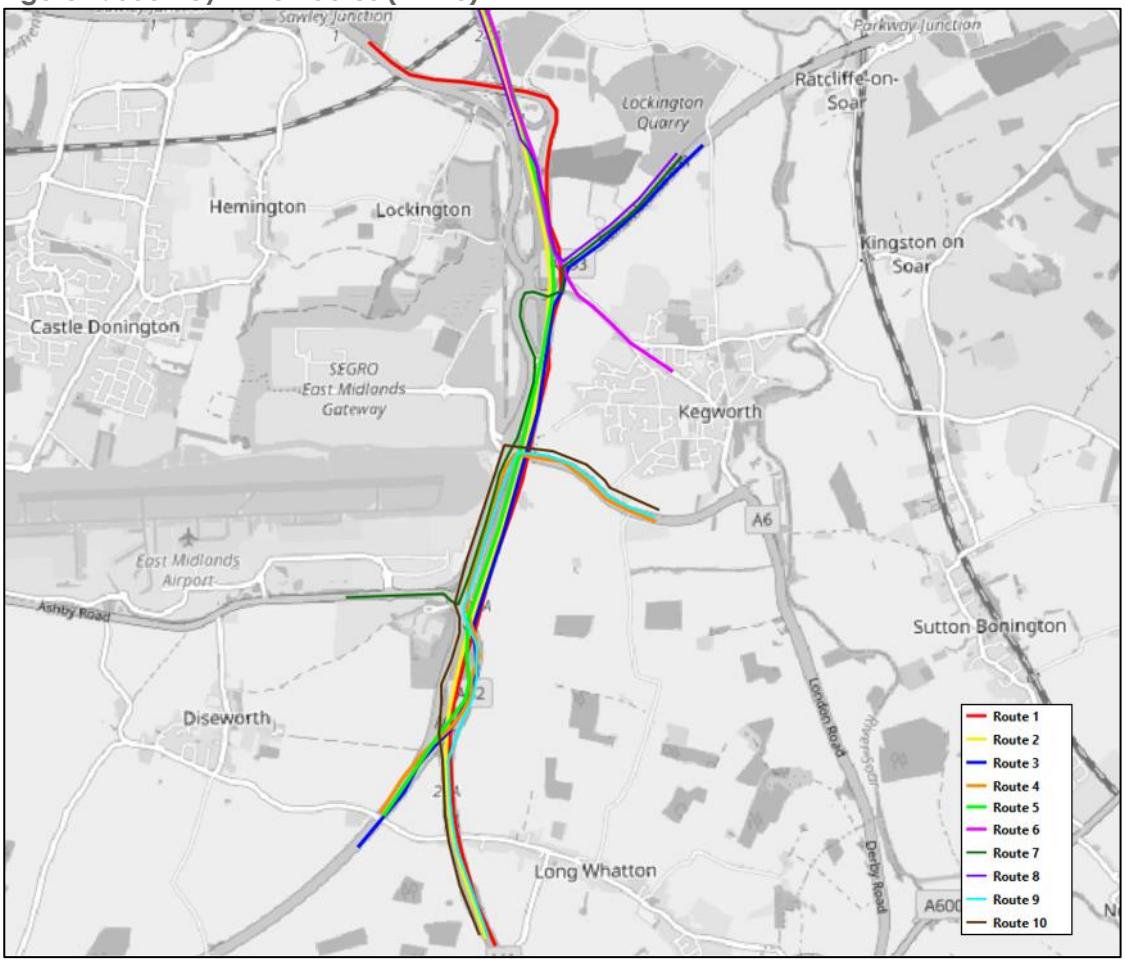
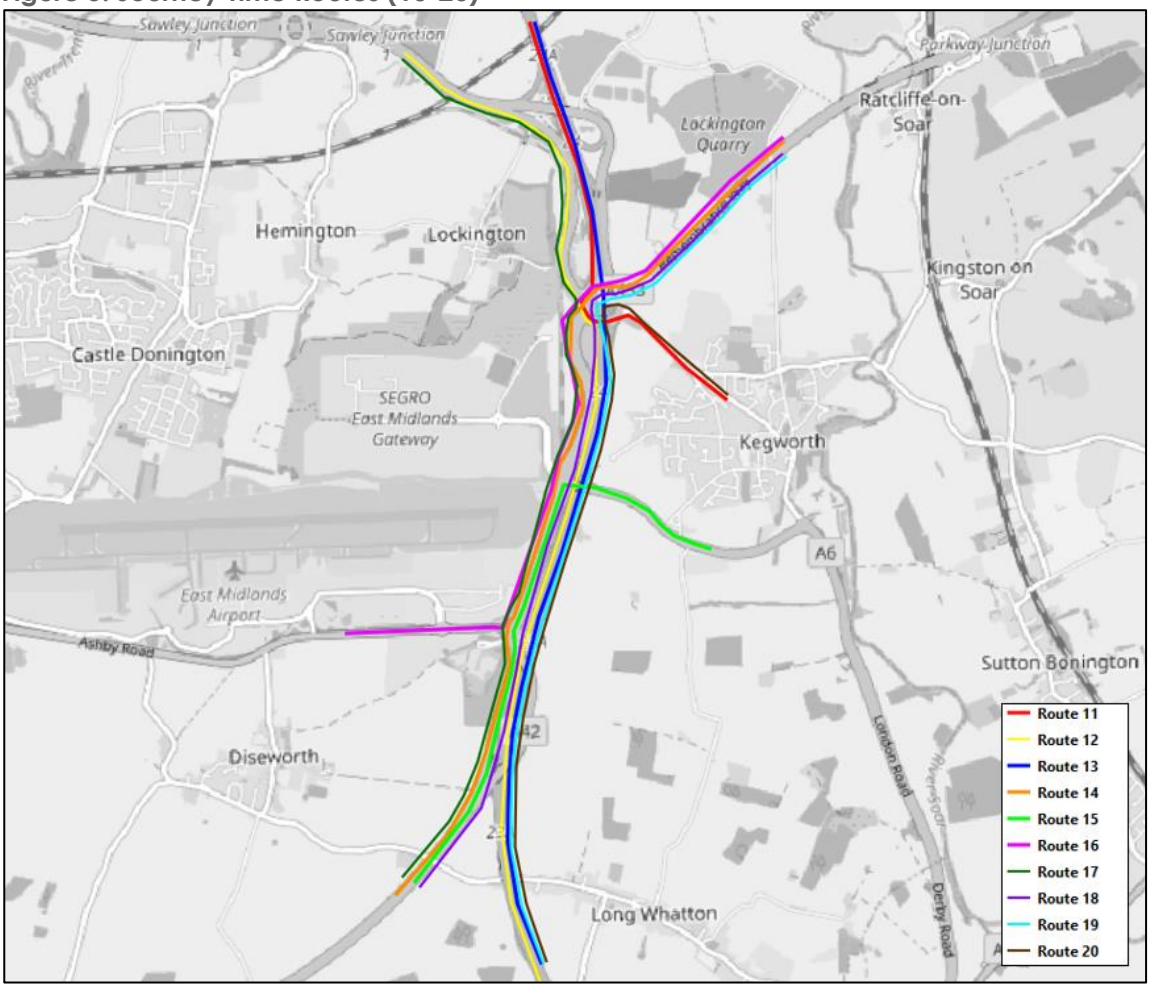


Figure 5: Journey Time Routes (10-20)



7.4 Details of the origin and destination of the routes identified above is provided below:

- Route 1 – A50 to M1 South
- Route 2 – M1 North to M1 South
- Route 3 – A453 Rememberance Way to A42
- Route 4 – Kegworth Bypass to A42
- Route 5 - M1 North to A42
- Route 6 – M1 North to Derby Road
- Route 7 – A453 Rememberance Way to A453 EMA
- Route 8 – M1 North to A453 Rememberance Way
- Route 9 – Kegworth Bypass to M1 South
- Route 10 - M1 South to Kegworth Bypass
- Route 11 – Derby Road to M1 North
- Route 12 – M1 South to A50
- Route 13 – M1 South to M1 North
- Route 14 – A42 to A453 Rememberance Way via A453

- Route 15 - A42 to Kegworth Bypass
- Route 16 – A453 EMA to A453 Rememberance Way
- Route 17 – A42 to A50 via A453
- Route 18 – A42 to A453 Rememberance Way via M1
- Route 19 – M1 South to A453 Rememberance Way via M1
- Route 20 - M1 South to Derby Road via M1

Validation Results

7.5 Model validation has been undertaken using 10 simulation seed runs as illustrated in **Table 7**. The average journey time for each full route has been compared with the surveyed journey times and the resultant output is presented in **Table 10** below.

Table 10: Travel Time Validation

Route	AM			PM		
	Observed	Modelled	% Difference	Observed	Modelled	% Difference
1	489	349	-28.6%	413	321	-22.4%
2	358	333	-6.9%	352	315	-10.4%
3	318	310	-2.5%	353	305	-13.6%
4	271	308	13.5%	269	288	7.2%
5	377	324	-14.0%	359	312	-13.0%
6	311	285	-8.5%	299	260	-12.9%
7	397	389	-1.9%	445	367	-17.4%
8	271	278	2.7%	255	258	1.4%
9	293	305	4.2%	294	291	-1.1%
10	318	338	6.4%	338	337	-0.4%
11	325	343	5.7%	394	339	-13.9%
12	374	348	-7.0%	408	361	-11.5%
13	331	327	-1.3%	397	356	-10.2%
14	393	424	7.9%	427	392	-8.2%
15	293	324	10.4%	314	297	-5.5%
16	389	400	2.8%	443	412	-6.9%
17	343	353	2.8%	414	441	6.5%
18	372	360	-3.2%	370	339	-8.4%
19	393	375	-4.7%	394	376	-4.5%
20	433	373	-13.8%	438	377	-13.9%

Table 11: Travel Time Validation Summary

	<15%	
	AM	PM
Fail	1	2
Pass	19	18
Total	20	20
%	95%	90%

7.6 **Table 8** illustrates that the over 85% of the journey times validate within 15% therefore it is considered the model is fit for purpose for future year assessment.

8. SUMMARY & CONCLUSIONS

8.1 BWB Consulting Ltd (BWB) has been appointed by SEGRO (the Applicant) to produce a microsimulation traffic model of the M1 Junction 24, in support of an outline planning application for the Phase 2 Expansion of the East Midlands Gateway (EMG) site.

8.2 The gross floor area (GFA) of the proposed scheme is approximately 3.23 million sqft (300,000sqm) comprising of 80% B8 use and 20% for B2 use, all with ancillary office use.

8.3 Traffic surveys were undertaken in November 2022 and subsequently a base VISSIM model of the study area has been developed by BWB.

8.4 The model was calibrated using observed and modelled turning movements during the peak hours at a 15-minute interval. These were assessed against DfT modelling guidelines and it was concluded that the base model satisfies both criterias.

8.5 Modelled journey times indicate that over 85% of these validate within 15% of observed data therefore it is considered the model is 'fit for purpose'.

APPENDICES

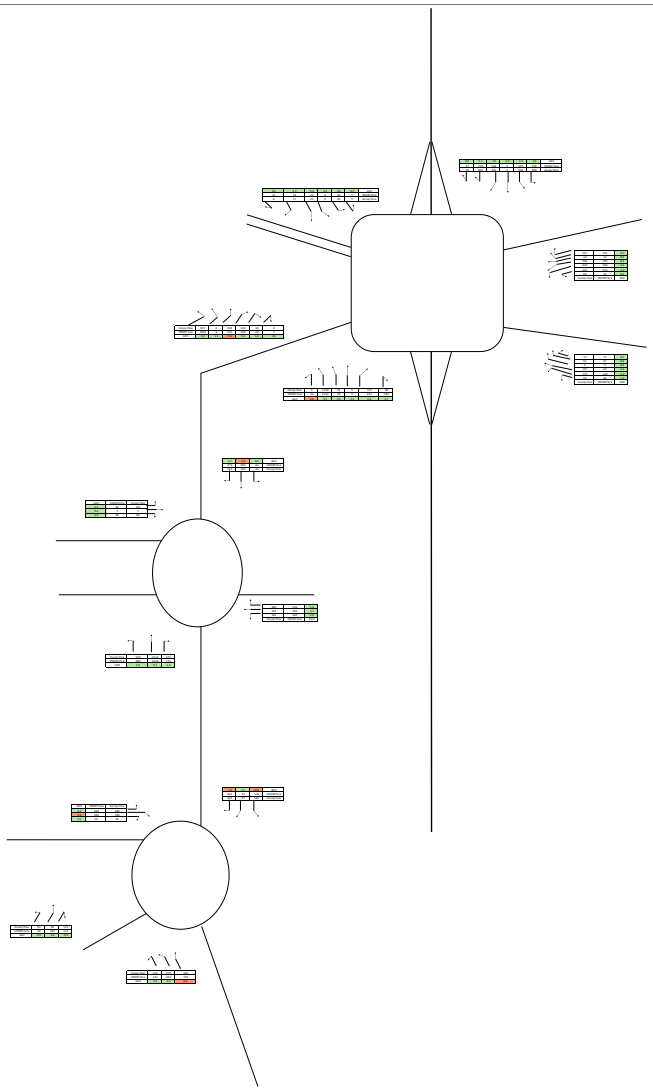
APPENDIX 1: TURNING COUNT CALIBRATION

AM Peak			Survey Flow	VISSIM Flow	Difference (M - C)	% Difference	GEH	GEH <5
Junction	From	To						
Junction 1	A453 (N)	M1 J23A Access	560	176	384	218%	20.02	Fail
Junction 1	A453 (N)	Donington Services Access	67	82	-15	-18%	1.74	Pass
Junction 1	A453 (N)	A453 (W)	420	591	-171	-29%	7.61	Fail
Junction 1	M1 J23A Access	Donington Services Access	134	123	11	9%	0.97	Pass
Junction 1	M1 J23A Access	A453 (W)	475	403	72	18%	3.44	Pass
Junction 1	M1 J23A Access	A453 (N)	952	759	193	25%	6.60	Fail
Junction 1	Donington Services Access	A453 (W)	55	32	23	72%	3.49	Pass
Junction 1	Donington Services Access	A453 (N)	89	103	-14	-14%	1.43	Pass
Junction 1	Donington Services Access	M1 J23A Access	112	115	-3	-3%	0.28	Pass
Junction 1	A453 (W)	A453 (N)	408	498	-90	-18%	4.23	Pass
Junction 1	A453 (W)	M1 J23A Access	249	164	85	52%	5.92	Fail
Junction 1	A453 (W)	Donington Services Access	23	10	13	130%	3.20	Pass
Junction 2	M1 J24 (N)	A453 (N)	900	979	-79	-8%	2.58	Pass
Junction 2	M1 J24 (N)	To Derby Road	526	557	-31	-6%	1.33	Pass
Junction 2	M1 J24 (N)	To M1 J24 (S)	0	0	0	0%	0.00	Pass
Junction 2	M1 J24 (N)	A453 (S)	542	520	22	4%	0.95	Pass
Junction 2	M1 J24 (N)	A50	321	319	2	1%	0.11	Pass
Junction 2	M1 J24 (N)	Hilton Hotel Lane	14	17	-3	-18%	0.76	Pass
Junction 2	A453 (N)	Derby Road	60	54	6	11%	0.79	Pass
Junction 2	A453 (N)	M1 J24 (S)	483	555	-72	-13%	3.16	Pass
Junction 2	A453 (N)	A453 (S)	424	356	68	19%	3.44	Pass
Junction 2	A453 (N)	A50	246	245	1	0%	0.06	Pass
Junction 2	A453 (N)	Hilton Hotel Lane	14	14	0	0%	0.00	Pass
Junction 2	A453 (N)	M1 J24 (N)	187	191	-4	-2%	0.29	Pass
Junction 2	Derby Road	M1 J24 (S)	54	64	-10	-16%	1.30	Pass
Junction 2	Derby Road	A453 (S)	174	146	28	19%	2.21	Pass
Junction 2	Derby Road	A50	107	94	13	14%	1.30	Pass
Junction 2	Derby Road	Hilton Hotel Lane	2	2	0	0%	0.00	Pass
Junction 2	Derby Road	M1 J24 (N)	61	67	-6	-9%	0.75	Pass
Junction 2	Derby Road	A453 (N)	75	71	4	6%	0.47	Pass
Junction 2	M1 J24 (S)	A453 (S)	5	34	-29	-85%	6.57	Fail
Junction 2	M1 J24 (S)	A50	1150	1132	18	2%	0.53	Pass
Junction 2	M1 J24 (S)	Hilton Hotel Lane	21	23	-2	-9%	0.43	Pass
Junction 2	M1 J24 (S)	M1 J24 (N)	5	0	5	0%	3.16	Pass
Junction 2	M1 J24 (S)	A453 (N)	731	811	-80	-10%	2.88	Pass
Junction 2	M1 J24 (S)	Derby Road	98	105	-7	-7%	0.69	Pass
Junction 2	A453 (S)	A50	957	1025	-68	-7%	2.16	Pass
Junction 2	A453 (S)	Hilton Hotel Lane	6	9	-3	-33%	1.10	Pass
Junction 2	A453 (S)	M1 J24 (N)	240	152	88	58%	6.29	Fail
Junction 2	A453 (S)	A453 (N)	232	228	4	2%	0.26	Pass
Junction 2	A453 (S)	Derby Road	30	23	7	30%	1.36	Pass
Junction 2	Hilton Hotel Lane	M1 J24 (N)	5	5	0	0%	0.00	Pass
Junction 2	Hilton Hotel Lane	A453 (N)	63	59	4	7%	0.51	Pass
Junction 2	Hilton Hotel Lane	Derby Road	9	9	0	0%	0.00	Pass
Junction 2	Hilton Hotel Lane	M1 J24 (S)	23	22	1	5%	0.21	Pass
Junction 2	Hilton Hotel Lane	A453 (S)	17	15	2	13%	0.50	Pass
Junction 2	Hilton Hotel Lane	A50	9	12	-3	-25%	0.93	Pass
Junction 3	A453 (N)	A6 Kegworth Bypass	54	91	-37	-41%	4.35	Pass
Junction 3	A453 (N)	A453 (S)	393	603	-210	-35%	9.41	Fail
Junction 3	A453 (N)	Wilders Way	323	374	-51	-14%	2.73	Pass
Junction 3	A6 Kegworth Bypass	A453 (S)	142	162	-20	-12%	1.62	Pass
Junction 3	A6 Kegworth Bypass	Wilders Way	415	382	33	9%	1.65	Pass
Junction 3	A6 Kegworth Bypass	A453 (N)	369	339	30	9%	1.59	Pass
Junction 3	A453 (S)	Wilders Way	219	264	-45	-17%	2.90	Pass
Junction 3	A453 (S)	A453 (N)	1014	1016	-2	0%	0.06	Pass
Junction 3	A453 (S)	A6 Kegworth Bypass	127	112	15	13%	1.37	Pass
Junction 3	Wilders Way	A453 (N)	107	86	21	24%	2.14	Pass
Junction 3	Wilders Way	A6 Kegworth Bypass	7	5	2	40%	0.82	Pass
Junction 3	Wilders Way	A453 (S)	80	88	-8	-9%	0.87	Pass

	<5
Fail	7
Pass	52
Total	59
%	88%

AM Peak			Survey Flow	VISSIM Flow	Difference (M - C)	% Difference	GEH	GEH <5
Junction	From	To						
Junction 1	A453 (N)	M1 J23A Access	367	209	158	76%	9.31	Fail
Junction 1	A453 (N)	Donington Services Access	88	73	15	21%	1.67	Pass
Junction 1	A453 (N)	A453 (W)	178	187	-9	-5%	0.67	Pass
Junction 1	M1 J23A Access	Donington Services Access	138	137	1	1%	0.09	Pass
Junction 1	M1 J23A Access	A453 (W)	420	406	14	3%	0.69	Pass
Junction 1	M1 J23A Access	A453 (N)	771	767	4	1%	0.14	Pass
Junction 1	Donington Services Access	A453 (W)	53	60	-7	-12%	0.93	Pass
Junction 1	Donington Services Access	A453 (N)	88	95	-7	-7%	0.73	Pass
Junction 1	Donington Services Access	M1 J23A Access	124	146	-22	-15%	1.89	Pass
Junction 1	A453 (W)	A453 (N)	587	498	89	18%	3.82	Pass
Junction 1	A453 (W)	M1 J23A Access	253	316	-63	-20%	3.74	Pass
Junction 1	A453 (W)	Donington Services Access	51	59	-8	-14%	1.08	Pass
Junction 2	M1 J24 (N)	A453 (N)	907	949	-42	-4%	1.38	Pass
Junction 2	M1 J24 (N)	To Derby Road	545	528	17	3%	0.73	Pass
Junction 2	M1 J24 (N)	To M1 J24 (S)	4	0	4	0%	2.83	Pass
Junction 2	M1 J24 (N)	A453 (S)	182	141	41	29%	3.23	Pass
Junction 2	M1 J24 (N)	A50	240	221	19	9%	1.25	Pass
Junction 2	M1 J24 (N)	Hilton Hotel Lane	10	9	1	11%	0.32	Pass
Junction 2	A453 (N)	Derby Road	74	72	2	3%	0.23	Pass
Junction 2	A453 (N)	M1 J24 (S)	813	865	-52	-6%	1.80	Pass
Junction 2	A453 (N)	A453 (S)	294	356	-62	-17%	3.44	Pass
Junction 2	A453 (N)	A50	405	376	29	8%	1.47	Pass
Junction 2	A453 (N)	Hilton Hotel Lane	11	9	2	22%	0.63	Pass
Junction 2	A453 (N)	M1 J24 (N)	263	269	-6	-2%	0.37	Pass
Junction 2	Derby Road	M1 J24 (S)	51	59	-8	-14%	1.08	Pass
Junction 2	Derby Road	A453 (S)	88	87	1	1%	0.11	Pass
Junction 2	Derby Road	A50	135	133	2	2%	0.17	Pass
Junction 2	Derby Road	Hilton Hotel Lane	2	2	0	0%	0.00	Pass
Junction 2	Derby Road	M1 J24 (N)	87	89	-2	-2%	0.21	Pass
Junction 2	Derby Road	A453 (N)	57	61	-4	-7%	0.52	Pass
Junction 2	M1 J24 (S)	A453 (S)	5	1	4	400%	2.31	Pass
Junction 2	M1 J24 (S)	A50	1089	980	109	11%	3.39	Pass
Junction 2	M1 J24 (S)	Hilton Hotel Lane	14	15	-1	-7%	0.26	Pass
Junction 2	M1 J24 (S)	M1 J24 (N)	0	0	0	0%	0.00	Pass
Junction 2	M1 J24 (S)	A453 (N)	528	686	-158	-23%	6.41	Fail
Junction 2	M1 J24 (S)	Derby Road	76	95	-19	-20%	2.05	Pass
Junction 2	A453 (S)	A50	999	875	124	14%	4.05	Pass
Junction 2	A453 (S)	Hilton Hotel Lane	5	5	0	0%	0.00	Pass
Junction 2	A453 (S)	M1 J24 (N)	323	347	-24	-7%	1.31	Pass
Junction 2	A453 (S)	A453 (N)	256	269	-13	-5%	0.80	Pass
Junction 2	A453 (S)	Derby Road	41	33	8	24%	1.32	Pass
Junction 2	Hilton Hotel Lane	M1 J24 (N)	15	15	0	0%	0.00	Pass
Junction 2	Hilton Hotel Lane	A453 (N)	20	21	-1	-5%	0.22	Pass
Junction 2	Hilton Hotel Lane	Derby Road	10	10	0	0%	0.00	Pass
Junction 2	Hilton Hotel Lane	M1 J24 (S)	8	7	1	14%	0.37	Pass
Junction 2	Hilton Hotel Lane	A453 (S)	4	3	1	33%	0.53	Pass
Junction 2	Hilton Hotel Lane	A50	11	10	1	10%	0.31	Pass
Junction 3	A453 (N)	A6 Kegworth Bypass	77	94	-17	-18%	1.84	Pass
Junction 3	A453 (N)	A453 (S)	305	194	111	57%	7.03	Fail
Junction 3	A453 (N)	Wilders Way	243	223	20	9%	1.31	Pass
Junction 3	A6 Kegworth Bypass	A453 (S)	132	139	-7	-5%	0.60	Pass
Junction 3	A6 Kegworth Bypass	Wilders Way	402	388	14	4%	0.70	Pass
Junction 3	A6 Kegworth Bypass	A453 (N)	389	388	1	0%	0.05	Pass
Junction 3	A453 (S)	Wilders Way	90	136	-46	-34%	4.33	Pass
Junction 3	A453 (S)	A453 (N)	1026	906	120	13%	3.86	Pass
Junction 3	A453 (S)	A6 Kegworth Bypass	187	328	-141	-43%	8.79	Fail
Junction 3	Wilders Way	A453 (N)	221	214	7	3%	0.47	Pass
Junction 3	Wilders Way	A6 Kegworth Bypass	19	17	2	12%	0.47	Pass
Junction 3	Wilders Way	A453 (S)	140	138	2	1%	0.17	Pass

	<5
Fail	2
Pass	45
Total	47
%	96%



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East Midlands Gateway Phase 2

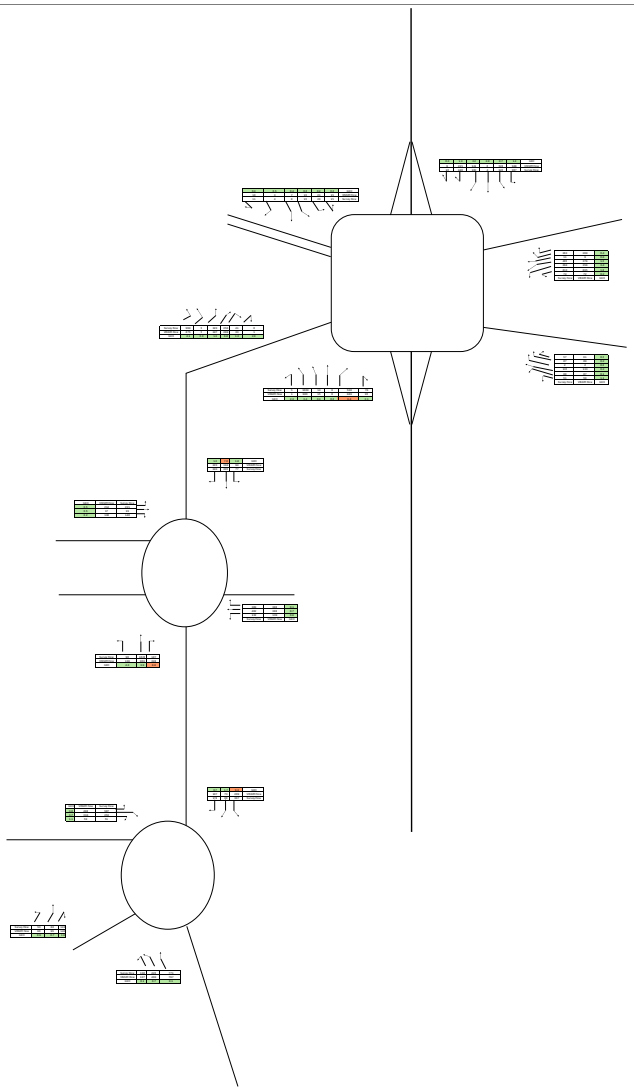
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GEM Comparison AM

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Checked	CC	**Date**	03.03.25

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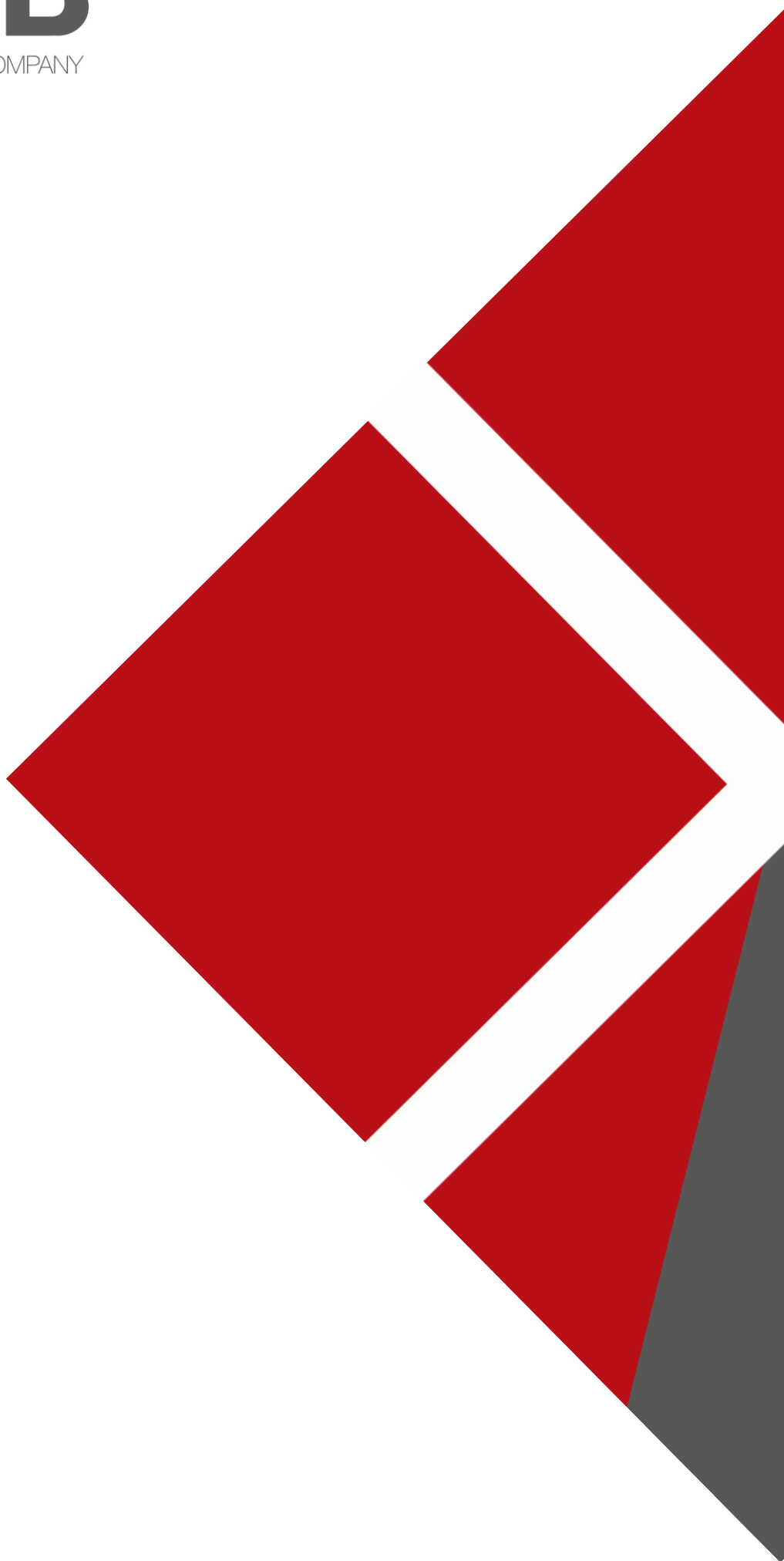
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Checked	CC	**Date**	03.03.25

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APPENDIX 5: Base Model Validation Report (document reference EMG2-BWB-GEN-XX-RP-TR-0007_S2-P4)

PROJECT NAME	East Midlands Gateway Phase 2		
DOCUMENT NUMBER	EMG2-BWB-GEN-XX-RP-TR-0007	BWB REF	220500
AUTHOR	[redacted]	STATUS	S2
CHECKED	[redacted]	REVISION	P4
APPROVED	[redacted]	DATE	31/05/2024

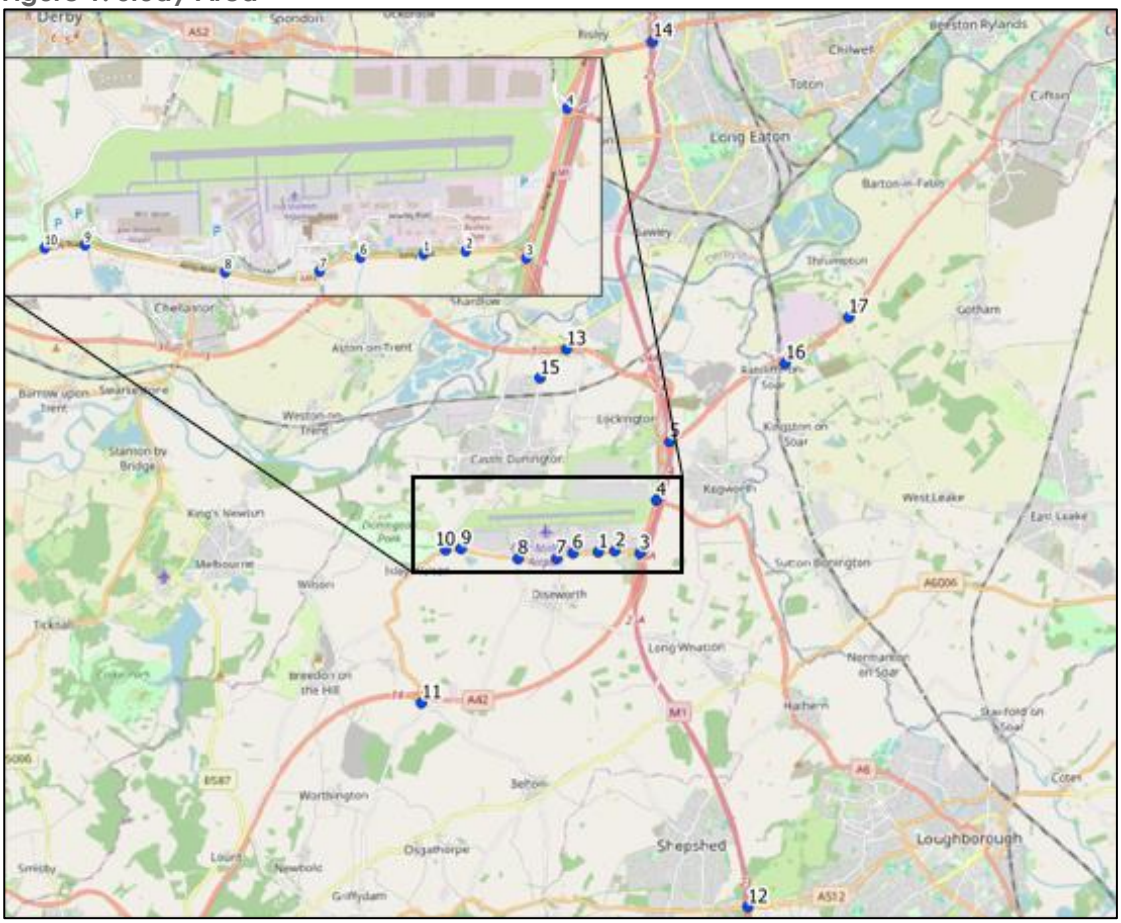
1. INTRODUCTION

1.1 BWB Consulting Ltd has been in pre-application discussions with the Transport Working Group (TWG) on a proposed Phase 2 Expansion of the East Midlands Gateway site located to the south of the A453 and East Midlands Airport in Leicestershire. BWB has proposed that the following 17 junctions, as presented in **Figure 1**, would be modelled as part of the Transport Assessment.

- Junction 1: A453/Site Access Roundabout (Leicestershire)
- Junction 2: A453/Hunter Road Roundabout (Leicestershire)
- Junction 3: Finger Farm Roundabout (National Highways)
- Junction 4: A453/EMGP1 Signal Gyratory (National Highways)
- Junction 5: M1 Junction 24 (National Highways)
- Junction 6: A453/East Midlands Airport Signal Junction (Leicestershire)
- Junction 7: A453/Grimes Gate Priority Junction (Leicestershire)
- Junction 8: A453/The Green Priority Junction (Leicestershire)
- Junction 9: A453/East Midlands Airport Roundabout (Leicestershire)
- Junction 10: A453/Walton Hill Signal Junction (Leicestershire)
- Junction 11: A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Roundabout (National Highways)
- Junction 12: M1 Junction 23 (National Highways)
- Junction 13: A50 Junction 1 (National Highways)
- Junction 14: M1 Junction 25 (National Highways)
- Junction 15: Station Road/Broad Rushes Roundabout (Leicestershire)
- Junction 16: A453/Kegworth Road roundabout (Nottinghamshire)
- Junction 17: A453/Barton Lane/West Leake Lane dumbbell roundabouts (Nottinghamshire)

1.2 This Technical Note summarises the validation process undertaken of the base junction models (Junctions 10 and LinSig software) to demonstrate they are suitable ahead of testing the future forecast traffic flows. It should be noted that Junctions 1, 2, 3, 4 and 5 are being modelled in VISSIM, of which the base model has already been agreed (report ref: EMG2-BWB-GEN-XX-RP-TR-0006_VISSIM_LMVR) and so these junctions are not covered in this report.

Figure 1. Study Area



1.3 A copy of the base model was initially submitted to NH on 26/01/2024 subsequently comments were received which have also been addressed in this technical note.

2. TRAFFIC SURVEYS

2.1 Manual classified turning counts were undertaken in November 2022 and May 2023 at the above 17 junctions. The surveys were undertaken between 0700 to 1000 hours and 1600 to 1900 hours and included a recording of queue lengths at 5-minute intervals. Video footage has also been supplied for the majority of junctions for the purposes of calculating green times and saturation flows for validating the base LinSig models. The surveys were undertaken on the following dates:

<u>November 2023 Surveys</u>

- Junction 2: A453/Hunter Road roundabout
- Junction 3: Finger Farm roundabout
- Junction 4: EMGP1 gyratory
- Junction 5: M1 Junction 24
- Junction 6: A453/Grimes Gate priority junction
- Junction 7: A453/The Green priority junction

- Junction 8: A453/East Midlands Airport signal junction
- Junction 9: A453/East Midlands Airport roundabout
- Junction 10: A453/Walton Hill signal junction
- Junction 12: M1 Junction 23

May 2023 Surveys

- Junction 11: A42 Junction 14 on-slip/A453/Top Brand/Gelscoe Lane roundabout
- Junction 13: A50 Junction 1
- Junction 14: M1 Junction 25
- Junction 15: Station Road/Broad Rushes roundabout (Castle Donnington)
- Junction 16: A453/Kegworth Road roundabout
- Junction 17: A453/Barton Lane/West Leake Lane dumbbell roundabouts

3. PRIORITY JUNCTIONS

Introduction

3.1 This following section summarises the base modelling results and validation of the priority-controlled junctions which have been built using TRL's Junctions 10 software, and are as follows:

- Junction 7 – A453/Grimes Gate priority junction
- Junction 8 - A453/The Green priority junction
- Junction 9 - A453/East Midlands Airport roundabout
- Junction 11 - A42 Junction 14 on-slip/Top Brand/Gelscoe Lane roundabout
- Junction 15 – Station Road/Broad Rushes roundabout
- Junction 16: A453/Kegworth Road roundabout
- Junction 17: A453/Barton Lane/West Leake Lane dumbbell roundabouts

3.2 Whilst there are no specific guidelines/thresholds for validating priority junctions, for the purposes of this assessment, the intention was to validate the models so that average observed versus modelled queues are within 2 passenger car units (PCUs).

Junction 7 - A453/Grimes Gate Priority Junction

3.3 The junction model has been created using the typical junction measurements that Junctions 10 software requires. The 2023 observed traffic flow movements are summarised in **Table 1.**

Table 1. Junction 7 2023 Observed Traffic Flows (PCUs)

	AM Peak			
	A453 (E)	Grimes Gate	A453 (W)	Total
A453 (E)	0	20	296	316
Grimes Gate	64	0	6	70
A453 (W)	547	7	0	554
Total	611	27	302	940
	PM Peak			
	A453 (E)	Grimes Gate	A453 (W)	Total
A453 (E)	0	74	408	482
Grimes Gate	28	0	9	37
A453 (W)	318	12	0	330
Total	346	86	417	849

3.4 In order to validate the model, the 2023 observed queues have been compared against the modelled. These are presented in **Table 2** below.

Table 2. Junction 7 Queue Comparison

Arm	AM			PM		
	Observed	Modelled	Difference	Observed	Modelled	Difference
Grimes Gate (Left Turn)	0.2	0.0	-0.2	0.4	0.0	-0.4
Grimes Gate (Right Turn)	2.1	0.2	-1.9	1.2	0.1	-1.1

3.5 The results show that queue lengths on all arms compare well with the observed data and validates well for both the morning and evening peak periods. Therefore, this model is considered suitable for testing the future forecast traffic flows.

3.6 The full model extracts and junction geometries are provided within **Appendix 1**.

Junction 8 - A453/The Green Junction

3.7 The junction model has been created using the typical junction measurements that Junctions 10 software. The observed traffic flow movements are summarised below in **Table 3**.

Table 3. Junction 8 2023 Observed Flows (PCUs)

	AM Peak			
	A453 (E)	The Green	A453 (W)	Total
A453 (E)	0	12	290	302
The Green	18	0	85	103
A453 (W)	536	73	0	609
Total	554	85	375	1014
	PM Peak			
	A453 (E)	The Green	A453 (W)	Total
A453 (E)	0	12	405	417
The Green	14	0	58	72
A453 (W)	316	104	0	420
Total	330	116	463	909

3.8 The 2023 observed queues have been compared to the modelled queues. The results are presented in **Table 4** below.

Table 4. Junction 8 Queue Comparison

Arm	AM			PM		
	Observed	Modelled	Difference	Observed	Modelled	Difference
The Green	2.1	0.2	-1.9	2.2	0.2	-2.0

3.9 The results show that queue lengths on all arms compare well with the observed data and validates well for both the morning and evening peak periods. Therefore, this model is considered suitable for testing the future forecast traffic flows.

3.10 The full model extracts and junction geometries are provided within **Appendix 2**.

Junction 9 - A453/EMA Roundabout

3.11 The junction model has been created using the typical junction measurements that Junctions 10 software requires.

Model Calibration

3.12 As both A453 arm of the roundabout are 2 lane entries and exits there is the potential for unequal lane usage. As result of this the junction has been modelled using Junctions 10 lane simulation mode which allows modelling for unequal lane usage.

3.13 The video of the junction has been reviewed to determine the level of traffic which use each lane. The videos showed that approximately 20% of traffic used the second lane. As a result in the Junctions 10 model the Traffic Considering Secondary Lanes Parameter has been set to 20%.

3.14 The observed traffic flow movements are summarised below in **Table 5**.

Table 5. Junction 9 2023 Observed Flows (PCUs)

	AM Peak			
	EMA Access	A453 (E)	A453 (W)	Total
EMA Access	0	64	60	124
A453 (E)	219	0	156	375
A453 (W)	240	545	0	785
Total	459	609	216	1284
	PM Peak			
	EMA Access	A453 (E)	A453 (W)	Total
EMA Access	0	162	221	383
A453 (E)	93	0	364	457
A453 (W)	134	258	0	392
Total	227	420	585	1232

3.15 The 2023 observed queues have been compared to the modelled queues and a summary of this is presented in **Table 6** below.

Table 6. Junction 9 Queue Comparison

Arm	AM			PM		
	Observed	Modelled	Difference	Observed	Modelled	Difference
EMA Access	1.2	0.2	-1	1.3	0.4	-0.9
A453 (E)	0.6	1.0	0.4	1.3	0.9	-0.4
A453 (W)	1.7	2.1	0.4	1	0.8	-0.2

3.16 The results show that queue lengths on all arms compare well with the observed data and validates well for both the morning and evening peak periods. Therefore, this model is considered suitable for testing the future forecast traffic flows.

3.17 The full model extracts and junction geometries are provided within **Appendix 3**.

Junction 11 - A453/Gelscoe Lane/Top Brand roundabout (near A42)

3.18 The A453/Gelscoe Lane/Top Brand roundabout includes an exit only arm; therefore in the Junctions 10 software the exit only option has been selected which registers this and prohibits flows being inputted in the O-D matrices. All other arms have been built using the standard measurements in Junctions 10.

Model Calibration

3.19 The junction has been modelled using Junctions 10 lane simulation mode which allows modelling for unequal lane usage. The lanes within the model have been coded to replicate movement at a typical 2 lane entry roundabout i.e. lane 1 for left and ahead and lane 2 for right and U-turns. As there are no arrow markings on the ground the video surveys were review and illustrated that vehicles use the roundabout as set out earlier.

3.20 The observed traffic flow movements are summarised within **Table 7** below.

Table 7. Junction 11 2023 Observed Flows (PCUs)

	AM Peak			
	A – Barton Lane	B – Gelscoe Lane	C – Top Brand	D – A42 Entry Slip Road
A – Barton Lane	0	43	126	77
B – Gelscoe Lane	19	0	12	24
C – Top Brand	169	23	0	40
D – A42 Entry Slip Road	0	0	0	0
	PM Peak			
	A – Barton Lane	B – Gelscoe Lane	C – Top Brand	D – A42 Entry Slip Road
A – Barton Lane	0	93	273	306
B – Gelscoe Lane	23	0	13	19
C – Top Brand	56	7	0	2
D – A42 Entry Slip Road	0	0	0	0

3.21 A comparison of the observed and modelled queues are presented in **Table 8** below.

Table 8. Junction 11 Queue Comparison

Arm	AM			PM		
	Observed	Modelled	Difference	Observed	Modelled	Difference
A453 (N)	0.0	0.4	0.4	0.0	1.5	1.5
Gelscoe Lane	0.1	0.1	0.0	0.0	0.1	0.1
Top Brand	0.1	0.5	0.4	0.1	0.1	0.0

3.22 The results show that queue lengths on all arms compare well with the observed data and validates well for both the morning and evening peak periods. Therefore, this model is considered suitable for testing the future forecast traffic flows.

3.23 The full model extracts and junction geometries are provided within **Appendix 4**.

Junction 15 - Station Road/Broad Rushes roundabout (Castle Donington)

3.24 The junction model has been created using the typical junction measurements that Junction 10 software requires.

Model Calibration

3.25 The junction has been modelled using Junctions 10 lane simulation mode which allows modelling for unequal lane usage. The lanes within the model have been coded to replicate what the road markings show at the junction.

3.26 The observed traffic flow movements are summarised below in **Table 9**.

Table 9. Junction 15 2023 Observed Flows (PCUs)

	AM Peak		
	Station Road (N)	Station Road (S)	Broad Rushes
Station Road (N)	0	626	500
Station Road (S)	349	0	22
Broad Rushes	414	12	0
	PM Peak		
	Station Road (N)	Broad Rushes	Station Road (S)
Station Road (N)	0	551	440
Station Road (S)	596	0	12
Broad Rushes	490	21	0

3.27 A comparison of the observed and modelled queues is presented in **Table 10** below.

Table 10. Junction 15 Queue Comparison

Arm	AM			PM		
	Observed	Modelled	Difference	Observed	Modelled	Difference
Station Road (N)	1.4	2.9	1.5	0.8	2.5	1.7
Broad Rushes	0.1	0.7	0.6	2.6	2.8	0.2
Station Road (S)	1.0	1.2	0.2	2.4	3.1	0.7

3.28 The results show that queue lengths on all arms compare well with the observed data and validates well for both the morning and evening peak periods. Therefore, this model is considered suitable for testing the future forecast traffic flows.

3.29 The full model extracts and geometries are provided within **Appendix 5**.

Junction 16 – A453/Kegworth Road Roundabout

3.30 The junction model has been created using the typical junction measurements that Junctions 10 software requires The observed traffic flow movements are summarised below in **Table 11**.

Table 11. Junction 16 2023 Observed Flows (PCUs)

	AM Peak			
	A453 Exit Slip Road	Kegworth Road (E)	Kegworth Road (S)	A453 Entry Slip Road
A453 Exit Slip Road	0	39	27	0
Kegworth Road (E)	0	0	20	28
Kegworth Road (S)	0	53	0	14
A453 Entry Slip Road	0	0	0	0
	PM Peak			

	A453 Exit Slip Road	Kegworth Road (E)	Kegworth Road (S)	A453 Entry Slip Road
A453 Exit Slip Road	0	18	36	0
Kegworth Road (E)	0	0	23	74
Kegworth Road (S)	0	35	0	6
A453 Entry Slip Road	0	0	0	0

3.31 A comparison of the observed and modelled queues is presented in **Table 12** below.

Table 12. Junction 16 Queue Comparison

Arm	AM			PM		
	Observed	Modelled	Difference	Observed	Modelled	Difference
A453 Exit Slip	0.2	0	-0.2	0.2	0	-0.2
Kegworth Road (E)	0	0	0.0	0	0.1	0.1
Kegworth Road (S)	0	0.1	0.1	0	0	0.0

3.32 The results show that queue lengths on all arms compare well with the observed data and validates well for both the morning and evening peak periods. Therefore, this model is considered suitable for testing the future forecast traffic flows.

3.33 The full model extracts and geometries are provided within **Appendix 6**.

Junction 17 – A453/West Leake Lane Dumbbell Roundabout

3.34 The junction model has been created using the typical junction measurements that Junctions 10 software requires. The observed traffic flow movements are summarised below in **Table 13**.

Table 13. Junction 17 2023 Observed Flows (PCUs)

	AM Peak			
	Junction 1			
	J1 - Barton Lane	J1 - A453 (NE)	J1 - West Leake Lane	J1 - A453 (SW)
J1 - Barton Lane	0	0	273	51
J1 - A453 (NE)	5	0	48	0
J1 - West Leake Lane	80	0	0	271
J1 - A453 (SW)	0	0	0	0
	Junction 2			
	J2 - Barton Lane	J2 - A453 (NE)	J2 - Barton Lane (S)	J2 - A453 (SW)
J2 - Barton Lane	0	0	66	0
J2 - A453 (NE)	0	0	0	0

J2 - Barton Lane (S)	12	73	0	0
J2 - A453 (SW)	26	0	258	0
	PM Peak			
	Junction 1			
	J1 - Barton Lane	J1 - A453 (NE)	J1 - West Leake Lane	J1 - A453 (SW)
J1 - Barton Lane	0	0	195	15
J1 - A453 (NE)	4	0	54	0
J1 - West Leake Lane	61	0	0	199
J1 - A453 (SW)	0	0	0	0
	Junction 2			
	J2 - Barton Lane	J2 - A453 (NE)	J2 - Barton Lane (S)	J2 - A453 (SW)
J2 - Barton Lane	0	1	18	0
J2 - A453 (NE)	0	0	0	0
J2 - Barton Lane (S)	8	57	0	0
J2 - A453 (SW)	13	0	192	0

3.35 A comparison of the observed and modelled queues are presented in **Table 14** below.

Table 14. Junction 17 Queue Comparison

Arm	AM			PM		
	Observed	Modelled	Difference	Observed	Modelled	Difference
Barton Lane (N)	0.4	0.4	0.0	0	0.2	0.2
A453 (NE)	0.5	0	-0.5	0.1	0	-0.1
West Leake Lane	0.6	0.5	-0.1	0.2	0.3	0.1
Barton Lane (N)	0.4	0.1	-0.3	0	0	0.0
Barton Lane (S)	0.6	0.1	-0.5	0.1	0.1	0.0
A453 (SW)	0.7	0.2	-0.5	0.2	0.1	-0.1

3.36 The results show that queue lengths on all arms compare well with the observed data and validates well for both the morning and evening peak periods. Therefore, this model is considered suitable for testing the future forecast traffic flows.

3.37 The full model extracts and geometries are provided within **Appendix 7**.

4. SIGNAL CONTROLLED JUNCTIONS

Introduction

4.1 This section summarises the base modelling results and validation of the signal-controlled junctions which have been built using JCT's LinSig software (version V3.2.44), and are as follows:

- Junction 6 - A453/East Midlands Airport Signal Junction
- Junction 10 - A453/Walton Hill Signal Junction
- Junction 12 – M1 Junction 23
- Junction 13 – A50 Junction 1
- Junction 14 – M1 Junction 25

4.2 The available traffic signal statistics/data has been sourced from all relevant highway authorities and have been used to build the models.

4.3 Further to manual turning counts, manual green time survey and Degree of Saturation (DoS) surveys were also undertaken to validate the models.

4.4 TfL modelling guidelines recommend that:

"A Degree of Saturation (DoS) survey should be conducted on all critical (Long Lanes) approaches for each modelled period. Critical approaches would include those close to saturation, those that determine stage length and those key to scheme proposals".

4.5 The validation criteria for LinSig models are presented in 'TfL modelling guidelines' which indicates that modelled DoS should be within 5% of observed values. This has been used as the threshold for validating the base LinSig models.

Junction 6 - A453/Airport Access Signal Junction

Signal Operation

4.6 The junction currently operates on one controller, A summary of the signal operation has been detailed below.

- Stage 1: A453 East Ahead and West Ahead/Left
- Stage 2: A453 East Ahead/Right and Airport Access Left Turn
- Stage 3: Airport Access Left and Right (This stage is demand dependant if vehicles are waiting to turn right)

Model Amendments

4.7 The videos of the survey have been reviewed to determine how often stage 3 is activated. The video showed that in the morning peak period stage 3 occurs a total of

14 times within the hour. As a result of this bonus green times were calculated and input into the LinSig model to reflect the demand dependency of stage 3 in the morning peak hour period.

Base Model Validation

4.8 The observed traffic flow movements are summarised below in **Table 15**

Table 15. Junction 6 2023 Observed Flows (PCUs)

	AM Peak			
	Airport Access	A453 (E)	A453 (W)	Total
Airport Access	0	114	39	153
A453 (E)	241	0	390	631
A453 (W)	129	460	0	589
Total	370	574	429	1373
	PM Peak			
	Airport Access	A453 (E)	A453 (W)	Total
Airport Access	0	224	65	289
A453 (E)	133	0	443	576
A453 (W)	41	347	0	388
Total	174	571	508	1253

4.9 The 2023 observed flows have been tested in the LinSig model and a comparison of modelled and observed DoS for the critical lanes is presented in **Table 16** below. Additional readings were undertaken for A453 W Lane one in the evening peak hour period.

Table 16. Junction 6 DoS Comparison

Arm / Lane	AM			PM		
	Observed	Modelled	Difference	Observed	Modelled	Difference
EMG Access – Lane 1	15.6%	18.3%	2.7%	32.4%	32.2%	-0.2%
A453 (E) – Lane 1	19.2%	32.8%	13.6%	31.5%	31.7%	0.2%
A453 (W) – Lane 2	43.8%	47.2%	3.4%	36.3%	32.8%	-3.5%

4.10 **Table 16** shows that modelled DoS are within 5% of observed DoS apart from the A453 (E) in the morning peak period. Due to the flare on A453 (E) LinSig provides a higher DoS reading for the A453 (E) ahead movement despite sufficient stacking capacity available on the flare. Therefore, the flare has been converted to a long lane to examine the DoS on the A453 (E) ahead movement. A summary of the results are presented in **Table 17** below.

Table 177. Junction 6 DoS Comparison (With Long Lane on A453 (E))

Arm / Lane	AM			PM		
	Observed	Modelled	Difference	Observed	Modelled	Difference

EMG Access – Lane 1	15.6%	18.3%	2.7%	32.4%	32.8%	0.4%
A453 (E) – Lane 1	19.2%	21.0%	1.8%	31.5%	29.0%	-2.5%
A453 (W) – Lane 2	43.8%	47.2%	3.4%	36.3%	32.1%	-4.2%

4.11 The table above now that the A453 (E) ahead movement now validates therefore it is considered that higher DoS reading inclusive of flare may be due to limitations in LinSig. Nevertheless, the original model inclusive of the short flare adjacent to A453 (E) is retained for forecast modelling scenarios.

4.12 Further to the above, a queue comparison has been undertaken on the A453 (E) approach which are shown in **Table 18** below.

Table 188. Junction 6 Queue Comparison on A453 (E) Approach

Arm / Lane	AM		
	Observed	Modelled	Difference
A453 (E) – Lane 1	1.9	0.8	0.8
A453 (E) – Lane 2	3.3	5.1	1.8

4.13 The table above shows that the queues are within 2 PCU between the modelled and observed and therefore, it is considered that the base model validates well and the model is considered suitable to test the future forecast scenarios.

4.14 A copy of the LinSig outputs are presented in **Appendix 8**.

Junction 10 – A453/Walton Hill Signal Junction

Signal Operation

4.15 The junction currently operates on one controller, A summary of the signal operation has been detailed below.

- Stage 1: A453 West Ahead/Left and A453 East Ahead
- Stage 2: A453 East Ahead/Right and Walton Hill Left Turn
- Stage 3: Walton Hill Left/Right Turn and A53 West Left

Base Model Validation

4.16 The observed survey traffic flow movements are summarised below in **Table 19.**

Table 19. Junction 10 2023 Observed Flows (PCUs)

	AM Peak			
	Local Road	A453 (E)	Walton Hill	Total
Local Road	0	520	287	807
A453 (E)	215	0	189	404
Walton Hill	314	406	0	720

Total	529	926	476	1931
	PM Peak			
	Local Road	**A453 (E)**	**Walton Hill**	**Total**
Local Road	0	228	289	517
A453 (E)	343	0	288	631
Walton Hill	227	187	0	414
Total	570	415	577	1562

4.17 It was noted that after replicating the latest signal specification at the junction additional DoS readings were required to understand whether the model still validates. This is as a result of the junction operating on MOVA and DoS readings would vary between cycles. Therefore, additional readings were taken at the junction and a comparison of modelled and observed DoS for the critical lanes is presented in **Table 20** below.

Table 20. Junction 10 DoS Comparison

Arm / Lane	AM			PM		
	Observed	**Modelled**	**Difference**	**Observed**	**Modelled**	**Difference**
Local Road - Lane 1	49.6%	53.5%	3.9%	48.8%	53.3%	4.5%
A453 (E) - Lane 1	46.0%	50.4%	4.4%	49.9%	52.8%	2.9%
Walton Hill - Lane 2	60.9%	63.0%	2.1%	45.3%	50.0%	4.7%

4.18 **Table 20** shows that modelled DoS of all critical lanes are within 5% of observed DoS. Hence, it is considered that the base model validates well and therefore the model is considered suitable to test the future forecast scenarios.

4.19 A copy of the LinSig outputs are presented in **Appendix 9**.

Junction 12 – M1 J23

Model Calibration

4.20 Pedestrian crossings are present on the northern arms of the junction (M1 north on and off-slips), the video has been reviewed to see how often these crossings are called and they shown that there was no pedestrian calling the crossings. Therefore, the crossing on the M1 north on-slip has not been included within the model as they would not have an impact on the model, this is phases F in controller specification 1.

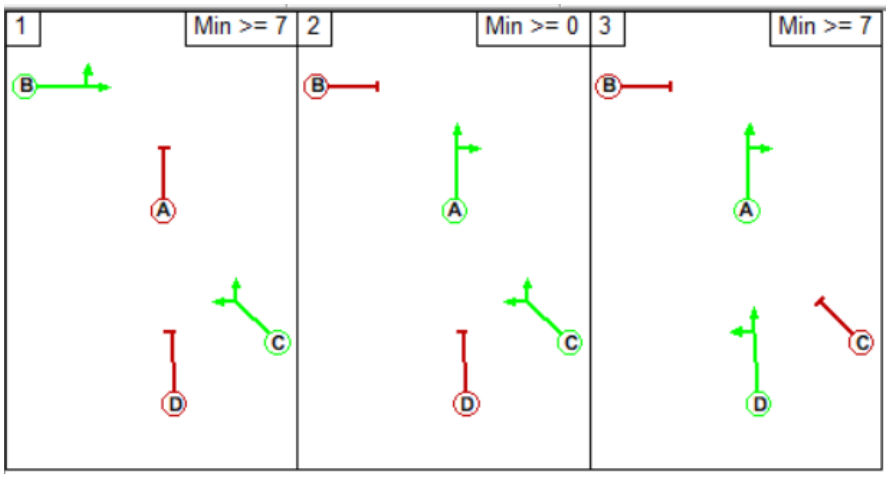
4.21 Phase E in controller specification 2 is the crossing on the M1 north off-slip and would also not be called however, upon review the controller specification would interact with the intergreen time of phase B and therefore kept in the model for this reason.

4.22 The signal specification for both controllers have dummy phases, controller 1 is phase G and controller 2 is phase F and therefore not included within the model.

Signal Operation

4.23 The junction currently operates on two controllers, one controlling the western side of the junction, and the second controlling the eastern side of the junction. Details of the stage sequence for the respective controllers are provided below.

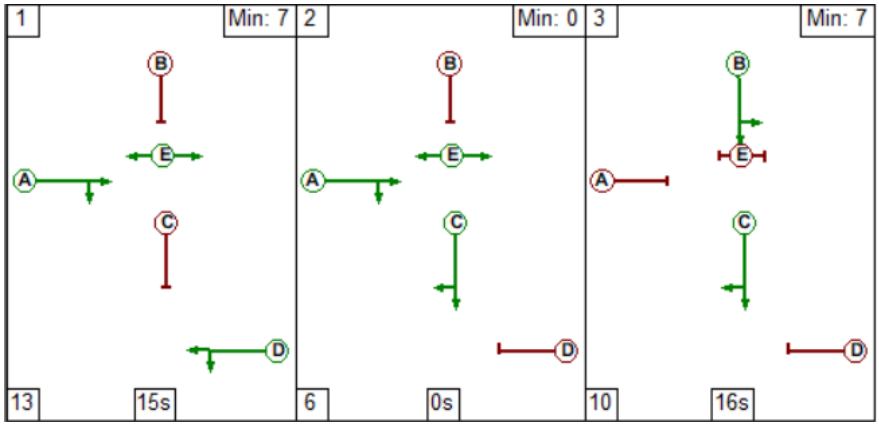
Controller 1: M1 J23 Western side



- Stage 1: A512 West approach and South Circulatory
- Stage 2: West Circulatory and South Circulatory
- Stage 3: M1 South Off-slip Approach and West Circulatory

4.24 Upon reviewing the signal specification for the eastern side controller the stages are shown to 1,2,3, however a review of the video survey indicates that stage 2 doesn't activate in both peak hour periods and therefore only stages 1 and 3 have been modelled for the eastern side controller.

Controller 2: M1 J23 Eastern side



- Stage 1: North Circulatory, A512 East Approach and Ped crossing over M1 North Off-slip
- Stage 2: North Circulatory, North Circulatory and Ped crossing over M1 North Off-slip
- Stage 3: M1 North Off-slip Approach and East Circulatory

Base Model Validation

4.25 The observed traffic flow movements are summarised below in **Table 21.**

Table 21. Junction 11 O/D Data (PCUs)

	AM Peak			
	M1 SB Off-slip	**A512 East**	**M1 NB Off-slip**	**A512 West**
M1 SB Off-slip	0	795	0	377
A512 East	494	0	161	378
M1 NB Off-slip	0	423	0	44
A512 West	290	735	132	0
	PM Peak			
	M1 SB Off-slip	**A512 East**	**M1 NB Off-slip**	**A512 West**
M1 SB Off-slip	0	408	0	187
A512 East	491	0	351	520
M1 NB Off-slip	0	203	0	168
A512 West	218	389	118	0

4.26 Additional DoS readings were undertaken for A512 W lane 3 and a comparison of modelled and observed DoS for the critical lanes has been presented in **Table 22**.

Table 22. Junction 11 DoS Comparison

Arm / Lane	AM			PM		
	Observed	**Modelled**	**Difference**	**Observed**	**Modelled**	**Difference**
M1 South Bound Off-slip – Lane 1	53.0%	57.9%	4.9%	46.4%	45.8%	-0.6%
M1 South Bound Off-slip - Lane 2	58.7%	59.9%	1.2%	62.8%	65.8%	3.0%
A512 West Bound Off-slip – Lane 2	54.7%	55.8%	1.1%	59.8%	56.6%	-3.2%
A512 West Bound Off-slip – Lane 3	68.1%	72.6%	4.5%	51.6%	49.5%	-2.1%
M1 North Bound Off-slip – Lane 2	No Signal Head in Camera View So Validated Against Queues					
M1 North Bound Off-slip – Lane 3						
A512 East Bound Off-slip – Lane 2	63.4%	67.2%	3.8%	46.2%	41.4%	-4.8%

4.27 **Table 22** shows that modelled DoS of all critical lanes are within 5% of observed DoS, Hence, it is considered that the base model validates well and therefore, is suitable to test the future forecast scenarios.

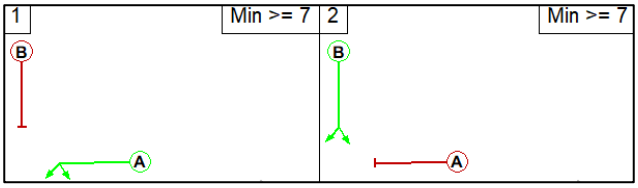
4.28 A copy of the LinSig outputs are presented in **Appendix 10.**

Junction 13 – A50 Junction 1

Signal Operation

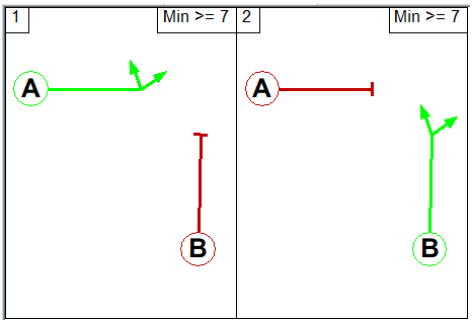
4.29 The junction currently operates on two controllers, one controlling the A50 westbound approach arm and circulatory, and the second controlling the A50 eastbound approach arm and circulatory. Details of the stage sequence for the respective controllers are provided below.

Controller 1: A50 Westbound Approach



- Stage 1: A50 East approach
- Stage 2: East Circulatory

Controller 2: A50 Eastbound Approach



- Stage 1: A50 West approach
- Stage 2: West Circulatory

Unequal Lane Usage Amendments

4.30 The initial LinSig model built using the signal data, showed unequal lane usage on the Trent Lane arm for vehicles travelling to the A50 eastbound, with the majority of vehicles using lane 3. The CCTV footage was reviewed and showed that vehicles used both lanes 2 and 3 at approximately 2/3 1/3 split respectively. Therefore, flows have been altered manually to allow for the split in the route list view in LinSig which in turn validated this arm.

Base Model Validation

4.31 The observed survey traffic flow movements are summarised below in

4.32 Table 23

Table 23. Junction 13 2023 Observed Flows (PCUs)

	AM Peak					
	B5010	B6540	A50 J1 Slip Road (E)	Ryecraft Road	Trent Lane	A50 J1 Slip Road (W)
B5010	0	65	88	5	95	72
B6540	37	0	315	11	237	198
A50 J1 Slip Road (E)	64	269	0	13	419	0
Ryecraft Road	3	10	15	0	10	12
Trent Lane	49	145	292	12	0	347
A50 J1 Slip Road (W)	14	245	0	15	449	0
	PM Peak					
	B5010	B6540	A50 J1 Slip Road (E)	Ryecraft Road	Trent Lane	A50 J1 Slip Road (W)
B5010	0	51	61	3	65	79
B6540	69	0	261	6	173	182
A50 J1 Slip Road (E)	121	279	0	16	330	0
Ryecraft Road	5	15	17	0	11	15
Trent Lane	107	235	415	17	0	501
A50 J1 Slip Road (W)	20	199	0	14	383	0

4.33 The 2023 observed flows have been tested in the LinSig model and a comparison of modelled and observed DoS for the critical lanes has been presented in **Table 24**.

Table 24. Junction 13 DoS Comparison

Arm / Lane	AM			PM		
	Observed	Modelled	Difference	Observed	Modelled	Difference
A50 Westbound approach lane 1	49.8%	50.1%	0.3%	40.9%	40.1%	-0.8%
A50 Westbound approach lane 2	34.2%	35.9%	1.7%	40.9%	43.2%	2.3%
A50 Eastbound approach lane 1	47.3%	48.8%	1.5%	47.4%	46.4%	-1.0%

4.34 **Table 24** shows that modelled DoS of all critical lanes are within 5% of observed DoS. It is considered that the base model validates well and therefore, this model is considered suitable to test the future forecast scenarios.

4.35 A copy of the LinSig outputs are presented in **Appendix 11.**

Junction 14 – M1 J25

Signal Operation

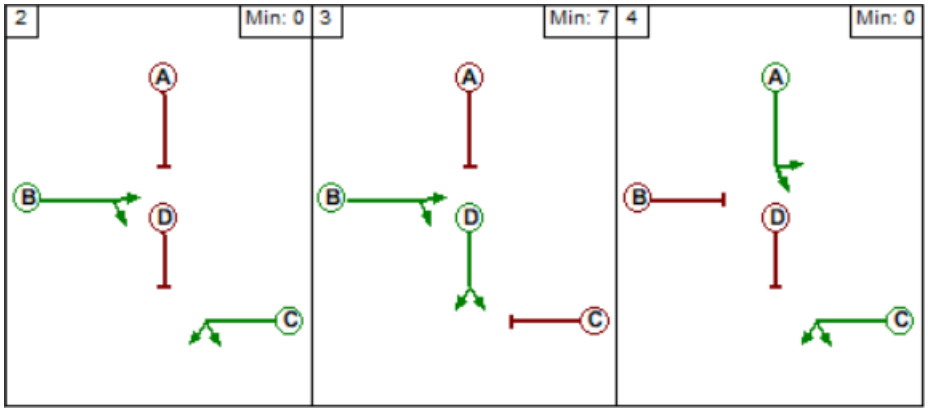
4.36 The junction currently operates on two controllers, one controlling the eastern side of the junction, and the second controlling the western side of the junction.

4.37 Analysis of the video footage indicated that the eastern controller operated on a 75 second cycle time and western controller on 60 second cycle time in the morning and evening peak hours respectively.

4.38 Details of the stage sequence based on video footage observation for the respective controllers for AM and PM are provided below.

AM Stage Sequences

Controller 1: M1 J25 Eastern side

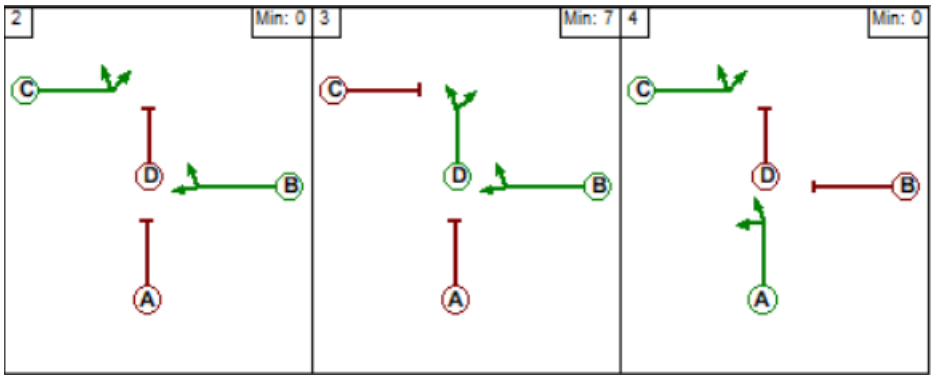


i. Stage 2: North Circulatory and A52 Westbound Off-slip Approach

ii. Stage 3: North Circulatory and East Circulatory

iii. Stage 4: M1 Southbound Off-slip Approach and A52 Westbound Off-slip Approach

Controller 2: M1 J25 Western Side



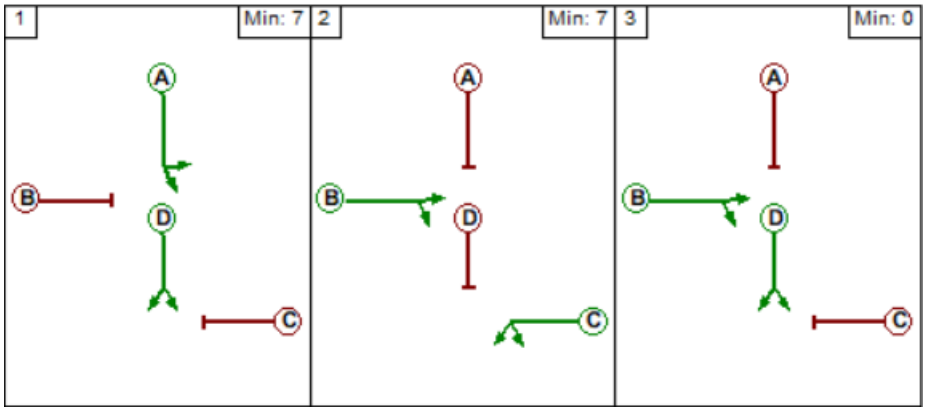
i. Stage 2: South Circulatory and A52 Eastbound Off-slip Approach

ii. Stage 3: South Circulatory and West Circulatory

iii. Stage 4: M1 Northbound Off-slip Approach and A52 Eastbound Off-slip Approach

PM Stage Sequences

Controller 1: M1 J25 Eastern side

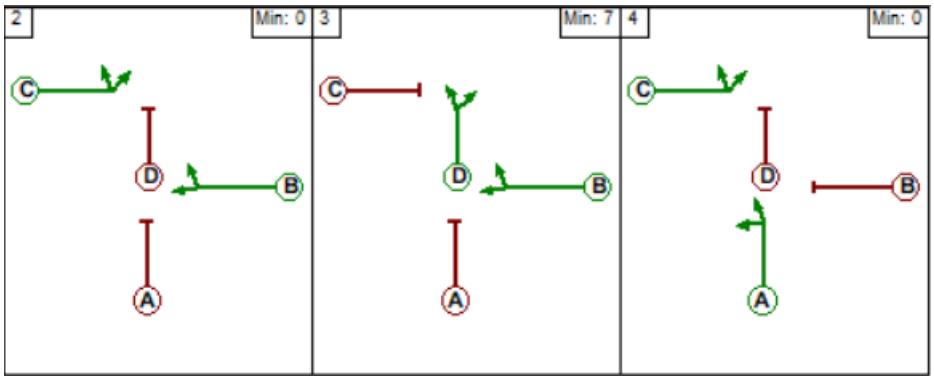


i. Stage 1: M1 Southbound Off-slip Approach and East Circulatory

ii. Stage 2: North Circulatory and A52 Westbound Off-slip Approach

iii. Stage 3: North Circulatory and East Circulatory

Controller 2: M1 J25 Western Side



i. Stage 2: South Circulatory and A52 Eastbound Off-slip Approach

ii. Stage 3: South Circulatory and West Circulatory

iii. Stage 4: M1 Northbound Off-slip Approach and A52 Eastbound Off-slip Approach

Unequal Lane Usage Amendments

4.39 The initial LinSig model built using the signal data, showed unequal lane usage on the M1 northbound off slip arm for vehicles travelling to the A52 eastbound, with the majority of vehicles using lane 3. The CCTV footage was reviewed and showed that vehicles

used both lanes 2 and 3 equally. Therefore, flows have been altered manually to allow an even 50/50 split in the route list view in LinSig which in turn validated this arm.

Base Model Validation

4.40 The observed survey traffic flow movements are summarised below in **Table 25.**

Table 25. Junction 14 O/D Data (PCUs)

	AM Peak					
	M1 (N)	A52 (E)	Bostocks Lane (S)	M1 (S)	A52 (W)	Bostocks Lane (N)
M1 (N)	0	357	308	0	642	160
A52 (E)	342	0	197	480	0	100
Bostocks Lane (S)	208	167	0	239	223	57
M1 (S)	0	457	220	0	313	200
A52 (W)	373	0	142	377	0	148
Bostocks Lane (N)	215	163	83	280	195	0
	PM Peak					
	M1 (N)	A52 (E)	Bostocks Lane (S)	M1 (S)	A52 (W)	Bostocks Lane (N)
M1 (N)	0	262	242	0	338	158
A52 (E)	368	0	373	387	0	133
Bostocks Lane (S)	219	132	0	101	177	76
M1 (S)	0	494	203	0	177	313
A52 (W)	563	0	131	244	0	108
Bostocks Lane (N)	170	136	66	126	88	0

4.41 The 2023 observed flows have been tested in the LinSig model and a comparison of modelled and observed DoS for the critical lanes has been presented in **Table 26** below.

Table 26. Junction 14 DoS Comparison

Arm / Lane	AM			PM		
	Observed	Modelled	Difference	Observed	Modelled	Difference
M1 South Bound Off-slip - Lane 2	79.80%	79.60%	-0.20%	76.00%	78.70%	2.70%
M1 South Bound Off-slip - Lane 3	64.50%	69.20%	4.70%	81.00%	78.30%	-2.70%
A52 West Bound Off-slip - Lane 2	50.60%	49.30%	-1.30%	71.40%	76.10%	4.70%
A52 West Bound Off-slip – Lane 3	59.60%	59.50%	-0.10%	76.70%	75.90%	-0.80%
M1 North Bound Off-slip – Lane 2	88.60%	83.90%	-4.70%	75.40%	75.40%	0.00%

M1 North Bound Off-slip - Lane 3	71.10%	72.20%	1.10%	65.80%	68.20%	2.40%
A52 East Bound Off-slip - Lane 1	72.60%	73.70%	1.10%	81.10%	83.00%	1.90%
A52 East Bound Off-slip - Lane 2	76.40%	75.10%	-1.30%	82.10%	82.40%	0.30%

4.42 **Table 26** shows that modelled DoS of all critical lanes are within 5% of observed data. It is considered that the base model validates well and therefore, the model is considered suitable to test the future forecast scenarios.

4.43 A copy of the LinSig outputs are presented in **Appendix 12**.

5. SUMMARY

5.1 The purpose of this Technical Note is to agree the base Junctions 10 and LinSig models to demonstrate they are suitable ahead of testing the future forecast traffic flows.

5.2 It has been demonstrated that all junctions validate well against observed data from the 2023 surveys and industry standard validation thresholds. As such all 17 models are considered suitable to test the future forecast traffic flows and understand where the development is expected to generate significant impacts and therefore where mitigation is required.

APPENDICES

APPENDIX 1: Junction 7 - A453/Grimes Gate Priority Junction Model Outputs

A453/GRIMES GATE PICADY MEASUREMENTS
SCALE - 1:500@A3

VISIBILITY C-AB = 190m

ARM A

VISIBILITY TO RIGHT = 100m

8.0

Path

VISIBILITY TO LEFT = 215m

4.4
4.0
4.3
4.3
3.8

43.0

3.1

Cycle Way

3.5

6.7

ARM C

ARM B

MAJOR ROAD
= (7.6+8.0 / 2
= 15.6 / 2
= 7.8m

MINOR ROAD (one lane plus flare)
0m = 10m
5m = 7.5m
10m = 7.4m
15m = 4.3m
20m = 3.8m

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: 240213 A453_Grimes Gate PICADY Model (Base Only).j10
Path: J:\2022\220500-East Midlands Gateway Phase 2 (1)\ProjectDelivery\01-WIP\DesignAndCalculations\T&I Planning\Traffic Models\7. A453_Grimes Gate
Report generation date: 05/04/2024 14:03:07

»2022 Observed, AM
»2022 Observed, PM

Summary of junction performance

	AM								PM							
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2022 Observed															
Stream B-C	D1	0.0	6.14	0.01	A	0.67	A	114 % [Stream B-A]	D2	0.0	6.42	0.02	A	0.43	A	147 % [Stream B-A]
Stream B-A		0.2	8.25	0.14	A					0.1	7.54	0.06	A			
Stream C-AB		0.0	4.07	0.02	A					0.0	4.85	0.03	A			

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

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

File summary

File Description

Title	East Midlands Gateway Phase 2
Location	A453/Grimes Gate
Site number	
Date	06/01/2023
Version	
Status	(new file)
Identifier	
Client	SEGRO
Jobnumber	220500
Enumerator	BWB\matt.corner
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Observed	AM	ONE HOUR	08:00	09:30	15
D2	2022 Observed	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Observed, AM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A453/Grimes Gate	T-Junction	Two-way	Two-way	Two-way		0.67	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	114	Stream B-A	0.67	A

Arms

Arms

Arm	Name	Description	Arm type
A	A453 (E)		Major
B	Grimes Gate		Minor
C	A453 (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.80			190.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	8.25	7.50	7.40	4.30	3.80		1.00	215	153

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	732	0.123	0.311	0.195	0.444
B-C	700	0.099	0.250	-	-
C-B	684	0.244	0.244	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Observed	AM	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	316	100.000
B		✓	70	100.000
C		✓	554	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	20	296
	B	64	0	6
	C	547	7	0

Vehicle Mix

Heavy Vehicle %

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	6.14	0.0	A
B-A	0.14	8.25	0.2	A
C-AB	0.02	4.07	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	5	629	0.007	4	0.0	5.764	A
B-A	48	578	0.083	48	0.1	6.784	A
C-AB	10	895	0.011	10	0.0	4.068	A
C-A	407			407			
A-B	15			15			
A-C	223			223			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	5	614	0.009	5	0.0	5.912	A
B-A	58	548	0.105	57	0.1	7.332	A
C-AB	13	938	0.014	13	0.0	3.890	A
C-A	485			485			
A-B	18			18			
A-C	266			266			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	7	593	0.011	7	0.0	6.137	A
B-A	70	507	0.139	70	0.2	8.241	A
C-AB	19	1001	0.019	19	0.0	3.667	A
C-A	591			591			
A-B	22			22			
A-C	326			326			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	7	593	0.011	7	0.0	6.137	A
B-A	70	507	0.139	70	0.2	8.248	A
C-AB	19	1001	0.019	19	0.0	3.667	A
C-A	591			591			
A-B	22			22			
A-C	326			326			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	5	614	0.009	5	0.0	5.913	A
B-A	58	548	0.105	58	0.1	7.341	A
C-AB	13	938	0.014	13	0.0	3.892	A
C-A	485			485			
A-B	18			18			
A-C	266			266			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	5	629	0.007	5	0.0	5.768	A
B-A	48	578	0.083	48	0.1	6.795	A
C-AB	10	895	0.011	10	0.0	4.068	A
C-A	407			407			
A-B	15			15			
A-C	223			223			

2022 Observed, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A453/Grimes Gate	T-Junction	Two-way	Two-way	Two-way		0.43	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	147	Stream B-A	0.43	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 Observed	PM	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	482	100.000
B		✓	37	100.000
C		✓	330	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	74	408
	B	28	0	9
	C	318	12	0

Vehicle Mix

Heavy Vehicle %

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.02	6.42	0.0	A
B-A	0.06	7.54	0.1	A
C-AB	0.03	4.85	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	7	612	0.011	7	0.0	5.948	A
B-A	21	579	0.036	21	0.0	6.450	A
C-AB	13	756	0.018	13	0.0	4.848	A
C-A	235			235			
A-B	56			56			
A-C	307			307			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	8	595	0.014	8	0.0	6.137	A
B-A	25	549	0.046	25	0.0	6.869	A
C-AB	17	772	0.022	17	0.0	4.767	A
C-A	280			280			
A-B	67			67			
A-C	367			367			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	10	571	0.017	10	0.0	6.420	A
B-A	31	508	0.061	31	0.1	7.541	A
C-AB	24	797	0.030	24	0.0	4.656	A
C-A	340			340			
A-B	81			81			
A-C	449			449			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	10	571	0.017	10	0.0	6.420	A
B-A	31	508	0.061	31	0.1	7.541	A
C-AB	24	797	0.030	24	0.0	4.656	A
C-A	340			340			
A-B	81			81			
A-C	449			449			

18:00 - 18:15

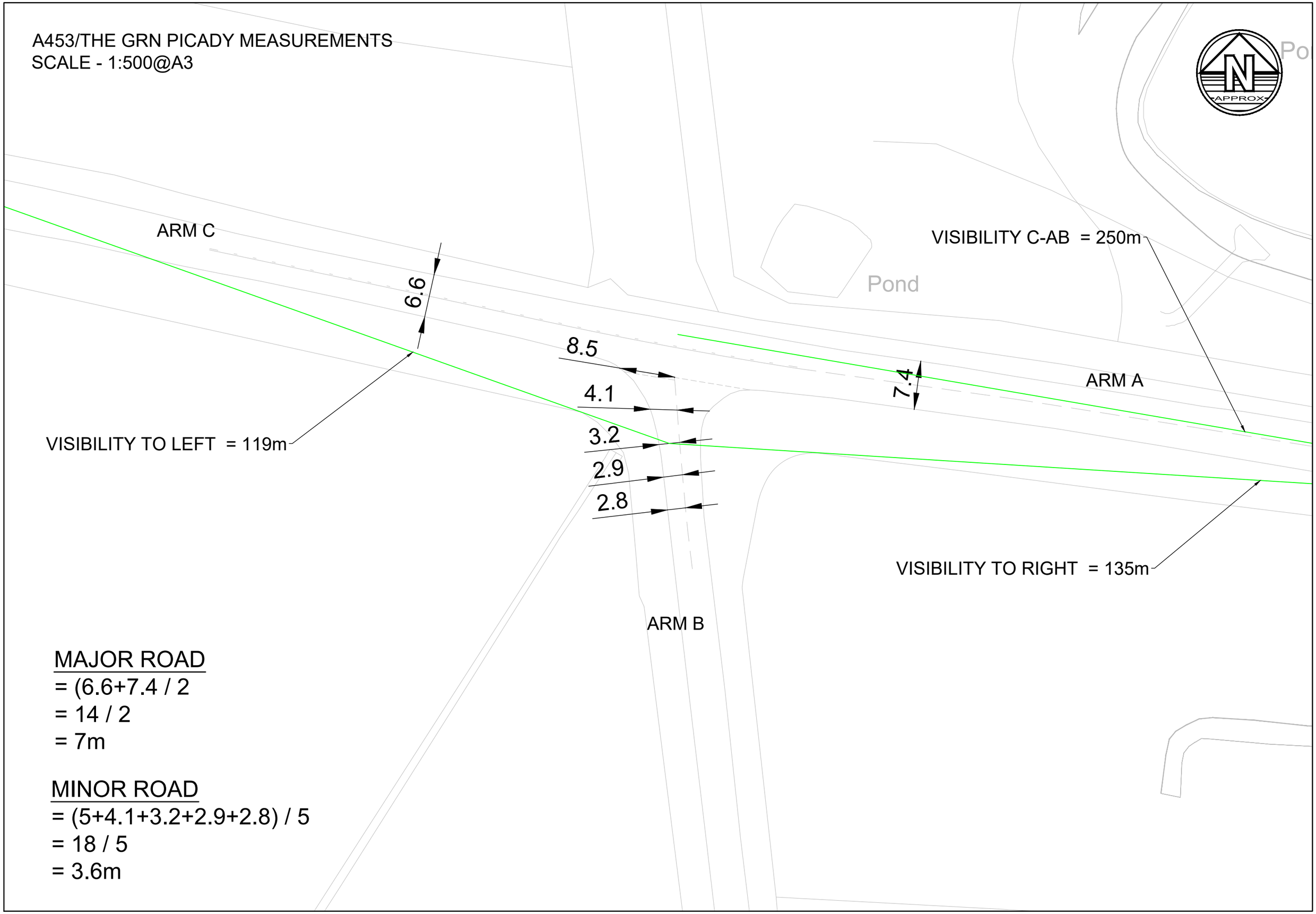
Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	8	595	0.014	8	0.0	6.140	A
B-A	25	549	0.046	25	0.0	6.871	A
C-AB	17	772	0.022	17	0.0	4.769	A
C-A	279			279			
A-B	67			67			
A-C	367			367			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	7	612	0.011	7	0.0	5.951	A
B-A	21	579	0.036	21	0.0	6.456	A
C-AB	13	756	0.018	13	0.0	4.849	A
C-A	235			235			
A-B	56			56			
A-C	307			307			

APPENDIX 2: Junction 8 - A453/The Green Priority Junction Model Outputs

A453/THE GRN PICADY MEASUREMENTS
SCALE - 1:500@A3



MAJOR ROAD
= (6.6+7.4 / 2
= 14 / 2
= 7m

MINOR ROAD
= (5+4.1+3.2+2.9+2.8) / 5
= 18 / 5
= 3.6m

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.3.1598
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Filename: Import of 230124 A453_The Green (BASE ONLY).j10
Path: J:\2022\220500-East Midlands Gateway Phase 2 (1)\ProjectDelivery\01-WIP\Models\A453_The Green Junction
Report generation date: 05/01/2024 12:21:59

»2022 Observed, AM
»2022 Observed, PM

Summary of junction performance

	AM								PM							
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2022 Observed															
Stream B-AC	D1	0.2	7.51	0.19	A	1.44	A	100 %	D2	0.2	7.47	0.14	A	1.63	A	109 %
Stream C-AB		0.5	4.42	0.19	A			[Stream C-AB]		0.5	5.71	0.24	A			[Stream C-AB]

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. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	East Midlands Gateway Phase 2
Location	A453/The Green T-Junction
Site number	
Date	06/01/2023
Version	
Status	(new file)
Identifier	
Client	SEGRO
Jobnumber	220500
Enumerator	BWB\matt.corner
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Observed	AM	ONE HOUR	08:00	09:30	15
D2	2022 Observed	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Observed, AM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A453/The Green T-Junction	T-Junction	Two-way	Two-way	Two-way		1.44	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	100	Stream C-AB	1.44	A

Arms

Arms

Arm	Name	Description	Arm type
A	A453 (E)		Major
B	The Green		Minor
C	A453 (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.00			250.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.60	119	135

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	621	0.108	0.273	0.172	0.390
B-C	752	0.110	0.279	-	-
C-B	719	0.266	0.266	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Observed	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	302	100.000
B		✓	103	100.000
C		✓	609	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	12	290
	B	18	0	85
	C	536	73	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.19	7.51	0.2	A
C-AB	0.19	4.42	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	78	637	0.122	77	0.1	6.419	A
C-AB	98	914	0.108	98	0.2	4.409	A
C-A	360			360			
A-B	9			9			
A-C	218			218			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	93	619	0.150	92	0.2	6.834	A
C-AB	133	955	0.139	133	0.3	4.380	A
C-A	415			415			
A-B	11			11			
A-C	261			261			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	113	593	0.191	113	0.2	7.499	A
C-AB	193	1014	0.191	193	0.5	4.389	A
C-A	477			477			
A-B	13			13			
A-C	319			319			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	113	593	0.191	113	0.2	7.506	A
C-AB	194	1014	0.191	193	0.5	4.394	A
C-A	477			477			
A-B	13			13			
A-C	319			319			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	93	619	0.150	93	0.2	6.843	A
C-AB	133	956	0.139	134	0.3	4.388	A
C-A	414			414			
A-B	11			11			
A-C	261			261			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	78	637	0.122	78	0.1	6.437	A
C-AB	99	915	0.108	99	0.2	4.421	A
C-A	360			360			
A-B	9			9			
A-C	218			218			

2022 Observed, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A453/The Green T-Junction	T-Junction	Two-way	Two-way	Two-way		1.63	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	109	Stream C-AB	1.63	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 Observed	PM	ONE HOUR	17:00	18:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	417	100.000
B		✓	72	100.000
C		✓	420	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	12	405
	B	14	0	58
	C	316	104	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.14	7.47	0.2	A
C-AB	0.24	5.71	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	54	614	0.088	54	0.1	6.421	A
C-AB	112	789	0.142	111	0.2	5.308	A
C-A	204			204			
A-B	9			9			
A-C	305			305			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	592	0.109	65	0.1	6.823	A
C-AB	145	805	0.180	144	0.3	5.451	A
C-A	233			233			
A-B	11			11			
A-C	364			364			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	79	561	0.141	79	0.2	7.469	A
C-AB	198	829	0.239	197	0.5	5.700	A
C-A	265			265			
A-B	13			13			
A-C	446			446			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	79	561	0.141	79	0.2	7.473	A
C-AB	198	830	0.239	198	0.5	5.713	A
C-A	264			264			
A-B	13			13			
A-C	446			446			

18:00 - 18:15

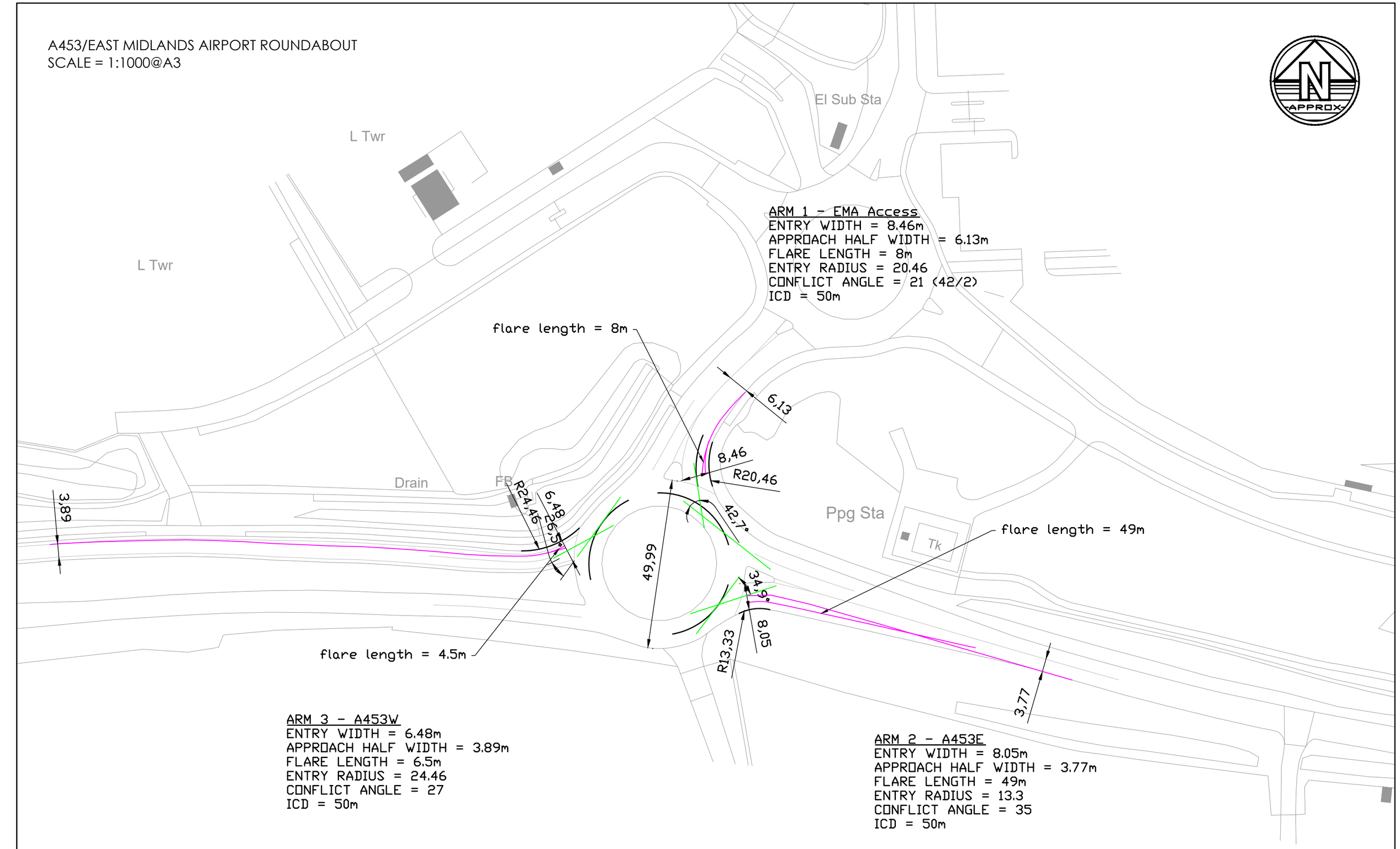
Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	592	0.109	65	0.1	6.834	A
C-AB	145	806	0.180	146	0.3	5.466	A
C-A	232			232			
A-B	11			11			
A-C	364			364			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	54	614	0.088	54	0.1	6.433	A
C-AB	112	789	0.142	113	0.2	5.329	A
C-A	204			204			
A-B	9			9			
A-C	305			305			

APPENDIX 3: Junction 9 - A453/East Midlands Airport Roundabout Model Outputs

A453/EAST MIDLANDS AIRPORT ROUNDABOUT
SCALE = 1:1000@A3



Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.1.1.1905
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Filename: 240213 A453_EMA Roundabout ARCADY Model (Lane Sim) (Base Only).j10
Path: J:\2022\220500-East Midlands Gateway Phase 2 (1)\ProjectDelivery\01-WIP\DesignAndCalculations\T&I Planning\Traffic Models\9. A453_EMA Roundabout
Report generation date: 05/04/2024 14:08:58

»2022 Base Flows, AM
»2022 Base Flows, PM

Summary of junction performance

	AM								PM							
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	[Lane Simulation] - 2022 Base Flows															
Arm 1	D1	0.3	4.26	0.14	A	5.93	A	%	D2	0.4	4.54	0.25	A	4.80	A	%
Arm 2		0.9	4.82	0.35	A			[ ]		0.7	4.42	0.32	A			[ ]
Arm 3		1.3	7.51	0.46	A					0.8	5.58	0.29	A			

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

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

File summary

File Description

Title	East Midlands Gateway Phase 2
Location	A453/EMA Roundabout
Site number	
Date	24/01/2023
Version	
Status	(new file)
Identifier	
Client	SEGRO
Jobnumber	220500
Enumerator	BWB\matt.corner
Description	

Units

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

Analysis Options

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

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			1467308316	48

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Flows	AM	ONE HOUR	08:00	09:30	15	✓
D2	2022 Base Flows	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

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

2022 Base Flows, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Info	Simulation	A1 - [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A453/EMA Roundabout	Standard Roundabout		1, 2, 3	5.93	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.93	A

Arms

Arms

Arm	Name	Description	No give-way line
1	EMA Access		
2	A453 (E)		
3	A453 (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)	Entry only	Exit only
1	6.13	8.46	8.0	20.5	50.0	21.0		
2	3.77	8.05	49.0	13.3	50.0	35.0		
3	3.89	6.48	6.5	24.5	50.0	27.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.730	2295
2	0.666	2065
3	0.586	1553

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

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
1	Evenly split	10.00
2	Evenly split	20.00
3	Evenly split	20.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
1	Entry	1	1	2	✓	3.00			0	99999	
			2	1, 3	✓	3.00			0	99999	
		2	1	(1, 2, 3)		Infinity					
	Exit	1	1			Infinity					
2	Entry	1	1	3	✓	11.00			0	99999	
			2	1, 2, 3	✓	11.00			0	99999	
		2	1	(1, 2, 3)		Infinity					
	Exit	1	1			Infinity					
3	Entry	1	1	1, 2	✓	14.00			0	99999	
			2	2, 3	✓	14.00			0	99999	
		2	1	(1, 2, 3)		Infinity					
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1	Entry	1	1	0.365	1147
			2	0.365	1147
2	Entry	1	1	0.333	1033
			2	0.333	1033
3	Entry	1	1	0.293	777
			2	0.293	777

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			1	2	3
1	1	1		✓	
		2	✓		✓
	2	1	✓	✓	✓
2	1	1			✓
		2	✓	✓	✓
	2	1	✓	✓	✓
3	1	1	✓	✓	
		2		✓	✓
	2	1	✓	✓	✓

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)	Run automatically
D1	2022 Base Flows	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	153	100.000
2		ONE HOUR	✓	631	100.000
3		ONE HOUR	✓	589	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	114	39
	2	241	0	390
	3	129	460	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
1	0.20	0.80

Heavy Vehicle %

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

Cyclist %

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.14	4.26	0.3	A	143	215
2	0.35	4.82	0.9	A	569	853
3	0.46	7.51	1.3	A	549	824

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	109	27	352	1347	0.081	109	114	283	0.0	0.1	3.606	A
2	481	120	32	2042	0.235	481	471	430	0.0	0.5	4.125	A
3	446	112	186	1454	0.307	450	441	327	0.0	0.5	6.015	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	157	39	418	1324	0.118	155	144	339	0.1	0.3	4.099	A
2	557	139	40	2011	0.277	561	573	533	0.5	0.5	4.317	A
3	539	135	219	1404	0.384	538	529	382	0.5	1.2	6.454	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	179	45	506	1258	0.142	177	170	404	0.3	0.3	4.259	A
2	663	166	46	2026	0.327	665	682	637	0.5	0.8	4.533	A
3	655	164	253	1412	0.464	657	650	459	1.2	1.3	7.307	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	165	41	510	1252	0.132	167	170	406	0.3	0.1	4.205	A
2	699	175	44	1984	0.352	699	697	633	0.8	0.9	4.816	A
3	638	159	276	1429	0.446	640	647	468	1.3	1.2	7.515	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	138	34	446	1287	0.107	136	138	339	0.1	0.2	3.951	A
2	554	139	34	2002	0.277	554	562	549	0.9	0.7	4.388	A
3	566	142	217	1428	0.396	568	543	371	1.2	0.9	6.523	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	111	28	361	1312	0.084	110	115	261	0.2	0.1	3.777	A
2	458	114	25	2060	0.222	458	474	446	0.7	0.5	4.182	A
3	451	113	171	1465	0.307	451	439	312	0.9	0.7	5.971	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	2	78	1019	0.076	78	84	0.0	0.1	3.666	A
			2	1, 3	32	1019	0.031	32	30	0.0	0.0	3.440	A
		2	1	(1, 2, 3)	109			109	114	0.0	0.0	0.000	A
	Exit	1	1		283			283	276	0.0	0.0	0.000	A
2	Entry	1	1	3	170	1022	0.167	170	164	0.0	0.2	3.838	A
			2	1, 2, 3	310	1022	0.304	311	306	0.0	0.4	4.279	A
		2	1	(1, 2, 3)	481			481	473	0.0	0.0	0.000	A
	Exit	1	1		430			430	430	0.0	0.0	0.000	A
3	Entry	1	1	1, 2	256	722	0.354	256	251	0.0	0.4	6.234	A
			2	2, 3	191	722	0.264	194	190	0.0	0.1	5.725	A
		2	1	(1, 2, 3)	446			446	443	0.0	0.0	0.000	A
	Exit	1	1		327			327	320	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	2	116	995	0.116	115	106	0.1	0.2	4.261	A
			2	1, 3	41	995	0.041	40	38	0.0	0.1	3.582	A
		2	1	(1, 2, 3)	157			157	144	0.0	0.0	0.016	A
	Exit	1	1		339			339	333	0.0	0.0	0.000	A
2	Entry	1	1	3	202	1019	0.198	203	207	0.2	0.2	3.888	A
			2	1, 2, 3	355	1019	0.348	358	366	0.4	0.3	4.560	A
		2	1	(1, 2, 3)	557			557	572	0.0	0.0	0.000	A
	Exit	1	1		533			533	517	0.0	0.0	0.000	A
3	Entry	1	1	1, 2	306	712	0.429	306	301	0.4	0.6	6.679	A
			2	2, 3	234	712	0.328	231	228	0.1	0.6	6.159	A
		2	1	(1, 2, 3)	539			539	532	0.0	0.0	0.000	A
	Exit	1	1		382			382	396	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	2	133	963	0.138	131	128	0.2	0.3	4.391	A
			2	1, 3	46	963	0.048	46	43	0.1	0.0	3.857	A
		2	1	(1, 2, 3)	179			179	170	0.0	0.0	0.002	A
	Exit	1	1		404			404	404	0.0	0.0	0.000	A
2	Entry	1	1	3	238	1017	0.234	237	250	0.2	0.3	4.016	A
			2	1, 2, 3	426	1017	0.418	429	432	0.3	0.5	4.832	A
		2	1	(1, 2, 3)	663			663	684	0.0	0.0	0.000	A
	Exit	1	1		637			637	635	0.0	0.0	0.000	A
3	Entry	1	1	1, 2	369	702	0.525	370	362	0.6	0.8	7.763	A
			2	2, 3	286	702	0.407	287	288	0.6	0.5	6.733	A
		2	1	(1, 2, 3)	655			655	651	0.0	0.0	0.000	A
	Exit	1	1		459			459	465	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	2	121	961	0.126	123	126	0.3	0.1	4.234	A
			2	1, 3	44	961	0.046	44	44	0.0	0.0	4.088	A
		2	1	(1, 2, 3)	165			165	169	0.0	0.0	0.009	A
	Exit	1	1		406			406	409	0.0	0.0	0.000	A
2	Entry	1	1	3	258	1018	0.253	257	259	0.3	0.4	4.113	A
			2	1, 2, 3	441	1018	0.433	442	438	0.5	0.5	5.231	A
		2	1	(1, 2, 3)	699			699	697	0.0	0.0	0.000	A
	Exit	1	1		633			633	635	0.0	0.0	0.000	A
3	Entry	1	1	1, 2	357	696	0.513	358	359	0.8	0.7	7.878	A
			2	2, 3	281	696	0.403	282	288	0.5	0.5	7.063	A
		2	1	(1, 2, 3)	638			638	647	0.0	0.0	0.000	A
	Exit	1	1		468			468	470	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	2	104	985	0.106	103	106	0.1	0.2	4.010	A
			2	1, 3	34	985	0.034	34	32	0.0	0.0	3.744	A
		2	1	(1, 2, 3)	138			138	138	0.0	0.0	0.002	A
	Exit	1	1		339			339	333	0.0	0.0	0.000	A
2	Entry	1	1	3	201	1022	0.197	200	205	0.4	0.3	3.956	A
			2	1, 2, 3	353	1022	0.346	354	356	0.5	0.4	4.637	A
		2	1	(1, 2, 3)	554			554	560	0.0	0.0	0.000	A
	Exit	1	1		549			549	534	0.0	0.0	0.000	A
3	Entry	1	1	1, 2	319	713	0.447	321	305	0.7	0.6	6.797	A
			2	2, 3	247	713	0.347	247	238	0.5	0.4	6.171	A
		2	1	(1, 2, 3)	566			566	542	0.0	0.0	0.000	A
	Exit	1	1		371			371	377	0.0	0.0	0.000	A

09:15 - 09:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	2	86	1016	0.084	85	87	0.2	0.1	3.873	A
			2	1, 3	25	1016	0.025	25	28	0.0	0.0	3.486	A
		2	1	(1, 2, 3)	111			111	115	0.0	0.0	0.000	A
	Exit	1	1		261			261	281	0.0	0.0	0.000	A
2	Entry	1	1	3	162	1024	0.158	163	166	0.3	0.1	3.881	A
			2	1, 2, 3	296	1024	0.288	295	309	0.4	0.4	4.344	A
		2	1	(1, 2, 3)	458			458	474	0.0	0.0	0.000	A
	Exit	1	1		446			446	430	0.0	0.0	0.000	A
3	Entry	1	1	1, 2	252	726	0.347	254	252	0.6	0.4	6.214	A
			2	2, 3	199	726	0.273	198	187	0.4	0.4	5.643	A
		2	1	(1, 2, 3)	451			451	438	0.0	0.0	0.000	A
	Exit	1	1		312			312	317	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	78	19	1147	1020	0.076	78	84	0.0	0.1	3.666	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	32	8	1147	1019	0.031	32	30	0.0	0.0	3.440	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	78	19	-	-	-	78	84	0.0	0.0	0.000	A
				3	32	8	-	-	-	32	30	0.0	0.0	0.000	A
2	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	170	43	1033	1023	0.167	170	164	0.0	0.2	3.838	A
			2	1	184	46	1033	1022	0.180	186	181	0.0	0.1	4.645	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	127	32	1033	1023	0.124	126	125	0.0	0.2	3.751	A
		2	1	1	184	46	-	-	-	184	182	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	297	74	-	-	-	297	291	0.0	0.0	0.000	A
3	Entry	1	1	1	97	24	777	722	0.134	97	95	0.0	0.1	7.240	A
				2	159	40	777	723	0.220	159	156	0.0	0.3	5.620	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	191	48	777	723	0.264	194	190	0.0	0.1	5.725	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	97	24	-	-	-	97	96	0.0	0.0	0.000	A
				2	349	87	-	-	-	349	347	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	116	29	1147	994	0.116	115	106	0.1	0.2	4.261	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	41	10	1147	996	0.041	40	38	0.0	0.1	3.582	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	116	29	-	-	-	116	107	0.0	0.0	0.022	A
				3	41	10	-	-	-	41	38	0.0	0.0	0.000	A
2	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	202	51	1033	1019	0.199	203	207	0.2	0.2	3.888	A
			2	1	216	54	1033	1019	0.212	219	214	0.1	0.1	5.041	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	139	35	1033	1019	0.136	139	151	0.2	0.2	3.879	A
		2	1	1	216	54	-	-	-	216	214	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	341	85	-	-	-	341	358	0.0	0.0	0.000	A
3	Entry	1	1	1	120	30	777	712	0.168	120	118	0.1	0.3	7.811	A
				2	186	46	777	712	0.261	187	183	0.3	0.3	5.941	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	234	58	777	713	0.328	231	228	0.1	0.6	6.159	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	120	30	-	-	-	120	119	0.0	0.0	0.000	A
				2	419	105	-	-	-	419	413	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	133	33	1147	963	0.138	131	128	0.2	0.3	4.391	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	46	12	1147	961	0.048	46	43	0.1	0.0	3.857	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	133	33	-	-	-	133	128	0.0	0.0	0.002	A
				3	46	12	-	-	-	46	43	0.0	0.0	0.000	A
2	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	238	59	1033	1018	0.234	237	250	0.2	0.3	4.016	A
			2	1	251	63	1033	1018	0.247	253	260	0.1	0.4	5.457	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	175	44	1033	1018	0.171	176	172	0.2	0.1	3.885	A
		2	1	1	251	63	-	-	-	251	261	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	412	103	-	-	-	412	423	0.0	0.0	0.000	A
3	Entry	1	1	1	150	37	777	703	0.213	151	144	0.3	0.2	9.309	A
				2	220	55	777	703	0.312	219	219	0.3	0.5	6.754	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	286	72	777	702	0.407	287	288	0.6	0.5	6.733	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	150	37	-	-	-	150	143	0.0	0.0	0.000	A
				2	506	126	-	-	-	506	508	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	121	30	1147	961	0.126	123	126	0.3	0.1	4.234	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	44	11	1147	959	0.046	44	44	0.0	0.0	4.088	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	121	30	-	-	-	121	125	0.0	0.0	0.012	A
				3	44	11	-	-	-	44	44	0.0	0.0	0.000	A
2	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	258	65	1033	1018	0.253	257	259	0.3	0.4	4.113	A
			2	1	274	69	1033	1018	0.269	276	270	0.4	0.4	5.925	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	167	42	1033	1018	0.164	167	168	0.1	0.2	4.115	A
		2	1	1	274	69	-	-	-	274	270	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	425	106	-	-	-	425	427	0.0	0.0	0.000	A
3	Entry	1	1	1	130	33	777	695	0.187	130	139	0.2	0.4	9.031	A
				2	227	57	777	696	0.326	228	220	0.5	0.4	7.147	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	281	70	777	696	0.403	282	288	0.5	0.5	7.063	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	130	33	-	-	-	130	139	0.0	0.0	0.000	A
				2	508	127	-	-	-	508	508	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	104	26	1147	986	0.105	103	106	0.1	0.2	4.010	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	34	8	1147	988	0.034	34	32	0.0	0.0	3.744	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	104	26	-	-	-	104	107	0.0	0.0	0.002	A
				3	34	8	-	-	-	34	31	0.0	0.0	0.000	A
2	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	201	50	1033	1022	0.197	200	205	0.4	0.3	3.956	A
			2	1	216	54	1033	1022	0.212	217	217	0.4	0.2	5.123	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	137	34	1033	1022	0.134	137	140	0.2	0.1	3.883	A
		2	1	1	216	54	-	-	-	216	216	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	338	85	-	-	-	338	344	0.0	0.0	0.000	A
3	Entry	1	1	1	120	30	777	713	0.168	122	116	0.4	0.2	7.908	A
				2	199	50	777	713	0.279	199	189	0.4	0.4	6.119	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	247	62	777	713	0.347	247	238	0.5	0.4	6.171	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	120	30	-	-	-	120	115	0.0	0.0	0.000	A
				2	447	112	-	-	-	447	427	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

09:15 - 09:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	86	21	1147	1019	0.084	85	87	0.2	0.1	3.873	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	25	6	1147	1022	0.024	25	28	0.0	0.0	3.486	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	86	21	-	-	-	86	86	0.0	0.0	0.000	A
				3	25	6	-	-	-	25	28	0.0	0.0	0.000	A
2	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	162	41	1033	1025	0.158	163	166	0.3	0.1	3.881	A
			2	1	169	42	1033	1024	0.165	171	186	0.2	0.2	4.768	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	126	32	1033	1025	0.123	124	123	0.1	0.2	3.700	A
		2	1	1	169	42	-	-	-	169	186	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	288	72	-	-	-	288	288	0.0	0.0	0.000	A
3	Entry	1	1	1	90	23	777	725	0.124	90	95	0.2	0.2	7.038	A
				2	162	40	777	726	0.223	164	157	0.4	0.2	5.715	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	199	50	777	727	0.273	198	187	0.4	0.4	5.643	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	90	23	-	-	-	90	95	0.0	0.0	0.000	A
				2	360	90	-	-	-	360	343	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

2022 Base Flows, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Info	Simulation	A1 - [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A453/EMA Roundabout	Standard Roundabout		1, 2, 3	4.80	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.80	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base Flows	PM	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	289	100.000
2		ONE HOUR	✓	576	100.000
3		ONE HOUR	✓	388	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	224	65
	2	133	0	443
	3	41	347	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
1	0.20	0.80

Heavy Vehicle %

From \ To	1	2	3
1	0	0	0
2	0	0	0
3	0	0	0

Cyclist %

From \ To	1	2	3
1	0	0	0
2	0	0	0
3	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.25	4.54	0.4	A	264	396
2	0.32	4.42	0.7	A	538	807
3	0.29	5.58	0.8	A	355	532

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	221	55	258	1361	0.163	221	220	139	0.0	0.3	3.989	A
2	439	110	49	2049	0.214	440	430	430	0.0	0.4	3.894	A
3	287	72	109	1468	0.196	289	287	381	0.0	0.4	5.373	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	256	64	314	1338	0.192	258	262	164	0.3	0.3	4.083	A
2	526	132	58	2003	0.263	528	521	514	0.4	0.6	4.123	A
3	352	88	126	1463	0.241	351	349	460	0.4	0.6	5.362	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	319	80	390	1287	0.248	322	311	187	0.3	0.2	4.354	A
2	649	162	73	2023	0.321	654	641	639	0.6	0.7	4.314	A
3	430	108	147	1480	0.291	430	430	580	0.6	0.8	5.576	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	311	78	372	1264	0.246	311	325	191	0.2	0.4	4.541	A
2	629	157	67	2000	0.315	632	622	616	0.7	0.6	4.423	A
3	414	104	148	1471	0.281	414	417	550	0.8	0.8	5.573	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	254	63	313	1322	0.192	255	264	155	0.4	0.3	4.338	A
2	538	135	55	2001	0.269	542	525	513	0.6	0.4	4.147	A
3	349	87	120	1473	0.237	348	353	477	0.8	0.5	5.396	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	224	56	264	1328	0.169	225	214	137	0.3	0.2	3.904	A
2	448	112	53	2051	0.218	446	439	437	0.4	0.4	4.187	A
3	296	74	104	1521	0.194	297	300	395	0.5	0.4	5.099	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	2	171	1053	0.163	171	170	0.0	0.2	4.149	A
			2	1, 3	50	1053	0.047	49	50	0.0	0.1	3.392	A
		2	1	(1, 2, 3)	221			221	221	0.0	0.0	0.013	A
	Exit	1	1		139			139	131	0.0	0.0	0.000	A
2	Entry	1	1	3	178	1016	0.175	179	175	0.0	0.1	3.717	A
			2	1, 2, 3	261	1016	0.257	261	255	0.0	0.3	4.016	A
		2	1	(1, 2, 3)	439			439	432	0.0	0.0	0.000	A
	Exit	1	1		430			430	426	0.0	0.0	0.000	A
3	Entry	1	1	1, 2	154	745	0.206	155	155	0.0	0.2	5.512	A
			2	2, 3	134	745	0.179	134	132	0.0	0.2	5.210	A
		2	1	(1, 2, 3)	287			287	288	0.0	0.0	0.000	A
	Exit	1	1		381			381	380	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	2	199	1033	0.192	200	201	0.2	0.3	4.230	A
			2	1, 3	58	1033	0.056	58	61	0.1	0.0	3.552	A
		2	1	(1, 2, 3)	256			256	262	0.0	0.0	0.011	A
	Exit	1	1		164			164	154	0.0	0.0	0.000	A
2	Entry	1	1	3	216	1013	0.213	216	217	0.1	0.2	3.875	A
			2	1, 2, 3	310	1013	0.306	312	303	0.3	0.4	4.301	A
		2	1	(1, 2, 3)	526			526	521	0.0	0.0	0.000	A
	Exit	1	1		514			514	514	0.0	0.0	0.000	A
3	Entry	1	1	1, 2	192	740	0.260	192	188	0.2	0.3	5.386	A
			2	2, 3	160	740	0.217	159	161	0.2	0.3	5.334	A
		2	1	(1, 2, 3)	352			352	350	0.0	0.0	0.000	A
	Exit	1	1		460			460	465	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	2	246	1005	0.245	250	240	0.3	0.1	4.437	A
			2	1, 3	73	1005	0.073	73	71	0.0	0.1	3.936	A
		2	1	(1, 2, 3)	319			320	311	0.0	0.0	0.031	A
	Exit	1	1		187			187	195	0.0	0.0	0.000	A
2	Entry	1	1	3	271	1009	0.268	272	270	0.2	0.4	4.114	A
			2	1, 2, 3	378	1009	0.375	382	370	0.4	0.3	4.461	A
		2	1	(1, 2, 3)	649			649	641	0.0	0.0	0.000	A
	Exit	1	1		639			639	624	0.0	0.0	0.000	A
3	Entry	1	1	1, 2	227	733	0.310	226	232	0.3	0.4	5.604	A
			2	2, 3	203	733	0.277	204	198	0.3	0.4	5.542	A
		2	1	(1, 2, 3)	430			430	431	0.0	0.0	0.000	A
	Exit	1	1		580			580	563	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	2	244	1012	0.242	244	251	0.1	0.4	4.739	A
			2	1, 3	67	1012	0.066	67	73	0.1	0.1	3.761	A
		2	1	(1, 2, 3)	311			311	326	0.0	0.0	0.022	A
	Exit	1	1		191			191	191	0.0	0.0	0.000	A
2	Entry	1	1	3	276	1010	0.273	277	268	0.4	0.3	4.093	A
			2	1, 2, 3	354	1010	0.350	355	354	0.3	0.4	4.674	A
		2	1	(1, 2, 3)	629			629	622	0.0	0.0	0.000	A
	Exit	1	1		616			616	623	0.0	0.0	0.000	A
3	Entry	1	1	1, 2	221	733	0.302	222	221	0.4	0.5	5.815	A
			2	2, 3	193	733	0.263	193	196	0.4	0.4	5.298	A
		2	1	(1, 2, 3)	414			414	417	0.0	0.0	0.000	A
	Exit	1	1		550			550	551	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	2	199	1033	0.193	201	205	0.4	0.3	4.503	A
			2	1, 3	54	1033	0.052	55	60	0.1	0.1	3.614	A
		2	1	(1, 2, 3)	254			254	264	0.0	0.0	0.036	A
	Exit	1	1		155			155	151	0.0	0.0	0.000	A
2	Entry	1	1	3	228	1014	0.224	230	226	0.3	0.1	3.907	A
			2	1, 2, 3	310	1014	0.306	312	299	0.4	0.3	4.328	A
		2	1	(1, 2, 3)	538			538	524	0.0	0.0	0.000	A
	Exit	1	1		513			513	524	0.0	0.0	0.000	A
3	Entry	1	1	1, 2	181	741	0.244	180	188	0.5	0.4	5.516	A
			2	2, 3	168	741	0.227	168	165	0.4	0.2	5.259	A
		2	1	(1, 2, 3)	349			349	352	0.0	0.0	0.000	A
	Exit	1	1		477			477	468	0.0	0.0	0.000	A

18:15 - 18:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	2	172	1051	0.164	172	165	0.3	0.2	4.027	A
			2	1, 3	52	1051	0.049	53	49	0.1	0.0	3.388	A
		2	1	(1, 2, 3)	224			224	213	0.0	0.0	0.024	A
	Exit	1	1		137			137	134	0.0	0.0	0.000	A
2	Entry	1	1	3	191	1015	0.189	189	186	0.1	0.3	3.843	A
			2	1, 2, 3	256	1015	0.253	257	253	0.3	0.2	4.441	A
		2	1	(1, 2, 3)	448			448	440	0.0	0.0	0.000	A
	Exit	1	1		437			437	431	0.0	0.0	0.000	A
3	Entry	1	1	1, 2	163	746	0.219	165	162	0.4	0.2	5.194	A
			2	2, 3	132	746	0.177	132	137	0.2	0.2	4.988	A
		2	1	(1, 2, 3)	296			296	299	0.0	0.0	0.000	A
	Exit	1	1		395			395	387	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	171	43	1147	1054	0.163	171	170	0.0	0.2	4.149	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	50	12	1147	1048	0.048	49	50	0.0	0.1	3.392	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	171	43	-	-	-	171	171	0.0	0.0	0.013	A
				3	50	12	-	-	-	50	51	0.0	0.0	0.012	A
2	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	178	44	1033	1016	0.175	179	175	0.0	0.1	3.717	A
			2	1	109	27	1033	1017	0.107	109	101	0.0	0.2	4.426	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	152	38	1033	1016	0.150	152	155	0.0	0.1	3.747	A
		2	1	1	109	27	-	-	-	109	102	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	330	82	-	-	-	330	330	0.0	0.0	0.000	A
3	Entry	1	1	1	30	8	777	746	0.041	31	31	0.0	0.1	6.035	A
				2	123	31	777	746	0.165	124	124	0.0	0.2	5.383	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	134	33	777	745	0.179	134	132	0.0	0.2	5.210	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	30	8	-	-	-	30	31	0.0	0.0	0.000	A
				2	257	64	-	-	-	257	258	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	199	50	1147	1032	0.193	200	201	0.2	0.3	4.230	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	58	14	1147	1037	0.056	58	61	0.1	0.0	3.552	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	199	50	-	-	-	199	202	0.0	0.0	0.014	A
				3	58	14	-	-	-	58	61	0.0	0.0	0.000	A
2	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	216	54	1033	1013	0.213	216	217	0.1	0.2	3.875	A
			2	1	126	32	1033	1013	0.125	126	117	0.2	0.2	4.928	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	184	46	1033	1013	0.182	185	186	0.1	0.2	3.907	A
		2	1	1	126	32	-	-	-	126	117	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	400	100	-	-	-	400	404	0.0	0.0	0.000	A
3	Entry	1	1	1	37	9	777	741	0.050	37	37	0.1	0.1	6.144	A
				2	155	39	777	740	0.209	155	151	0.2	0.2	5.203	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	160	40	777	739	0.217	159	161	0.2	0.3	5.334	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	37	9	-	-	-	37	37	0.0	0.0	0.000	A
				2	315	79	-	-	-	315	314	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	246	62	1147	1005	0.245	250	240	0.3	0.1	4.437	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	73	18	1147	1006	0.073	73	71	0.0	0.1	3.936	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	246	61	-	-	-	246	240	0.0	0.0	0.039	A
				3	73	18	-	-	-	73	71	0.0	0.0	0.006	A
2	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	271	68	1033	1009	0.268	272	270	0.2	0.4	4.114	A
			2	1	145	36	1033	1010	0.144	147	148	0.2	0.2	5.176	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	233	58	1033	1009	0.231	235	222	0.2	0.1	3.984	A
		2	1	1	145	36	-	-	-	145	148	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	503	126	-	-	-	503	493	0.0	0.0	0.000	A
3	Entry	1	1	1	41	10	777	732	0.056	40	46	0.1	0.1	6.336	A
				2	186	47	777	733	0.254	186	186	0.2	0.3	5.420	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	203	51	777	734	0.277	204	198	0.3	0.4	5.542	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	41	10	-	-	-	41	47	0.0	0.0	0.000	A
				2	389	97	-	-	-	389	384	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	244	61	1147	1012	0.241	244	251	0.1	0.4	4.739	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	67	17	1147	1013	0.066	67	73	0.1	0.1	3.761	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	244	61	-	-	-	244	252	0.0	0.0	0.024	A
				3	67	17	-	-	-	67	73	0.0	0.0	0.015	A
2	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	276	69	1033	1010	0.273	277	268	0.4	0.3	4.093	A
			2	1	149	37	1033	1011	0.147	148	145	0.2	0.2	5.447	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	205	51	1033	1011	0.203	207	209	0.1	0.1	4.139	A
		2	1	1	149	37	-	-	-	149	145	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	481	120	-	-	-	481	477	0.0	0.0	0.000	A
3	Entry	1	1	1	42	10	777	733	0.057	42	46	0.1	0.1	6.739	A
				2	180	45	777	733	0.245	179	175	0.3	0.4	5.574	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	193	48	777	733	0.263	193	196	0.4	0.4	5.298	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	42	10	-	-	-	42	46	0.0	0.0	0.000	A
				2	373	93	-	-	-	373	371	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

18:00 - 18:15

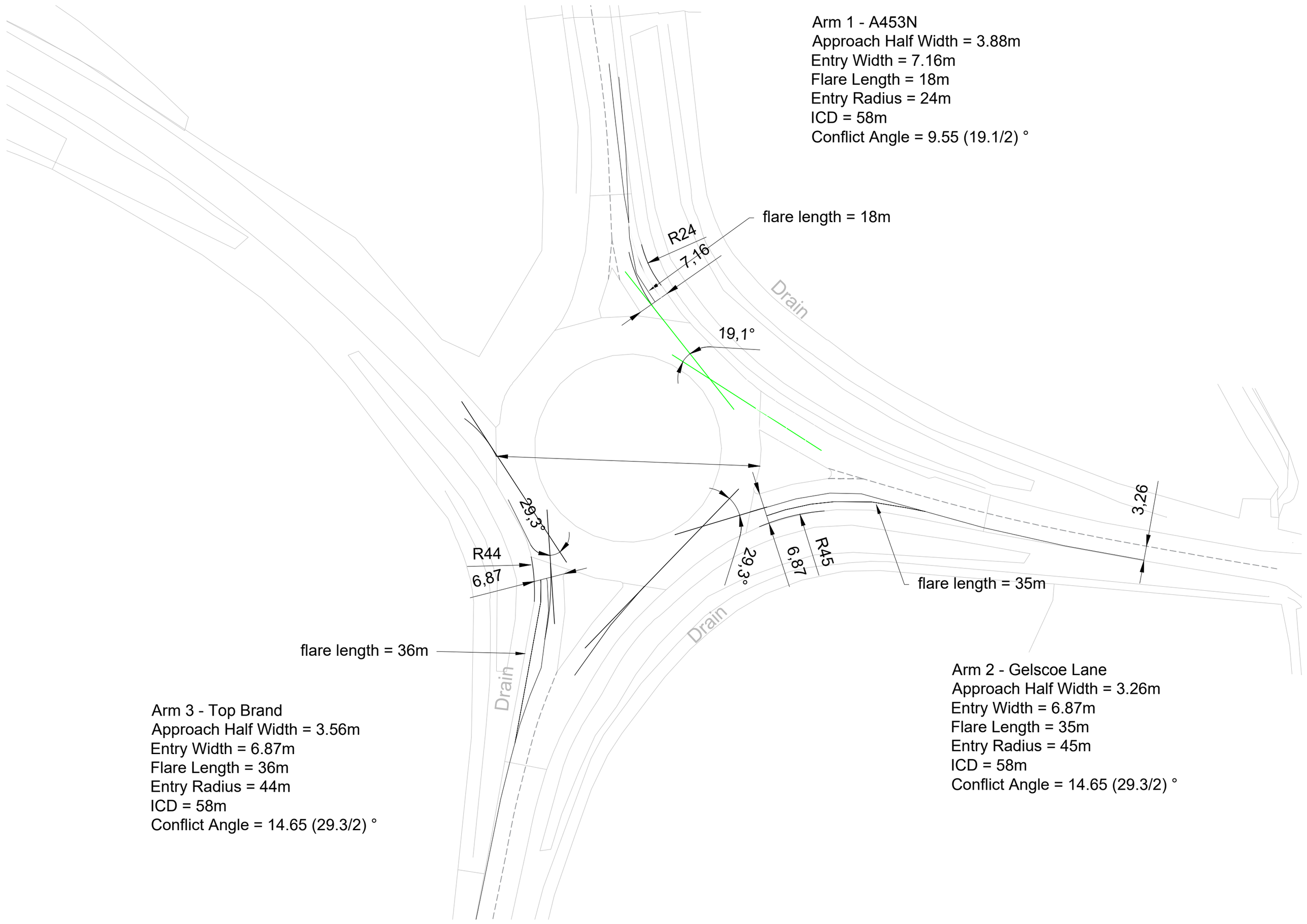
Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	199	50	1147	1032	0.193	201	205	0.4	0.3	4.503	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	54	14	1147	1029	0.053	55	60	0.1	0.1	3.614	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	199	50	-	-	-	199	204	0.0	0.0	0.044	A
				3	54	14	-	-	-	54	60	0.0	0.0	0.007	A
2	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	228	57	1033	1014	0.225	230	226	0.3	0.1	3.907	A
			2	1	120	30	1033	1014	0.118	120	116	0.2	0.1	4.653	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	191	48	1033	1014	0.188	192	183	0.1	0.2	4.123	A
		2	1	1	120	30	-	-	-	120	116	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	418	105	-	-	-	418	408	0.0	0.0	0.000	A
3	Entry	1	1	1	36	9	777	742	0.049	35	34	0.1	0.1	6.487	A
				2	145	36	777	741	0.195	144	154	0.4	0.3	5.297	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	168	42	777	741	0.227	168	165	0.4	0.2	5.259	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	36	9	-	-	-	36	35	0.0	0.0	0.000	A
				2	313	78	-	-	-	313	318	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

18:15 - 18:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	172	43	1147	1050	0.164	172	165	0.3	0.2	4.027	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	52	13	1147	1051	0.049	53	49	0.1	0.0	3.388	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	172	43	-	-	-	172	164	0.0	0.0	0.027	A
				3	52	13	-	-	-	52	49	0.0	0.0	0.012	A
2	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	191	48	1033	1015	0.189	189	186	0.1	0.3	3.843	A
			2	1	103	26	1033	1015	0.102	104	101	0.1	0.1	5.202	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	153	38	1033	1015	0.151	153	152	0.2	0.1	3.935	A
		2	1	1	103	26	-	-	-	103	101	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	345	86	-	-	-	345	339	0.0	0.0	0.000	A
3	Entry	1	1	1	32	8	777	748	0.043	33	33	0.1	0.0	5.903	A
				2	131	33	777	747	0.176	132	129	0.3	0.1	5.011	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	132	33	777	746	0.177	132	137	0.2	0.2	4.988	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	32	8	-	-	-	32	33	0.0	0.0	0.000	A
				2	264	66	-	-	-	264	266	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

APPENDIX 4: Junction 11 - A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Roundabout Model Outputs

Arm 1 - A453N
Approach Half Width = 3.88m
Entry Width = 7.16m
Flare Length = 18m
Entry Radius = 24m
ICD = 58m
Conflict Angle = 9.55 (19.1/2) °



Arm 3 - Top Brand
Approach Half Width = 3.56m
Entry Width = 6.87m
Flare Length = 36m
Entry Radius = 44m
ICD = 58m
Conflict Angle = 14.65 (29.3/2) °

Arm 2 - Gelscoe Lane
Approach Half Width = 3.26m
Entry Width = 6.87m
Flare Length = 35m
Entry Radius = 45m
ICD = 58m
Conflict Angle = 14.65 (29.3/2) °

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.1.1.1905
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Filename: A453_Gelscoe Lane_Top Brand roundabout (near A42) (Lane Sim) (Base Only).j10
Path: J:\2022\220500-East Midlands Gateway Phase 2 (1)\ProjectDelivery\01-WIP\DesignAndCalculations\T&I Planning\Traffic Models\11. A453_Gelscoe Lane_Top Brand roundabout (near A42)
Report generation date: 05/04/2024 14:13:09

»2022 Base Flows, AM
»2022 Base Flows, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	[Lane Simulation] - 2022 Base Flows									
1 - A453 (N)	D1	0.4	4.39	0.20	A	D2	1.5	6.17	0.47	A
2 - Gelscoe Lane		0.1	4.30	0.05	A		0.1	4.98	0.05	A
3 - Top Brand		0.5	4.93	0.26	A		0.1	4.47	0.08	A

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	A453 Gelscoe Lane Top Brand roundabout
Location	
Site number	
Date	18/10/2023
Version	
Status	(new file)
Identifier	Aaiza
Client	
Jobnumber	220500
Enumerator	BWB\Aaiza.Shafiq
Description	

Units

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

Analysis Options

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

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			2058580669	74

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Flows	AM	ONE HOUR	07:45	09:15	15	✓
D2	2022 Base Flows	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2022 Base Flows, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Gelscoe Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Top Brand - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Info	Simulation	A1 - [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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	4.61	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.61	A

Arms

Arms

Arm	Name	Description	No give-way line
1	A453 (N)		
2	Gelscoe Lane		
3	Top Brand		
4	A42		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - A453 (N)	3.88	7.16	18.0	24.0	58.0	9.6		
2 - Gelscoe Lane	3.26	6.87	35.0	45.0	58.0	14.7		
3 - Top Brand	3.56	6.87	36.0	44.0	58.0	14.7		
4 - A42								✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A453 (N)	0.633	1946
2 - Gelscoe Lane	0.635	1956
3 - Top Brand	0.643	2002
4 - A42		

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

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
1 - A453 (N)	Evenly split	10.00
2 - Gelscoe Lane	Evenly split	10.00
3 - Top Brand	Evenly split	10.00
4 - A42	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
1 - A453 (N)	Entry	1	1	2, 3	✓	4.00			0	99999	
			2	1, 4	✓	4.00			0	99999	
		2	1	(1, 2, 3, 4)		Infinity					
	Exit	1	1			Infinity					
2 - Gelscoe Lane	Entry	1	1	3, 4	✓	5.00			0	99999	
			2	1, 2	✓	5.00			0	99999	
		2	1	(1, 2, 3, 4)		Infinity					
	Exit	1	1			Infinity					
3 - Top Brand	Entry	1	1	1, 4	✓	5.00			0	99999	
			2	2, 3	✓	5.00			0	99999	
		2	1	(1, 2, 3, 4)		Infinity					
	Exit	1	1			Infinity					
4 - A42	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - A453 (N)	Entry	1	1	0.316	973
			2	0.316	973
2 - Gelscoe Lane	Entry	1	1	0.317	978
			2	0.317	978
3 - Top Brand	Entry	1	1	0.321	1001
			2	0.321	1001

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			A453 (N)	Gelscoe Lane	Top Brand	A42
1 - A453 (N)	1	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
2 - Gelscoe Lane	1	1			✓	✓
		2	✓	✓		
	2	1	✓	✓	✓	✓
3 - Top Brand	1	1	✓			✓
		2		✓	✓	
	2	1	✓	✓	✓	✓

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)	Run automatically
D1	2022 Base Flows	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A453 (N)		ONE HOUR	✓	246	100.000
2 - Gelscoe Lane		ONE HOUR	✓	55	100.000
3 - Top Brand		ONE HOUR	✓	232	100.000
4 - A42					

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A453 (N)	2 - Gelscoe Lane	3 - Top Brand	4 - A42
From	1 - A453 (N)	0	43	126	77
	2 - Gelscoe Lane	19	0	12	24
	3 - Top Brand	169	23	0	40
	4 - A42	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
1	0.20	0.80

Heavy Vehicle %

		To			
		1 - A453 (N)	2 - Gelscoe Lane	3 - Top Brand	4 - A42
From	1 - A453 (N)	0	0	0	0
	2 - Gelscoe Lane	0	0	0	0
	3 - Top Brand	0	0	0	0
	4 - A42	0	0	0	0

Cyclist %

		To			
		1 - A453 (N)	2 - Gelscoe Lane	3 - Top Brand	4 - A42
From	1 - A453 (N)	0	0	0	0
	2 - Gelscoe Lane	0	0	0	0
	3 - Top Brand	0	0	0	0
	4 - A42	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A453 (N)	0.20	4.39	0.4	A	226	339
2 - Gelscoe Lane	0.05	4.30	0.1	A	50	75
3 - Top Brand	0.26	4.93	0.5	A	212	318
4 - A42						

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	183	46	17	1340	0.137	183	183	138	0.0	0.2	4.167	A
2 - Gelscoe Lane	40	10	150	1438	0.028	40	43	50	0.0	0.0	3.905	A
3 - Top Brand	175	44	86	1065	0.164	176	177	104	0.0	0.2	4.354	A
4 - A42			0					107				

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	218	55	22	1364	0.160	217	221	163	0.2	0.2	4.358	A
2 - Gelscoe Lane	47	12	180	1373	0.034	47	48	59	0.0	0.1	3.987	A
3 - Top Brand	200	50	106	1089	0.184	201	210	122	0.2	0.2	4.443	A
4 - A42			0					122				

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	273	68	26	1369	0.199	272	267	209	0.2	0.4	4.387	A
2 - Gelscoe Lane	57	14	222	1360	0.042	58	55	76	0.1	0.0	4.051	A
3 - Top Brand	263	66	133	1028	0.256	264	256	147	0.2	0.5	4.899	A
4 - A42			0					162				

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	265	66	25	1361	0.195	263	267	209	0.4	0.4	4.383	A
2 - Gelscoe Lane	65	16	220	1357	0.048	64	64	69	0.0	0.1	3.953	A
3 - Top Brand	258	64	136	1090	0.237	261	258	148	0.5	0.2	4.925	A
4 - A42			0					162				

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	229	57	22	1380	0.166	229	224	163	0.4	0.2	4.191	A
2 - Gelscoe Lane	52	13	190	1380	0.038	51	51	60	0.1	0.1	4.299	A
3 - Top Brand	204	51	113	1087	0.188	205	209	129	0.2	0.2	4.823	A
4 - A42			0					133				

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	186	47	14	1340	0.139	187	184	140	0.2	0.2	4.206	A
2 - Gelscoe Lane	37	9	156	1344	0.028	37	39	45	0.1	0.1	4.031	A
3 - Top Brand	173	43	89	1089	0.158	171	177	104	0.2	0.2	4.260	A
4 - A42			0					106				

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	2, 3	128	968	0.132	128	127	0.0	0.2	4.367	A
			2	1, 4	56	968	0.057	55	56	0.0	0.1	3.707	A
		2	1	(1, 2, 3, 4)	183			183	184	0.0	0.0	0.002	A
	Exit	1	1		138			138	141	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	3, 4	29	930	0.031	29	28	0.0	0.0	3.925	A
			2	1, 2	12	930	0.013	11	15	0.0	0.0	3.869	A
		2	1	(1, 2, 3, 4)	40			40	43	0.0	0.0	0.000	A
	Exit	1	1		50			50	53	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1, 4	159	973	0.163	159	159	0.0	0.2	4.410	A
			2	2, 3	16	973	0.017	17	18	0.0	0.0	3.838	A
		2	1	(1, 2, 3, 4)	175			175	178	0.0	0.0	0.003	A
	Exit	1	1		104			104	102	0.0	0.0	0.000	A
4 - A42	Exit	1	1		107			107	107	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	2, 3	148	966	0.153	148	152	0.2	0.1	4.397	A
			2	1, 4	70	966	0.073	70	69	0.1	0.1	4.274	A
		2	1	(1, 2, 3, 4)	218			218	221	0.0	0.0	0.000	A
	Exit	1	1		163			163	169	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	3, 4	32	921	0.035	32	31	0.0	0.0	4.094	A
			2	1, 2	16	921	0.017	16	16	0.0	0.0	3.783	A
		2	1	(1, 2, 3, 4)	47			47	48	0.0	0.0	0.000	A
	Exit	1	1		59			59	62	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1, 4	179	967	0.185	180	188	0.2	0.2	4.515	A
			2	2, 3	21	967	0.022	22	22	0.0	0.0	3.841	A
		2	1	(1, 2, 3, 4)	200			200	210	0.0	0.0	0.000	A
	Exit	1	1		122			122	123	0.0	0.0	0.000	A
4 - A42	Exit	1	1		122			122	124	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	2, 3	184	965	0.190	184	181	0.1	0.3	4.497	A
			2	1, 4	89	965	0.092	88	86	0.1	0.1	4.155	A
		2	1	(1, 2, 3, 4)	273			273	268	0.0	0.0	0.000	A
	Exit	1	1		209			209	203	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	3, 4	39	907	0.043	39	38	0.0	0.0	4.131	A
			2	1, 2	18	907	0.019	18	18	0.0	0.0	3.882	A
		2	1	(1, 2, 3, 4)	57			57	55	0.0	0.0	0.000	A
	Exit	1	1		76			76	73	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1, 4	237	958	0.247	238	231	0.2	0.5	5.029	A
			2	2, 3	26	958	0.027	26	25	0.0	0.0	3.684	A
		2	1	(1, 2, 3, 4)	263			263	257	0.0	0.0	0.003	A
	Exit	1	1		147			147	146	0.0	0.0	0.000	A
4 - A42	Exit	1	1		162			162	157	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	2, 3	180	965	0.186	179	183	0.3	0.3	4.536	A
			2	1, 4	85	965	0.088	85	84	0.1	0.1	4.047	A
		2	1	(1, 2, 3, 4)	265			265	266	0.0	0.0	0.000	A
	Exit	1	1		209			209	208	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	3, 4	42	908	0.047	42	42	0.0	0.1	3.919	A
			2	1, 2	23	908	0.025	22	22	0.0	0.0	4.017	A
		2	1	(1, 2, 3, 4)	65			65	64	0.0	0.0	0.000	A
	Exit	1	1		69			69	71	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1, 4	233	957	0.243	236	232	0.5	0.2	5.003	A
			2	2, 3	25	957	0.026	25	26	0.0	0.0	4.174	A
		2	1	(1, 2, 3, 4)	258			258	256	0.0	0.0	0.006	A
	Exit	1	1		148			148	152	0.0	0.0	0.000	A
4 - A42	Exit	1	1		162			162	158	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	2, 3	159	966	0.164	158	152	0.3	0.2	4.319	A
			2	1, 4	70	966	0.073	70	73	0.1	0.1	3.925	A
		2	1	(1, 2, 3, 4)	229			229	224	0.0	0.0	0.000	A
	Exit	1	1		163			163	169	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	3, 4	34	917	0.037	33	32	0.1	0.1	4.596	A
			2	1, 2	18	917	0.020	18	19	0.0	0.0	3.792	A
		2	1	(1, 2, 3, 4)	52			52	51	0.0	0.0	0.000	A
	Exit	1	1		60			60	60	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1, 4	182	965	0.189	183	186	0.2	0.2	4.906	A
			2	2, 3	22	965	0.023	22	23	0.0	0.0	4.035	A
		2	1	(1, 2, 3, 4)	204			204	209	0.0	0.0	0.015	A
	Exit	1	1		129			129	126	0.0	0.0	0.000	A
4 - A42	Exit	1	1		133			133	130	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	2, 3	128	969	0.132	129	125	0.2	0.1	4.293	A
			2	1, 4	58	969	0.060	59	59	0.1	0.0	4.023	A
		2	1	(1, 2, 3, 4)	186			186	184	0.0	0.0	0.000	A
	Exit	1	1		140			140	142	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	3, 4	23	928	0.025	23	25	0.1	0.0	4.008	A
			2	1, 2	14	928	0.015	14	14	0.0	0.0	4.073	A
		2	1	(1, 2, 3, 4)	37			37	39	0.0	0.0	0.000	A
	Exit	1	1		45			45	47	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1, 4	158	972	0.163	157	160	0.2	0.2	4.314	A
			2	2, 3	14	972	0.015	14	17	0.0	0.0	3.744	A
		2	1	(1, 2, 3, 4)	173			173	177	0.0	0.0	0.000	A
	Exit	1	1		104			104	104	0.0	0.0	0.000	A
4 - A42	Exit	1	1		106			106	107	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	33	8	973	967	0.034	33	35	0.0	0.0	4.284	A
				3	95	24	973	967	0.098	95	92	0.0	0.1	4.399	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	56	14	973	967	0.057	55	56	0.0	0.1	3.707	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	33	8	-	-	-	33	35	0.0	0.0	0.000	A
				3	95	24	-	-	-	95	93	0.0	0.0	0.004	A
				4	56	14	-	-	-	56	56	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	9	2	872	828	0.011	9	9	0.0	0.0	3.998	A
				4	19	5	978	932	0.021	19	19	0.0	0.0	3.888	A
			2	1	12	3	951	907	0.013	11	15	0.0	0.0	3.869	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	12	3	-	-	-	12	15	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	9	2	-	-	-	9	9	0.0	0.0	0.000	A
				4	19	5	-	-	-	19	19	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1	127	32	1001	974	0.130	127	127	0.0	0.2	4.356	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	32	8	1001	972	0.033	32	32	0.0	0.0	4.622	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	16	4	987	958	0.017	17	18	0.0	0.0	3.838	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	127	32	-	-	-	127	127	0.0	0.0	0.004	A
				2	16	4	-	-	-	16	18	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	32	8	-	-	-	32	32	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	37	9	973	966	0.038	37	40	0.0	0.0	4.147	A
				3	111	28	973	966	0.115	111	113	0.1	0.1	4.484	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	70	18	973	966	0.073	70	69	0.1	0.1	4.274	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	37	9	-	-	-	37	39	0.0	0.0	0.000	A
				3	111	28	-	-	-	111	113	0.0	0.0	0.000	A
				4	70	18	-	-	-	70	69	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	11	3	899	847	0.013	11	11	0.0	0.0	3.907	A
				4	21	5	978	921	0.023	20	21	0.0	0.0	4.190	A
			2	1	16	4	978	919	0.017	16	16	0.0	0.0	3.783	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	16	4	-	-	-	16	16	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	11	3	-	-	-	11	11	0.0	0.0	0.000	A
				4	21	5	-	-	-	21	21	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1	147	37	1001	967	0.152	147	153	0.2	0.1	4.501	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	32	8	1001	966	0.033	32	35	0.0	0.0	4.573	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	21	5	1001	968	0.022	22	22	0.0	0.0	3.841	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	147	37	-	-	-	147	153	0.0	0.0	0.000	A
				2	21	5	-	-	-	21	22	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	32	8	-	-	-	32	35	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	49	12	973	966	0.050	50	48	0.0	0.0	4.480	A
				3	135	34	973	965	0.140	134	133	0.1	0.2	4.503	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	89	22	973	965	0.092	88	86	0.1	0.1	4.155	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	49	12	-	-	-	49	48	0.0	0.0	0.000	A
				3	135	34	-	-	-	135	134	0.0	0.0	0.000	A
				4	89	22	-	-	-	89	86	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	13	3	938	871	0.015	13	12	0.0	0.0	3.703	A
				4	26	7	978	907	0.029	27	25	0.0	0.0	4.339	A
			2	1	18	4	925	862	0.021	18	18	0.0	0.0	3.882	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	18	4	-	-	-	18	18	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	13	3	-	-	-	13	12	0.0	0.0	0.000	A
				4	26	7	-	-	-	26	25	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1	190	48	1001	959	0.199	191	185	0.1	0.4	5.094	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	46	12	1001	960	0.048	47	46	0.0	0.1	4.766	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	26	6	1001	958	0.027	26	25	0.0	0.0	3.684	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	190	48	-	-	-	190	186	0.0	0.0	0.001	A
				2	26	6	-	-	-	26	25	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	46	12	-	-	-	46	46	0.0	0.0	0.011	A

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	43	11	973	965	0.045	43	45	0.0	0.0	4.557	A
				3	137	34	973	965	0.142	135	138	0.2	0.3	4.529	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	85	21	973	965	0.088	85	84	0.1	0.1	4.047	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	43	11	-	-	-	43	45	0.0	0.0	0.000	A
				3	137	34	-	-	-	137	138	0.0	0.0	0.001	A
				4	85	21	-	-	-	85	83	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	13	3	912	847	0.016	13	14	0.0	0.0	4.222	A
				4	29	7	978	907	0.032	29	28	0.0	0.0	3.769	A
			2	1	23	6	978	905	0.025	22	22	0.0	0.0	4.017	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	23	6	-	-	-	23	22	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	13	3	-	-	-	13	14	0.0	0.0	0.000	A
				4	29	7	-	-	-	29	28	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1	185	46	1001	957	0.193	187	185	0.4	0.2	4.999	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	48	12	1001	956	0.050	49	46	0.1	0.0	5.018	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	25	6	1001	958	0.026	25	26	0.0	0.0	4.174	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	185	46	-	-	-	185	185	0.0	0.0	0.008	A
				2	25	6	-	-	-	25	26	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	48	12	-	-	-	48	46	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	38	10	973	965	0.039	38	36	0.0	0.0	4.203	A
				3	120	30	973	966	0.125	120	115	0.3	0.1	4.356	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	70	18	973	966	0.073	70	73	0.1	0.1	3.925	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	38	10	-	-	-	38	36	0.0	0.0	0.000	A
				3	120	30	-	-	-	120	115	0.0	0.0	0.000	A
				4	70	18	-	-	-	70	72	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	9	2	899	844	0.011	9	10	0.0	0.0	4.675	A
				4	25	6	978	918	0.027	24	22	0.0	0.1	4.559	A
			2	1	18	5	978	915	0.020	18	19	0.0	0.0	3.792	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	18	5	-	-	-	18	19	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	9	2	-	-	-	9	10	0.0	0.0	0.000	A
				4	25	6	-	-	-	25	22	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1	144	36	1001	964	0.149	145	150	0.2	0.1	4.860	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	38	10	1001	964	0.040	38	36	0.0	0.1	5.097	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	22	6	1001	964	0.023	22	23	0.0	0.0	4.035	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	144	36	-	-	-	144	150	0.0	0.0	0.021	A
				2	22	6	-	-	-	22	24	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	38	10	-	-	-	38	36	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	31	8	973	968	0.032	31	30	0.0	0.0	4.374	A
				3	98	24	973	969	0.101	97	95	0.1	0.1	4.266	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	58	15	973	969	0.060	59	59	0.1	0.0	4.023	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	31	8	-	-	-	31	30	0.0	0.0	0.000	A
				3	98	24	-	-	-	98	95	0.0	0.0	0.000	A
				4	58	15	-	-	-	58	59	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	7	2	872	825	0.008	7	8	0.0	0.0	4.026	A
				4	17	4	978	925	0.018	17	17	0.1	0.0	3.999	A
			2	1	14	4	951	903	0.016	14	14	0.0	0.0	4.073	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	14	4	-	-	-	14	14	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	7	2	-	-	-	7	8	0.0	0.0	0.000	A
				4	17	4	-	-	-	17	17	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1	127	32	1001	972	0.130	126	128	0.1	0.2	4.301	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	32	8	1001	971	0.033	31	31	0.1	0.1	4.369	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	14	4	1001	973	0.015	14	17	0.0	0.0	3.744	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	127	32	-	-	-	127	129	0.0	0.0	0.000	A
				2	14	4	-	-	-	14	17	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	32	8	-	-	-	32	31	0.0	0.0	0.000	A

2022 Base Flows, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Gelscoe Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Top Brand - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Info	Simulation	A1 - [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.95	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.95	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base Flows	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A453 (N)		ONE HOUR	✓	672	100.000
2 - Gelscoe Lane		ONE HOUR	✓	55	100.000
3 - Top Brand		ONE HOUR	✓	65	100.000
4 - A42					

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A453 (N)	2 - Gelscoe Lane	3 - Top Brand	4 - A42
From	1 - A453 (N)	0	93	273	306
	2 - Gelscoe Lane	23	0	13	19
	3 - Top Brand	56	7	0	2
	4 - A42	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
1	0.20	0.80

Heavy Vehicle %

		To			
		1 - A453 (N)	2 - Gelscoe Lane	3 - Top Brand	4 - A42
From	1 - A453 (N)	0	0	0	0
	2 - Gelscoe Lane	0	0	0	0
	3 - Top Brand	0	0	0	0
	4 - A42	0	0	0	0

Cyclist %

		To			
		1 - A453 (N)	2 - Gelscoe Lane	3 - Top Brand	4 - A42
From	1 - A453 (N)	0	0	0	0
	2 - Gelscoe Lane	0	0	0	0
	3 - Top Brand	0	0	0	0
	4 - A42	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A453 (N)	0.47	6.17	1.5	A	610	914
2 - Gelscoe Lane	0.05	4.98	0.1	A	50	76
3 - Top Brand	0.08	4.47	0.1	A	59	88
4 - A42						

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	505	126	4	1547	0.326	507	503	58	0.0	0.7	5.111	A
2 - Gelscoe Lane	43	11	437	1435	0.030	43	41	74	0.0	0.0	4.736	A
3 - Top Brand	48	12	260	1030	0.046	47	53	220	0.0	0.1	4.216	A
4 - A42			0					245				

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	603	151	6	1513	0.398	599	592	67	0.7	1.1	5.290	A
2 - Gelscoe Lane	47	12	516	1361	0.035	47	51	88	0.0	0.1	4.493	A
3 - Top Brand	57	14	309	1013	0.057	56	58	254	0.1	0.1	4.213	A
4 - A42			0					292				

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	723	181	8	1560	0.463	722	729	90	1.1	0.9	6.052	A
2 - Gelscoe Lane	62	15	626	1255	0.049	62	61	104	0.1	0.1	4.975	A
3 - Top Brand	73	18	372	965	0.075	73	75	316	0.1	0.1	4.176	A
4 - A42			0					347				

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	746	187	8	1580	0.472	743	737	83	0.9	1.5	6.172	A
2 - Gelscoe Lane	59	15	637	1228	0.048	59	59	113	0.1	0.1	4.734	A
3 - Top Brand	68	17	374	976	0.070	69	73	321	0.1	0.0	4.474	A
4 - A42			0					353				

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	588	147	5	1531	0.384	588	608	71	1.5	0.8	5.359	A
2 - Gelscoe Lane	50	12	504	1286	0.039	50	50	89	0.1	0.1	4.748	A
3 - Top Brand	56	14	305	992	0.057	56	58	250	0.0	0.1	4.412	A
4 - A42			0					284				

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	493	123	4	1581	0.312	493	494	61	0.8	0.7	4.911	A
2 - Gelscoe Lane	42	11	423	1391	0.030	42	42	74	0.1	0.1	4.548	A
3 - Top Brand	50	12	248	1030	0.048	50	49	217	0.1	0.0	3.964	A
4 - A42			0					233				

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	2, 3	275	972	0.283	277	276	0.0	0.4	5.081	A
			2	1, 4	230	972	0.236	230	227	0.0	0.3	5.066	A
		2	1	(1, 2, 3, 4)	505			505	506	0.0	0.0	0.038	A
	Exit	1	1		58			58	63	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	3, 4	25	839	0.030	25	24	0.0	0.0	4.728	A
			2	1, 2	17	839	0.021	17	17	0.0	0.0	4.748	A
		2	1	(1, 2, 3, 4)	43			43	42	0.0	0.0	0.000	A
	Exit	1	1		74			74	77	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1, 4	44	917	0.047	43	48	0.0	0.1	4.140	A
			2	2, 3	4	917	0.004	4	5	0.0	0.0	4.903	A
		2	1	(1, 2, 3, 4)	48			48	53	0.0	0.0	0.000	A
	Exit	1	1		220			220	216	0.0	0.0	0.000	A
4 - A42	Exit	1	1		245			245	243	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	2, 3	325	971	0.335	324	319	0.4	0.5	5.339	A
			2	1, 4	277	971	0.286	275	274	0.3	0.6	5.080	A
		2	1	(1, 2, 3, 4)	603			602	594	0.0	0.0	0.070	A
	Exit	1	1		67			67	73	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	3, 4	29	814	0.036	29	30	0.0	0.1	4.500	A
			2	1, 2	18	814	0.022	18	21	0.0	0.0	4.485	A
		2	1	(1, 2, 3, 4)	47			47	51	0.0	0.0	0.000	A
	Exit	1	1		88			88	90	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1, 4	51	902	0.057	50	53	0.1	0.1	4.272	A
			2	2, 3	6	902	0.007	6	5	0.0	0.0	3.573	A
		2	1	(1, 2, 3, 4)	57			57	58	0.0	0.0	0.000	A
	Exit	1	1		254			254	246	0.0	0.0	0.000	A
4 - A42	Exit	1	1		292			292	293	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	2, 3	399	971	0.411	398	395	0.5	0.6	6.057	A
			2	1, 4	324	971	0.333	324	334	0.6	0.3	5.645	A
		2	1	(1, 2, 3, 4)	723			723	728	0.0	0.0	0.185	A
	Exit	1	1		90			90	91	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	3, 4	35	779	0.045	35	33	0.1	0.1	5.052	A
			2	1, 2	27	779	0.035	27	27	0.0	0.1	4.882	A
		2	1	(1, 2, 3, 4)	62			62	61	0.0	0.0	0.000	A
	Exit	1	1		104			104	106	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1, 4	65	881	0.074	65	66	0.1	0.0	4.226	A
			2	2, 3	8	881	0.009	8	9	0.0	0.0	3.791	A
		2	1	(1, 2, 3, 4)	73			73	75	0.0	0.0	0.000	A
	Exit	1	1		316			316	310	0.0	0.0	0.000	A
4 - A42	Exit	1	1		347			347	357	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	2, 3	417	971	0.429	414	408	0.6	0.8	6.316	A
			2	1, 4	331	971	0.341	328	329	0.3	0.7	5.395	A
		2	1	(1, 2, 3, 4)	746			747	740	0.0	0.0	0.268	A
	Exit	1	1		83			83	87	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	3, 4	35	776	0.046	36	35	0.1	0.0	4.844	A
			2	1, 2	23	776	0.030	23	24	0.1	0.0	4.573	A
		2	1	(1, 2, 3, 4)	59			59	59	0.0	0.0	0.000	A
	Exit	1	1		113			113	115	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1, 4	61	881	0.069	62	65	0.0	0.0	4.578	A
			2	2, 3	8	881	0.009	8	8	0.0	0.0	3.619	A
		2	1	(1, 2, 3, 4)	68			68	73	0.0	0.0	0.000	A
	Exit	1	1		321			321	314	0.0	0.0	0.000	A
4 - A42	Exit	1	1		353			353	355	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	2, 3	322	971	0.331	321	331	0.8	0.5	5.401	A
			2	1, 4	267	971	0.275	267	277	0.7	0.3	5.133	A
		2	1	(1, 2, 3, 4)	588			588	605	0.0	0.0	0.080	A
	Exit	1	1		71			71	73	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	3, 4	28	818	0.034	28	28	0.0	0.0	4.710	A
			2	1, 2	22	818	0.026	22	22	0.0	0.1	4.798	A
		2	1	(1, 2, 3, 4)	50			50	50	0.0	0.0	0.000	A
	Exit	1	1		89			89	91	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1, 4	51	903	0.056	50	53	0.0	0.1	4.448	A
			2	2, 3	5	903	0.006	5	5	0.0	0.0	4.069	A
		2	1	(1, 2, 3, 4)	56			56	58	0.0	0.0	0.000	A
	Exit	1	1		250			250	257	0.0	0.0	0.000	A
4 - A42	Exit	1	1		284			284	295	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	2, 3	278	972	0.286	277	277	0.5	0.4	5.006	A
			2	1, 4	214	972	0.221	216	217	0.3	0.3	4.777	A
		2	1	(1, 2, 3, 4)	493			493	494	0.0	0.0	0.006	A
	Exit	1	1		61			61	60	0.0	0.0	0.000	A
2 - Gelscoe Lane	Entry	1	1	3, 4	25	844	0.030	25	25	0.0	0.0	4.478	A
			2	1, 2	17	844	0.020	17	17	0.1	0.0	4.650	A
		2	1	(1, 2, 3, 4)	42			42	42	0.0	0.0	0.000	A
	Exit	1	1		74			74	75	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1, 4	46	921	0.050	46	45	0.1	0.0	3.950	A
			2	2, 3	4	921	0.004	4	4	0.0	0.0	4.111	A
		2	1	(1, 2, 3, 4)	50			50	49	0.0	0.0	0.000	A
	Exit	1	1		217			217	216	0.0	0.0	0.000	A
4 - A42	Exit	1	1		233			233	234	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	69	17	973	971	0.071	70	71	0.0	0.1	4.938	A
				3	206	52	973	972	0.212	207	204	0.0	0.3	5.130	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	230	57	973	972	0.236	230	227	0.0	0.3	5.066	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	69	17	-	-	-	69	72	0.0	0.0	0.046	A
				3	206	52	-	-	-	206	205	0.0	0.0	0.033	A
				4	230	57	-	-	-	230	229	0.0	0.0	0.039	A
2 - Gelscoe Lane	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	12	3	965	831	0.015	12	11	0.0	0.0	4.952	A
				4	13	3	965	822	0.016	13	13	0.0	0.0	4.533	A
			2	1	17	4	952	818	0.021	17	17	0.0	0.0	4.748	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	17	4	-	-	-	17	17	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	12	3	-	-	-	12	11	0.0	0.0	0.000	A
				4	13	3	-	-	-	13	13	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1	41	10	1001	917	0.045	41	46	0.0	0.1	4.102	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	2	0.52	360	331	0.006	2	2	0.0	0.0	4.972	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	4	1	694	639	0.006	4	5	0.0	0.0	4.903	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	41	10	-	-	-	41	46	0.0	0.0	0.000	A
				2	4	1	-	-	-	4	5	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	2	0.52	-	-	-	2	2	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	82	21	973	971	0.085	82	85	0.1	0.2	5.300	A
				3	243	61	973	971	0.250	242	234	0.3	0.3	5.354	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	277	69	973	971	0.285	275	274	0.3	0.6	5.080	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	82	21	-	-	-	82	85	0.0	0.0	0.117	A
				3	243	61	-	-	-	243	234	0.0	0.0	0.068	A
				4	277	69	-	-	-	277	275	0.0	0.0	0.057	A
2 - Gelscoe Lane	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	13	3	952	795	0.016	12	12	0.0	0.0	4.451	A
				4	16	4	939	785	0.021	16	17	0.0	0.1	4.534	A
			2	1	18	4	978	819	0.022	18	21	0.0	0.0	4.485	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	18	4	-	-	-	18	21	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	13	3	-	-	-	13	12	0.0	0.0	0.000	A
				4	16	4	-	-	-	16	17	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1	50	12	1001	902	0.055	48	51	0.1	0.1	4.320	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	1	0.36	440	398	0.004	1	2	0.0	0.0	3.117	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	6	2	761	687	0.009	6	5	0.0	0.0	3.573	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	50	12	-	-	-	50	51	0.0	0.0	0.000	A
				2	6	2	-	-	-	6	5	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	1	0.36	-	-	-	1	2	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	96	24	973	971	0.098	96	97	0.2	0.1	6.143	A
				3	304	76	973	971	0.313	302	297	0.3	0.5	6.029	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	324	81	973	971	0.333	324	334	0.6	0.3	5.645	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	96	24	-	-	-	96	97	0.0	0.0	0.225	A
				3	304	76	-	-	-	304	298	0.0	0.0	0.164	A
				4	324	81	-	-	-	324	333	0.0	0.0	0.191	A
2 - Gelscoe Lane	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	14	3	939	749	0.018	14	13	0.0	0.0	5.069	A
				4	21	5	965	769	0.027	21	20	0.1	0.0	5.041	A
			2	1	27	7	978	776	0.035	27	27	0.0	0.1	4.882	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	27	7	-	-	-	27	27	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	14	3	-	-	-	14	13	0.0	0.0	0.000	A
				4	21	5	-	-	-	21	20	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1	63	16	1001	880	0.072	63	64	0.1	0.0	4.229	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	2	0.44	440	388	0.005	2	2	0.0	0.0	4.138	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	8	2	894	789	0.010	8	9	0.0	0.0	3.791	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	63	16	-	-	-	63	64	0.0	0.0	0.000	A
				2	8	2	-	-	-	8	9	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	2	0.44	-	-	-	2	2	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	108	27	973	971	0.111	106	107	0.1	0.4	6.420	A
				3	309	77	973	971	0.318	308	301	0.5	0.5	6.278	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	331	83	973	971	0.341	328	329	0.3	0.7	5.395	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	107	27	-	-	-	108	108	0.0	0.0	0.290	A
				3	309	77	-	-	-	309	301	0.0	0.0	0.306	A
				4	330	83	-	-	-	331	331	0.0	0.0	0.225	A
2 - Gelscoe Lane	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	13	3	952	750	0.018	13	13	0.0	0.0	4.655	A
				4	22	6	978	774	0.029	23	23	0.0	0.0	4.949	A
			2	1	23	6	978	778	0.030	23	24	0.1	0.0	4.573	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	23	6	-	-	-	23	24	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	13	3	-	-	-	13	13	0.0	0.0	0.000	A
				4	22	6	-	-	-	22	23	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1	58	15	1001	880	0.066	59	62	0.0	0.0	4.562	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	2	0.56	440	385	0.006	2	2	0.0	0.0	4.986	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	8	2	867	766	0.010	8	8	0.0	0.0	3.619	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	58	15	-	-	-	58	62	0.0	0.0	0.000	A
				2	8	2	-	-	-	8	8	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	2	0.56	-	-	-	2	2	0.0	0.0	0.000	A

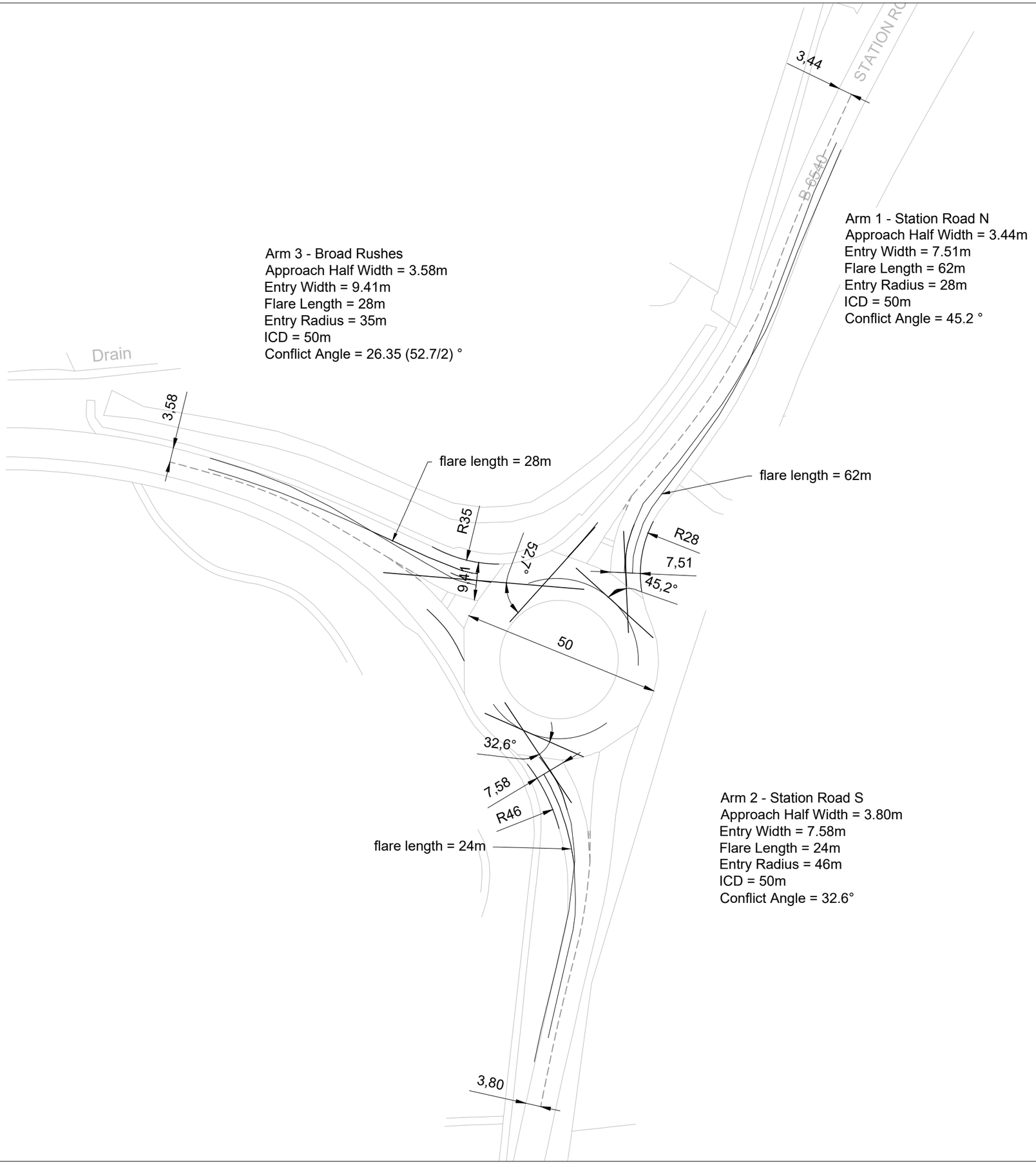
17:45 - 18:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	84	21	973	971	0.087	84	85	0.4	0.1	5.205	A
				3	237	59	973	971	0.244	237	246	0.5	0.4	5.469	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	267	67	973	971	0.275	267	277	0.7	0.3	5.133	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	84	21	-	-	-	84	84	0.0	0.0	0.100	A
				3	237	59	-	-	-	237	245	0.0	0.0	0.104	A
				4	267	67	-	-	-	267	275	0.0	0.0	0.053	A
2 - Gelscoe Lane	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	13	3	939	777	0.017	13	12	0.0	0.0	4.847	A
				4	15	4	978	811	0.019	15	16	0.0	0.0	4.612	A
			2	1	22	5	978	816	0.026	22	22	0.0	0.1	4.798	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	22	5	-	-	-	22	22	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	13	3	-	-	-	13	12	0.0	0.0	0.000	A
				4	15	4	-	-	-	15	17	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1	50	12	1001	905	0.055	49	51	0.0	0.1	4.445	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	1	0.28	320	287	0.004	1	2	0.0	0.0	4.544	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	5	1	734	658	0.008	5	5	0.0	0.0	4.069	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	50	12	-	-	-	50	51	0.0	0.0	0.000	A
				2	5	1	-	-	-	5	5	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	1	0.28	-	-	-	1	2	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A453 (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	70	18	973	972	0.072	70	71	0.1	0.1	4.923	A
				3	208	52	973	972	0.214	207	206	0.4	0.3	5.035	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	214	54	973	972	0.221	216	217	0.3	0.3	4.777	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	70	18	-	-	-	70	71	0.0	0.0	0.002	A
				3	208	52	-	-	-	208	206	0.0	0.0	0.007	A
				4	214	54	-	-	-	214	217	0.0	0.0	0.006	A
2 - Gelscoe Lane	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	10	3	861	740	0.014	10	10	0.0	0.0	4.421	A
				4	15	4	926	796	0.019	15	16	0.0	0.0	4.513	A
			2	1	17	4	939	811	0.021	17	17	0.1	0.0	4.650	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	17	4	-	-	-	17	17	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	10	3	-	-	-	10	9	0.0	0.0	0.000	A
				4	15	4	-	-	-	15	16	0.0	0.0	0.000	A
3 - Top Brand	Entry	1	1	1	44	11	1001	918	0.048	44	43	0.1	0.0	3.946	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	2	0.40	320	294	0.005	2	2	0.0	0.0	4.055	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	4	1	681	628	0.006	4	4	0.0	0.0	4.111	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	44	11	-	-	-	44	43	0.0	0.0	0.000	A
				2	4	1	-	-	-	4	4	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				4	2	0.40	-	-	-	2	2	0.0	0.0	0.000	A

APPENDIX 5: Junction 15 - Station Road/Broad Rushes Roundabout Model Outputs


STATION RO
3,44
B 6540
Arm 1 - Station Road N
Approach Half Width = 3.44m
Entry Width = 7.51m
Flare Length = 62m
Entry Radius = 28m
ICD = 50m
Conflict Angle = 45.2 °
Arm 3 - Broad Rushes
Approach Half Width = 3.58m
Entry Width = 9.41m
Flare Length = 28m
Entry Radius = 35m
ICD = 50m
Conflict Angle = 26.35 (52.7/2) °
Drain
3,58
flare length = 28m
R35
52,7°
9,41
flare length = 62m
R28
7,51
45,2°
50
32,6°
7,58
R46
flare length = 24m
3,80
Arm 2 - Station Road S
Approach Half Width = 3.80m
Entry Width = 7.58m
Flare Length = 24m
Entry Radius = 46m
ICD = 50m
Conflict Angle = 32.6°

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.1.1.1905
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Filename: Station Road_Broad Rushes roundabout (LANE SIM) (Base Only).j10
Path: J:\2022\220500-East Midlands Gateway Phase 2 (1)\ProjectDelivery\01-WIP\DesignAndCalculations\T&I Planning\Traffic Models\15. Station Road_Broad Rushes roundabout (Castle Donington)
Report generation date: 05/04/2024 14:20:26

»2023 base, AM
»2023 base, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	[Lane Simulation] - 2023 base									
1 - Station Road (N)	D1	2.9	8.04	0.67	A	D2	2.5	7.05	0.60	A
2 - Station Road (S)		0.7	6.65	0.42	A		2.8	13.04	0.73	B
3 - Broad Rushes		1.2	9.62	0.56	A		3.1	17.25	0.74	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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Station Road_Broad Rushes roundabout
Location	
Site number	Junction 15
Date	18/10/2023
Version	
Status	(new file)
Identifier	Aaiza
Client	
Jobnumber	220500
Enumerator	BWB\Aaiza.Shafiq
Description	

Units

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

Analysis Options

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

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			429421701	85

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2023 base	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2023 base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Station Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Info	Simulation	A1 - [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	8.12	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.12	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Station Road (N)		
2	Station Road (S)		
3	Broad Rushes		

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)	Entry only	Exit only
1 - Station Road (N)	3.44	7.51	62.0	28.0	50.0	45.2		
2 - Station Road (S)	3.58	9.41	28.0	35.0	50.0	26.4		
3 - Broad Rushes	3.80	7.58	24.0	46.0	50.0	32.6		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Station Road (N)	0.651	1982
2 - Station Road (S)	0.716	2217
3 - Broad Rushes	0.661	1949

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

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
1 - Station Road (N)	Direct		100

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
1 - Station Road (N)	Evenly split	10.00
2 - Station Road (S)	Evenly split	10.00
3 - Broad Rushes	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
1 - Station Road (N)	Entry	1	1	2	✓	7.00			0	99999	
			2	1, 3	✓	7.00			0	99999	
		2	1	(1, 3, 2)		Infinity					
	Exit	1	1			Infinity					
2 - Station Road (S)	Entry	1	1	3	✓	5.00			0	99999	
			2	1, 2	✓	5.00			0	99999	
		2	1	(1, 3, 2)		Infinity					
	Exit	1	1			Infinity					
3 - Broad Rushes	Entry	1	1	1	✓	7.00			0	99999	
			2	3, 2	✓	7.00			0	99999	
		2	1	(1, 3, 2)		Infinity					
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - Station Road (N)	Entry	1	1	0.325	991
			2	0.325	991
2 - Station Road (S)	Entry	1	1	0.358	1108
			2	0.358	1108
3 - Broad Rushes	Entry	1	1	0.330	974
			2	0.330	974

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			Station Road (N)	Broad Rushes	Station Road (S)
1 - Station Road (N)	1	1			✓
		2	✓	✓	
	2	1	✓	✓	✓
3 - Broad Rushes	1	1	✓		
		2		✓	✓
	2	1	✓	✓	✓
2 - Station Road (S)	1	1		✓	
		2	✓		✓
	2	1	✓	✓	✓

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)	Run automatically
D1	2023 base	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Station Road (N)		ONE HOUR	✓	1126	100.000
2 - Station Road (S)		ONE HOUR	✓	371	100.000
3 - Broad Rushes		ONE HOUR	✓	426	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Station Road (N)	2 - Station Road (S)	3 - Broad Rushes
From	1 - Station Road (N)	0	626	500
	2 - Station Road (S)	349	0	22
	3 - Broad Rushes	414	12	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
1	0.20	0.80

Heavy Vehicle %

		To		
		1 - Station Road (N)	2 - Station Road (S)	3 - Broad Rushes
From	1 - Station Road (N)	0	0	0
	2 - Station Road (S)	0	0	0
	3 - Broad Rushes	0	0	0

Cyclist %

		To		
		1 - Station Road (N)	2 - Station Road (S)	3 - Broad Rushes
From	1 - Station Road (N)	0	0	0
	2 - Station Road (S)	0	0	0
	3 - Broad Rushes	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Station Road (N)	0.67	8.04	2.9	A	1029	1543
2 - Station Road (S)	0.42	6.65	0.7	A	340	509
3 - Broad Rushes	0.56	9.62	1.2	A	390	585

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	851	213	11	1841	0.462	852	857	575	0.0	1.4	5.587	A
2 - Station Road (S)	280	70	377	1049	0.267	280	278	486	0.0	0.4	5.078	A
3 - Broad Rushes	326	81	261	946	0.344	325	319	396	0.0	0.5	6.140	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	1001	250	10	1829	0.547	1001	1019	694	1.4	2.0	6.390	A
2 - Station Road (S)	343	86	443	1002	0.342	345	337	568	0.4	0.5	5.512	A
3 - Broad Rushes	383	96	325	880	0.436	380	381	463	0.5	1.0	7.013	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	1223	306	14	1813	0.674	1218	1223	833	2.0	2.8	8.036	A
2 - Station Road (S)	405	101	547	973	0.417	406	397	685	0.5	0.7	6.646	A
3 - Broad Rushes	462	116	382	832	0.556	465	465	571	1.0	1.0	8.859	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	1227	307	15	1846	0.665	1221	1234	854	2.8	2.9	8.010	A
2 - Station Road (S)	407	102	536	974	0.418	411	410	700	0.7	0.7	6.647	A
3 - Broad Rushes	476	119	386	897	0.531	483	475	561	1.0	1.2	9.625	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	1013	253	11	1866	0.543	1010	1017	684	2.9	1.9	6.325	A
2 - Station Road (S)	330	83	461	992	0.333	331	331	560	0.7	0.4	5.546	A
3 - Broad Rushes	381	95	312	919	0.414	383	392	479	1.2	0.7	7.176	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	857	214	8	1841	0.466	859	849	560	1.9	1.3	5.674	A
2 - Station Road (S)	272	68	372	1031	0.264	271	277	495	0.4	0.5	5.048	A
3 - Broad Rushes	311	78	256	916	0.339	311	315	387	0.7	0.6	6.214	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	2	477	1087	0.439	475	477	0.0	1.0	6.119	A
			2	1, 3	374	1087	0.344	377	380	0.0	0.4	4.903	A
		2	1	(1, 3, 2)	851			851	863	0.0	0.0	0.006	A
	Exit	1	1		575			575	569	0.0	0.0	0.000	A
2 - Station Road (S)	Entry	1	1	3	19	974	0.020	19	18	0.0	0.0	4.041	A
			2	1, 2	261	974	0.268	261	260	0.0	0.3	5.149	A
		2	1	(1, 3, 2)	280			280	280	0.0	0.0	0.002	A
	Exit	1	1		486			486	487	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	315	888	0.355	314	309	0.0	0.5	6.205	A
			2	3, 2	10	888	0.012	11	10	0.0	0.0	4.099	A
		2	1	(1, 3, 2)	326			326	321	0.0	0.0	0.000	A
	Exit	1	1		396			396	398	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	2	558	1087	0.513	558	568	1.0	1.1	6.952	A
			2	1, 3	444	1087	0.408	443	451	0.4	0.9	5.557	A
		2	1	(1, 3, 2)	1001			1002	1022	0.0	0.0	0.057	A
	Exit	1	1		694			694	687	0.0	0.0	0.000	A
2 - Station Road (S)	Entry	1	1	3	19	950	0.021	20	20	0.0	0.0	4.070	A
			2	1, 2	324	950	0.341	325	317	0.3	0.5	5.589	A
		2	1	(1, 3, 2)	343			343	337	0.0	0.0	0.013	A
	Exit	1	1		568			568	579	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	373	867	0.430	370	370	0.5	1.0	7.087	A
			2	3, 2	10	867	0.012	10	11	0.0	0.0	4.328	A
		2	1	(1, 3, 2)	383			383	383	0.0	0.0	0.002	A
	Exit	1	1		463			463	471	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	2	674	1086	0.620	671	678	1.1	1.4	8.497	A
			2	1, 3	548	1086	0.505	547	545	0.9	1.2	6.663	A
		2	1	(1, 3, 2)	1223			1222	1225	0.0	0.2	0.348	A
	Exit	1	1		833			833	825	0.0	0.0	0.000	A
2 - Station Road (S)	Entry	1	1	3	25	913	0.027	24	24	0.0	0.0	4.131	A
			2	1, 2	381	913	0.417	382	373	0.5	0.7	6.674	A
		2	1	(1, 3, 2)	405			405	398	0.0	0.0	0.128	A
	Exit	1	1		685			685	691	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	450	848	0.530	452	452	1.0	1.0	8.859	A
			2	3, 2	13	848	0.016	14	13	0.0	0.0	4.700	A
		2	1	(1, 3, 2)	462			463	465	0.0	0.0	0.119	A
	Exit	1	1		571			571	569	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	2	690	1086	0.635	685	686	1.4	1.8	8.641	A
			2	1, 3	538	1086	0.495	536	548	1.2	1.0	6.341	A
		2	1	(1, 3, 2)	1227			1228	1234	0.2	0.1	0.395	A
	Exit	1	1		854			854	846	0.0	0.0	0.000	A
2 - Station Road (S)	Entry	1	1	3	25	917	0.027	25	26	0.0	0.0	4.297	A
			2	1, 2	382	917	0.417	386	384	0.7	0.7	6.753	A
		2	1	(1, 3, 2)	407			407	410	0.0	0.0	0.049	A
	Exit	1	1		700			700	699	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	463	847	0.547	468	462	1.0	1.2	9.546	A
			2	3, 2	15	847	0.017	15	13	0.0	0.0	4.143	A
		2	1	(1, 3, 2)	476			477	476	0.0	0.0	0.228	A
	Exit	1	1		561			561	574	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	2	549	1087	0.505	549	556	1.8	1.0	6.500	A
			2	1, 3	464	1087	0.427	461	461	1.0	0.9	5.909	A
		2	1	(1, 3, 2)	1013			1013	1013	0.1	0.0	0.096	A
	Exit	1	1		684			684	693	0.0	0.0	0.000	A
2 - Station Road (S)	Entry	1	1	3	18	944	0.019	18	19	0.0	0.0	3.589	A
			2	1, 2	312	944	0.330	312	312	0.7	0.4	5.657	A
		2	1	(1, 3, 2)	330			330	330	0.0	0.0	0.009	A
	Exit	1	1		560			560	567	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	370	871	0.425	372	381	1.2	0.7	7.244	A
			2	3, 2	11	871	0.012	11	11	0.0	0.0	4.027	A
		2	1	(1, 3, 2)	381			381	389	0.0	0.0	0.021	A
	Exit	1	1		479			479	479	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	2	485	1088	0.446	487	476	1.0	0.7	6.032	A
			2	1, 3	372	1088	0.342	372	373	0.9	0.5	5.158	A
		2	1	(1, 3, 2)	857			857	847	0.0	0.0	0.027	A
	Exit	1	1		560			560	568	0.0	0.0	0.000	A
2 - Station Road (S)	Entry	1	1	3	15	975	0.015	15	16	0.0	0.0	3.824	A
			2	1, 2	257	975	0.264	256	261	0.4	0.5	5.111	A
		2	1	(1, 3, 2)	272			272	277	0.0	0.0	0.010	A
	Exit	1	1		495			495	484	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	303	890	0.340	303	307	0.7	0.6	6.271	A
			2	3, 2	8	890	0.009	8	8	0.0	0.0	4.018	A
		2	1	(1, 3, 2)	311			311	315	0.0	0.0	0.001	A
	Exit	1	1		387			387	389	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	477	119	991	1087	0.439	475	477	0.0	1.0	6.119	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	374	93	991	1087	0.344	377	380	0.0	0.4	4.903	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	477	119	-	-	-	477	481	0.0	0.0	0.007	A
				3	374	93	-	-	-	374	382	0.0	0.0	0.005	A
2 - Station Road (S)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	19	5	1095	961	0.020	19	18	0.0	0.0	4.041	A
			2	1	261	65	1108	973	0.268	261	260	0.0	0.3	5.149	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	261	65	-	-	-	261	261	0.0	0.0	0.002	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	19	5	-	-	-	19	18	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	315	79	974	889	0.355	314	309	0.0	0.5	6.205	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	10	3	905	825	0.012	11	10	0.0	0.0	4.099	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	315	79	-	-	-	315	311	0.0	0.0	0.000	A
				2	10	3	-	-	-	10	10	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	558	139	991	1087	0.513	558	568	1.0	1.1	6.952	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	444	111	991	1087	0.408	443	451	0.4	0.9	5.557	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	557	139	-	-	-	558	569	0.0	0.0	0.063	A
				3	444	111	-	-	-	444	453	0.0	0.0	0.049	A
2 - Station Road (S)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	19	5	1095	937	0.021	20	20	0.0	0.0	4.070	A
			2	1	324	81	1108	949	0.341	325	317	0.3	0.5	5.589	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	324	81	-	-	-	324	317	0.0	0.0	0.014	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	19	5	-	-	-	19	20	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	373	93	974	867	0.430	370	370	0.5	1.0	7.087	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	10	3	905	811	0.013	10	11	0.0	0.0	4.328	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	373	93	-	-	-	373	372	0.0	0.0	0.002	A
				2	10	3	-	-	-	10	11	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	674	168	991	1086	0.620	671	678	1.1	1.4	8.497	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	548	137	991	1086	0.505	547	545	0.9	1.2	6.663	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	674	168	-	-	-	674	679	0.0	0.1	0.363	A
				3	549	137	-	-	-	548	546	0.0	0.1	0.331	A
2 - Station Road (S)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	25	6	1095	899	0.027	24	24	0.0	0.0	4.131	A
			2	1	381	95	1108	912	0.418	382	373	0.5	0.7	6.674	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	381	95	-	-	-	381	374	0.0	0.0	0.130	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	25	6	-	-	-	25	24	0.0	0.0	0.108	A
3 - Broad Rushes	Entry	1	1	1	450	112	974	848	0.530	452	452	1.0	1.0	8.859	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	13	3	940	820	0.016	14	13	0.0	0.0	4.700	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	449	112	-	-	-	450	452	0.0	0.0	0.122	A
				2	13	3	-	-	-	13	13	0.0	0.0	0.010	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	690	172	991	1086	0.635	685	686	1.4	1.8	8.641	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	538	134	991	1086	0.495	536	548	1.2	1.0	6.341	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	689	172	-	-	-	690	687	0.1	0.1	0.425	A
				3	538	134	-	-	-	538	547	0.1	0.0	0.357	A
2 - Station Road (S)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	25	6	1108	913	0.027	25	26	0.0	0.0	4.297	A
			2	1	382	96	1108	918	0.417	386	384	0.7	0.7	6.753	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	382	96	-	-	-	382	384	0.0	0.0	0.051	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	25	6	-	-	-	25	26	0.0	0.0	0.011	A
3 - Broad Rushes	Entry	1	1	1	463	116	974	848	0.546	468	462	1.0	1.2	9.546	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	15	4	928	809	0.018	15	13	0.0	0.0	4.143	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	462	115	-	-	-	463	463	0.0	0.0	0.232	A
				2	15	4	-	-	-	15	13	0.0	0.0	0.075	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	549	137	991	1087	0.505	549	556	1.8	1.0	6.500	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	464	116	991	1087	0.427	461	461	1.0	0.9	5.909	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	549	137	-	-	-	549	553	0.1	0.0	0.085	A
				3	464	116	-	-	-	464	460	0.0	0.0	0.109	A
2 - Station Road (S)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	18	5	1095	934	0.020	18	19	0.0	0.0	3.589	A
			2	1	312	78	1108	944	0.330	312	312	0.7	0.4	5.657	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	312	78	-	-	-	312	311	0.0	0.0	0.009	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	18	5	-	-	-	18	19	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	370	93	974	871	0.425	372	381	1.2	0.7	7.244	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	11	3	871	780	0.014	11	11	0.0	0.0	4.027	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	370	93	-	-	-	370	379	0.0	0.0	0.021	A
				2	11	3	-	-	-	11	11	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	485	121	991	1088	0.446	487	476	1.0	0.7	6.032	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	372	93	991	1088	0.342	372	373	0.9	0.5	5.158	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	485	121	-	-	-	485	475	0.0	0.0	0.025	A
				3	372	93	-	-	-	372	371	0.0	0.0	0.029	A
2 - Station Road (S)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	15	4	1108	970	0.015	15	16	0.0	0.0	3.824	A
			2	1	257	64	1108	975	0.264	256	261	0.4	0.5	5.111	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	257	64	-	-	-	257	261	0.0	0.0	0.011	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	15	4	-	-	-	15	16	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	303	76	974	890	0.340	303	307	0.7	0.6	6.271	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	8	2	848	776	0.010	8	8	0.0	0.0	4.018	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	303	76	-	-	-	303	307	0.0	0.0	0.001	A
				2	8	2	-	-	-	8	8	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

2023 base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Station Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Info	Simulation	A1 - [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	11.26	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	11.26	B

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)	Run automatically
D2	2023 base	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Station Road (N)		ONE HOUR	✓	991	100.000
2 - Station Road (S)		ONE HOUR	✓	608	100.000
3 - Broad Rushes		ONE HOUR	✓	511	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Station Road (N)	2 - Station Road (S)	3 - Broad Rushes
From	1 - Station Road (N)	0	551	440
	2 - Station Road (S)	596	0	12
	3 - Broad Rushes	490	21	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
1	0.20	0.80

Heavy Vehicle %

		To		
		1 - Station Road (N)	2 - Station Road (S)	3 - Broad Rushes
From	1 - Station Road (N)	0	0	0
	2 - Station Road (S)	0	0	0
	3 - Broad Rushes	0	0	0

Cyclist %

		To		
		1 - Station Road (N)	2 - Station Road (S)	3 - Broad Rushes
From	1 - Station Road (N)	0	0	0
	2 - Station Road (S)	0	0	0
	3 - Broad Rushes	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Station Road (N)	0.60	7.05	2.5	A	904	1356
2 - Station Road (S)	0.73	13.04	2.8	B	553	830
3 - Broad Rushes	0.74	17.25	3.1	C	470	706

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	740	185	15	1861	0.398	743	735	806	0.0	0.9	5.191	A
2 - Station Road (S)	449	112	327	1001	0.449	448	457	432	0.0	0.8	6.858	A
3 - Broad Rushes	380	95	440	853	0.445	381	379	334	0.0	0.9	8.013	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	888	222	17	1811	0.490	890	884	955	0.9	1.3	5.686	A
2 - Station Road (S)	536	134	391	974	0.550	533	538	515	0.8	1.2	8.462	A
3 - Broad Rushes	453	113	522	859	0.528	450	458	402	0.9	1.4	9.940	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	1103	276	23	1852	0.596	1097	1098	1205	1.3	2.5	6.911	A
2 - Station Road (S)	676	169	486	928	0.728	673	665	634	1.2	2.8	12.592	B
3 - Broad Rushes	569	142	658	770	0.739	570	558	501	1.4	2.6	15.634	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	1087	272	23	1879	0.578	1092	1093	1200	2.5	2.1	7.054	A
2 - Station Road (S)	670	167	482	951	0.704	670	679	634	2.8	2.6	13.036	B
3 - Broad Rushes	571	143	658	768	0.744	566	566	494	2.6	3.1	17.246	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	881	220	19	1871	0.471	881	887	965	2.1	1.3	5.670	A
2 - Station Road (S)	527	132	396	999	0.527	528	546	504	2.6	1.1	8.008	A
3 - Broad Rushes	470	117	515	824	0.570	469	468	408	3.1	1.4	10.619	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	723	181	18	1873	0.386	724	745	815	1.3	1.0	4.965	A
2 - Station Road (S)	461	115	320	1016	0.454	462	470	422	1.1	1.0	6.661	A
3 - Broad Rushes	380	95	454	857	0.443	380	387	329	1.4	0.8	7.771	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	2	415	1086	0.382	416	410	0.0	0.6	5.451	A
			2	1, 3	326	1086	0.300	327	326	0.0	0.4	4.765	A
		2	1	(1, 3, 2)	740			740	739	0.0	0.0	0.043	A
	Exit	1	1		806			806	813	0.0	0.0	0.000	A
2 - Station Road (S)	Entry	1	1	3	8	992	0.008	8	9	0.0	0.0	3.666	A
			2	1, 2	442	992	0.445	440	448	0.0	0.8	6.782	A
		2	1	(1, 3, 2)	449			449	460	0.0	0.0	0.132	A
	Exit	1	1		432			432	424	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	365	829	0.440	366	365	0.0	0.8	8.132	A
			2	3, 2	15	829	0.018	15	15	0.0	0.0	4.220	A
		2	1	(1, 3, 2)	380			380	383	0.0	0.0	0.030	A
	Exit	1	1		334			334	334	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	2	498	1085	0.459	498	491	0.6	0.8	6.071	A
			2	1, 3	389	1085	0.359	391	393	0.4	0.5	5.147	A
		2	1	(1, 3, 2)	888			888	885	0.0	0.0	0.025	A
	Exit	1	1		955			955	966	0.0	0.0	0.000	A
2 - Station Road (S)	Entry	1	1	3	11	968	0.011	11	11	0.0	0.0	3.645	A
			2	1, 2	523	968	0.540	522	527	0.8	1.1	8.162	A
		2	1	(1, 3, 2)	536			534	539	0.0	0.1	0.388	A
	Exit	1	1		515			515	510	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	436	802	0.544	433	439	0.8	1.4	9.935	A
			2	3, 2	17	802	0.021	17	19	0.0	0.0	4.569	A
		2	1	(1, 3, 2)	453			453	460	0.0	0.0	0.224	A
	Exit	1	1		402			402	404	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	2	616	1083	0.569	611	608	0.8	1.6	7.332	A
			2	1, 3	486	1083	0.449	486	490	0.5	0.8	5.978	A
		2	1	(1, 3, 2)	1103			1102	1103	0.0	0.1	0.181	A
	Exit	1	1		1205			1205	1187	0.0	0.0	0.000	A
2 - Station Road (S)	Entry	1	1	3	14	934	0.015	14	12	0.0	0.0	3.962	A
			2	1, 2	659	934	0.705	658	653	1.1	2.1	10.610	B
		2	1	(1, 3, 2)	676			674	669	0.1	0.7	2.076	A
	Exit	1	1		634			634	632	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	547	757	0.723	547	534	1.4	2.4	14.808	B
			2	3, 2	23	757	0.030	23	23	0.0	0.0	4.866	A
		2	1	(1, 3, 2)	569			570	562	0.0	0.2	1.228	A
	Exit	1	1		501			501	502	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	2	607	1083	0.560	611	612	1.6	1.2	7.514	A
			2	1, 3	481	1083	0.444	482	481	0.8	0.8	5.994	A
		2	1	(1, 3, 2)	1087			1088	1091	0.1	0.0	0.207	A
	Exit	1	1		1200			1200	1210	0.0	0.0	0.000	A
2 - Station Road (S)	Entry	1	1	3	12	936	0.013	12	12	0.0	0.0	3.652	A
			2	1, 2	656	936	0.701	658	667	2.1	2.0	10.991	B
		2	1	(1, 3, 2)	670			669	679	0.7	0.5	2.191	A
	Exit	1	1		634			634	635	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	548	757	0.724	543	543	2.4	2.8	15.692	C
			2	3, 2	24	757	0.031	23	23	0.0	0.1	4.928	A
		2	1	(1, 3, 2)	571			571	568	0.2	0.3	1.965	A
	Exit	1	1		494			494	493	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	2	489	1084	0.451	485	493	1.2	0.9	6.055	A
			2	1, 3	392	1084	0.362	396	394	0.8	0.4	5.113	A
		2	1	(1, 3, 2)	881			881	884	0.0	0.0	0.037	A
	Exit	1	1		965			965	985	0.0	0.0	0.000	A
2 - Station Road (S)	Entry	1	1	3	12	967	0.013	12	11	0.0	0.0	3.785	A
			2	1, 2	514	967	0.532	515	535	2.0	1.1	7.621	A
		2	1	(1, 3, 2)	527			527	542	0.5	0.1	0.492	A
	Exit	1	1		504			504	511	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	451	804	0.561	450	451	2.8	1.3	10.696	B
			2	3, 2	20	804	0.025	19	18	0.1	0.0	4.528	A
		2	1	(1, 3, 2)	470			470	462	0.3	0.0	0.220	A
	Exit	1	1		408			408	405	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	2	402	1085	0.371	403	414	0.9	0.5	5.216	A
			2	1, 3	321	1085	0.296	320	330	0.4	0.4	4.649	A
		2	1	(1, 3, 2)	723			723	743	0.0	0.0	0.001	A
	Exit	1	1		815			815	831	0.0	0.0	0.000	A
2 - Station Road (S)	Entry	1	1	3	9	994	0.009	9	10	0.0	0.0	3.715	A
			2	1, 2	453	994	0.456	454	460	1.1	0.9	6.619	A
		2	1	(1, 3, 2)	461			462	469	0.1	0.0	0.110	A
	Exit	1	1		422			422	430	0.0	0.0	0.000	A
3 - Broad Rushes	Entry	1	1	1	362	824	0.439	361	372	1.3	0.8	7.876	A
			2	3, 2	18	824	0.022	18	15	0.0	0.0	4.961	A
		2	1	(1, 3, 2)	380			380	385	0.0	0.0	0.011	A
	Exit	1	1		329			329	341	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	415	104	991	1086	0.382	416	410	0.0	0.6	5.451	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	326	81	991	1086	0.300	327	326	0.0	0.4	4.765	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	415	104	-	-	-	415	412	0.0	0.0	0.050	A
				3	326	81	-	-	-	326	327	0.0	0.0	0.035	A
2 - Station Road (S)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	8	2	1037	927	0.008	8	9	0.0	0.0	3.666	A
			2	1	442	110	1108	992	0.445	440	448	0.0	0.8	6.782	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	441	110	-	-	-	442	451	0.0	0.0	0.134	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	8	2	-	-	-	8	9	0.0	0.0	0.054	A
3 - Broad Rushes	Entry	1	1	1	365	91	974	829	0.440	366	365	0.0	0.8	8.132	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	15	4	924	783	0.019	15	15	0.0	0.0	4.220	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	365	91	-	-	-	365	368	0.0	0.0	0.026	A
				2	15	4	-	-	-	15	15	0.0	0.0	0.137	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	498	125	991	1085	0.459	498	491	0.6	0.8	6.071	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	389	97	991	1085	0.359	391	393	0.4	0.5	5.147	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	498	125	-	-	-	498	492	0.0	0.0	0.027	A
				3	389	97	-	-	-	389	393	0.0	0.0	0.023	A
2 - Station Road (S)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	11	3	1052	919	0.012	11	11	0.0	0.0	3.645	A
			2	1	523	131	1108	968	0.541	522	527	0.8	1.1	8.162	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	525	131	-	-	-	523	529	0.0	0.1	0.392	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	11	3	-	-	-	11	11	0.0	0.0	0.205	A
3 - Broad Rushes	Entry	1	1	1	436	109	974	802	0.544	433	439	0.8	1.4	9.935	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	17	4	974	805	0.021	17	19	0.0	0.0	4.569	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	436	109	-	-	-	436	441	0.0	0.0	0.234	A
				2	17	4	-	-	-	17	19	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalis level of service
1 - Station Road (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	616	154	991	1083	0.569	611	608	0.8	1.6	7.332	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	486	122	991	1083	0.449	486	490	0.5	0.8	5.978	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	617	154	-	-	-	616	611	0.0	0.0	0.199	A
				3	486	122	-	-	-	486	491	0.0	0.0	0.158	A
2 - Station Road (S)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	14	4	1066	897	0.016	14	12	0.0	0.0	3.962	A
			2	1	659	165	1108	935	0.705	658	653	1.1	2.1	10.610	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	661	165	-	-	-	659	657	0.1	0.7	2.082	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	14	4	-	-	-	14	12	0.0	0.0	1.791	A
3 - Broad Rushes	Entry	1	1	1	547	137	974	757	0.723	547	534	1.4	2.4	14.808	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	23	6	974	761	0.030	23	23	0.0	0.0	4.866	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	546	137	-	-	-	547	539	0.0	0.2	1.243	A
				2	23	6	-	-	-	23	23	0.0	0.0	0.886	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalis level of service
1 - Station Road (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	607	152	991	1083	0.560	611	612	1.6	1.2	7.514	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	481	120	991	1083	0.444	482	481	0.8	0.8	5.994	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	606	152	-	-	-	607	610	0.0	0.0	0.213	A
				3	480	120	-	-	-	481	480	0.0	0.0	0.199	A
2 - Station Road (S)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	12	3	1066	899	0.014	12	12	0.0	0.0	3.652	A
			2	1	656	164	1108	936	0.702	658	667	2.1	2.0	10.991	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	657	164	-	-	-	656	667	0.7	0.5	2.194	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	12	3	-	-	-	12	12	0.0	0.0	2.034	A
3 - Broad Rushes	Entry	1	1	1	548	137	974	757	0.723	543	543	2.4	2.8	15.692	C
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	24	6	974	757	0.031	23	23	0.0	0.1	4.928	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	548	137	-	-	-	548	545	0.2	0.3	1.963	A
				2	24	6	-	-	-	24	23	0.0	0.0	2.023	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

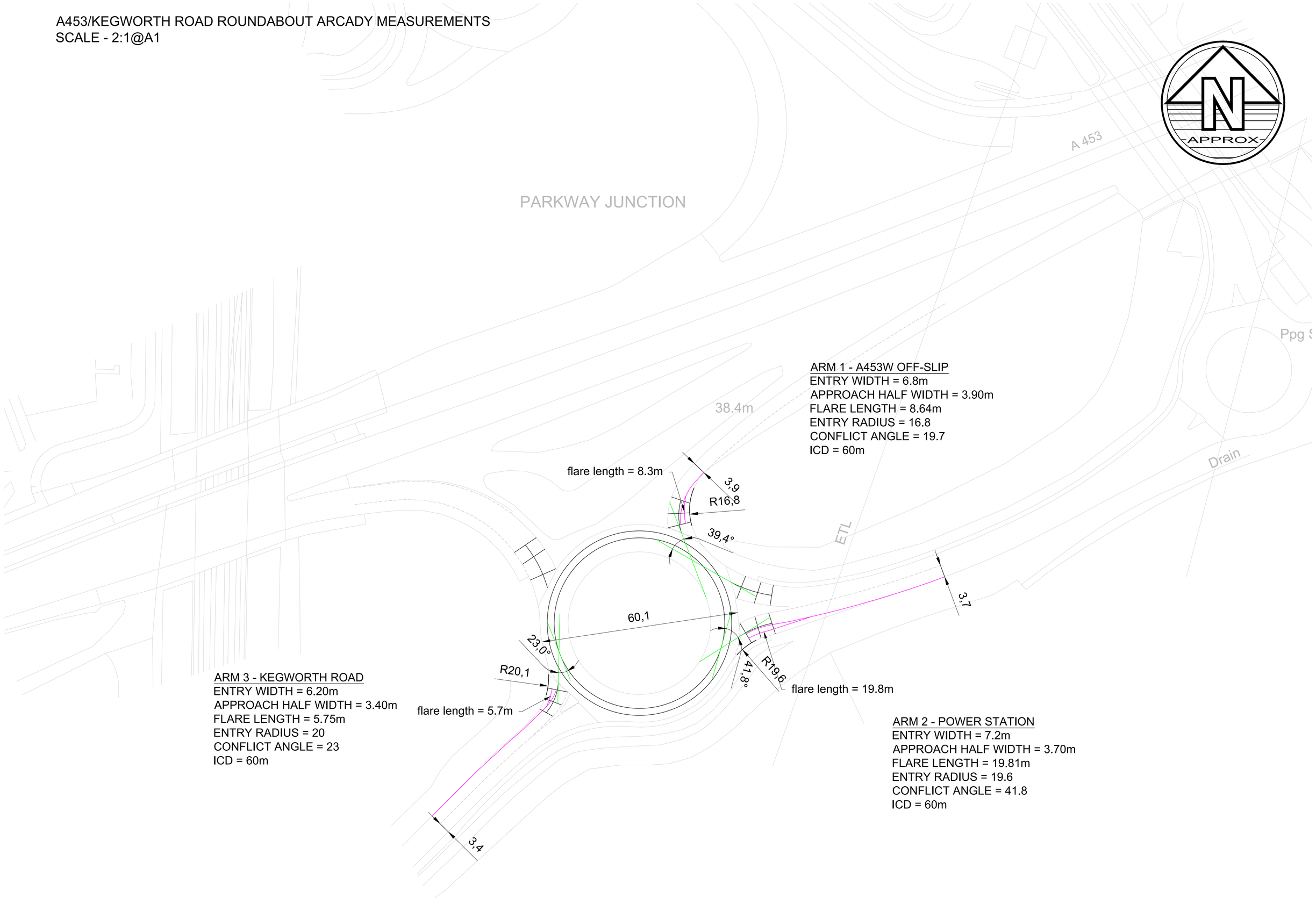
Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalis level of service
1 - Station Road (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	489	122	991	1084	0.451	485	493	1.2	0.9	6.055	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	392	98	991	1084	0.362	396	394	0.8	0.4	5.113	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	489	122	-	-	-	489	492	0.0	0.0	0.037	A
				3	392	98	-	-	-	392	392	0.0	0.0	0.037	A
2 - Station Road (S)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	12	3	1052	916	0.013	12	11	0.0	0.0	3.785	A
			2	1	514	129	1108	966	0.532	515	535	2.0	1.1	7.621	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	514	129	-	-	-	514	531	0.5	0.1	0.498	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	12	3	-	-	-	12	11	0.0	0.0	0.229	A
3 - Broad Rushes	Entry	1	1	1	451	113	974	804	0.560	450	451	2.8	1.3	10.696	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	20	5	962	791	0.025	19	18	0.1	0.0	4.528	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	450	113	-	-	-	451	445	0.3	0.0	0.221	A
				2	20	5	-	-	-	20	18	0.0	0.0	0.190	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Station Road (N)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	402	101	991	1085	0.370	403	414	0.9	0.5	5.216	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	321	80	991	1085	0.296	320	330	0.4	0.4	4.649	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	402	101	-	-	-	402	413	0.0	0.0	0.002	A
				3	321	80	-	-	-	321	331	0.0	0.0	0.001	A
2 - Station Road (S)	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	9	2	1023	911	0.010	9	10	0.0	0.0	3.715	A
			2	1	453	113	1108	994	0.456	454	460	1.1	0.9	6.619	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	453	113	-	-	-	453	459	0.1	0.0	0.112	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	9	2	-	-	-	9	10	0.0	0.0	0.031	A
3 - Broad Rushes	Entry	1	1	1	362	90	974	826	0.438	361	372	1.3	0.8	7.876	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	18	5	974	822	0.022	18	15	0.0	0.0	4.961	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	1	362	90	-	-	-	362	370	0.0	0.0	0.011	A
				2	18	5	-	-	-	18	15	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

APPENDIX 6: Junction 16 A453/Kegworth Road Roundabout Model Outputs

A453/KEGWORTH ROAD ROUNDABOUT ARCADY MEASUREMENTS
SCALE - 2:1@A1



ARM 1 - A453W OFF-SLIP
ENTRY WIDTH = 6.8m
APPROACH HALF WIDTH = 3.90m
FLARE LENGTH = 8.64m
ENTRY RADIUS = 16.8
CONFLICT ANGLE = 19.7
ICD = 60m

ARM 3 - KEGWORTH ROAD
ENTRY WIDTH = 6.20m
APPROACH HALF WIDTH = 3.40m
FLARE LENGTH = 5.75m
ENTRY RADIUS = 20
CONFLICT ANGLE = 23
ICD = 60m

ARM 2 - POWER STATION
ENTRY WIDTH = 7.2m
APPROACH HALF WIDTH = 3.70m
FLARE LENGTH = 19.81m
ENTRY RADIUS = 19.6
CONFLICT ANGLE = 41.8
ICD = 60m

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.3.1598
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Filename: Import of A453 Kegworth Road.j10
Path: J:\2022\220500-East Midlands Gateway Phase 2 (1)\ProjectDelivery\01-WIP\Models\16. A453_Kegworth Road\A453_Kegworth Road Base Model
Report generation date: 31/01/2024 14:40:31

»2022, AM
»2022, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022									
Arm 1	D1	0.0	2.41	0.04	A	D2	0.0	2.39	0.04	A
Arm 2		0.0	2.27	0.03	A		0.1	2.38	0.06	A
Arm 3		0.1	2.67	0.05	A		0.0	2.55	0.03	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	
Location	
Site number	
Date	08/01/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	BWB\Aaiza.Shafiq
Description	

Units

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

Analysis Options

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

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	2022	AM	ONE HOUR	07:45	09:15	15
D2	2022	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022, 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	2.47	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.47	A

Arms

Arms

Arm	Name	Description	No give-way line
1	A453 Exit Slip Road		
2	Kegworth Road (E)		
3	Kegworth Road (S)		
4	A453 Entry Slip Road		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1	3.90	6.80	8.6	16.8	60.0	19.7		
2	3.70	7.20	19.8	19.6	60.0	41.8		
3	3.40	6.20	5.8	20.0	60.0	0.0		
4								✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.555	1648
2	0.550	1723
3	0.550	1504
4		

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	2022	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	66	100.000
2		✓	48	100.000
3		✓	67	100.000
4				

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	39	27	0
	2	0	0	20	28
	3	0	53	0	14
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	4	0
	2	0	0	0	8
	3	0	2	0	17
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.04	2.41	0.0	A
2	0.03	2.27	0.0	A
3	0.05	2.67	0.1	A
4				

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	50	40	1626	0.031	50	0.0	2.361	A
2	36	20	1712	0.021	36	0.0	2.244	A
3	50	21	1492	0.034	50	0.0	2.616	A
4		40						

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	59	48	1621	0.037	59	0.0	2.382	A
2	43	24	1710	0.025	43	0.0	2.257	A
3	60	25	1490	0.040	60	0.0	2.638	A
4		48						

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	73	58	1615	0.045	73	0.0	2.412	A
2	53	30	1707	0.031	53	0.0	2.274	A
3	74	31	1487	0.050	74	0.1	2.669	A
4		58						

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	73	58	1615	0.045	73	0.0	2.412	A
2	53	30	1707	0.031	53	0.0	2.274	A
3	74	31	1487	0.050	74	0.1	2.669	A
4		58						

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	59	48	1621	0.037	59	0.0	2.384	A
2	43	24	1710	0.025	43	0.0	2.257	A
3	60	25	1490	0.040	60	0.0	2.639	A
4		48						

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	50	40	1626	0.031	50	0.0	2.361	A
2	36	20	1712	0.021	36	0.0	2.244	A
3	50	21	1492	0.034	50	0.0	2.619	A
4		40						

2022, 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	2.42	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.42	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022	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 (PCU/hr)	Scaling Factor (%)
1		✓	54	100.000
2		✓	97	100.000
3		✓	41	100.000
4				

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	18	36	0
	2	0	0	23	74
	3	0	35	0	6
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	13	0	0
	2	0	0	10	4
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.04	2.39	0.0	A
2	0.06	2.38	0.1	A
3	0.03	2.55	0.0	A
4				

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	41	26	1633	0.025	41	0.0	2.350	A
2	73	27	1708	0.043	73	0.0	2.319	A
3	31	56	1473	0.021	31	0.0	2.495	A
4		26						

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	49	31	1630	0.030	49	0.0	2.366	A
2	87	32	1705	0.051	87	0.1	2.343	A
3	37	66	1467	0.025	37	0.0	2.516	A
4		31						

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	59	39	1626	0.037	59	0.0	2.388	A
2	107	40	1701	0.063	107	0.1	2.378	A
3	45	81	1459	0.031	45	0.0	2.546	A
4		39						

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	59	39	1626	0.037	59	0.0	2.388	A
2	107	40	1701	0.063	107	0.1	2.378	A
3	45	81	1459	0.031	45	0.0	2.546	A
4		39						

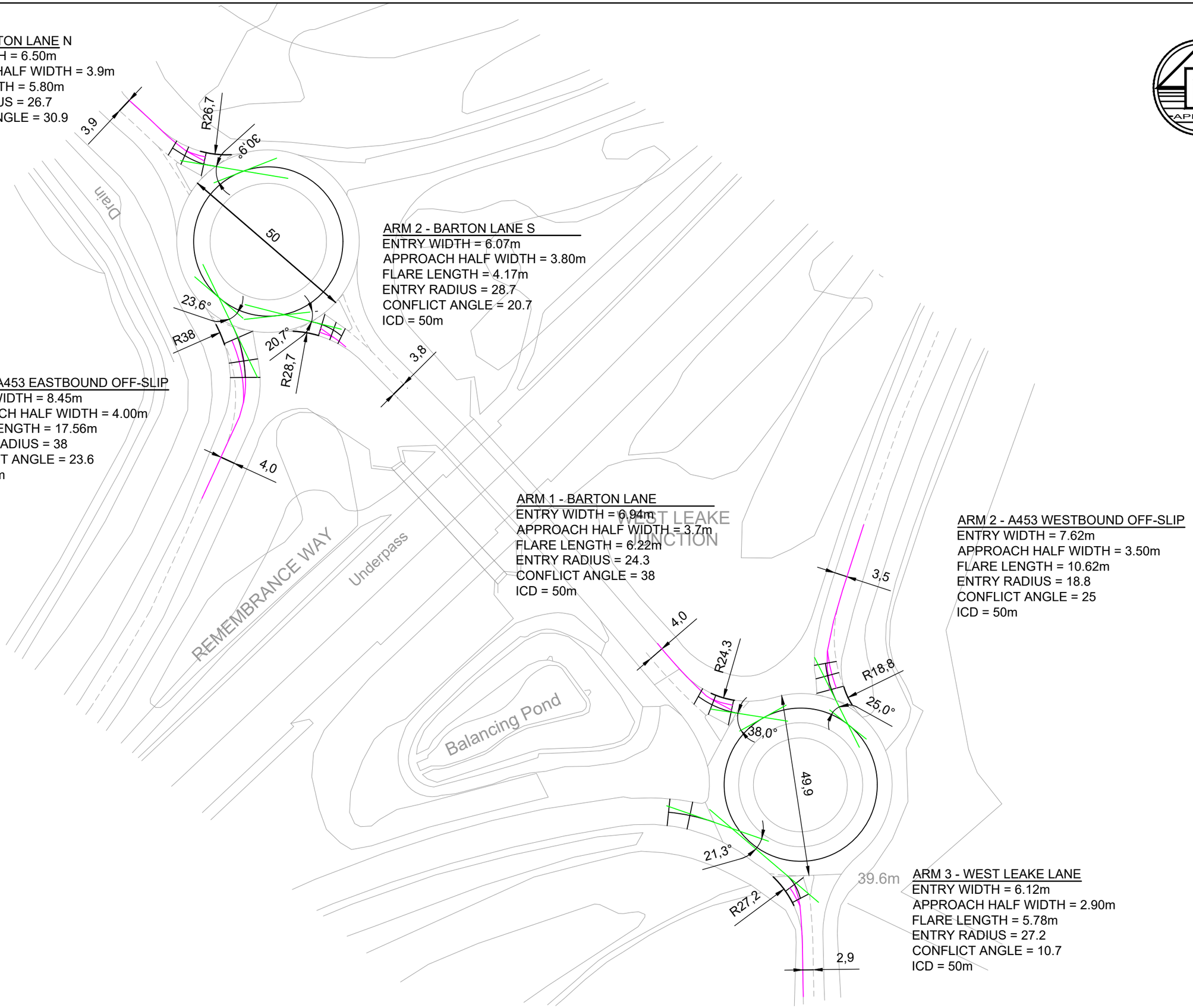
17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	49	31	1630	0.030	49	0.0	2.368	A
2	87	32	1705	0.051	87	0.1	2.343	A
3	37	67	1467	0.025	37	0.0	2.516	A
4		31						

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	41	26	1633	0.025	41	0.0	2.350	A
2	73	27	1708	0.043	73	0.0	2.319	A
3	31	56	1473	0.021	31	0.0	2.497	A
4		26						

APPENDIX 7: Junction 17 - A453/West Leake Lane Roundabout Model Outputs



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Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.3.1598
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Filename: Import of West Leake Lane.j10
Path: J:\2022\220500-East Midlands Gateway Phase 2 (1)\ProjectDelivery\01-WIP\Models\17. A453_West Leake Lane\A453_West Leake Lane Base Model
Report generation date: 31/01/2024 14:42:21

»2022, AM
»2022, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022									
1 - untitled - 1 - Barton Lane	D1	0.4	3.74	0.24	A	D2	0.2	3.01	0.16	A
1 - untitled - 2 - A453 (NE)		0.0	2.80	0.04	A		0.0	2.60	0.04	A
1 - untitled - 3 - West Leake Lane		0.5	4.40	0.30	A		0.3	3.70	0.22	A
2 - untitled - 1 - Barton Lane		0.1	3.55	0.06	A		0.0	2.84	0.02	A
2 - untitled - 3 - Barton Lane (S)		0.1	3.02	0.06	A		0.1	2.71	0.05	A
2 - untitled - 4 - A453 (SW)		0.2	2.50	0.16	A		0.1	2.10	0.11	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	
Location	
Site number	
Date	08/01/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	BWB\Aaiza.Shafiq
Description	

Units

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

Analysis Options

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

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	2022	AM	ONE HOUR	07:45	09:15	15
D2	2022	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022, 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	3.99	A
2	untitled	Standard Roundabout		1, 2, 3, 4	2.76	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.53	A

Arms

Arms

Junction	Arm	Name	Description	No give-way line
1 - untitled	1	Barton Lane		
	2	A453 (NE)		
	3	West Leake Lane		
	4	A453 (SW)		
2 - untitled	1	Barton Lane		
	2	A453 (NE)		
	3	Barton Lane (S)		
	4	A453 (SW)		

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - untitled	1 - Barton Lane	3.70	6.94	6.2	24.3	50.0	38.0		
	2 - A453 (NE)	3.50	7.62	10.6	18.8	50.0	25.0	✓	
	3 - West Leake Lane	2.90	6.12	5.8	27.2	50.0	10.7		
	4 - A453 (SW)								✓
2 - untitled	1 - Barton Lane	3.90	6.50	5.8	26.7	50.0	30.9		
	2 - A453 (NE)								✓
	3 - Barton Lane (S)	3.80	6.07	4.2	28.7	50.0	20.7		
	4 - A453 (SW)	4.00	8.45	17.6	38.0	50.0	23.6	✓	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/hr)
1 - untitled	1 - Barton Lane	0.558	1461
	2 - A453 (NE)	0.601	1640
	3 - West Leake Lane	0.561	1328
	4 - A453 (SW)		
2 - untitled	1 - Barton Lane	0.577	1519
	2 - A453 (NE)		
	3 - Barton Lane (S)	0.578	1468
	4 - A453 (SW)	0.687	2045

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	2022	AM	ONE HOUR	07:45	09:15	15

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - untitled	1 - Barton Lane	2	3	Queue limited	Normal	0	100.00	27.00
2 - untitled	3 - Barton Lane (S)	1	1	Queue limited	Normal	0	100.00	27.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - untitled	1 - Barton Lane	✓			
	2 - A453 (NE)		✓	53	100.000
	3 - West Leake Lane		✓	351	100.000
	4 - A453 (SW)				
2 - untitled	1 - Barton Lane		✓	66	100.000
	2 - A453 (NE)				
	3 - Barton Lane (S)	✓			
	4 - A453 (SW)		✓	284	100.000

Origin-Destination Data

1 - untitled

Demand (PCU/hr)

		To			
		1 - Barton Lane	2 - A453 (NE)	3 - West Leake Lane	4 - A453 (SW)
From	1 - Barton Lane	0	0	273	51
	2 - A453 (NE)	5	0	48	0
	3 - West Leake Lane	80	0	0	271
	4 - A453 (SW)	0	0	0	0

2 - untitled

Demand (PCU/hr)

		To			
		1 - Barton Lane	2 - A453 (NE)	3 - Barton Lane (S)	4 - A453 (SW)
From	1 - Barton Lane	0	0	66	0
	2 - A453 (NE)	0	0	0	0
	3 - Barton Lane (S)	12	73	0	0
	4 - A453 (SW)	26	0	258	0

Vehicle Mix

Heavy Vehicle Percentages

1 - untitled

		To			
		1 - Barton Lane	2 - A453 (NE)	3 - West Leake Lane	4 - A453 (SW)
From	1 - Barton Lane	0	0	14	19
	2 - A453 (NE)	0	0	7	0
	3 - West Leake Lane	14	0	0	10
	4 - A453 (SW)	0	0	0	0

Heavy Vehicle Percentages

2 - untitled

		To			
		1 - Barton Lane	2 - A453 (NE)	3 - Barton Lane (S)	4 - A453 (SW)
From	1 - Barton Lane	0	0	22	0
	2 - A453 (NE)	0	0	0	0
	3 - Barton Lane (S)	25	14	0	0
	4 - A453 (SW)	15	0	16	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - untitled	1 - Barton Lane	0.24	3.74	0.4	A
	2 - A453 (NE)	0.04	2.80	0.0	A
	3 - West Leake Lane	0.30	4.40	0.5	A
	4 - A453 (SW)				
2 - untitled	1 - Barton Lane	0.06	3.55	0.1	A
	2 - A453 (NE)				
	3 - Barton Lane (S)	0.06	3.02	0.1	A
	4 - A453 (SW)	0.16	2.50	0.2	A

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - untitled	1 - Barton Lane	243	0	1461	0.167	242	0.2	3.389	A
	2 - A453 (NE)	40	242	1495	0.027	40	0.0	2.629	A
	3 - West Leake Lane	264	42	1304	0.203	263	0.3	3.832	A
	4 - A453 (SW)		64						
2 - untitled	1 - Barton Lane	50	248	1376	0.036	50	0.0	3.311	A
	2 - A453 (NE)		243						
	3 - Barton Lane (S)	64	0	1468	0.043	64	0.1	2.958	A
	4 - A453 (SW)	214	64	2002	0.107	213	0.1	2.333	A

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - untitled	1 - Barton Lane	291	0	1461	0.199	291	0.3	3.531	A
	2 - A453 (NE)	48	291	1466	0.033	48	0.0	2.698	A
	3 - West Leake Lane	316	50	1299	0.243	315	0.4	4.055	A
	4 - A453 (SW)		76						
2 - untitled	1 - Barton Lane	59	297	1348	0.044	59	0.1	3.408	A
	2 - A453 (NE)		291						
	3 - Barton Lane (S)	76	0	1468	0.052	76	0.1	2.984	A
	4 - A453 (SW)	255	76	1993	0.128	255	0.2	2.400	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - untitled	1 - Barton Lane	356	0	1461	0.244	356	0.4	3.740	A
	2 - A453 (NE)	58	356	1426	0.041	58	0.0	2.796	A
	3 - West Leake Lane	386	62	1293	0.299	386	0.5	4.399	A
	4 - A453 (SW)		93						
2 - untitled	1 - Barton Lane	73	364	1309	0.056	73	0.1	3.551	A
	2 - A453 (NE)		356						
	3 - Barton Lane (S)	93	0	1468	0.064	93	0.1	3.022	A
	4 - A453 (SW)	313	93	1981	0.158	313	0.2	2.500	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - untitled	1 - Barton Lane	357	0	1461	0.244	357	0.4	3.741	A
	2 - A453 (NE)	58	357	1426	0.041	58	0.0	2.797	A
	3 - West Leake Lane	386	62	1293	0.299	386	0.5	4.403	A
	4 - A453 (SW)		94						
2 - untitled	1 - Barton Lane	73	364	1309	0.056	73	0.1	3.552	A
	2 - A453 (NE)		357						
	3 - Barton Lane (S)	94	0	1468	0.064	94	0.1	3.022	A
	4 - A453 (SW)	313	94	1981	0.158	313	0.2	2.500	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - untitled	1 - Barton Lane	291	0	1461	0.200	292	0.3	3.534	A
	2 - A453 (NE)	48	292	1465	0.033	48	0.0	2.701	A
	3 - West Leake Lane	316	50	1299	0.243	316	0.4	4.063	A
	4 - A453 (SW)		77						
2 - untitled	1 - Barton Lane	59	298	1347	0.044	59	0.1	3.409	A
	2 - A453 (NE)		291						
	3 - Barton Lane (S)	77	0	1468	0.052	77	0.1	2.987	A
	4 - A453 (SW)	255	77	1993	0.128	255	0.2	2.401	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - untitled	1 - Barton Lane	244	0	1461	0.167	244	0.2	3.398	A
	2 - A453 (NE)	40	244	1494	0.027	40	0.0	2.634	A
	3 - West Leake Lane	264	42	1304	0.203	265	0.3	3.841	A
	4 - A453 (SW)		64						
2 - untitled	1 - Barton Lane	50	249	1375	0.036	50	0.0	3.315	A
	2 - A453 (NE)		244						
	3 - Barton Lane (S)	64	0	1468	0.044	64	0.1	2.958	A
	4 - A453 (SW)	214	64	2001	0.107	214	0.1	2.334	A

2022, 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	3.30	A
2	untitled	Standard Roundabout		1, 2, 3, 4	2.29	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.94	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022	PM	ONE HOUR	16:45	18:15	15

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - untitled	1 - Barton Lane	2	3	Queue limited	Normal	0	100.00	27.00
2 - untitled	3 - Barton Lane (S)	1	1	Queue limited	Normal	0	100.00	27.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - untitled	1 - Barton Lane	✓			
	2 - A453 (NE)		✓	58	100.000
	3 - West Leake Lane		✓	260	100.000
	4 - A453 (SW)				
2 - untitled	1 - Barton Lane		✓	19	100.000
	2 - A453 (NE)				
	3 - Barton Lane (S)	✓			
	4 - A453 (SW)		✓	205	100.000

Origin-Destination Data

Demand (PCU/hr)

1 - untitled

		To			
		1 - Barton Lane	2 - A453 (NE)	3 - West Leake Lane	4 - A453 (SW)
From	1 - Barton Lane	0	0	195	15
	2 - A453 (NE)	4	0	54	0
	3 - West Leake Lane	61	0	0	199
	4 - A453 (SW)	0	0	0	0

Demand (PCU/hr)

2 - untitled

		To			
		1 - Barton Lane	2 - A453 (NE)	3 - Barton Lane (S)	4 - A453 (SW)
From	1 - Barton Lane	0	1	18	0
	2 - A453 (NE)	0	0	0	0
	3 - Barton Lane (S)	8	57	0	0
	4 - A453 (SW)	13	0	192	0

Vehicle Mix

Heavy Vehicle Percentages

1 - untitled

		To			
		1 - Barton Lane	2 - A453 (NE)	3 - West Leake Lane	4 - A453 (SW)
From	1 - Barton Lane	0	0	3	0
	2 - A453 (NE)	0	0	4	0
	3 - West Leake Lane	5	0	0	6
	4 - A453 (SW)	0	0	0	0

Heavy Vehicle Percentages

2 - untitled

		To			
		1 - Barton Lane	2 - A453 (NE)	3 - Barton Lane (S)	4 - A453 (SW)
From	1 - Barton Lane	0	0	6	0
	2 - A453 (NE)	0	0	0	0
	3 - Barton Lane (S)	0	6	0	0
	4 - A453 (SW)	9	0	3	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - untitled	1 - Barton Lane	0.16	3.01	0.2	A
	2 - A453 (NE)	0.04	2.60	0.0	A
	3 - West Leake Lane	0.22	3.70	0.3	A
	4 - A453 (SW)				
2 - untitled	1 - Barton Lane	0.02	2.84	0.0	A
	2 - A453 (NE)				
	3 - Barton Lane (S)	0.05	2.71	0.1	A
	4 - A453 (SW)	0.11	2.10	0.1	A

Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - untitled	1 - Barton Lane	158	0	1461	0.108	157	0.1	2.838	A
	2 - A453 (NE)	44	157	1546	0.028	44	0.0	2.484	A
	3 - West Leake Lane	196	14	1320	0.148	195	0.2	3.384	A
	4 - A453 (SW)		49						
2 - untitled	1 - Barton Lane	14	187	1411	0.010	14	0.0	2.722	A
	2 - A453 (NE)		158						
	3 - Barton Lane (S)	49	0	1468	0.033	49	0.0	2.667	A
	4 - A453 (SW)	154	49	2012	0.077	154	0.1	2.002	A

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - untitled	1 - Barton Lane	189	0	1461	0.129	189	0.2	2.908	A
	2 - A453 (NE)	52	189	1527	0.034	52	0.0	2.530	A
	3 - West Leake Lane	234	17	1318	0.177	234	0.2	3.510	A
	4 - A453 (SW)		58						
2 - untitled	1 - Barton Lane	17	224	1390	0.012	17	0.0	2.770	A
	2 - A453 (NE)		189						
	3 - Barton Lane (S)	58	0	1468	0.040	58	0.0	2.686	A
	4 - A453 (SW)	184	58	2005	0.092	184	0.1	2.043	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - untitled	1 - Barton Lane	231	0	1461	0.158	231	0.2	3.008	A
	2 - A453 (NE)	64	231	1502	0.043	64	0.0	2.596	A
	3 - West Leake Lane	286	21	1316	0.218	286	0.3	3.697	A
	4 - A453 (SW)		72						
2 - untitled	1 - Barton Lane	21	274	1361	0.015	21	0.0	2.837	A
	2 - A453 (NE)		231						
	3 - Barton Lane (S)	72	0	1468	0.049	71	0.1	2.711	A
	4 - A453 (SW)	226	71	1996	0.113	226	0.1	2.101	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - untitled	1 - Barton Lane	231	0	1461	0.158	231	0.2	3.008	A
	2 - A453 (NE)	64	231	1501	0.043	64	0.0	2.596	A
	3 - West Leake Lane	286	21	1316	0.218	286	0.3	3.697	A
	4 - A453 (SW)		72						
2 - untitled	1 - Barton Lane	21	274	1361	0.015	21	0.0	2.838	A
	2 - A453 (NE)		231						
	3 - Barton Lane (S)	72	0	1468	0.049	72	0.1	2.711	A
	4 - A453 (SW)	226	72	1996	0.113	226	0.1	2.101	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - untitled	1 - Barton Lane	189	0	1461	0.129	189	0.2	2.909	A
	2 - A453 (NE)	52	189	1527	0.034	52	0.0	2.533	A
	3 - West Leake Lane	234	17	1318	0.177	234	0.2	3.515	A
	4 - A453 (SW)		58						
2 - untitled	1 - Barton Lane	17	224	1390	0.012	17	0.0	2.772	A
	2 - A453 (NE)		189						
	3 - Barton Lane (S)	58	0	1468	0.040	59	0.0	2.688	A
	4 - A453 (SW)	184	59	2005	0.092	184	0.1	2.045	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - untitled	1 - Barton Lane	158	0	1461	0.108	158	0.1	2.842	A
	2 - A453 (NE)	44	158	1545	0.028	44	0.0	2.488	A
	3 - West Leake Lane	196	14	1320	0.148	196	0.2	3.388	A
	4 - A453 (SW)		49						
2 - untitled	1 - Barton Lane	14	188	1411	0.010	14	0.0	2.723	A
	2 - A453 (NE)		158						
	3 - Barton Lane (S)	49	0	1468	0.033	49	0.0	2.670	A
	4 - A453 (SW)	154	49	2012	0.077	154	0.1	2.003	A

APPENDIX 8: Junction 6 - A453/East Midlands Airport Signal Junction Model Outputs

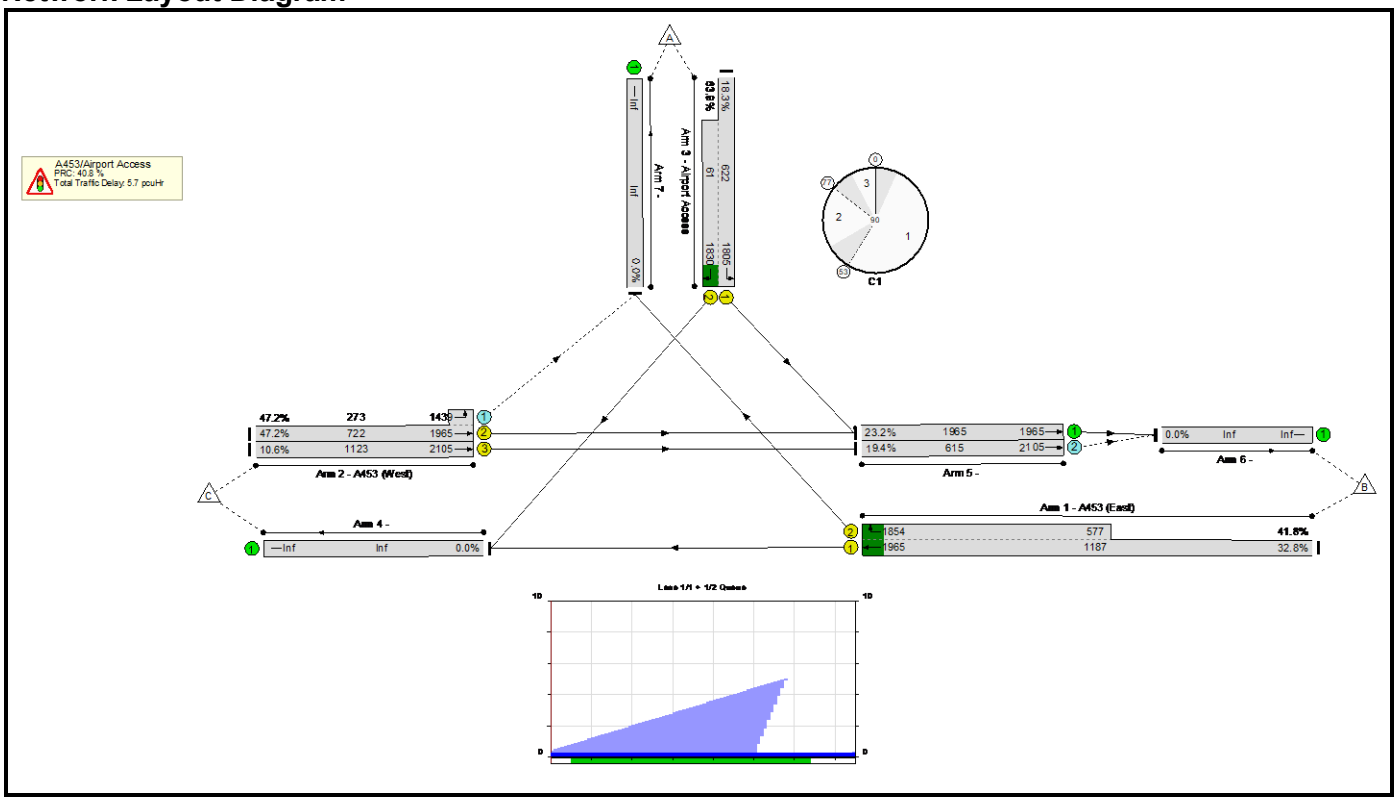
Basic Results Summary

User and Project Details

Project:	**East Midlands Gateway Phase 2**
Title:	**A453/EMA Junction**
Location:	
Client:	SEGRO
Site Ref(s):	Junction 6
Checked By:	[redacted]
Checked By Date:	27/03/24
Additional detail:	
File name:	240405 A453_Airport Access Signal Junction (BASE ONLY).lsg3x
Author:	[redacted]
Company:	BWB
Address:	

Scenario 1: '2022 Observed (AM)' (FG1: '2022 Observed (AM)', Plan 2: 'Network Control Plan 2')

Network Layout Diagram



Basic Results Summary

Network Results

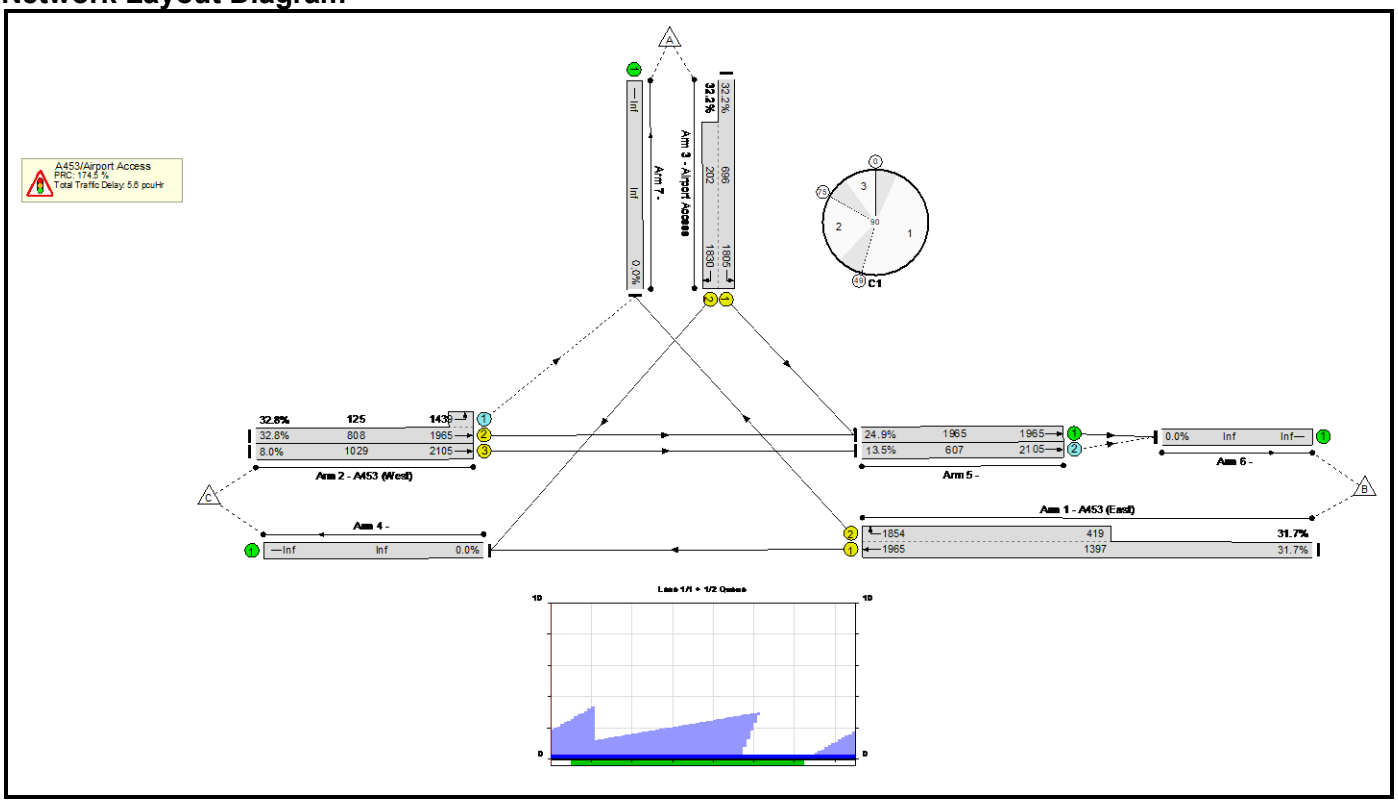
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)
Network: A453/EMA Junction	**-**	**63.9%**	**-**	**-**
A453/Airport Access	**-**	**63.9%**	**-**	**-**
2/3	A453 (West) Ahead	10.6%	12.2	1.5
5/2	Ahead	19.4%	5.0	1.8
5/1	Ahead	23.2%	1.2	0.0
1/1+1/2	A453 (East) Ahead Right	32.8 : 41.8%	11.1 (1.8:26.1)	4.8
2/2+2/1	A453 (West) Ahead Left	47.2 : 47.2%	13.3 (15.7:7.0)	6.2
3/1+3/2	Airport Access Right Left	18.3 : 63.9%	29.7 (24.0:46.4)	2.0

C1 PRC for Signalled Lanes (%): 40.8 Total Delay for Signalled Lanes (pcuHr): 5.35 Cycle Time (s): 90
PRC Over All Lanes (%): 40.8 Total Delay Over All Lanes(pcuHr): 5.66

Basic Results Summary

Scenario 2: '2022 Observed (PM)' (FG2: '2022 Observed (PM)', Plan 2: 'Network Control Plan 2')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)
Network: A453/EMA Junction	**-**	**32.8%**	**-**	**-**
A453/Airport Access	**-**	**32.8%**	**-**	**-**
2/3	A453 (West) Ahead	8.0%	14.1	1.1
5/2	Ahead	13.5%	4.0	1.2
5/1	Ahead	24.9%	1.2	0.0
1/1+1/2	A453 (East) Ahead Right	31.7 : 31.7%	10.2 (4.3:30.0)	3.1
3/1+3/2	Airport Access Right Left	32.2 : 32.2%	26.1 (22.1:39.8)	3.9
2/2+2/1	A453 (West) Ahead Left	32.8 : 32.8%	15.0 (16.5:5.3)	4.2

C1 PRC for Signalled Lanes (%): 174.5 Total Delay for Signalled Lanes (pcuHr): 5.34 Cycle Time (s): 90

PRC Over All Lanes (%): 174.5 Total Delay Over All Lanes(pcuHr): 5.59

APPENDIX 9: Junction 10 - A453/Walton Hill Signal Junction Model Outputs

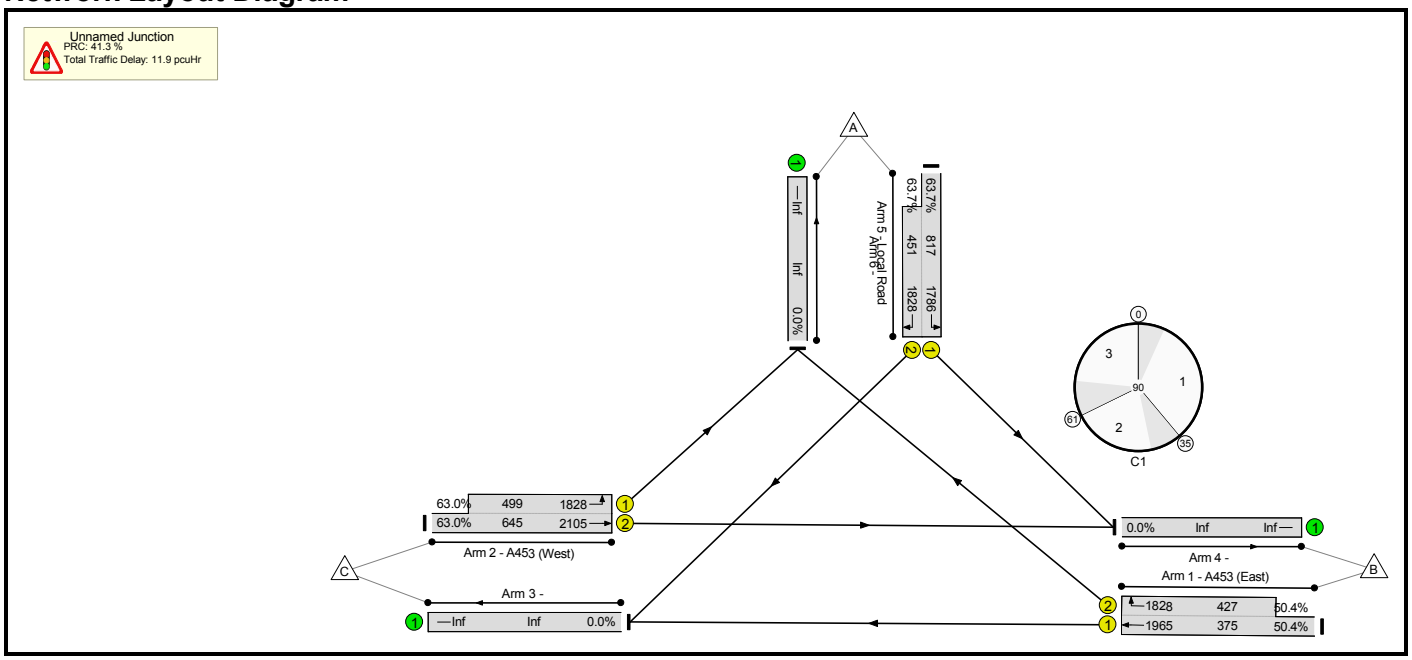
Basic Results Summary

User and Project Details

Project:	**East Midlands Gateway Phase 2**
Title:	**A453 Walton Hill Junction**
Location:	
Client:	SEGRO
Site Ref(s):	Junction 10
Date Completed:	27/03/24
Checked By:	[redacted]
Additional detail:	Phase B added to run in stage 3 as per on site observations
File name:	240405 A453_Local Road Signal Junction (BASE ONLY).lsg3x
Author:	[redacted]
Company:	BWB
Address:	

Scenario 1: '2022 Observed (AM)' (FG1: '2022 Observed (AM) (Current Scenario)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A453 Walton Hill Junction	-	-	-		-	-	-	-	-	-	**63.7%**	**0**	**0**	**0**	**11.9**	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**63.7%**	**0**	**0**	**0**	**11.9**	-	-
1/1+1/2	A453 (East) Ahead Right	U	C D		1	55:20	-	404	1965:1828	375+427	50.4 : 50.4%	-	-	-	2.7	23.8	5.2
2/2+2/1	A453 (West) Ahead Left	U	A B		1	29:56	-	720	2105:1828	645+499	63.0 : 63.0%	-	-	-	4.3	21.4	9.2
5/1+5/2	Local Road Right Left	U	E F		1	48:24	-	807	1786:1828	817+451	63.7 : 63.7%	-	-	-	5.0	22.3	9.1

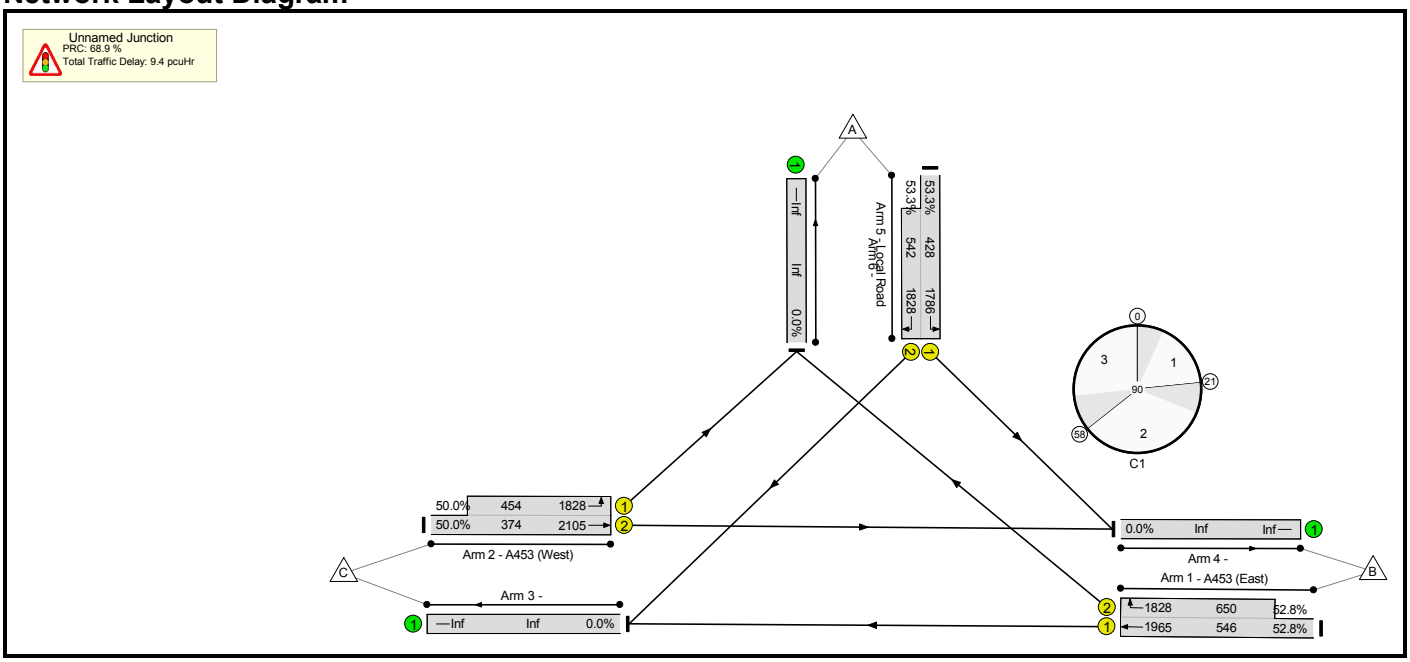
C1 PRC for Signalled Lanes (%): 41.3 Total Delay for Signalled Lanes (pcuHr): 11.95 Cycle Time (s): 90

PRC Over All Lanes (%): 41.3 Total Delay Over All Lanes(pcuHr): 11.95

Basic Results Summary

Scenario 2: '2022 Observed (PM)' (FG2: '2022 Observed (PM)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A453 Walton Hill Junction	-	-	-		-	-	-	-	-	-	**53.3%**	**0**	**0**	**0**	**9.4**	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**53.3%**	**0**	**0**	**0**	**9.4**	-	-
1/1+1/2	A453 (East) Ahead Right	U	C D		1	52:31	-	631	1965:1828	546+650	52.8 : 52.8%	-	-	-	3.5	19.8	7.3
2/2+2/1	A453 (West) Ahead Left	U	A B		1	15:45	-	414	2105:1828	374+454	50.0 : 50.0%	-	-	-	3.0	26.2	4.7
5/1+5/2	Local Road Right Left	U	E F		1	62:27	-	517	1786:1828	428+542	53.3 : 53.3%	-	-	-	2.9	20.2	6.4

C1

PRC for Signalled Lanes (%): 68.9
PRC Over All Lanes (%): 68.9

Total Delay for Signalled Lanes (pcuHr): 9.37
Total Delay Over All Lanes(pcuHr): 9.37

Cycle Time (s): 90

APPENDIX 10: Junction 12 - M1 Junction 23 Model Outputs

Basic Results Summary

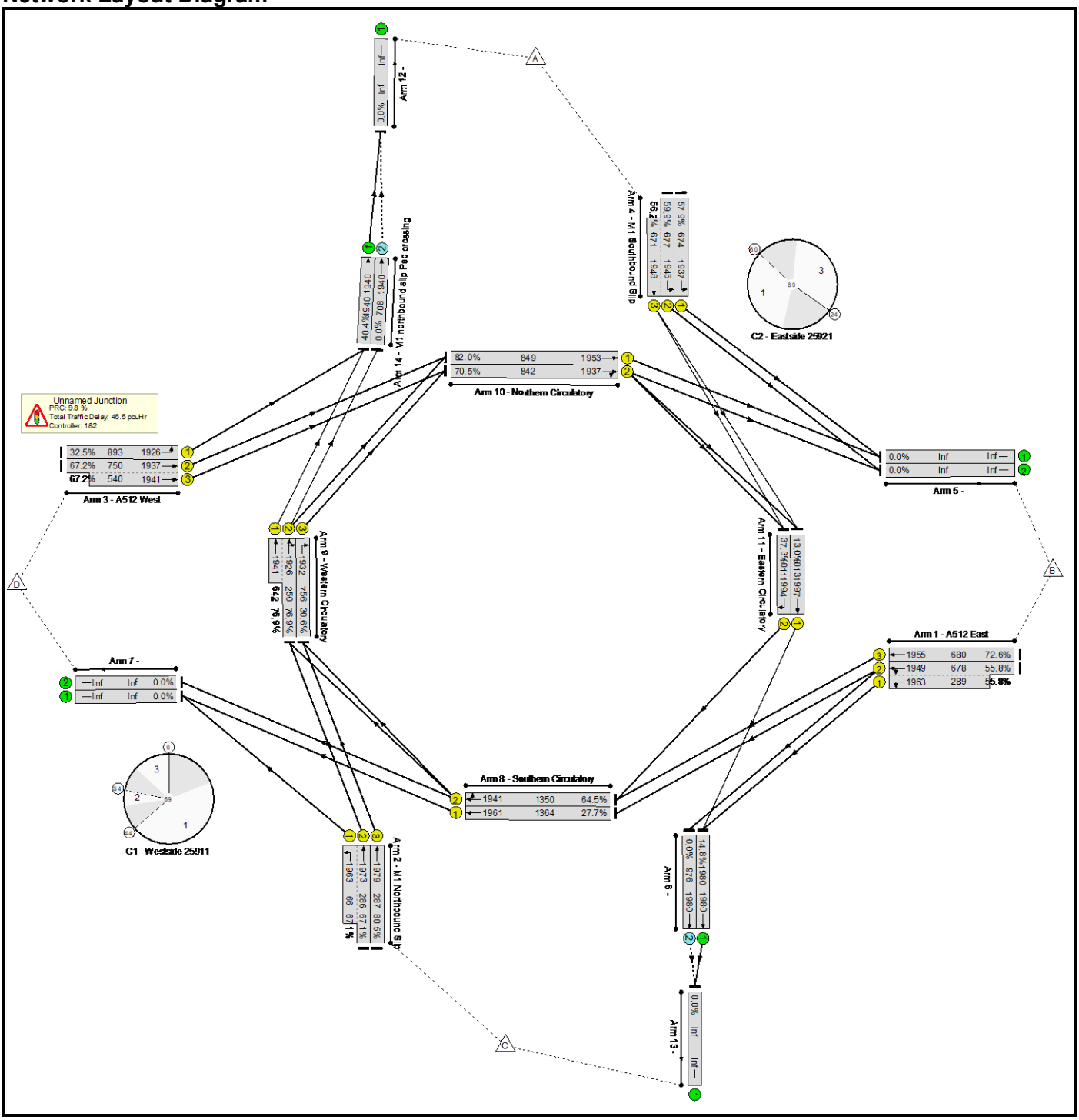
User and Project Details

Project:	**East Midlands Gateway 2**
Title:	**M1 Junction 23**
Location:	
Client:	SEGRO
Site Ref(s):	Junction 12
Date Started:	26/10/23
Checked By:	[redacted]
Additional detail:	
File name:	M1 Junction 23 (BASE ONLY).lsg3x
Author:	[redacted]
Company:	BWB
Address:	

Basic Results Summary

Scenario 1: 'AM Base' (FG1: '2022 Am', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

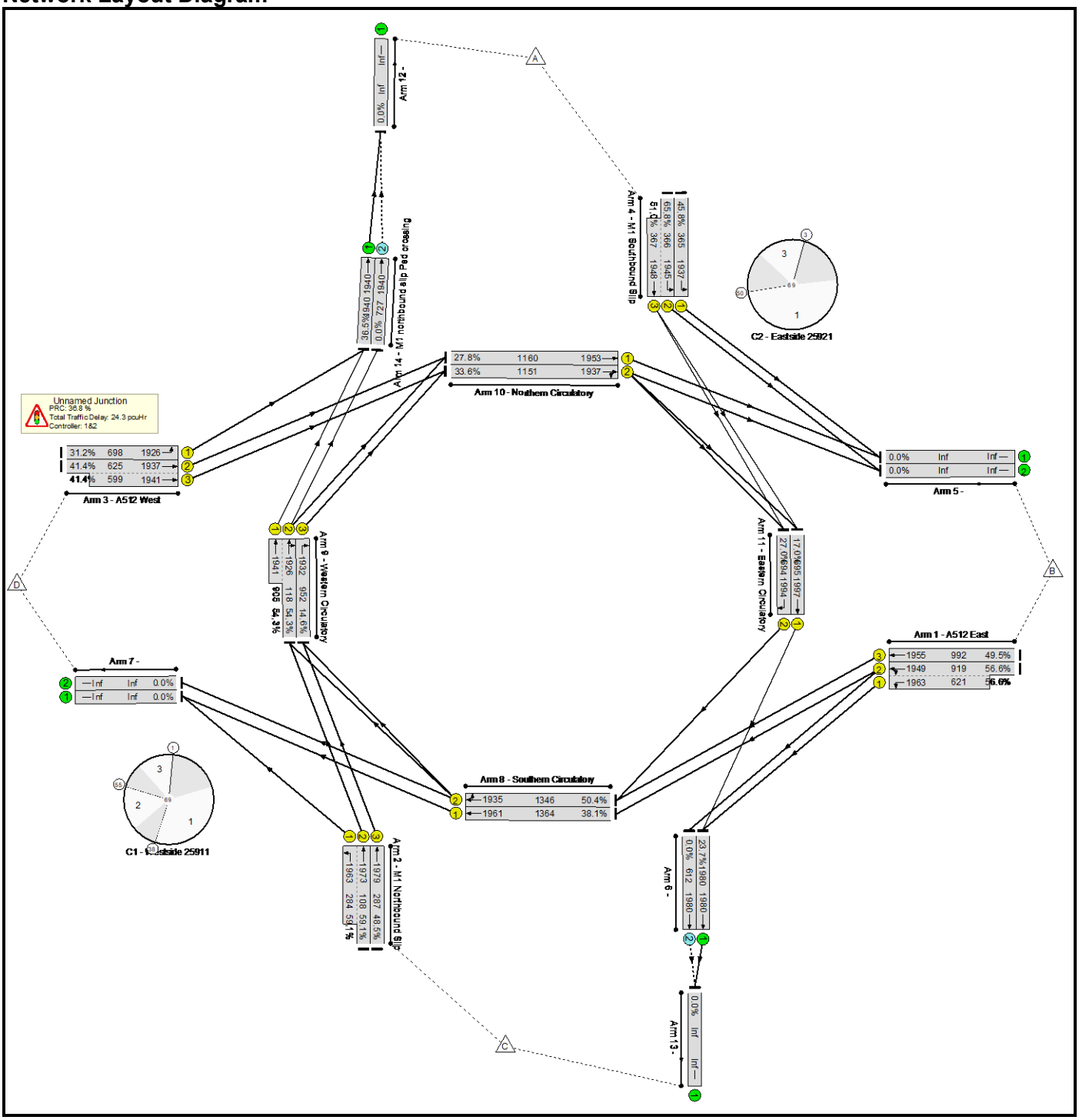
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M1 Junction 23	-	**82.0%**	-	-
Unnamed Junction	-	**82.0%**	-	-
1/2+1/1	A512 East Left Ahead	55.8 : 55.8%	21.7	6.4
1/3	A512 East Ahead	72.6%	29.2	9.5
2/2+2/1	M1 Northbound Slip Left Ahead	67.1 : 67.1%	42.9	4.5
2/3	M1 Northbound Slip Ahead	80.5%	58.7	6.2
3/1	A512 West Left	32.5%	14.7	3.7
3/2+3/3	A512 West Ahead	67.2 : 67.2%	17.1	8.0
4/1	M1 Southbound Slip Left	57.9%	24.7	6.8
4/2+4/3	M1 Southbound Slip Left Ahead	59.9 : 56.2%	21.5	7.0
6/1	Ahead	14.8%	1.1	0.1
6/2	Ahead	0.0%	0.0	0.0
8/1	Southern Circulatory Ahead	27.7%	17.2	6.6
8/2	Southern Circulatory Ahead Right	64.5%	13.4	9.9
9/2+9/1	Western Circulatory Right Ahead	76.9 : 76.9%	32.2	11.1
9/3	Western Circulatory Right	30.6%	6.8	0.6
10/1	Northern Circulatory Ahead	82.0%	20.9	14.4
10/2	Northern Circulatory Ahead Right	70.5%	18.3	11.3
11/1	Eastern Circulatory Ahead	13.0%	15.2	2.6
11/2	Eastern Circulatory Right	37.3%	3.5	0.4
14/1	M1 northbound slip Ped crossing Ahead	40.4%	1.6	0.3
14/2	M1 northbound slip Ped crossing Ahead	0.0%	0.0	0.0

C1 - Westside 25911	PRC for Signalled Lanes (%):	11.7	Total Delay for Signalled Lanes (pcuHr):	23.51	Cycle Time (s): 69
C2 - Eastside 25921	PRC for Signalled Lanes (%):	9.8	Total Delay for Signalled Lanes (pcuHr):	22.60	Cycle Time (s): 69
	PRC Over All Lanes (%):	9.8	Total Delay Over All Lanes(pcuHr):	46.53	

Basic Results Summary

Scenario 2: 'PM Base' (FG2: '2022 Pm', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M1 Junction 23	-	**65.8%**	-	-
Unnamed Junction	-	**65.8%**	-	-
1/2+1/1	A512 East Left Ahead	56.6 : 56.6%	13.6	7.3
1/3	A512 East Ahead	49.5%	14.8	6.6
2/2+2/1	M1 Northbound Slip Left Ahead	59.1 : 59.1%	38.3	3.7
2/3	M1 Northbound Slip Ahead	48.5%	39.3	2.9
3/1	A512 West Left	31.2%	19.6	3.2
3/2+3/3	A512 West Ahead	41.4 : 41.4%	18.7	4.0
4/1	M1 Southbound Slip Left	45.8%	33.9	3.2
4/2+4/3	M1 Southbound Slip Left Ahead	65.8 : 51.0%	31.5	4.9
6/1	Ahead	23.7%	1.2	0.2
6/2	Ahead	0.0%	0.0	0.0
8/1	Southern Circulatory Ahead	38.1%	5.4	2.4
8/2	Southern Circulatory Ahead Right	50.4%	5.1	2.6
9/2+9/1	Western Circulatory Right Ahead	54.3 : 54.3%	12.2	9.2
9/3	Western Circulatory Right	14.6%	3.8	0.2
10/1	Northern Circulatory Ahead	27.8%	4.4	0.8
10/2	Northern Circulatory Ahead Right	33.6%	4.3	0.9
11/1	Eastern Circulatory Ahead	17.0%	17.6	2.3
11/2	Eastern Circulatory Right	27.0%	4.9	0.3
14/1	M1 northbound slip Ped crossing Ahead	36.5%	1.5	0.3
14/2	M1 northbound slip Ped crossing Ahead	0.0%	0.0	0.0

C1 - Westside 25911	PRC for Signalled Lanes (%):	52.4	Total Delay for Signalled Lanes (pcuHr):	11.56	Cycle Time (s): 69
C2 - Eastside 25921	PRC for Signalled Lanes (%):	36.8	Total Delay for Signalled Lanes (pcuHr):	12.32	Cycle Time (s): 69
	PRC Over All Lanes (%):	36.8	Total Delay Over All Lanes(pcuHr):	24.32	

APPENDIX 11: Junction 13 - A50 Junction 1 Model Outputs

Basic Results Summary

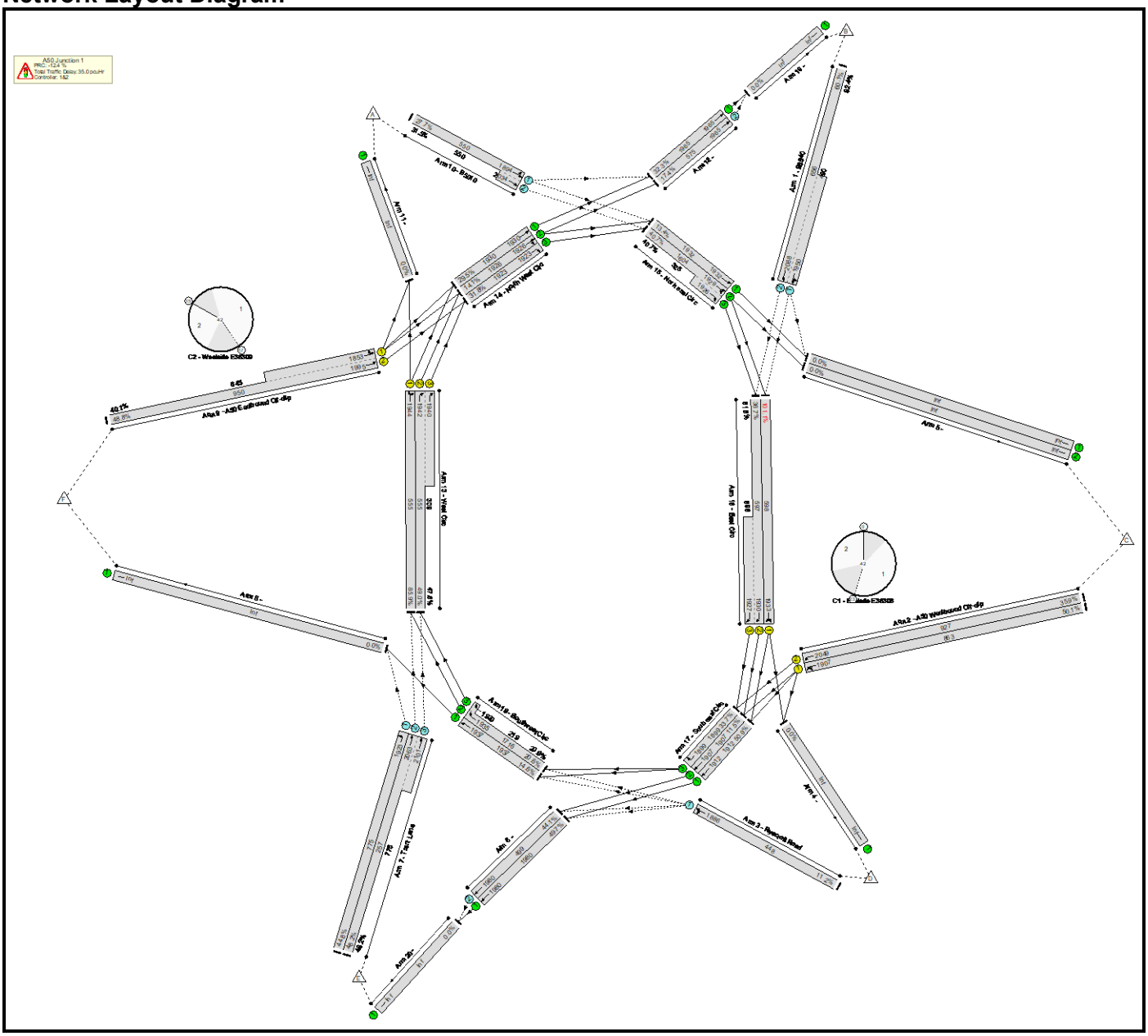
User and Project Details

Project:	**A50 Junction 1**
Title:	**A50 Junction 1**
Location:	
Client:	SEGRO
Site Ref(s):	Junction 13
Date Completed:	27/03/2024
Checked By:	[redacted]
Additional detail:	
File name:	A50 Junction 1 (BASE ONLY).lsg3x
Author:	[redacted]
Company:	
Address:	

Basic Results Summary

Scenario 1: '2023 Base AM' (FG1: '2023 Base Flows AM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A50 Junction 1	-	-	-		-	-	-	-	-	-	**101.1%**	**3959**	**0**	**0**	**35.0**	-	-
A50 Junction 1	-	-	-		-	-	-	-	-	-	**101.1%**	**3959**	**0**	**0**	**35.0**	-	-
1/2+1/1	B6540 Left Ahead	O	-		-	-	-	798	2088:1950	656+490	60.1 : 82.4%	1596	0	0	1.5	6.6	4.1
2/1	A50 Westbound Off-slip Left Ahead	U	C1:A		1	18	-	432	1907	863	50.1%	-	-	-	1.5	12.3	4.0
2/2	A50 Westbound Off-slip Ahead	U	C1:A		1	18	-	333	2049	927	35.9%	-	-	-	1.0	10.6	2.8
3/1	Ryecroft Road Left Ahead	O	-		-	-	-	50	1886	448	11.2%	50	0	0	0.1	5.3	0.2
6/1	Ahead	U	-		-	-	-	990	1980	1980	49.7%	-	-	-	0.5	1.8	0.5
6/2	Ahead	O	-		-	-	-	220	1980	499	44.1%	220	0	0	0.5	8.7	2.7
7/1	Trent Lane Left	O	-		-	-	-	347	1923	775	44.8%	347	0	0	0.4	4.2	0.4
7/2+7/3	Trent Lane Ahead	O	-		-	-	-	498	2063:2101	257+775	48.2 : 48.2%	996	0	0	0.5	3.4	0.5
9/2+9/1	A50 Eastbound Off-slip Left Ahead	U	C2:A		1	19	-	723	1995:1853	950+645	48.8 : 40.1%	-	-	-	1.9	9.3	4.0
10/1+10/2	B5010 Left Ahead	O	-		-	-	-	325	1894:2034	550+550	27.7 : 31.5%	650	0	0	0.3	3.0	0.6
12/1	Ahead	U	-		-	-	-	634	1965	1965	32.3%	-	-	-	0.2	1.4	0.2
12/2	Ahead	O	-		-	-	-	100	1965	575	17.4%	100	0	0	0.1	3.8	0.1
13/1	West Circ Ahead Right	U	C2:B		1	11	-	477	1944	555	85.9%	-	-	-	4.8	36.4	7.4
13/2+13/3	West Circ Right	U	C2:B		1	11	-	419	1942:1940	555+309	49.0 : 47.5%	-	-	-	1.9	16.4	3.0

Basic Results Summary

14/1	North West Circ Ahead	U	-		-	-	-	569	1930	1930	29.5%	-	-	-	0.2	1.3	0.2
14/2	North West Circ Ahead Right	U	-		-	-	-	272	1926	1926	14.1%	-	-	-	0.1	1.1	0.1
14/3	North West Circ Right	U	-		-	-	-	611	1923	1923	31.8%	-	-	-	0.2	1.4	1.3
15/1	Northeast Circ Ahead	U	-		-	-	-	259	1932	1932	13.4%	-	-	-	0.1	1.1	0.1
15/2+15/3	Northeast Circ Ahead Right	U	-		-	-	-	784	1929:1926	1604+325	40.7 : 40.7%	-	-	-	0.3	1.6	0.3
16/1	East Circ Ahead Ahead2	U	C1:B		1	12	-	605	1933	598	101.1%	-	-	-	15.8	94.1	21.2
16/2+16/3	East Circ Ahead	U	C1:B		1	12	-	526	1930:1927	597+596	36.7 : 51.5%	-	-	-	2.1	14.4	3.3
17/1	Southeast Circ Ahead	U	-		-	-	-	980	1912	1912	50.9%	-	-	-	0.5	1.9	0.5
17/2	Southeast Circ Ahead	U	-		-	-	-	220	1907	1907	11.5%	-	-	-	0.1	1.1	0.1
17/3	Southeast Circ Right	U	-		-	-	-	640	1899	1899	33.7%	-	-	-	0.3	1.4	0.3
18/1	Southwest Circ Ahead	U	-		-	-	-	282	1937	1937	14.6%	-	-	-	0.1	1.1	0.1
18/2+18/3	Southwest Circ Right	U	-		-	-	-	398	1935:1930	1716+219	20.6 : 20.6%	-	-	-	0.1	1.2	0.1

C1 - Eastsde E36308
C2 - Westside E36309

PRC for Signalled Lanes (%): -12.4
PRC for Signalled Lanes (%): 4.8
PRC Over All Lanes (%): -12.4

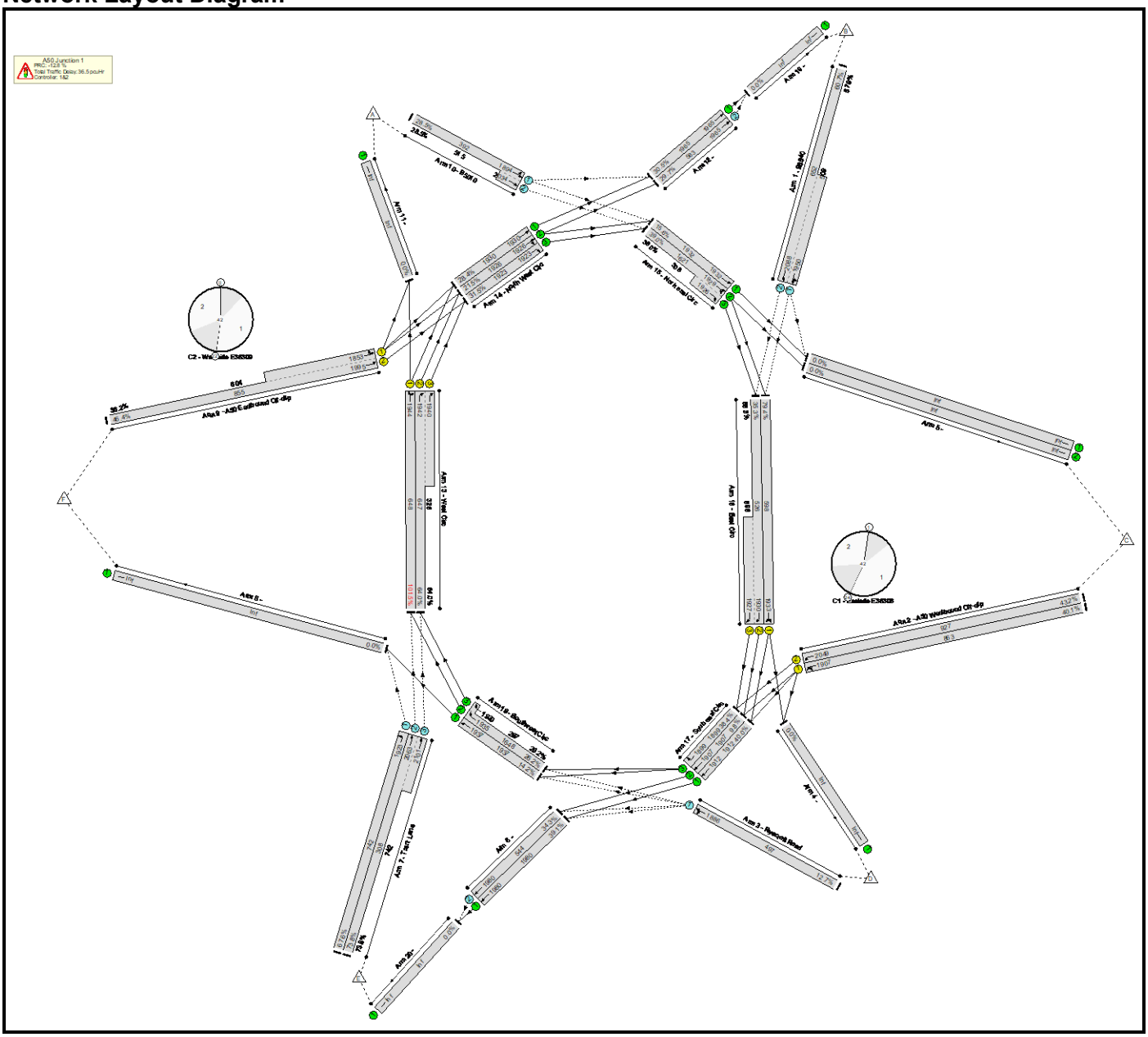
Total Delay for Signalled Lanes (pcuHr): 20.37
Total Delay for Signalled Lanes (pcuHr): 8.60
Total Delay Over All Lanes(pcuHr): 35.02

Cycle Time (s): 42
Cycle Time (s): 42

Basic Results Summary

Scenario 2: '2023 Base PM' (FG2: '2023 Base Flows PM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A50 Junction 1	-	-	-		-	-	-	-	-	-	**101.5%**	**4372**	**0**	**0**	**36.5**	-	-
A50 Junction 1	-	-	-		-	-	-	-	-	-	**101.5%**	**4372**	**0**	**0**	**36.5**	-	-
1/2+1/1	B6540 Left Ahead	O	-		-	-	-	691	2088:1950	652+509	60.7 : 57.9%	1382	0	0	0.9	4.8	2.3
2/1	A50 Westbound Off-slip Left Ahead	U	C1:A		1	18	-	346	1907	863	40.1%	-	-	-	1.1	11.2	3.0
2/2	A50 Westbound Off-slip Ahead	U	C1:A		1	18	-	400	2049	927	43.2%	-	-	-	1.2	11.2	3.5
3/1	Ryecroft Road Left Ahead	O	-		-	-	-	63	1886	497	12.7%	63	0	0	0.1	5.1	0.2
6/1	Ahead	U	-		-	-	-	775	1980	1980	39.1%	-	-	-	0.3	1.5	0.3
6/2	Ahead	O	-		-	-	-	187	1980	544	34.3%	187	0	0	0.3	5.9	2.1
7/1	Trent Lane Left	O	-		-	-	-	501	1923	742	67.6%	501	0	0	1.0	7.4	1.3
7/2+7/3	Trent Lane Ahead	O	-		-	-	-	774	2063:2101	308+742	73.8 : 73.8%	1548	0	0	1.4	6.5	2.2
9/2+9/1	A50 Eastbound Off-slip Left Ahead	U	C2:A		1	17	-	616	1995:1853	855+604	46.4 : 36.2%	-	-	-	1.8	10.4	3.6
10/1+10/2	B5010 Left Ahead	O	-		-	-	-	259	1894:2034	392+515	28.5 : 28.5%	518	0	0	0.3	3.7	0.6
12/1	Ahead	U	-		-	-	-	606	1965	1965	30.5%	-	-	-	0.2	1.3	0.2
12/2	Ahead	O	-		-	-	-	173	1965	583	29.7%	173	0	0	0.2	4.6	1.3
13/1	West Circ Ahead Right	U	C2:B		1	13	-	658	1944	648	101.5%	-	-	-	17.9	98.2	23.4
13/2+13/3	West Circ Right	U	C2:B		1	13	-	622	1942:1940	647+325	64.0 : 64.0%	-	-	-	2.8	16.1	4.7

Basic Results Summary

14/1	North West Circ Ahead	U	-		-	-	-	555	1930	1930	28.4%	-	-	-	0.2	1.3	0.2
14/2	North West Circ Ahead Right	U	-		-	-	-	414	1926	1926	21.5%	-	-	-	0.1	1.2	0.1
14/3	North West Circ Right	U	-		-	-	-	605	1923	1923	31.5%	-	-	-	0.2	1.4	1.3
15/1	Northeast Circ Ahead	U	-		-	-	-	302	1932	1932	15.6%	-	-	-	0.1	1.1	0.1
15/2+15/3	Northeast Circ Ahead Right	U	-		-	-	-	752	1929:1926	1621+308	39.0 : 39.0%	-	-	-	0.3	1.5	0.3
16/1	East Circ Ahead Ahead2	U	C1:B		1	12	-	475	1933	598	79.4%	-	-	-	2.9	22.0	6.4
16/2+16/3	East Circ Ahead	U	C1:B		1	12	-	516	1930:1927	526+596	35.3 : 55.3%	-	-	-	2.1	14.7	3.5
17/1	Southeast Circ Ahead	U	-		-	-	-	764	1912	1912	40.0%	-	-	-	0.3	1.6	0.3
17/2	Southeast Circ Ahead	U	-		-	-	-	187	1907	1907	9.8%	-	-	-	0.1	1.0	0.1
17/3	Southeast Circ Right	U	-		-	-	-	730	1899	1899	38.4%	-	-	-	0.3	1.5	0.8
18/1	Southwest Circ Ahead	U	-		-	-	-	276	1937	1937	14.2%	-	-	-	0.1	1.1	0.1
18/2+18/3	Southwest Circ Right	U	-		-	-	-	506	1935:1930	1648+287	26.2 : 26.2%	-	-	-	0.2	1.3	0.2

C1 - Eastsde E36308	PRC for Signalled Lanes (%):	13.4	Total Delay for Signalled Lanes (pcuHr):	7.33	Cycle Time (s): 42
C2 - Westside E36309	PRC for Signalled Lanes (%):	-12.8	Total Delay for Signalled Lanes (pcuHr):	22.51	Cycle Time (s): 42
	PRC Over All Lanes (%):	-12.8	Total Delay Over All Lanes(pcuHr):	36.55	

APPENDIX 12: Junction 14 - M1 Junction 25 Model Outputs

Basic Results Summary

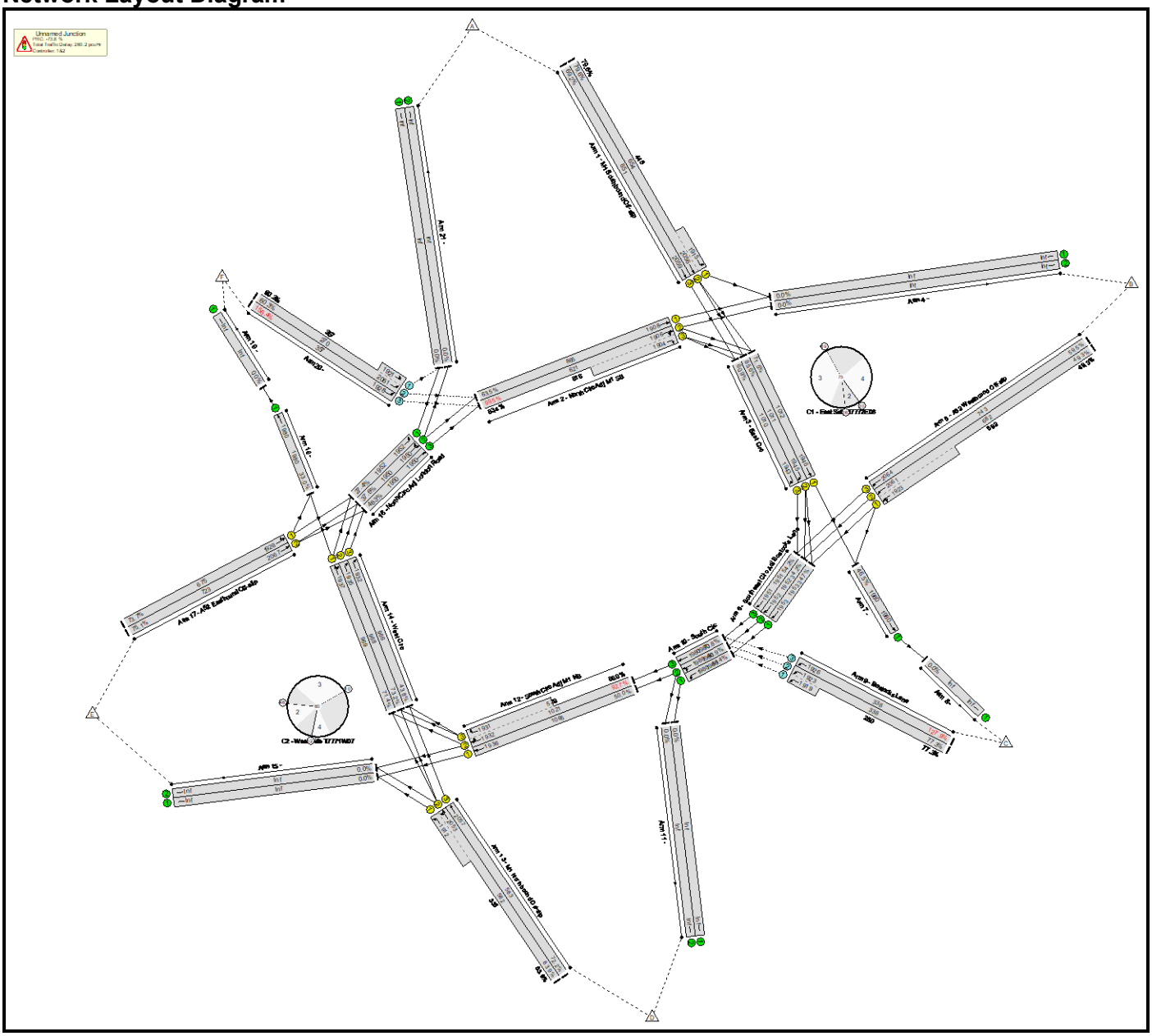
User and Project Details

Project:	**M1 Junction 25**
Title:	**EMG2**
Location:	
Client:	SERGO
Date Completed:	27/03/24
Checked By:	[redacted]
Additional detail:	
File name:	240514 M1 Junction 25 (BASE ONLY).lsg3x
Author:	[redacted]
Company:	BWB
Address:	

Basic Results Summary

Scenario 1: '2022 AM' (FG1: '2022 AM Base', Plan 1: 'Network Control Plan 1 AM')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: EMG2	-	**156.4%**	-	-
Unnamed Junction	-	**156.4%**	-	-
1/2+1/1	M1 Southbound Off-slip Ahead Left	79.6 : 79.6%	24.7	11.4
1/3	M1 Southbound Off-slip Ahead	69.2%	24.9	11.1
2/1	North Circ Adj M1 SB Ahead	63.5%	21.4	9.6
2/2+2/3	North Circ Adj M1 SB Right Ahead	99.5 : 83.4%	29.3	16.3
3/1	East Circ Ahead	71.5%	19.7	14.4
3/2	East Circ Right	85.6%	20.5	19.3
3/3	East Circ Right	60.9%	34.5	13.4
5/2+5/1	A52 Westbound Off-slip Ahead Left	49.3 : 49.3%	21.1	6.0
5/3	A52 Westbound Off-slip Ahead	59.5%	25.5	8.2
6/1	Southeast Circ Adj Bostocks Lane Ahead	34.7%	1.4	0.3
6/2	Southeast Circ Adj Bostocks Lane Ahead	34.2%	1.4	2.5
6/3	Southeast Circ Adj Bostocks Lane Ahead	54.2%	2.0	5.5
7/1	Ahead	46.5%	1.7	0.4
9/2+9/1	Bostocks Lane Left	77.3 : 77.3%	21.9	4.6
9/3	Bostocks Lane Left	127.9%	453.1	74.2
10/1	South Circ Left	44.4%	1.6	0.4
10/2	South Circ Left Ahead	46.9%	1.7	0.4
10/3	South Circ Ahead	70.8%	3.1	1.8
12/1	South Circ Adj M1 NB Ahead	50.0%	11.8	6.0
12/2+12/3	South Circ Adj M1 NB Right Ahead	92.7 : 86.0%	22.1	18.1
13/2+13/1	M1 Northbound Off-slip Ahead Left	83.9 : 83.9%	31.2	10.1
13/3	M1 Northbound Off-slip Ahead	72.2%	30.3	7.6
14/1	West Circ Right Ahead	71.4%	17.2	11.5
14/2	West Circ Right	73.2%	22.5	12.3
14/3	West Circ Right	43.8%	31.3	7.4
16/1	North Circ Adj London Road Left	27.4%	1.3	0.2

Basic Results Summary

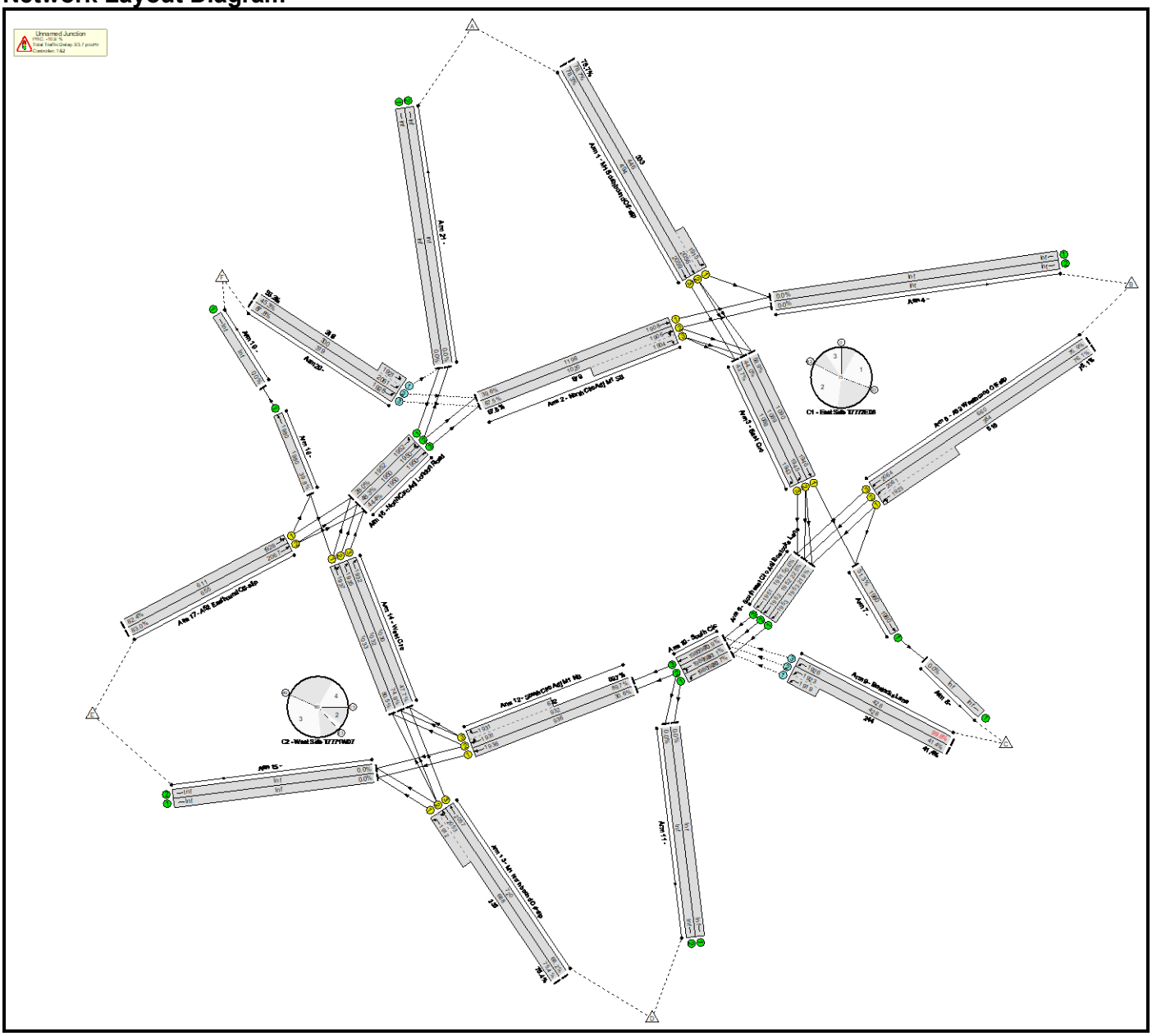
16/2	North Circ Adj London Road Ahead Left	37.6%	1.5	0.3
16/3	North Circ Adj London Road Ahead	48.3%	1.8	3.7
17/1	A52 Eastbound Off-slip Ahead Left	73.7%	27.1	8.6
17/2	A52 Eastbound Off-slip Ahead	75.1%	27.0	9.3
18/1	Ahead	33.0%	1.4	0.2
20/2+20/1	Left Left2	60.3 : 60.3%	12.9	2.3
20/3	Left	156.4%	717.4	129.9

C1 - East Side T7772E06	PRC for Signalled Lanes (%):	-10.6	Total Delay for Signalled Lanes (pcuHr):	45.83	Cycle Time (s): 75
C2 - West Side T7771W07	PRC for Signalled Lanes (%):	-3.0	Total Delay for Signalled Lanes (pcuHr):	39.77	Cycle Time (s): 60
	PRC Over All Lanes (%):	-73.8	Total Delay Over All Lanes(pcuHr):	260.15	

Basic Results Summary

Scenario 2: '2022 PM' (FG2: '2022 PM Base', Plan 2: 'Network Control Plan 2 PM')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: EMG2	-	**99.8%**	-	-
Unnamed Junction	-	**99.8%**	-	-
1/2+1/1	M1 Southbound Off-slip Ahead Left	78.7 : 78.7%	36.3	8.4
1/3	M1 Southbound Off-slip Ahead	78.3%	42.9	9.3
2/1	North Circ Adj M1 SB Ahead	39.6%	9.5	5.2
2/2+2/3	North Circ Adj M1 SB Right Ahead	67.5 : 67.5%	10.9	9.3
3/1	East Circ Ahead	58.9%	15.9	8.6
3/2	East Circ Right	44.0%	18.0	7.6
3/3	East Circ Right	43.7%	6.6	2.6
5/2+5/1	A52 Westbound Off-slip Ahead Left	76.1 : 76.1%	29.3	10.3
5/3	A52 Westbound Off-slip Ahead	75.9%	34.0	10.9
6/1	Southeast Circ Adj Bostocks Lane Ahead	21.9%	1.2	0.1
6/2	Southeast Circ Adj Bostocks Lane Ahead	22.5%	1.2	1.8
6/3	Southeast Circ Adj Bostocks Lane Ahead	50.0%	1.9	7.2
7/1	Ahead	51.3%	1.9	0.5
9/2+9/1	Bostocks Lane Left	41.4 : 41.4%	6.6	1.4
9/3	Bostocks Lane Left	99.8%	93.4	18.9
10/1	South Circ Left	26.7%	1.2	0.2
10/2	South Circ Left Ahead	31.1%	1.3	0.2
10/3	South Circ Ahead	70.9%	3.1	6.3
12/1	South Circ Adj M1 NB Ahead	30.6%	12.2	3.1
12/2+12/3	South Circ Adj M1 NB Right Ahead	89.7 : 89.7%	23.6	16.7
13/2+13/1	M1 Northbound Off-slip Ahead Left	75.4 : 75.4%	24.0	9.0
13/3	M1 Northbound Off-slip Ahead	68.2%	24.4	8.0
14/1	West Circ Right Ahead	80.5%	20.5	15.0
14/2	West Circ Right	74.9%	16.4	13.1
14/3	West Circ Right	47.7%	29.2	8.6
16/1	North Circ Adj London Road Left	28.0%	1.3	0.2

Basic Results Summary

16/2	North Circ Adj London Road Ahead Left	48.3%	1.8	0.5
16/3	North Circ Adj London Road Ahead	44.4%	1.7	0.4
17/1	A52 Eastbound Off-slip Ahead Left	82.4%	35.0	9.9
17/2	A52 Eastbound Off-slip Ahead	83.0%	34.5	10.6
18/1	Ahead	39.8%	1.5	0.3
20/2+20/1	Left Left2	45.3 : 53.3%	12.0	1.8
20/3	Left	87.8%	48.1	5.6

C1 - East Side T7772E06	PRC for Signalled Lanes (%):	14.3	Total Delay for Signalled Lanes (pcuHr):	32.53	Cycle Time (s):	75
C2 - West Side T7771W07	PRC for Signalled Lanes (%):	0.3	Total Delay for Signalled Lanes (pcuHr):	40.49	Cycle Time (s):	60
	PRC Over All Lanes (%):	-10.9	Total Delay Over All Lanes(pcuHr):	93.73		

APPENDIX 6: EMFM Base Year Model Review (document reference EMFM 2019 – East Midlands Gateway Phase 2: Base Year Model Review v1.1)



AECOM

EMFM 2019

East Midlands Gateway Phase 2: Base Year Model Review

Delivering a better world

Quality Information

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Revision History

Revision	Revision date	Details	Authorised	Name	Position
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Section 1 – Overview

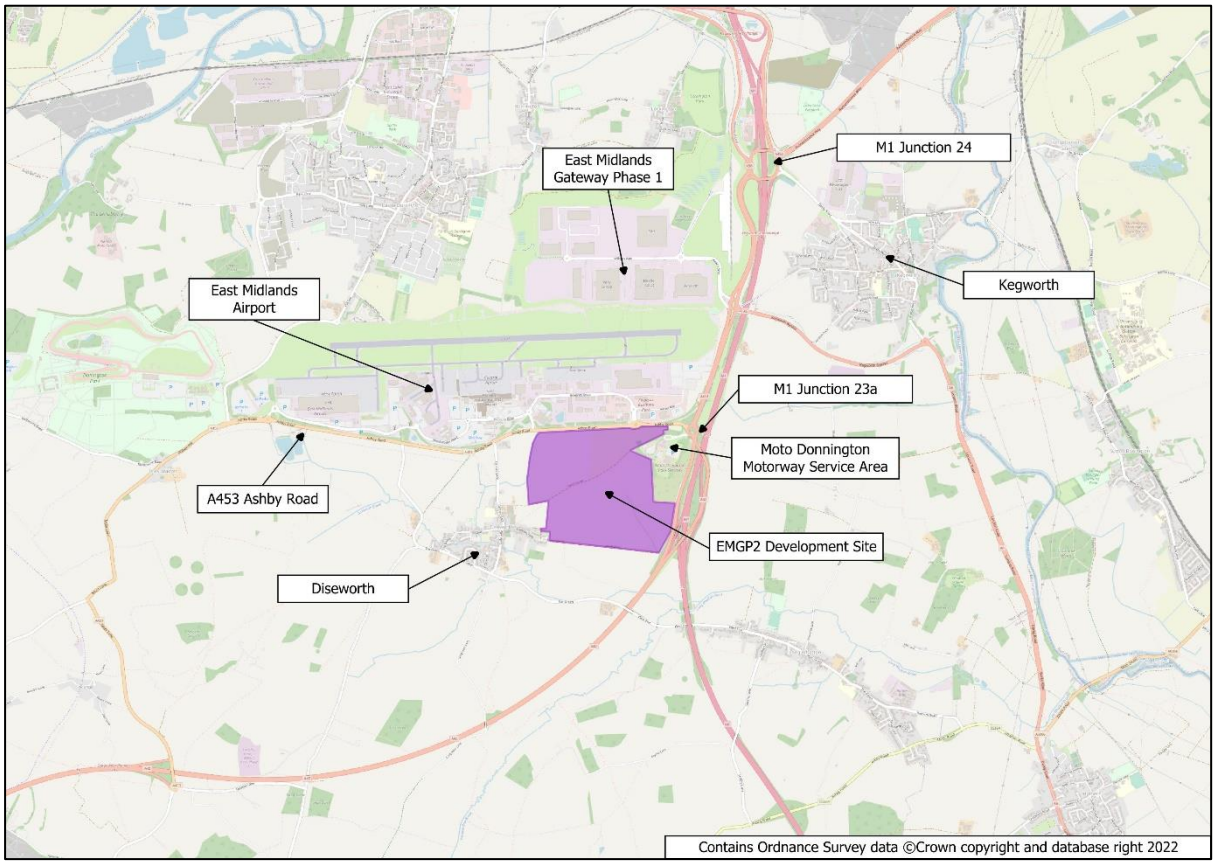
1.1 Introduction

1.1.1 The East Midlands Gateway Phase 2 development is a proposed employment development of mixed B2 (general industrial) and B8 (storage or distribution) use, with capacity for 300,000m^2 gross floor area of industrial use, comprising 240,000m^2 B8 and 60,000m^2 B2.

1.1.2 The development site is located to the south of East Midlands Airport in Leicestershire and west of the A42 and is expected to build out by 2031.

1.1.3 Figure 1.1 shows an indication of the location of the proposed development, denoted by the area shaded in purple. The proposed development has a total area of circa 250 acres located to the south of the A453 and East Midlands Airport itself, to the east of Diseworth village. The M1 Junction 23a lies to the east of the site with the Moto Donnington Motorway Service Area (MSA) directly abutting to the north-east.

Figure 1.1: Location of Proposed Development[1]



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1.1.4 AECOM has been commissioned to undertake strategic modelling to assess the potential traffic impacts of the proposed development using the East Midlands Freeport Model (EMFM). The first stage of this commission is to undertake a review of the EMFM base year model.

1.1.5 The base year of the EMFM is 2019, and it is a highway assignment model (for the AM Peak and PM Peak hours), with its demand derived from the more extensive Pan-Regional Transport Model (PRTM 2019), though the EMFM has greater network and zonal density in the vicinity of the Freeport sites. The EMFM uses the latest in-draft November 2022 TAG databook.

[1] Figure 1, Technical Note 1 – Transport Scoping Note, East Midlands Gateway Phase 2 (EMG-BWB-GEN-XX-RP-TR-0001_TN1 Transport Scoping Note-S1-P3.pdf), provided as part of the information pack with the PRTM Development Form for East Midlands Gateway Phase 2 (220701 EMGP2 PRTM Development Form v1.2.docx)

1.1.6 The EMFM is derived from a cordon extract from the Pan-Regional Transport Model 2019 (PRTM 2019). The highway simulation network of the EMFM has been extended northward and model zones have been disaggregated for zones outside Leicestershire to provide greater detail in the East Midlands Freeport area. Figure 2.1, Figure 2.2 and Figure 2.3 provide an overview of the EMFM zone system and network structure.

1.2 Report Structure

1.2.1 Following the introduction, this report contains the following sections:

- Section 2 details the review of the EMFM zone system and network structure in the vicinity of the proposed East Midlands Gateway Phase 2 development;
- Section 3 details the review of the EMFM base year model performance compared with observed data;
- Section 4 provides a summary of the base year model review; and
- Appendix A provides journey time validation graphs for routes in the vicinity of the proposed East Midlands Gateway Phase 2 development.

Section 2 – Zone System and Network Structure

2.1 Introduction

2.1.1 This section details the review of the base year (2019) EMFM highway model in the vicinity of the proposed East Midlands Gateway Phase 2 development, which includes:

- a review of the model zone system in the vicinity of the proposed development; and
- a review of the base year highway network coding in the vicinity of the proposed development, including:
  - the A453 between the Tonge Interchange with the A42 and the interchange with the A42 and M1 Junction 23a;
  - the M1 between Junction 23 and Junction 24;
  - the A42 / A453 junction (Tonge Interchange); and
  - the A50 Junction 1.

2.2 Zone System

2.2.1 The existing zoning for the EMFM is largely defined by existing land-use and 2011 Census geography.

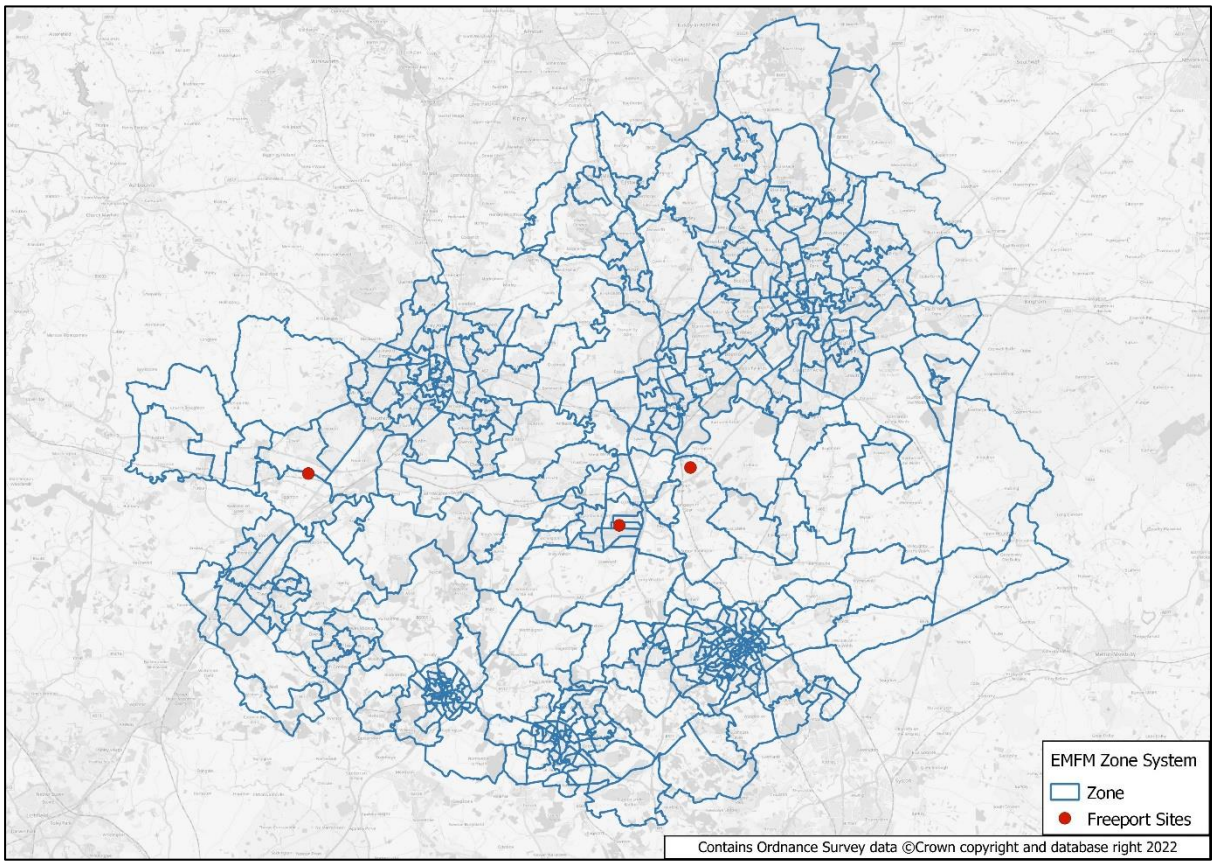
2.2.2 Figure 2.1 shows an overview of the EMFM highway model zone system. The granularity of the zone system is generally higher in urban areas, such as Loughborough, Derby and Nottingham, and larger zones are used for rural areas.

2.2.3 Figure 2.2 shows the EMFM highway model zone system in north-west Leicestershire, with East Midlands Gateway Phase 2 broadly in the centre. The zonal detail in the East Midlands Gateway Phase 2 area is considered suitable for this application of the EMFM, considering the existing underlying land-use.

2.2.4 The proposed development site is covered by the existing zone 7250. This zone covers a predominantly rural area with two small villages (Breedon on the Hill and Diseworth) and is connected to the highway network using a single access point onto the highway network at Breedon on the Hill. Considering the level of expected trip generation within zone 7250, predominantly from these small villages, this is judged to be appropriate zonal detail.

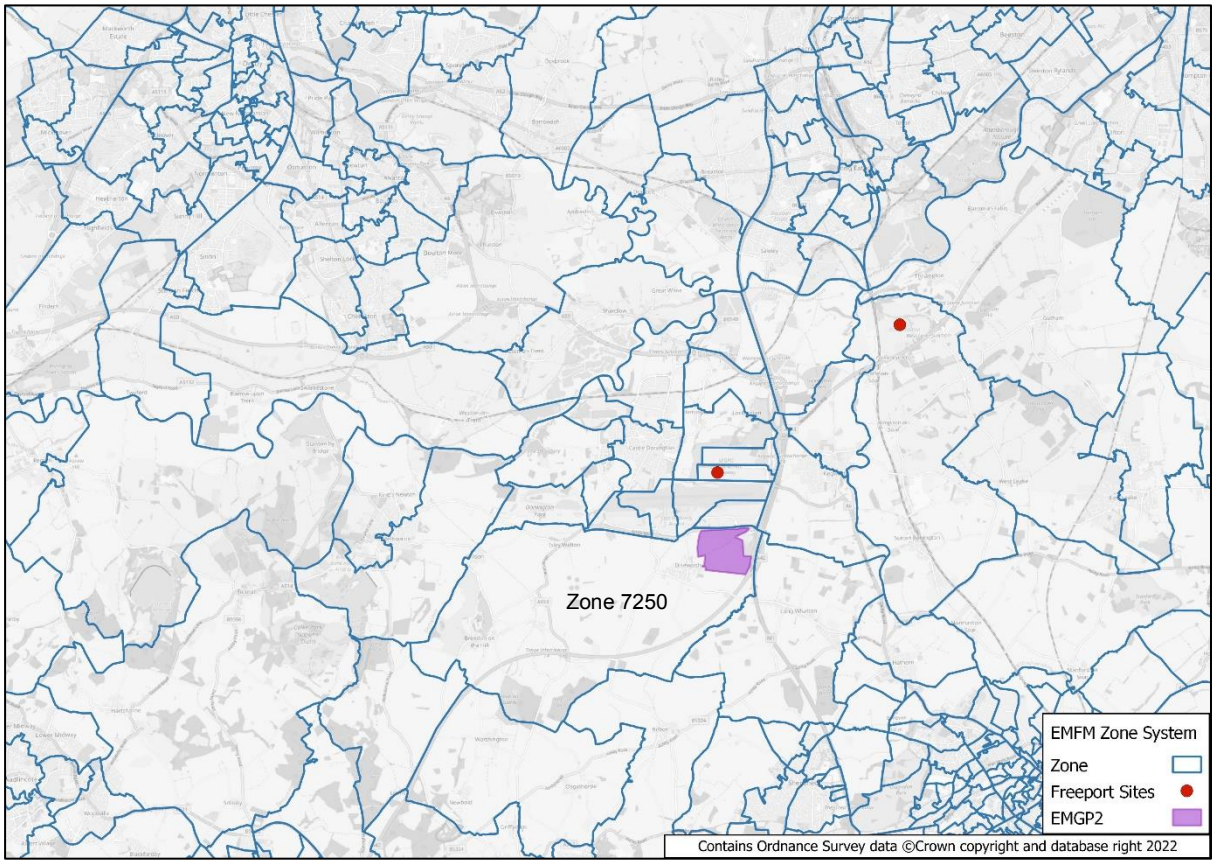
2.2.5 It is recommended that one or two development zone(s) be used to represent the proposed East Midlands Gateway Phase 2 development, thus separating the demand from the proposed development and that in the existing zone 7250.

Figure 2.1: Highway Model Zone System – EMFM



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Figure 2.2: Highway Model Zone System – North-West Leicestershire / East Midlands Gateway Phase 2 Area



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2.3 EMFM Highway Base Year Model Network Coding

2.3.1 Figure 2.3 shows the base year highway network of the EMFM. The EMFM highway network has been coded using the standards set out in the PRTM 2019 Coding Manual . All links (and junctions) are within the simulation area except for the urban areas of Nottingham and Derby which have been coded as buffer. As shown in Figure 2.3, all strategic roads within the model area are included in the EMFM highway network. The review of the existing base year network coding is focused on the East Midlands Gateway Phase 2 area, and specifically the roads and junctions that are likely to be affected by the proposed development.

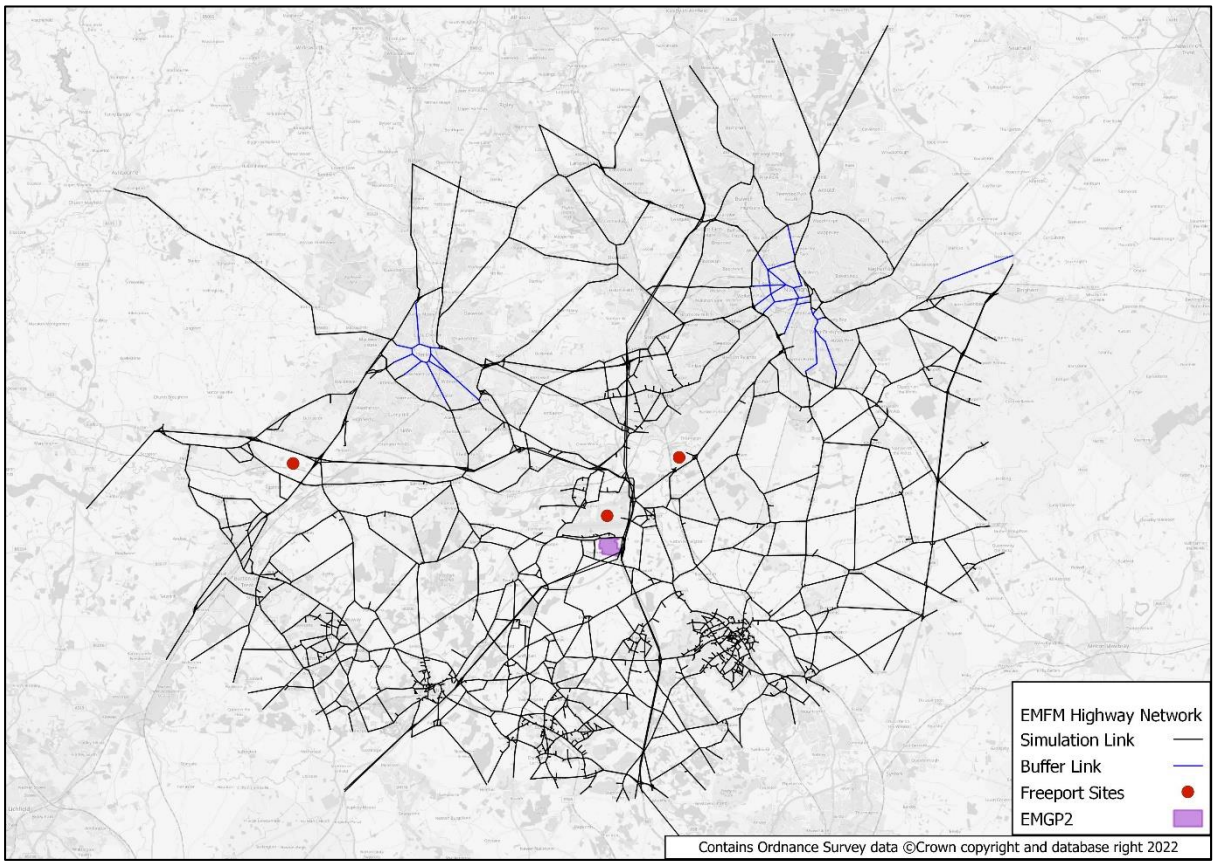
2.3.2 Figure 2.4 shows the highway network extent near the proposed East Midlands Gateway Phase 2 development. All strategic links and junctions near the proposed development are simulated and the network detail in the base year model is appropriate for the purpose of strategic assessment of the proposed development.

2.3.3 The highway network in the vicinity of the proposed development has been reviewed. The coded distances for the A453 (between the Tonge Interchange with the A42 and M1 Junction 23a) and the M1 (between Junction 23 and Junction 24) have been reviewed, and no significant discrepancies between the measured and coded distances have been found. Speed flow curves and link capacities for the A453 and the M1 have also been reviewed and found to be appropriately coded.

2.3.4 In terms of junction coding, junctions along the A453 (between the Tonge Interchange with the A42 and M1 Junction 23a) have been reviewed and are found to be representative of the 2019 road configurations. Most junctions are coded using a single node, and the junction type, the number of lanes, turning movements and flare lengths are satisfactory in terms of their accuracy and consistency with the Coding Manual.

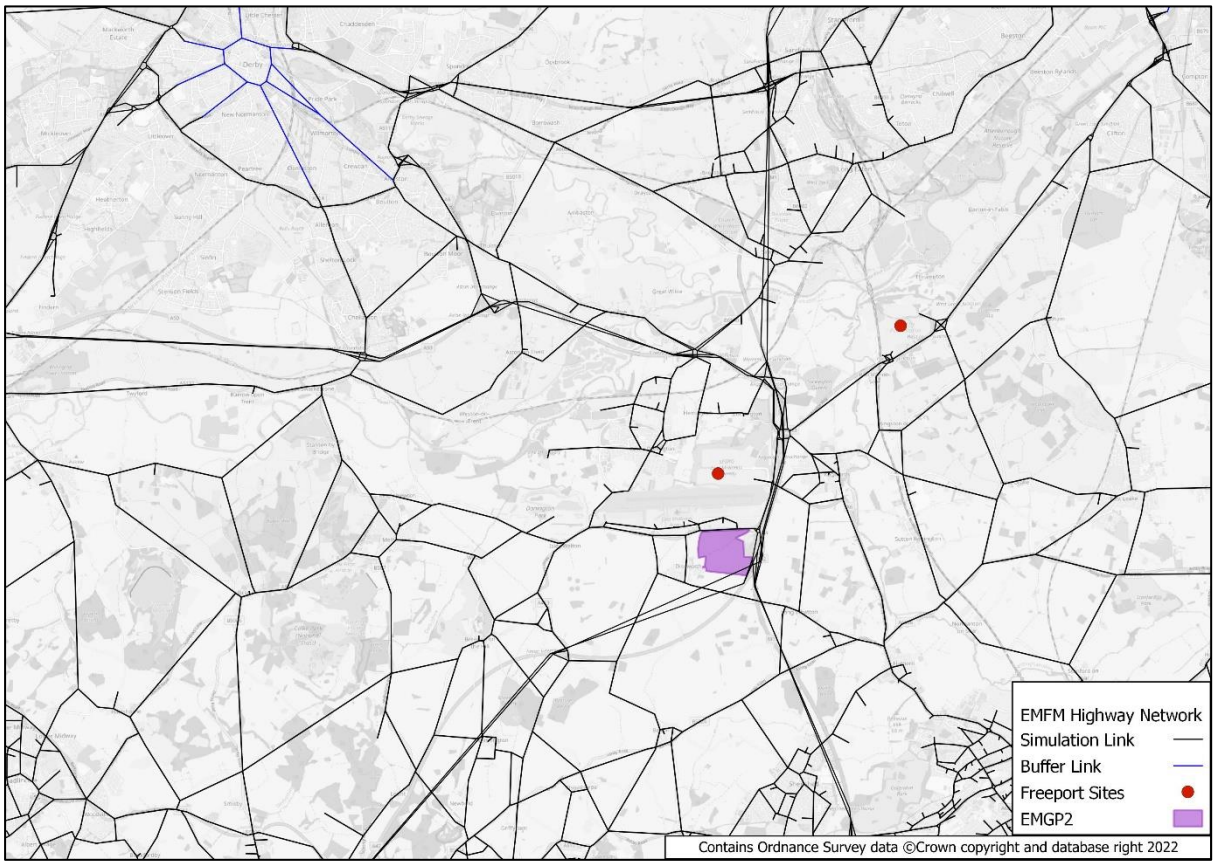
2.3.5 For the Finger Farm roundabout, A453 / A6 Kegworth Bypass roundabout, M1 Junction 24 and A50 Junction 1, these have been coded as ‘exploded’ roundabouts which provide a more accurate representation of the junctions in terms of number of lanes and capacity than a single roundabout node. Figure 2.5 shows the network coding structure for these junctions.

Figure 2.3: Overview of the Highway Network – EMFM



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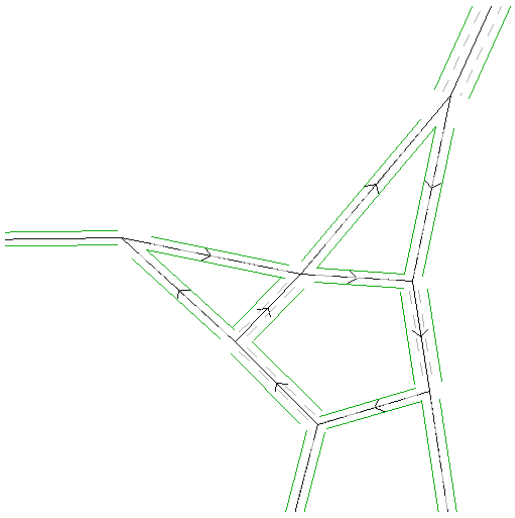
Figure 2.4: Overview of the Highway Network – East Midlands Gateway Phase 2 Area



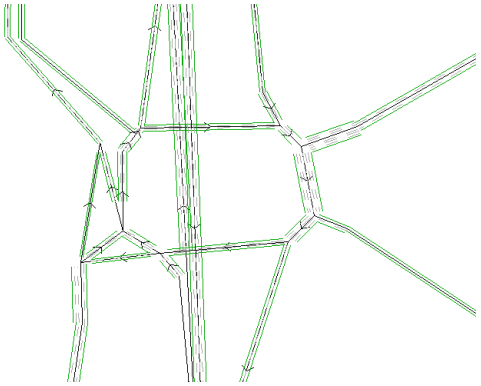
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Figure 2.5: Junction Coding – Strategic Junctions

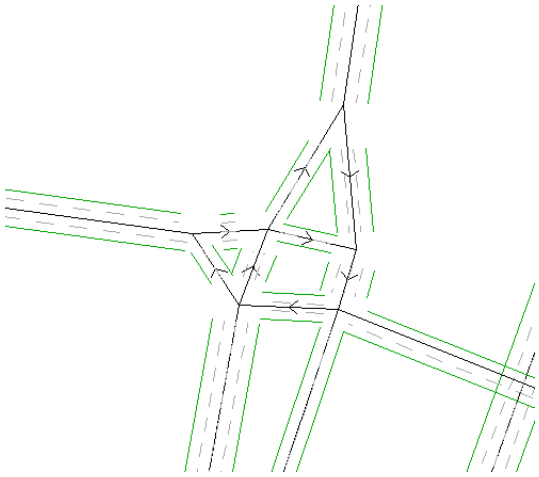
Finger Farm Roundabout



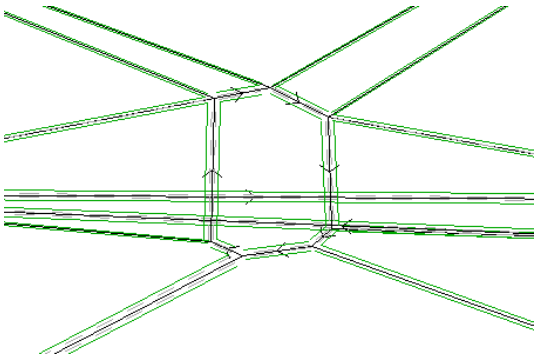
M1 Junction 24



A453 / A6 Kegworth Bypass roundabout



A50 Junction 1



Section 3 – Base Year Model Performance

3.1 Introduction

3.1.1 This section presents a summary of the performance of the EMFM base year model against the observed traffic counts and journey times in the vicinity of the proposed East Midlands Gateway Phase 2 development.

3.2 EMFM Highway Base Year Model Screenline / Cordon Performance

3.2.1 Guidelines set out in Table 1 of TAG Unit M3.1 on highway assignment modelling state that a modelled screenline meets TAG criteria if the differences between modelled flows and observed counts are less than 5% of the counts and that this should be true for 'all or nearly all screenlines'.

3.2.2 Screenlines are normally made up of 5 links or more. Within the EMFM, there are several screenlines / cordons with fewer than five count locations and / or with a relatively low observed flow for the screenline. It has been noted that such screenline / cordons tend to fail the 5% TAG criterion for screenline / cordon flows even when all individual links are within the TAG criteria. For this reason, the flow criterion has been adjusted for screenlines / cordons with fewer than five counts and / or low observed flows.

3.2.3 This revised criterion has been based on the individual link flow acceptability criteria and is given in Table 3.1. This uses the individual link flow TAG criteria for screenlines with one count, and the standard screenline criterion for screenlines with five or more counts, and interpolates between these two points for screenlines with between two and four counts. These revised criteria have been used in the assessment of the modelled screenline flows against observed data.

Table 3.1: Revised Screenline Flow Acceptability Criteria

Number of Counts on Screenline	Acceptability Guidelines
5 of more counts	Within ±5% or ±100 vehicles of observed count
4 counts	Within ±7.5% or ±100 vehicles of observed count
3 counts	Within ±10% or ±100 vehicles of observed count
2 counts	Within ±12.5% or ±100 vehicles of observed count
1 count	Within ±15% or ±100 vehicles of observed count

3.2.4 Figure 3.1 shows the screenlines and cordons for the EMFM and Table 3.2 provides a summary of the base year model performance by county. All screenlines (for all vehicles) meet the revised acceptability criteria for the PM Peak hour. For the AM Peak hour, one screenline in Leicestershire (Leicestershire County Screenline (North) Inbound) marginally fails, resulting in a 92.9% (13 out of 14) pass rate for Leicestershire.

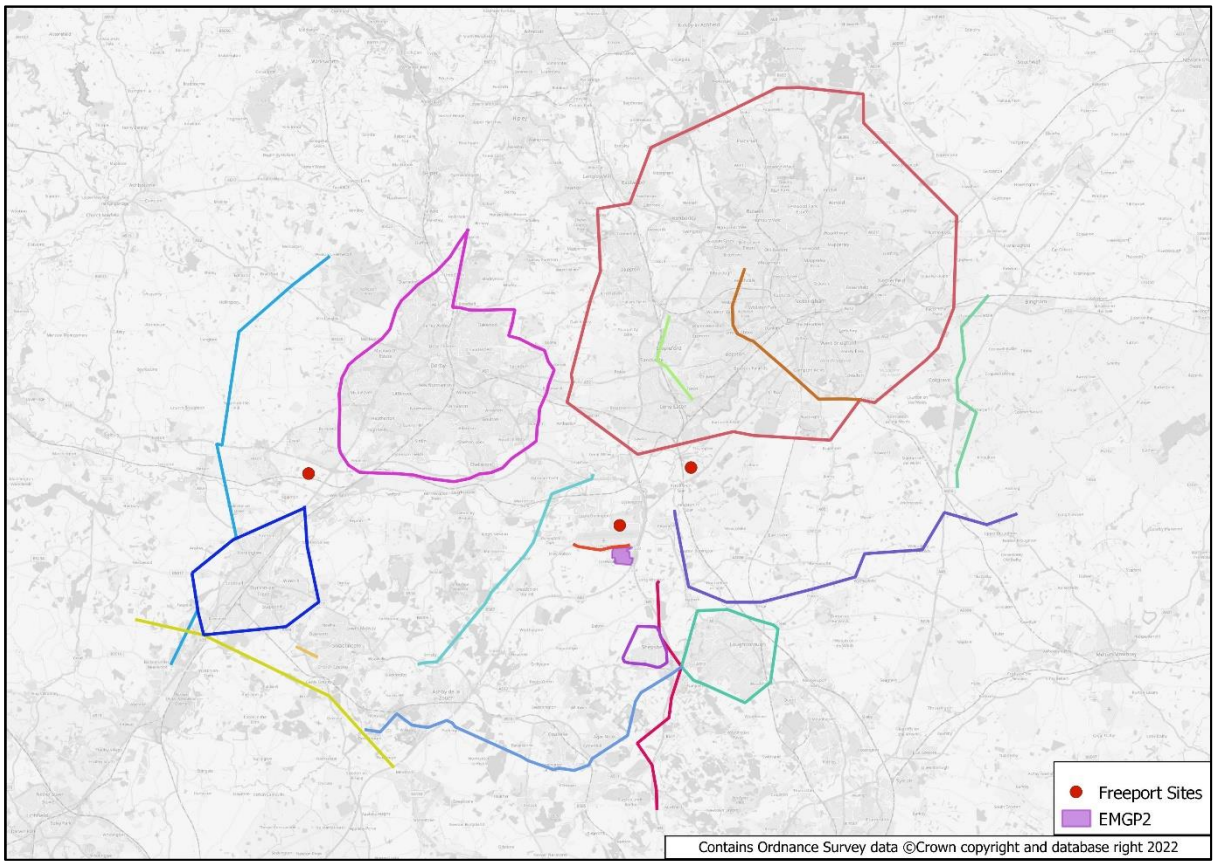
3.2.5 Overall, the screenline and cordon performance for the EMFM base year model is good and meets the TAG that 'all or nearly all screenlines' pass the acceptability criteria.

Table 3.2: Screenline and Cordon Performance for the EMFM

Area	# Slines	All Vehicles		Car		LGV		HGV	
		AM	PM	AM	PM	AM	PM	AM	PM
Nottinghamshire	8	100.0%	100.0%	87.5%	87.5%	100.0%	100.0%	100.0%	100.0%
Leicestershire	14	92.9%	100.0%	92.9%	100.0%	100.0%	100.0%	100.0%	100.0%
Derbyshire	8	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Staffordshire	2	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

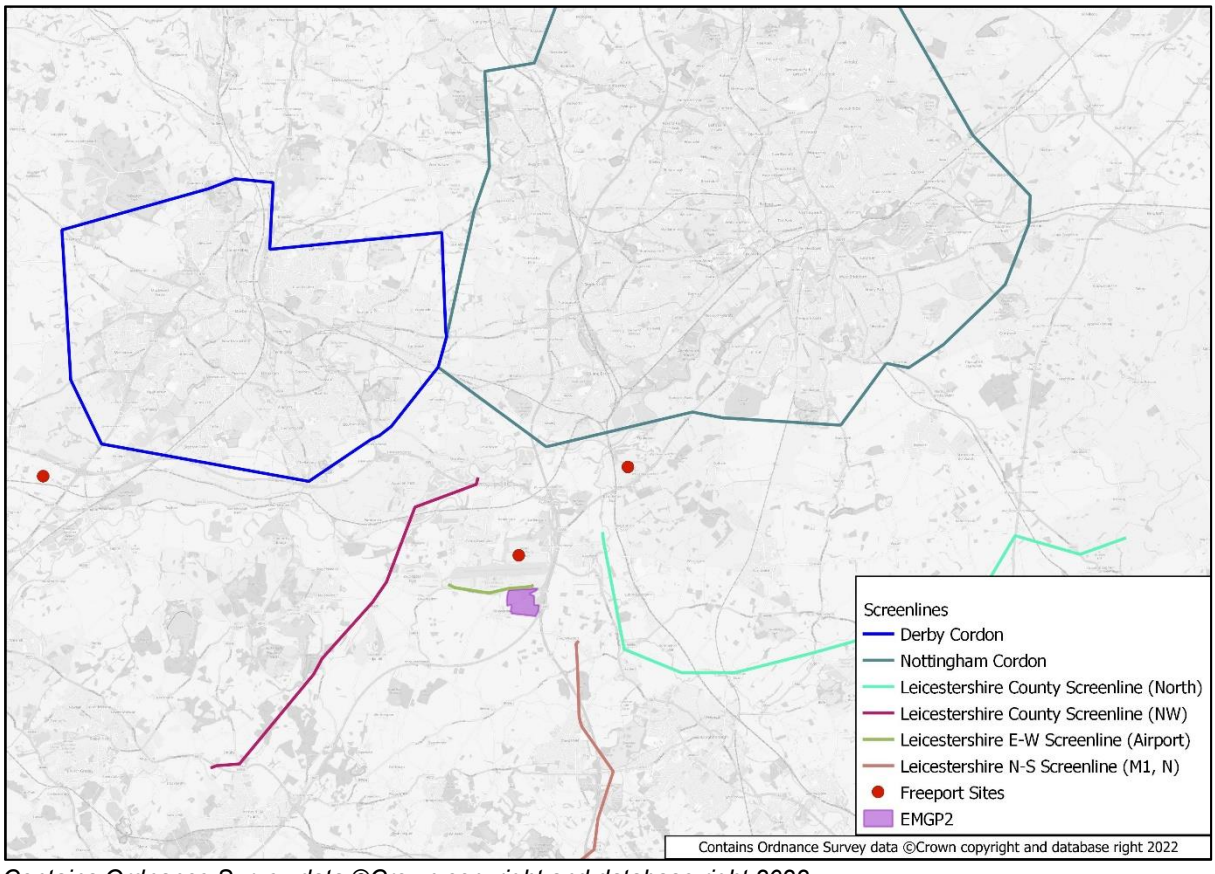
3.2.6 For the screenlines and cordons in the vicinity of the proposed East Midlands Gateway Phase 2 development (as shown in Figure 3.2), which include four screenlines in Leicestershire and two cordons for Nottingham and Derby, detailed base year model performance results are provided in Table 3.3. All screenlines and cordons considered meet the acceptability criteria in both directions and in both modelled peak hours except for the Leicestershire County Screenline (North) which marginally fails for southbound (i.e. inbound to Leicestershire) in the AM Peak hour.

Figure 3.1: Screenlines and Cordons for the EMFM



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Figure 3.2: Screenlines and Cordons in the Vicinity of the Proposed Development



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Table 3.3: Screenline and Cordon Performance in the Vicinity of the Proposed Development

Screenline / Cordon	# Counts	AM Peak					PM Peak				
		Observed (veh)	Modelled (veh)	Abs Diff (veh)	% Diff	Pass?	Observed (veh)	Modelled (veh)	Abs Diff (veh)	% Diff	Pass?
Leicestershire E-W Screenline (Airport) Northbound	3	1,301	1,291	-10	-0.8%	✓	424	378	-46	-10.9%	✓
Leicestershire E-W Screenline (Airport) Southbound	3	415	397	-17	-4.2%	✓	1,150	1,089	-61	-5.3%	✓
Leicestershire County Screenline (North-West) Inbound	7	4,279	4,249	-30	-0.7%	✓	5,134	5,027	-107	-2.1%	✓
Leicestershire County Screenline (North-West) Outbound	7	4,843	4,659	-184	-3.8%	✓	4,946	4,921	-24	-0.5%	✓
Leicestershire County Screenline (North) Inbound	9	3,788	4,000	212	5.6%	×	3,988	3,978	-10	-0.3%	✓
Leicestershire County Screenline (North) Outbound	9	3,821	3,817	-4	-0.1%	✓	4,095	4,179	84	2.1%	✓
Leicestershire N-S Screenline (M1, North) Eastbound	9	5,604	5,628	24	0.4%	✓	4,721	4,678	-42	-0.9%	✓
Leicestershire N-S Screenline (M1, North) Westbound	9	3,945	3,971	26	0.7%	✓	5,275	5,340	65	1.2%	✓
Nottingham Cordon Inbound	25	23,816	3,094	-722	-3.0%	✓	24,787	24,194	-593	-2.4%	✓
Nottingham Cordon Outbound	25	22,567	21,739	-828	-3.7%	✓	24,524	23,316	-1208	-4.9%	✓
Derby Cordon Inbound	13	12,975	12,449	-525	-4.0%	✓	12,760	12,649	-110	-0.9%	✓
Derby Cordon Outbound	13	11,285	11,277	-8	-0.1%	✓	13,448	13,079	-370	-2.7%	✓

3.3 EMFM Highway Base Year Model Link Flow Performance

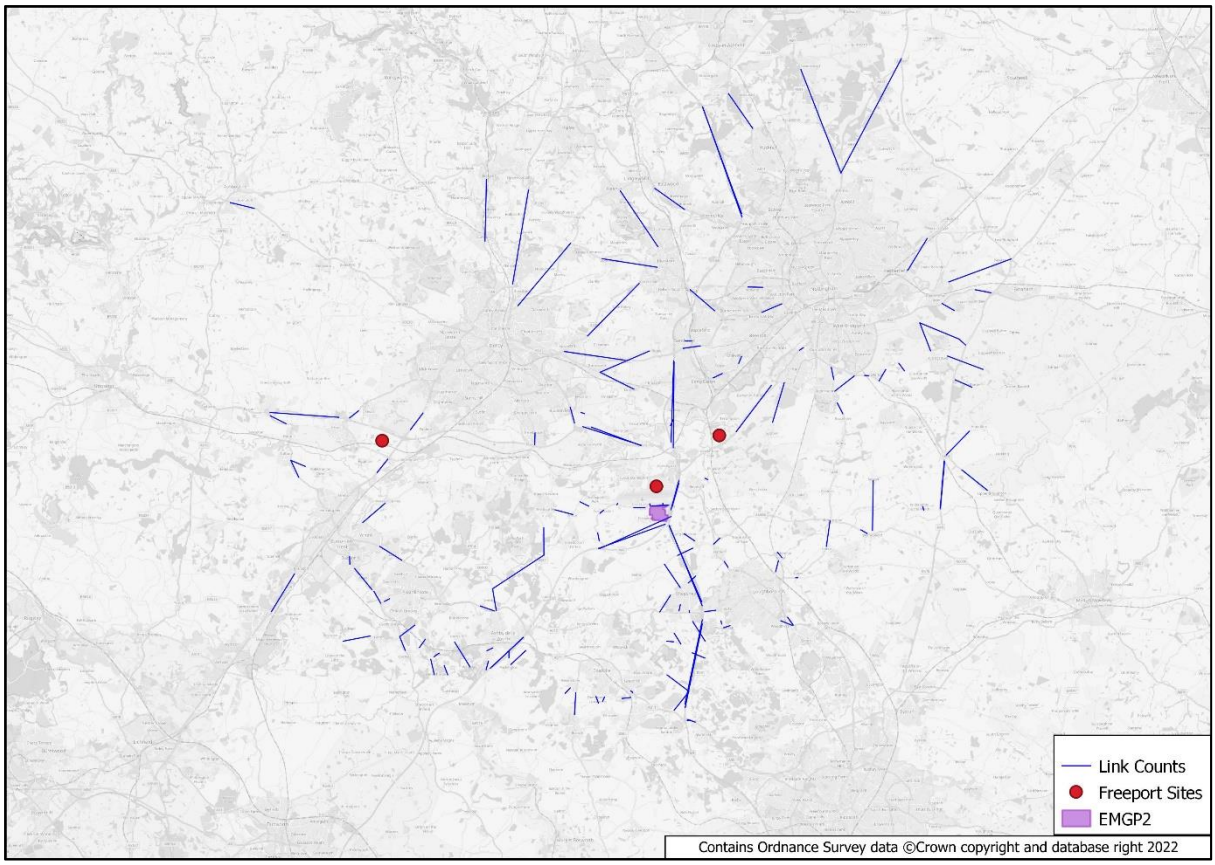
3.3.1 Guidelines set out in Table 2 of TAG Unit 3.1 on highway assignment modelling state that a modelled link flow meets TAG criteria if at least one of the two following conditions is met:

- Flow criteria:
  - modelled flow is within 100 vehicles for counts with an observed flow of less than 700 vehicles;
  - modelled flow is within 15% vehicles for counts with an observed flow between 700 and 2,700 vehicles; or
  - modelled flow is within 400 vehicles for counts with an observed flow greater than 2,700 vehicles.
- GEH criteria:
  - a GEH[2] value of less than 5.

3.3.2 Figure 3.3 shows the location of observed traffic count sites within the EMFM. Based on these data, 258 directional traffic counts have been used in the calibration of the model.

3.3.3 Table 3.4 provides a summary of the base year model link flow performance; and Figure 3.4 and Figure 3.5 illustrate the locations of the links passing TAG criteria in the AM Peak hour and PM Peak hour respectively. Table 3.4 shows that of the 258 counts used for the calibration of the model, the pass rates for all vehicles are 94.2% and 92.2% for the AM Peak hour and PM Peak hour respectively, exceeding the 85% TAG criteria guidelines.

Figure 3.3: Link Count Locations



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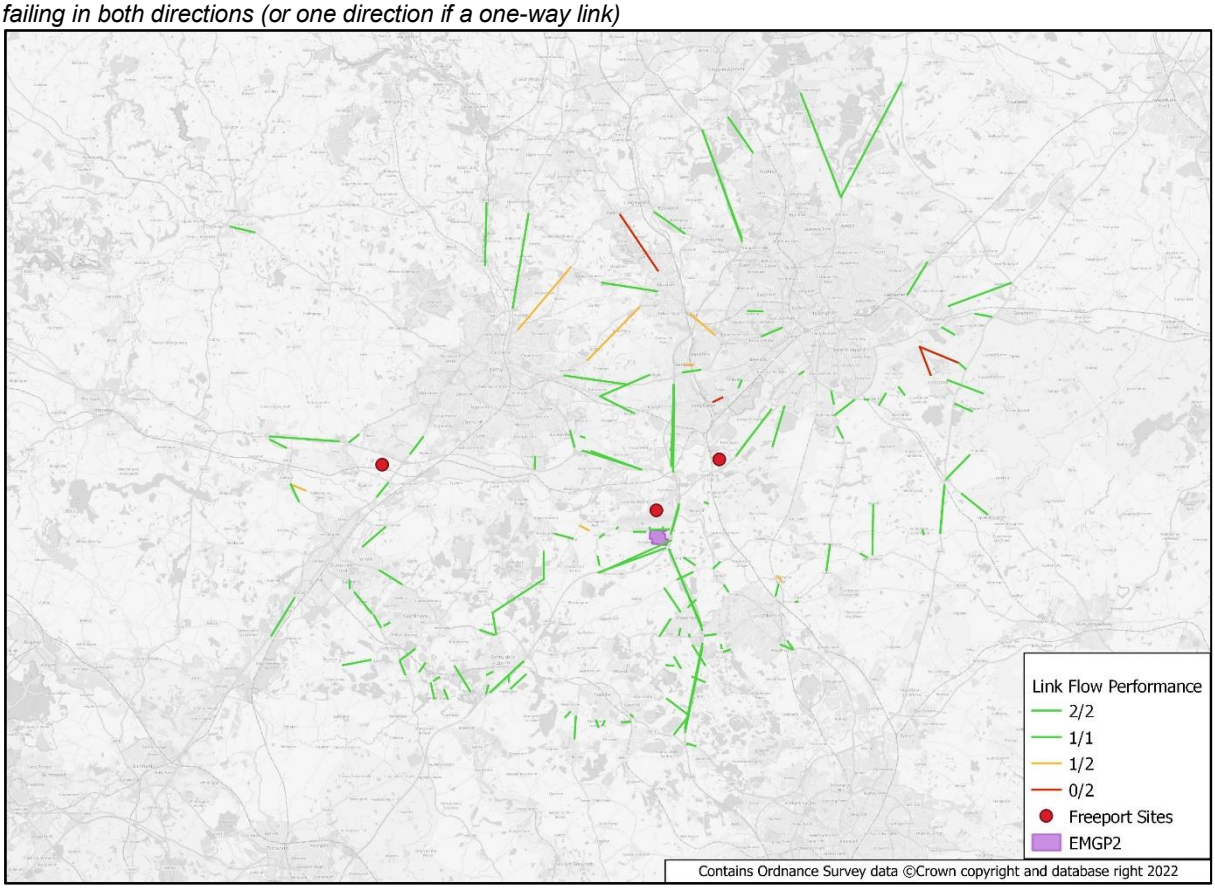
[2] $GEH = \sqrt{\frac{(M-O)^2}{(M+O)/2}}$, where M is the modelled flow and O is the observed flow

Table 3.4: Link Flow Performance for the EMFM

Area	# Counts	All Vehicles		Car		LGV		HGV	
		AM	PM	AM	PM	AM	PM	AM	PM
Nottinghamshire	78	85.9%	85.9%	87.2%	85.9%	98.7%	100.0%	100.0%	100.0%
Leicestershire	112	98.2%	96.4%	98.2%	95.5%	100.0%	100.0%	100.0%	100.0%
Derbyshire	36	97.2%	97.2%	97.2%	97.2%	100.0%	100.0%	100.0%	100.0%
Staffordshire	16	93.8%	81.3%	93.8%	81.3%	100.0%	100.0%	100.0%	100.0%
Individual Counts	16	100.0%	93.8%	100.0%	100.0%	100.0%	100.0%	93.8%	100.0%
Total	**258**	**94.2%**	**92.2%**	**94.6%**	**92.2%**	**99.6%**	**100.0%**	**99.6%**	**100.0%**

Figure 3.4: Link Flow Performance for the EMFM in the AM Peak Hour

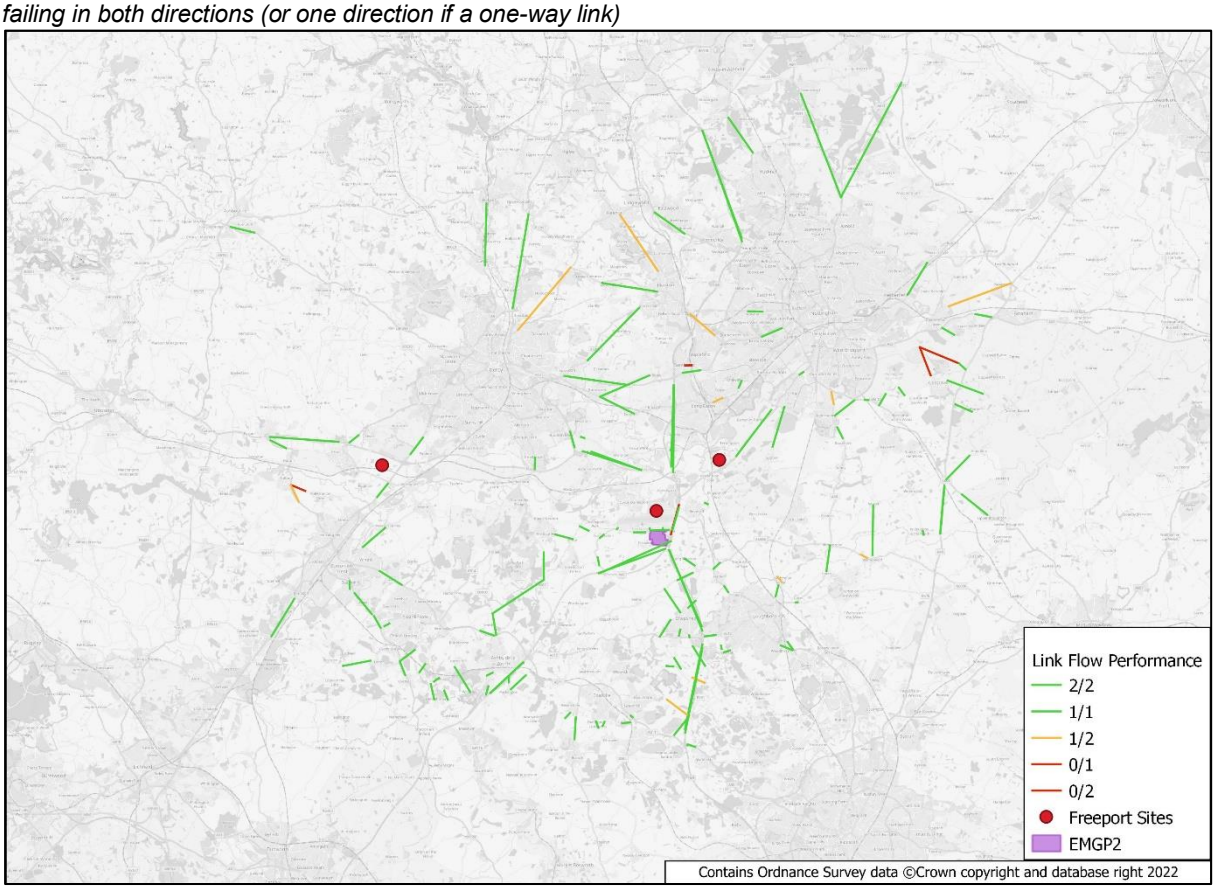
Green = passing in both directions (or one direction if a one-way link), orange = passing in one direction, red = failing in both directions (or one direction if a one-way link)



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Figure 3.5: Link Flow Performance for the EMFM in the PM Peak Hour

Green = passing in both directions (or one direction if a one-way link), orange = passing in one direction, red = failing in both directions (or one direction if a one-way link)



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3.3.4 Near the proposed East Midlands Gateway Phase 2 development, the counts on the A453, East Midlands Airport links and the Strategic Road Network (SRN) perform well. Table 3.5 shows that all counts on the A453 and East Midlands Airport links pass the acceptability criteria in both directions for the AM Peak and PM Peak hour. For the 14 counts considered for the SRN, Table 3.6 shows that all pass in the AM Peak hour and all but one (M1 northbound between Junction 23a and Junction 24) pass in the PM Peak hour. Figure 3.6 and Figure 3.7 show the observed count locations.

Table 3.5: Link Flow Performance – A453 and East Midlands Airport

Location	AM Peak						PM Peak					
	Observed (veh)	Modelled (veh)	Abs Diff (veh)	% Diff	GEH	Pass?	Observed (veh)	Modelled (veh)	Observed (veh)	% Diff	GEH	Pass?
Ashby Road E of EMA Eastbound	567	562	-6	-1%	0.2	✓	649	593	-56	-9%	2.3	✓
Ashby Road E of EMA Westbound	619	505	-114	-18%	4.8	✓	520	513	-7	-1%	0.3	✓
Ashby Road West of A453 Junction Eastbound	582	703	121	21%	4.8	✓	1,024	1,014	-10	-1%	0.3	✓
Ashby Road West of A453 Junction Westbound	1,084	1,079	-5	0%	0.2	✓	589	633	45	8%	1.8	✓
Moor Lane Northbound	293	293	1	0%	0.0	✓	240	242	2	1%	0.1	✓
Moor Lane Southbound	224	224	0	0%	0.0	✓	289	288	-1	0%	0.1	✓
A453 Walton Hill Eastbound	440	438	-2	0%	0.1	✓	324	325	1	0%	0.0	✓
A453 Walton Hill Westbound	307	311	3	1%	0.2	✓	451	444	-7	-1%	0.3	✓
Ashby Road West of Grimes Gate Northbound	641	631	-10	-2%	0.4	✓	321	322	2	1%	0.1	✓
Ashby Road West of Grimes Gate Southbound	331	332	1	0%	0.1	✓	444	440	-3	-1%	0.2	✓
EMA Western Access Northbound	300	300	1	0%	0.0	✓	78	79	1	1%	0.1	✓
EMA Central Access Northbound	389	417	27	7%	1.4	✓	177	179	1	1%	0.1	✓
Hunter Road (Pegasus Park) Northbound	612	574	-38	-6%	1.6	✓	169	120	-49	-29%	4.0	✓
EMA Western Access Southbound	65	64	-1	-1%	0.1	✓	299	299	0	0%	0.0	✓
EMA Central Access Southbound	189	191	2	1%	0.2	✓	356	369	13	4%	0.7	✓
Hunter Road (Pegasus Park) Southbound	161	142	-19	-12%	1.5	✓	496	421	-74	-15%	3.5	✓

Figure 3.6: Observed Count Locations – A453 and East Midlands Airport

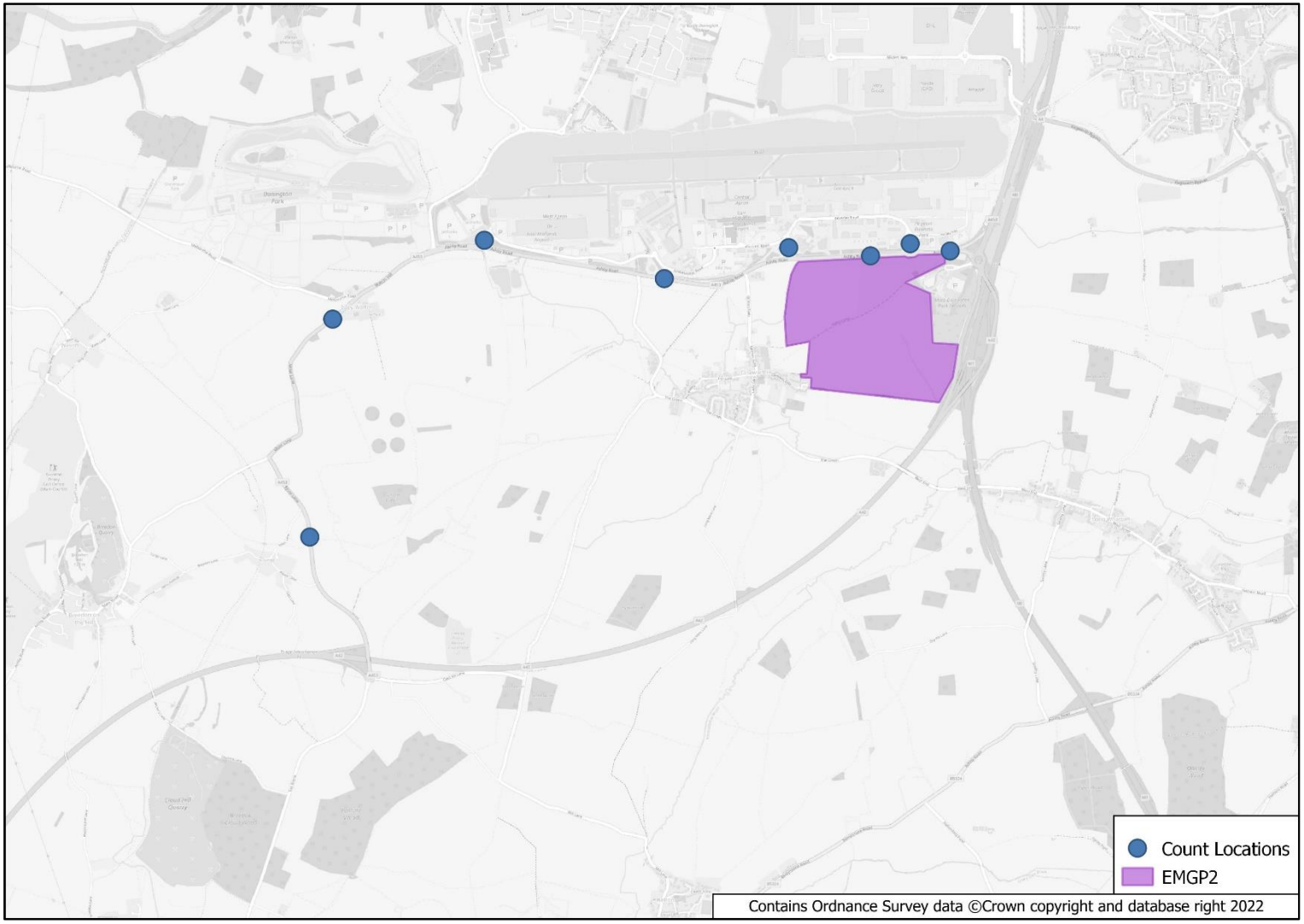
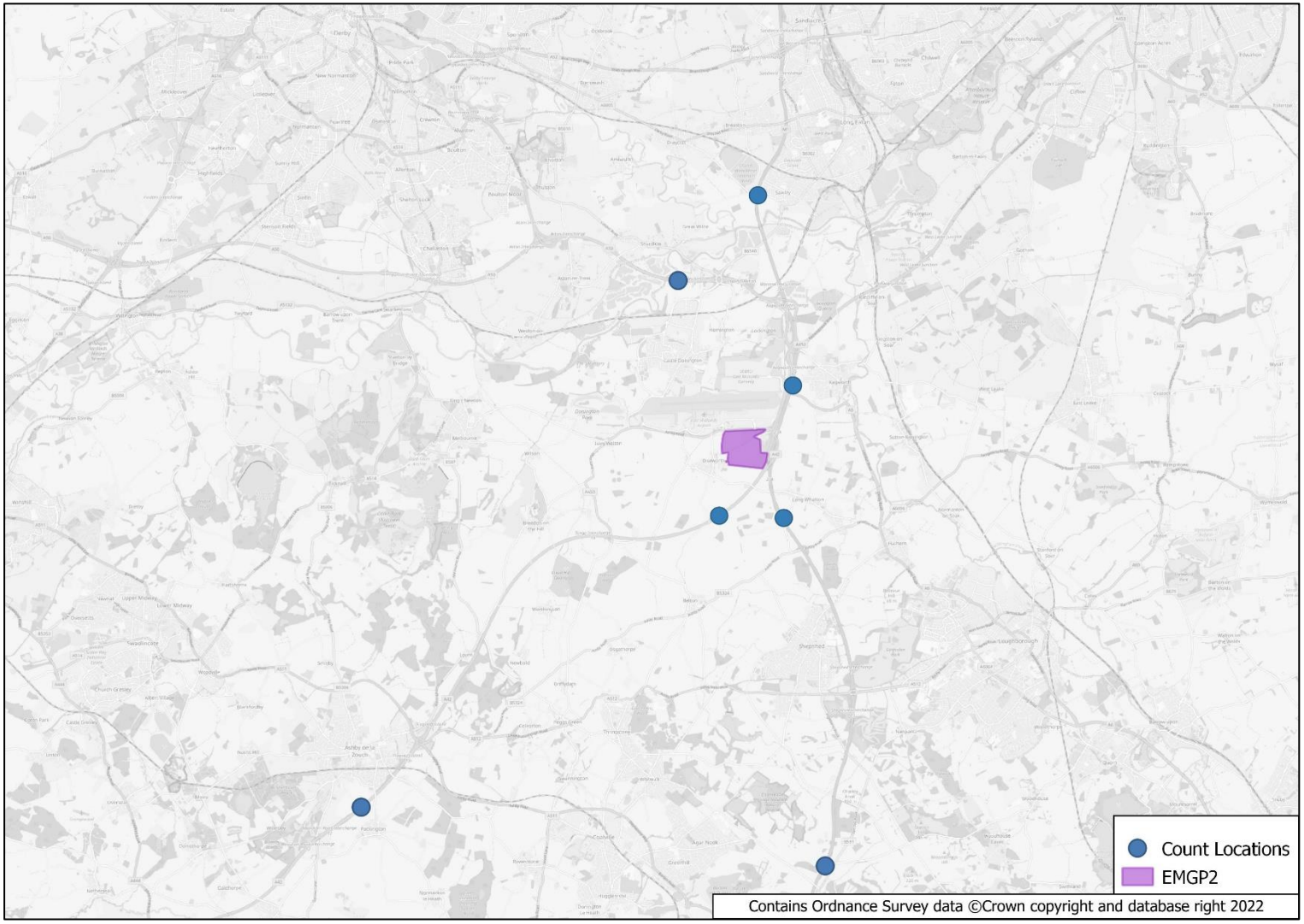


Table 3.6: Link Flow Performance – Strategic Road Network

Location	AM Peak						PM Peak					
	Observed (veh)	Modelled (veh)	Abs Diff (veh)	% Diff	GEH	Pass?	Observed (veh)	Modelled (veh)	Observed (veh)	% Diff	GEH	Pass?
A50 between Junction 1 and Junction 2 Eastbound	3,018	2,994	-24	-1%	0.4	✓	3,173	3,146	-27	-1%	0.5	✓
A50 between Junction 1 and Junction 2 Westbound	3,039	3,036	-3	0%	0.1	✓	3,590	3,566	-23	-1%	0.4	✓
A42 between Junction 12 and Junction 13 Northbound	2,700	2,698	-3	0%	0.0	✓	2,542	2,542	1	0%	0.0	✓
A42 between Junction 12 and Junction 13 Southbound	2,395	2,401	6	0%	0.1	✓	2,466	2,466	0	0%	0.0	✓
A42 between Junction 14 and M1 Northbound	2,175	2,064	-111	-5%	2.4	✓	2,027	2,027	0	0%	0.0	✓
A42 between Junction 14 and M1 Southbound	2,019	1,996	-22	-1%	0.5	✓	1,976	1,882	-95	-5%	2.2	✓
M1 between Junction 22 and Junction 23 Northbound	3,983	3,996	13	0%	0.2	✓	4,282	4,314	32	1%	0.5	✓
M1 between Junction 22 and Junction 23 Southbound	3,731	3,727	-4	0%	0.1	✓	4,104	4,110	6	0%	0.1	✓
M1 between Junction 23 and 23a Northbound	3,974	3,974	0	0%	0.0	✓	4,521	4,494	-27	-1%	0.4	✓
M1 between Junction 23 and 23a Southbound	4,002	3,997	-4	0%	0.1	✓	4,214	4,221	7	0%	0.1	✓
M1 between Junction 23a and 24 Northbound	3,658	3,950	292	8%	4.7	✓	4,301	4,762	460	11%	6.8	×
M1 between Junction 23a and 24 Southbound	5,153	5,313	161	3%	2.2	✓	5,255	5,253	-2	0%	0.0	✓
M1 between Junction 24 and Junction 25 Northbound	3,461	3,446	-15	0%	0.3	✓	5,119	5,072	-47	-1%	0.7	✓
M1 between Junction 24 and Junction 25 Southbound	4,501	4,525	23	1%	0.3	✓	3,887	3,815	-72	-2%	1.2	✓

Figure 3.7: Observed Count Locations – Strategic Road Network



3.4 EMFM Highway Base Year Model Journey Time Performance

3.4.1 In terms of journey time routes, there are 32 routes (64 by direction) in the EMFM, as shown in Figure 3.8. The TAG criteria for journey time routes are for the modelled journey time to be within ±15% (or ±1 minute) of the observed journey time. Table 3.7 provides a summary of the journey time performance by area. Overall, the EMFM base year model performs well and is above the 85% threshold of the routes required to pass against TAG.

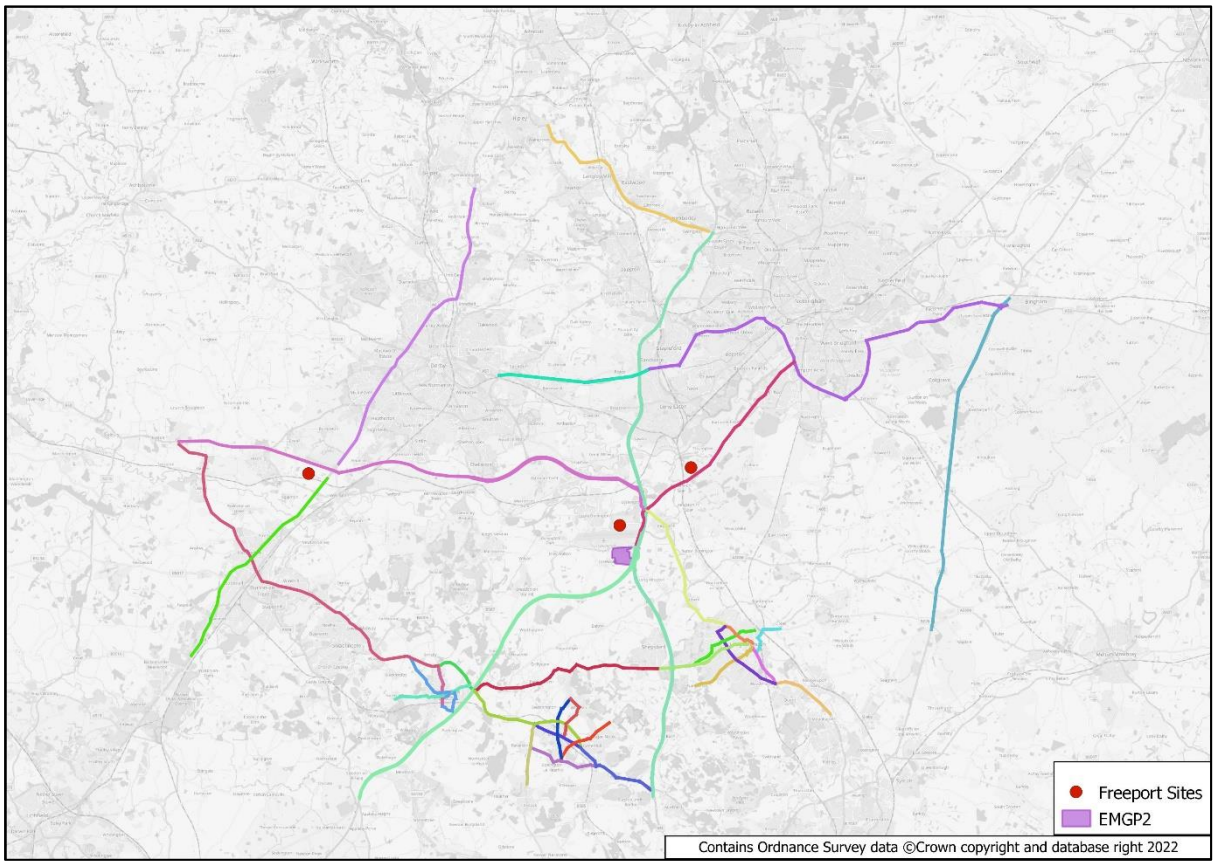
Table 3.7: Journey Time Performance for the EMFM

Area	# Routes	All Vehicles	
		AM	PM
Strategic (cross-county)	8	100.0%	100.0%
North-West Leicestershire	24	83.3%	87.5%
North Leicestershire	18	94.4%	94.4%
Nottinghamshire	6	83.3%	83.3%
Derbyshire & Staffordshire	8	87.5%	87.5%
Total	**64**	**89.1%**	**90.6%**

3.4.2 For the journey time routes in the vicinity of the proposed East Midlands Gateway Phase 2 development (as shown in Figure 3.9), further details are provided in Table 3.8. Appendix A shows the comparison of modelled and observed journey times for these routes in distance-time graph format.

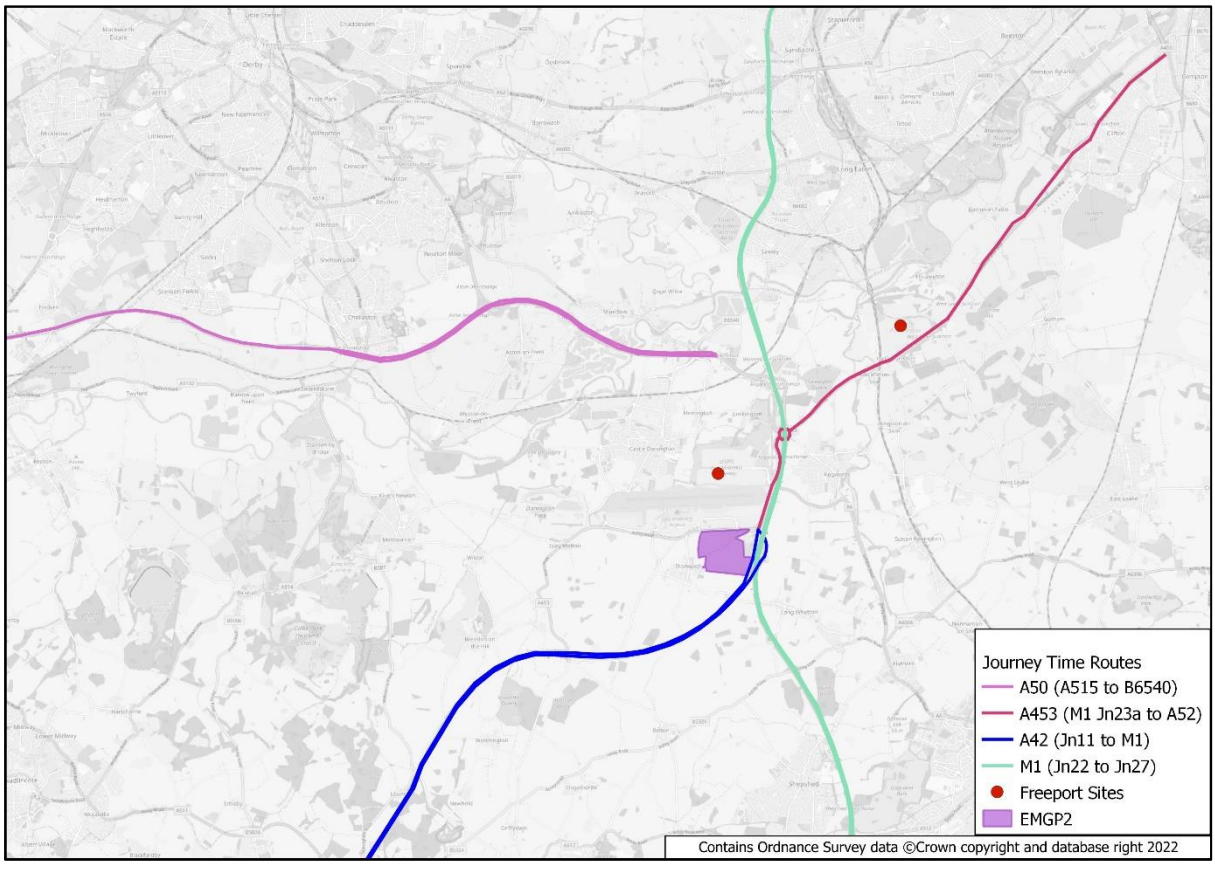
3.4.3 Of the four journey time routes considered, all pass in the AM Peak hour and all but one route (A453 northbound from M1 Junction 23a to A52) pass in the PM Peak hour. Review of the distance-time graph shows that the section of the A453 near the proposed development between M1 Junction 23a and M1 Junction 24 performs well, with the model overestimating journey time on the A453 approach to the A52 in Nottingham.

Figure 3.8: Journey Time Routes used in the EMFM



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Figure 3.9: Journey Time Routes in the Vicinity of the Proposed Development



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Table 3.8: Journey Time Performance in the Vicinity of the Proposed Development

Route	AM Peak					PM Peak				
	Observed	Modelled	Abs Diff	% Diff	Pass	Observed	Modelled	Abs Diff	% Diff	Pass
M1 (Jn22 to 27) Northbound	20:30	22:27	01:56	9%	✓	21:20	23:42	02:22	11%	✓
M1 (Jn22 to 27) Southbound	22:15	23:53	01:37	7%	✓	20:52	22:53	02:00	10%	✓
A42 (Jn11 to M1) Northbound	14:27	15:48	01:21	9%	✓	13:27	15:27	02:00	15%	✓
A42 (Jn11 to M1) Southbound	13:59	15:17	01:19	9%	✓	13:33	15:07	01:34	12%	✓
A50 (A515 to M1) Eastbound	17:55	19:18	01:23	8%	✓	17:03	19:35	02:32	15%	✓
A50 (A515 to M1) Westbound	17:57	19:17	01:19	7%	✓	18:20	19:23	01:03	6%	✓
A453 (M1 Jn23a to A52) Northbound	13:29	14:54	01:24	10%	✓	11:45	14:14	02:30	21%	×
A453 (M1 Jn23a to A52) Southbound	13:08	13:41	00:33	4%	✓	14:24	14:47	00:23	3%	✓

Section 4 – Summary

4.1.1 The EMFM highway model represents an average weekday in April / May / June in 2019 for the AM Peak and PM Peak hours. This review is focused on the suitability of the model for the use in the strategic assessment of the proposed East Midlands Gateway Phase 2 development.

4.1.2 The review of the base year highway model has considered the zone system and network structure in the vicinity of the proposed development, and the network coding along the A453 and for several key junctions in the area. It has also considered the performance of the base year model against the observed counts and journey time data collated as part of the model development.

4.1.3 In terms of the model zone system, the EMFM is considered to contain sufficient detail for a strategic assessment of the proposed development. The proposed development is located within one zone south-west of the Airport. To be able to accurately represent the access points to the network for the proposed development, and to be able to isolate the trips generated by the development within the assignment, it is recommended that one or two development zone(s) be used to represent the proposed development.

4.1.4 A review of the coded highway network near the proposed development has shown the coding of the base year model is satisfactory and is representative of the 2019 road configurations.

4.1.5 A review of the performance of the base year highway model against observed counts and journey time data collated as part of the model development has been undertaken. The EMFM performs well and meets TAG acceptability guidelines in terms of screenline and cordon performance, link flow performance and journey time validation performance.

4.1.6 Near the proposed development, six screenlines and cordons were reviewed in greater detail. Of these six screenlines and cordons, all meet the acceptability criteria in the PM Peak hour and all but one (Leicestershire County Screenline (North)) pass in the AM Peak hour.

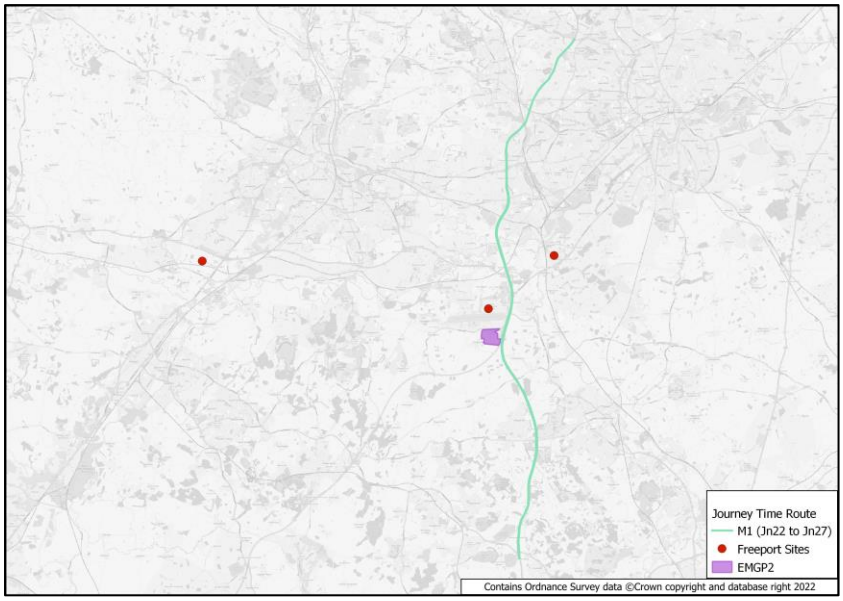
4.1.7 Regarding link flow performance, the EMFM considers 258 observed counts in total, and the pass rates for all vehicles are 94.2% and 92.2% for the AM Peak hour and PM Peak hour respectively, exceeding the 85% TAG criteria guidelines. Near the proposed development, all counts on the A453 and East Midlands Airport links pass the acceptability criteria in both directions for the AM Peak and PM Peak hours. For the 14 counts considered for the SRN, all pass in the AM Peak hour and all but one (M1 northbound between Junction 23a and Junction 24) pass in the PM Peak hour.

4.1.8 In terms of the journey time validation performance, the EMFM considers 64 directional routes in total and the pass rates are 89.1% and 90.6% for the AM Peak hour and PM Peak hour respectively. For the eight directional routes considered in the vicinity of the proposed development which covers the A50, A453, A42 and M1, all pass in the AM Peak hour and all but one (A453 northbound from M1 Junction 23a to A52) pass in the PM Peak hour. Review of the distance-time graph shows that the section of the A453 near the proposed development between M1 Junction 23a and M1 Junction 24 performs well, with the model overestimating journey time on the A453 approach to the A52 in Nottingham.

4.1.9 In summary, based on this base year model review, the EMFM is considered suitable for the strategic assessment of the proposed East Midlands Gateway Phase 2 development.

Appendix A Journey Time Route Performance

Figure A.1: M1 (Junction 22 to Junction 27) Journey Time Validation Graphs



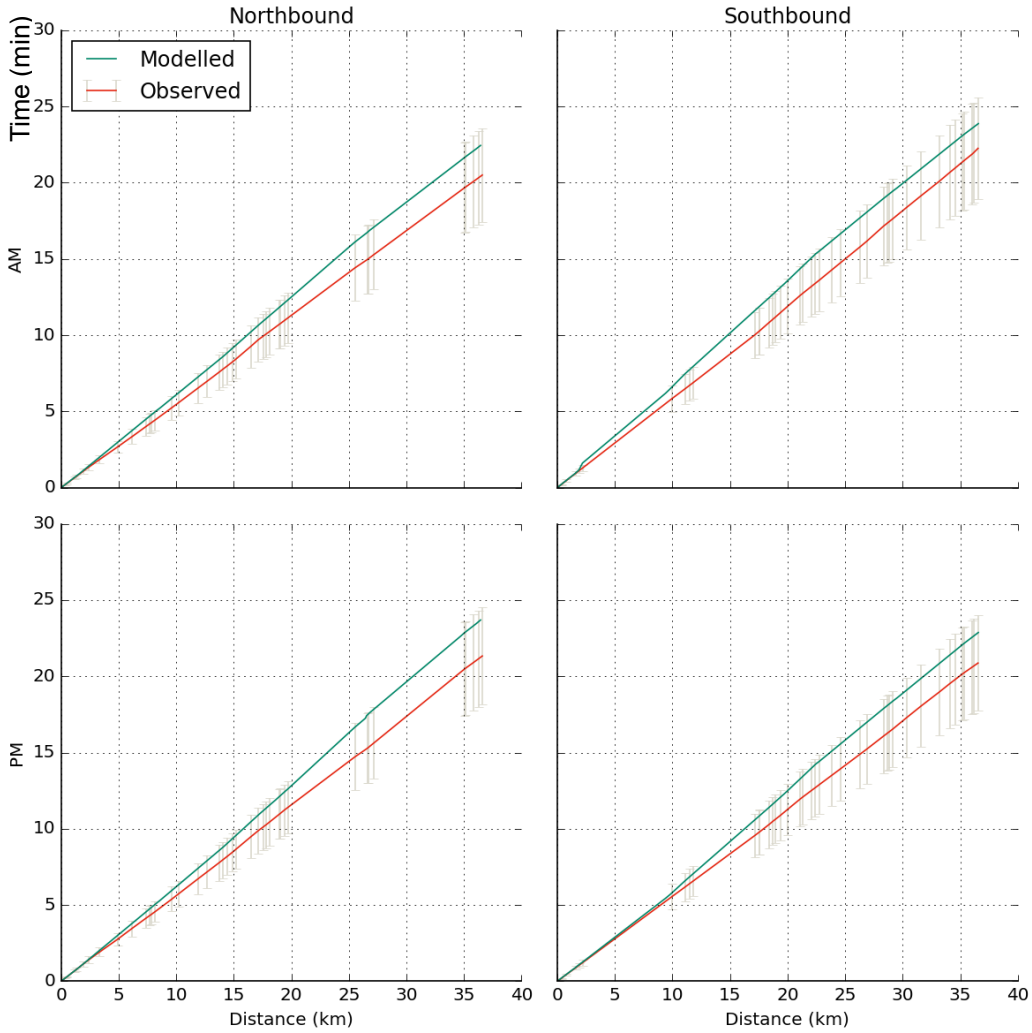
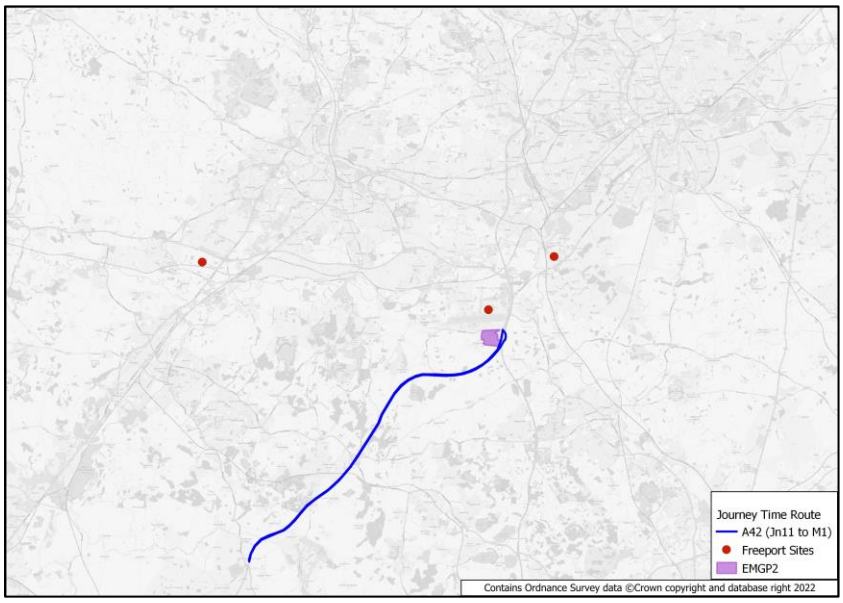


Figure A.2: A42 (Junction 11 to M1) Journey Time Validation Graphs



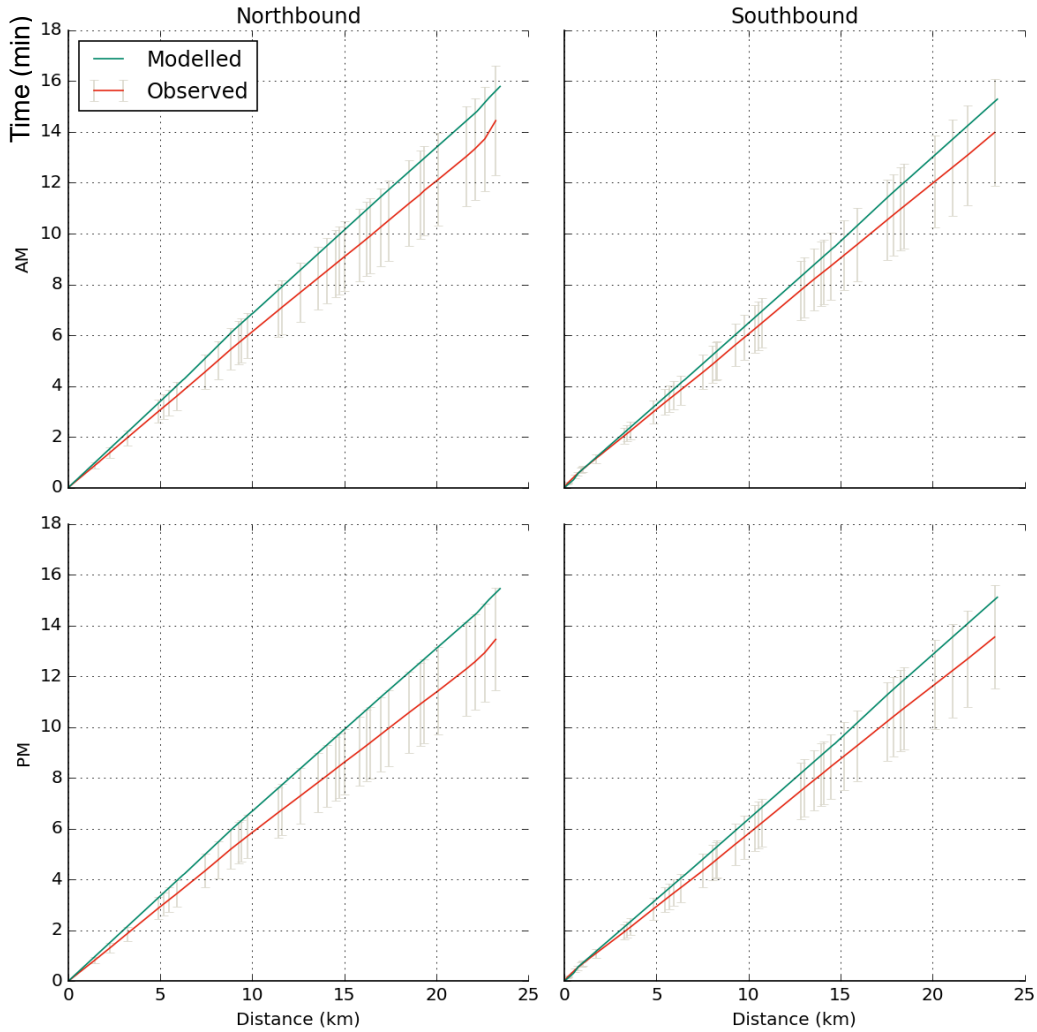
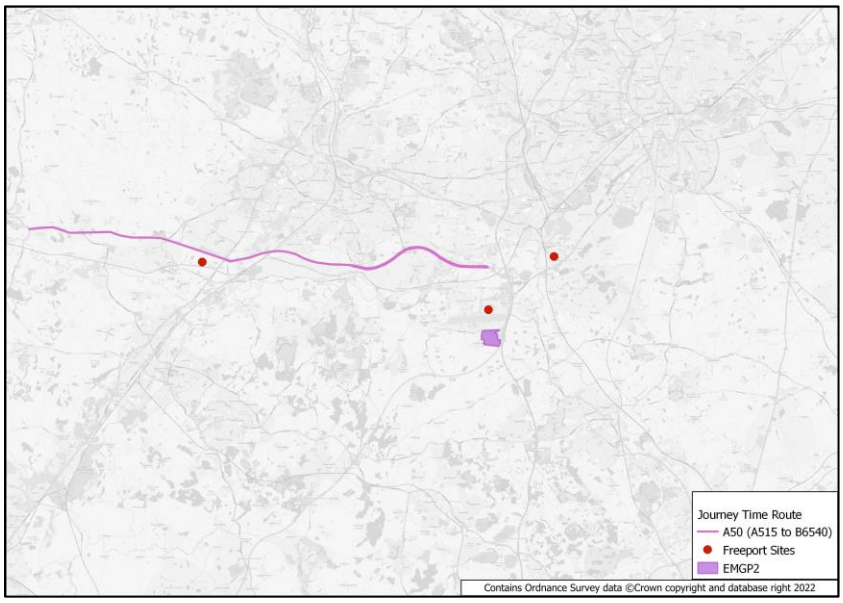


Figure A.3: A50 (A515 to B6540) Journey Time Validation Graphs



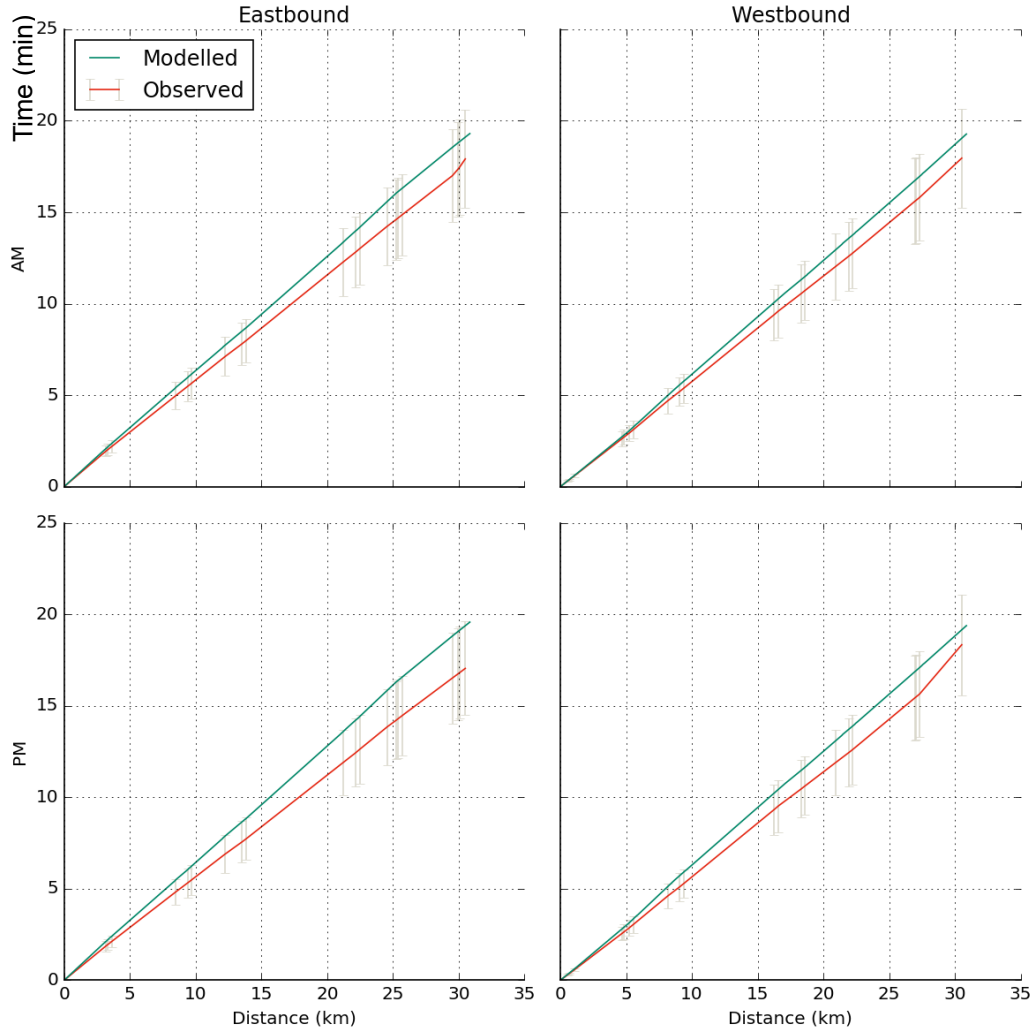
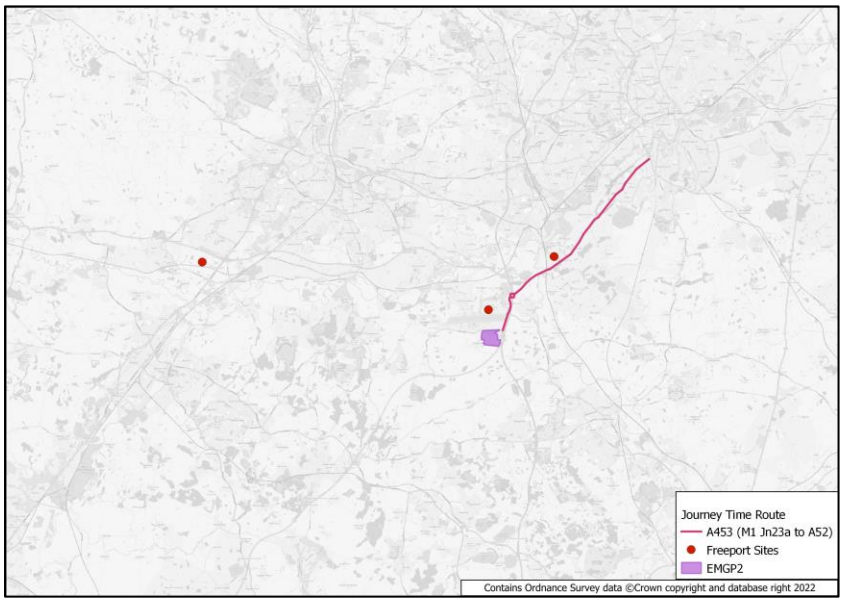
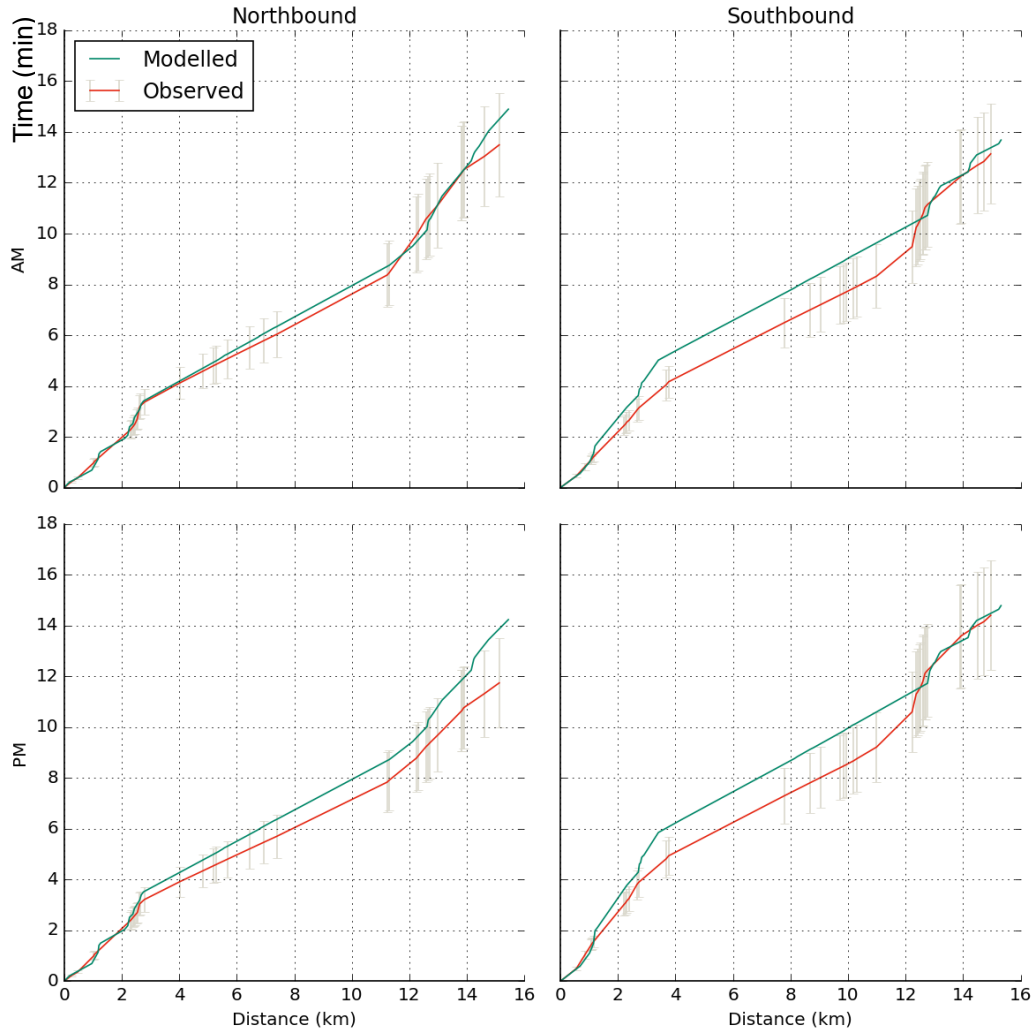


Figure A4: A453 (M1 Junction 23a to A52) Journey Time Validation Graphs





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APPENDIX 7: EMFM Base Year Model Review Addendum (document reference East Midlands Gateway Phase 2: Base Year Model Review Addendum, update to May 2024 TAG data book, v1.0)



EMFM 2019

East Midlands Gateway Phase 2: Base Year Model Review Addendum (update to May 2024 TAG data book)

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Section 1 – Overview

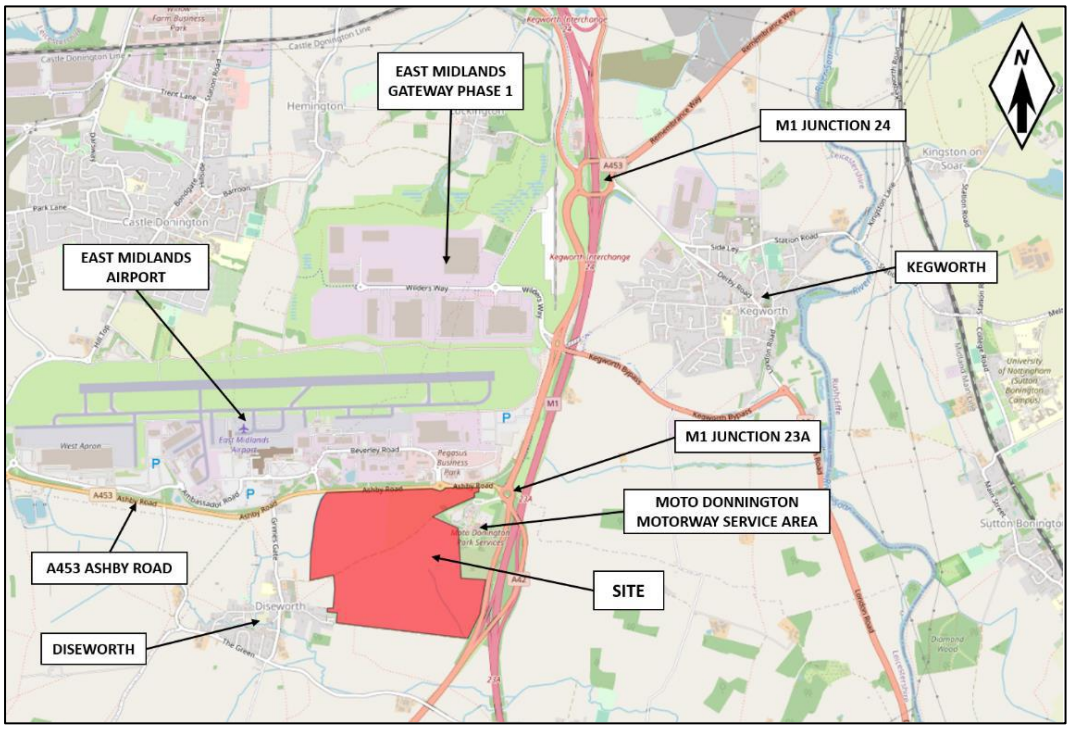
1.1 Introduction

1.1.1 The East Midlands Gateway (EMG) Phase 2 development is a proposed employment development of mixed B2 (general industrial) and B8 (storage or distribution) use, with capacity for 400,000sqm gross floorspace (300,000sqm ground floorspace and 100,000sqm mezzanine floorspace) of industrial use, comprising 340,000sqm B8 and 60,000sqm B2.

1.1.2 The development site is located to the south of East Midlands Airport and west of the A42 in Leicestershire and is expected to build out by 2031.

1.1.3 Figure 1.1 shows an indication of the location of the proposed development, denoted by the area shaded in red. The proposed development has a total area of circa 250 acres located to the south of the A453 and East Midlands Airport itself, to the east of Diseworth village. The M1 Junction 23a lies to the east of the site with the Moto Donington Motorway Service Area (MSA) directly abutting to the north-east.

Figure 1.1: Location of Proposed Development[1]



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1.1.4 AECOM has been commissioned to undertake strategic modelling to assess the potential traffic impacts of the proposed development using the East Midlands Freeport Model (EMFM).

1.1.5 The base year of the EMFM is 2019, and it is a highway assignment model (for the AM Peak and PM Peak hours), with its demand derived from the more extensive Pan-Regional Transport Model (PRTM 2019), though the EMFM has greater network and zonal density in the vicinity of the Freeport sites.

1.1.6 A base year model review for the $EMFM_{2019}$ was undertaken in 2022 / 2023 for this application. However, this previous version of the $EMFM_{2019}$ used the draft November 2022 TAG data book.

1.1.7 It is proposed that the $EMFM_{2019}$ is updated to use the latest May 2024 TAG data book for this application. The impact on the 2019 base year modelled flows due to the update of the TAG data book version is expected to be small (i.e. within ±25 PCUs) and is not expected to materially affect the

[1] Indicative site boundary from 19232_F0037[M]_Illustrative Masterplan.pdf, provided by BWB (23/05/2024)

overall base year model performance results. As such, a full update of the base year model review is not considered necessary.

1.1.8 This addendum provides modelled flow difference plots between the 2019 base year model with the draft November 2022 TAG data book and May 2024 TAG data book to demonstrate that for most links, the modelled flow differences are small, and the screenline, link flow and journey time performance in the vicinity of the proposed EMG Phase 2 development is not materially affected. This addendum should be read alongside the East Midlands Gateway Phase 2 Base Year Model Review Report[2], which also provides the zone and network review for the $EMFM_{2019}$.

1.2 Report Structure

1.2.1 Following this overview, this report contains the following sections:

- Section 2 provides the modelled flow difference plots between the 2019 base year model with the draft November 2022 TAG data book and May 2024 TAG data book;
- Section 3 summarises the base year model performance in the vicinity of the proposed development for the updated base year model (with May 2024 TAG data book); and
- Section 4 provides a summary.

[2] EMFM2019 – East Midlands Gateway Phase 2: Base Year Model Review v1.1 (dated 2022-11-11)

Section 2 – Modelled Flow Difference

2.1 Introduction

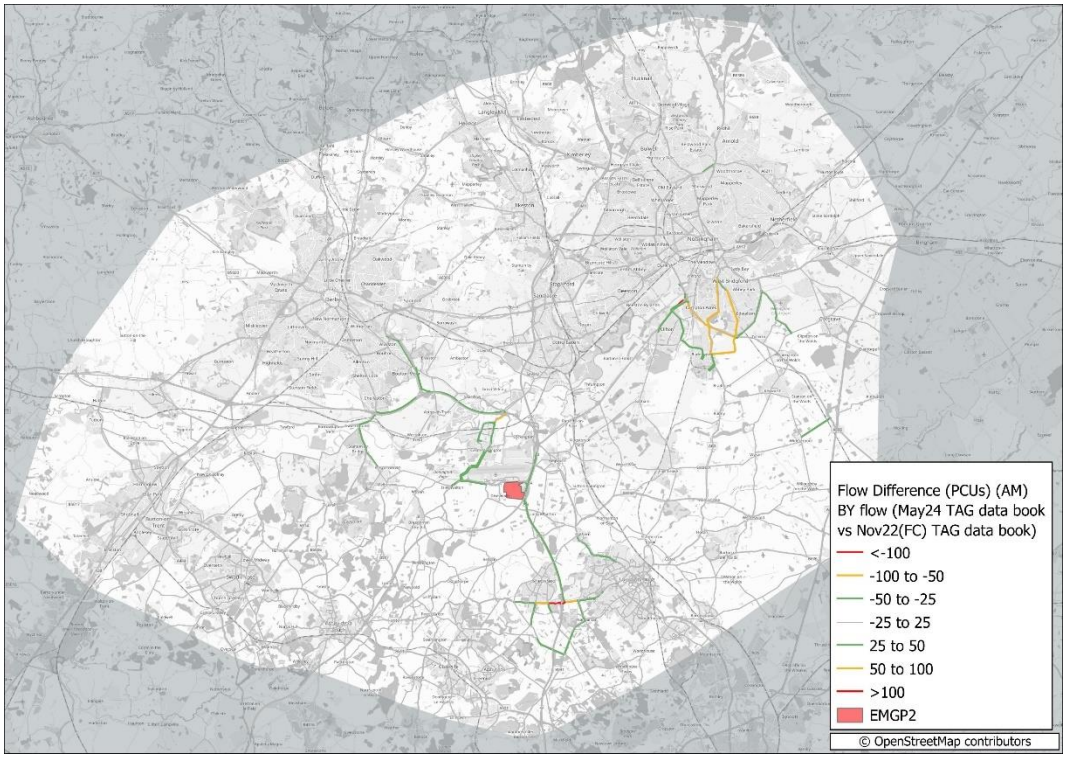
2.1.1 This section presents the 2019 base year modelled flow difference plots between the EMFM$_{2019}$ with the draft November 2022 TAG data book and the latest May 2024 TAG data book for the AM Peak and PM Peak hours.

2.2 2019 Base Year Modelled Flow Difference

2.2.1 Figure 2.1 and Figure 2.2 show the 2019 base year modelled flow differences due to the update of the TAG data book version.

2.2.2 As shown in Figure 2.1 and Figure 2.2, most links show an absolute modelled flow difference of fewer than 25 PCUs[3], and as such do not materially affect the overall base year model performance results. Section 3 provides additional checks on the screenline, link flow and journey time performance in the vicinity of the proposed development for the EMFM$_{2019}$ with May 2024 TAG data book.

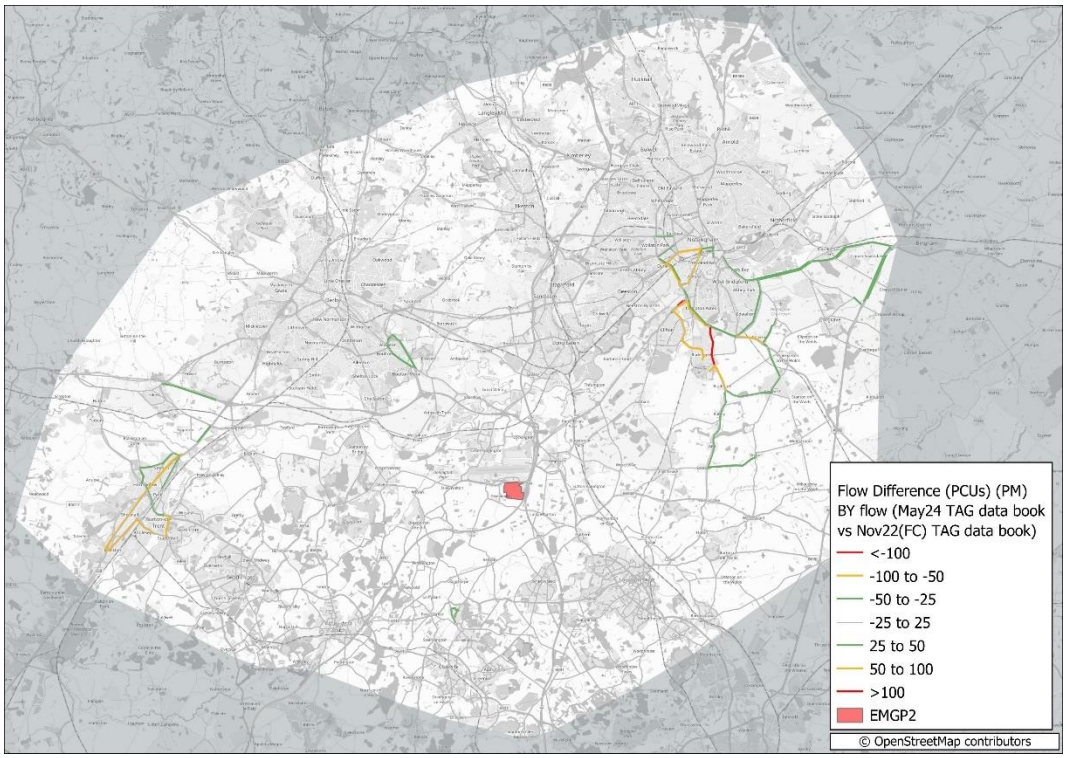
Figure 2.1: Base Year Modelled Flow Difference – EMFM2019 with May 2024 TAG data book minus EMFM2019 with draft November 2022 TAG data book (AM Peak hour)



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[3] Passenger Car Units (for the EMFM$_{2019}$, one car / LGV is equivalent to one PCU, and one HGV is equivalent to two PCUs)

Figure 2.2: Base Year Modelled Flow Difference – EMFM2019 with May 2024 TAG data book minus EMFM2019 with draft November 2022 TAG data book (PM Peak hour)



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Section 3 – Base Year Model Performance

3.1 Introduction

3.1.1 This section presents the base year model performance results for the screenlines / cordons, link flows and journey time routes in the vicinity of the proposed EMG Phase 2 development for the $EMFM_{2019}$ with the latest May 2024 TAG data book.

3.2 EMFM Highway Base Year Model Screenline / Cordon Performance

3.2.1 Guidelines set out in Table 1 of TAG Unit M3.1 on highway assignment modelling state that a modelled screenline meets TAG criteria if the differences between modelled flows and observed counts are less than 5% of the counts and that this should be true for 'all or nearly all screenlines'.

3.2.2 Screenlines are normally made up of 5 links or more. Within the EMFM, there are several screenlines / cordons with fewer than five count locations and / or with a relatively low observed flow for the screenline. It has been noted that such screenline / cordons tend to fail the 5% TAG criterion for screenline / cordon flows even when all individual links are within the TAG criteria. For this reason, the flow criterion has been adjusted for screenlines / cordons with fewer than five counts and / or low observed flows.

3.2.3 This revised criterion has been based on the individual link flow acceptability criteria and is given in Table 3.1. This uses the individual link flow TAG criteria for screenlines with one count, and the standard screenline criterion for screenlines with five or more counts, and interpolates between these two points for screenlines with between two and four counts. These revised criteria have been used in the assessment of the modelled screenline flows against observed data.

Table 3.1: Revised Screenline Flow Acceptability Criteria

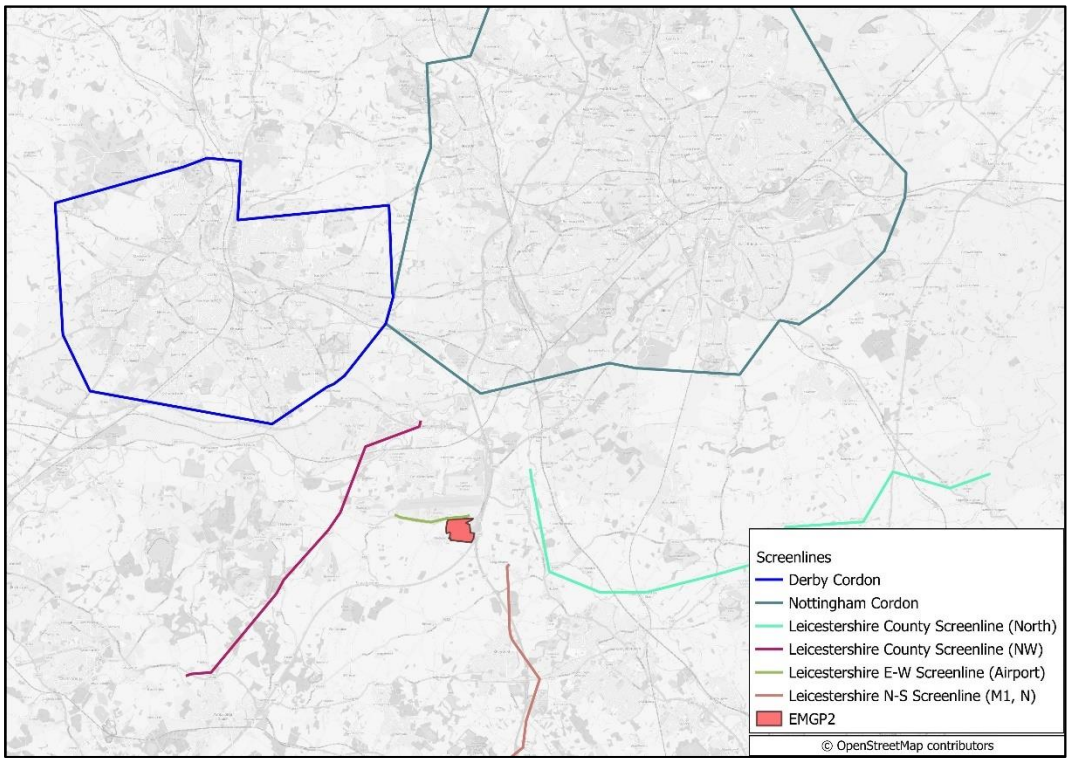
Number of Counts on Screenline	Acceptability Guidelines
5 of more counts	Within ±5% or ±100 vehicles of observed count
4 counts	Within ±7.5% or ±100 vehicles of observed count
3 counts	Within ±10% or ±100 vehicles of observed count
2 counts	Within ±12.5% or ±100 vehicles of observed count
1 count	Within ±15% or ±100 vehicles of observed count

3.2.4 Figure 3.1 shows the screenlines and cordons in the vicinity of the proposed development and Table 3.2 provides a summary of the base year model performance. For the AM Peak hour, all screenlines and cordons considered meet the acceptability criteria in both directions except the Leicestershire County Screenline (North) which marginally fails for southbound (i.e. inbound to Leicestershire). For the PM Peak hour, all screenlines and cordons considered meet the acceptability criteria in both directions except the Nottingham Cordon which marginally fails for the outbound direction.

3.2.5 The reader may note that the Nottingham Cordon (outbound) marginally passes for the model with the draft November 2022 TAG data book (i.e. difference of -4.9%) but marginally fails for the model with the latest May 2024 TAG data book (i.e. difference of -5.1%).

3.2.6 Overall, the screenline and cordon performance for the EMFM base year model (with May 2024 TAG data book) is good and meets the TAG threshold that 'all or nearly all screenlines' pass the acceptability criteria.

Figure 3.1: Screenlines and Cordons in the Vicinity of the Proposed Development



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Table 3.2: Screenline and Cordon Performance in the Vicinity of the Proposed Development (May 2024 TAG data book)

Screenline / Cordon	# Counts	AM Peak					PM Peak				
		Observed (veh)	Modelled (veh)	Abs Diff (veh)	% Diff	Pass?	Observed (veh)	Modelled (veh)	Abs Diff (veh)	% Diff	Pass?
Leicestershire E-W Screenline (Airport) Northbound	3	1,301	1,291	-10	-0.8%	✓	424	378	-46	-10.9%	✓
Leicestershire E-W Screenline (Airport) Southbound	3	415	397	-17	-4.2%	✓	1,150	1,089	-61	-5.3%	✓
Leicestershire County Screenline (North-West) Inbound	7	4,279	4,244	-35	-0.8%	✓	5,134	5,020	-114	-2.2%	✓
Leicestershire County Screenline (North-West) Outbound	7	4,843	4,648	-194	-4.0%	✓	4,946	4,926	-19	-0.4%	✓
Leicestershire County Screenline (North) Inbound	9	3,788	4,010	222	5.9%	×	3,988	3,990	2	0.0%	✓
Leicestershire County Screenline (North) Outbound	9	3,821	3,808	-13	-0.3%	✓	4,095	4,174	79	1.9%	✓
Leicestershire N-S Screenline (M1, North) Eastbound	9	5,604	5,631	27	0.5%	✓	4,721	4,665	-56	-1.2%	✓
Leicestershire N-S Screenline (M1, North) Westbound	9	3,945	4,000	55	1.4%	✓	5,275	5,372	96	1.8%	✓
Nottingham Cordon Inbound	25	23,816	23,104	-712	-3.0%	✓	24,787	24,153	-633	-2.6%	✓
Nottingham Cordon Outbound	25	22,567	21,737	-830	-3.7%	✓	24,524	23,279	-1,245	-5.1%	×
Derby Cordon Inbound	13	12,975	12,440	-534	-4.1%	✓	12,760	12,637	-122	-1.0%	✓
Derby Cordon Outbound	13	11,285	11,258	-27	-0.2%	✓	13,448	13,067	-382	-2.8%	✓

3.3 EMFM Highway Base Year Model Link Flow Performance

3.3.1 Guidelines set out in Table 2 of TAG Unit 3.1 on highway assignment modelling state that a modelled link flow meets TAG criteria if at least one of the two following conditions is met:

- Flow criteria:
  - modelled flow is within 100 vehicles for counts with an observed flow of less than 700 vehicles;
  - modelled flow is within 15% for counts with an observed flow between 700 and 2,700 vehicles; or
  - modelled flow is within 400 vehicles for counts with an observed flow greater than 2,700 vehicles.
- GEH criteria:
  - a GEH[4] value of less than 5.

3.3.2 The link flow performance for the A453, East Midlands Airport links and the Strategic Road Network (SRN) in the vicinity of the proposed development has been checked. Table 3.3 shows that all counts on the A453 and East Midlands Airport links pass the acceptability criteria in both directions for the AM Peak and PM Peak hours. For the 14 counts considered for the SRN, Table 3.4 shows that all pass in the AM Peak hour, and all but one (M1 northbound between Junction 23a and Junction 24) pass in the PM Peak hour. Figure 3.2 and Figure 3.3 show the observed count locations.

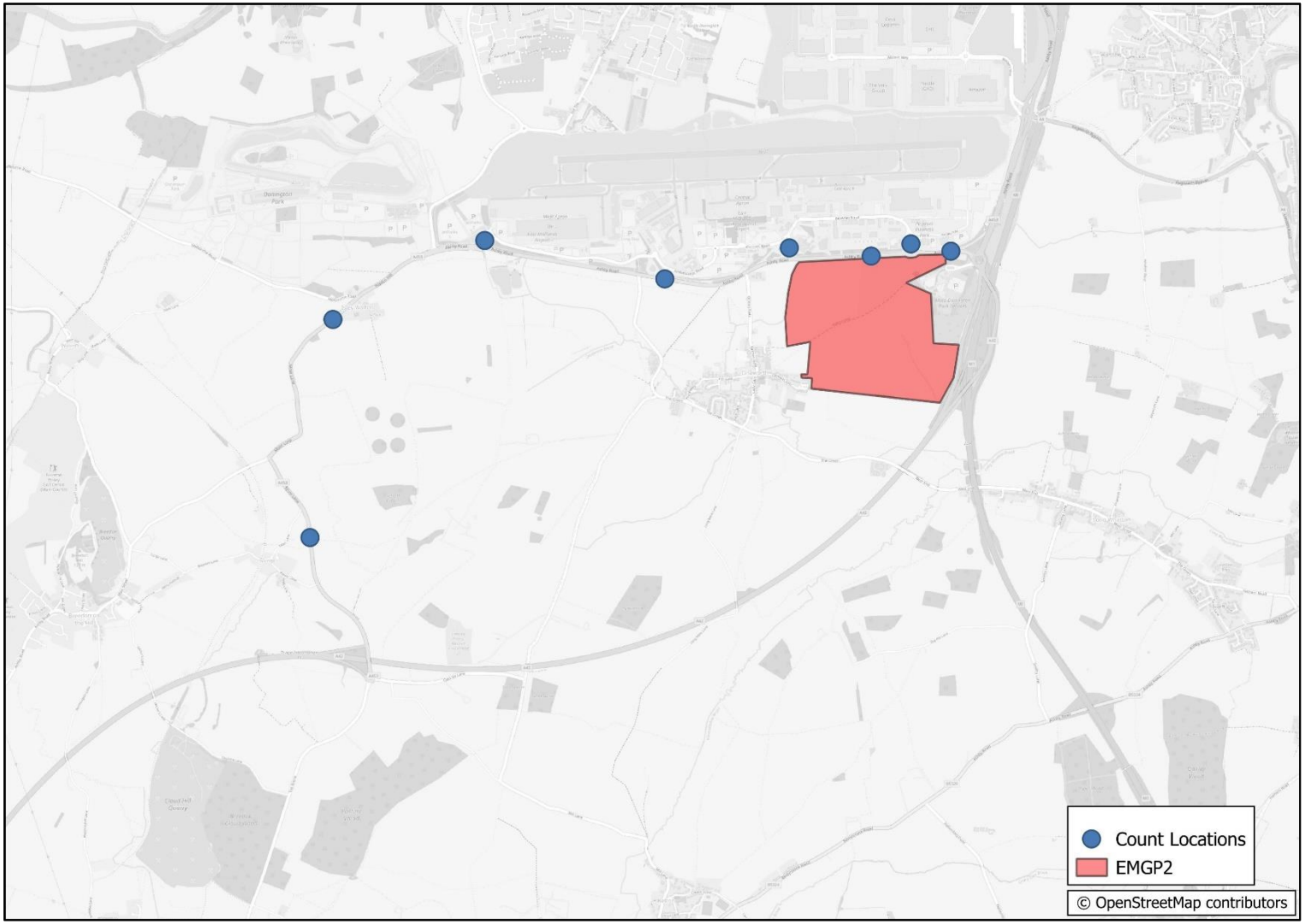
3.3.3 The pass rates for the link flow performance for both AM Peak and PM Peak hours have not changed following the update of the TAG data book from draft November 2022 version to May 2024 version.

[4] $GEH = \sqrt{\frac{(M-O)^2}{(M+O)/2}}$, where M is the modelled flow and O is the observed flow

Table 3.3: Link Flow Performance – A453 and East Midlands Airport (May 2024 TAG data book)

Location	AM Peak						PM Peak					
	Observed (veh)	Modelled (veh)	Abs Diff (veh)	% Diff	GEH	Pass?	Observed (veh)	Modelled (veh)	Observed (veh)	% Diff	GEH	Pass?
Ashby Road E of EMA Eastbound	567	532	-36	-6.3%	1.5	✓	649	587	-61	-9.5%	2.5	✓
Ashby Road E of EMA Westbound	619	528	-91	-14.7%	3.8	✓	520	486	-34	-6.6%	1.5	✓
Ashby Road West of A453 Junction Eastbound	582	671	89	15.3%	3.6	✓	1,024	1,008	-16	-1.6%	0.5	✓
Ashby Road West of A453 Junction Westbound	1,084	1,102	18	1.7%	0.5	✓	589	606	17	2.9%	0.7	✓
Moor Lane Northbound	293	295	2	0.6%	0.1	✓	240	240	0	0.1%	0.0	✓
Moor Lane Southbound	224	220	-4	-1.7%	0.3	✓	289	289	-1	-0.2%	0.0	✓
A453 Walton Hill Eastbound	440	442	1	0.3%	0.1	✓	324	322	-1	-0.4%	0.1	✓
A453 Walton Hill Westbound	307	314	7	2.1%	0.4	✓	451	439	-12	-2.7%	0.6	✓
Ashby Road West of Grimes Gate Northbound	641	606	-34	-5.4%	1.4	✓	321	319	-2	-0.5%	0.1	✓
Ashby Road West of Grimes Gate Southbound	331	355	24	7.3%	1.3	✓	444	402	-42	-9.4%	2.0	✓
EMA Western Access Northbound	300	301	1	0.2%	0.0	✓	78	78	-0	-0.6%	0.1	✓
EMA Central Access Northbound	389	416	27	7.0%	1.3	✓	177	180	3	1.6%	0.2	✓
Hunter Road (Pegasus Park) Northbound	612	574	-38	-6.2%	1.6	✓	169	120	-49	-28.8%	4.0	✓
EMA Western Access Southbound	65	71	6	9.0%	0.7	✓	299	310	11	3.7%	0.6	✓
EMA Central Access Southbound	189	186	-2	-1.2%	0.2	✓	356	359	3	0.9%	0.2	✓
Hunter Road (Pegasus Park) Southbound	161	140	-21	-13.1%	1.7	✓	496	421	-75	-15.2%	3.5	✓

Figure 3.2: Observed Count Locations – A453 and East Midlands Airport

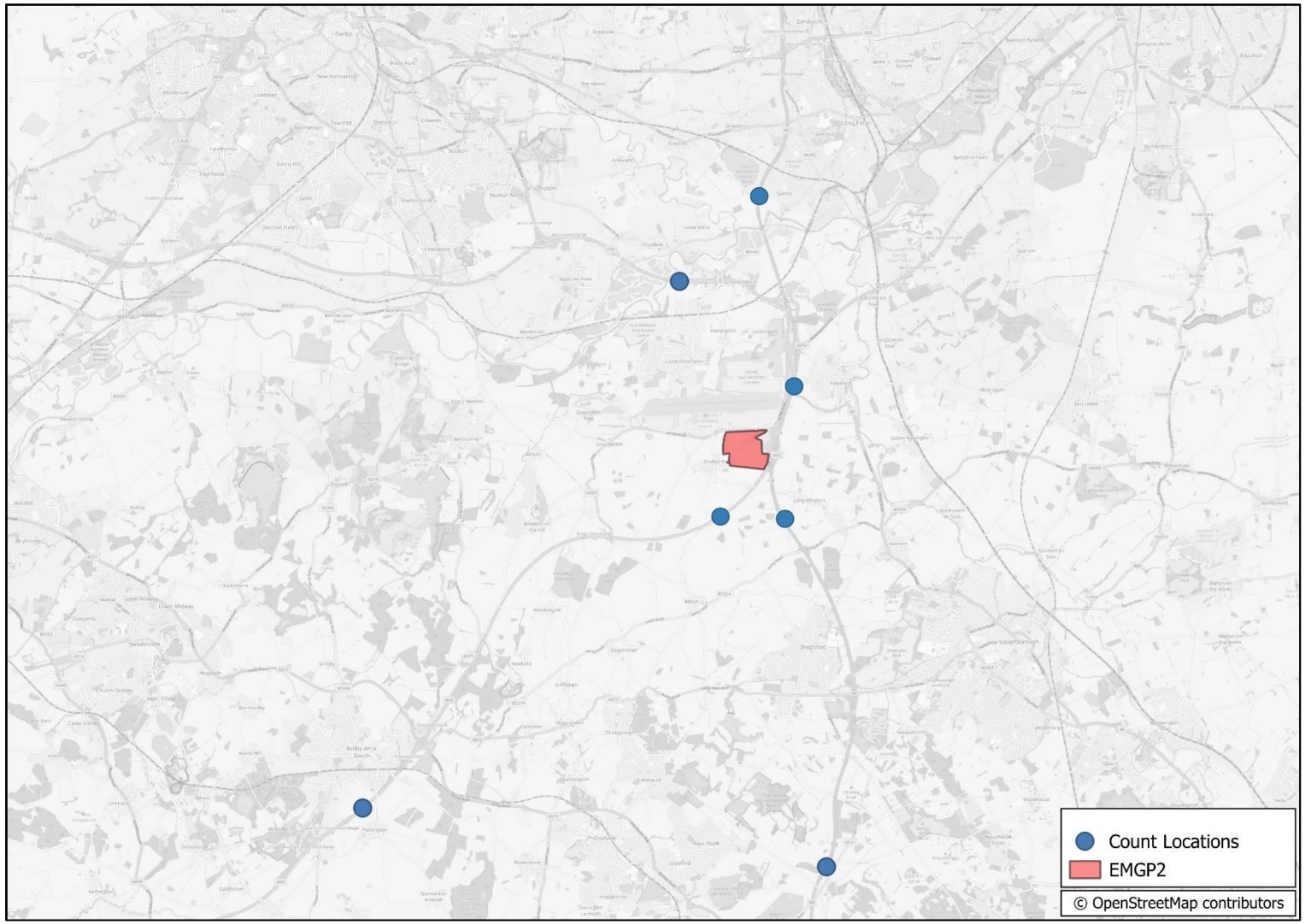


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Table 3.4: Link Flow Performance – Strategic Road Network (May 2024 TAG data book)

Location	AM Peak						PM Peak					
	Observed (veh)	Modelled (veh)	Abs Diff (veh)	% Diff	GEH	Pass?	Observed (veh)	Modelled (veh)	Observed (veh)	% Diff	GEH	Pass?
A50 between Junction 1 and Junction 2 Eastbound	3,018	2,946	-72	-2.4%	1.3	✓	3,173	3,131	-42	-1.3%	0.8	✓
A50 between Junction 1 and Junction 2 Westbound	3,039	3,033	-5	-0.2%	0.1	✓	3,590	3,561	-29	-0.8%	0.5	✓
A42 between Junction 12 and Junction 13 Northbound	2,700	2,697	-3	-0.1%	0.1	✓	2,542	2,541	-1	-0.0%	0.0	✓
A42 between Junction 12 and Junction 13 Southbound	2,395	2,401	6	0.2%	0.1	✓	2,466	2,465	-1	-0.0%	0.0	✓
A42 between Junction 14 and M1 Northbound	2,175	2,070	-105	-4.8%	2.3	✓	2,027	2,032	5	0.2%	0.1	✓
A42 between Junction 14 and M1 Southbound	2,019	2,016	-3	-0.1%	0.1	✓	1,976	1,878	-99	-5.0%	2.2	✓
M1 between Junction 22 and Junction 23 Northbound	3,983	3,971	-12	-0.3%	0.2	✓	4,282	4,303	21	0.5%	0.3	✓
M1 between Junction 22 and Junction 23 Southbound	3,731	3,728	-4	-0.1%	0.1	✓	4,104	4,101	-3	-0.1%	0.0	✓
M1 between Junction 23 and 23a Northbound	3,974	3,982	8	0.2%	0.1	✓	4,521	4,501	-19	-0.4%	0.3	✓
M1 between Junction 23 and 23a Southbound	4,002	3,935	-67	-1.7%	1.1	✓	4,214	4,205	-8	-0.2%	0.1	✓
M1 between Junction 23a and 24 Northbound	3,658	3,952	294	8.0%	4.8	✓	4,301	4,833	532	12.4%	7.9	×
M1 between Junction 23a and 24 Southbound	5,153	5,302	150	2.9%	2.1	✓	5,255	5,240	-15	-0.3%	0.2	✓
M1 between Junction 24 and Junction 25 Northbound	3,461	3,442	-19	-0.6%	0.3	✓	5,119	5,072	-47	-0.9%	0.7	✓
M1 between Junction 24 and Junction 25 Southbound	4,501	4,520	19	0.4%	0.3	✓	3,887	3,811	-76	-2.0%	1.2	✓

Figure 3.3: Observed Count Locations – Strategic Road Network



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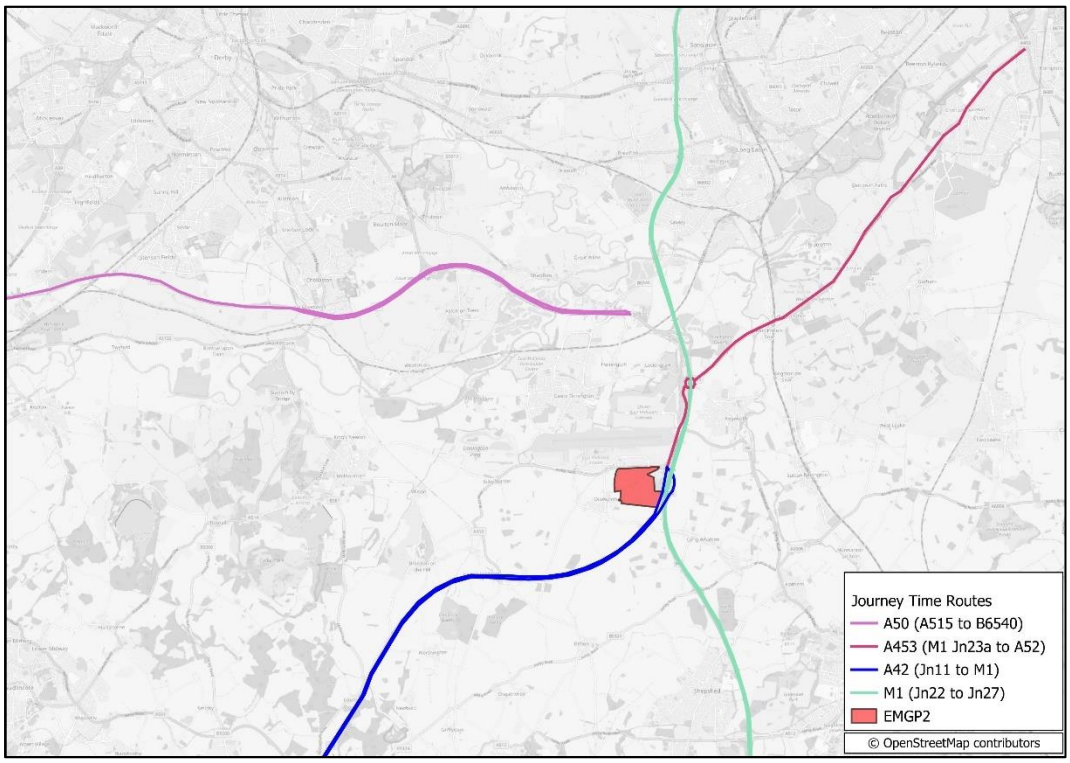
3.4 EMFM Highway Base Year Model Journey Time Performance

3.4.1 Of the four journey time routes in the vicinity of the proposed development as shown in Figure 3.4, Table 3.5 shows that all routes pass in the AM Peak hour and all but one route (A453 northbound from M1 Junction 23a to A52) pass in the PM Peak hour.

3.4.2 Figure 3.5 to Figure 3.8 shows the comparison of modelled and observed journey times in distance-time graph format. Figure 3.8 shows that the section of the A453 near the proposed development between M1 Junction 23a and M1 Junction 24 performs well, with the model overestimating journey time on the A453 approach to the A52 in Nottingham.

3.4.3 The pass rates for the journey time performance for both AM Peak and PM Peak hours have not changed following the update of the TAG data book from draft November 2022 version to May 2024 version.

Figure 3.4: Journey Time Routes in the Vicinity of the Proposed Development



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Table 3.5: Journey Time Performance in the Vicinity of the Proposed Development (May 2024 TAG data book)

Route	AM Peak					PM Peak				
	Observed	Modelled	Abs Diff	% Diff	Pass	Observed	Modelled	Abs Diff	% Diff	Pass
M1 (Jn22 to 27) Northbound	20:30	22:26	01:56	9.4%	✓	21:20	23:43	02:22	11.1%	✓
M1 (Jn22 to 27) Southbound	22:15	23:52	01:36	7.2%	✓	20:52	22:52	02:00	9.6%	✓
A42 (Jn11 to M1) Northbound	14:27	15:48	01:21	9.4%	✓	13:27	15:27	02:00	14.8%	✓
A42 (Jn11 to M1) Southbound	13:59	15:19	01:20	9.5%	✓	13:33	15:07	01:34	11.5%	✓
A50 (A515 to B6540) Eastbound	17:55	19:16	01:21	7.6%	✓	17:03	19:34	02:31	14.8%	✓
A50 (A515 to B6540) Westbound	17:57	19:16	01:19	7.3%	✓	18:20	19:22	01:01	5.6%	✓
A453 (M1 Jn23a to A52) Northbound	13:29	14:58	01:28	10.9%	✓	11:45	14:15	02:30	21.3%	×
A453 (M1 Jn23a to A52) Southbound	13:08	13:40	00:32	4.0%	✓	14:24	14:43	00:19	2.2%	✓

Figure 3.5: M1 (Junction 22 to Junction 27) Journey Time Validation Graphs (May 2024 TAG data book)

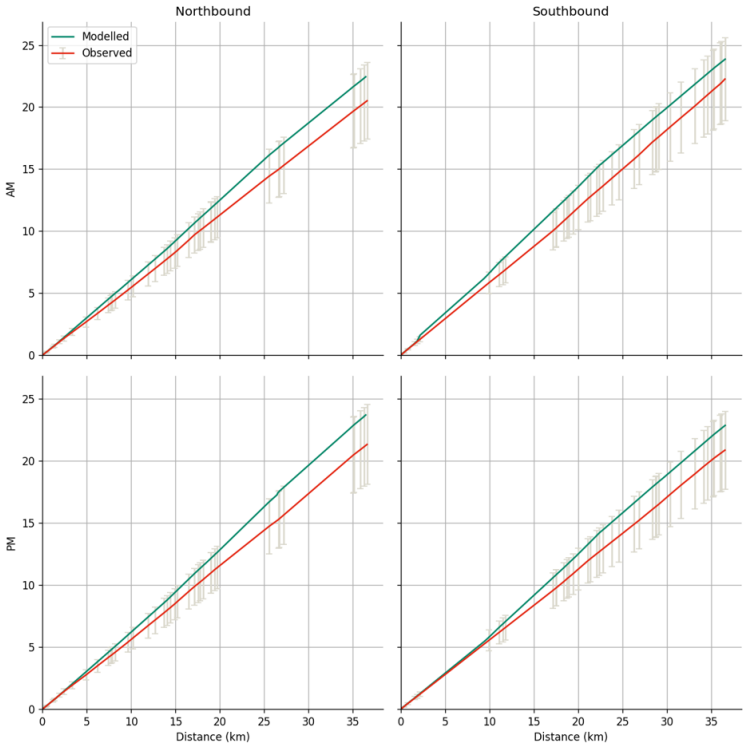


Figure 3.6: A42 (Junction 11 to M1) Journey Time Validation Graphs (May 2024 TAG data book)

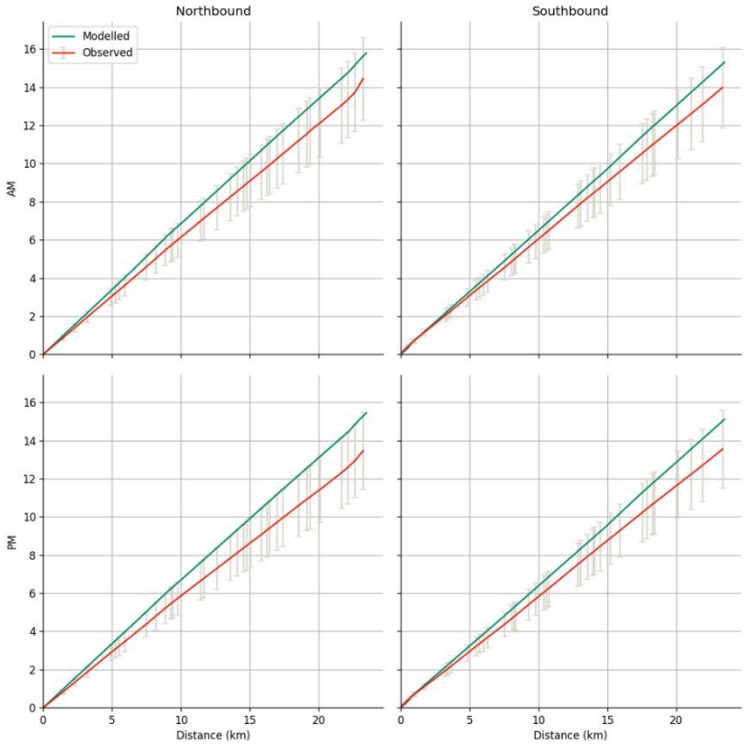


Figure 3.7: A50 (A515 to B6540) Journey Time Validation Graphs (May 2024 TAG data book)

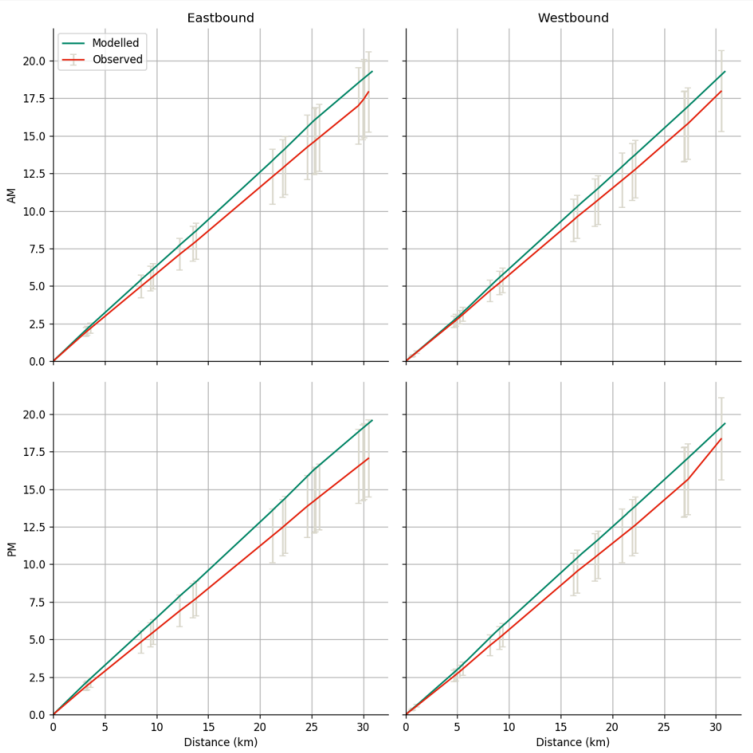
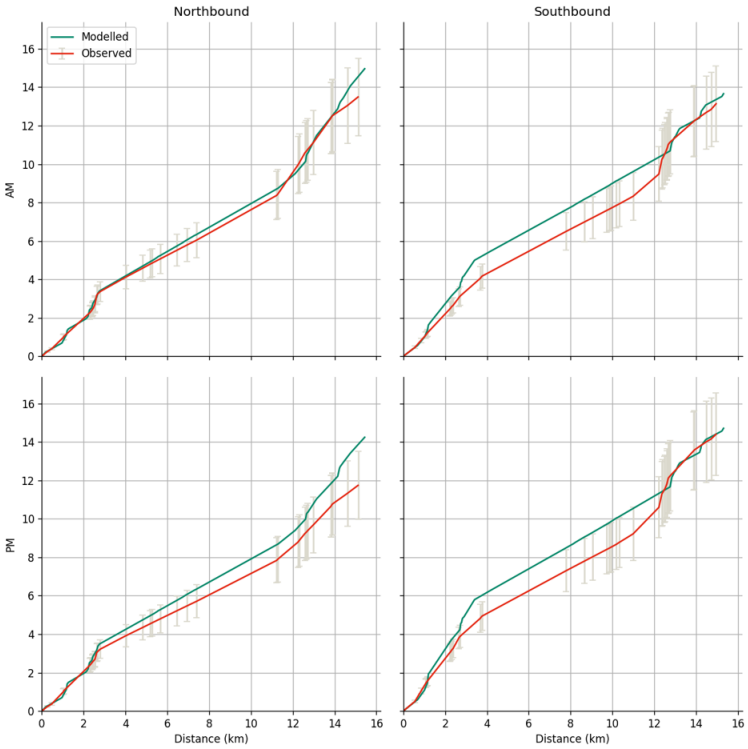


Figure 3.8: A453 (M1 Junction 23a to A52) Journey Time Validation Graphs (May 2024 TAG data book)



Section 4 – Summary

4.1.1 The $EMFM_{2019}$ highway model represents an average weekday in April / May / June in 2019 for the AM Peak and PM Peak hours. This review is focused on the suitability of the model for use in the strategic assessment of the proposed EMG Phase 2 development.

4.1.2 A base year model review for the $EMFM_{2019}$ was undertaken in 2022 / 2023 for the EMG Phase 2 application. However this previous version of the $EMFM_{2019}$ used the draft November 2022 TAG data book.

4.1.3 It is proposed that the $EMFM_{2019}$ is updated to use the latest May 2024 TAG data book for the EMG Phase 2 application. To demonstrate that the impact on the 2019 base year modelled flows due to the update of TAG data book version is small, modelled flow difference checks were undertaken. For most links, the absolute modelled flow differences between the 2019 base year model with the draft November 2022 TAG data book and the latest May 2024 TAG data book are fewer than 25 PCUs, and as such do not materially affect the overall base year model performance results.

4.1.4 The screenline, link flow and journey time performance in the vicinity of the proposed development has also been checked. For link flow and journey time performance, the pass rates for the model with May 2024 TAG data book are consistent with the model with the draft November 2022 TAG data book. For screenline performance, the pass rate for the AM Peak hour is consistent; however, for the PM Peak hour, the Nottingham Cordon (outbound) marginally passes for the model with the draft November 2022 TAG data book (i.e. difference of -4.9%) but marginally fails for the model with the latest May 2024 TAG data book (i.e. difference of -5.1%).

4.1.5 Overall, the $EMFM_{2019}$ (with the May 2024 TAG data book) is considered suitable for the strategic assessment of the proposed East Midlands Gateway Phase 2 development.

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About AECOM

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APPENDIX 8: PRTM Proforma v14 & Uncertainty Log v7

Leicestershire County Council

Pan Regional Transport Model (PRTM) Development Testing Proforma

Foreword:

Before completing this form for development management purposes, it is recommended that you contact Leicestershire County Council (LCC) and seek advice from the Highway Development Management (HDM) team on the proposed use of PRTM. The HDM team can be contacted at hdc@leics.gov.uk.

Although not a requirement it is strongly recommended that potential stakeholders, e.g. LCC HDM, National Highways, sign-off on your brief and trip generation before submitting this proforma to Environment and Transport Modelling Services Contract (E&T MSC). This should ensure that any subsequent work proposal through E&T MSC is as accurate as possible in terms of scope, timescales and cost.

Please note that E&T MSC and wider Network Data and Intelligence (NDI) Team work independently from all other teams within LCC, including HDM. Please ensure any correspondence intended for the HDM team is sent to the case officer for your (pre)application; or, if unknown, to HDM's generic inbox: hdc@leics.gov.uk.

On the following page is an indicative flowchart summarising the general transport modelling process for using the PRTM to inform client Transport Assessments; this is a typical approach and has been simplified to a generic process – each individual application may differ from the below and as above advice should be sought from the HDM team.


Pre-meeting between client and HDM/stakeholders to discuss brief and suitability of PRTM
HDM/stakeholder approved brief and PRTM proforma submitted to E&T MSC framework by client
E&T MSC to send brief and proforma to Framework consultants and commission as applicable.
Commissioned consultant produces model validation report and extracts relevant network scheme and planning data assumptions
Client circulates local model validation report and model assumptions to stakeholders for sign-off
Inception meeting is arranged once sign-off is complete to discuss the modelling methodology
Commissioned consultant undertakes forecasting of all scenarios bar mitigation runs, creates report for client
Client interprets model forecast results and suggests and agrees junctions, with relevant stakeholders, for further assessment
Client undertakes further assessment and formalises mitigation packages
Commissioned consultant undertakes forecasting of mitigation scenario and creates addendum to forecasting report
E&T MSC commission complete

Leicestershire County Council

Section 1: Client Details

Name:	Paul Wilson
Company:	BWB Consulting Ltd (on behalf of Segro)
Telephone:	[redacted]
E-mail:	[redacted]
Date:	10/10/2024

Section 2: Project Details

Title:	East Midlands Gateway Phase 2
District / Location:	Land to the southeast of EMA, and southwest of M1J23a in North West Leicestershire DC's jurisdiction
Background:	EMFM modelling has recently been undertaken for forecast years of 2025 and 2035 (reference EMGP2 proforma Revision 6). Due to the passage of time with submitting the EMG2 application, revised EMFM modelling is now required for higher forecast years of 2028 (opening year) and 2038 (10 years post opening). There have been changes to the evening peak hour trip rates and the scale of development, which is now being proposed at 400,000sqm on EMG2 (to account for 300,000sqm of ground floorspace and 100,000sqm of potential B8 mezzanine floorspace) plus 30,000sqm of B8 floorspace on EMG1 (Plot 16). The entire EMG2 development is now proposed to be served by a single point of access via a fourth arm from the A453/Hunter Road roundabout. Plot 16 on EMG1 would be served by the existing access via Wilder's Way. The revised uncertainty log also picks up on any new developments during the higher opening and future years. This version of the proforma sets out the updated modelling work based on the above changes. We are however considering other scenarios and a 'vision and validate' sensitivity test based on more up to date EMG1 trip rates and considering in detail the activity generated by mezzanines. However, further information will need to be shared, and methodology agreed with the TWG, for these scenarios, which will be set out in due course in a separate proforma assuming such an approach is indeed continued with.

Section 3: Development Details

Please input your development phasing into the provided table on the right; if it is a mixed-use site, please separate dwellings and employment floorspace with a comma. This table will act as an overview to the detail provided further in this proforma as well as the supporting brief (if available).

There are two main forms of assessment that the E&T MSC offers, a highway-only model run and a full-PRTM model run. Your HDM Case Officer will confirm which type of assessment is needed for your development.

For highway-only model runs please provide details in section 3a, for full model runs please provide details in section 3b.

Please provide a brief description of the access arrangements in the box below; if there are preliminary scheme drawings available please provide these alongside submission of this proforma via email attachment.

Brief description of access arrangements:

Having reflected on matters recently, the access proposals to EMG2 are being revised. One main access is now being introduced, via a fourth arm of the existing A453/Hunter Road roundabout to serve 100% of the development plus the bus interchange, which can then connect directly into the site.

A separate emergency access would also be provided, but that won't affect the revised modelling work.

Development on Plot 16 of EMG1 would be served by the existing access via Wilder's Way.

.

Year	No.
2021	Figure
2022	Figure
2023	Figure
2024	Figure
2025	Figure
2026	Figure
2027	Figure
2028	*130,000sqm*
2029	*100,000sqm*
2030	*100,000sqm*
2031	*100,000sqm*
2032	Figure
2033	Figure
2034	Figure
2035	Figure
2036	Figure
2037	Figure
2038	Figure
2039	Figure
2040	Figure
2041	Figure
2042	Figure
2043	Figure
2044	Figure
2045	Figure
2046	Figure
2047	Figure
2048	Figure
2049	Figure
2050	Figure
2051	Figure
Total	*430,000sqm*

Section 3a: Highway Model Only Development Details

Please provide either the agreed trip rates and/or trip generation for your development in the relevant tables below. Depending on your land use and agreed approach with LCC HDM, values may not be required for all three time periods.

Trip Rates:

Housing: N/A

Vehicle Type	AM			IP			PM		
	Arr.	Dep.	Total	Arr.	Dep.	Total	Arr.	Dep.	Total
Light Vehicles									
HGV's									
Total									

Employment: B2

Vehicle Type	AM			IP			PM		
	Arr.	Dep.	Total	Arr.	Dep.	Total	Arr.	Dep.	Total
Light Vehicles	0.376	0.057	0.433	-	-	-	0.046	0.363	0.408
HGV's	0.016	0.014	0.030	-	-	-	0.003	0.006	0.009
Total	0.392	0.071	0.463	-	-	-	0.049	0.369	0.417

Employment: B8

Vehicle Type	AM			IP			PM		
	Arr.	Dep.	Total	Arr.	Dep.	Total	Arr.	Dep.	Total
Light Vehicles	0.121	0.013	0.135	-	-	-	0.040	0.140	0.180
HGV's	0.019	0.023	0.041	-	-	-	0.025	0.015	0.040
Total	0.140	0.036	0.176	-	-	-	0.065	0.155	0.220

The B8 trip rates for the PM peak now mirror the 1600 to 1700 hour shoulder peak trip rates adopted for EMG1

Trip Generation:

Housing: N/A

Vehicle Type	AM			IP			PM		
	Arr.	Dep.	Total	Arr.	Dep.	Total	Arr.	Dep.	Total
Light Vehicles									
HGV's									
Total									

EMG2 (400,000sqm)

Employment: B2; 60,000sqm GFA

Vehicle Type	AM			IP			PM		
	Arr.	Dep.	Total	Arr.	Dep.	Total	Arr.	Dep.	Total
Light Vehicles	226	34	260	-	-	-	28	218	246
HGV's	10	8	18	-	-	-	2	4	6
Total	235	43	278	-	-	-	30	222	252

Employment: B8 340,000sqm GFA

Vehicle Type	AM			IP			PM		
	Arr.	Dep.	Total	Arr.	Dep.	Total	Arr.	Dep.	Total
Light Vehicles	411	44	455	-	-	-	136	476	612
HGV's	65	78	143	-	-	-	85	51	136
Total	476	122	598	-	-	-	221	527	748

Employment: TOTAL EMG2 DEVELOPMENT

Vehicle Type	AM			IP			PM		
	Arr.	Dep.	Total	Arr.	Dep.	Total	Arr.	Dep.	Total
Light Vehicles	637	78	715	-	-	-	164	694	858
HGV's	75	86	161	-	-	-	87	55	142
Total	711	165	876	-	-	-	250	748	998

Plot 16 EMG1 (30,000sqm)

Employment: B8 30,000sqm GFA

Vehicle Type	AM			IP			PM		
	Arr.	Dep.	Total	Arr.	Dep.	Total	Arr.	Dep.	Total
Light Vehicles	36	4	40	-	-	-	12	42	54
HGV's	6	7	13	-	-	-	8	5	13
Total	42	11	53	-	-	-	20	47	67

Section 3b: Full Model Run Development Details

Please provide the number of dwellings and/or employment floorspace, or preferably if known, jobs for each of the sub-categories below.

Employment Development Land Use:

Land Use	Class	Unit	Quantum	Jobs
Shops	A1	m^2		
Business	B1a	m^2		
General Industrial	B2	m^2	*60,000*	*TBC*
Storage or Distribution	B8	m^2	*370,000**	*TBC*
Research & Development	B1b	m^2		
Leisure	D2	m^2		
Hotels	C1	Beds		
Education	D1	Jobs		

** includes 340,000sqm of B8 floorspace on EMG2 and 30,000sqm of B8 floorspace on Plot 16 of EMG1*

Housing Development Land Use:

Land Use	Class	Dwellings
Dwellings	C3	

Section 4: Modelling Required

Assessment Years:

Please select your assessment years from the options below. Please note that if you need PRTM forecast years to infer model flows to correspond with data collection, you will need to select the 'shoulder' forecast years (i.e. inferring the 2018 model forecast year will require 2016 and 2021 PRTM forecast years). Bespoke individual forecast years may be requested with the "Other, please specify" option, but this does not guarantee inclusion in any provided proposal.

2014 (base) ☐	2016 ☐	2021 ☐
2026 ☐	2031 ☐	2036 ☐
2041 ☐	2046 ☐	2051 ☐
Other, please specify:	2028 and 2038 forecast years are required (year of opening and post 10 years). A revised 2022 forecast base year assessment is also required, alongside a 2023/2024 forecast base for air and noise quality purposes (exact approach TBC with AECOM post the meeting on 3/10/24).	

If required, please provide proposed phasing in each forecast year selected above, in the box below. An example has been included in green, please delete and populate with your data.

2022: 0% development (do minimum) 2028: 100% occupancy 2038: 100% occupancy

Assessment Options:

Please select which scenarios you will want testing, as well as defining which model year each scenario corresponds to as this can potentially be multiple forecast years for one scenario; this will depend on your discussions with HDM and their requirements.

Scenario	Choice	Model Year(s)
Core	Assumed	2022/2028/2038
Core + no development + access strategy	☐	
Core + development + no mitigation	Assumed	2028/2038
Core + development + mitigation	☒	2028/2038

Other, please specify:	The following scenarios will need testing as part of the Stage 1 modelling: i) 2019 baseline year (for air quality purposes) ii) 2022/2023/2024 forecast base year (2023 and 2024 TBC for noise and air quality purposes) iii) 2028/2038 forecast year without development (with EM Freeport and Local Plan related schemes, including Isley Woodhouse, Land West of Castle Donington and the Coaker Land schemes) iv) 2028/2038 forecast year with development (with EM Freeport and Local Plan related schemes, including Isley Woodhouse, Land West of Castle Donington and the Coaker Land schemes) v) Construction traffic – further information still to be provided NB Covid sensitivity testing is to be considered further for the TWG to agree the approach to be adopted in the Stage 2 modelling work; further information has been provided by AECOM/Jacobs to inform decision making There will be a need to run the mitigation schemes through the EMFM once agreed. This will test the core development trips included in this proforma plus a scenario with reduced development trips as part of a 'vision and validate' strategy, details to be provided. Please therefore include fee for two mitigation runs (hopefully this will be limited to one). Additional scenarios have been requested from an air and noise quality perspective which has been sent separately via a Technical Note from Buro Happold.

Time Period Selection:

Please select the time periods you would like your development assessed in.

AM (0800-0900)	☒
IP (average hour for 1000-1600)	☐
PM (1700-1800)	☒

Indicative list of Junctions for Further Assessment:

If known, please provide an indicative list of expected junctions that may be required for further assessment in the box below. This, in turn, will facilitate the delivery of strategic model outputs to inform any further detailed junction assessments. Failing that, a rough estimation of the number of junctions that **may** require further assessment will aid consultants in producing robust quotations within their proposals.

We have currently agreed the following 17 junctions will be modelled as part of the Transport Assessment, which we will require strategic model outputs for (NB LCountyC in particular have confirmed that they will agree the study area following modelling outputs). The purpose of this list is simply to allow AECOM to quote for providing detailed data over a defined area, albeit this may change later.

Junction 2) A453/Hunter Road Roundabout (Leicestershire)

Junction 3) Finger Farm Roundabout (National Highways)

Junction 4) A453/EMGP1 Signal Gyratory (National Highways)

Junction 5) M1 Junction 24 (National Highways)

Junction 6) A453/East Midlands Airport Signal Junction (Leicestershire)

Junction 7) A453/Grimes Gate Priority Junction (Leicestershire)

Junction 8) A453/The Green Priority Junction (Leicestershire)

Junction 9) A453/East Midlands Airport Roundabout (Leicestershire)

Junction 10) A453/Walton Hill Signal Junction (Leicestershire)

Junction 11) A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Roundabout (National Highways)

Junction 12) M1 Junction 23 (National Highways)

Junction 13) A50 Junction 1 (National Highways)

Junction 14) M1 Junction 25 (National Highways)

Junction 15) Station Road/Broad Rushes Roundabout (Leicestershire)

Junction 16) A453/Kegworth Road dumbbell Roundabouts (Nottinghamshire)

Junction 17) A453/Barton Lane/West Leake dumbbell Roundabouts (Nottinghamshire)

Section 5: Pre-Modelling Outputs

This section details the options available to the client pre-modelling; typically, in aid of model assurance for project stakeholders to ensure no abortive work is undertaken. Please de-select which pre-modelling outputs you do not require, as these are usually standard documents provided to HDM.

Project Specific Study Area Model Validation Report	☒
Local Planning Data Assumptions	☒
Network Scheme Uncertainty Log	☒

NB a project specific validation report is assumed not needed given a previous LMVR has already been produced; the hope being that the minor changes to the other two items above are a quick and simple exercise.

NNB AECOM confirmed in the last TWG that an addendum will be produced in light of TAG Databook changes and model comparisons undertaken.

Section 6: Post-Modelling Outputs

Highway Model Outputs:

The following highway model output options are available post-transport-model assignment. Some metrics below will need to be specified by the client after analysis of the forecasting report; for instance, “individual junction plots” which would tie in with the relevant sub-section in Section 4.

Area of Influence (AoI) (criteria defined as 5% and 30 PCU change)	Assumed
Highway Flow Changes within AoI	Assumed
Highway Delay Changes within AoI	☒
Individual Junction Plots – Turning Flows	☒
Individual Junction Plots – Volume/Capacity Ratio	☒
Maximum Volume/Capacity Ratio Plots	☒
Select Link Analysis of Development Traffic (link based)	☒
Provision of flow data for junction design/assessment	☒
AADT/AAWT	☒
The following model outputs would be required in shape file format for the purposes of our subsequent analysis (which may overlap with above). - AM/PM Peak flows classified into Lights/Heavies/Total - AM/PM/AADT Development only flows classified into Lights/Heavies/Total - Maximum Junction VoC - Link Delay - Link Queue - AADT classified into Lights/Heavies/Total - AAWT (24hr, 18hr, 8hr) classified into Lights/Heavies/Total - Mean speeds of links - Road Class Further to the above extraction of cordon matrices (actual flows) for the VISSIM modelling extent is required which includes the following junctions: - M1 J24; - M1 J24a southbound merge onto the M1 and M1 junction 24; - A453/EMG Phase 1/Kegworth Bypass signal controlled gyratory; - M1 J23a Finger Farm roundabout (including M1/A42 on and off slip roads); - A453/Hunter Road/minor EMG Phase 2 access roundabout; The outputs from the cordon matrices should include: - Cordon matrices (in vehicle) for o Cars / LGVs / HGVs o AM Peak hour / PM Peak hour (including shoulder peaks if available) - The cordon matrices to be provided in spreadsheet format. The above should provide an exhaustive list of information requirements, however, as discussed with LCC's NDI team and AECOM during a meeting on 16/05/24 there may be benefit in	

including for a provisional additional fee of £10k for any other additional requests, which wouldn't be invoiced if not required.	

Variable Demand Model Outputs (full PRTM run required):

The following demand model output options are available post-transport-model assignment.

Mode Share reporting; PT, Car, Active	☐
Trip Distance, 24-hour trip making & sustainability	☐

Public Transport Model Outputs (full PRTM run required):

The following highway model output options are available post-transport-model assignment.

Change in travel time, distances & speeds	☐
Distribution Analysis/Diagrams of Development Traffic	☐
Travel Time Changes along Key Routes	☐
Public Transport Passenger Changes	☐

Environmental Model Outputs:

Environmental model outputs are available post-transport-model assignment. Please note that environmental outputs will require a separate commission via the E&T MSC Manager, please contact ETCF@leics.gov.uk if you require emission or dispersion modelling to support your application.

Section 7: Supporting Documents

Supporting Documents:

Please provide any supporting documents that have been selected below to the E&T MSC Manager upon delivery of your proforma.

Location Plan Access Scheme Drawings Development Masterplan (to be updated in the coming weeks)	☒ ☒ ☐
Other, please specify:	Click here to enter text

Client's Expected Timescales:

Please provide an approximation for your client's timescales for this modelling commission in the box below; please take into consideration HDM's and National Highways' standard response times and sign-off procedures to avoid unrealistic timescales being provided and slippage to your project.

As discussed with LCC's NDI team and AECOM during recent meetings there is an urgent need to pick the modelling work back up.

Section 8: Contact Details

Email the completed form, along with supporting documents to ETCF@leics.gov.uk

For queries regarding the modelling process please contact:

Laura Good – ETCF & E&T MSC Manager
Email: ETCF@leics.gov.uk

Version Control

Project East Midlands Gateway Phase 2
Document Uncertainty Log

Revision History

Revision	Details	Date
v1.0 draft	Housing and employment data for NW Leicestershire, and neighbouring districts for Derbyshire and Nottinghamshire, based on PRTM2.3 planning data version HH50Emp51, with additional information from: *Employment Input Spreadsheet for Planning Authority TB Notts CC Oct 11 Broxtowe.xlsx* *Housing Input Spreadsheet for Planning Authority TB Notts CC Oct 11 2021 Broxtowe.xlsm* *RBC Employment Input Spreadsheet for Planning Authority Rushcliffe.xlsx* *RBC Housing Input Spreadsheet for Planning Authority Rushcliffe.xlsx* Highway network assumptions, based on PRTM2.3 network assumptions with the following edits: - Shuttle signals at the old railway bridge on Tickow Lane - added - Buttercup Lane, Shepshed - added - A47 roundabout between Wykin Road and Outlands Drive - added - A47/Dan's Lane - added - B582 Barlestone Road / B585 Bosworth Lane signalisation - added - A38 grade-separated junctions (Kingsway Roundabout, Markeaton Island and Little Eaton Roundabout) - added	14/09/2022
v1.1 draft	With updated EM Freeport data (ID Emp_North West Leicestershire_905 to Emp_North West Leicestershire_914)	05/10/2022
v2.0	Housing data: - Data for Leicester City added (blue text) 'Employment data: - Data for Leicester City added (blue text) - Freeport sites excluded - rows 124 to 126 and rows 133 to 140 have been updated to "N". -- It should be noted that for the sensitivity test for this application, the Freeport sites will be included (i.e. rows 124 to 126 and rows 133 to 140 will be included) Highway newtork assumptions: - row 72 Lutterworth East Development Associated Mitigations updated from "N" to "Y", certainty status updated from "Reasonably Foreseeable" to "More than Likely"	27/10/2022
v3.0	Housing data: - 2014 to 2019 data - greyed out as base year (2019) model will be used for this application - Rushcliffe - data updated based on updated housing data received on 25/11/2022 and 05/12/2022 - Broxtowe - rows 469 and 473 HS2 Innovation and Chetwynd Barracks sites - development phasing updated - Leicester City - 19 sites have been excluded (please refer to Col BA "Include"); trajectory for selected sites updated based on data received on 08/12/2022 Employment data: - 2014 to 2019 data - greyed out as base year (2019) model will be used for this application - rows 133 to 139 - Rushcliffe Uniper Site - typo correction for Col C from "Leicestershire" to "Nottinghamshire" - Rushcliffe - data updated based on updated housing data received on 14/12/2022 - NWL - Site of Former Sawley Crossroads Service Station (18/01115/FUL) and LAnd at East Midlands Point (Junction 23A) (18/02227/FULM) added Highway newtork assumptions: - row 162 A38 grade-separated junctions (Kingsway Roundabout, Markeaton Island and Little Eaton Roundabout) - forecast year updated from "2026" to "2024" - row 111 Toton Innovation Hub (HS2) access - first forecast year updated from "2031" to "2026" - row 163 Toton Link Road scheme - added with first forecast year "2026" - Include maker is "N"	21/12/2022
v4.0	Employment data: - Land South Of Junction 1 Of The A50 Castle Donington Leicestershire (19/01496/OUTM) - added	22/02/2022
v5.0	Housing data and Employment data for North West Leicestershire have been updated for the next stage of modelling work for EMG Phase 2 to be undertaken around Summer 2024. Historic data (pre-2019) removed. -- Please note that the following NWL Local Plan sites have been added (assume these sites will be included in the Sensitivity Test only): --- Land North and South of Park Lane, Castle Donington (CD10) - 1,076 dwellings --- Isley Woodhouse (IW1) - 4,500 dwellings and 23,000sqm of employment floorspace (by 2040, 1,9000 dwellings and 4,600sqm employment floorspace) --- Land West of Hilltop Farm, Castle Donington (EMP89) - 6,000sqm office floorspace and 11,850sqm industry/warehousing floorspace --- Land to the north of J11 A/M42 (EMP82) - 28ha site area - potential for strategic distribution purposes Highway network assumptions: -- highway network assumptions have been updated to the latest version available which includes Scheme 187: --- Scheme 187 A50 J1 signalisation of two additional arms (Tamworth Road and Trent Lane) (opening year = 2025)	21/05/2024

v6.0	Employment data	26/06/2024

--- SEGRO EMG Phase 2 - development quantum updated from 300,000sqm to 400,000sqm
--- Land North of Remembrance Way (A453), Kegworth (EMP73 (part)) - 40,000sqm industry/warehousing floorspace - added (assume 50% industry, 50% warehousing; assumed trajectory 2025-2034)
--- Land North of Derby Road (A6), Kegworth (EMP73 (part)) - 30,000sqm industry/warehousing floorspace - added (assume 50% industry, 50% warehousing; assumed trajectory 2025-2034)
--- Uniper site - "include" marker chagned to "Y" for parts of the site. Trajectory for parts of the site updated from 2023/24 to 2025/26.

'Highyway network assumptions:
--- Scheme 188 Blaby Desford Road/Ratby Lane signalisation (2022) - added
--- Scheme 189 Nottinghamshire A52 Gamston roundabout (2023) - added
--- Scheme 190 Nottinghamshire A52 Wheatcroft junction (2028) - added
--- Scheme 191 Nottinghamshire A52 Nottingham Knight junction (2028) - added

v7.0	Housing data	04/07/2024

--- Land North and South of Park Lane, Castle Donington (CD10) - trajectory u[pdated to start from 2027; "include" marker updated to "Y"
--- Isley Woodhouse (IW1) - "include" marker updated to "Y"

Employment data
--- Uniper site - "include" marker updated to "Y"
--- EMIP - "include" marker updated to "Y"
--- EMA Aviation expansion - "include" marker updated to "Y"
--- Land West of Hilltop Farm, Castle Donington (EMP89) - "include" marker updated to "Y"
--- Isley Woodhouse (IW1) - "include" marker updated to "Y"
--- Land to the north of J11 A/M42 (EMP82) - "include" marker updated to "Y"
--- Land North of Remembrance Way (A453), Kegworth (EMP73 (part)) - "include" marker updated to "Y"
--- Land North of Derby Road (A6), Kegworth (EMP73 (part)) - "include" marker updated to "Y"

PlanID	Authority	District	Source	Type	Mode	ZoneSett	Settlement	MapLoc	MapNorth	Location	Description	SiteHectare	Unit	Year_2019	Year_2020	Year_2021	Year_2022	Year_2023	Year_2024	Year_2025	Year_2026	Year_2027	Year_2028	Year_2029	Year_2030	Year_2031	Year_2032	Year_2033	Year_2034	Year_2035	Year_2036	Year_2037	Year_2038	Year_2039	Year_2040	Year_2041	Year_2042	Year_2043	Year_2044	Year_2045	Year_2046	Year_2047	Year_2048	Year_2049	Year_2050	Year_2051	Unit Total	Include	
EMPLOYMENT DATA																																															
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							9066		429911		310091	Mercia Park		Floorspace	m2					12832					35497																							48329	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							9066		429911		310091	Mercia Park		Floorspace	m2					30272	279007				35497																							344776	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7202	Castle Don	467220		327220	Strategic Rail Freight Interchange on land north of East Midlands Airport/west of Junction 24 of the M1		Floorspace	m2	176701	16493	77394		222177			6967																							499629	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7201	Bardon	455616		311960	Rear of Otherwood Arms (Land Off Gartergate Way)		Jobs								836																							836	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7253	Ashby de l	457666		316564	Former Lounge disposal point		Floorspace	m2					23333	233333	233334																							70000	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7308	Ashby de l	456343		317344	Money Hill		Sitewit	mark									1	1	1	1	1																	5	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7308	Ashby de l	456343		317344	Money Hill		Sitewit	mark									1	1	1	1	1																	5	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7308	Ashby de l	456343		317344	Money Hill		Sitewit	mark									1	1	1	1	1																	5	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7123	Ashby de l	435286		317105	Money Hill new primary school/nursery/community hall (assume 30 jobs - AD 01/02/2024)		Jobs																															30	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Retail							7123	Ashby de l	435286		317105	Money Hill local retail centre		Floorspace	m2										560																					560	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7377	Castle Don	464111		328705	Willow Farm		Floorspace	m2				1928																											1928	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7377	Castle Don	464111		328705	Willow Farm		Floorspace	m2				1928																											1928	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7377	Castle Don	464111		328705	Willow Farm		Jobs						288																											288	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7273	Castle Don	464329		324092	Park Lane, Castle Donington		Sitewit	mark					0	0	0	0	0																							1	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7273	Castle Don	464329		324092	Park Lane, Castle Donington		Sitewit	mark					0	0	0	0	0																							2	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7273	Castle Don	464329		324092	Park Lane, Castle Donington		Sitewit	mark					0	0	0	0	0																							2	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7273	Castle Don	464185		324675	Fuddigtge Primary School, Park Lane, Castle Donington (assume 30 jobs - AD 01/02/2024)		Jobs						30																										30	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7254	Kegworth	468150		327647	Cott Beverages, Citrus Grove, Kegworth		Floorspace	m2		19771																															19771	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7268	Ashby	457580		317228	Land North Of Lountside Flagstaff(Land Interchange Ind Est)		Floorspace	m2		3788																															3788	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7268	Ashby	455726		316562	Manor Farm Vicarage Lane Packington Ashby De La Zouch		Floorspace	m2			1		1				1	1																						3	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7380	Castle Don	463916		327097	Donington Hall, Park Lane, Castle Donington		Floorspace	m2		812																															812	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7201	Measham	458039		311176	Measham Lodge Farm, Gallows Lane, Measham		Floorspace	m2				651																													651	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7201	Measham	458039		311176	Measham Lodge Farm, Gallows Lane, Measham		Floorspace	m2				1303																													1303	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							6155	Ellistown	444548		310660	Land at Victoria Lane, Ellistown (in HBBC and NWLDC)		Floorspace	m2				10268																													10268	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7277	Castle Don	463738		328386	Plot 1, EMDC, Castle Donington		Floorspace	m2		51450																															51450	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7284	Castle Don	463742		328293	Plot 1, EMDC, Castle Donington office hub		Floorspace	m2		735																															735	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7284	Castle Don	463776		328231	Plot 3, EMDC, Castle Donington		Floorspace	m2						41005																											41005	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7281	Sawley	465896		329830	Sawley Crossroads		Floorspace	m2											60000																					60000	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7254	Measham	459497		312532	J S Bloor Ltd Ashby Road		Floorspace	m2				910																													932	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7253	Measham	457666		311176	Measham Lodge Farm Gartergate Industrial Estate , Beveridge Lane		Floorspace	m2				1																												1	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7253	Measham	457666		311318	Plastic Omnium, Hurdlegtton Way, Measham		Floorspace	m2						2529																											2529	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7216	Hugglescot	462716		312052	The Limes, Midland Road		Sitewit	mark			1																													1	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7213	Coalville	464366		312855	Land at Bardon Road		Floorspace	m2				11186																													11186	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7213	Coalville	464366		312855	Land at Bardon Road		Floorspace	m2				6392																													6392	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7366	Appleby M	457773		309574	Redhill Farm, Top Street, Appleby Magna		Floorspace	m2							992																									992	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7366	Appleby M	457773		309574	Redhill Farm, Top Street, Appleby Magna		Floorspace	m2							128																									128	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7317	Ashby	457580		317228	Land North Of Lountside Flagstaff(Land		Floorspace	m2								3600																							3600	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7249	Kegworth	467432		324139	Midehill Farm Ashby Road		Floorspace	m2						432																											432	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7201	Bardon	465183		311739	Land At Fi elds Road		Floorspace	m2			2296																													2296	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7286	Coalville	439450		315343	Heather Birdsworths Newton Road Heather Coalville Leicestershire LE67 2RD		Floorspace	m2							832	832	833																							2497	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7286	Coalville	439450		315343	Heather Birdsworths Newton Road Heather Coalville Leicestershire LE67 2RD		Floorspace	m2							1209	1209	1209																							3627	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7201	Coalville	464729		312486	Land East Of Nep Way Coalville Leicestershire		Floorspace	m2					13767																												13767	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7201	Coalville	464729		312486	Land East Of Nep Way Coalville Leicestershire		Floorspace	m2					13767																												13767	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7254	Kegworth	468618		327394	Slack and Parr , Long Lane Kegworth		Floorspace	m2		-3191																															-3191	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7007	Coalville	462248		313479	Worksplace 17 Highfield Street Coalville Leicestershire LE67 3BR		Floorspace	m2						-2137																										-2137	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7270	Ashby	459063		317966	Former Arla Dairy Smisby Road		Floorspace	m2		-5																															-5	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7131	Ashby	455180		317988	32 Tournament Way Ashby De La Zouch Leicestershire LE65 2UU		Floorspace	m2		-725																															-725	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Leisure							7131	Ashby	455180		317988	32 Tournament Way Ashby De La Zouch Leicestershire LE65 2UU		Floorspace	m2		725																															725	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7131	Ashby	455387		317976	York House Smisby Road Ashby De La Zouch Leicestershire LE65 2UG		Floorspace	m2						-839																											-839	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Leisure							7220	Coalville	463177		315127	Whitwick & Coalville Leisure Centre, Land Adjacent To A511 Stephenson Way Coalville Leicestershire		Floorspace	m2						5592																											5592	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Retail							7259	Ashby	457147		317146	Plot 2 Ashby Gateway Smithy Road Ashby De La Zouch Leicestershire		Floorspace	m2		1915																															1915	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7123	Ashby	458975		317088	Ashby Hastings Primary School, Holywell Farm Burton Road Ashby De La Zouch Leicestershire LE65 2LP (assume 30 jobs AD - 01/02/2024)		Jobs						30																											30	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7115	Ashby	455895		317030	Ivanhoe College North Street Ashby De La Zouch Leicestershire LE65 1HE (assume 10 jobs AD - 01/02/2024)		Jobs							10																											10	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							9058	Coalville	463609		315507	Land Off Grange Road Grange Road Hugglescote Leicestershire		Floorspace	m2															1000																			1000	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							9058	Coalville	463975		313484	Land Off Beveridge Lane Coalville (assume 30 jobs AD - 01/02/2024)		Jobs											30																							30	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Leisure							9058	Coalville	463699		315507	Land Off Grange Road Grange Road Hugglescote Leicestershire		Floorspace	m2												499																					499	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							9058	Coalville	463699		315507	Land Off Grange Road Grange Road Hugglescote Leicestershire (assume 30 jobs AD - 01/02/2024)		Jobs													30																					30	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Health							9058	Coalville	463699		315507	Land Off Grange Road Grange Road Hugglescote Leicestershire		Floorspace	m2												500																					500	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Leisure							7202	Breedon	465309		323014	Priory Nursery Garden Centre Ashby Road Breedon On The Hill Derby DE73 8AZ		Floorspace	m2								175																									175	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7277	Castle Don	464698		327798	Sherwood Self Store Station Road Castle Donington Derby DE74 2NJ		Floorspace	m2						-2480																										-2480	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Retail							7277	Castle Don	464698		327798	Sherwood Self Store Station Road Castle Donington Derby DE74 2NJ		Floorspace	m2						-1786																										-1786	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7269	Castle Don	464895		327148	Castle Donington High School And College Mount Pleasant Castle Donington Derby DE74 2LN (assume 10 jobs AD - 01/02/2024)		Jobs								10																										10	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7317	Ashby	455628		316405	SA Market Street Ashby De La Zouch Leicestershire LE65 1AF		Floorspace	m2					106																												106	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7131	Ashby	455249		317971	26 Tournament Way Ashby De La Zouch Leicestershire LE65 2UU		Floorspace	m2		32																															32	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7131	Ashby	454842		318051	Holywell Farm Smisby Road		Floorspace	m2		350																															350	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7263	Ashby	456775		317640	Plots L1 Ed Resolution Road Ashby De La Zouch Leicestershire		Floorspace	m2						223																												223	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7277	Castle Don	464376		328791	Plot 2B Willow Farm, Castle Donington		Floorspace	m2						208																												208	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7277	Castle Don	464376		328791	Plot 2B Willow Farm, Castle Donington		Floorspace	m2						1928																												1928	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7277	Castle Don	464376		328791	Plot 2B Willow Farm, Castle Donington		Floorspace	m2						1928																												1928	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7202	Coalville	462414		314458	1-4 Old Station Close Coalville Leicestershire LE67 3FH		Floorspace	m2		78																																78	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7202	Coalville	462414		314458	1-4 Old Station Close Coalville Leicestershire LE67 3FH		Floorspace	m2		78																																78	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7265	Coalville	464996		312207	Aerials, Tax h Street, Hilltop Ind. Est. Coalville		Floorspace	m2		140																																140	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7059	Coalville	461385		314483	Units 23 And 24 Sinbston Drive		Floorspace	m2				94																															94	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7226	Coalville	464179		316279	Vicarage Forest Farm Oaks Road Whitwick Coalville Leicestershire LE67 5QP		Floorspace	m2				94																															94	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7217	Hugglescot	463416		312409	Grange Farm, Grange Road		Floorspace	m2				133																															133	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7256	Measham	459487		312532	J S Bloor Ltd Ashby Road		Floorspace	m2				910																															910	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7283	Moira	461608		315638	Gilliam Ln 1 - 3 Ashby Road		Floorspace	m2						-603																												-603	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7114	Ashby De L	455701		316843	9, 10, 10a And 10 Brook Street Ashby De La Zouch Leicestershire LE65 1HA		Floorspace	m2						-1																												-1	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7283	Moira	461595		315270	Secura Lidelink Measham Road		Floorspace	m2		-682																																-682	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7269	Castle Don	464113		327324	37 Market Street Castle Donington Derby DE74 2LB		Floorspace	m2						-553																												-553	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7252	Castle Don	466087		325648	Future House Asg.sys Road Castle Donington Derby Derby DE74 2SA		Floorspace	m2						-120																												-120	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7007	Coalville	462352		313485	Worksplace 17 Highfield Street Coalville Leicestershire LE6 3bR		Floorspace	m2						-2137																												-2137	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7116	Ashby De L	455638		316821	6 Elford Street Ashby De La Zouch Leicestershire LE65 1HH		Floorspace	m2		-25																																-25	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7276	Donisthorp	457156		316516	Mallycrow Coaches Hill Street Donisthorpe Swadlincote Derby DE12 7PL		Floorspace	m2		-236																																-236	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7207	Coalville	461262		311648	Interlink Way S Bardon Coalville Leicestershire LE67 1LA		Floorspace	m2		-276																																-276	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7305	Ashby	455825		315750	4 Mill Farm Lane Ashby De La Zouch Leicestershire LE65 1GR		Floorspace	m2						16																												16	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7208	Ellistown	444105		310693	Land At Battleflat Lodge Farm Victoria Road Stanton Under Bardon LE67 3FA (Plot 3)		Floorspace	m2						2304																												2304	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7208	Ellistown	444105		310693	Land At Battleflat Lodge Farm Victoria Road Stanton Under Bardon LE67 3FA (Plot 3)		Floorspace	m2						2304																												2304	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7265	Coalville	464988		312160	Land Rear Of Unit Off Tax h Street Franks Road Bardon Leicestershire		Floorspace	m2						1678																												1678	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7265	Coalville	464988		312160	Land Rear Of Unit Off Tax h Street Franks Road Bardon Leicestershire		Floorspace	m2						1678																												1678	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7284	Castle Don	463198		328075	Plot 4 East Midlands Distribution Centre Trent Lane Castle Donington DE74 2HL		Floorspace	m2						30196																												30196	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7202	Ellsworth	461542		323617	The Crew Yard Langley Priory Way Cum Langley Ellsworth DE78 2QZ		Floorspace	m2						193																												193	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7205	Coalville	463396		316251	Former Church Hall North Street Whitwick Leicestershire LE67 5HB		Floorspace	m2				19																															19	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7205	Coalville	463396		316251	Former Church Hall North Street Whitwick Leicestershire LE67 5HB		Floorspace	m2				146																															166	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7111	Ashby	455795		316737	52 Market Street, Ashby		Floorspace	m2						-123																												-123	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7230	Coalville	462961		314561	3 The Courtyard Interlink Road Coalville Leicestershire LE67 4LP		Floorspace	m2						-75																												-75	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7052	Coalville	462338		314171	3B Belvoir Road Coalville Leicestershire LE67 3PE		Floorspace	m2						-47																												-47	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7233	Coalville	462645		314688	Unit 4 Apollo Court Coalville Leicestershire LE67 3FD		Floorspace	m2						-95																												-95	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7233	Coalville	462645		314688	Unit 4 Apollo Court Coalville Leicestershire LE67 3FD		Floorspace	m2						-95																												-95	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7286	Heather	439140		311642	Thorntree Farm Ravenstone Road Heather Coalville Leicestershire LE67 2SJ		Floorspace	m2							610																												610	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7286	Heather	439140		311642	Thorntree Farm Ravenstone Road Heather Coalville Leicestershire LE67 2SJ		Floorspace	m2							127																												127	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7249	Sawley	466681		330707	Walker Mouvement Ltd Tamworth Road Sawley Long Eaton Nottingham NG10 3AE		Floorspace	m2							127																												127	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7233	Coalville	463236		313918	117 London Road Coalville Leicestershire LE67 3JG		Floorspace	m2									-252																									-252	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7286	Coalville	439626		310662	MTS Logistics Mill Lane Heather Coalville Leicestershire LE67 2QE		Floorspace	m2									-1388																									-1388	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7201	Coleorton	465130		317879	Rowell And Son Anchor Lane Coleorton Coalville Leicestershire LE67 8HA		Floorspace	m2									-147																									-147	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7118	Ashby	455182		316497	Kilvard Dy House 6 - 8 Kilvardby Street Ashby De La Zouch Leicestershire LE65 2FU		Floorspace	m2									-477																									-477	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Warehousing							7280	Castle Don	463193		324925	Donington Hall Park Lane Castle Donington Derby DE74 2SS		Floorspace	m2									-2675																									-2675	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Industry							7280	Castle Don	463193		324925	Donington Hall Park Lane Castle Donington Derby DE74 2SS		Floorspace	m2									-378																									-378	Y	
IntEmp	Emp_NorthLincolnshireN	North West	Employment Office							7111	Ashby	455828		316737	60 Market Street Ashby De La Zouch Leicestershire LE65 1AN		Floorspace	m2	

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Highway Network Scheme Assumptions

Scheme No.	Location	Scheme Name	Included from...	Included
16	Earl Shilton	Access arrangements for SUE / Highway improvements for SUE	2026	Y
17	Barwell	Access arrangements for SUE / Highway improvements for SUE	2026	Y
18	Lubbesthorpe	Access arrangements for SUE including strategic traffic link to the A563 Lubbesthorpe Way	2021	Y
20	Loughborough	A512 widening B591 to M1 J23, improvements to J23 and completion of dualling thereafter to either Snell's Nook Lane or Epinal Way junction	2021	Y
23	Coalville	4. Bardon Road Link: Southern section only	2026	Y
24	Castle Donington	Western Link Road from Back Lane to Tops Hill, NWLDC package of measures to help mitigate growth planned	2021	Y
25	Lubbesthorpe	Link across M69 to join North and South of the Lubbesthorpe development.	2031	Y
26	Earl Shilton & Barwell	Highway improvements for SUE	2026	Y
27	Lubbesthorpe	Highway improvements for SUE	2026	Y
30	Loughborough	West of Loughborough SUE (access from the north via the A6 roundabout)	2022	Y
36	Blaby	Desford Crossroads	2026	N
37	Harborough	Harborough Strategic Development Area	2021	Y
38	Charnwood	North of Birstall SUE	2026	Y
39	Charnwood	Mountsorrel Lane, Rothley Link Road	2021	Y
40	Charnwood	A512 junction improvements	2021	Y
46	North of East Leicester	North of East Leicester Development Network - Thorpebury (previously Thurmaston) SUE.	2026	Y
53	Leicester City	Traffic Calming Schemes (Phase 2)	2021	Y
60	Leicester City	Welford Road	2021	Y
63	Leicester City	Waterside Development	2026	Y
66	Leicester City	Belgrave Gate South	2020	Y
70	Leicester City	Lancaster Road	2020	Y
71	Leicester City	Mansfield Street & Church Gate	2021	Y
72	Leicester City	SMBS Access to Burleys Way	2021	Y
73	Leicester City	Vaughan Way	2020	Y
74	Leicester City	Ashton Green	2021	Y
108	Leicester City	LNW2 Ravensbridge Drive / Blackbird Road	2020	Y
104	Melton	MMDR Northern Section	2026	Y
105	Melton	MMDR Eastern Section	2026	Y
106	Melton	MMDR Southern Section	2026	Y
109	Melton	Gladman's Site (Leicester Rd and Kirby Lane Access)	2021	Y
114	Leicester City	Beaumont Leys Anstey Lane Improvements	2021	Y
115	Hinckley	Hinckley Rugby Road Corridor Improvements - Phase 4	2023	Y
116	Leicester City	Putney Road West Improvement	2022	Y
117	Lutterworth	Frank Whittle Roundabout approaches	2021	Y
601	Lutterworth	Lutterworth East Development (Development Access (A4304, Gilmorton Road and A426))	2026	Y
602	Lutterworth	Lutterworth East Development associated mitigations	2031	Y
603	Lutterworth	Lutterworth East Development (Link Road between A4304 and A426)	2031	Y
604	Lutterworth	Lutterworth East Development (Gilmorton Road bridge bus restriction)	2026	Y
119	Bardon Hill	Bardon Hill Link Road North Section	2026	Y
120	Coalville	Hoo Ash Roundabout	2025	Y
121	Coalville	Thornborough Road Roundabout	2025	Y
122	Coalville	Dual Carriageway from Thornborough Rd to Whitwick Road	2025	Y
123	Coalville	Whitwick Road Roundabout	2025	Y
124	Coalville	Broom Leys Road Junction	2025	Y
125	Coalville	Bardon Link Road Junction	2025	Y
126	Coalville	Birch Tree Roundabout	2025	Y
128	Coalville	Flying Horse Roundabout	2025	Y
129	Coalville	Fieldhead Roundabout	2025	Y
134	Hinckley	DPD A5 Access	2021	Y
137	Padge Hall	Padge Hall Development Access	2024	Y
140	Leicester City	Abbey Park Road Cycle Provision	2021	Y
142	Blaby	A47/Kirby Lane Tesco Express	2021	Y
143	Leicester City	Abbey Street	2021	Y
144	Leicester City	A50 Groby Road Bus Lane	2022	Y
150	Harborough	Magna Park Extension Access - Mere Lane, Lutterworth	2021	Y
151	Harborough	Magna Park Extension Access - A5, Lutterworth	2026	Y

152	Blaby	Highway improvements for Lubbesthorpe SUE	2021	Y
153	Blaby	Foxhunter Roundabout Eastbound Approach	2021	Y
154	Loughborough	West of Loughborough SUE (connection to the northern arm of the A512 roundabout)	2036	Y
155	Harborough	B4114/B581 Signalisation Improvement, Broughton Astley	2026	Y
157	Blaby	Blaby DPD Site Access	2026	Y
158	Blaby	West of St Johns (Blaby DPD) Site Access	2026	Y
159	Harborough	Wigston Direction for Growth Site Access	2026	Y
160	Blaby	Everard Way Closure, Fosse Park	2020	Y
161	Loughborough	Access connection for the Science Park via the A512 roundabout	2031	Y
163	NWL	Money Hill Site Access A511	2026	Y
164	Derbyshire	Wragley Way (South Derbyshire) SUE Access A50	2031	Y
166	Derbyshire	Clifton (Rushcliffe) SUE Access	2022	Y
167	Derbyshire	EMIP A50 (Freeport)	2030	Y
169	Derbyshire	Toton Innovation Hub (HS2)	2026	Y
170	Nottinghamshire	Ratcliffe Power Station A453 (Freeport)	2030	Y
171	Rugby	Rugby Radio Station - A5 Access	2022	Y
174	North West Leicestershire	Mercia Park	2020	Y
175	Leicester City	Western Park Golf Course	2029	Y
176	Harborough	Kettering Road Signalisation	2021	Y
177	Charnwood	Shuttle signals on Tickow Lane (over bridge)	2022	Y
178	Charnwood	Buttercup Lane in Shepshed	2022	Y
179	Blaby	Dans Lane (A47)	2023	Y
180	Hinckley	B582 / B585 signalisation	2023	Y
181	Hinckley	A47 roundabout between Wykin Rd and Outlands Dr	2021	Y
502	M6 J10-13	M54-Stafford ALR	2021	Y
504	M54-M6 Toll	New Link Road min 2 lane motorway	2024	Y
507	M6 J13-J16	Stafford South to Stoke ALR	2022	Y
510	M1 J13-16	MK South - J16 ALR	2022	Y
513	M40 M42	M40 J16-M42 J3 ALR	2026	Y
516	A46 Coventry	Remove Binley and Walsgrove roundabouts M40-M6 as 'expressway standard'(ie all grade separated junctions)	2026	Y
520	A46 Toll Bar End	Grade separated jcn at TBE & Stonebridge Hwy to 3 lanes	2021	Y
526	Newark N	Dualling Newark N bypass first stages now in RIS 2	2031	Y
527	Newark S	A1-A46 link S of Newark; part constructed. Not in MRTM list	2031	Y
528	Lincoln E	A15-A158; under construction	2021	Y
529	Lincoln S	A158-A46; *sketchy details*; envisaged as dual carriageway… Assumed costing will be similar to Lincoln E bypass and will be 60mph single	2031	Y
530	Grantham S	A1-A52 link bypassing Grantham; under construction	2023	Y
9	Warwickshire	M6 J2 - J4 SMART motorway	2021	Y
201	Nuneaton and Bedworth Borough	Coton Arches	2021	Y
202	Nuneaton and Bedworth Borough	A4254b Eastboro Way P1	2024	Y
203	Nuneaton and Bedworth Borough	College Street / A444	2026	Y
204	Nuneaton and Bedworth Borough	Transforming Nuneaton	2026	Y
205	Nuneaton and Bedworth Borough	Croft Road/Greenmoor Road Priority	2031	Y
206	Nuneaton and Bedworth Borough	A47 Old Hinckley Road	2024	Y
207	Nuneaton and Bedworth Borough	Coventry Road / Gipsy Lane	2026	Y
208	Nuneaton and Bedworth Borough	A4254 / B4114 / Eastboro Way	2026	Y
209	Nuneaton and Bedworth Borough	Nuneaton Northern Sites Link Road	2026	Y
210	North Warwickshire	B5000 Market Street/Bridge St Signals	2026	Y
211	North Warwickshire	A5 Dualling between Grendon and Dordon Junction	2033	Y
213	Rugby Borough	A426/A4071 Avon Mill Roundabout/Newbold Road/Hunters Lane Priority Junction	2026	Y
214	Rugby Borough	Ashlawn Road/Hillmorton Road	2021	Y
215	Rugby Borough	A5 Northern Access to DIRFT III	2021	Y
216	Rugby Borough	A5/A428 Halfway House Roundabout	2026	Y
217	Rugby Borough	M1 Junction 18	2031	Y
218	Rugby Borough	M6 to Coton House	2021	Y
219	Rugby Borough	A5 Southern Access to DIRFT III	2021	Y
221	North Warwickshire	A5 dualling Grendon to Atherstone	2031	Y
223	Rugby Borough	M6 J2 Signalisation	2024	Y
250	Nuneaton and Bedworth Borough	Callendar Farm Phase 2	2031	Y
251	Nuneaton and Bedworth Borough	Bermuda Triangle Project	2026	Y

252	Rugby Borough	Ansty Park Access (Combe Fields Road)	2020	Y
182	Castle Donington	Land South of A50 J1 Development Access	2024	Y
183	Hinckley	B4114 Coventry Rd / Broughton Rd widening	2021	Y
184	Shepshed	A512 Ashby Rd Quarry access/signalised jnc	2021	Y
185	Bardon	Tungsten Park, Bardon A511	2021	Y
186	NWL	EMAGIC Segro EMG Phase 2 Development Access	2028	N
306	Leicester City	St George Street (Queen St to Southampton St)	2022	Y
307	Leicester City	Dover Street (Granby Street Jct)	2024	Y
305	Leicester City	Granby St (Bishop St to Halford St)	2024	Y
304	Leicester City	Granby St (N'hampton St to St George's Way)	2022	Y
303	Leicester City	Pocklingtons Walk	2022	Y
302	Leicester City	Aylestone Road, Saffron Lane to Oxford Street (A426)	2023	Y
301	Leicester City	Saffron Lane (B5366)	2023	Y
149	Leicester City	Duns Lane/Braunstone Gate	2023	Y
148	Leicester City	Abbey Park Road (Eastern section and bridge)	2023	Y
147	Leicester City	Anstey Lane (A5630)	2022	Y
146	Leicester City	St. Margaret's to Birstall (A6)	2024	Y
145	Leicester City	Melton Road (A607)	2023	Y
77	Leicester City	Belgrave Gate/Haymarket/Church Gate Pedestrianisation	2020	Y
187	NWL	A50 J1 signalisation of two additional arms (Tamworth Road and Trent Lane)	2025	Y
188	Blaby	Desford Road/Ratby Lane signalisation	2022	Y
189	Nottinghamshire	A52 Gamston roundabout	2023	Y
190	Nottinghamshire	A52 Wheatcroft junction	2028	Y
191	Nottinghamshire	A52 Nottingham Knight junction	2028	Y
n/a	Derbyshire	A38 grade-separated junctions (Kingsway Roundabout, Markeaton Island and Little Eaton Roundabout)	2024	Y
n/a	Broxtowe	Toton Link Road	2026	N