OXFORDSHIRE
STRATEGIC RAIL FREIGHT INTERCHANGE

DCO Submission

Environmental Statement

Chapter 3: Transport
Appendix 3.1: Transport Assessment Part 03 of 11 – Appendices 10 to 13

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Rev v2

On behalf of
Oxfordshire Railfreight Limited

Prepared by ADC Infrastructure Ltd
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APPENDIX 10

LIGHT VEHICLE TRIP DISTRIBUTION

Bicester, OxSRFI

Technical Note 4: Development Light Vehicle Trip Distribution

Oxfordshire Railfreight Ltd / Oxfordshire County Council

September 2025

Prepared on Behalf of Tetra Tech Environment Planning Transport Limited.
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1 INTRODUCTION

1.1.1 Tetra Tech has been appointed by Oxfordshire County Council to provide traffic and transport modelling services with regard to the Bicester Transport Model (BTM), and specifically the use of the model in relation to the proposed Oxfordshire Strategic Rail Freight Interchange (OxSRFI).

1.1.2 The BTM comprises a Public Transport Network, a Variable Demand Module (VDM) and a SATURN highways assignment model that is centred on Bicester town, covers the Cherwell District, and embraces the geographic area within which reassignment effects due to congestion or potential mitigation measures are likely to be significant.

1.1.3 The model is owned by Oxfordshire County Council (OCC), and maintained by Tetra Tech. It has been developed so that future year forecasting of traffic conditions in Bicester can be undertaken. This has included testing of proposed highways and development schemes in order to assess their comparative viability and to aid economic assessment.

1.1.4 The proposed OxSRFI will be located to the northwest of Bicester, in close proximity to M40 Junction 10, and within the extents of the BTM. It was therefore suitable to assess the traffic impacts of the OxSRFI using the BTM.

1.1.5 ADC Infrastructure Ltd, who are highway and traffic consultants for Oxfordshire Railfreight Ltd, have provided Tetra Tech with details of the approved peak hour traffic generation for OxSRFI, and this Technical Note has been produced to detail how the VDM has been used to distribute that traffic onto the highway network.

2 NETWORK MODELLING

2.1.1 The BTM has been developed for a base year of 2016, with the future year models for 2021, 2026 and 2031 having been originally produced to accord with the Local Plan implementation period.

2.1.2 The most recent validation of the BTM was undertaken by Tetra Tech in 2018 and was associated with the model being extended westwards to better represent the road network in the vicinity of the proposed Heyford Park development.

2.1.3 In 2022 the first series of revisions to the BTM uncertainty log were made, producing with it a set of future year reference case models as used by the previous modelling work for the OxSRFI.

2.1.4 In late 2024/early 2025 another update of the Uncertainty Log was undertaken for the latest version of the Cherwell Local Plan which consisted of a single forecast year of 2042.This version of the Uncertainty Log was then revised and expanded to cover the years of 2023, 2024, 2031 and 2034. These years, and an additional scenario in 2031 called the DfT Circular, were required for the OxSRFI modelling. For reference, the current Uncertainty Log covering all these assessment years is presented in **Appendix A**.

2.1.5 In July 2025, whilst conducting the OxSRFI modelling, a planning application was granted for a new logistics development by Albion Land, comprising of two sites near the Baynards Green roundabout (A43/B4100) and a subsequent mitigation scheme.

2.1.6 The decision was taken to revise the remodelled Reference Cases with the addition of these Albion Land sites, including both the demand and associated highway mitigation. To differentiate these from the initial reference cases these scenarios have been labelled with an ‘A’.

2.1.7 The 2034 Reference Case scenario with Albion Land (RC3A) has been used to produce an OxSRFI Do Something with Albion Land scenario (DS3A). This includes full traffic generation from the development and the following embedded infrastructure mitigation.

- M40 Junction 10 improvements.
- Further A43 / B4100 Baynards Green junction improvements.
- Ardley Bypass.
- Middleton Stoney Relief Road.
- Heyford Park Link Road.

- M40 Junction 9 improvements.
- A43 widened to 3 lanes between Padbury and Baynards Green.

2.1.8 A set of SATURN plots are presented in **Appendix B** that show how the items above are represented in the BTM network model.

3 VARIABLE DEMAND MODEL

3.1.1 The VDM produces synthetic trip matrices based on Dft TAG guidance, the 2011 Census Data, National Travel Survey and Journey to Work Information, in conjunction with the spatial data of the number of houses, the number of employees, the number of pupils and the retail floorspace within each zone being modelled.

3.1.2 The demand model has been calibrated against roadside interview data and using the 2011 Census data / journey to work data. Synthetic Production and Attraction (PA) matrices for a 24-hour period are produced by the demand model, disaggregated by trip purpose, car availability and mode.

3.1.3 The output Production and Attraction prior matrices derived from the demand model are converted to AM, IP, PM and the Off Peak (OP) period origin destination matrices according to derived proportions. Peak period to peak hour factors for each purpose are used to calculate the peak hour matrices for ten purpose types (see below). It should be noted that the OP period is used within the VDM model only and not assessed as part of the highway assignment validation.

3.1.4 There are ten trip purpose types modelled, as follows, comprising both home-based (HB) and non-home-based (NHB) trips:

- HB Commute.
- HB Employer's Business.
- HB Education.
- HB Shopping.
- HB Rest (this comprises all other HB purposes).
- NHB Commute.
- NHB Employer's Business.
- NHB Education.
- NHB Shopping.
- NHB Rest (this comprises all other NHB purposes).

3.1.5 The ten purpose OD highway matrices are aggregated for assignment, giving the following car matrices: Car Commute; Car Employers Business and Car Other for each peak period where Car Other sums the Education, Shopping and Rest purpose types.

4 OXSRFI LIGHT VEHICLE TRIP DISTRIBUTION

4.1.1 Trip generation for employment development is calculated within the VDM based on number of jobs, with the OxSRFI modelling assuming a total of 9,000 full time equivalent jobs.

4.1.2 ADC have also provided details of approved peak hour trips for the development, with light vehicle trip generation (without the impact of the Travel Plan) being as detailed in **Table 4-1**.

Table 4-1: OxSRFI Peak Hour Light Vehicle Generation

	Inbound	Outbound	Total
AM Peak Hour	903	97	1000
PM Peak Hour	298	1038	1336

4.1.3 In terms of creating trip matrices that include OxSRFI, the first stage has been to input the 9,000 employees figure into the VDM. This results in the development light vehicle trip generation detailed in **Table 4-2**.

Table 4-2: VDM OxSRFI Peak Hour Light Vehicle Generation (9,000 Employees)

	Inbound	Outbound	Total
AM Peak Hour	1185	163	1348
PM Peak Hour	342	1040	1382

4.1.4 The trip matrices have then been manually adjusted so that total OxSRFI trips match those in **Table 4-1**. The zone-to-zone percentage distribution has remained the same as that produced by the VDM, with just the number of light vehicles being adjusted.

4.1.5 The adjusted trip matrices have then been assigned to the network, and OxSRFI light vehicle distribution data extracted from the model. This distribution data has then been plotted onto OS mapping, and these plots are presented in **Appendices C to F**.

APPENDICES

APPENDIX A: UNCERTAINTY LOG

ID	Name	Dev Type	2023	2024	DfT Circular (2031)	2031	2034	2042	Certainty
Inf101	London Road level crossing	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf102	NW Bicester: Internal road network	Infrastructure	Partial	Partial	Yes	Yes	Yes	Yes	Near Certain
Inf103	NW Bicester: Strategic Link Road	Infrastructure	No	No	Yes	Yes	Yes	Yes	More Than Likely
Inf104	SE Bicester Wretchwick Green	Infrastructure	Partial	Partial	Yes	Yes	Yes	Yes	Near Certain
Inf105	SE Bicester Additional Area	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	More Than Likely
Inf109	Western peripheral corridor	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf110	Western peripheral corridor	Infrastructure	No	No	Yes	Yes	Yes	Yes	More Than Likely
Inf111	Eastern peripheral corridor	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Completed
Inf112	Eastern peripheral corridor	Infrastructure	No	No	No	No	No	No	Hypothetical
Inf113	Eastern peripheral corridor	Infrastructure	No	No	No	No	No	No	Hypothetical
Inf114	Eastern peripheral corridor:	Infrastructure	No	No	Yes	Yes	Yes	Yes	More Than Likely
Inf115	Pioneer Road roundabout improvements	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Completed
Inf155b	Ploughley Road	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf116	Southern peripheral corridor:	Infrastructure	No	No	No	No	No	No	Hypothetical
Inf117	London Road level crossing solution	Infrastructure	No	No	No	Yes	Yes	Yes	More Than Likely
Inf118	Oxford Rd / Pingle Drive juncrion	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Completed
Inf119	A41/ Neunkirchen Way Roundabout (Rodney House)	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Completed
Inf120	A41 Oxford Rd / Boundary Way roundabout	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Completed
Inf122	Bus Route S5/X5	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Near Certain
Inf123	Bus Route 25A (Now renamed 250)	Infrastructure	1ph	1ph	Yes	Yes	1ph	1ph	Near Certain
Inf124	Bus Route 500	Infrastructure	No	No	Yes	Yes	Yes	Yes	More Than Likely
Inf125	Bus Route E2	Infrastructure	No	No	Yes	Yes	Yes	Yes	More Than Likely
Inf126	Bus Route E3	Infrastructure	No	No	Yes	Yes	Yes	Yes	More Than Likely
Inf127	Bus Route 21	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Near Certain
Inf128	Bus Route SEB	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	More Than Likely
Inf129	Bus Route GH	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	More Than Likely
Inf130	Bus Route 26	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	More Than Likely
Inf131	Reading – Bedford with a headway of 60 minutes all day;	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	More Than Likely
Inf132	Reading – Milton Keynes with a headway of 60 minutes all day;	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	More Than Likely
Inf133	Bletchley – Milton Keynes with a headway of 60 minutes all day;	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	More Than Likely
Inf134	Milton Keynes – Marylebone with a headway of 60 minutes all day.	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	More Than Likely
Inf135	Evergreen3 from Chiltern Railway	Infrastructure	N/A	N/A	N/A	N/A	N/A	N/A	Completed
Inf136	Kingsmere Retail Mitigation Scheme	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Near Certain
Inf137	Bicester 10 transport mitigation	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf138	Bicester 11 Transport Mitigation	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Completed
Inf139	Skimmingdish Lane housing site mitigation	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Completed
Inf140	A4095 / A4260 Shipton Junction	Infrastructure	No	No	No	Yes	Yes	Yes	Near Certain
Inf141	Bicester 4	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf142	Heyford Park Existing Permission Infrastructure	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Completed
Inf143	HPA Mitigation: Public transport	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf145	HPA Mitigation: M40 J10	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf146	HPA Mitigation: B430 / Unammed Road Junction	Infrastructure	No	No	No	Yes	Yes	Yes	Near Certain
Inf147	HPA Mitigation:Hopcrofts Holt Junction	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf148	HPA Mitigation: Middleton Stoney Junction	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf149	HPA Mitigation: Ardley Village B430 Signalisation	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf150	HPA Mitigation: Chilgrove Drive / Camp Road Junction Upgrade	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf151	Great Wolf Lodge, Chesterton	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf152	Bicester Heritage (Hotel)	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf153	Bicester Heritage (Experience Quarter)	Infrastructure	No	No	Yes	Yes	Yes	Yes	More Than Likely
Inf154	Bicester Heritage (Innovation Quarter)	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf155	Bicester Catalyst	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Completed
Inf156	Siemens (Tritax Symmetry) - M40J9	Infrastructure	No	No	No	Yes	Yes	Yes	Near Certain
Inf157	Land at Lechmere Farm, Camp Road, Upper Heyford (Pye Homes)	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf158	Land south of Heyford Grange, Letchmere Farm, Upper Heyford (Pye Homes)	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf159	Bicester Sports Association (Chesterton)	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf161	Bicester Central Corridor	Infrastructure	No	No	No	Yes	Yes	Yes	Near Certain
Inf162	40mh on Biceter Ring Road	Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Completed
Inf158	Land south of Heyford Grange, Letchmere Farm, Upper Heyford (Pye Homes)	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain
Inf159	Bicester Sports Association (Chesterton)	Infrastructure	No	No	Yes	Yes	Yes	Yes	Near Certain

Bicester Transport Model Uncertainty Log - All Scenarios
Infrastructure Schemes

ID	Name		Dev Type	2023	2024	DfT Circular (2031)	2031	2034	2042	Certainty
Res101	Bicester Community Hospital Kings End		C3Dwellings	14	14	14	14	14	14	Completed (March 2017)
Res103	BICESTER 13: Gavray Drive		C3Dwellings	0	0	250	250	250	250	More Than Likely
Res104a	BICESTER 2: Graven Hill		C3Dwellings	0	0	0	0	283	1036	More Than Likely
Res104b	BICESTER 2: Graven Hill		C3Dwellings	446	446	1064	1064	1064	1064	Near Certain
Res105	KINGSMERE (South West Bicester) - Phase 1		C3Dwellings	1744	1744	1744	1744	1744	1744	Near Certain
Res106	Land at Skimmingdish Lane		C3Dwellings	46	46	46	46	46	46	Completed (Sept 2019)
Res107	Land South of Church Lane (Old Place Yard and St Edburgs)		C3Dwellings	0	0	14	14	14	14	Near Certain
Res108	Land South of Talisman Road		C3Dwellings	125	125	125	125	125	125	Completed (March 2018)
Res109	BICESTER 1: North West Bicester Eco-Town Exemplar Site		C3Dwellings	373	373	412	412	412	412	Near Certain
Res110a	BICESTER 1: North West Bicester Phase 2 (Remainder)		C3Dwellings	0	0	530	530	530	530	Near Certain
Res110b	BICESTER 1: North West Bicester Phase 2 (Remainder)		C3Dwellings	0	0	0	0	845	3100	More Than Likely
Res111	South East Bicester (Wretchwick Green) (Bicester 12)		C3Dwellings	0	0	1500	1050	1173	1500	More Than Likely
Res112a	BICESTER 3: South West Bicester Phase 2		C3Dwellings	401	401	649	649	649	649	Completed
Res112b	BICESTER 3: South West Bicester Phase 2		C3Dwellings	0	0	0	0	26	96	More Than Likely
Res115	Windfall Allowance (<10 dwellings)		C3Dwellings			208	208	208	208	-
Res116	Land at Bessemer Close / Launton Road		C3Dwellings	0	0	0	0	0	0	Completed (Dec 2019)
Res118i	VILLAGES 5: Former RAF Upper Heyford		C3Dwellings	813	843	1784	1784	1784	1784	Near Certain
Res118ii	VILLAGES 5: Former RAF Upper Heyford		C3Dwellings	5	135	998	340	519	998	Near Certain
Res121	Inside Out Interiors, 85-87 Churchill Road, Bicester		C3Dwellings	0	0	10	10	10	10	More Than Likely
Res122	Kings End Antiques, Kings End, Bicester		C3Dwellings	0	10	0	0	0	0	More Than Likely
Res123	Bicester Gateway Business Park, Wendlebury Road, Bicester (Phase 1B)		C3Dwellings	0	0	273	273	273	273	More Than Likely
Res124	The Paddocks, Chesterton		C3Dwellings	45	45	45	45	45	45	More Than Likely
Res126	Land North Of Oak View, Weston On The Green		C3Dwellings	0	20	0	0	0	0	More Than Likely
Res129	UNALLOCATED SITE (10 or more dwellings)		C3 Dwellings	0	0	0	0	0	0	
Res130	UNALLOCATED SITE (10 or more dwellings)		C3 Dwellings	0	0	0	10	10	10	
Res131	UNALLOCATED SITE (10 or more dwellings)		C3 Dwellings	0	0	0	65	65	65	
Res132	UNALLOCATED SITE (10 or more dwellings)		C3 Dwellings	0	0	0	66	66	66	
Res133	UNALLOCATED SITE (10 or more dwellings)		C3 Dwellings	0	0	0	84	84	84	
Res134	UNALLOCATED SITE (10 or more dwellings)		C3 Dwellings	0	0	0	55	55	55	
Res135	UNALLOCATED SITE (10 or more dwellings)		C3 Dwellings	0	0	0	147	147	147	
Res136	UNALLOCATED SITE (10 or more dwellings)		C3 Dwellings	0	0	0	120	120	120	
Res137	Bicester H1: North West Bicester (Cherwell Local Plan)		C3 Dwellings	0	0	0	0	943	3458	

Bicester Transport Model Uncertainty Log - All Scenarios
Residential Developments

ID	Name		Dev Type	2023	2024	DfT Circular (2031)	2031	2034	2042	Certainty
Emp101a	NW Bicester (Bicester 1)		Number of Jobs	1000	1000	1,000	1,000	1000	1,000	Completed
Emp101b	NW Bicester (Axis Jn 9 Phase 3)		Number of Jobs	0	0	200	200	200	200	More than likely
Emp102	Graven Hill (Bicester 2)		B8	0	0	104008	104,008	104008	104,008	Near Certain
Emp103	Bicester Business Park (Bicester 4)		B1(a)	0	0	60,000	60,000	60000	60,000	Near Certain
Emp104a	Bicester Gateway (Bicester 10 - Phase 1)		B1(a)	0	0	14,972	14,972	14972	14,972	Near Certain
Emp104b	Bicester Gateway (Bicester 10 - Phase 1)		Hotel	50	50	50	50	50	50	Completed
Emp105a	NE Bicester Business Park (Bicester 11)		B2	14,492	14,492	14,492	14,492	14492	14,492	Completed
Emp105b	NE Bicester Business Park (Bicester 11)		B8	33,816	33,816	33,816	33,816	33816	33,816	
Emp106a	Wretchwick Green (Bicester 12)		B1(c)	0	0	7,000	7,000	7000	7,000	Near Certain
Emp106b	Wretchwick Green (Bicester 12)		B8	0	0	62,708	62,708	62708	62,708	
Emp107	SE Bicester (Symetry Park) (Bicester 12)		Number of Jobs	0	0	1481	1481	1481	1,481	Near Certain
Emp114	Bicester Village Phase 4		Retail	5,181	5,181	5,181	5,181	5181	5,181	Completed
Emp115	Bicester Gateway (Kingsmere Retail)		Retail	9,913	9,913	9,913	9,913	9913	9,913	Near Certain
Emp116	McDonalds Drive-thru		Retail	548	548	548	548	548	548	Completed
Emp118	Heyford Park		Number of Jobs	40	40	1,181	1,181	1181	1,181	Near Certain
Emp119	Great Wolf Lodge, Chesterton		Number of Jobs	0	0	460	460	460	460	Near Certain
Emp120	Ardley Energy Recovery Facility [3]		Number of Jobs	0	0	0	0	0	0	Completed
Emp121	Bicester Heritage (Hotel)		Number of Jobs	0	0	180	180	180	180	Near Certain
Emp122a	Bicester Heritage (Experience Quarter)		Number of Jobs	0	0	200	200	200	200	More than likely
Emp122b	Bicester Heritage (Experience Quarter)		Number of Visitors	0	0	625	625	625	625	More than likely
Emp123a	Bicester Heritage (Extension to technical site)		B1(c)	2,177	2,177	2,177	2,177	2177	2,177	Completed
Emp123b	Bicester Heritage (Extension to technical site)		B2	2,177	2,177	2,177	2,177	2177	2,177	
Emp123c	Bicester Heritage (Extension to technical site)		B8	2,177	2,177	2,177	2,177	2177	2,177	
Emp124a	Bicester Heritage (Innovation Quarter)		B1(c)	0	0	7,331	7,331	7331	7,331	Near Certain
Emp124b	Bicester Heritage (Innovation Quarter)		B2	0	0	7,331	7,331	7331	7,331	
Emp124c	Bicester Heritage (Innovation Quarter)		B8	0	0	7,331	7,331	7331	7,331	
Emp125a	Bicester Catalyst		Number of Jobs	0	0	1,049	1,049	1049	1,049	Under Construction
Emp125b	Bicester Catalyst		Number of Jobs	110	110	110	110	110	110	
Emp126	Siemens (Tritax Symmetry) - M40J9		Number of jobs	0	0	1,315	1,315	1315	1,315	Reasonably Forseeable
Emp127	BICESTER E1		Number of jobs	0	0	0	0	1588	1,588	Reasonably foreseeable
Emp128	BICESTER E2		Number of jobs	0	0	0	0	0	854	Reasonably foreseeable
Emp129	BICESTER E3		Number of jobs	0	0	0	0	658	5,793	Reasonably foreseeable
Emp130	BICESTER E4		Number of jobs	0	0	0	0	1279	4,688	Reasonably foreseeable
Emp131	BICESTER E5		Number of jobs	0	0	0	0	169	618	Reasonably foreseeable
Emp132	Suhner House, Telford Road		Number of jobs	0	0	0	0	-16	-60	Reasonably foreseeable
Emp133	1 Talisman Road Bicester OX26 6HR		Number of jobs	0	0	0	0	15	56	Reasonably foreseeable
Emp134	Bicester Town Centre, Manorsfield Rd		Number of jobs	0	0	0	0	22	81	Reasonably foreseeable
Emp135	29 Murdock Road and 34B Murdock Road		Number of jobs	0	0	0	0	-12	-43	Reasonably foreseeable

Completion quantum and land use split (B1 / B2 / B8) remains as per previous uncertainty log
Completion quantum and / or land use slpit (B1 / B2 / B8) has been updated since previous uncertainty log.
Development was not in previous uncertainty log

Notes: (1) Completion rates are in square metres (sqm) of floor area, unless specified otherwise.

Bicester Transport Model Uncertainty Log - All Scenarios
Employment Development

ID	Name		Dev Type							Certainty
				2023	2024	DfT Circular (2031)	2031	2034	2042	
Sch101	Bicester – SW (Kingsmere)		600 place secondary school	600	600	600	600	600	600	Completed
Sch102	Bicester – SW (Kingsmere)		Primary	0	0	210	210	210	210	Completed
Sch103	Bicester – S (Graven Hill)		Primary: 2FE plus nursery	0	60	420	420	420	420	Completed
Sch104	Bicester – NW (Ecotown)		3 - 4 primaries	420	420	1365	1365	1365	1365	More Than Likely
Sch105	Bicester – NW (Ecotown)		Secondary	0	0	1200	1200	1200	1200	More Than Likely
Sch106	Bicester – SE		Primary: 2fe	0	0	420	420	420	420	More Than Likely
Sch107	Longfield		Primary	58	58	101	101	101	101	Completed
Sch108	Launton		Primary	35	35	0	35	35	35	Hypothetical
Sch109	St Edburgs		Primary	169	169	528	528	528	528	Completed
Sch110	Upper Heyford committed		Primary	0	0	0	280	280	280	Near Certain
Sch111	Upper Heyford committed		Secondary	0	0	180	180	180	180	Near Certain
Sch112	Upper Heyford allocation		Primary	0	0	0	315	315	315	Reasonably Foreseeable
Sch113	Upper Heyford allocation		Secondary	0	0	315	315	315	315	Reasonably Foreseeable
Sch114	Bicester		Primary	150	180	210	210	210	210	More Than Likely

Bicester Transport Model Uncertainty Log - All Sceanrios
Education Development

ID	Name	Dev Type	2023	2024	DfT Circular	2031	2034	2042	Certainty
Ret1	Bicester Village Phase 4	A1	5181	5181	5181	5181	5181	5181	Completed
Ret2	Bicester Gateway (Kingsmere Retail) (Bicester 3)	A1 / A3 / D2	9913	9913	9913	9913	9913	9913	Completed
Ret3	McDonalds Drive-thru	A1 / A5	548	548	548	548	548	548	Completed

Notes: (1) Completion rates are in square metres (sqm) of floor area.

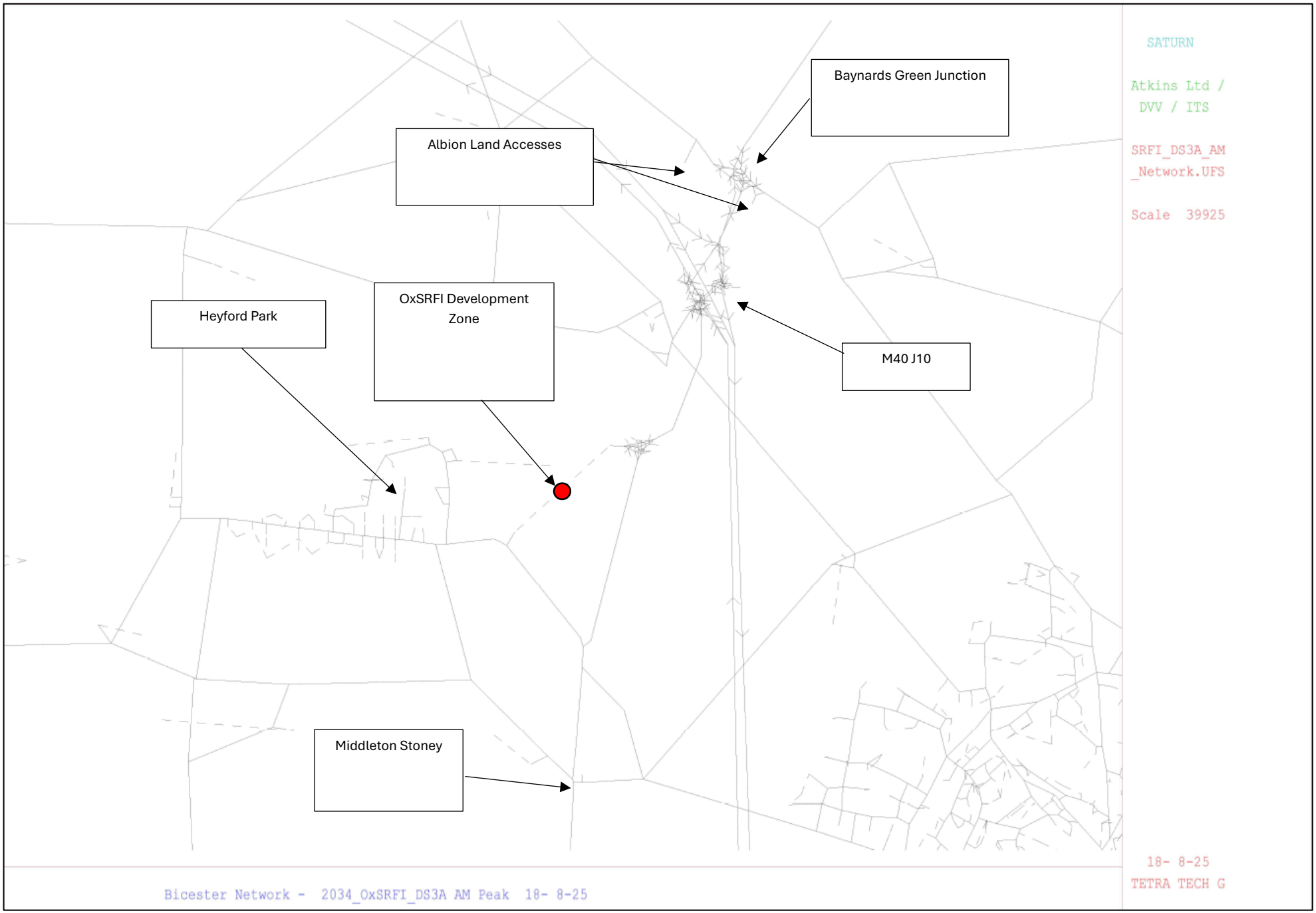
Bicester Transport Model Uncertainty Log - All Sceanrios
Retail Development

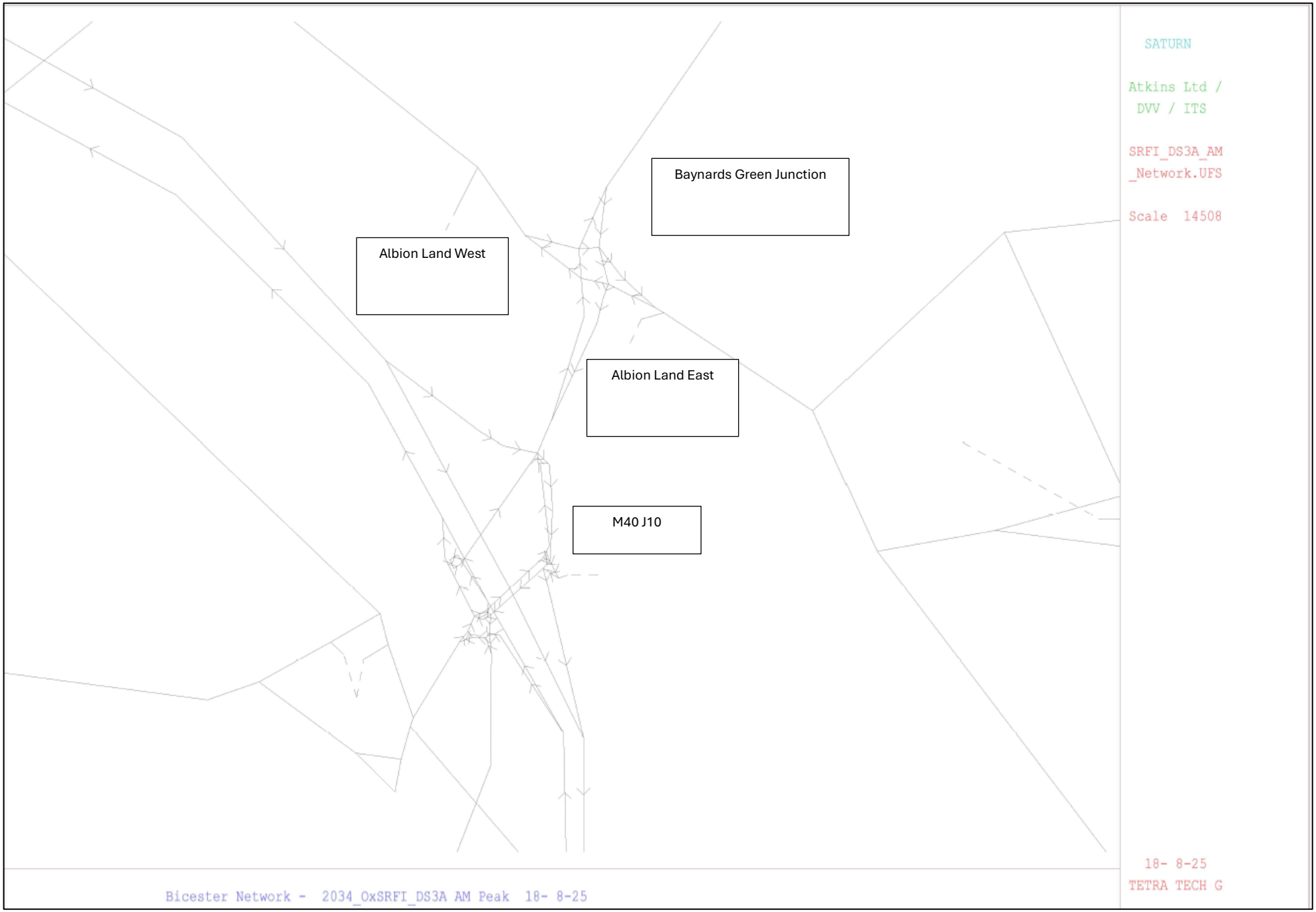
ID	Name	Description / Planning Reference / Notes	Dev Type	2023	2024	2031	2034	2042	Certainty
Other1	Bicester Sports Association (Chesterton)	**19/00934/F**: Change of Use of Agricultural land and extension of the existing Bicester Sports Association facilities for enhanced sports facilities including relocation and reorientation of existing pitches and archery zone, 2 No training pitches with floodlighting, 2 No match pitches, new flexible sports pitch, new rugby training grids, new clubhouse with events space, new rifle and shooting range, cricket scorers building, storage and maintenance buildings and provision of associated car parking, amended access, landscaping and other associated work. **Note**: Traffic generation and distribution to be added into the BTM fixed trip car matrix, to match the data presented in the Pell Frischmann Transprt Statement and Technical Notes that accompanied the planning application	-			Full development	Full development	Full development	Near certain

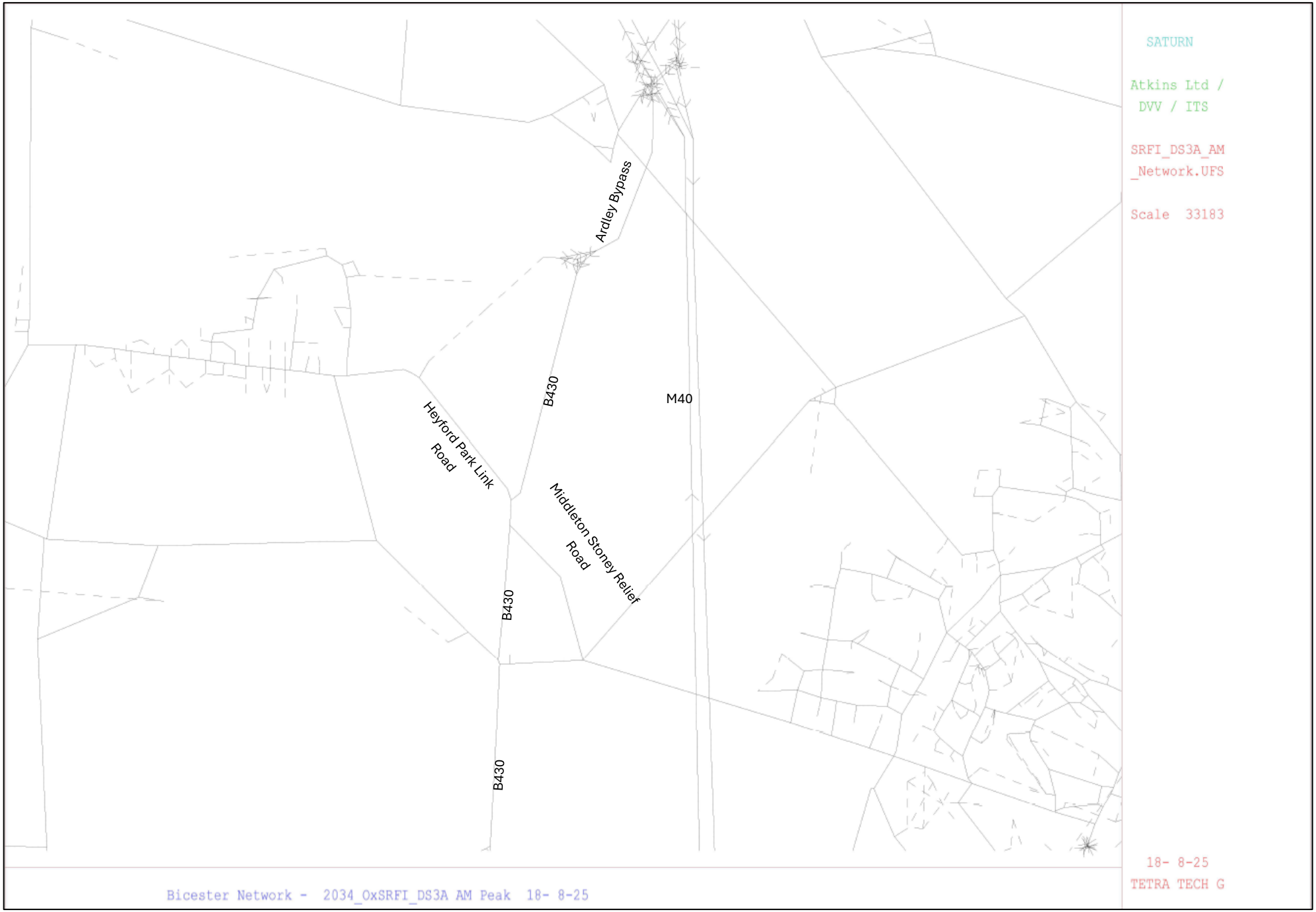
Notes: (1) Developments in this table fall outside of the land use types used in the BTM Variable Demand Model (Residential / Retail / Employment / Schools)
(2) It has been assumed that Other1 will all be fully built out by 2026

Bicester Transport Model Uncertainty Log (2042 Cherwell Local Plan Sceanrio)
Other Land Use Types

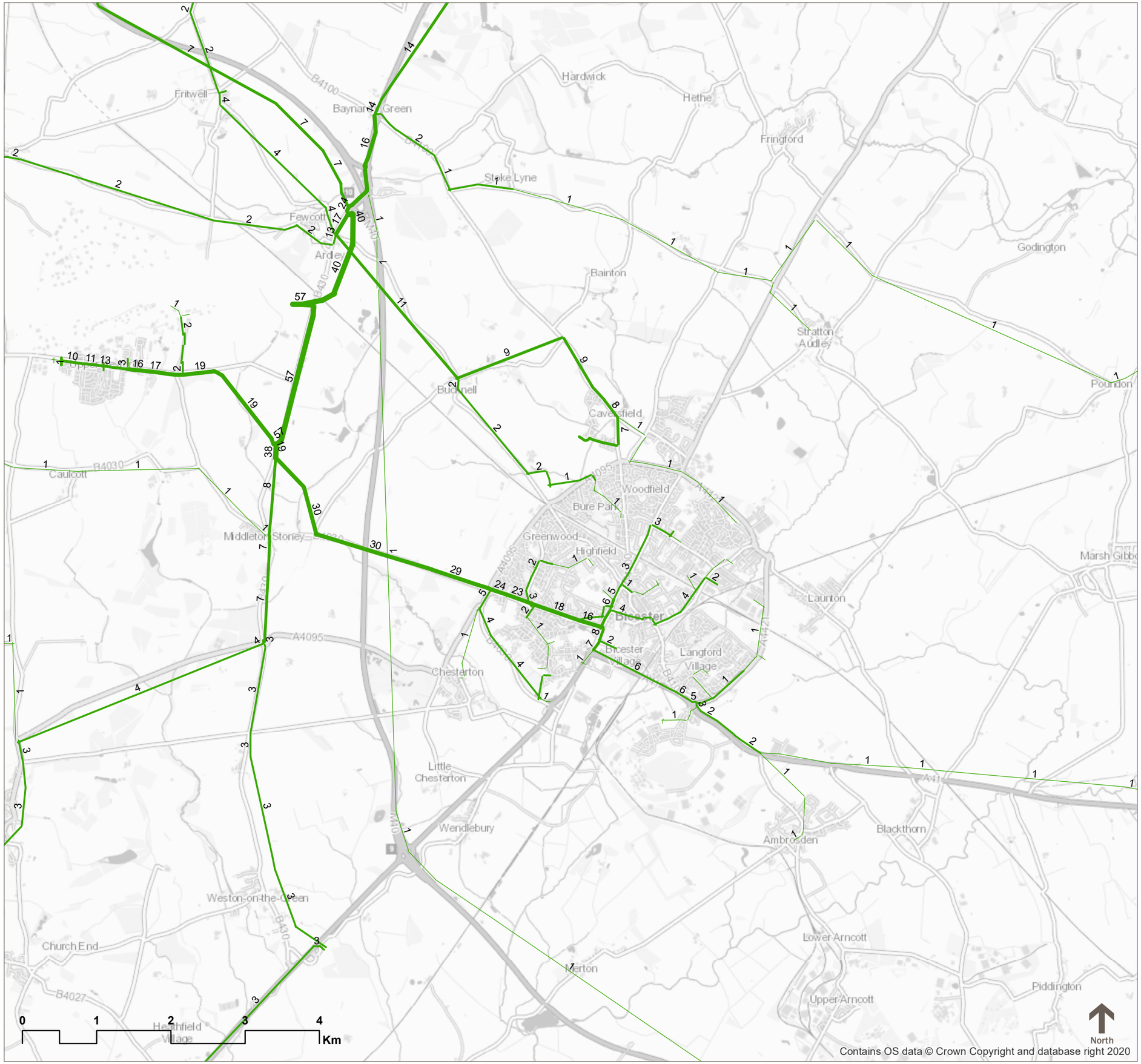
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Baynards Green Junction
Albion Land Accesses
Heyford Park
OxSRFI Development Zone
M40 J10
Middleton Stoney
SATURN
Atkins Ltd / DVV / ITS
SRFI_DS3A_AM_Network.UFS
Scale 39925
18- 8-25
TETRA TECH G
Bicester Network - 2034_OxSRFI_DS3A AM Peak 18- 8-25


Baynards Green Junction
Albion Land West
Albion Land East
M40 J10
SATURN
Atkins Ltd /
DVV / ITS
SRFI_DS3A_AM
_Network.UFS
Scale 14508
18- 8-25
TETRA TECH G
Bicester Network - 2034_OxSRFI_DS3A AM Peak 18- 8-25


Ardley Bypass
B430
M40
Heyford Park Link Road
Middleton Stoney Relief Road
B430
B430
SATURN
Atkins Ltd / DVV / ITS
SRFI_DS3A_AM_Network.UFS
Scale 33183
18- 8-25
TETRA TECH G
Bicester Network - 2034_OxSRFI_DS3A AM Peak 18- 8-25

APPENDIX C: AM OUTBOUND DISTRIBUTION PLOTS



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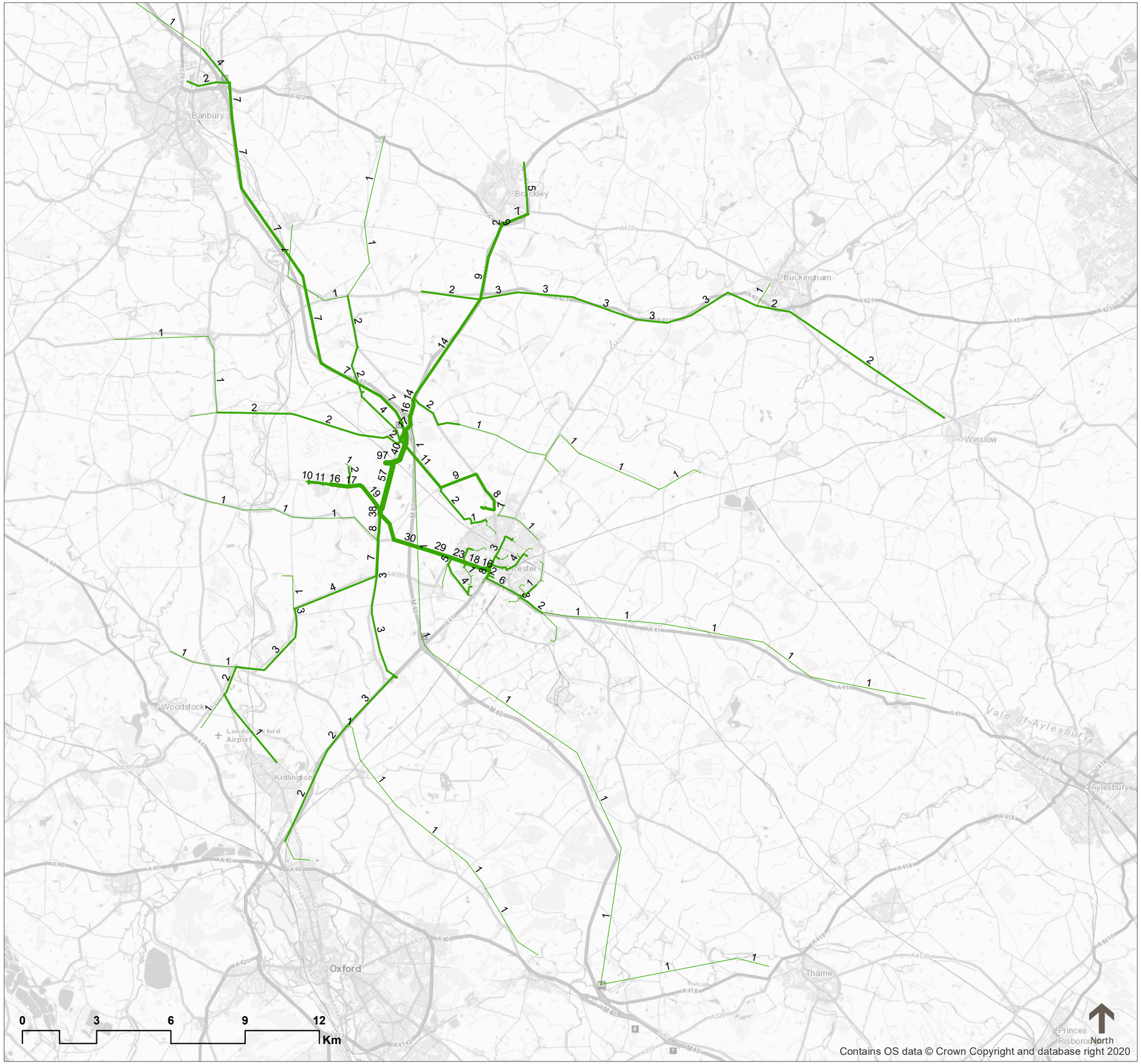
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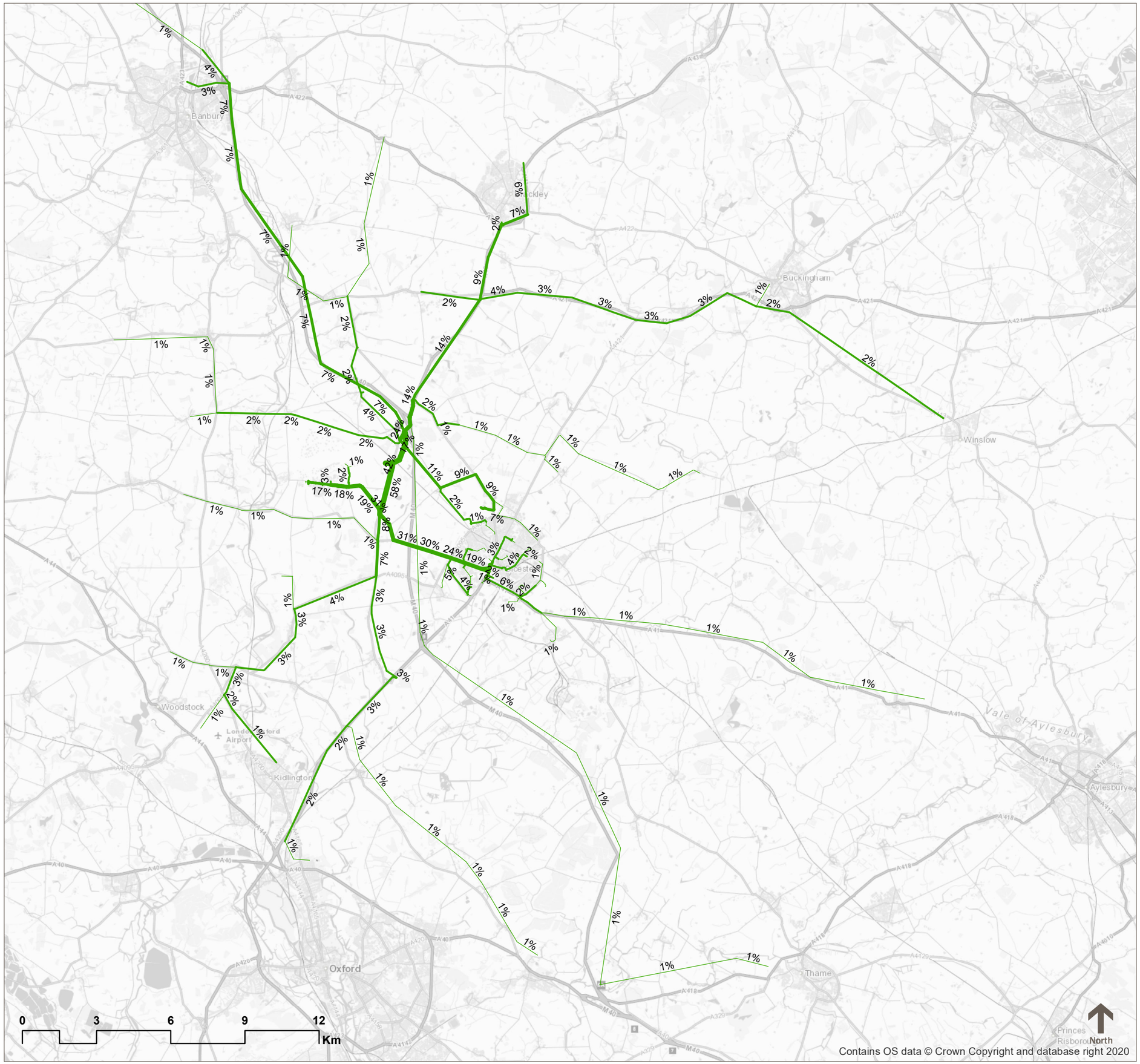
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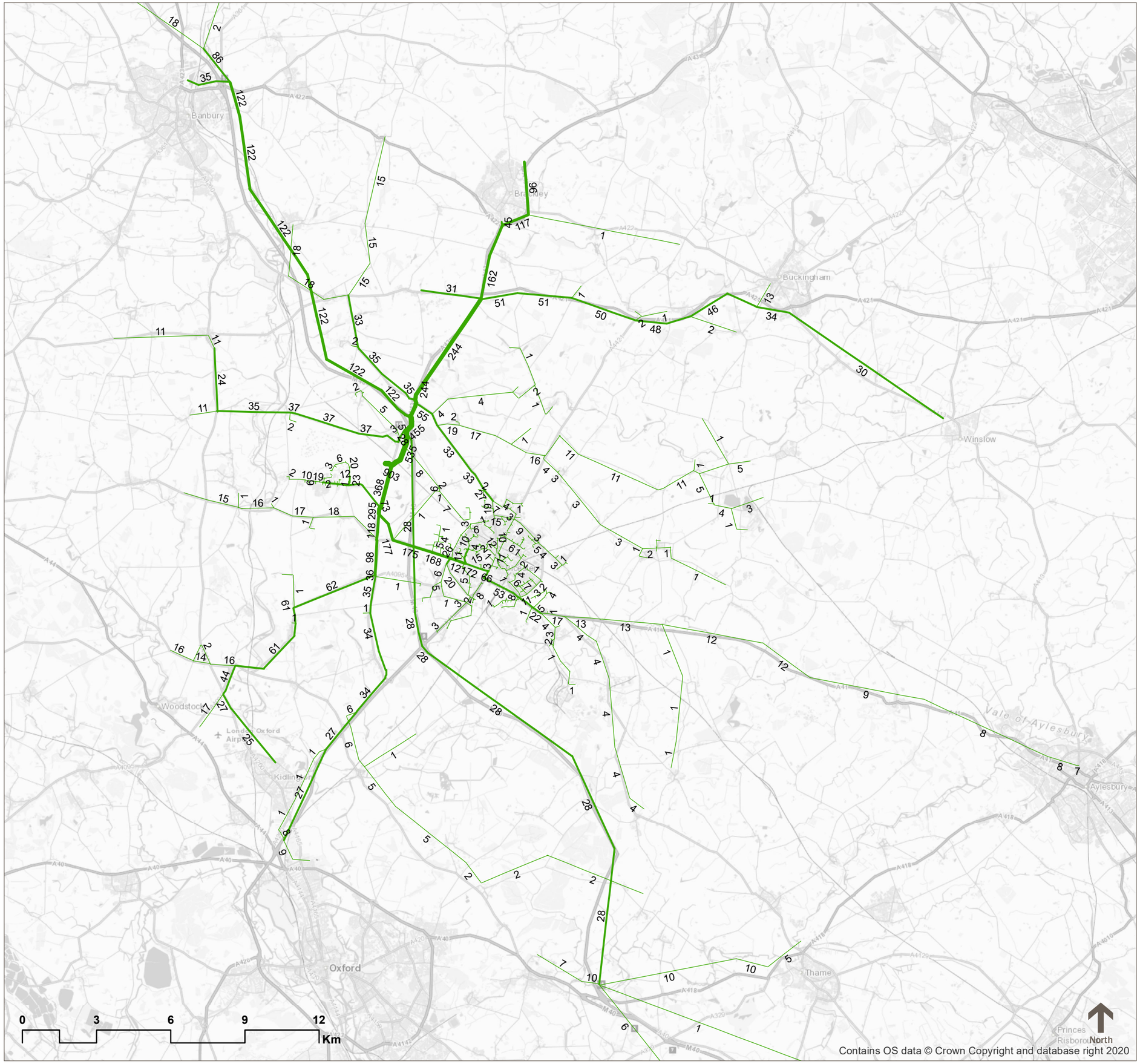
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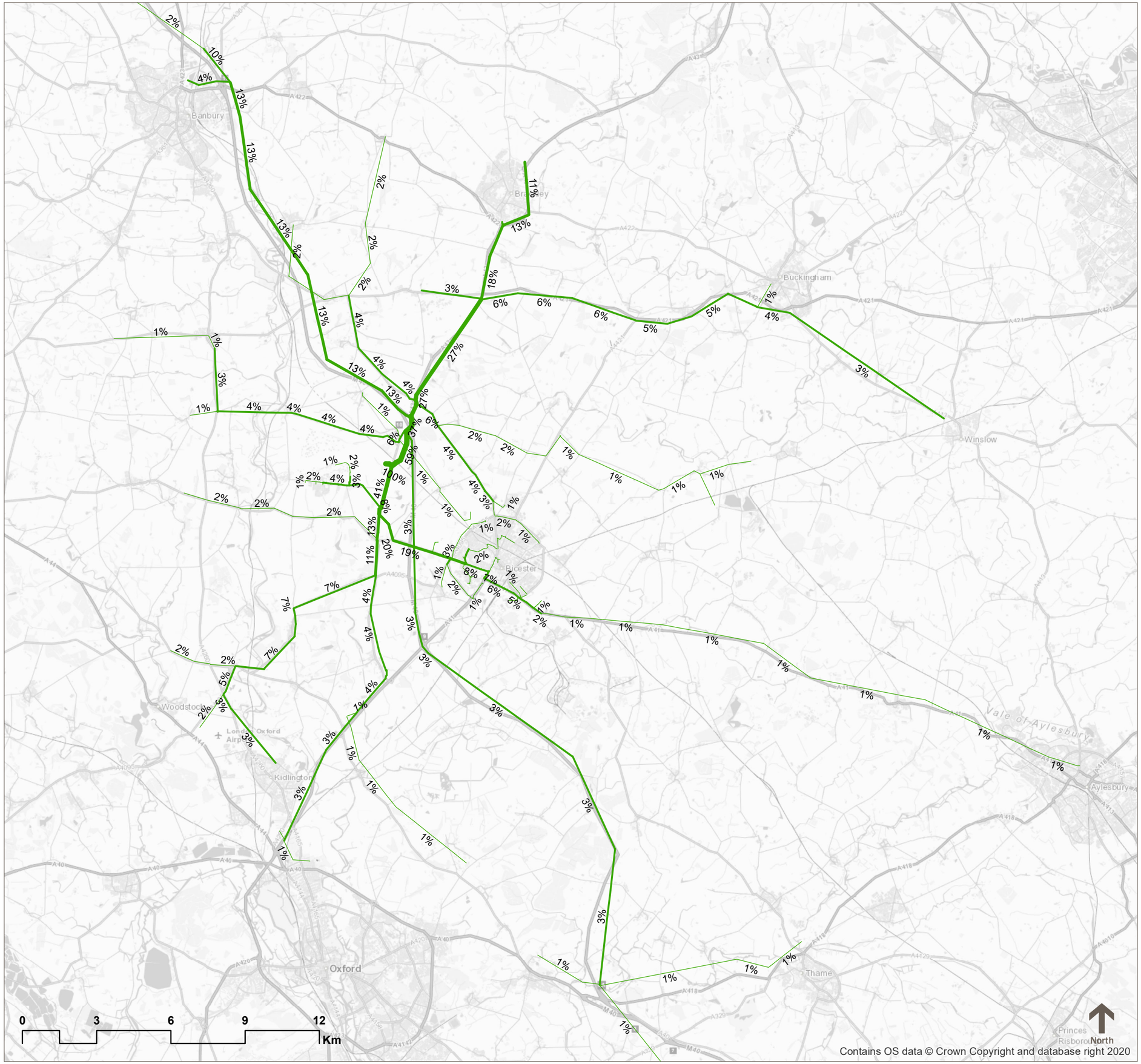
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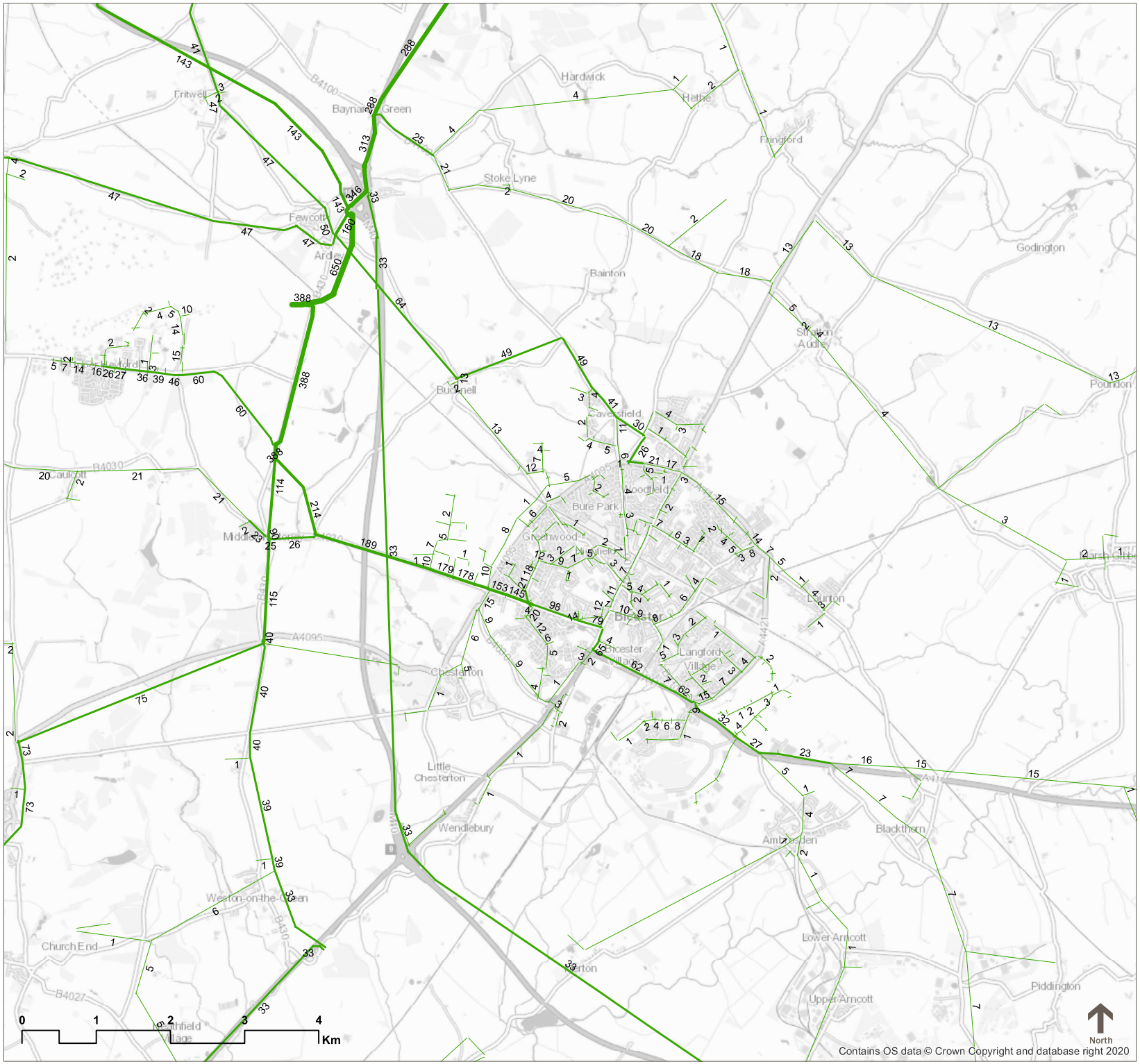
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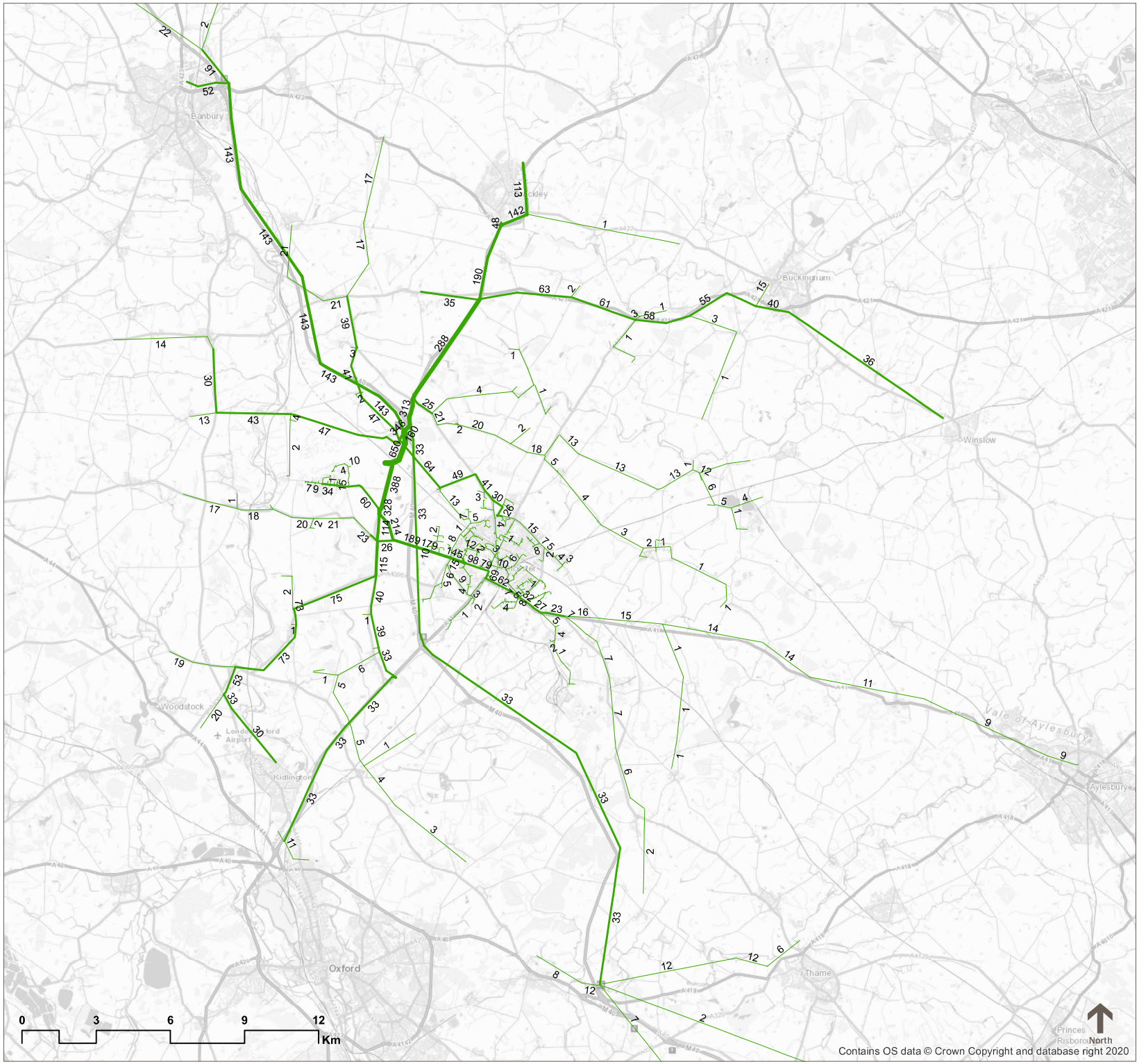
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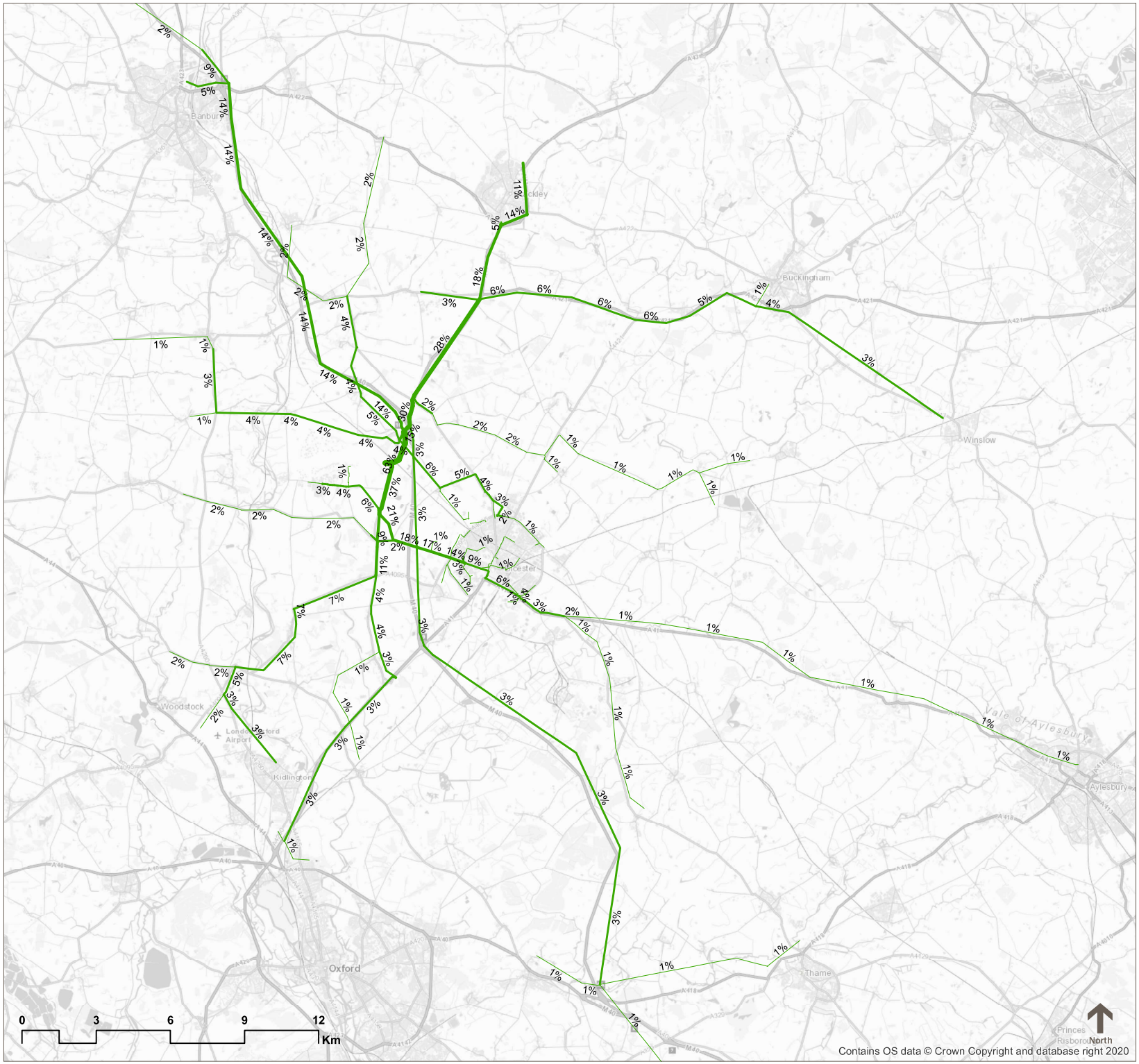
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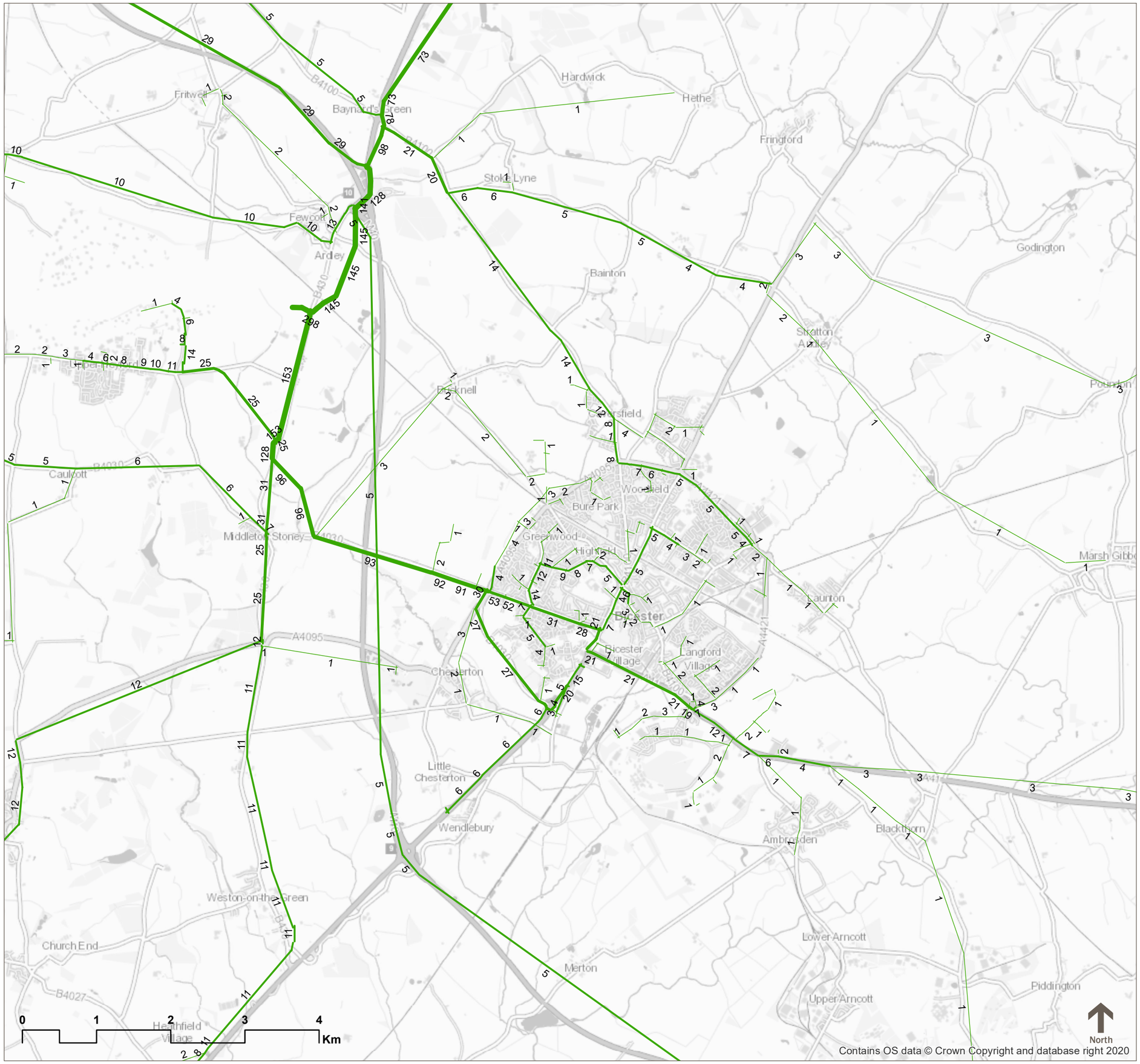
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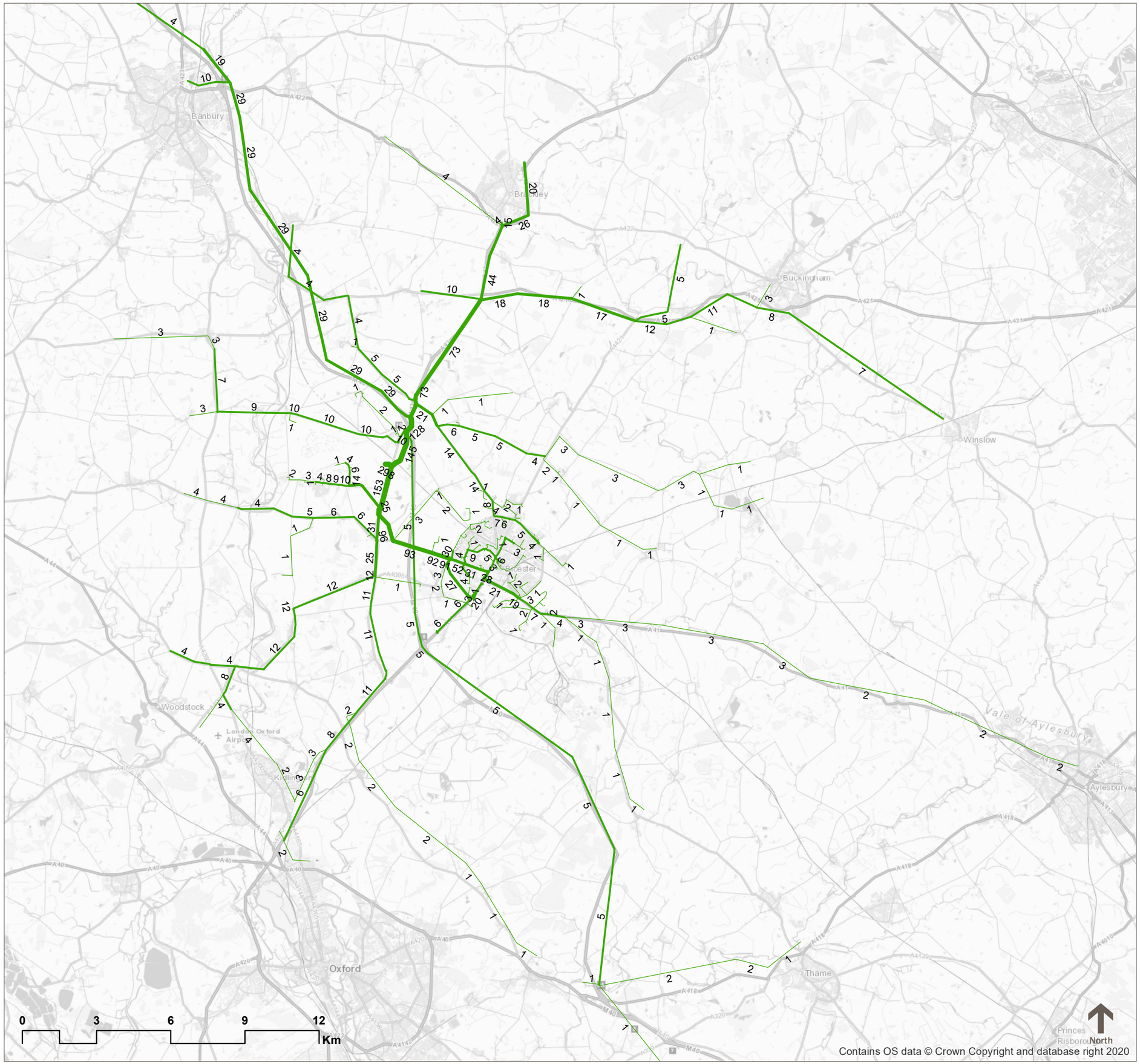
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Number of Cars

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Number of Cars

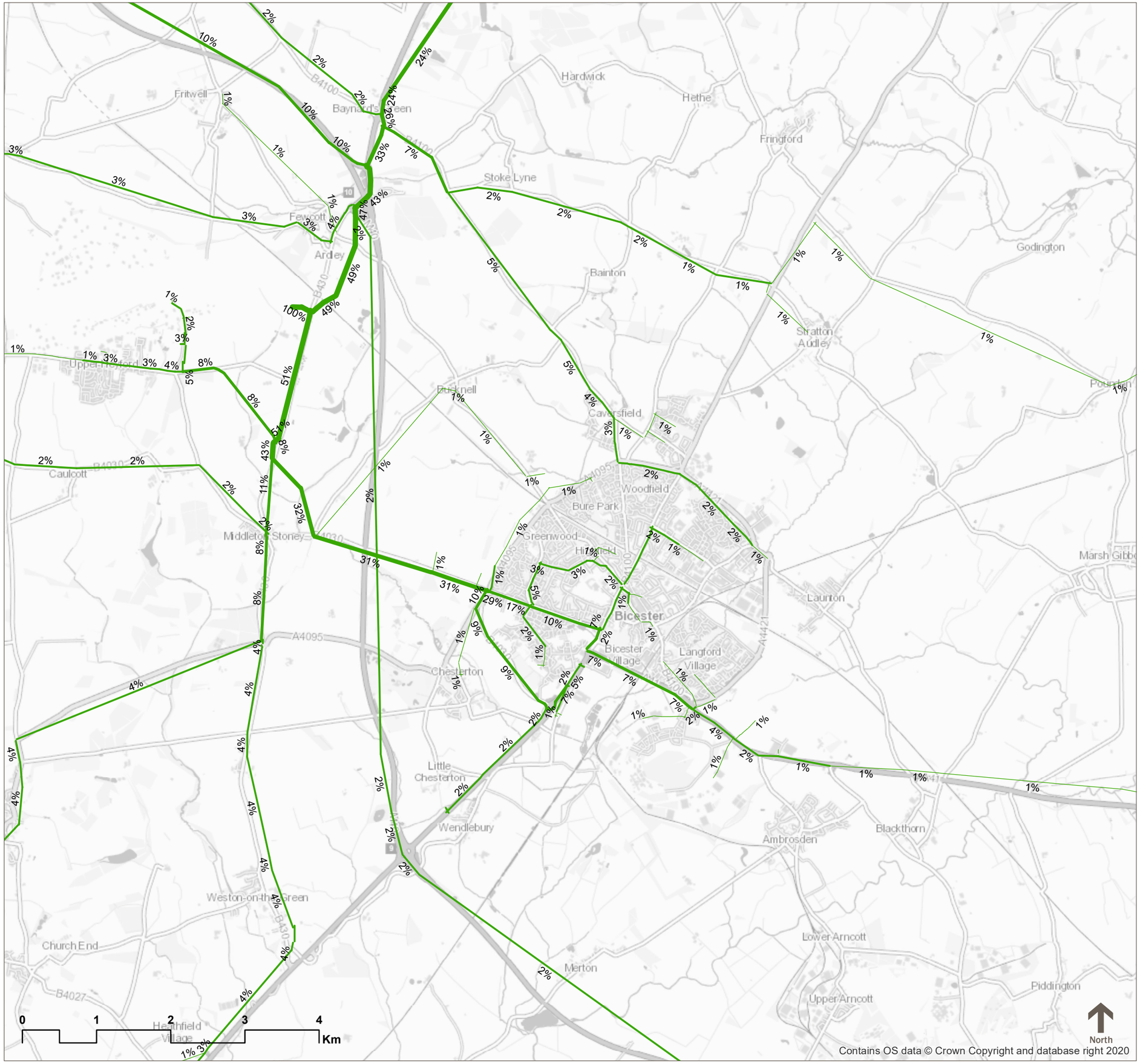
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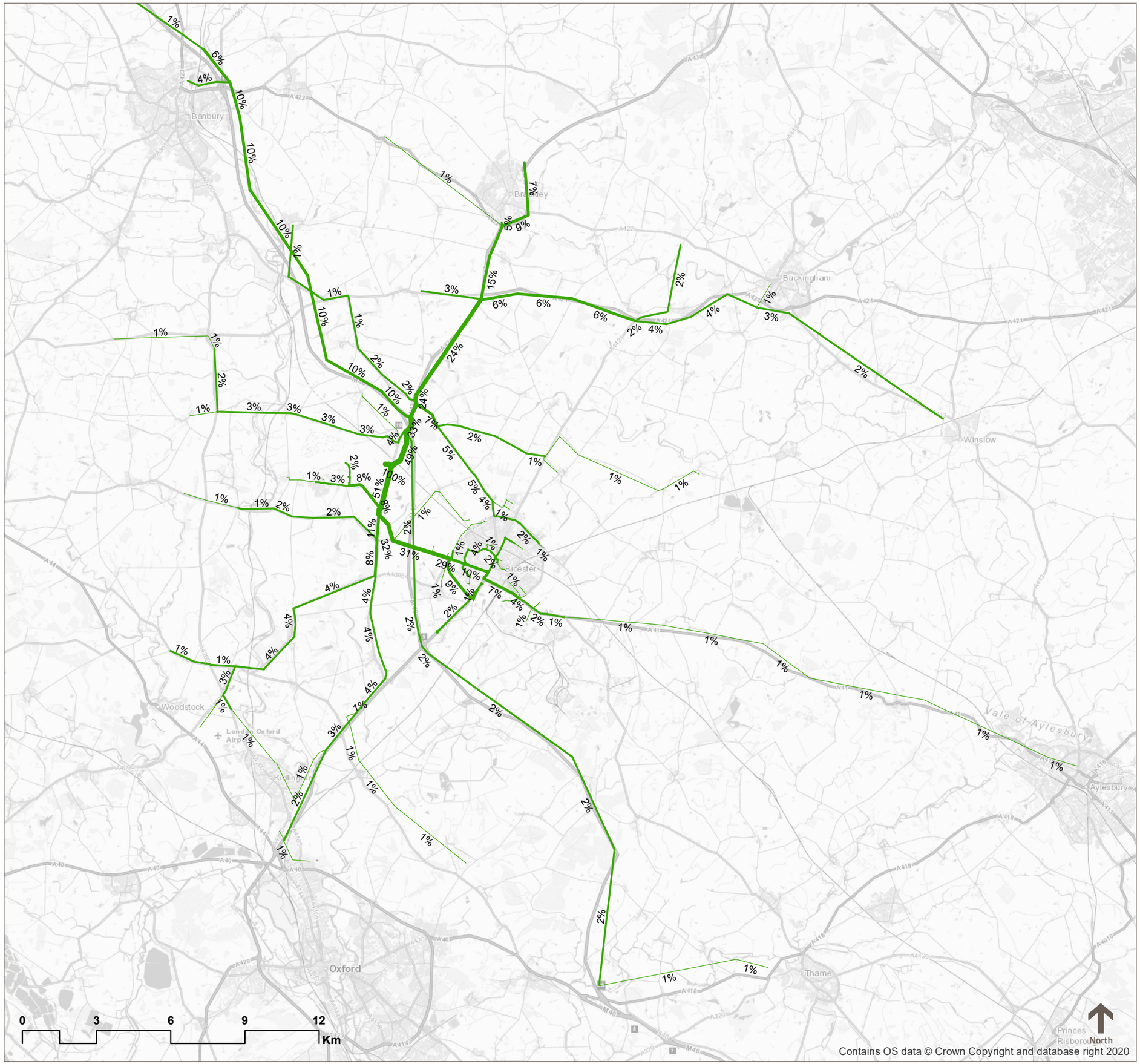
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APPENDIX 11

TN4: HGV TRIP DISTRIBUTION

OXFORDSHIRE RAILFREIGHT INTERCHANGE LIMITED

TECHNICAL NOTE 4: HGV TRIP DISTRIBUTION

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www.ADCinfrastructure.com

project number: ADC1794			report reference: ADC1794-RP-K
version	date	author(s)	comments
1		[redacted]	internal draft
2	01/02/2021		for issue to Transport Working Group
3	17/05/2021		updated to incorporate Transport Working Group comments
4	03/08/2022		methodology revised as agreed with Transport Working Group

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Table 4 'National' HGV distribution
Table 5 'Regional' HGV distribution
Table 6 External HGV trips associated with rail terminal
Table 7 External HGV trips associated with warehousing
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Appendix A Total External HGVs (Table 7 extracted from Technical Note 3: Trip Generation)
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Appendix C DfT Road Freight Statistics (2019) data
Appendix D DfT Road Freight Statistics (2019) data calculations
Appendix E Gravity model calculations of the regional area

1.0 INTRODUCTION

1.1 ADC Infrastructure Ltd are appointed by Oxfordshire Railfreight Interchange Ltd (the Applicant) to assess the transport and infrastructure requirements of a Nationally Significant Infrastructure Project (NSIP), that being a proposed Strategic Rail Freight Interchange in Oxfordshire, to be known as OxSRFI.

1.2 The Bicester Transport Model (BTM) is to be used to examine the transport impacts of the proposed OxSRFI scheme. The BTM can calculate a trip distribution for light vehicle trips. This will be used to determine the light vehicle trip distribution associated with OxSRFI. To appropriately represent the movement of heavy goods vehicles (HGVs) associated with the OxSRFI development within the BTM, it is necessary to determine a bespoke HGV trip distribution for the development.

1.3 Initially a methodology for the calculation of the HGV distribution using the same approach to that approved as part of the consented Northampton Gateway SRFI was considered. National Highways (NH) said that the same approach may be acceptable in principle for OxSRFI. However, they recommended that consideration be given to alternative methodologies such as the potential use of the Great Britain (GB) Freight Model to refine the likely HGV trip distribution.

1.4 The use of the GB Freight Model was therefore also considered, and the findings reported back to NH and Oxfordshire County Council (OCC) in February 2022.

1.5 ADC Infrastructure met with NH on 6 April 2022 to discuss the HGV trip distribution work. At that meeting it was agreed that the 50% HGV distribution share associated with the main seaports identified in the GB Freight Model was appropriate to take forward into the OxSRFI HGV distribution work. However, based on the review work undertaken by Aecom on behalf of NH, NH considered that the GB Freight Model showed some unusual concentrations of HGV distributions, in particularly in rural areas to the west of the site and around Banbury. NH also identified concerns that the Northampton Gateway SRFI methodology may lead to an underrepresentation of HGVs using the A34, whereas they were concerned that the GB Freight Model methodology may lead to an overrepresentation of HGVs using the A34. ADC Infrastructure noted that the Applicant was not promoting the use of GB Freight Model and the preference was to develop a bespoke HGV distribution that would represent the location of the OxSRFI site.

1.6 Previous work had also considered the HGV distribution methodology applied at the most recently consented SRFI scheme, West Midlands Interchange (WMI) SRFI. NH confirmed that they were generally supportive of the WMI methodology. It was agreed that ADC should consider the WMI methodology but look to incorporate the port-based distribution share identified from the GB Freight Model work and consider means to minimise the potential boundary effects that could potentially influence the HGV distribution for the OxSRFI site, due to its location on the confluence of Oxfordshire, Warwickshire, and Northamptonshire.

1.7 ADC Infrastructure incorporated the above into a revised HGV distribution methodology, which was submitted in draft to NH and OCC on 14 June 2022. A further meeting with NH and OCC was then held on 6 July 2022, to review the revised methodology. The methodology was agreed in principle at the meeting, and it was agreed that ADC Infrastructure should update this technical note to report the findings, and for formal submission to the Transport Working Group for agreement.

1.8 Accordingly, this technical note presents the methodology proposed to determine the HGV trip distribution associated with OxSRFI for use in the transport modelling work and Transport Assessment (TA) for the scheme. The document is structured as follows:

- Section 2 summarises the proposed OxSRFI HGV trip generation from Technical Note 3.
- Section 3 details the methodology used to calculate the HGV trip distributions.
- Section 4 defines which HGV trips should be assigned to the highway network using the HGV trip distributions.

2.0 HGV TRIP GENERATION

2.1 The trip generation for the development is set out in Technical Note 3[1], which has been agreed with the Transport Working Group. Table 7 of Technical Note 3 summarises the HGV trip generation for OxSRFI. A copy of the table is included at **Appendix A** of this note.

2.2 It should be noted that not all the HGV traffic associated with the proposed OxSRFI would be new traffic to the road network, as container movements associated with existing end users would already be taking place on both the strategic and local road network.

2.3 For example, instead of goods destined for Banbury arriving by HGV having travelled from Southampton Port on the A34 and M40, the containers may be transferred to the region by rail, arriving at OxSRFI to then be distributed from the site to the local area by HGV.

2.4 The development would therefore alter the assignment of HGV trips, particularly around the site itself, as the development will result in modal shift to rail and provide a distribution hub.

2.5 Nevertheless, it is not possible at this stage to identify which HGV trips would be transferred from one route to another. Therefore, all HGV traffic will be assigned to the highway network as new trips. This will lead to some possible double counting of HGV movements that may need to be considered when reviewing the potential impacts of HGV traffic at locations more remote from the site.

2.6 However, this methodology provides a robust basis on which to assess the highway mitigation works that are proposed as part of the scheme.

[1] Oxfordshire SRFI Technical Note 3: Trip Generation. Report Reference ADC1794-RP-J-V3, ADC Infrastructure Ltd, 16 April 2021.

3.0 HGV TRIP DISTRIBUTION

Introduction

3.1 Within the UK, most of the imported container traffic is distributed to regional and national distribution centres. A high proportion of distribution centres are in the Midlands area, which is well placed for distribution by road as it is served by the M1 and M6 in the north, and the M40, M1 and M25 in the south. Currently, there is also a concentration of SRFIs in the Midlands, principally along the M1 and M6 corridors. This existing concentrated network is due to be reinforced with consented proposals at Northampton (Northampton Gateway SRFI), and Wolverhampton (WMI SRFI). There are currently no SRFIs along the M40 corridor, and none which serve Oxfordshire. An Oxfordshire SRFI would be capable of expanding the existing network of SRFIs, meet the needs of existing and future businesses in Oxfordshire and be capable of helping to meet the needs of London and the Midlands.

3.2 This section therefore sets out the methodology used to determine the HGV trip distribution for the proposed OxSRFI. It is based on the work undertaken in consultation with NH and OCC as described in Section 1 of this report.

3.3 The methodology considers the location of the site in relation to the strategic road network and the main container ports and uses DfT Road Freight Statistics (2019) data to determine an appropriate national distribution for HGV movements, combined with a gravity model for the regions more local to the site. The methodology is based on the approach agreed for the most recently consented WMI SRFI DCO.

HGV trip distribution – port related trips

3.4 It has been agreed with the TWG that 50% of the HGV trips associated with the warehousing units at the OxSRFI are likely to be associated with the main seaports, which account for around 95% of freight (by weight) handled in the UK. The 50% figure has been agreed with the TWG based on the work undertaken by MDS Transmodal as part of their GB Freight Model study[2].

3.5 Therefore, 50% of the HGV trips associated with OxSRFI are to be distributed based on the amount of goods (in containers) that pass through all UK mainland ports. This has been undertaken using the DfT Port Freight Statistics (2019) data (see **Appendix B**). 2019 data was

[2] MDS Transmodal advised that the actual origins and destinations of traffic at sites such as that proposed for the OxSRFI will ultimately depend on who ends up occupying the units. For example, an e-commerce clothing retailer's National Distribution Centre (NDC) could be expected to source the majority (close to 100%) of their stock from overseas markets (e.g. Bangladesh or Turkey), where as a grocery retailer's Regional Distribution Centre (RDC) facility handling ambient goods would typically have a high proportion of domestically produced stock. MDS Transmodal took a balanced approach and assumed a mix of typical occupiers derived from those currently located at both rail and non-rail-served distribution parks across the Midlands. Based on anecdotal knowledge of the market, NDCs are predominantly sourcing directly from overseas, whereas RDCs are more domestically focused, receiving goods inbound from NDCs and domestic producers. Therefore, in line with an assumed two-thirds/one-third NDC/RDC split, 50% therefore emerged as a reasonable (mid-point) working assumption on a weighted average basis. As a sense check, MDS Transmodal noted that that GB warehouses handle around 220 million tonnes of cargo annually. Unit load imports (which in most cases are destined for warehousing) are just over 100 million tonnes or just under 50%. Further, Transport Statistics GB suggests that around 700 million tonnes of non-bulk cargo is lifted annually in GB. Given that goods are typically lifted between 2-3 times between import/production and consumption by the end user, this suggests that 220-240 million tonnes of actual goods are lifted each year (same ballpark as the warehouse tonnage). Either way, 50% figure is considered a reasonable judgement.

selected as this pre-dates the Covid-19 pandemic. This results in a distribution based on the 26 port locations as shown in **Table 1**.

Table 1: HGV trip distribution by ports

Port	Share/Distribution
Felixstowe	9.47%
Dover	9.34%
London	5.96%
Liverpool	4.22%
Grimsby & Immingham	4.20%
Southampton	4.18%
Holyhead	1.77%
Tees & Hartlepool	1.45%
Hull	1.42%
Harwich	1.35%
Heysham	1.04%
Portsmouth	1.02%
Loch Ryan	0.78%
Cairnryan	0.73%
Larne	0.73%
Forth	0.57%
Tyne	0.25%
Milford Haven	0.24%
Bristol	0.24%
Medway	0.23%
Clyde	0.20%
Fishguard	0.15%
Aberdeen	0.15%
Newhaven	0.14%
Poole	0.12%
Plymouth	0.02%
Total	**50%**

HGV trip distribution – national and regional

3.6 The remaining 50% of HGV trips are to be distributed on a national and regional basis in accordance with the DfT Road Freight Statistics (2019), which has been used to obtain information on the volume (in tonnes) of road freight moved by region, by origin and destination. **Figure 1** shows the NUTS Level 2 regions that correspond with the DfT Road Freight Statistic data. The source DfT Road Freight Statistics (2019) data is provided at **Appendix C**.

3.7 The OxSRFI site is located within NUTS Level 2 region UKJ1 (Berkshire, Buckinghamshire and Oxfordshire). A summary of the DfT Road Freight Statistics for UKJ1 is provided at **Table 2**.

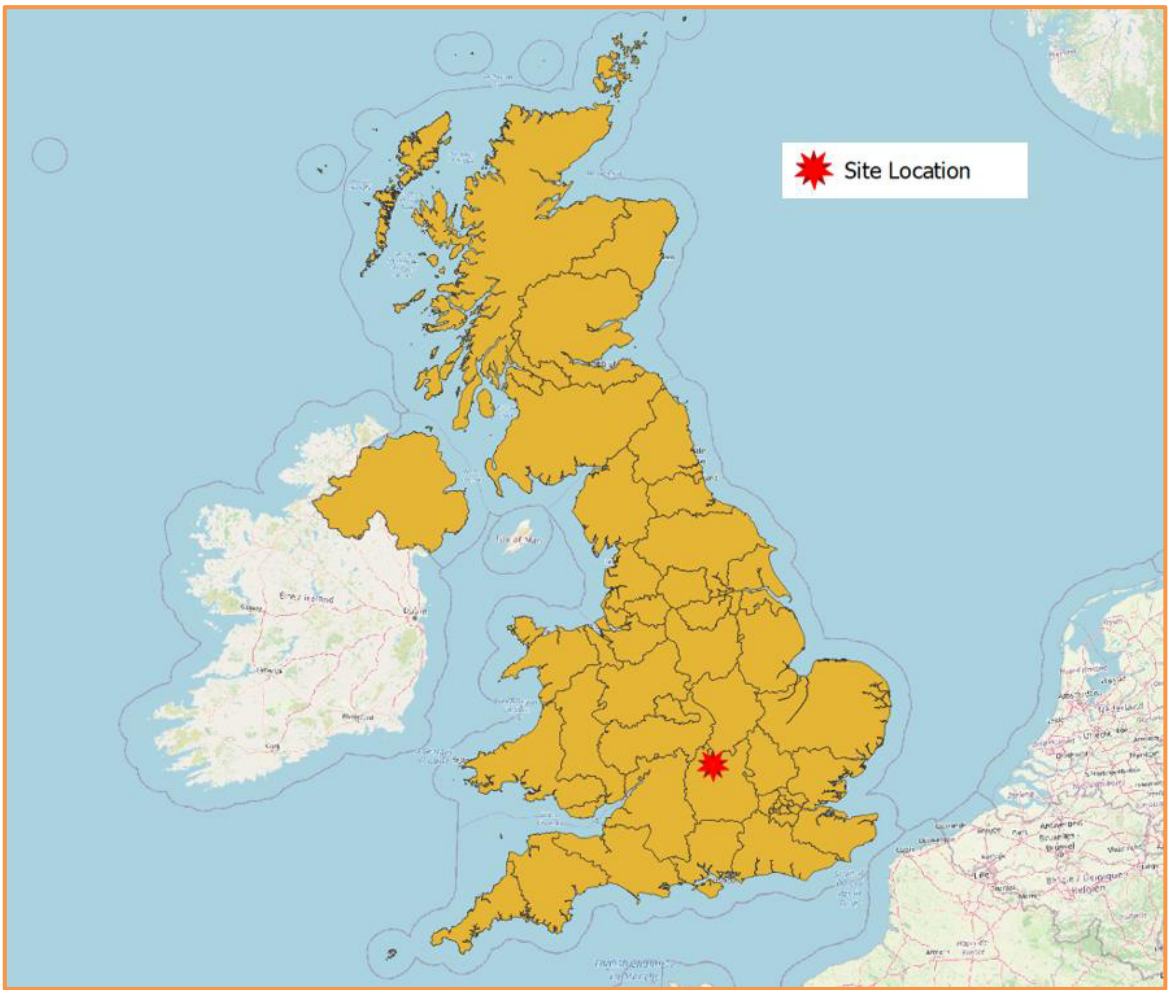


Figure 1: NUTS Level 2 regions

Table 2: two-way road freight movements (in tonnes) from and to UKJ1 (Berkshire, Buckinghamshire, and Oxfordshire)

NUT S2 Code	Region	Million Tonnes	Share
UKD3	Greater Manchester	2	2%
UKE3	South Yorkshire	1	1%
UKF1	Derbyshire and Nottinghamshire	1	1%
UKF2	Leicestershire, Rutland and Northamptonshire	5	6%
UKG1	Herefordshire, Worcestershire and Warwickshire	2	2%
UKG2	Shropshire and Staffordshire	2	2%
UKG3	West Midlands	1	1%
UKH1	East Anglia	2	2%
UKH2	Bedfordshire and Hertfordshire	4	5%
UKH3	Essex	3	3%
UKI5	Outer London — East and North East	1	1%
UKI6	Outer London — South	1	1%
UKI7	Outer London — West and North West	3	3%
UKJ1	Berkshire, Buckinghamshire and Oxfordshire	46	53%
UKJ2	Surrey, East and West Sussex	2	2%
UKJ3	Hampshire and Isle of Wight	3	3%
UKJ4	Kent	2	2%
UKK1	Gloucestershire, Wiltshire and Bristol/Bath Area	5	6%
UKL2	East Wales	1	1%
Total		**87**	**100%**

3.8 As shown in **Figure 1**, the OxSRFI site is located towards the northern boundary of the NUTS Level 2 region UKJ1 (Berkshire, Buckinghamshire and Oxfordshire), close to the adjacent regions

containing Warwickshire, which is UKG1 (Herefordshire, Worcestershire and Warwickshire), and Northamptonshire, which is UKF2 (Leicestershire, Rutland and Northamptonshire), see **Figure 2**.

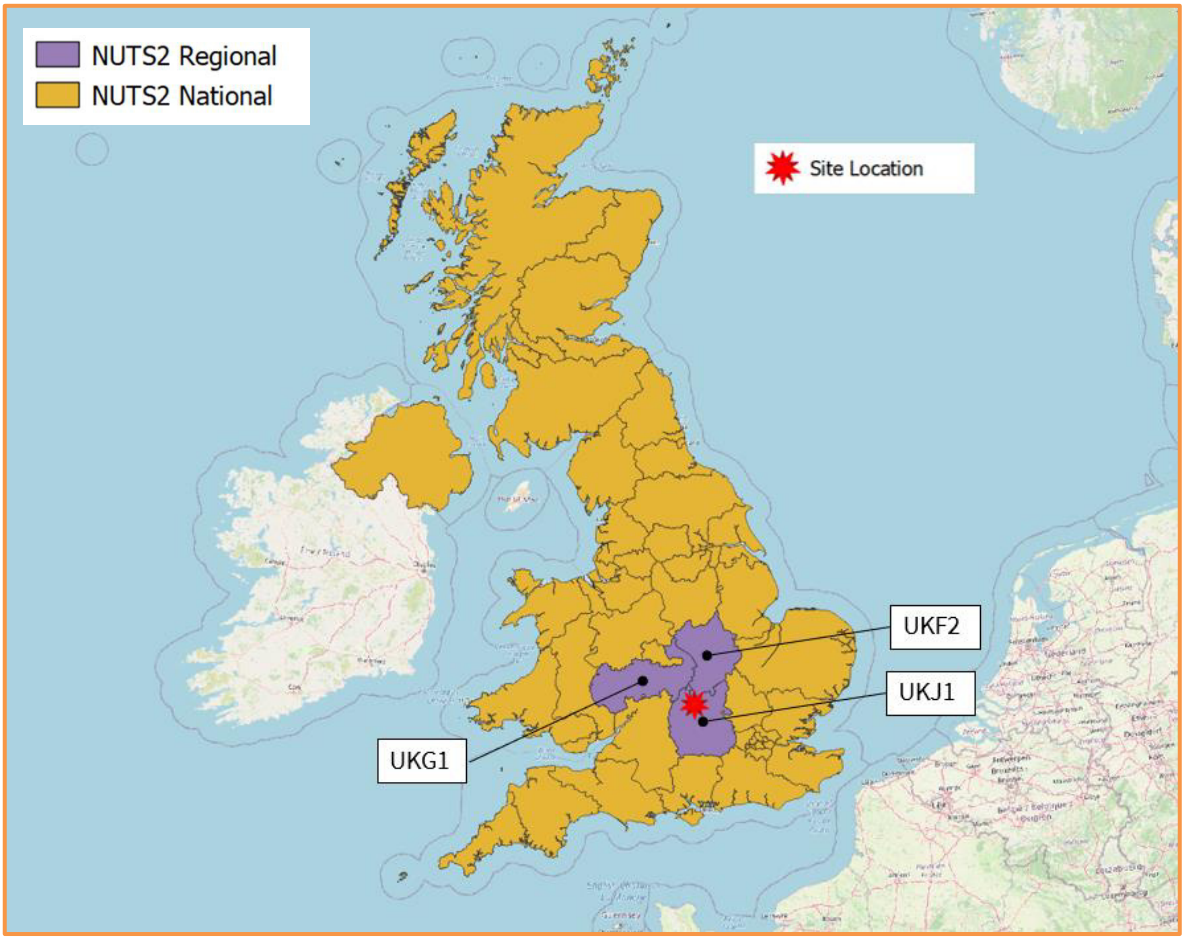


Figure 2: NUTS Level 2 regions UKJ1, UKG1, and UKF2

3.9 Rather than use DfT data solely for the road freight movements to and from UKJ1 (Berkshire, Buckinghamshire and Oxfordshire), a weighted assessment was undertaken using the adjacent regions containing Warwickshire (UKG1), and Northamptonshire (UKF2), along with UKJ1. This was undertaken to minimise the potential boundary effects that could potentially influence the HGV distribution for the OxSRFI site due to its location on the confluence of Oxfordshire, Warwickshire, and Northamptonshire. A weighting of 0.75 for UKJ1 (in which the site is located) is used along with a 0.125 weighting each for regions UKG1 and UKF2. This approach has been agreed with NH and OCC. The resultant summary of road freight movements (by tonnes) and corresponding share by region is given at **Table 3**. The detailed calculations are provided at **Appendix D**.

3.10 **Table 3** shows that it is expected that regional area defined in **Figure 2** (i.e. UKJ1, UKG1, and UKF2) would account for 58.9% of road freight share associated with OxSRFI, or 29.45% of the HGV trips by total distribution.

HGV trip distribution - national

3.11 The remaining areas beyond these local regions (i.e. the 'National' distribution) would account for 41.1% of the road freight share, or 20.55% of the HGV trips by total distribution, as summarised in **Table 4**.

Table 3: two-way road freight movements (in tonnes) – weighted average of UKJ1, UKG1, and UKF2

NUT S2 Code	Region	Million Tones (weighted average 3/4 UKJ1, 1/8 UKF2 and 1/8 UKG1)	Share	As % of total distribution
UKC1	Tees Valley and Durham	0.13	0.1%	0.06%
UKD3	Greater Manchester	2.00	2.1%	1.03%
UKD4	Lancashire	0.25	0.3%	0.13%
UKD6	Cheshire	0.50	0.5%	0.26%
UKD7	Merseyside	0.50	0.5%	0.26%
UKE1	East Yorkshire and Northern Lincolnshire	0.50	0.5%	0.26%
UKE2	North Yorkshire	0.13	0.1%	0.06%
UKE3	South Yorkshire	1.13	1.2%	0.58%
UKE4	West Yorkshire	0.63	0.6%	0.32%
UKF1	Derbyshire and Nottinghamshire	1.75	1.8%	0.90%
UKF2	Leicestershire, Rutland and Northamptonshire	13.00	13.4%	6.70%
UKF3	Lincolnshire	0.63	0.6%	0.32%
UKG1	Herefordshire, Worcestershire and Warwickshire	8.75	9.0%	4.51%
UKG2	Shropshire and Staffordshire	2.88	3.0%	1.48%
UKG3	West Midlands	2.00	2.1%	1.03%
UKH1	East Anglia	2.75	2.8%	1.42%
UKH2	Bedfordshire and Hertfordshire	3.75	3.9%	1.93%
UKH3	Essex	3.13	3.2%	1.61%
UKI4	Inner London — East	0.13	0.1%	0.06%
UKI5	Outer London — East and North East	1.13	1.2%	0.58%
UKI6	Outer London — South	0.75	0.8%	0.39%
UKI7	Outer London — West and North West	2.50	2.6%	1.29%
UKJ1	Berkshire, Buckinghamshire and Oxfordshire	35.38	36.5%	18.23%
UKJ2	Surrey, East and West Sussex	1.75	1.8%	0.90%
UKJ3	Hampshire and Isle of Wight	2.75	2.8%	1.42%
UKJ4	Kent	2.25	2.3%	1.16%
UKK1	Gloucestershire, Wiltshire and Bristol/Bath Area	4.50	4.6%	2.32%
UKK4	Devon	0.13	0.1%	0.06%
UKL1	West Wales and The Valleys	0.13	0.1%	0.06%
UKL2	East Wales	1.25	1.3%	0.64%
Total		**97.00**	**100%**	**50%**

Table 4: 'National' HGV distribution

NUTS Level 2 Code	Region	As % of total distribution
UKC1	Tees Valley and Durham	0.06%
UKD3	Greater Manchester	1.03%
UKD4	Lancashire	0.13%
UKD6	Cheshire	0.26%
UKD7	Merseyside	0.26%
UKE1	East Yorkshire and Northern Lincolnshire	0.26%
UKE2	North Yorkshire	0.06%
UKE3	South Yorkshire	0.58%
UKE4	West Yorkshire	0.32%
UKF1	Derbyshire and Nottinghamshire	0.90%
UKF3	Lincolnshire	0.32%
UKG2	Shropshire and Staffordshire	1.48%
UKG3	West Midlands	1.03%
UKH1	East Anglia	1.42%
UKH2	Bedfordshire and Hertfordshire	1.93%
UKH3	Essex	1.61%
UKI3	Inner London — West	0.00%
UKI4	Inner London — East	0.06%
UKI5	Outer London — East and North East	0.58%
UKI6	Outer London — South	0.39%
UKI7	Outer London — West and North West	1.29%
UKJ2	Surrey, East and West Sussex	0.90%
UKJ3	Hampshire and Isle of Wight	1.42%
UKJ4	Kent	1.16%
UKK1	Gloucestershire, Wiltshire and Bristol/Bath Area	2.32%
UKK2	Dorset and Somerset	0.00%
UKK3	Cornwall and Isles of Scilly	0.00%
UKK4	Devon	0.06%
UKL1	West Wales and The Valleys	0.06%
UKL2	East Wales	0.64%
Total		**20.6%**

3.12 To understand how the regional movements will impact the highway network around the OxSRFI site, a further gravity distribution model was developed for the regional area using a workplace population / distance^2 calculation. HGV movements are related to economic activity, and centres of employment and populations and hence the gravity model reflects this. This is discussed further in the regional section below.

HGV trip distribution - regional

3.13 The gravity model calculations of the regional area defined by NUTS Level 2 areas UKJ1, UKG1, and UKF2 (**Figure 2**) are provided at **Appendix E**. To provide the appropriate accuracy in the regional areas close to the OxSRFI site the NUTS Level 2 areas have been further broken down into local authority and MSOA areas. The results are summarised at **Table 5**.

Table 5: 'Regional' HGV distribution

NUTS Level 2 Code	Area	Local Authority or MSOA	Share	As % of total distribution
UKF2	Blaby	Local Authority	0.73%	0.21%
	Charnwood	Local Authority	0.71%	0.21%
	Harborough	Local Authority	0.83%	0.25%
	Hinckley & Bosworth	Local Authority	0.68%	0.20%
	Leicester	Local Authority	2.09%	0.62%
	Melton	Local Authority	0.18%	0.05%
	North West Leicestershire	Local Authority	0.52%	0.15%
	Oadby and Wigston	Local Authority	0.26%	0.08%
	Rutland	Local Authority	0.18%	0.05%
	Corby	Local Authority	0.45%	0.13%
	Daventry	Local Authority	1.72%	0.51%
	East Northamptonshire	Local Authority	0.40%	0.12%
	Kettering	Local Authority	0.86%	0.25%
	Northampton	Local Authority	5.57%	1.64%
	South Northamptonshire 001	MSOA	0.18%	0.05%
	South Northamptonshire 002	MSOA	0.08%	0.02%
	South Northamptonshire 003	MSOA	0.25%	0.07%
	South Northamptonshire 004	MSOA	0.46%	0.13%
	South Northamptonshire 005	MSOA	0.32%	0.09%
	South Northamptonshire 006	MSOA	0.59%	0.17%
	South Northamptonshire 007	MSOA	0.37%	0.11%
	South Northamptonshire 008	MSOA	0.17%	0.05%
	South Northamptonshire 009	MSOA	0.75%	0.22%
	South Northamptonshire 010	MSOA	2.55%	0.75%
	South Northamptonshire 011	MSOA	0.95%	0.28%
	Wellingborough	MSOA	0.92%	0.27%
UKG1	Bromsgrove	Local Authority	0.86%	0.25%
	Herefordshire, County of	Local Authority	0.63%	0.19%
	Malvern Hills	Local Authority	0.38%	0.11%
	North Warwickshire	Local Authority	0.79%	0.23%
	Nuneaton and Bedworth	Local Authority	0.81%	0.24%
	Redditch	Local Authority	0.93%	0.27%
	Rugby	Local Authority	1.38%	0.41%
	Warwick	Local Authority	4.09%	1.20%
	Worcester	Local Authority	0.81%	0.24%
	Wychavon	Local Authority	1.13%	0.33%
	Wyre Forest	Local Authority	0.59%	0.17%
	Stratford-on-Avon 001	MSOA	0.07%	0.02%
	Stratford-on-Avon 002	MSOA	0.11%	0.03%
	Stratford-on-Avon 003	MSOA	0.06%	0.02%
	Stratford-on-Avon 004	MSOA	0.26%	0.08%
	Stratford-on-Avon 005	MSOA	0.30%	0.09%
	Stratford-on-Avon 006	MSOA	0.10%	0.03%
	Stratford-on-Avon 007	MSOA	0.10%	0.03%
	Stratford-on-Avon 008	MSOA	0.28%	0.08%
	Stratford-on-Avon 009	MSOA	0.38%	0.11%
	Stratford-on-Avon 010	MSOA	0.11%	0.03%
	Stratford-on-Avon 011	MSOA	0.20%	0.06%
	Stratford-on-Avon 012	MSOA	0.08%	0.02%
	Stratford-on-Avon 013	MSOA	0.60%	0.18%
	Stratford-on-Avon 014	MSOA	0.09%	0.03%
	Stratford-on-Avon 015	MSOA	0.18%	0.05%
UKJ1	Aylesbury Vale 001	MSOA	0.69%	0.20%
	Aylesbury Vale 002	MSOA	0.39%	0.11%
	Aylesbury Vale 003	MSOA	0.13%	0.04%
	Aylesbury Vale 004	MSOA	0.27%	0.08%
	Aylesbury Vale 005	MSOA	0.11%	0.03%
	Aylesbury Vale 006	MSOA	0.10%	0.03%
	Aylesbury Vale 007	MSOA	0.06%	0.02%
	Aylesbury Vale 008	MSOA	0.19%	0.06%
	Aylesbury Vale 009	MSOA	0.08%	0.02%
	Aylesbury Vale 010	MSOA	0.36%	0.10%
	Aylesbury Vale 011	MSOA	0.05%	0.01%
	Aylesbury Vale 012	MSOA	0.32%	0.10%
	Aylesbury Vale 013	MSOA	0.23%	0.07%
	Aylesbury Vale 014	MSOA	0.12%	0.03%
	Aylesbury Vale 015	MSOA	0.54%	0.16%
	Aylesbury Vale 016	MSOA	0.10%	0.03%
	Aylesbury Vale 017	MSOA	0.10%	0.03%
	Aylesbury Vale 018	MSOA	0.06%	0.02%
	Aylesbury Vale 019	MSOA	0.19%	0.06%
	Aylesbury Vale 020	MSOA	0.03%	0.01%
	Aylesbury Vale 021	MSOA	0.12%	0.04%
	Aylesbury Vale 022	MSOA	0.18%	0.05%
	Aylesbury Vale 023	MSOA	0.15%	0.04%
	Aylesbury Vale 024	MSOA	0.12%	0.04%
	Bracknell Forest	Local Authority	0.73%	0.21%
	Chiltern	Local Authority	0.64%	0.19%
	Milton Keynes	Local Authority	7.69%	2.26%
	Oxford	Local Authority	9.14%	2.69%
	Reading	Local Authority	1.02%	0.30%
	Slough	Local Authority	1.16%	0.34%
	South Bucks	Local Authority	0.61%	0.18%
	South Oxfordshire	Local Authority	2.09%	0.62%
	Vale of White Horse	Local Authority	2.44%	0.72%
	West Berkshire	Local Authority	2.01%	0.59%
	West Oxfordshire 001	MSOA	0.31%	0.09%
	West Oxfordshire 002	MSOA	0.43%	0.13%
	West Oxfordshire 003	MSOA	0.10%	0.03%
	West Oxfordshire 004	MSOA	0.58%	0.17%
	West Oxfordshire 005	MSOA	0.18%	0.05%
	West Oxfordshire 006	MSOA	0.24%	0.07%
	West Oxfordshire 007	MSOA	0.18%	0.05%
	West Oxfordshire 008	MSOA	0.20%	0.06%
	West Oxfordshire 009	MSOA	0.31%	0.09%
	West Oxfordshire 010	MSOA	0.56%	0.17%
	West Oxfordshire 011	MSOA	0.40%	0.12%
	West Oxfordshire 012	MSOA	0.10%	0.03%
	West Oxfordshire 013	MSOA	0.07%	0.02%
	West Oxfordshire 014	MSOA	0.28%	0.08%
	West Oxfordshire 015	MSOA	0.09%	0.03%
	Windsor and Maidenhead	Local Authority	1.25%	0.37%
	Wokingham	Local Authority	0.85%	0.25%
	Wycombe	Local Authority	2.71%	0.80%
	Cherwell 001	MSOA	0.20%	0.06%
	Cherwell 002	MSOA	0.16%	0.05%
	Cherwell 003	MSOA	0.69%	0.20%
	Cherwell 004	MSOA	2.77%	0.82%
	Cherwell 005	MSOA	0.09%	0.03%
	Cherwell 006	MSOA	0.54%	0.16%
	Cherwell 007	MSOA	0.28%	0.08%
	Cherwell 008	MSOA	1.00%	0.29%
	Cherwell 009	MSOA	0.15%	0.04%
	Cherwell 010	MSOA	1.29%	0.38%
	Cherwell 011	MSOA	1.91%	0.56%
	Cherwell 012	MSOA	0.48%	0.14%
	Cherwell 013	MSOA	2.47%	0.73%
	Cherwell 014	MSOA	1.53%	0.45%
	Cherwell 015	MSOA	2.30%	0.68%
	Cherwell 016	MSOA	2.85%	0.84%
	Cherwell 017	MSOA	0.47%	0.14%
	Cherwell 018	MSOA	0.20%	0.06%
	Cherwell 019	MSOA	1.49%	0.44%
Total			**100%**	**29.45%**

4.0 HGV TRIP ASSIGNMENT

Introduction

4.1 It is proposed to use the BTM to provide traffic data for assessment of the OxSRFI. A necessary input for this model is the distribution of the HGV trips associated with the scheme. The BTM will then assign the HGV trips in accordance with the relative 'cost' of using a route and in accordance with existing HGV route restrictions, which are represented in the model.

4.2 Section 3 of this Technical Note presents the HGV trip distribution. This section of the technical note therefore defines the relative split of HGV traffic associated with the warehousing and the rail terminal.

HGV trips associated with the rail terminal

4.3 Technical Note 3 sets out the vehicle trip generation associated with the OxSRFI. That note considers the HGV generation of both the rail terminal and the warehousing at the development. It also identifies the level of interaction between those elements.

4.4 It identifies that, once fully operational, the rail terminal would generate up to 1,104 two-way HGV movements per day. Of these, some 35% are identified as being captured within the OxSRFI site, i.e. they would be associated with the warehousing at the site and hence would not result in an external HGV trip. For the 65% balance (718 two-way HGV trips) of HGV traffic not immediately captured by OxSRFI warehousing, a regional catchment is appropriate.

4.5 Therefore, for the purposes of the assessment all HGV trips associated with the rail terminal are to be assigned using the regional distribution share given at **Table 5**. In accordance with Technical Note 3, for the development peak hour assessment periods of 0800 to 0900 and 1600 to 1700 and daily period, the HGV trips given at the **Table 6** below will be assigned using the BTM based on the regional HGV distribution.

Table 6: external HGV trips associated with rail terminal

	arrive	depart	two-way
AM peak	17	17	35
PM peak	21	21	42
Daily	359	359	718

HGV trips associated with the warehousing

4.6 HGV trips associated with the warehousing at OxSRFI would have anywhere from a local up to a national catchment. The actual catchment will be dictated by end users and their requirements. However, based on the location of the site it is considered that OxSRFI would be attractive to occupiers looking to locate their national distribution centres alongside serving more regional markets. Therefore, for the warehousing the full distribution comprising ports, national and regional elements, as described in paragraph Section 3 is used.

4.7 In accordance with Technical Note 3, for the development peak hour assessment periods of 0800 to 0900 and 1600 to 1700 and daily period, the HGV trips given at the **Table 7** below will be assigned in accordance with the distributions that are given in **Tables 1**, **4** and **5** for the ports, national and regional elements, respectively.

Table 7: External HGV trips associated with warehousing

	arrive	depart	two-way
AM peak	155	142	297
PM peak	136	122	258
Daily	2,100	2,103	4,203

Resulting HGV trip distribution / assignment (indicative)

4.8 A summary of the resultant indicative assignment at M40 J10 is provided in **Table 8** below.

Table 8: indicative distribution / assignment

Route	Distribution / Assignment
M40 North	21.8%
A43	26.6%
(of which A43)	*20.0%*
(of which A421)	*6.7%*
M40 South	51.5%
(of which M40S)	*29.7%*
(of which A34)	*17.3%*
(of which A41)	*4.6%*
B430	-
Total	**100%**

4.9 This shows similar trends to that obtained using the previous methodologies considered as referred to in Section 1 but demonstrates an increased share for the A34 (at 17.3%) as compared to the TN4 method (of 11.6%) which NH considered too low, but it is lower than the GB Freight Model share for the A34 (which was 27.1%), which NH considered too large.

4.10 It should be noted the above assignment is only indicative, as the actual assignment of HGV trips to the road network will be undertaken as part of the BTM assessment in accordance with the relative 'cost' of using a route.

APPENDIX A

Total External HGVs
(Table 7 extracted from Technical Note 3: Trip Generation)

Time Window	HGVs B8 warehouses*			HGVs rail terminal 35% Internal**			HGVs rail terminal 65% external HGVs***			Total external HGVs OxSRFI		
	Arrive	Depart	Two-way	Arrive	Depart	Two-way	Arrive	Depart	Two-way	Arrive	Depart	Two-way
00.00-01.00	51	82	133	-4	-7	-11	5	5	11	52	80	133
01.00-02.00	77	77	154	-6	-7	-13	5	5	9	76	75	150
02.00-03.00	82	82	164	-7	-7	-14	5	5	9	80	80	160
03.00-04.00	56	87	143	-5	-7	-12	3	3	7	54	83	138
04.00-05.00	77	51	128	-6	-5	-11	5	5	10	76	51	127
05.00-06.00	118	71	189	-10	-6	-16	10	10	20	118	75	193
06.00-07.00	118	51	169	-10	-4	-14	20	20	41	128	67	195
07.00-08.00	107	143	250	-9	-12	-21	26	26	52	124	157	280
08.00-09.00	169	155	324	-14	-13	-27	17	17	35	172	159	331
09.00-10.00	113	103	216	-10	-8	-18	19	19	37	122	113	235
10.00-11.00	128	139	267	-11	-11	-22	23	23	46	140	151	291
11.00-12.00	113	107	220	-10	-9	-19	24	24	48	127	123	250
12.00-13.00	87	77	164	-7	-7	-14	28	28	56	108	98	207
13.00-14.00	71	118	189	-6	-10	-16	24	24	47	89	132	220
14.00-15.00	87	139	226	-7	-12	-19	22	22	45	102	149	252
15.00-16.00	56	107	163	-5	-9	-14	24	24	48	75	122	197
16.00-17.00	118	71	189	-10	-6	-16	24	24	48	132	89	221
17.00-18.00	148	134	282	-12	-12	-24	21	21	42	157	143	300
18.00-19.00	113	92	205	-10	-7	-17	17	17	35	120	102	222
19.00-20.00	97	67	164	-8	-6	-14	12	12	23	101	73	174
20.00-21.00	107	87	194	-9	-7	-16	8	8	15	106	87	193
21.00-22.00	67	97	164	-6	-8	-14	7	7	14	68	96	164
22.00-23.00	62	77	139	-5	-7	-12	6	6	11	63	76	138
23.00-00.00	71	82	153	-6	-7	-13	5	5	10	70	80	150
Totals	**2293**	**2296**	**4589**	**-193**	**-193**	**-386**	**359**	**359**	**718**	**2459**	**2461**	**4920**

* from Table 4

** Based on B8 HGV profile

*** Based on avreage of Hams Hall and iPort HGV arrivals

Table 7: Total external HGVs including for interaction between rail and warehousing and distributions uses

APPENDIX B

DfT Port Freight Statistics (2019) data

Department for Transport Statistics

Port Freight Statistics

Table PORT0203

UK major port unitised freight traffic by port and cargo type (direction filter)

Direction	Both Directions
Year	2019

Thousand units/ Thousand TEUs/ Thousand tonnes

Ports	Lift-of / Lift-off (Lo-Lo) containers					Roll-on / Roll-off (Ro-Ro) main freight units												All main freight units		
						Shipborne port-to-port trailers			Road goods vehicles			Unaccompanied trailers			All Ro-Ro main freight units					
	All units	All units TEU	Loaded units	Loaded units TEU	Weight of goods	All units	Loaded units	Weight of goods	All units	Loaded units	Weight of goods	All units	Loaded units	Weight of goods	All units	Loaded units	Weight of goods	All units	Loaded units	Weight of goods
Aberdeen	2	2	1	2	18	5	3	34	2	~	10	30	22	349	37	26	392	39	27	410
Belfast	131	230	98	173	1,756	0	0	0	204	145	2,037	366	324	5,483	570	469	7,520	701	567	9,277
Boston	0	0	0	0	0	z	z	z	z	z	z	z	z	z	z	z	z	0	0	0
Bristol	61	111	43	77	912	3	2	92	0	0	0	~	~	~	3	2	93	64	45	1,005
Cairnryan	z	z	z	z	z	0	0	0	123	111	1,756	70	67	947	192	178	2,704	192	178	2,704
Cardiff	0	0	0	0	0	z	z	z	z	z	z	z	z	z	z	z	z	0	0	0
Clyde	52	94	34	62	596	z	z	z	z	z	z	z	z	z	z	z	z	52	34	596
Cromarty Firth	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Dover	15	27	14	26	146	0	0	0	2,383	2,024	22,447	47	32	526	2,430	2,057	22,973	2,445	2,071	23,119
Dundee	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Felixstowe	2,234	3,840	1,541	2,630	21,711	~	~	3	9	8	158	237	185	3,422	246	193	3,583	2,481	1,734	25,294
Fishguard	z	z	z	z	z	0	0	0	25	21	255	14	13	240	39	34	495	39	34	495
Fleetwood	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Forth	149	251	113	192	2,432	0	0	0	0	0	0	0	0	0	0	0	0	149	113	2,432
Fowey	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Glensanda	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Goole	0	0	0	0	0	z	z	z	z	z	z	z	z	z	z	z	z	0	0	0
Great Yarmouth	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Grimsby & Immingham	187	368	111	212	2,145	164	133	3,868	114	100	1,223	635	529	10,150	913	762	15,241	1,101	872	17,386
Harwich	6	9	4	6	92	3	3	47	169	144	1,626	175	138	1,937	348	284	3,609	354	288	3,701
Heysham	z	z	z	z	z	0	0	0	33	21	459	239	220	4,053	272	242	4,513	272	242	4,513
Holyhead	z	z	z	z	z	0	0	0	308	308	3,490	156	156	1,788	464	464	5,278	464	464	5,278
Hull	190	345	127	223	2,168	57	40	714	73	63	897	53	44	798	183	147	2,409	373	274	4,577
Ipswich[1]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kilroot Power Station Jetty	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Larne	z	z	z	z	z	0	0	0	123	111	1,756	70	67	947	192	178	2,704	192	178	2,704
Liverpool	503	886	391	688	6,268	11	9	158	207	173	2,437	383	337	5,069	601	519	7,665	1,104	910	13,932
Loch Ryan[2]	z	z	z	z	z	0	0	0	122	102	1,400	83	73	1,248	205	176	2,648	205	176	2,648
London	1,017	1,764	791	1,359	14,985	217	179	3,400	10	9	109	317	222	3,508	544	409	7,016	1,560	1,200	22,001
Londonderry	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Manchester	~	~	~	~	~	z	z	z	z	z	z	z	z	z	z	z	z	~	~	~
Medway	54	113	32	65	716	6	6	283	0	0	0	0	0	0	6	6	283	60	37	999
Milford Haven	z	z	z	z	z	0	0	0	31	28	338	33	31	492	64	59	830	64	59	830
Newhaven	z	z	z	z	z	0	0	0	33	32	484	3	3	37	36	35	521	36	35	521
Newport	0	0	0	0	0	z	z	z	z	z	z	z	z	z	z	z	z	0	0	0
Orkney	0	0	0	0	0	2	1	14	6	2	25	14	11	195	22	13	234	22	13	234
Peterhead	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Plymouth	z	z	z	z	z	0	0	0	5	4	55	1	1	7	6	5	63	6	5	63
Poole	0	0	0	0	0	0	0	0	17	14	160	15	13	251	32	27	411	32	27	411
Port Talbot	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Portsmouth	36	67	19	36	366	0	0	0	139	125	1,761	93	72	864	232	197	2,625	268	216	2,991
Ramsgate	z	z	z	z	z	0	0	0	~	~	1	0	0	0	~	~	1	~	~	1
River Trent	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Rivers Hull & Humber	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Shoreham	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Southampton	1,093	1,878	813	1,381	9,008	3	2	71	0	0	0	0	0	0	3	2	71	1,095	815	9,079
Stranraer[2]	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Sullom Voe	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Sunderland	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z	z
Swansea	z	z	z	z	z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tees & Hartlepool	260	458	176	305	3,037	77	60	1,291	2	2	31	41	35	716	120	97	2,037	380	273	5,074
Tyne	31	56	24	43	431	0	0	0	27	26	131	7	6	114	34	32	245	66	56	677
Warrenpoint	17	36	11	23	248	0	0	0	8	8	221	97	92	2,069	105	100	2,290	123	110	2,539
England	**5,688**	**9,922**	**4,086**	**7,050**	**61,984**	**541**	**435**	**9,927**	**3,222**	**2,744**	**31,980**	**2,246**	**1,837**	**31,453**	**6,010**	**5,016**	**73,360**	**11,698**	**9,102**	**135,344**
Wales	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**364**	**356**	**4,083**	**203**	**201**	**2,520**	**567**	**558**	**6,604**	**567**	**558**	**6,604**
Scotland	**202**	**347**	**147**	**256**	**3,046**	**7**	**4**	**48**	**252**	**215**	**3,191**	**197**	**174**	**2,739**	**457**	**393**	**5,978**	**659**	**540**	**9,024**
Great Britain	**5,891**	**10,269**	**4,233**	**7,307**	**65,031**	**548**	**439**	**9,975**	**3,839**	**3,316**	**39,254**	**2,647**	**2,212**	**36,712**	**7,034**	**5,967**	**85,941**	**12,925**	**10,200**	**150,972**
Northern Ireland	**148**	**265**	**109**	**197**	**2,005**	**0**	**0**	**0**	**335**	**264**	**4,015**	**533**	**483**	**8,500**	**868**	**746**	**12,514**	**1,016**	**855**	**14,519**
All UK major ports	**6,039**	**10,534**	**4,342**	**7,503**	**67,035**	**548**	**439**	**9,975**	**4,174**	**3,579**	**43,269**	**3,180**	**2,695**	**45,212**	**7,902**	**6,713**	**98,456**	**13,941**	**11,055**	**165,491**

1. Ro-Ro operations at Ipswich ceased in August 2012.
2. Stranraer port closed in November 2011. Its operations were transferred to neighbouring Loch Ryan Port.
"0" is null, "z" is not applicable and "~" is less than 1 (in units given). "r" is where the datapoint has been amended since the previous release.

Source: DfT Port Freight Statistics
Last updated: 12 August 2020
Next update: August 2021

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The figures in this table are National Statistics.

Department for Transport Statistics

Port Freight Statistics

Table PORT0203

UK major port unitised freight traffic by port and cargo type (direction filter)

Ports	All units	Adjusted*	share	
Felixstowe	2,481	2,481	18.94%	9.47%
Dover	2,445	2,445	18.67%	9.34%
London	1,560	1,560	11.92%	5.96%
Liverpool	1,104	1,104	8.43%	4.22%
Grimsby & Immingham	1,101	1,101	8.41%	4.20%
Southampton	1,095	1,095	8.37%	4.18%
Belfast	701		0.00%	0.00%
Holyhead	464	464	3.55%	1.77%
Tees & Hartlepool	380	380	2.91%	1.45%
Hull	373	373	2.85%	1.42%
Harwich	354	354	2.70%	1.35%
Heysham	272	272	2.08%	1.04%
Portsmouth	268	268	2.05%	1.02%
Loch Ryan	205	205	1.57%	0.78%
Cairnryan	192	192	1.47%	0.73%
Larne	192	192	1.47%	0.73%
Forth	149	149	1.14%	0.57%
Warrenpoint	123		0.00%	0.00%
Tyne	66	66	0.50%	0.25%
Milford Haven	64	64	0.49%	0.24%
Bristol	64	64	0.49%	0.24%
Medway	60	60	0.46%	0.23%
Clyde	52	52	0.40%	0.20%
Fishguard	39	39	0.30%	0.15%
Aberdeen	39	39	0.29%	0.15%
Newhaven	36	36	0.28%	0.14%
Poole	32	32	0.24%	0.12%
Orkney	22		0.00%	0.00%
Plymouth	6	6	0.05%	0.02%
Total	13,941	13,095	100.00%	50.00%

* Non-UK mainland ports removed

APPENDIX C

DfT Road Freight Statistics (2019) data

Department for Transport statistics

Road Freight Statistics

Table RFS0123

Goods lifted[1] by NUTS2 region[2] of origin and destination: 2019

UK activity of GB-registered heavy goods vehicles

Million tonnes

| | | | Destination (by NUTS2 code) | | |

APPENDIX D

DfT Road Freight Statistics (2019) data calculations

		Million Tonnes (UKJ1)			Million Tonnes (UKF2)			Million Tonnes (UKG1)		
NUT S2 Code	Region	Destination (From Berkshire, Buckinghamshire and Oxfordshire, to)	Origin (To Berkshire, Buckinghamshire and Oxfordshire, from)	Million Tonnes	Destination (From Leicestershire, Rutland and Northamptonshire, to)	Origin (To Leicestershire, Rutland and Northamptonshire, from)	Total	Destination (From Herefordshire, Worcestershire and Warwickshire, to)	Origin (To Herefordshire, Worcestershire and Warwickshire, from)	Total
UKC1	Tees Valley and Durham	0	0	0	1		1	0	0	0
UKD3	Greater Manchester	1	1	2	1	1	2	1	1	2
UKD4	Lancashire			0	1		1		1	1
UKD6	Cheshire			0	2	1	3	1		1
UKD7	Merseyside	0	0	0	1	1	2	1	1	2
UKE1	East Yorkshire and Northern Lincolnshire	0	0	0	1	2	3		1	1
UKE2	North Yorkshire	0	0	0		1	1	0	0	0
UKE3	South Yorkshire		1	1	1	1	2	1		1
UKE4	West Yorkshire	0	0	0	1	2	3	1	1	2
UKF1	Derbyshire and Nottinghamshire		1	1	2	3	5	1	2	3
UKF2	Leicestershire, Rutland and Northamptonshire	2	3	5	34	34	68	3	3	6
UKF3	Lincolnshire	0	0	0	1	2	3	1	1	2
UKG1	Herefordshire, Worcestershire and Warwickshire	1	1	2	3	3	6	26	26	52
UKG2	Shropshire and Staffordshire	1	1	2	3	2	5	3	3	6
UKG3	West Midlands		1	1	2	2	4	4	2	6
UKH1	East Anglia	1	1	2	3	5	8	1	1	2
UKH2	Bedfordshire and Hertfordshire	2	2	4	2	2	4	1	1	2
UKH3	Essex	1	2	3	2	2	4	1	2	3
UKI4	Inner London — East	0	0	0	0	1	1	0	0	0
UKI5	Outer London — East and North East	1		1	1	1	2	1		1
UKI6	Outer London — South		1	1	0	0	0	0	0	0
UKI7	Outer London — West and North West	1	2	3	1	1	2	0	0	0
UKJ1	Berkshire, Buckinghamshire and Oxfordshire	23	23	46	3	2	5	1	1	2
UKJ2	Surrey, East and West Sussex	1	1	2	1	1	2	0	0	0
UKJ3	Hampshire and Isle of Wight	2	1	3	1	1	2	1	1	2
UKJ4	Kent	1	1	2	2	1	3	2	1	3
UKK1	Gloucestershire, Wiltshire and Bristol/Bath Area	2	3	5	2	1	3	2	1	3
UKK4	Devon	0	0	0	0	0	0	0	1	1
UKL1	West Wales and The Valleys			0	0		0		1	1
UKL2	East Wales		1	1	1		1	2	1	3
Total		**40**	**47**	**87**	**73**	**73**	**146**	**55**	**53**	**108**

		Million Tonnes (weighted average 3/4 UKJ1, 1/8 UKF2 and 1/8 UKG1)		
NUT S2 Code	Region	Million Tonnes (weighted average 3/4 UKJ1, 1/8 UKF2 and 1/8 UKG1)	Share	As % of total distribution
UKC1	Tees Valley and Durham	0.13	0.1%	0.06%
UKD3	Greater Manchester	2.00	2.1%	1.03%
UKD4	Lancashire	0.25	0.3%	0.13%
UKD6	Cheshire	0.50	0.5%	0.26%
UKD7	Merseyside	0.50	0.5%	0.26%
UKE1	East Yorkshire and Northern Lincolnshire	0.50	0.5%	0.26%
UKE2	North Yorkshire	0.13	0.1%	0.06%
UKE3	South Yorkshire	1.13	1.2%	0.58%
UKE4	West Yorkshire	0.63	0.6%	0.32%
UKF1	Derbyshire and Nottinghamshire	1.75	1.8%	0.90%
UKF2	Leicestershire, Rutland and Northamptonshire	13.00	13.4%	6.70%
UKF3	Lincolnshire	0.63	0.6%	0.32%
UKG1	Herefordshire, Worcestershire and Warwickshire	8.75	9.0%	4.51%
UKG2	Shropshire and Staffordshire	2.88	3.0%	1.48%
UKG3	West Midlands	2.00	2.1%	1.03%
UKH1	East Anglia	2.75	2.8%	1.42%
UKH2	Bedfordshire and Hertfordshire	3.75	3.9%	1.93%
UKH3	Essex	3.13	3.2%	1.61%
UKI4	Inner London — East	0.13	0.1%	0.06%
UKI5	Outer London — East and North East	1.13	1.2%	0.58%
UKI6	Outer London — South	0.75	0.8%	0.39%
UKI7	Outer London — West and North West	2.50	2.6%	1.29%
UKJ1	Berkshire, Buckinghamshire and Oxfordshire	35.38	36.5%	18.23%
UKJ2	Surrey, East and West Sussex	1.75	1.8%	0.90%
UKJ3	Hampshire and Isle of Wight	2.75	2.8%	1.42%
UKJ4	Kent	2.25	2.3%	1.16%
UKK1	Gloucestershire, Wiltshire and Bristol/Bath Area	4.50	4.6%	2.32%
UKK4	Devon	0.13	0.1%	0.06%
UKL1	West Wales and The Valleys	0.13	0.1%	0.06%
UKL2	East Wales	1.25	1.3%	0.64%
Total		**97.00**	**100%**	**50%**

APPENDIX E

Gravity model calculations of the regional area

Table E1: regional HGV distribution – UKJ1 (Berkshire, Buckinghamshire and Oxfordshire)

Area	Workplace population (P)	Journey time (mins)	P/T^2	Share	As % of total distribution
Aylesbury Vale 001	4,427	26	6.78	1.1%	0.20%
Aylesbury Vale 002	2,442	25	3.83	0.6%	0.11%
Aylesbury Vale 003	1,630	36	1.25	0.2%	0.04%
Aylesbury Vale 004	3,613	37	2.64	0.4%	0.08%
Aylesbury Vale 005	1,556	38	1.08	0.2%	0.03%
Aylesbury Vale 006	1,983	45	0.98	0.2%	0.03%
Aylesbury Vale 007	2,361	61	0.63	0.1%	0.02%
Aylesbury Vale 008	2,534	37	1.85	0.3%	0.06%
Aylesbury Vale 009	3,229	66	0.74	0.1%	0.02%
Aylesbury Vale 010	2,744	28	3.50	0.6%	0.10%
Aylesbury Vale 011	899	45	0.44	0.1%	0.01%
Aylesbury Vale 012	5,100	40	3.19	0.5%	0.10%
Aylesbury Vale 013	4,202	43	2.27	0.4%	0.07%
Aylesbury Vale 014	2,540	47	1.15	0.2%	0.03%
Aylesbury Vale 015	10,674	45	5.27	0.9%	0.16%
Aylesbury Vale 016	2,030	45	1.00	0.2%	0.03%
Aylesbury Vale 017	2,523	50	1.01	0.2%	0.03%
Aylesbury Vale 018	1,416	48	0.61	0.1%	0.02%
Aylesbury Vale 019	4,604	49	1.92	0.3%	0.06%
Aylesbury Vale 020	848	55	0.28	0.0%	0.01%
Aylesbury Vale 021	3,677	55	1.22	0.2%	0.04%
Aylesbury Vale 022	3,596	45	1.78	0.3%	0.05%
Aylesbury Vale 023	2,552	42	1.45	0.2%	0.04%
Aylesbury Vale 024	4,130	58	1.23	0.2%	0.04%
Bracknell Forest	59,267	91	7.14	1.2%	0.21%
Chiltern	35,476	75	6.27	1.0%	0.19%
Milton Keynes	143,998	44	75.68	12.4%	2.26%
Oxford	99,423	33	89.98	14.8%	2.69%
Reading	89,115	94	10.06	1.7%	0.30%
Slough	74,593	81	11.42	1.9%	0.34%
South Bucks	33,210	75	5.97	1.0%	0.18%
South Oxfordshire	61,683	55	20.56	3.4%	0.62%
Vale of White Horse	62,253	51	24.05	3.9%	0.72%
West Berkshire	87,006	66	19.79	3.2%	0.59%
West Oxfordshire 001	3,348	33	3.07	0.5%	0.09%
West Oxfordshire 002	2,893	26	4.28	0.7%	0.13%
West Oxfordshire 003	2,112	47	0.96	0.2%	0.03%
West Oxfordshire 004	3,006	23	5.68	0.9%	0.17%
West Oxfordshire 005	1,739	31	1.81	0.3%	0.05%
West Oxfordshire 006	2,591	33	2.38	0.4%	0.07%
West Oxfordshire 007	2,935	41	1.75	0.3%	0.05%
West Oxfordshire 008	2,654	37	1.94	0.3%	0.06%
West Oxfordshire 009	2,717	30	3.02	0.5%	0.09%
West Oxfordshire 010	7,974	38	5.52	0.9%	0.17%
West Oxfordshire 011	3,539	30	3.93	0.6%	0.12%
West Oxfordshire 012	2,944	54	1.01	0.2%	0.03%
West Oxfordshire 013	1,523	48	0.66	0.1%	0.02%
West Oxfordshire 014	6,235	48	2.71	0.4%	0.08%
West Oxfordshire 015	2,012	48	0.87	0.1%	0.03%
Windsor and Maidenhead	76,112	79	12.28	2.0%	0.37%
Wokingham	69,107	91	8.36	1.4%	0.25%
Wycombe	80,986	55	26.69	4.4%	0.80%
Cherwell 001	1,904	31	1.97	0.3%	0.06%
Cherwell 002	1,261	28	1.61	0.3%	0.05%
Cherwell 003	4,966	27	6.81	1.1%	0.20%
Cherwell 004	14,431	23	27.28	4.5%	0.82%
Cherwell 005	751	29	0.89	0.1%	0.03%
Cherwell 006	4,149	28	5.29	0.9%	0.16%
Cherwell 007	2,620	31	2.73	0.4%	0.08%
Cherwell 008	3,554	19	9.84	1.6%	0.29%
Cherwell 009	2,272	39	1.49	0.2%	0.04%
Cherwell 010	2,845	15	12.64	2.1%	0.38%
Cherwell 011	3,693	14	18.84	3.1%	0.56%
Cherwell 012	1,066	15	4.74	0.8%	0.14%
Cherwell 013	5,472	15	24.32	4.0%	0.73%
Cherwell 014	1,823	11	15.07	2.5%	0.45%
Cherwell 015	5,786	16	22.60	3.7%	0.68%
Cherwell 016	4,739	13	28.04	4.6%	0.84%
Cherwell 017	1,837	20	4.59	0.8%	0.14%
Cherwell 018	863	21	1.96	0.3%	0.06%
Cherwell 019	7,771	23	14.69	2.4%	0.44%
Total				**100%**	**18.23%**

Table E2: regional HGV distribution – UKG1 (Herefordshire, Worcestershire and Warwickshire)

Area	Workplace population (P)	Journey time (mins)	P/T²	Share	As % of total distribution
Bromsgrove	39,055	82	5.83	5.64%	0.25%
Herefordshire, County of	87,169	143	4.26	4.12%	0.19%
Malvern Hills	31,181	111	2.54	2.45%	0.11%
North Warwickshire	39,558	86	5.31	5.13%	0.23%
Nuneaton and Bedworth	45,300	91	5.48	5.30%	0.24%
Redditch	39,031	79	6.31	6.10%	0.27%
Rugby	47,452	71	9.29	8.98%	0.41%
Warwick	77,726	53	27.63	26.70%	1.20%
Worcester	53,214	99	5.48	5.29%	0.24%
Wychavon	54,092	84	7.64	7.39%	0.33%
Wyre Forest	37,393	97	4.00	3.87%	0.17%
Stratford-on-Avon 001	2,866	79	0.46	0.44%	0.02%
Stratford-on-Avon 002	2,914	62	0.76	0.73%	0.03%
Stratford-on-Avon 003	2,134	75	0.38	0.37%	0.02%
Stratford-on-Avon 004	3,983	48	1.73	1.67%	0.08%
Stratford-on-Avon 005	3,702	43	2.00	1.93%	0.09%
Stratford-on-Avon 006	3,500	72	0.68	0.65%	0.03%
Stratford-on-Avon 007	2,991	68	0.65	0.63%	0.03%
Stratford-on-Avon 008	4,779	50	1.91	1.85%	0.08%
Stratford-on-Avon 009	9,860	62	2.57	2.48%	0.11%
Stratford-on-Avon 010	3,055	63	0.77	0.74%	0.03%
Stratford-on-Avon 011	5,393	63	1.36	1.31%	0.06%
Stratford-on-Avon 012	3,411	79	0.55	0.53%	0.02%
Stratford-on-Avon 013	8,608	46	4.07	3.93%	0.18%
Stratford-on-Avon 014	3,193	71	0.63	0.61%	0.03%
Stratford-on-Avon 015	3,009	50	1.20	1.16%	0.05%
Total				**100%**	**4.51%**

Table E3: regional HGV distribution – UKF2 (Leicestershire, Rutland and Northamptonshire)

Area	Workplace population (P)	Journey time (mins)	P/T²	Share	As % of total distribution
Blaby	51,967	93	6.04	3.19%	0.2%
Charnwood	67,856	107	5.94	3.13%	0.2%
Harborough	42,180	78	6.94	3.67%	0.2%
Hinckley & Bosworth	42,514	87	5.62	2.97%	0.2%
Leicester	163,224	97	17.43	9.20%	0.6%
Melton	22,107	123	1.47	0.78%	0.1%
North West Leicestershire	53,711	112	4.29	2.27%	0.2%
Oadby and Wigston	21,125	100	2.13	1.12%	0.1%
Rutland	18,293	111	1.48	0.78%	0.1%
Corby	30,883	91	3.72	1.96%	0.1%
Daventry	38,650	52	14.35	7.58%	0.5%
East Northamptonshire	31,128	96	3.34	1.77%	0.1%
Kettering	42,290	77	7.14	3.77%	0.3%
Northampton	118,778	51	46.32	24.45%	1.6%
South Northamptonshire 001	2,709	42	1.54	0.81%	0.1%
South Northamptonshire 002	2,060	56	0.66	0.35%	0.0%
South Northamptonshire 003	4,661	47	2.11	1.11%	0.1%
South Northamptonshire 004	4,399	34	3.81	2.01%	0.1%
South Northamptonshire 005	2,907	33	2.67	1.41%	0.1%
South Northamptonshire 006	3,323	26	4.92	2.60%	0.2%
South Northamptonshire 007	2,420	28	3.09	1.63%	0.1%
South Northamptonshire 008	2,623	43	1.42	0.75%	0.1%
South Northamptonshire 009	1,592	16	6.22	3.28%	0.2%
South Northamptonshire 010	4,776	15	21.23	11.21%	0.8%
South Northamptonshire 011	2,853	19	7.90	4.17%	0.3%
Wellingborough	34,351	67	7.65	4.04%	0.3%
Total				**100%**	**6.70%**

APPENDIX 12

TN2: TRANSPORT MODELLING METHODOLOGY

OXFORDSHIRE RAILFREIGHT INTERCHANGE LIMITED

TECHNICAL NOTE 2: TRANSPORT MODELLING METHODOLOGY

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project number: ADC1794			report reference: ADC1794-RP-H
version	date	lead author	comments
1		[redacted]	internal draft
2	21/12/2020		first issued to the Transport Working Group
3	28/02/2022		updated to reflect revised strategy and issued to the Transport Working Group

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APPENDICES

Appendix A Bicester, OxSRFI Technical Note 1: Bicester Transport Model Validation
Appendix B OxSRFI BTM Modelling Methodology

1.0 INTRODUCTION

1.1 ADC Infrastructure Ltd are appointed by Oxfordshire Railfreight Interchange Ltd (the Applicant) to assess the transport and infrastructure requirements of a Nationally Significant Infrastructure Project (NSIP), that being a proposed Strategic Rail Freight Interchange (SRFI) in Oxfordshire.

1.2 The proposed SRFI, to be known as Oxfordshire Strategic Rail Freight Interchange (OxSRFI) is located adjacent to the Chiltern Main Line Railway, part of the strategic rail freight network, and to the southwest of Junction 10 of the M40 motorway in Oxfordshire.

1.3 Oxfordshire County Council (OCC) are the local highway authority and National Highways have responsibility for the strategic road network (SRN), which in the vicinity of the site comprises the M40, A43 and A34.

1.4 As the scheme falls within the definition of a NSIP it requires consent under the Planning Act 2008. An application for a Development Consent Order (DCO) is therefore being prepared and it will be submitted to the Planning Inspectorate (the Examining Authority) for consideration. The Examining Authority will examine the application before making a recommendation to the Secretary of State for Transport, who will make the final decision.

1.5 The DCO application will be supported by an Environmental Statement which will include a Transport Assessment and Framework Travel Plan. A Transport Working Group has been established to provide a forum for discussion and allow a step-by-step approach to the assessment and agreement of transport matters relating to OxSRFI in advance of submission of the DCO and the preparation of Statements of Common Ground. The Transport Working Group comprises representatives from:

- National Highways
- Aecom (National Highways' term consultant)
- Oxfordshire County Council
- The Applicant
- ADC Infrastructure Ltd
- BWB Consulting Ltd
- Oxalis Planning Ltd.

1.6 Ensuring good access to the SRN is a prerequisite for the proposed OxSRFI development. The Applicant's approach to the road access strategy has evolved from a starting assumption that a new junction on the M40 motorway midway between J9 and J10 would be the most appropriate approach. Following initial investigations into a new junction[1], and consultation with OCC and National Highways, it became clear that for a new junction to be compliant with DfT Circular 02/2013 requirements for new access onto the SRN, National Highways would require the Applicant to demonstrate that there were no alternative options to improve existing junctions.

1.7 The Applicant was also mindful that the initial assessment identified a high degree of uncertainty regarding the acceptability of the available weaving distances between a new junction and the existing M40 junctions 9 and 10. Furthermore, it was identified that a new junction would not necessarily negate the requirement for substantial improvements at M40 Junction 10 to accommodate the OxSRFI development traffic bound to and from the A43.

[1] Technical Note 1 – New M40 Junction, report reference ADC1794-RP-G-V3, ADC December 2020.

1.8 The access strategy for OxSRFI has therefore evolved and is now centred on significant improvements to Junction 10 of the M40 motorway, in combination with the provision of a new bypass for the village of Ardley and a new relief road around the north-east quadrant of the village of Middleton Stoney. The unnamed road that passes through the OxSRFI site would be removed as part of the development proposals, and so would be replaced with a new road link to the south of the site, termed the Heyford Park Link Road.

1.9 The objectives of this access strategy approach are to ensure adequate capacity at M40 Junction 10 to accommodate the required access to the SRN, whilst delivering appropriate new site access infrastructure, along with aiding the delivery of planned growth and development across the wider area.

1.10 Version 2 of this Technical Note was prepared in December 2020. It set out the proposed transport modelling methodology based on the then proposed access strategy of a new junction on the M40. That report was submitted to the Transport Working Group and feedback was provided from both National Highways (then Highways England) and OCC.

1.11 This Technical Note has therefore been updated to incorporate into the assessment methodology the feedback provided by National Highways and OCC. It builds upon and captures work progressed through the Transport Working Group meetings held during 2021. This update follows a period of significant and ongoing option testing that has been undertaken in consultation with National Highways and OCC regarding the M40 Junction 10 improvement scheme.

1.12 The purpose of this report is therefore to reflect the changes to the transport modelling methodology brought about by the change in access strategy. The report is structured as follows:

- Section 2 describes briefly the proposed OxSRFI development and proposed embedded transport mitigation measures.
- Section 3 sets out the proposed transport modelling methodology
- Section 4 sets out the assessment years and scenarios.
- Section 5 presents a short summary.

2.0 PROPOSED DEVELOPMENT

Site location

2.1 The OxSRFI site is in Cherwell District Council, within northern Oxfordshire. It is located to the southwest of M40 Junction 10, approximately 6km from Bicester. A general site location plan is shown at **Figure 1**.

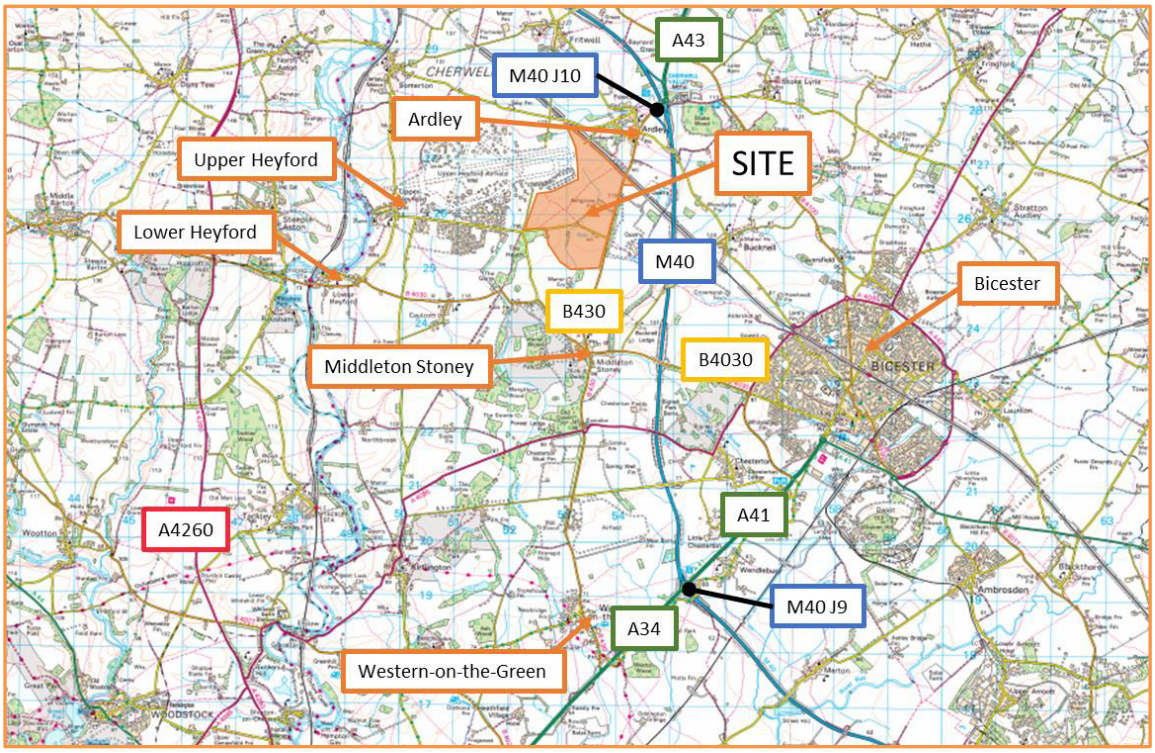


Figure 1: general site location

2.2 The main site is bounded to the north by the Chiltern Main Line Railway, to the east by the B430 and the Viridor 'Ardley Energy from Waste' facility, to the south by farmland, and to the west by the Heyford Park development[2], which is located on the former RAF Upper Heyford site, **Figure 2**. The village of Ardley is approximately 1km to the north of the site. The village of Middleton Stoney is approximately 2km to the south of the site.

2.3 The closest point of access to the Strategic Road Network from the main site is at Junction 10 of the M40, approximately 1.6km to the north when accessed via the B430. To access M40 Junction 10 from the main site involves travelling through the village of Ardley.

2.4 At Junction 10 there is also direct access to the A43. The M40 connects to Birmingham (and the M42 and M5) to the north, and the M25 and London to the south. The A43 heads northeast from M40 Junction 10 and connects to the M1 at M1 Junction 15A.

2.5 Although less direct, access to the M40 could also be possible via Junction 9, which is a 10.5km drive to the south of the site, when accessed via the B430, passing through the village of Middleton Stoney, and then via the B4030 and then the A41.

2.6 To the south of the site the A34 runs in a northeast to southwest direction and connects Bicester to Oxford. It continues further south, connecting with the M4 at Newbury and the M3 at

[2] 18/00825/HYBRID

Winchester. The B430 runs between the A34 to the south and Junction 10 of the M40 to the north.

2.7 As shown in **Figure 2**, an unnamed road passes through the main site area. It connects the B430 to Camp Road. Camp Road continues west towards Upper Heyford and provides access to the Heyford Park development.

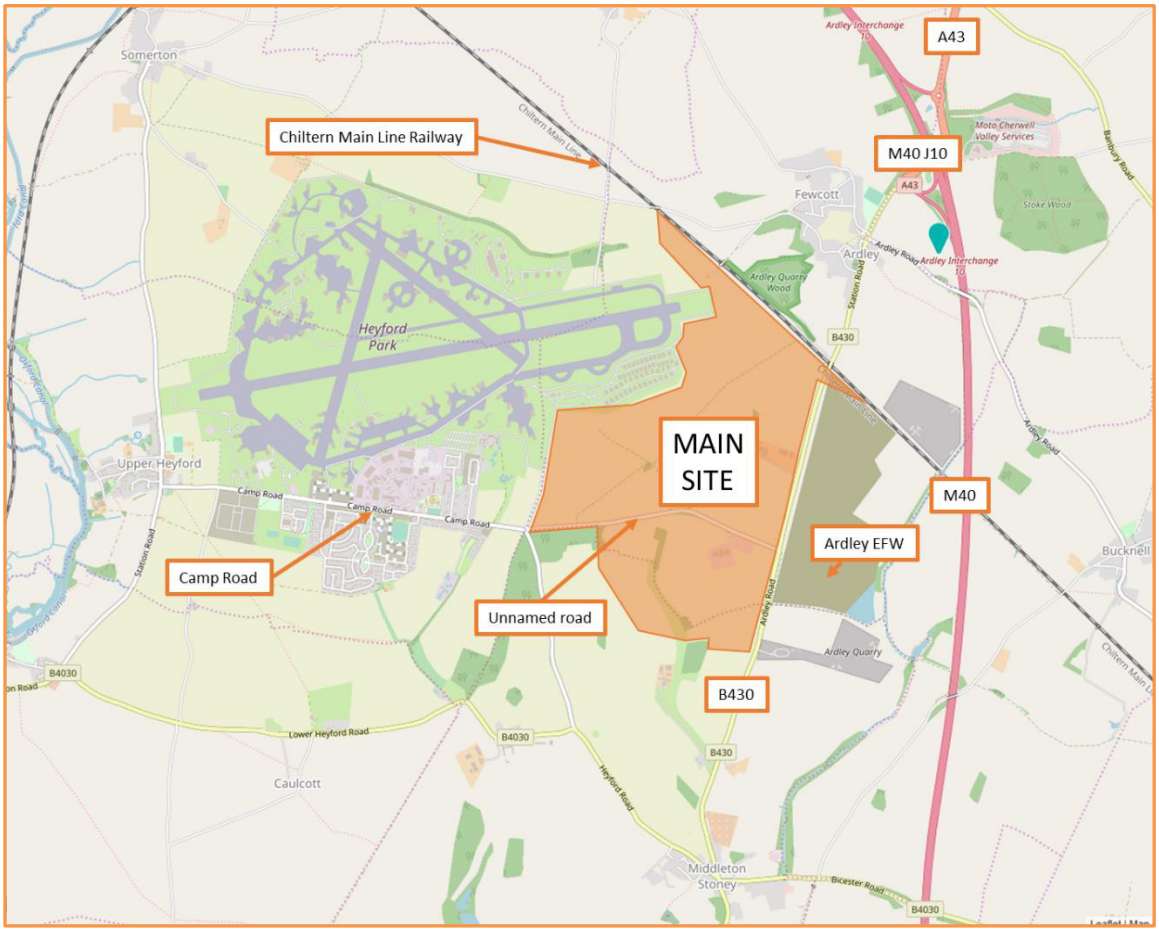


Figure 2: detailed site location

OxSRFI development

2.8 The OxSRFI development would provide a freight terminal accommodating trains of up to 775m long, and include container storage and HGV parking, with rail sidings within the site with the potential to serve some of the individual warehouses. It would provide 6.5 million sqft of predominantly large scale B8 warehousing and distribution space. The scheme will provide substantial mounding and woodland/tree planting around the site edges for visual screening and ecological connectivity.

2.9 The maximum floor space will be set by the Parameters Plan. An allowance will be made for up to 1/3 of the warehouses to be fitted with mezzanines.

2.10 The OxSRFI scheme will accommodate 12 freight trains per day. The freight terminal would be connected to the Chiltern Main Line Railway, part of the strategic rail freight network.

Embedded transport mitigation (Highway Works)

2.11 The Applicant's approach to road access is centred on significant improvements to Junction 10 of the M40 motorway.

2.12 The proposed embedded Highway Works also include a new Ardley Bypass which would remove through-traffic from the village and deliver the primary new site access road to the main site. Based on early assessment work and an understanding of the current baseline conditions, the Highway Works also include a Middleton Stoney Relief Road (MSRR) to remove a proportion of both current and anticipated future traffic from the village centre. The Highway Works include a secondary site access to the main site for public transport, cyclists and pedestrians (and emergency vehicles), which would be taken from the realigned unnamed road that links Camp Road with the B430, which would represent a new Heyford Park Link Road (HPLR).

2.13 In combination, this proposed strategy is considered appropriate to ensure suitable and efficient access to the main site, and from the main site to the SRN, while mitigating likely future effects and addressing a number of well-known existing local transport issues and challenges. Options are being considered with regard to the access strategy, including the route alignment for the MSRR and HPLR, and the configuration of elements of the proposed M40 Junction 10 Highway Improvements. The latter is the subject of a series of technical notes and ongoing assessment work that is being undertaken in consultation with the Transport Working Group.

2.14 It has been agreed with OCC that the OxSRFI development would be subject to a HGV routing strategy to restrict HGVs from travelling to and from the south of the site on the B430. This is consistent with the routing agreement that is in place for the adjacent Ardley EFW facility, which requires all HGV traffic to access J10 of the M40 via the B430 to the north.

2.15 The HGV routing strategy would be enforced through a combination of a physical restriction to prevent HGVs exiting the site from being able to travel south on the B430, paired with an enforcement methodology, likely to be based on Automatic Number Plate Recognition (ANPR) cameras.

2.16 The OxSRFI scheme will require the amendment, via diversions and extensions, of several public rights of way and there are ongoing discussions with OCC regarding these.

2.17 The detail of the complete package of transport mitigation works will be developed and finalised as part of the Transport Assessment process.

Additional transport mitigation

2.18 The requirement for additional transport related mitigation measures will be assessed and agreed with the Transport Working Group as part of the Transport Assessment and Framework Travel Plan process.

3.0 TRANSPORT MODELLING METHODOLOGY

Introduction

3.1 National Highways and OCC provided feedback in early 2021 on the proposed transport modelling methodology set out in version 2 of this Technical Note.

3.2 Since then, the transport modelling methodology has continued to be discussed at the regular Transport Working Group meetings. The use of the South East Regional Traffic Model (SERTM) was originally proposed to consider the potential wider strategic impact on the SRN of the (then) proposed new junction on the M40 motorway. As the strategy of a new M40 junction is no longer being pursued it was agreed at the Transport Working Group meeting held on 11 March 2021, that there is no longer a need to undertake modelling using the SERTM.

3.3 Both authorities agree that the Bicester Transport Model (BTM) is the most suitable model available to assess the impacts of the OxSRFI development on the highway network in the area.

3.4 However, National Highways, via their consultant Aecom, raised a number of comments regarding the validation of the BTM. These comments related to link count validation on the A43 near Baynard's Green Roundabout, journey time validation on the A41, and additional information on the B4100. Additional work on the BTM validation was therefore undertaken during 2021 and this is discussed below.

Bicester Transport Model (BTM)

3.5 Tetra Tech maintain and operate the BTM on OCC's behalf. The BTM was developed for OCC by Tetra Tech[3] in 2016/17 to comply with WebTAG guidance for transport models, in order that it could be used in future year transport forecasting and for the purpose of operational, economic and environment assessments[4].

3.6 The BTM was updated and expanded in 2018[5] to ensure that it was suitable to use to assess the transport impacts of the Heyford Park development. This included the extension of the model simulation network coding to include the A4260 to the west of the site. The model provides a 2016 base year, and 2021, 2026 and 2031 forecast years.

3.7 **Figure 3** (extracted from Figure 4 of the 'Local Model Validation Report'[4]) shows the extent of the SATURN network coding, with the original extent of the simulation network coding shown by the red outline, with the buffer network shown outside of the simulation coding boundary. Superimposed on this, in orange, is the updated extent of the simulation network (taken from Figure 2 of the 'Heyford Park Model Update Addendum to the Local Model Validation Report'[5]).

[3] Formerly White Young Green (WYG)
[4] Bicester Transport Model, Local Model Validation Report RT099211-001 Issue 2, WYG, March 2017
[5] Bicester Transport Model, Heyford Park Model Update Addendum to the Local Model Validation Report RT099211-5-001 Issue 3, WYG, August 2018

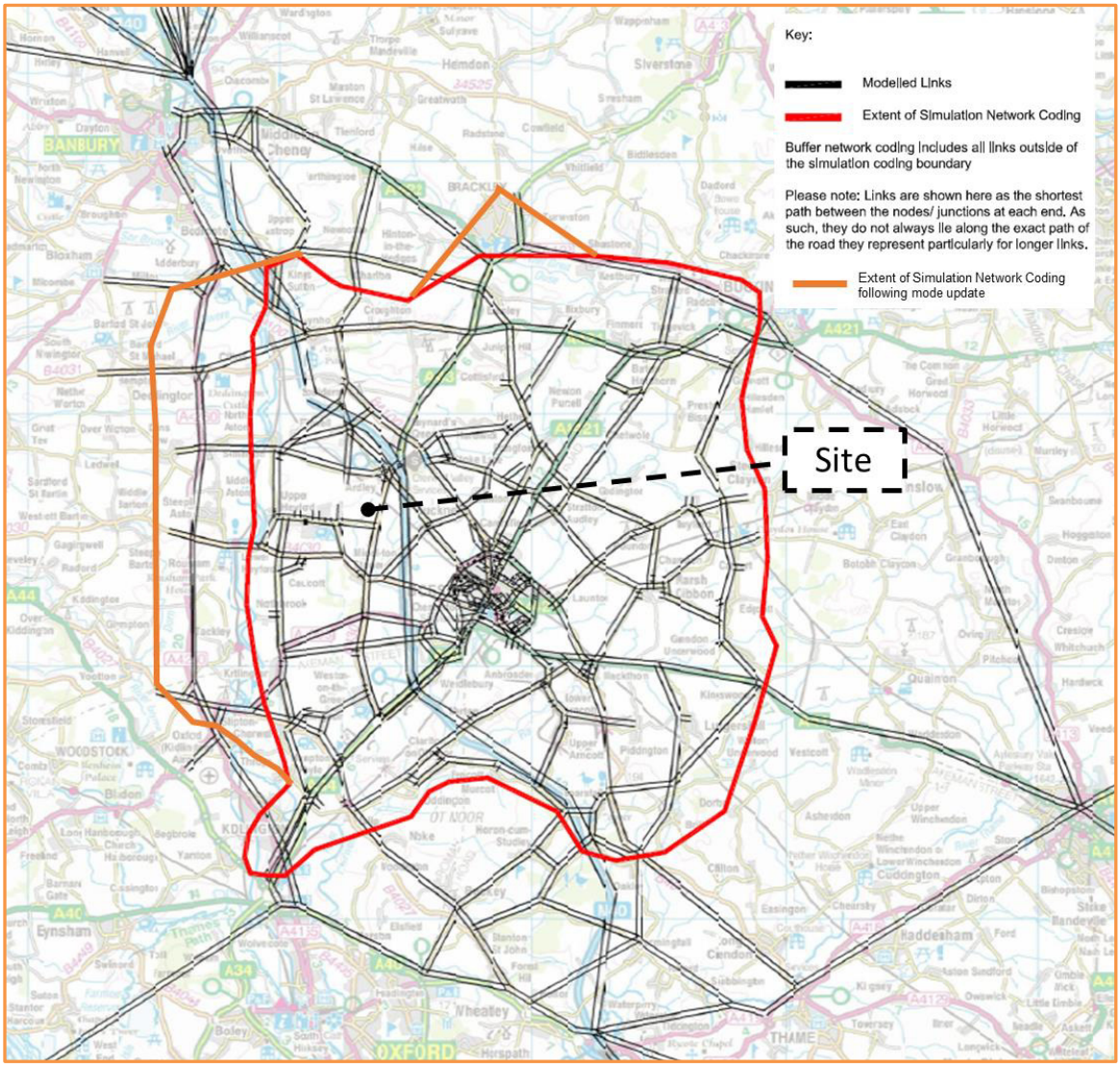


Figure 3: Extent of Saturn Network Coding, BTM (reproduced from Figure 4 of the 'BTM LMVR' and Figure 2 'BTM Heyford Park Model Update Addendum LMVR')

3.8 OCC and National Highways approved the use of the BTM to examine the transport impacts of the Heyford Park development, which is located directly adjacent to the OxSRFI site, and is forecast to generate similar peak hour traffic flows to the proposed OxSRFI. The BTM will also be used by OCC in the forthcoming Cherwell District Council Local Plan work.

3.9 It was concluded that the BTM is therefore suitable for examining traffic impacts of the OxSRFI. The BTM can model traffic reassignment effects at Junctions 9 and 10 of the M40 that may be associated with the OxSRFI and proposed embedded highway works.

BTM validation

3.10 Following agreement from National Highways and OCC to the use of the BTM to examine the transport impacts of the OxSRFI scheme, Tetra Tech were commissioned to consider and address the comments made by National Highways on the BTM validation.

3.11 Accordingly, Tetra Tech prepared Technical Note 1: Bicester Transport Model Validation that was issued to the Transport Working Group on 28 May 2021. National Highways provided comments on Technical Note 1 on 29 June 2021, requesting additional traffic flow data be

included in the model validation report. Tetra Tech therefore updated their Technical Note 1[6], and this was issued to the Transport Working Group on 9 September 2021. A copy of the final report that addresses the comments is provided at **Appendix A** of this Technical Note.

Embedded highway mitigation

3.12 Highway improvement option assessment work at M40 Junction 10 and the Ardley Bypass has been undertaken using traffic flow demands based on the M40 Junction 10 VISSIM model developed by National Highways. This work is reported in the following reports:

- Technical Note 5 'M40 Junction 10 Options Reports' (ADC1794-RP-M-V3)
- Technical Note 5 Addendum 'Response to NH comments' (ADC1794-RP-M1-V2)
- Technical Note 6 'Options Report Traffic Flow Derivation' (ADC1794-RP-N-V2)
- Technical Note 8 'M40 Junction Options 3A and 3B' (ADC1794-RP-Q-V4)

3.13 The M40 Junction 10 options assessment is ongoing, and the Applicant is now focused on considering an improvement option for M40 Junction 10 that would provide free flow links between the A43 to M40 southbound and the M40 to A43 northbound.

3.14 Work on an alignment and junction options for the MSRR and HPLR has been undertaken using traffic flow forecasts available from the Heyford Park planning application.

Transport modelling methodology

3.15 The above, and the discussions held with the Transport Working Group, results in the following three-stage transport modelling process:

i. The options and preliminary design of the embedded highway works at M40 Junction 10, Ardley Bypass, site access and the MSRR and HPLR are developed based on traffic flow demands from the M40 Junction 10 VISSIM model developed by National Highways, and the transport work undertaken to support the Heyford Park development. The objective of this stage is to develop the highway layouts to a preliminary stage sufficient for coding into the BTM.

ii. The BTM is used to assess the traffic impacts of the OxSRFI as the second stage of work. This will provide traffic data for the second design review of the embedded highway works and access layout.

iii. Based on the outputs from the BTM, the study area for detailed assessment in the third stage of work will be identified and agreed with the Transport Working Group. The third stage of work will then comprise detailed assessment of the study area using industry standard assessment tools (Junctions 9, LinSig etc). This will include micro-simulation assessment of the operation of the M40 Junction 10 complex, including the site access and Ardley Bypass using VISSIM.

[6] Bicester OxSRFI, Technical Note 1: Bicester Transport Model Validation, Revision 2, August 2021, Tetra Tech

4.0 TRANSPORT MODELLING ASSESSMENT YEARS AND SCENARIOS

4.1 This section presents the assessment scenarios as discussed with the Transport Working Group. It has informed the development modelling brief prepared by Tetra Tech for the required BTM transport modelling work.

Assessment years

4.2 The following assessment years have been agreed, as discussed in the paragraphs below:

- 2019 and 2021 baseline
- 2026 opening assessment year
- 2031 future assessment year

2019 and 2021 baseline years

4.3 Baseline year BTM outputs will be required for the assessment of the environmental air quality and noise effects.

4.4 For air quality, monitoring data will be annualised to 2019 for air quality model verification. Hence, 2019 will be used to provide baseline traffic data for the air quality assessment.

4.5 Baseline monitoring for noise was undertaken during 2021. Hence, 2021 will be used to provide baseline traffic data for the noise assessment.

2026 opening assessment year

4.6 A 2026 opening year has been agreed.

4.7 The DCO application for OxSRFI is expected to be submitted in late 2022/early 2023, with a decision expected in late 2023/early 2024. Based on the experience from East Midlands Gateway SRFI which took 3 years from consent to first opening, it is therefore reasonable to assume a 2026/2027 opening year for OxSRFI. The BTM does not provide a 2027 forecast year, but it does provide a 2026 forecast year. Therefore, 2026 has been adopted as the opening year.

2031 future assessment year

4.8 OCC have confirmed that they will require an assessment of the impact of the development on the local highway network in 2031, consistent with the end of the current Local Plan period.

4.9 National Highways also require the 'Review Period' assessment, this should be 10 years after the registration of the planning application or the end of the Local Plan period, whichever is greater. The DCO application was registered with PINs in 2021 and the BTM has a 2031 forecast year.

4.10 It has been agreed with the Transport Working Group that National Highways 'Review Period' be based on 2031 BTM outputs. This means that the OCC future assessment year and National Highways Review Period have the same assessment year.

BTM modelling methodology and assessment scenarios

4.11 Tetra Tech have been commissioned to undertake the required transport modelling work using the BTM. A copy of their modelling brief is provided at **Appendix B**. The scenarios to be modelled are summarised in the table on the next page.

	ID	year	scenario name	reference case parameter	development case and embedded highway mitigation parameters	to be used for
Base	B-2019	2019	baseline year	committed and allocated development and infrastructure in place by 2019	n/a	base year traffic flows for Air Quality model verification
	B-2021	2021	baseline year	committed and allocated development and infrastructure in place by 2021	n/a	base year traffic flows
Reference Case	RC1-2026	2026	opening year	committed and allocated development and infrastructure in place by 2026	n/a	background traffic flows in opening year for assessment of environmental effects
	RC2-2026	2026	DfT 02/2013 Circular compliant year	committed development and infrastructure in place by 2026, no allocated development/infrastructure	n/a	background traffic flows for assessment of the requirement for highway mitigation on the SRN
	RC1-2031	2031	2031 future assessment year	committed and allocated development and infrastructure in place by 2031	n/a	background traffic flows for assessment of the requirement for highway mitigation on the local highway network background traffic flows for assessment of environmental effects in future year the Review Period for the SRN
	RC1A-2031	2031	2031 future assessment year sensitivity test with Heyford Park bus gate in place	committed and allocated development and infrastructure in place by 2031, including Heyford Park bus gate	n/a	sensitivity test background traffic flows should Heyford Park deliver the bus gate

	ID	year	scenario name	reference case parameter	development case and embedded highway mitigation parameters	to be used for
Development case no highway mitigation	DM1	2026	opening year, no highway mitigation	RC1-2026	first phase of OxSRFI (TBC), no embedded highway mitigation (other than site access)	opening year traffic flows for assessment of the first phase of development
	DM2	2026	DfT 02/2013 Circular compliant year, no highway mitigation	RC2-2026	100% of OxSRFI, no embedded highway mitigation (other than site access)	assessment of the requirement for highway mitigation on the SRN
	DM3	2031	2031 future assessment year, no highway mitigation	RC1-2031	100% of OxSRFI, no embedded highway mitigation (other than site access)	assessment of the requirement for highway mitigation on County roads the Review Period for the SRN
Development case	DS1	2026	opening year, with embedded highway mitigation	RC1-2026	first phase of OxSRFI (TBC), with embedded highway mitigation for first phase (TBC)	opening year traffic flows for assessment of environmental effects
	DS2	2026	DfT 02/2013 Circular compliant year, with embedded highway mitigation	RC2-2026	100% of OxSRFI, with embedded highway mitigation	demonstrate suitability of embedded highway mitigation once reassignment effects are considered assessment of residual impacts on the SRN once any reassignment effects are considered
	DS3	2031	2031 future assessment year, with embedded highway mitigation	RC1-2031	100% of OxSRFI, with embedded highway mitigation	future year traffic flows for assessment of environmental effects design of County road highway mitigation, where a requirement for mitigation is identified assessment of residual impacts on County road network once any reassignment effects are considered the Review Period for the SRN

With Albion Land sensitivity test

	ID	year	scenario name	reference case parameter	development case and embedded highway mitigation parameters	to be used for
Development Case – Sensitivity Test	DS4	2031	2031 future assessment year sensitivity test, with Albion Land in place	RC1-2031	100% of OxSRFI, with embedded highway mitigation 100% of Albion Land development with embedded highway mitigation Note: where there is overlap of highway mitigation, agreement will be need as to which mitigation to model.	With development traffic flows for 'with Albion Land sensitivity test'

Base and Reference Case scenarios

4.12 Tetra Tech will produce uncertainty logs for the two base year scenarios and each of the reference case modelling scenarios, as detailed in their modelling brief. The uncertainty logs will be agreed with the Transport Working Group.

4.13 Where highway mitigation is required on the SRN, then this should be designed to accommodate the forecast traffic demand in the year of opening of the development assuming that 100% of the development is in place and including for all committed development and infrastructure[7]. National Highways have advised that only committed development and infrastructure that have a realistic prospect of being delivered by 2026 should be included. This is the DfT 02/2013 Circular compliant opening year scenario.

4.14 Whilst the DfT 02/2013 Circular compliant year scenario is appropriate for assessment of the traffic impacts on the SRN, it does not represent a realistic opening year scenario for assessment of environmental impacts. In the case of environmental impacts, the greatest impact will generally be when the development traffic is the largest proportion of the background traffic, which is often at the opening of a development, when background traffic flows are lowest. Hence, a separate 2026 'opening year' scenario will also be required. This scenario will include both the committed and allocated development and infrastructure schemes that have a realistic prospect of being delivered by 2026 and therefore differs from the DfT 02/2013 Circular compliant scenario, which includes only committed schemes.

4.15 These requirements result in two slightly different 2026 opening year reference case scenarios, along with the 2031 future year reference case scenario, as follows:

- RC1-2026, the opening year for assessment of environmental impacts
- RC2-2026, the opening year for the DfT 02/2013 Circular compliant scenario for assessment of requirement for highway mitigation on the SRN
- RC1-2031, the future year for assessment of environmental impacts, impacts on the local highway network and National Highways Review Period assessment.

4.16 In addition, a 2031 future year sensitivity test scenario that includes the bus gate proposed on the B4030 to the west of Middleton Stoney as part of the Heyford Park development will be developed. It has been agreed with OCC that the bus gate will not be included in the other reference case scenarios as there is increasing uncertainty regarding its implementation as part of the Heyford Park development. However, its inclusion as a sensitivity test, will allow a comparison of the OxSRFI development impacts under a scenario in which Heyford Park did implement the bus gate proposals. This scenario is RC1A-2031.

BTM development case scenarios

4.17 The OxSRFI development case scenarios will be modelled both with and without the proposed embedded transport infrastructure in place, as follows:

- Do Minimum (DM), without embedded transport infrastructure, except the site access
- Do Something (DS), with the embedded transport infrastructure.

4.18 The DM1 and DS1 scenarios will include only the first phase of the OxSRFI, whereas the other scenarios will include 100% of the OxSRFI scheme.

[7] The Strategic Road Network and the Delivery of Sustainable Development, DfT Circular 02/2013

4.19 The highway infrastructure associated with each scenario will be coded appropriately within the BTM, along with the HGV distribution that will be provided by ADC following agreement with the Transport Working Group. The light vehicle trip distribution will be determined using the BTM.

BTM development case sensitivity test scenario

4.20 Albion Land have submitted two outline planning applications for development either side of A43, adjacent to the Baynard's Green Roundabout (ref 21/03268/OUT and 21/03267/OUT), along with an additional enabling works application (21/03266/F). In total, the applications comprise up to 270,000sqm of B8 development.

4.21 OCC have requested that the cumulative impact of these applications is considered in combination with the OxSRFI scheme. The Albion Land scheme is not a commitment nor is it an allocated site and therefore it is not appropriate to include it within any of the reference case scenarios. However, the Applicant has agreed to undertake a sensitivity test (DS4) that would examine the 2031 future year with both the OxSRFI and Albion Land scheme in place. Further work will be required to agree the appropriate input parameters for this scenario.

BTM modelling and outputs

4.22 Tetra Tech are commissioned to run the BTM to obtain the required outputs.

4.23 It is anticipated that the Tetra Tech output will be a report, or reports, describing the modelling process and presenting and comparing the BTM results for the various scenarios. It is anticipated that flow difference plots and ratio of volume to capacity (V/C) plots will be provided. Peak hour link flows and turning counts at junctions will be provided. Based on the experience of the approach taken by PINS on other SRFI schemes, output plots will need to include link flows and not just show traffic flow bandwidths. Turning counts will need to be provided in both diagrammatical and tabulated form. The traffic flows should be presented as total vehicles and HGVs.

4.24 Based on the outputs from the BTM a study area for further detailed assessment will be agreed with the Transport Working Group.

4.25 Annual Average Daily Traffic (AADT) and Annual Average Weekday Traffic (AAWT) traffic flows will be required for all study area road links, for the Base, RC1-2026, RC1-2031 and DS1, DS3 and DS4 scenarios. The % HGV and average vehicle speeds on the road links should also be provided. For single carriageway links, the data should be presented as two-way flows. For dual carriageway and motorway links the data should be presented as one-way directional flows.

4.26 The AADT and AAWT flow data will be calculated from the BTM peak hour traffic data for the base and RC scenarios, using conversion factors derived from daily count data. The development traffic will have a different daily profile to the background traffic and therefore the calculation of the AADT and AAWT flow data for the with development traffic scenarios will need to take this into account. The conversion factors for the development traffic can be provided by ADC from analysis of the proposed daily traffic profile for the OxSRFI development.

Detailed junction modelling

4.27 The Stage 3 transport modelling will involve detailed junction modelling of the study area junctions using industry standard software. The study area will be agreed with the Transport

Working Group. The detail junction modelling will use the BTM peak hour traffic flows output from the BTM modelling.

4.28 Assessment of the M40 J10 junction complex, including the site access and Ardley Bypass, will be undertaken using micro-simulation (VISSIM). Work to agree the Reference Case VISSIM model is well progressed and is being considered via a separate work stream with National Highways and OCC.

5.0 SUMMARY AND CONCLUSIONS

5.1 ADC Infrastructure Ltd are appointed by Oxfordshire Railfreight Interchange Ltd to assess the transport and infrastructure requirements of a proposed Strategic Rail Freight Interchange (SRFI) in Oxfordshire, to be known as OxSRFI. The scheme is classified as a Nationally Significant Infrastructure Project.

5.2 This Technical Note has set out a three-stage transport modelling methodology for the assessment of the traffic impacts of the proposed OxSRFI development.

i. The options and preliminary design of the embedded highway works at M40 Junction 10, Ardley Bypass, site access and the MSRR and HPLR are developed based on traffic flow demands from the M40 Junction 10 VISSIM model developed by National Highways, and the transport work undertaken to support the Heyford Park development. The objective of this stage is to develop the highway layouts to a preliminary stage sufficient for coding into the Bicester Transport Model (BTM).

ii. The BTM is used to assess the traffic impacts of the OxSRFI as the second stage of work. This will provide traffic data for the second design review of the embedded highway works and access layout.

iii. Based on the outputs from the BTM, the study area for detailed assessment in the third stage of work will be identified and agreed with the Transport Working Group. The third stage of work will then comprise detailed assessment of the study area using industry standard assessment tools. This will include micro-simulation assessment of the operation of the M40 Junction 10 complex, including the site access and Ardley Bypass using VISSIM.

5.3 Tetra Tech, maintain and operate the BTM on OCC's behalf. They have been commissioned to undertake the required BTM modelling work, and this Technical Note has presented the modelling methodology and assessment scenarios for agreement with the Transport Working Group.

APPENDIX A

Bicester, OxSRFI Technical Note 1: Bicester Transport Model Validation

Bicester, OxSRFI

Technical Note 1: Bicester Transport Model Validation

Oxfordshire Railfreight Ltd

August 2021

Prepared on Behalf of Tetra Tech Environment Planning Transport Limited.
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1 INTRODUCTION

1.1 BACKGROUND

1.1.1 Tetra Tech has been appointed by Oxfordshire Railfreight Ltd to provide traffic and transport modelling services with regard to the Bicester Transport Model (BTM), and specifically the use of the model in relation to the proposed Oxfordshire Strategic Rail Freight Interchange (OxSRFI).

1.1.2 The BTM comprises a Public Transport Network, a Variable Demand Module and a SATURN highways assignment model that is centred on Bicester town, covers the Cherwell District and embraces the geographic area within which reassignment effects due to congestion or potential mitigation measures to be tested are likely to be significant.

1.1.3 The model is owned by Oxfordshire County Council (OCC), and maintained by Tetra Tech, and has been developed so that future year forecasting of traffic conditions in Bicester can be undertaken. This has included testing of proposed highways and development schemes in order to assess their comparative viability and to aid economic assessment.

1.1.4 The modelled time periods include a morning (AM) peak from 07:30 to 08:30, an inter peak (IP) average hour between 11:00 and 15:00 and an evening (PM) peak from 17:00 and 18:00. The model was developed for a base year of 2016, with future year models for 2021, 2026 and 2031 to accord with the Local Plan implementation period.

1.1.5 The proposed OxSRFI will be located to the west of Bicester and in close proximity to M40 Junction 10 (see **Figure 1**) and is within the extents of the BTM (see **Figure 2**). It is therefore proposed that the BTM will be used to assess the traffic impacts of the OxSRFI.

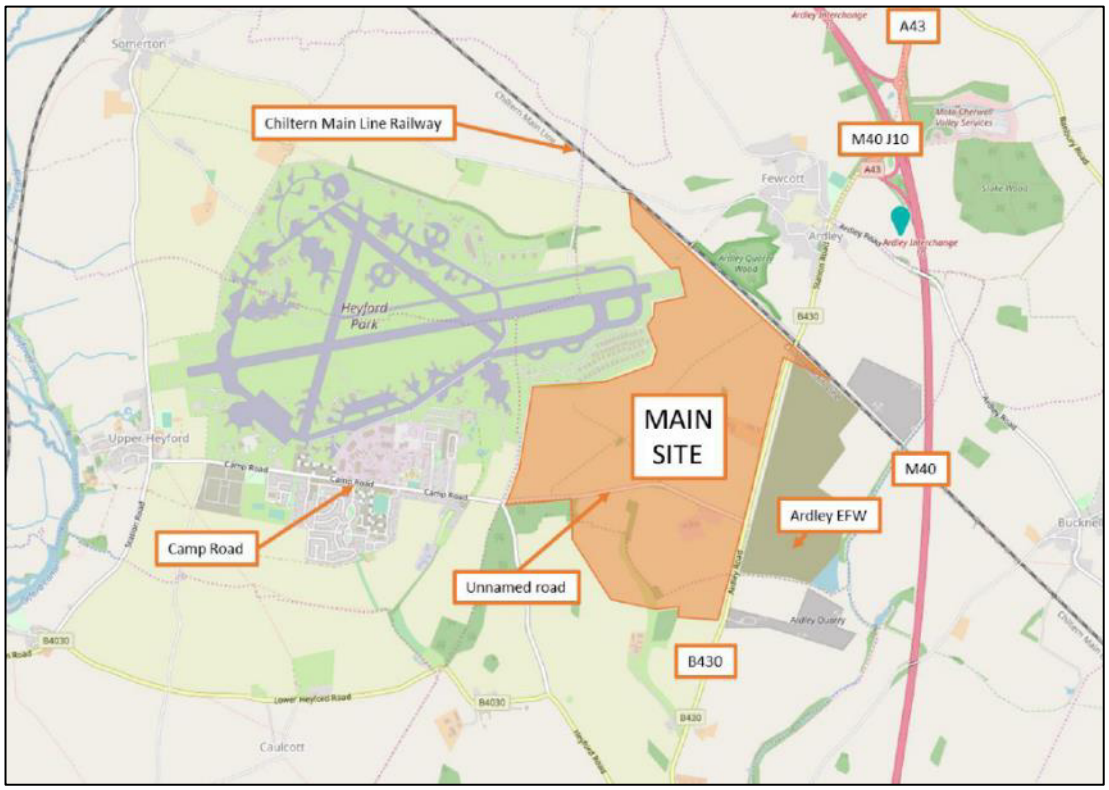
1.1.6 Given the close proximity of the OxSRFI to the strategic road network, primarily the M40, Highways England (HE) have been consulted with regard to the use of the BTM. Through their consultants AECOM, HE have made a number of comments relating to the validation of the BTM in the vicinity of the M40, and these are contained within the technical note presented in **Appendix A**. This Tetra Tech technical note has been produced to consider and address the following of these comments:

- The BTM LMVR Addendum highlights validation issues on the green route in the westbound direction in both AM and PM peak periods. As one of the green routes shown in the LMVR Addendum is along the A41, if the validation issues relate to this, these issues may need to be resolved through additional validation.

- It is noted that the link flow validation GEH statistics do not meet the required criteria on the A43 between Baynards Green roundabout and M40 J10. This is of concern and should be considered further at future steps of modelling.

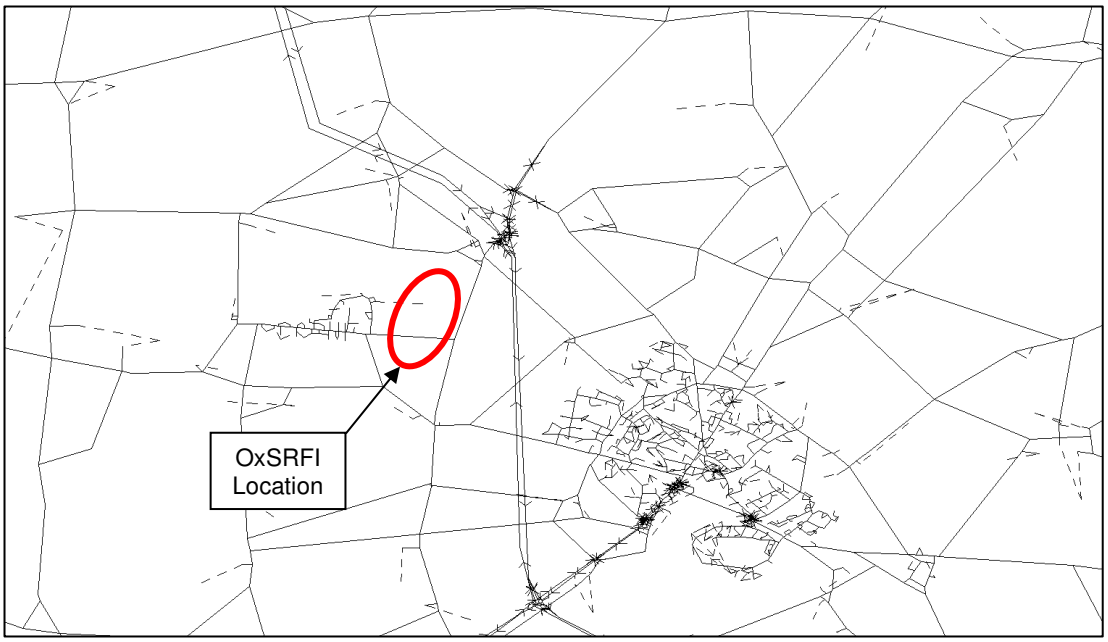
- Modelled vs observed journey time comparison should be undertaken for the B4100 between A4095/B4100 roundabout and Baynards Green roundabout for base AM and PM peak periods. This is because the B4100 provides an access route into Bicester off the A43 and would determine route choice into Bicester in future assessment years.

Figure 1: Location of OxSRFI



(Note: Plan has been sourced from ADC Technical Note 2 referenced ADC1794-RP-H)

Figure 2: Indicative Location of OxSRFI in the BTM



1.2 AECOM COMMENTS

1.2.1 Revision 1 of this technical note was issued to Aecom in June 2021, and they provided comments via email on 29th June 2021. These comments are contained within the emails presented in **Appendix B**.

1.2.2 Email discussions between Tetra Tech and Aecom regarding these comments was then undertaken, resulting in an agreed set of actions to them. The emails in **Appendix B** detail this process, with the agreed actions being as follows:

i. A41 Validation: Tetra Tech to present a sectional breakdown of the green route against Trafficmaster data.

ii. A43 Validation: HE / Aecom to provide a copy of Highways England's 2016 traffic survey data for M40 J10 Interchange.

iii. A43 Validation: Tetra Tech to present A43 model validation against HE 2016 traffic survey data.

iv. A43 Validation: Tetra Tech to present A43 model validation against WebTRIS data, using closest available month / year.

v. A41 Validation: HE / Aecom to provide a copy of Highways England's 2016 MCC survey data for Baynards Green roundabout.

vi. B4100 Validation: Tetra Tech to present B4100 model validation against 2016 MCC survey data for Baynards Green roundabout.

vii. B4100 Validation: Tetra Tech to identify and obtain other sources of traffic flow data for A4095/B4100 roundabout with OCC.

viii. B4100 Validation: Tetra Tech to present B4100 model validation against other survey data for A4095/B4100 roundabout.

ix. M40: Tetra Tech to include previously published validation statistics for the M40 in an updated version of the technical note and add commentary on suitability / risks / risk management of M40 validation.

1.2.3 The HE / Aecom actions above comprise the provision of traffic data to be used in additional validation checks. This data was provided by Aecom on 9th July 2021 and this report has been updated to include the additional validation data subsequently produced by Tetra Tech, as per the above actions.

1.3 REPORT STRUCTURE

1.3.1 Taking account of the comments in the above sections, the chapters of this technical note are structured as follows:

- **Chapter 2** considers journey time validation along a section of the A41 that is referred to as the green route in the Local Model Validation Report (LMVR).
- **Chapter 3** considers flow validation along the A43 between the Baynards Green junction and M40 J10.
- **Chapter 4** considers both journey time and flow validation along the B4100 between the Baynards Green junction and the A4095.
- **Chapter 5** presents and comments on the previously published M40 validation statistics.
- **Chapter 6** provides a summary of the above.

2 A41 (GREEN ROUTE) JOURNEY TIME VALIDATION

2.1 OVERVIEW

2.1.1 The most recent validation of the BTM was undertaken by WYG (now Tetra Tech) in 2018, and was associated with the model being extended westwards to better represent the road network in the vicinity of the proposed Heyford Park development. An LMVR Addendum report dated August 2018 was produced to present the results of this validation process.

2.1.2 Journey time validation was undertaken along a number of routes (see **Appendix C**) and while the modelled journey times generally validated well against independent observed data, meeting the relevant TAG criteria, the LMVR Addendum report does highlight that westbound journeys along the green route did not validate satisfactorily in either the AM or PM peak periods.

2.1.3 As noted previously, this non-validation along the green route, which comprises the A41 between its junction with the M40 (Junction 9) and Station Road (near Blackthorn village), was highlighted by HE as being of potential concern and has therefore been investigated.

2.1.4 For reference, the journey time validation criteria detailed in TAG Unit M3.1 is as follows:

> 'Modelled times along routes should be within 15% of surveyed times (or 1 minute, if higher than 15%)'

2.2 LMVR DATA

2.2.1 A summary of journey time validation results for the green route, as presented in the LMVR Addendum report, are detailed below in **Table 1**:

Table 1: Summary of Original Journey Time Validation Results on Green Route

Peak Hour	Direction	Average Time (s)						
		Obs'd	Model	Diff	% Diff	Within 15%	Within 60s	Validate?
AM	EB	531	499	-32	-6%	Yes	Yes	Yes
	WB	714	539	-175	-24%	No	No	No
PM	EB	603	516	-87	-14%	Yes	no	Yes
	WB	707	518	-189	-27%	No	No	No

2.2.2 While the data in the table above presents a summary over the full route length, the calculations undertaken actually break the route down into four sections, as detailed in **Figure 3**. The journey time validation data for each of these sections is presented below in **Tables 2 and 3**, while **Appendix D** contains the time vs distance plots that were presented in the LMVR Addendum report.

Figure 3: Green Route Sections

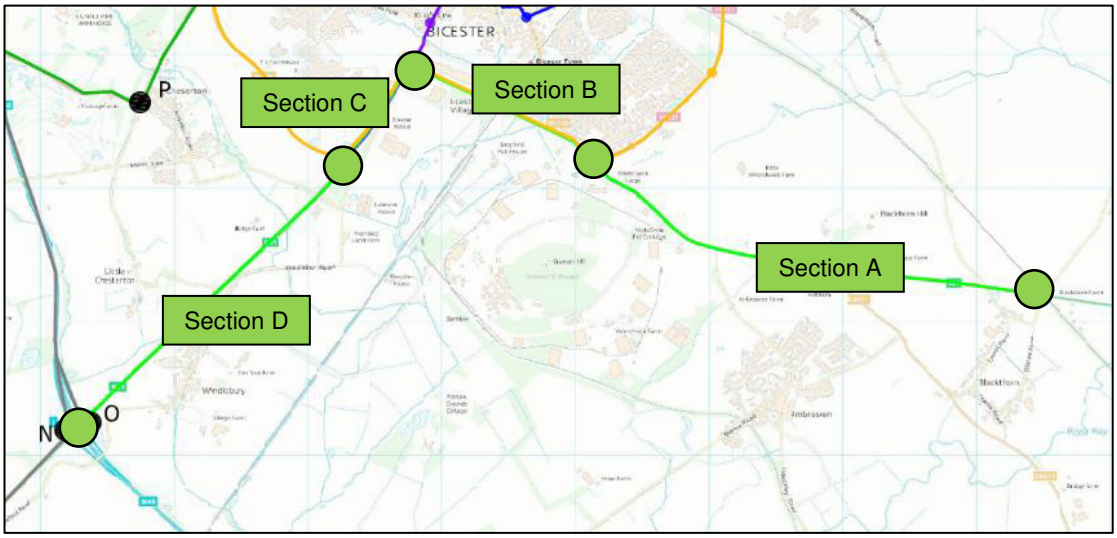


Table 2: Original Westbound Journey Time Validation Results on Green Route (AM Peak)

Route Section	Average Time (s)						
	Obs'd	Model	Diff	% Diff	Within 15%	Within 60s	Validate?
A	220	203	-17	-8%	Yes	Yes	Yes
B	261	92	-169	-65%	No	No	No
C	86	82	-4	-5%	Yes	Yes	Yes
D	147	162	15	10%	Yes	Yes	Yes

Table 3: Original Westbound Journey Time Validation Results on Green Route (PM Peak)

Route Section	Average Time (s)						
	Obs'd	Model	Diff	% Diff	Within 15%	Within 60s	Validate?
A	228	206	-22	-10%	Yes	Yes	Yes
B	225	92	-133	-59%	No	No	No
C	89	83	-6	-7%	Yes	Yes	Yes
D	165	137	-28	-17%	Yes	Yes	Yes

2.3 JOURNEY TIME INVESTIGATION

2.3.1 The data in **Tables 2 and 3** clearly shows that the model validates along three of the route sections, with the non-validation occurring on Section B, which correlates to the A41 between its junctions with London Road and the B4030 (referred to at the Esso roundabout). This is also clearly shown of the time vs distance plots in **Appendix D**. The observed and modelled data for this section of the A41 have therefore been investigated further, as detailed below.

2.3.2 The observed data comprises journey time surveys undertaken by Tracsis Traffic Ltd in June 2016. It is detailed within the data report (see **Appendix E**) that there were no incidents reported over the survey period that could affect journey times, although examination of the various westbound datasets collected does show that there was a notable variation in the range of the journey times along Section B, as detailed in **Table 4**:

Table 4: Observed Journey Time Data along Section B

Journey Time Data	AM Peak Hour	PM Peak Hour
Minimum	1 min 41 sec	1 min 31 sec
Maximum	8 min 59 sec	6 min 8 sec

2.3.3 While Tracsis noted that there were no incidents reported over the survey period that could affect journey times, the subsequent comments from Aecom (see **Appendix B**) note that a review on the Crashmap website indicates that an incident did occurred on the A41 sometime on the 15th June 2016. To investigate this further the full Crashmap report has been obtained by Tetra Tech. This report shows that this accident occurred at 8:15am, and therefore could have had an impact on the journey times recorded by Tracsis, however it does not specify on which carriageway it occurred, which makes it difficult to ascertain exactly what affect it could have on journey times in any given direction. While more detailed accident data could be obtained from OCC, the emails in **Appendix B** detail that since Trafficmaster data has also subsequently been used to validate journey times (see section 2.4 of this technical note), and this is averaged over a whole year and so is unaffected by the incident in question, no further investigation or consideration of this is required.

2.3.4 With regard to how travel along this section of road is modelled, **Table 5** below details the that the 92 second journey time in both peak hours relates to average speed of 39mph. **Images 1** below show that the A41 between the London Road and B4030 junctions comprises a single carriageway road with that is straight in horizontal profile, has no junctions along it and of circa 8 metres width. The base model year is 2016, and at that time the A41 / B4030 junction comprised a priority roundabout with a left turn filter for traffic travelling westbound on the A41 (see **Image 2**), and this arrangement has been coded into the model. The road speed limit is

60mph, and has been coded into the model with a cruise speed of 77kph / 48mph. This road layout is such that there should be minimal delay when travelling along the route, all be it with some likely slowing of larger vehicles as they use the left turn filter, and therefore the 39mph average speed is considered a reasonable representation of the actual travel speed along the route.

Table 5: Modelled Journey Data along Section B

Journey Data	AM Peak Hour	PM Peak Hour
Distance	1.59 km	1.59 km
Travel Time	92 sec	92 sec
Average Speed	39 mph	39 mph

Image 1: A41 between London Road and B4030 Junctions



Image 2: Left Turn Filter at A41 / B4030 Roundabout in 2016



2.3.5 Examination of the A41 / B4030 roundabout layout shows that there is a pedestrian crossing at the start of the left turn filter (see **Image 3**), which could add delay into traffic flows. This has been coded into the model such that the pedestrian stage is called every 5-6 minutes with a pedestrian green time of 12 seconds, which is considered reasonable for the likely pedestrian demand in 2016.

Image 3: Left Turn Filter at A41 / B4030 Roundabout in 2016



2.3.6 While the filter lane at the A41 / B4030 roundabout allows left turning westbound traffic to turn unopposed, **Image 3** shows that a relatively small queue of traffic in the right-hand lane (circa four vehicles) would block the left turning vehicles. The coding, usage and operation of the right-hand lane in the model has therefore been examined.

2.3.7 The modelled saturation flow, delay and average queue at the right-hand lane give-way line is detailed in **Table 6**. The saturation flow is considered to be conservative, and as such will not overestimate the ability of vehicles to travel onto the roundabout, while delay is minimal and queuing is such that there would be no blocking back to affect the left turning traffic.

Table 6: Modelled Journey Data along Section B

Journey Data	AM Peak Hour	PM Peak Hour
Saturation Flow	1100 pcu/hr	1100 pcu/hr
Delay (per pcu)	11 seconds	13 seconds
Average Queue	0 pcu	1 pcu

2.3.8 The link flows and turning flows on the A41westbound arm of the junction were assessed in the LMVR Addendum report and were found to validate satisfactorily, as shown in **Tables 7 and 8**.

Table 7: A41 Westbound Flow Validation (AM Peak)

Flow	Observed	Modelled	GEH	Validate?
Link Flow	925	890	1.61	Yes
Left Lane	730	755	0.93	Yes
Right Lane	195	188	0.52	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

Table 8: A41 Westbound Flow Validation (PM Peak)

Flow	Observed	Modelled	GEH	Validate?
Link Flow	961	954	0.22	Yes
Left Lane	738	713	0.93	Yes
Right Lane	217	274	3.62	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

2.3.9 Given that the turning flows validate, and the junction coding of the right-hand lane give-way line is satisfactory, the opposing flows travelling around the roundabout in-front of the give-way

line have been assessed. **Table 9** presents the observed and modelled opposing flows, and details that the modelled flows validate satisfactorily.

Table 9: A41 Westbound Right Lane Opposing Flows

Flow	Observed	Modelled	GEH	Validate?
AM Peak	871	830	1.39	Yes
PM Peak	1076	1002	2.28	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

2.3.10 In summary, the above checks on the A41 westbound route and the A41 / B4030 junction indicate that they have been modelled satisfactorily and should therefore provide a reasonable representation of traffic journey times.

2.4 TRAFFICMASTER JOURNEY TIME DATA

2.4.1 Given that the model appears to be provide a reasonable representation of the route, additional observed journey time data for the route has been obtained so that an additional validation assessment can be undertaken, which is in keeping with the HE / AECOM comments detailed in Chapter 1.

2.4.2 This journey time data has been provided by OCC from the Trafficmaster database, and is presented in **Appendix F**. It comprises averaged data for the AM and PM peak hours, for term time weekdays only and for the whole of 2016.

2.4.3 Validation calculations have been undertaken for both directions along the route, and these are presented in **Appendix G** along with time vs distance plots.

2.4.4 A summary of the calculated data is provided in **Table 10,** and this shows that the journey times satisfactorily validate in both directions in both peak periods.

Table 10: Journey Time Validation Results on A41 (Trafficmaster Data)

Peak Hour	Direction	Average Time (s)						
		Obs'd	Model	Diff	% Diff	Within 15%	Within 60s	Validate?
AM	EB	511	499	-12	-2%	Yes	Yes	Yes
	WB	587	539	-48	-8%	Yes	Yes	Yes
PM	EB	547	516	-31	-6%	Yes	Yes	Yes
	WB	572	518	--54	-9	Yes	Yes	Yes

2.5 SECTIONAL VALIDATION STATISTICS

2.5.1 Following the comments provided by Aecom, action (i) noted in section 1.2 is to present a sectional breakdown of the A41 green route against Trafficmaster data.

2.5.2 **Appendix H** presents a table showing comparisons using the Trafficmaster data along the A41 for each of the four sections detailed in **Figure 3**, with a summary provided in **Tables11 and 12** below.

Table 11: Eastbound Sectional Journey Time Validation Results on A41

Peak Hour	Green Route Section	Average Time (s)						
		Obs'd	Model	Diff	% Diff	Within 15%	Within 60s	Validate?
AM	A	119	125	6	5.0%	Yes	Yes	**Yes**
	B	83	91	8	9.6%	Yes	Yes	**Yes**
	C	100	98	-2	-2.0%	Yes	Yes	**Yes**
	D	209	185	-24	-11.5%	Yes	Yes	**Yes**
PM	A	119	125	6	5.0%	Yes	Yes	**Yes**
	B	83	91	8	9.6%	Yes	Yes	**Yes**
	C	100	98	-2	-2.0%	Yes	Yes	**Yes**
	D	209	185	-24	-11.5%	Yes	Yes	**Yes**

Table 12: Westbound Sectional Journey Time Validation Results on A41

Peak Hour	Green Route Section	Average Time (s)						
		Obs'd	Model	Diff	% Diff	Within 15%	Within 60s	Validate?
AM	A	200	203	3	1.5%	Yes	Yes	Yes
	B	138	92	-46	-33.3%	No	Yes	Yes
	C	69	82	13	18.8%	No	Yes	Yes
	D	180	162	-18	-10.0%	Yes	Yes	Yes
PM	A	210	206	-4	-1.9%	Yes	Yes	Yes
	B	147	92	-55	-37.4%	No	Yes	Yes
	C	69	83	14	20.3%	No	Yes	Yes
	D	146	137	-9	-6.2%	Yes	Yes	Yes

3 A43 LINK FLOW VALIDATION

3.1 OVERVIEW

3.1.1 Validation of individual flows on a link are assessed in accordance with the guidance presented in TAG Unit M3.1, which is presented below in **Table 13**.

Table 13: Web TAG Link Flow Validation Criteria

Criteria	Description of Criteria
1	Modelled flows are within 100 veh/h of counts for flows less than 700 veh/h
	Modelled flows are within 15% of counts, for flows from 700 to 2,700 veh/h
	Modelled flows are within 400 veh/h of counts for flows more than 2700 veh/h
2	GEH < 5 for individual flows

3.1.2 The following notes are referenced to the above criteria in TAG Unit M3.1:

- the above criteria should be applied to both link flows and turning movements;
- the acceptability guideline should be applied to link flows but may be difficult to achieve for turning movements;
- the comparisons should be presented for cars and all vehicles but not for light and other goods vehicles unless sufficiently accurate link counts have been obtained;
- the comparisons should be presented separately for each modelled period; and
- it is recommended that comparisons using both measures are reported in the model validation report.

3.1.3 The GEH (Geoffrey E. Havers) error statistic, as noted in **Table 11**, has been used to compare the observed and modelled flows. It is defined as:

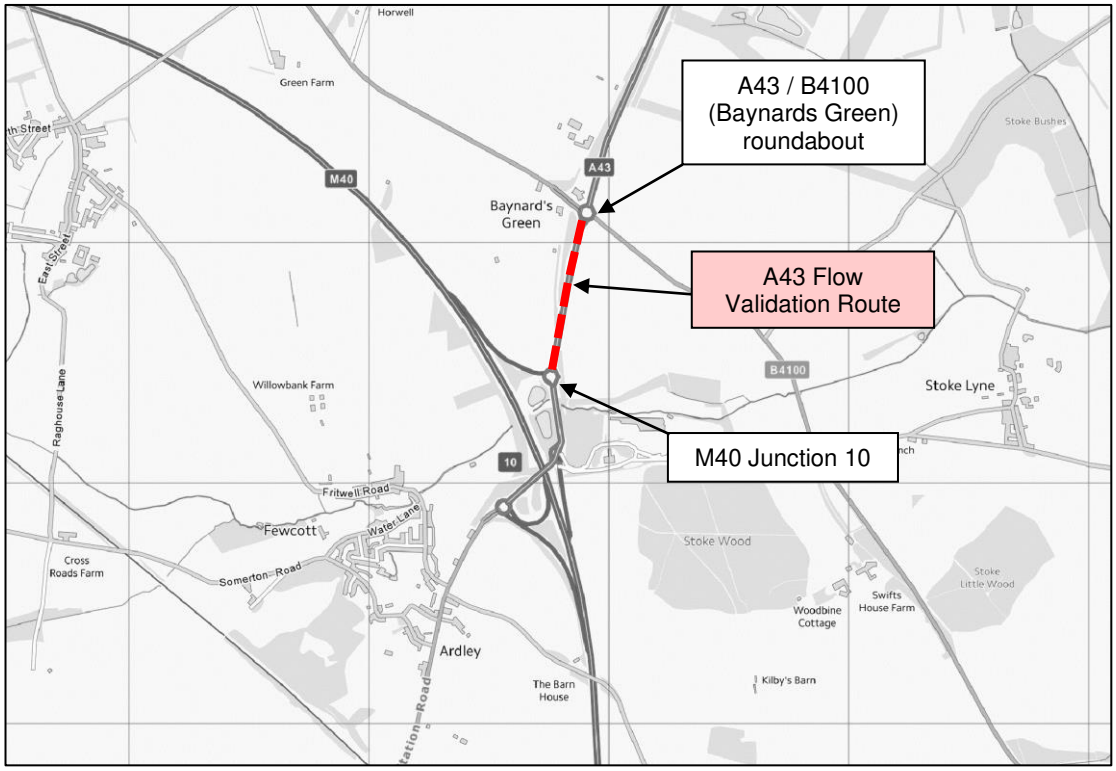
$$\sqrt{\left[\frac{(Y-X)^2}{0.5(Y+X)}\right]}$$

where X = observed flow
Y = modelled flow

3.2 LMVR DATA

3.2.1 Flow validation on the A43, between the B4100 Baynards Green junction and M40 J10 (see **Figure 4**), is presented Appendix L of the LMVR Addendum report.

Figure 4: A43 Between B4100 and M40 Junction 10



3.2.2 The observed data is from an Automatic Traffic Count (ATC) undertaken by Tracsis over two weeks between the 15th and 22nd June 2016 (see **Appendix I**), however only the northbound data is available due to the count tube on the southbound carriageway being classified as having recorded 'bad data'. The validation data presented in the addendum report for northbound flows is presented in **Table 14** below:

Table 14: LMVR A43 Northbound Flow Validation

Time Period	Vehicle	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	Cars	984	1047	1.98	Yes	-
	Total	1160	1353	5.45	No	No
PM Peak	Cars	1333	1418	2.31	Yes	-
	Total	1563	1759	4.82	Yes	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

3.2.3 The data in **Table 14** shows that in the AM Peak the total flows do not validate under either criterion, although the GEH is only marginally over the 5.0 threshold, while in the PM Peak they validate satisfactorily to both criteria.

3.3 ATC DATA

3.3.1 Although ATC data was collected for the A43 southbound carriageway, it was noted in the Tracsis survey report that this was considered 'bad' data and therefore none was presented (see yellow highlighted sections in **Appendix I**).

3.3.2 While ATC data was collected and provided for the A43 northbound carriageway, the incidents and observations section of the Tracsis report (see **Appendix I**) notes the following with regard to this data:

- There was a loss of data during Week 1 on Monday 20th June 2016 between 00:00 and 22:15. This was patched (replaced) with data collected on Monday 4th July 2016.
- There was a loss of data during Week 1 between 12:45 on Wednesday 15th June 2016 and 24:00 on Sunday 19th June 2016. This data was patched (replaced) with data collected between 00:00 on Friday 1st July 2016 and 24:00 on Sunday 3rd July 2016.

3.3.3 It can therefore be seen that although northbound data was presented for a two week period, the data for Week 1 is not complete, with there being 1½ days when no data is presented (see green highlighted sections in **Appendix I**), or consistent since it has patched data from another week (again see green highlighted sections in **Appendix I**).

3.3.4 To this end, the only set of A43 ATC data that is considered completed and consistent is that collected on the northbound carriageway during Week 2, and for this reason the flow validation has been recalculated using just this data (see blue highlighted sections in **Appendix I**). The resultant validation calculations are presented in **Appendix J**, and summarised below in **Table 15**, with the data showing that the modelled northbound flows do now validate in both the AM and PM Peak periods.

Table 15: A43 Northbound Flow Validation (Week 2 Observed ATC Data)

Time Period	Vehicle	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	Cars	1004	1047	1.33	Yes	-
	Total	1182	1353	4,81	Yes	Yes
PM Peak	Cars	1303	1418	3.13	Yes	-
	Total	1531	1759	5.63	No	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

3.4 MCC DATA

3.4.1 While use of the Week 2 ATC data shows that the northbound modelled flows validate, there is still no ATC data available with which to assess southbound flows.

3.4.2 Observed flow data in both directions along this stretch of the A43 is available from Manual Classified Counts (MCC) undertaken in November 2016 at the Baynards Green junction and M40 Junction 10 (see **Appendix K**). It is noted in LMVR Addendum report that in general MCC data has been used to calibrate the model and ATC data has been used for validation, however in the absence of any southbound ATC data for the A43 it is considered appropriate to undertake validation using the MCC data. The relevant validation calculations are presented in **Appendix J**, while the southbound data is summarised below in **Tables 16 and 17**.

Table 16: A43 Southbound Flow Validation (Baynards Green MCC Data)

Time Period	Vehicle	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	Cars	1211	1144	2.0	Yes	-
	Total	1665	1534	3.3	Yes	Yes
PM Peak	Cars	1072	1045	0.8	Yes	-
	Total	1299	1312	0.4	Yes	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

Table 17: A43 Southbound Flow Validation (M40 Junction 10 MCC Data)

Time Period	Vehicle	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	Cars	1224	1144	2.3	Yes	-
	Total	1671	1534	3.4	Yes	Yes
PM Peak	Cars	1066	1045	0.6	Yes	-
	Total	1289	1312	0.6	Yes	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

3.4.3 The data in the above tables shows that the modelled southbound flows satisfactorily validate in both the AM and PM peak periods, and the calculations in **Appendix J** show that the northbound flows also validate using this methodology.

3.5 DATA FROM AECOM / HIGHWAYS ENGLAND

3.5.1 Following the comments provided by Aecom, action (iii) noted in section 1.2 is to present A43 model validation against HE 2016 traffic survey data.

3.5.2 Aecom have provided the turning count data for the junctions at the north (Baynards Green roundabout) and south (M40 Junction 10) of the section of the A43 being assessed, and this is presented in **Appendix L**.

3.5.3 Flow validation on the A43 has been undertaken using data from both turning movement counts, with the calculations presented in **Appendix M** and a summary provided in **Tables 18, 19, 20 and 21**:

Table 18: Additional A43 Northbound Flow Validation (Baynards Green)

Time Period	Vehicle	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	Cars	994	1047	1.6	Yes	-
	Total	1326	1353	0.7	Yes	Yes
PM Peak	Cars	1580	1418	4.2	Yes	-
	Total	1957	1759	4.6	Yes	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

Table 19: Additional A43 Southbound Flow Validation (Baynards Green)

Time Period	Vehicle	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	Cars	1217	1144	2.1	Yes	-
	Total	1685	1534	3.8	Yes	Yes
PM Peak	Cars	1107	1045	1.9	Yes	-
	Total	1328	1312	0.4	No	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

Table 20: Additional A43 Northbound Flow Validation (M40 J10)

Time Period	Vehicle	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	Cars	1003	1047	1.4	Yes	-
	Total	1344	1353	0.3	Yes	Yes
PM Peak	Cars	1570	1418	3.9	Yes	-
	Total	1941	1759	4.2	No	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

Table 21: Additional A43 Southbound Flow Validation (M40 J10)

Time Period	Vehicle	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	Cars	1239	1144	2.8	Yes	-
	Total	1696	1534	4.0	Yes	Yes
PM Peak	Cars	1126	1045	2.5	Yes	-
	Total	1352	1312	1.1	No	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

3.5.4 The data in the above tables shows that the modelled flows satisfactorily validate in both directions during both the AM and PM peak periods.

3.6 DATA FROM WEBTRIS

3.6.1 Following the comments provided by Aecom, action (iv) noted in section 1.2 is to present A43 model validation against WebTRIS data, using the closest available month / year to June 2016.

3.6.2 Examination of the WebTRIS website shows that there are count sites (northbound and southbound) on the section of A43 being assessed, as shown on the plans in **Appendix N**, however there is no data available for 2016 (see **Figure 5**). The closest available month with data is April 2015, so this has been downloaded (see **Appendix N**) and used for validation.

3.6.3 The flow validation calculations are presented in **Appendix O**, with a summary provided in **Tables 22 and 23**.

Figure 5: WebTRIS Data Availability

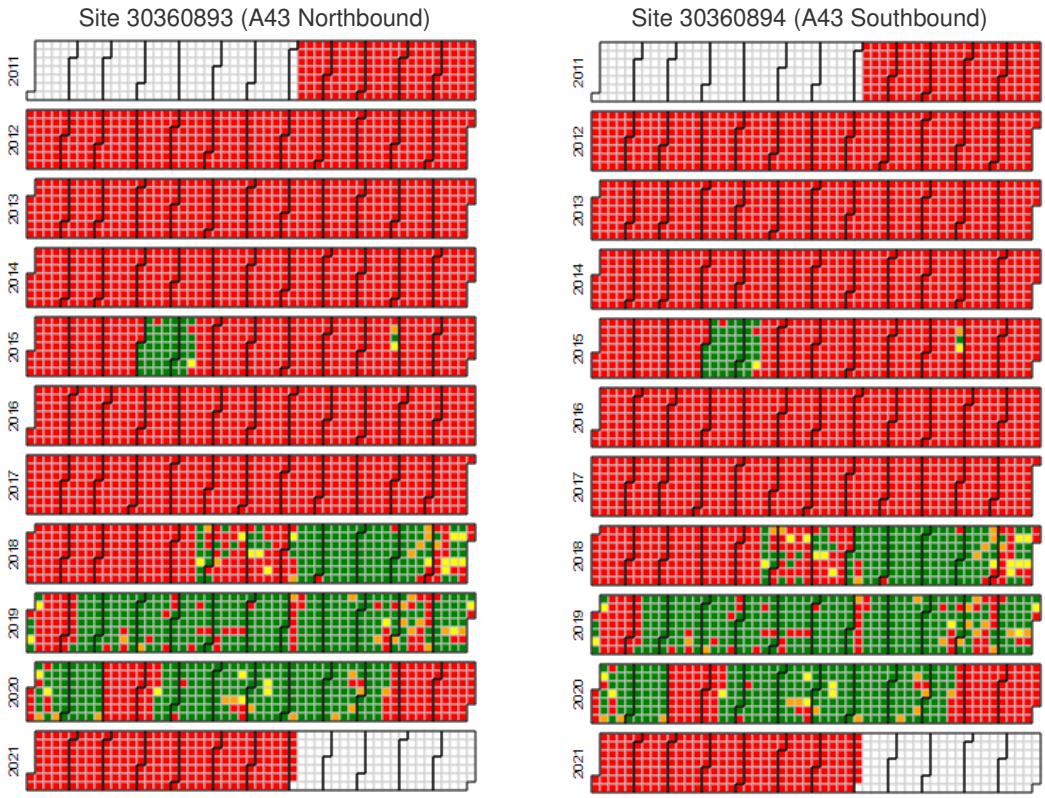


Table 22: Additional Northbound A43 Flow Validation (WebTRIS Data)

Time Period	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
			GEH	Validate?	
AM Peak	1856	1353	12.6	No	No
PM Peak	2083	1759	7.4	No	No

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

Table 23: Additional Southbound A43 Flow Validation (WebTRIS Data)

Time Period	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
			GEH	Validate?	
AM Peak	647	1534	26.9	No	No
PM Peak	572	1312	24.1	No	No

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

3.6.4 The data in **Tables 22 and 23** shows that the model does not validate satisfactorily against the observed WebTRIS data, which is in contrast to the A43 validation calculations presented in the previous sections of this report. The appropriateness of using the WebTRIS data has been examined.

3.6.5 Examination of the data in **Tables 22 and 23** shows that there is a significant difference between the magnitude of flows in each direction, with northbound flows (1856 / 2083 vehicle per hour) being three to four times larger than the southbound flows (572 / 647 vehicles per hour). This order of magnitude is not replicated in the other observed datasets.

3.6.6 A comparison of the WebTRIS data with the other observed datasets is presented in **Tables 24 and 25**. These show that the WebTRIS northbound data is higher than all the other datasets, while the WebTRIS southbound data is significantly lower than all the other datasets (circa two to three times lower).

Table 24: Comparison of Observed A43 Northbound Traffic Flows

Time Period	ATC	MCC Data		MCC Data from Aecom		WebTRIS
		Baynards Green	M40 J10	Baynards Green	M40 J10	
AM Peak	1182	1251	1271	1326	1344	1856
PM Peak	1531	1749	1762	1957	1941	2083

Note: Data in green cells validates, data in red cells does not validate

Table 25: Comparison of Observed A43 Southbound Traffic Flows

Time Period	ATC	MCC Data		MCC Data from Aecom		WebTRIS
		Baynards Green	M40 J10	Baynards Green	M40 J10	
AM Peak	No Data	1665	1671	1685	1696	647
PM Peak	No Data	1299	1289	1328	1352	572

Note: Data in green cells validates, data in red cells does not validate

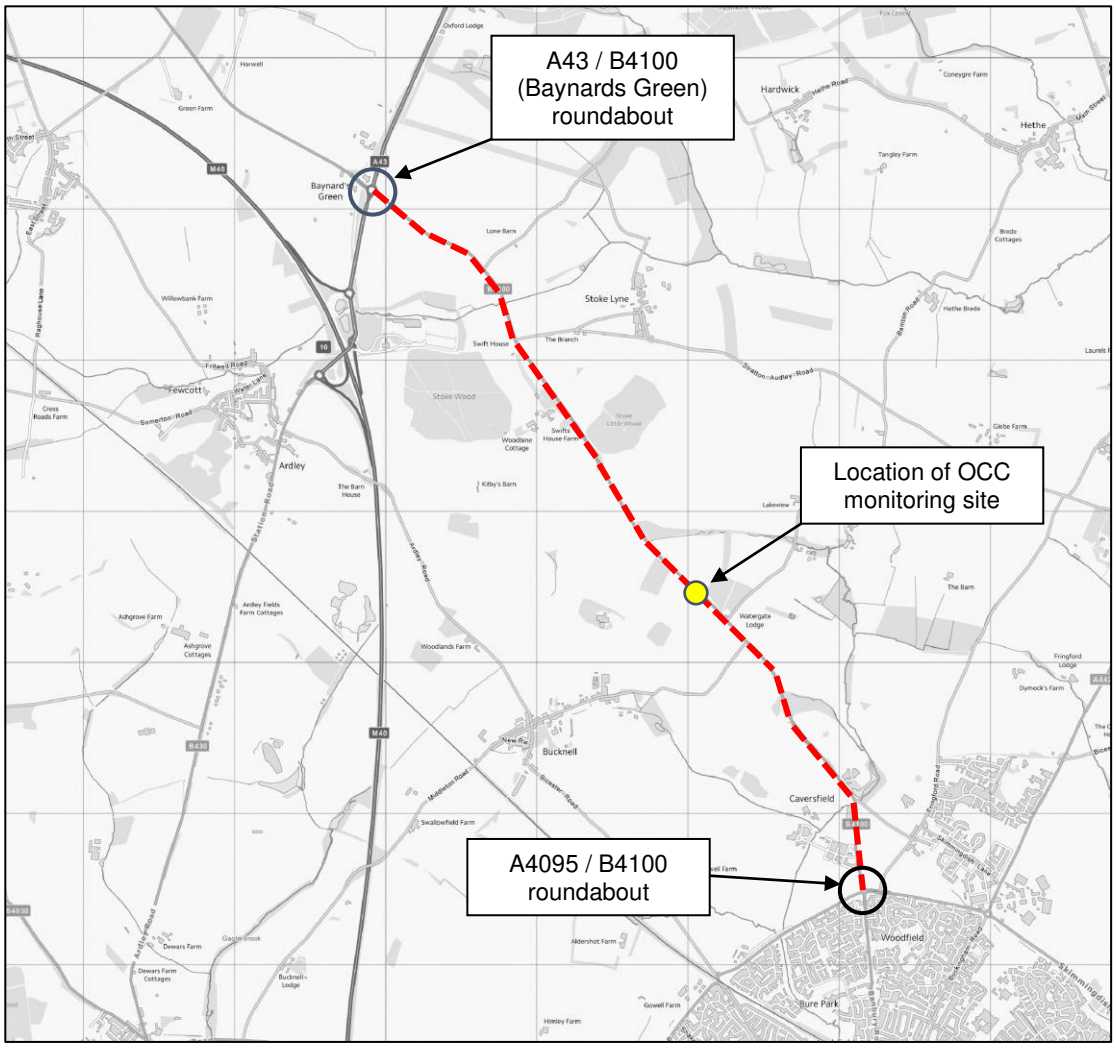
3.6.7 Given how badly the WebTRIS data compares to all the other datasets, which are drawn from three different sources and are all generally comparable, it is concluded that the WebTRIS data is not satisfactory for use in validating the model.

4 B4100 ROUTE VALIDATION

4.1 OVERVIEW

4.1.1 Validation of traffic flows and journey times on the B4100 between the A43 and the A4095 (see **Figure 5**) was not included within the LMVR Addendum report, however HE have requested that this is now undertaken since this route provides an access route into Bicester off the A43 and would determine route choice into Bicester in future assessment years.

Figure 5: B4100 between A43 and A4095



4.2 FLOW VALIDATION

4.2.1 Observed traffic flows on the B4100 have been obtained from the following sources:

- MCC survey at the Baynards Green roundabout, undertaken in November 2016 (see **Appendix K**).
- MCC survey at the A4095 / B4100 roundabout, undertaken in November 2016 (see **Appendix P**).
- Data from the OCC monitoring site on the B4100 (see **Figure 5**) for the whole of 2016 (see **Appendix P**).

4.2.2 The flow validation calculations are presented **in Appendix Q**, and summarised below in **Tables 26, 27 and 28**, and it can be seen that the modelled flows on the B4100 validate satisfactorily in the AM and PM Peak periods at all locations and in both directions.

Table 26: B4100 Flow Validation Summary (Baynards Green roundabout)

Time Period	Direction	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	NB	554	467	3.9	Yes	Yes
	SB	718	770	1.9	Yes	Yes
PM Peak	NB	663	565	4.0	Yes	Yes
	SB	523	603	3.4	Yes	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

Table 27: B4100 Flow Validation Summary (OCC Monitoring Site)

Time Period	Direction	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	NB	370	440	3.5	Yes	Yes
	SB	629	676	1.8	Yes	Yes
PM Peak	NB	628	520	4.5	Yes	Yes
	SB	536	555	0.8	Yes	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

Table 28: B4100 Flow Validation Summary (A4095 / B4100 Roundabout)

Time Period	Direction	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	NB	467	440	1.3	Yes	Yes
	SB	765	734	1.1	Yes	Yes
PM Peak	NB	623	565	2.4	Yes	Yes
	SB	567	574	0.3	Yes	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

4.3 JOURNEY TIME VALIDATION

4.3.1 Observed journey time data has been provided by OCC from the Trafficmaster database, and is presented in **Appendix R**. As noted previously, this comprises averaged data for the AM and PM peak hours, for term time weekdays only and for the whole of 2016.

4.3.2 Validation calculations have been undertaken and are presented in **Appendix S**, with a summary provided below in **Tables 29 and 30**, and these show that the journey times validate in the AM and PM Peak periods in both directions.

Table 29: B4100 Journey Time Validation Summary (AM Peak)

Direction	Average Time (s)						
	Obs'd	Model	Diff	% Diff	Within 15%	Within 60s	Validate?
NB	322	326	4	1%	Yes	Yes	Yes
SB	337	352	15	5%	Yes	Yes	Yes

Table 30: B4100 Journey Time Validation Summary (PM Peak)

Direction	Average Time (s)						
	Obs'd	Model	Diff	% Diff	Within 15%	Within 60s	Validate?
NB	313	331	18	6%	Yes	Yes	Yes
SB	343	336	-7	-2%	Yes	Yes	Yes

4.4 FLOW VALIDATION: DATA FROM AECOM / HE

4.4.1 Following the comments provided by Aecom, action (vi) noted in section 1.2 is to present B4100 model validation against HE 2016 MCC survey data for Baynards Green roundabout.

4.4.2 As noted previously, Aecom have provided the turning count data at the Baynards Green roundabout, and this is presented in **Appendix L**.

4.4.3 Flow validation calculations using this data are presented in **Appendix T**, with a summary provided in **Tables 31 and 32**. This data shows that the modelled flows generally validate satisfactorily, with the only exception being southbound car flows in the AM Peak.

Table 31: Additional B4100 Northbound Flow Validation (Baynards Green MCC)

Time Period	Direction	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	Car	464	376	4.3	Yes	-
	Total	546	467	3.5	Yes	Yes
PM Peak	Car	583	504	3.4	Yes	-
	Total	660	565	3.8	Yes	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

Table 32: Additional B4100 Southbound Flow Validation (Baynards Green MCC)

Time Period	Direction	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	Car	491	639	6.2	No	-
	Total	647	770	4.6	Yes	No
PM Peak	Car	542	541	0.0	Yes	-
	Total	599	603	0.2	Yes	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

4.5 FLOW VALIDATION: ALTERNATIVE DATASETS

4.5.1 Following the comments provided by Aecom, actions (vi) and (vii) noted in section 1.2 detail that Tetra Tech will look to identify and obtain any other sources of traffic flow data, and if any is available use it to undertake validation calculations for the B4100.

4.5.2 OCC have been contacted with regard to this and have provided data from an ATC survey on the B4100 (see **Appendix U**). The survey was undertaken in June 2016, with the location being just to the north-west of the A4095 / B4100 roundabout.

4.5.3 Flow validation calculations using this data are presented in **Appendix V**, with a summary provided in **Tables 33 and 34**. This data shows that the modelled flows generally validate satisfactorily, with the only exception being northbound car flows in the AM Peak.

Table 33: Additional B4100 Northbound Flow Validation (B4100 ATC)

Time Period	Direction	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	Car	519	348	8.2	No	-
	Total	549	440	4.9	Yes	No
PM Peak	Car	567	506	2.6	Yes	-
	Total	661	565	3.8	Yes	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

Table 34: Additional B4100 Southbound Flow Validation (B4100 ATC)

Time Period	Direction	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
				GEH	Validate?	
AM Peak	Car	669	591	3.1	Yes	-
	Total	700	734	1.3	Yes	Yes
PM Peak	Car	464	509	2.0	Yes	-
	Total	517	574	2.4	Yes	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

5 M40 VALIDATION STATISTICS

5.1 OVERVIEW

5.1.1 Following the comments provided by Aecom, action (ix) noted in section 1.2 is to include previously published validation statistics for the M40 in this updated version of the technical note and add commentary on suitability / risks / risk management of M40 validation.

5.1.2 Journey time and flow validation data has been extracted from the LMVR and is presented in in full in **Appendices W and X** respectively. Examination of the M40 data is then presented in the following section.

5.2 JOURNEY TIME VALIDATION

5.2.1 Journey time validation data from the LMVR is presented in **Appendix W**, and this details that route G-S (M-Way) is routed along the M40. The journey time validation statistics for this route in the AM and PM peak periods have been extracted from the data in **Appendix W** and are shown below in **Table 35**.

Table 35: Summary of LMVR Journey Time Validation Results on Route G-S (M-Way)

Peak Hour	Direction	Average Time (s)						
		Obs'd	Model	Diff	% Diff	Within 15%	Within 60s	Validate?
AM	NB	472	542	70	15%	Yes	No	Yes
	SB	783	705	-78	-10%	Yes	No	Yes
PM	NB	552	642	90	16%	No	No	No
	SB	552	525	-27	-5%	Yes	Yes	Yes

Note: Northbound route runs between points G and S. Southbound route is between points S and G

5.2.2 The data in **Table 35** shows that the model satisfactorily validates in the AM peak period in both directions, and in the PM peak in the southbound direction The PM northbound journey time does however marginally fail the 15% validation criteria, with a difference of 16%.

5.2.3 Examination of the plan in **Appendix W**, shows that while route G-S (M-Way) is routed along the M40, it is also routed along the A34 to the south-west on M40 Junction 9. The journey time data for travel between Junctions 9 and 10 on the M40 has therefore been extracted from the information presented in **Appendix W**, with the subsequent validation calculations shown in **Appendix Y** and summarised in **Table 36**:

Table 36 Summary of Journey Time Validation Results on M40 (Between J9 and J10)

Peak Hour	Direction	Average Time (s)						
		Obs'd	Model	Diff	% Diff	Within 15%	Within 60s	Validate?
AM	NB	326	315	-11	-3.4%	Yes	Yes	Yes
	SB	783	705	-78	-10.0%	Yes	No	Yes
PM	NB	379	386	7	1.8%	Yes	Yes	Yes
	SB	552	525	-27	-4.9%	Yes	Yes	Yes

5.2.4 The data in **Table 36** shows that the modelled journey times along the M40 satisfactorily validate in both peak periods and in both directions.

5.3 FLOW VALIDATION DATA

5.3.1 Link flow validation data from the LMVR is presented in **Appendix X**, with statistics for the M40 shown below in **Tables 37 and 38**. This data shows that the model satisfactorily validates at all locations on the M40, in both AM and PM peak periods and in all directions.

Table 37: Summary of LMVR M40 Link Flow Validation Data (AM Peak)

LMVR Ref	Link Reference	Direction	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
					GEH	Validate?	
204	M40 South of J9	NB	2213	2224	0.2	Yes	Yes
205		NB	2231	2224	0.2	Yes	Yes
206		SB	3643	3581	1.0	Yes	Yes
209	M40 J9 through junction	NB	1838	1851	0.3	Yes	Yes
210		SB	2918	2883	0.6	Yes	Yes
215	M40 J10 through junction	NB	2479	2460	0.4	Yes	Yes
216		SB	2766	2830	1.2	Yes	Yes
218		SB	2761	2830	1.3	Yes	Yes
222	M40 North of J10	NB	2949	2880	1.3	Yes	Yes
224		SB	3352	3482	2.2	Yes	Yes
229	M40 between J9 and J10	SB	4252	4126	1.9	Yes	Yes
231		NB	3596	3553	1.1	Yes	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

Table 38: Summary of LMVR M40 Link Flow Validation Data (PM Peak)

LMVR Ref	Link Reference	Direction	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
					GEH	Validate?	
204	M40 South of J9	NB	3546	3580	0.6	Yes	Yes
205		NB	3571	3580	0.2	Yes	Yes
206		SB	2518	2476	0.8	Yes	Yes
209	M40 J9 through junction	NB	2777	2790	0.2	Yes	Yes
210		SB	2126	2116	0.2	Yes	Yes
215	M40 J10 through junction	NB	3296	3228	1.2	Yes	Yes
216		SB	2842	2869	0.5	Yes	Yes
218		SB	2817	2869	1.0	Yes	Yes
222	M40 North of J10	NB	3800	3678	2.0	Yes	Yes
224		SB	3326	3383	1.0	Yes	Yes
229	M40 between J9 and J10	SB	4086	4129	0.7	Yes	Yes
231		NB	4760	4662	1.4	Yes	Yes

Note: In accordance with TAG Unit M3.1, flow validates if GEH<5

5.3.2 Turning flow validation data from the LMVR is also presented in **Appendix X**, with statistics for M40 shown below in **Tables 39 and 40**. The data presented in the LMVR is for M40 Junction 10, and the tables below show that the model is a good fit at this junction.

Table 39: Summary of LMVR M40 J10 Turning Flow Validation Data (AM Peak)

LMVR Ref	Turning Movement		Vehicle	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
	From	To				GEH	Validate?	
287	A43(N)	A43(S)	Car	1224	1114	2.33	Yes	Yes
			Total	1665	1535	3.26	Yes	Yes
288	A43(S)	A43(N)	Car	817	845	0.98	Yes	Yes
			Total	1056	1096	1.20	Yes	Yes
289	M40 SB Off Slip	A43(N)	Car	148	200	3.93	Yes	Yes
			Total	209	256	3.06	Yes	Yes
290	M40 SB Off Slip	A43(S)	Car	196	305	6.89	No	No
			Total	296	403	5.71	No	No
292	A43(N)	M40 SB On Slip	Car	771	807	1.30	Yes	Yes
			Total	1111	1084	0.82	Yes	Yes
293	A43(N)	A43(W)	Car	559	530	1.26	Yes	Yes
			Total	680	641	1.52	Yes	Yes
297	A43(W)	A43(N)	Car	781	807	0.94	Yes	Yes
			Total	1007	1041	1.08	Yes	Yes
299	A43(W)	M40 SB On Slip	Car	33	14	3.83	Yes	Yes
			Total	43	14	5.35	No	Yes
300	A43(E)	M40 NB On Slip	Car	202	92	9.11	No	No
			Total	262	164	6.69	No	Yes
301	A43(E)	B430	Car	439	545	4.78	Yes	No
			Total	536	646	4.54	Yes	No
302	M40 NB Off Slip	A43(E)	Car	781	821	1.40	Yes	Yes
			Total	1009	1069	1.87	Yes	Yes
303	M40 NB Off Slip	B430	Car	24	4	5.44	No	Yes
			Total	34	4	6.96	No`	Yes
304	B430	A43(E)	Car	175	158	1.28	Yes	Yes
			Total	226	174	3.71	Yes	Yes
305	B430	M40 NB On Slip	Car	212	218	0.43	Yes	Yes
			Total	231	257	1.64	Yes	Yes

Notes: i. In accordance with TAG Unit M3.1, flow validates if GEH<5
ii. Ref 287, 288, 289, 290 is the M40 J10 Baynards roundabout.
iii. Ref 292, 293, 297, 299 is the M40 J10 Cherwell roundabout.
iv. Ref 300, 301, 302, 303, 304, 305 is the M40 J10 Ardley roundabout.

Table 40: Summary of LMVR M40 Turning Flow Validation Data (AM Peak)

LMVR Ref	Turning Movement		Vehicle	Observed Flow	Modelled Flow	Criteria 2		Criteria 1 Validation
	From	To				GEH	Validate?	
287	A43(N)	A43(S)	Car	1006	1046	0.63	Yes	Yes
			Total	1288	1312	0.68	Yes	Yes
288	A43(S)	A43(N)	Car	1351	1279	1.99	Yes	Yes
			Total	1606	1592	0.35	Yes	Yes
289	M40 SB Off Slip	A43(N)	Car	124	143	1.65	Yes	Yes
			Total	151	172	1.65	Yes	Yes
290	M40 SB Off Slip	A43(S)	Car	224	247	1.47	Yes	Yes
			Total	283	342	3.32	Yes	Yes
292	A43(N)	M40 SB On Slip	Car	755	808	1.90	Yes	Yes
			Total	873	1034	5.23	No	No
293	A43(N)	A43(W)	Car	398	304	5.00	Yes	Yes
			Total	459	358	5.01	No	No
297	A43(W)	A43(N)	Car	1263	1222	1.17	Yes	Yes
			Total	1497	1517	0.52	Yes	Yes
299	A43(W)	M40 SB On Slip	Car	20	2	5,45	No	Yes
			Total	27	2	6.58	No	Yes
300	A43(E)	M40 NB On Slip	Car	240	124	8.58	No	No
			Total	308	196	7.02	No	No
301	A43(E)	B430	Car	248	286	2.34	Yes	Yes
			Total	271	315	2.55	Yes	Yes
302	M40 NB Off Slip	A43(E)	Car	1083	1112	0.89	Yes	Yes
			Total	1352	1425	1.96	Yes	Yes
303	M40 NB Off Slip	B430	Car	21	8	3.37	Yes	Yes
			Total	28	8	4.67	Yes	Yes
304	B430	A43(E)	Car	333	235	5.79	No	Yes
			Total	373	271	5.68	No	No
305	B430	M40 NB On Slip	Car	133	228	7.10	No	Yes
			Total	160	256	6.66	No	Yes

Notes: i. In accordance with TAG Unit M3.1, flow validates if GEH<5

ii. Ref 287, 288, 289, 290 is the M40 J10 Baynards roundabout.

iii. Ref 292, 293, 297, 299 is the M40 J10 Cherwell roundabout.

iv. Ref 300, 301, 302, 303, 304, 305 is the M40 J10 Ardley roundabout.

6 SUMMARY AND CONCLUSION

6.1 SUMMARY

6.1.1 Tetra Tech has been appointed by ADC Infrastructure Ltd to provide traffic and transport modelling services with regard to the use of the Bicester Transport Model (BTM) in relation to the proposed Oxfordshire Strategic Rail Freight Interchange (OxSRFI).

6.1.2 The proposed OxSRFI will be located to the northwest of Bicester and in close proximity to M40 Junction 10, and therefore Highways England (HE) have been consulted regarding the use of the BTM. A number of comments have been received from HE, via their consultants AECOM, and this technical note addresses a number of those comments.

6.1.3 A41 Journey Time Validation: Examination of the validation data presented in the LMVR Addendum report shows that westbound journey times on the section of the A41 between its junctions with London Road and the B4030 do not validate. The model coding has been examined and this appears to provide a satisfactory representation of the route, such that journey times should be reasonable. In accordance with the comments from HE / AECOM, an additional journey time assessment has therefore been undertaken. This has used observed data from the trafficmaster database, and shows that the modelled journey times validate satisfactorily.

6.1.4 A43 Flow Validation: The validation data presented in the LMVR Addendum report shows that northbound traffic flows on the A43 between M40 Junction 10 and the Baynards Green roundabout do not validate. There was no validation of southbound traffic flows presented in the LMVR Addendum report since the ATC survey undertaken recorded bad data. In addition to this it has been noted that the northbound data from week 1 of the ATC survey is incomplete. Further flow validation has therefore been undertaken using just the week 2 ATC data (northbound traffic) and data from junction turning counts (both directions) and this details that the modelled flows validate satisfactorily.

6.1.5 A43 Flow Validation (Additional Analysis - MCC): Additional flow validation has been undertaken using manual classified count data from March 2016 that has been provided by Aecom, and this shows that the modelled flows satisfactorily validate in both directions during both the AM and PM peak periods.

6.1.6 A43 Flow Validation (Additional Analysis - WebTRIS): Additional flow validation has also been undertaken using WebTRIS data from April 2015, which is the closest available dataset to June 2016. The modelled flows do not satisfactorily validate against this data, however the WebTRIS data compares poorly to all the other datasets, which are drawn from three different sources and are all generally comparable, and it is therefore concluded that the WebTRIS data is not satisfactory for use in validating the model.

6.1.7 B4100 Flow and Journey Time Validation: Validation of the modelled traffic flows on the B4100 between the Baynards Green roundabout and the A4095 roundabout has been undertaken using flow data from junction turning counts and an OCC monitoring site, and it is concluded that the model validates satisfactorily. Validation of the modelled journey times on this route has been undertaken using data from the trafficmaster database, and it is again concluded that the model validates satisfactorily.

6.1.8 B4100 Flow Validation (Additional Analysis - MCC): Additional flow validation has been undertaken using manual classified count data from March 2016, which has been provided by Aecom. This data shows that the modelled flows generally validate satisfactorily, with the only exception being southbound car flows in the AM Peak.

6.1.9 B4100 Flow Validation (Additional Analysis - ATC): Additional flow validation has also been undertaken using automatic traffic count data from March 2016, which has been provided by OCC. This data shows that the modelled flows generally validate satisfactorily, with the only exception being northbound car flows in the AM Peak.

6.1.10 M40 Validation Statistics (Journey Time Validation): Journey time validation data for the M40 has been extracted from the LMVR and presented in this Technical Note. Examination of journey times along the M40 between Junctions 9 and 10 shows that the model satisfactorily validates in both directions during both the AM and PM peak periods.

6.1.11 M40 Validation Statistics (Link Flow Validation): Link flow validation data for the M40 has been extracted from the LMVR and presented in this Technical Note. Examination of this data shows that the modelled flows satisfactorily validate in both directions during both the AM and PM peak periods.

6.1.12 M40 Validation Statistics (Turning Flow Validation): Turning flow validation data for M40 Junction 10 has been extracted from the LMVR and presented in this Technical Note. Examination of this data shows that the modelled turning flows are a good fit at this junction.

6.2 CONCLUSION

6.2.1 The journey time and link flow validation checks that have been undertaken on the A41, A43 and B4100 have made use a number of different datasets, with the results showing that the model validates satisfactorily on all of these routes. Validation data presented in the LMVR for the M40 shows that in general both journey times and link flows validate well, with turning flows at Junction 10 also being a good fit. It is therefore concluded that the Bicester Transport Model provides a sound basis for modelling the proposed Oxfordshire Strategic Rail Freight Interchange.

APPENDICES

APPENDIX A: AECOM TECHNICAL NOTE

Project:	**Highways England Spatial Planning Arrangement 2016-2020**	Job No:	**60600479 / DO003**
Subject:	**Oxfordshire SRFI – TN1 and TN2 Review**		
[redacted]		Date:	**18 January 2021**
		Date:	**18 January 2021**
		Date:	**19 January 2021**
		Date:	**25 January 2021**

Executive Summary

Highways England have commissioned AECOM to provide transport planning advice regarding the proposed Oxfordshire Strategic Rail Freight Interchange (OxSRFI). As part of this commission, AECOM have been asked to review Technical Note 1 and Technical Note 2 shared by the applicant's transport consultant ADC.

As part of the proposed development ADC have indicated that a new all-movement junction on the M40 (referred as M40 J9A) will be proposed. Technical Note 1 intends to establish the case for a new junction. Technical Note 2 informs on the modelling methodology intended to be adopted to assess the impacts of the development on the highway network in the area.

Based on the review of Technical Note 1 and Technical Note 2, AECOM has following recommendations:

Recommendations regarding Technical Note 1:

1. Highways England should acknowledge the policy background provided by ADC and agree that there is strong government support towards the delivery of SRFIs in England as they promote sustainable economic growth.

2. While the applicant has highlighted performance issues and some network constraints in the area, the applicant should submit an OAR which would inform on alternative options being considered and why they were not considered to be viable options. OAR would be an important first step in any Business Case for a new M40 junction.

3. ADC make reference to the committee report for Heyford Park in Technical Note 1 regarding the likely future performance of M40 J10 once schemes identified by Highways England at this location are delivered. However, we have noted concerns regarding the statement and advise Highways England to seek further clarity from ADC on this matter.

4. Technical Note 1 makes reference to the feasibility work undertaken by Cherwell District Council to support the Garden Town status for Bicester as this indicated that one of the preferred options was a new junction on the M40 which was expected to have a high/very high BCR. Highways England should welcome this reference as it indicates that there is potentially a case for a new junction on the M40 which may provide wider benefits, in addition to providing access to the site. However, as this work was undertaken for different purposes and therefore, based on the location, layout and development proposals considered for OxSRFI, different options may be identified.

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Therefore, Highways England should advise the applicant to produce an OAR as part of this proposal.

5. Bicester Strategic Delivery Board meeting report states that *'Highways England has made it clear that a new motorway junction may be possible but it needs to be considered in the light of the Oxford Cambridge Expressway'*. However, it is not clear whether this has been considered by ADC as part of the proposed M40 J9A. As such, Highways England should seek clarify from ADC regarding this matter.

6. ADC indicate that mainline improvements may be required between M40 J9 and J10 in future due to the traffic demands which would make existing merge and diverge layouts along this section unsuitable. Merges and diverges for the new junction would also not comply with standards. ADC indicate that they intend to apply for a Departure from Standards (DfS) for this, however, we advise that Highways England should recommend ADC to seek advice from SES to inform if the departure is likely to be accepted.

Recommendations regarding Technical Note 2:

1. Highways England should welcome the consideration of various models and accept that Bicester Transport Model (BTM) is the most suitable model available to assess the impacts of the development on the highway network in the area.

2. Some concerns regarding the validation of BTM have raised in this note which relate to link count validation on A43 near Baynards Green roundabout, JT validation on green route, and additional validation information for B4100. These concerns are recommended to be shared with ADC so that additional information can be provided.

3. Highways England's South East Regional Transport Model has been proposed to be used to assess the reassignment impacts of the proposed development. While this is considered to be acceptable ADC have noted that the infrastructure assumptions for the network will need to be updated. While this is considered acceptable, Highways England should recommend that changes should be made in consultation with Highways England to ensure that there is no abortive work.

4. Assessment years of 2026 (opening year) and 2031 (review year) have been proposed by ADC in line with DfT's Circular 02/2013. However, if the proposal for a new junction on M40 is accepted, Highways England should advise ADC that an additional assessment year will be required (15 years post opening of the new M40 junction) to ensure the longevity of the new infrastructure.

5. Further junction modelling is proposed to test the impact of the development in further detail. However, this does not confirm that the interaction between M40 J9, J9A (if accepted) and J10 would be assessed through a microsimulation model. Highways England should recommend ADC that this should be undertaken as part of the assessments.

6. Table in Para 4.33 outlines various assessment scenarios. However, it is noted that ADC intend to include all committed developments as fully build out for Highways England's purposes. As Highways England require developments to be considered based on their likely build-outs, ADC should be advised to revise the Table based on discussions with Highways England

AECOM advise Highways England to formally raise the concerns highlighted in this note with ADC to inform ongoing discussions in the next TWG meeting scheduled on Tuesday 2nd February 2021.

1. Introduction

1.1. Highways England have commissioned AECOM to provide transport planning advice regarding the proposed Oxfordshire Strategic Rail Freight Interchange (OxSRFI). The proposed development site is located adjacent to the Chiltern Railway line, part of the strategic rail freight network, and to the southwest of Junction 10 of the M40 motorway in Oxfordshire as shown in Figure 1 for information.

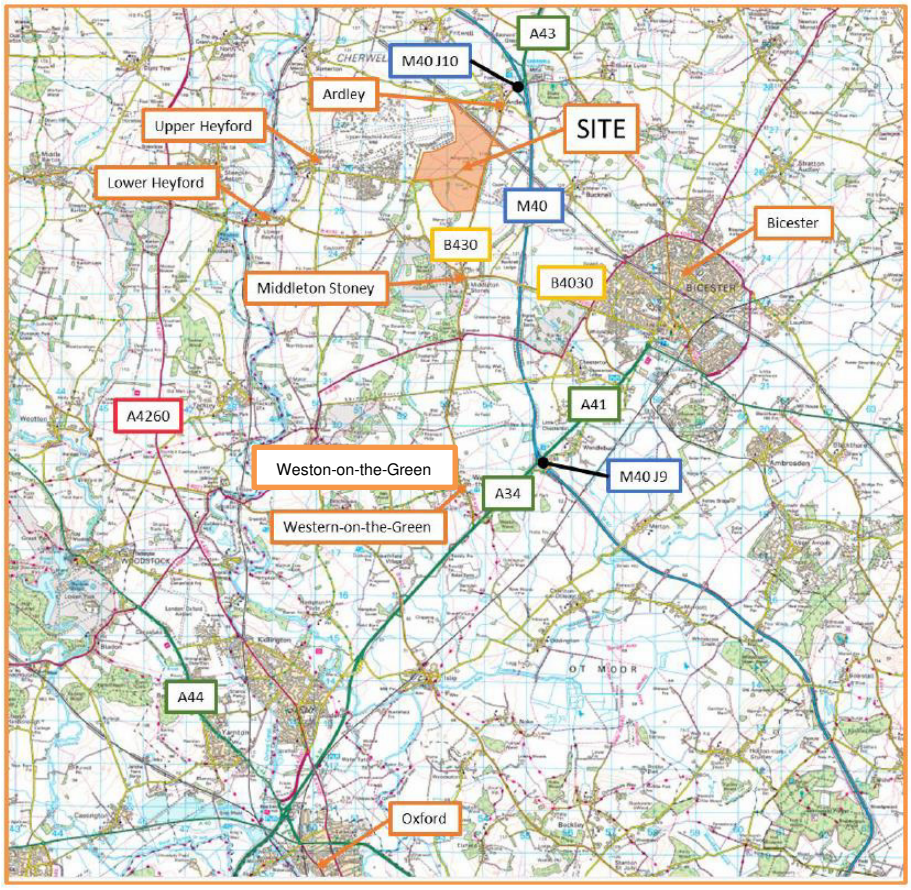


Figure 1: OxSRFI Site Location Plan (Source: TN1)

1.2. The development proposal is outlined to include:

- an intermodal freight terminal accommodating trains of up to 775m long, and including container storage and HGV parking, with new rail sidings within the site with the potential to serve individual warehousing
- approximately 6.5 million sqft of predominantly large scale B8 warehousing and distribution uses
- substantial mounding and woodland/tree planting around site edges for visual screening and ecological connectivity
- proposed link road that would pass under the B430 and connect with a proposed new M40 junction.

1.3. As part of this commission, AECOM have been asked to review Technical Note 1 and Technical Note 2 shared by the applicant's transport consultant, ADC Infrastructure Ltd. (ADC) with Highways England which inform on the following:

Technical Note 1: New M40 Junction – As part of the proposed development, the applicant's transport consultant, ADC have indicated that a new all-movements junction on the M40 will be proposed as part of OxSRFI. This is indicatively referred to as M40 Junction 9A and would be

located at the point at which the M40 crosses the B4030 to the west of Bicester, as shown on Figure 9 of TN01 This was indicated to Highways England in the initial meeting on 15th October 2020 and during the Transport Working Group (TWG)[1] meeting on 13th November 2020. During these meetings, it was agreed that for Highways England to consider the proposed new junction, the need for the new junction will need to be established and agreed with Highways England to ensure it satisfies planning policy requirements. Technical Note 1 (TN1) outlines the case for this new junction on the M40 and ADC consider that this note satisfies the strategic growth test requirements as outlined in DfT's Circular 02/2013.

Technical Note 2: Transport Modelling Methodology – The proposed methodology for transport modelling work which will be undertaken to inform on the likely traffic and environmental impacts of the proposed development were raised by ADC with Highways England and Oxfordshire County Council during Transport Working Group (TWG) meetings in November and December 2020. It was agreed during the TWG meeting of December 2020 that ADC would prepare a note to set out the proposed transport modelling methodology for further consideration and agreement with the TWG. Technical Note 2 (TN2) has been issued as a result of this discussions and informs on the proposed transport modelling methodology.

1.4. Based on the review of above referenced Technical Notes, our comments are documented in this note. Specific recommendations for further action are identified by the use of **bold underlined text. Recommendations regarded as critical to the acceptability of the proposal are coloured red. Recommendations regarded as important but not critical to the acceptability of the proposal are highlighted in amber.**

2. Technical Note 1 (TN1): New M40 Junction

Planning Policy Context

2.1. The 'Planning Policy Context' section of TN1 reviews transport planning policy relevant to the proposed development. This section refers to *National Policy Statement (NPS) for National Networks*[2] and *DfT Circular 02/2013: The Strategic Road Network and the delivery of sustainable development*[3] policy documents as these are considered to be relevant to the proposed development.

National Policy Statement (NPS) for National Networks

2.2. AECOM agree that Para 2.42- 2.58 of *National Policy Statement (NPS) for National Networks* are relevant to OxSRFI as this outlines the importance of SRFIs, their role to promote sustainable economic growth, and government's policy to address the need and expansion of the network of SRFIs.

2.3. This relevance has been considered by ADC in Para 2.2- 2.12 of TN1 with Para 2.12 highlighting that there are currently no SRFIs along the M40 corridor and that the proposed development will

[1] Transport Working Group (TWG) has been established by the applicant to provide a forum for discussion and allow a step by step approach to the assessment and agreement of transport matters related to OxSRFI. The group includes representations from Highways England, AECOM, Oxfordshire County Council (OCC), ADC Infrastructure Ltd., BWB Consulting Ltd., the Applicant, and Oxalis Planning.

[2] https://www.gov.uk/government/speeches/national-networks-national-policy-statement

[3] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/237412/dft-circular-strategic-road.pdf

support the government's objective of expanding the network. Para 2.12 also outlines that OxSRFI will meet the needs of existing and future businesses in Oxfordshire and be capable of helping to meet the needs of London and the Midlands.

DfT's Circular 02/2013

2.4. As mentioned above, the 'Planning Policy Context' section also refers to DfT's Circular 02/2013 outlining that policy regarding access to developments from the SRN is set out in Para 37-44 of the Circular with Para 39 stating:

"*Where appropriate, proposals for the creation of new junctions or direct means of access may be identified and developed at the Plan-making stage in circumstances where it can be established that such new infrastructure is essential for the delivery of strategic planned growth"*

2.5. Given that the above relates to the Local Plan-making process, and that the Circular predates the '*National Policy Statement (NPS) for National Networks'* which was published in 2015, ADC make reference to the '*Strategic Road Network, Planning for the Future – a guide for working with Highways England on planning matters'* outlining that Paras 121-125 set out Highways England's role as a statutory consultee regarding NSIPs promoted by third parties. ADC consider that this guidance satisfies the requirement of identification and development of new junctions during Plan-making stage as outlined in Para 39 of the Circular 02/2013 as this can be done through the consultation process for NSIPs.

2.6. While AECOM agree to the above assumption by ADC, it is noted that Para 40 of DfT's Circular indicates that proposals which include creation of new junctions on the SRN are required to meet the strategic growth test in order to be accepted. We also note that Para 40 outlines that Highways England may exceptionally accept request for new junctions for proposals such as signed roadside facilities, maintenance compounds, and major transport interchanges.

2.7. The requirements of the strategic growth test are broadly defined in Para 76 of '*Strategic Road Network, Planning for the Future - a guide for working with Highways England on planning matters'* document which states:

'Where a potential need for additional capacity is identified, the following factors will be considered:

- *the needs of all road users;*
- *impact on the local / regional community, including businesses;*
- *local economic needs and opportunities;*
- *local environmental issues;*
- *how the measures will be paid for (this will ensure that all relevant requirements can be captured in relevant local policy, such as the authority's infrastructure delivery plan);*
- *the forward programme of works currently planned for the SRN in the area'*

2.8. In addition, Para 43 of the Circular 02/2013 outlines that Highways England's preference is for new developments to use existing junctions. It is noted that an 'Options Assessment (Identification) Report (OAR)' has not been submitted by ADC at this stage, this should inform on other options that have been considered aside from the new M40 junction proposal and why these were rejected. The OAR will review various intervention options and precede 'Stage 0' of Highways England's Project Control Framework (PCF) and would articulate the strategic case and hence why a new junction is needed on the M40. **AECOM consider that an OAR would be an important first step in any Business Case for a new M40 junction.**

2.9. Notwithstanding, ADC also make reference to further guidance regarding new accesses provided in Para 42-47 of the '*Strategic Road Network, Planning for the Future - a guide for working with Highways England on planning matters'* document in Para 2.23 of TN1 which outlines that:

Paragraph 43 of '*Strategic Road Network, Planning for the Future - a guide for working with Highways England on planning matters'* states:

"In the case of sections of the network designed for high-speed traffic, with partially or comprehensively limited access, there should be a presumption against connection, except where it can be provided safely and where there is a demonstrable benefit to the economy. On all other sections of the network there should be a presumption in favour of connection, except where a clear case can be made to prohibit connection on the basis of safety or economic impact."

2.10. ADC consider, and AECOM agree that the proposal for a new junction on the M40 falls into the first part of the above guidance. However, before the proposal for a new junction is progressed through discussions and developed**, the OAR as outlined above should be developed and provided to Highways England and OCC for consideration**.

Transport Network Review

2.11. This section of TN1 reviews existing conditions on the transport network in the vicinity of the proposed development. The section also informs on recent highway infrastructure planning information including those related to network studies by Highways England and key development proposals in the area.

2.12. In context of the M40 J10 Interchange, Para 3.16 states:

'3.16 Highways England have identified an improvement scheme at M40 Junction 10 Padbury Roundabout and at the Baynards Green Roundabout. The scheme will be delivered through a combination of Growth Deal funding and contributions from the Heyford Park development, with planning conditions to define the trigger points in the development buildout of Heyford Park by which time the mitigation scheme will need to be completed and operational. It is currently expected that the improvement scheme will be delivered in 2023.'

2.13. Having considered the above, it is noted that Highways England has also identified improvements at Ardley roundabout and Cherwell junctions. Together with improvements at M40 J10, Padbury roundabout and Baynards Green roundabout, assessments undertaken by AECOM on behalf of Highways England indicated that the scheme package can cater for the traffic demands on the M40 in the area up to 2031. While the assessments did indicate moderate increases of queues between 2016 Do-Nothing and 2031 Do-Something (with all improvements), the overall network performance was noted to be better than 2016 Do-Nothing. **As such, we recommend that further clarity should be provided regarding the above statement from ADC.**

2.14. In addition, Para 3.17 and 3.18 state:

3.17 The development of the highway mitigation scheme was ongoing since 2018, as it was difficult to identify a scheme that achieved a balance between acceptable impacts on the SRN and ensuring that the impacts on the local road network, in particular the B430 approach to the junction, were not severe. The Planning Committee report for the Heyford Park development states, at paragraph 9.103, that "Modelling by Highways England of a preferred scheme indicated there could be potential delays and congestion tailing back on the Oxfordshire network which was unacceptable to OCC. A solution was found by a redesign of the Baynards Green and Padbury roundabouts. The Ardley and Cherwell roundabouts which were proposed to be altered will now remain as existing."

3.18 This suggests that further improvements to the junction to cater for traffic increases on the SRN associated with the proposed OxSRFI would lead to impacts on the local highway network that would be unacceptable to OCC.

2.15. It is likely that the above statement from the planning committee report for Heyford Park relates to modelling work undertaken for the development (Heyford Park) and not the overall scheme package identified by Highways England. As such, the above statement and the conclusion reached may not be correct. **As such we recommend that clarity should be provided regarding this statement from ADC.**

2.16. The section also outlines the concerns regarding the performance of the Local Highway Network (B430) near the villages of Ardley and Middleton Stoney. These include the Chiltern Main Line railway bridge on the B430 near Ardley, which narrows slightly, potentially making it difficult for two HGVs to pass one another. However, no consideration appears to have been given to potential solutions (such as a new bridge and a bypass to Ardley). While some options may not be viable, for an initial option assessment (identification) purpose, **AECOM recommend that potential options are documented and the reason for their rejection outlined as part of the case for a new M40 junction.**

2.17. Near Middleton Stoney, these concerns relate to the performance of the B430/B4030 signalised staggered junction which also has a committed highway improvement conditioned to the 2008 planning approval of the Heyford Park site. Para 3.20-3.27 of TN1 provide further details regarding the uncertainty surrounding the local highway network near Middleton Stoney including committed schemes and contributions linked to the Heyford Park development. Para 3.27 outlines the above uncertainties and existing constraints to inform that further traffic from the development cannot be managed through this route.

2.18. In addition to the above, the section also outlines the feasibility work commissioned by Cherwell District Council and undertaken by SYSTRA for Bicester's Garden Town status. It is noted that this work considered the provision of a new junction on the M40. TN1 notes that two preferred options (Option D1 and Option C) were expected to provide very high value for money. Option C as shown in TN1 related to the creation of a new north facing junction on the M40 at the B4030 to the west of Bicester while Option D1 related to the creation of an A34/M40 flyover at M40 J9. This indicates that there is potentially a case for a new junction on the M40 which may provide benefits, however, it is noted that this work was undertaken for different purposes and therefore, based on the location, layout and development proposals considered for OxSRFI, different options may be identified. **This will need to be investigated by considering other options which may have the potential to support the proposed development.**

2.19. In addition to the above, we also note that the Bicester Strategic Delivery Board meeting report states that *'Highways England has made it clear that a new motorway junction may be possible but it needs to be considered in the light of the Oxford Cambridge Expressway'*. However, it is not clear whether this has been considered by ADC as part of the proposed M40 J9A. As such, **we recommend that clarity should be provided regarding this.**

2.20. Furthermore, we also recommend that the SYSTRA reports are submitted to Highways England so that these can be considered thoroughly.

Traffic Generation, Distribution and Assignment

2.21. This section of TN1 provides a high-level indication of the likely trip generation, distribution and assignment expected from the development based on trip generation and distribution

methodologies agreed for SRFI developments in Northampton and Leicestershire. It is noted in Para 4.3 that detailed assessments, refinement, and agreement of methodologies with OCC and Highways England will be undertaken to support this scheme. This is considered acceptable and as such a detailed review of the assumptions and calculations has not been undertaken at this stage.

2.22. Having considered the trip generation and distribution indicated in this section, we note that a significant proportion of the development traffic is expected to assign onto the A43 to the Northeast of M40 J10 and onto the M40 North of J10. This may result in weaving and junction hopping issues, between Junctions 9A and 10, which may generate safety concerns to be addressed.

2.23. The section also outlines the likely routing of traffic if the existing network was used by the traffic from the proposed development. This indicates that, if the traffic from the development used existing routes, it would result in significant increases of traffic wishing to travel towards the A43 (Northeast of M40 J10) and the M40 North by using the B430 through Ardley. While this may be true if the existing network was considered, no consideration has been given to solutions, aside from a new junction on the M40, to accommodate these additional traffic demands. For example, the potential for a local bypass of Ardley and further enhancements to the capacity of M40 Junction 10**. AECOM recommend that such alternative options should be considered further.**

M40 J9A Initial Feasibility Assessment

2.24. This section undertakes an initial feasibility assessment of the proposed new junction on the M40 in line with DMRB requirements. Para 5.5 notes that the weaving section expected between M40 J9-M40 J9A and M40 J9A- M40 J10 will exceed the minimum requirement of 2kms for rural motorway as per Para 4.5 of CD122.

2.25. However, given that a significant amount of new trips/reassigned trips are expected to weave and hop junctions, **AECOM recommend that this is considered further at future stages**. For example, interaction between junctions may also need to be considered through a microsimulation modelling assessment.

2.26. It is also noted that merge diverge assessments have been undertaken for the proposed junction and this indicates that 'Type A' slip road layouts will be suitable for 2020, 2026 and 2031 assessment years, lane gain will be required on the M40 in the northbound direction between M40 J9 and M40 J10 in both 2026 and 2031. ADC considers this to be beyond the scope of the OxSRFI project, since it appears to arise from an increase in flow between Junctions 9 and 10 and not from traffic generated by OxSRFI, and would therefore apply for a Departure from Standard (DfS). **This will need to be considered by Highways England further and further advice provided through Highways England's SES.**

2.27. It is also noted that if the proposal for a new junction were to be accepted, **it would be necessary to design the junction for a later design year (potentially 15 years post opening).**

3. Technical Note 2: Transport Modelling Methodology

3.1. The proposed methodology for transport modelling work which will be undertaken to inform on the likely traffic and environmental impacts of the proposed development were raised by ADC with Highways England and Oxfordshire County Council during Transport Working Group (TWG) meetings in November and December 2020. It was agreed during the TWG meeting of December 2020 that ADC would prepare a note to set out the proposed transport modelling methodology for

further consideration and agreement with the TWG. Technical Note 2 (TN2) has been issued as a result of these discussions and informs on the proposed transport modelling methodology.

3.2. Having reviewed TN2, we note that Para 2.7- Para 2.13 outline various details regarding the development which have not been agreed yet. These include, assumptions regarding the likely operation of the site, assumptions regarding trip rates, trip generation, likely traffic distribution, traffic redistribution impacts etc. As it has been agreed in TWG discussions that further details regarding these matters will be provided in due course, no comments have been made regarding these matters as we await further information.

3.3. As such, our comments regarding TN2 are simply based on a review of the modelling methodology proposed to assess the likely traffic impacts. These are detailed below.

Transport Modelling Methodology

3.4. This section of TN2 informs on the various modelling tools considered for use by ADC to assess the likely impact of the proposed development (and proposed J9A) on the highway network in the area.

3.5. Para 3.3 outlines that through discussions with OCC in September 2020, the following modelling tools have been discussed for use to assess the impacts of OxSRFI on the highway network in the area:

Oxfordshire Strategic Model
Oxfordshire Mobility Model
Bicester Transport Model (BTM)

3.6. TN2 notes that the Oxfordshire Strategic Model is out of date. However, some recent update work has been undertaken to the south of Oxfordshire County.

3.7. TN2 also notes that Oxfordshire Mobility Model is currently being developed by OCC. However, based on the timescales involved with this model for it to be agreed with DfT, and that the model will only provide one assessment year (2035), this model was discounted.

3.8. In contrast to the above two models, it has been identified that Bicester Transport Model (BTM) was recently used for the transport assessment work of the Heyford Park development. Based on this, BTM has been considered for further use by ADC. Having considered this, and through discussions with OCC, **AECOM agree that BTM is the most suitable tool to consider out of all tools available** (subject to further detailed checks).

3.9. ADC have also provided the LMVR for the BTM model, and based on a review of this we have the following comments to make:

- The BTM LMVR Addendum, which was prepared as part of the modelling work undertaken for Heyford Park development indicates that the model achieves good levels of validation overall in terms of modelled vs observed journey times. However, it highlights validation issues on the green route (as defined in the LMVR) in the westbound direction in both AM and PM peak periods. Having reviewed Appendix H which shows the colour coded routes, it is noted that there are two routes shaded green. As such, **ADC should confirm which route this poor validation relates to.** As one of the green routes shown in Appendix H is along the A41, if the validation issues relate to this, these issues may need to be resolved through additional validation. This is because the A41 forms one of the key access routes into Bicester off the M40

and would also determine the route choice into Bicester in future assessment years. Given that proposed development is likely to attract a significant proportion of its workers from Bicester this issue may need to be resolved.

- AECOM have reviewed the link flow validation statistics for AM and PM peak and have not noted any significant issues on the M40. However, it is noted that the link flow validation GEH statistics do not meet the required criteria on the A43 between Baynards Green roundabout and M40 J10. **This is of concern and should be considered further at future steps of modelling.**
- **Modelled vs observed journey time comparison should be undertaken for the B4100 between A4095/B4100 roundabout and Baynards Green roundabout for base AM and PM peak periods**. This is because the B4100 provides an access route into Bicester off the A43 and would determine route choice into Bicester in future assessment years.

3.10. ADC have also noted the limitations of the BTM, as it is unsuitable to consider wider reassignment impacts given its limited model extents. As such, the use of Highways England's Regional Transport Models (RTM) has been considered. Given that the proposals include for a new junction between the M40 and B4030, it will be important to understand potential wider reassignment effects that could increase the attractiveness of the B4030 as a through route for traffic not generated by OxSRFI. Based on a review of the model extents of RTMs for the South East region (SERTM), South West region (SWRTM) and Midlands region (MRTM), SERTM has been considered to be the most appropriate RTM to examine potential wider traffic reassignment effects on the SRN. This is considered acceptable.

3.11. ADC have however, noted that SERTM currently includes the layout for M40 J10 that predates the current layout which was delivered at the junction in 2015 through Highways England's Pinch Point Programme. **This will need to be rectified**. In addition, the model will also need to be updated with potential highway and development schemes at this location which may be delivered in future. **These should be confirmed with Highways England and OCC before any modelling work is commissioned.**

3.12. TN2 also outlines a 3-stage modelling approach which will include the modelling work to be undertaken in SERTM as a first step and this will inform on potential reassignment impacts. This will be followed by modelling work in BTM which will inform on the area of impact in and around Bicester. The outputs of the BTM modelling work are proposed to be analysed to identify locations which require detailed review in junction modelling packages such as LinSig, Junctions, VISSIM etc. ADC also acknowledge the need to undertaken microsimulation modelling work to study the interaction of proposed M40 J9A with the M40, however, as outlined in this note, **interaction with other SRN junctions in the area may also need to be considered through this assessment.**

Transport Modelling Assessment Requirements

3.13. This section of TN2 outlines the assessment requirements and includes information on assessment years, modelling scenarios for SERTM modelling, BTM modelling and local junction modelling.

3.14. 2026 and 2031 have been accepted by Highways England as the opening year and 'Review Period' assessment years and are therefore considered to be acceptable. Please note that if the proposal for a new junction were to be accepted, it would be necessary to design the junction for a later design year (potentially 15 years post opening). Hence, another future assessment year, post 2031, should be considered in addition to the 2026 and 2031.

3.15. This section of TN2 also outlines the base model network coding that will require to be undertaken to update SERTM models. It is recommended that this change is discussed with Highways England before the work is commissioned to ensure correct schemes are coded. Furthermore, forecasting

assumptions are expected to be reviewed and agreed with Highways England's TPG before any changes are made to future forecasting. This is considered acceptable.

3.16. It is noted that Para 4.25 outlines that 'Where highway mitigation is required on the SRN, then this should be designed to accommodate the forecast traffic demand in the year of opening of the development assuming that 100% of the development is in place and including for all committed development and infrastructure schemes. This is the DfT 02/2013 Circular compliant opening year scenario.' However, it is noted that Highways England no longer seek 100% of the committed development and infrastructure to be considered in opening year scenarios. Instead Highways England now expects a realistic opening year scenario where all committed developments and infrastructure schemes are considered based on their likely build out by the proposed opening year. The development proposal (OxSRFI) will however need to be considered as fully built and operational in opening year assessments.

3.17. **Based on this, we recommend that the Table in Para 4.33 outlining various assessment scenarios are revised based on discussions with Highways England.**

3.18. Notwithstanding, other assumptions regarding scenarios and outputs expected from each model are considered to be broadly acceptable at this stage, we anticipate that these requirements can be further refined as the applicant progresses.

4. Summary

4.1. AECOM have reviewed Technical Note 1, Technical Note 2 and the BTM LMVR, the comments provided here are intended to inform ongoing discussions in the next TWG meeting scheduled on Tuesday 2nd February 2021.

APPENDIX B: FURTHER ACTIONS EMAILS

[redacted]

From: [redacted] >
Sent: 06 July 2021 17:16
To: [redacted]
Subject: RE: OxSRFI - BTM validation (Tetra Tech Technical Note 1)

Hi [redacted]

I hope you are well.

All of the actions that you have outlined below appear reasonable. I agree with you that Action 1 is unnecessary as you will provide a section by section comparison of the green route based on Traffic Master data.

In terms of the data requests, I will aim to share this information with you by the end of this week.

Regards
[redacted]

From: [redacted] >
Sent: 06 July 2021 15:42
To: [redacted]
Subject: [EXTERNAL] RE: OxSRFI - BTM validation (Tetra Tech Technical Note 1)

Hi [redacted]

Thanks for your comments below. I've been asked by Stuart to respond and get agreement on what we need to do to close out the remaining issues.

I'll take each section in turn, as you have.

A41 (Green Route) Journey Time Validation:

Issue raised

An incident had occurred on the A41 on 15 June 2016, the day of the surveys.

Journey time comparisons should also presented for Section B of the green route against Trafficmaster data

Tetra Tech response

We've looked at the crashmap data for this accident. The accident occurred at 8:15am so could certainly have affected journey times (not sure why Tracsis said there were no incidents!). Unfortunately the report doesn't say which carriageway the accident was on, although if it blocked one direction and vehicles had to overtake the stationary cars then it could affect both directions of flow anyway. We could always get data from OCC which may be a bit more detailed. While this accident could therefore account for the greater observed journey times in the AM, it wouldn't have affected the PM which also had observed journey times that were too long.

Despite the above however, the Green route journey times were also checked against Trafficmaster journey time data. The Trafficmaster data is averaged over a whole year and so is unaffected by the incident in question. The A41 green route is shown to validate well against the Trafficmaster data.

Suggested actions

1) Tetra Tech to obtain full accident data from OCC to close out accident issue. [I feel this is unnecessary as we present validation based on Trafficmaster data];
2) Tetra Tech to present a sectional breakdown of the green route against Trafficmaster data.

A43 flow validation:

Issues raised

Independent data, which has not been used to calibrate the model should be used to inform on the validation statistics for this link. Suggest using WebTRIS flow data and Highways England's 2016 traffic survey data for M40 J10 Interchange.

Tetra Tech response

There are WebTRIS count sites on the A43, however there is no data for 2016 (see attached). We don't have the HE LMVR report but we could do an additional validation calculation if it was provided. The lack of independent data on the same day, month or even year raises the issue of the observed flow data being different at different times. The likelihood is that flow data from one of these sources will not match the classified turning counts used to calibrate the model. The exercise will be one of presenting additional data, which is certainly worthwhile, rather that proving validation at this location.

Suggested actions

3) HE / Aecom to provide a copy of Highways England's 2016 traffic survey data for M40 J10 Interchange;
4) Tetra Tech to present A43 model validation against HE 2016 traffic survey data;
5) Tetra Tech to present A43 model validation against WebTRIS data, using closest available month / year.

B4100 validation:

Issue raised

We would welcome if alternative sources of traffic data were considered for use at Baynards Green roundabout and A4095/B4100 roundabout. Highways Englands MCC data for Baynards Green roundabout which was collected in 2016, for A4095/B4100 roundabout, other sources of traffic flow data may be explored with OCC.

Tetra Tech response

We can look at these alternative sources of flow data, but as noted above, independent data collected on a different day, month or year raises the issue of the observed flow data being different at different times, making validation at that location much less likely. As a consequence, the exercise will also be one of presenting additional data, which is worthwhile, rather that proving validation at this location.

Suggested actions

6) HE / Aecom to provide a copy of Highways England's 2016 MCC survey data for Baynards Green roundabout;
7) Tetra Tech to present B4100 model validation against 2016 MCC survey data for Baynards Green roundabout;
8) Tetra Tech to identify and obtain other sources of traffic flow data for A4095/B4100 roundabout with OCC;
9) Tetra Tech to present B4100 model validation against other survey data for A4095/B4100 roundabout.

Other matters - M40:

Issue raised

Include validation statistics for the M40 within the updated version of the Technical Note to inform on the suitability of the model for the M40 in the area.

We would welcome commentary on the suitability and how/if some of the risks around validation issues can be managed.

Tetra Tech response

These requests can be included in an updated version of the technical note.

Suggested actions

10) Tetra Tech to include previously published validation statistics for the M40 in an updated version of the technical note and add commentary on suitability / risks / risk management of M40 validation.

I have listed out 10 suggested actions that should address the issues you raised. I think that action 1) is unnecessary due to use of the Trafficmaster data, but in any case, **please let me know whether these actions will address the issues** and which ones will need doing. I'd like to get the requirements agreed up front if possible, to avoid too much back and forth.

If you want to discuss any of this I am available this week for a call. Please note that I will be on holiday next week though.

I look forward to your reply,

Kind regards,

[redacted] MMath PhD MSc CMath FIMA
Associate Director

Tetra Tech
Executive Park, Avalon Way, Anstey, Leicester, Leicestershire, LE7 7GR

[redacted]

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Following Government guidance aimed at preventing the spread of COVID-19 the majority of our office based teams are working from home. We are fully enabled to work remotely so this will not impact on our service to our clients or our colleagues. However, we do require that all communications are sent to us electronically by email so that we will be in a position to receive and respond. Thank you for your co-operation.

From: [redacted].com>
Sent: 29 June 2021 16:10
To: [redacted]
Subject: RE: OxSRFI - BTM validation (Tetra Tech Technical Note 1)

Hi [redacted]

Thank you for sharing the attached Technical Note 1 by Tetra Tech with responds to the issues raised by Highways England previously through AECOM's TN2 regarding the validation of the Bicester Transport Model (BTM) in the vicinity of the proposed development. Apologies for the delay sending this over to you.

In relation to the responses provided within Tetra Tech's Technical Note 1, we have following comments to make in relation to the issues that were raised:

A41 (Green Route) Journey Time Validation:
We note that Tetra Tech have reviewed the issues regarding journey time validated on the A41 (Green Route) in AM and PM peaks. Based on a section by section analysis, Tetra Tech report that the validation issues on this route appear to relate to the performance of Section B (A41 between A41/Graven Hill Road/A4421 roundabout and A41/B4030 Oxford Road roundabout). The comparisons of observed vs modelled journey times presented in Table 2 and Table 3 of Technical Note 1 indicate significant differences on this section in both AM and PM peaks.

In order to investigate the likely cause of these differences, Tetra Tech have reviewed the 2016 journey time data set provided by Tracsis and informed that whilst no incidents were reported on the network during the survey period on the day that the journey time data was collected (15 June 2016), there was notable variation in the journey time measurements. Based on a review of the journey time data provided by Tracsis, Tetra Tech have also identified have identified a significant journey time variability along this section which is noted to range between 1 min 41 sec to 8 min 59 sec in AM peak. Similarly, Journey time along this section ranges from 1 min 31 sec to 6 min 8 sec in the PM peak.

While the variation noted in journey time measurements may provide a plausible justification on the likely cause of journey time validation issues, based on a review on Crashmap and online news we note that an incident had

occurred on the A41 on 15 June 2016 (https://www.oxfordmail.co.uk/news/14557835.roads-re-opened-three-car-collision-a41-bicester/). However, based on our limited review, we are not aware of the timing of this incident and whether it may have had an impact on the journey time data being used for validation purposes. As such, we would welcome if Tetra Tech can confirm if this was considered during the review of the traffic survey data prior to its use in the validation exercise?

Tetra Tech have also investigated coding of the model in the area and found no issues in how the network has been coded and we welcome this confirmation. Furthermore, flow and journey time validation for the green route has also been undertaken using independent data (Trafficmaster data for the green route has been provided by OCC) and we note that the route and links validate satisfactorily. However, we would welcome if journey time comparisons were also presented for Section B of the green route against Trafficmaster data.

Based on the above, we recommend that both of these matters should be investigated further and discussed with Highways England for agreement.

A43 flow validation:

We note that flow validation information has been provided for the A43 link between B4100 and M40 J10. It is noted that while ATC data has initially used to informed on the link flow validation levels for the A43 in the northbound direction, due to reasons outlined in Section 3.3 of Technical Note 1, validation checks have also been informed using MCC data (also used for calibration). We recommend that independent data, which has not been used to calibrate the model is used to inform on the validation statistics for this link. Based on the information provided in Technical Note 1, it is not clear if consideration has been given to other sources of traffic flow data such as WebTRIS flow data and Highways England's 2016 traffic survey data for M40 J10 Interchange (further details provided in Highways England's LMVR for M40 10 and Baynards Green VISSIM model)

As such, we would welcome if consideration is given to additional available sources of traffic flow data to inform on the validation of the model for the A43 in the study area.

B4100 validation:

We welcome the provision of the validation information for B4100. We note that flow validation information is based on MCC survey data at Baynards Green roundabout, A4095/B4100, and OCCs monitoring site on the B4100 for the whole of 2016. In addition, we note that JT validation information has been provided using journey time data provided by OCC from the Trafficmaster database.

While we can confirm the suitability of the validation along this route based on the journey time statistics and flow validation information provided for OCCs monitoring site, we would welcome if alternative sources of traffic data were considered for use at Baynards Green roundabout and A4095/B4100 roundabout. As outlined above, Highways Englands MCC data for Baynards Green roundabout which was collected in 2016 can potentially be used at this location. For A4095/B4100 roundabout, other sources of traffic flow data may be explored with OCC.

Other matters - M40:
While we note that validation statistics are provided for the M40 within the appendices of LMVR addendum, we would appreciate if these are included within the updated version of the Technical Note to inform on the suitability of the model for the M40 in the area. Whilst we note that some of the statistics may not satisfy the validation criterion as reported in the Appendices of LMVR addendum, we would welcome commentary on the suitability and how/if some of the risks around validation issues can be managed.

I hope this is helpful but let me know if you would like to discuss.

Regards
[redacted]

From: [redacted]>
Sent: 28 May 2021 20:43
To: [redacted]
>
Subject: [EXTERNAL] OxSRFI - BTM validation (Tetra Tech Technical Note 1)

All,

With reference to comment TN2-2 within the comments tracker relating to validation of the Bicester Transport Model (BTM), please find attached Tetra Tech Technical Note 1 for your review and agreement.

The note considers the following points:

- A41 journey time validation
- A43 flow validation
- B4100 flow and journey time validation.

In each case, it is concluded that the BTM validates satisfactory.

Kind regards

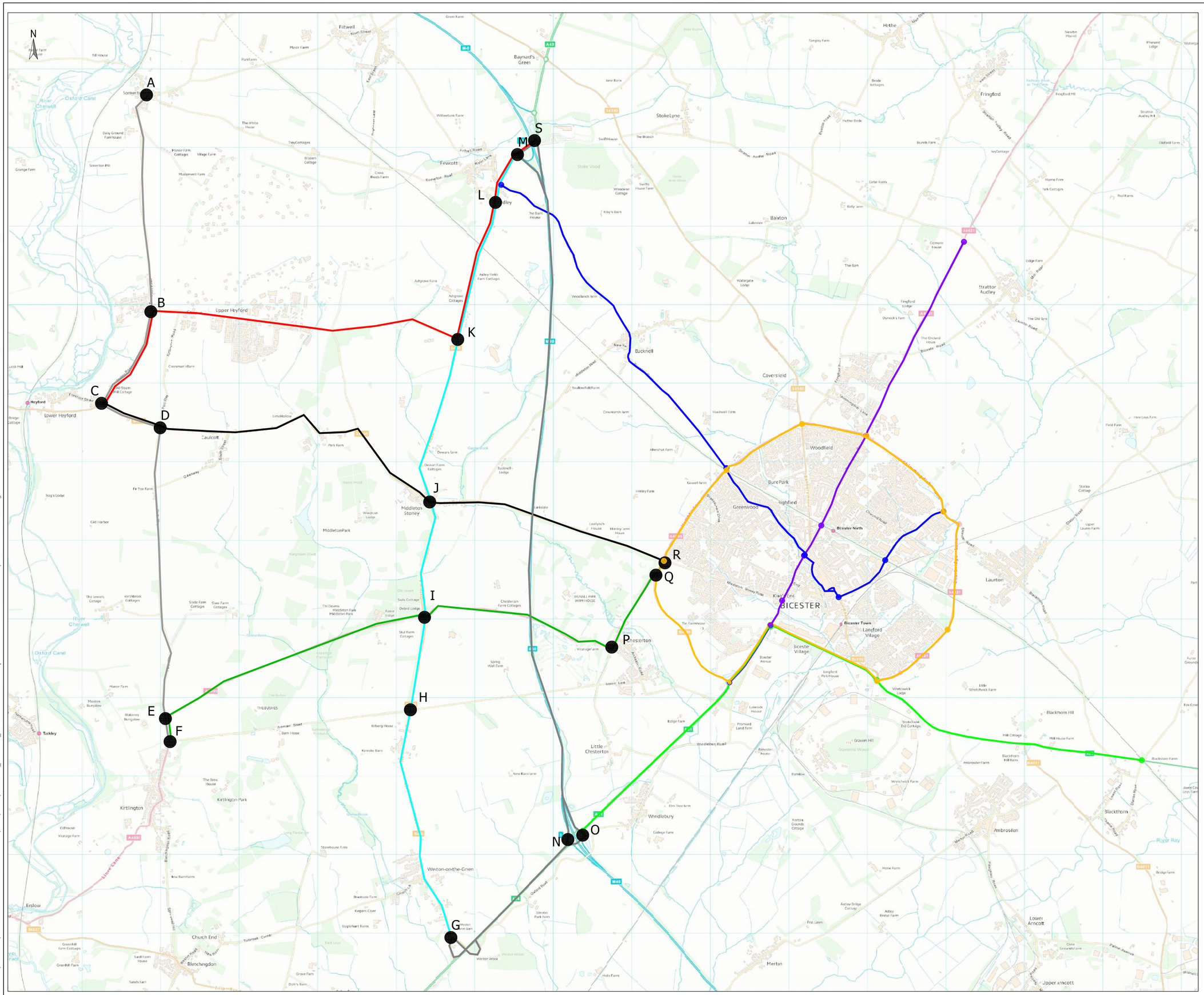
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APPENDIX C: LMVR JOURNEY TIME VALIDATION ROUTES

DO NOT SCALE: CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ANY OMISSIONS OR ERRORS



REV	DESCRIPTION	BY	CHK	APP	DATE

Client:

Oxfordshire County Council
Heyford Park Settlements LP

EXECUTIVE PARK
AVALON WAY
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TEL: +44 (0)116 234 8000
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Project:

Bicester Transport Model
Heyford Park Model Update

Drawing Title:

Figure 1
Journey Time Routes

Scale @ ISO A1	Drawn	Date	Checked	Date	Approved	Date
NTS	RW	10.07.18	GD	10.07.18	CRS	10.07.18

Project No.	Office	Type	Drawing No.	Revision
A099211-5	35	18	001	

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FILENAME : N:\PROJECTS\A099211-5 UPPER HEYFORD BICESTER\ACAD\DWGS\A099211-5_001 LMVR_A FIG1 JT ROUTES.DWG | PLOTTED BY : RACHAEL.WALKER | PLOTTED DATE : 07 August 2018 13:37:56

APPENDIX D: GREEN ROUTE JOURNEY TIME DATA

Blue		AM		IP		PM	
Northbound	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 Launton Road / Skimmingdish Lane roundabout (A)	0	00	00	00	00	00	00
2 Under railway bridge Launton Road	804	83	84	174	81	84	83
3 Stop Line Launton Road/London Road Junction	1780	159	186	250	186	170	186
4 Left turn into Bucknell Road from Field Street	2611	281	308	378	313	347	398
5 Under railway bridge Bucknell Road/Howes Lane Junction	4100	404	446	511	451	472	536
6 Ardley Road /B430 Junction (B)	8982	723	784	831	764	803	865

Blue		AM		IP		PM	
Southbound	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 Ardley Road /B430 Junction (B)	0	00	00	00	00	00	00
2 Under railway bridge Bucknell Road/Howes Lane Junction	4882	299	320	313	305	333	308
3 Right turn into Field Street	6371	451	485	478	457	512	474
4 Left turn into Launton Road	7226	578	638	633	595	656	612
5 Under railway bridge Launton Road	8202	650	735	717	693	800	711
6 Launton Road / Skimmingdish Lane roundabout (A)	9006	741	823	877	782	916	809

Green		AM		IP		PM	
Eastbound	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 M40/A41 Roundabout (A)	0	00	00	00	00	00	00
2 Cross stopline Vendee Drive roundabout	2712	123	125	125	126	141	127
3 Cross stopline Esso roundabout towards Boundary Way	3629	209	216	219	216	272	226
4 Cross stopline London Road roundabout towards A41	5219	334	314	321	311	394	330
5 Under railway bridge at Marsh Gibbon turning (B)	8769	531	499	513	483	603	516

Green		AM		IP		PM	
Westbound	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 Under railway bridge at Marsh Gibbon turning (B)	0	00	00	00	00	00	00
2 Cross stopline London Road roundabout towards A41	3153	220	203	198	191	228	206
3 Cross stopline Esso roundabout towards Boundary Way	4755	481	295	314	274	453	298
4 Cross stopline Vendee Drive roundabout	5693	567	377	392	353	542	381
5 M40/A41 Roundabout (A)	8381	714	539	549	484	707	518

Purple		AM		IP		PM	
Northbound	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 Vendee Drive roundabout (A)	0	00	00	00	00	00	00
2 Cross stopline Esso roundabout towards Oxford Road	917	110	84	73	83	78	91
3 Cross stopline mini roundabouts with Middleton Stoney Road	1249	157	125	124	124	151	141
4 Cross stopline St John's Street roundabout	1892	229	193	204	193	273	216
5 Under railway bridge on Buckingham Road	2321	280	260	263	262	346	302
6 Cross stopline Skimmingdish Lane roundabout towards A4421	3631	393	399	378	398	485	451
7 Right turn into Stoke Lyne Road (B)	6390	559	530	538	527	671	602

Purple		AM		IP		PM	
Southbound	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 Left turn from Stoke Lyne Road (B)	0	00	00	00	00	00	00
2 Cross stopline Skimmingdish Lane roundabout towards Buckingham Road	2759	166	165	160	131	175	134
3 Under railway bridge on Buckingham Road	4069	315	321	297	278	350	286
4 Cross stopline St John's Street roundabout	4508	421	413	359	343	420	359
5 Cross stopline mini roundabouts with Middleton Stoney Road	5146	495	490	431	412	514	430
6 Cross stopline Esso roundabout towards A41	5478	542	532	476	452	581	477
7 Vendee Drive roundabout (A)	6402	615	623	540	540	644	569

Yellow		AM		IP		PM	
Clockwise	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 Vendee Drive roundabout (A)	0	00	00	00	00	00	00
2 Cross stopline towards Howes Lane from Middleton Stoney roundabout	1737	84	99	81	99	86	103
3 Under railway bridge Bucknell Road/Howes Lane Junction	3169	174	186	169	185	176	195
4 Cross stopline Banbury Road roundabout towards A4095	4298	248	270	242	268	255	287
5 Cross stopline A4421 roundabout towards Skimmingdish Lane	5125	306	329	296	322	312	348
6 Cross stopline Launton road roundabout towards Charbridge Lane	6541	384	440	380	429	416	456
7 Cross stopline roundabout with Gavray Drive	8425	507	521	513	509	536	537
8 Cross stopline roundabout with London Road towards A41	9593	603	601	603	586	616	616
9 Cross stopline Esso roundabout towards Oxford Road (B)	9593	770	693	725	670	763	708

Yellow		AM		IP		PM	
Anti-clockwise	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 Vendee Drive roundabout (B)	0	00	00	00	00	00	00
2 Cross stopline Esso roundabout towards Boundary Way	1499	00	00	00	00	00	00
3 Cross stopline London Road roundabout towards A4421	1499	84	95	83	92	87	102
4 Cross stopline roundabout with Gavray Drive	2705	169	171	159	168	160	179
5 Cross stopline Launton Road roundabout towards Skimmingdish Lane	4513	292	253	280	249	274	262
6 Cross stopline A4421 roundabout towards A4095	5899	385	356	357	349	359	364
7 Cross stopline Banbury Road roundabout	6717	445	417	407	403	419	425
8 Under railway bridge Bucknell Road/Howes Lane Junction	7841	518	522	480	485	492	511
9 Cross stopline Howes Lane towards Vendee Drive at Middleton Stoney Road roundabout (A)	9287	624	616	573	574	597	601
10 Vendee Drive roundabout	11015	708	718	654	669	681	697

A-F			AM		IP		PM	
SB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
A	Water St/ Ardley Rd	00	00	00	00	00	00	00
B	Somerton Rd/ Camp Rd	877	183	145	187	145	182	145
C	B4030/ Station Rd	1891	261	210	265	210	258	210
D	B4030/ Port Way	2647	309	253	313	253	306	253
E	A4095 / Port Way	3713	518	466	513	463	502	464
F	A4095/ Akeman St	4911	540	496	534	493	523	495

F-A			AM		IP		PM	
NB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
F	A4095/ Akeman St	00	00	00	00	00	00	00
E	A4095 / Port Way	1541	21	30	21	30	21	32
D	B4030/ Port Way	2627	233	241	223	240	218	244
C	B4030/ Station Rd	3376	281	281	270	280	267	285
B	Somerton Rd/ Camp Rd	5072	358	346	349	345	342	350
A	Water St/ Ardley Rd	5830	541	495	535	493	525	499

C-R			AM		IP		PM	
EB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
C	B4030/ Station Rd	00	00	00	00	00	00	00
D	B4030/ Port Way	1650	48	40	48	39	48	40
J	B430/ B4030 Middleton Stoney Crossroads	2078	320	306	297	305	310	306
R	B4030/Howes Ln	2542	487	464	463	461	482	463

R-C			AM		IP		PM	
WB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
R	B4030/Howes Ln	00	00	00	00	00	00	00
J	B430/ B4030 Middleton Stoney Crossroads	1613	165	227	165	196	165	194
D	B4030/ Port Way	2898	437	449	414	417	427	416
C	B4030/ Station Rd	3386	485	488	461	456	476	456

F-R			AM		IP		PM	
SB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
F	A4095/ Akeman St	00	00	00	00	00	00	00
E	A4095 / Port Way	807	21	34	21	34	21	35
I	A4095/ B430	1278	200	210	197	209	204	213
P	A4095/ Unclassified	2597	335	321	335	320	333	325
Q	A4095/ Vendee Dr	3620	422	390	423	389	432	397
R	B4030/Howes Ln	4032	447	412	447	411	458	420

R-F			AM		IP		PM	
NB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
R	B4030/Howes Ln	00	00	00	00	00	00	00
Q	A4095/ Vendee Dr	553	18	29	18	23	18	26
P	A4095/ Unclassified	1857	105	100	106	92	117	96
I	A4095/ B430	2325	240	219	244	209	247	213
E	A4095 / Port Way	3476	431	389	426	378	438	383
F	A4095/ Akeman St	3896	452	420	447	408	459	413

S-G (M-way)			AM		IP		PM	
SB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
S	M40 J10 Cherwell Roundabout	00	00	00	00	00	00	00
O	M40 Jn9/ A41	4562	572	587	404	347	422	395
G	B4030/ B4030 Overbridge	5267	783	705	529	465	552	525

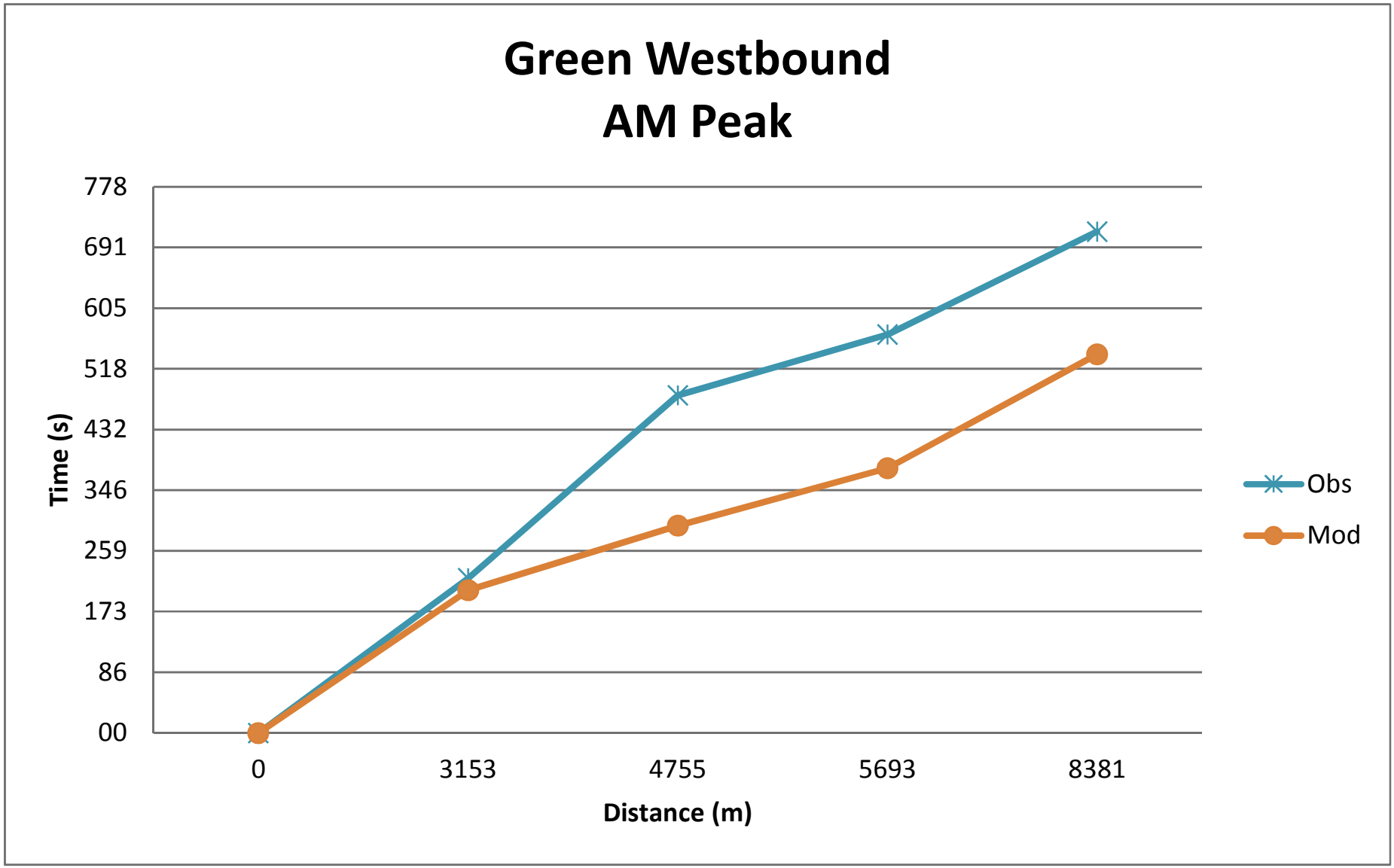
G-S (M-way)			AM		IP		PM	
NB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
G	B4030/ B4030 Overbridge	00	00	00	00	00	00	00
N	M40 Jn9/ A34	1840	123	167	141	132	146	195
M	Ardley Roundabout	4575	449	482	496	451	525	581
S	M40 J10 Cherwell Roundabout	5117	472	542	522	509	552	642

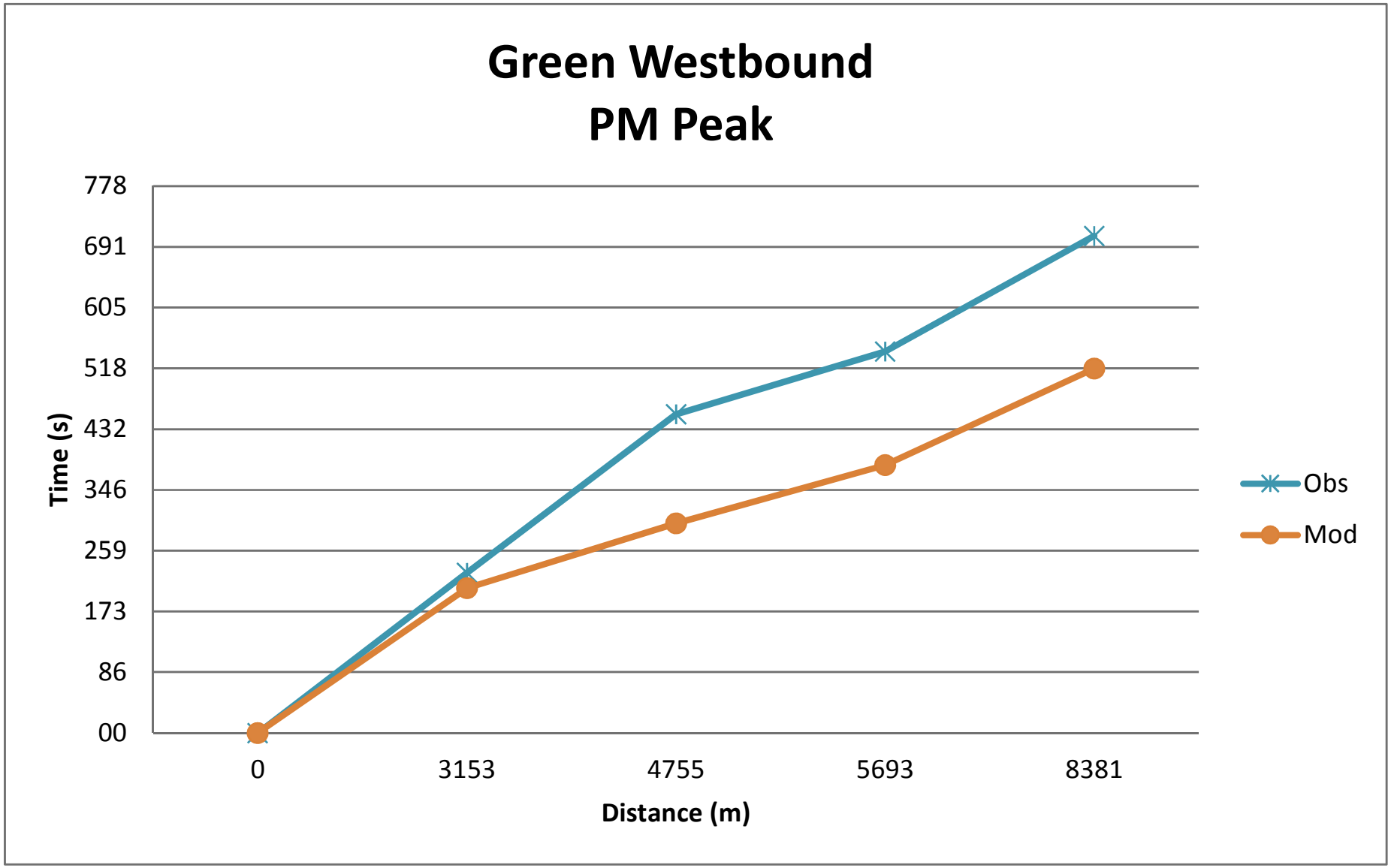
S-G (Local)			AM		IP		PM	
SB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
S	M40 J10 Cherwell Roundabout	00	00	00	00	00	00	00
M	Ardley Roundabout	1500	37	21	36	18	37	18
L	B430/ Church Rd	3000	91	61	92	53	95	54
K	B430/ Unclassified	4194	178	144	183	132	186	132
J	B430/ B4030 Middleton Stoney Crossroads	4776	343	285	312	257	316	263
I	A4095/ B430	6091	424	366	400	334	407	339
H	B430/Green Lane	7406	476	421	456	387	464	392
G	B4030/ B4030 Overbridge	7975	647	569	627	531	630	536

G-S (Local)			AM		IP		PM	
NB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
G	B4030/ B4030 Overbridge	00	00	00	00	00	00	00
H	B430/Green Lane	1287	170	139	171	139	166	141
I	A4095/ B430	2602	223	192	227	193	223	195
J	B430/ B4030 Middleton Stoney Crossroads	4147	303	293	315	291	314	311
K	B430/ Unclassified	5462	469	395	445	393	444	415
L	B430/ Church Rd	6777	556	474	536	472	536	496
M	Ardley Roundabout	9512	607	522	592	518	597	559
S	M40 J10 Cherwell Roundabout	10094	630	582	618	577	625	620

C-S			AM		IP		PM	
EB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
C	B4030/ Station Rd	00	00	00	00	00	00	00
B	Somerton Rd/ Camp Rd	818	77	69	78	68	76	68
K	B430/ Unclassified	1885	429	372	428	370	428	372
L	B430/ Church Rd	3200	516	451	518	449	519	453
M	Ardley Roundabout	5935	568	499	575	496	581	516
S	M40 J10 Cherwell Roundabout	6494	591	559	601	554	608	577

S-C			AM		IP		PM	
WB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
S	M40 J10 Cherwell Roundabout	00	00	00	00	00	00	00
M	Ardley Roundabout	1500	37	21	36	18	37	18
L	B430/ Church Rd	3000	91	61	92	53	95	54
K	B430/ Unclassified	3575	178	148	183	136	186	136
B	Somerton Rd/ Camp Rd	4727	528	474	532	460	536	461
C	B4030/ Station Rd	5266	606	539	611	525	612	526


Green Westbound
AM Peak
778
691
605
518
432
346
259
173
86
00
Time (s)
0
3153
4755
5693
8381
Distance (m)
Obs
Mod


Green Westbound
PM Peak
778
691
605
518
432
346
259
173
86
00
Time (s)
0
3153
4755
5693
8381
Distance (m)
Obs
Mod

APPENDIX E: A41 WESTBOUND SURVEYED JOURNEY TIME DATA

Tracsis plc
Traffic and Data Services

Client:	**Oxfordshire CC**
Project:	**3262-LON Bicester**
Survey Date:	**Wednesday 15 June 2016**
Survey Period:	**07:00-19:00**
Route and Direction:	**Route B Westbound**
Method:	**Journey Time Survey**

Incidents / Observations:

There were no incidents reported over the survey period.

Duration Summary

AM (07:00 - 10:00)

6 Runs Collected

	TP 1 - TP 2	TP 2 - TP 3	TP 3 - TP 4	TP 4 - TP 5
Max	00:09:02	00:08:59	00:01:35	00:02:38
Min	00:03:07	00:01:41	00:01:08	00:02:05
Average	00:04:33	00:04:40	00:01:24	00:02:22

Interpeak (11:00-14:00)

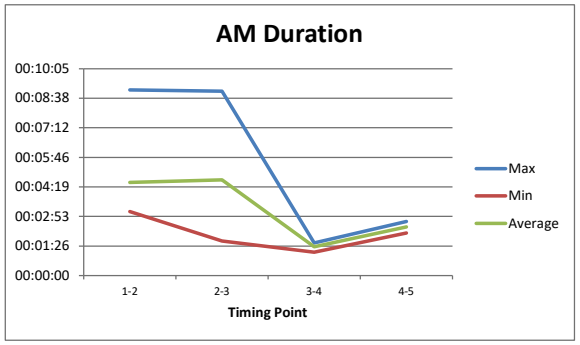
13 Runs Collected

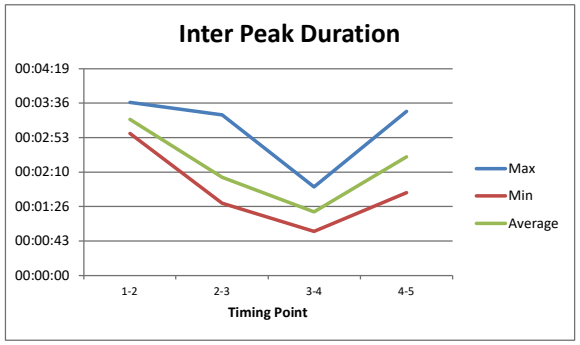
	TP 1 - TP 2	TP 2 - TP 3	TP 3 - TP 4	TP 4 - TP 5
Max	00:03:37	00:03:21	00:01:51	00:03:26
Min	00:02:58	00:01:31	00:00:55	00:01:44
Average	00:03:16	00:02:03	00:01:20	00:02:29

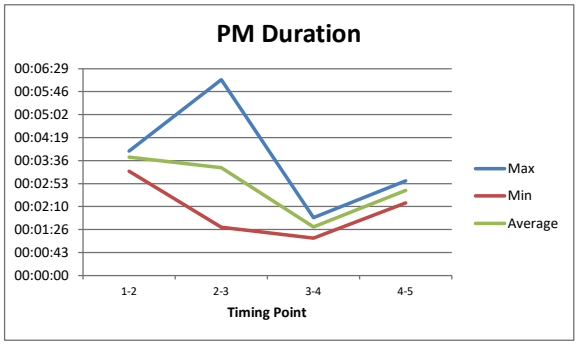
PM (16:00-19:00)

6 Runs Collected

	TP 1 - TP 2	TP 2 - TP 3	TP 3 - TP 4	TP 4 - TP 5
Max	00:03:54	00:06:08	00:01:49	00:02:58
Min	00:03:16	00:01:31	00:01:11	00:02:17
Average	00:03:43	00:03:23	00:01:32	00:02:40







Distance

	TP 1	TP 2	TP 3	TP 4	TP 5
Distance to TPs	0.000	2.253	0.983	0.564	1.635
Cumulative Distance	0.000	2.253	3.237	3.801	5.435

Timing Point Locations



AM (07:00 - 10:00)

	TP 1 - TP 2	TP 2 - TP 3	TP 3 - TP 4	TP 4 - TP 5	Total
Run 1	00:03:13	00:04:36	00:01:22	00:02:37	**00:11:48**
Run 2	00:03:07	00:04:44	00:01:35	00:02:16	**00:11:43**
Run 3	00:03:15	00:04:05	00:01:14	00:02:15	**00:10:50**
Run 4	00:09:02	00:08:59	00:01:08	00:02:05	**00:21:14**
Run 5	00:05:07	00:03:56	00:01:35	00:02:38	**00:13:15**
Run 6	00:03:32	00:01:41	00:01:31	00:02:23	**00:09:07**
Average	**00:04:33**	**00:04:40**	**00:01:24**	**00:02:22**	**00:12:59**

Interpeak (11:00-14:00)

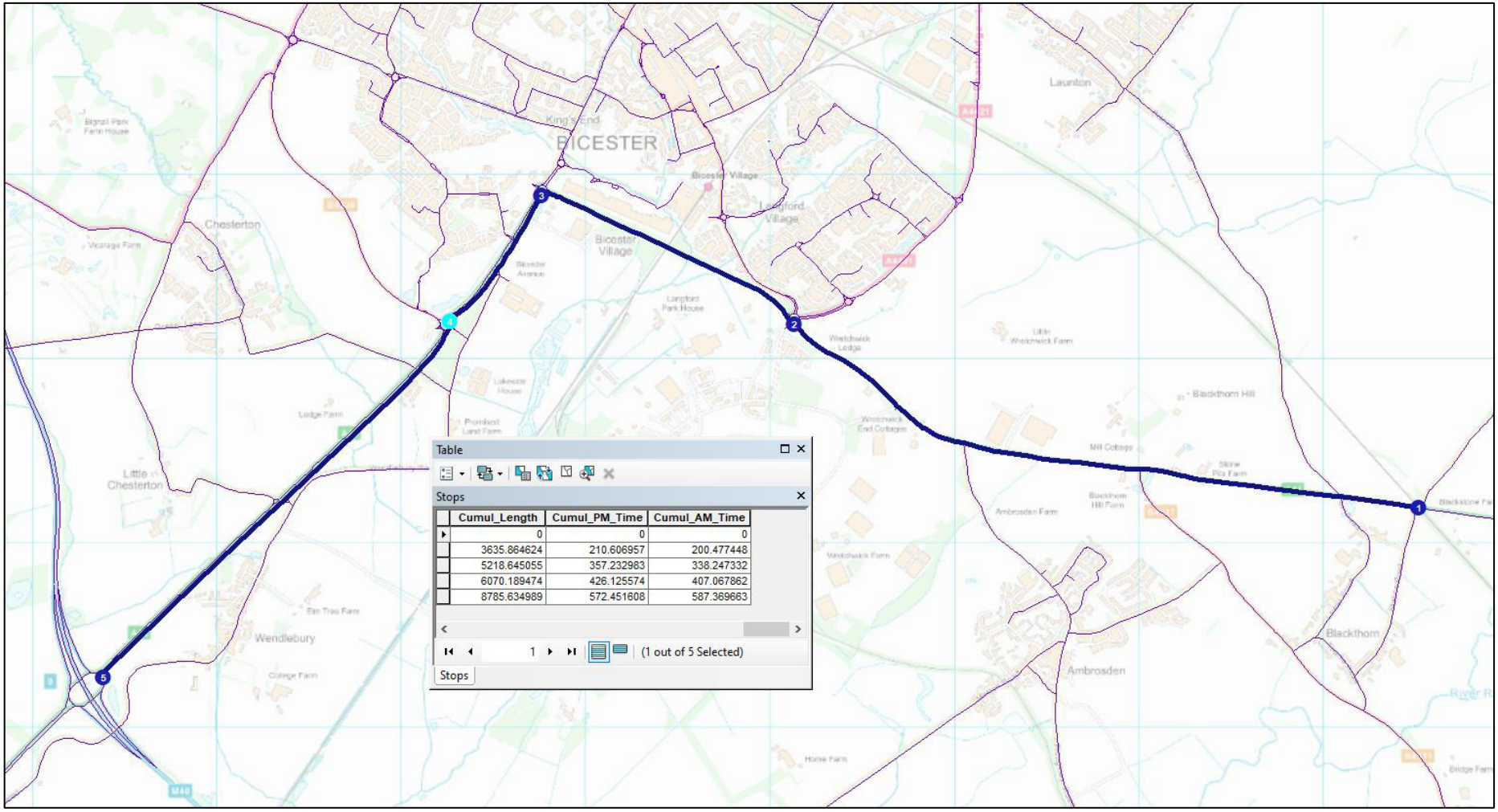
	TP 1 - TP 2	TP 2 - TP 3	TP 3 - TP 4	TP 4 - TP 5	Total
Run 1	00:03:19	00:01:49	00:00:58	00:02:49	**00:08:55**
Run 2	00:03:16	00:01:32	00:01:36	00:02:25	**00:08:48**
Run 3	00:03:23	00:02:01	00:01:26	00:02:13	**00:09:03**
Run 4	00:02:58	00:01:57	00:01:12	00:02:25	**00:08:31**
Run 5	00:03:08	00:02:27	00:00:55	00:02:18	**00:08:49**
Run 6	00:03:02	00:01:39	00:01:04	00:03:26	**00:09:11**
Run 7	00:03:14	00:01:54	00:01:00	00:02:40	**00:08:48**
Run 8	00:03:22	00:01:40	00:01:25	00:02:26	**00:08:53**
Run 9	00:03:19	00:01:31	00:01:20	00:02:36	**00:08:46**
Run 10	00:03:37	00:02:19	00:01:51	00:02:43	**00:10:31**
Run 11	00:03:37	00:02:02	00:01:30	00:02:40	**00:09:49**
Run 12	00:03:00	00:03:21	00:01:33	00:01:50	**00:09:45**
Run 13	00:03:12	00:02:25	00:01:26	00:01:44	**00:08:48**
Average	**00:03:16**	**00:02:03**	**00:01:20**	**00:02:29**	**00:09:07**

PM (16:00-19:00)

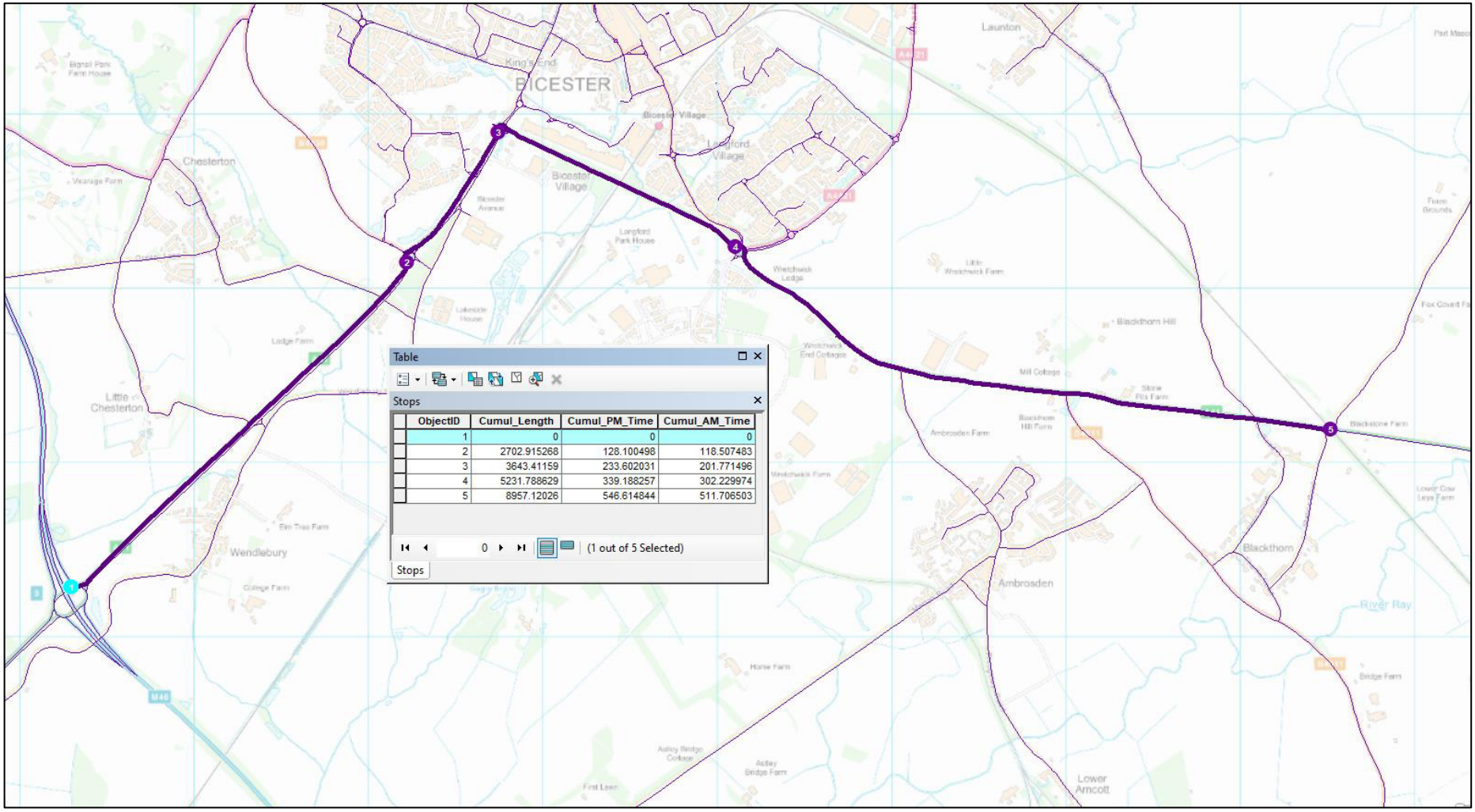
	TP 1 - TP 2	TP 2 - TP 3	TP 3 - TP 4	TP 4 - TP 5	Total
Run 1	00:03:49	00:02:09	00:01:11	00:02:45	**00:09:53**
Run 2	00:03:40	00:06:08	00:01:47	00:02:28	**00:14:03**
Run 3	00:03:49	00:04:46	00:01:49	00:02:56	**00:13:20**
Run 4	00:03:47	00:03:58	00:01:12	00:02:58	**00:11:55**
Run 5	00:03:54	00:01:45	00:01:27	00:02:36	**00:09:42**
Run 6	00:03:16	00:01:31	00:01:44	00:02:17	**00:08:48**
Average	**00:03:43**	**00:03:23**	**00:01:32**	**00:02:40**	**00:11:17**

APPENDIX F: A41 TRAFFICMASTER JOURNEY TIME DATA

A41 Trafficmaster Journey Time Data (Westbound)



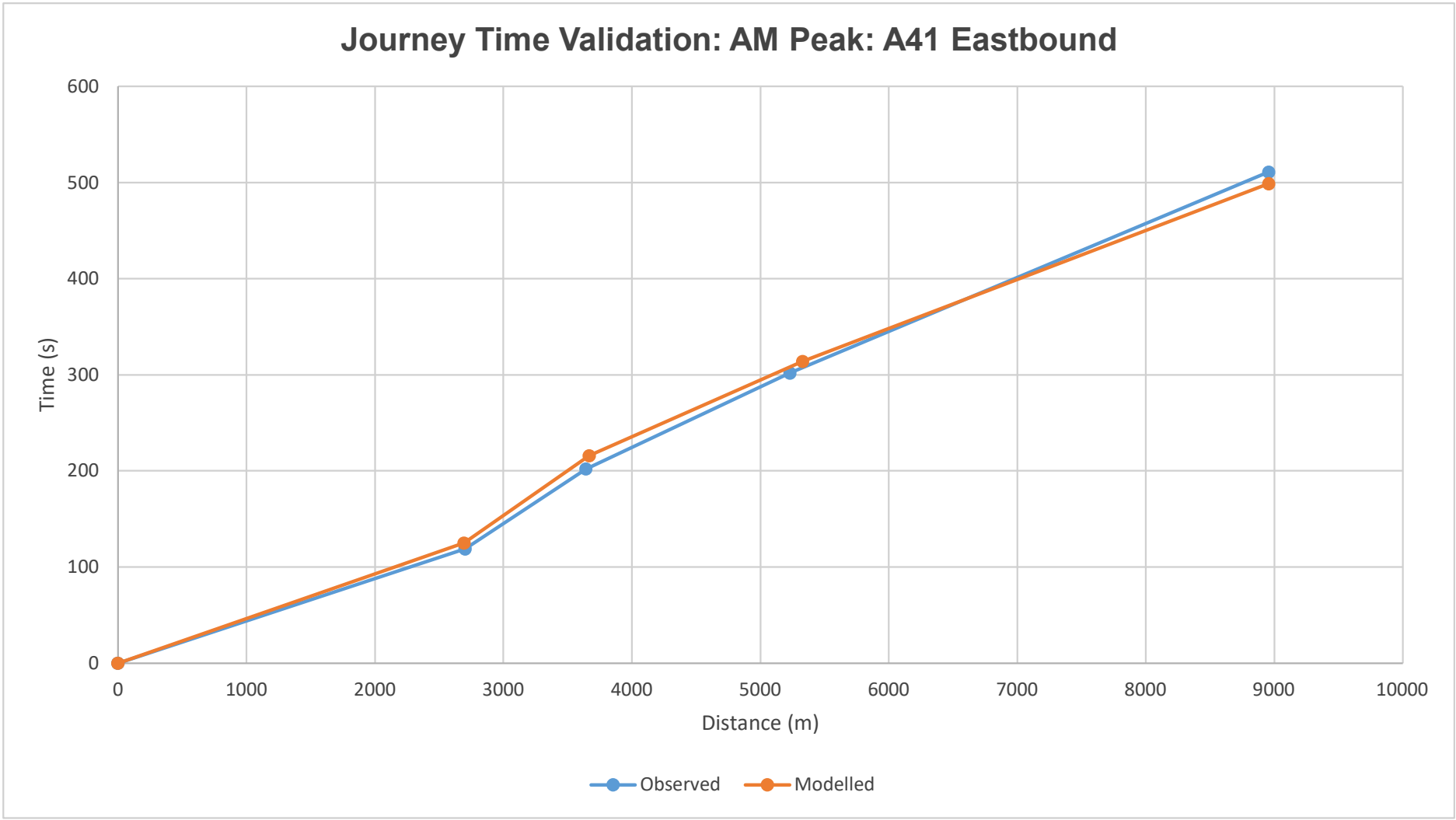
A41 Trafficmaster Journey Time Data (Eastbound)

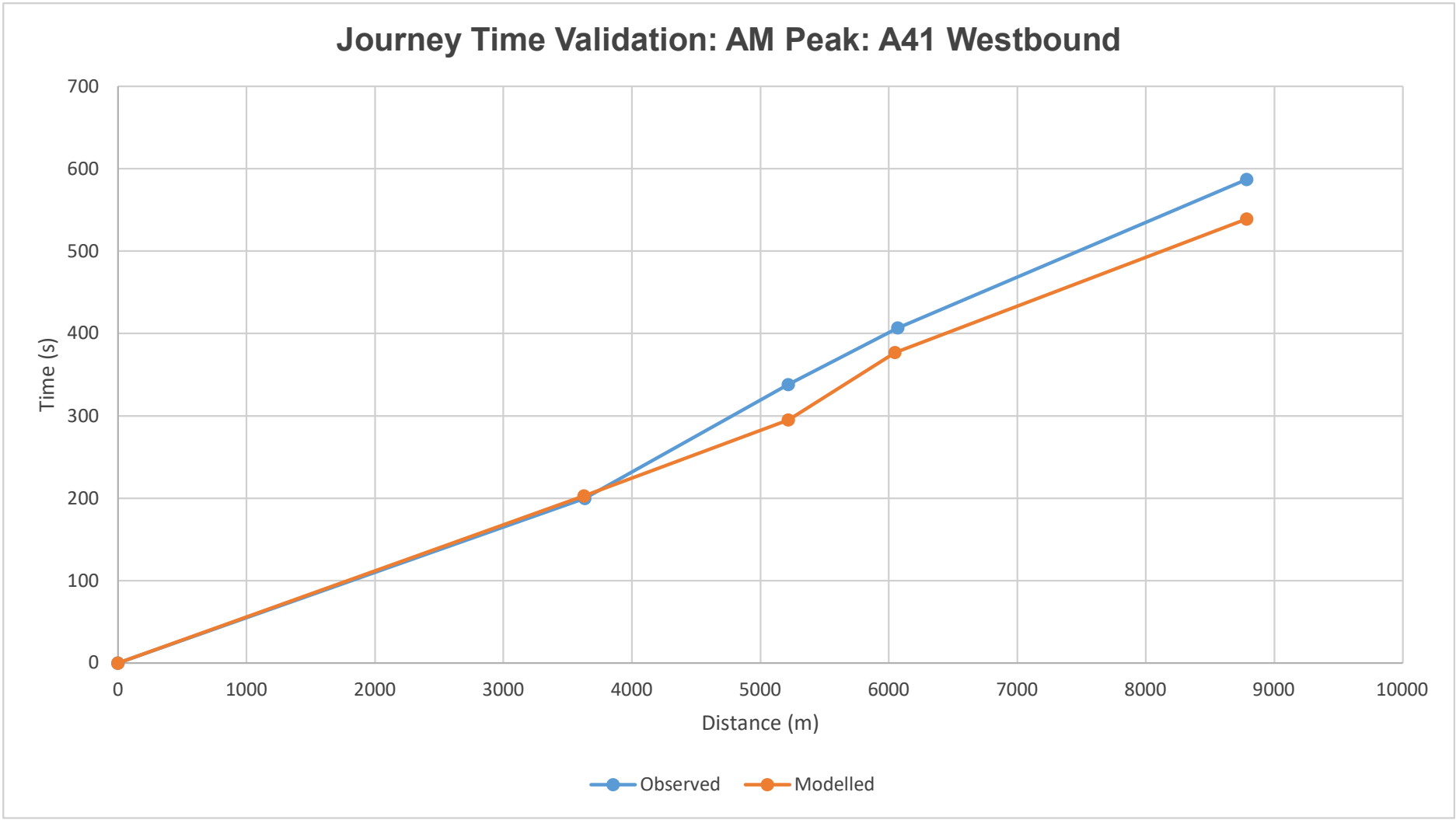


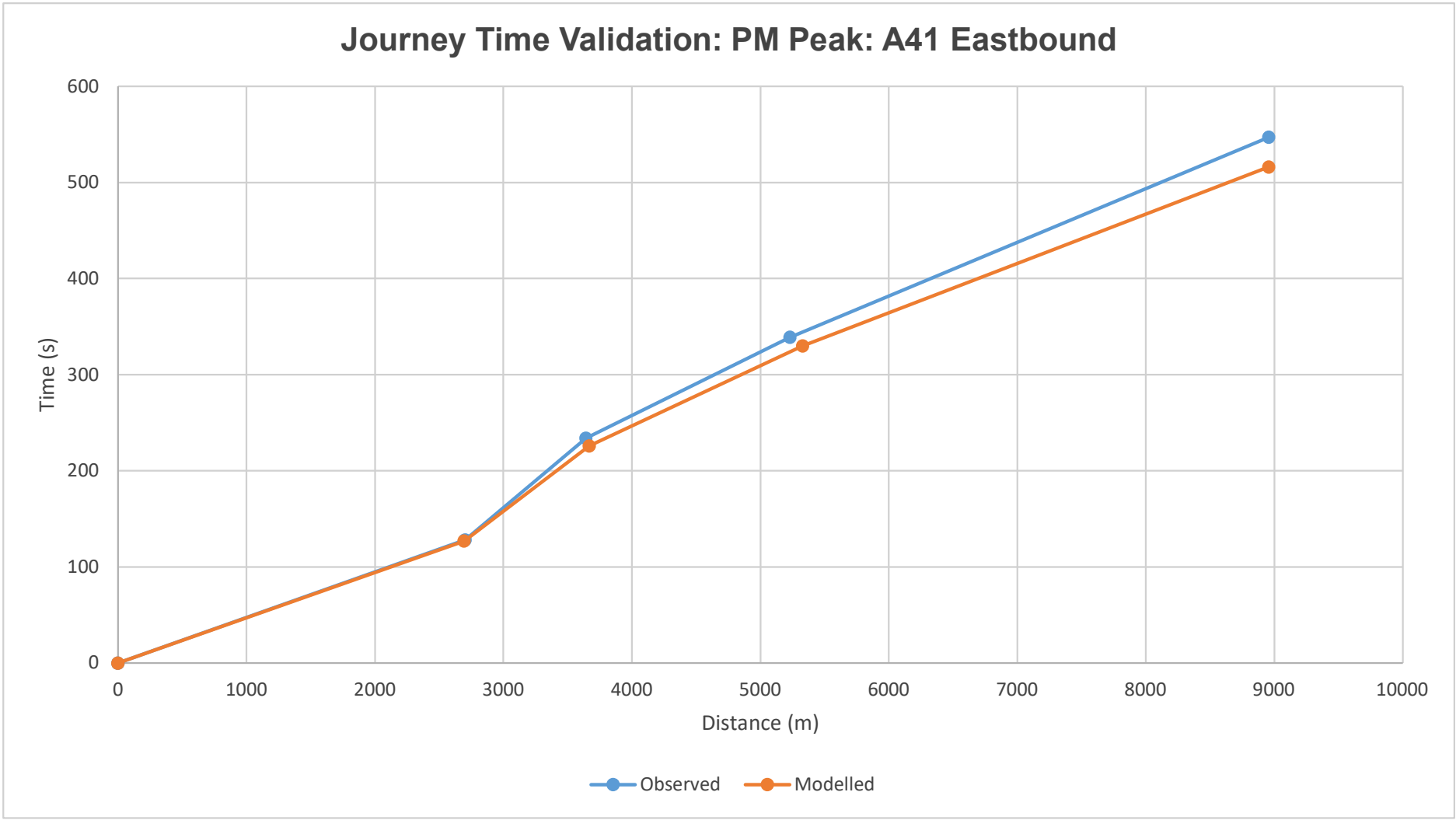
APPENDIX G: A41 JOURNEY TIME VALIDATION CALCULATIONS

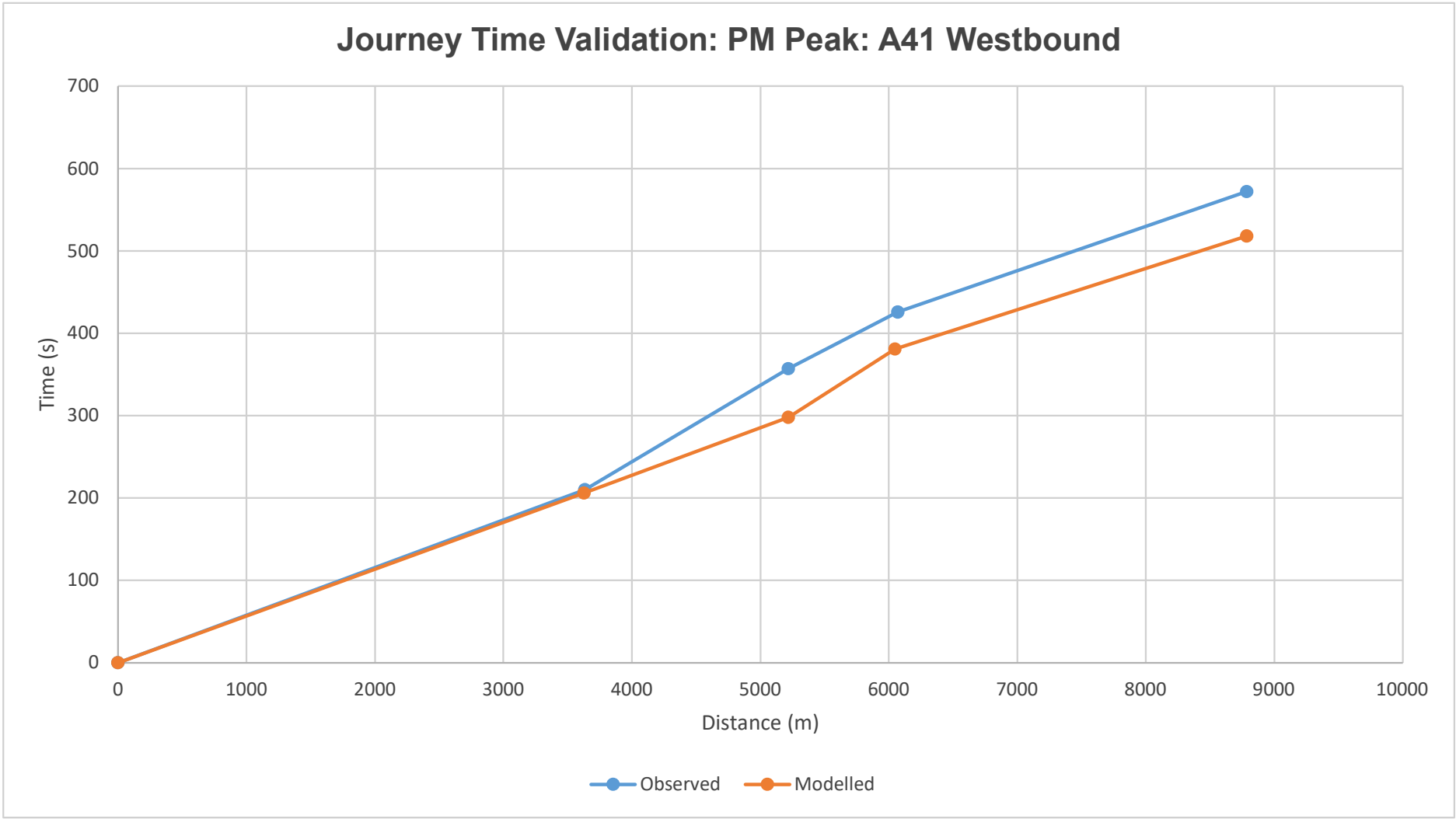
Time Period	Direction	Distance (m)		Average Time (s)						
		Trafficmaster	Saturn	Observed	Modelled	AbsDiff	%Diff	Within 15%	Within 60s	Validate?
AM	Eastbound	8957	8957	511	499	-12	-2.3%	Yes	Yes	Yes
	Westbound	8786	8786	587	539	-48	-8.2%	Yes	Yes	Yes
PM	Eastbound	8957	8957	547	516	-31	-5.7%	Yes	Yes	Yes
	Westbound	8786	8786	572	518	-54	-9.4%	Yes	Yes	Yes

A41 Westbound Journey Time Validation (Trafficmaster Data)


Journey Time Validation: AM Peak: A41 Eastbound
Time (s)
600
500
400
300
200
100
0
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
Distance (m)
Observed
Modelled


Journey Time Validation: AM Peak: A41 Westbound
Time (s)
700
600
500
400
300
200
100
0
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
Distance (m)
Observed
Modelled


Journey Time Validation: PM Peak: A41 Eastbound
Time (s)
600
500
400
300
200
100
0
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
Distance (m)
Observed
Modelled


Journey Time Validation: PM Peak: A41 Westbound
Time (s)
700
600
500
400
300
200
100
0
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
Distance (m)
Observed
Modelled

APPENDIX H: A41 SECTIONAL JOURNEY TIME VALIDATION DATA

Time Period	Direction	Route Section	Distance (m)		Average Time (s)						
			Trafficmaster	Saturn	Observed	Modelled	AbsDiff	%Diff	Within 15%	Within 60s	Validate?
AM	Eastbound	A	2703	2693	119	125	6	5.0%	Yes	Yes	**Yes**
		B	940	976	83	91	8	9.6%	Yes	Yes	**Yes**
		C	1588	1660	100	98	-2	-2.0%	Yes	Yes	**Yes**
		D	3726	3628	209	185	-24	-11.5%	Yes	Yes	**Yes**
	Westbound	A	3635	3628	200	203	3	1.5%	Yes	Yes	**Yes**
		B	1583	1590	138	92	-46	-33.3%	No	Yes	**Yes**
		C	852	830	69	82	13	18.8%	No	Yes	**Yes**
		D	2716	2738	180	162	-18	-10.0%	Yes	Yes	**Yes**
PM	Eastbound	A	2703	2693	119	125	6	5.0%	Yes	Yes	**Yes**
		B	940	976	83	91	8	9.6%	Yes	Yes	**Yes**
		C	1588	1660	100	98	-2	-2.0%	Yes	Yes	**Yes**
		D	3726	3628	209	185	-24	-11.5%	Yes	Yes	**Yes**
	Westbound	A	3635	3628	210	206	-4	-1.9%	Yes	Yes	**Yes**
		B	1583	1590	147	92	-55	-37.4%	No	Yes	**Yes**
		C	852	830	69	83	14	20.3%	No	Yes	**Yes**
		D	2716	2738	146	137	-9	-6.2%	Yes	Yes	**Yes**

A41 Journey Time Validation (Trafficmaster Data)

Calculations for each route section

APPENDIX I: A43 AUTOMATIC TRAFFIC COUNT DATA

Job Number	3262-LON
Client:	Oxfordshire County Council
Project:	Bicester - ATC Report
Location:	51.950433, -1.204451
Site No.	8NB
Road	Wk1. A43 - North of M40 Junction 10
Start Date:	15-Jun-16
Directions	Northbound N/A

Bicester - ATC Report

Site:

8NB. Wk1. A43 - North of M40 Junction 10 - 51.950433, -1.204451

Incidents / Observations

Site 6SB Wk1 *- Data loss, Mon 20th Jun 07:45-24:00 patched with Mon 4th Jul 07:45-24:00 data.*
Site 8NB Wk1 *- Data loss, Mon 20th Jun 00:00-22:15 and Wed 15th Jun 12:45 until Sun 19th Jun 24:00 patched with Mon 4th Jul 00:00-22:15 and Fri 1st Jul 00:00 until Sun 3rd Jul 24:00 data.*
Site 8SB *- Bad data, both WK1 & Wk2.*

Contact: [redacted]

Tracsis plc
Unit 3 Spectrum House
32-34 Gordon House Road
London
NW5 1LP

[redacted]

Tracsis plc
Traffic and Data Services

Job Number	3262-LON
Client	Oxfordshire County Council
Project	Bicester - ATC Report
Location	51.950433, -1.204451
Site No.	8NB
Road	Wk1. A43 - North of M40 Junction 10
Start Date	15-Jun-16
Direction	Northbound

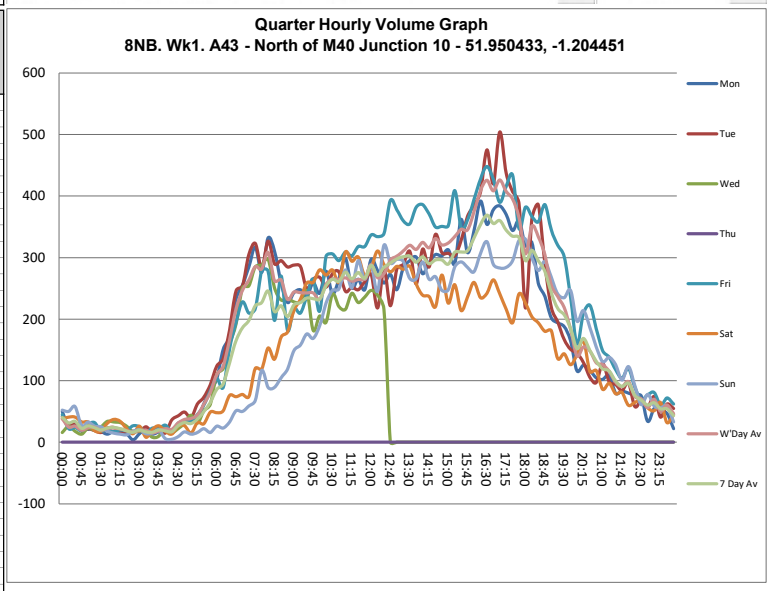
Volume Summary

Average Weekday	18,444
7 Day Average	16,949

8NB. Wk1. A43 - North of M40 Junction 10 - 51.950433, -1.204451 | Northbound

	Day of Week							Ave	7 Day
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Time	20-Jun	21-Jun	15-Jun	16-Jun	01-Jul	02-Jul	03-Jul	W'day	Ave
AM Peak	332	327	297	0	318	309	295		
PM Peak	392	504	247	0	448	311	330		
00:00	50	42	16	0	45	38	52	38	41
00:15	24	27	26	0	22	41	50	25	32
00:30	31	32	18	0	24	41	58	26	34
00:45	27	18	13	0	19	33	26	19	23
01:00	21	22	23	0	29	33	33	24	27
01:15	26	19	20	0	32	19	26	24	24
01:30	18	16	25	0	18	18	25	19	20
01:45	13	23	34	0	21	31	18	23	23
02:00	18	24	33	0	17	37	15	23	24
02:15	17	18	32	0	20	34	13	22	22
02:30	14	17	26	0	19	22	12	19	18
02:45	4	18	17	0	27	14	18	17	16
03:00	14	18	18	0	25	26	20	19	20
03:15	20	25	17	0	16	8	14	20	17
03:30	13	17	8	0	23	21	15	15	16
03:45	17	24	10	0	22	27	20	18	20
04:00	20	15	25	0	28	18	6	22	19
04:15	15	36	16	0	17	13	5	21	17
04:30	31	43	22	0	29	26	9	31	27
04:45	33	49	31	0	35	27	17	37	32
05:00	35	40	44	0	35	15	13	39	30
05:15	39	62	31	0	45	32	16	44	38
05:30	62	73	51	0	60	30	22	62	50
05:45	85	94	62	0	84	49	16	81	65
06:00	103	124	110	0	104	48	26	110	86
06:15	151	136	120	0	89	51	23	124	95
06:30	172	183	159	0	152	76	33	167	129
06:45	233	246	192	0	195	74	51	217	165
07:00	255	254	251	0	228	78	50	247	186
07:15	285	305	254	0	210	74	59	264	198
07:30	317	323	285	0	217	120	68	286	222
07:45	276	283	288	0	279	119	117	282	227
08:00	332	327	297	0	278	153	89	309	246
08:15	311	290	251	0	198	135	89	263	212
08:30	259	295	231	0	270	171	105	264	222
08:45	227	285	234	0	182	179	119	232	204
09:00	243	288	228	0	217	214	149	244	223
09:15	248	286	228	0	210	232	158	243	227
09:30	237	250	246	0	237	259	176	243	234
09:45	259	265	182	0	265	260	169	243	233
10:00	242	268	205	0	213	280	189	232	233
10:15	278	252	195	0	302	272	226	257	254
10:30	241	274	241	0	306	280	247	266	265
10:45	265	277	221	0	295	260	249	265	261
11:00	299	245	216	0	309	309	280	267	276
11:15	251	252	242	0	303	294	251	262	266
11:30	265	248	227	0	318	301	295	265	276
11:45	248	261	236	0	318	271	265	266	267
12:00	297	273	247	0	337	283	288	289	288
12:15	279	218	239	0	334	311	245	268	271
12:30	259	281	216	0	339	289	320	274	284
12:45	273	222	0	0	393	277	291	296	291
13:00	248	281	0	0	378	286	297	302	298
13:15	283	289	0	0	360	281	294	311	301
13:30	295	310	0	0	355	286	266	320	302
13:45	301	257	0	0	382	257	266	313	293
14:00	274	314	0	0	386	239	293	325	301
14:15	292	285	0	0	371	237	265	316	290
14:30	305	338	0	0	350	220	269	331	296
14:45	303	308	0	0	351	272	247	321	296
15:00	313	307	0	0	352	226	248	324	289
15:15	290	303	0	0	409	256	285	334	309
15:30	362	328	0	0	348	214	293	346	309
15:45	308	367	0	0	361	236	284	345	311
16:00	343	385	0	0	394	260	277	374	332
16:15	392	407	0	0	428	235	307	409	354
16:30	354	475	0	0	448	242	326	426	369
16:45	378	420	0	0	427	264	289	408	356
17:00	384	504	0	0	390	241	283	426	360
17:15	370	437	0	0	416	216	284	408	345
17:30	344	407	0	0	434	194	295	395	335
17:45	360	388	0	0	347	241	328	365	333
18:00	319	218	0	0	382	226	330	306	295
18:15	325	362	0	0	367	204	300	351	312
18:30	259	386	0	0	358	194	279	334	295
18:45	237	290	0	0	386	180	294	304	277
19:00	202	219	0	0	345	181	268	255	243
19:15	194	196	0	0	320	136	241	237	217
19:30	188	167	0	0	302	144	235	219	207
19:45	165	151	0	0	236	126	247	184	185
20:00	116	145	0	0	160	142	197	140	152
20:15	125	130	0	0	209	165	214	155	169
20:30	117	106	0	0	223	115	187	149	150
20:45	105	97	0	0	185	117	155	129	132
21:00	102	128	0	0	149	86	131	126	119
21:15	109	98	0	0	138	96	138	115	116
21:30	80	94	0	0	118	79	126	97	99
21:45	83	84	0	0	104	81	101	90	91
22:00	80	96	0	0	120	60	123	99	96
22:15	76	58	0	0	89	65	92	74	76
22:30	75	68	0	0	69	69	61	71	68
22:45	34	58	0	0	77	56	78	56	61
23:00	55	74	0	0	81	51	59	70	64
23:15	50	41	0	0	60	65	56	50	54
23:30	47	62	0	0	72	32	59	60	54
23:45	22	55	0	0	62	45	33	46	43
Total	17416	18476	6659	0	20109	13941	14846	18444	16949

07:00-19:00	14085	14888	5460	0	15738	11128	11393	14716	13424
06:00-22:00	16330	17192	6041	0	18767	12845	13766	17229	15778
06:00-24:00	16769	17704	6041	0	19397	13288	14327	17756	16295
00:00-24:00	17416	18476	6659	0	20109	13941	14846	18444	16949



Tracsis plc
Traffic and Data Services

Job Number	3262-LON
Client	Oxfordshire County Council
Project	Bicester - ATC Report
Location	51.950433, -1.204451
Site No.	8NB
Road	Wk2. A43 - North of M40 Junction 10
Start Date	22-Jun-16
Direction	Northbound

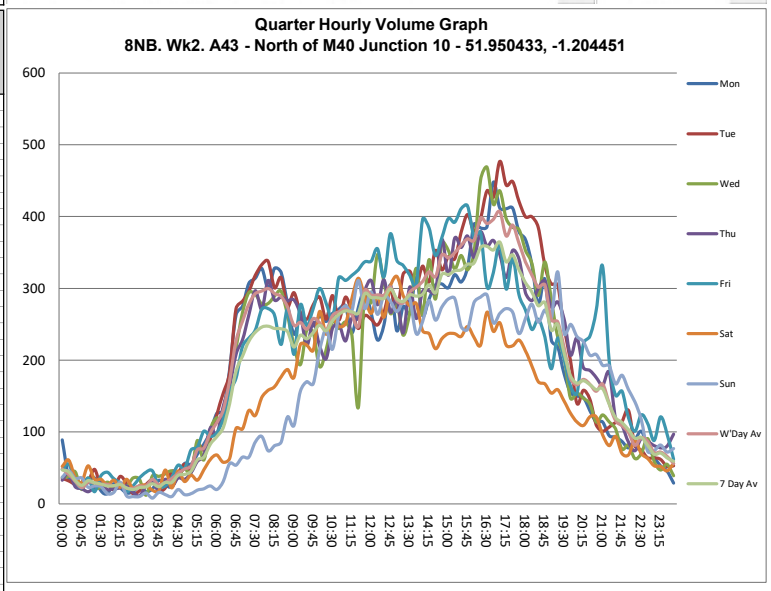
Volume Summary

Average Weekday	19,064
7 Day Average	17,758

8NB. Wk2. A43 - North of M40 Junction 10 - 51.950433, -1.204451 | Northbound

Time	Day of Week: Mon 27-Jun	Tue 28-Jun	Wed 22-Jun	Thu 23-Jun	Fri 24-Jun	Sat 25-Jun	Sun 26-Jun	Ave W'day	7 Day Ave
AM Peak	328	338	296	311	337	314	311		
PM Peak	448	477	469	379	415	317	323		
00:00	89	35	37	33	48	52	37	**48**	**47**
00:15	36	32	38	44	55	61	46	**41**	**45**
00:30	29	27	45	24	32	37	35	**31**	**33**
00:45	25	25	20	21	22	30	36	**23**	**26**
01:00	31	30	36	17	36	53	23	**30**	**32**
01:15	36	48	22	23	17	34	25	**29**	**29**
01:30	18	25	23	31	39	34	24	**27**	**28**
01:45	14	27	30	20	44	26	14	**27**	**25**
02:00	28	20	23	21	35	33	16	**25**	**25**
02:15	22	38	24	22	29	23	30	**27**	**27**
02:30	15	28	24	25	17	34	11	**22**	**22**
02:45	17	14	36	16	25	21	10	**22**	**20**
03:00	25	18	34	11	36	25	10	**25**	**23**
03:15	17	27	12	25	44	26	15	**25**	**24**
03:30	21	33	39	31	46	19	8	**34**	**28**
03:45	33	19	38	18	25	18	16	**27**	**24**
04:00	26	22	42	34	25	47	13	**30**	**30**
04:15	24	45	46	24	37	22	10	**35**	**30**
04:30	39	44	39	36	54	46	20	**42**	**40**
04:45	56	55	49	34	49	31	13	**49**	**41**
05:00	55	47	43	43	75	40	14	**53**	**45**
05:15	69	82	88	59	79	33	19	**75**	**61**
05:30	83	75	61	67	101	47	21	**77**	**65**
05:45	100	91	104	106	94	62	25	**99**	**83**
06:00	126	124	120	96	99	68	20	**113**	**93**
06:15	130	154	115	136	118	58	31	**131**	**106**
06:30	187	183	169	163	156	63	56	**172**	**140**
06:45	263	272	217	208	175	105	54	**227**	**185**
07:00	275	282	266	228	219	104	65	**254**	**206**
07:15	307	296	294	263	231	130	65	**278**	**227**
07:30	314	318	292	297	242	123	86	**293**	**239**
07:45	328	333	278	271	271	148	94	**296**	**246**
08:00	300	338	279	311	272	158	74	**300**	**247**
08:15	328	301	289	284	263	163	81	**293**	**244**
08:30	322	315	296	288	222	177	86	**289**	**244**
08:45	279	275	263	283	271	187	121	**274**	**240**
09:00	236	294	221	284	208	176	109	**249**	**218**
09:15	262	267	194	264	277	222	157	**253**	**235**
09:30	249	257	242	221	248	221	170	**243**	**230**
09:45	248	277	239	253	272	214	167	**258**	**239**
10:00	261	288	191	220	300	268	214	**252**	**249**
10:15	254	257	214	202	280	236	243	**241**	**241**
10:30	265	290	254	244	258	259	215	**262**	**255**
10:45	271	256	244	251	315	247	263	**267**	**264**
11:00	276	288	253	227	311	251	276	**271**	**269**
11:15	238	267	235	259	318	286	269	**263**	**267**
11:30	273	244	134	258	326	314	311	**247**	**266**
11:45	297	262	295	296	337	289	272	**297**	**293**
12:00	266	257	280	311	338	265	295	**290**	**287**
12:15	228	249	347	277	355	290	264	**291**	**287**
12:30	249	267	309	312	316	260	290	**291**	**286**
12:45	305	298	265	267	376	303	282	**302**	**299**
13:00	241	270	280	285	339	317	268	**283**	**286**
13:15	275	320	235	238	332	290	282	**280**	**282**
13:30	265	324	267	302	318	276	285	**295**	**291**
13:45	315	303	328	258	304	279	237	**302**	**289**
14:00	262	331	263	296	396	241	254	**310**	**292**
14:15	285	309	340	297	384	237	283	**323**	**305**
14:30	305	353	285	294	346	216	256	**317**	**294**
14:45	306	326	363	368	371	230	274	**347**	**320**
15:00	301	344	353	318	397	237	285	**343**	**319**
15:15	319	341	327	370	392	237	286	**350**	**325**
15:30	309	378	346	357	411	233	247	**360**	**326**
15:45	329	403	326	373	415	247	243	**369**	**334**
16:00	389	380	349	343	372	232	280	**367**	**335**
16:15	384	397	451	379	378	221	288	**398**	**357**
16:30	386	436	469	359	302	267	291	**390**	**359**
16:45	448	427	417	367	322	240	252	**396**	**353**
17:00	412	477	436	347	362	252	265	**407**	**364**
17:15	411	444	397	315	299	221	272	**373**	**337**
17:30	412	449	385	353	342	220	267	**388**	**347**
17:45	379	421	382	341	291	228	237	**363**	**326**
18:00	368	400	353	294	270	213	258	**337**	**308**
18:15	333	400	335	283	243	192	278	**319**	**295**
18:30	277	385	290	300	257	170	253	**302**	**276**
18:45	313	332	337	310	232	167	270	**305**	**280**
19:00	228	306	285	274	188	154	258	**256**	**242**
19:15	219	305	232	281	231	159	323	**254**	**250**
19:30	181	245	203	257	202	143	237	**218**	**210**
19:45	155	199	147	207	164	126	250	**174**	**178**
20:00	150	140	154	231	154	114	233	**166**	**168**
20:15	148	158	147	190	223	109	226	**173**	**172**
20:30	130	146	139	186	233	121	207	**167**	**166**
20:45	114	110	114	176	269	121	208	**157**	**159**
21:00	114	101	124	165	331	96	193	**167**	**161**
21:15	95	107	114	183	198	81	192	**139**	**139**
21:30	93	113	104	118	151	94	167	**116**	**120**
21:45	87	115	76	109	157	70	179	**109**	**113**
22:00	78	130	82	86	120	68	159	**99**	**103**
22:15	89	81	63	74	101	88	142	**82**	**91**
22:30	101	75	70	91	124	70	117	**92**	**93**
22:45	80	64	91	87	112	63	73	**87**	**81**
23:00	65	64	59	81	88	53	74	**71**	**69**
23:15	53	62	47	78	121	52	82	**72**	**71**
23:30	46	52	55	80	98	46	72	**66**	**64**
23:45	29	53	39	97	62	56	77	**56**	**59**
Total	**18524**	**19992**	**18407**	**18557**	**19840**	**13986**	**15001**	**19064**	**17758**

07:00-19:00	14655	15726	14488	14118	14901	10954	10880	14778	13675
06:00-22:00	17075	18504	16948	17098	17950	12636	13714	17515	16275
06:00-24:00	17616	19085	17454	17772	18776	13132	14510	18141	16906
00:00-24:00	18524	19992	18407	18557	19840	13986	15001	19064	17758



Tracsis plc
Traffic and Data Services

Job Number	3262-LON
Client	Oxfordshire County Council
Project	Bicester - ATC Report
Location	51.950787, -1.204208
Site No.	8SB
Road	Wk1. A43 - North of M40 Junction 10
Start Date	15-Jun-16
Direction	Southbound

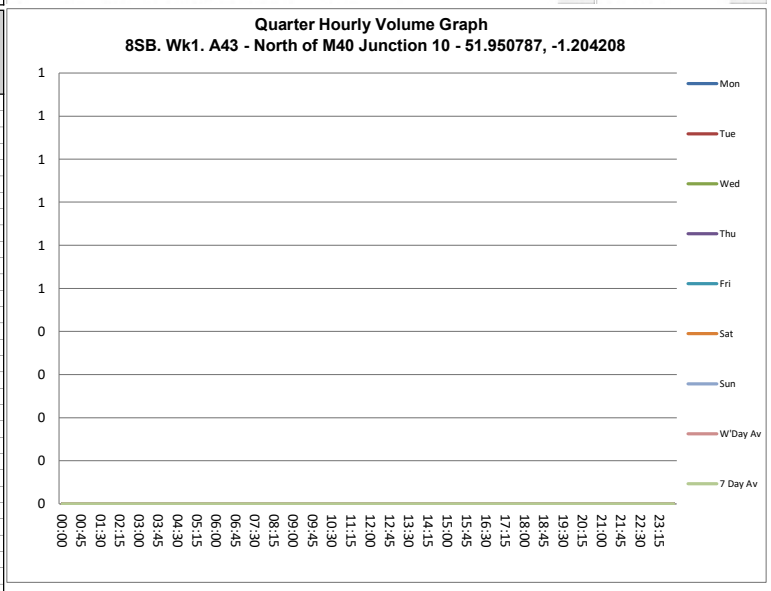
Volume Summary

Average Weekday	0
7 Day Average	0

8SB. Wk1. A43 - North of M40 Junction 10 - 51.950787, -1.204208 | Southbound

	Day of Week							Ave	7 Day
	Mon	Tue	Wed	Thu	Fri	Sat	Sun	W'day	Ave
Time	20-Jun	21-Jun	15-Jun	16-Jun	17-Jun	18-Jun	19-Jun		
AM Peak	0	0	0	0	0	0	0		
PM Peak	0	0	0	0	0	0	0		
00:00	0	0	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0
04:15	0	0	0	0	0	0	0	0	0
04:30	0	0	0	0	0	0	0	0	0
04:45	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0
05:15	0	0	0	0	0	0	0	0	0
05:30	0	0	0	0	0	0	0	0	0
05:45	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	0	0	0	0	0
06:15	0	0	0	0	0	0	0	0	0
06:30	0	0	0	0	0	0	0	0	0
06:45	0	0	0	0	0	0	0	0	0
07:00	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0
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09:15	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0
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12:15	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0
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15:15	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0
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16:15	0	0	0	0	0	0	0	0	0
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19:15	0	0	0	0	0	0	0	0	0
19:30	0	0	0	0	0	0	0	0	0
19:45	0	0	0	0	0	0	0	0	0
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20:15	0	0	0	0	0	0	0	0	0
20:30	0	0	0	0	0	0	0	0	0
20:45	0	0	0	0	0	0	0	0	0
21:00	0	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	0	0
21:30	0	0	0	0	0	0	0	0	0
21:45	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0
22:15	0	0	0	0	0	0	0	0	0
22:30	0	0	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

07:00-19:00	0	0	0	0	0	0	0	0	0
06:00-22:00	0	0	0	0	0	0	0	0	0
06:00-24:00	0	0	0	0	0	0	0	0	0
00:00-24:00	0	0	0	0	0	0	0	0	0



Tracsis plc
Traffic and Data Services

Job Number	3262-LON
Client	Oxfordshire County Council
Project	Bicester - ATC Report
Location	51.950787, -1.204208
Site No.	8SB
Road	Wk2. A43 - North of M40 Junction 10
Start Date	22-Jun-16
Direction	Southbound

Volume Summary

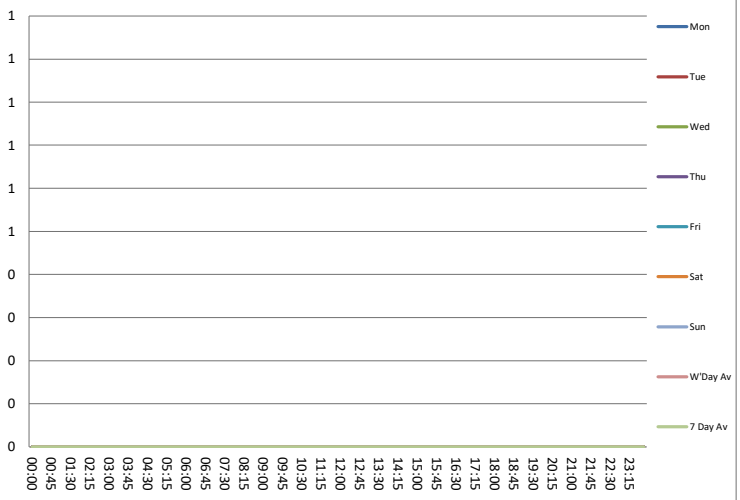
Average Weekday	0
7 Day Average	0

8SB. Wk2. A43 - North of M40 Junction 10 - 51.950787, -1.204208 | Southbound

Time	Day of Week: Mon 27-Jun	Tue 28-Jun	Wed 22-Jun	Thu 23-Jun	Fri 24-Jun	Sat 25-Jun	Sun 26-Jun	Ave W'day	7 Day Ave
AM Peak	0	0	0	0	0	0	0		
PM Peak	0	0	0	0	0	0	0		
00:00	0	0	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0
04:15	0	0	0	0	0	0	0	0	0
04:30	0	0	0	0	0	0	0	0	0
04:45	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0
05:15	0	0	0	0	0	0	0	0	0
05:30	0	0	0	0	0	0	0	0	0
05:45	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	0	0	0	0	0
06:15	0	0	0	0	0	0	0	0	0
06:30	0	0	0	0	0	0	0	0	0
06:45	0	0	0	0	0	0	0	0	0
07:00	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0
19:00	0	0	0	0	0	0	0	0	0
19:15	0	0	0	0	0	0	0	0	0
19:30	0	0	0	0	0	0	0	0	0
19:45	0	0	0	0	0	0	0	0	0
20:00	0	0	0	0	0	0	0	0	0
20:15	0	0	0	0	0	0	0	0	0
20:30	0	0	0	0	0	0	0	0	0
20:45	0	0	0	0	0	0	0	0	0
21:00	0	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	0	0
21:30	0	0	0	0	0	0	0	0	0
21:45	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0
22:15	0	0	0	0	0	0	0	0	0
22:30	0	0	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0

07:00-19:00	0	0	0	0	0	0	0	0	0
06:00-22:00	0	0	0	0	0	0	0	0	0
06:00-24:00	0	0	0	0	0	0	0	0	0
00:00-24:00	0	0	0	0	0	0	0	0	0

Quarter Hourly Volume Graph
8SB. Wk2. A43 - North of M40 Junction 10 - 51.950787, -1.204208



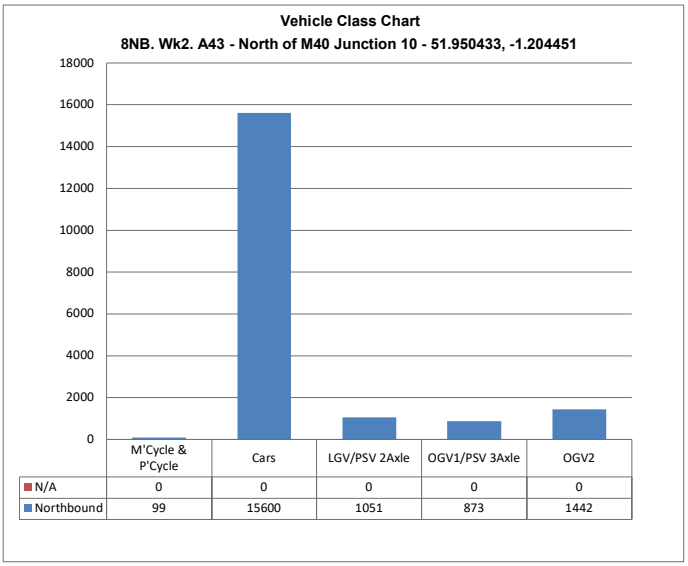
Tracsis plc
Traffic and Data Services

Job Number	3262-LON
Client:	Oxfordshire County Council
Project:	Bicester - ATC Report
Location:	51.950433, -1.204451
Site No.	8NB
Road	Wk2. A43 - North of M40 Junction 10
Start Date	22-Jun-16
Direction	Northbound N/A

Vehicle Class Summary

M'Cycle & P'Cycle	1%
Cars	82%
LGV	6%
OGV1 & PSV	5%
OGV2	8%

8NB. Wk2. A43 - North of M40 Junction 10 - 51.950433, -1.204451 | Weekday Averag



	Northbound						N/A						Combined					
	M'Cycle & P'Cycle	Cars	LGV/PSV 2Axle	OGV1/PSV 3Axle	OGV2	Total	M'Cycle & P'Cycle	Cars	LGV/PSV 2Axle	OGV1/PSV 3Axle	OGV2	Total	M'Cycle & P'Cycle	Cars	LGV/PSV 2Axle	OGV1/PSV 3Axle	OGV2	Total
00:00	1	39	3	2	5	48	0	0	0	0	0	0	1	39	3	2	5	48
00:15	0	32	3	2	4	41	0	0	0	0	0	0	0	32	3	2	4	41
00:30	0	22	2	3	4	31	0	0	0	0	0	0	0	22	2	3	4	31
00:45	0	16	1	1	5	23	0	0	0	0	0	0	0	16	1	1	5	23
01:00	0	22	1	1	6	30	0	0	0	0	0	0	0	22	1	1	6	30
01:15	0	19	2	2	6	29	0	0	0	0	0	0	0	19	2	2	6	29
01:30	0	21	1	1	5	27	0	0	0	0	0	0	0	21	1	1	5	27
01:45	0	21	1	1	4	27	0	0	0	0	0	0	0	21	1	1	4	27
02:00	0	17	1	1	5	25	0	0	0	0	0	0	0	17	1	1	5	25
02:15	0	18	2	1	6	27	0	0	0	0	0	0	0	18	2	1	6	27
02:30	0	15	0	2	5	22	0	0	0	0	0	0	0	15	0	2	5	22
02:45	0	13	1	2	5	22	0	0	0	0	0	0	0	13	1	2	5	22
03:00	0	19	0	1	5	25	0	0	0	0	0	0	0	19	0	1	5	25
03:15	0	18	0	1	6	25	0	0	0	0	0	0	0	18	0	1	6	25
03:30	0	26	2	1	4	34	0	0	0	0	0	0	0	26	2	1	4	34
03:45	0	19	1	1	6	27	0	0	0	0	0	0	0	19	1	1	6	27
04:00	0	21	1	2	6	30	0	0	0	0	0	0	0	21	1	2	6	30
04:15	0	23	2	2	8	35	0	0	0	0	0	0	0	23	2	2	8	35
04:30	0	33	2	1	6	42	0	0	0	0	0	0	0	33	2	1	6	42
04:45	0	35	3	3	8	49	0	0	0	0	0	0	0	35	3	3	8	49
05:00	0	38	2	3	9	53	0	0	0	0	0	0	0	38	2	3	9	53
05:15	0	59	3	3	10	75	0	0	0	0	0	0	0	59	3	3	10	75
05:30	0	59	4	3	11	77	0	0	0	0	0	0	0	59	4	3	11	77
05:45	0	77	5	5	12	99	0	0	0	0	0	0	0	77	5	5	12	99
06:00	0	85	6	9	12	113	0	0	0	0	0	0	0	85	6	9	12	113
06:15	0	98	10	10	12	131	0	0	0	0	0	0	0	98	10	10	12	131
06:30	1	134	11	14	13	172	0	0	0	0	0	0	1	134	11	14	13	172
06:45	0	192	10	9	15	227	0	0	0	0	0	0	0	192	10	9	15	227
07:00	1	210	14	11	18	254	0	0	0	0	0	0	1	210	14	11	18	254
07:15	1	233	13	14	18	278	0	0	0	0	0	0	1	233	13	14	18	278
07:30	2	249	14	11	17	293	0	0	0	0	0	0	2	249	14	11	17	293
07:45	1	252	14	13	16	296	0	0	0	0	0	0	1	252	14	13	16	296
08:00	1	251	14	16	18	300	0	0	0	0	0	0	1	251	14	16	18	300
08:15	1	251	13	11	17	293	0	0	0	0	0	0	1	251	13	11	17	293
08:30	2	242	13	14	18	289	0	0	0	0	0	0	2	242	13	14	18	289
08:45	2	225	15	14	17	274	0	0	0	0	0	0	2	225	15	14	17	274
09:00	1	207	14	10	17	249	0	0	0	0	0	0	1	207	14	10	17	249
09:15	1	202	16	15	18	253	0	0	0	0	0	0	1	202	16	15	18	253
09:30	1	196	17	11	19	243	0	0	0	0	0	0	1	196	17	11	19	243
09:45	1	211	17	11	19	258	0	0	0	0	0	0	1	211	17	11	19	258
10:00	1	204	16	11	21	252	0	0	0	0	0	0	1	204	16	11	21	252
10:15	1	192	15	12	20	241	0	0	0	0	0	0	1	192	15	12	20	241
10:30	0	209	17	12	23	262	0	0	0	0	0	0	0	209	17	12	23	262
10:45	3	206	20	18	21	267	0	0	0	0	0	0	3	206	20	18	21	267
11:00	1	210	18	14	28	271	0	0	0	0	0	0	1	210	18	14	28	271
11:15	0	208	19	14	22	263	0	0	0	0	0	0	0	208	19	14	22	263
11:30	1	194	20	12	21	247	0	0	0	0	0	0	1	194	20	12	21	247
11:45	1	240	20	14	22	297	0	0	0	0	0	0	1	240	20	14	22	297
12:00	2	230	25	11	23	290	0	0	0	0	0	0	2	230	25	11	23	290
12:15	1	228	25	14	24	291	0	0	0	0	0	0	1	228	25	14	24	291
12:30	1	237	19	13	20	291	0	0	0	0	0	0	1	237	19	13	20	291
12:45	2	242	22	12	24	302	0	0	0	0	0	0	2	242	22	12	24	302
13:00	2	225	20	13	23	283	0	0	0	0	0	0	2	225	20	13	23	283
13:15	1	220	25	8	25	280	0	0	0	0	0	0	1	220	25	8	25	280
13:30	1	234	22	13	25	295	0	0	0	0	0	0	1	234	22	13	25	295
13:45	2	238	23	14	25	302	0	0	0	0	0	0	2	238	23	14	25	302
14:00	2	241	25	20	22	310	0	0	0	0	0	0	2	241	25	20	22	310
14:15	2	259	20	17	25	323	0	0	0	0	0	0	2	259	20	17	25	323
14:30	1	252	22	15	26	317	0	0	0	0	0	0	1	252	22	15	26	317
14:45	1	282	24	14	26	347	0	0	0	0	0	0	1	282	24	14	26	347
15:00	1	279	23	16	24	343	0	0	0	0	0	0	1	279	23	16	24	343
15:15	1	279	27	18	25	350	0	0	0	0	0	0	1	279	27	18	25	350
15:30	1	297	24	16	23	360	0	0	0	0	0	0	1	297	24	16	23	360
15:45	1	298	26	17	27	369	0	0	0	0	0	0	1	298	26	17	27	369
16:00	4	303	22	15	23	367	0	0	0	0	0	0	4	303	22	15	23	367
16:15	2	336	21	16	23	398	0	0	0	0	0	0	2	336	21	16	23	398
16:30	2	322	21	20	26	390	0	0	0	0	0	0	2	322	21	20	26	390
16:45	2	339	15	15	25	396	0	0	0	0	0	0	2	339	15	15	25	396
17:00	3	343	18	15	28	407	0	0	0	0	0	0	3	343	18	15	28	407
17:15	3	314	19	13	24	373	0	0	0	0	0	0	3	314	19	13	24	373
17:30	4	330	16	14	24	388	0	0	0	0	0	0	4	330	16	14	24	388
17:45	2	315	14	11	21	363	0	0	0	0	0	0	2	315	14	11	21	363
18:00	3	288	14	13	20	337	0	0	0	0	0	0	3	288	14	13	20	337
18:15	3	273	12	13	18	319	0	0	0	0	0	0	3	273	12	13	18	319
18:30	3	259	12	16	13	302	0	0	0	0	0	0	3	259	12	16	13	302
18:45	1	270	8	10	15	305	0	0	0	0	0	0	1	270	8	10	15	305
19:00	1	218	13	7	16	256	0	0	0	0	0	0	1	218	13	7	16	256
19:15	1	223	7	10	13	254	0	0	0	0	0	0	1	223	7	10	13	254
19:30	2	183	9	8	15	218	0	0	0	0	0	0	2	183	9	8	15	218
19:45	2	146	7	8	12	174	0	0	0	0	0	0	2	146	7	8	12	174
20:00	1	142	5	7	11	166	0	0	0	0	0	0	1	142	5	7	11	166
20:15	1	149	5	7	11	173	0	0	0	0	0	0	1	149	5	7	11	173
20:30	1	142	5	7	12	167	0	0	0	0	0	0	1	142	5	7	12	167
20:45	2	132	4	8	11	157	0	0	0	0	0	0	2	132	4	8	11	157
21:00	3	138	3	10	13	167	0	0	0	0	0	0	3	138	3	10	13	167
21:15	2	117	4	7	9	139	0	0	0	0	0	0	2	117	4	7	9	139
21:30	2	97	3	5	9	116	0	0	0	0	0	0	2	97	3	5	9	116
21:45	1	91	3	5	10	109	0	0	0	0	0	0	1	91	3	5	10	109
22:00	0	83	2	5	8	99	0	0	0	0	0	0	0	83	2	5	8	99
22:15	1	64	3	6	8	82	0	0	0	0	0	0	1	64	3	6	8	82
22:30	1	76	3	3	10	92	0	0	0	0	0	0	1	76	3	3	10	92
22:45	1	68	4	5	9	87	0	0	0	0	0	0	1	68	4	5	9	87
23:00	0	57	4	5	6	71	0	0	0	0	0	0	0	57	4	5	6	71
23:15	0	57	3	4	7	72	0	0	0	0	0	0	0	57	3	4	7	72
23:30	0	54	2	4	6	66	0	0	0	0	0	0	0	54	2	4	6	66
23:45	0	46	1	2	6	56	0	0	0	0	0	0	0	46	1	2	6	56
Total	99	15600	1051	873	1442	19064	0	0	0	0	0	0	99	15600	1051	873	1442	19064

APPENDIX J: A43 FLOW VALIDATION CALCULATIONS

AM Peak											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,004	1,182	1,047	1,353	1.33	4.81	171	14.5%	-	Yes	-	Yes

PM Peak											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,303	1,531	1,418	1,759	3.13	5.63	228	14.9%	-	Yes	-	Yes

Note: Total observed data includes motorbikes and pedal cycles

A43 Northbound (ATC Data - Week 2)

AM Peak											
Observed		Modelled (Vehicles)		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
944	1,251	1,047	1,353	3.3	2.8	102	8%	-	Yes	-	Yes

PM Peak											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,459	1,749	1,418	1,759	1.1	0.2	10	1%	-	Yes	-	Yes

A43 Flow Validation (Northbound)

AM Peak											
Observed		Modelled (Vehicles)		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,211	1,665	1,144	1,534	2.0	3.3	-131	-8%	-	Yes	-	Yes

PM Peak											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,072	1,299	1,045	1,312	0.8	0.4	13	1%	-	Yes	-	Yes

A43 Flow Validation (Southbound)

Note: Observed data from MCC at Baynards Green roundabout

AM Peak											
Observed		Modelled (Vehicles)		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
965	1,271	1,047	1,353	2.6	2.3	82	6%	-	Yes	-	Yes

PM Peak											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,475	1,762	1,418	1,759	1.5	0.1	-3	0%	-	Yes	-	Yes

A43 Flow Validation (Northbound)

AM Peak											
Observed		Modelled (Vehicles)		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,224	1,671	1,144	1,534	2.3	3.4	-137	-8%	-	Yes	-	Yes

PM Peak											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,066	1,289	1,045	1,312	0.6	0.6	23	2%	-	Yes	-	Yes

A43 Flow Validation (Southbound)

Note: Observed data from MCC at M40 Junction 10

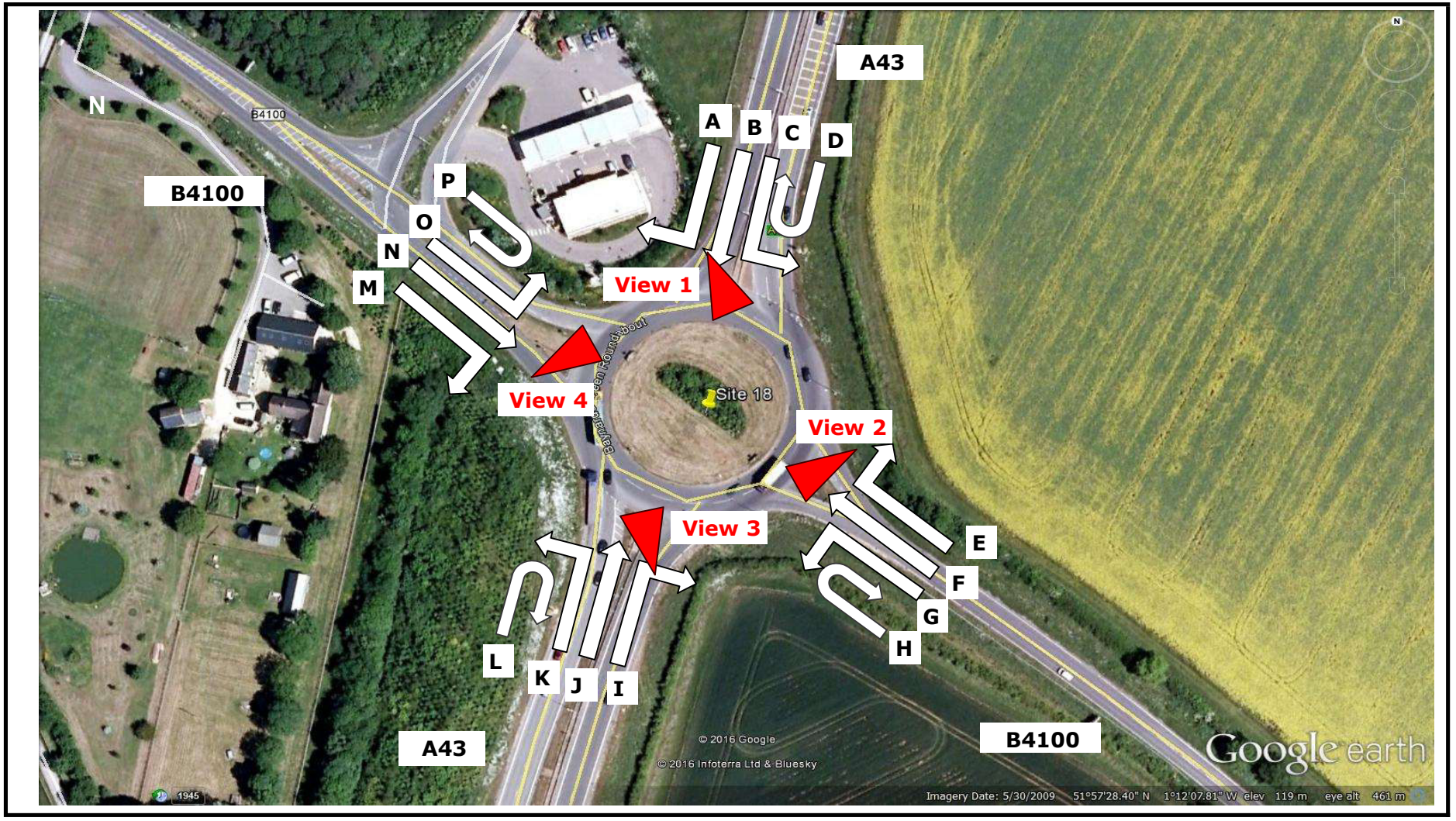
APPENDIX K: A43 MANUAL CLASSIFIED COUNT DATA

advanced transport research

Job Number & Name:	12602 Heyford Park
Site Number/Name:	Site 18 - A43/ B4100
Client:	Peter Brett
Date:	03/11/2016
Weather:	Cloudy, Dry
Comments:	None

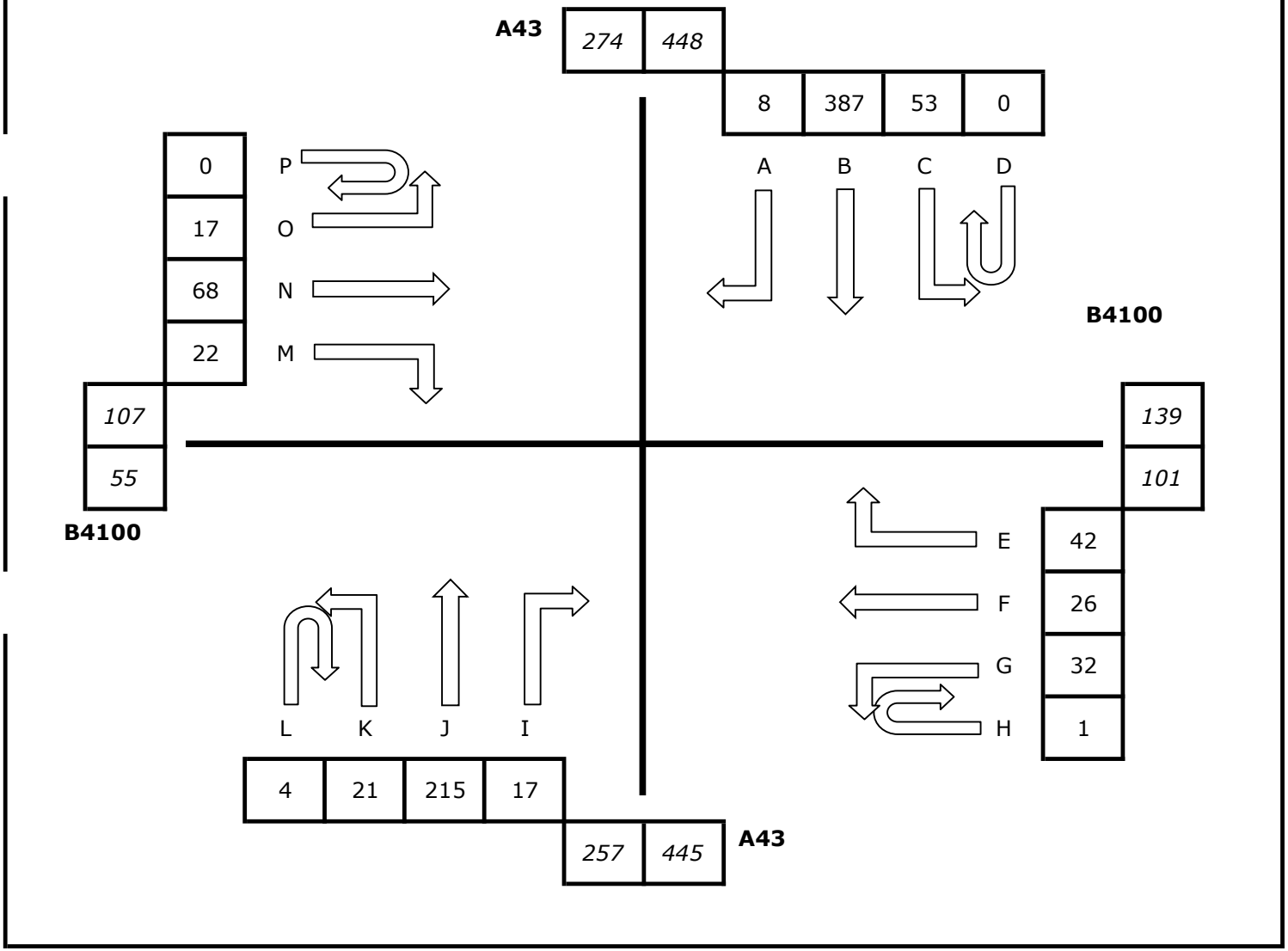
Advanced Transport Research	Job Number & Name:	12602 Heyford Park
Site 18 - A43/ B4100	Date:	Thursday 03 Nov 2016

Job Type:	Junction Count				
Co-ordinates:	51°57'28.34"N,1°12'8.29"W	Postcode:	OX27 7SS	Times:	0700-1000 1600-1900



Advanced Transport Research	*Job Number & Name:*	**12602 Heyford Park**
Site 18 - A43/ B4100	*Client:*	**Peter Brett**
Flow Diagram	*Date:*	**Thursday 03 Nov 2016**

Select Period **07:00**



Advanced Transport Research

Site 18 - A43/ B4100

Classified Counts

	Movement A							Movement B							Movement C							Movement D							Movement E							Movement F							Movement G							Movement H								
Times	**Cars**	**LGV**	**OGV 1**	**OGV 2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**	**OGV 1**	**OGV 2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**	**OGV 1**	**OGV 2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**	**OGV 1**	**OGV 2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**	**OGV 1**	**OGV 2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**	**OGV 1**	**OGV 2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**	**OGV 1**	**OGV 2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**	**OGV 1**	**OGV 2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**
07:00 - 07:15	5	2	0	1	0	0	0	263	83	9	31	0	1	0	38	12	0	3	0	0	0	0	0	0	0	0	0	0	35	4	0	2	1	0	0	16	7	0	1	2	0	0	24	7	0	0	1	0	0	0	0	1	0	0	0	0	9	7
07:15 - 07:30	7	2	0	0	0	0	0	247	63	17	32	0	1	0	60	8	0	1	0	0	0	0	0	0	0	0	0	0	52	2	3	2	2	0	0	28	11	1	0	2	0	0	18	7	0	0	0	0	0	0	0	0	0	0	0	0	19	2
07:30 - 07:45	10	3	1	1	0	0	0	253	53	10	35	0	3	0	51	10	2	1	0	1	0	0	0	0	0	0	0	0	67	4	1	0	0	0	0	40	11	1	0	2	0	0	23	4	1	1	0	0	0	1	0	0	0	0	0	0	15	7
07:45 - 08:00	9	2	0	1	0	0	0	274	59	11	34	0	1	0	61	12	0	3	0	0	0	0	0	0	0	0	0	0	44	4	0	5	0	0	0	38	7	1	1	0	0	0	21	3	1	2	1	0	0	0	0	0	0	0	0	0	17	5
Hourly Total	**31**	**9**	**1**	**3**	**0**	**0**	**0**	**1037**	**258**	**47**	**132**	**0**	**6**	**0**	**210**	**42**	**2**	**8**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**198**	**14**	**4**	**9**	**3**	**0**	**0**	**122**	**36**	**3**	**2**	**6**	**0**	**0**	**86**	**21**	**2**	**3**	**2**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**60**	**21**
08:00 - 08:15	9	2	2	0	0	0	0	253	44	16	37	0	1	0	61	9	2	2	0	0	0	0	0	0	0	0	0	0	50	6	2	1	1	0	0	40	8	2	0	1	0	0	12	1	0	1	0	0	0	1	0	0	0	0	0	0	18	7
08:15 - 08:30	13	5	3	2	0	0	0	253	61	15	29	0	0	0	64	4	2	1	0	0	0	0	0	0	0	0	0	0	53	2	1	1	0	1	0	42	10	1	0	0	0	0	21	6	2	3	0	0	0	1	0	0	0	0	0	0	13	6
08:30 - 08:45	10	1	0	2	0	0	0	210	32	15	23	0	1	0	56	1	1	1	0	0	0	0	0	0	0	0	0	0	36	3	0	2	0	0	0	38	3	1	0	0	1	0	17	3	1	2	0	0	0	0	0	0	0	0	0	0	12	4
08:45 - 09:00	4	5	0	0	0	0	0	185	42	8	31	1	1	0	56	7	2	1	0	0	0	0	0	0	0	0	0	0	27	3	1	3	0	0	0	32	3	2	0	0	0	0	11	4	1	3	0	0	0	0	0	0	0	0	0	0	17	2
Hourly Total	**36**	**13**	**5**	**4**	**0**	**0**	**0**	**901**	**179**	**54**	**120**	**1**	**3**	**0**	**237**	**21**	**7**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**166**	**14**	**4**	**7**	**1**	**1**	**0**	**152**	**24**	**6**	**0**	**1**	**1**	**0**	**61**	**14**	**4**	**9**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**60**	**19**
09:00 - 09:15	14	4	2	3	0	0	0	218	44	12	26	1	0	0	30	14	4	0	0	0	0	0	0	0	0	0	0	0	24	6	1	2	0	0	0	23	6	1	0	0	0	0	10	0	1	2	0	0	0	0	0	0	0	0	0	0	17	4
09:15 - 09:30	11	3	0	1	0	0	0	168	51	14	31	0	0	0	31	8	1	2	0	0	0	0	0	0	0	0	0	0	26	5	0	2	0	0	0	35	7	2	0	0	0	0	18	1	1	3	0	0	0	0	0	0	0	0	0	0	7	1
09:30 - 09:45	6	4	0	1	0	0	0	186	37	11	39	0	0	0	25	5	2	0	0	0	0	0	0	0	0	0	0	0	12	5	2	1	0	0	0	25	7	3	1	0	0	0	16	2	2	1	0	0	0	0	0	1	0	0	0	0	9	2
09:45 - 10:00	9	3	0	1	0	0	0	196	39	23	38	0	0	0	21	6	2	1	0	0	0	0	0	0	0	0	0	0	11	2	1	1	0	0	0	19	6	0	0	0	0	0	9	1	2	2	0	0	0	0	0	0	0	0	0	0	10	2
Hourly Total	**40**	**14**	**2**	**6**	**0**	**0**	**0**	**768**	**171**	**60**	**134**	**1**	**0**	**0**	**107**	**33**	**9**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**73**	**18**	**4**	**6**	**0**	**0**	**0**	**102**	**26**	**6**	**1**	**0**	**0**	**0**	**53**	**4**	**6**	**8**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**43**	**9**
16:00 - 16:15	5	0	1	1	0	0	0	188	35	13	20	0	1	0	30	6	2	1	0	1	0	0	0	0	0	0	0	0	56	10	2	1	0	0	0	48	8	1	0	0	0	1	27	2	2	0	0	0	0	0	0	0	0	0	0	0	11	3
16:15 - 16:30	10	1	0	1	0	0	0	235	26	4	25	0	0	0	30	5	1	1	0	0	0	0	0	0	0	0	0	0	46	8	2	1	0	0	0	44	5	1	0	0	0	0	27	4	2	2	0	0	0	0	0	0	0	0	0	0	15	3
16:30 - 16:45	9	0	0	1	0	0	0	222	39	4	19	0	0	0	37	4	0	0	0	0	0	0	0	0	0	0	0	0	71	7	1	0	0	0	0	56	7	1	0	0	0	0	33	4	0	1	0	0	0	0	0	0	0	0	0	0	14	3
16:45 - 17:00	11	0	0	0	0	0	0	201	35	3	26	1	1	0	45	4	1	0	0	0	0	0	0	0	0	0	0	0	65	8	2	2	0	0	0	45	7	0	0	0	0	0	20	3	0	1	0	0	0	0	0	0	0	0	0	0	22	5
Hourly Total	**35**	**1**	**1**	**3**	**0**	**0**	**0**	**846**	**135**	**24**	**90**	**1**	**2**	**0**	**142**	**19**	**4**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**238**	**33**	**7**	**4**	**0**	**0**	**0**	**193**	**27**	**3**	**0**	**0**	**0**	**1**	**107**	**13**	**4**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**62**	**14**
17:00 - 17:15	11	4	0	1	0	0	0	224	16	3	22	0	0	0	52	6	1	1	0	0	0	0	0	0	0	0	0	0	69	10	0	0	0	0	0	48	7	2	0	0	0	0	27	7	1	0	0	0	0	0	0	0	0	0	0	0	17	1
17:15 - 17:30	11	2	1	0	0	0	0	221	21	5	18	0	0	0	47	4	0	0	1	0	0	0	0	0	0	0	0	0	71	7	0	1	0	1	0	67	2	0	0	0	0	0	24	5	0	0	0	0	0	0	0	0	0	0	0	0	9	1
17:30 - 17:45	16	2	0	0	0	0	0	232	14	5	26	0	1	0	61	4	0	1	1	0	0	0	0	0	0	0	0	0	67	3	0	0	0	0	0	54	2	0	0	0	0	0	29	7	0	2	0	0	0	1	0	0	0	0	0	0	16	3
17:45 - 18:00	5	0	0	0	0	0	0	216	10	8	18	0	0	0	49	5	0	0	0	1	0	0	0	0	0	0	0	0	70	1	0	0	0	0	0	48	1	0	0	0	0	0	22	5	0	1	0	1	0	0	0	0	0	0	0	0	22	5
Hourly Total	**43**	**8**	**1**	**1**	**0**	**0**	**0**	**893**	**61**	**21**	**84**	**0**	**1**	**0**	**209**	**19**	**1**	**2**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**277**	**21**	**0**	**1**	**0**	**1**	**0**	**217**	**12**	**2**	**0**	**0**	**0**	**0**	**102**	**24**	**1**	**3**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**64**	**10**
18:00 - 18:15	11	1	1	0	0	0	0	185	22	5	23	0	0	0	32	1	0	3	0	0	0	0	0	0	0	0	0	0	60	3	0	1	0	0	0	44	2	0	0	0	0	0	10	1	0	0	0	1	0	0	0	0	0	0	0	0	17	1
18:15 - 18:30	7	0	0	1	0	0	0	240	9	6	11	0	0	0	54	2	0	0	0	0	0	0	0	0	0	0	0	0	45	2	0	0	0	0	0	34	1	0	0	0	0	0	16	1	1	0	0	0	0	0	0	0	0	0	0	0	16	2
18:30 - 18:45	5	0	0	0	0	0	0	205	13	4	18	0	0	0	31	2	0	0	0	0	0	0	0	0	0	0	0	0	51	2	0	0	0	0	0	40	1	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	14	5
18:45 - 19:00	9	0	0	0	0	0	0	175	12	10	17	1	1	0	37	0	0	2	0	0	0	0	0	0	0	0	0	0	44	0	0	0	0	0	0	34	1	2	0	0	0	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	15	2
Hourly Total	**32**	**1**	**1**	**1**	**0**	**0**	**0**	**805**	**56**	**25**	**69**	**1**	**1**	**0**	**154**	**5**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**200**	**7**	**0**	**1**	**0**	**0**	**0**	**152**	**5**	**3**	**0**	**0**	**0**	**0**	**39**	**3**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**62**	**10**

Job Number & Name:	**12602 Heyford Park**
Client:	**Peter Brett**
Date:	**Thursday 03 November 2016**

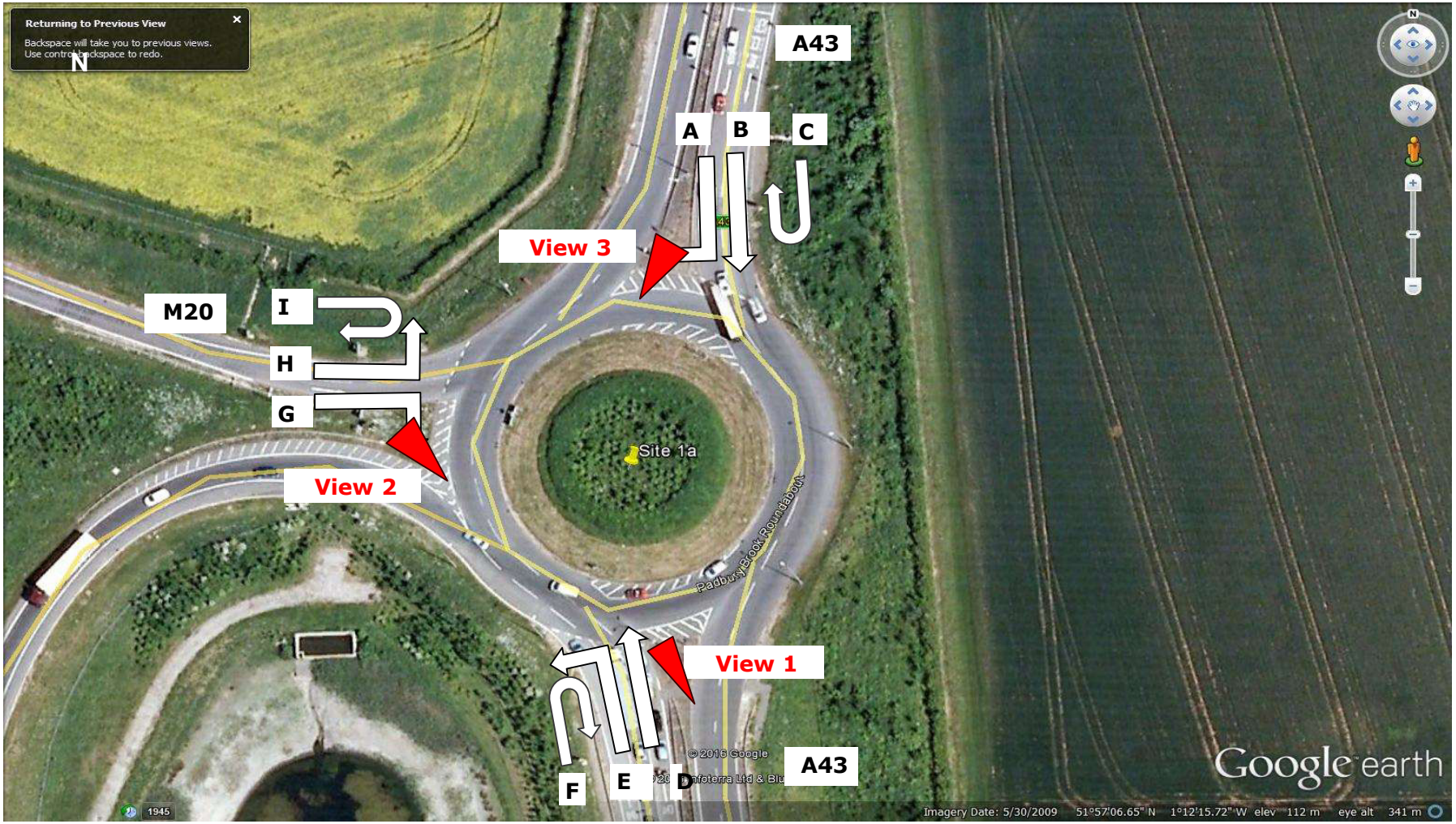
Movement I					Movement J							Movement K							Movement L							Movement M							Movement N							Movement O							Movement P						
OGV 1	OGV 2	PSV	M/B	Cyc	Cars	LGV	OGV 1	OGV 2	PSV	M/B	Cyc	Cars	LGV	OGV 1	OGV 2	PSV	M/B	Cyc	Cars	LGV	OGV 1	OGV 2	PSV	M/B	Cyc	Cars	LGV	OGV 1	OGV 2	PSV	M/B	Cyc	Cars	LGV	OGV 1	OGV 2	PSV	M/B	Cyc	Cars	LGV	OGV 1	OGV 2	PSV	M/B	Cyc	Cars	LGV	OGV 1	OGV 2	PSV	M/B	Cyc
1	0	0	0	0	152	27	11	25	0	0	0	6	11	4	0	0	0	0	1	2	0	1	0	0	0	18	2	2	0	0	0	0	53	13	0	1	0	1	0	9	3	3	2	0	0	0	0	0	0	0	0	0	0	0
1	1	0	0	0	169	28	14	25	0	0	0	12	8	1	1	1	0	0	1	0	0	0	0	0	0	31	7	6	0	0	0	0	69	1	0	3	0	0	0	8	5	1	0	0	0	0	1	0	0	0	0	0	0	0
3	2	0	0	0	206	24	8	21	0	2	0	9	5	4	1	0	0	0	0	0	0	0	0	0	0	30	3	2	1	0	0	0	71	14	1	0	0	0	1	14	2	2	1	0	0	0	1	0	0	0	0	0	0	0
2	0	0	0	0	196	30	8	27	0	1	0	9	5	1	1	0	0	0	0	0	0	0	0	0	0	23	6	2	0	0	0	0	62	12	3	2	0	0	0	10	3	3	0	0	0	0	0	0	0	0	0	0	0	0
7	**3**	**0**	**0**	**0**	**723**	**109**	**41**	**98**	**0**	**3**	**0**	**36**	**29**	**10**	**3**	**1**	**0**	**0**	**2**	**2**	**0**	**1**	**0**	**0**	**0**	**102**	**18**	**12**	**1**	**0**	**0**	**0**	**255**	**40**	**4**	**6**	**0**	**1**	**1**	**41**	**13**	**9**	**3**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**
3	2	0	0	0	220	27	6	20	0	1	0	19	3	3	1	1	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	71	13	2	1	0	0	0	15	3	0	1	0	0	0	1	0	0	0	0	0	0	0
1	1	0	0	0	209	27	6	26	0	1	0	12	6	0	2	0	0	0	1	0	0	0	0	0	0	26	0	4	1	0	0	0	58	12	4	0	0	0	0	22	2	1	5	0	0	0	1	0	2	0	0	0	0	0
1	1	0	1	0	220	32	7	22	0	0	0	19	4	0	2	0	0	0	0	0	0	0	0	0	0	27	6	4	1	0	0	0	40	10	0	1	2	1	0	8	4	0	1	0	0	0	1	0	0	0	0	0	0	0
3	1	0	0	0	185	36	7	17	0	1	0	26	7	3	1	0	0	0	0	0	0	0	0	0	0	24	0	3	0	0	0	0	51	11	0	1	3	0	0	13	3	1	1	0	0	0	0	0	0	0	0	0	0	0
8	**5**	**0**	**1**	**0**	**834**	**122**	**26**	**85**	**0**	**3**	**0**	**76**	**20**	**6**	**6**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**98**	**6**	**11**	**2**	**0**	**0**	**0**	**220**	**46**	**6**	**3**	**5**	**1**	**0**	**58**	**12**	**2**	**8**	**0**	**0**	**0**	**3**	**0**	**2**	**0**	**0**	**0**	**0**
2	0	0	0	0	155	22	6	28	0	0	0	21	3	0	0	1	0	0	0	0	1	0	0	0	0	29	3	2	3	0	0	0	45	10	2	0	0	0	0	11	1	0	0	0	0	0	2	0	0	0	0	0	0	0
3	0	0	0	0	149	22	7	33	1	0	0	17	4	2	2	0	0	0	1	1	0	1	0	0	0	23	6	0	1	0	0	0	36	7	5	0	1	0	0	6	2	1	3	0	0	0	0	0	0	0	1	0	0	0
0	0	1	0	0	166	36	14	34	0	0	0	13	6	2	1	0	0	0	0	0	0	1	0	0	0	20	0	3	1	1	0	0	32	7	2	1	0	0	0	13	7	1	2	0	0	0	1	0	0	0	0	0	0	0
1	2	0	0	0	155	27	9	29	0	0	0	18	5	1	1	0	0	0	0	0	0	0	0	0	0	13	8	1	2	0	0	0	28	5	2	0	0	0	0	6	1	2	1	0	0	0	0	1	0	0	0	0	0	0
6	**2**	**1**	**0**	**0**	**625**	**107**	**36**	**124**	**1**	**0**	**0**	**69**	**18**	**5**	**4**	**1**	**0**	**0**	**1**	**1**	**1**	**2**	**0**	**0**	**0**	**85**	**17**	**6**	**7**	**1**	**0**	**0**	**141**	**29**	**11**	**1**	**1**	**0**	**0**	**36**	**11**	**4**	**6**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**1**	**0**	**0**
0	1	1	0	0	277	53	13	42	0	0	0	20	4	4	1	0	0	0	1	0	0	0	0	0	0	15	1	2	0	0	0	0	33	7	3	1	5	0	0	13	1	3	2	0	1	0	1	0	0	0	0	0	0	0
0	1	2	0	0	290	69	14	29	0	1	0	25	3	1	0	0	0	0	1	0	0	0	0	0	0	16	8	1	1	0	0	0	46	5	1	2	0	0	1	9	2	2	0	0	0	0	0	0	0	0	0	0	0	0
0	3	0	0	0	322	64	8	25	0	0	0	19	0	0	0	0	0	0	0	1	0	0	0	0	0	16	2	2	1	0	0	0	51	11	1	0	0	0	0	10	4	1	0	0	0	0	1	0	0	0	0	0	0	0
0	1	0	0	0	262	49	8	21	0	1	0	21	4	1	0	0	0	0	2	0	0	0	0	0	0	27	1	0	1	0	0	0	39	9	0	0	0	2	0	13	3	0	0	0	0	0	1	0	0	0	0	0	0	0
0	**6**	**3**	**0**	**0**	**1151**	**235**	**43**	**117**	**0**	**2**	**0**	**85**	**11**	**6**	**1**	**0**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**74**	**12**	**5**	**3**	**0**	**0**	**0**	**169**	**32**	**5**	**3**	**5**	**2**	**1**	**45**	**10**	**6**	**2**	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	303	39	4	27	0	0	0	28	1	1	0	0	0	0	2	0	0	0	0	0	0	14	9	0	0	0	0	0	42	1	0	0	0	0	0	10	2	0	0	0	0	0	1	0	0	0	0	0	0	0
0	0	0	0	0	310	31	5	24	0	0	0	23	3	1	1	0	0	0	1	0	0	0	0	0	0	16	6	0	3	0	0	0	59	6	3	0	1	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	2	0	0	0	325	35	6	21	0	3	0	23	6	1	0	0	0	0	2	0	0	0	0	0	0	14	2	2	1	0	0	0	48	1	0	0	0	1	0	9	0	1	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	348	39	6	21	0	0	0	29	3	0	0	0	0	0	1	0	0	0	0	0	0	27	7	0	1	0	0	0	42	5	1	0	2	0	0	13	0	0	1	0	0	0	1	0	0	0	0	0	0	0
0	**2**	**0**	**0**	**0**	**1286**	**144**	**21**	**93**	**0**	**3**	**0**	**103**	**13**	**3**	**1**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**71**	**24**	**2**	**5**	**0**	**0**	**0**	**191**	**13**	**4**	**0**	**3**	**1**	**0**	**39**	**2**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**
0	1	0	0	0	321	32	7	23	0	5	0	39	6	0	0	0	0	0	1	0	0	0	0	0	0	15	1	1	0	0	0	0	32	2	0	1	1	0	0	9	4	0	0	0	0	0	2	1	0	0	0	0	0	0
0	1	0	0	0	328	39	11	23	0	2	0	25	1	0	0	0	0	0	1	0	0	0	0	0	0	12	9	0	2	0	0	0	42	0	1	0	0	1	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	285	32	2	25	2	1	0	19	2	2	0	0	1	0	3	0	0	0	0	0	0	3	2	1	1	0	0	0	38	5	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	267	21	6	11	0	0	0	24	2	0	1	0	0	0	1	0	0	0	0	0	0	3	1	0	0	0	0	0	45	0	2	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	**2**	**0**	**0**	**0**	**1201**	**124**	**26**	**82**	**2**	**8**	**0**	**107**	**11**	**2**	**1**	**0**	**1**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**33**	**13**	**2**	**3**	**0**	**0**	**0**	**157**	**7**	**3**	**1**	**1**	**1**	**0**	**31**	**6**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**

advanced transport research

Job Number & Name:	12602 Heyford Park
Site Number/Name:	Site 1a - M40 Junction 10/A43
Client:	Peter Brett
Date:	03/11/2016
Weather:	Cloudy, Dry
Comments:	None

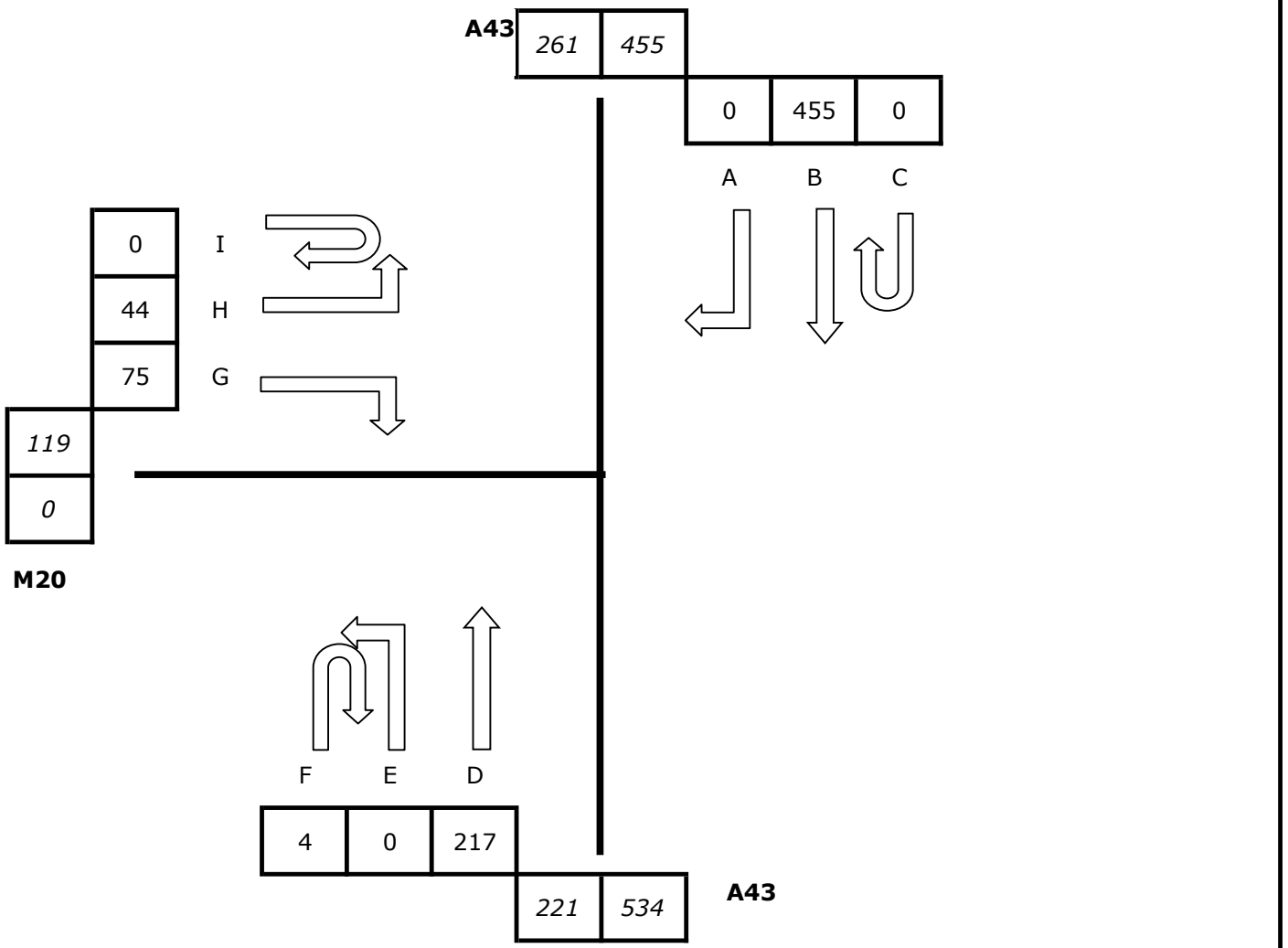
Advanced Transport Research	Job Number & Name:	12602 Heyford Park
Site 1a - M40 Junction 10/A43	Date:	Thursday 03 Nov 2016

Job Type:	Junction Count				
Co-ordinates:	51°57'6.27"N, 1°12'16.69"W	Postcode:	OX27 7RD	Times:	0700-1000 1600-1900



Advanced Transport Research	*Job Number & Name:*	**12602 Heyford Park**
Site 1a - M40 Junction 10/A43	*Client:*	**Peter Brett**
Flow Diagram	*Date:*	**Thursday 03 Nov 2016**

Select Period **07:00**



Advanced Transport Research

Site 1a - M40 Junction 10/A43

Classified Counts

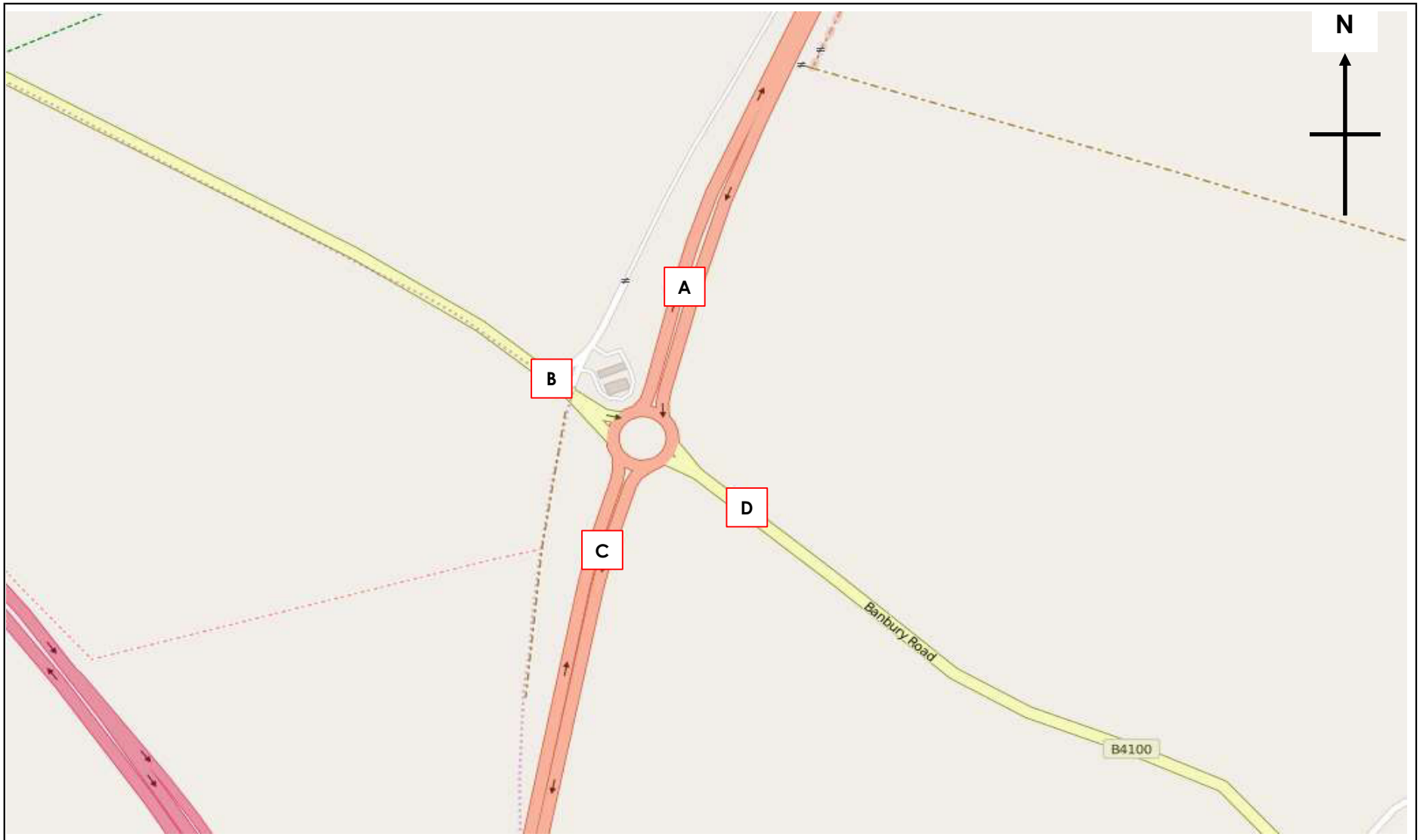
	Movement A							Movement B							Movement C							Movement D							Movement E				
Times	**Cars**	**LGV**	**OGV1**	**OGV2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**	**OGV1**	**OGV2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**	**OGV1**	**OGV2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**	**OGV1**	**OGV2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**	**OGV1**	**OGV2**	**PSV**
07:00 - 07:15	0	0	0	0	0	0	0	317	91	13	31	1	2	0	0	0	0	0	0	0	0	145	36	9	27	0	0	0	0	0	0	0	0
07:15 - 07:30	0	0	0	0	0	0	0	299	80	21	32	0	1	0	0	0	0	0	0	0	0	176	32	11	25	1	0	0	0	0	0	0	0
07:30 - 07:45	0	0	0	0	0	0	0	315	59	12	35	0	3	0	0	0	0	0	0	0	0	196	29	10	21	0	2	0	0	0	0	0	0
07:45 - 08:00	0	0	0	0	0	0	0	315	69	14	36	1	1	0	0	0	0	0	0	0	0	181	29	8	25	0	1	0	0	0	0	0	0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1246**	**299**	**60**	**134**	**2**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**698**	**126**	**38**	**98**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**
08:00 - 08:15	0	0	0	0	0	0	0	287	47	17	38	0	1	0	0	0	0	0	0	0	0	222	23	10	21	1	1	0	0	0	0	0	0
08:15 - 08:30	0	0	0	0	0	0	0	307	64	18	32	0	0	0	0	0	0	0	0	0	0	218	28	7	28	0	1	0	0	0	0	0	0
08:30 - 08:45	0	0	0	0	0	0	0	258	45	20	29	0	2	0	0	0	0	0	0	0	0	221	35	9	24	0	0	0	0	0	0	0	0
08:45 - 09:00	0	0	0	0	0	0	0	225	46	12	33	1	1	0	0	0	0	0	0	0	0	180	35	7	17	0	0	0	0	0	0	0	0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1077**	**202**	**67**	**132**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**841**	**121**	**33**	**90**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**
09:00 - 09:15	0	0	0	0	0	0	0	256	46	16	29	1	0	0	0	0	0	0	0	0	0	162	24	7	30	1	0	0	0	0	0	0	0
09:15 - 09:30	0	0	0	0	0	0	0	222	61	14	38	0	0	0	0	0	0	0	0	0	0	149	26	10	33	1	0	0	0	0	0	0	0
09:30 - 09:45	0	0	0	0	0	0	0	220	35	18	42	0	0	0	0	0	0	0	0	0	0	170	37	18	34	0	0	0	0	0	0	0	0
09:45 - 10:00	0	0	0	0	0	0	0	226	48	26	43	1	0	0	0	0	0	0	0	0	0	164	33	12	30	0	0	0	0	0	0	0	0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**924**	**190**	**74**	**152**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**645**	**120**	**47**	**127**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
16:00 - 16:15	0	0	0	0	0	0	0	232	36	14	21	0	1	0	0	0	0	0	0	0	0	291	59	14	40	1	0	0	0	0	0	0	0
16:15 - 16:30	0	0	0	0	0	0	0	286	38	9	28	0	0	0	0	0	0	0	0	0	0	316	69	14	30	0	1	0	0	0	0	0	0
16:30 - 16:45	0	0	0	0	0	0	0	266	43	5	20	0	0	0	0	0	0	0	0	0	0	304	62	7	25	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	0	0	0	0	0	248	40	3	26	1	1	0	0	0	0	0	0	0	0	274	50	11	23	0	1	0	0	0	0	0	0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1032**	**157**	**31**	**95**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1185**	**240**	**46**	**118**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**
17:00 - 17:15	0	0	0	0	0	0	0	275	32	5	23	0	0	0	0	0	0	0	0	0	0	327	36	3	24	0	0	0	0	0	0	0	0
17:15 - 17:30	0	0	0	0	0	0	0	252	34	4	20	0	0	0	0	0	0	0	0	0	0	328	32	7	22	0	3	0	0	0	0	0	0
17:30 - 17:45	0	0	0	0	0	0	0	280	26	6	26	0	0	0	0	0	0	0	0	0	0	340	37	5	17	0	2	0	0	0	0	0	0
17:45 - 18:00	0	0	0	0	0	0	0	259	20	6	20	0	1	0	0	0	0	0	0	0	0	356	46	4	22	0	0	0	0	0	0	0	0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1066**	**112**	**21**	**89**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1351**	**151**	**19**	**85**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**
18:00 - 18:15	0	0	0	0	0	0	0	221	27	6	24	0	1	0	0	0	0	0	0	0	0	340	35	6	21	0	5	0	0	0	0	0	0
18:15 - 18:30	0	0	0	0	0	0	0	275	18	7	11	0	0	0	0	0	0	0	0	0	0	323	41	10	21	0	2	0	0	0	0	0	0
18:30 - 18:45	0	0	0	0	0	0	0	202	20	6	17	0	0	0	0	0	0	0	0	0	0	280	29	3	23	2	2	0	0	0	0	0	0
18:45 - 19:00	0	0	0	0	0	0	0	197	14	12	19	1	1	0	0	0	0	0	0	0	0	274	27	5	13	0	0	0	0	0	0	0	0
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**895**	**79**	**31**	**71**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1217**	**132**	**24**	**78**	**2**	**9**	**0**	**0**	**0**	**0**	**0**	**0**

Job Number & Name:	**12602 Heyford Park**
Client:	**Peter Brett**
Date:	**Thursday 03 November 2016**

		Movement F							Movement G							Movement H							Movement I						
M/B	**Cyc**	**Cars**	**LGV**	**OGV1**	**OGV2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**	**OGV1**	**OGV2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**	**OGV1**	**OGV2**	**PSV**	**M/B**	**Cyc**	**Cars**	**LGV**	**OGV1**	**OGV2**	**PSV**	**M/B**	**Cyc**
0	0	2	1	1	0	0	0	0	53	16	1	5	0	0	0	25	13	5	1	0	0	0	0	0	0	0	0	0	0
0	0	0	1	0	0	0	0	0	56	26	3	2	0	0	0	32	7	2	2	0	0	0	0	0	0	0	0	0	0
0	0	0	1	0	0	0	0	0	58	20	1	9	0	0	0	38	10	3	2	0	0	0	0	0	0	0	0	0	0
0	0	0	1	0	0	0	0	0	51	19	1	4	1	0	0	41	7	5	3	0	0	0	0	0	0	0	0	0	0
0	**0**	**2**	**4**	**1**	**0**	**0**	**0**	**0**	**218**	**81**	**6**	**20**	**1**	**0**	**0**	**136**	**37**	**15**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0	0	48	15	5	7	0	0	0	44	13	2	3	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	39	9	3	7	0	0	0	25	11	1	1	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	74	13	2	4	0	1	0	24	9	2	1	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	58	12	1	4	0	0	0	43	9	4	2	0	0	0	0	0	0	0	0	0	0
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**219**	**49**	**11**	**22**	**0**	**1**	**0**	**136**	**42**	**9**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	0	0	0	0	0	0	0	48	8	2	6	0	0	0	37	4	2	1	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	29	5	4	6	0	1	0	29	4	2	4	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	40	7	4	3	0	0	0	24	7	1	1	1	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	39	7	1	4	1	0	0	17	3	1	3	0	0	0	0	0	0	0	0	0	0
0	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**156**	**27**	**11**	**19**	**1**	**1**	**0**	**107**	**18**	**6**	**9**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

0	0	0	0	0	0	0	0	0	41	5	3	3	0	0	0	21	3	2	4	0	0	0	0	0	0	0	0	0	0
0	0	3	0	0	0	0	0	0	61	4	1	8	0	0	0	32	4	0	1	2	0	0	0	0	0	0	0	0	0
0	0	4	1	0	0	0	0	0	51	7	1	9	0	0	0	40	3	1	4	0	0	0	0	0	0	0	0	0	0
0	0	1	2	0	0	0	0	0	55	4	2	1	0	0	0	36	7	1	0	0	0	0	0	0	0	0	0	0	0
0	**0**	**8**	**3**	**0**	**0**	**0**	**0**	**0**	**208**	**20**	**7**	**21**	**0**	**0**	**0**	**129**	**17**	**4**	**9**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	2	0	0	0	0	0	0	52	7	0	7	0	0	0	28	4	2	2	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	52	6	1	10	0	1	0	23	3	1	2	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	64	10	1	6	0	0	0	26	5	0	3	0	0	0	0	0	0	0	0	0	0
0	0	3	0	0	0	0	0	0	56	2	1	8	0	0	0	47	3	1	1	0	0	0	0	0	0	0	0	0	0
0	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**224**	**25**	**3**	**31**	**0**	**1**	**0**	**124**	**15**	**4**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	0	2	0	0	1	0	0	0	56	3	2	7	0	1	0	38	4	1	3	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	44	5	0	4	1	0	0	47	2	0	1	0	0	0	0	0	0	0	0	0	0
0	0	1	1	1	0	0	0	0	55	7	1	4	0	0	0	37	5	0	2	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	36	1	0	4	0	0	0	28	3	1	1	0	0	0	0	0	0	0	0	0	0
0	**0**	**4**	**1**	**1**	**1**	**0**	**0**	**0**	**191**	**16**	**3**	**19**	**1**	**1**	**0**	**150**	**14**	**2**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

APPENDIX L: A43 TRAFFIC COUNT DATA (FROM AECOM)



NDC NATIONWIDE DATA COLLECTION	**Site / Location:**	Site 1 - A43/B4100	**Project No:**	6102	**Drawing No:**	6102/01	**Drawn By:** CW
	Survey Date:	Thursday 17th March 2016	**Project Name:**	M40 Jct 10			
	Survey Times:	0600 - 1900	**Drawing Title:**	Site Layout and Observed Movements			



NDC NATIONWIDE DATA COLLECTION	**Site / Location:**	Sites 3 to 4	**Project No:**	6102	**Drawing No:**	6102/02	**Drawn By:** CW
	Survey Date:	Thursday 17th March 2016	**Project Name:**	M40 Jct 10			
	Survey Times:	0600 - 1900	**Drawing Title:**	Site Layout and Observed Movements			

6102/ M40 JUNCTION 10
MARCH 2016
CLASSIFIED TURNING COUNT

SITE: 1 DATE: 17/03/2016

LOCATION: A43/B4100 DAY: Thursday

	A - D								A - C							
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**MCL**	**PCL**	**TOT**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**MCL**	**PCL**	**TOT**
06:00	15	2	0	3	0	0	0	20	95	45	21	41	0	0	0	202
06:15	35	4	3	1	0	0	0	43	195	51	23	39	0	1	0	309
06:30	54	13	2	2	0	0	0	71	253	74	29	41	0	0	0	397
06:45	48	10	1	1	0	0	0	60	274	90	27	50	0	4	0	445
H/TOT	152	29	6	7	0	0	0	194	817	260	100	171	0	5	0	1353
07:00	51	12	4	1	0	1	0	69	286	62	24	42	0	2	0	416
07:15	54	18	1	2	0	0	0	75	266	68	18	36	0	2	0	390
07:30	29	3	1	2	0	0	0	35	198	36	22	22	1	1	0	280
07:45	48	18	7	3	0	0	0	76	269	46	26	40	0	1	0	382
H/TOT	182	51	13	8	0	1	0	255	1019	212	90	140	1	6	0	1468
08:00	39	5	2	1	0	0	0	47	251	46	27	41	1	1	0	367
08:15	45	4	2	5	0	0	0	56	259	42	19	52	0	0	0	372
08:30	43	5	2	0	0	0	0	50	232	31	17	39	0	0	0	319
08:45	39	3	2	2	0	0	0	46	235	46	24	26	0	2	0	333
H/TOT	166	17	8	8	0	0	0	199	977	165	87	158	1	3	0	1391
09:00	25	9	5	2	0	0	0	41	247	42	18	39	2	0	0	348
09:15	48	4	0	0	0	0	0	52	236	38	18	37	3	0	0	332
09:30	35	10	1	4	0	0	0	50	166	29	7	35	2	0	0	239
09:45	29	5	0	0	0	0	0	34	192	44	20	33	0	0	0	289
H/TOT	137	28	6	6	0	0	0	177	841	153	63	144	7	0	0	1208
10:00	30	7	5	0	0	0	0	42	148	23	14	20	2	0	0	207
10:15	13	5	4	0	0	1	0	23	131	17	8	20	0	0	0	176
10:30	23	4	3	1	0	1	0	32	142	30	14	24	1	0	0	211
10:45	13	3	4	1	0	0	0	21	151	24	12	28	0	0	0	215
H/TOT	79	19	16	2	0	2	0	118	572	94	48	92	3	0	0	809
11:00	13	3	3	2	0	0	0	21	124	22	9	33	0	0	0	188
11:15	19	5	4	0	0	0	0	28	120	27	11	29	0	0	0	187
11:30	29	3	1	2	0	0	0	35	136	29	12	30	2	0	0	209
11:45	25	3	4	0	0	0	0	32	140	31	14	36	0	0	0	221
H/TOT	86	14	12	4	0	0	0	116	520	109	46	128	2	0	0	805
12:00	19	1	3	0	0	0	0	23	126	24	16	36	0	0	0	202
12:15	16	0	2	1	0	0	0	19	137	29	6	30	0	0	0	202
12:30	22	3	1	2	0	0	0	28	125	23	10	32	0	0	0	190
12:45	15	1	3	0	0	0	0	19	148	23	12	23	0	0	0	206
H/TOT	72	5	9	3	0	0	0	89	536	99	44	121	0	0	0	800
13:00	25	2	3	0	0	0	0	30	165	18	8	28	0	0	0	219
13:15	17	4	1	1	0	0	0	23	144	33	15	28	0	0	0	220
13:30	22	3	2	0	0	1	0	28	126	29	15	28	0	3	0	201
13:45	20	8	2	4	0	1	0	35	160	25	10	27	0	0	0	222
H/TOT	84	17	8	5	0	2	0	116	595	105	48	111	0	3	0	862
14:00	27	2	1	1	0	0	0	31	127	25	14	32	0	1	0	199
14:15	11	2	0	3	0	1	0	17	148	19	11	46	1	2	0	227
14:30	24	5	2	1	0	0	0	32	167	25	4	24	0	0	0	220
14:45	20	0	5	1	0	0	0	26	158	20	11	24	2	2	0	217
H/TOT	82	9	8	6	0	1	0	106	600	89	40	126	3	5	0	863
15:00	16	3	0	2	1	0	0	22	167	24	10	41	0	0	0	242
15:15	21	2	1	0	0	1	0	25	171	28	13	29	0	0	0	241
15:30	27	5	2	0	0	0	0	34	211	26	16	34	0	1	0	288
15:45	31	1	0	2	0	0	0	34	212	35	9	28	0	4	0	288
H/TOT	95	11	3	4	1	1	0	115	761	113	48	132	0	5	0	1059
16:00	35	2	1	1	0	0	0	39	221	27	8	27	0	0	0	283
16:15	26	6	0	1	0	0	0	33	217	21	10	17	0	0	0	265
16:30	55	3	1	0	0	0	0	59	221	23	6	18	0	0	0	268
16:45	59	4	2	0	0	0	0	65	236	33	8	18	1	2	0	298
H/TOT	175	15	4	2	0	0	0	196	895	104	32	80	1	2	0	1114
17:00	62	6	1	3	0	1	0	73	258	30	8	19	1	1	0	317
17:15	53	6	1	0	1	0	0	61	265	13	9	21	0	0	0	308
17:30	49	2	0	1	0	0	0	52	216	10	3	22	0	0	0	251
17:45	63	3	1	1	1	0	0	69	243	23	5	26	0	0	0	297
H/TOT	227	17	3	5	2	1	0	255	982	76	25	88	1	1	0	1173
18:00	36	3	0	0	0	1	0	40	204	12	2	17	0	0	0	235
18:15	45	3	1	2	0	0	0	51	237	19	6	32	0	1	0	295
18:30	45	4	0	1	0	1	0	51	188	16	5	23	0	1	0	233
18:45	31	3	0	2	0	0	0	36	172	10	5	10	0	1	0	198
H/TOT	157	13	1	5	0	2	0	178	801	57	18	82	0	3	0	961
P/TOT	1694	245	97	65	3	10	0	2114	9916	1636	689	1573	19	33	0	13866

SITE: 1 DATE: 17/03/2016

LOCATION: A43/B4100 DAY: Thursday

	A - B								A - A							
TIME	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	8	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0
06:15	8	4	0	2	0	0	0	14	0	0	0	0	0	0	0	0
06:30	2	4	1	0	0	0	0	7	0	0	0	0	0	0	0	0
06:45	8	0	1	0	0	0	0	9	0	0	0	0	0	0	0	0
H/TOT	26	8	2	2	0	0	0	38	0	0	0	0	0	0	0	0
07:00	10	0	2	0	0	0	0	12	0	0	0	0	0	0	0	0
07:15	13	7	2	0	0	0	0	22	0	0	0	0	0	0	0	0
07:30	8	3	0	0	0	0	0	11	0	0	0	0	0	0	0	0
07:45	9	3	0	0	0	0	0	12	0	0	0	0	0	0	0	0
H/TOT	40	13	4	0	0	0	0	57	0	0	0	0	0	0	0	0
08:00	11	5	4	0	0	0	0	20	0	0	0	0	0	0	0	0
08:15	15	3	3	1	0	0	0	22	0	0	0	0	0	0	0	0
08:30	4	4	2	2	0	0	0	12	0	0	0	0	0	0	0	0
08:45	14	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0
H/TOT	44	12	9	3	0	0	0	68	0	0	0	0	0	0	0	0
09:00	6	0	2	1	0	0	0	9	0	0	0	0	0	0	0	0
09:15	8	1	4	0	0	0	0	13	0	0	0	0	0	0	0	0
09:30	6	1	0	0	0	0	0	7	0	0	0	0	0	0	0	0
09:45	6	3	1	1	0	0	0	11	0	0	0	0	0	0	0	0
H/TOT	26	5	7	2	0	0	0	40	0	0	0	0	0	0	0	0
10:00	6	1	0	0	0	0	0	7	0	0	0	0	0	0	0	0
10:15	2	2	0	0	0	0	0	4	0	0	0	0	0	0	0	0
10:30	10	1	0	0	0	0	0	11	0	0	0	0	0	0	0	0
10:45	3	2	1	0	0	0	0	6	0	0	0	0	0	0	0	0
H/TOT	21	6	1	0	0	0	0	28	0	0	0	0	0	0	0	0
11:00	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
11:15	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
11:30	6	0	1	1	0	0	0	8	0	0	0	0	0	0	0	0
11:45	2	5	1	0	0	0	0	8	0	0	0	0	0	0	0	0
H/TOT	15	5	2	1	0	0	0	23	0	0	0	0	0	0	0	0
12:00	4	1	0	0	0	0	0	5	0	0	0	0	0	0	0	0
12:15	7	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
12:30	7	0	0	0	0	0	0	7	1	0	0	0	0	0	0	1
12:45	9	2	0	0	0	0	0	11	0	0	0	0	0	0	0	0
H/TOT	27	3	0	0	0	0	0	30	1	0	0	0	0	0	0	1
13:00	0	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0
13:15	5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
13:30	4	1	2	0	0	0	0	7	0	0	0	0	0	0	0	0
13:45	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
H/TOT	11	5	2	0	0	0	0	18	0	0	0	0	0	0	0	0
14:00	6	1	0	0	0	0	0	7	0	0	0	0	0	0	0	0
14:15	8	0	2	0	0	0	0	10	0	0	0	0	0	0	0	0
14:30	5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
14:45	3	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0
H/TOT	22	1	2	1	0	0	0	26	0	0	0	0	0	0	0	0
15:00	3	5	3	0	0	0	0	11	0	0	0	0	0	0	0	0
15:15	5	1	1	2	0	0	0	9	0	0	0	0	0	0	0	0
15:30	8	0	1	0	0	0	0	9	0	0	0	0	0	0	0	0
15:45	2	0	3	0	0	0	0	5	0	0	0	0	0	0	0	0
H/TOT	18	6	8	2	0	0	0	34	0	0	0	0	0	0	0	0
16:00	11	0	1	0	0	0	0	12	0	0	0	0	0	0	0	0
16:15	7	1	3	0	0	0	0	11	0	0	0	0	0	0	0	0
16:30	9	1	0	0	0	0	0	10	0	1	0	0	0	0	0	1
16:45	9	2	2	3	0	0	0	16	0	0	0	0	0	0	0	0
H/TOT	36	4	6	3	0	0	0	49	0	1	0	0	0	0	0	1
17:00	7	0	3	1	0	0	0	11	0	0	0	0	0	0	0	0
17:15	8	2	1	1	0	0	0	12	0	1	0	0	0	0	0	1
17:30	10	2	0	0	0	0	0	12	0	0	0	0	0	0	0	0
17:45	10	3	1	0	0	0	0	14	0	0	0	0	0	0	0	0
H/TOT	35	7	5	2	0	0	0	49	0	1	0	0	0	0	0	1
18:00	7	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0
18:15	6	1	0	0	0	0	0	7	0	0	0	0	0	0	0	0
18:30	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
18:45	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
H/TOT	19	2	0	0	0	0	0	21	0	0	0	0	0	0	0	0
P/TOT	340	77	48	16	0	0	0	481	1	2	0	0	0	0	0	3

SITE: 1 DATE: 17/03/2016

LOCATION: A43/B4100 DAY: Thursday

	B - A								B - D							
TIME	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	5	2	0	1	0	0	0	8	13	5	0	3	0	0	0	21
06:15	2	2	0	1	0	0	0	5	13	0	2	3	0	1	0	19
06:30	6	1	0	1	0	0	0	8	29	11	2	0	0	0	0	42
06:45	6	2	0	2	0	1	0	11	34	6	1	0	1	0	0	42
H/TOT	19	7	0	5	0	1	0	32	89	22	5	6	1	1	0	124
07:00	3	3	0	0	0	0	0	6	37	4	0	0	0	0	0	41
07:15	21	4	2	0	0	0	0	27	45	8	2	1	0	0	0	56
07:30	17	3	3	1	0	0	0	24	55	6	2	0	1	0	0	64
07:45	18	3	0	1	0	0	0	22	47	4	2	2	0	0	0	55
H/TOT	59	13	5	2	0	0	0	79	184	22	6	3	1	0	0	216
08:00	24	3	3	1	0	0	0	31	73	12	11	1	0	0	0	97
08:15	20	1	4	1	0	0	0	26	45	5	0	1	0	0	0	51
08:30	10	4	1	0	0	0	0	15	59	9	2	0	3	0	0	73
08:45	17	1	2	1	0	0	0	21	48	6	3	2	4	0	0	63
H/TOT	71	9	10	3	0	0	0	93	225	32	16	4	7	0	0	284
09:00	10	2	0	1	1	0	0	14	41	5	4	1	1	0	0	52
09:15	6	2	2	0	0	0	0	10	22	9	3	3	0	0	0	37
09:30	4	2	2	0	0	0	0	8	28	4	1	2	0	0	0	35
09:45	11	3	3	1	0	0	0	18	24	4	3	0	0	0	0	31
H/TOT	31	9	7	2	1	0	0	50	115	22	11	6	1	0	0	155
10:00	9	2	2	1	0	0	0	14	24	4	0	0	0	0	0	28
10:15	4	0	1	0	0	0	0	5	23	7	3	1	0	0	0	34
10:30	11	3	2	1	0	0	0	17	20	2	2	1	0	0	0	25
10:45	1	0	0	2	0	0	0	3	22	9	0	2	0	0	0	33
H/TOT	25	5	5	4	0	0	0	39	89	22	5	4	0	0	0	120
11:00	2	5	1	1	0	0	0	9	15	2	0	0	0	0	0	17
11:15	6	1	2	0	0	1	0	10	23	6	1	0	0	0	0	30
11:30	5	3	0	0	0	0	0	8	18	11	0	0	0	0	0	29
11:45	5	5	3	0	0	0	0	13	30	10	2	0	0	0	0	42
H/TOT	18	14	6	1	0	1	0	40	86	29	3	0	0	0	0	118
12:00	14	3	2	0	0	1	0	20	21	10	3	0	0	0	0	34
12:15	5	3	1	1	0	0	0	10	13	7	0	0	0	1	0	21
12:30	4	6	2	1	0	0	0	13	23	7	1	0	0	0	0	31
12:45	5	3	2	0	0	0	0	10	34	5	0	0	0	0	0	39
H/TOT	28	15	7	2	0	1	0	53	91	29	4	0	0	1	0	125
13:00	11	4	1	1	0	0	0	17	25	3	0	1	0	0	0	29
13:15	7	5	2	2	0	0	0	16	17	4	5	1	0	0	0	27
13:30	4	2	2	0	0	0	0	8	16	7	0	2	0	2	0	27
13:45	13	4	3	2	0	0	0	22	29	0	1	1	0	0	0	31
H/TOT	35	15	8	5	0	0	0	63	87	14	6	5	0	2	0	114
14:00	7	2	0	3	0	0	0	12	21	8	1	0	0	0	0	30
14:15	7	5	2	1	0	1	0	16	31	3	2	0	0	0	0	36
14:30	9	3	1	1	0	1	0	15	25	6	1	1	0	0	0	33
14:45	9	2	0	0	0	0	0	11	26	1	2	0	0	3	0	32
H/TOT	32	12	3	5	0	2	0	54	103	18	6	1	0	3	0	131
15:00	8	1	0	1	0	0	0	10	31	5	3	1	0	2	0	42
15:15	10	3	3	0	0	1	0	17	29	3	1	0	0	0	0	33
15:30	10	3	1	1	0	0	0	15	29	8	1	2	1	0	0	41
15:45	9	5	2	0	0	0	0	16	44	6	4	0	1	0	0	55
H/TOT	37	12	6	2	0	1	0	58	133	22	9	3	2	2	0	171
16:00	13	2	1	1	0	0	0	17	49	9	2	1	4	0	0	65
16:15	13	3	0	1	0	1	0	18	46	7	2	0	0	1	0	56
16:30	9	3	2	0	0	0	0	14	48	8	2	0	0	0	0	58
16:45	10	3	1	0	0	0	0	14	39	11	2	0	1	0	0	53
H/TOT	45	11	4	2	0	1	0	63	182	35	8	1	5	1	0	232
17:00	11	1	2	0	0	0	0	14	48	6	2	0	0	2	0	58
17:15	13	2	0	0	0	0	0	15	59	8	1	1	0	0	0	69
17:30	15	1	0	0	0	0	0	16	65	0	0	0	0	0	0	65
17:45	8	6	0	0	0	0	0	14	50	5	1	0	0	0	0	56
H/TOT	47	10	2	0	0	0	0	59	222	19	4	1	0	2	0	248
18:00	11	3	0	1	0	0	0	15	46	0	0	2	0	0	0	48
18:15	9	1	0	0	0	0	0	10	45	6	0	0	0	0	0	51
18:30	10	4	0	1	0	0	0	15	41	2	1	0	0	0	0	44
18:45	9	2	0	0	0	0	0	11	23	3	0	0	0	0	0	26
H/TOT	39	10	0	2	0	0	0	51	155	11	1	2	0	0	0	169
P/TOT	486	142	63	35	1	7	0	734	1761	297	84	36	17	12	0	2207

SITE: 1 DATE: 17/03/2016

LOCATION: A43/B4100 DAY: Thursday

	B - C								B - B							
TIME	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	11	2	2	2	0	0	0	17	2	0	0	0	0	0	0	2
06:15	25	12	3	0	1	0	0	41	0	0	0	0	0	0	0	0
06:30	27	7	2	2	0	0	0	38	0	0	0	0	0	0	0	0
06:45	16	3	5	2	0	0	0	26	0	0	1	0	0	0	0	1
H/TOT	79	24	12	6	1	0	0	122	2	0	1	0	0	0	0	3
07:00	14	4	0	1	0	0	0	19	0	0	0	0	0	0	0	0
07:15	27	6	1	1	0	0	0	35	0	0	0	0	0	0	0	0
07:30	46	4	3	0	0	0	0	53	0	1	0	0	0	0	0	1
07:45	36	7	1	0	0	0	0	44	1	0	0	0	0	0	0	1
H/TOT	123	21	5	2	0	0	0	151	1	1	0	0	0	0	0	2
08:00	36	1	1	1	0	0	0	39	0	1	0	0	0	0	0	1
08:15	28	2	7	1	0	0	0	38	0	3	0	0	0	0	0	3
08:30	23	5	0	1	0	0	0	29	0	0	0	0	0	0	0	0
08:45	20	7	1	1	0	0	0	29	0	0	0	0	0	0	0	0
H/TOT	107	15	9	4	0	0	0	135	0	4	0	0	0	0	0	4
09:00	27	4	0	0	0	0	0	31	2	0	0	0	0	0	0	2
09:15	34	0	2	0	0	0	0	36	0	0	0	0	0	0	0	0
09:30	28	10	2	0	0	0	0	40	0	1	0	0	0	0	0	1
09:45	17	2	4	0	0	0	0	23	0	0	0	0	0	0	0	0
H/TOT	106	16	8	0	0	0	0	130	2	1	0	0	0	0	0	3
10:00	13	4	3	0	0	0	0	20	2	0	0	0	0	0	0	2
10:15	12	6	4	0	0	0	0	22	1	0	0	0	0	0	0	1
10:30	14	1	3	0	0	0	0	18	2	0	2	0	0	0	0	4
10:45	21	4	0	0	0	0	0	25	1	0	0	0	0	0	0	1
H/TOT	60	15	10	0	0	0	0	85	6	0	2	0	0	0	0	8
11:00	16	2	0	2	0	0	0	20	0	2	0	0	0	0	0	2
11:15	19	4	0	0	0	0	0	23	2	0	0	0	0	0	0	2
11:30	18	4	5	1	0	0	0	28	0	0	0	0	0	0	0	0
11:45	15	7	0	1	0	0	0	23	0	0	0	0	0	0	0	0
H/TOT	68	17	5	4	0	0	0	94	2	2	0	0	0	0	0	4
12:00	15	3	2	2	0	0	0	22	0	1	0	0	0	0	0	1
12:15	16	4	2	0	0	0	0	22	0	0	0	0	0	0	0	0
12:30	16	2	0	0	0	0	0	18	2	0	0	0	1	0	0	3
12:45	13	4	2	2	0	0	0	21	1	2	0	0	0	0	0	3
H/TOT	60	13	6	4	0	0	0	83	3	3	0	0	1	0	0	7
13:00	17	2	0	0	0	0	0	19	2	0	0	0	0	0	0	2
13:15	18	4	0	0	0	0	0	22	0	3	0	0	0	0	0	3
13:30	10	5	2	0	0	0	0	17	0	0	0	0	0	0	0	0
13:45	12	2	3	0	0	0	0	17	2	3	0	0	0	0	0	5
H/TOT	57	13	5	0	0	0	0	75	4	6	0	0	0	0	0	10
14:00	12	2	1	3	0	0	0	18	0	0	0	0	0	0	0	0
14:15	12	2	1	1	0	0	0	16	1	0	3	0	0	0	0	4
14:30	12	2	1	0	0	0	0	15	0	0	1	0	0	0	0	1
14:45	13	0	2	0	0	0	0	15	1	0	0	0	0	0	0	1
H/TOT	49	6	5	4	0	0	0	64	2	0	4	0	0	0	0	6
15:00	9	7	2	0	0	0	0	18	2	0	0	0	0	0	0	2
15:15	13	6	0	1	0	0	0	20	0	0	1	0	0	0	0	1
15:30	14	3	1	0	0	0	0	18	0	0	0	0	0	0	0	0
15:45	15	1	0	0	1	0	0	17	0	0	0	2	0	0	0	2
H/TOT	51	17	3	1	1	0	0	73	2	0	1	2	0	0	0	5
16:00	16	0	1	1	1	1	0	20	0	0	0	0	0	0	0	0
16:15	11	1	0	0	0	0	0	12	2	0	0	0	1	0	0	3
16:30	20	3	0	0	0	0	0	23	1	0	0	0	0	0	0	1
16:45	12	3	2	0	0	0	0	17	1	1	0	0	0	0	0	2
H/TOT	59	7	3	1	1	1	0	72	4	1	0	0	1	0	0	6
17:00	7	2	1	0	0	0	0	10	0	4	0	0	0	0	0	4
17:15	10	3	3	1	0	0	0	17	2	0	0	0	0	0	0	2
17:30	13	5	2	0	0	0	0	20	2	0	0	0	0	0	0	2
17:45	6	0	1	0	0	0	0	7	1	0	0	0	0	0	0	1
H/TOT	36	10	7	1	0	0	0	54	5	4	0	0	0	0	0	9
18:00	15	1	0	0	0	0	0	16	2	0	0	0	0	0	0	2
18:15	7	2	0	1	0	0	0	10	0	0	0	0	0	0	0	0
18:30	7	3	0	0	0	0	0	10	0	0	0	0	0	0	0	0
18:45	4	1	0	0	0	0	0	5	1	0	0	0	0	0	0	1
H/TOT	33	7	0	1	0	0	0	41	3	0	0	0	0	0	0	3
P/TOT	888	181	78	28	3	1	0	1179	36	22	8	2	2	0	0	70

SITE: 1 DATE: 17/03/2016

LOCATION: A43/B4100 DAY: Thursday

	C - B								C - A							
TIME	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	4	3	0	2	0	0	0	9	32	13	5	22	0	0	0	72
06:15	1	2	0	2	0	0	0	5	46	26	9	28	0	1	0	110
06:30	6	3	2	1	0	0	0	12	85	26	14	29	0	0	0	154
06:45	4	7	2	2	0	0	0	15	118	20	14	25	0	1	0	178
H/TOT	15	15	4	7	0	0	0	41	281	85	42	104	0	2	0	514
07:00	15	10	2	0	1	0	0	28	150	23	15	28	0	0	0	216
07:15	12	7	2	2	0	0	0	23	192	22	14	29	1	0	0	258
07:30	16	5	2	0	0	0	0	23	186	19	14	30	0	0	0	249
07:45	14	6	4	2	0	0	0	26	212	24	10	23	0	2	0	271
H/TOT	57	28	10	4	1	0	0	100	740	88	53	110	1	2	0	994
08:00	16	5	5	2	1	0	0	29	233	26	12	23	0	0	0	294
08:15	19	3	0	2	0	0	0	24	185	16	12	27	0	0	0	240
08:30	31	6	0	3	0	0	0	40	189	19	14	20	0	2	0	244
08:45	19	0	0	2	0	0	0	21	146	17	13	30	0	0	0	206
H/TOT	85	14	5	9	1	0	0	114	753	78	51	100	0	2	0	984
09:00	16	0	1	0	0	0	0	17	130	22	15	31	0	0	0	198
09:15	14	3	0	0	0	0	0	17	144	18	11	21	0	0	0	194
09:30	7	4	1	0	0	0	0	12	134	26	11	23	0	0	0	194
09:45	1	7	2	0	0	0	0	10	142	20	16	34	0	0	0	212
H/TOT	38	14	4	0	0	0	0	56	550	86	53	109	0	0	0	798
10:00	15	3	2	4	0	0	0	24	126	34	5	34	1	0	0	200
10:15	11	0	3	1	0	0	0	15	151	26	15	39	0	0	0	231
10:30	13	5	1	0	0	0	0	19	108	29	18	38	0	0	0	193
10:45	11	6	0	0	0	0	0	17	137	19	15	34	0	0	0	205
H/TOT	50	14	6	5	0	0	0	75	522	108	53	145	1	0	0	829
11:00	10	3	1	0	0	1	0	15	116	28	23	41	0	0	0	208
11:15	9	1	1	1	0	1	0	13	130	30	22	44	0	0	0	226
11:30	5	7	2	1	0	0	0	15	138	34	15	22	0	0	0	209
11:45	5	3	2	1	0	1	0	12	130	35	14	41	0	0	0	220
H/TOT	29	14	6	3	0	3	0	55	514	127	74	148	0	0	0	863
12:00	23	3	3	1	1	0	0	31	140	32	26	30	0	0	0	228
12:15	13	3	1	1	0	0	0	18	129	24	17	29	0	1	0	200
12:30	14	8	2	2	0	0	0	26	124	27	16	34	0	2	0	203
12:45	17	5	2	1	0	0	0	25	129	32	16	38	6	0	0	221
H/TOT	67	19	8	5	1	0	0	100	522	115	75	131	6	3	0	852
13:00	17	7	0	0	0	0	0	24	146	35	20	27	0	0	0	228
13:15	10	5	4	2	0	0	0	21	157	31	28	39	0	0	0	255
13:30	12	3	0	2	0	0	0	17	154	38	17	39	0	0	0	248
13:45	18	5	1	0	0	0	0	24	164	44	17	43	2	1	0	271
H/TOT	57	20	5	4	0	0	0	86	621	148	82	148	2	1	0	1002
14:00	19	5	2	1	0	0	0	27	196	38	8	33	0	0	0	275
14:15	9	2	2	1	0	0	0	14	181	41	26	38	0	0	0	286
14:30	16	1	0	0	0	0	0	17	200	41	18	36	0	0	0	295
14:45	19	2	2	0	0	0	0	23	206	33	11	47	0	1	0	298
H/TOT	63	10	6	2	0	0	0	81	783	153	63	154	0	1	0	1154
15:00	9	2	2	0	0	0	0	13	209	52	15	37	0	0	0	313
15:15	16	4	3	0	0	1	0	24	191	40	22	30	0	1	0	284
15:30	23	7	1	1	0	0	0	32	221	41	13	40	0	1	0	316
15:45	20	10	2	2	0	0	0	34	258	45	20	35	0	2	0	360
H/TOT	68	23	8	3	0	1	0	103	879	178	70	142	0	4	0	1273
16:00	13	3	0	1	0	0	0	17	254	52	27	36	0	1	0	370
16:15	16	3	2	0	0	0	0	21	297	56	12	41	1	2	0	409
16:30	20	3	0	0	0	0	0	23	327	49	5	27	1	0	0	409
16:45	12	5	4	0	0	0	0	21	346	51	7	23	0	2	0	429
H/TOT	61	14	6	1	0	0	0	82	1224	208	51	127	2	5	0	1617
17:00	28	2	1	0	0	0	0	31	349	66	13	22	0	0	0	450
17:15	24	3	1	0	0	0	0	28	352	43	7	28	0	1	0	431
17:30	25	3	1	0	0	0	0	29	344	52	12	29	0	7	0	444
17:45	29	6	1	1	0	0	0	37	336	35	8	27	1	4	0	411
H/TOT	106	14	4	1	0	0	0	125	1381	196	40	106	1	12	0	1736
18:00	20	2	0	0	0	0	0	22	375	46	16	20	0	2	0	459
18:15	19	1	1	1	0	0	0	22	359	25	14	29	0	0	0	427
18:30	20	2	0	0	1	0	0	23	319	23	12	17	0	2	0	373
18:45	23	1	0	0	0	0	0	24	262	19	11	23	0	0	0	315
H/TOT	82	6	1	1	1	0	0	91	1315	113	53	89	0	4	0	1574
P/TOT	778	205	73	45	4	4	0	1109	10085	1683	760	1613	13	36	0	14190

SITE: 1 DATE: 17/03/2016

LOCATION: A43/B4100 DAY: Thursday

	C - D								C - C							
TIME	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	9	0	0	0	0	0	0	9	1	0	0	1	0	0	0	2
06:15	10	3	0	0	0	0	0	13	4	1	1	0	0	0	0	6
06:30	17	0	0	0	0	0	0	17	0	2	0	0	0	0	0	2
06:45	24	8	1	4	0	0	0	37	6	3	0	0	0	0	0	9
H/TOT	60	11	1	4	0	0	0	76	11	6	1	1	0	0	0	19
07:00	31	11	3	0	0	0	0	45	0	0	1	0	0	0	0	1
07:15	29	9	0	1	0	0	0	39	6	1	0	0	0	0	0	7
07:30	36	8	1	2	0	0	0	47	0	0	0	0	0	0	0	0
07:45	23	13	0	3	0	0	0	39	0	0	0	0	0	0	0	0
H/TOT	119	41	4	6	0	0	0	170	6	1	1	0	0	0	0	8
08:00	21	7	2	2	0	0	0	32	0	0	1	0	0	0	0	1
08:15	30	11	4	3	0	0	0	48	3	1	0	1	0	0	0	5
08:30	25	3	1	0	0	0	0	29	0	1	0	0	0	0	0	1
08:45	18	7	0	2	0	0	0	27	0	0	0	0	0	0	0	0
H/TOT	94	28	7	7	0	0	0	136	3	2	1	1	0	0	0	7
09:00	18	2	1	2	0	0	0	23	0	2	0	0	0	0	0	2
09:15	15	4	1	1	0	0	0	21	0	1	0	0	0	0	0	1
09:30	21	6	2	0	0	0	0	29	0	0	0	0	0	0	0	0
09:45	16	4	2	2	0	0	0	24	0	0	0	0	0	0	0	0
H/TOT	70	16	6	5	0	0	0	97	0	3	0	0	0	0	0	3
10:00	15	2	3	2	0	0	0	22	0	0	0	0	0	0	0	0
10:15	17	5	2	1	0	0	0	25	0	0	0	0	0	0	0	0
10:30	14	3	2	0	0	0	0	19	0	0	0	0	0	0	0	0
10:45	11	0	0	3	0	0	0	14	0	0	0	0	0	0	0	0
H/TOT	57	10	7	6	0	0	0	80	0	0	0	0	0	0	0	0
11:00	20	1	0	0	0	0	0	21	0	0	0	1	0	0	0	1
11:15	10	0	0	3	0	0	0	13	0	0	0	0	0	0	0	0
11:30	16	0	0	2	0	0	0	18	0	0	0	3	0	0	0	3
11:45	13	1	1	0	0	0	0	15	0	0	0	0	0	0	0	0
H/TOT	59	2	1	5	0	0	0	67	0	0	0	4	0	0	0	4
12:00	16	0	0	0	0	0	0	16	2	0	0	1	0	0	0	3
12:15	16	3	2	2	0	0	0	23	0	0	0	1	0	0	0	1
12:30	14	0	2	1	0	0	0	17	3	0	0	0	0	0	0	3
12:45	20	0	0	0	0	0	0	20	2	0	0	0	0	0	0	2
H/TOT	66	3	4	3	0	0	0	76	7	0	0	2	0	0	0	9
13:00	25	5	3	1	0	0	0	34	4	0	0	0	0	0	0	4
13:15	16	2	1	0	0	0	0	19	0	0	0	0	0	0	0	0
13:30	20	1	2	0	0	0	0	23	0	0	0	0	0	0	0	0
13:45	14	4	0	0	0	0	0	18	1	0	1	0	0	0	0	2
H/TOT	75	12	6	1	0	0	0	94	5	0	1	0	0	0	0	6
14:00	22	2	0	0	0	0	0	24	0	0	0	0	0	0	0	0
14:15	18	4	1	2	0	0	0	25	2	0	1	2	0	0	0	5
14:30	18	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0
14:45	24	1	1	1	0	0	0	27	0	0	0	0	0	0	0	0
H/TOT	82	7	2	3	0	0	0	94	2	0	1	2	0	0	0	5
15:00	15	8	2	2	0	0	0	27	0	1	0	0	0	0	0	1
15:15	15	5	0	1	0	0	0	21	1	1	0	0	0	0	0	2
15:30	10	2	1	0	0	0	0	13	0	2	0	1	0	0	0	3
15:45	11	2	1	0	0	0	0	14	0	0	0	0	0	0	0	0
H/TOT	51	17	4	3	0	0	0	75	1	4	0	1	0	0	0	6
16:00	13	1	0	1	1	0	0	16	3	0	0	0	0	0	0	3
16:15	25	0	0	0	1	0	0	26	2	0	0	0	0	0	0	2
16:30	15	4	3	0	0	0	0	22	0	0	0	0	0	0	0	0
16:45	25	3	0	3	0	0	0	31	0	0	0	0	0	0	0	0
H/TOT	78	8	3	4	2	0	0	95	5	0	0	0	0	0	0	5
17:00	15	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0
17:15	23	0	1	0	0	0	0	24	0	0	0	0	0	0	0	0
17:30	18	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0
17:45	37	2	0	0	0	0	0	39	0	0	0	0	0	0	0	0
H/TOT	93	2	1	0	0	0	0	96	0	0	0	0	0	0	0	0
18:00	22	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0
18:15	21	1	0	0	0	0	0	22	0	0	0	0	0	0	0	0
18:30	15	5	0	0	0	0	0	20	1	0	0	0	0	0	0	1
18:45	10	0	0	0	0	0	0	10	2	0	0	0	0	0	0	2
H/TOT	68	6	0	0	0	0	0	74	3	0	0	0	0	0	0	3
P/TOT	972	163	46	47	2	0	0	1230	43	16	5	11	0	0	0	75

SITE: 1 DATE: 17/03/2016

LOCATION: A43/B4100 DAY: Thursday

	D - C								D - B							
TIME	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	13	1	2	1	1	0	0	18	18	3	0	0	0	1	0	22
06:15	10	1	2	2	0	0	0	15	14	4	0	1	0	1	0	20
06:30	10	3	0	0	0	0	0	13	25	2	0	0	1	0	0	28
06:45	24	1	1	0	0	0	0	26	18	6	0	0	0	1	0	25
H/TOT	57	6	5	3	1	0	0	72	75	15	0	1	1	3	0	95
07:00	20	2	1	1	0	0	0	24	27	11	3	0	2	0	0	43
07:15	22	2	0	2	0	0	0	26	37	4	1	0	1	0	0	43
07:30	17	3	0	2	0	0	0	22	48	7	2	2	1	0	0	60
07:45	18	2	0	0	1	0	0	21	46	9	0	2	0	0	0	57
H/TOT	77	9	1	5	1	0	0	93	158	31	6	4	4	0	0	203
08:00	37	0	1	0	0	0	0	38	54	8	0	2	1	0	0	65
08:15	19	1	2	1	0	0	0	23	45	5	2	0	0	0	0	52
08:30	15	1	2	1	0	0	0	19	51	5	1	1	0	0	1	59
08:45	17	2	1	2	0	0	0	22	30	7	2	0	0	0	0	39
H/TOT	88	4	6	4	0	0	0	102	180	25	5	3	1	0	1	215
09:00	13	1	0	2	0	0	0	16	35	3	0	1	0	0	0	39
09:15	16	2	2	0	0	0	0	20	28	8	3	0	0	0	0	39
09:30	12	1	2	2	0	0	0	17	22	3	3	1	0	0	0	29
09:45	15	3	1	1	0	0	0	20	22	4	0	2	0	0	0	28
H/TOT	56	7	5	5	0	0	0	73	107	18	6	4	0	0	0	135
10:00	14	0	1	1	0	0	0	16	23	7	3	2	0	0	0	35
10:15	6	4	0	2	0	0	0	12	26	4	1	1	0	2	0	34
10:30	9	2	2	0	0	0	0	13	17	4	1	1	0	3	0	26
10:45	6	3	2	2	0	0	0	13	22	2	1	0	0	0	0	25
H/TOT	35	9	5	5	0	0	0	54	88	17	6	4	0	5	0	120
11:00	8	4	2	2	0	0	0	16	28	3	2	1	0	1	0	35
11:15	10	5	2	1	0	0	0	18	28	8	2	1	0	2	0	41
11:30	10	2	2	1	0	0	0	15	32	4	0	0	0	1	0	37
11:45	5	3	2	1	0	0	0	11	25	7	3	0	1	0	0	36
H/TOT	33	14	8	5	0	0	0	60	113	22	7	2	1	4	0	149
12:00	13	3	2	1	0	0	0	19	33	7	2	0	0	0	0	42
12:15	4	2	1	1	0	0	0	8	26	6	0	0	0	0	0	32
12:30	4	0	0	2	0	0	0	6	34	5	1	4	0	0	0	44
12:45	7	1	2	1	0	0	0	11	34	4	0	1	0	0	0	39
H/TOT	28	6	5	5	0	0	0	44	127	22	3	5	0	0	0	157
13:00	11	3	0	2	0	0	0	16	19	4	0	1	0	0	0	24
13:15	6	3	1	3	0	0	0	13	39	7	0	0	0	0	0	46
13:30	10	1	0	3	0	0	0	14	25	7	4	2	0	0	0	38
13:45	9	2	3	1	0	0	0	15	23	7	0	2	0	0	0	32
H/TOT	36	9	4	9	0	0	0	58	106	25	4	5	0	0	0	140
14:00	11	5	0	1	0	0	0	17	29	5	6	0	0	0	0	40
14:15	7	4	0	0	0	0	0	11	17	4	2	1	3	2	0	29
14:30	13	4	2	0	0	0	0	19	31	7	0	2	2	0	0	42
14:45	15	6	2	0	0	0	0	23	37	9	5	1	2	0	2	56
H/TOT	46	19	4	1	0	0	0	70	114	25	13	4	7	2	2	167
15:00	16	9	0	2	0	0	0	27	34	5	0	0	0	2	0	41
15:15	15	2	1	1	1	0	0	20	34	3	2	0	1	0	0	40
15:30	14	3	1	1	0	1	0	20	49	7	5	2	0	0	0	63
15:45	15	6	0	3	0	0	0	24	47	7	0	0	0	0	0	54
H/TOT	60	20	2	7	1	1	0	91	164	22	7	2	1	2	0	198
16:00	17	3	0	2	0	0	0	22	34	10	1	2	0	0	0	47
16:15	21	4	3	2	0	0	0	30	54	6	2	0	0	0	0	62
16:30	25	3	1	1	0	0	0	30	52	10	1	0	0	0	0	63
16:45	18	1	1	1	0	0	0	21	62	16	0	0	0	0	0	78
H/TOT	81	11	5	6	0	0	0	103	202	42	4	2	0	0	0	250
17:00	21	3	0	0	0	0	0	24	53	4	1	0	0	0	0	58
17:15	27	4	0	0	0	0	0	31	68	11	0	0	0	1	0	80
17:30	19	2	1	0	0	0	0	22	58	8	2	1	0	0	0	69
17:45	22	0	0	1	0	1	0	24	51	5	1	0	0	0	0	57
H/TOT	89	9	1	1	0	1	0	101	230	28	4	1	0	1	0	264
18:00	21	2	0	0	0	0	0	23	53	4	1	0	0	1	0	59
18:15	15	0	0	0	0	0	0	15	37	2	0	0	0	1	0	40
18:30	10	2	0	1	0	0	0	13	39	9	0	0	0	0	0	48
18:45	13	1	1	0	0	0	0	15	37	0	0	0	0	0	0	37
H/TOT	59	5	1	1	0	0	0	66	166	15	1	0	0	2	0	184
P/TOT	745	128	52	57	3	2	0	987	1830	307	66	37	15	19	3	2277

SITE: 1 DATE: 17/03/2016

LOCATION: A43/B4100 DAY: Thursday

	D - A								D - D							
TIME	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	9	0	1	0	0	0	0	10	0	0	0	0	0	0	0	0
06:15	12	2	0	2	0	0	0	16	0	0	0	0	0	0	0	0
06:30	11	6	2	0	0	0	0	19	0	0	0	0	0	0	0	0
06:45	36	5	3	1	1	0	0	46	0	0	0	0	0	0	0	0
H/TOT	68	13	6	3	1	0	0	91	0	0	0	0	0	0	0	0
07:00	54	2	0	2	1	0	0	59	0	0	0	0	0	0	0	0
07:15	49	1	2	0	2	1	0	55	0	0	0	0	0	0	0	0
07:30	44	4	0	0	0	0	0	48	0	0	0	0	0	0	0	0
07:45	63	4	4	0	0	1	0	72	0	0	0	0	0	0	0	0
H/TOT	210	11	6	2	3	2	0	234	0	0	0	0	0	0	0	0
08:00	45	5	3	0	1	0	0	54	0	0	0	0	0	0	0	0
08:15	28	3	0	3	0	0	0	34	0	0	0	0	0	0	0	0
08:30	25	3	2	1	0	0	0	31	0	0	0	0	0	0	0	0
08:45	19	3	5	3	0	0	0	30	1	0	0	0	0	0	0	1
H/TOT	117	14	10	7	1	0	0	149	1	0	0	0	0	0	0	1
09:00	36	3	2	4	0	0	0	45	0	0	0	0	0	0	0	0
09:15	18	1	3	3	0	0	0	25	0	0	0	0	0	0	0	0
09:30	14	4	1	0	0	0	0	19	0	0	0	0	0	0	0	0
09:45	18	1	1	0	0	0	0	20	0	0	0	0	0	0	0	0
H/TOT	86	9	7	7	0	0	0	109	0	0	0	0	0	0	0	0
10:00	9	2	0	4	0	0	0	15	0	0	0	0	0	0	0	0
10:15	7	2	1	1	0	0	0	11	0	0	0	0	0	0	0	0
10:30	13	1	0	2	0	0	0	16	0	0	0	0	0	0	0	0
10:45	14	3	6	2	0	0	0	25	0	0	0	0	0	0	0	0
H/TOT	43	8	7	9	0	0	0	67	0	0	0	0	0	0	0	0
11:00	23	3	5	3	0	0	0	34	0	0	0	0	0	0	0	0
11:15	16	4	1	0	0	0	0	21	0	0	0	0	0	0	0	0
11:30	16	1	1	2	0	0	0	20	0	0	0	0	0	0	0	0
11:45	18	6	2	2	0	0	0	28	0	0	0	0	0	0	0	0
H/TOT	73	14	9	7	0	0	0	103	0	0	0	0	0	0	0	0
12:00	21	6	0	4	0	0	0	31	0	0	0	0	0	0	0	0
12:15	24	1	4	4	0	1	0	34	0	0	0	1	0	0	0	1
12:30	19	7	4	1	0	1	0	32	0	0	0	0	0	0	0	0
12:45	15	3	1	3	0	0	0	22	0	0	0	0	0	0	0	0
H/TOT	79	17	9	12	0	2	0	119	0	0	0	1	0	0	0	1
13:00	29	1	0	0	0	0	0	30	0	0	0	0	0	0	0	0
13:15	20	1	2	0	0	0	0	23	1	0	0	0	0	0	0	1
13:30	14	6	4	0	0	0	0	24	0	0	0	0	0	0	0	0
13:45	27	2	2	2	0	0	0	33	0	0	0	0	0	0	0	0
H/TOT	90	10	8	2	0	0	0	110	1	0	0	0	0	0	0	1
14:00	19	4	3	1	0	0	0	27	0	0	0	0	0	0	0	0
14:15	34	4	2	2	3	0	0	45	0	0	0	0	0	0	0	0
14:30	23	2	4	1	2	0	0	32	0	0	0	0	0	0	0	0
14:45	17	1	0	0	0	0	0	18	0	0	0	0	0	0	0	0
H/TOT	93	11	9	4	5	0	0	122	0	0	0	0	0	0	0	0
15:00	22	4	3	3	0	1	0	33	0	0	0	0	0	0	0	0
15:15	28	6	0	0	0	0	0	34	0	0	0	0	0	0	0	0
15:30	40	6	0	1	0	0	0	47	0	0	0	0	0	0	0	0
15:45	34	8	2	1	0	0	0	45	0	0	0	0	0	0	0	0
H/TOT	124	24	5	5	0	1	0	159	0	0	0	0	0	0	0	0
16:00	48	6	3	1	0	0	0	58	0	0	0	0	0	0	0	0
16:15	55	8	0	2	0	0	0	65	0	0	0	0	0	0	0	0
16:30	61	8	4	1	0	0	0	74	0	0	0	0	0	0	0	0
16:45	65	14	1	0	0	0	0	80	0	0	0	0	0	0	0	0
H/TOT	229	36	8	4	0	0	0	277	0	0	0	0	0	0	0	0
17:00	74	14	0	1	0	0	0	89	0	0	0	0	0	0	0	0
17:15	73	2	1	1	0	1	0	78	0	0	0	0	0	0	0	0
17:30	54	6	0	0	0	0	0	60	0	0	0	0	0	0	0	0
17:45	63	3	2	0	0	0	0	68	0	0	0	0	0	0	0	0
H/TOT	264	25	3	2	0	1	0	295	0	0	0	0	0	0	0	0
18:00	41	9	2	0	0	0	0	52	0	0	0	0	0	0	0	0
18:15	34	2	2	1	0	0	0	39	0	0	0	0	0	0	0	0
18:30	39	2	0	1	0	0	0	42	0	0	0	0	0	0	0	0
18:45	29	0	1	0	0	1	0	31	0	0	0	0	0	0	0	0
H/TOT	143	13	5	2	0	1	0	164	0	0	0	0	0	0	0	0
P/TOT	1619	205	92	66	10	7	0	1999	2	0	0	1	0	0	0	3

SITE: 1 DATE: 17/03/2016

LOCATION: A43/B4100 DAY: Thursday

	TO ARM A								FROM ARM A							
TIME	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	46	15	6	23	0	0	0	90	118	47	21	44	0	0	0	230
06:15	60	30	9	31	0	1	0	131	238	59	26	42	0	1	0	366
06:30	102	33	16	30	0	0	0	181	309	91	32	43	0	0	0	475
06:45	160	27	17	28	1	2	0	235	330	100	29	51	0	4	0	514
H/TOT	368	105	48	112	1	3	0	637	995	297	108	180	0	5	0	1585
07:00	207	28	15	30	1	0	0	281	347	74	30	43	0	3	0	497
07:15	262	27	18	29	3	1	0	340	333	93	21	38	0	2	0	487
07:30	247	26	17	31	0	0	0	321	235	42	23	24	1	1	0	326
07:45	293	31	14	24	0	3	0	365	326	67	33	43	0	1	0	470
H/TOT	1009	112	64	114	4	4	0	1307	1241	276	107	148	1	7	0	1780
08:00	302	34	18	24	1	0	0	379	301	56	33	42	1	1	0	434
08:15	233	20	16	31	0	0	0	300	319	49	24	58	0	0	0	450
08:30	224	26	17	21	0	2	0	290	279	40	21	41	0	0	0	381
08:45	182	21	20	34	0	0	0	257	288	49	26	28	0	2	0	393
H/TOT	941	101	71	110	1	2	0	1226	1187	194	104	169	1	3	0	1658
09:00	176	27	17	36	1	0	0	257	278	51	25	42	2	0	0	398
09:15	168	21	16	24	0	0	0	229	292	43	22	37	3	0	0	397
09:30	152	32	14	23	0	0	0	221	207	40	8	39	2	0	0	296
09:45	171	24	20	35	0	0	0	250	227	52	21	34	0	0	0	334
H/TOT	667	104	67	118	1	0	0	957	1004	186	76	152	7	0	0	1425
10:00	144	38	7	39	1	0	0	229	184	31	19	20	2	0	0	256
10:15	162	28	17	40	0	0	0	247	146	24	12	20	0	1	0	203
10:30	132	33	20	41	0	0	0	226	175	35	17	25	1	1	0	254
10:45	152	22	21	38	0	0	0	233	167	29	17	29	0	0	0	242
H/TOT	590	121	65	158	1	0	0	935	672	119	65	94	3	2	0	955
11:00	141	36	29	45	0	0	0	251	141	25	12	35	0	0	0	213
11:15	152	35	25	44	0	1	0	257	142	32	15	29	0	0	0	218
11:30	159	38	16	24	0	0	0	237	171	32	14	33	2	0	0	252
11:45	153	46	19	43	0	0	0	261	167	39	19	36	0	0	0	261
H/TOT	605	155	89	156	0	1	0	1006	621	128	60	133	2	0	0	944
12:00	175	41	28	34	0	1	0	279	149	26	19	36	0	0	0	230
12:15	158	28	22	34	0	2	0	244	160	29	8	31	0	0	0	228
12:30	148	40	22	36	0	3	0	249	155	26	11	34	0	0	0	226
12:45	149	38	19	41	6	0	0	253	172	26	15	23	0	0	0	236
H/TOT	630	147	91	145	6	6	0	1025	636	107	53	124	0	0	0	920
13:00	186	40	21	28	0	0	0	275	190	24	11	28	0	0	0	253
13:15	184	37	32	41	0	0	0	294	166	37	16	29	0	0	0	248
13:30	172	46	23	39	0	0	0	280	152	33	19	28	0	4	0	236
13:45	204	50	22	47	2	1	0	326	182	33	12	31	0	1	0	259
H/TOT	746	173	98	155	2	1	0	1175	690	127	58	116	0	5	0	996
14:00	222	44	11	37	0	0	0	314	160	28	15	33	0	1	0	237
14:15	222	50	30	41	3	1	0	347	167	21	13	49	1	3	0	254
14:30	232	46	23	38	2	1	0	342	196	30	6	25	0	0	0	257
14:45	232	36	11	47	0	1	0	327	181	20	16	26	2	2	0	247
H/TOT	908	176	75	163	5	3	0	1330	704	99	50	133	3	6	0	995
15:00	239	57	18	41	0	1	0	356	186	32	13	43	1	0	0	275
15:15	229	49	25	30	0	2	0	335	197	31	15	31	0	1	0	275
15:30	271	50	14	42	0	1	0	378	246	31	19	34	0	1	0	331
15:45	301	58	24	36	0	2	0	421	245	36	12	30	0	4	0	327
H/TOT	1040	214	81	149	0	6	0	1490	874	130	59	138	1	6	0	1208
16:00	315	60	31	38	0	1	0	445	267	29	10	28	0	0	0	334
16:15	365	67	12	44	1	3	0	492	250	28	13	18	0	0	0	309
16:30	397	61	11	28	1	0	0	498	285	28	7	18	0	0	0	338
16:45	421	68	9	23	0	2	0	523	304	39	12	21	1	2	0	379
H/TOT	1498	256	63	133	2	6	0	1958	1106	124	42	85	1	2	0	1360
17:00	434	81	15	23	0	0	0	553	327	36	12	23	1	2	0	401
17:15	438	48	8	29	0	2	0	525	326	22	11	22	1	0	0	382
17:30	413	59	12	29	0	7	0	520	275	14	3	23	0	0	0	315
17:45	407	44	10	27	1	4	0	493	316	29	7	27	1	0	0	380
H/TOT	1692	232	45	108	1	13	0	2091	1244	101	33	95	3	2	0	1478
18:00	427	58	18	21	0	2	0	526	247	16	2	17	0	1	0	283
18:15	402	28	16	30	0	0	0	476	288	23	7	34	0	1	0	353
18:30	368	29	12	19	0	2	0	430	237	20	5	24	0	2	0	288
18:45	300	21	12	23	0	1	0	357	205	13	5	12	0	1	0	236
H/TOT	1497	136	58	93	0	5	0	1789	977	72	19	87	0	5	0	1160
P/TOT	12191	2032	915	1714	24	50	0	16926	11951	1960	834	1654	22	43	0	16464

SITE: 1 DATE: 17/03/2016

LOCATION: A43/B4100 DAY: Thursday

	TO ARM B								FROM ARM B							
TIME	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	32	6	0	2	0	1	0	41	31	9	2	6	0	0	0	48
06:15	23	10	0	5	0	1	0	39	40	14	5	4	1	1	0	65
06:30	33	9	3	1	1	0	0	47	62	19	4	3	0	0	0	88
06:45	30	13	4	2	0	1	0	50	56	11	7	4	1	1	0	80
H/TOT	118	38	7	10	1	3	0	177	189	53	18	17	2	2	0	281
07:00	52	21	7	0	3	0	0	83	54	11	0	1	0	0	0	66
07:15	62	18	5	2	1	0	0	88	93	18	5	2	0	0	0	118
07:30	72	16	4	2	1	0	0	95	118	14	8	1	1	0	0	142
07:45	70	18	4	4	0	0	0	96	102	14	3	3	0	0	0	122
H/TOT	256	73	20	8	5	0	0	362	367	57	16	7	1	0	0	448
08:00	81	19	9	4	2	0	0	115	133	17	15	3	0	0	0	168
08:15	79	14	5	3	0	0	0	101	93	11	11	3	0	0	0	118
08:30	86	15	3	6	0	0	1	111	92	18	3	1	3	0	0	117
08:45	63	7	2	2	0	0	0	74	85	14	6	4	4	0	0	113
H/TOT	309	55	19	15	2	0	1	401	403	60	35	11	7	0	0	516
09:00	59	3	3	2	0	0	0	67	80	11	4	2	2	0	0	99
09:15	50	12	7	0	0	0	0	69	62	11	7	3	0	0	0	83
09:30	35	9	4	1	0	0	0	49	60	17	5	2	0	0	0	84
09:45	29	14	3	3	0	0	0	49	52	9	10	1	0	0	0	72
H/TOT	173	38	17	6	0	0	0	234	254	48	26	8	2	0	0	338
10:00	46	11	5	6	0	0	0	68	48	10	5	1	0	0	0	64
10:15	40	6	4	2	0	2	0	54	40	13	8	1	0	0	0	62
10:30	42	10	4	1	0	3	0	60	47	6	9	2	0	0	0	64
10:45	37	10	2	0	0	0	0	49	45	13	0	4	0	0	0	62
H/TOT	165	37	15	9	0	5	0	231	180	42	22	8	0	0	0	252
11:00	42	8	3	1	0	2	0	56	33	11	1	3	0	0	0	48
11:15	42	9	3	2	0	3	0	59	50	11	3	0	0	1	0	65
11:30	43	11	3	2	0	1	0	60	41	18	5	1	0	0	0	65
11:45	32	15	6	1	1	1	0	56	50	22	5	1	0	0	0	78
H/TOT	159	43	15	6	1	7	0	231	174	62	14	5	0	1	0	256
12:00	60	12	5	1	1	0	0	79	50	17	7	2	0	1	0	77
12:15	46	9	1	1	0	0	0	57	34	14	3	1	0	1	0	53
12:30	57	13	3	6	1	0	0	80	45	15	3	1	1	0	0	65
12:45	61	13	2	2	0	0	0	78	53	14	4	2	0	0	0	73
H/TOT	224	47	11	10	2	0	0	294	182	60	17	6	1	2	0	268
13:00	38	15	0	1	0	0	0	54	55	9	1	2	0	0	0	67
13:15	54	15	4	2	0	0	0	75	42	16	7	3	0	0	0	68
13:30	41	11	6	4	0	0	0	62	30	14	4	2	0	2	0	52
13:45	45	15	1	2	0	0	0	63	56	9	7	3	0	0	0	75
H/TOT	178	56	11	9	0	0	0	254	183	48	19	10	0	2	0	262
14:00	54	11	8	1	0	0	0	74	40	12	2	6	0	0	0	60
14:15	35	6	9	2	3	2	0	57	51	10	8	2	0	1	0	72
14:30	52	8	1	2	2	0	0	65	46	11	4	2	0	1	0	64
14:45	60	11	7	2	2	0	2	84	49	3	4	0	0	3	0	59
H/TOT	201	36	25	7	7	2	2	280	186	36	18	10	0	5	0	255
15:00	48	12	5	0	0	2	0	67	50	13	5	2	0	2	0	72
15:15	55	8	7	2	1	1	0	74	52	12	5	1	0	1	0	71
15:30	80	14	7	3	0	0	0	104	53	14	3	3	1	0	0	74
15:45	69	17	5	4	0	0	0	95	68	12	6	2	2	0	0	90
H/TOT	252	51	24	9	1	3	0	340	223	51	19	8	3	3	0	307
16:00	58	13	2	3	0	0	0	76	78	11	4	3	5	1	0	102
16:15	79	10	7	0	1	0	0	97	72	11	2	1	1	2	0	89
16:30	82	14	1	0	0	0	0	97	78	14	4	0	0	0	0	96
16:45	84	24	6	3	0	0	0	117	62	18	5	0	1	0	0	86
H/TOT	303	61	16	6	1	0	0	387	290	54	15	4	7	3	0	373
17:00	88	10	5	1	0	0	0	104	66	13	5	0	0	2	0	86
17:15	102	16	2	1	0	1	0	122	84	13	4	2	0	0	0	103
17:30	95	13	3	1	0	0	0	112	95	6	2	0	0	0	0	103
17:45	91	14	3	1	0	0	0	109	65	11	2	0	0	0	0	78
H/TOT	376	53	13	4	0	1	0	447	310	43	13	2	0	2	0	370
18:00	82	7	1	0	0	1	0	91	74	4	0	3	0	0	0	81
18:15	62	4	1	1	0	1	0	69	61	9	0	1	0	0	0	71
18:30	63	11	0	0	1	0	0	75	58	9	1	1	0	0	0	69
18:45	63	1	0	0	0	0	0	64	37	6	0	0	0	0	0	43
H/TOT	270	23	2	1	1	2	0	299	230	28	1	5	0	0	0	264
P/TOT	2984	611	195	100	21	23	3	3937	3171	642	233	101	23	20	0	4190

SITE: 1 DATE: 17/03/2016

LOCATION: A43/B4100 DAY: Thursday

	TO ARM C								FROM ARM C							
TIME	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	120	48	25	45	1	0	0	239	46	16	5	25	0	0	0	92
06:15	234	65	29	41	1	1	0	371	61	32	10	30	0	1	0	134
06:30	290	86	31	43	0	0	0	450	108	31	16	30	0	0	0	185
06:45	320	97	33	52	0	4	0	506	152	38	17	31	0	1	0	239
H/TOT	964	296	118	181	2	5	0	1566	367	117	48	116	0	2	0	650
07:00	320	68	26	44	0	2	0	460	196	44	21	28	1	0	0	290
07:15	321	77	19	39	0	2	0	458	239	39	16	32	1	0	0	327
07:30	261	43	25	24	1	1	0	355	238	32	17	32	0	0	0	319
07:45	323	55	27	40	1	1	0	447	249	43	14	28	0	2	0	336
H/TOT	1225	243	97	147	2	6	0	1720	922	158	68	120	2	2	0	1272
08:00	324	47	30	42	1	1	0	445	270	38	20	27	1	0	0	356
08:15	309	46	28	55	0	0	0	438	237	31	16	33	0	0	0	317
08:30	270	38	19	41	0	0	0	368	245	29	15	23	0	2	0	314
08:45	272	55	26	29	0	2	0	384	183	24	13	34	0	0	0	254
H/TOT	1175	186	103	167	1	3	0	1635	935	122	64	117	1	2	0	1241
09:00	287	49	18	41	2	0	0	397	164	26	17	33	0	0	0	240
09:15	286	41	22	37	3	0	0	389	173	26	12	22	0	0	0	233
09:30	206	40	11	37	2	0	0	296	162	36	14	23	0	0	0	235
09:45	224	49	25	34	0	0	0	332	159	31	20	36	0	0	0	246
H/TOT	1003	179	76	149	7	0	0	1414	658	119	63	114	0	0	0	954
10:00	175	27	18	21	2	0	0	243	156	39	10	40	1	0	0	246
10:15	149	27	12	22	0	0	0	210	179	31	20	41	0	0	0	271
10:30	165	33	19	24	1	0	0	242	135	37	21	38	0	0	0	231
10:45	178	31	14	30	0	0	0	253	159	25	15	37	0	0	0	236
H/TOT	667	118	63	97	3	0	0	948	629	132	66	156	1	0	0	984
11:00	148	28	11	38	0	0	0	225	146	32	24	42	0	1	0	245
11:15	149	36	13	30	0	0	0	228	149	31	23	48	0	1	0	252
11:30	164	35	19	35	2	0	0	255	159	41	17	28	0	0	0	245
11:45	160	41	16	38	0	0	0	255	148	39	17	42	0	1	0	247
H/TOT	621	140	59	141	2	0	0	963	602	143	81	160	0	3	0	989
12:00	156	30	20	40	0	0	0	246	181	35	29	32	1	0	0	278
12:15	157	35	9	32	0	0	0	233	158	30	20	33	0	1	0	242
12:30	148	25	10	34	0	0	0	217	155	35	20	37	0	2	0	249
12:45	170	28	16	26	0	0	0	240	168	37	18	39	6	0	0	268
H/TOT	631	118	55	132	0	0	0	936	662	137	87	141	7	3	0	1037
13:00	197	23	8	30	0	0	0	258	192	47	23	28	0	0	0	290
13:15	168	40	16	31	0	0	0	255	183	38	33	41	0	0	0	295
13:30	146	35	17	31	0	3	0	232	186	42	19	41	0	0	0	288
13:45	182	29	17	28	0	0	0	256	197	53	19	43	2	1	0	315
H/TOT	693	127	58	120	0	3	0	1001	758	180	94	153	2	1	0	1188
14:00	150	32	15	36	0	1	0	234	237	45	10	34	0	0	0	326
14:15	169	25	13	49	1	2	0	259	210	47	30	43	0	0	0	330
14:30	192	31	7	24	0	0	0	254	234	42	18	36	0	0	0	330
14:45	186	26	15	24	2	2	0	255	249	36	14	48	0	1	0	348
H/TOT	697	114	50	133	3	5	0	1002	930	170	72	161	0	1	0	1334
15:00	192	41	12	43	0	0	0	288	233	63	19	39	0	0	0	354
15:15	200	37	14	31	1	0	0	283	223	50	25	31	0	2	0	331
15:30	239	34	18	36	0	2	0	329	254	52	15	42	0	1	0	364
15:45	242	42	9	31	1	4	0	329	289	57	23	37	0	2	0	408
H/TOT	873	154	53	141	2	6	0	1229	999	222	82	149	0	5	0	1457
16:00	257	30	9	30	1	1	0	328	283	56	27	38	1	1	0	406
16:15	251	26	13	19	0	0	0	309	340	59	14	41	2	2	0	458
16:30	266	29	7	19	0	0	0	321	362	56	8	27	1	0	0	454
16:45	266	37	11	19	1	2	0	336	383	59	11	26	0	2	0	481
H/TOT	1040	122	40	87	2	3	0	1294	1368	230	60	132	4	5	0	1799
17:00	286	35	9	19	1	1	0	351	392	68	14	22	0	0	0	496
17:15	302	20	12	22	0	0	0	356	399	46	9	28	0	1	0	483
17:30	248	17	6	22	0	0	0	293	387	55	13	29	0	7	0	491
17:45	271	23	6	27	0	1	0	328	402	43	9	28	1	4	0	487
H/TOT	1107	95	33	90	1	2	0	1328	1580	212	45	107	1	12	0	1957
18:00	240	15	2	17	0	0	0	274	417	48	16	20	0	2	0	503
18:15	259	21	6	33	0	1	0	320	399	27	15	30	0	0	0	471
18:30	206	21	5	24	0	1	0	257	355	30	12	17	1	2	0	417
18:45	191	12	6	10	0	1	0	220	297	20	11	23	0	0	0	351
H/TOT	896	69	19	84	0	3	0	1071	1468	125	54	90	1	4	0	1742
P/TOT	11592	1961	824	1669	25	36	0	16107	11878	2067	884	1716	19	40	0	16604

SITE: 1 DATE: 17/03/2016

LOCATION: A43/B4100 DAY: Thursday

	TO ARM D								FROM ARM D							
TIME	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	37	7	0	6	0	0	0	50	40	4	3	1	1	1	0	50
06:15	58	7	5	4	0	1	0	75	36	7	2	5	0	1	0	51
06:30	100	24	4	2	0	0	0	130	46	11	2	0	1	0	0	60
06:45	106	24	3	5	1	0	0	139	78	12	4	1	1	1	0	97
H/TOT	301	62	12	17	1	1	0	394	200	34	11	7	3	3	0	258
07:00	119	27	7	1	0	1	0	155	101	15	4	3	3	0	0	126
07:15	128	35	3	4	0	0	0	170	108	7	3	2	3	1	0	124
07:30	120	17	4	4	1	0	0	146	109	14	2	4	1	0	0	130
07:45	118	35	9	8	0	0	0	170	127	15	4	2	1	1	0	150
H/TOT	485	114	23	17	1	1	0	641	445	51	13	11	8	2	0	530
08:00	133	24	15	4	0	0	0	176	136	13	4	2	2	0	0	157
08:15	120	20	6	9	0	0	0	155	92	9	4	4	0	0	0	109
08:30	127	17	5	0	3	0	0	152	91	9	5	3	0	0	1	109
08:45	106	16	5	6	4	0	0	137	67	12	8	5	0	0	0	92
H/TOT	486	77	31	19	7	0	0	620	386	43	21	14	2	0	1	467
09:00	84	16	10	5	1	0	0	116	84	7	2	7	0	0	0	100
09:15	85	17	4	4	0	0	0	110	62	11	8	3	0	0	0	84
09:30	84	20	4	6	0	0	0	114	48	8	6	3	0	0	0	65
09:45	69	13	5	2	0	0	0	89	55	8	2	3	0	0	0	68
H/TOT	322	66	23	17	1	0	0	429	249	34	18	16	0	0	0	317
10:00	69	13	8	2	0	0	0	92	46	9	4	7	0	0	0	66
10:15	53	17	9	2	0	1	0	82	39	10	2	4	0	2	0	57
10:30	57	9	7	2	0	1	0	76	39	7	3	3	0	3	0	55
10:45	46	12	4	6	0	0	0	68	42	8	9	4	0	0	0	63
H/TOT	225	51	28	12	0	2	0	318	166	34	18	18	0	5	0	241
11:00	48	6	3	2	0	0	0	59	59	10	9	6	0	1	0	85
11:15	52	11	5	3	0	0	0	71	54	17	5	2	0	2	0	80
11:30	63	14	1	4	0	0	0	82	58	7	3	3	0	1	0	72
11:45	68	14	7	0	0	0	0	89	48	16	7	3	1	0	0	75
H/TOT	231	45	16	9	0	0	0	301	219	50	24	14	1	4	0	312
12:00	56	11	6	0	0	0	0	73	67	16	4	5	0	0	0	92
12:15	45	10	4	4	0	1	0	64	54	9	5	6	0	1	0	75
12:30	59	10	4	3	0	0	0	76	57	12	5	7	0	1	0	82
12:45	69	6	3	0	0	0	0	78	56	8	3	5	0	0	0	72
H/TOT	229	37	17	7	0	1	0	291	234	45	17	23	0	2	0	321
13:00	75	10	6	2	0	0	0	93	59	8	0	3	0	0	0	70
13:15	51	10	7	2	0	0	0	70	66	11	3	3	0	0	0	83
13:30	58	11	4	2	0	3	0	78	49	14	8	5	0	0	0	76
13:45	63	12	3	5	0	1	0	84	59	11	5	5	0	0	0	80
H/TOT	247	43	20	11	0	4	0	325	233	44	16	16	0	0	0	309
14:00	70	12	2	1	0	0	0	85	59	14	9	2	0	0	0	84
14:15	60	9	3	5	0	1	0	78	58	12	4	3	6	2	0	85
14:30	67	11	3	2	0	0	0	83	67	13	6	3	4	0	0	93
14:45	70	2	8	2	0	3	0	85	69	16	7	1	2	0	2	97
H/TOT	267	34	16	10	0	4	0	331	253	55	26	9	12	2	2	359
15:00	62	16	5	5	1	2	0	91	72	18	3	5	0	3	0	101
15:15	65	10	2	1	0	1	0	79	77	11	3	1	2	0	0	94
15:30	66	15	4	2	1	0	0	88	103	16	6	4	0	1	0	130
15:45	86	9	5	2	1	0	0	103	96	21	2	4	0	0	0	123
H/TOT	279	50	16	10	3	3	0	361	348	66	14	14	2	4	0	448
16:00	97	12	3	3	5	0	0	120	99	19	4	5	0	0	0	127
16:15	97	13	2	1	1	1	0	115	130	18	5	4	0	0	0	157
16:30	118	15	6	0	0	0	0	139	138	21	6	2	0	0	0	167
16:45	123	18	4	3	1	0	0	149	145	31	2	1	0	0	0	179
H/TOT	435	58	15	7	7	1	0	523	512	89	17	12	0	0	0	630
17:00	125	12	3	3	0	3	0	146	148	21	1	1	0	0	0	171
17:15	135	14	3	1	1	0	0	154	168	17	1	1	0	2	0	189
17:30	132	2	0	1	0	0	0	135	131	16	3	1	0	0	0	151
17:45	150	10	2	1	1	0	0	164	136	8	3	1	0	1	0	149
H/TOT	542	38	8	6	2	3	0	599	583	62	8	4	0	3	0	660
18:00	104	3	0	2	0	1	0	110	115	15	3	0	0	1	0	134
18:15	111	10	1	2	0	0	0	124	86	4	2	1	0	1	0	94
18:30	101	11	1	1	0	1	0	115	88	13	0	2	0	0	0	103
18:45	64	6	0	2	0	0	0	72	79	1	2	0	0	1	0	83
H/TOT	380	30	2	7	0	2	0	421	368	33	7	3	0	3	0	414
P/TOT	4429	705	227	149	22	22	0	5554	4196	640	210	161	28	28	3	5266

6102 / M40 JUNCTION 10
MARCH 2016
CLASSIFIED TURNING COUNT

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

TIME	A to C							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	116	50	25	41	1	0	0	233
06:15	238	65	24	44	1	1	0	373
06:30	286	84	26	44	0	0	0	440
06:45	334	91	31	53	0	4	0	513
H/TOT	974	290	106	182	2	5	0	1559
07:00	325	66	26	44	0	1	0	462
07:15	325	69	18	48	0	2	0	462
07:30	272	45	24	27	0	1	0	369
07:45	328	57	30	35	1	1	0	452
H/TOT	1250	237	98	154	1	5	0	1745
08:00	325	48	27	42	1	1	0	444
08:15	314	42	22	52	0	1	0	431
08:30	285	38	23	45	0	0	0	391
08:45	269	55	24	32	0	2	0	382
H/TOT	1193	183	96	171	1	4	0	1648
09:00	297	40	21	38	2	0	0	398
09:15	293	39	22	39	0	0	0	393
09:30	223	35	11	37	3	0	0	309
09:45	215	46	22	32	0	0	0	315
H/TOT	1028	160	76	146	5	0	0	1415
10:00	177	29	16	25	2	0	0	249
10:15	146	26	12	20	0	0	0	204
10:30	167	30	19	25	1	1	0	243
10:45	179	30	15	28	0	0	0	252
H/TOT	669	115	62	98	3	1	0	948
11:00	155	26	12	38	0	0	0	231
11:15	140	33	12	32	0	1	0	218
11:30	168	39	22	32	1	0	0	262
11:45	158	37	17	36	1	0	0	249
H/TOT	621	135	63	138	2	1	0	960
12:00	164	30	20	43	0	1	0	258
12:15	160	34	8	30	0	0	0	232
12:30	142	24	8	32	0	1	0	207
12:45	171	29	16	23	0	0	0	239
H/TOT	637	117	52	128	0	2	0	936
13:00	184	22	5	29	0	1	0	241
13:15	175	40	15	32	0	1	0	263
13:30	141	35	17	26	0	3	0	222
13:45	189	27	15	31	0	0	0	262
H/TOT	689	124	52	118	0	5	0	988
14:00	159	30	14	35	0	1	0	239
14:15	165	25	10	45	1	2	0	248
14:30	193	31	10	28	0	0	0	262
14:45	202	23	15	23	1	2	0	266
H/TOT	719	109	49	131	2	5	0	1015
15:00	193	41	13	42	0	0	0	289
15:15	204	34	10	33	1	0	0	282
15:30	232	36	17	36	1	2	0	324
15:45	242	40	9	31	1	4	0	327
H/TOT	871	151	49	142	3	6	0	1222
16:00	273	27	7	31	2	1	0	341
16:15	246	23	12	18	0	0	0	299
16:30	275	29	7	18	0	0	0	329
16:45	274	38	16	19	1	2	0	350
H/TOT	1068	117	42	86	3	3	0	1319
17:00	290	35	14	21	1	1	0	362
17:15	301	20	13	21	0	0	0	355
17:30	268	17	5	24	0	0	0	314
17:45	267	23	6	23	0	2	0	321
H/TOT	1126	95	38	89	1	3	0	1352
18:00	249	15	1	21	0	0	0	286
18:15	259	21	4	32	0	1	0	317
18:30	211	21	7	25	0	1	0	265
18:45	194	11	5	10	0	1	0	221
H/TOT	913	68	17	88	0	3	0	1089
P/TOT	11758	1901	800	1671	23	43	0	16196

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

	A to B - banned movement							
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**MCL**	**PCL**	**TOT**
06:00								0
06:15								0
06:30								0
06:45								0
H/TOT	0	0	0	0	0	0	0	0
07:00								0
07:15								0
07:30								0
07:45								0
H/TOT	0	0	0	0	0	0	0	0
08:00								0
08:15								0
08:30								0
08:45								0
H/TOT	0	0	0	0	0	0	0	0
09:00								0
09:15								0
09:30								0
09:45								0
H/TOT	0	0	0	0	0	0	0	0
10:00								0
10:15								0
10:30								0
10:45								0
H/TOT	0	0	0	0	0	0	0	0
11:00								0
11:15								0
11:30								0
11:45								0
H/TOT	0	0	0	0	0	0	0	0
12:00								0
12:15								0
12:30								0
12:45								0
H/TOT	0	0	0	0	0	0	0	0
13:00								0
13:15								0
13:30								0
13:45								0
H/TOT	0	0	0	0	0	0	0	0
14:00								0
14:15								0
14:30								0
14:45								0
H/TOT	0	0	0	0	0	0	0	0
15:00								0
15:15								0
15:30								0
15:45								0
H/TOT	0	0	0	0	0	0	0	0
16:00								0
16:15								0
16:30								0
16:45								0
H/TOT	0	0	0	0	0	0	0	0
17:00								0
17:15								0
17:30								0
17:45								0
H/TOT	0	0	0	0	0	0	0	0
18:00								0
18:15								0
18:30								0
18:45								0
H/TOT	0	0	0	0	0	0	0	0
P/TOT	0	0	0	0	0	0	0	0

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

TIME	A to A - banned movement CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00								0
06:15								0
06:30								0
06:45								0
H/TOT	0	0	0	0	0	0	0	0
07:00								0
07:15								0
07:30								0
07:45								0
H/TOT	0	0	0	0	0	0	0	0
08:00								0
08:15								0
08:30								0
08:45								0
H/TOT	0	0	0	0	0	0	0	0
09:00								0
09:15								0
09:30								0
09:45								0
H/TOT	0	0	0	0	0	0	0	0
10:00								0
10:15								0
10:30								0
10:45								0
H/TOT	0	0	0	0	0	0	0	0
11:00								0
11:15								0
11:30								0
11:45								0
H/TOT	0	0	0	0	0	0	0	0
12:00								0
12:15								0
12:30								0
12:45								0
H/TOT	0	0	0	0	0	0	0	0
13:00								0
13:15								0
13:30								0
13:45								0
H/TOT	0	0	0	0	0	0	0	0
14:00								0
14:15								0
14:30								0
14:45								0
H/TOT	0	0	0	0	0	0	0	0
15:00								0
15:15								0
15:30								0
15:45								0
H/TOT	0	0	0	0	0	0	0	0
16:00								0
16:15								0
16:30								0
16:45								0
H/TOT	0	0	0	0	0	0	0	0
17:00								0
17:15								0
17:30								0
17:45								0
H/TOT	0	0	0	0	0	0	0	0
18:00								0
18:15								0
18:30								0
18:45								0
H/TOT	0	0	0	0	0	0	0	0
P/TOT	0	0	0	0	0	0	0	0

6102 / M40 JUNCTION 10
MARCH 2016
CLASSIFIED TURNING COUNT

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

	B to A							
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**MCL**	**PCL**	**TOT**
06:00	5	5	0	4	0	0	0	14
06:15	11	4	2	5	0	0	0	22
06:30	15	5	4	2	0	0	0	26
06:45	29	12	2	4	0	0	0	47
H/TOT	60	26	8	15	0	0	0	109
07:00	37	12	4	0	0	0	0	53
07:15	41	9	5	1	1	0	0	57
07:30	44	9	1	2	0	0	0	56
07:45	33	11	4	6	0	1	0	55
H/TOT	155	41	14	9	1	1	0	221
08:00	37	14	6	2	0	2	0	61
08:15	41	8	3	6	0	0	0	58
08:30	34	6	2	3	0	0	0	45
08:45	31	7	6	7	0	0	0	51
H/TOT	143	35	17	18	0	2	0	215
09:00	24	6	5	2	0	0	0	37
09:15	25	9	5	3	0	0	0	42
09:30	17	8	3	2	0	0	0	30
09:45	14	3	3	3	0	0	0	23
H/TOT	80	26	16	10	0	0	0	132
10:00	18	6	3	5	0	0	0	32
10:15	8	8	4	1	0	0	0	21
10:30	10	3	4	0	0	0	0	17
10:45	26	1	4	2	0	0	0	33
H/TOT	62	18	15	8	0	0	0	103
11:00	15	3	2	4	0	0	0	24
11:15	8	2	1	4	0	0	0	15
11:30	16	4	1	3	0	0	0	24
11:45	11	5	1	4	0	0	0	21
H/TOT	50	14	5	15	0	0	0	84
12:00	18	2	2	2	0	0	0	24
12:15	14	4	2	4	0	0	0	24
12:30	16	4	3	7	0	1	0	31
12:45	27	5	3	2	0	0	0	37
H/TOT	75	15	10	15	0	1	0	116
13:00	27	7	3	3	0	0	0	40
13:15	15	2	3	1	0	0	0	21
13:30	23	2	2	2	0	0	0	29
13:45	17	5	1	2	0	0	0	25
H/TOT	82	16	9	8	0	0	0	115
14:00	21	4	0	2	0	0	0	27
14:15	19	4	1	4	0	0	0	28
14:30	22	2	1	1	0	0	0	26
14:45	31	2	2	3	0	0	0	38
H/TOT	93	12	4	10	0	0	0	119
15:00	20	12	1	1	0	0	0	34
15:15	22	9	1	2	0	0	0	34
15:30	25	4	2	1	0	0	0	32
15:45	15	3	2	5	1	0	0	26
H/TOT	82	28	6	9	1	0	0	126
16:00	28	4	1	1	1	0	0	35
16:15	32	5	3	1	1	0	0	42
16:30	30	10	2	1	2	0	0	45
16:45	55	7	2	3	0	0	0	67
H/TOT	145	26	8	6	4	0	0	189
17:00	45	5	2	2	0	0	0	54
17:15	50	1	1	1	0	0	0	53
17:30	25	5	0	1	0	0	0	31
17:45	63	5	0	0	0	0	0	68
H/TOT	183	16	3	4	0	0	0	206
18:00	41	3	0	0	1	0	0	45
18:15	42	1	1	3	0	0	0	47
18:30	45	3	2	0	0	0	0	50
18:45	24	1	0	0	0	0	0	25
H/TOT	152	8	3	3	1	0	0	167
P/TOT	1362	281	118	130	7	4	0	1902

6102 / M40 JUNCTION 10
MARCH 2016
CLASSIFIED TURNING COUNT

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

TIME	B to C							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	13	7	3	2	0	0	0	25
06:15	23	7	4	8	0	0	0	42
06:30	36	10	3	4	0	0	0	53
06:45	45	9	3	6	0	0	0	63
H/TOT	117	33	13	20	0	0	0	183
07:00	39	16	6	6	0	0	0	67
07:15	48	11	3	6	0	0	0	68
07:30	60	8	3	8	0	1	0	80
07:45	51	13	3	6	0	0	0	73
H/TOT	198	48	15	26	0	1	0	288
08:00	65	19	3	5	0	0	0	92
08:15	60	13	1	10	0	0	0	84
08:30	49	9	3	5	0	0	0	66
08:45	49	7	5	7	0	0	0	68
H/TOT	223	48	12	27	0	0	0	310
09:00	30	8	5	13	0	0	0	56
09:15	41	8	1	11	0	0	0	61
09:30	45	5	6	11	0	0	0	67
09:45	27	7	2	10	0	0	0	46
H/TOT	143	28	14	45	0	0	0	230
10:00	34	5	2	7	0	0	0	48
10:15	35	6	3	7	0	0	0	51
10:30	34	6	2	10	0	0	0	52
10:45	37	4	6	10	0	0	0	57
H/TOT	140	21	13	34	0	0	0	208
11:00	25	5	3	15	0	0	0	48
11:15	33	8	2	7	0	0	0	50
11:30	32	8	5	11	0	0	0	56
11:45	49	2	2	2	0	0	0	55
H/TOT	139	23	12	35	0	0	0	209
12:00	51	2	1	6	0	0	0	60
12:15	41	12	3	9	0	0	0	65
12:30	38	7	4	7	0	0	0	56
12:45	39	5	4	8	0	0	0	56
H/TOT	169	26	12	30	0	0	0	237
13:00	48	8	3	6	0	1	0	66
13:15	44	4	5	8	0	0	0	61
13:30	42	3	9	3	0	0	0	57
13:45	36	6	3	3	0	0	0	48
H/TOT	170	21	20	20	0	1	0	232
14:00	46	6	4	7	0	0	0	63
14:15	51	3	2	6	1	0	0	63
14:30	52	3	5	9	0	0	0	69
14:45	52	2	2	11	0	0	0	67
H/TOT	201	14	13	33	1	0	0	262
15:00	40	1	0	4	0	0	0	45
15:15	39	9	3	4	0	1	0	56
15:30	55	3	4	5	0	0	0	67
15:45	50	2	2	7	0	0	0	61
H/TOT	184	15	9	20	0	1	0	229
16:00	52	11	1	4	0	0	0	68
16:15	49	5	4	5	0	0	0	63
16:30	49	3	1	10	0	1	0	64
16:45	55	5	2	3	1	1	0	67
H/TOT	205	24	8	22	1	2	0	262
17:00	50	4	1	5	0	0	0	60
17:15	54	3	1	1	0	0	0	59
17:30	50	4	0	4	1	1	0	60
17:45	63	2	1	7	0	1	0	74
H/TOT	217	13	3	17	1	2	0	253
18:00	45	5	0	2	0	0	0	52
18:15	73	8	0	5	0	1	0	87
18:30	42	0	0	4	0	0	0	46
18:45	40	2	1	8	0	0	0	51
H/TOT	200	15	1	19	0	1	0	236
P/TOT	2306	329	145	348	3	8	0	3139

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

TIME	B to B - banned movement CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00								0
06:15								0
06:30								0
06:45								0
H/TOT	0	0	0	0	0	0	0	0
07:00								0
07:15								0
07:30								0
07:45								0
H/TOT	0	0	0	0	0	0	0	0
08:00								0
08:15								0
08:30								0
08:45								0
H/TOT	0	0	0	0	0	0	0	0
09:00								0
09:15								0
09:30								0
09:45								0
H/TOT	0	0	0	0	0	0	0	0
10:00								0
10:15								0
10:30								0
10:45								0
H/TOT	0	0	0	0	0	0	0	0
11:00								0
11:15								0
11:30								0
11:45								0
H/TOT	0	0	0	0	0	0	0	0
12:00								0
12:15								0
12:30								0
12:45								0
H/TOT	0	0	0	0	0	0	0	0
13:00								0
13:15								0
13:30								0
13:45								0
H/TOT	0	0	0	0	0	0	0	0
14:00								0
14:15								0
14:30								0
14:45								0
H/TOT	0	0	0	0	0	0	0	0
15:00								0
15:15								0
15:30								0
15:45								0
H/TOT	0	0	0	0	0	0	0	0
16:00								0
16:15								0
16:30								0
16:45								0
H/TOT	0	0	0	0	0	0	0	0
17:00								0
17:15								0
17:30								0
17:45								0
H/TOT	0	0	0	0	0	0	0	0
18:00								0
18:15								0
18:30								0
18:45								0
H/TOT	0	0	0	0	0	0	0	0
P/TOT	0	0	0	0	0	0	0	0

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

TIME	C to B - banned movement CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00								0
06:15								0
06:30								0
06:45								0
H/TOT	0	0	0	0	0	0	0	0
07:00								0
07:15								0
07:30								0
07:45								0
H/TOT	0	0	0	0	0	0	0	0
08:00								0
08:15								0
08:30								0
08:45								0
H/TOT	0	0	0	0	0	0	0	0
09:00								0
09:15								0
09:30								0
09:45								0
H/TOT	0	0	0	0	0	0	0	0
10:00								0
10:15								0
10:30								0
10:45								0
H/TOT	0	0	0	0	0	0	0	0
11:00								0
11:15								0
11:30								0
11:45								0
H/TOT	0	0	0	0	0	0	0	0
12:00								0
12:15								0
12:30								0
12:45								0
H/TOT	0	0	0	0	0	0	0	0
13:00								0
13:15								0
13:30								0
13:45								0
H/TOT	0	0	0	0	0	0	0	0
14:00								0
14:15								0
14:30								0
14:45								0
H/TOT	0	0	0	0	0	0	0	0
15:00								0
15:15								0
15:30								0
15:45								0
H/TOT	0	0	0	0	0	0	0	0
16:00								0
16:15								0
16:30								0
16:45								0
H/TOT	0	0	0	0	0	0	0	0
17:00								0
17:15								0
17:30								0
17:45								0
H/TOT	0	0	0	0	0	0	0	0
18:00								0
18:15								0
18:30								0
18:45								0
H/TOT	0	0	0	0	0	0	0	0
P/TOT	0	0	0	0	0	0	0	0

6102 / M40 JUNCTION 10
MARCH 2016
CLASSIFIED TURNING COUNT

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

TIME	C to A CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	40	11	6	21	0	1	0	79
06:15	55	25	7	25	0	0	0	112
06:30	96	25	12	28	0	0	0	161
06:45	126	26	14	29	0	1	0	196
H/TOT	317	87	39	103	0	2	0	548
07:00	175	30	17	31	0	0	0	253
07:15	195	24	11	29	0	0	0	259
07:30	191	28	17	34	0	1	0	271
07:45	227	30	10	26	0	1	0	294
H/TOT	788	112	55	120	0	2	0	1077
08:00	228	23	17	21	1	0	0	290
08:15	202	17	13	27	0	0	0	259
08:30	213	23	12	20	0	2	0	270
08:45	160	17	8	31	0	0	0	216
H/TOT	803	80	50	99	1	2	0	1035
09:00	145	17	13	27	0	0	0	202
09:15	145	16	8	22	0	0	0	191
09:30	152	26	9	21	0	1	0	209
09:45	143	30	17	34	0	0	0	224
H/TOT	585	89	47	104	0	1	0	826
10:00	145	30	8	33	1	0	0	217
10:15	160	22	18	39	0	0	0	239
10:30	128	33	20	37	0	0	0	218
10:45	142	24	11	33	0	0	0	210
H/TOT	575	109	57	142	1	0	0	884
11:00	132	30	25	35	0	2	0	224
11:15	139	30	22	45	0	2	0	238
11:30	146	34	19	24	0	0	0	223
11:45	142	33	17	37	0	2	0	231
H/TOT	559	127	83	141	0	6	0	916
12:00	165	36	27	32	2	0	0	262
12:15	139	23	19	27	0	1	0	209
12:30	142	30	18	30	0	1	0	221
12:45	143	36	19	32	6	0	0	236
H/TOT	589	125	83	121	8	2	0	928
13:00	164	39	22	27	0	0	0	252
13:15	164	35	31	37	0	0	0	267
13:30	164	39	18	40	0	0	0	261
13:45	190	47	19	41	2	1	0	300
H/TOT	682	160	90	145	2	1	0	1080
14:00	215	43	16	32	0	0	0	306
14:15	183	42	23	40	0	0	0	288
14:30	221	36	17	35	1	0	0	310
14:45	207	38	16	40	0	1	0	302
H/TOT	826	159	72	147	1	1	0	1206
15:00	213	50	16	37	0	0	0	316
15:15	201	39	25	31	0	2	0	298
15:30	239	47	16	37	1	1	0	341
15:45	259	51	20	36	1	2	0	369
H/TOT	912	187	77	141	2	5	0	1324
16:00	261	52	27	40	0	1	0	381
16:15	309	54	12	34	1	2	0	412
16:30	334	46	7	28	0	0	0	415
16:45	338	52	11	22	0	2	0	425
H/TOT	1242	204	57	124	1	5	0	1633
17:00	355	61	12	25	0	3	0	456
17:15	350	45	8	22	0	0	0	425
17:30	346	49	16	28	0	7	0	446
17:45	336	38	4	25	1	4	0	408
H/TOT	1387	193	40	100	1	14	0	1735
18:00	375	46	16	23	0	2	0	462
18:15	353	26	12	27	0	0	0	418
18:30	317	27	11	14	1	2	0	372
18:45	272	19	11	22	0	0	0	324
H/TOT	1317	118	50	86	1	4	0	1576
P/TOT	10582	1750	800	1573	18	45	0	14768

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

TIME	C to C CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	0	0	1	0	0	0	0	1
06:15	0	0	0	0	0	0	0	0
06:30	0	0	0	1	0	0	0	1
06:45	1	0	0	0	0	0	0	1
H/TOT	1	0	1	1	0	0	0	3
07:00	0	0	2	0	0	0	0	2
07:15	0	0	0	0	0	0	0	0
07:30	0	0	1	0	0	0	0	1
07:45	3	0	0	0	0	0	0	3
H/TOT	3	0	3	0	0	0	0	6
08:00	2	1	0	0	0	0	0	3
08:15	3	0	0	0	0	0	0	3
08:30	5	0	1	0	0	0	0	6
08:45	3	1	0	0	0	0	0	4
H/TOT	13	2	1	0	0	0	0	16
09:00	4	0	0	0	0	0	0	4
09:15	3	1	0	0	0	0	0	4
09:30	2	1	1	1	0	0	0	5
09:45	3	0	0	1	0	0	0	4
H/TOT	12	2	1	2	0	0	0	17
10:00	2	0	0	1	0	0	0	3
10:15	3	1	0	1	0	0	0	5
10:30	2	2	0	0	0	0	0	4
10:45	3	2	0	0	0	0	0	5
H/TOT	10	5	0	2	0	0	0	17
11:00	1	0	0	0	0	0	0	1
11:15	2	2	1	1	0	0	0	6
11:30	3	1	0	1	0	0	0	5
11:45	4	0	1	2	0	0	0	7
H/TOT	10	3	2	4	0	0	0	19
12:00	0	1	1	0	0	0	0	2
12:15	2	2	0	0	0	0	0	4
12:30	2	0	0	0	0	0	0	2
12:45	2	0	0	0	0	0	0	2
H/TOT	6	3	1	0	0	0	0	10
13:00	4	0	0	1	0	0	0	5
13:15	7	0	1	1	0	0	0	9
13:30	3	2	0	0	0	0	0	5
13:45	4	2	0	0	0	0	0	6
H/TOT	18	4	1	2	0	0	0	25
14:00	2	1	0	1	0	0	0	4
14:15	0	1	0	0	0	2	0	3
14:30	3	1	0	0	0	0	0	4
14:45	9	0	1	0	0	0	0	10
H/TOT	14	3	1	1	0	2	0	21
15:00	2	1	0	0	0	0	0	3
15:15	1	0	0	0	0	0	0	1
15:30	3	0	0	0	0	0	0	3
15:45	2	0	0	0	0	0	0	2
H/TOT	8	1	0	0	0	0	0	9
16:00	2	1	0	0	0	0	0	3
16:15	2	0	0	0	0	0	0	2
16:30	0	0	0	0	0	0	0	0
16:45	2	0	0	3	0	0	0	5
H/TOT	6	1	0	3	0	0	0	10
17:00	6	0	0	0	0	0	0	6
17:15	5	0	0	0	0	0	0	5
17:30	4	1	0	2	0	0	0	7
17:45	3	0	0	0	0	0	0	3
H/TOT	18	1	0	2	0	0	0	21
18:00	3	1	0	0	0	0	0	4
18:15	5	0	0	0	0	0	0	5
18:30	2	0	0	1	0	0	0	3
18:45	4	0	0	0	0	0	0	4
H/TOT	14	1	0	1	0	0	0	16
P/TOT	133	26	11	18	0	2	0	190

6102 / M40 JUNCTION 10
MARCH 2016
CLASSIFIED TURNING COUNT

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

	TO ARM A							
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**MCL**	**PCL**	**TOT**
06:00	45	16	6	25	0	1	0	93
06:15	66	29	9	30	0	0	0	134
06:30	111	30	16	30	0	0	0	187
06:45	155	38	16	33	0	1	0	243
H/TOT	377	113	47	118	0	2	0	657
07:00	212	42	21	31	0	0	0	306
07:15	236	33	16	30	1	0	0	316
07:30	235	37	18	36	0	1	0	327
07:45	260	41	14	32	0	2	0	349
H/TOT	943	153	69	129	1	3	0	1298
08:00	265	37	23	23	1	2	0	351
08:15	243	25	16	33	0	0	0	317
08:30	247	29	14	23	0	2	0	315
08:45	191	24	14	38	0	0	0	267
H/TOT	946	115	67	117	1	4	0	1250
09:00	169	23	18	29	0	0	0	239
09:15	170	25	13	25	0	0	0	233
09:30	169	34	12	23	0	1	0	239
09:45	157	33	20	37	0	0	0	247
H/TOT	665	115	63	114	0	1	0	958
10:00	163	36	11	38	1	0	0	249
10:15	168	30	22	40	0	0	0	260
10:30	138	36	24	37	0	0	0	235
10:45	168	25	15	35	0	0	0	243
H/TOT	637	127	72	150	1	0	0	987
11:00	147	33	27	39	0	2	0	248
11:15	147	32	23	49	0	2	0	253
11:30	162	38	20	27	0	0	0	247
11:45	153	38	18	41	0	2	0	252
H/TOT	609	141	88	156	0	6	0	1000
12:00	183	38	29	34	2	0	0	286
12:15	153	27	21	31	0	1	0	233
12:30	158	34	21	37	0	2	0	252
12:45	170	41	22	34	6	0	0	273
H/TOT	664	140	93	136	8	3	0	1044
13:00	191	46	25	30	0	0	0	292
13:15	179	37	34	38	0	0	0	288
13:30	187	41	20	42	0	0	0	290
13:45	207	52	20	43	2	1	0	325
H/TOT	764	176	99	153	2	1	0	1195
14:00	236	47	16	34	0	0	0	333
14:15	202	46	24	44	0	0	0	316
14:30	243	38	18	36	1	0	0	336
14:45	238	40	18	43	0	1	0	340
H/TOT	919	171	76	157	1	1	0	1325
15:00	233	62	17	38	0	0	0	350
15:15	223	48	26	33	0	2	0	332
15:30	264	51	18	38	1	1	0	373
15:45	274	54	22	41	2	2	0	395
H/TOT	994	215	83	150	3	5	0	1450
16:00	289	56	28	41	1	1	0	416
16:15	341	59	15	35	2	2	0	454
16:30	364	56	9	29	2	0	0	460
16:45	393	59	13	25	0	2	0	492
H/TOT	1387	230	65	130	5	5	0	1822
17:00	400	66	14	27	0	3	0	510
17:15	400	46	9	23	0	0	0	478
17:30	371	54	16	29	0	7	0	477
17:45	399	43	4	25	1	4	0	476
H/TOT	1570	209	43	104	1	14	0	1941
18:00	416	49	16	23	1	2	0	507
18:15	395	27	13	30	0	0	0	465
18:30	362	30	13	14	1	2	0	422
18:45	296	20	11	22	0	0	0	349
H/TOT	1469	126	53	89	2	4	0	1743
P/TOT	11944	2031	918	1703	25	49	0	16670

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

	FROM ARM A							
TIME	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	116	50	25	41	1	0	0	233
06:15	238	65	24	44	1	1	0	373
06:30	286	84	26	44	0	0	0	440
06:45	334	91	31	53	0	4	0	513
H/TOT	974	290	106	182	2	5	0	1559
07:00	325	66	26	44	0	1	0	462
07:15	325	69	18	48	0	2	0	462
07:30	272	45	24	27	0	1	0	369
07:45	328	57	30	35	1	1	0	452
H/TOT	1250	237	98	154	1	5	0	1745
08:00	325	48	27	42	1	1	0	444
08:15	314	42	22	52	0	1	0	431
08:30	285	38	23	45	0	0	0	391
08:45	269	55	24	32	0	2	0	382
H/TOT	1193	183	96	171	1	4	0	1648
09:00	297	40	21	38	2	0	0	398
09:15	293	39	22	39	0	0	0	393
09:30	223	35	11	37	3	0	0	309
09:45	215	46	22	32	0	0	0	315
H/TOT	1028	160	76	146	5	0	0	1415
10:00	177	29	16	25	2	0	0	249
10:15	146	26	12	20	0	0	0	204
10:30	167	30	19	25	1	1	0	243
10:45	179	30	15	28	0	0	0	252
H/TOT	669	115	62	98	3	1	0	948
11:00	155	26	12	38	0	0	0	231
11:15	140	33	12	32	0	1	0	218
11:30	168	39	22	32	1	0	0	262
11:45	158	37	17	36	1	0	0	249
H/TOT	621	135	63	138	2	1	0	960
12:00	164	30	20	43	0	1	0	258
12:15	160	34	8	30	0	0	0	232
12:30	142	24	8	32	0	1	0	207
12:45	171	29	16	23	0	0	0	239
H/TOT	637	117	52	128	0	2	0	936
13:00	184	22	5	29	0	1	0	241
13:15	175	40	15	32	0	1	0	263
13:30	141	35	17	26	0	3	0	222
13:45	189	27	15	31	0	0	0	262
H/TOT	689	124	52	118	0	5	0	988
14:00	159	30	14	35	0	1	0	239
14:15	165	25	10	45	1	2	0	248
14:30	193	31	10	28	0	0	0	262
14:45	202	23	15	23	1	2	0	266
H/TOT	719	109	49	131	2	5	0	1015
15:00	193	41	13	42	0	0	0	289
15:15	204	34	10	33	1	0	0	282
15:30	232	36	17	36	1	2	0	324
15:45	242	40	9	31	1	4	0	327
H/TOT	871	151	49	142	3	6	0	1222
16:00	273	27	7	31	2	1	0	341
16:15	246	23	12	18	0	0	0	299
16:30	275	29	7	18	0	0	0	329
16:45	274	38	16	19	1	2	0	350
H/TOT	1068	117	42	86	3	3	0	1319
17:00	290	35	14	21	1	1	0	362
17:15	301	20	13	21	0	0	0	355
17:30	268	17	5	24	0	0	0	314
17:45	267	23	6	23	0	2	0	321
H/TOT	1126	95	38	89	1	3	0	1352
18:00	249	15	1	21	0	0	0	286
18:15	259	21	4	32	0	1	0	317
18:30	211	21	7	25	0	1	0	265
18:45	194	11	5	10	0	1	0	221
H/TOT	913	68	17	88	0	3	0	1089
P/TOT	11758	1901	800	1671	23	43	0	16196

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

	TO ARM B							
TIME	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	0	0	0	0	0	0	0	0
06:15	0	0	0	0	0	0	0	0
06:30	0	0	0	0	0	0	0	0
06:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
P/TOT	0	0	0	0	0	0	0	0

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

	FROM ARM B							
TIME	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
06:00	18	12	3	6	0	0	0	39
06:15	34	11	6	13	0	0	0	64
06:30	51	15	7	6	0	0	0	79
06:45	74	21	5	10	0	0	0	110
H/TOT	177	59	21	35	0	0	0	292
07:00	76	28	10	6	0	0	0	120
07:15	89	20	8	7	1	0	0	125
07:30	104	17	4	10	0	1	0	136
07:45	84	24	7	12	0	1	0	128
H/TOT	353	89	29	35	1	2	0	509
08:00	102	33	9	7	0	2	0	153
08:15	101	21	4	16	0	0	0	142
08:30	83	15	5	8	0	0	0	111
08:45	80	14	11	14	0	0	0	119
H/TOT	366	83	29	45	0	2	0	525
09:00	54	14	10	15	0	0	0	93
09:15	66	17	6	14	0	0	0	103
09:30	62	13	9	13	0	0	0	97
09:45	41	10	5	13	0	0	0	69
H/TOT	223	54	30	55	0	0	0	362
10:00	52	11	5	12	0	0	0	80
10:15	43	14	7	8	0	0	0	72
10:30	44	9	6	10	0	0	0	69
10:45	63	5	10	12	0	0	0	90
H/TOT	202	39	28	42	0	0	0	311
11:00	40	8	5	19	0	0	0	72
11:15	41	10	3	11	0	0	0	65
11:30	48	12	6	14	0	0	0	80
11:45	60	7	3	6	0	0	0	76
H/TOT	189	37	17	50	0	0	0	293
12:00	69	4	3	8	0	0	0	84
12:15	55	16	5	13	0	0	0	89
12:30	54	11	7	14	0	1	0	87
12:45	66	10	7	10	0	0	0	93
H/TOT	244	41	22	45	0	1	0	353
13:00	75	15	6	9	0	1	0	106
13:15	59	6	8	9	0	0	0	82
13:30	65	5	11	5	0	0	0	86
13:45	53	11	4	5	0	0	0	73
H/TOT	252	37	29	28	0	1	0	347
14:00	67	10	4	9	0	0	0	90
14:15	70	7	3	10	1	0	0	91
14:30	74	5	6	10	0	0	0	95
14:45	83	4	4	14	0	0	0	105
H/TOT	294	26	17	43	1	0	0	381
15:00	60	13	1	5	0	0	0	79
15:15	61	18	4	6	0	1	0	90
15:30	80	7	6	6	0	0	0	99
15:45	65	5	4	12	1	0	0	87
H/TOT	266	43	15	29	1	1	0	355
16:00	80	15	2	5	1	0	0	103
16:15	81	10	7	6	1	0	0	105
16:30	79	13	3	11	2	1	0	109
16:45	110	12	4	6	1	1	0	134
H/TOT	350	50	16	28	5	2	0	451
17:00	95	9	3	7	0	0	0	114
17:15	104	4	2	2	0	0	0	112
17:30	75	9	0	5	1	1	0	91
17:45	126	7	1	7	0	1	0	142
H/TOT	400	29	6	21	1	2	0	459
18:00	86	8	0	2	1	0	0	97
18:15	115	9	1	8	0	1	0	134
18:30	87	3	2	4	0	0	0	96
18:45	64	3	1	8	0	0	0	76
H/TOT	352	23	4	22	1	1	0	403
P/TOT	3668	610	263	478	10	12	0	5041

6102 / M40 JUNCTION 10
MARCH 2016
CLASSIFIED TURNING COUNT

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

	TO ARM C							
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**MCL**	**PCL**	**TOT**
06:00	129	57	29	43	1	0	0	259
06:15	261	72	28	52	1	1	0	415
06:30	322	94	29	49	0	0	0	494
06:45	380	100	34	59	0	4	0	577
H/TOT	1092	323	120	203	2	5	0	1745
07:00	364	82	34	50	0	1	0	531
07:15	373	80	21	54	0	2	0	530
07:30	332	53	28	35	0	2	0	450
07:45	382	70	33	41	1	1	0	528
H/TOT	1451	285	116	180	1	6	0	2039
08:00	392	68	30	47	1	1	0	539
08:15	377	55	23	62	0	1	0	518
08:30	339	47	27	50	0	0	0	463
08:45	321	63	29	39	0	2	0	454
H/TOT	1429	233	109	198	1	4	0	1974
09:00	331	48	26	51	2	0	0	458
09:15	337	48	23	50	0	0	0	458
09:30	270	41	18	49	3	0	0	381
09:45	245	53	24	43	0	0	0	365
H/TOT	1183	190	91	193	5	0	0	1662
10:00	213	34	18	33	2	0	0	300
10:15	184	33	15	28	0	0	0	260
10:30	203	38	21	35	1	1	0	299
10:45	219	36	21	38	0	0	0	314
H/TOT	819	141	75	134	3	1	0	1173
11:00	181	31	15	53	0	0	0	280
11:15	175	43	15	40	0	1	0	274
11:30	203	48	27	44	1	0	0	323
11:45	211	39	20	40	1	0	0	311
H/TOT	770	161	77	177	2	1	0	1188
12:00	215	33	22	49	0	1	0	320
12:15	203	48	11	39	0	0	0	301
12:30	182	31	12	39	0	1	0	265
12:45	212	34	20	31	0	0	0	297
H/TOT	812	146	65	158	0	2	0	1183
13:00	236	30	8	36	0	2	0	312
13:15	226	44	21	41	0	1	0	333
13:30	186	40	26	29	0	3	0	284
13:45	229	35	18	34	0	0	0	316
H/TOT	877	149	73	140	0	6	0	1245
14:00	207	37	18	43	0	1	0	306
14:15	216	29	12	51	2	4	0	314
14:30	248	35	15	37	0	0	0	335
14:45	263	25	18	34	1	2	0	343
H/TOT	934	126	63	165	3	7	0	1298
15:00	235	43	13	46	0	0	0	337
15:15	244	43	13	37	1	1	0	339
15:30	290	39	21	41	1	2	0	394
15:45	294	42	11	38	1	4	0	390
H/TOT	1063	167	58	162	3	7	0	1460
16:00	327	39	8	35	2	1	0	412
16:15	297	28	16	23	0	0	0	364
16:30	324	32	8	28	0	1	0	393
16:45	331	43	18	25	2	3	0	422
H/TOT	1279	142	50	111	4	5	0	1591
17:00	346	39	15	26	1	1	0	428
17:15	360	23	14	22	0	0	0	419
17:30	322	22	5	30	1	1	0	381
17:45	333	25	7	30	0	3	0	398
H/TOT	1361	109	41	108	2	5	0	1626
18:00	297	21	1	23	0	0	0	342
18:15	337	29	4	37	0	2	0	409
18:30	255	21	7	30	0	1	0	314
18:45	238	13	6	18	0	1	0	276
H/TOT	1127	84	18	108	0	4	0	1341
P/TOT	14197	2256	956	2037	26	53	0	19525

6102 / M40 JUNCTION 10
MARCH 2016
CLASSIFIED TURNING COUNT

SITE: 2 DATE: 17/03/2016

LOCATION: A43/M40 DAY: Thursday

	FROM ARM C							
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**MCL**	**PCL**	**TOT**
06:00	40	11	7	21	0	1	0	80
06:15	55	25	7	25	0	0	0	112
06:30	96	25	12	29	0	0	0	162
06:45	127	26	14	29	0	1	0	197
H/TOT	318	87	40	104	0	2	0	551
07:00	175	30	19	31	0	0	0	255
07:15	195	24	11	29	0	0	0	259
07:30	191	28	18	34	0	1	0	272
07:45	230	30	10	26	0	1	0	297
H/TOT	791	112	58	120	0	2	0	1083
08:00	230	24	17	21	1	0	0	293
08:15	205	17	13	27	0	0	0	262
08:30	218	23	13	20	0	2	0	276
08:45	163	18	8	31	0	0	0	220
H/TOT	816	82	51	99	1	2	0	1051
09:00	149	17	13	27	0	0	0	206
09:15	148	17	8	22	0	0	0	195
09:30	154	27	10	22	0	1	0	214
09:45	146	30	17	35	0	0	0	228
H/TOT	597	91	48	106	0	1	0	843
10:00	147	30	8	34	1	0	0	220
10:15	163	23	18	40	0	0	0	244
10:30	130	35	20	37	0	0	0	222
10:45	145	26	11	33	0	0	0	215
H/TOT	585	114	57	144	1	0	0	901
11:00	133	30	25	35	0	2	0	225
11:15	141	32	23	46	0	2	0	244
11:30	149	35	19	25	0	0	0	228
11:45	146	33	18	39	0	2	0	238
H/TOT	569	130	85	145	0	6	0	935
12:00	165	37	28	32	2	0	0	264
12:15	141	25	19	27	0	1	0	213
12:30	144	30	18	30	0	1	0	223
12:45	145	36	19	32	6	0	0	238
H/TOT	595	128	84	121	8	2	0	938
13:00	168	39	22	28	0	0	0	257
13:15	171	35	32	38	0	0	0	276
13:30	167	41	18	40	0	0	0	266
13:45	194	49	19	41	2	1	0	306
H/TOT	700	164	91	147	2	1	0	1105
14:00	217	44	16	33	0	0	0	310
14:15	183	43	23	40	0	2	0	291
14:30	224	37	17	35	1	0	0	314
14:45	216	38	17	40	0	1	0	312
H/TOT	840	162	73	148	1	3	0	1227
15:00	215	51	16	37	0	0	0	319
15:15	202	39	25	31	0	2	0	299
15:30	242	47	16	37	1	1	0	344
15:45	261	51	20	36	1	2	0	371
H/TOT	920	188	77	141	2	5	0	1333
16:00	263	53	27	40	0	1	0	384
16:15	311	54	12	34	1	2	0	414
16:30	334	46	7	28	0	0	0	415
16:45	340	52	11	25	0	2	0	430
H/TOT	1248	205	57	127	1	5	0	1643
17:00	361	61	12	25	0	3	0	462
17:15	355	45	8	22	0	0	0	430
17:30	350	50	16	30	0	7	0	453
17:45	339	38	4	25	1	4	0	411
H/TOT	1405	194	40	102	1	14	0	1756
18:00	378	47	16	23	0	2	0	466
18:15	358	26	12	27	0	0	0	423
18:30	319	27	11	15	1	2	0	375
18:45	276	19	11	22	0	0	0	328
H/TOT	1331	119	50	87	1	4	0	1592
P/TOT	10715	1776	811	1591	18	47	0	14958

APPENDIX M: ADDITIONAL A43 FLOW VALIDATION (AECOM)

AM Peak											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
994	1,328	1,047	1,353	1.6	0.7	25	2%	-	Yes	-	Yes

PM Peak											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,580	1,957	1,418	1,759	4.2	4.6	-198	-10%	-	Yes	-	Yes

A43 Flow Validation (Northbound)

AM Peak											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,217	1,685	1,144	1,534	2.1	3.8	-151	-9%	-	Yes	-	Yes

PM Peak											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,107	1,328	1,045	1,312	1.9	0.4	-16	-1%	-	Yes	-	Yes

A43 Flow Validation (Southbound)

Note: Observed data from MCC at Baynards Green roundabout. Count undertaken in March 2016 and data provided by Aecom.

AM Peak											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,003	1,344	1,047	1,353	1.4	0.3	9	1%	-	Yes	-	Yes

PM Peak											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,570	1,941	1,418	1,759	3.9	4.2	-182	-9%	-	Yes	-	Yes

A43 Flow Validation (Northbound)

AM Peak											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,239	1,696	1,144	1,534	2.8	4.0	-162	-10%	-	Yes	-	Yes

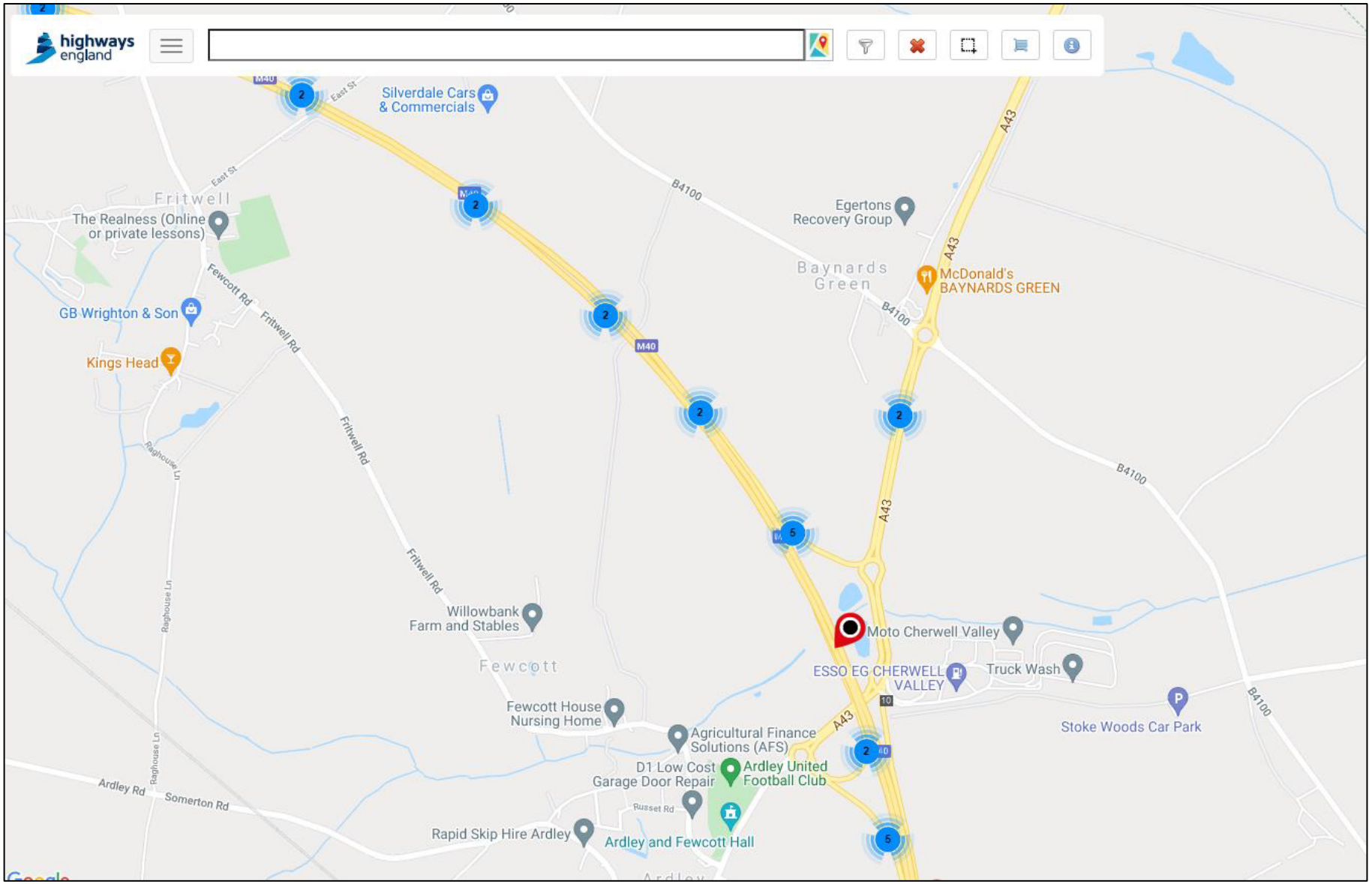
PM Peak											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
1,126	1,352	1,045	1,312	2.5	1.1	-40	-3%	-	Yes	-	Yes

A43 Flow Validation (Southbound)

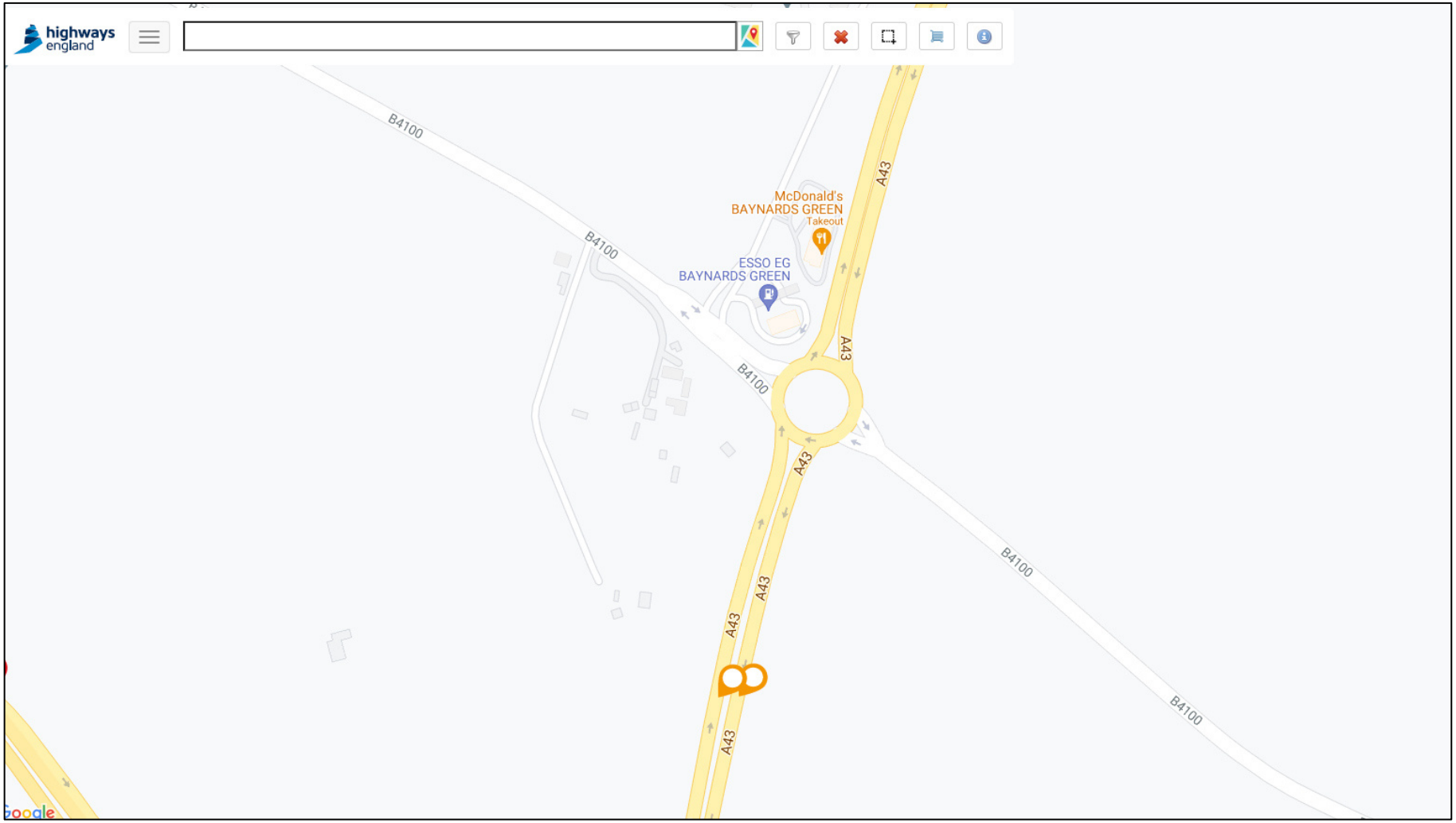
Note: Observed data from MCC at M40 Junction 10. Count undertaken in March 2016 and data provided by Aecom.

APPENDIX N: A43 WEBTRIS TRAFFIC DATA

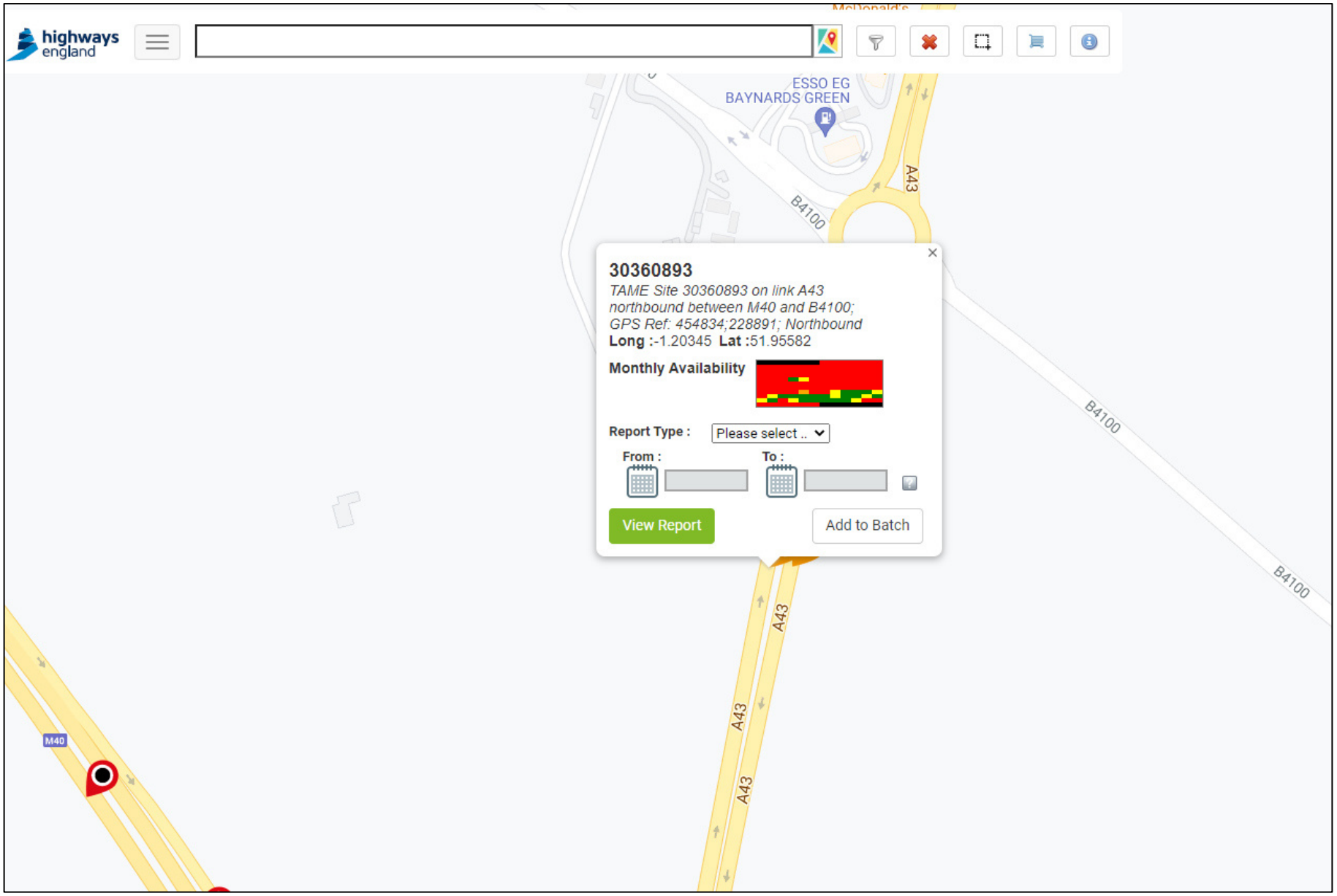
A43 WebTRIS Data Site Location Plans



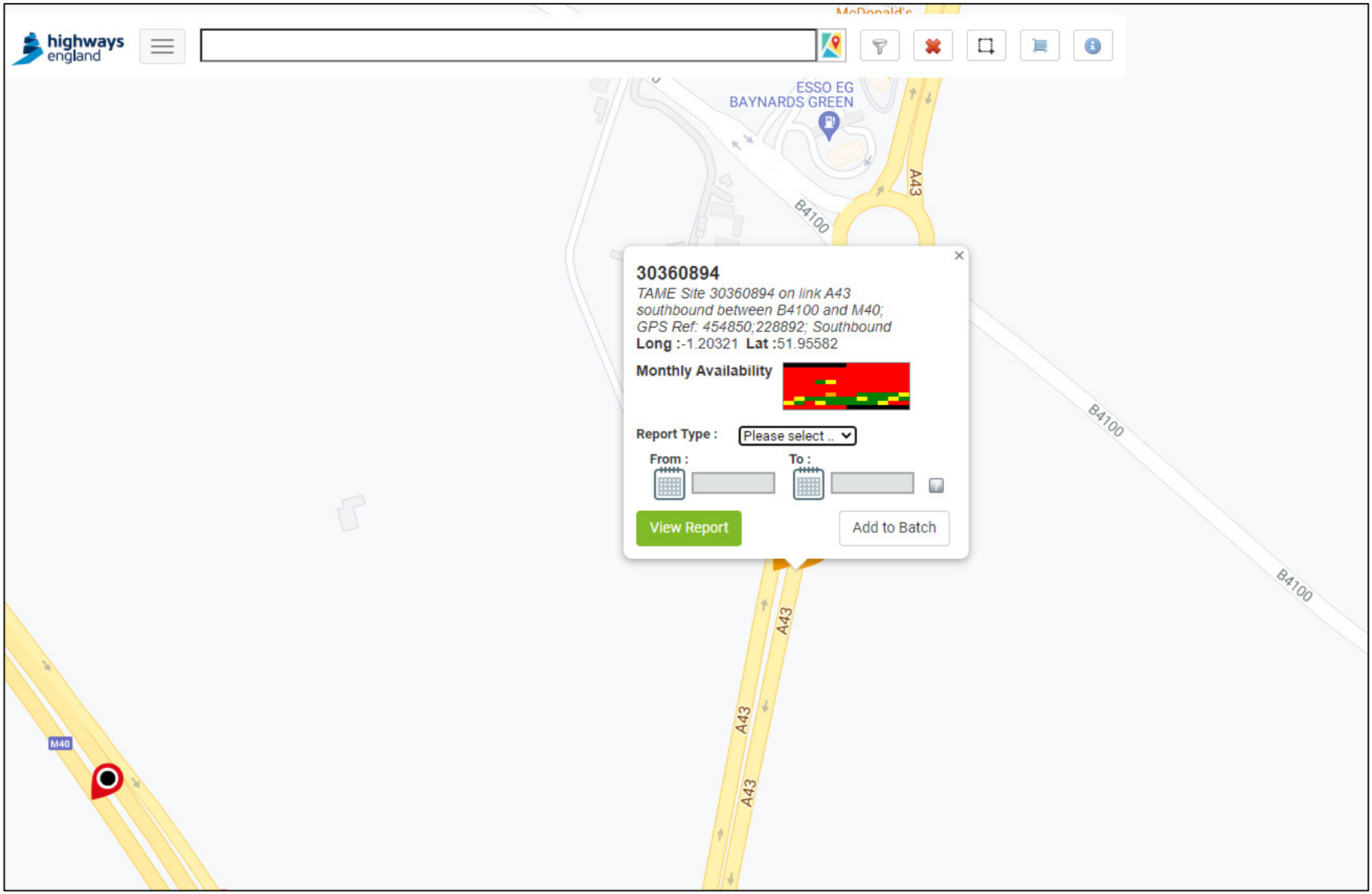
A43 WebTRIS Data Site Location Plans



A43 WebTRIS Data Site Location Plans



A43 WebTRIS Data Site Location Plans



WebTRIS Data - Site Number 30360893 - A43 Northbound

Report Date	00:00	00:15	00:30	00:45	01:00	01:15	01:30	01:45	02:00	02:15	02:30	02:45	03:00	03:15	03:30
Wed 01 Apr 2015	45	45	30	39	31	34	19	14	24	23	18	38	33	28	40
Thu 02 Apr 2015	18	15	14	18	24	22	12	11	13	21	24	19	19	22	23
Fri 03 Apr 2015	38	39	39	34	25	23	28	18	11	27	16	13	19	21	27
Sat 04 Apr 2015	38	20	19	17	20	15	11	12	14	14	21	14	9	9	15
Sun 05 Apr 2015	32	18	10	19	12	12	13	10	7	8	10	9	7	7	13
Mon 06 Apr 2015	35	30	20	26	9	10	16	16	16	14	13	12	22	13	7
Tue 07 Apr 2015	31	40	28	26	18	12	20	17	15	14	16	11	11	18	21
Wed 08 Apr 2015	63	56	41	37	41	40	25	34	30	31	32	36	22	42	42
Thu 09 Apr 2015	64	44	51	42	41	40	37	37	42	33	40	40	46	48	59
Fri 10 Apr 2015	70	53	51	38	44	45	30	40	29	42	32	21	43	36	49
Sat 11 Apr 2015	62	66	46	42	40	39	40	26	31	41	31	32	33	23	33
Sun 12 Apr 2015	41	34	37	20											
Mon 13 Apr 2015					16	16	18	23	16	11	11	23	14	20	15
Tue 14 Apr 2015	50	56	35	45	38	43	41	32	37	30	40	34	29	33	38
Wed 15 Apr 2015	16	26	25	22	21	18	19	25	15	12	19	9	14	15	18
Thu 16 Apr 2015	60	62	41	43	38	27	29	41	33	45	37	42	25	26	47
Fri 17 Apr 2015	60	58	42	53	48	65	36	45	41	27	38	46	48	37	48
Sat 18 Apr 2015	69	48	49	46	31	45	33	31	40	39	29	29	40	41	41
Sun 19 Apr 2015	40	41	34	21	13	22	13	12	19	12	13	15	5	6	7
Mon 20 Apr 2015	24	24	20	30	22	13	13	26	12	16	12	17	13	12	25
Tue 21 Apr 2015	55	50	28	25	39	33	33	22	32	44	22	40	40	36	36
Wed 22 Apr 2015	56	43	35	39	36	35	31	37	39	30	31	46	42	39	42
Thu 23 Apr 2015	20	24	29	29	16	13	20	23	17	19	16	19	21	18	16
Fri 24 Apr 2015	56	63	36	43	52	36	43	52	33	24	38	49	37	45	42
Sat 25 Apr 2015	11	13	6	11	5	9	6	5	4	1	6	10	7	5	6
Sun 26 Apr 2015	4	3	7	6	3	3	2	6	3	4	1	1	1	1	3
Mon 27 Apr 2015	26	36	34	25	17	12	17	14	13	10	10	8	14	13	21
Tue 28 Apr 2015	44	41	35	28	41	32	25	28	27	30	44	25	37	25	32
Wed 29 Apr 2015	64	52	43	40	39	30	29	29	37	32	31	32	23	28	39
Thu 30 Apr 2015	55	45	49	41	33	23	32	45	28	31	39	31	38	39	39
Fri 01 May 2015	72	64	46	33	39	46	32	37	33	35	35	38	39	36	37
Total Weekday	1022	966	772	756	728	668	605	666	593	601	614	649	649	650	763
Average Weekday	46	44	35	34	32	29	26	29	26	26	27	28	28	28	33

WebTRIS Data - Site Number 30360893 - A43 Northbound

03:45	04:00	04:15	04:30	04:45	05:00	05:15	05:30	05:45	06:00	06:15	06:30	06:45	07:00	07:15	07:30	07:45
33	45	53	62	64	55	90	109	170	203	289	405	432	463	500	503	484
29	35	37	38	54	71	97	111	145	215	264	355	383	438	437	433	461
30	32	34	53	43	51	52	79	87	92	121	136	152	153	171	188	214
17	16	15	12	23	21	33	38	39	69	68	69	101	107	111	119	132
6	7	11	14	11	11	16	19	29	27	29	51	47	48	68	50	81
19	24	17	14	27	25	32	43	39	27	44	72	86	97	93	67	79
18	24	40	38	49	65	117	136	186	291	339	416	453	367	504	522	443
50	41	61	54	64	89	95	114	193	203	313	394	443	450	466	453	450
54	43	46	47	50	71	98	127	160	179	325	377	430	488	477	493	469
53	63	47	65	56	73	97	112	165	176	263	336	381	408	427	451	449
40	38	39	33	25	28	33	48	47	48	100	131	128	146	154	174	208
26	37	40	54	55	88	115	150	204	326	396	440	432	421	459	490	443
34	29	39	53	47	69	119	134	180	246	382	437	439	480	470	495	449
28	34	22	43	37	68	49	104	159	197	341	432	482	517	492	504	513
47	41	43	60	87	98	117	138	165	217	336	392	465	481	495	515	481
49	54	43	69	74	79	89	118	160	194	267	320	440	449	463	484	483
31	19	22	32	38	28	21	50	46	41	87	104	108	132	143	164	171
5	11	12	7	14	17	14	24	29	23	37	55	57	103	82	102	95
14	22	38	44	63	66	93	151	228	269	386	408	489	524	493	492	494
46	46	51	61	89	72	93	122	179	235	338	401	478	534	512	539	524
52	31	32	42	50	62	93	133	181	212	302	435	461	476	470	547	480
17	23	21	27	31	77	90	133	189	269	309	316	347	439	443	494	429
47	64	58	68	61	66	87	146	154	223	282	340	414	441	439	445	461
10	2	12	2	3	11	13	15	9	19	18	38	33	39	55	43	32
7	2	8	5	4	5	6	5	9	12	16	7	22	21	17	17	24
29	25	37	41	43	71	120	169	228	304	407	436	525	377	538	552	534
33	44	54	56	57	69	83	130	193	259	345	471	494	539	570	565	516
39	36	57	66	54	77	89	134	169	250	329	441	520	509	548	587	561
37	35	32	48	71	78	89	128	158	229	304	413	489	480	545	555	505
44	73	50	68	70	68	95	102	149	198	258	352	401	431	448	437	413
828	901	952	1171	1296	1608	2099	2823	3841	5014	6940	8525	9636	9962	10460	10811	10335
36	39	41	51	56	70	91	123	167	218	302	371	419	433	455	470	449
																18

WebTRIS Data - Site Number 30360893 - A43 Northbound

08:00	08:15	08:30	08:45	09:00	09:15	09:30	09:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00
485	475	448	455	420	400	413	416	372	382	449	410	443	422	412	431	382
523	467	400	425	398	386	423	374	428	382	409	425	432	450	449	460	446
218	227	249	242	329	355	338	410	418	470	425	462	442	473	435	403	450
140	147	219	221	231	271	295	352	353	393	394	435	410	437	431	436	456
88	85	117	138	147	182	191	211	271	315	345	335	392	406	381	446	403
131	118	153	153	188	221	223	282	315	348	373	415	449	381	437	368	467
473	481	454	418	463	418	422	444	367	378	413	414	418	333	361	409	403
453	469	472	451	425	429	430	412	403	427	392	371	364	410	409	386	413
509	501	487	422	392	382	451	417	409	412	414	440	408	432	395	407	378
430	455	437	407	360	407	437	418	422	428	444	443	465	453	420	466	449
231	251	282	264	315	310	347	360	380	437	481	425	444	469	507	437	446
505	527	467	468	456	440	388	389	403	371	393	395	351	409	393	406	329
487	473	452	451	380	449	414	411	399	400	403	427	376	391	377	346	344
493	502	472	444	407	441	461	388	453	432	362	359	355	342	328	390	350
504	490	468	404	408	419	410	424	402	373	370	367	347	377	343	387	354
441	448	399	374	362	367	362	365	359	356	388	377	390	421	405	430	428
163	218	229	265	239	308	309	318	349	367	402	413	406	447	434	386	379
102	131	118	128	155	191	214	248	242	279	327	324	316	329	348	354	356
495	556	420	437	486	408	393	373	416	403	396	405	384	349	396	334	375
541	521	574	493	389	440	421	413	411	331	333	345	312	351	339	341	304
564	587	553	516	454	426	463	427	381	424	404	377	378	338	359	348	346
452	421	380	343	325	333	337	342	399	427	416	341	335	330	317	359	373
459	461	385	349	287	368	393	343	383	352	341	380	389	404	457	468	453
54	49	66	58	74	105	106	115	102	109	126	129	90	96	90	82	75
31	20	36	44	40	54	57	58	72	60	77	58	76	90	78	74	74
525	515	493	442	396	449	380	398	414	394	355	415	374	395	382	333	354
559	532	557	507	471	482	443	449	376	353	359	358	331	350	311	347	341
573	531	519	488	444	435	398	411	365	370	377	351	328	312	352	348	352
563	535	505	453	454	413	402	393	363	322	371	354	338	364	390	325	315
459	408	402	340	319	362	369	390	384	384	510	428	375	425	414	457	414
10842	10700	10146	9482	9013	9230	9171	9089	9042	8919	9097	9059	8784	8912	8881	8949	8820
471	465	441	412	392	401	399	395	393	388	396	394	382	387	386	389	383
56																

WebTRIS Data - Site Number 30360893 - A43 Northbound

12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15
348	399	391	385	425	413	414	392	407	387	451	420	448	485	493	470	507
465	470	464	469	438	444	447	481	507	484	523	448	477	483	493	517	536
466	460	432	446	483	465	453	425	464	420	409	388	413	356	427	394	413
367	383	393	332	332	411	327	349	322	326	292	286	319	327	300	328	324
348	357	318	367	273	305	267	271	256	252	285	295	273	266	283	272	350
451	516	469	477	472	428	429	408	440	440	438	438	454	431	428	371	390
400	380	450	395	459	421	443	404	482	470	437	414	425	497	452	509	490
379	377	371	380	406	390	432	427	427	428	434	435	449	457	479	522	554
404	375	369	409	365	397	367	395	480	449	465	465	481	474	484	493	542
449	435	384	436	473	446	414	446	437	470	464	434	501	459	464	483	535
378	430	368	381	339	391	353	298	368	301	318	296	355	337	300	282	297
352	369	369	409	350	387	388	380	365	358	368	419	394	396	418	431	412
338	347	374	346	337	395	365	341	387	415	453	399	428	462	469	524	497
340	351	337	337	388	384	415	452	443	453	457	391	464	474	427	484	514
384	384	358	399	394	431	421	448	417	390	415	484	472	473	528	510	544
426	403	432	413	440	461	448	487	506	437	418	505	494	548	528	539	570
413	336	336	327	314	309	274	361	268	260	287	266	277	275	289	307	276
344	339	317	337	320	322	332	378	325	338	381	356	344	406	367	399	395
341	349	328	354	388	286	330	398	371	336	342	358	368	362	354	388	485
348	342	297	347	360	347	366	368	380	410	404	430	395	450	468	523	508
366	344	343	324	360	372	371	391	427	392	324	406	469	439	526	547	552
376	355	362	372	420	407	405	422	406	415	400	444	420	501	534	555	518
447	489	492	505	466	492	514	523	499	535	518	570	526	526	555	560	560
118	8	29	105	63	83	50	58	62	67	80	57	83	79	65	51	50
63	69	88	73	76	76	61	79	57	75	84	82	73	102	92	101	117
343	318	336	345	427	449	503	512	476	394	385	409	409	434	454	437	500
351	352	328	353	381	373	363	384	328	341	347	359	425	452	470	509	532
349	343	369	364	368	383	391	410	401	416	407	445	443	437	474	534	525
392	424	356	405	437	409	406	396	378	394	336	410	449	482	503	540	551
460	416	453	522	500	517	522	541	532	509	459	439	503	529	525	445	433
8975	8998	8864	9192	9537	9497	9607	9831	9960	9743	9654	9910	10307	10607	10953	11285	11668
390	391	385	400	415	413	418	427	433	424	420	431	448	461	476	491	507

WebTRIS Data - Site Number 30360893 - A43 Northbound

16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00	20:15	20:30
531	513	491	492	504	514	555	559	439	425	375	269	207	105	103	84	74
542	507	501	509	534	542	547	496	525	531	524	534	463	426	382	310	284
372	323	300	317	313	241	261	251	218	165	154	153	152	124	135	96	118
310	309	275	270	254	284	248	234	253	195	178	189	172	162	143	95	119
260	314	336	300	335	322	327	283	324	282	303	268	214	224	213	190	164
379	408	417	415	400	379	360	364	374	333	367	278	352	249	285	273	206
550	549	503	534	474	500	503	474	415	345	340	317	208	221	177	230	217
553	535	506	547	542	533	535	500	428	420	395	323	287	306	239	248	194
520	497	481	554	566	544	563	525	520	444	380	352	352	341	301	273	250
482	427	533	500	489	499	530	509	385	387	328	330	360	315	313	291	272
286	298	305	300	301	312	316	293	258	271	291	235	205	188	154	132	147
499	472	480	507	495	526	472	457	400	341	284	262	258	261	225	166	184
522	489	548	522	573	526	526	526	473	383	376	317	246	233	115	97	78
522	531	472	580	506	547	524	544	479	423	366	319	263	243	266	241	216
521	460	516	542	610	528	522	550	539	471	387	360	277	328	313	313	294
515	532	588	546	551	590	528	448	433	386	339	329	244	320	325	248	254
319	309	277	268	278	278	269	243	257	216	200	185	175	151	139	138	108
404	416	390	397	386	338	370	347	340	350	332	279	291	247	243	239	219
493	523	509	513	416	546	591	469	392	372	345	337	243	210	218	218	196
534	558	548	564	526	584	527	526	450	376	344	316	238	234	273	210	195
570	549	540	550	567	596	559	502	421	397	380	330	288	289	239	222	184
567	559	559	572	596	604	569	584	541	481	464	390	349	343	306	214	235
558	566	558	577	563	546	509	493	480	352	373	283	224	168	116	67	43
72	64	66	45	48	63	43	53	55	36	50	51	46	35	38	15	24
99	104	164	244	245	217	204	272	253	244	228	225	220	193	162	166	169
473	488	519	555	504	483	485	441	387	353	307	249	188	212	200	196	139
555	579	573	570	596	588	562	522	422	373	337	272	275	261	217	221	185
601	572	628	577	606	543	581	521	501	418	391	352	312	311	248	225	187
484	577	570	603	585	602	557	523	519	463	443	362	323	272	251	230	233
398	419	426	452	569	405	360	377	421	358	386	366	353	416	412	363	357
11741	11633	11766	12098	12085	11966	11726	11161	10162	8997	8385	7400	6462	6188	5659	5036	4595
510	506	512	526	525	520	510	485	442	391	365	322	281	269	246	219	200
		2083														

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20:45	21:00	21:15	21:30	21:45	22:00	22:15	22:30	22:45	23:00	23:15	23:30	23:45	Total
55	46	45	52	34	36	32	34	21	28	9	16	18	25537
305	212	217	177	137	130	106	109	69	70	76	59	29	29154
103	74	85	61	69	63	56	58	41	41	30	17	29	20146
123	105	87	65	71	75	67	61	51	48	41	36	35	17132
178	147	125	133	121	82	81	64	63	55	50	41	39	16041
224	223	179	163	140	137	110	84	87	71	85	45	32	20985
171	160	144	137	119	127	137	89	94	75	97	74	56	26940
185	159	157	145	121	127	116	120	99	89	79	78	85	27619
195	186	170	167	140	157	116	124	103	72	64	71	72	28368
225	217	223	170	128	142	117	143	95	81	81	74	66	28028
140	109	103	104	77	66	64	75	62	61	68	73	53	19530
													132
152	151	114	140	107	109	94	88	66	71	76	55	46	25572
69	67	72	58	48	57	47	40	37	35	31	34	25	25710
255	207	182	162	122	142	135	117	83	81	76	80	66	27136
317	297	233	207	201	171	142	135	95	87	101	90	87	28767
179	173	159	151	137	112	142	111	78	75	61	70	58	27936
82	90	82	81	67	73	65	46	44	56	51	41	58	17301
189	177	139	148	135	85	82	58	68	44	59	40	25	17959
191	157	155	135	109	119	97	73	79	69	69	49	50	25660
163	137	153	148	112	125	108	110	80	76	66	63	53	26854
84	88	102	84	57	78	56	41	53	58	38	35	30	26925
216	190	148	139	116	131	109	118	93	83	76	84	58	26990
54	39	41	30	26	22	20	19	17	11	17	20	14	26700
23	8	23	11	12	11	14	13	8	4	11	6	8	4049
121	155	138	112	106	81	88	77	63	59	65	35	28	7139
131	138	139	115	103	102	118	86	70	60	60	33	53	26238
166	172	131	118	135	89	102	90	86	83	69	54	56	27205
163	149	150	151	124	118	122	95	107	78	75	65	65	28063
237	197	162	147	115	132	126	119	112	71	68	85	61	28121
271	280	206	184	179	142	116	120	101	92	88	92	55	28188
4111	3719	3367	3041	2579	2568	2324	2123	1766	1557	1492	1343	1164	
179	162	146	132	112	112	101	92	77	68	65	58	51	

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Report Date	00:00	00:15	00:30	00:45	01:00	01:15	01:30	01:45	02:00	02:15	02:30	02:45	03:00	03:15	03:30
Wed 01 Apr 2015	0	0	3	0	0	0	0	0	1	0	0	0	1	2	0
Thu 02 Apr 2015	27	24	25	17	19	19	16	13	28	17	17	15	12	11	17
Fri 03 Apr 2015	22	22	14	14	15	20	10	17	16	11	10	8	11	12	10
Sat 04 Apr 2015	10	15	12	12	13	2	12	6	8	5	5	10	10	7	3
Sun 05 Apr 2015	4	13	6	9	7	13	7	0	7	6	4	4	2	4	6
Mon 06 Apr 2015	19	9	6	7	7	3	7	6	7	3	4	13	7	5	7
Tue 07 Apr 2015	18	15	10	12	11	11	5	9	4	18	7	12	7	10	6
Wed 08 Apr 2015	0	0	1	0	0	0	0	0	2	0	1	1	0	0	0
Thu 09 Apr 2015	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1
Fri 10 Apr 2015	1	0	1	3	0	0	1	0	0	1	0	0	0	2	0
Sat 11 Apr 2015	0	0	0	0	1	0	2	0	1	0	1	0	1	2	2
Sun 12 Apr 2015	22	22	20	20											
Mon 13 Apr 2015					13	18	12	12	7	9	12	14	15	8	11
Tue 14 Apr 2015	1	1	2	0	0	1	1	1	0	2	0	1	0	1	8
Wed 15 Apr 2015	0	0	0	0	1	0	1	1	2	0	0	0	0	1	1
Thu 16 Apr 2015	7	4	3	4	2	0	1	0	3	0	0	2	1	0	1
Fri 17 Apr 2015	3	6	7	0	1	1	1	0	2	2	0	3	0	3	0
Sat 18 Apr 2015	0	0	2	0	1	1	2	0	0	2	2	1	0	2	1
Sun 19 Apr 2015	15	17	13	6	9	5	6	13	9	11	3	6	5	5	7
Mon 20 Apr 2015	24	18	7	10	7	11	6	4	12	8	9	5	10	10	11
Tue 21 Apr 2015	0	1	0	0	0	2	1	0	0	0	2	0	1	2	0
Wed 22 Apr 2015	1	0	1	1	1	0	0	1	1	0	1	0	2	2	2
Thu 23 Apr 2015	22	20	18	24	16	18	17	14	18	16	22	23	17	22	20
Fri 24 Apr 2015	0	2	0	2	2	0	1	0	0	0	0	1	0	0	0
Sat 25 Apr 2015	30	20	12	19	13	8	12	9	17	11	15	5	17	14	15
Sun 26 Apr 2015	21	18	18	12	8	8	12	10	12	7	6	5	7	9	7
Mon 27 Apr 2015	12	15	12	12	10	4	5	10	9	5	10	5	9	8	19
Tue 28 Apr 2015	0	3	0	3	1	1	1	0	1	0	1	0	0	1	0
Wed 29 Apr 2015	0	0	0	1	0	1	2	1	0	1	1	0	1	2	0
Thu 30 Apr 2015	2	0	1	0	1	0	0	1	0	0	1	1	4	0	1
Fri 01 May 2015	0	1	1	0	2	1	1	1	1	2	0	3	0	2	2
Total Weekday	159	141	112	110	109	111	89	91	114	95	98	107	98	106	117
Average Weekday	7	6	5	5	5	5	4	4	5	4	4	5	4	5	5

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03:45	04:00	04:15	04:30	04:45	05:00	05:15	05:30	05:45	06:00	06:15	06:30	06:45	07:00	07:15	07:30	07:45
1	0	1	0	3	19	31	43	38	55	72	123	169	154	152	164	197
19	15	14	27	16	23	34	38	47	48	67	87	132	160	153	165	167
19	16	14	17	20	26	20	31	34	47	38	56	50	48	62	61	71
12	9	9	13	14	16	12	13	17	18	32	36	23	34	45	55	57
7	2	8	5	6	9	8	11	14	12	14	18	15	21	17	38	33
13	8	13	10	14	9	12	16	12	28	31	25	37	20	35	47	31
8	15	26	18	20	37	32	39	52	64	82	128	147	148	165	220	174
1	0	1	3	13	25	35	39	42	60	76	104	136	176	182	183	202
4	1	0	14	18	26	39	40	30	58	88	116	155	174	180	196	159
1	2	0	0	23	28	33	55	43	45	74	92	133	122	144	131	118
2	0	6	16	17	17	17	21	20	31	31	33	37	43	60	55	64
16	14	22	26	20	28	39	46	71	71	103	136	209	209	223	219	197
17	16	15	32	17	23	31	42	50	46	108	120	185	238	200	194	184
0	0	0	3	1	2	28	40	44	57	80	133	166	171	214	190	199
0	0	0	2	0	0	16	45	50	67	85	136	164	160	186	190	185
3	1	0	1	0	10	31	46	45	57	85	110	142	139	180	118	162
5	6	9	6	6	23	21	26	29	35	48	40	53	58	75	80	67
5	7	7	7	7	10	5	16	14	19	25	24	30	23	28	38	33
23	16	12	21	29	27	42	71	61	83	125	203	230	227	200	212	186
1	1	1	1	1	20	41	52	60	73	117	151	174	205	227	223	208
1	10	14	23	26	32	32	50	54	81	109	158	167	211	244	184	207
28	31	20	30	54	30	39	48	53	75	103	93	105	152	144	136	122
0	0	1	0	15	23	40	48	52	53	89	113	132	165	169	147	131
10	10	13	15	9	15	27	35	20	43	45	48	47	49	73	88	102
12	13	10	10	6	14	22	13	14	25	29	29	29	34	36	42	48
14	13	17	22	24	32	47	60	69	89	111	169	200	219	208	227	226
0	0	0	0	10	30	37	50	55	80	103	161	173	208	205	236	215
2	1	0	0	24	17	48	48	49	85	108	132	166	165	213	178	176
7	12	17	25	17	28	39	54	50	71	105	147	155	184	205	189	176
1	0	0	1	26	19	43	49	50	60	100	124	150	162	143	142	137
179	172	188	276	391	514	789	1050	1111	1453	2059	2817	3477	3817	4034	3952	3830
8	7	8	12	17	22	34	46	48	63	90	122	151	166	175	172	167
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08:00	08:15	08:30	08:45	09:00	09:15	09:30	09:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00
200	145	175	152	113	109	102	124	111	108	106	100	108	116	95	102	110
145	130	128	118	108	91	90	104	108	105	97	101	137	134	113	125	135
63	71	91	92	98	110	115	94	119	125	132	130	159	177	165	165	197
61	78	71	85	79	91	126	121	117	134	144	151	146	147	138	139	123
36	37	51	59	64	67	84	73	94	110	108	121	119	146	148	115	147
44	47	64	63	74	68	101	107	128	120	136	143	153	149	153	155	142
184	196	198	153	82	101	116	116	139	133	95	120	115	128	102	120	139
202	193	174	155	101	111	115	117	107	117	111	114	98	109	122	119	98
139	147	131	130	107	112	130	128	118	103	126	124	114	106	107	115	110
129	129	131	118	95	113	108	122	116	126	125	119	128	132	150	143	102
59	67	80	96	90	100	113	111	122	117	101	114	124	146	125	140	127
222	185	204	119	128	115	118	101	103	115	124	116	98	115	102	108	106
194	171	189	197	188	118	108	126	99	110	98	100	110	94	88	94	104
194	177	170	207	179	145	117	116	105	117	98	108	116	111	98	101	100
186	189	189	127	119	112	133	147	129	94	90	113	104	117	107	91	115
123	118	124	119	117	128	104	113	124	133	119	122	130	127	116	125	127
88	81	87	105	112	125	142	134	139	142	155	141	130	135	155	162	154
47	49	66	59	63	83	80	94	109	114	125	140	159	135	145	146	129
224	163	188	132	113	110	106	121	109	132	115	128	110	132	120	100	125
196	167	174	152	131	128	129	116	117	97	107	121	101	87	106	99	96
165	167	151	146	126	107	120	132	103	113	113	119	116	114	104	101	108
114	126	125	116	110	102	113	110	106	116	125	105	127	102	112	117	116
135	136	129	124	96	126	109	118	114	98	97	116	124	115	149	129	145
118	119	142	135	150	159	174	164	166	172	150	175	169	136	149	133	112
48	52	73	75	83	76	111	116	120	124	150	140	130	165	162	151	143
211	158	142	155	118	103	121	114	122	117	120	120	128	124	108	117	113
170	133	143	144	121	118	104	107	114	108	108	120	93	108	102	109	116
165	134	142	155	137	108	106	119	99	107	115	121	112	98	126	117	125
179	163	177	162	134	140	131	123	119	111	126	97	120	103	113	98	109
131	140	116	134	117	127	106	112	132	119	160	136	124	118	133	124	140
3715	3385	3455	3170	2712	2602	2602	2687	2641	2624	2643	2693	2725	2716	2691	2674	2778
162	147	150	138	118	113	113	117	115	114	115	117	118	118	117	116	121
47																

WebTRIS Data - Site Number 30360894 - A43 Southbound

12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15
103	102	109	106	103	126	91	115	101	103	115	109	111	113	130	121	118
127	134	124	129	135	134	130	124	127	126	142	142	153	124	145	149	143
166	162	138	137	137	133	143	137	130	136	127	121	120	129	120	126	134
113	135	144	139	111	100	118	110	114	119	118	108	125	137	88	135	102
122	122	130	137	119	112	98	87	114	114	117	103	103	115	108	112	109
136	116	134	130	121	144	138	120	138	122	139	130	141	137	129	154	130
125	131	114	112	122	96	101	95	101	91	84	96	97	108	110	113	112
118	111	121	100	125	102	116	105	114	117	130	125	112	107	129	125	108
110	110	96	116	122	127	124	130	104	131	105	135	120	135	129	170	100
147	140	173	149	110	145	143	172	174	175	161	162	151	167	191	165	120
102	116	139	117	130	140	127	106	120	104	125	111	122	118	124	120	120
94	117	103	95	108	124	121	112	122	88	107	99	102	100	115	108	100
109	106	107	103	106	112	100	96	102	108	91	97	104	104	106	103	96
117	123	105	103	93	80	113	81	97	113	108	122	122	122	103	117	117
100	97	94	118	115	96	110	117	126	124	108	105	102	119	116	119	102
127	121	134	123	128	155	139	132	129	142	152	143	133	140	141	146	138
148	127	139	128	107	140	113	85	117	107	135	106	109	119	115	119	135
147	148	143	136	143	133	128	122	134	144	144	138	139	150	125	145	152
126	129	114	110	123	119	101	113	122	119	110	113	109	91	102	125	114
110	107	107	103	91	125	129	120	107	108	112	104	116	115	124	133	134
103	125	124	128	110	109	131	120	128	115	113	109	117	127	125	121	139
102	128	119	120	100	134	98	108	118	116	114	109	131	113	121	133	131
128	105	116	121	133	129	143	118	145	148	139	100	142	143	138	131	131
155	178	168	198	144	155	137	144	140	138	141	140	129	126	138	124	126
162	168	160	143	148	155	153	145	162	145	155	150	142	140	126	145	136
100	100	112	97	102	117	118	128	99	119	92	109	86	94	105	104	126
85	89	122	106	111	108	99	118	115	121	127	115	106	107	130	113	111
104	92	110	112	114	117	104	118	112	115	104	102	111	120	140	107	125
117	92	123	125	101	104	101	115	100	109	116	99	105	115	119	100	124
129	126	109	145	146	138	143	138	137	135	121	145	135	144	136	138	132
2683	2663	2708	2688	2656	2774	2736	2732	2748	2781	2717	2691	2726	2774	2904	2921	2785
117	116	118	117	115	121	119	119	119	121	118	117	119	121	126	127	121

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16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00	20:15	20:30
137	164	152	172	186	147	109	124	90	86	65	95	127	102	114	87	106
145	194	183	187	140	156	154	178	145	115	93	97	98	87	86	82	63
118	114	107	107	117	116	89	102	86	59	55	71	57	46	56	40	41
109	114	93	91	95	97	83	111	98	77	73	70	77	64	45	51	54
122	127	120	115	99	124	124	119	104	111	106	96	87	75	68	77	64
121	131	129	122	120	117	123	126	118	120	115	107	101	86	74	84	83
110	105	115	135	126	148	120	122	96	82	77	81	85	56	51	5	2
120	134	143	148	118	136	125	91	104	93	90	63	35	0	1	0	0
106	173	190	159	146	154	135	130	120	96	91	83	4	1	4	1	0
108	95	176	146	175	180	118	121	129	117	111	74	2	1	1	1	1
111	124	128	131	122	113	102	131	88	87	128	117	93	70	64	64	53
114	150	126	139	128	111	119	89	87	92	70	77	22	1	2	0	0
152	131	133	135	128	123	112	121	105	120	70	78	31	0	2	0	4
117	119	186	168	182	166	161	126	109	98	92	80	75	53	1	1	9
110	130	134	134	138	174	149	136	127	98	89	85	75	12	3	10	9
157	145	151	143	148	130	136	120	120	96	99	92	82	12	2	3	1
127	148	133	126	139	128	126	117	109	103	81	87	56	68	86	54	52
141	136	175	148	121	150	134	130	118	121	127	115	87	87	81	79	84
113	125	131	135	123	148	98	108	100	104	81	80	87	58	22	1	4
131	153	119	138	136	157	131	125	111	107	83	86	80	24	0	3	2
129	139	143	140	147	134	132	127	109	107	104	99	44	0	0	2	10
138	144	154	163	155	161	142	131	106	102	105	77	1	0	1	2	0
146	150	150	159	147	121	118	124	114	112	98	105	89	79	80	63	102
135	133	138	172	134	140	133	117	117	105	122	114	91	110	71	74	62
181	152	137	137	140	130	124	97	106	90	99	94	77	70	81	84	75
114	145	119	138	144	141	107	106	91	84	81	74	60	36	0	1	1
146	130	131	133	138	143	140	119	106	96	86	70	23	0	0	2	0
145	146	137	150	134	155	133	124	119	98	84	69	0	0	0	3	1
144	124	152	132	153	113	124	94	99	99	106	106	84	69	68	23	1
128	148	129	134	139	147	146	156	128	150	139	127	106	6	0	3	1
2949	3189	3290	3317	3268	3278	2921	2800	2519	2331	2084	1976	1368	729	568	417	441
128	139	143	144	142	143	127	122	110	101	91	86	59	32	25	18	19
		572														

WebTRIS Data - Site Number 30360894 - A43 Southbound

20:45	21:00	21:15	21:30	21:45	22:00	22:15	22:30	22:45	23:00	23:15	23:30	23:45	Total
83	69	65	66	52	60	54	46	41	30	22	27	38	7897
69	64	54	47	58	50	41	55	30	34	37	21	24	8533
38	35	30	24	31	29	17	18	29	18	15	17	14	6937
58	36	42	37	33	29	22	31	31	25	25	22	16	6321
59	63	53	39	46	36	29	34	31	34	28	25	18	6064
75	67	68	63	56	43	47	38	40	24	25	27	14	7041
2	0	1	0	0	1	1	0	1	0	1	0	2	7100
0	0	0	0	0	0	0	0	0	0	0	0	0	6812
2	4	1	0	1	0	0	0	0	0	2	2	2	7019
1	0	0	0	0	0	1	1	0	2	0	0	0	7345
53	36	38	43	30	33	41	32	42	34	25	22	22	6530
													84
0	2	0	2	0	2	0	1	1	0	0	1	0	7110
2	1	1	0	1	1	0	2	0	0	1	3	0	6932
4	8	10	7	4	1	6	5	5	4	2	2	2	7233
13	7	6	4	5	6	3	3	2	2	1	5	4	7018
0	5	1	1	3	0	1	3	1	1	0	1	0	7205
42	40	42	27	22	25	21	17	22	36	29	20	15	6935
61	63	47	61	44	45	33	43	36	26	23	24	9	7091
1	1	1	0	0	0	1	0	0	0	0	1	0	7611
2	2	1	4	2	0	0	0	0	0	0	0	0	7231
72	76	58	55	46	61	47	49	41	35	39	29	25	7964
0	0	0	0	0	1	0	1	2	0	1	1	4	7079
79	76	66	54	45	44	55	40	45	29	46	39	19	8050
55	42	55	44	56	34	48	42	30	41	27	24	15	8351
65	56	45	53	47	39	37	33	30	28	23	16	11	7357
1	1	2	1	1	1	1	1	1	0	0	0	0	7343
4	1	1	0	3	0	0	0	0	0	0	0	0	6948
2	3	2	0	1	0	1	1	2	0	2	0	0	6927
0	1	3	0	3	2	1	0	2	0	2	1	0	7269
0	1	2	0	0	0	0	0	0	0	0	1	0	7481
450	424	373	328	312	302	277	264	243	179	196	178	148	
20	18	16	14	14	13	12	11	11	8	9	8	6	

APPENDIX O: ADDITIONAL A43 FLOW VALIDATION (WEBTRIS)

AM Peak								
Observed	Modelled	GEH	Total Veh					Validate?
Total	Total	Total	Diff	% Diff	<700	700-2700	>2700	
1,856	1,353	12.6	-503	-27%	-	No	-	No

PM Peak								
Observed	Modelled	GEH	Total Veh					Validate?
Total	Total	Total	Diff	% Diff	<700	700-2700	>2700	
2,083	1,759	7.4	-324	-16%	-	No	-	No

A43 Flow Validation (Northbound)

AM Peak								
Observed	Modelled	GEH	Total Veh					Validate?
Total	Total	Total	Diff	% Diff	<700	700-2700	>2700	
647	1,534	26.9	887	137%	No	-	-	No

PM Peak								
Observed	Modelled	GEH	Total Veh					Validate?
Total	Total	Total	Diff	% Diff	<700	700-2700	>2700	
572	1,312	24.1	740	129%	No	-	-	No

A43 Flow Validation (Southbound)

Note: Observed data from WebTRIS (April 2015)

APPENDIX P: B4100 MANUAL CLASSIFIED COUNT DATA

Tracsis plc
Traffic and Data Services

Client :	Oxfordshire CC	**Site plan for :**	1
Project :	3262-LON Bicester	**Date :**	15/06/2016



A - B4100 N

B - A4095 E

C - Banbury Road

D - A4095 W

Click Here for Map

Tracsis plc
Traffic and Data Services

Client: Oxfordshire CC
Project: 3262-LON Bicester
Site: 1
Date: 15/06/2016

Entry : A - B4100 (N)

	Destination : A - B4100 (N)									Destination : B - A4095 (E)									Destination : C - B4100 (S)									Destination : D - A4095 (W)									Arm Totals
	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	
07:00	0	0	0	0	0	0	0	0	0	60	0	14	5	5	0	0	0	84	42	0	9	2	0	0	1	0	54	18	0	5	0	0	0	1	0	24	162
07:15	1	0	0	0	0	0	0	0	1	74	0	16	1	2	0	0	0	93	45	1	6	0	0	0	0	0	52	19	0	5	3	0	0	0	0	27	173
07:30	0	0	0	0	0	0	0	0	0	68	0	16	3	4	0	0	0	91	42	0	8	3	0	0	0	0	53	29	0	2	0	0	0	0	0	31	175
07:45	0	0	0	0	0	0	0	0	0	87	1	10	4	2	0	2	0	106	42	1	9	2	0	0	0	0	54	24	0	6	0	0	0	0	0	30	190
1 Hr	1	0	0	0	0	0	0	0	1	289	1	56	13	13	0	2	0	374	171	2	32	7	0	0	1	0	213	90	0	18	3	0	0	1	0	112	700
08:00	0	0	0	0	0	0	0	0	0	77	0	19	3	2	0	1	0	102	49	2	6	2	0	0	0	0	59	26	0	1	2	0	0	0	0	29	190
08:15	0	0	0	0	0	0	0	0	0	92	0	17	7	4	1	0	0	121	55	0	5	1	0	0	0	0	61	24	0	1	3	0	0	0	0	28	210
08:30	0	0	0	0	0	0	0	0	0	81	0	7	2	3	0	0	0	93	54	0	6	3	0	0	1	0	64	34	0	0	0	0	0	0	0	34	191
08:45	0	0	0	0	0	0	0	0	0	66	0	5	3	2	2	0	0	78	42	0	3	0	0	0	0	0	45	7	1	0	0	1	0	0	0	9	132
1 Hr	0	0	0	0	0	0	0	0	0	316	0	48	15	11	3	1	0	394	200	2	20	6	0	0	1	0	229	91	1	2	5	1	0	0	0	100	723
09:00	0	0	0	0	0	0	0	0	0	54	0	9	7	6	1	0	0	77	38	0	2	3	0	0	0	0	43	10	0	2	0	1	0	0	0	13	133
09:15	0	0	0	0	0	0	0	0	0	40	0	8	5	3	1	0	0	57	28	0	7	2	0	0	0	0	37	12	0	1	2	0	0	0	0	15	109
09:30	0	0	0	0	0	0	0	0	0	35	0	6	2	4	0	0	0	47	24	0	2	0	0	0	0	0	26	7	1	0	0	2	0	0	0	10	83
09:45	0	0	0	0	0	0	0	0	0	41	1	12	6	5	0	0	0	65	27	2	1	0	0	0	0	0	30	7	0	3	1	0	0	0	0	11	106
1 Hr	0	0	0	0	0	0	0	0	0	170	1	35	20	18	2	0	0	246	117	2	12	5	0	0	0	0	136	36	1	6	3	3	0	0	0	49	431
10:00	0	0	0	0	0	0	0	0	0	26	0	7	6	3	0	0	0	42	30	0	3	0	1	0	0	0	34	7	0	1	1	0	0	0	0	9	85
10:15	0	0	0	0	0	0	0	0	0	23	0	5	2	7	0	0	0	37	28	0	6	1	0	0	0	0	35	13	0	2	0	0	0	0	0	15	87
10:30	0	0	0	0	0	0	0	0	0	32	0	4	6	2	0	0	0	44	36	0	2	0	1	0	0	0	39	9	0	0	0	0	0	0	0	9	92
10:45	0	0	0	0	0	0	0	0	0	33	0	8	4	3	1	0	0	49	30	0	2	1	0	0	0	0	33	8	0	6	0	0	0	0	0	14	96
1 Hr	0	0	0	0	0	0	0	0	0	114	0	24	18	15	1	0	0	172	124	0	13	2	2	0	0	0	141	37	0	9	1	0	0	0	0	47	360
11:00	0	0	0	0	0	0	0	0	0	25	0	9	7	4	1	0	0	46	33	0	3	0	0	0	0	0	36	10	0	1	1	0	0	0	0	12	94
11:15	0	0	0	0	0	0	0	0	0	27	0	3	3	3	0	1	0	37	24	1	1	2	0	0	0	0	28	8	0	1	0	0	0	1	0	10	75
11:30	0	0	0	0	0	0	0	0	0	31	0	12	4	3	0	0	0	50	31	0	1	1	0	0	0	0	33	5	0	2	1	0	0	0	0	8	91
11:45	1	0	1	0	0	0	0	0	2	35	0	6	1	5	0	0	0	47	34	0	2	0	0	0	0	0	36	11	0	1	0	0	0	0	0	12	97
1 Hr	1	0	1	0	0	0	0	0	2	118	0	30	15	15	1	1	0	180	122	1	7	3	0	0	0	0	133	34	0	5	2	0	0	1	0	42	357
12:00	0	0	0	0	0	0	0	0	0	24	0	4	4	2	0	0	0	34	22	0	4	0	0	0	0	0	26	6	0	2	0	1	0	0	0	9	69
12:15	0	0	1	0	0	0	0	0	1	35	0	3	2	2	0	0	0	42	30	0	2	2	0	0	0	0	34	16	0	0	0	0	0	0	0	16	93
12:30	0	0	0	0	0	0	0	0	0	32	0	5	3	5	0	0	0	45	41	3	2	0	0	0	1	0	47	9	0	2	0	1	0	0	0	12	104
12:45	0	0	0	0	0	0	0	0	0	28	0	1	6	3	0	0	0	38	21	0	1	1	0	0	0	0	23	9	1	3	0	0	0	0	0	13	74
1 Hr	0	0	1	0	0	0	0	0	1	119	0	13	15	12	0	0	0	159	114	3	9	3	0	0	1	0	130	40	1	7	0	2	0	0	0	50	340
13:00	0	0	0	0	0	0	0	0	0	31	0	3	3	3	0	0	0	40	27	0	4	0	0	0	0	0	31	7	0	1	1	0	0	0	0	9	80
13:15	0	0	0	0	0	0	0	0	0	33	0	5	1	2	0	0	0	41	23	0	3	1	0	0	0	0	27	16	0	1	2	1	0	0	0	20	88
13:30	0	0	0	0	0	0	0	0	0	50	0	9	4	2	0	1	0	66	18	1	1	2	0	0	1	0	23	8	0	3	1	0	0	0	0	12	101
13:45	1	0	0	0	0	0	0	0	1	23	1	2	2	1	0	0	0	29	23	1	3	0	0	0	0	0	27	11	0	2	0	0	0	0	0	13	70
1 Hr	1	0	0	0	0	0	0	0	1	137	1	19	10	8	0	1	0	176	91	2	11	3	0	0	1	0	108	42	0	7	4	1	0	0	0	54	339
14:00	0	0	0	0	0	0	0	0	0	28	0	5	5	4	0	0	0	42	18	0	1	1	0	0	0	0	20	9	0	1	3	0	0	0	0	13	75
14:15	0	0	0	0	0	0	0	0	0	29	0	6	4	2	0	0	0	41	23	1	3	0	0	0	0	0	27	13	0	1	0	0	0	0	0	14	82
14:30	1	0	0	0	0	0	0	0	1	47	1	9	4	3	0	0	0	64	21	0	3	0	0	0	0	0	24	13	0	0	0	0	0	0	0	13	102
14:45	0	0	0	0	0	0	0	0	0	36	0	8	3	3	2	0	0	52	19	0	0	0	0	0	1	0	20	20	0	1	0	0	0	0	0	21	93
1 Hr	1	0	0	0	0	0	0	0	1	140	1	28	16	12	2	0	0	199	81	1	7	1	0	0	1	0	91	55	0	3	3	0	0	0	0	61	352
15:00	0	0	0	0	0	0	0	0	0	27	0	6	1	0	0	1	0	35	15	1	3	2	0	0	0	0	21	14	0	2	0	0	0	0	0	16	72
15:15	0	0	0	0	0	0	0	0	0	32	1	15	5	1	0	1	0	55	25	0	8	0	0	0	0	0	33	15	0	2	1	0	0	0	0	18	106
15:30	0	0	0	0	0	0	0	0	0	30	0	16	2	2	0	1	0	51	22	0	1	0	0	0	0	0	23	14	0	0	0	0	0	0	0	14	88
15:45	0	0	0	0	0	0	0	0	0	37	0	11	5	2	2	1	0	58	18	1	0	0	0	0	1	0	20	15	0	5	0	0	0	0	0	20	98
1 Hr	0	0	0	0	0	0	0	0	0	126	1	48	13	5	2	4	0	199	80	2	12	2	0	0	1	0	97	58	0	9	1	0	0	0	0	68	364
16:00	0	0	0	0	0	0	0	0	0	30	0	12	2	0	3	0	0	47	28	0	7	2	0	0	0	0	37	14	0	5	1	0	0	0	0	20	104
16:15	0	0	0	0	0	0	0	0	0	48	0	8	2	0	1	0	0	59	36	0	4	0	0	0	0	0	40	24	0	4	0	0	0	0	0	28	127
16:30	0	0	0	0	0	0	0	0	0	54	0	6	2	0	2	0	0	64	31	1	2	1	0	0	0	0	35	20	0	1	0	0	0	0	0	21	120
16:45	0	0	0	0	0	0	0	0	0	55	0	7	3	1	0	0	0	66	30	0	4	0	0	0	0	0	34	20	1	4	1	0	0	0	0	26	126
1 Hr	0	0	0	0	0	0	0	0	0	187	0	33	9	1	6	0	0	236	125	1	17	3	0	0	0	0	146	78	1	14	2	0	0	0	0	95	477
17:00	0	0	0	0	0	0	0	0	0	61	0	11	5	3	1	0	0	81	33	0	7	0	0	0	0	0	40	19	0	3	0	0	0	0	0	22	143
17:15	0	0	0	0	0	0	0	0	0	68	0	7	0	1	0	0	0	76	31	1	2	0	0	0	0	0	34	28	0	4	0	0	0	0	0	32	142
17:30	0	0	0	0	0	0	0	0	0	64	0	7	3	0	0	0	0	74	24	0	2	0	0	0	0	0	26	29	0	3	1	0	0	0	0	33	133
17:45	0	0	0	0	0	0	0	0	0	79	0	6	0	1	0	0	0	86	37	1	2	0	0	0	0	0	40	21	0	1	0	0	0	1	0	23	149
1 Hr	0	0	0	0	0	0	0	0	0	272	0	31	8	5	1	0	0	317	125	2	13	0	0	0	0	0	140	97	0	11	1	0	0	1	0	110	567
18:00	0	0	0	0	0	0	0	0	0	49	0	9	1	0	1	0	0	60	32	0	1	0	0	0	1	0	34	27	0	1	0	0	0	0	0	28	122
18:15	0	0	0	0	0	0	0	0	0	66	0	6	1	2	0	0	0	75	32	0	1	0	0	0	0	0	33	19	0	0	0	0	0	0	0	19	127
18:30	0	0	0	0	0	0	0	0	0	31	0	2	1	0	1	0	0	35	22	0	2	0	0	0	0	0	24	11	0	1	0	0	0	0	0	12	71
18:45	0	0	0	0	0	0	0	0	0	36	0	5	0	0	0	1	0	42	28	0	2	1	0	0	0	0	31	19	0	1	0	0	0	1	0	21	94
1 Hr	0	0	0	0	0	0	0	0	0	182	0	22	3	2	2	1	0	212	114	0	6	1	0	0	1	0	122	76	0	3	0	0	0	1	0	80	414
Total	4	0	2	0	0	0	0	0	6	2170	5	387	155	117	20	10	0	2864	1464	18	159	36	2	0	7	0	1686	734	4	94	25	7	0	4	0	868	5424

Tracsis plc
Traffic and Data Services

Client: Oxfordshire CC
Project: 3262-LON Bicester
Site: 1
Date: 15/06/2016

Entry : B - A4095 (E)

	Destination : A - B4100 (N)									Destination : B - A4095 (E)									Destination : C - B4100 (S)									Destination : D - A4095 (W)									Arm Totals
	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	
07:00	37	0	13	2	3	2	0	0	57	0	0	0	0	0	0	0	0	0	15	1	2	0	0	1	0	0	19	121	0	22	1	0	1	0	1	146	222
07:15	49	0	15	1	1	2	1	0	69	1	0	0	0	0	0	0	0	1	18	0	3	0	0	1	0	0	22	131	1	23	0	0	4	3	0	162	254
07:30	60	1	14	3	0	1	0	0	79	2	1	0	0	0	1	0	0	4	18	1	2	0	0	0	0	1	22	147	1	31	1	0	1	1	1	183	288
07:45	68	0	10	5	1	1	0	0	85	4	0	1	0	0	0	0	0	5	21	0	0	0	0	0	0	0	21	168	0	21	3	0	0	1	0	193	304
1 Hr	214	1	52	11	5	6	1	0	290	7	1	1	0	0	1	0	0	10	72	2	7	0	0	2	0	1	84	567	2	97	5	0	6	5	2	684	1068
08:00	48	0	6	2	5	0	0	0	61	1	0	0	0	0	0	0	0	1	21	1	1	1	0	0	0	0	24	137	0	20	2	2	1	0	1	163	249
08:15	53	0	12	2	6	0	0	0	73	1	0	0	0	1	0	0	0	2	27	0	1	0	0	0	0	0	28	127	0	10	3	1	0	0	0	141	244
08:30	31	0	13	3	3	0	0	0	50	8	0	0	1	0	0	0	0	9	34	0	0	0	0	1	0	0	35	140	0	18	6	2	0	0	0	166	260
08:45	25	0	4	2	2	0	1	0	34	9	0	0	0	0	0	0	0	9	23	1	0	0	0	0	0	0	24	135	0	15	1	3	1	1	1	157	224
1 Hr	157	0	35	9	16	0	1	0	218	19	0	0	1	1	0	0	0	21	105	2	2	1	0	1	0	0	111	539	0	63	12	8	2	1	2	627	977
09:00	50	0	7	3	4	0	0	0	64	3	0	0	0	0	0	0	0	3	18	1	1	0	0	1	0	0	21	102	0	18	5	3	0	1	1	130	218
09:15	31	0	11	2	3	0	0	0	47	1	0	0	0	0	0	0	0	1	28	0	4	1	0	0	0	0	33	78	0	19	4	1	1	0	0	103	184
09:30	28	0	6	2	6	0	0	0	42	3	0	0	0	0	0	0	0	3	15	0	3	0	0	1	1	0	20	70	0	10	4	0	0	1	1	86	151
09:45	21	0	6	7	3	0	0	0	37	0	0	0	0	0	0	0	0	0	23	0	1	0	0	0	0	0	24	58	0	16	4	1	1	0	0	80	141
1 Hr	130	0	30	14	16	0	0	0	190	7	0	0	0	0	0	0	0	7	84	1	9	1	0	2	1	0	98	308	0	63	17	5	2	2	2	399	694
10:00	24	0	3	2	8	0	1	0	38	1	0	0	0	0	0	0	0	1	17	0	3	2	0	1	0	0	23	54	0	7	1	0	0	0	0	62	124
10:15	24	0	2	2	3	0	0	0	31	1	0	1	0	0	0	0	1	3	19	0	1	0	0	0	0	0	20	49	1	8	2	1	0	0	1	62	116
10:30	19	0	5	2	2	0	0	0	28	1	0	0	0	0	0	0	0	1	14	0	0	0	0	1	0	0	15	57	1	14	6	2	0	0	0	80	124
10:45	20	0	2	1	6	0	2	0	31	2	0	0	0	0	0	0	0	2	17	0	1	2	0	0	0	0	20	65	0	6	2	2	1	0	0	76	129
1 Hr	87	0	12	7	19	0	3	0	128	5	0	1	0	0	0	0	1	7	67	0	5	4	0	2	0	0	78	225	2	35	11	5	1	0	1	280	493
11:00	19	1	10	2	4	0	0	0	36	0	0	0	0	0	0	0	0	0	9	0	0	0	0	1	0	0	10	52	0	9	2	0	0	0	0	63	109
11:15	29	0	10	4	4	0	0	0	47	1	0	1	0	0	0	0	0	2	10	0	1	1	0	0	0	0	12	40	0	6	4	1	0	0	0	51	112
11:30	33	0	2	1	4	0	0	0	40	0	0	0	0	0	0	0	0	0	20	0	2	0	0	1	0	0	23	52	0	14	2	2	0	0	0	70	133
11:45	32	0	5	5	5	0	0	0	47	4	0	0	0	0	0	0	0	4	22	0	2	0	0	0	0	0	24	48	0	7	4	0	1	0	0	60	135
1 Hr	113	1	27	12	17	0	0	0	170	5	0	1	0	0	0	0	0	6	61	0	5	1	0	2	0	0	69	192	0	36	12	3	1	0	0	244	489
12:00	28	0	9	2	4	0	0	0	43	2	0	0	1	0	0	0	0	3	15	0	2	1	1	1	0	0	20	49	0	8	3	0	0	0	0	60	126
12:15	35	0	8	4	2	0	1	0	50	0	0	1	0	0	0	0	0	1	16	0	1	0	0	0	0	0	17	50	0	8	2	0	0	0	0	60	128
12:30	32	0	5	3	1	0	0	0	41	0	0	0	0	0	0	0	0	0	16	0	3	0	0	1	0	0	20	71	0	9	1	0	0	0	0	81	142
12:45	31	0	3	5	1	0	0	0	40	1	0	1	0	0	0	0	0	2	27	0	1	0	0	0	0	0	28	45	0	11	2	1	0	0	0	59	129
1 Hr	126	0	25	14	8	0	1	0	174	3	0	2	1	0	0	0	0	6	74	0	7	1	1	2	0	0	85	215	0	36	8	1	0	0	0	260	525
13:00	28	0	4	3	4	0	0	0	39	1	0	0	0	0	0	0	0	1	14	0	1	0	0	1	0	0	16	56	0	5	1	0	0	0	0	62	118
13:15	41	0	7	8	3	0	0	0	59	1	0	0	0	0	0	0	0	1	14	0	0	0	0	0	0	0	14	55	0	6	4	2	0	0	0	67	141
13:30	25	0	5	3	1	1	1	0	36	1	0	0	0	0	0	0	0	1	17	1	0	0	0	1	0	0	19	63	0	7	1	1	0	0	0	72	128
13:45	39	0	9	2	5	0	0	0	55	2	0	2	0	0	0	0	0	4	15	0	2	0	0	0	0	0	17	46	0	6	4	0	1	2	1	60	136
1 Hr	133	0	25	16	13	1	1	0	189	5	0	2	0	0	0	0	0	7	60	1	3	0	0	2	0	0	66	220	0	24	10	3	1	2	1	261	523
14:00	30	0	8	5	1	1	0	0	45	2	0	1	0	0	0	0	0	3	11	0	1	1	0	1	0	0	14	73	0	11	1	2	0	0	0	87	149
14:15	31	0	8	6	4	4	0	0	53	3	0	1	0	0	0	0	0	4	13	0	1	0	0	0	0	0	14	59	0	10	1	2	1	0	0	73	144
14:30	54	0	7	1	2	1	0	0	65	2	0	0	0	0	0	0	0	2	17	0	1	0	0	1	0	0	19	66	0	10	4	1	2	0	0	83	169
14:45	23	0	5	2	4	1	0	0	35	1	0	0	0	0	0	0	0	1	23	0	1	0	0	0	0	0	24	71	0	8	1	1	1	0	1	83	143
1 Hr	138	0	28	14	11	7	0	0	198	8	0	2	0	0	0	0	0	10	64	0	4	1	0	2	0	0	71	269	0	39	7	6	4	0	1	326	605
15:00	37	1	10	6	0	0	0	0	54	1	0	0	0	0	0	0	0	1	21	0	1	0	0	1	0	0	23	73	1	9	5	0	0	0	0	88	166
15:15	33	0	7	2	6	0	0	0	48	6	0	0	0	0	0	0	0	6	22	0	3	0	0	0	0	0	25	72	0	10	1	1	0	0	0	84	163
15:30	53	0	13	4	2	0	0	0	72	8	0	1	0	0	0	0	0	9	20	1	2	0	0	1	0	0	24	97	0	11	2	1	0	0	0	111	216
15:45	42	0	13	3	2	0	0	0	60	2	0	0	0	0	0	0	0	2	20	0	0	0	0	0	0	0	20	82	0	6	2	1	1	1	0	93	175
1 Hr	165	1	43	15	10	0	0	0	234	17	0	1	0	0	0	0	0	18	83	1	6	0	0	2	0	0	92	324	1	36	10	3	1	1	0	376	720
16:00	69	0	11	3	1	0	0	0	84	3	0	0	0	0	0	0	0	3	15	0	2	0	0	1	0	0	18	76	1	8	1	1	0	1	0	88	193
16:15	70	0	12	3	2	0	0	0	87	2	0	0	0	0	0	0	0	2	13	0	4	0	0	0	0	0	17	106	0	17	2	2	0	0	0	127	233
16:30	70	0	12	1	4	0	0	0	87	3	0	1	0	0	0	0	0	4	21	0	0	0	0	1	0	0	22	104	0	10	1	1	0	0	1	117	230
16:45	58	0	17	2	5	0	0	0	82	4	0	1	0	0	0	0	0	5	32	0	2	1	0	0	0	0	35	125	0	21	2	0	2	0	0	150	272
1 Hr	267	0	52	9	12	0	0	0	340	12	0	2	0	0	0	0	0	14	81	0	8	1	0	2	0	0	92	411	1	56	6	4	2	1	1	482	928
17:00	95	1	13	2	0	0	1	0	112	3	0	0	0	0	0	0	0	3	34	0	3	0	0	1	0	0	38	119	0	14	1	0	0	0	1	135	288
17:15	93	0	6	0	0	0	0	0	99	1	0	0	0	0	0	0	0	1	30	0	0	0	0	0	0	0	30	154	0	11	3	0	0	1	0	169	299
17:30	101	0	13	0	1	0	0	0	115	2	0	1	0	0	0	0	0	3	25	0	1	1	0	1	1	0	29	129	0	8	0	1	0	0	0	138	285
17:45	65	1	5	0	1	0	0	0	72	0	0	0	0	0	0	0	0	0	26	0	4	0	0	0	0	0	30	121	1	13	0	0	2	0	0	137	239
1 Hr	354	2	37	2	2	0	1	0	398	6	0	1	0	0	0	0	0	7	115	0	8	1	0	2	1	0	127	523	1	46	4	1	2	1	1	579	1111
18:00	65	0	5	0	1	0	0	0	71	3	0	0	0	0	0	0	0	3	28	0	2	0	0	1	0	0	31	101	0	12	0	0	0	0	0	113	218
18:15	34	0	5	2	0	0	0	0	41	4	0	3	0	0	0	0	0	7	34	0	1	0	0	0	0	0	35	96	0	5	0	0	0	0	1	102	185
18:30	47	0	2	1	0	0	1	0	51	2	0	0	0	0	0	0	0	2	23	0	1	0	0	0	0	0	24	74	0	11	1	0	0	0	0	86	163
18:45	42	0	2	0	1	0	1	0	46	0	0	0	0	0	0	0	0	0	26	0	0	0	0	1	0	0	27	98	0	7	1	0	1	0	0	107	180
1 Hr	188	0	14	3	2	0	2	0	209	9	0	3	0	0	0	0	0	12	111	0	4	0	0	2	0	0	117	369	0	35	2	0	1	0	1	408	746
Total	2072	5	380	126	131	14	10	0	2738	103	1	16	2	1	1	0	1	125	977	7	68	11	1	23	2	1	1090	4162	7	566	104	39	23	13	12	4926	8879

Tracsis plc
Traffic and Data Services

Client: Oxfordshire CC
Project: 3262-LON Bicester
Site: 1
Date: 15/06/2016

Entry : C - B4100 (S)

	Destination : A - B4100 (N)									Destination : B - A4095 (E)									Destination : C - B4100 (S)									Destination : D - A4095 (W)									Arm Totals
	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	
07:00	14	0	5	1	0	1	1	0	22	15	0	1	0	0	0	0	0	16	2	0	0	0	0	0	0	0	2	7	0	1	0	0	0	0	0	8	48
07:15	16	0	4	0	0	0	0	0	20	9	0	3	0	0	0	1	0	13	0	0	0	0	0	0	0	0	0	11	0	2	0	0	0	0	0	13	46
07:30	18	0	6	0	0	0	0	0	24	15	1	1	0	0	1	0	0	18	0	0	0	0	0	0	0	0	0	13	0	3	0	0	1	0	0	17	59
07:45	19	0	3	0	0	1	1	0	24	13	0	3	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	12	52
1 Hr	67	0	18	1	0	2	2	0	90	52	1	8	0	0	1	1	0	63	2	0	0	0	0	0	0	0	2	43	0	6	0	0	1	0	0	50	205
08:00	21	0	3	0	0	0	1	0	25	22	0	2	0	2	0	0	0	26	0	0	0	0	0	0	0	0	0	20	0	2	0	0	0	0	0	22	73
08:15	23	0	3	1	0	1	0	0	28	21	0	4	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	17	1	2	0	0	0	0	0	20	73
08:30	16	0	2	0	0	0	0	0	18	23	0	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	21	0	1	0	0	0	0	0	22	63
08:45	16	0	2	0	0	1	0	0	19	29	0	0	0	0	0	0	0	29	1	0	0	0	0	0	0	0	1	33	0	1	0	0	0	0	0	34	83
1 Hr	76	0	10	1	0	2	1	0	90	95	0	6	0	2	0	0	0	103	1	0	0	0	0	0	0	0	1	91	1	6	0	0	0	0	0	98	292
09:00	9	0	5	2	1	0	0	0	17	21	0	2	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	23	0	3	1	0	0	0	0	27	67
09:15	18	0	4	0	0	1	0	0	23	16	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	14	1	0	1	0	0	0	0	16	55
09:30	23	0	5	6	0	0	0	0	34	10	1	3	0	0	0	0	1	15	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	12	61
09:45	8	0	3	0	0	1	0	0	12	14	0	1	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	32
1 Hr	58	0	17	8	1	2	0	0	86	61	1	6	0	0	0	0	1	69	0	0	0	0	0	0	0	0	0	54	1	3	2	0	0	0	0	60	215
10:00	15	0	2	1	0	0	0	0	18	18	0	2	0	0	0	0	0	20	1	0	0	0	0	0	0	0	1	8	0	0	0	0	0	0	0	8	47
10:15	21	1	6	0	0	1	0	0	29	7	0	3	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	6	0	1	1	0	0	0	0	8	47
10:30	12	0	3	0	1	0	0	0	16	17	0	2	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	14	0	0	2	0	0	0	0	16	51
10:45	11	0	4	0	0	1	0	0	16	10	0	1	2	0	0	0	0	13	0	0	0	0	0	0	0	0	0	10	0	0	1	0	0	0	0	11	40
1 Hr	59	1	15	1	1	2	0	0	79	52	0	8	2	0	0	0	0	62	1	0	0	0	0	0	0	0	1	38	0	1	4	0	0	0	0	43	185
11:00	14	0	0	0	1	0	0	0	15	16	0	0	1	0	0	0	0	17	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7	39
11:15	15	0	3	0	0	1	0	0	19	16	0	3	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	11	0	1	0	0	0	0	0	12	50
11:30	14	0	1	0	0	0	0	0	15	15	0	3	0	0	0	0	0	18	0	0	1	0	0	0	0	0	1	8	0	0	2	0	0	0	0	10	44
11:45	22	0	3	0	0	1	0	0	26	16	0	2	2	0	0	0	0	20	0	0	0	0	0	0	0	0	0	8	0	4	0	0	0	0	0	12	58
1 Hr	65	0	7	0	1	2	0	0	75	63	0	8	3	0	0	0	0	74	0	0	1	0	0	0	0	0	1	34	0	5	2	0	0	0	0	41	191
12:00	18	1	1	1	0	0	0	0	21	20	0	1	0	0	0	0	0	21	1	0	0	0	0	0	0	0	1	11	0	0	0	0	0	0	0	11	54
12:15	17	0	2	1	0	1	0	0	21	13	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	7	0	2	1	0	0	0	0	10	44
12:30	21	0	3	0	0	0	0	0	24	15	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	10	49
12:45	16	0	4	2	0	1	0	0	23	20	0	0	1	0	0	0	0	21	0	0	0	0	0	0	0	0	0	11	0	3	1	0	0	0	0	15	59
1 Hr	72	1	10	4	0	2	0	0	89	68	0	1	1	0	0	0	0	70	1	0	0	0	0	0	0	0	1	39	0	5	2	0	0	0	0	46	206
13:00	19	0	5	1	0	0	0	0	25	16	0	2	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	21	64
13:15	25	0	1	3	0	1	0	0	30	21	0	1	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0	7	0	2	0	0	0	0	0	9	61
13:30	31	1	1	0	0	0	0	0	33	15	0	0	0	0	0	0	0	15	2	0	0	0	0	0	0	0	2	3	0	0	1	0	0	0	0	4	54
13:45	22	0	4	2	0	1	0	0	29	15	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	5	0	2	0	0	0	0	0	7	51
1 Hr	97	1	11	6	0	2	0	0	117	67	0	3	0	0	0	0	0	70	2	0	0	0	0	0	0	0	2	36	0	4	1	0	0	0	0	41	230
14:00	23	1	1	0	0	0	0	0	25	16	1	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	10	0	2	0	0	0	0	0	12	54
14:15	19	0	5	1	0	1	0	0	26	10	1	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	13	0	1	0	0	0	0	0	14	51
14:30	23	1	2	2	0	0	0	0	28	19	0	1	0	0	0	0	0	20	0	0	1	0	0	0	0	0	1	9	1	1	1	0	0	0	0	12	61
14:45	27	0	4	2	0	1	0	0	34	18	0	3	0	0	0	0	0	21	0	0	1	0	0	0	0	0	1	12	1	0	0	0	0	0	0	13	69
1 Hr	92	2	12	5	0	2	0	0	113	63	2	4	0	0	0	0	0	69	0	0	2	0	0	0	0	0	2	44	2	4	1	0	0	0	0	51	235
15:00	38	2	2	0	0	0	0	0	42	24	0	1	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	19	86
15:15	25	0	3	1	0	1	0	0	30	24	0	1	0	1	0	0	0	26	0	0	0	0	0	0	0	0	0	36	0	0	0	0	0	0	0	36	92
15:30	33	0	6	1	0	0	0	0	40	25	0	2	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	20	87
15:45	38	1	7	0	0	1	0	0	47	21	0	1	0	0	1	0	0	23	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	10	80
1 Hr	134	3	18	2	0	2	0	0	159	94	0	5	0	1	1	0	0	101	0	0	0	0	0	0	0	0	0	85	0	0	0	0	0	0	0	85	345
16:00	35	2	3	1	0	0	0	0	41	14	1	4	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	15	75
16:15	40	0	7	0	0	1	0	0	48	26	0	1	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0	11	0	1	0	0	0	0	0	12	87
16:30	41	1	4	0	0	0	0	0	46	21	0	2	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	14	0	3	0	0	0	0	0	17	86
16:45	28	0	2	1	0	0	0	0	31	28	0	2	1	0	0	0	0	31	1	0	0	0	0	0	0	0	1	18	0	0	2	0	0	0	0	20	83
1 Hr	144	3	16	2	0	1	0	0	166	89	1	9	1	0	0	0	0	100	1	0	0	0	0	0	0	0	1	58	0	4	2	0	0	0	0	64	331
17:00	32	0	5	0	0	0	1	0	38	23	0	2	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	20	0	2	0	0	0	0	0	22	85
17:15	43	0	3	0	0	1	0	0	47	30	0	2	0	0	0	0	0	32	0	0	0	0	0	0	0	0	0	21	0	2	0	0	0	0	0	23	102
17:30	44	0	2	0	0	1	0	0	47	48	0	1	0	0	0	0	0	49	0	0	0	0	0	0	0	0	0	24	0	1	0	0	0	0	0	25	121
17:45	37	0	1	0	0	1	0	0	39	36	0	3	0	0	0	0	1	40	0	0	0	0	0	0	0	0	0	19	0	1	0	0	0	0	0	20	99
1 Hr	156	0	11	0	0	3	1	0	171	137	0	8	0	0	0	0	1	146	0	0	0	0	0	0	0	0	0	84	0	6	0	0	0	0	0	90	407
18:00	36	0	5	0	1	0	0	0	42	29	1	3	0	0	0	0	0	33	0	0	0	0	0	0	0	0	0	14	0	1	0	0	0	1	0	16	91
18:15	27	0	2	0	0	0	0	0	29	26	0	0	0	0	0	1	0	27	1	0	0	0	0	0	0	0	1	16	0	1	0	0	0	0	0	17	74
18:30	32	0	1	0	0	1	0	0	34	35	0	2	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0	18	0	1	0	0	0	0	0	19	90
18:45	32	0	2	0	0	0	0	0	34	28	0	3	0	0	0	0	0	31	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	12	77
1 Hr	127	0	10	0	1	1	0	0	139	118	1	8	0	0	0	1	0	128	1	0	0	0	0	0	0	0	1	60	0	3	0	0	0	1	0	64	332
Total	1147	11	155	30	4	23	4	0	1374	959	6	74	7	3	2	2	2	1055	9	0	3	0	0	0	0	0	12	666	4	47	14	0	1	1	0	733	3174

Tracsis plc
Traffic and Data Services

Client: Oxfordshire CC
Project: 3262-LON Bicester
Site: 1
Date: 15/06/2016

Entry : D - A4095 (W)

	Destination : A - B4100 (N)									Destination : B - A4095 (E)									Destination : C - B4100 (S)									Destination : D - A4095 (W)									Arm Totals
	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	
07:00	14	0	1	0	0	0	0	0	15	56	1	5	2	0	0	0	0	64	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	80
07:15	19	0	3	0	0	0	0	0	22	75	1	13	1	0	0	0	0	90	6	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	118
07:30	15	0	3	2	0	0	0	0	20	83	0	8	1	0	0	0	0	92	11	1	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	124
07:45	8	0	2	0	0	0	0	0	10	71	0	14	0	0	0	0	0	85	7	0	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	103
1 Hr	56	0	9	2	0	0	0	0	67	285	2	40	4	0	0	0	0	331	25	1	1	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0	425
08:00	22	0	4	0	0	0	1	0	27	106	0	5	1	1	0	0	0	113	17	0	1	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	158
08:15	10	0	1	0	0	0	0	0	11	106	0	10	2	1	0	0	0	119	21	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	151
08:30	11	0	3	0	0	0	0	0	14	97	0	13	4	1	0	0	0	115	30	0	0	0	0	0	0	0	30	0	0	0	2	0	0	0	0	2	161
08:45	18	0	2	1	0	0	0	0	21	111	2	6	3	1	1	0	0	124	14	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	159
1 Hr	61	0	10	1	0	0	1	0	73	420	2	34	10	4	1	0	0	471	82	0	1	0	0	0	0	0	83	0	0	0	2	0	0	0	0	2	629
09:00	15	0	0	0	0	0	0	0	15	78	1	5	3	3	3	0	0	93	14	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	122
09:15	7	0	1	1	0	0	0	0	9	64	0	12	5	1	1	0	1	84	8	0	1	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	102
09:30	9	0	1	2	0	0	0	0	12	47	0	8	3	1	0	0	0	59	15	1	1	0	1	0	0	0	18	0	0	0	0	0	0	0	0	0	89
09:45	8	0	1	0	0	0	0	0	9	34	0	6	0	1	0	1	0	42	10	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	61
1 Hr	39	0	3	3	0	0	0	0	45	223	1	31	11	6	4	1	1	278	47	1	2	0	1	0	0	0	51	0	0	0	0	0	0	0	0	0	374
10:00	6	0	1	0	1	0	0	0	8	64	0	11	0	0	0	0	0	75	12	0	1	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	96
10:15	6	0	0	0	0	0	0	0	6	46	1	10	4	1	0	0	1	63	3	0	2	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	74
10:30	11	0	1	0	0	0	0	0	12	45	0	8	4	1	1	0	0	59	11	0	0	1	0	0	0	0	12	0	0	0	0	0	0	0	0	0	83
10:45	10	0	1	3	0	0	0	0	14	45	0	10	1	1	1	0	1	59	14	0	2	1	0	0	0	0	17	0	0	0	0	0	0	0	0	0	90
1 Hr	33	0	3	3	1	0	0	0	40	200	1	39	9	3	2	0	2	256	40	0	5	2	0	0	0	0	47	0	0	0	0	0	0	0	0	0	343
11:00	3	0	1	0	0	0	0	0	4	51	0	8	3	0	1	0	0	63	3	0	0	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	71
11:15	16	0	3	1	1	0	0	0	21	38	0	7	4	1	0	0	0	50	12	0	1	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	84
11:30	5	0	1	0	0	0	0	0	6	49	0	4	2	2	0	0	0	57	10	0	1	2	0	0	0	0	13	0	0	0	0	0	0	0	0	0	76
11:45	8	0	1	1	0	0	0	0	10	42	0	12	1	0	0	0	0	55	5	1	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	71
1 Hr	32	0	6	2	1	0	0	0	41	180	0	31	10	3	1	0	0	225	30	1	2	3	0	0	0	0	36	0	0	0	0	0	0	0	0	0	302
12:00	14	0	1	0	0	0	0	0	15	53	0	7	3	0	0	0	0	63	13	0	2	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	93
12:15	8	0	2	0	1	0	0	0	11	50	0	8	4	2	0	0	0	64	5	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0	1	81
12:30	9	0	0	1	0	0	0	0	10	40	0	10	2	0	0	0	0	52	13	0	1	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	76
12:45	5	0	2	1	0	0	0	0	8	59	0	3	2	0	0	0	0	64	12	0	1	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	85
1 Hr	36	0	5	2	1	0	0	0	44	202	0	28	11	2	0	0	0	243	43	0	4	0	0	0	0	0	47	1	0	0	0	0	0	0	0	1	335
13:00	5	0	0	0	0	0	0	0	5	49	0	9	4	0	1	1	0	64	11	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	80
13:15	11	0	3	1	0	0	0	0	15	55	0	9	3	0	0	0	0	67	7	0	2	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	91
13:30	11	0	2	0	0	0	1	0	14	59	1	7	3	1	0	0	0	71	6	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	91
13:45	11	0	2	1	0	0	0	0	14	61	0	12	2	2	0	0	0	77	4	0	2	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	97
1 Hr	38	0	7	2	0	0	1	0	48	224	1	37	12	3	1	1	0	279	28	0	4	0	0	0	0	0	32	0	0	0	0	0	0	0	0	0	359
14:00	6	0	1	0	1	0	0	0	8	49	0	5	1	0	1	1	0	57	12	0	1	1	0	0	0	0	14	0	0	0	0	0	0	0	0	0	79
14:15	11	0	1	1	0	0	0	0	13	65	0	12	3	0	0	0	0	80	10	0	0	2	0	0	0	0	12	0	0	0	0	0	0	0	0	0	105
14:30	9	0	4	1	0	0	0	0	14	79	0	6	4	0	1	0	0	90	11	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	115
14:45	17	0	1	0	0	0	0	0	18	72	0	12	0	3	0	0	0	87	28	0	1	0	0	0	0	0	29	0	0	0	0	0	0	0	0	0	134
1 Hr	43	0	7	2	1	0	0	0	53	265	0	35	8	3	2	1	0	314	61	0	2	3	0	0	0	0	66	0	0	0	0	0	0	0	0	0	433
15:00	8	0	2	0	0	0	0	0	10	78	0	15	1	0	1	0	0	95	8	1	1	1	0	0	0	0	11	0	0	0	0	0	0	0	0	0	116
15:15	12	0	1	2	0	0	0	0	15	93	0	10	3	0	0	0	0	106	13	0	0	0	0	0	0	0	13	1	0	0	0	0	0	0	0	1	135
15:30	9	0	1	0	1	0	0	0	11	79	0	10	4	2	0	1	1	97	15	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	123
15:45	14	0	5	1	0	0	0	0	20	88	0	9	2	2	0	0	0	101	9	0	0	0	0	1	0	0	10	0	0	0	0	0	0	0	0	0	131
1 Hr	43	0	9	3	1	0	0	0	56	338	0	44	10	4	1	1	1	399	45	1	1	1	0	1	0	0	49	1	0	0	0	0	0	0	0	1	505
16:00	14	0	7	0	0	0	0	0	21	75	0	16	0	0	1	0	0	92	8	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	121
16:15	15	0	4	1	0	0	0	0	20	112	1	16	0	1	1	0	1	132	13	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	165
16:30	14	0	5	1	0	0	0	0	20	100	0	18	1	0	1	0	0	120	14	0	0	2	0	0	0	0	16	0	0	0	0	0	0	0	0	0	156
16:45	20	0	4	1	0	0	0	0	25	126	1	14	0	0	0	0	0	141	13	0	3	0	0	0	0	0	16	1	0	0	0	0	0	0	0	1	183
1 Hr	63	0	20	3	0	0	0	0	86	413	2	64	1	1	3	0	1	485	48	0	3	2	0	0	0	0	53	1	0	0	0	0	0	0	0	1	625
17:00	14	0	3	0	0	0	0	0	17	120	1	22	2	0	0	0	0	145	20	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	182
17:15	10	0	2	0	0	0	0	0	12	147	0	19	2	1	2	2	1	174	15	0	1	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	202
17:30	6	0	1	0	0	0	1	0	8	131	0	15	3	1	0	2	0	152	22	0	1	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	183
17:45	15	0	2	0	0	0	0	0	17	176	1	9	1	0	0	2	0	189	14	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	220
1 Hr	45	0	8	0	0	0	1	0	54	574	2	65	8	2	2	6	1	660	71	0	2	0	0	0	0	0	73	0	0	0	0	0	0	0	0	0	787
18:00	13	0	2	0	0	0	0	0	15	131	0	14	0	0	0	0	0	145	12	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	172
18:15	12	0	2	0	0	0	0	0	14	130	0	15	0	2	1	1	0	149	19	0	3	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0	185
18:30	10	0	2	0	0	0	0	0	12	120	0	5	0	1	0	1	0	127	7	0	1	0	1	0	0	0	9	0	0	1	0	0	0	0	0	1	149
18:45	10	0	1	0	1	0	1	0	13	125	0	7	1	0	0	1	1	135	7	0	3	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	158
1 Hr	45	0	7	0	1	0	1	0	54	506	0	41	1	3	1	3	1	556	45	0	7	0	1	0	0	0	53	0	0	1	0	0	0	0	0	1	664
Total	534	0	94	23	6	0	4	0	661	3830	11	489	95	34	18	13	7	4497	565	4	34	11	2	1	0	0	617	3	0	1	2	0	0	0	0	6	5781

Tracsis plc
Traffic and Data Services

Client: Oxfordshire CC
Project: 3262-LON Bicester
Site: 1
Date: 15/06/2016

ORIGIN SUMMARY

	Origin : A - B4100 (N)									Origin : B - A4095 (E)									Origin : C - B4100 (S)									Origin : D - A4095 (W)									Origin Totals
	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	
07:00	120	0	28	7	5	0	2	0	162	173	1	37	3	3	4	0	1	222	38	0	7	1	0	1	1	0	48	71	1	6	2	0	0	0	0	80	512
07:15	139	1	27	4	2	0	0	0	173	199	1	41	1	1	7	4	0	254	36	0	9	0	0	0	1	0	46	100	1	16	1	0	0	0	0	118	591
07:30	139	0	26	6	4	0	0	0	175	227	4	47	4	0	3	1	2	288	46	1	10	0	0	2	0	0	59	109	1	11	3	0	0	0	0	124	646
07:45	153	2	25	6	2	0	2	0	190	261	0	32	8	1	1	1	0	304	44	0	6	0	0	1	1	0	52	86	0	17	0	0	0	0	0	103	649
1 Hr	551	3	106	23	13	0	4	0	700	860	6	157	16	5	15	6	3	1068	164	1	32	1	0	4	3	0	205	366	3	50	6	0	0	0	0	425	2398
08:00	152	2	26	7	2	0	1	0	190	207	1	27	5	7	1	0	1	249	63	0	7	0	2	0	1	0	73	145	0	10	1	1	0	1	0	158	670
08:15	171	0	23	11	4	1	0	0	210	208	0	23	5	8	0	0	0	244	61	1	9	1	0	1	0	0	73	137	0	11	2	1	0	0	0	151	678
08:30	169	0	13	5	3	0	1	0	191	213	0	31	10	5	1	0	0	260	60	0	3	0	0	0	0	0	63	138	0	16	6	1	0	0	0	161	675
08:45	115	1	8	3	3	2	0	0	132	192	1	19	3	5	1	2	1	224	79	0	3	0	0	1	0	0	83	143	2	8	4	1	1	0	0	159	598
1 Hr	607	3	70	26	12	3	2	0	723	820	2	100	23	25	3	2	2	977	263	1	22	1	2	2	1	0	292	563	2	45	13	4	1	1	0	629	2621
09:00	102	0	13	10	7	1	0	0	133	173	1	26	8	7	1	1	1	218	53	0	10	3	1	0	0	0	67	107	1	5	3	3	3	0	0	122	540
09:15	80	0	16	9	3	1	0	0	109	138	0	34	7	4	1	0	0	184	48	1	4	1	0	1	0	0	55	79	0	14	6	1	1	0	1	102	450
09:30	66	1	8	2	6	0	0	0	83	116	0	19	6	6	1	2	1	151	45	1	8	6	0	0	0	1	61	71	1	10	5	2	0	0	0	89	384
09:45	75	3	16	7	5	0	0	0	106	102	0	23	11	4	1	0	0	141	27	0	4	0	0	1	0	0	32	52	0	7	0	1	0	1	0	61	340
1 Hr	323	4	53	28	21	2	0	0	431	529	1	102	32	21	4	3	2	694	173	2	26	10	1	2	0	1	215	309	2	36	14	7	4	1	1	374	1714
10:00	63	0	11	7	4	0	0	0	85	96	0	13	5	8	1	1	0	124	42	0	4	1	0	0	0	0	47	82	0	13	0	1	0	0	0	96	352
10:15	64	0	13	3	7	0	0	0	87	93	1	12	4	4	0	0	2	116	34	1	10	1	0	1	0	0	47	55	1	12	4	1	0	0	1	74	324
10:30	77	0	6	6	3	0	0	0	92	91	1	19	8	4	1	0	0	124	43	0	5	2	1	0	0	0	51	67	0	9	5	1	1	0	0	83	350
10:45	71	0	16	5	3	1	0	0	96	104	0	9	5	8	1	2	0	129	31	0	5	3	0	1	0	0	40	69	0	13	5	1	1	0	1	90	355
1 Hr	275	0	46	21	17	1	0	0	360	384	2	53	22	24	3	3	2	493	150	1	24	7	1	2	0	0	185	273	1	47	14	4	2	0	2	343	1381
11:00	68	0	13	8	4	1	0	0	94	80	1	19	4	4	1	0	0	109	37	0	0	1	1	0	0	0	39	57	0	9	4	0	1	0	0	71	313
11:15	59	1	5	5	3	0	2	0	75	80	0	18	9	5	0	0	0	112	42	0	7	0	0	1	0	0	50	66	0	11	5	2	0	0	0	84	321
11:30	67	0	15	6	3	0	0	0	91	105	0	18	3	6	1	0	0	133	37	0	5	2	0	0	0	0	44	64	0	6	4	2	0	0	0	76	344
11:45	81	0	10	1	5	0	0	0	97	106	0	14	9	5	1	0	0	135	46	0	9	2	0	1	0	0	58	55	1	13	2	0	0	0	0	71	361
1 Hr	275	1	43	20	15	1	2	0	357	371	1	69	25	20	3	0	0	489	162	0	21	5	1	2	0	0	191	242	1	39	15	4	1	0	0	302	1339
12:00	52	0	10	4	3	0	0	0	69	94	0	19	7	5	1	0	0	126	50	1	2	1	0	0	0	0	54	80	0	10	3	0	0	0	0	93	342
12:15	81	0	6	4	2	0	0	0	93	101	0	18	6	2	0	1	0	128	37	0	4	2	0	1	0	0	44	64	0	10	4	3	0	0	0	81	346
12:30	82	3	9	3	6	0	1	0	104	119	0	17	4	1	1	0	0	142	46	0	3	0	0	0	0	0	49	62	0	11	3	0	0	0	0	76	371
12:45	58	1	5	7	3	0	0	0	74	104	0	16	7	2	0	0	0	129	47	0	7	4	0	1	0	0	59	76	0	6	3	0	0	0	0	85	347
1 Hr	273	4	30	18	14	0	1	0	340	418	0	70	24	10	2	1	0	525	180	1	16	7	0	2	0	0	206	282	0	37	13	3	0	0	0	335	1406
13:00	65	0	8	4	3	0	0	0	80	99	0	10	4	4	1	0	0	118	56	0	7	1	0	0	0	0	64	65	0	9	4	0	1	1	0	80	342
13:15	72	0	9	4	3	0	0	0	88	111	0	13	12	5	0	0	0	141	53	0	4	3	0	1	0	0	61	73	0	14	4	0	0	0	0	91	381
13:30	76	1	13	7	2	0	2	0	101	106	1	12	4	2	2	1	0	128	51	1	1	1	0	0	0	0	54	76	1	9	3	1	0	1	0	91	374
13:45	58	2	7	2	1	0	0	0	70	102	0	19	6	5	1	2	1	136	42	0	6	2	0	1	0	0	51	76	0	16	3	2	0	0	0	97	354
1 Hr	271	3	37	17	9	0	2	0	339	418	1	54	26	16	4	3	1	523	202	1	18	7	0	2	0	0	230	290	1	48	14	3	1	2	0	359	1451
14:00	55	0	7	9	4	0	0	0	75	116	0	21	7	3	2	0	0	149	49	2	3	0	0	0	0	0	54	67	0	7	2	1	1	1	0	79	357
14:15	65	1	10	4	2	0	0	0	82	106	0	20	7	6	5	0	0	144	42	1	6	1	0	1	0	0	51	86	0	13	6	0	0	0	0	105	382
14:30	82	1	12	4	3	0	0	0	102	139	0	18	5	3	4	0	0	169	51	2	5	3	0	0	0	0	61	99	0	10	5	0	1	0	0	115	447
14:45	75	0	9	3	3	2	1	0	93	118	0	14	3	5	2	0	1	143	57	1	8	2	0	1	0	0	69	117	0	14	0	3	0	0	0	134	439
1 Hr	277	2	38	20	12	2	1	0	352	479	0	73	22	17	13	0	1	605	199	6	22	6	0	2	0	0	235	369	0	44	13	4	2	1	0	433	1625
15:00	56	1	11	3	0	0	1	0	72	132	2	20	11	0	1	0	0	166	81	2	3	0	0	0	0	0	86	94	1	18	2	0	1	0	0	116	440
15:15	72	1	25	6	1	0	1	0	106	133	0	20	3	7	0	0	0	163	85	0	4	1	1	1	0	0	92	119	0	11	5	0	0	0	0	135	496
15:30	66	0	17	2	2	0	1	0	88	178	1	27	6	3	1	0	0	216	78	0	8	1	0	0	0	0	87	103	0	11	4	3	0	1	1	123	514
15:45	70	1	16	5	2	2	2	0	98	146	0	19	5	3	1	1	0	175	69	1	8	0	0	2	0	0	80	111	0	14	3	2	1	0	0	131	484
1 Hr	264	3	69	16	5	2	5	0	364	589	3	86	25	13	3	1	0	720	313	3	23	2	1	3	0	0	345	427	1	54	14	5	2	1	1	505	1934
16:00	72	0	24	5	0	3	0	0	104	163	1	21	4	2	1	1	0	193	64	3	7	1	0	0	0	0	75	97	0	23	0	0	1	0	0	121	493
16:15	108	0	16	2	0	1	0	0	127	191	0	33	5	4	0	0	0	233	77	0	9	0	0	1	0	0	87	140	1	20	1	1	1	0	1	165	612
16:30	105	1	9	3	0	2	0	0	120	198	0	23	2	5	1	0	1	230	76	1	9	0	0	0	0	0	86	128	0	23	4	0	1	0	0	156	592
16:45	105	1	15	4	1	0	0	0	126	219	0	41	5	5	2	0	0	272	75	0	4	4	0	0	0	0	83	160	1	21	1	0	0	0	0	183	664
1 Hr	390	2	64	14	1	6	0	0	477	771	1	118	16	16	4	1	1	928	292	4	29	5	0	1	0	0	331	525	2	87	6	1	3	0	1	625	2361
17:00	113	0	21	5	3	1	0	0	143	251	1	30	3	0	1	1	1	288	75	0	9	0	0	0	1	0	85	154	1	25	2	0	0	0	0	182	698
17:15	127	1	13	0	1	0	0	0	142	278	0	17	3	0	0	1	0	299	94	0	7	0	0	1	0	0	102	172	0	22	2	1	2	2	1	202	745
17:30	117	0	12	4	0	0	0	0	133	257	0	23	1	2	1	1	0	285	116	0	4	0	0	1	0	0	121	159	0	17	3	1	0	3	0	183	722
17:45	137	1	9	0	1	0	1	0	149	212	2	22	0	1	2	0	0	239	92	0	5	0	0	1	0	1	99	205	1	11	1	0	0	2	0	220	707
1 Hr	494	2	55	9	5	1	1	0	567	998	3	92	7	3	4	3	1	1111	377	0	25	0	0	3	1	1	407	690	2	75	8	2	2	7	1	787	2872
18:00	108	0	11	1	0	1	1	0	122	197	0	19	0	1	1	0	0	218	79	1	9	0	1	0	1	0	91	156	0	16	0	0	0	0	0	172	603
18:15	117	0	7	1	2	0	0	0	127	168	0	14	2	0	0	0	1	185	70	0	3	0	0	0	1	0	74	161	0	20	0	2	1	1	0	185	571
18:30	64	0	5	1	0	1	0	0	71	146	0	14	2	0	0	1	0	163	85	0	4	0	0	1	0	0	90	137	0	9	0	2	0	1	0	149	473
18:45	83	0	8	1	0	0	2	0	94	166	0	9	1	1	2	1	0	180	72	0	5	0	0	0	0	0	77	142	0	11	1	1	0	2	1	158	509
1 Hr	372	0	31	4	2	2	3	0	414	677	0	56	5	2	3	2	1	746	306	1	21	0	1	1	2	0	332	596	0	56	1	5	1	4	1	664	2156
Total	4372	27	642	216	126	20	21	0	5424	7314	20	1030	243	172	61	25	14	8879	2781	21	279	51	7	26	7	2	3174	4932	15	618	131	42	19	17	7	5781	23258

Tracsis plc
Traffic and Data Services

Client: Oxfordshire CC
Project: 3262-LON Bicester
Site: 1
Date: 15/06/2016

DESTINATION SUMMARY

	Destination : A - B4100 (N)									Destination : B - A4095 (E)									Destination : C - B4100 (S)									Destination : D - A4095 (W)									Dest Totals
	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	CAR	Taxi	LGV	OGV1	OGV2	PSV	MCL	PCL	Total	
07:00	65	0	19	3	3	3	1	0	94	131	1	20	7	5	0	0	0	164	60	1	11	2	0	1	1	0	76	146	0	28	1	0	1	1	1	178	512
07:15	85	0	22	1	1	2	1	0	112	159	1	32	2	2	0	1	0	197	69	1	9	0	0	1	0	0	80	161	1	30	3	0	4	3	0	202	591
07:30	93	1	23	5	0	1	0	0	123	168	2	25	4	4	2	0	0	205	71	2	10	3	0	0	0	1	87	189	1	36	1	0	2	1	1	231	646
07:45	95	0	15	5	1	2	1	0	119	175	1	28	4	2	0	2	0	212	70	1	10	2	0	0	0	0	83	204	0	27	3	0	0	1	0	235	649
1 Hr	338	1	79	14	5	8	3	0	448	633	5	105	17	13	2	3	0	778	270	5	40	7	0	2	1	1	326	700	2	121	8	0	7	6	2	846	2398
08:00	91	0	13	2	5	0	2	0	113	206	0	26	4	5	0	1	0	242	87	3	8	3	0	0	0	0	101	183	0	23	4	2	1	0	1	214	670
08:15	86	0	16	3	6	1	0	0	112	220	0	31	9	6	1	0	0	267	103	0	6	1	0	0	0	0	110	168	1	13	6	1	0	0	0	189	678
08:30	58	0	18	3	3	0	0	0	82	209	0	20	7	4	0	0	0	240	118	0	6	3	0	1	1	0	129	195	0	19	8	2	0	0	0	224	675
08:45	59	0	8	3	2	1	1	0	74	215	2	11	6	3	3	0	0	240	80	1	3	0	0	0	0	0	84	175	1	16	1	4	1	1	1	200	598
1 Hr	294	0	55	11	16	2	3	0	381	850	2	88	26	18	4	1	0	989	388	4	23	7	0	1	1	0	424	721	2	71	19	9	2	1	2	827	2621
09:00	74	0	12	5	5	0	0	0	96	156	1	16	10	9	4	0	0	196	70	1	3	3	0	1	0	0	78	135	0	23	6	4	0	1	1	170	540
09:15	56	0	16	3	3	1	0	0	79	121	0	20	10	4	2	0	1	158	64	0	12	3	0	0	0	0	79	104	1	20	7	1	1	0	0	134	450
09:30	60	0	12	10	6	0	0	0	88	95	1	17	5	5	0	0	1	124	54	1	6	0	1	1	1	0	64	89	1	10	4	2	0	1	1	108	384
09:45	37	0	10	7	3	1	0	0	58	89	1	19	6	6	0	1	0	122	60	2	2	0	0	0	0	0	64	70	0	19	5	1	1	0	0	96	340
1 Hr	227	0	50	25	17	2	0	0	321	461	3	72	31	24	6	1	2	600	248	4	23	6	1	2	1	0	285	398	2	72	22	8	2	2	2	508	1714
10:00	45	0	6	3	9	0	1	0	64	109	0	20	6	3	0	0	0	138	60	0	7	2	1	1	0	0	71	69	0	8	2	0	0	0	0	79	352
10:15	51	1	8	2	3	1	0	0	66	77	1	19	6	8	0	0	2	113	50	0	9	1	0	0	0	0	60	68	1	11	3	1	0	0	1	85	324
10:30	42	0	9	2	3	0	0	0	56	95	0	14	10	3	1	0	0	123	61	0	2	1	1	1	0	0	66	80	1	14	8	2	0	0	0	105	350
10:45	41	0	7	4	6	1	2	0	61	90	0	19	7	4	2	0	1	123	61	0	5	4	0	0	0	0	70	83	0	12	3	2	1	0	0	101	355
1 Hr	179	1	30	11	21	2	3	0	247	371	1	72	29	18	3	0	3	497	232	0	23	8	2	2	0	0	267	300	2	45	16	5	1	0	1	370	1381
11:00	36	1	11	2	5	0	0	0	55	92	0	17	11	4	2	0	0	126	45	0	3	1	0	1	0	0	50	69	0	10	3	0	0	0	0	82	313
11:15	60	0	16	5	5	1	0	0	87	82	0	14	7	4	0	1	0	108	46	1	3	3	0	0	0	0	53	59	0	8	4	1	0	1	0	73	321
11:30	52	0	4	1	4	0	0	0	61	95	0	19	6	5	0	0	0	125	61	0	5	3	0	1	0	0	70	65	0	16	5	2	0	0	0	88	344
11:45	63	0	10	6	5	1	0	0	85	97	0	20	4	5	0	0	0	126	61	1	4	0	0	0	0	0	66	67	0	12	4	0	1	0	0	84	361
1 Hr	211	1	41	14	19	2	0	0	288	366	0	70	28	18	2	1	0	485	213	2	15	7	0	2	0	0	239	260	0	46	16	3	1	1	0	327	1339
12:00	60	1	11	3	4	0	0	0	79	99	0	12	8	2	0	0	0	121	51	0	8	1	1	1	0	0	62	66	0	10	3	1	0	0	0	80	342
12:15	60	0	13	5	3	1	1	0	83	98	0	12	6	4	0	0	0	120	51	0	3	2	0	0	0	0	56	74	0	10	3	0	0	0	0	87	346
12:30	62	0	8	4	1	0	0	0	75	87	0	15	5	5	0	0	0	112	70	3	6	0	0	1	1	0	81	90	0	11	1	1	0	0	0	103	371
12:45	52	0	9	8	1	1	0	0	71	108	0	5	9	3	0	0	0	125	60	0	3	1	0	0	0	0	64	65	1	17	3	1	0	0	0	87	347
1 Hr	234	1	41	20	9	2	1	0	308	392	0	44	28	14	0	0	0	478	232	3	20	4	1	2	1	0	263	295	1	48	10	3	0	0	0	357	1406
13:00	52	0	9	4	4	0	0	0	69	97	0	14	7	3	1	1	0	123	52	0	5	0	0	1	0	0	58	84	0	6	2	0	0	0	0	92	342
13:15	77	0	11	12	3	1	0	0	104	110	0	15	4	2	0	0	0	131	44	0	5	1	0	0	0	0	50	78	0	9	6	3	0	0	0	96	381
13:30	67	1	8	3	1	1	2	0	83	125	1	16	7	3	0	1	0	153	43	2	1	2	0	1	1	0	50	74	0	10	3	1	0	0	0	88	374
13:45	73	0	15	5	5	1	0	0	99	101	1	16	4	3	0	0	0	125	42	1	7	0	0	0	0	0	50	62	0	10	4	0	1	2	1	80	354
1 Hr	269	1	43	24	13	3	2	0	355	433	2	61	22	11	1	2	0	532	181	3	18	3	0	2	1	0	208	298	0	35	15	4	1	2	1	356	1451
14:00	59	1	10	5	2	1	0	0	78	95	1	11	6	4	1	1	0	119	41	0	3	3	0	1	0	0	48	92	0	14	4	2	0	0	0	112	357
14:15	61	0	14	8	4	5	0	0	92	107	1	19	7	2	0	0	0	136	46	1	4	2	0	0	0	0	53	85	0	12	1	2	1	0	0	101	382
14:30	87	1	13	4	2	1	0	0	108	147	1	16	8	3	1	0	0	176	49	0	5	0	0	1	0	0	55	88	1	11	5	1	2	0	0	108	447
14:45	67	0	10	4	4	2	0	0	87	127	0	23	3	6	2	0	0	161	70	0	3	0	0	0	1	0	74	103	1	9	1	1	1	0	1	117	439
1 Hr	274	2	47	21	12	9	0	0	365	476	3	69	24	15	4	1	0	592	206	1	15	5	0	2	1	0	230	368	2	46	11	6	4	0	1	438	1625
15:00	83	3	14	6	0	0	0	0	106	130	0	22	2	0	1	1	0	156	44	2	5	3	0	1	0	0	55	106	1	11	5	0	0	0	0	123	440
15:15	70	0	11	5	6	1	0	0	93	155	1	26	8	2	0	1	0	193	60	0	11	0	0	0	0	0	71	124	0	12	2	1	0	0	0	139	496
15:30	95	0	20	5	3	0	0	0	123	142	0	29	6	4	0	2	1	184	57	1	3	0	0	1	0	0	62	131	0	11	2	1	0	0	0	145	514
15:45	94	1	25	4	2	1	0	0	127	148	0	21	7	4	3	1	0	184	47	1	0	0	0	1	1	0	50	107	0	11	2	1	1	1	0	123	484
1 Hr	342	4	70	20	11	2	0	0	449	575	1	98	23	10	4	5	1	717	208	4	19	3	0	3	1	0	238	468	1	45	11	3	1	1	0	530	1934
16:00	118	2	21	4	1	0	0	0	146	122	1	32	2	0	4	0	0	161	51	0	9	2	0	1	0	0	63	105	1	13	2	1	0	1	0	123	493
16:15	125	0	23	4	2	1	0	0	155	188	1	25	2	1	2	0	1	220	62	0	8	0	0	0	0	0	70	141	0	22	2	2	0	0	0	167	612
16:30	125	1	21	2	4	0	0	0	153	178	0	27	3	0	3	0	0	211	66	1	2	3	0	1	0	0	73	138	0	14	1	1	0	0	1	155	592
16:45	106	0	23	4	5	0	0	0	138	213	1	24	4	1	0	0	0	243	76	0	9	1	0	0	0	0	86	164	1	25	5	0	2	0	0	197	664
1 Hr	474	3	88	14	12	1	0	0	592	701	3	108	11	2	9	0	1	835	255	1	28	6	0	2	0	0	292	548	2	74	10	4	2	1	1	642	2361
17:00	141	1	21	2	0	0	2	0	167	207	1	35	7	3	1	0	0	254	87	0	10	0	0	1	0	0	98	158	0	19	1	0	0	0	1	179	698
17:15	146	0	11	0	0	1	0	0	158	246	0	28	2	2	2	2	1	283	76	1	3	0	0	0	0	0	80	203	0	17	3	0	0	1	0	224	745
17:30	151	0	16	0	1	1	1	0	170	245	0	24	6	1	0	2	0	278	71	0	4	1	0	1	1	0	78	182	0	12	1	1	0	0	0	196	722
17:45	117	1	8	0	1	1	0	0	128	291	1	18	1	1	0	2	1	315	77	1	6	0	0	0	0	0	84	161	1	15	0	0	2	1	0	180	707
1 Hr	555	2	56	2	2	3	3	0	623	989	2	105	16	7	3	6	2	1130	311	2	23	1	0	2	1	0	340	704	1	63	5	1	2	2	1	779	2872
18:00	114	0	12	0	2	0	0	0	128	212	1	26	1	0	1	0	0	241	72	0	3	0	0	1	1	0	77	142	0	14	0	0	0	1	0	157	603
18:15	73	0	9	2	0	0	0	0	84	226	0	24	1	4	1	2	0	258	86	0	5	0	0	0	0	0	91	131	0	6	0	0	0	0	1	138	571
18:30	89	0	5	1	0	1	1	0	97	188	0	9	1	1	1	1	0	201	52	0	4	0	1	0	0	0	57	103	0	14	1	0	0	0	0	118	473
18:45	84	0	5	0	2	0	2	0	93	189	0	15	1	0	0	2	1	208	61	0	5	1	0	1	0	0	68	129	0	8	1	0	1	1	0	140	509
1 Hr	360	0	31	3	4	1	3	0	402	815	1	74	4	5	3	5	1	908	271	0	17	1	1	2	1	0	293	505	0	42	2	0	1	2	1	553	2156
Total	3757	16	631	179	141	37	18	0	4779	7062	23	966	259	155	41	25	10	8541	3015	29	264	58	5	24	9	1	3405	5565	15	708	145	46	24	18	12	6533	23258

Site No. 00000007 **Site Ref.** B4100 0007 **Lat/Lng.** 51.93435 -1.172228

B4100 NORTH OF BICESTER **Channel:** Northbound

Vehicle Count Summary
From 01/01/2016 To 01/01/2017

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	5-DayAve.	7-DayAve.
00:00	21	25	24	26	30	39	43	25	30
01:00	16	18	19	22	21	24	23	19	20
02:00	15	15	15	18	20	21	18	17	17
03:00	17	16	17	18	18	19	16	17	17
04:00	33	36	35	35	36	22	17	35	31
05:00	82	85	85	83	79	40	29	83	69
06:00	197	218	221	214	199	63	47	210	166
07:00	412	455	461	458	419	118	79	441	343
08:00	340	384	385	380	359	191	108	370	307
09:00	257	274	271	276	281	274	178	272	259
10:00	249	249	259	261	283	315	256	260	268
11:00	271	275	278	286	316	358	295	285	297
12:00	289	296	308	301	368	385	326	312	325
13:00	312	321	331	328	415	363	312	341	340
14:00	343	365	374	375	477	343	293	387	367
15:00	410	435	452	457	540	323	301	459	417
16:00	536	573	591	599	596	341	306	579	506
17:00	600	633	653	663	593	312	252	628	529
18:00	402	429	436	438	444	260	232	430	377
19:00	255	273	285	307	294	199	194	283	258
20:00	157	164	183	182	173	144	118	172	160
21:00	109	122	137	136	122	113	85	125	118
22:00	92	106	115	123	117	102	57	111	102
23:00	38	46	50	56	69	68	32	52	51
Total									
12H(7-19)	4420	4689	4798	4823	5092	3583	2937	4764	4335
16H(6-22)	5138	5466	5625	5662	5880	4103	3382	5554	5036
18H(6-24)	5269	5617	5790	5841	6067	4272	3471	5717	5190
24H(0-24)	5452	5813	5985	6044	6271	4437	3616	5913	5374
AM Peak	07:00	07:00	07:00	07:00	07:00	11:00	11:00	07:00	07:00
	412	455	461	458	419	358	295	441	343
PM Peak	17:00	17:00	17:00	17:00	16:00	12:00	12:00	17:00	17:00
	600	633	653	663	596	385	326	628	529

Site No. 00000007 **Site Ref.** B4100 0007 **Lat/Lng.** 51.93435 -1.172228

B4100 NORTH OF BICESTER **Channel:** Southbound

Vehicle Count Summary

From 01/01/2016 To 01/01/2017

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	5-DayAve.	7-DayAve.
00:00	24	20	21	24	26	37	42	23	28
01:00	14	14	15	16	17	20	23	15	17
02:00	14	15	16	15	17	18	15	15	16
03:00	26	26	28	30	27	21	15	28	25
04:00	37	36	35	35	37	15	9	36	29
05:00	113	115	119	113	107	41	24	113	90
06:00	309	329	341	324	281	88	47	317	245
07:00	613	668	674	645	589	161	72	638	489
08:00	628	657	655	637	570	249	111	629	501
09:00	400	416	425	409	388	300	224	408	366
10:00	348	349	346	341	347	357	322	346	344
11:00	344	334	338	333	358	404	360	341	353
12:00	329	325	330	332	364	427	377	336	355
13:00	322	325	330	329	374	401	348	336	347
14:00	323	328	340	340	392	368	334	345	346
15:00	333	351	357	357	412	355	324	362	356
16:00	448	468	485	482	511	351	338	479	440
17:00	519	545	547	552	517	312	340	536	476
18:00	371	413	426	424	393	260	310	406	371
19:00	220	240	261	254	255	194	224	246	235
20:00	133	141	154	158	162	125	139	150	145
21:00	95	110	115	124	110	93	102	111	107
22:00	60	71	71	80	83	81	56	73	72
23:00	33	39	43	46	58	61	36	44	45
Total									
12H(7-19)	4978	5180	5252	5181	5215	3944	3460	5161	4744
16H(6-22)	5735	6000	6123	6041	6022	4444	3972	5984	5477
18H(6-24)	5828	6110	6237	6166	6163	4585	4063	6101	5593
24H(0-24)	6056	6335	6471	6400	6394	4739	4191	6331	5798
AM Peak	08:00	07:00	07:00	07:00	07:00	11:00	11:00	07:00	08:00
	628	668	674	645	589	404	360	638	501
PM Peak	17:00	17:00	17:00	17:00	17:00	12:00	12:00	17:00	17:00
	519	545	547	552	517	427	377	536	476

Site No. 00000007 **Site Ref.** B4100 0007 **Lat/Lng.** 51.93435 -1.172228

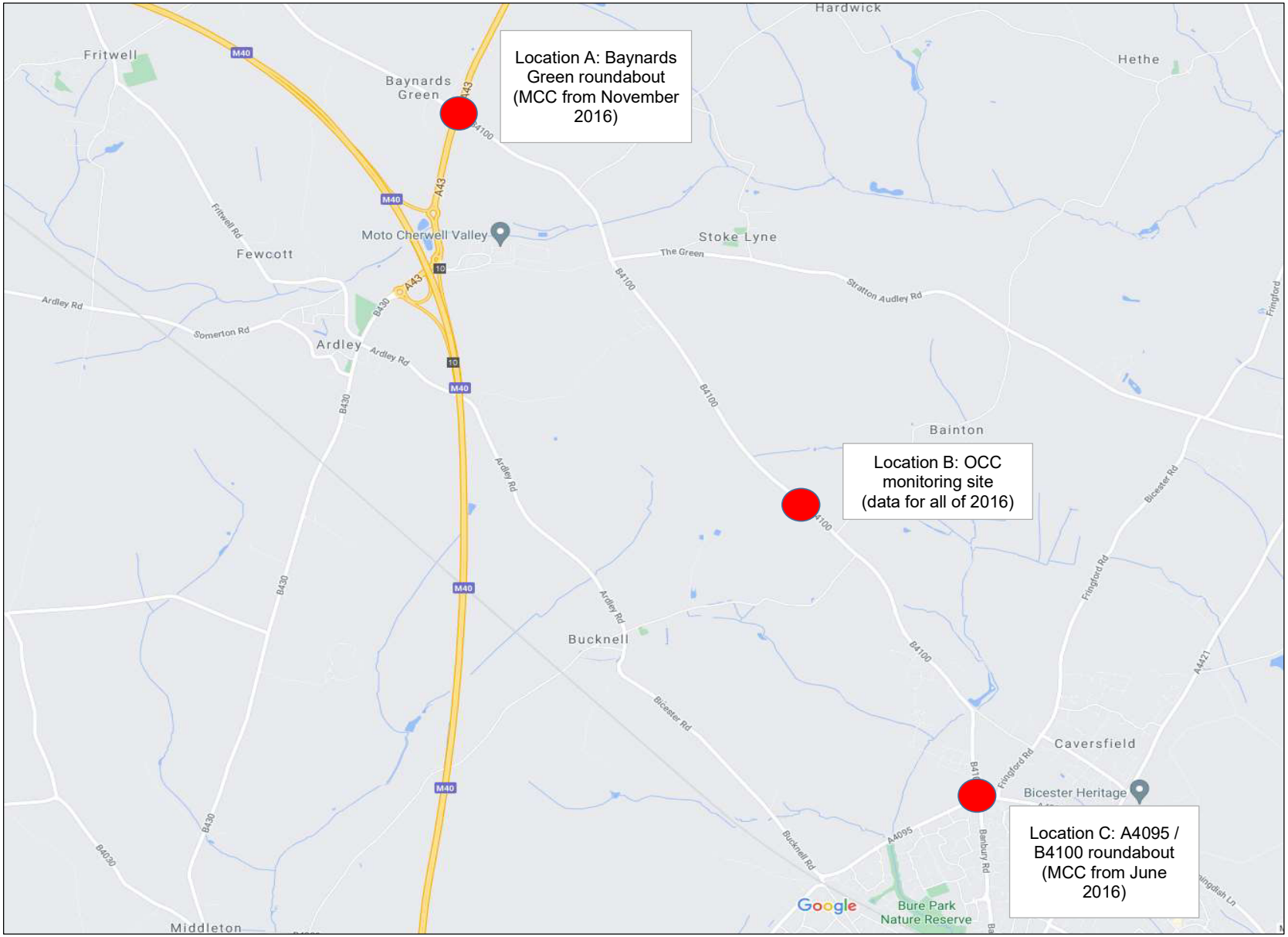
B4100 NORTH OF BICESTER **Channel:** Total Flow

Vehicle Count Summary

From 01/01/2016 To 01/01/2017

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	5-DayAve.	7-DayAve.
00:00	45	44	45	50	56	77	85	48	57
01:00	30	32	34	38	38	43	45	34	37
02:00	28	30	31	33	37	40	33	32	33
03:00	44	43	45	48	45	40	31	45	42
04:00	69	71	70	71	73	38	26	71	60
05:00	195	200	204	197	185	81	53	196	159
06:00	506	547	562	537	479	152	93	526	411
07:00	1024	1123	1135	1103	1008	279	151	1079	832
08:00	968	1041	1040	1017	928	441	219	999	808
09:00	656	690	696	685	669	574	402	679	625
10:00	597	598	605	603	631	671	578	607	612
11:00	614	609	616	619	675	762	655	627	650
12:00	618	621	637	634	732	812	703	648	680
13:00	634	646	662	657	789	763	660	677	687
14:00	667	694	714	714	869	711	627	731	713
15:00	743	786	809	814	952	677	625	821	772
16:00	984	1042	1075	1080	1107	692	644	1058	946
17:00	1119	1178	1200	1215	1110	624	593	1164	1006
18:00	773	842	862	863	837	520	542	835	749
19:00	474	513	546	561	549	393	418	529	494
20:00	291	305	337	340	335	269	257	322	305
21:00	205	231	252	259	232	205	187	236	225
22:00	152	176	186	202	200	182	113	183	173
23:00	72	85	93	102	127	129	68	96	97
Total									
12H(7-19)	9398	9869	10050	10004	10307	7527	6398	9926	9079
16H(6-22)	10874	11466	11747	11702	11902	8546	7353	11538	10513
18H(6-24)	11097	11727	12027	12007	12230	8857	7534	11818	10783
24H(0-24)	11508	12147	12456	12444	12665	9176	7807	12244	11172
AM Peak	07:00	07:00	07:00	07:00	07:00	11:00	11:00	07:00	07:00
	1024	1123	1135	1103	1008	762	655	1079	832
PM Peak	17:00	17:00	17:00	17:00	17:00	12:00	12:00	17:00	17:00
	1119	1178	1200	1215	1110	812	703	1164	1006

APPENDIX Q: B4100 FLOW VALIDATION CALCULATIONS



LOCATION OF TRAFFIC COUNT DATA / FLOW VALIDATION CHECKS

AM Peak (08:00 - 09:00)												
Location Reference	Observed		Modelled		GEH		Total Veh					Validate?
	Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
A	565	718	639	770	3.0	1.9	52	7%	-	Yes	-	Yes
B	-	629	542	676	-	1.8	47	7%	Yes	-	-	Yes
C	619	765	591	734	1.1	1.1	-31	-4%	-	Yes	-	Yes

PM Peak (16:30 - 17:30)												
Location Reference	Observed		Modelled		GEH		Total Veh					Validate?
	Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
A	465	523	541	603	3.4	3.4	80	15%	Yes	-	-	Yes
B	-	536	487	555	-	0.8	19	4%	Yes	-	-	Yes
C	496	567	509	574	0.6	0.3	7	1%	Yes	-	-	Yes

B4100 Flow Validation (Southbound)

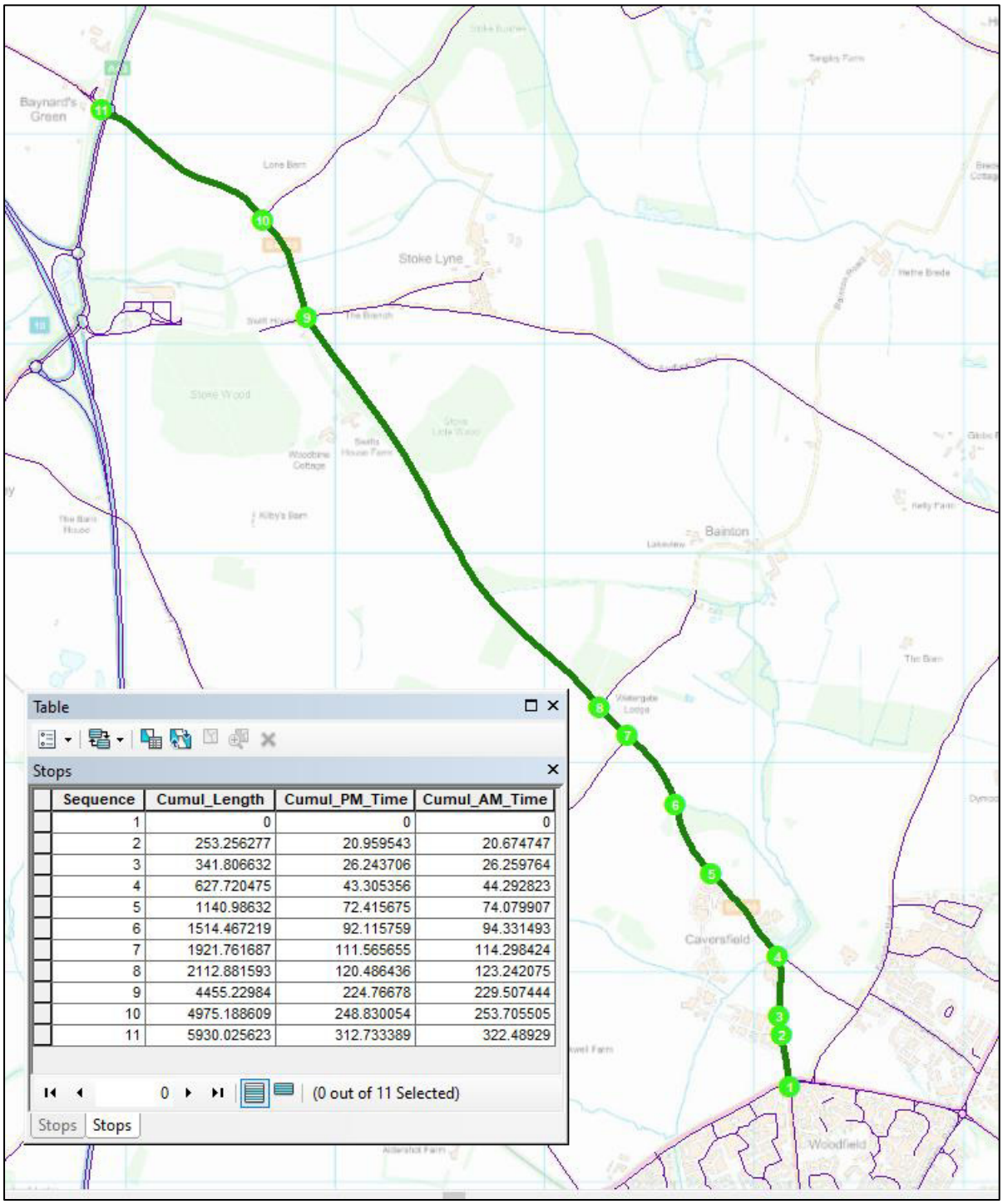
AM Peak (08:00 - 09:00)												
Location Reference	Observed		Modelled		GEH		Total Veh					Validate?
	Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
A	454	554	376	467	3.8	3.9	-87	-16%	Yes	-	-	Yes
B	-	370	349	440	-	3.5	70	19%	Yes	-	-	Yes
C	366	467	348	440	1.0	1.3	-27	-6%	Yes	-	-	Yes

PM Peak (16:30 - 17:30)												
Location Reference	Observed		Modelled		GEH		Total Veh					Validate?
	Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
A	599	663	504	565	4.0	4.0	-98	-15%	Yes	-	-	Yes
B	-	628	473	520	-	4.5	-108	-17%	No	-	-	Yes
C	560	623	506	565	2.3	2.4	-58	-9%	Yes	-	-	Yes

B4100 Flow Validation (Northbound)

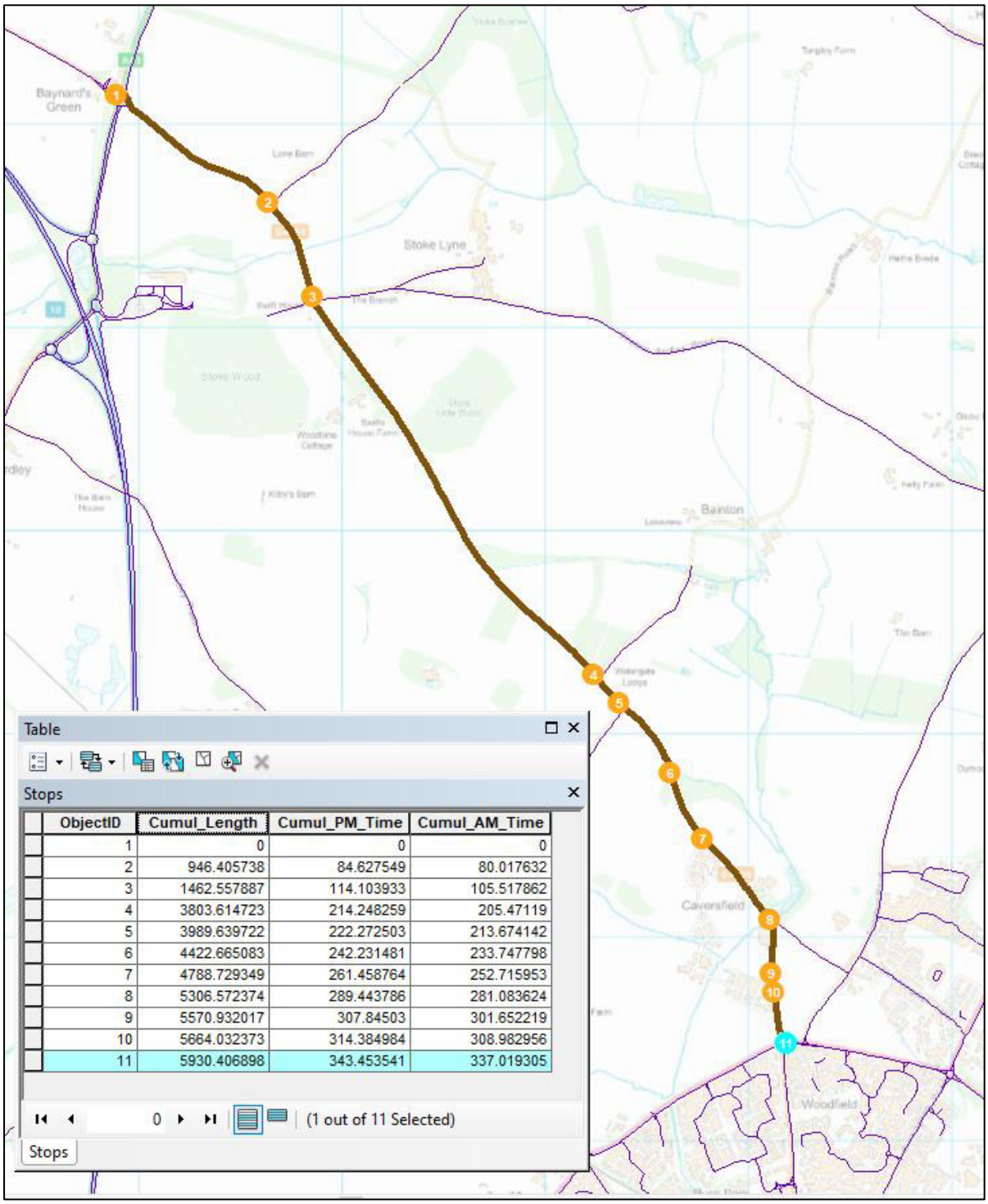
APPENDIX R: B4100 TRAFFICMASTER DATA

B4100 Trafficmaster Journey Time Data (Northbound)



Sequence	Cumul_Length	Cumul_PM_Time	Cumul_AM_Time
1	0	0	0
2	253.256277	20.959543	20.674747
3	341.806632	26.243706	26.259764
4	627.720475	43.305356	44.292823
5	1140.98632	72.415675	74.079907
6	1514.467219	92.115759	94.331493
7	1921.761687	111.565655	114.298424
8	2112.881593	120.486436	123.242075
9	4455.22984	224.76678	229.507444
10	4975.188609	248.830054	253.705505
11	5930.025623	312.733389	322.48929

B4100 Trafficmaster Journey Time Data (Southbound)

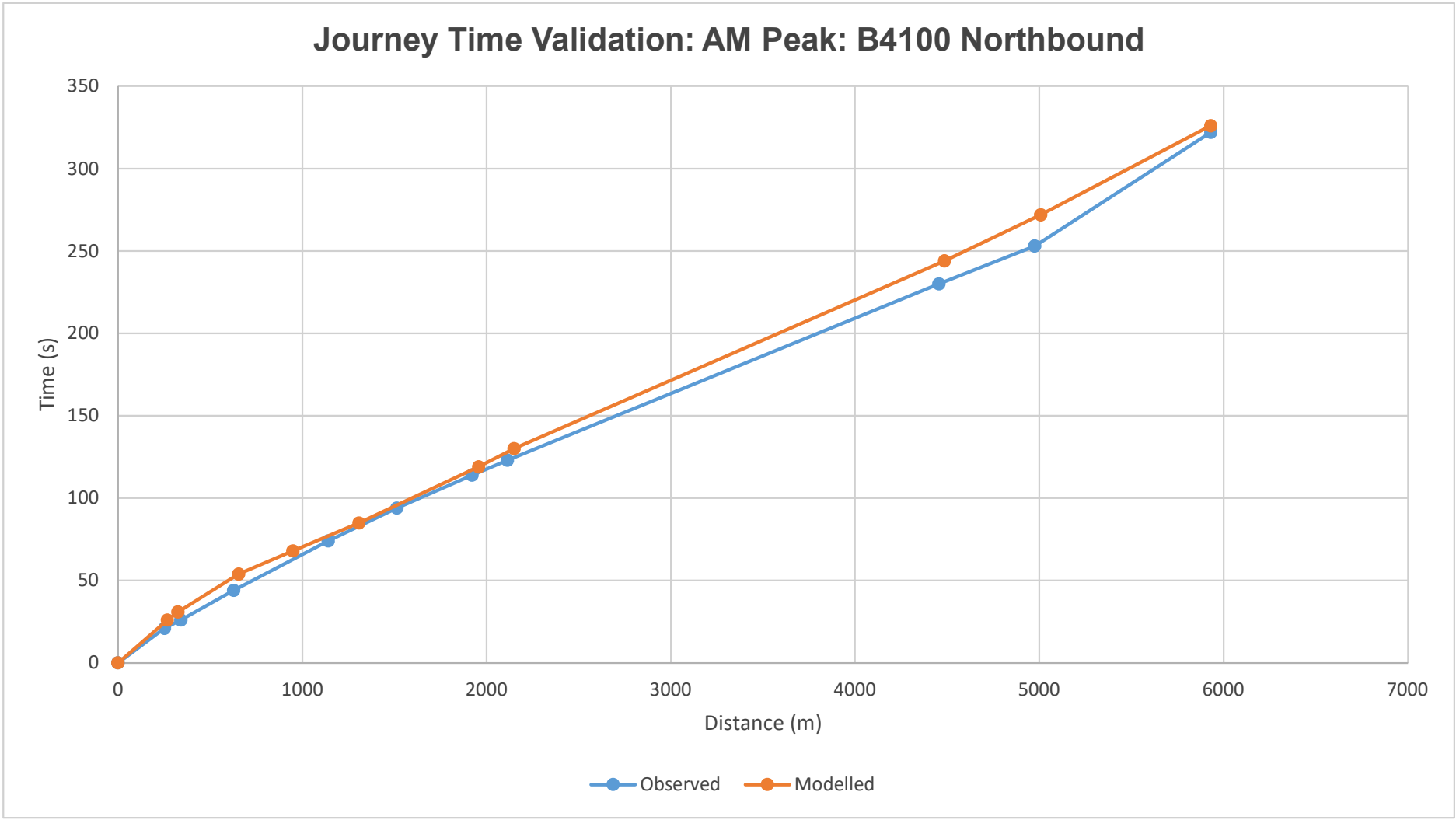


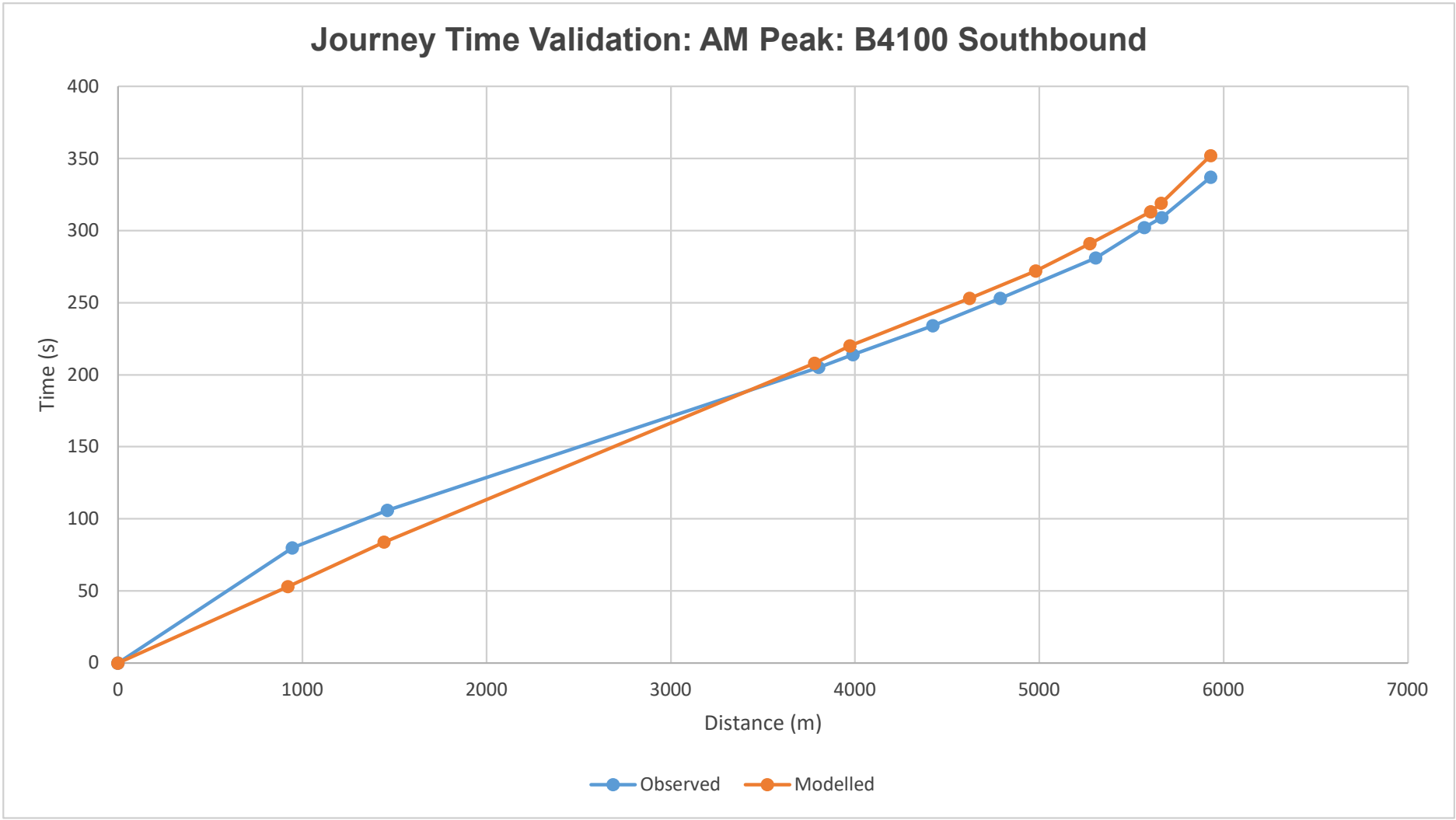
ObjectID	Cumul_Length	Cumul_PM_Time	Cumul_AM_Time
1	0	0	0
2	946.405738	84.627549	80.017632
3	1462.557887	114.103933	105.517862
4	3803.614723	214.248259	205.47119
5	3989.639722	222.272503	213.674142
6	4422.665083	242.231481	233.747798
7	4788.729349	261.458764	252.715953
8	5306.572374	289.443786	281.083624
9	5570.932017	307.84503	301.652219
10	5664.032373	314.384984	308.982956
11	5930.406898	343.453541	337.019305

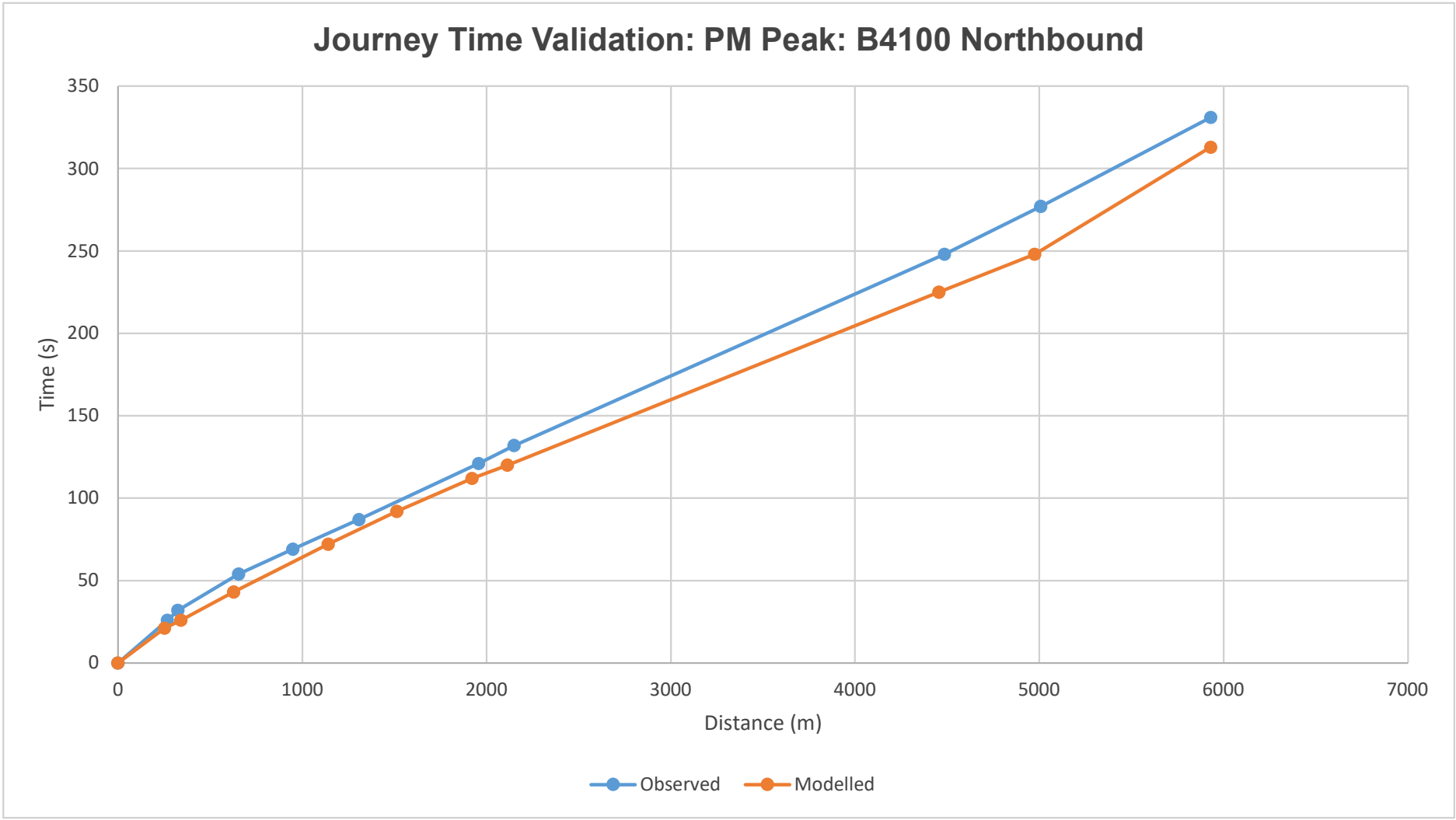
APPENDIX S: B4100 JOURNEY TIME VALIDATION CALCULATIONS

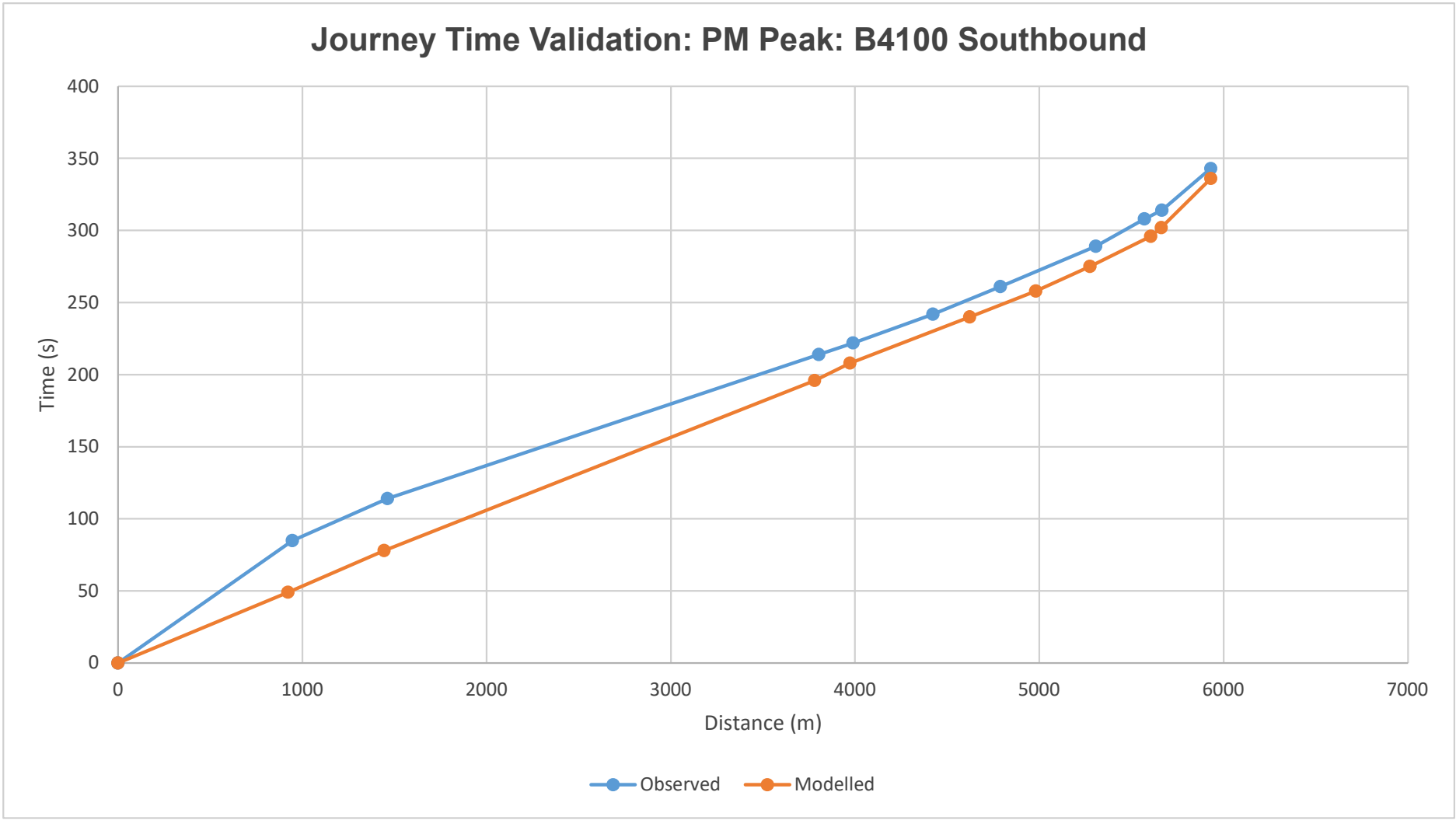
Time Period	Direction	Distance (m)		Average Time (s)						
		Trafficmaster	Saturn	Observed	Modelled	AbsDiff	%Diff	Within 15%	Within 60s	Validate?
AM Peak Hour	Southbound	5930	5930	337	352	15	4.5%	Yes	Yes	Yes
	Northbound	5930	5930	322	326	4	1.2%	Yes	Yes	Yes
PM Peak Hour	Southbound	5930	5930	343	336	-7	-2.0%	Yes	Yes	Yes
	Northbound	5930	5930	313	331	18	5.8%	Yes	Yes	Yes

B4100 Journey Time Validation


Journey Time Validation: AM Peak: B4100 Northbound
Time (s)
350
300
250
200
150
100
50
0
0
1000
2000
3000
4000
5000
6000
7000
Distance (m)
Observed
Modelled


Journey Time Validation: AM Peak: B4100 Southbound
Time (s)
400
350
300
250
200
150
100
50
0
0
1000
2000
3000
4000
5000
6000
7000
Distance (m)
Observed
Modelled


Journey Time Validation: PM Peak: B4100 Northbound
Time (s)
350
300
250
200
150
100
50
0
0
1000
2000
3000
4000
5000
6000
7000
Distance (m)
Observed
Modelled


Journey Time Validation: PM Peak: B4100 Southbound
Time (s)
400
350
300
250
200
150
100
50
0
0
1000
2000
3000
4000
5000
6000
7000
Distance (m)
Observed
Modelled

APPENDIX T: ADDITIONAL B4100 FLOW VALIDATION (AECOM)

AM Peak (08:00 - 09:00)											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
464	546	376	467	4.3	3.5	-79	-15%	Yes	-	-	Yes

PM Peak (16:30 - 17:30)											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
583	660	504	565	3.4	3.8	-95	-14%	Yes	-	-	Yes

B4100 Flow Validation (Northbound)

AM Peak (08:00 - 09:00)											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
491	647	639	770	6.2	4.6	123	19%	No	-	-	Yes

PM Peak (16:30 - 17:30)											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
542	599	541	603	0.0	0.2	4	1%	Yes	-	-	Yes

B4100 Flow Validation (Southbound)

Note: Observed data from MCC at Baynards Green roundabout. Count undertaken in March 2016 and data provided by Aecom.

APPENDIX U: B4100 ALTERNATIVE DATASETS (OCC ATC)

Client:	Oxfordshire County Council
Project:	Bicester - ATC Report
Job Number	3262-LON
Start Date:	15-Jun-16
Site No.	1
Road	Wk1. B4100 - Road from Aynho
Location:	51.917265, -1.156096
Directions	Northbound Southbound

1. Wk1. B4100 - Road from Aynho - 51.917265, -1.156096



Job Number	3262-LON
Client:	Oxfordshire County Council
Project:	Bicester - ATC Report
Location:	51.917265, -1.156096
Site No.	1
Road	Wk1. B4100 - Road from Aynho
Start Date:	15-Jun-16
Directions	Northbound Southbound

Bicester - ATC Report

Site:

1. Wk1. B4100 - Road from Aynho - 51.917265, -1.156096

Incidents / Observations

Site 1 Wk2 *- Data loss, Mon 27th Jun 09:30-12:15 & 18:00 until Tues 28th Jun 15:15 and Sun 26th Jun 15:30-19:00 patched with Mon 4th Jul 09:30-12:15 & 18:00 until Tues 5th Jul 15:15 and Sun 3rd Jul 15:30-19:00 data.*
Site 2 Wk1 *- Missing data Mon 20th Jun 00:00-24:00 and Wed 15th Jun 06:30 until Sun 17th Jun 24:00. Data loss, Tues 21st Jun 08:30-24:00 patched with Tues 14th Jun data. Mon 20th Jun and Wed 15th Jun until Sun 17th Jun patched with Mon 4th Jul 00:00-24:00 and Wed 29th Jun 06:30 until Sun 3rd Jul 24:00 data.*
Site 2 Wk2 *- Data loss, Wed 22nd Jun 00:00 until Thurs 23rd Jun 24:00 patched with Thurs 7th Jul 00:00-15:00.*

Contact: [redacted]

Tracsis plc
Unit 3 Spectrum House
32-34 Gordon House Road
London
NW5 1LP

[redacted]

Tracsis plc
Traffic and Data Services

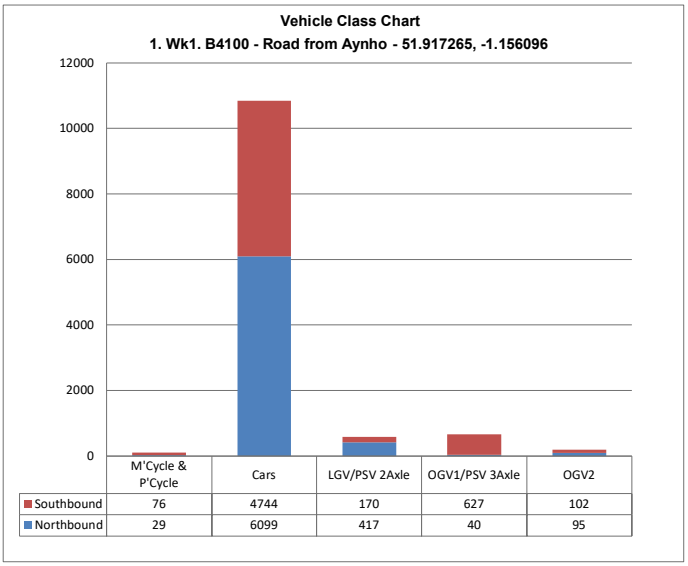
Job Number	3262-LON
Client:	Oxfordshire County Council
Project:	Bicester - ATC Report
Location:	51.917265, -1.156096
Site No.	1
Road	Wk1. B4100 - Road from Aynho
Start Date	15-Jun-16
Direction	Northbound Southbound

Vehicle Class Summary

M'Cycle & P'Cycle	1%
Cars	87%
LGV	5%
OGV1 & PSV	5%
OGV2	2%

	Northbound						Southbound						Combined					
	M'Cycle & P'Cycle	Cars	LGV/PSV 2Axle	OGV1/PSV 3Axle	OGV2	Total	M'Cycle & P'Cycle	Cars	LGV/PSV 2Axle	OGV1/PSV 3Axle	OGV2	Total	M'Cycle & P'Cycle	Cars	LGV/PSV 2Axle	OGV1/PSV 3Axle	OGV2	Total
00:00	0	10	0	0	0	10	0	7	0	1	0	9	0	18	0	1	0	19
00:15	0	10	0	0	0	10	0	6	0	2	1	8	0	16	0	2	1	18
00:30	0	9	1	0	0	11	0	4	0	1	0	5	0	13	1	1	1	16
00:45	0	5	0	0	0	6	0	3	0	0	0	4	0	9	0	1	0	10
01:00	0	8	1	0	0	9	0	3	0	0	0	3	0	11	1	0	0	12
01:15	0	8	0	0	0	8	0	6	0	1	1	8	0	14	0	1	1	16
01:30	0	4	1	0	0	5	0	3	0	1	0	4	0	7	1	1	0	9
01:45	0	3	0	0	0	4	0	3	0	0	0	3	0	6	0	0	0	7
02:00	0	4	0	0	0	5	0	2	0	0	0	2	0	6	0	0	0	7
02:15	0	3	0	0	0	3	0	3	0	1	0	4	0	5	0	1	1	7
02:30	0	4	1	0	0	5	1	5	0	0	0	6	1	9	1	0	0	11
02:45	0	4	0	0	0	4	0	4	0	0	0	4	0	7	0	0	1	9
03:00	0	5	0	0	0	5	0	6	0	0	1	7	0	11	0	0	1	12
03:15	0	6	0	0	0	6	0	7	0	1	0	8	0	12	0	1	0	14
03:30	0	5	1	0	0	6	0	5	0	1	0	7	0	10	1	2	0	13
03:45	0	4	0	0	0	5	0	8	0	1	1	11	0	13	0	2	1	15
04:00	0	6	1	0	0	8	0	7	0	1	0	8	0	13	1	1	1	16
04:15	0	6	1	0	0	7	0	7	0	0	0	7	0	13	1	1	0	14
04:30	0	9	1	0	0	11	0	9	0	0	0	9	0	18	2	0	0	20
04:45	0	12	1	0	1	13	0	12	2	1	0	15	0	23	3	1	1	28
05:00	1	13	3	0	0	18	0	11	1	0	1	12	1	24	4	0	1	30
05:15	0	14	4	1	0	18	0	20	1	1	1	24	0	34	5	2	1	42
05:30	0	24	3	0	1	28	0	29	1	2	0	32	0	54	3	2	1	60
05:45	0	26	1	0	1	28	0	33	2	4	1	40	0	58	4	4	2	67
06:00	1	45	2	1	0	48	1	32	2	4	1	40	1	77	4	5	1	87
06:15	0	46	4	2	1	52	1	42	2	4	0	50	1	88	6	6	1	102
06:30	0	55	5	1	0	61	1	70	3	7	1	81	1	125	8	8	1	143
06:45	0	80	5	1	1	88	1	103	2	10	2	118	1	183	8	12	3	207
07:00	0	107	9	1	1	118	2	103	3	12	3	123	2	210	12	13	3	241
07:15	0	119	3	2	0	124	2	129	5	13	2	151	2	248	9	15	2	275
07:30	1	131	7	1	1	141	1	135	5	17	2	160	2	266	12	17	3	301
07:45	0	138	6	1	1	146	2	146	3	16	3	170	2	284	9	17	4	316
08:00	1	133	6	1	1	141	3	141	6	17	2	169	3	274	12	18	3	310
08:15	0	113	6	1	2	122	3	152	6	17	3	181	3	266	12	18	4	303
08:30	0	92	7	0	1	100	2	119	5	16	3	145	2	211	12	16	4	245
08:45	1	96	5	1	2	104	1	113	4	18	2	138	2	209	8	19	4	242
09:00	0	97	7	1	1	107	2	89	4	12	1	109	3	186	11	13	3	216
09:15	0	69	7	0	2	79	1	74	3	12	2	91	1	143	10	12	4	170
09:30	1	73	7	1	3	84	1	71	4	13	1	90	2	144	11	14	4	174
09:45	0	66	13	1	2	82	1	66	4	13	2	86	1	132	17	13	4	168
10:00	0	66	6	1	3	76	1	54	2	11	1	69	2	120	8	12	4	146
10:15	1	72	9	1	2	84	0	69	4	14	1	87	1	141	12	15	3	171
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11:30	0	73	6	1	2	81	1	50	4	12	2	70	2	123	10	13	4	151
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12:30	1	83	8	0	2	95	1	57	3	10	2	74	2	140	11	11	4	168
12:45	0	77	9	1	2	89	0	50	3	12	1	67	0	128	12	13	3	156
13:00	0	78	9	1	3	90	1	60	3	11	2	77	1	138	12	12	5	167
13:15	0	88	10	0	2	100	2	59	2	10	2	75	2	147	12	10	3	175
13:30	1	85	8	0	3	98	3	62	2	12	2	81	4	147	11	12	5	179
13:45	0	89	10	2	3	103	1	59	2	11	1	75	1	147	12	13	4	177
14:00	0	78	8	1	2	89	0	51	4	9	2	67	1	129	12	10	4	156
14:15	0	88	14	1	1	104	2	57	1	10	1	70	2	144	15	11	3	175
14:30	1	98	10	1	2	111	2	65	2	8	0	77	2	163	12	9	2	188
14:45	0	88	10	1	2	100	2	64	3	8	2	80	2	152	13	9	4	180
15:00	0	99	8	1	1	108	0	59	3	10	2	74	1	158	11	10	3	182
15:15	0	106	9	0	1	117	1	62	3	11	2	79	1	168	12	11	4	196
15:30	0	120	8	0	2	130	2	59	4	12	3	81	3	180	12	12	5	211
15:45	0	115	9	1	2	126	2	58	2	15	3	80	2	173	12	15	4	207
16:00	1	144	8	0	2	155	1	73	3	11	1	90	1	218	12	12	3	245
16:15	1	139	8	0	1	149	2	91	4	11	1	109	2	230	11	11	3	257
16:30	0	160	8	0	2	171	1	93	3	10	2	109	2	253	11	10	4	280
16:45	0	139	6	0	1	147	1	102	2	9	2	116	1	241	9	10	3	263
17:00	1	165	8	0	1	175	2	107	2	10	2	123	4	272	10	10	3	299
17:15	1	171	8	0	1	180	2	114	2	7	1	125	2	285	9	8	1	306
17:30	1	178	5	0	1	186	2	107	1	10	2	122	3	285	6	11	3	308
17:45	1	147	5	0	1	154	3	104	1	8	2	118	4	251	6	8	3	272
18:00	1	123	3	0	1	129	2	83	1	10	2	99	3	206	5	11	3	228
18:15	1	109	4	0	0	113	0	91	1	6	0	98	1	199	5	6	1	212
18:30	0	106	4	0	1	112	0	65	2	7	1	75	1	171	6	7	2	187
18:45	0	106	2	0	0	109	1	62	1	5	0	70	2	168	4	6	0	179
19:00	0	78	3	0	0	82	1	54	1	3	0	60	1	132	4	4	1	142
19:15	1	70	2	0	0	73	0	49	1	3	1	54	1	119	3	3	1	127
19:30	1	73	1	0	1	76	2	42	1	3	1	49	2	115	2	3	2	125
19:45	0	64	1	0	1	66	1	43	1	3	0	48	1	107	2	3	1	114
20:00	0	48	2	0	1	50	1	32	1	3	1	37	1	80	3	3	1	88
20:15	0	42	1	0	1	44	0	31	1	2	0	35	1	74	2	2	1	79
20:30	0	42	1	0	0	43	0	29	1	2	1	34	1	71	2	2	1	77
20:45	0	34	1	0	1	37	0	27	0	2	0	29	0	61	2	2	1	66
21:00	0	31	1	0	0	34	0	20	0	1	1	23	0	51	2	1	2	56
21:15	0	29	1	1	1	31	0	20	0	2	0	22	0	49	1	3	1	54
21:30	0	35	1	0	0	37	0	19	0	1	0	21	0	55	1	1	1	58
21:45	0	34	1	0	1	36	0	17	0	1	0	18	0	52	1	1	1	55
22:00	1	36	0	1	0	38	0	15	0	1	0	17	1	51	1	2	0	55
22:15	0	30	0	0	1	31	0	16	0	1	0	17	0	46	0	1	1	48
22:30	0	28	0	0	0	28	0	14	0	2	1	17	0	42	0	2	1	45
22:45	0	21	0	0	0	22	0	11	1	0	0	12	0	33	1	0	1	34
23:00	1	14	0	0	0	15	0	8	0	0	0	9	1	23	0	0	0	25
23:15	0	16	0	0	1	17	0	10	0	2	0	12	0	26	0	2	1	29
23:30	0	15	0	0	0	15	0	9	0	1	0	10	0	24	0	1	0	25
23:45	0	7	0	0	0	7	0	8	0	1	0	9	0	15	0	1	0	17
Total	**29**	**6099**	**417**	**40**	**95**	**6681**	**76**	**4744**	**170**	**627**	**102**	**5719**	**105**	**10843**	**586**	**667**	**197**	**12399**

1. Wk1. B4100 - Road from Aynho - 51.917265, -1.156096 | Weekday Averag



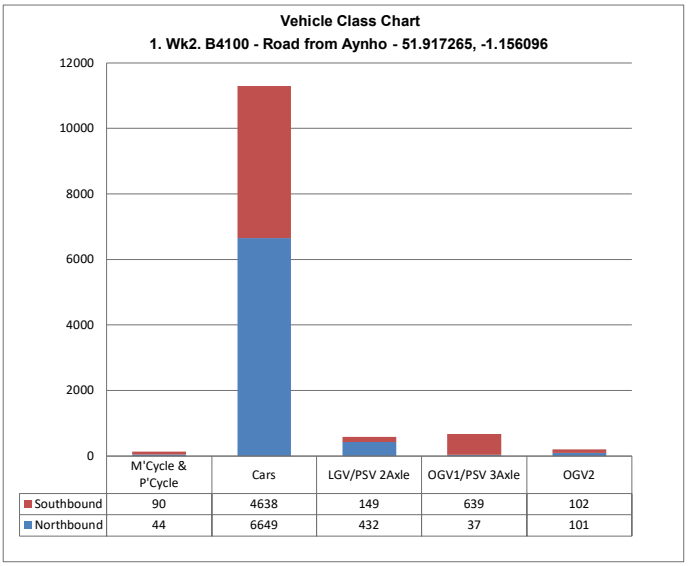
Tracsis plc
Traffic and Data Services

Job Number	3262-LON
Client:	Oxfordshire County Council
Project:	Bicester - ATC Report
Location:	51.917265, -1.156096
Site No.	1
Road	Wk2. B4100 - Road from Aynho
Start Date	22-Jun-16
Direction	Northbound Southbound

Vehicle Class Summary

M'Cycle & P'Cycle	1%
Cars	88%
LGV	5%
OGV1 & PSV	5%
OGV2	2%

1. Wk2. B4100 - Road from Aynho - 51.917265, -1.156096 | Weekday Averag



	Northbound						Southbound						Combined					
	M'Cycle & P'Cycle	Cars	LGV/PSV 2Axle	OGV1/PSV 3Axle	OGV2	Total	M'Cycle & P'Cycle	Cars	LGV/PSV 2Axle	OGV1/PSV 3Axle	OGV2	Total	M'Cycle & P'Cycle	Cars	LGV/PSV 2Axle	OGV1/PSV 3Axle	OGV2	Total
00:00	0	11	1	0	0	12	0	6	0	1	0	7	0	17	1	1	0	19
00:15	0	8	0	0	0	8	0	5	0	1	0	6	0	13	1	1	0	15
00:30	0	6	1	0	1	7	0	4	0	0	0	4	0	10	1	0	1	12
00:45	0	6	1	0	0	7	0	4	0	0	0	5	0	11	1	0	1	13
01:00	0	6	0	0	0	7	0	2	0	1	0	3	0	9	0	1	0	10
01:15	0	6	1	0	1	8	0	4	0	1	0	5	0	10	1	1	1	13
01:30	0	5	0	0	0	5	0	4	1	0	0	5	0	9	1	0	0	10
01:45	0	4	1	0	0	5	0	3	0	0	0	3	0	7	1	0	0	9
02:00	0	5	1	0	0	6	0	2	0	0	0	3	0	7	1	0	1	9
02:15	0	3	0	0	0	3	0	2	0	0	0	2	0	5	0	0	0	5
02:30	0	4	0	0	0	4	1	3	0	0	0	4	1	7	0	0	0	9
02:45	0	3	0	0	0	4	0	5	0	0	0	5	0	8	0	0	1	9
03:00	0	3	0	0	0	3	0	5	0	0	0	6	0	8	0	0	0	9
03:15	0	6	0	0	0	7	0	6	0	0	0	6	0	12	0	1	0	13
03:30	0	4	0	0	0	5	0	6	0	1	0	7	0	10	1	1	0	12
03:45	0	7	1	0	0	8	0	9	1	1	1	12	0	16	2	1	1	20
04:00	0	6	0	0	1	7	0	6	0	0	0	7	0	12	1	1	1	14
04:15	0	7	2	0	1	10	0	8	0	0	0	9	0	15	2	1	1	18
04:30	0	12	1	1	1	15	0	10	0	0	0	11	0	21	1	2	1	25
04:45	0	12	2	0	1	15	0	12	1	0	0	14	0	25	3	1	1	29
05:00	0	10	4	1	1	15	0	7	1	1	0	9	0	17	5	1	1	25
05:15	0	16	2	1	1	21	0	20	1	1	0	22	0	36	3	2	1	42
05:30	0	25	2	1	1	28	0	31	1	3	1	36	0	56	3	3	2	64
05:45	0	33	3	0	2	37	0	40	2	2	0	44	0	73	5	2	2	82
06:00	0	46	4	0	0	49	0	34	3	3	1	41	0	79	7	4	1	91
06:15	0	43	5	0	0	49	1	38	2	5	1	46	1	81	7	5	1	95
06:30	0	57	5	0	0	63	1	61	3	9	2	76	1	118	8	9	2	138
06:45	0	89	4	0	1	94	1	87	2	10	2	102	1	176	6	11	2	197
07:00	1	102	7	1	1	111	2	93	2	10	3	110	2	195	9	11	3	221
07:15	0	135	6	2	1	144	4	119	3	17	2	145	4	254	10	19	3	290
07:30	2	138	7	1	1	149	1	120	4	16	2	144	3	258	11	18	3	293
07:45	1	131	8	1	1	142	2	131	3	17	4	158	3	262	11	18	6	300
08:00	0	136	4	0	2	143	2	139	5	12	3	161	2	275	9	12	5	304
08:15	0	115	7	0	1	123	2	155	6	14	3	179	2	270	13	14	4	302
08:30	0	106	5	1	1	113	2	119	4	14	2	141	2	225	9	14	4	254
08:45	0	94	6	0	3	103	2	106	3	15	3	128	2	200	9	15	5	231
09:00	0	90	9	1	1	102	1	83	3	11	2	100	2	173	12	11	4	202
09:15	0	79	10	1	1	92	1	69	2	13	1	85	1	149	12	13	2	177
09:30	0	65	7	1	1	73	1	48	1	15	2	68	1	113	8	16	3	141
09:45	0	66	7	1	2	77	1	49	2	12	2	66	1	115	9	13	4	142
10:00	1	63	8	1	2	75	1	45	3	14	2	65	2	108	11	16	4	140
10:15	0	67	7	1	1	76	1	38	1	16	3	60	1	105	8	17	4	136
10:30	0	66	7	1	2	76	1	43	1	15	1	61	1	109	8	16	3	137
10:45	1	76	9	1	2	87	1	46	1	15	1	65	2	122	10	16	3	152
11:00	0	66	10	0	3	79	1	44	2	13	3	62	1	110	12	13	6	142
11:15	1	70	8	0	2	81	1	38	1	15	1	56	2	108	9	15	3	137
11:30	1	72	6	1	2	82	1	45	2	11	2	62	2	117	8	12	4	143
11:45	0	73	7	1	1	82	2	37	1	18	1	60	2	110	9	19	3	142
12:00	0	82	9	2	1	94	1	40	1	14	3	60	2	122	11	16	4	154
12:15	0	83	9	1	2	95	1	47	2	14	1	65	1	130	11	15	3	160
12:30	1	81	9	0	1	91	1	56	2	11	2	72	2	136	11	11	3	164
12:45	1	88	8	1	1	98	2	59	2	10	1	74	3	147	9	10	3	172
13:00	0	94	8	1	2	105	2	51	2	9	1	66	2	145	10	10	3	171
13:15	0	92	7	1	2	102	2	48	2	12	1	65	2	141	9	12	3	167
13:30	0	96	10	1	2	109	1	49	1	10	1	62	1	145	11	10	3	170
13:45	0	83	9	1	2	96	1	45	2	9	3	59	1	128	11	10	5	155
14:00	0	100	7	1	1	110	2	45	2	14	2	64	2	145	9	14	3	174
14:15	0	90	11	2	2	105	1	46	2	7	1	58	1	136	13	9	3	163
14:30	0	101	9	1	2	114	2	57	2	12	1	74	3	158	11	14	3	188
14:45	1	101	9	0	2	113	2	56	2	16	1	77	4	157	11	16	3	190
15:00	0	108	6	1	2	116	3	52	3	14	3	75	3	160	9	14	4	191
15:15	0	109	10	0	1	121	1	77	3	7	1	88	1	186	13	7	2	209
15:30	1	138	12	0	1	152	1	68	2	10	1	82	1	206	14	10	2	234
15:45	1	122	9	1	2	135	1	76	4	10	2	92	1	199	12	12	3	227
16:00	0	150	7	0	3	160	1	93	2	9	2	108	1	243	9	9	4	267
16:15	1	164	8	0	1	174	2	107	4	10	2	126	3	271	12	11	3	299
16:30	1	180	7	0	3	191	2	95	3	10	2	113	3	275	10	10	5	304
16:45	1	161	5	0	2	169	2	126	4	10	3	146	3	288	9	10	5	315
17:00	1	166	6	0	1	173	3	114	2	9	1	130	3	280	8	9	2	303
17:15	1	181	7	0	0	190	1	134	3	7	2	146	1	315	10	7	3	336
17:30	0	177	5	1	1	184	0	126	2	6	0	135	1	303	7	7	1	319
17:45	1	151	5	0	1	159	1	123	3	7	0	135	2	274	8	7	2	294
18:00	1	121	5	0	1	128	1	98	2	9	1	112	2	220	7	9	2	240
18:15	0	141	5	0	1	147	4	88	2	9	1	104	4	229	6	10	2	251
18:30	0	129	6	0	2	137	4	65	2	8	1	80	4	194	8	8	3	217
18:45	1	111	4	0	1	116	2	68	1	6	1	79	3	179	5	6	2	195
19:00	1	102	4	0	1	107	1	55	1	4	0	62	2	157	4	4	1	169
19:15	1	96	4	0	1	102	2	56	0	5	1	64	3	152	5	5	2	166
19:30	1	88	3	0	0	93	1	43	2	3	1	50	2	131	5	3	1	142
19:45	1	77	5	0	1	83	0	48	1	3	0	52	1	125	5	3	1	135
20:00	1	75	4	0	1	81	1	36	1	2	0	40	1	111	5	2	1	121
20:15	2	78	3	0	0	84	0	38	0	1	0	40	2	116	4	1	0	124
20:30	3	65	2	0	0	70	0	35	0	2	0	38	3	100	2	2	1	108
20:45	3	52	3	0	2	60	1	28	0	2	0	32	4	79	3	2	3	91
21:00	4	53	2	0	1	60	0	24	1	2	0	28	4	78	4	2	1	88
21:15	2	39	1	0	1	42	0	25	1	2	0	29	2	63	2	2	1	70
21:30	0	47	3	0	0	50	0	27	0	1	0	28	0	74	3	1	1	78
21:45	0	34	1	0	0	35	0	18	1	1	0	20	0	52	1	1	1	54
22:00	1	40	1	0	0	43	0	16	0	1	0	18	2	56	1	1	0	61
22:15	0	37	0	0	1	38	0	17	1	1	0	18	0	53	1	1	1	56
22:30	0	26	1	0	1	27	0	16	0	0	0	17	0	41	1	0	1	44
22:45	0	21	0	0	0	22	0	15	0	0	0	16	0	36	1	0	1	38
23:00	0	22	0	0	0	23	0	13	1	1	0	15	0	35	1	1	0	38
23:15	0	17	0	0	0	17	0	9	0	1	0	11	0	27	0	1	0	28
23:30	0	14	0	0	1	15	0	8	0	1	0	10	0	22	1	1	1	25
23:45	0	12	1	0	0	13	0	8	0	1	0	9	0	20	1	1	1	22
Total	**44**	**6649**	**432**	**37**	**101**	**7263**	**90**	**4638**	**149**	**639**	**102**	**5617**	**133**	**11287**	**581**	**676**	**203**	**12880**

APPENDIX V: ADDITIONAL B4100 FLOW VALIDATION (OCC DATA)

AM Peak (08:00 - 09:00)											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
519	549	348	440	8.2	4.9	-108	-20%	No	-	-	No

PM Peak (16:30 - 17:30)											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
567	661	506	565	2.6	3.8	-95	-14%	Yes	-	-	Yes

B4100 Flow Validation (Northbound)

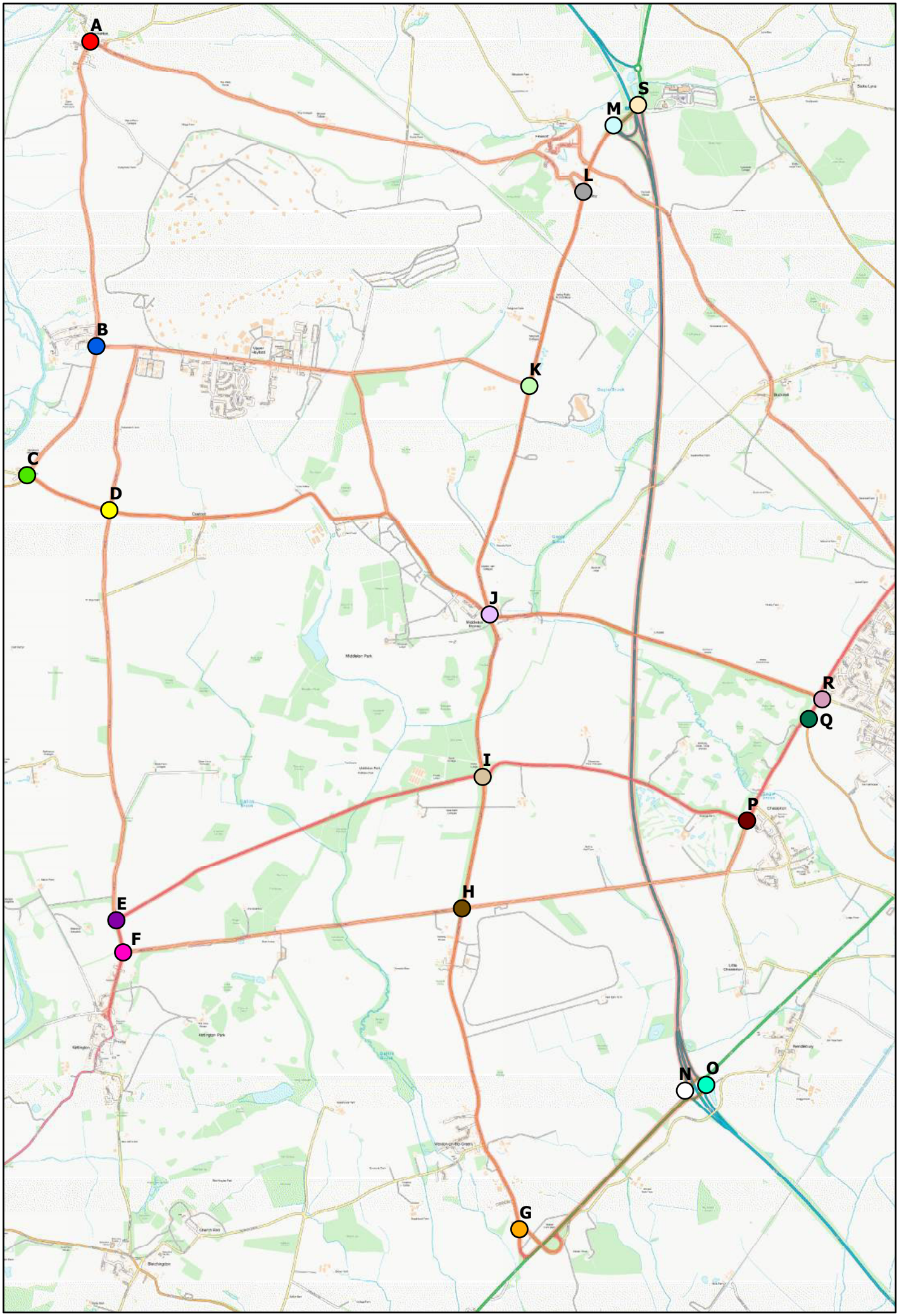
AM Peak (08:00 - 09:00)											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
669	700	591	734	3.1	1.3	34	5%	-	Yes	-	Yes

PM Peak (16:30 - 17:30)											
Observed		Modelled		GEH		Total Veh					Validate?
Car	Total	Car	Total	Car	Total	Diff	% Diff	<700	700-2700	>2700	
464	517	509	574	2.0	2.4	57	11%	Yes	-	-	Yes

B4100 Flow Validation (Southbound)

Note: Observed data from ATC on B4100. Count undertaken in June 2016 and data provided by OCC.

APPENDIX W: M40 LMVR JOURNEY TIME VALIDATION DATA


A
B
C
D
E
F
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R
S

Journey Time Validation Summary

AM Peak		Average Time (s)						
Route		Observed	Modelled	AbsDiff	%Diff	Within 15%	Within 60s	Validate?
Blue	NB	723	784	61	8%	yes	no	yes
	SB	741	823	82	11%	yes	no	yes
Green	EB	531	499	-32	-6%	yes	yes	yes
	WB	714	539	-175	-24%	no	no	no
Purple	NB	559	530	-29	-5%	yes	yes	yes
	SB	615	623	8	1%	yes	yes	yes
Yellow	CW	770	693	-77	-10%	yes	no	yes
	Anti-CW	708	718	10	1%	yes	yes	yes
A-F	SB	540	496	-44	-8%	yes	yes	yes
F-A	NB	541	495	-46	-9%	yes	yes	yes
C-R	EB	487	464	-23	-5%	yes	yes	yes
R-C	WB	485	488	3	1%	yes	yes	yes
F-R	EB	447	412	-35	-8%	yes	yes	yes
R-F	WB	452	420	-32	-7%	yes	yes	yes
S-G (M-way)	SB	783	705	-78	-10%	yes	no	yes
G-S (M-way)	NB	472	542	70	15%	yes	no	yes
S-G (Local)	SB	647	569	-78	-12%	yes	no	yes
G-S (Local)	NB	630	582	-48	-8%	yes	yes	yes
C-S	EB	591	559	-32	-5%	yes	yes	yes
S-C	WB	606	539	-67	-11%	yes	no	yes
								95%

Inter Peak		Average Time (s)						
Route		Observed	Modelled	AbsDiff	%Diff	Within 15%	Within 60s	Validate?
Blue	NB	831	764	-67	-8%	yes	no	yes
	SB	877	782	-95	-11%	yes	no	yes
Green	EB	513	483	-30	-6%	yes	yes	yes
	WB	549	484	-65	-12%	yes	no	yes
Purple	NB	538	527	-11	-2%	yes	yes	yes
	SB	540	540	0	0%	yes	yes	yes
Yellow	CW	725	670	-55	-8%	yes	yes	yes
	Anti-CW	654	669	15	2%	yes	yes	yes
A-F	SB	534	493	-41	-8%	yes	yes	yes
F-A	NB	535	493	-42	-8%	yes	yes	yes
C-R	EB	463	461	-2	0%	yes	yes	yes
R-C	WB	461	456	-5	-1%	yes	yes	yes
F-R	EB	447	411	-36	-8%	yes	yes	yes
R-F	WB	447	408	-39	-9%	yes	yes	yes
S-G (M-way)	SB	529	465	-64	-12%	yes	no	yes
G-S (M-way)	NB	522	509	-13	-2%	yes	yes	yes
S-G (Local)	SB	627	531	-96	-15%	no	no	no
G-S (Local)	NB	618	577	-41	-7%	yes	yes	yes
C-S	EB	601	554	-47	-8%	yes	yes	yes
S-C	WB	611	525	-86	-14%	yes	no	yes
								95%

PM Peak		Average Time (s)						
Route		Observed	Modelled	AbsDiff	%Diff	Within 15%	Within 60s	Validate?
Blue	NB	803	865	62	8%	yes	no	yes
	SB	916	809	-107	-12%	yes	no	yes
Green	EB	603	516	-87	-14%	yes	no	yes
	WB	707	518	-189	-27%	no	no	no
Purple	NB	671	602	-69	-10%	yes	no	yes
	SB	644	569	-75	-12%	yes	no	yes
Yellow	CW	763	708	-55	-7%	yes	yes	yes
	Anti-CW	681	697	16	2%	yes	yes	yes
A-F	SB	523	495	-28	-5%	yes	yes	yes
F-A	NB	525	499	-26	-5%	yes	yes	yes
C-R	EB	482	463	-19	-4%	yes	yes	yes
R-C	WB	476	456	-20	-4%	yes	yes	yes
F-R	EB	458	420	-38	-8%	yes	yes	yes
R-F	WB	459	413	-46	-10%	yes	yes	yes
S-G (M-way)	SB	552	525	-27	-5%	yes	yes	yes
G-S (M-way)	NB	552	642	90	16%	no	no	no
S-G (Local)	SB	630	536	-94	-15%	yes	no	yes
G-S (Local)	NB	625	620	-5	-1%	yes	yes	yes
C-S	EB	608	577	-31	-5%	yes	yes	yes
S-C	WB	612	526	-86	-14%	yes	no	yes
								90%

Blue		AM		IP		PM	
Northbound	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 Launton Road / Skimmingdish Lane roundabout (A)	0	00	00	00	00	00	00
2 Under railway bridge Launton Road	804	83	84	174	81	84	83
3 Stop Line Launton Road/London Road Junction	1780	159	186	250	186	170	186
4 Left turn into Bucknell Road from Field Street	2611	281	308	378	313	347	398
5 Under railway bridge Bucknell Road/Howes Lane Junction	4100	404	446	511	451	472	536
6 Ardley Road /B430 Junction (B)	8982	723	784	831	764	803	865

Blue		AM		IP		PM	
Southbound	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 Ardley Road /B430 Junction (B)	0	00	00	00	00	00	00
2 Under railway bridge Bucknell Road/Howes Lane Junction	4882	299	320	313	305	333	308
3 Right turn into Field Street	6371	451	485	478	457	512	474
4 Left turn into Launton Road	7226	578	638	633	595	656	612
5 Under railway bridge Launton Road	8202	650	735	717	693	800	711
6 Launton Road / Skimmingdish Lane roundabout (A)	9006	741	823	877	782	916	809

Green		AM		IP		PM	
Eastbound	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 M40/A41 Roundabout (A)	0	00	00	00	00	00	00
2 Cross stopline Vendee Drive roundabout	2712	123	125	125	126	141	127
3 Cross stopline Esso roundabout towards Boundary Way	3629	209	216	219	216	272	226
4 Cross stopline London Road roundabout towards A41	5219	334	314	321	311	394	330
5 Under railway bridge at Marsh Gibbon turning (B)	8769	531	499	513	483	603	516

Green		AM		IP		PM	
Westbound	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 Under railway bridge at Marsh Gibbon turning (B)	0	00	00	00	00	00	00
2 Cross stopline London Road roundabout towards A41	3153	220	203	198	191	228	206
3 Cross stopline Esso roundabout towards Boundary Way	4755	481	295	314	274	453	298
4 Cross stopline Vendee Drive roundabout	5693	567	377	392	353	542	381
5 M40/A41 Roundabout (A)	8381	714	539	549	484	707	518

Purple		AM		IP		PM	
Northbound	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 Vendee Drive roundabout (A)	0	00	00	00	00	00	00
2 Cross stopline Esso roundabout towards Oxford Road	917	110	84	73	83	78	91
3 Cross stopline mini roundabouts with Middleton Stoney Road	1249	157	125	124	124	151	141
4 Cross stopline St John's Street roundabout	1892	229	193	204	193	273	216
5 Under railway bridge on Buckingham Road	2321	280	260	263	262	346	302
6 Cross stopline Skimmingdish Lane roundabout towards A4421	3631	393	399	378	398	485	451
7 Right turn into Stoke Lyne Road (B)	6390	559	530	538	527	671	602

Purple		AM		IP		PM	
Southbound	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 Left turn from Stoke Lyne Road (B)	0	00	00	00	00	00	00
2 Cross stopline Skimmingdish Lane roundabout towards Buckingham Road	2759	166	165	160	131	175	134
3 Under railway bridge on Buckingham Road	4069	315	321	297	278	350	286
4 Cross stopline St John's Street roundabout	4508	421	413	359	343	420	359
5 Cross stopline mini roundabouts with Middleton Stoney Road	5146	495	490	431	412	514	430
6 Cross stopline Esso roundabout towards A41	5478	542	532	476	452	581	477
7 Vendee Drive roundabout (A)	6402	615	623	540	540	644	569

Yellow		AM		IP		PM	
Clockwise	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 Vendee Drive roundabout (A)	0	00	00	00	00	00	00
2 Cross stopline towards Howes Lane from Middleton Stoney roundabout	1737	84	99	81	99	86	103
3 Under railway bridge Bucknell Road/Howes Lane Junction	3169	174	186	169	185	176	195
4 Cross stopline Banbury Road roundabout towards A4095	4298	248	270	242	268	255	287
5 Cross stopline A4421 roundabout towards Skimmingdish Lane	5125	306	329	296	322	312	348
6 Cross stopline Launton road roundabout towards Charbridge Lane	6541	384	440	380	429	416	456
7 Cross stopline roundabout with Gavray Drive	8425	507	521	513	509	536	537
8 Cross stopline roundabout with London Road towards A41	9593	603	601	603	586	616	616
9 Cross stopline Esso roundabout towards Oxford Road (B)	9593	770	693	725	670	763	708

Yellow		AM		IP		PM	
Anti-clockwise	Distance	Obs	Mod	Obs	Mod	Obs	Mod
1 Vendee Drive roundabout (B)	0	00	00	00	00	00	00
2 Cross stopline Esso roundabout towards Boundary Way	1499	00	00	00	00	00	00
3 Cross stopline London Road roundabout towards A4421	1499	84	95	83	92	87	102
4 Cross stopline roundabout with Gavray Drive	2705	169	171	159	168	160	179
5 Cross stopline Launton Road roundabout towards Skimmingdish Lane	4513	292	253	280	249	274	262
6 Cross stopline A4421 roundabout towards A4095	5899	385	356	357	349	359	364
7 Cross stopline Banbury Road roundabout	6717	445	417	407	403	419	425
8 Under railway bridge Bucknell Road/Howes Lane Junction	7841	518	522	480	485	492	511
9 Cross stopline Howes Lane towards Vendee Drive at Middleton Stoney Road roundabout (A)	9287	624	616	573	574	597	601
10 Vendee Drive roundabout	11015	708	718	654	669	681	697

A-F			AM		IP		PM	
SB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
A	Water St/ Ardley Rd	00	00	00	00	00	00	00
B	Somerton Rd/ Camp Rd	877	183	145	187	145	182	145
C	B4030/ Station Rd	1891	261	210	265	210	258	210
D	B4030/ Port Way	2647	309	253	313	253	306	253
E	A4095 / Port Way	3713	518	466	513	463	502	464
F	A4095/ Akeman St	4911	540	496	534	493	523	495

F-A			AM		IP		PM	
NB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
F	A4095/ Akeman St	00	00	00	00	00	00	00
E	A4095 / Port Way	1541	21	30	21	30	21	32
D	B4030/ Port Way	2627	233	241	223	240	218	244
C	B4030/ Station Rd	3376	281	281	270	280	267	285
B	Somerton Rd/ Camp Rd	5072	358	346	349	345	342	350
A	Water St/ Ardley Rd	5830	541	495	535	493	525	499

C-R			AM		IP		PM	
EB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
C	B4030/ Station Rd	00	00	00	00	00	00	00
D	B4030/ Port Way	1650	48	40	48	39	48	40
J	B430/ B4030 Middleton Stoney Crossroads	2078	320	306	297	305	310	306
R	B4030/Howes Ln	2542	487	464	463	461	482	463

R-C			AM		IP		PM	
WB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
R	B4030/Howes Ln	00	00	00	00	00	00	00
J	B430/ B4030 Middleton Stoney Crossroads	1613	165	227	165	196	165	194
D	B4030/ Port Way	2898	437	449	414	417	427	416
C	B4030/ Station Rd	3386	485	488	461	456	476	456

F-R			AM		IP		PM	
SB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
F	A4095/ Akeman St	00	00	00	00	00	00	00
E	A4095 / Port Way	807	21	34	21	34	21	35
I	A4095/ B430	1278	200	210	197	209	204	213
P	A4095/ Unclassified	2597	335	321	335	320	333	325
Q	A4095/ Vendee Dr	3620	422	390	423	389	432	397
R	B4030/Howes Ln	4032	447	412	447	411	458	420

R-F			AM		IP		PM	
NB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
R	B4030/Howes Ln	00	00	00	00	00	00	00
Q	A4095/ Vendee Dr	553	18	29	18	23	18	26
P	A4095/ Unclassified	1857	105	100	106	92	117	96
I	A4095/ B430	2325	240	219	244	209	247	213
E	A4095 / Port Way	3476	431	389	426	378	438	383
F	A4095/ Akeman St	3896	452	420	447	408	459	413

S-G (M-way)			AM		IP		PM	
SB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
S	M40 J10 Cherwell Roundabout	00	00	00	00	00	00	00
O	M40 Jn9/ A41	4562	572	587	404	347	422	395
G	B4030/ B4030 Overbridge	5267	783	705	529	465	552	525

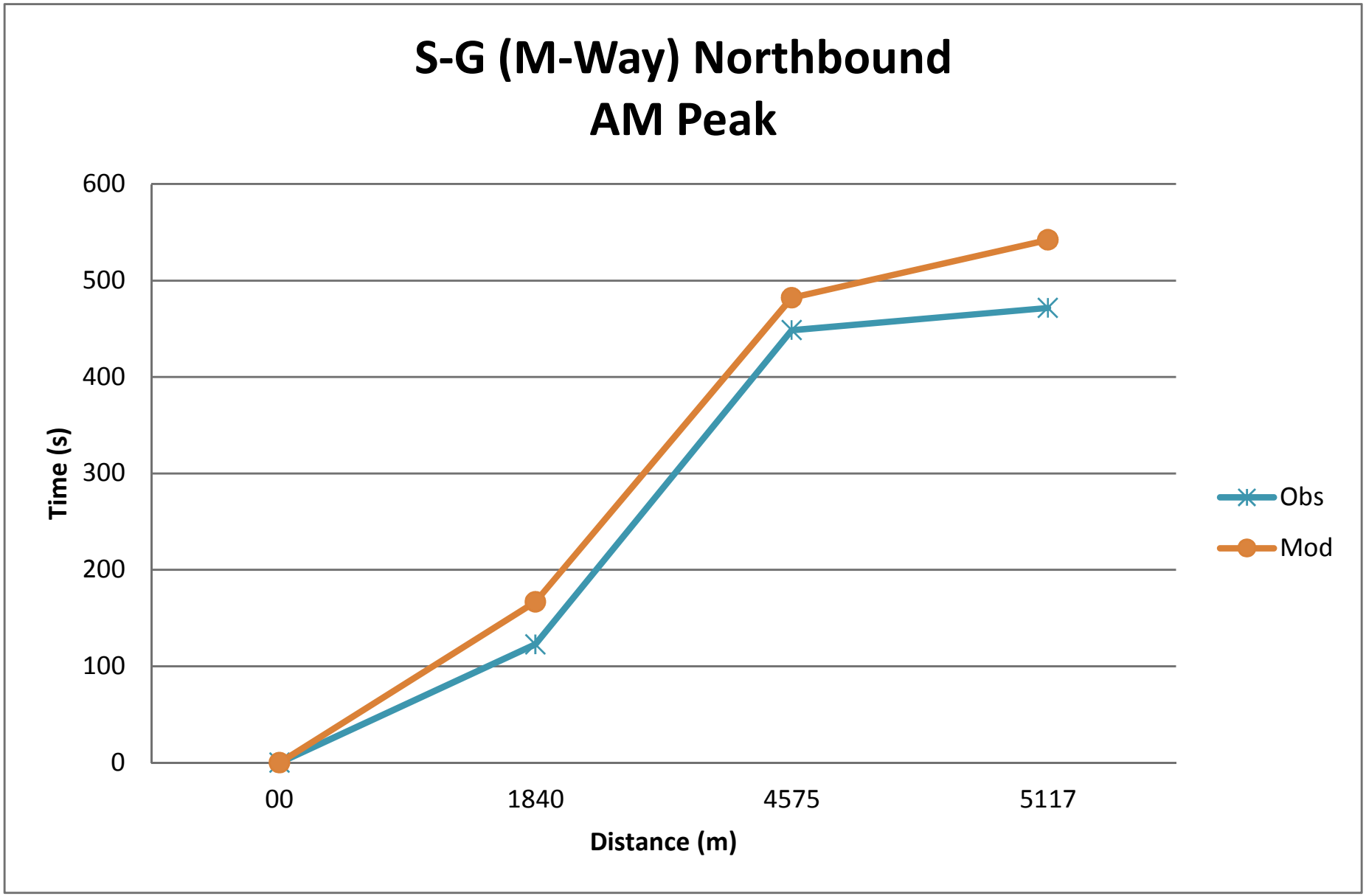
G-S (M-way)			AM		IP		PM	
NB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
G	B4030/ B4030 Overbridge	00	00	00	00	00	00	00
N	M40 Jn9/ A34	1840	123	167	141	132	146	195
M	Ardley Roundabout	4575	449	482	496	451	525	581
S	M40 J10 Cherwell Roundabout	5117	472	542	522	509	552	642

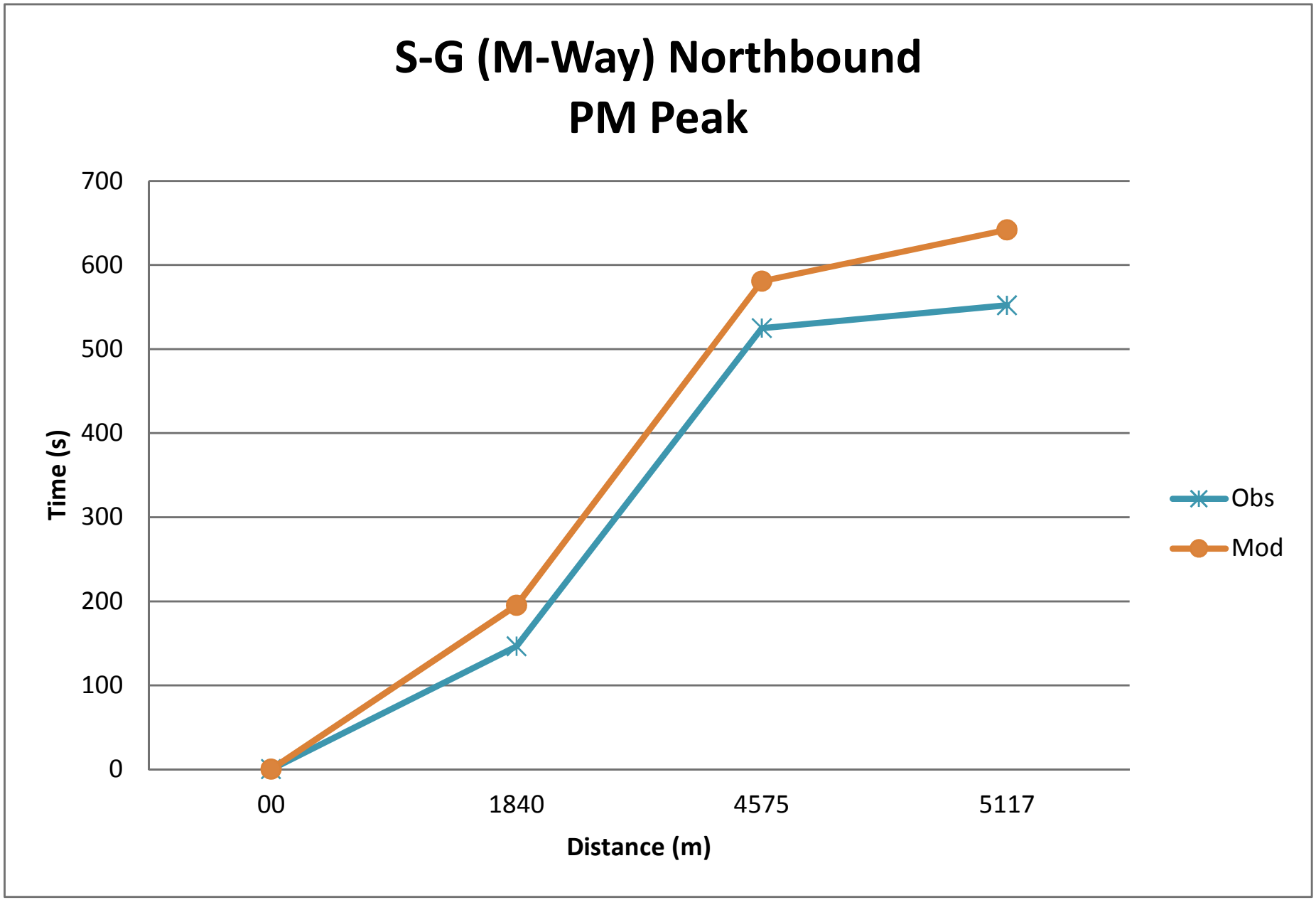
S-G (Local)			AM		IP		PM	
SB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
S	M40 J10 Cherwell Roundabout	00	00	00	00	00	00	00
M	Ardley Roundabout	1500	37	21	36	18	37	18
L	B430/ Church Rd	3000	91	61	92	53	95	54
K	B430/ Unclassified	4194	178	144	183	132	186	132
J	B430/ B4030 Middleton Stoney Crossroads	4776	343	285	312	257	316	263
I	A4095/ B430	6091	424	366	400	334	407	339
H	B430/Green Lane	7406	476	421	456	387	464	392
G	B4030/ B4030 Overbridge	7975	647	569	627	531	630	536

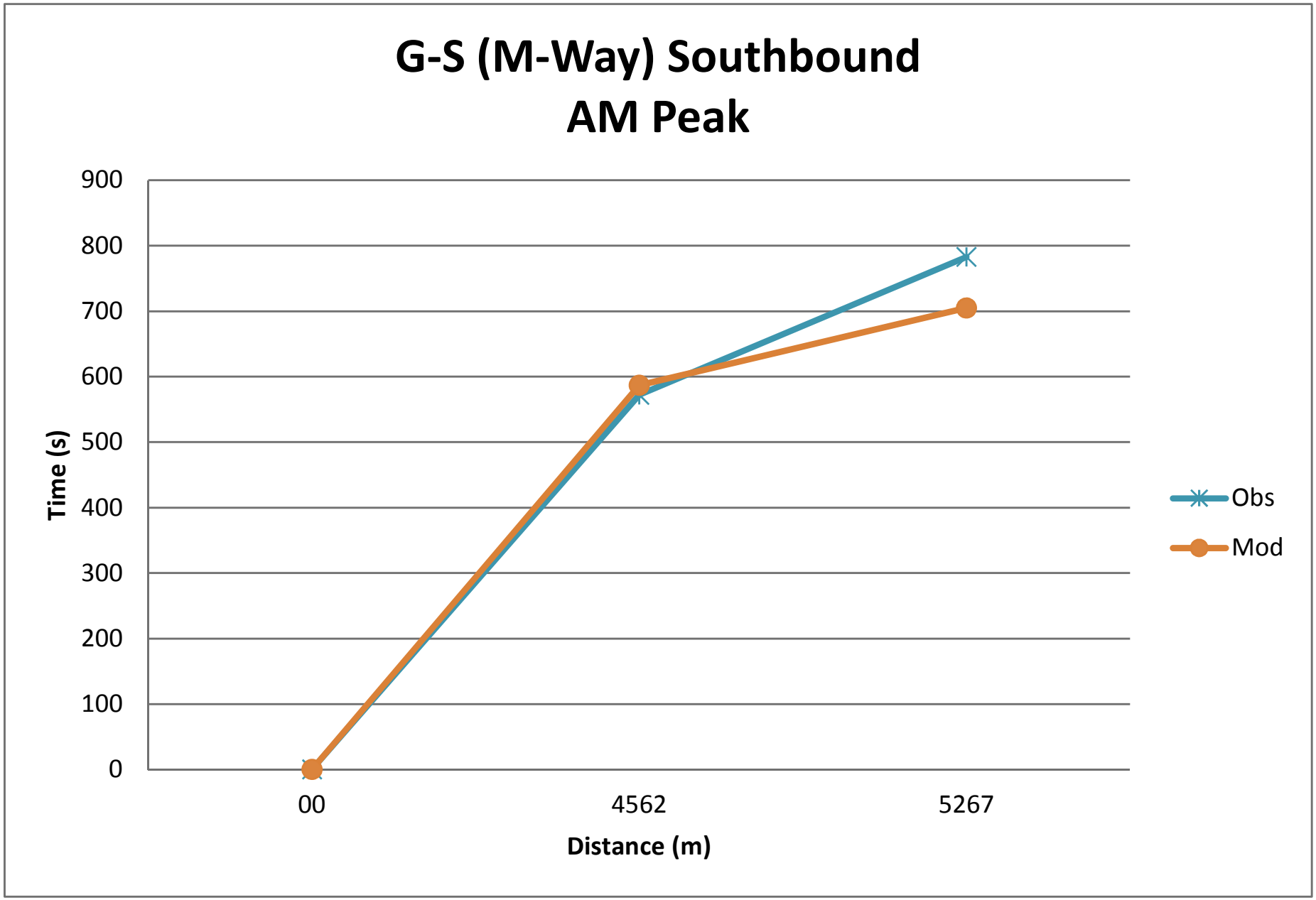
G-S (Local)			AM		IP		PM	
NB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
G	B4030/ B4030 Overbridge	00	00	00	00	00	00	00
H	B430/Green Lane	1287	170	139	171	139	166	141
I	A4095/ B430	2602	223	192	227	193	223	195
J	B430/ B4030 Middleton Stoney Crossroads	4147	303	293	315	291	314	311
K	B430/ Unclassified	5462	469	395	445	393	444	415
L	B430/ Church Rd	6777	556	474	536	472	536	496
M	Ardley Roundabout	9512	607	522	592	518	597	559
S	M40 J10 Cherwell Roundabout	10094	630	582	618	577	625	620

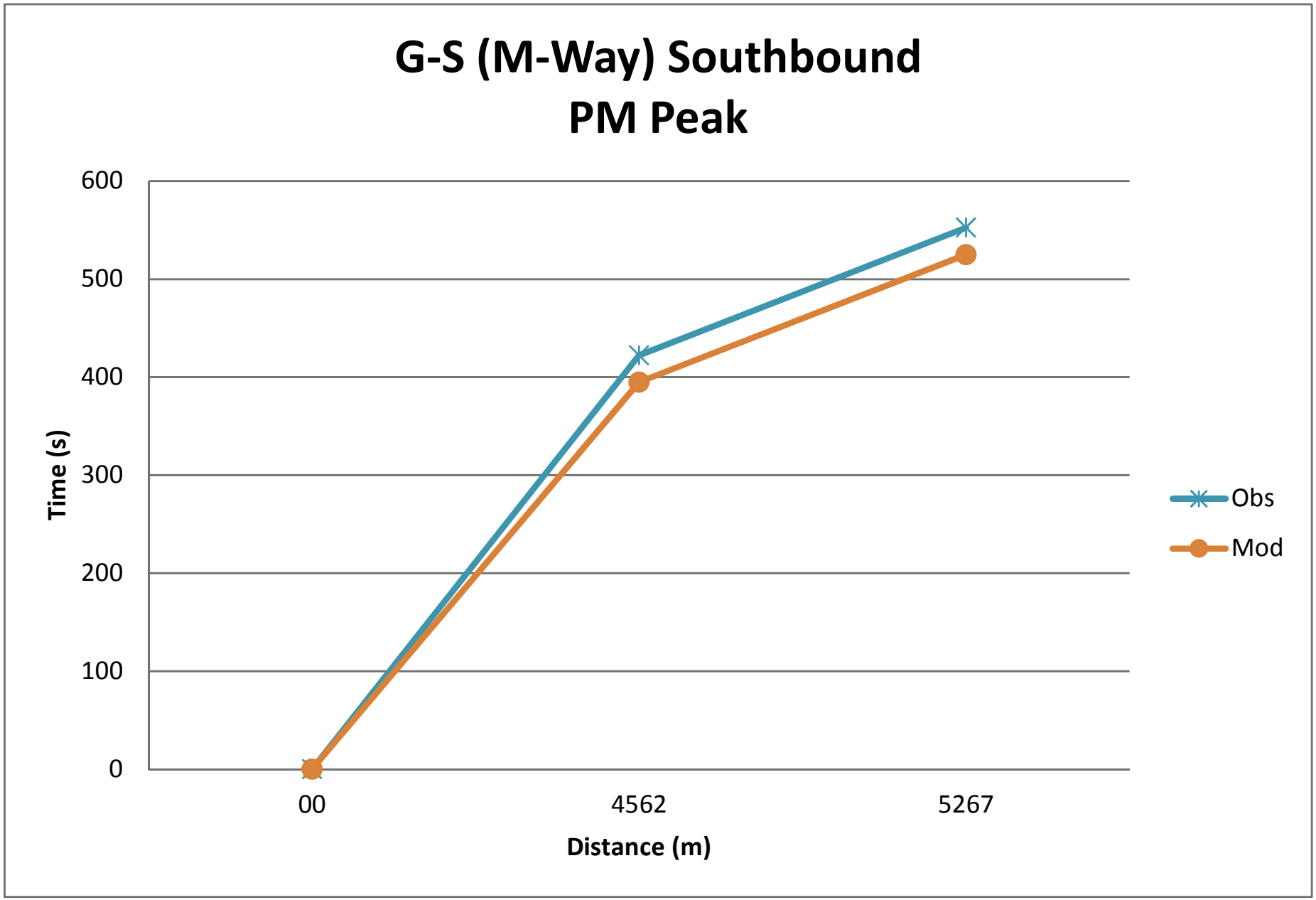
C-S			AM		IP		PM	
EB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
C	B4030/ Station Rd	00	00	00	00	00	00	00
B	Somerton Rd/ Camp Rd	818	77	69	78	68	76	68
K	B430/ Unclassified	1885	429	372	428	370	428	372
L	B430/ Church Rd	3200	516	451	518	449	519	453
M	Ardley Roundabout	5935	568	499	575	496	581	516
S	M40 J10 Cherwell Roundabout	6494	591	559	601	554	608	577

S-C			AM		IP		PM	
WB		Distance	Obs	Mod	Obs	Mod	Obs	Mod
S	M40 J10 Cherwell Roundabout	00	00	00	00	00	00	00
M	Ardley Roundabout	1500	37	21	36	18	37	18
L	B430/ Church Rd	3000	91	61	92	53	95	54
K	B430/ Unclassified	3575	178	148	183	136	186	136
B	Somerton Rd/ Camp Rd	4727	528	474	532	460	536	461
C	B4030/ Station Rd	5266	606	539	611	525	612	526


S-G (M-Way) Northbound
AM Peak
600
500
400
300
200
100
0
Time (s)
00
1840
4575
5117
Distance (m)
Obs
Mod


S-G (M-Way) Northbound
PM Peak
700
600
500
400
300
200
100
0
Time (s)
00
1840
4575
5117
Distance (m)
Obs
Mod


G-S (M-Way) Southbound
AM Peak
900
800
700
600
500
400
300
200
100
0
Time (s)
00
4562
5267
Distance (m)
Obs
Mod


G-S (M-Way) Southbound
PM Peak
600
500
400
300
200
100
0
Time (s)
00
4562
5267
Distance (m)
Obs
Mod

APPENDIX X: M40 LMVR FLOW VALIDATION DATA

All flows in **Veh** unless otherwise stated
All modelled flows are **Actuals**

| | | | | AM Peak | | | |

				AM Peak												PM Peak											
				Observed				Modelled (Actual)				Car	LGV	HGVeh	Total Veh	Observed				Modelled (Actual)				Car	LGV	HGVeh	Total Veh		
	MCC	From	TO	Car	LGV	HGV	Total	Car	LGV	HGVeh	Total	GEH	GEH	GEH	Diff	% Diff	GEH	Car	LGV	HGV	Total	Car	LGV	HGV	Total	GEH	GEH	GEH	Diff	% Diff	GEH
275	1e	Chilgrove Drive	Unclassified	1	0	0	1	0	0	0	0	1.44	0.00	0.00	-1	-100%	1.44	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0%	0.00
276	1e	Chilgrove Drive	Camp Road South	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0%	0.00	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0%	0.00
277	1e	Chilgrove Drive	Camp Road West	3	0	0	3	0	0	0	0	2.50	0.00	0.00	-3	-100%	2.50	1	0	0	1	0	0	0	0	1.44	0.00	0.00	-1	-100%	1.44
278	1e	Unclassified	Chilgrove Drive	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0%	0.00	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0%	0.00
279	1e	Unclassified	Camp Road South	9	1	0	10	9	0	0	9	0.04	1.45	0.00	-1	-11%	0.37	7	0	0	7	6	0	0	6	0.46	0.00	0.00	-1	-16%	0.46
280	1e	Unclassified	Camp Road West	97	20	1	118	100	11	0	111	0.38	2.33	1.43	-6	-5%	0.60	46	2	1	49	55	0	0	55	1.26	2.06	1.43	6	12%	0.80
281	1e	Camp Road South	Chilgrove Drive	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0%	0.00	1	0	0	1	0	0	0	0	1.44	0.00	0.00	-1	-100%	1.44
282	1e	Camp Road South	Unclassified	4	2	0	6	10	0	0	10	2.14	2.06	0.00	4	57%	1.25	5	1	0	6	21	0	0	21	4.38	1.45	0.00	15	237%	4.00
283	1e	Camp Road South	Camp Road West	88	6	1	96	97	5	6	108	0.91	0.77	2.73	12	13%	1.20	85	6	0	92	95	9	9	113	1.03	1.06	4.22	22	24%	2.14
284	1e	Camp Road West	Chilgrove Drive	2	0	0	2	0	0	0	0	2.04	0.00	0.00	-2	-100%	2.04	2	0	0	2	0	0	0	0	2.04	0.00	0.00	-2	-100%	2.04
285	1e	Camp Road West	Unclassified	50	0	3	53	52	0	0	52	0.26	0.00	2.47	-1	-2%	0.16	94	5	2	101	72	1	0	73	2.40	2.45	2.02	-28	-28%	3.02
286	1e	Camp Road West	Camp Road South	98	14	2	113	118	13	9	140	1.96	0.28	3.10	27	24%	2.38	117	2	1	121	113	6	3	122	0.46	1.95	1.42	1	1%	0.09
287	2a	A43 North	A43 South	1224	239	202	1665	1144	208	183	1535	2.33	2.09	1.38	-130	-8%	3.26	1066	112	110	1288	1046	176	91	1312	0.63	5.30	1.86	24	2%	0.68
288	2a	A43 South	A43 North	817	109	130	1056	845	129	121	1096	0.98	1.87	0.82	40	4%	1.20	1351	151	104	1606	1279	201	112	1592	1.99	3.76	0.79	-14	-1%	0.35
289	2a	M40 SB Off Slip	A43 North	148	41	20	209	200	34	22	256	3.93	1.20	0.47	47	22%	3.06	124	15	12	151	143	29	0	172	1.65	2.96	4.90	21	14%	1.65
290	2a	M40 SB Off Slip	A43 South	196	63	37	296	305	45	53	403	6.89	2.47	2.35	107	36%	5.71	224	25	34	283	247	48	47	342	1.47	3.86	2.00	59	21%	3.32
292	2b	A43 North	M40 SB On Slip	771	176	164	1111	807	105	172	1084	1.30	6.02	0.60	-27	-2%	0.82	755	42	76	873	808	143	83	1034	1.90	10.49	0.83	161	18%	5.23
293	2b	A43 North	A43 West	559	86	35	680	530	103	9	641	1.26	1.71	5.58	-39	-6%	1.52	398	43	18	459	304	46	7	358	5.00	0.47	3.01	-101	-22%	5.01
297	2b	A43 West	A43 North	781	107	119	1007	807	125	110	1041	0.94	1.63	0.89	34	3%	1.08	1263	146	88	1497	1222	195	101	1517	1.17	3.74	1.29	20	1%	0.52
299	2b	A43 West	M40 SB On Slip	33	3	7	43	14	0	0	14	3.83	2.45	3.74	-29	-67%	5.35	20	4	3	27	2	0	0	2	5.45	2.83	2.45	-25	-93%	6.58
300	2c	A43 East	M40 NB On Slip	202	30	30	262	92	29	43	164	9.11	0.12	2.20	-98	-37%	6.69	240	42	26	308	124	34	38	196	8.58	1.27	2.13	-112	-36%	7.02
301	2c	A43 East	B430	439	73	24	536	545	92	9	646	4.78	2.12	3.73	110	21%	4.54	248	18	5	271	286	25	3	315	2.34	1.51	0.80	44	16%	2.55
302	2c	M40 NB Off Slip	A43 East	781	103	125	1009	821	138	110	1069	1.40	3.22	1.35	60	6%	1.87	1083	144	125	1352	1112	178	134	1425	0.89	2.71	0.82	73	5%	1.96
303	2c	M40 NB Off Slip	B430	24	7	3	34	4	0	0	4	5.44	3.74	2.45	-30	-89%	6.96	21	5	2	28	8	0	0	8	3.37	3.16	2.00	-20	-71%	4.67
304	2c	B430	A43 East	175	27	24	226	158	3	12	174	1.28	6.03	2.92	-52	-23%	3.71	333	28	12	373	235	31	5	271	5.79	0.50	2.43	-102	-27%	5.68
305	2c	B430	M40 NB On Slip	212	15	4	231	218	29	9	257	0.43	3.04	1.93	26	11%	1.64	133	22	5	160	228	28	0	256	7.10	1.13	3.16	96	60%	6.66
367	8	A4095/ Howes Lane	A4095/ Howes Lane	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0%	0.00	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0%	0.00
368	8	A4095/ Howes Lane	Middleton Stoney Road East	13	1	1	15	1	0	0	1	4.37	1.41	1.41	-14	-91%	4.79	33	1	0	34	20	0	0	20	2.46	1.41	0.00	-14	-40%	2.62
369	8	A4095/ Howes Lane	Vendee Drive	486	89	11	586	553	74	13	640	2.95	1.71	0.52	54	9%	2.17	223	32	6	261	204	23	3	230	1.29	1.70	1.59	-31	-12%	1.99
370	8	A4095/ Howes Lane	Middleton Stoney Road West	51	8	0	59	87	17	3	107	4.35	2.55	2.36	48	81%	5.26	62	9	5	76	72	8	2	82	1.25	0.37	1.45	6	8%	0.72
371	8	Middleton Stoney Road East	A4095/ Howes Lane	13	1	0	14	9	0	0	9	1.19	1.41	0.00	-5	-35%	1.46	31	8	2	41	27	0	0	27	0.82	4.00	2.00	-14	-35%	2.48
372	8	Middleton Stoney Road East	Middleton Stoney Road East	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0%	0.00	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0%	0.00
373	8	Middleton Stoney Road East	Vendee Drive	123	21	3	147	139	9	0	148	1.41	3.08	2.45	1	1%	0.10	70	14	1	85	63	4	0	67	0.85	3.50	1.41	-18	-22%	2.11
374	8	Middleton Stoney Road East	Middleton Stoney Road West	65	21	5	91	90	15	10	115	2.85	1.42	1.86	24	27%	2.38	96	13	1	110	139	11	2	151	3.96	0.72	0.56	41	37%	3.59
375	8	Vendee Drive	A4095/ Howes Lane	100	16	3	119	176	15	5	196	6.47	0.27	1.06	77	65%	6.14	464	82	8	554	451	50	8	509	0.61	3.88	0.05	-45	-8%	1.94
376	8	Vendee Drive	Middleton Stoney Road East	45	10	0	55	68	7	1	75	3.01	1.17	1.11	20	36%	2.46	123	20	0	143	174	21	0	195	4.21	0.21	0.00	52	37%	4.02
377	8	Vendee Drive	Vendee Drive	0	1	0	1	0	0	0	0	0.00	1.41	0.00	-1	-100%	1.41	1	0	0	1	0	0	0	0	1.41	0.00	0.00	-1	-100%	1.41
378	8	Vendee Drive	Middleton Stoney Road West	1	1	0	2	26	0	5	31	6.83	0.85	3.17	29	1475%	7.21	1	0	2	3	39	1	2	42	8.47	1.52	0.20	39	1307%	8.25
379	8	Middleton Stoney Road West	A4095/ Howes Lane	24	3	3	30	48	13	3	63	3.97	3.43	0.20	33	110%	4.84	73	14	6	93	89	9	2	99	1.75	1.44	2.26	6	7%	0.66
380	8	Middleton Stoney Road West	Middleton Stoney Road East	97	13	3	113	146	17	7	171	4.45	1.10	1.86	58	51%	4.83	112	30	1	143	106	5	4	115	0.55	5.98	1.91	-28	-19%	2.44
381	8	Middleton Stoney Road West	Vendee Drive	27	12	2	41	17	0	6	24	2.02	4.62	2.05	-17	-41%	2.97	50	4	1	55	23	0	0	23	4.49	2.51	1.18	-32	-58%	5.06
382	8	Middleton Stoney Road West	Middleton Stoney Road West	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0%	0.00	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0%	0.00
383	9	Camp Road	B4030 South	127	15	7	149	118	13	9	140	0.81	0.62	0.86	-9	-6%	0.73	131	7	2	140	112	6	3	121	1.71	0.37	0.66	-19	-13%	1.64
384	9	Camp Road	B4030 West	21	6	2	29	9	0	0	9	3.00	3.46	2.00	-20	-68%	4.50	12	0	0	12	6	0	0	6	1.83	0.00	0.00	-6	-46%	1.83
385	9	B4030 South	Camp Road	94	9	6	109	97	5	6	108	0.29	1.71	0.09	-1	-1%	0.13	157	10	4	171	95	9	9	113	5.54	0.22	1.93	-58	-34%	4.87
386	9	B4030 South	B4030 West	152	25	7	184	105	14	0	118	4.19	2.59	3.74	-66	-36%	5.36	132	9	2	143	140	7	0	147	0.65	0.71	2.00	4	2%	0.30
387	9	B4030 West	Camp Road	16	2	1	19	10	0	0	10	1.66	2.00	1.41	-9	-47%	2.36	16	0	0	16	21	0	0	21	1.21	0.00	0.00	5	33%	1.21
388	9	B4030 West	B4030 South	139	20	3	162	107	16	0	123	2.84	1.01	2.45	-39	-24%	3.25	132	3	0	135	105	7	0	112	2.45	1.64	0.00	-23	-17%	2.08
401	12	Port Way North	B4030 East	3	0	0	3	0	0	0	0	2.35	0.00	0.00	-3	-96%	2.35	2	1	0	3	1	0	0	1	0.65	1.44	0.00	-2	-61%	1.28
402	12	Port Way North	Port Way South	11	1	0	12	5	0	1	6	2.06	1.44	1.49	-6	-48%	1.91	15	0	0	15	19	0	0	19	0.90	0.00	0.00	4	24%	0.90
403	12	Port Way North	B4030 West	3	0	0	3	0	0	0	0	2.48	0.00	0.00	-3	-100%	2.48	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0%	0.00
404	12	B4030 East	Port Way North	2	0	0	2	1	0	0	1	1.24	0.00	0.00	-1	-70%	1.24	2	0	0	2	0	0	0	0	1.51	0.00	0.00	-2	-81%	1.51
405	12	B4030 East	Port Way South	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0%	0.00	6	0	0	6	0	0	0	0	3.51	0.00	0.00	-6	-100%	3.51
406	12	B4030 East	B4030 West	115	30	13	158	107	12	0	118	0.80	4.07	5.14	-40	-25%	3.42	146	17	2	165	137	7	0	144	0.71	2.82	2.02	-20	-12%	1.62
407	12	Port Way South	Port Way North	12	0	0	12	14	0	0	14	0.37	0.00	0.00	1	11%	0.37	15	1	0	16	12	0	0	12	0.92	1.44	0.00	-4	-27%	1.18
408	12	Port Way South	B4030 East	4	0	0	4	0	0	0	0	2.87	0.00	0.00	-4	-100%	2.87	5	0	0	5	0	0	0	0	3.20	0.00	0.00	-5	-100%	3.20
409	12	Port Way South	B4030 West	9	1	1	11	13	9	0	22	1.01	3.53	1.43	10	90%	2.52	25	0	0	25	33	0	0	33	1.58	0.00	0.00	8	34%	1.58
410	12	B4030 West	Port Way North	1	0	0	1	0	0	0	0	1.43	0.00	0.00	-1	-100%	1.43	1	0	0	1	0	0	0	0	1.43	0.00	0.00	-1	-100%	1.43
411	12	B4030 West	B4030 East	134	18	5	156	102	16	0	118	2.90	0.54	3.19	-39	-25%	3.31	101	12	1	114	103	3	0	106	0.27	3.54	1.43	-8	-7%	0.76
412	12	B4030 West	Port Way South	27	6	1	34	61	0	0	61	5.17	3.54	1.43	27	79%	3.91	16	1	0	17	15	5	0	19	0.47	2.12	0.00	2	10%	0.40
463	18	A4260 North	B4027 West	1	1	0	2	0	0	0	0	1.41	1.41	0.00	-2	-100%	2.00	1	0	0	1	0	0	0	0	1.41	0.00	0.00	-1	-100%	1.41
470	18	B4027 West	A4260 North	1	0	1	2	0	0	0	0	1.41	0.00	1.41	-2	-100%	2.00	1	0	0	1	0	0	0	0	1.41	0.00	0.00	-1	-100%	1.41
471	18	B4027 West	B4027 East	162	17	2	181	140	18	0	158	1.76	0.13	2.00	-23	-13%	1.77	83	8	1	92	139	18	9	166	5.34	2.71	3.45	74	80%	6.48
472	18	B4027 West	A4260 South	24	5	0	29	0	0	0	0	6.93	3.16	0.00	-29	-100%	7.62	29	1	0	30	0	0	0	0	7.62	1.41	0.00	-30	-100%	7.75

APPENDIX Y: M40 LMVR JOURNEY TIME VALIDATION CALCS

Time Period	Route Description	Direction	Route Section	Average Time (s)						
				Observed	Modelled	AbsDiff	%Diff	Within 15%	Within 60s	Validate?
AM Peak	M40	Northbound	N-M	326	315	-11	-3.4%	Yes	Yes	**Yes**
		Southbound	S-O	783	705	-78	-10.0%	Yes	No	**Yes**
PM Peak	M40	Northbound	N-M	379	386	7	1.8%	Yes	Yes	**Yes**
		Southbound	S-O	552	525	-27	-4.9%	Yes	Yes	**Yes**

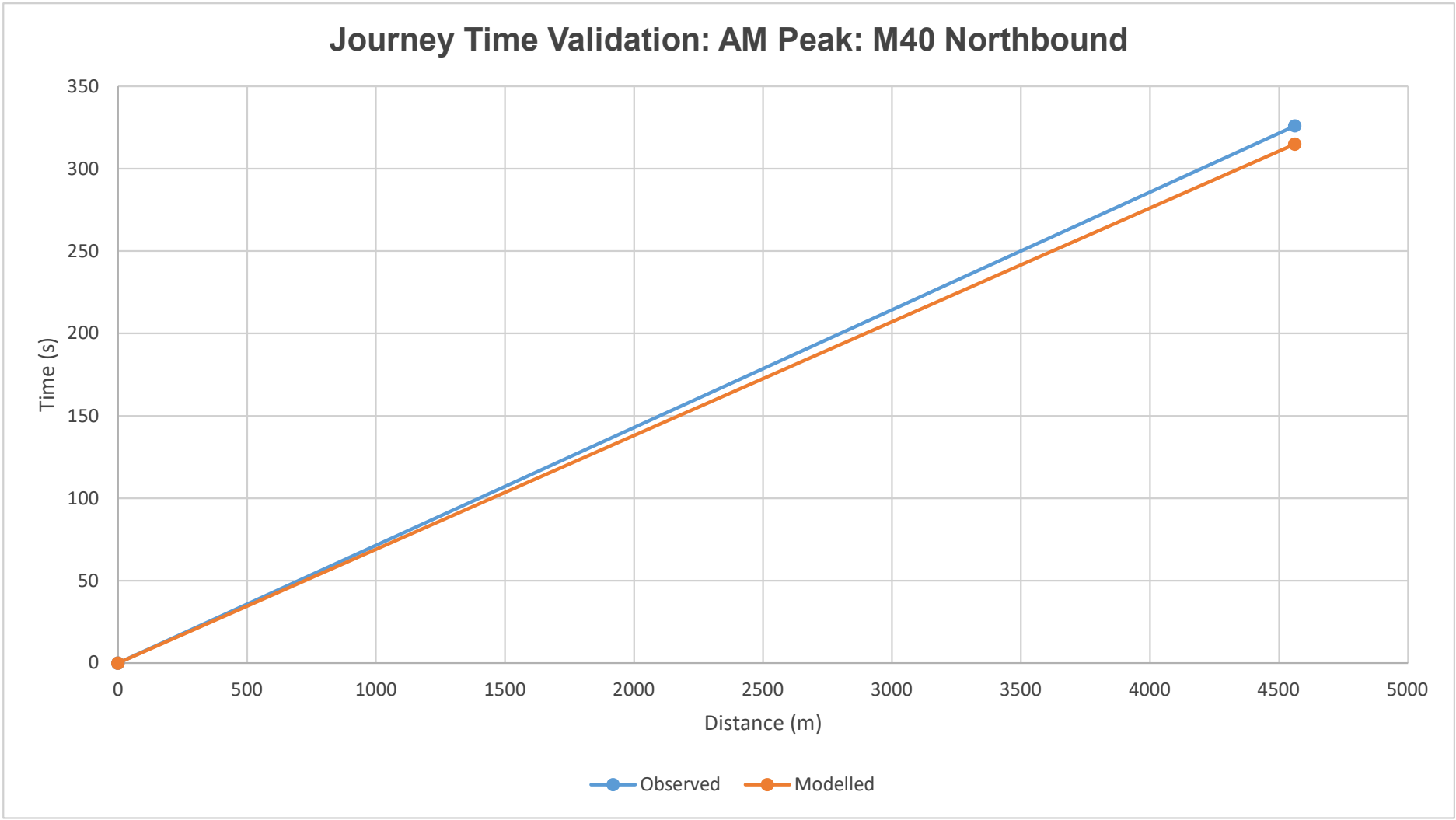
Notes: Point N = M40 J9 (A34)

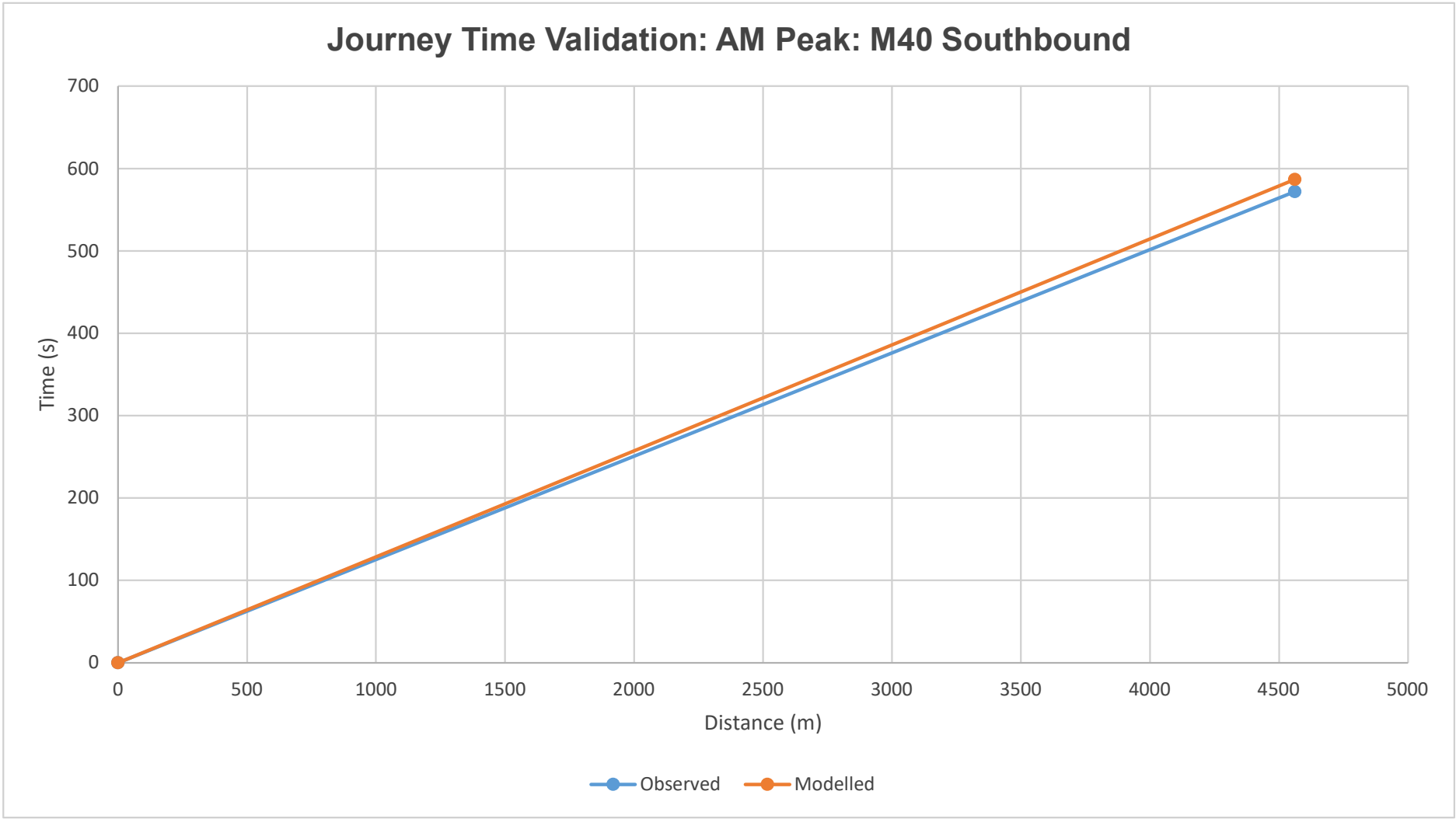
Point M = M40 J10 (Ardley roundabout)

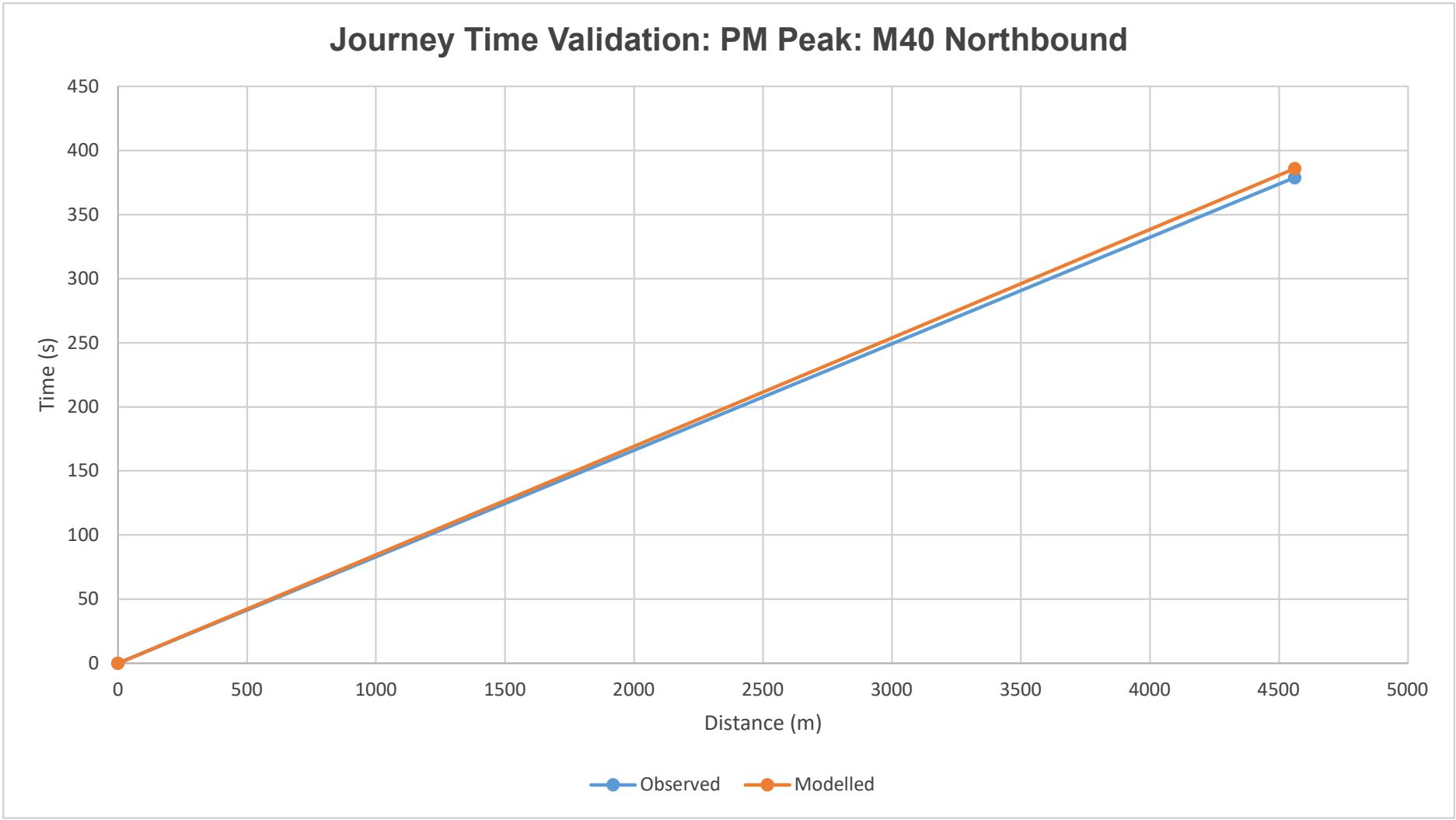
Point S = M40 J10 (Cherwell roundabout)

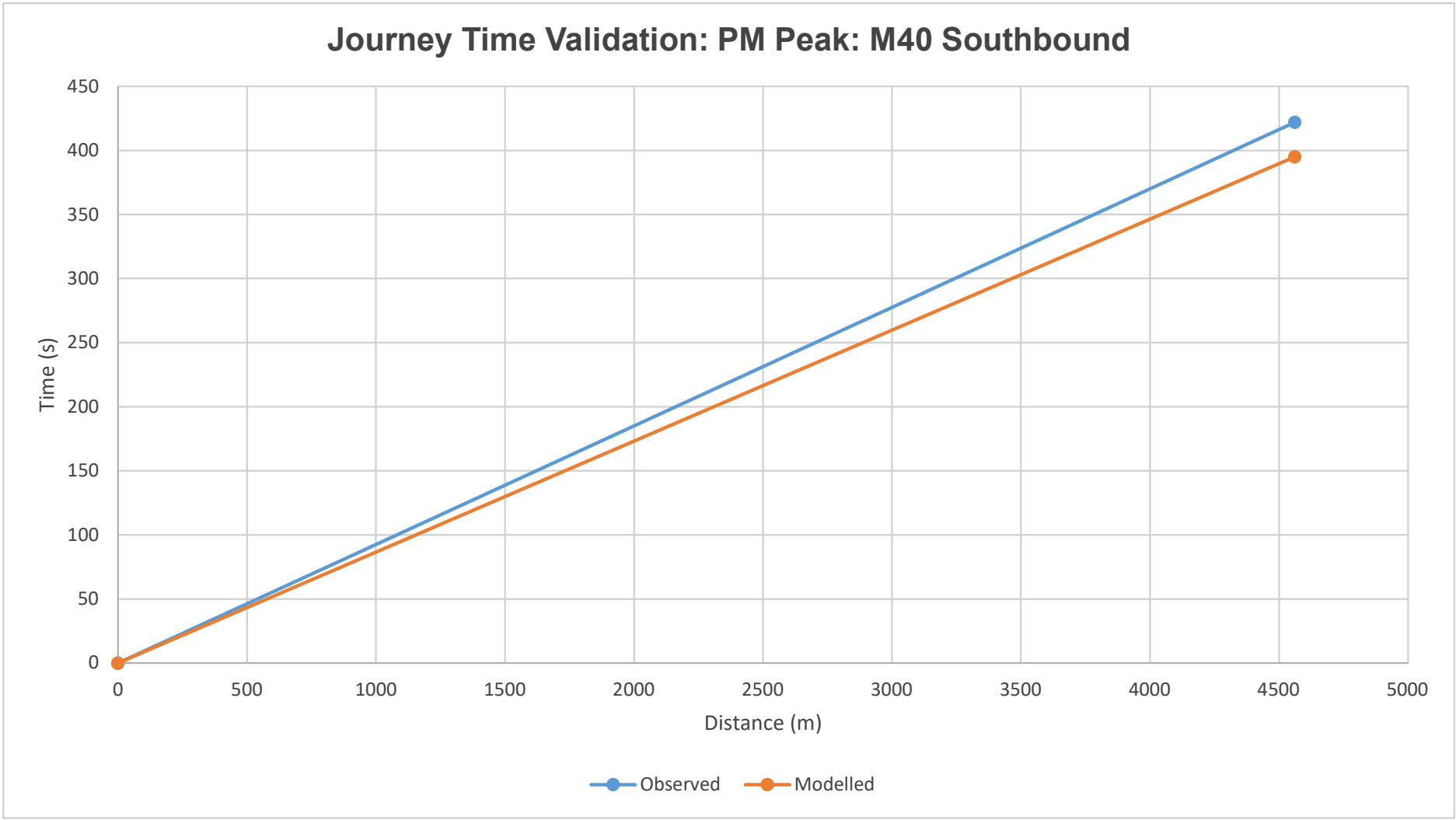
Point O = M40 J9 (A41)

M40 Journey Time Validation (data from LMVR report appendices)


Journey Time Validation: AM Peak: M40 Northbound
Time (s)
350
300
250
200
150
100
50
0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
Distance (m)
Observed
Modelled


Journey Time Validation: AM Peak: M40 Southbound
Time (s)
700
600
500
400
300
200
100
0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
Distance (m)
Observed
Modelled


Journey Time Validation: PM Peak: M40 Northbound
Time (s)
450
400
350
300
250
200
150
100
50
0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
Distance (m)
Observed
Modelled


Journey Time Validation: PM Peak: M40 Southbound
Time (s)
450
400
350
300
250
200
150
100
50
0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
Distance (m)
Observed
Modelled

APPENDIX B

OxSRFI BTM Modelling Methodology

OxSRFI SATURN Modelling

Revised Modelling Methodology and Fee Proposal (9th February 2022)

Work Overview

- Based on discussions with, and information provided by, ADC infrastructure it is understood that the following scenarios will require modelling using the Bicester Transport Model (BTM):

Item ID	Scenario Name	Description
B-2019	2019 OxSRFI Base	Committed and allocated development and infrastructure in place by 2019
B-2021	2021 OxSRFI Base	Committed and allocated development and infrastructure in place by 2021
RC1-2026	2026 OxSRFI Reference Case 1	Committed and allocated development and infrastructure in place by 2026
RC2-2026	2026 OxSRFI Reference Case 2	Committed development and infrastructure in place by 2026, no allocated development / infrastructure
RC1-2031	2031 OxSRFI Reference Case 1	Committed and allocated development and infrastructure in place by 2031
RC1A-2031	2031 OxSRFI Reference Case 1A	Committed and allocated development and infrastructure in place by 2031, including Heyford Park bus gate
DM1	2026 OxSRFI Do Minimum 1	2026 Reference Case 1 plus OxSRFI Phase 1, with no embedded highway mitigation other than site access
DM2	2026 OxSRFI Do Minimum 2	2026 Reference Case 2 plus full OxSRFI scheme, with no embedded highway mitigation other than site access
DM3	2031 OxSRFI Do Minimum 3	2031 Reference Case 1 plus full OxSRFI scheme, with no embedded highway mitigation other than site access
DS1	2026 OxSRFI Do Something 1	2026 Do Minimum 1 plus OxSRFI Phase 1 embedded highway mitigation
DS2	2026 OxSRFI Do Something 2	2026 Do Minimum 2 plus full OxSRFI embedded highway mitigation
DS3	2031 OxSRFI Do Something 3	2031 Do Minimum plus full OxSRFI embedded highway mitigation
DS4	2031 OxSRFI Do Something 4	2031 Do Something 3 plus Albion Land development with associated embedded highway mitigation

- Each of the above scenarios would be created specifically for the OxSRFI development site, with the work needing to be undertaken detailed below

OxSRFI SATURN Modelling

Revised Modelling Methodology and Fee Proposal (9th February 2022)

Work Item B-2019: 2019 OxSRFI Base Scenario

- This would use the 2016 Base scenario as a starting point.
- Produce new uncertainty log for 2019.
    - This would utilise the 2019 Cherwell District Council (CDC) Annual Monitoring Report (AMR) to ascertain the scale of allocated residential developments that were in place by 31st March 2019.
    - Discussions would be undertaken with CDC and Oxfordshire County Council (OCC) to ascertain what committed residential and non-residential developments should be included.
    - Discussions would also be undertaken with OCC to ascertain which infrastructure schemes should be included.
- Code in any network changes required due to the new 2019 uncertainty log and / or other committed developments.
- Produce new matrix building python files and spreadsheets as per the new 2019 uncertainty log.
- Run the Variable Demand Model (VDM) and produce new trip matrices.
- Assign trip matrices to the network and check the model.
- Produce output data from the model (see notes in section below).

Work Item B-2021: 2021 OxSRFI Base Scenario

- This would use the 2019 Base scenario as a starting point.
- Produce new uncertainty log for 2021.
    - This would utilise the 2021 CDC AMR to ascertain the scale of allocated residential developments that that were in place by 31st March 2021.
    - Discussions would be undertaken with CDC and Oxfordshire County Council (OCC) to ascertain what committed residential and non-residential developments should be included.
    - Discussions would also be undertaken with OCC to ascertain which infrastructure schemes should be included.
- Code in any network changes required due to the new 2021 uncertainty log and / or other committed developments.
- Produce new matrix building python files and spreadsheets as per the new 2021 uncertainty log.
- Run the VDM and produce new trip matrices.
- Assign trip matrices to the network and check the model.
- Produce output data from the model (see notes in section below).

Revised Modelling Methodology and Fee Proposal (9th February 2022)

Work Item RC1-2026: 2026 OxSRFI Reference Case 1 Scenario

- This would use the existing 2026 with Heyford Park Allocation scenario as the starting point. This scenario includes the Heyford Park development and associated highway mitigation works, however it pre-dates the final mitigation schedule that has recently been agreed with OCC, and the modelled network would therefore be updated accordingly.
- Produce new uncertainty log for 2026 (committed and allocated development and infrastructure).
    - This would utilise the 2021 CDC AMR to ascertain the scale of allocated residential developments that will in place by 2026.
    - Discussions would be undertaken with CDC and Oxfordshire County Council (OCC) to ascertain what committed residential and non-residential developments should be included.
    - Discussions would also be undertaken with OCC to ascertain which infrastructure schemes should be included.
- Code in any network changes required due to the new 2026 uncertainty log and / or other committed developments.
- Produce new matrix building python files and spreadsheets as per the new 2026 uncertainty log.
- Run the VDM and produce new trip matrices.
- Assign trip matrices to the network and check the model.
- Produce output data from the model (see notes in section below).

Work Item RC2-2026: 2026 OxSRFI Reference Case 2 Scenario

- This would use the 2026 OxSRFI Reference Case 1 Scenario as a starting point.
- Produce an amended uncertainty log for 2026 to include only committed development and infrastructure.
- Amend the 2026 OxSRFI RC1 network to include only committed development infrastructure
- Amend the 2026 OxSRFI RC1matrix building python files and spreadsheets to include only committed development.
- Run the VDM and produce new trip matrices.
- Assign trip matrices to the network and check the model.
- Produce output data from the model (see notes in section below).

Revised Modelling Methodology and Fee Proposal (9th February 2022)

Work Item RC1-2031: 2031 OxSRFI Reference Case 1 Scenario

- This would use the existing 2031 Kingsmere Update with Heyford Park scenario as a starting point.
- Produce new uncertainty log for 2031 (committed and allocated development and infrastructure).
    - This would utilise the 2021 CDC AMR to ascertain the scale of allocated residential developments that will in place by 2031.
    - Discussions would be undertaken with CDC and Oxfordshire County Council (OCC) to ascertain what committed residential and non-residential developments should be included.
    - Discussions would also be undertaken with OCC to ascertain which infrastructure schemes should be included.
- Code in any network changes required due to the new 2031 uncertainty log and / or other committed developments.
- Produce new matrix building python files and spreadsheets as per the new 2031 uncertainty log.
- Run the VDM and produce new trip matrices.
- Assign trip matrices to the network and check the model.
- Produce output data from the model (see notes in section below).

Work Item RC1A-2031: 2031 OxSRFI Reference Case 1A Scenario

- This would use the 2031 OxSRFI Reference Case 3 scenario as a starting point.
- Code the Heyford Park bus gate into the network.
- It is proposed that the 2031 OxSRFI Reference Case 3 trip matrices be used. This will show the impact on traffic distribution
- Assign trip matrices to the network and check the model.
- Produce output data from the model (see notes in section below).

Revised Modelling Methodology and Fee Proposal (9th February 2022)

Work Item DM1: 2026 OxSRFI Do Minimum 1 Scenario

- This would use the 2026 OxSRFI Reference Case 1 scenario as a starting point.
- Code the OxSRFI site access junction and development zone into the network.
- Amend the 2026 OxSRFI RC1 matrix building python files and spreadsheets to include the OxSRFI Phase 1 development.
- Run the VDM and produce new trip matrices.
- Manually adjust the car and heavy vehicle matrices so that vehicles match the site-specific data to be provided by ADC.
- Assign trip matrices to the network and check the model.
- Produce output data from the model (see notes in section below).

Work Item DM2: 2026 OxSRFI Do Minimum 2 Scenario

- This would use the 2026 OxSRFI Reference Case 2 scenario as a starting point.
- Code the OxSRFI site access junction and development zone into the network.
- Amend the 2026 OxSRFI RC2 matrix building python files and spreadsheets to include the full OxSRFI development.
- Run the VDM and produce new trip matrices.
- Manually adjust the matrices so that vehicles match the site-specific data.
- Assign trip matrices to the network and check the model.
- Produce output data from the model (see notes in section below).

Work Item DM3: 2031 OxSRFI Do Minimum 3 Scenario

- This would use the 2031 OxSRFI Reference Case 1 scenario as a starting point.
- Code the OxSRFI site access junction and development zone into the network.
- Amend the 2031 OxSRFI RC1 matrix building python files and spreadsheets to include the full OxSRFI development.
- Run the Variable Demand Model (VDM) and produce new trip matrices.
- Manually adjust the matrices so that vehicles match the site-specific data.
- Assign trip matrices to the network and check the model.
- Produce output data from the model (see notes in section below).

Work Item DS1: 2026 OxSRFI Do Something 1 Scenario

- This would use the 2026 OxSRFI Do Minimum 1 scenario as a starting point.
- Code the OxSRFI Phase 1 embedded highway mitigation into the network.
- Run the VDM and produce new trip matrices.
- Assign trip matrices to the network and check the model.
- Produce output data from the model (see notes in section below).

Work Item DS2: 2026 OxSRFI Do Something 2 Scenario

- This would use the 2026 OxSRFI Do Minimum 2 scenario as a starting point.
- Code the full OxSRFI embedded highway mitigation into the network.
- Run the VDM and produce new trip matrices.
- Assign trip matrices to the network and check the model.
- Produce output data from the model (see notes in section below).

Work Item DS3: 2026 OxSRFI Do Something 3 Scenario

- This would use the 2031 OxSRFI Do Minimum 3 scenario as a starting point.
- Code the full OxSRFI Phase 1 embedded highway mitigation into the network.
- Run the VDM and produce new trip matrices.
- Assign trip matrices to the network and check the model.
- Produce output data from the model (see notes in section below).

Work Item DS4: 2026 OxSRFI Do Something 4 Scenario

- This would use the 2031 OxSRFI Do Something 3 scenario as a starting point.
- Code the Albion Land zones, site accesses and highway mitigation scheme into the network.
- Amend the 2031 OxSRFI DM matrix building python files and spreadsheets to include the Albion Land development.
- Run the VDM and produce new trip matrices.
- Assign trip matrices to the network and check the model.
- Produce output data from the model (see notes in section below).

Revised Modelling Methodology and Fee Proposal (9th February 2022)

Data Output

- Turning movement spreadsheets for all scenarios. We have allowed for providing data for up to 20 junctions, with the final scope to be advised by ADC.
- Shape files providing AADT and AAWT link flows (total traffic and HGVs) and average speeds, for use in the assessment of environmental effects.
- Peak hour data plots for all scenarios showing link flows and Volume over Capacity (VoC) data.
- Peak hour Select Link Analysis plots for the with development scenarios showing the routing of OxSRFI traffic.
- Peak hour difference plots comparing the link flows data for different scenarios. Scope of plots (study area) to be advised by ADC.
- The above noted plots will be produced using GIS, and will detail the data on an OS mapping background.

APPENDIX 13

SUMMARY OF AGREED TRANSPORT MODELLING SCENARIOS

SUMMARY OF AGREED TRANSPORT MODELLING SCENARIOS

Background

1. This technical note summarises the agreements between the local highway authority, Oxfordshire County Council (OCC), National Highways, and the Applicant regarding the transport modelling scenarios to be examined to support the DCO application for the proposed OxSRFI development.

2. This version of the technical note supersedes the previous versions and agreements. It sets out the position agreed with OCC and National Highways following the project pause and following initial BTM modelling in May 2025. The version of the note captures the agreements following the resolution to grant planning permission that was received for the Albion Land scheme adjacent to M40 J10[1].

Assessment Years

3. The key years for the OxSRFI development are as follows:
   - 2031 year of opening.
   - 2034 completion year.

4. In addition, OCC and Cherwell District Council (CDC) wish to understand the cumulative effects of the OxSRFI scheme with the proposed Local Plan 2042 growth.

Assessment requirements

5. There are different assessment requirements to satisfy as part of the DCO application. These are as follows:
   - the requirements in DfT Circular 01/2022 for assessment of the Strategic Road Network (SRN)
   - ensuring a robust assessment for the Environmental Impact Assessment (EIA) and associated Environmental Statement (ES)
   - OCC's and CDC's request for assessment at the end of the proposed Cherwell Local Plan 2042 period, which it is agreed is to be considered as a sensitivity test.

6. These are discussed in further detail below.

DfT Circular 01/2022 compliant scenario

7. DfT Circular 01/2022 sets out the requirements for the assessment of the SRN. Paragraph 50 of the Circular details the requirement for an opening year assessment including the trips generated by the proposed development. National Highways have confirmed that an opening year assessment should always be undertaken for 100% of the development being in place and is to be based on the year of first occupation (regardless of when the site will be fully occupied). Accordingly, this is 2031.

8. Paragraph 49 explains the requirements for the assumptions underpinning projected levels of traffic to be included in the assessment, including committed development as defined in Footnote 21.

[1] Albion Land planning application references 21/03268/OUT, 21/03267/OUT, and 21/03266/F

9. Footnote 21 states "*Where development proposals are consistent with an up-to-date plan or strategy (or where there is no up-to-date plan or strategy), this should include all relevant development that is consented or allocated where there is a reasonable degree of certainty* [it] *will proceed within the next 3 years and include the full amount of development to be built. Where development proposals are not consistent with an up-to-date plan or strategy, this should include all relevant development that is consented or allocated over the entirety of the plan period. In some instances, due regard should be had to permissions and allocations in neighbouring authorities. The inclusion or exclusion of specific developments should be agreed with the local planning authority at pre-application stage".*

10. CDC have consulted on their proposed Cherwell Local Plan 2042, but it is not adopted and therefore there is no certainty that it will be taken forward as proposed. In accordance with Footnote 21, the DfT Circular compliant scenario should therefore include development "…*that is consented or allocated where there is a reasonable degree of certainty* [it] *will proceed within the next 3 years and include the full amount of development to be built*". This is agreed by National Highways.

11. The impact of the OxSRFI scheme on the SRN will be assessed against the DfT 01/2022 Circular compliant assessment scenario.

Scenarios for assessment of environmental impacts

12. The EIA assessment scenarios need to ensure a realistic and robust assessment. A longer design horizon does not necessarily provide a more robust assessment. This is because the additional traffic growth dilutes the development impacts as compared to an assessment in the year of completion. This is relevant to the assessment of the potential environmental impacts that will be considered in the Transport, Air Quality and Noise chapters of the ES. For Air Quality, vehicle emissions, and therefore pollutant concentrations, are expected to decrease year on year. The worst case for the assessment of Air Quality and Noise environmental impacts is therefore likely to be when the development traffic is at the greatest proportion of the background traffic. This is taken to be the year that the scheme would be built out, which is 2034. Hence, to be robust the assessment in the ES needs to consider the year of completion.

13. For the reasons given above, the 2034 Completion Year assessment includes only those consented or allocated development and infrastructure schemes that are forecast to be built out by 2034. It has been agreed that the 2034 Completion Year include for some of the proposed Cherwell Local Plan 2042 growth, calculated on a pro-rata basis. This is discussed in the Uncertainty Log section below.

14. It is also necessary as part of the ES to assess the impacts of the first phase of the OxSRFI development and embedded highway mitigation in the Opening Year, which is 2031. Again, for the reasons given above, the 2031 Opening Year assessment includes only those consented or allocated development and infrastructure schemes that are forecast to be built out by 2031. This scenario will also provide traffic flow data to demonstrate the satisfactory operation of the first phase of embedded highway mitigation.

15. The final scenario is the 2042 Future Year, to coincide with the end of the Local Plan period and to include the growth that is proposed as part of the proposed Cherwell Local Plan 2042. The 2042 scenario includes for the full amount of Local Plan growth that has been proposed in the Cherwell Local Plan 2042, but without the infrastructure changes that would be required to accommodate that growth (as these have not yet been determined). Such an unmitigated scenario results in an unrepresentative future baseline position meaning it is difficult to isolate

the impacts of the proposed OxSRFI development. It has therefore been agreed that this scenario will be included as a sensitivity test to assist OCC's forward planning and would be for information only.

16. The 2031 Opening Year and 2034 Completion Year scenarios will therefore be the future year scenario for the ES assessment and the future year scenarios used to identify the need for any additional mitigation measures on OCC's highway network. The 2042 Future Year scenario will be included as a sensitivity test to assist OCC's forward planning and will be for information only.

Uncertainty log

17. OCC have developed an Uncertainty Log for the 2031 and 2042 future years as part of their work on the proposed Cherwell Local Plan. It is agreed that the 2034 Uncertainty Log is based on a linear interpolation between the 2031 and 2042 logs.

18. There is a live planning application (25-00284-F) submitted in relation to the draft employment allocation site BIC E1. There is a requirement via draft policy BIC E1 for the associated development to provide a highway improvement at M40 J9. CDC have advised that that site is likely to come forward early. Hence, it has been agreed that assessment scenarios that include draft allocation BIC E1 should include the M40 J9 improvement scheme submitted as part of the planning application for that site. This is relevant to the 2042 Future Year assessment and the 2034 Completion Year. The 2031 Opening Year and the DfT 01/2022 Circular assessment scenarios do not include the draft allocation and hence are not affected.

19. In addition, it has been agreed with OCC, for the purposes of assessment of the OxSRFI scheme, that the mitigation scheme at Middleton Stoney crossroads (Inf148 in the Uncertainty Logs) associated with the Heyford Park planning permission should not be included in any of the reference case or do-something modelling scenarios, as it is now considered unlikely to be implemented. Further, whilst the improvement to provide traffic signal control at the B430/Ardley Road staggered crossroads in Ardley village is a committed scheme included in the reference case scenarios, it would be unlikely to be implemented should OxSRFI proceed as the Ardley Bypass would negate the need for the signal control scheme. Accordingly, this infrastructure scheme (Inf149 in the Uncertainty Logs) is not included in any of the do-something scenarios that include the Ardley Bypass.

20. The previous base year scenarios have been updated due to the passage of time since the scheme pause. Base years are now provided for 2023 and 2024.

21. At the 3 July 2025 Cherwell District Council planning committee, the Albion Land scheme (3 planning applications) received a resolution to grant planning permission, and the Tritax Big Box development received a resolution to refuse planning permission.

22. The Albion Land development (3 planning applications) is not yet a commitment, as planning permission is subject to the S106 Agreement and JR period. However, the Applicant has taken the advice of the Transport Working Gorup that the Albion Land scheme be included in the BTM strategic transport modelling as a commitment. Accordingly, the Applicant on this occasion, was willing to include the Albion Land scheme in the Reference Case and Do-Something scenarios.

23. That means that the highway improvement at Baynard's Green, as shown drawing on '216285-A-14A A43 Baynard's Green Roundabout – GA' that is required to be implemented by the Albion Land scheme prior to occupation of that development, will be included in the future Reference Case scenarios.

24. The inclusion of the Albion Land scheme in the Reference Case presupposes that that scheme will be in place prior to the OxSRFI scheme. It follows that the future position at Baynard's Green will be with the Albion Land highway improvement in place.

25. Accordingly, the Do-Something scenarios considers the 'Scenario 3' OxSRFI improvements at Baynard's Green, which will build upon the improvement works provided by the Albion Land scheme. The 'Scenario 3' OxSRFI improvement scheme at Baynard's Green is shown on drawing OxSRFI-BWB-GEN-XX-SK-CH-SK097-S1-P02 at **Appendix A.**

26. The DCO for OxSRFI will include provisions for OxSRFI to implement an alternative highway improvement for Baynard's Green should OxSRFI come forward ahead of the Albion Land scheme, or the Albion Land scheme is not progressed.

27. Following advice from CDC, a single sensitivity test will also be undertaken (Scenario DS5A) in which the Tritax scheme will be included in the 2034 Do-Something scenario. This will provide a cumulative assessment with the Albion Land, Tritax and OxSRFI schemes in place.

Agreed assessment scenarios

28. Based on the above requirements it has been agreed with OCC and National Highways that the following scenarios will be assessed:
    1. **DfT Circular 01/2022 Compliant Scenario**: used for assessment of the impact on the SRN (in the opening year with 100% of the development and all embedded highway mitigation).
    2. **2031 Opening Year Scenario**: opening year assessment for the ES, with first phase of the development and first phase of embedded mitigation works, used to demonstrate the suitability of proposed first phase of development on both SRN and OCC network, and for use in the ES.
    3. **2034 Completion Year Scenario**: completion year assessment for the ES, with all development and all embedded mitigation works, used for ES year of completion assessment (worst case for air quality and noise assessment), and assessment of impacts on OCC's network in year of completion.
    4. **2042 Future Year (Sensitivity Test) Scenario**: end of Local Plan period, for information only.

29. Scenarios 2, 3 and 4, will be assessed with and without the impact of the Travel Plan.

30. Notwithstanding the guidance in DfT 01/2022 Circular that allows for the effects of the Travel Plan to be taken in to account, National Highways have requested that reductions in vehicle trips associated with the Travel Plan are not applied to the vehicle traffic generation for assessment of impacts on the SRN (scenario 1). This is because they expect that the impact on the Travel Plan will be limited on the SRN.

31. With the above as context, **Tables 1 to 3** that are provided at the rear of this technical note set out the scenario testing that will be undertaken to support the Transport Assessment and ES for OxSRFI. The scenarios have been agreed with OCC and National Highways.

32. **Table 1** details the Core Scenarios. It includes:
    - the 2023 and 2024 *Base year* scenarios
    - the three core *Reference Case* scenarios (future baseline without OxSRFI)
    - the *Do-minimum scenario* (future baseline with OxSRFI but without the associated embedded highway mitigation)

- the three core *Do-something scenarios* (future baseline with OxSRFI with the associated embedded highway mitigation).

33. **Table 2** details the three core with Travel Plan Do-something scenarios.

34. **Table 3** details the three sensitivity test scenarios. These are;
    - RC4A = the 2042 Reference Case scenario to coincide with the end of the Local Plan period.
    - DS4A = the 2042 Do-Something scenario to coincide with the end of the Local Plan period.
    - DS5A = 2034 sensitivity test with the Tritax[2] planning application.

35. The sensitivity test scenarios are provided for information only, for the reason explained at paragraphs 15 and 16.

OCC's Implementing 'Decide and Provide: Requirements for Transport Assessments guidance

36. It has been agreed with OCC that any 'low growth' sensitivity testing to consider a reduction in background traffic compared to the core growth scenario, will be considered outside of the strategic traffic modelling, on a specific junction by junction basis. This would only be required for OCC study area junctions, and likely only those in more urban areas. The parameters for that work will be agreed with OCC at the appropriate time.

ADC Infrastructure Ltd
31/07/2025

[2] Tritax planning application reference 22/01340/OUT.

Table 1: Core scenarios

	ID	year	scenario name	reference case parameter	development case and embedded highway mitigation parameters	to be used for
Base	B-2023	2023	baseline year	development and infrastructure in place by 2023	n/a	base year traffic flows for Air Quality model verification
	B-2024	2024	baseline year	development and infrastructure in place by 2024	n/a	base year traffic flows
Reference Case	RC1A SRN	2031	DfT Circular 01/2022 compliant scenario	committed and allocated development and infrastructure (as per definition given at Footnote 21 of the Circular)	n/a	reference case traffic flows for the DfT Circular 01/2022 compliant assessment scenario for assessment of the strategic road network
	RC2A	2031	Reference case opening year	committed and allocated development and infrastructure in place by 2031 (in accordance with the proposed Cherwell Local Plan 2042 consultation)	n/a	reference case traffic flows in opening year for assessment of environmental effects reference case opening year for assessment of local highway network and strategic road network
	RC3A	2034	Reference case completion year	committed and allocated development and infrastructure in place by 2034 (in accordance with the proposed Cherwell Local Plan 2042) and including M40 J9 improvement scheme associated with live planning application 25-00284-F)	n/a	reference case traffic flows for assessment of environmental effects in year of completion reference case completion year for assessment of local highway network

	ID	year	scenario name	reference case parameter	development case and embedded highway mitigation parameters	to be used for
Development case Do minimum	DMA	2034	Do minimum completion year (with OxSRFI, without embedded highway mitigation)	as RC3A	100% of OxSRFI, no embedded highway mitigation (other than site access) – no Travel Plan	assessment of development impacts without interventions
Development case Do Something	DS1A SRN	2031	Do Something DfT Circular 01/2022 compliant scenario	as RC1A	100% of OxSRFI, with all embedded highway mitigation, no Travel Plan	assessment of development in the DfT Circular 01/2022 compliant assessment scenario for assessment of the strategic road network
	DS2A	2031	Do Something opening year	as RC2A	first phase of OxSRFI with embedded mitigation for first phase, no Travel Plan	assessment of first phase of development environmental effects in year of opening assessment of first phase of development in opening year for assessment of local highway network and strategic road network
	DS3A	2034	Do Something completion year	as RC3A	100% of OxSRFI, with all embedded highway mitigation, no Travel Plan	assessment of development environmental effects in year of completion assessment of development in opening year for assessment of local highway network

Table 2: With Travel Plan

	ID	year	scenario name	reference case parameter	development case and embedded highway mitigation parameters	to be used for
Development Case – with Travel Plan	DS2AwTP	2031	Do Something opening year, with Travel Plan	as RC2A	first phase of OxSRFI with embedded mitigation for first phase, with Travel Plan	test for DS2A with Travel Plan
	DS3AwTP	2034	Do Something completion year, with Travel Plan	as RC3A	100% of OxSRFI, with all embedded highway mitigation, with Travel Plan	test for DS3A with Travel Plan
	DS4AwTP	2042	Do Something future year sensitivity test, with Travel Plan	as RC4A	100% of OxSRFI, with all embedded highway mitigation, with Travel Plan	test for DS4A with Travel Plan

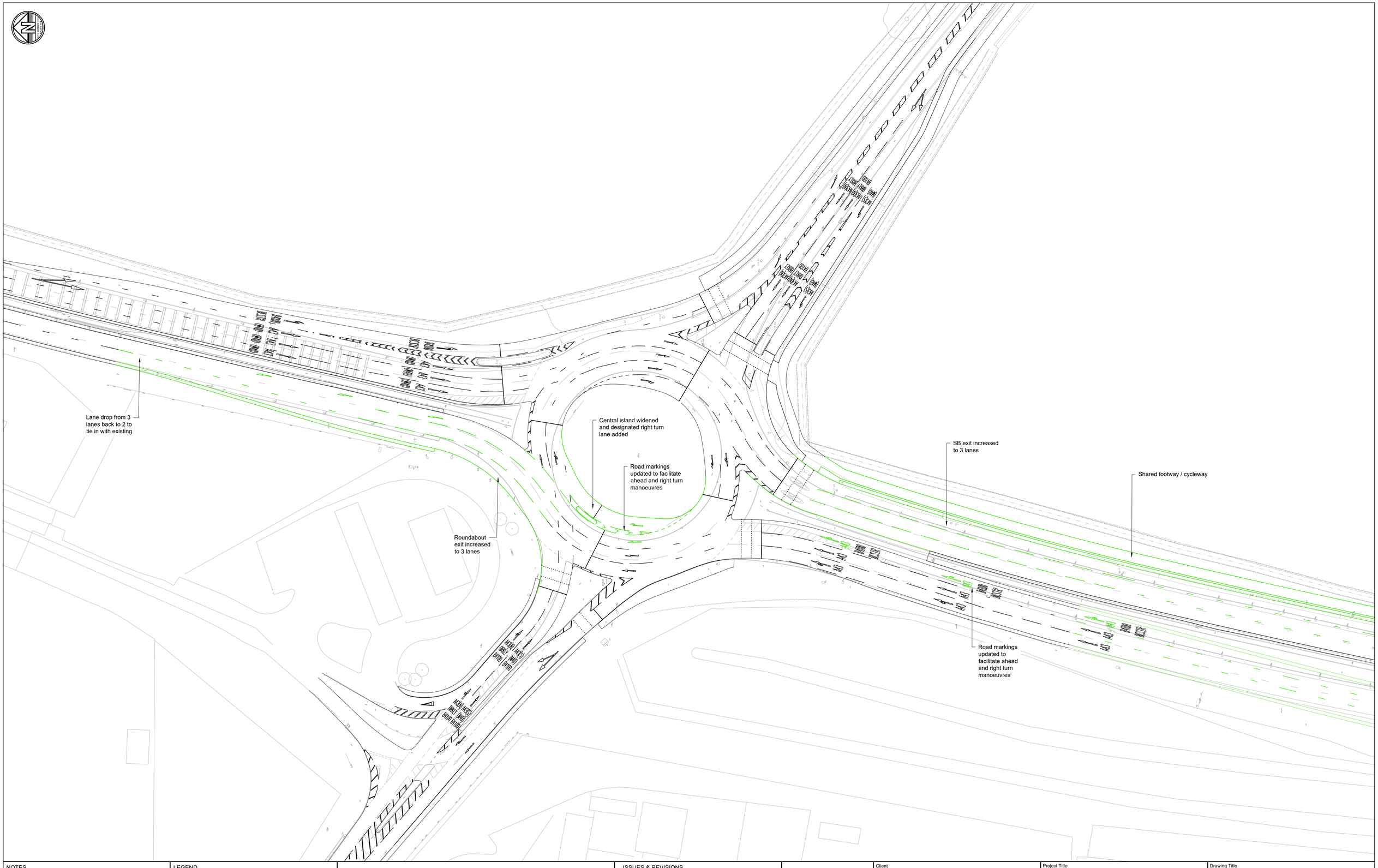
Table 3: Sensitivity test BTM scenarios

	ID	year	scenario name	reference case parameter	development case and embedded highway mitigation parameters	to be used for
Development Case – Sensitivity Test	RC4A	2042	Reference case future year sensitivity test	committed and allocated development and infrastructure within Local Plan period up to 2042 (as per the proposed Cherwell Local Plan 2042) and including M40 J9 improvement scheme associated with live planning application 25-00284-F)	n/a	reference case traffic flows for sensitivity test, provided for information
	DS4A	2042	Do Something future year sensitivity test	as RC4A	100% of OxSRFI, with all embedded highway mitigation, no Travel Plan	provided for information
	DS5A	2034	Do Something future year sensitivity test, with Tritax planning application in place*	as RC3A + Tritax development proposals	As per DS3A for OxSRFI.	With development traffic flows for 'with Tritax sensitivity test'

*Tritax planning application reference 22/01340/OUT

APPENDIX A

A43 Baynard's Green improvement scheme general arrangement



NOTES

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in metres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.

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LEGEND

- Additional works
- Albion / Tritax proposal

ISSUES & REVISIONS

Rev	Date	Details of issue / revision	Drw	Rev
P01	06.11.24	Preliminary Issue	SB	SRH
P02	06.02.25	A43 NB approach amended to 3 lanes	SRH	SRH

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Drawing Title
BAYNARDS GREEN GENERAL ARRANGEMENT OPTION 28A ALTERNATIVE SCHEME

Drawn:	S. Birchall	Reviewed:	S. Hilditch		
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Status: **S1** Rev: **P02**

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