Title: Hawkwell Village, Bicester

Bicester Road Network Junction Impact Assessment

Technical Note 11 v2

Date: November 2022

1.0 Introduction

1.1.1 Jubb has been commissioned by Hallam Land Management Ltd (HLM) to provide highways and transportation advice in relation to a proposal for a residential-led mixed use development on land north-east of the railway line in North West Bicester - 'Hawkwell Village'.

1.1.2 A planning application (Ref: 21/04275/OUT) was submitted in December 2021 for a residential led mixed use development for up to 3,100 dwellings.

1.1.3 A previous application (14/01384/OUT), comprising of a residential led mixed use development of up to 2,600 dwellings, received the benefit of a resolution to grant planning permission; however, no section 106 was agreed.

1.1.4 The main thrust of the submitted Transport Assessment to support the new application is that whilst permission is being sought for 500 dwellings more than in 2014, total trip generation would be similar, due to a general lowering of trip generation per dwelling between 2014 and 2019, the effect of the Covid-19 pandemic on working practices, the internalisation of trips due to the provision of other land uses, the marketing of a robust Travel Plan and the provision of mobility hubs, a public transport contribution and off-site active travel route improvements.

1.1.5 Oxfordshire County Council (OCC) requested the use of the updated Bicester Transport Model (BTM), managed by Tetra Tech on behalf of OCC, to inform the traffic assessment of the Hawkwell Village (HV) development.

1.1.6 The recently adopted OCC Local Transport and Connectivity Plan (LTCP) recognises that road schemes often generate new demand and quickly reach capacity again and that therefore, increasing junction capacity is not a sustainable long-term solution for Oxfordshire's transport network. The focus for the future is to improve connections and movement by walking, cycling and public transport to encourage modal shift.

1.1.7 Policy 36 of the LTCP states:

We will:

a. Only consider road capacity schemes after all other options have been explored.

b. Where appropriate, adopt a decide and provide approach to manage and develop the county's road network.

c. Assess opportunities for traffic reduction as part of any junction or road route improvement schemes.

d. Require transport assessments accompanying planning applications for new development to follow the County Council's 'Implementing 'Decide & Provide': Requirements for Transport Assessments' document.

e. Promote the use of the 'decide and provide' approach in planning policy development to support site assessment.

1.1.8 The OCC 'Implementing Decide & Provide': Requirements for Transport Assessments states:

"*As outlined in the LTCP, 'predict and provide' can be broadly described as an approach to transport planning that uses current or historical traffic patterns to determine the future need for infrastructure. However, this approach tends to simply maintain the status quo by perpetuating dependence on the private car through provision of additional highway capacity.*

By contrast, the 'decide and provide' approach to transport planning decides on a preferred vision of the future and then provides the means to work towards that whilst also accommodating uncertainty about the future. This offers the opportunity for more positive transport planning and will help to implement the LTCP transport user hierarchy by considering walking, cycling and public transport upfront."

1.1.9 Hawkwell Village forms part of the North West Bicester allocation and is designed with active travel at the top of the hierarchy of travel options. It will provide walkable neighbourhoods to the proposed on-site services and facilities linked by new footways and cycleways which will extend beyond the development to form high-quality links with existing neighbourhoods, the town centre and railway stations. The development will provide a considerable contribution to enable a high frequency, high quality bus service to be delivered enabling convenient access to the town centre, railway stations and services and facilities available within Bicester. The development will deliver a main mobility hub supported by satellite mobility hubs to enable the new community to easily access the public transport provision and the cycle network through the provision of high-quality bus stops and e-bike/e-scooter hire facilities. The proposals will deliver a Decide and Provide vision, through the provision of on-site employment and everyday services and facilities which will enable residents to live, work and play in a community where internal journeys can be undertaken by sustainable modes of transport and where a mode choice is available for external journeys to be undertaken without reliance on the private car.

1.1.10 This Technical Note (TN) provides the turning movement outputs from the BTM and the assessment of the percentage impact at the junctions within the OCC network along with commentary as to the need to undertake individual junction capacity modelling.

2.0 Bicester Transport Model Turning Movement Data

2.1.1 The BTM model runs included the following scenarios:

- 2031 Base;
- 2031 Base + Committed;
- 2031 Base + Committed + Development 1a (BTM traffic generation); and
- 2031 Base + Committed + Development 1b (Agreed 'Decide & Provide' (D&P) trip generation).

2.1.2 **Figure 2.1** visually represents the junctions for which turning movements from the BTM were extracted.

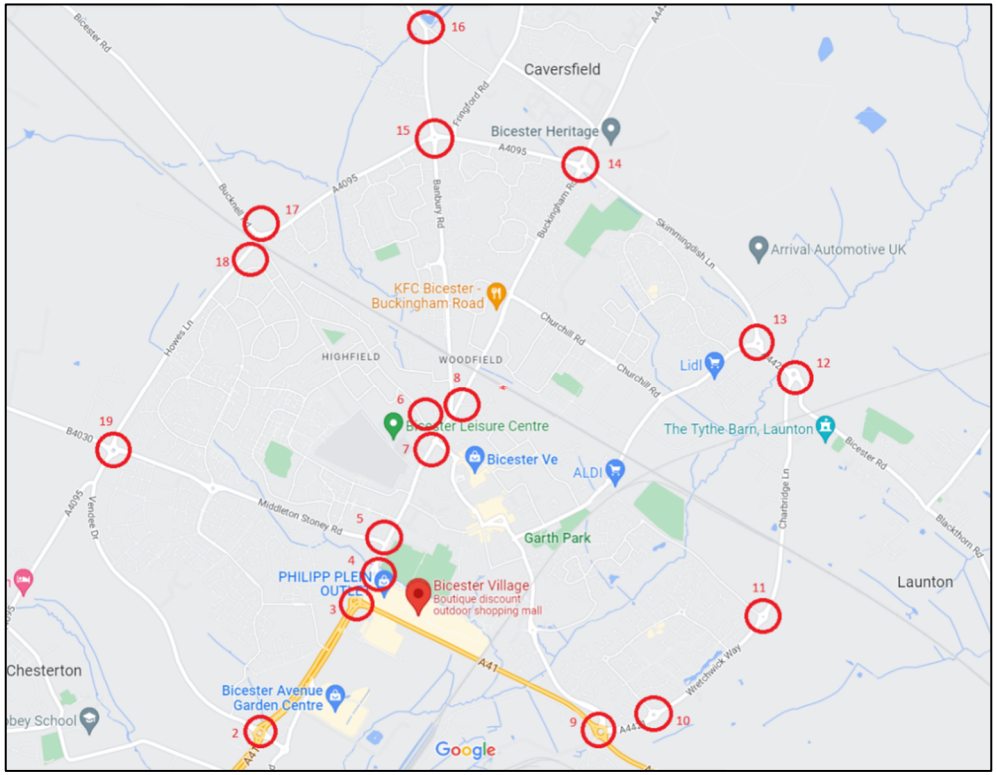

Figure 2.1 – Junction Locations and Reference Numbers

2.1.3 The extracted turning movements are attached at **Appendix A**.

3.0 Junction Percentage Impact Assessment

3.1.1 **Table 3.1** sets out the calculated percentage impact assessment of the Proposed Development on individual junctions and each arm of the junction along with commentary as to the need to undertake individual junction capacity testing. The assessment compares the percentage impact of Developments 1a and 1b against the Base + Committed scenario.

Ref	Junction	Arm	2031 + Dev 1a		Year 2031 + Dev 1b		Comments
			AM	PM	AM	PM	
2	A41 Oxford Road / Vendee Drive roundabout	A41 (N)	-35%	-20%	-35%	-23%	Reduction in total movements through the junction and on each individual arm. Junction capacity assessment not required.
		Unlabelled Rd	-38%	-27%	-38%	-27%	
		A41 (S)	-24%	-28%	-24%	-28%	
		Park & Ride	-75%	-74%	-75%	-74%	
		Vendee Drive	-8%	-48%	-9%	-40%	
		Total	-25%	-29%	-25%	-28%	
3	A41 / B4030 Oxford Road signalised roundabout	Oxford Rd	-18%	-33%	-19%	-36%	Reduction in total movements through the junction and on each individual arm. Junction capacity assessment not required.
		A41 (E)	-22%	-31%	-22%	-32%	
		A41 (S)	-33%	-15%	-33%	-16%	

Ref	Junction	Arm	2031 + Dev 1a		Year 2031 + Dev 1b		Comments
			AM	PM	AM	PM	
		Unlabelled Rd (W)	-33%	-69%	-33%	-69%	
		Total	-25%	-26%	-25%	-27%	
4	A41 Oxford Road / Pingle Drive signal junction	B4030 Oxford Road (N)	-5%	12%	-5%	8%	Reduction in total movements through the junction. In the AM peak there is a 33% (BTM)/34% (D&P) increase on the Pingle Drive (E) arm. In the PM peak there is a 12% (BTM/8% (D&P) increase on the Oxford Road (N) arm. It is considered that the proposed improvements to the cycleway alongside the railway line will improve modal shift within Bicester with a positive impact at this junction. Junction capacity assessment not required.
		Pingle Drive (E)	33%	-51%	34%	-52%	
		A41 Oxford Road (S)	-2%	-4%	-2%	-5%	
		Total	-2%	-5%	-2%	-7%	
5	Middleton Stoney Road / Kings End mini roundabout	Kings End (N)	4%	11%	4%	8%	Reduction in total movements through the junction in AM peak and less than 5% increase in PM peak. The majority of the individual arms see either a positive impact or an impact of less than 5%. The impact on the Kings End (N) arm during the PM peak is 11% (BTM) or 8% (D&P). It is considered that the percentage increase on this arm is in the same region of expected changes in daily traffic flows (10%) and the improvements to the cycleway alongside the railway line will improve modal shift within Bicester with a positive impact at this junction. Junction capacity assessment not required.
		Oxford Road (S)	4%	2%	4%	1%	
		Middleton Stoney Road (W)	-15%	-4%	-16%	-4%	
		Total	-2%	4%	-2%	2%	
6	Field Street / Bucknell Road priority junction	Field Street (N)	4%	-5%	3%	-5%	Reduction in total movements through the junction. The majority of the individual arms see either a positive impact or an impact of less than 5%. There is an impact of 19% (BTM) and 23% (D&P) in the PM peak. The Oxfordshire LTCP identifies town centre highway modifications, and it is proposed, due to the central location of this junction, that a
		Field Street (S)	-3%	-6%	-3%	-7%	
		Bucknell Road (W)	-9%	19%	-11%	23%	

Ref	Junction	Arm	2031 + Dev 1a		Year 2031 + Dev 1b		Comments
			AM	PM	AM	PM	
		Total	0%	-5%	-1%	-5%	contribution is provided based on a proportionate impact when considered with all cumulative developments.
7	Queens Avenue / St John's Street mini roundabout	Field Street (N)	-1%	-4%	-1%	-7%	Reduction in total movements through junction and 5% or less on each individual arm. Junction capacity assessment not required.
		St John's Street (E)	2%	-3%	1%	-4%	
		Queens Avenue (S)	-2%	5%	-1%	5%	
		Total	0%	0%	0%	-2%	
8	Banbury Road / Field Street mini roundabout	Buckingham Road (N)	2%	-11%	3%	-11%	Reduction in total movements through the junction. The majority of the individual arms see either a positive impact or an impact of less than 5%. There is an impact of 12% (BTM & D&P) in the PM peak on the Banbury Road (W) arm. The Oxfordshire Local Transport and Connectivity Plan identifies town centre highway modifications, and it is proposed, due to the central location of this junction, a contribution is provided based on a proportionate impact when considered with all cumulative developments.
		Field Street (S)	-9%	-1%	-9%	-2%	
		Banbury Road (W)	6%	12%	3%	12%	
		Total	-3%	-3%	-3%	-4%	
9	A41 / A4421 / B4100 / Gravenhill Road roundabout	B4100 London Rd	-28%	-51%	-29%	-51%	Reduction in total movements through junction and through each individual arm. Junction capacity assessment not required.
		A4421	-46%	-41%	-47%	-42%	
		A41 (SE)	-18%	-25%	-18%	-26%	
		Gravenhill Road	-33%	-39%	-33%	-39%	

Ref	Junction	Arm	2031 + Dev 1a		Year 2031 + Dev 1b		Comments
			AM	PM	AM	PM	
		A41 (NW)	-29%	-20%	-30%	-20%	
		Total	-30%	-27%	-30%	-27%	
10	A4421 / Peregrine Way roundabout	Peregrine Way (N)	-35%	15%	-35%	15%	Reduction in total movements through the junction. The majority of the individual arms see either a positive impact or an impact of less than 5%. There is an impact of 15% (BTM & D&P) in the PM peak on Peregrine Way (N). Junction capacity assessment to be undertaken.
		A4421 (E)	2%	-6%	1%	-9%	
		A4421 (W)	3%	-19%	3%	-20%	
		Total	-12%	-10%	-12%	-11%	
11	Wretchwick Way / Charbridge Lane / Gavray Drive roundabout	Charbridge Lane (N)	10%	4%	9%	2%	Reduction in total movements through the junction in AM peak and less than 1% increase in PM peak. The majority of the individual arms see either a positive impact or an impact of less than 5%. The impact on the Charbridge Lane (N) arm during the AM peak is 10% (BTM) or 9% (D&P). It is considered that the percentage increase on this arm is in the same region of expected changes in daily traffic flows (10%). Junction capacity assessment not required.
		SE Bicester Access Road	-2%	-1%	-2%	-2%	
		Wretchwick Way	-29%	4%	-29%	3%	
		Gavray Drive (W)	-27%	-21%	-27%	-21%	
		Total	-5%	1%	-6%	0%	
12	A4421 / Bicester Road roundabout	Bicester Road (E)	-1%	2%	-1%	1%	Reduction in total movements through the junction in AM peak and less than 2% increase in PM peak. The majority of the individual arms see either a positive impact or an impact of less than 5%. The impact on the A4421 (W) arm during the
		Charbridge Lane (S)	-17%	-1%	-16%	-1%	

Ref	Junction	Arm	2031 + Dev 1a		Year 2031 + Dev 1b		Comments
			AM	PM	AM	PM	
		A4421 (W)	7%	4%	6%	2%	AM peak is 7% (BTM) or 6% (D&P). It is considered that the percentage increase on this arm is in the same region of expected changes in daily traffic flows (10%). Junction capacity assessment not required.
		Total	-3%	2%	-3%	1%	
13	A4421 / Launton Road / Skimmingdish Lane roundabout	Skimmingdish Lane (N)	-2%	10%	-3%	7%	Reduction in total movements through the junction in AM peak and less than 1% increase in PM peak. There is a positive impact on the Wyndham Hall (E) and A4421 (S) arms in both peak hours. The impact on the Skimmingdish Lane (N) arm is 10% (BTM) and 7% (D&P) in the PM peak. It is considered that the percentage increase on this arm is in the same region of expected changes in daily traffic flows (10%). The impact on Launton Road (W) is 21% (BTM & D&P) in the AM peak. Junction capacity assessment to be undertaken.
		Wyndham Hall (E)	-19%	-32%	-19%	-33%	
		A4421 (S)	-17%	-3%	-16%	-3%	
		Launton Road (W)	21%	-2%	21%	-2%	
		Total	-3%	1%	-3%	0%	
14	A4421 / Skimmingdish Lane / Buckingham Road / A4095 roundabout	A4421 (N)	1%	11%	2%	13%	Reduction in total movements through the junction in AM peak and less than 2% increase in PM peak. There is a positive impact or a maximum impact of 5% Skimmingdish Lane (E) and A4095 (W). The impact on the A4421 (N) arm is 11% (BTM) and 13% (D&P) in the PM peak. The impact on the Buckingham Road (S) arm is 16% (BTM) and 7% (D&P) in the PM peak. Junction capacity assessment to be undertaken.
		Skimmingdish Lane (E)	-6%	-8%	-5%	-9%	
		Buckingham Road (S)	-27%	16%	-28%	7%	
		A4095 (W)	5%	2%	3%	1%	
		Total	-2%	2%	-3%	1%	
15	B4100 Banbury Road / A4095	B4100 (N)	1%	2%	0%	2%	The increase in total movements through the junction are less than 5%. There are increases of 15% (BTM) and 37% ('D&P') in the PM peak on

Ref	Junction	Arm	2031 + Dev 1a		Year 2031 + Dev 1b		Comments
			AM	PM	AM	PM	
	Lords Lane roundabout	A4095 (E)	-7%	-9%	-5%	-6%	Banbury Road (S) and 24% (BTM) and 19% ('D&P') on A4095 (W) in the AM peak. Planning permission has been granted (Ref: 21/02457/OCC) for the signalisation of the junction to relieve congestion, accommodate the NW Bicester development and improve cycle and pedestrian links to and from the NW Bicester development and Bicester. Further junction capacity assessment not required.
		Banbury Road (S)	-16%	15%	-15%	37%	
		A4095 (W)	24%	6%	19%	3%	
		Total	0%	0%	-1%	4%	
16	B4100 / Caversfield priority junction	B4100 (N)	4%	10%	4%	9%	There is an increase of 10% (BTM) and 9% (D&P) through the junction in the PM peak. The increases on the B4100 (N&S) are within expected changes in daily traffic flows (10%). There is a 19% (BTM) and 20% (D&P) predicted increase on Aunt Ems Lane (E) in the PM peak. As was accepted within the 2014 application, it is proposed to provide traffic calming through the Caversfield village to deter traffic using this route. Further junction capacity assessment not required.
		Aunt Ems Lane (E)	-27%	19%	-26%	20%	
		B4100 (S)	-4%	9%	-6%	8%	
		Total	-1%	10%	-2%	9%	
17	A4095 Lords Lane / Bucknell Road roundabout	Bucknell Road (N)	0%	0%	0%	0%	There is an increase of between 3% and 8% in the total number of vehicle movements through the junction during the peak hours. A mitigation scheme (signalisation) set out in Jubb TN10 provides suitable mitigation for full build out of development. In addition the proposed improvements to the cycleway alongside the railway line will improve modal shift within Bicester with a positive impact at this junction. Further junction capacity assessment not required.
		A4095 (E)	21%	-10%	17%	-2%	
		Bucknell Road (S)	-10%	16%	-9%	12%	
		Total	8%	3%	6%	5%	
18	Howes Lane / Bucknell Road	Bucknell Road (N)	20%	-9%	16%	-2%	There is an increase of 7% (BTM) and 5% (D&P) in the total number of vehicle movements through the junction during the AM peak.

Ref	Junction	Arm	2031 + Dev 1a		Year 2031 + Dev 1b		Comments
			AM	PM	AM	PM	
	priority junction	Bucknell Road (S)	-5%	7%	-4%	-2%	A mitigation scheme (signalisation) set out in Jubb TN10 provides suitable mitigation for full build out of development. In addition the proposed improvements to the cycleway alongside the railway line will improve modal shift within Bicester with a positive impact at this junction. Further junction capacity assessment not required.
		Howes Lane (W)	-12%	-6%	-11%	-7%	
		Total	7%	-5%	5%	-4%	
19	Howes Lane / Middleton Stoney Road / Vendee Road roundabout	Howes Lane (N)	-1%	-25%	-4%	-12%	Reduction in total movements through junction and through the majority of individual arms. There is a 5% (BTM)/6%(D&P) increase in the PM peak on the Middle Stoney Road (E) arm. It is considered that the improvements to the cycleway alongside the railway line will improve modal shift within Bicester with a positive impact at this junction. Junction capacity assessment not required.
		Middleton Stoney Road (E)	-16%	5%	-16%	6%	
		Vendee Drive (S)	0%	-14%	1%	-14%	
		B4030 (W)	-9%	-2%	-9%	-3%	
		Total	-7%	-9%	-7%	-7%	
21	Middleton Road / Bainton Road priority junction	Ardley Road (N)	4%	-12%	5%	-18%	In the AM peak there is a reduction in total movements through the junction and the majority of individual arms. The Ardley Road impact is 5% or less. In the PM peak there is an increase of 9% (BTM) and 2% (D&P) through the junction. The majority of individual arms see a reduction in traffic movements with the Bicester Road (S) arm predicted to see an increase of 121% with BTM traffic generation and 101% with 'D&P' traffic generation. Whilst this is a significant percentage increase the base flow of traffic is low (98 pcus) and the additional vehicles will not impact on the operation of the junction in terms of capacity. Appendix B of Jubb TN05
		Bainton Road (E)	-46%	-18%	-46%	-22%	
		Bicester Road (S)	-27%	121%	-34%	101%	
		Middleton Road (W)	-35%	-17%	-35%	-19%	

Ref	Junction	Arm	2031 + Dev 1a		Year 2031 + Dev 1b		Comments
			AM	PM	AM	PM	
		Total	-14%	9%	-15%	2%	presented an indicative traffic calming scheme for Bucknell village and Bucknell Road which would discourage use of this route. Junction capacity assessment not required.

Table 3.1: Percentage Impact of Traffic Generated by Hawkwell Village at Junctions on the Bicester Network

4.0 Summary

4.1.1 **Table 3.1** has summarised the data output from the BTM showing a percentage impact of both the BTM and the D&P vehicle flows through the junction as a whole and on each individua arm. Commentary on the need to undertake individual junction capacity assessment is provided and OCC are invited to provide a response to the assessment, with consideration to the proposed off-site active travel improvements that the proposal will provide/contribute to and Policy 36 of the recently adopted LTCP,

North West Bicester – Hawkwell Village

20300

Appendix A BTM Output

PCU Summary

Ref	Junction	Arm	Year 2031 Base		ar 2031 Base + Commi		Year 2031 + Dev 1a		Year 2031 + Dev 1b		Year 2031 + Dev 1a % Change on Base + Committed		Year 2031 + Dev 1b % Change on Base + Committed	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	M40 Junction 9	M40 (N)	2037	2361	2045	2366	2025	2345	2024	2349	-1%	-1%	-1%	-1%
		A41	1435	1305	1441	1311	1140	938	1135	965	-21%	-28%	-21%	-26%
		M40 (S)	521	960	524	963	456	806	456	809	-13%	-16%	-13%	-16%
		A34	3789	3676	3790	3672	3539	3377	3539	3369	-7%	-8%	-7%	-8%
		Total	7783	8302	7800	8312	7160	7466	7154	7492	-8%	-10%	-8%	-10%
2	A41 Oxford Road / Vendee Drive roundabout	A41 (N)	1088	1407	1103	1422	716	1131	713	1097	-35%	-20%	-35%	-23%
		Unlabelled Rd	411	478	414	483	258	354	258	351	-38%	-27%	-38%	-27%
		A41 (S)	1353	1358	1357	1361	1028	978	1027	980	-24%	-28%	-24%	-28%
		Park & Ride	11	8	11	8	3	2	3	2	-75%	-74%	-75%	-74%
		Vendee Drive	960	663	996	673	920	349	910	405	-8%	-48%	-9%	-40%
		Total	3823	3914	3880	3948	2923	2814	2911	2834	-25%	-29%	-25%	-28%
3	A41 / B4030 Oxford Road signalised roundabout	Oxford Rd	1426	1151	1443	1528	1182	1018	1173	981	-18%	-33%	-19%	-36%
		A41 (E)	1326	1108	1334	1283	1043	887	1041	878	-22%	-31%	-22%	-32%
		A41 (S)	1669	1835	1669	1916	1110	1630	1110	1609	-33%	-15%	-33%	-16%
		Unlabelled Rd (W)	110	48	110	89	74	27	74	27	-33%	-69%	-33%	-69%
		Total	4532	4142	4556	4816	3409	3562	3399	3496	-25%	-26%	-25%	-27%
4	A41 Oxford Road / Pingle Drive signal junction	B4030 Oxford Road (N)	1501	1173	1512	1188	1442	1328	1433	1287	-5%	12%	-5%	8%
		Pingle Drive (E)	145	498	148	501	197	243	198	242	33%	-51%	34%	-52%
		A41 Oxford Road (S)	1081	1505	1095	1531	1068	1477	1069	1456	-2%	-4%	-2%	-5%
		Total	2727	3177	2755	3220	2707	3048	2700	2985	-2%	-5%	-2%	-7%
5	Middleton Stoney Road / Kings End mini roundabout	Kings End (N)	1179	1075	1142	1092	1186	1212	1186	1178	4%	11%	4%	8%
		Oxford Road (S)	1013	1421	1032	1448	1074	1478	1076	1456	4%	2%	4%	1%
		Middleton Stoney Road (W)	935	725	1005	737	850	707	846	705	-15%	-4%	-16%	-4%
		Total	3128	3221	3179	3277	3110	3397	3108	3340	-2%	4%	-2%	2%
6	Field Street / Bucknell Road priority junction	Field Street (N)	918	920	883	927	917	884	908	880	4%	-5%	3%	-5%
		Field Street (S)	778	1090	827	1099	801	1029	806	1025	-3%	-6%	-3%	-7%
		Bucknell Road (W)	135	90	143	90	130	107	127	111	-9%	19%	-11%	23%
		Total	1831	2100	1853	2116	1848	2019	1841	2015	0%	-5%	-1%	-5%
7	Queens Avenue / St John's Street mini roundabout	Field Street (N)	951	909	915	923	911	884	908	859	-1%	-4%	-1%	-7%
		St John's Street (E)	650	630	666	636	677	615	675	610	2%	-3%	1%	-4%
		Queens Avenue (S)	842	1032	880	1043	864	1100	867	1091	-2%	5%	-1%	5%
		Total	2443	2572	2461	2602	2452	2599	2449	2560	0%	0%	0%	-2%
8	Banbury Road / Field Street mini roundabout	Buckingham Road (N)	509	696	504	699	515	623	518	619	2%	-11%	3%	-11%
		Field Street (S)	747	1003	804	1008	728	998	732	989	-9%	-1%	-9%	-2%
		Banbury Road (W)	411	230	382	234	404	263	391	262	6%	12%	3%	12%
		Total	1667	1929	1690	1941	1647	1884	1642	1870	-3%	-3%	-3%	-4%
9	A41 / A4421 / B4100 / Gravenhill Road roundabout	B4100 London Rd	246	496	249	508	178	249	177	247	-28%	-51%	-29%	-51%
		A4421	615	474	626	482	335	285	333	279	-46%	-41%	-47%	-42%
		A41 (SE)	783	940	782	945	642	705	642	702	-18%	-25%	-18%	-26%
		Gravenhill Road	322	259	333	260	223	159	224	159	-33%	-39%	-33%	-39%
		A41 (NW)	1343	1369	1362	1373	962	1100	960	1098	-29%	-20%	-30%	-20%
		Total	3062	3042	3104	3060	2162	2249	2158	2238	-30%	-27%	-30%	-27%
10	A4421 / Peregrine Way roundabout	Peregrine Way (N)	494	230	503	232	326	267	327	266	-35%	15%	-35%	15%
		A4421 (E)	336	367	347	375	353	352	350	341	2%	-6%	1%	-9%
		A4421 (W)	446	824	473	830	489	671	489	667	3%	-19%	3%	-20%
		Total	1276	1421	1324	1437	1169	1290	1166	1273	-12%	-10%	-12%	-11%
11	Wretchwick Way / Charbridge Lane / Gavray Drive roundabout	Charbridge Lane (N)	1076	1028	1103	1040	1213	1080	1199	1060	10%	4%	9%	2%
		SE Bicester Access Road	428	688	462	696	451	691	452	684	-2%	-1%	-2%	-2%
		Wretchwick Way	606	554	644	560	454	582	455	576	-29%	4%	-29%	3%
		Gavray Drive (W)	130	108	137	108	100	86	100	86	-27%	-21%	-27%	-21%
		Total	2241	2378	2346	2403	2218	2438	2206	2405	-5%	1%	-6%	0%
12	A4421 / Bicester Road roundabout	Bicester Road (E)	443	342	461	339	454	345	455	344	-1%	2%	-1%	1%
		Charbridge Lane (S)	915	1209	987	1220	824	1213	827	1204	-17%	-1%	-16%	-1%
		A4421 (W)	1329	1279	1351	1292	1448	1339	1429	1322	7%	4%	6%	2%
		Total	2687	2830	2799	2850	2726	2898	2711	2870	-3%	2%	-3%	1%
13	A4421 / Launton Road / Skimmingish Lane roundabout	Skimmingdish Lane (N)	1383	1064	1390	1091	1367	1197	1352	1172	-2%	10%	-3%	7%
		Wyndham Hall (E)	15	27	15	27	12	18	12	18	-19%	-32%	-19%	-33%
		A4421 (S)	1194	1403	1281	1409	1070	1371	1074	1363	-17%	-3%	-16%	-3%
		Launton Road (W)	693	1096	706	1101	854	1078	855	1074	21%	-2%	21%	-2%
		Total	3285	3589	3392	3628	3303	3664	3293	3627	-3%	1%	-3%	0%
14	A4421 / Skimmingdish Lane / Buckingham Road / A4095 roundabout	A4421 (N)	1346	1031	1358	1040	1377	1155	1380	1171	1%	11%	2%	13%
		Skimmingdish Lane (E)	782	1474	878	1499	829	1375	836	1362	-6%	-8%	-5%	-9%
		Buckingham Road (S)	451	375	455	373	331	432	330	399	-27%	16%	-28%	7%
		A4095 (W)	1154	997	1164	1034	1226	1050	1196	1046	5%	2%	3%	1%
		Total	3734	3878	3855	3946	3762	4012	3742	3979	-2%	2%	-3%	1%
15	B4100 Banbury Road / A4095 Lords Lane roundabout	B4100 (N)	1237	857	1239	924	1251	942	1234	943	1%	2%	0%	2%
		A4095 (E)	1121	1309	1246	1337	1165	1211	1180	1263	-7%	-9%	-5%	-6%
		Banbury Road (S)	311	399	425	423	355	488	363	581	-16%	15%	-15%	37%
		A4095 (W)	527	648	540	658	671	696	644	678	24%	6%	19%	3%
		Total	3196	3213	3451	3342	3442	3336	3421	3465	0%	0%	-1%	4%
16	B4100 / Caversfield priority junction	B4100 (N)	1059	784	1164	826	1212	908	1215	898	4%	10%	4%	9%
		Aunt Elms Lane (E)	127	61	160	66	117	79	118	79	-27%	19%	-26%	20%
		B4100 (S)	629	878	641	931	615	1012	600	1002	-4%	9%	-6%	8%
		Total	1815	1723	1965	1823	1945	1998	1933	1980	-1%	10%	-2%	9%
17	A4095 Lords Lane / Bucknell Road roundabout	Bucknell Road (N)	12	12	12	12	12	12	12	12	0%	0%	0%	0%
		A4095 (E)	236	280	250	289	303	261	292	284	21%	-10%	17%	-2%
		Bucknell Road (S)	170	273	183	278	165	322	167	310	-10%	16%	-9%	12%
		Total	417	565	445	579	480	595	472	606	8%	3%	6%	5%
18	Howes Lane / Bucknell Road prioity junction	Bucknell Road (N)	248	292	262	301	315	273	304	296	20%	-9%	16%	-2%
		Bucknell Road (S)	86	123	94	125	90	134	91	123	-5%	7%	-4%	-2%
		Howes Lane (W)	128	258	134	262	118	246	119	244	-12%	-6%	-11%	-7%
		Total	462	674	491	688	522	653	514	662	7%	-5%	5%	-4%
19	Howes Lane / Middleton Stoney Road / Vendee Road roundabout	Howes Lane (N)	788	459	783	482	772	360	750	423	-1%	-25%	-4%	-12%
		Middleton Stoney Road (E)	722	550	772	598	651	630	651	632	-16%	5%	-16%	6%
		Vendee Drive (S)	586	1095	622	1116	622	961	626	960	0%	-14%	1%	-14%
		B4030 (W)	650	572	793	629	725	614	725	607	-9%	-2%	-9%	-3%
		Total	2746	2676	2970	2824	2770	2565	2751	2622	-7%	-9%	-7%	-7%
20a	M40 J10 (Padbury signal junction)	M40 SB Off Slip	928	728	929	738	775	602	776	600	-17%	-18%	-17%	-19%
		A43 (N)	1947	1455	1971	1462	2012	1507	2012	1479	2%	3%	2%	1%
		A43 (S)	1405	2006	1409	2016	1355	1923	1354	1913	-4%	-5%	-4%	-5%
		Total	4280	4188	4310	4216	4142	4032	4142	3992	-4%	-4%	-4%	-5%
20b	M40 J10 (Cherwell signal junction)	A43 (N)	2487	1879	2536	1889	2467	1838	2468	1806	-3%	-3%	-3%	-4%
		Services	586	610	586	610	586	610	586	610	0%	0%	0%	0%
		A43 (W)	1593	2175	1597	2185	1533	2085	1532	2075	-4%	-5%	-4%	-5%
		Total	4666	4663	4720	4683	4587	4532	4586	4491	-3%	-3%	-3%	-4%
20c	M40 J10 (Ardley roundabout)	A43 (E)	1319	1162	1354	1173	1311	1085	1311	1078	-3%	-8%	-3%	-8%
		M40 NB Off Slip	1328	1829	1328	1828	1318	1707	1318	1701	-1%	-7%	-1%	-7%
		B430	511	587	509	597	308	604	303	601	-39%	1%	-40%	1%
		Total	3158	3578	3191	3598	2937	3396	2932	3381	-8%	-6%	-8%	-6%
21	Middleton Road / Bainton Road priority junction	Ardley Road (N)	331	178	397	203	412	177	415	166	4%	-12%	5%	-18%
		Bainton Road (E)	72	27	82	30	44	24	44	23	-46%	-18%	-46%	-22%
		Bicester Road (S)	176	88	170	98	123	217	113	198	-27%	121%	-34%	101%
		Middleton Road (W)	85	221	116	232	75	193	75	187	-35%	-17%	-35%	-19%
		Total	664	514	764	562	655	612	648	574	-14%	9%	-15%	2%
23	Site Access (Eastern)	Site Access (N)	0	0	0	0	440	322	373	241				
		A4095 (E)	0	0	0	0	774	530	792	789				
		Germander Way (S)	0	0	0	0	28	96	28	26				
		A4095 (W)	0	0	0	0	419	700	424	674				
		Total	0	0	0	0	1660	1648	1617	1730				
24	Site Access (Western)	Site Acces (N)	0	0	0	0	178	178	158	158				
		A4095 (E)	0	0	0	0	599	599	588	588				
		A4095 (W)	0	0	0	0	397	397	402	402				
		Total	0	0	0	0	1174	1174	1148	1148				