

## 3. Daily Traffic Volumes

3.1 This section of the report looks at 24hr traffic flows on the M6, M6 Toll and other key motorway and strategic routes. Data has been provided by Automatic Traffic Counts (ATCs) at various locations along the routes.

### Factoring Methodology

3.2 It should be noted, that all flows presented previously in this report have not been factored, and have been based on actual observed flows for each quarter or year. Henceforth, and in this section, flows have been factored year on year to reflect background traffic growth experienced on motorways and other road types. This makes flows from different years directly comparable.

3.3 Factors have been derived from the Transport Statistics Bulletin: Traffic in Great Britain published by the DfT. Final statistics for 2008 and first quarter 2009 are not yet available; however provisional figures are available, which have been used here.

3.4 Table 3.1 therefore provides a summary of the factors used in the remainder of this report, however the following points should be noted:

- Provisional Q1 2009 figures were affected by heavy snowfall, mainly during the first week of February;
- The provisional traffic estimates are based mainly on data from 180 Automatic Traffic Counter (ATC) sites. Caution should therefore be taken in drawing conclusions about longer term trends from these estimates; and
- The final annual road traffic estimates are calculated from data collected by both the ATCs and around 10,000 12-hour manual counts, combined with road lengths.

**Table 3.1 – Year on Year Growth Factors used in this Report<sup>1</sup>**

		'03-'04	'04-'05	'05-'06	'06-'07	'07-'08 <sup>2</sup>	'08-'09	2004 to 2009	2003 to 2009
Motorways	All vehicles	1.03	1.02	1.01	1.02	1.02	0.95	1.02	1.05
	Cars	1.02	1.02	0.99	1.03	1.01	0.96	1.01	1.03
	HGVs	1.04	1.01	1.02	0.99	1.02	0.89	0.93	0.95
Urban A' Roads	All vehicles	1.03	0.97	1.01	0.99	0.98	0.96	0.91	0.98
Rural A' Roads	All vehicles	1.02	0.99	1.02	1.01	1.00	0.98	1.00	1.00

<sup>1</sup> statistics have been based on Quarter 1 figures for each year.

<sup>2</sup> 2008 and 2009 based on provisional statistics (July '09)

### Locations of Automatic Traffic Count (ATC) Sites on M6 Toll

3.5 The locations of the ATCs along the M6 Toll are shown in Figure 3.1, and the section details of the M6 Toll are provided in Table 3.2.

Figure 3.1 – Traffic Count Locations on M6 Toll

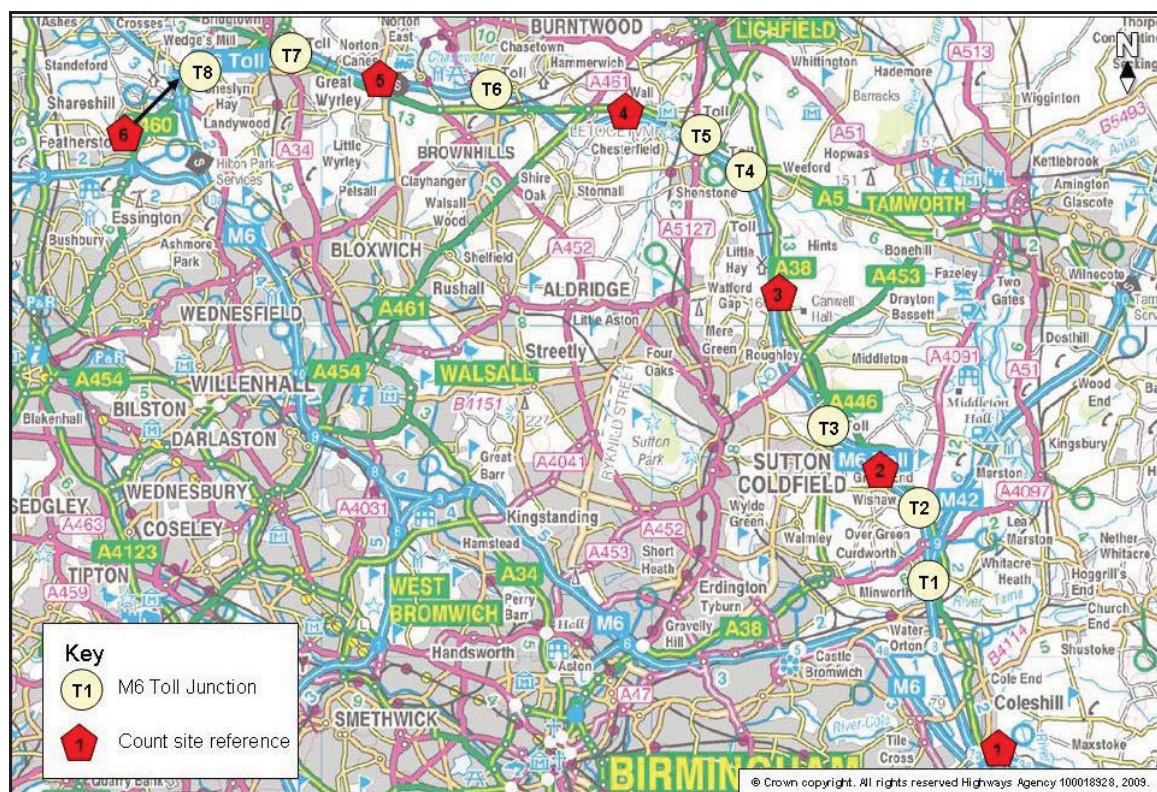


Table 3.2 – M6 Toll Junction to Junction Descriptions (South to North)

M6 Toll Section	From	To
M6 J3a to M42 merge	South tie-in M6 J3a	Tie-in with M42 J7a shared section
T1 – T2	A4097/ J with M42 J9	The Belfry/A446
T2 – T3	The Belfry/A446	A38 near Sutton Coldfield (Langley Mill)
T3 – T4	A38 near Sutton Coldfield (Langley Mill)	Tamworth/Weeford
T4 – T5	Tamworth/Weeford	A5127 near Wall/Shenstone
T5 – T6	A5127 near Wall/Shenstone	Chasetown, near Burntwood/Brownhills
T6 – T7	Chasetown, near Burntwood/Brownhills	A34 near Cannock/Churchbridge
T7 – T8	A34 near Cannock/Churchbridge	A460 near Laney Green
T8 – M6 North	A460 near Laney Green	North tie-in at M6 J11a

### Changes in 24hr Traffic Flows on the M6 Toll since 2004

- 3.6 Table 3.3 through to 3.6 are a series of tables presenting 24hr totals for an average Monday – Thursday, average Friday, average Saturday and average Sunday for various sections of the M6 Toll where data is available. Background growth based on the factors provided in Table 3.1 has been applied to all years between 2004 and 2008 to make them directly comparable with 2009 flows and to enable a Five Years After (FYA) comparison.
- 3.7 Flows have been taken from the month of March for all years, and data affected by roadworks and accidents has been excluded from the analysis. The Easter week of 2005 was also excluded.

Where March data for a particular year was not available, an appropriate seasonal factor from the same site has been applied to the nearest, most appropriate month. Figures 3.2 through to 3.5 show the corresponding 'One Year After' and 'Five Years After' flows and percentage changes, geographically.



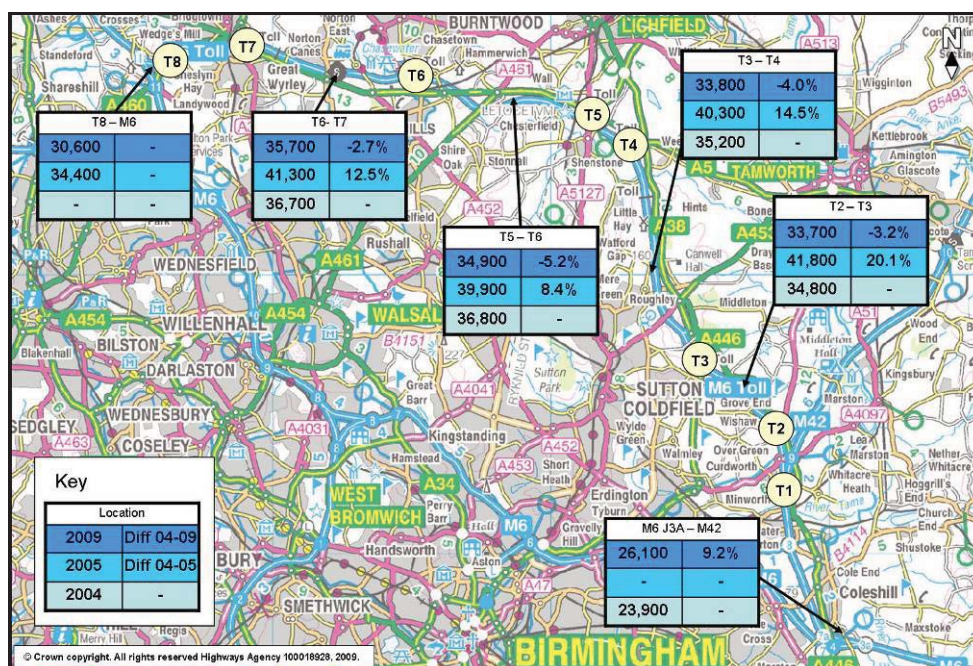
Table 3.3 – Average Monday – Thursday flows on M6 Toll 2004 – 2009

2004 through to 2008 flows factored to 2009 <sup>3</sup>											
	M6 Toll Section	Mar '04	Mar '05	OYA Diff.	OYA <sup>1</sup> % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA Diff.	FYA <sup>2</sup> % Diff.
1	M6 J3a – M42 Merge	23,900	-	-	-	26,900	27,100	25,400	26,100	2,200	9.2%
2	T2-T3	34,800	41,800	7,000	20.1%	-	39,100	34,000	33,700	-1,100	-3.2%
3	T3-T4	35,200	40,300	5,100	14.5%	38,200	39,300	34,200	33,800	-1,400	-4.0%
4	T5-T6	36,800	39,900	3,100	8.4%	38,200	-	35,300	34,900	-1,900	-5.2%
5	T6-T7	36,700	41,300	4,600	12.5%	39,600	41,200	36,400	35,700	-1,000	-2.7%
6	T8-M6 North	-	34,400	34,400	-	32,500	33,300	29,100	30,600	-	-

<sup>1</sup> OYA (One Year After) difference between March 2004 and March 2005 <sup>2</sup> FYA (Five Years After) difference between March '04 and March '09

<sup>3</sup> 2004 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.

Figure 3.2 – Change in Monday to Thursday flows on M6 Toll



3.8 Table 3.3 and Figure 3.2 show that:

- Taking into account background traffic growth for motorways between 2004 and 2009 shown in Table 3.1, in 2005 one year after the opening of the M6 Toll, all sections where data was available had witnessed an increase of at least 9%, with T2 – T3 showing the largest increase of 20% compared to 2004 flows;
- Five years on however, all sections have shown a reduction of between 3 and 5% on 2004 levels (with the exception of the non-tolled section M6 J3a – M42 merge); and
- It should be noted however, that 2008 and Quarter one national figures for traffic growth shown in Table 3.1 which have been applied to the traffic flows in Table 2.5, are provisional statistics.

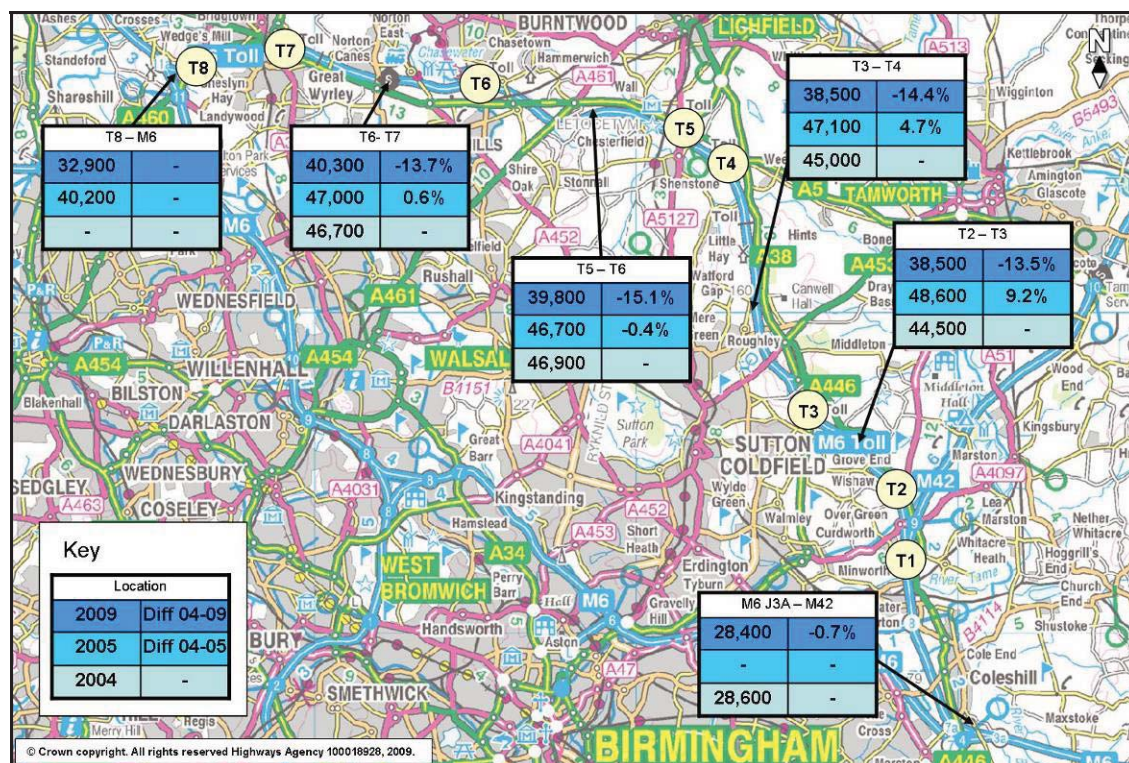
Table 3.4 – Average Friday flows on M6 Toll 2004 – 2009

		2004 through to 2008 flows factored to 2009 <sup>3</sup>									
	M6 Toll Section	Mar '04	Mar '05	OYA Diff.	OYA <sup>1</sup> % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA Diff.	FYA <sup>2</sup> % Diff.
1	M6 J3a – M42 Merge	28,600	-	-	-	30,200	30,800	29,200	28,400	-200	-0.7%
2	T2-T3	44,500	48,600	4,100	9.2%	-	46,200	39,600	38,500	-6,000	-13.5%
3	T3-T4	45,000	47,100	2,100	4.7%	45,000	46,600	39,600	38,500	-6,500	-14.4%
4	T5-T6	46,900	46,700	-200	-0.4%	45,500	-	40,500	39,800	-7,100	-15.1%
5	T6-T7	46,700	47,000	300	0.6%	46,800	48,300	40,800	40,300	-6,400	-13.7%
6	T8-M6 North	-	40,200	-	-	38,700	39,500	33,500	32,900	-	-

<sup>1</sup> OYA (One Year After) difference between March 2004 and March 2005 <sup>2</sup> FYA (Five Years After) difference between March '04 and March '09

<sup>3</sup> 2004 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.

Figure 3.3 – Change in Friday flows on M6 Toll



3.9 The following observations regarding average Friday flows on the M6 Toll can be made from Table 3.4 and Figure 3.3:

- On an average Friday, flows on the sections presented between T2 and T7 have shown a reduction of 14 – 20% after background traffic growth has been applied. This is with the exception of the M6 J3a – M42 merge where flows have remained broadly the same; and
- This shows that the M6 Toll has witnessed a greater reduction in Friday traffic than for other weekdays (Mondays to Thursdays).



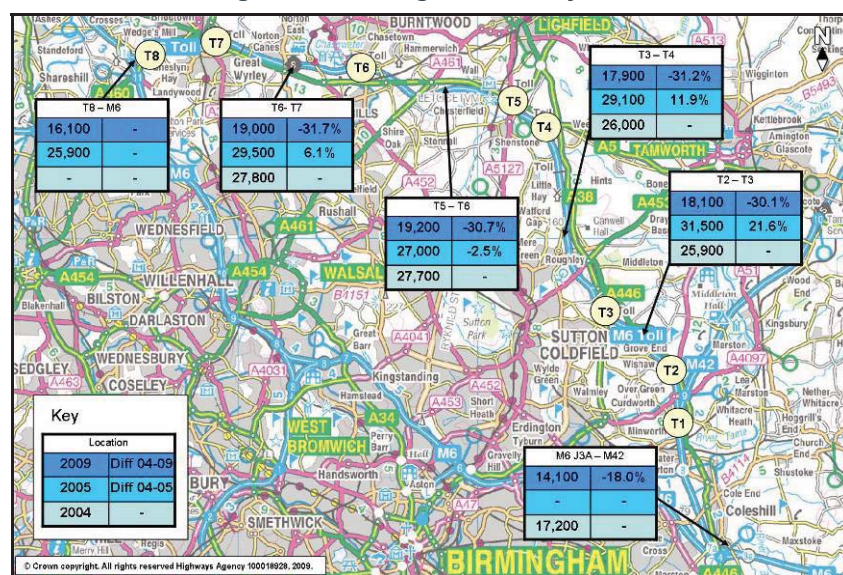
Table 3.5 – Average Saturday flows on M6 Toll 2004 – 2009

		2004 through to 2008 flows factored to 2009 <sup>3</sup>									
	M6 Toll Section	Mar '04	Mar '05	OYA Diff.	OYA <sup>1</sup> % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA Diff.	FYA <sup>2</sup> % Diff.
1	M6 J3a – M42 Merge	17,200	-	-	-	15,700	16,400	14,800	14,100	-3,100	-18.0%
2	T2-T3	25,900	31,500	5,600	21.6%	-	23,700	20,500	18,100	-7,800	-30.1%
3	T3-T4	26,000	29,100	3,100	11.9%	22,200	23,700	20,400	17,900	-8,100	-31.2%
4	T5-T6	27,700	27,000	-700	-2.5%	23,700	-	21,500	19,200	-8,500	-30.7%
5	T6-T7	27,800	29,500	1,700	6.1%	23,400	24,900	21,600	19,000	-8,800	-31.7%
6	T8-M6 North	-	25,900	-	-	19,800	21,200	18,600	16,100	-	-

<sup>1</sup> OYA (One Year After) difference between March 2004 and March 2005, <sup>2</sup> FYA (Five Years After) difference between March '04 and March '09

<sup>3</sup> 2004 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.

Figure 3.4 – Change in Saturday flows on M6 Toll



3.10 Table 3.5 and Figure 3.4 show us that:

- The initial increases shown in 2005 on most sections of the M6 Toll reflect the ramp-up period however the exception to this appears to be T5 – T6, with a slight reduction;
- Average Saturday flows have reduced by approximately 30% on most sections with the exception of M6 J3A – M42 Merge, which has witnessed a reduction by a lesser 18%. This shows a more significant reduction than that witnessed on weekdays;
- This perhaps indicates that recreational and longer-distance traffic associated with weekend/Saturday travel are using the M6 Toll less. This reduction appears to have been greater than the reduction in traffic observed on motorways nationally. Given the economic climate over the last 12 months, and the fact that there is a toll for motorists to use the road, has exacerbated national trends; and
- Weekend travel generally has a lower value of time than weekday travel, when there is a lot of business and commuter traffic, hence perhaps explaining the larger impact on weekend traffic than weekday traffic on the M6 Toll during the current economic climate.

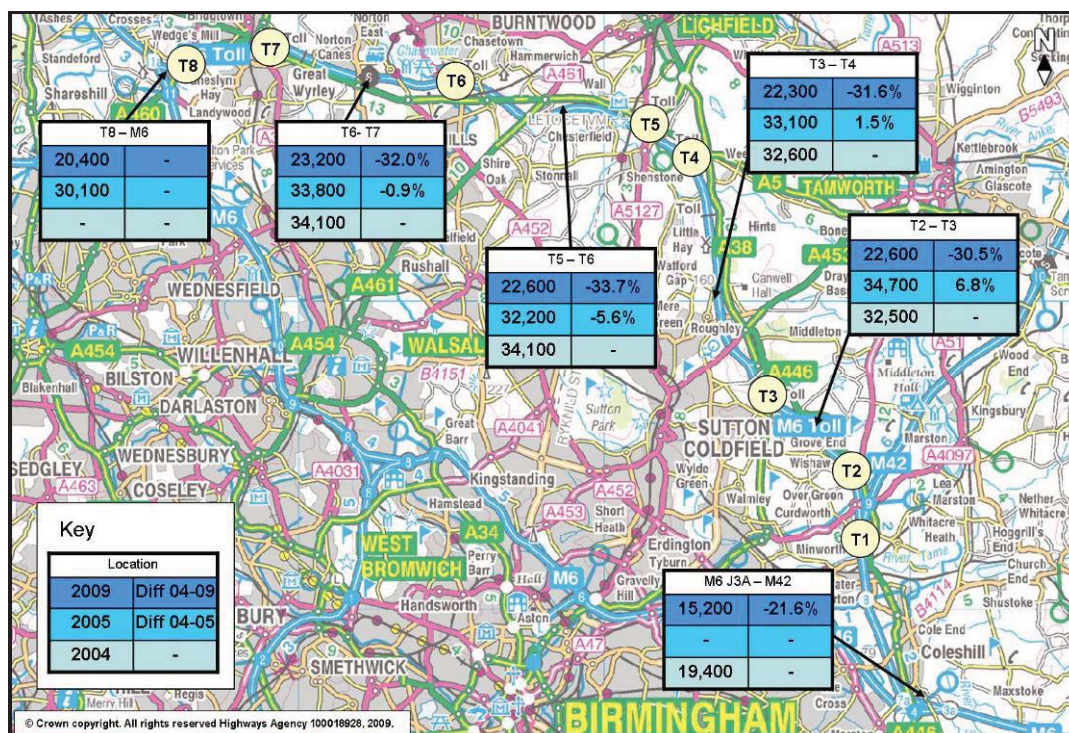
Table 3.6 – Average Sunday flows on M6 Toll 2004 – 2009

		2004 through to 2008 flows factored to 2009 <sup>3</sup>									
	M6 Toll Section	Mar '04	Mar '05	OYA Diff.	OYA <sup>1</sup> % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA Diff.	FYA <sup>2</sup> % Diff.
1	M6 J3a – M42 Merge	19,400	-	-	-	21,800	17,500	14,400	15,200	-4,200	-21.6%
2	T2-T3	32,500	34,700	2,200	6.8%	-	29,200	23,300	22,600	-9,900	-30.5%
3	T3-T4	32,600	33,100	500	1.5%	31,700	29,100	23,200	22,300	-10,300	-31.6%
4	T5-T6	34,100	32,200	-1,900	-5.6%	31,100	-	23,300	22,600	-11,500	-33.7%
5	T6-T7	34,100	33,800	-300	-0.9%	32,800	30,100	24,300	23,200	-10,900	-32.0%
6	T8-M6 North	-	30,100	-	-	28,400	26,400	21,400	20,400	-	-

<sup>1</sup> OYA (One Year After) difference between March 2004 and March 2005, <sup>2</sup> FYA (Five Years After) difference between March '04 and March '09

<sup>3</sup> 2004 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.

Figure 3.5 – Change in Sunday flows on M6 Toll



3.11 With regards to average Sunday flows on the M6 Toll, Table 3.6 and Figure 3.5 tell us that:

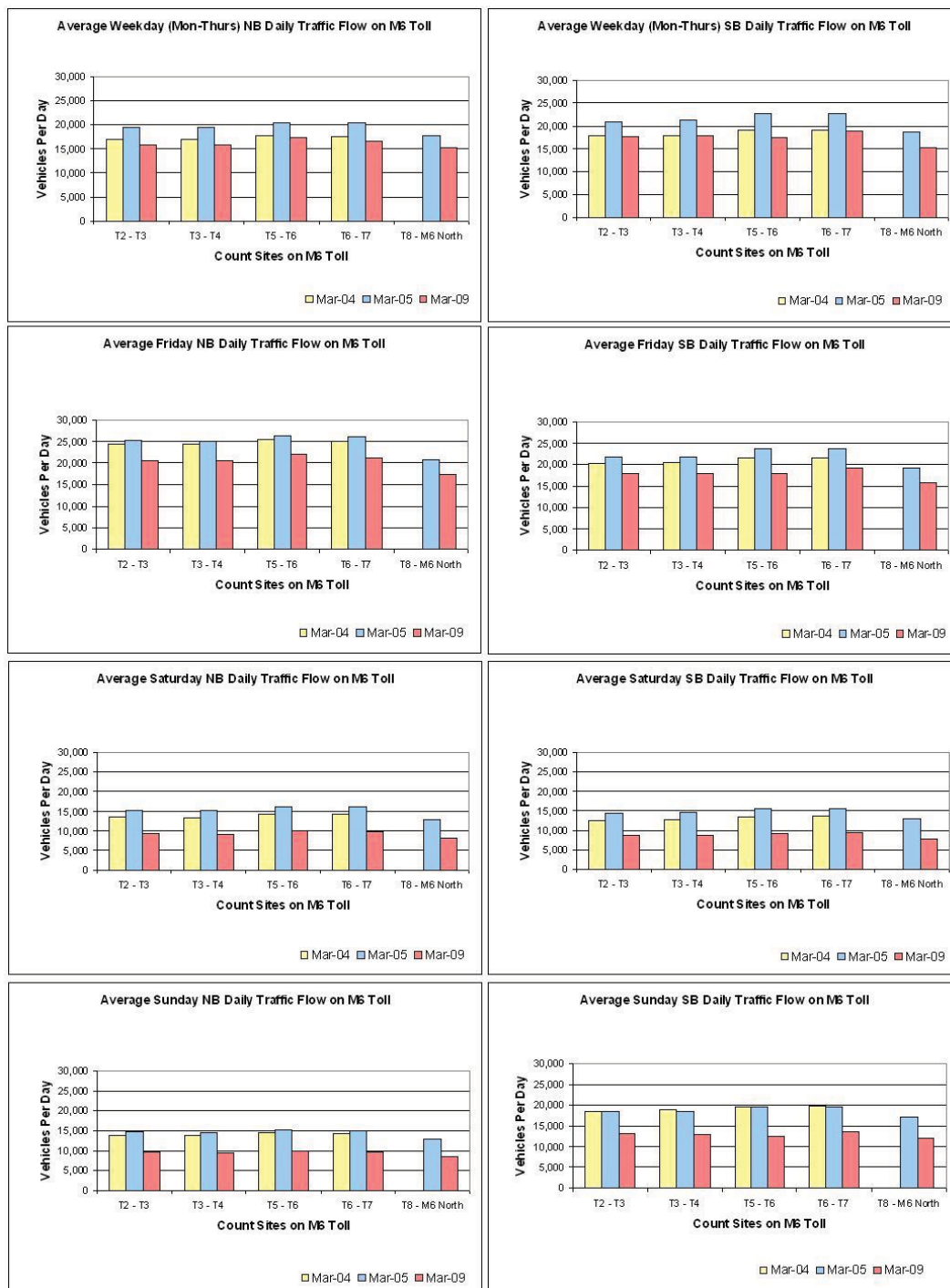
- Average Sunday flows Five Years After (FYA) opening have once again reduced by approximately 30% on all sections (except the M6 J3a – M42 Merge) after background traffic growth factors have been applied; and
- This reduction is similar to that witnessed on average Saturday traffic, and will be due to the same reasons.



## Changes in Directional Flows on M6 Toll

- 3.12 It is perhaps useful to determine the proportion of directional traffic at various sections of the M6 Toll and whether this has changed over the last five years.

Figure 3.6 – Directional Average 24hr Traffic Flow on M6 Toll



- 3.13 Figure 3.6 shows graphically the key information presented previously in Tables 3.3 to 3.6 but is also split by direction. The following observations can be made:

- In 2004 and in 2005, southbound flows were higher on most links than northbound flows on Mondays to Thursdays, however in 2009, the directional split has become more even. Therefore for the majority of links, the reduction in flows on the M6 Toll has been more noticeable in the southbound direction;



- The highest daily flows on the M6 Toll are still occurring on Fridays in the northbound direction (particularly T2 through to T4) which suggests that there are a number of weekend travellers from the south-east heading north. This is further supported by the greater proportion of traffic on a Sunday travelling in the southbound direction. It would seem however that Five Years After opening, the directional split on Fridays and Sundays is slightly less distinct; and
- On Saturdays, the directional split of traffic is much more even, and this has continued to be the case for all years shown.

#### **Traffic Flows on the M6 and other Motorways and Strategic Routes**

- 3.14 In order to assess these changes to M6 Toll traffic flows against the wider context of changes in strategic motorway and trunk road traffic in the Midlands, a selection of key routes have also been chosen to enable comparison.
- 3.15 Tables 3.7 to 3.10 show the 2-way average 24hr flows for Monday to Thursdays, Fridays, Saturdays and Sundays for key strategic links, respectively. The tables include flows for 2003 through to 2009, with flows for 2003 through to 2008 factored to account for background traffic growth discussed earlier. Figures 3.7 to 3.10 show geographically the 'Before', 'One Year After' and 'Five Years After' flows with corresponding percentage change.

Table 3.7 – Average 2-way Monday – Thursday flows on M6 and other strategic routes 2003 – 2009

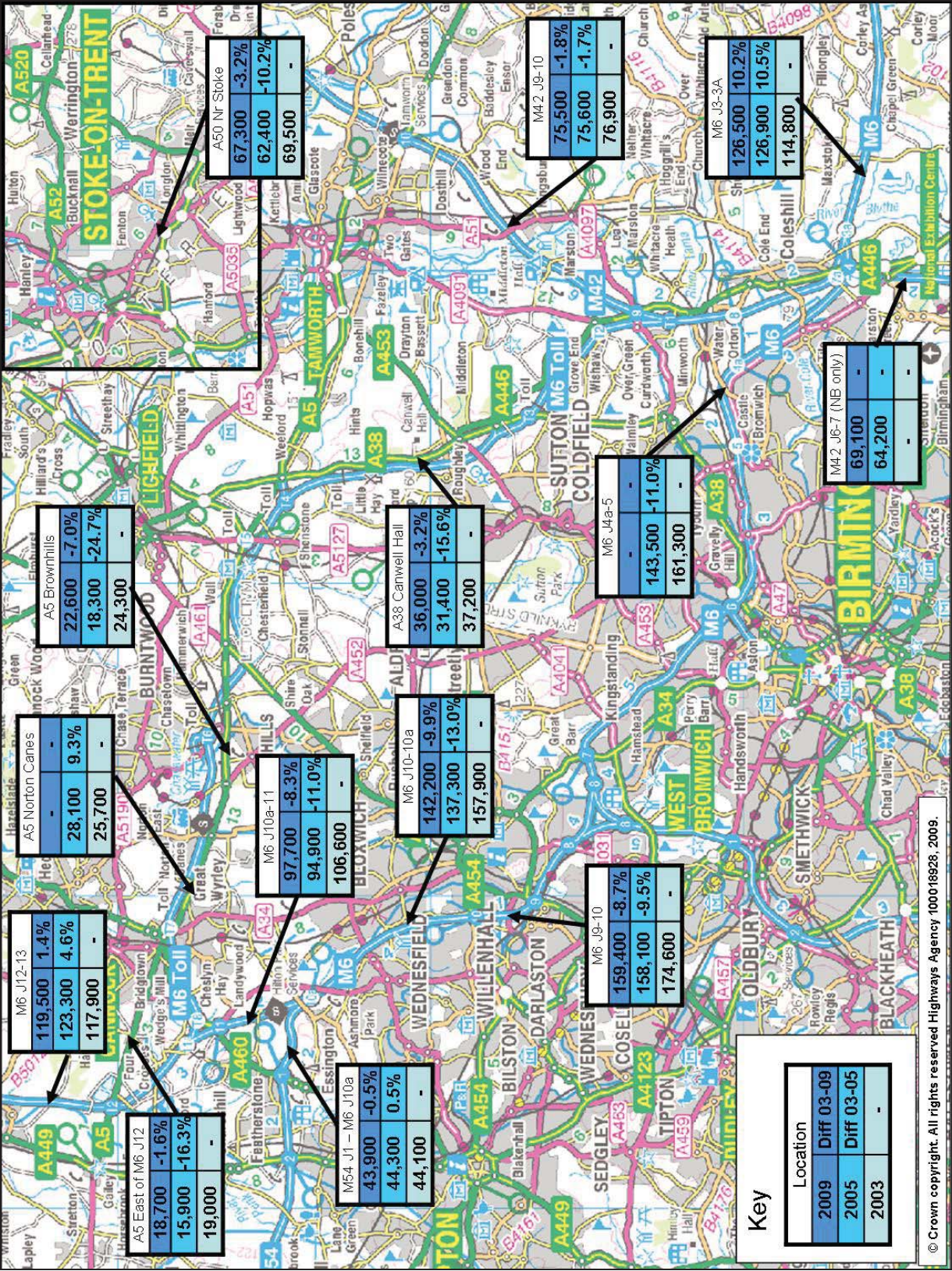
Section	Mar '03	Mar '05	OYA Diff.	OYA % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA Diff.	FYA <sup>1</sup> % Diff.
M6										
J3 – J3A	114,800	126,900	12,100	10.5%	125,000	132,200	124,300	126,500	11,700	10.2%
J4A – J5	161,300	143,500	-17,800	-11.0%	146,100	144,400	151,000	-	-	-
J9 – J10	174,600	158,100	-16,500	-9.5%	153,200	152,100	154,800	159,400	-15,200	-8.7%
J10 – J10A	157,900	137,300	-20,600	-13.0%	133,900	129,200	138,500	142,200	-15,700	-9.9%
J10A – J11	106,600	94,900	-11,700	-11.0%	92,000	89,100	45,800	97,700	-8,900	-8.3%
J12 – J13	117,900	123,300	5,400	4.6%	118,200	-	120,500	119,500	1,600	1.4%
Other Routes										
M42 J6 – J7 N/B only	-	64,200	-	-	66,200	69,400	68,100	69,100	-	-
M42 J9 – J10	76,900	75,600	-1,300	-1.7%	75,300	77,400	76,000	75,500	-1,400	-1.8%
A38 (A5 – A453) Canwell Hall	37,200	31,400	-5,800	-15.6%	31,200	34,000	35,300	36,000	-1,200	-3.2%
A5 (A452 – A461) Brownhills	24,300	18,300	-6,000	-24.7%	20,300	22,100	-	22,600	-1,700	-7.0%
A5 (A34 – A452) Norton Canes	25,700	28,100	2,400	9.3%	26,800	29,300	-	-	-	-
A5 East of M6 J12, West of Cannock	19,000	15,900	-3,100	-16.3%	16,800	17,900	18,400	18,700	-300	-1.6%
M54 J1 – M6 J10a	44,100	44,300	200	0.5%	43,000	41,100	42,200	43,900	-200	-0.5%
A50 East of A520 nr Stoke on Trent	69,500	62,400	-7,100	-10.2%	61,100	64,400	66,700	67,300	-2,200	-3.2%

<sup>1</sup> OYA (One Year After) difference between March '03 and March '05, <sup>2</sup> FYA (Five Years After) difference between March '03 and March '09

<sup>3</sup> 2003 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.



Figure 3.7 – Change in Monday to Thursday flows on the M6 and other Strategic Routes





### ***Mondays to Thursdays***

- On the parallel sections of the M6, namely J9 – J10, J10 – J10a and J10a – J11, March flows are approximately 8 – 9% lower five years after the opening of the M6 Toll than they were in 2003 before the M6 Toll opened. However, this is taking into account nationally observed background changes in traffic between those years (for example a factor of 1.05 was applied to 2003 flows);
- It should be noted, that 'actual' flows on these parallel sections of the M6 have shown an increase since 2007, unlike the M6 Toll which has witnessed reductions, indicating that some traffic is rerouting back to the M6;
- On sections of the M6 north and south of the M6 Toll tie-ins, i.e. between J12 and J13 and between J3 and J3a, flows have shown an increase on 2003, however this increase is smaller than the one observed at the one year after stage in 2005 indicating that there has been a reduction in flows since 2005; and
- Flows on the M42, A38, A5, M54 and A50 are all lower in March 2009 than they were before the M6 Toll opened. However, for the majority of locations monitored, the reduction in flows compared to 2003, is much smaller than was observed at the One year after stage. This indicates that, after an initial reduction, traffic has been increasing on the strategic routes in the vicinity of the M6 Toll, and Table 3.7 shows that this has generally been happening since 2007.

Table 3.8 – Average 2-way Friday flows on M6 and other strategic routes 2003 – 2009

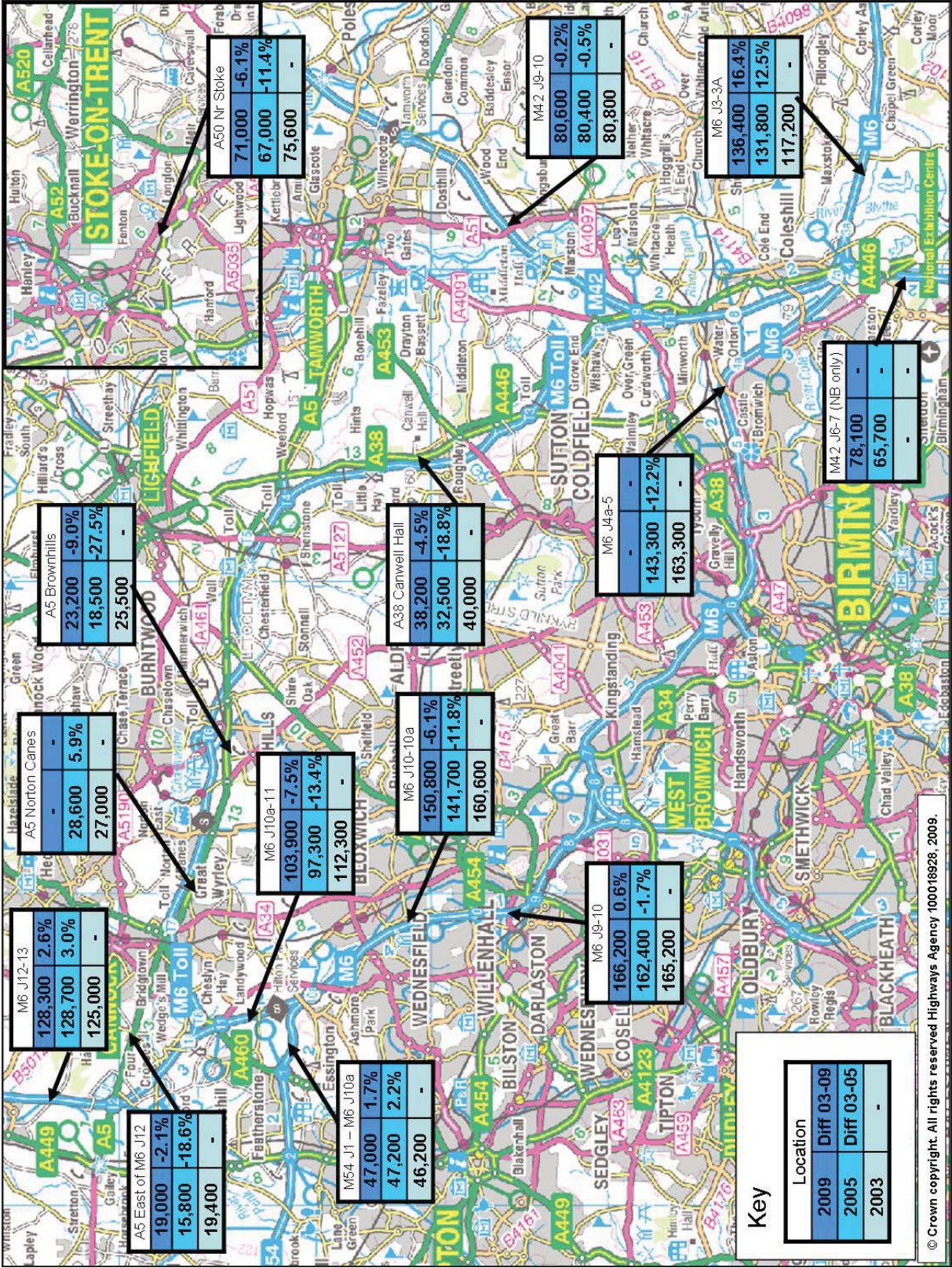
Section	Mar '03	Mar '05	OYA Diff.	OYA % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA Diff.	FYA <sup>1</sup> % Diff.
M6										
J3 – J3A	117,200	131,800	14,600	12.5%	131,600	139,600	132,400	136,400	19,200	16.4%
J4A – J5	163,300	143,300	-20,000	-12.2%	149,500	146,500	153,400	-	-	-
J9 – J10	165,200	162,400	-2,800	-1.7%	158,100	154,100	159,700	166,200	1,000	0.6%
J10 – J10A	160,600	141,700	-18,900	-11.8%	140,200	133,200	143,500	150,800	-9,800	-6.1%
J10A – J11	112,300	97,300	-15,000	-13.4%	95,700	91,200	99,000	103,900	-8,400	-7.5%
J12 – J13	125,000	128,700	3,700	3.0%	125,300	-	124,400	128,300	3,300	2.6%
Other Routes										
M42 J6 – J7 N/B only	-	65,700	-	-	73,200	77,700	74,700	78,100	-	-
M42 J9 – J10	80,800	80,400	-400	-0.5%	80,800	82,500	82,500	80,600	-200	-0.2%
A38 (A5 – A453) Canwell Hall	40,000	32,500	-7,500	-18.8%	32,400	35,300	38,000	38,200	-1,800	-4.5%
A5 (A452 – A461) Brownhills	25,500	18,500	-7,000	-27.5%	20,700	22,500	-	23,200	-2,300	-9.0%
A5 (A34 – A452) Norton Canes	27,000	28,600	1,600	5.9%	27,700	30,200	-	-	-	-
A5 East of M6 J12, West of Cannock	19,400	15,800	-3,600	-18.6%	17,000	18,400	18,600	19,000	-400	-2.1%
M54 J1 – M6 J10a	46,200	47,200	1,000	2.2%	45,800	43,500	44,800	47,000	800	1.7%
A50 East of A520 nr Stoke on Trent	75,600	67,000	-8,600	-11.4%	65,300	70,400	69,800	71,000	-4,600	-6.1%

<sup>1</sup> OYA (One Year After) difference between March 2003 and March 2005, <sup>2</sup> FYA (Five Years After) difference between March 2003 and March 2009

<sup>3</sup> 2003 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.



Figure 3.8 – Change in Friday flows on the M6 and other Strategic Routes





### ***Fridays***

- On Fridays, trends have been similar to Mondays to Thursdays on the M6, with the exception of J9 – J10 which is the busiest of the sections, where flows are now roughly the same as they were in March 2003, and only marginally higher than in 2005. This section had shown the least change in percentage terms at the One year after stage;
- As with Mondays to Thursdays, on Fridays, these sections have also observed a steady increase since 2007. The increase since 2007 is also more significant on Fridays than on Mondays to Thursdays. For example, on M6 J10 – J10a flows, having taken account of background changes in traffic, this section has witnessed a real increase from 133,200 in March 2007 to 150,800 in March 2009;
- On the M6 north and south of the M6 Toll Friday flows have remained broadly similar to those witnessed at the One year after stage, that is approximately 13% higher between J3 – J3a and 3% higher between J12 and J13, compared to 2003 flows before the M6 Toll opened;
- On other strategic routes in the corridor, including the A38, A5, and A50, Friday flows in March 2009 have been lower than they were in March 2003, however flows are now much closer to those witnessed before the M6 Toll opened, and in most cases have shown a steady increase since 2006; and
- On the M42 J9 – J10, flows are only marginally lower than observed before the M6 Toll opened, and have shown a very marginal year-on-year reduction since 2007.

Table 3.9 – Average 2-way Saturday flows on M6 and other strategic routes 2003 – 2009

Section	Mar '03	Mar '05	OYA Diff.	OYA % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA Diff.	FYA <sup>1</sup> % Diff.
M6										
J3 – J3A	79,700	86,100	6,400	8.0%	84,600	95,500	87,000	92,200	12,500	15.7%
J4A – J5	111,300	98,600	-12,700	-11.4%	105,300	105,500	111,400	-	-	-
J9 – J10	133,400	115,200	-18,200	-13.6%	121,100	126,200	122,700	128,300	-5,100	-3.8%
J10 – J10A	-	100,800	-	-	103,700	106,100	112,100	114,800	-	-
J10A – J11	85,200	75,000	-10,200	-12.0%	72,900	75,100	79,400	80,700	-4,500	-5.3%
J12 – J13	84,400	90,800	6,400	7.6%	80,900	-	89,500	86,300	1,900	2.3%
Other Routes										
M42 J6 – J7 N/B only	-	46,600	-	-	49,000	51,200	50,800	51,200	-	-
M42 J9 – J10	52,600	53,000	400	0.8%	53,300	54,900	54,300	53,100	500	1.0%
A38 (A5 – A453) Canwell Hall	25,300	22,500	-2,800	-11.1%	22,200	23,200	23,500	23,200	-2,100	-8.3%
A5 (A452 – A461) Brownhills	16,900	15,600	-1,300	-7.7%	13,700	15,100	-	16,300	-600	-3.6%
A5 (A34 – A452) Norton Canes	21,100	22,300	1,200	5.7%	20,400	22,900	-	-	-	-
A5 East of M6 J12, West of Cannock	15,000	12,500	-2,500	-16.7%	12,600	12,700	13,300	13,900	-1,100	-7.3%
M54 J1 – M6 J10a	34,000	32,700	-1,300	-3.8%	32,600	32,300	32,400	33,800	-200	-0.6%
A50 East of A520 nr Stoke on Trent	54,400	52,200	-2,200	-4.0%	49,500	53,900	54,800	54,100	-300	-0.6%

<sup>1</sup> OYA (One Year After) difference between March 2003 and March 2005, <sup>2</sup> FYA (Five Years After) difference between March 2003 and March 2009

<sup>3</sup> 2003 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.



Figure 3.9 – Change in Saturday flows on the M6 and other Strategic routes

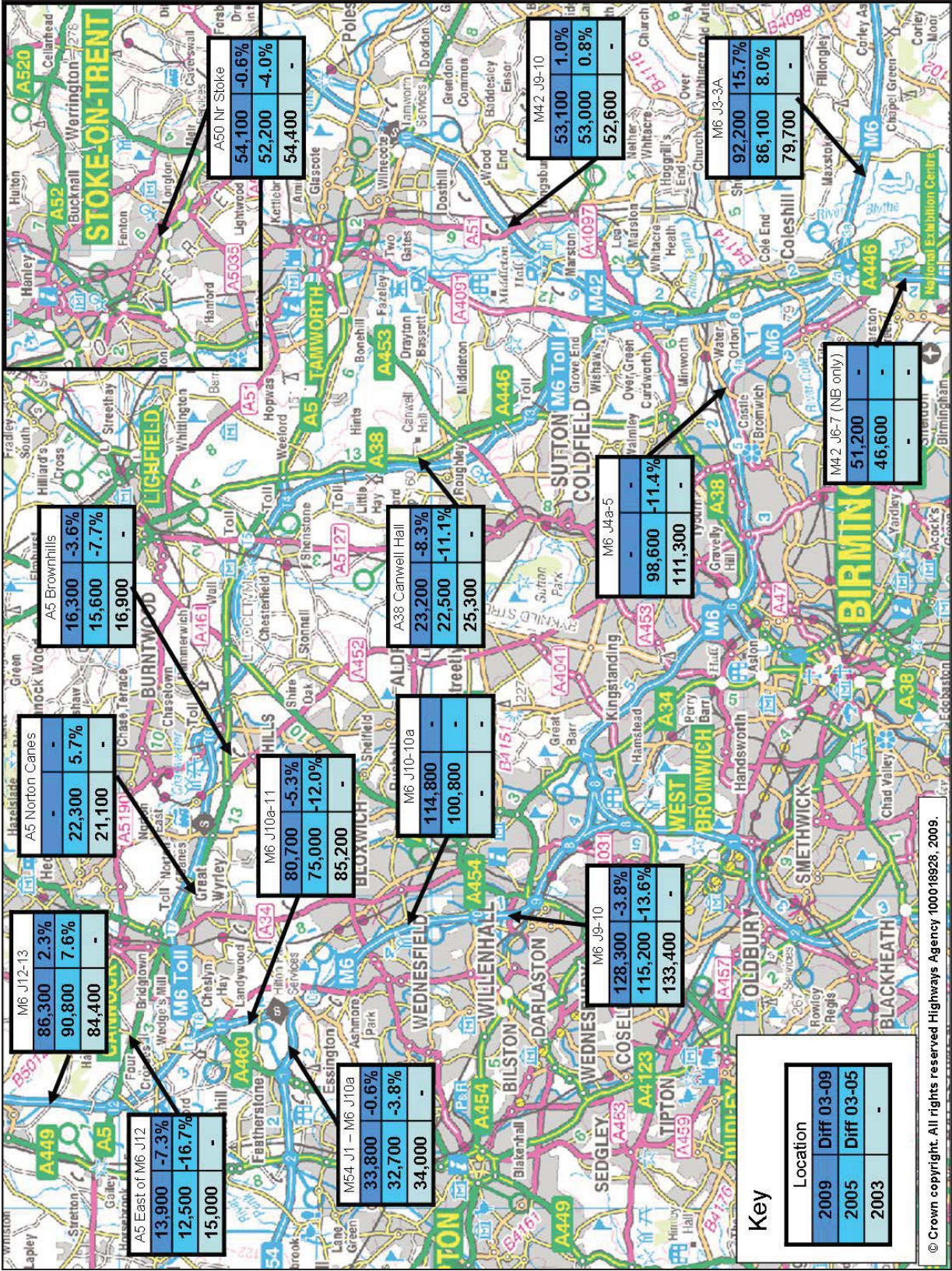




Table 3.10 – Average 2-way Sunday flows on M6 and other strategic routes 2003 – 2009

Section	Mar '03	Mar '05	OYA Diff.	OYA % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA Diff.	FYA <sup>1</sup> % Diff.
M6										
J3 – J3A	80,500	87,400	6,900	8.6%	92,900	93,600	82,600	91,900	11,400	14.2%
J4A – J5	111,800	97,500	-14,300	-12.8%	105,600	99,700	104,700	-	-	-
J9 – J10	139,200	124,600	-14,600	-10.5%	127,700	120,400	122,500	133,200	-6,000	-4.3%
J10 – J10A	-	109,700	-	-	113,000	105,700	114,500	123,700	-	-
J10A – J11	96,800	77,100	-19,700	-20.4%	78,900	74,000	80,800	88,000	-8,800	-9.1%
J12 – J13	92,300	99,300	7,000	7.6%	91,700	-	94,800	99,000	6,700	7.3%
Other Routes										
M42 J6 – J7 N/B only	-	50,700	-	-	52,600	51,800	50,700	52,400	-	-
M42 J9 – J10	55,400	54,200	-1,200	-2.2%	57,600	53,600	51,300	51,800	-3,600	-6.5%
A38 (A5 – A453) Canwell Hall	23,700	20,200	-3,500	-14.8%	22,500	20,800	20,800	20,600	-3,100	-13.1%
A5 (A452 – A461) Brownhills	15,500	11,400	-4,100	-26.5%	13,900	12,800	-	14,000	-1,500	-9.7%
A5 (A34 – A452) Norton Canes	19,400	18,600	-800	-4.1%	16,400	18,600	-	-	-	-
A5 East of M6 J12, West of Cannock	14,000	12,000	-2,000	-14.3%	12,400	12,100	12,300	13,100	-900	-6.4%
M54 J1 – M6 J10a	35,100	34,300	-800	-2.3%	35,300	32,200	33,100	35,700	600	1.7%
A50 East of A520 nr Stoke on Trent	48,200	45,300	-2,900	-6.0%	46,600	45,300	46,000	46,100	-2,100	-4.4%

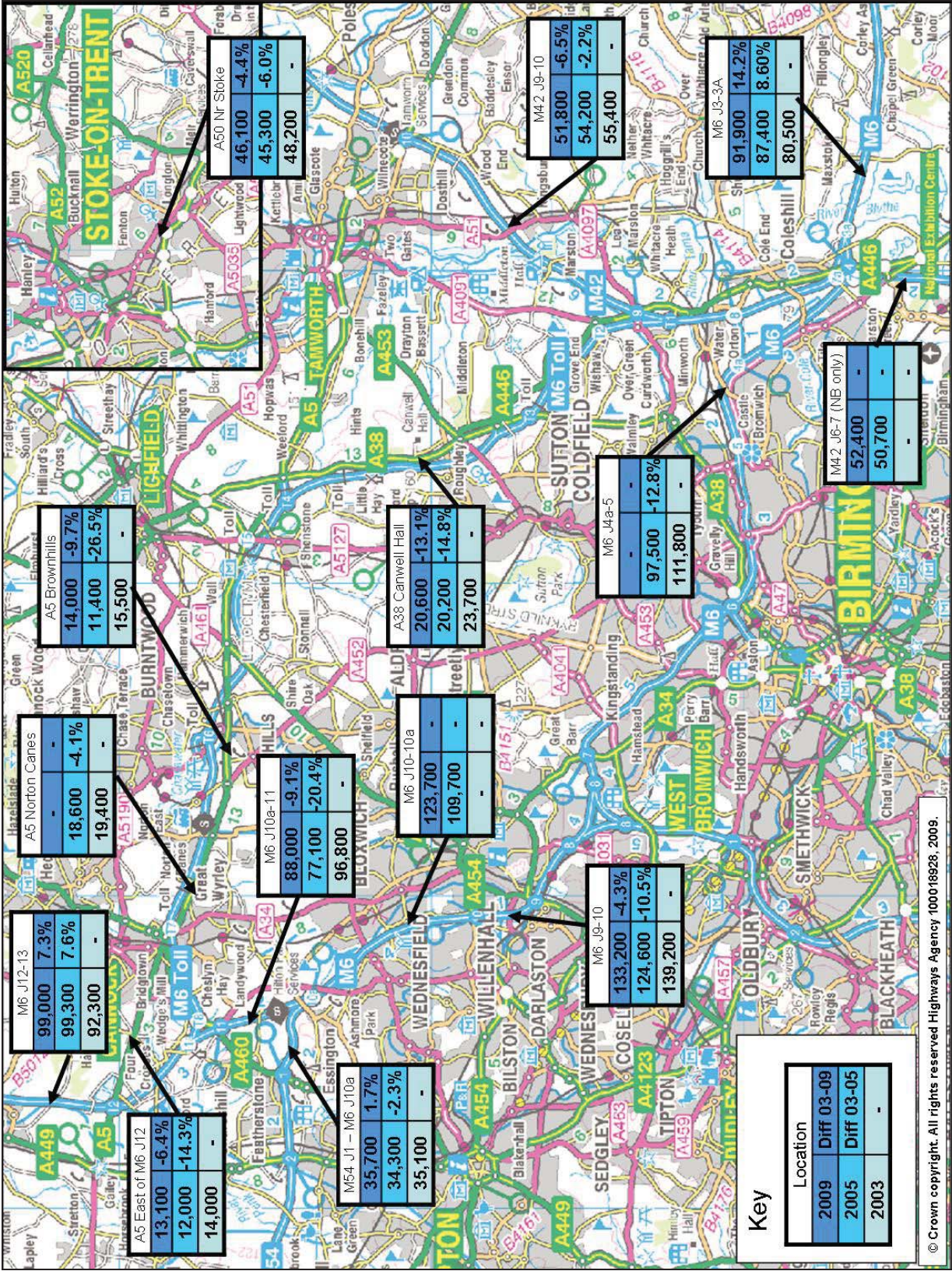
<sup>1</sup> OYA (One Year After) difference between March 2003 and March 2005

<sup>2</sup> FYA (Five Years After) difference between March 2003 and March 2009

<sup>3</sup> 2003 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.



Figure 3.10 – Change in Sunday flows on the M6 and other Strategic routes





### ***Saturdays and Sundays***

- On Saturdays and Sundays, traffic flows on parallel sections of the M6 have shown a similar trend to that observed on average Mondays to Thursdays and average Fridays. This indicates that on the M6, trends in weekday business and commuter traffic and weekend recreational traffic have been similar, whereas on the M6 Toll (Tables 3.5 and 3.6), reductions in the number of weekend users since 2005 have been greater than they have on Mondays to Thursdays, and Fridays;
- On Saturdays and Sundays (and also Fridays), on the M6 north and south of the M6 Toll tie-ins, reductions have been greater than they have been on Mondays to Thursdays, comparing March 2009 flows with March 2003 flows;
- On the A38, A5 and A50, at the One year after stage, flows were lower than before the M6 Toll opened, with the exception of the A5 at Norton Canes where flows were higher on Saturdays; and
- Five years after the opening of the M6 Toll, of the strategic routes monitored in this study, the A38 at Canwell Hall exhibits the biggest reduction on pre M6 Toll flows, with 13% (3,100) fewer vehicles on an average Sunday.

### **Key Findings: Daily Traffic Volumes**

#### **Changes to flows on M6 Toll Five Years After opening**

- Taking changes in background traffic into account, five years after opening, average Monday – Thursday traffic on most sections of the M6 Toll has reduced by 3–5% compared to 2004 (first year);
- Average Friday flows on most sections have reduced by 14-15%, and Saturday and Sunday flows have reduced by around 30% compared to 2004;
- The section of the M6 Toll between M6 J3a and the M42 merge however, has seen an increase of 9% (23,900 – 26,100) on Mondays – Thursdays, with Friday volumes remaining broadly the same (28,000), and Saturdays and Sundays reducing by 18%, and 22%, respectively;
- Recreational and longer-distance traffic associated with weekend travel appear to be using the M6 Toll less, which could be associated with the economic climate;
- However, analysis shows that the biggest reduction in M6 Toll traffic appears to have been between March 2007 and March 2008 which, according to official statistics was before the UK was considered to be in recession, therefore indicating that other factors may be involved, such as rising toll prices on the M6 Toll, and more generally rising fuel prices. Recreational trips are particularly sensitive to this; and
- There is a national trend of people driving fewer motorway miles due to the current economic climate (as shown in Table 3.1). The reduction in traffic on the M6 Toll is partly for this reason, and partly due to rerouting to the M6.



#### **Changes to flows on the parallel M6 Five Years After M6 Toll opening**

- If background traffic growth from nationally observed statistics is applied to March 2003 flows, then parallel sections of the M6 in March 2009 are showing 8-9% less than expected on Mondays to Thursdays;
- Analysis shows however that flows on these sections have increased considerably since 2007, which is not consistent with the reductions witnessed on the M6 Toll, suggesting that some traffic is rerouting back to the M6;
- On Fridays, similar results have been found, however the busiest section of the M6 between J9 – J10 in March 2009 had flows equal to those in March 2003. This is with nationally observed growth factors applied to 2003 figures. However, if these are not applied, then this section of the M6 actually now carries more traffic than in March 2003; and
- Weekend traffic on the parallel M6 appears to have reduced proportionately by the same amount as on Mondays – Thursdays. This differs to findings on the M6 Toll, where reductions have been much greater on weekends. This indicates that the effects of the recent economic downturn are affecting recreational and longer-distance traffic on the M6 Toll to a much greater degree than the M6.

#### **Changes to flows on M6 north and south of M6 Toll, and other strategic routes**

- North and south of the M6 Toll, on Mondays – Thursdays, the M6 has witnessed increases in traffic compared to 2003, however flows have reduced since 2005, particularly at J12 – J13, and to a lesser extent between J3 – J3a;
- Also on Mondays – Thursdays, on the other strategic routes, namely the M42, A38, A5, M54 and A50, March 2009 flows are lower than March 2003, when taking account of background traffic changes; and
- However, the majority of locations analysed show a smaller reduction than in 2005, indicating that some traffic is returning to the strategic routes in the vicinity of the M6 Toll, and as observed with the M6, this has generally been happening since 2007.

## 4. Peak Period Flows

### Introduction

- 4.1 Previous sections of this report have looked at daily flows. This section looks at flows in the AM peak period (07:00-09:00) and during the PM peak period (16:00-18:00) on the M6 Toll, M6 and other key strategic routes, to see if there have been any changes since the opening of the M6 Toll.

### Peak Period Flows on the M6 Toll

- 4.2 In order to assess if there has been any change in flows during the peak periods on the M6 Toll, an average hourly flow for the AM and PM peak periods has been calculated for various sections by direction. These are shown in Tables 4.1 to 4.4 below for Mondays – Thursdays, and Fridays. The figures in the tables have taken account of background traffic changes as detailed earlier in Section 3 (Table 3.1).

### Changes to Peak flows on Mondays to Thursdays

Table 4.1 – Average Hourly Peak Period Flows: Mondays to Thursdays (Northbound)

	AM Peak	2004 through to 2008 flows factored to 2009 <sup>3</sup>									
	M6 Toll Section	Mar '04	Mar '05	OYA <sup>1</sup> Diff.	OYA % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA <sup>2</sup> Diff.	FYA % Diff.
1	M6 J3a – M42 Merge	850	950	100	11.8%	950	950	950	950	100	11.8%
2	T2 – T3	1,100	1,400	300	27.3%	-	1,200	1,100	1,100	0	0.0%
3	T3 – T4	1,050	1,250	200	19.0%	1,150	1,150	1,050	1,100	50	4.8%
4	T5 – T6	1,200	1,450	250	20.8%	1,350	1,400	1,250	1,300	100	8.3%
5	T6 – T7	1,150	1,350	200	17.4%	1,300	1,300	1,200	1,250	100	8.7%
6	T8 – M6 North	-	1,100	-	-	1,000	1,050	950	1,000	-	-
	PM Peak	2004 through to 2008 flows factored to 2009									
	M6 Toll Section	Mar '04	Mar '05	OYA Diff.	OYA % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA Diff.	FYA % Diff.
1	M6 J3a – M42 Merge	1,350	1,400	50	3.7%	1,400	1,350	1,350	1,400	50	3.7%
2	T2 – T3	2,000	2,150	150	7.5%	-	2,050	1,900	1,900	-100	-5.0%
3	T3 – T4	2,050	2,100	50	2.4%	2,050	2,050	1,900	1,900	-150	-7.3%
4	T5 – T6	2,100	2,150	50	2.4%	2,150	2,150	2,050	2,000	-100	-4.8%
5	T6 – T7	2,000	2,000	0	0.0%	2,000	2,000	1,850	1,850	-150	-7.5%
6	T8 – M6 North	-	1,550	-	-	1,550	1,550	1,450	1,450	-	-

<sup>1</sup> One Year After difference between March '04 and March '05, <sup>2</sup> Five Years After difference between March '04 and March '09

<sup>3</sup> 2004 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.



**Table 4.2 – Average Hourly Peak Period Flows: Mondays to Thursdays (Southbound)**

<b>AM Peak</b>	<b>2004 through to 2008 flows factored to 2009<sup>3</sup></b>									
<b>M6 Toll Section</b>	<b>Mar '04</b>	<b>Mar '05</b>	<b>OYA<sup>1</sup> Diff.</b>	<b>OYA % Diff.</b>	<b>Mar '06</b>	<b>Mar '07</b>	<b>Mar '08</b>	<b>Mar '09</b>	<b>FYA<sup>2</sup> Diff.</b>	<b>FYA % Diff.</b>
M6 J3a – M42 Merge	1,150	-	-	-	1,350	1,300	1,250	1,400	250	21.7%
T2 – T3	2,000	2,350	350	17.5%	2,300	2,350	2,250	2,250	250	12.5%
T3 – T4	2,050	2,400	350	17.1%	2,250	2,400	2,300	2,300	250	12.2%
T5 – T6	2,050	1,950	-100	-4.9%	1,950	-	1,900	1,950	-100	-4.9%
T6 – T7	2,000	2,400	400	20.0%	2,350	2,400	2,300	2,350	350	17.5%
T8 – M6 North	-	1,850	-	-	1,800	1,850	1,800	1,800	-	-
<b>PM Peak</b>	<b>2004 through to 2008 flows factored to 2009</b>									
<b>M6 Toll Section</b>	<b>Mar '04</b>	<b>Mar '05</b>	<b>OYA Diff.</b>	<b>OYA % Diff.</b>	<b>Mar '06</b>	<b>Mar '07</b>	<b>Mar '08</b>	<b>Mar '09</b>	<b>FYA Diff.</b>	<b>FYA % Diff.</b>
M6 J3a – M42 Merge	800	-	-	-	1,000	950	900	950	150	18.8%
T2 – T3	1,350	1,500	150	11.1%	1,450	1,500	1,300	1,300	-50	-3.7%
T3 – T4	1,400	1,500	100	7.1%	1,500	1,500	1,300	1,300	-100	-7.1%
T5 – T6	1,550	1,450	-100	-6.5%	1,450	-	1,300	1,350	-200	-12.9%
T6 – T7	1,550	1,700	150	9.7%	1,650	1,750	1,500	1,550	0	0.0%
T8 – M6 North	-	1,400	-	-	1,350	1,400	1,200	1,250	-	-

<sup>1</sup> One Year After difference between March '04 and March '05, <sup>2</sup> Five Years After difference between March '04 and March '09

<sup>3</sup> 2004 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.

4.3 The following observations can be made from Tables 4.1 and 4.2 regarding changes to peak period flows on the M6 Toll on Mondays to Thursdays:

- Despite overall reductions in 24hr flows on the M6 Toll, it appears peak traffic in the mornings has increased on most sections five years after opening. This is the case in both directions for almost all sections monitored;
- However, in the PM peaks flows on the M6 Toll appear to have reduced, with the exception of the section between the M6 J3A and M42 merge in the northbound direction; and
- This indicates that less traffic is now using the M6 Toll in the afternoons during the week.

## Changes to Peak flows on Fridays

Table 4.3 – Average Hourly Peak Period Flows: Fridays (Northbound)

AM Peak	2004 through to 2008 flows factored to 2009 <sup>3</sup>									
M6 Toll Section	Mar '04	Mar '05	OYA <sup>1</sup> Diff.	OYA % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA <sup>2</sup> Diff.	FYA % Diff.
M6 J3a – M42 Merge	650	800	150	23.1%	800	800	800	750	100	15.4%
T2 – T3	800	1,100	300	37.5%	-	900	800	750	-50	-6.3%
T3 – T4	750	950	200	26.7%	900	900	800	750	0	0.0%
T5 – T6	900	1,100	200	22.2%	1,100	1,050	950	950	50	5.6%
T6 – T7	900	1,050	150	16.7%	1,000	1,000	850	900	0	0.0%
T8 – M6 North	-	850	850	-	800	800	700	650	650	-
PM Peak	2004 through to 2008 flows factored to 2009									
M6 Toll Section	Mar '04	Mar '05	OYA Diff.	OYA % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA Diff.	FYA % Diff.
M6 J3a – M42 Merge	1,600	1,500	-100	-6.3%	1,550	1,600	1,550	1,550	-50	-3.1%
T2 – T3	2,650	2,550	-100	-3.8%	-	2,650	2,350	2,300	-350	-13.2%
T3 – T4	2,700	2,550	-150	-5.6%	2,500	2,650	2,400	2,350	-350	-13.0%
T5 – T6	2,800	2,650	-150	-5.4%	2,600	2,750	2,500	2,450	-350	-12.5%
T6 – T7	2,750	2,450	-300	-10.9%	2,450	2,600	2,250	2,300	-450	-16.4%
T8 – M6 North	-	1,950	-	-	1,900	2,000	1,800	1,850	-	-

<sup>1</sup> One Year After difference between March '04 and March '05, <sup>2</sup> Five Years After difference between March '04 and March '09

<sup>3</sup> 2004 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.



**Table 4.4 – Average Hourly Peak Period Flows: Fridays (Southbound)**

<b>AM Peak</b>	<b>2004 through to 2008 flows factored to 2009<sup>3</sup></b>									
<b>M6 Toll Section</b>	<b>Mar '04</b>	<b>Mar '05</b>	<b>OYA<sup>1</sup> Diff.</b>	<b>OYA % Diff.</b>	<b>Mar '06</b>	<b>Mar '07</b>	<b>Mar '08</b>	<b>Mar '09</b>	<b>FYA<sup>2</sup> Diff.</b>	<b>FYA % Diff.</b>
M6 J3a – M42 Merge	750	-	-	-	1,000	1,000	900	1,000	250	33.3%
T2 – T3	1,350	1,600	250	18.5%	1,500	1,600	1,500	1,400	50	3.7%
T3 – T4	1,400	1,600	200	14.3%	1,600	1,600	1,500	1,400	0	0.0%
T5 – T6	1,400	1,500	100	7.1%	1,500	-	1,450	1,400	0	0.0%
T6 – T7	1,350	1,650	300	22.2%	1,550	1,600	1,500	1,450	100	7.4%
T8 – M6 North	-	1,200	-	-	1,150	1,150	1,100	1,050	-	-
<b>PM Peak</b>	<b>2004 through to 2008 flows factored to 2009</b>									
<b>M6 Toll Section</b>	<b>Mar '04</b>	<b>Mar '05</b>	<b>OYA Diff.</b>	<b>OYA % Diff.</b>	<b>Mar '06</b>	<b>Mar '07</b>	<b>Mar '08</b>	<b>Mar '09</b>	<b>FYA Diff.</b>	<b>FYA % Diff.</b>
M6 J3a – M42 Merge	1,100	-	-	-	1,150	1,200	1,050	1,050	-50	-4.5%
T2 – T3	1,900	1,950	50	2.6%	1,750	2,050	1,500	1,550	-350	-18.4%
T3 – T4	1,900	1,950	50	2.6%	1,750	2,100	1,500	1,600	-300	-15.8%
T5 – T6	2,100	1,700	-400	-19.0%	1,650	-	1,450	1,500	-600	-28.6%
T6 – T7	2,100	2,200	100	4.8%	2,000	2,300	1,700	1,800	-300	-14.3%
T8 – M6 North	-	1,800	-	-	1,650	1,900	1,400	1,450	-	-

<sup>1</sup> One Year After difference between March '04 and March '05, <sup>2</sup> Five Years After difference between March '04 and March '09

<sup>3</sup> 2004 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.

- Fridays illustrate a slightly different trend, shown in Tables 4.3 and 4.4. Flows have remained the same or slightly reduced in the northbound AM peak period, and have most noticeably reduced by up to 28% (T5 – T6) in the southbound PM peak;
- Conversely, southbound flows in the AM period have slightly increased, and northbound flows in the PM have also increased five years after opening by up to 18%. M6 J3a to M42 merge has shown a large increase of 33% in the southbound morning peaks;
- PM peak period flows on Fridays are higher in both directions than on Mondays to Thursdays, this is consistent with findings at the OYA stage; and
- In the AM peak, flows are lower in both directions compared to Mondays to Thursdays, and this is also consistent with OYA findings.

### Peak Period flows on the M6 and other Strategic Routes (Monday – Thursdays)

4.4 Average hourly flows in the peak periods (07:00-09:00 and 16:00–18:00) have also been calculated and are provided in Tables 4.5 to 4.8.

**Table 4.5 – Average Hourly Peak Period 2-way flows on M6 and other strategic routes (Mondays to Thursdays - AM)**

Section	Mar '03	Mar '05	OYA <sup>1</sup> Diff.	OYA % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA Diff.	FYA <sup>2</sup> % Diff.
M6										
J3 – J3A	8,200	9,700	1,500	18.3%	9,600	9,700	9,300	9,850	1,650	20.1%
J4A – J5	11,750	10,300	-1,450	-12.3%	10,550	10,300	10,300	-	-	-
J9 – J10	10,600	9,950	-650	-6.1%	9,050	9,450	9,300	10,000	-600	-5.7%
J10 – J10A	8,300	7,950	-350	-4.2%	7,600	7,450	7,600	8,350	50	0.6%
J10A – J11	5,800	5,150	-650	-11.2%	4,750	4,700	4,700	5,150	-650	-11.2%
J12 – J13	6,850	8,450	1,600	23.4%	7,800	-	7,950	8,350	1,500	21.9%
Other Routes										
M42 J6 – J7 N/B only	-	4,850	-	-	4,400	4,750	4,500	4,950	-	-
M42 J9 – J10	5,950	5,550	-400	-6.7%	5,650	5,650	5,500	6,050	100	1.7%
A38 (A5 – A453) Canwell Hall	3,300	2,750	-550	-16.7%	2,850	3,050	-	-	-	-
A5 (A452 – A461) Brownhills	1,950	1,500	-450	-23.1%	1,700	1,700	-	1,800	-150	-7.7%
A5 (A34 – A452) Norton Canes	1,850	2,300	450	24.3%	2,200	2,350	-	-	-	-
A5 East of M6 J12, West of Cannock	1,500	1,300	-200	-13.3%	1,500	1,550	1,650	1,700	200	13.3%
M54 J1 – M6 J10a	2,950	2,900	-50	-1.7%	2,800	2,800	2,750	3,050	100	3.4%
A50 East of A520 nr Stoke on Trent	5,500	4,850	-650	-11.8%	4,700	5,000	4,750	5,250	-250	-4.5%

<sup>1</sup> One Year After difference between March '03 and March '05, <sup>2</sup> Five Years After difference between March '03 and March '09

<sup>3</sup> 2003 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.



**Table 4.6 – Average Hourly Peak Period 2-way flows on M6 and other strategic routes (Mondays to Thursdays - PM)**

Section	Mar '03	Mar '05	OYA Diff.	OYA <sup>1</sup> % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA Diff.	FYA <sup>2</sup> % Diff.
M6										
J3 – J3A	7,850	9,350	1,500	19.2%	9,350	9,350	8,950	9,200	1,350	17.2%
J4A – J5	11,100	10,450	-700	-6.3%	10,600	10,350	10,250	-	-	-
J9 – J10	10,750	10,800	50	0.5%	9,950	9,650	10,450	10,750	0	0.0%
J10 – J10A	10,200	9,900	-350	-3.4%	9,550	8,700	9,800	10,150	-100	-1.0%
J10A – J11	7,150	6,350	-800	-11.3%	6,150	5,600	6,350	6,600	-550	-7.7%
J12 – J13	7,400	8,650	1,250	17.4%	8,100	-	8,550	8,550	1,150	15.5%
Other Routes										
M42 J6 – J7 N/B only	-	5,200	-	-	5,450	6,000	5,750	6,200	-	-
M42 J9 – J10	6,000	6,050	50	0.8%	5,850	6,000	6,000	6,000	0	0.0%
A38 (A5 – A453) Canwell Hall	2,950	2,600	-350	-11.9%	2,650	2,900	-	-	-	-
A5 (A452 – A461) Brownhills	1,950	1,500	-450	-23.1%	1,700	1,800	-	1,850	-100	-5.1%
A5 (A34 – A452) Norton Canes	1,950	2,400	450	23.1%	2,250	2,400	-	-	-	-
A5 East of M6 J12, West of Cannock	1,450	1,300	-150	-10.3%	1,350	1,500	1,500	1,550	100	6.9%
M54 J1 – M6 J10a	3,400	3,650	250	7.4%	3,500	3,250	3,400	3,600	200	5.9%
A50 East of A520 nr Stoke on Trent	5,700	5,100	-600	-10.5%	5,000	5,250	5,500	5,550	-150	-2.6%

<sup>1</sup> One Year After difference between March '03 and March '05, <sup>2</sup> Five Years After difference between March '03 and March '09

<sup>3</sup> 2003 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.

#### 4.5 Analysis of the peak period data on Mondays to Thursdays on the M6 has shown the following:

- On parallel sections of the M6, on Mondays to Thursdays in the AM peaks, flows observed in March 2009 are lower than March 2003 and very similar to the March 2005 flows, showing stabilisation after an initial reduction. The exception is J10 – J10a where there has been a slight increase since 2005, however flows on this link in the AM peak are still broadly in line with flows before the M6 Toll opened; and
- AM peak hour flows on Mondays to Thursdays on the M6 north and south of the M6 Toll tie-ins have increased by at least 20% (excluding general background traffic growth) since March 2003. This is an increase of around 1,650 vehicles per hour between J3 – J3a and 1,500 vehicles per hour between J12 – J13. In the PM peaks the increase on these two links has been 15 – 16%, broadly the same as the observed change at the OYA stage in 2005.

4.6 Analysis of the Monday – Thursday peak period data on the other strategic routes listed in Tables 4.5 and 4.6 has shown that:

- On the A50 (east of the A520 near Stoke on Trent) in the PM peaks flows are approximately the same as they were before the M6 Toll opened. In the AM peaks, they are approximately 5% lower;
- On the A5 (east of the M6 J12) and on the M54, average peak hour flows are now higher than they were in March 2003; and
- The A5 at Brownhills has consistently shown lower flows than in 2003 across both AM and PM peaks on Monday to Thursdays. However, the flows have increased since 2005, and are now much closer to the flows observed prior to the opening of the M6 Toll.

#### Peak Period flows on the M6 and other Strategic Routes (Fridays)

Table 4.7 – Average Hourly Peak Period 2-way flows on M6 and other strategic routes (Fridays - AM)

Section	Mar '03	Mar '05	OYA <sup>1</sup> Diff.	OYA % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA <sup>2</sup> Diff.	FYA % Diff.
M6										
J3 – J3A	7,550	9,150	1,600	21.2%	8,800	9,100	8,600	8,650	1,100	14.6%
J4A – J5	10,850	10,250	-600	-5.5%	10,150	10,200	10,100	-	-	-
J9 – J10	9,400	9,700	300	3.2%	9,250	9,550	9,150	10,800	1,400	14.9%
J10 – J10A	8,150	8,000	-150	-1.8%	7,500	7,650	7,850	8,300	150	1.8%
J10A – J11	5,450	5,200	-250	-4.6%	4,650	4,750	4,850	5,250	-200	-3.7%
J12 – J13	6,100	7,050	950	15.6%	6,550	-	6,750	6,900	800	13.1%
Other Routes										
M42 J6 – J7 N/B only	-	4,250	-	-	4,050	4,150	4,100	4,250	-	-
M42 J9 – J10	5,550	5,300	-250	-4.5%	5,300	5,400	5,250	5,550	0	0.0%
A38 (A5 – A453) Canwell Hall	3,150	2,650	-500	-15.9%	2,700	2,900	-	-	-	-
A5 (A452 – A461) Brownhills	1,850	1,450	-400	-21.6%	1,650	1,650	-	1,700	-150	-8.1%
A5 (A34 – A452) Norton Canes	1,750	2,250	500	28.6%	2,150	2,250	-	-	-	-
A5 East of M6 J12, West of Cannock	1,400	1,200	-200	-14.3%	1,400	1,500	1,550	1,600	200	14.3%
M54 J1 – M6 J10a	3,050	3,050	0	0.0%	2,900	2,900	2,850	3,100	50	1.6%
A50 East of A520 nr Stoke on Trent	5,050	4,550	-500	-9.9%	4,400	4,700	4,650	4,750	-300	-5.9%

<sup>1</sup> One Year After difference between March '03 and March '05, <sup>2</sup> Five Years After difference between March '03 and March '09

<sup>3</sup> 2003 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.

**Table 4.8 – Average Hourly Peak Period 2-way flows on M6 and other strategic routes (Fridays - PM)**

Section	Mar '03	Mar '05	OYA Diff.	OYA <sup>1</sup> % Diff.	Mar '06	Mar '07	Mar '08	Mar '09	FYA Diff.	FYA <sup>2</sup> % Diff.
M6										
J3 – J3A	7,450	9,250	1,800	24.2%	9,300	9,800	9,250	9,600	2,150	28.9%
J4A – J5	10,100	9,350	-750	-7.4%	9,700	9,500	9,700	-	-	-
J9 – J10	9,250	10,300	1,050	11.4%	9,800	9,200	10,150	10,900	1,650	17.8%
J10 – J10A	9,850	9,600	-250	-2.5%	9,100	8,400	9,150	10,300	450	4.6%
J10A – J11	6,900	5,950	-950	-13.8%	5,850	5,450	6,250	6,700	-200	-2.9%
J12 – J13	7,300	9,400	2,100	28.8%	8,700	-	8,450	9,250	1,950	26.7%
Other Routes										
M42 J6 – J7 N/B only	-	5,100	-	-	5,250	6,200	5,750	6,500	-	-
M42 J9 – J10	5,850	5,900	50	0.9%	5,800	6,000	6,100	6,200	350	6.0%
A38 (A5 – A453) Canwell Hall	3,100	2,650	-450	-14.5%	2,650	2,950	-	-	-	-
A5 (A452 – A461) Brownhills	2,000	1,400	-600	-30.0%	1,600	1,750	-	1,800	-200	-10.0%
A5 (A34 – A452) Norton Canes	2,000	2,250	250	12.5%	2,150	2,350	-	-	-	-
A5 East of M6 J12, West of Cannock	1,450	1,250	-200	-13.8%	1,300	1,500	1,450	1,550	100	6.9%
M54 J1 – M6 J10a	3,100	3,650	550	17.7%	3,400	3,050	3,250	3,600	500	16.1%
A50 East of A520 nr Stoke on Trent	5,800	5,300	-500	-8.6%	5,100	5,500	5,550	5,750	-50	-0.9%

<sup>1</sup> One Year After difference between March '03 and March '05, <sup>2</sup> Five Years After difference between March '03 and March '09

<sup>3</sup> 2003 through to 2008 have been factored to account for background traffic growth using factors presented in Table 3.1.

#### 4.7 Analysis of the data presented in Tables 4.7 and 4.8 shows that:

- On the M6, Friday morning peak flows have increased on most sections compared to pre-opening peak flows. This is a subtle change since the one year after situation, and is apparent in the PM peak also;
- Elsewhere on Fridays, the most significant changes since 2003 have been on the A5 east of M6 J12 in the AM peak, an increase of 14%, and on the M54 in the PM peak, an increase of 16%;
- On the other strategic routes, the most noticeable changes since the OYA stage (2005) have been on the A5 east of M6 J12 and A5 Brownhills in the PM peaks, which have shown increases in flows since 2005. These locations have also seen similar changes to the AM peaks.



## Key Findings: Peak Period Flows

### Peak period flows on the M6 Toll

- On Mondays to Thursdays, despite reductions in overall 24 hr flows, average hourly peak flows in the mornings have increased since 2004 on most sections;
- With the exception of the section between M6 J3a – M42 merge, PM peak flows however have reduced, indicating that fewer vehicles are using the M6 Toll in the afternoons; and
- On Fridays, northbound traffic in the PM peak period which is traditionally associated with recreational traffic heading north for the weekend, has witnessed a notable reduction (by 13-16%), and likewise a reduction can also be seen in the southbound direction in this time period.

### Peak period flows on the M6 and other Strategic Routes

- On Mondays to Thursdays, on the parallel sections of the M6, peak flows in the AM and PM periods have reduced on pre-M6 Toll opening levels. On Fridays however, a different trend is apparent, with an increase on most sections. This does not match the trends shown on the M6 Toll, suggesting that there has been a decline in recreational traffic on the M6 Toll and an increase on the M6;
- On the M6 north and south of the M6 Toll tie-ins, peak period flows have more significantly increased (by up to 28%) in both AM and PM periods on Mondays to Thursdays and Fridays; and
- On the other strategic routes, the A50 near Stoke, and the A5 at Brownhills are still witnessing fewer vehicles in the peak periods than in 2003, however the reduction is smaller than was witnessed in 2005, indicating some traffic is returning to these strategic routes. For the other routes, slightly more traffic in the peaks is observed in 2009 than in 2003, and once again this shows an increase in flows compared to the 2005 situation.

## 5. Birmingham Box & the Midlands Area

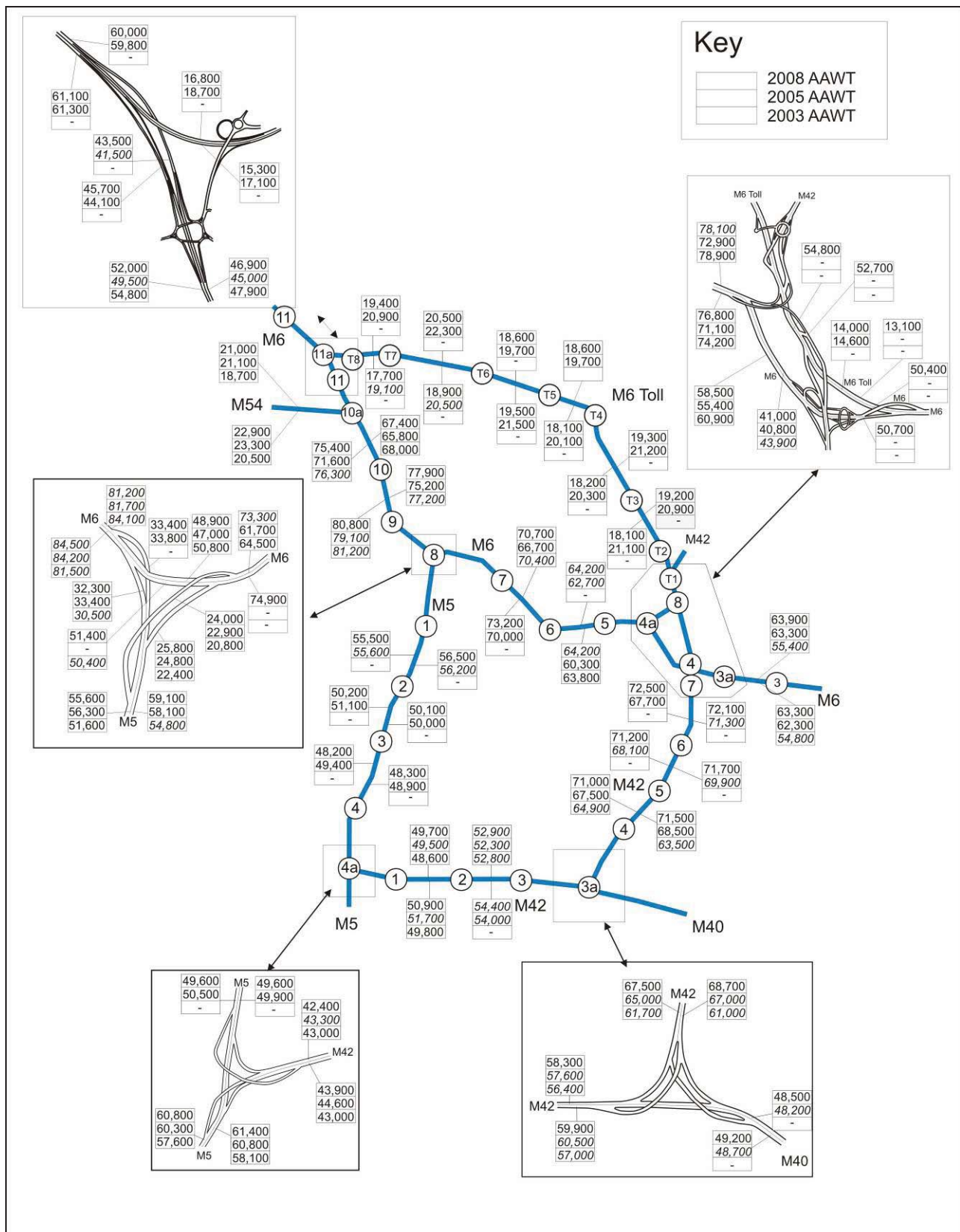
### Introduction

- 5.1 One of the aims of this report is to provide evidence of and understanding of recent changes in traffic on the 'Birmingham Box' motorways.
- 5.2 The Birmingham Box (also commonly referred to as the Midlands Motorway Box) comprises sections of the M5, M6 and M42 and provides the strategic highway link into and around the West Midlands conurbation. In addition, the 'Birmingham box' as a whole acts as an interchange between several major motorway and trunk roads linking all parts of the country.
- 5.3 The entire Birmingham Box is included in the Trans-European Road Network and much of the freight between the Celtic nations and continental Europe, as well as from the West Midlands and other English regions, passes through it. In addition, Birmingham International Airport's main access is from the Box, via Junction 6 of the M42.
- 5.4 This section of the report attempts to draw some meaningful conclusions regarding changes in the five years since the M6 Toll opened and the impact that this may have had.

### Motorway Box

- 5.5 Figure 5.1 shows the Birmingham Box with directional Annual Average Weekday Traffic (AAWTs) for the years 2003, 2005 and 2008.
- 5.6 These figures are 'as observed' data and have been taken from the Annual Traffic Reports produced by the Midlands Traffic Monitoring team on behalf of the Highways Agency.
- 5.7 These figures have not been factored to take account of background growth, and Bank Holiday and incident affected data has not been excluded.

Figure 5.1 – Flows around the Midlands Motorway Box (2003, 2005 and 2008)





### Analysis of Motorway Box flows

5.8 Whilst there are many locations where a 2003 annual average is not available, from the data that is available, the following observations can be made:

- Annual average weekday traffic on the M42 between J3a and J7 (south of the M6 Toll) has increased steadily between 2003 and 2008. This is shown by traffic at J4 – J5 increasing by 6,100 (9%) northbound, and 8,000 (13%) southbound, compared to 2003 levels. This is likely to be linked with the Active Traffic Management (ATM) scheme introduced between November 2004 and September 2006;
- Traffic on the M42 along the southern part of the motorway box, however, is now broadly at the same level as it was in 2003;
- Limited data was available for the M5 in order to make long-term comparisons, however flows in 2008 for mainline sections along the western side of the box (between the M42 and the M6 J8) indicate slightly less traffic than that observed in 2005;
- For the majority of M6 sections running parallel to the M6 Toll, 2008 flows on an annual level are at the same level or very close to those in 2003 before the opening of the M6 Toll. The re-assignment of traffic from the M6 to the M6 Toll can clearly be seen from the 2005 figures, however it would seem that traffic on these sections has increased between the years of 2005 and 2008; and
- Of those sections where data was available, M6 J8 East to J8 South and M6 J3 – J3a have shown the most significant increase between 2003 and 2008 (around 15%). These are also locations which had not shown a reduction in 2005.

### Midlands Area Context

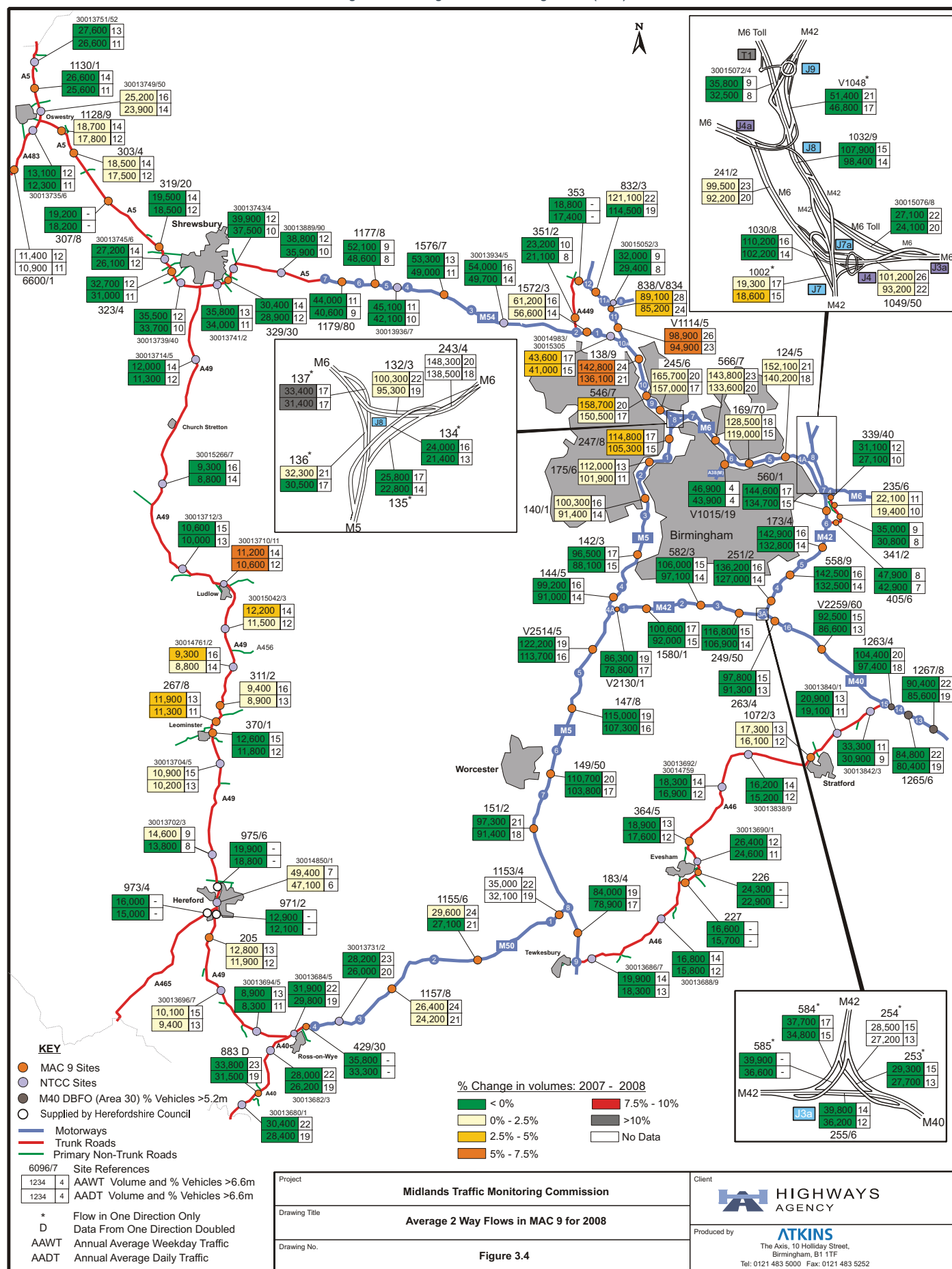
5.9 It should be noted that the observations made above are based on changes in annual average traffic, and that these statistics therefore include the latter half of 2008, which at the time was witnessing what we now recognise as the start of the current economic downturn. In order to help establish how these events have affected traffic in the Midlands in general, and perhaps provide some context to the changes that have been presented in this report, it is considered worthwhile to present Annual Average Traffic data for the wider Midlands motorway and trunk road network, showing changes between 2007 and 2008.

5.10 Figures 5.2 and 5.3 show 2-way Annual Average Weekday Totals (AAWTs) and Annual Average Daily Totals (AADTs) for 2008 for count sites in Highways Agency Areas 9 and 11, with colour coding to illustrate the percentage changes on 2007.

5.11 These figures have been taken from the 2008 Annual Traffic Report produced by the Midlands Traffic Monitoring team on behalf of the Highways Agency.

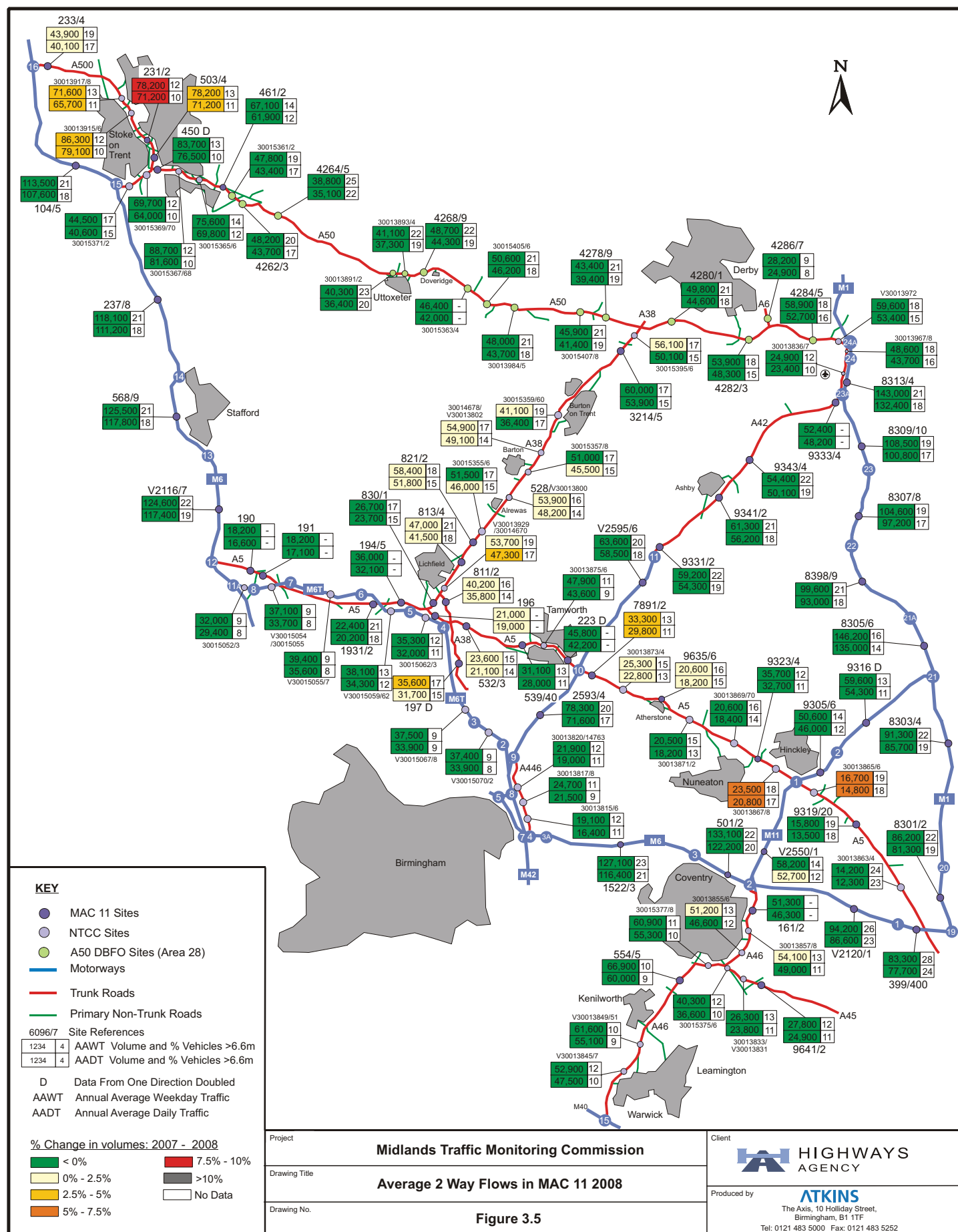
5.12 These figures have not been factored to take account of background growth, and Bank Holiday and incident affected data has not been excluded.

Figure 5.2 – Change in Annual Average Flows (2008): Area 9<sup>2</sup>



<sup>2</sup> 6.6m division represents the split between heavy and light vehicles.

Figure 5.3 – Change in Annual Average Flows (2008): Area 11





5.13 The following observations can be made from Figures 5.2 and 5.3 regarding changes between 2007 and 2008:

- The current economic climate has had a noticeable impact in terms of annual average daily traffic on the Midlands trunk road and motorway network, and this is despite statistics stating that the economic downturn did not start until the latter half of 2008;
- This is shown by the significant amount of green boxes on both Area maps, indicating annual averages in 2008 being lower than in 2007;
- Motorway traffic on the M5, M42, M54, M1, M40 and M69 has shown a consistent reduction in 2008 compared to the previous year. The M6 north and south of the M6 Toll tie-ins has also shown a similar trend;
- In comparison however, the section of the M6 parallel to the M6 Toll is one of the few areas within the Midlands, and the only significant length of motorway to have witnessed increases in annual average traffic;
- The trunk road network shows a similar pattern with a reduction in annual average traffic between 2007 and 2008 for the vast majority of locations. The exceptions to this can be seen in the Stoke-on-Trent area, small increases on the A38 and some parts of the A5 and A49; and
- Given this general decline in traffic on the Midlands motorway and trunk road network, it is therefore concluded that the increase in traffic observed on the parallel section of the M6 is primarily attributable to some proportion of long distance traffic rerouting back from the M6 Toll to the M6, and that the current economic climate is likely to be the principal factor.

#### Key Findings: Motorway Box & the Midlands Area

##### Changes in Traffic around the Motorway Box, 2003, 2005 & 2008

- The most significant fluctuation in traffic around the box appears to have been on the M6 parallel to the M6 Toll as expected due to the re-assignment of some M6 traffic after the opening of the M6 Toll, and increases in flows since 2005;
- Annual average traffic on the M42 along the southern part of the box has witnessed little change since 2003, however along the eastern part of the box, M42 traffic appears to have increased steadily, likely to be due to the ATM scheme;
- The M5 exhibited slightly less traffic in 2008 than in 2005.

##### Midlands Area Context

- The vast majority of motorway and trunk road count locations have exhibited a reduction in annual average traffic flows in 2008 compared to 2007. This includes the M6 Toll and the M6 north and south of the M6 Toll;
- It is concluded that this is a result of the current economic downturn, and matches nationally observed trends in traffic; and
- However, there has been an increase in flows between 2007 and 2008 on the sections of the M6 which are parallel to the M6 Toll, which is inconsistent with the rest of the Midlands trunk road and motorway network. This suggests that traffic is switching back from the M6 Toll to the M6. The most likely explanation for this is that it is a route choice to avoid paying the toll, and a response to the current economic climate.