

# Post Opening Project Evaluation

## M6 Toll



## Five Years After Study Summary Report

October 2009

### Document History

JOB NUMBER: 5081587/905			DOCUMENT REF: M6T_FYA_Summary_Report_Final.doc			
Revision	Purpose Description	Originated	Checked	Reviewed	Authorised	Date
1	Draft for client review	SB	PW	NM	PR	Oct '09
2	Final report	SB	PW	NM	PR	Oct '09

# Contents

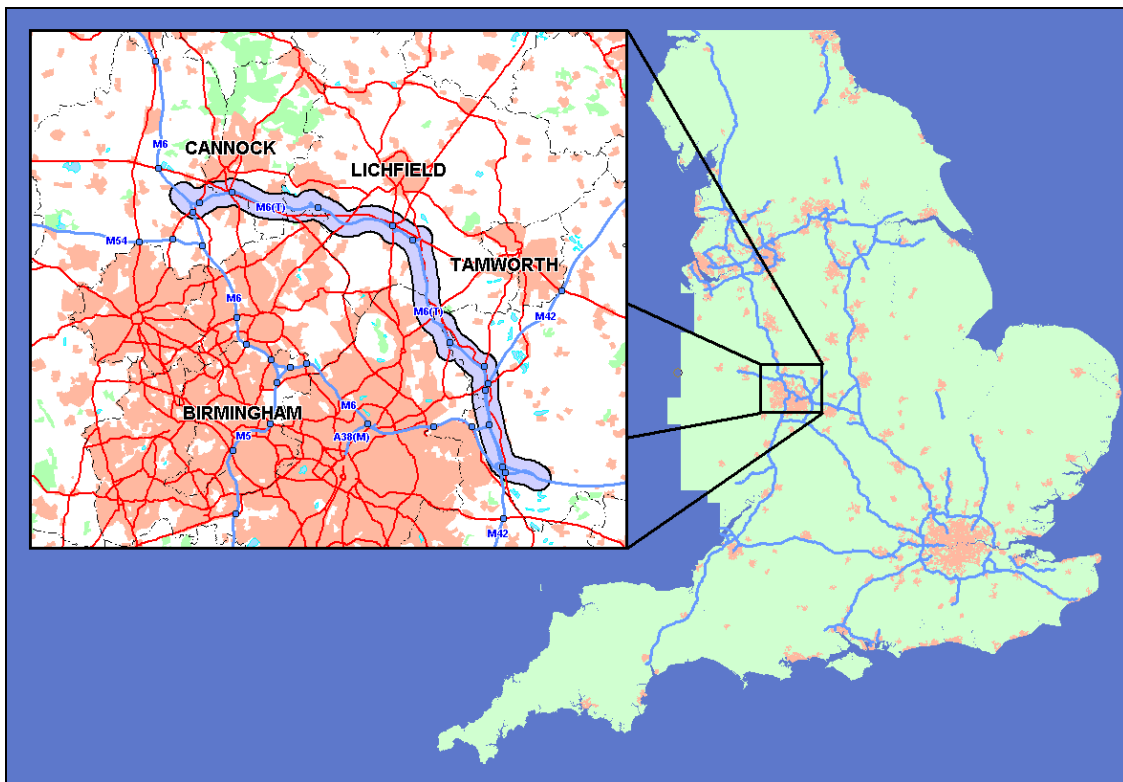
<b>Section</b>	<b>Page</b>
<b>1. Introduction</b>	<b>2</b>
Introduction	2
Key Influences within Five Years Post Opening	2
<b>2. Key Findings of Five Years After Study</b>	<b>4</b>
Traffic Impacts	4
Performance against Scheme Objectives	5
Safety Impacts	6
Environmental Impacts	7
 <b>Appendices</b>	
<b>Appendix A</b>	<b>8</b>
A.1 Birmingham Box Traffic Flows 2003, 2005 and 2008	8

# 1. Introduction

## Introduction

- 1.1 The M6 Toll motorway is the first toll motorway in the UK. The motorway is a privately-financed three lane motorway 43 kilometres (27 miles) in length and provides a new strategic route to the north east of the West Midlands conurbation.

**Figure 1.1 – Location of the M6 Toll Motorway within England**



- 1.2 The M6 Toll opened in December 2003 and this report summarises the more detailed ‘Five Years After Study’ report which evaluates the impacts of the road in the first five years.
- 1.3 The main aims of the Five Years After study are to:
- Analyse changing patterns of traffic on the M6, M6 Toll and other strategic routes in the region over the first five years compared to that before the M6 Toll was opened;
  - Analyse changes in journey times on the motorways;
  - Examine the safety impact over five years; and
  - Evaluate the environmental impacts at the five year stage compared to that forecast and that observed at the one year after stage.

## Key Influences within Five Years Post Opening

- 1.4 This study has taken into consideration a range of important events and trends which have influenced the impacts of the M6 Toll, namely:

- Major roadworks on the M6;
- Toll price increases on M6 Toll;
- Background growth in motorway and trunk road traffic on a national basis for most of the five years; and
- Economic recession from 2008 onwards.

## 2. Key Findings of Five Years After Study

### Traffic Impacts

#### Traffic Volumes

- 2.1 Figure A.1 in Appendix A shows the Birmingham Box with directional Annual Average Weekday Traffic (AAWT) for the years 2003, 2005 and 2008. These figures are 'as observed' data, and have been taken from the Annual Traffic Reports produced by the Midlands Traffic monitoring on behalf of the Highways Agency. These figures have not been factored to take account of background growth, and Bank Holiday and incident affected data has not been included.
- 2.2 Drawing upon findings presented in the main M6 Toll Five Years After Study report, the following conclusions in relation to traffic have been made:
- Five years on, the M6 Toll continues to provide an alternative route to the M6 for motorists and has improved congestion and journey times on the M6;
  - Traffic has reduced in the last two years on the M6 Toll, and data suggests that the current economic climate is likely to be an important factor. However, this is only a partial explanation for the changes, as long term trends show that traffic on the M6 Toll was starting to decline in 2007 before the economic downturn was widely acknowledged;
  - It could be argued that this reduction in M6 Toll flows in 2007 may be due to traffic returning to the M6, seeing it as a more desirable route with improved journey times after the M6 Toll opened, contributing to a kind of 'see-saw' effect between the two strategic routes;
  - Recreational traffic on the M6 Toll appears to have been affected the most, with the number of vehicles on weekends reduced by some 30% compared to 2004 levels;
  - Based on annual averages, traffic volumes on much of the parallel section of the M6 is at or near to levels experienced before the M6 Toll opened, and has shown an increase in vehicles between 2007 and 2008. This is against widespread reductions observed elsewhere across the Midlands motorway and strategic trunk road network; and
  - This suggests some long distance traffic has re-routed back onto the M6 from the M6 Toll, and the economic climate has exacerbated this trend.

#### Strategic Screenlines

- 2.3 The One Year After study identified that traffic using the M6 Toll had reassigned from the parallel section of the M6 and a range of other roads in the corridor as far north as the A50. This study has drawn the following conclusions:
- Since 2005, there has been clear reassignment of traffic from the M6 Toll back onto the M6 and other strategic routes within the West Midlands;
  - Despite the current economic climate affecting the traffic in the region as it has elsewhere nationally, it has been possible to identify the routes where the most significant reassignment appears to have taken place; these are:
    - M6 (parallel to the M6 Toll)
    - A446;
    - A38;

- A5;
- And to a lesser extent, the A460, A34, A513, A518 and A50.

### **Journey Times**

2.4 Drawing upon data derived from 2 independent sources, the following conclusions regarding journey times can be made:

- Journeys on the M6 have continued to benefit from considerable time savings of up to 80 minutes, and this is particularly the case in peak periods when previously some of the worst delays used to be experienced before the M6 Toll opened;
- The periods benefiting most significantly are Friday afternoons and evenings, Sunday evenings in the southbound direction, and Monday mornings in the southbound direction;
- In 2009, in most time periods, journey times are marginally longer than in 2004, however they have not returned to 2003 levels;
- Journeys via the M6 Toll generally exhibit consistent times at most times of day, throughout the week, indicating a high level of reliability; and
- During inter-peak times and periods without delay, journeys between M6 J2 and M6 J12 via the M6 Toll are generally around 5 – 10 minutes quicker than using the parallel M6.

### **Vehicle Types**

- In relation to the composition of vehicle types, available data has suggested that the absolute number and proportions of vehicles deemed as 'heavies' (over 5.2m in length) have increased on both the M6 and the M6 Toll compared to 2003 and 2004 levels, respectively;
- More detailed analysis indicates that the M6 Toll carries a more even distribution between light vans and OGV1/OGV2 categories, than the M6, where 'heavies' consist primarily of the larger OGV1/OGV2 categories; and
- Based on available data, the increase in 'heavies' on the M6 since 2005 seems to be primarily derived from vehicles between 5.2m and 6.6m in length, and therefore likely to be light vans.

## **Performance against Scheme Objectives**

2.5 The evaluation of the scheme's specific objectives are summarised in Table 2.1.

**Table 2.1 – Success against Scheme Objectives**

Objective	Success	
To provide through traffic with an alternative to the M6.	Five years on, the M6 Toll continues to provide an alternative route for motorists to the M6 offering faster journey times and greater reliability	✓
To relieve the M6.	Journey times have reduced compared to before the M6 Toll opened. Although they have increased slightly since 2005, they have remained quicker than before the M6 Toll opened.	✓
To improve journey time reliability.	More consistent journey times have continued to be exhibited on the M6 since the M6 Toll opened.	✓
To reduce traffic levels on less appropriate local routes.	Traffic on the A38, A5 and A50 has reduced compared to pre-M6 Toll opening levels; however flows have started to increase on these routes again.	✓
To improve transport links with towns to the north and east of the West Midlands.	Local transport links have undoubtedly improved due to the reduced journey times and increased reliability of journeys.	✓
To become an integral part of a continual motorway corridor along the backbone of the country.	The M6 Toll continues to provide an alternative route for motorists to the M6 along the northern part of the Birmingham Box which is included in the Trans-European Road Network. Freight between the Celtic nations and continental Europe, as well as from the West Midlands and other English regions, passes through it.	✓

## Safety Impacts

### Safety Trends at FYA compared to OYA findings

2.6 At the five years after stage there is clearly much more accident data. This has been used to confirm:

- The safety benefits observed One Year After have been continued over the Five Years After period; and
- The benefits observed on the key links are statistically significant.

### Safety on the M6 Toll

2.7 Analysis of accident records for the M6 Toll has shown that the road has a good safety record. In particular:

- In the first five years, there was an average of 18 accidents per year on the main tolled part of the M6 Toll; and
- Accident rate per million vehicle kilometres is less than half the national average for a motorway which is the rate seen on the parallel M6.

### Safety on the Parallel M6 and wider network

2.8 The main findings on the safety impacts have been:

- The reduction of 85 accidents on the parallel section of the M6;
- There is little change in the proportions of accidents by severity;
- Overall in the M6 / M6 toll corridor including parallel A roads, there is an annual saving of an average of 95 accidents, a reduction of 23% compared to the number before;

- Taking into account traffic volumes, there have been statistically significant reductions in the accident rates on:
  - The parallel section of the M6 alone;
  - The motorway corridor comprising the M6 Toll, the shared section with the M42 and the parallel section of the M6;
  - The M6 north of the M6 Toll tie-in up to J15; and
  - A5 parallel to M6 Toll.
- Findings regarding the changes in the numbers of casualties injured annually in the five years after opening are similar to those for accidents;
- The number of casualties injured per year in the motorway and A road corridor has reduced by 136 annually (22%); and
- The numbers of casualties killed or seriously injured has reduced significantly on the motorway routes including the M6 Toll and parallel M6, and the M6 north and south of the tie-ins.

## Environmental Impacts

### 2.9

An evaluation was made at the One Year After stage of the environmental impacts of the M6 Toll compared to those forecast. The conclusion of which was that the impacts had largely been as expected along the route, however it was recommended that particular aspects would be revisited at the Five Years After stage, and have therefore been evaluated in this study. The main impacts since the One Year After evaluation have therefore been:

- **Noise and Local Air Quality** – Based on lower observed traffic flows on the M6 Toll compared to forecasts used in the ES, it is likely that noise and local air quality impacts are lower than expected. Traffic data is not available to evaluate the impact of the M6 Toll on adjacent local roads;
- **Landscape** – Planting is largely establishing well, although there are some gaps / less well established areas and some specialised areas such as species-rich grassland and marginal pond planting have not developed as expected. Lighting impacts have been reduced by the use of downward directed lighting;
- **Biodiversity** – limited up to date information available to fully evaluate although impacts are likely to be as expected. Based on the information available some remedial and management works appear to remain outstanding. Value of hedgerow translocation in future schemes should be assessed;
- **Heritage** – Archaeology report has now been provided to the relevant County Archaeologists; and
- **Water**– Based on the information available it is likely that the impacts on the water environment are as expected.



# Appendix A

## A.1 Birmingham Box Traffic Flows 2003, 2005 and 2008

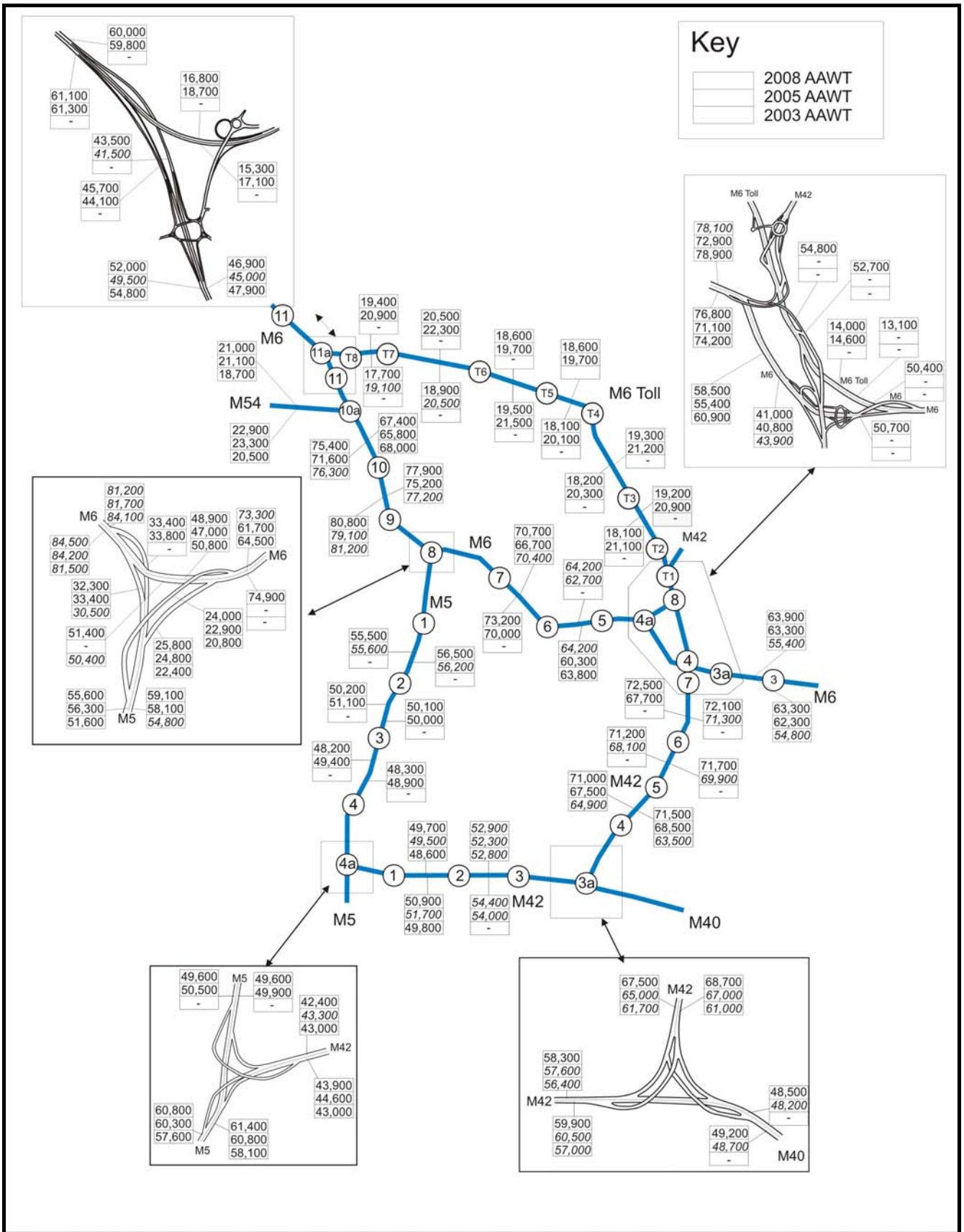


Figure A.1 – Birmingham Box Traffic Flows 2003, 2005, 2008