

# THE M74 COMPLETION - DOES IT DO WHAT WE SAID IT WOULD DO?

Alison Irvine

Transport Scotland, Transport Analysis Branch, MTRIPS

Alan Anderson

Glasgow City Council

M74 Completion Appointed Agent Team

## 1. INTRODUCTION

The M74 Completion scheme opened to traffic on the 28<sup>th</sup> June 2011. The new 8km section of motorway continues the existing M74 from the Fullarton Road Junction to the M8 motorway west of the Kingston Bridge, and completes a vital part of the west of Scotland's motorway network. The construction of the scheme was completed eight months early and approximately £20M under budget.

The transport planning objectives for the M74 Completion scheme, as defined by the Project Partners during the early scheme assessment, include:

- Completion of the strategic transport links for West of Scotland businesses currently handicapped by severe congestion on the M8
- Advancing the national competitiveness by improving access to Glasgow Airport and other key strategic commercial and industrial sites
- Assisting the development of prime sites in high unemployment areas throughout West Central Scotland
- Opening the way for regeneration of derelict land across the south and east of Glasgow and in Rutherglen and Cambuslang
- Relieving traffic congestion on local roads across Glasgow and South Lanarkshire, allowing priority to be allocated to public transport, cyclists and pedestrians
- Improving road safety and reduce road accidents

The various traffic studies carried out as part of the scheme appraisal forecast that the scheme would perform well in achieving these objectives. In particular, the proposed scheme was forecast to:

- Provide relief to the M8 northern flank (between Charing Cross & Baillieston) and the local road network, the latter through the transferral of traffic from the local road network to the new road
- Improve journey times
- Improve access along and adjacent to the scheme corridor to currently derelict areas
- Improve safety and reduce traffic accidents by transferring traffic off local roads onto the new motorway.

In order to determine to what extent these objectives are being met, a monitoring and evaluation exercise is being undertaken by Transport Scotland, in association with Project Partners Glasgow City Council.

This monitoring and evaluation exercise includes a review of:

- Traffic flows
- Journey times
- Accident numbers & severities

Traffic flow and journey time data are now available for the post opening period. The initial observed changes across the strategic and local road networks before and after the scheme opening can therefore now be examined.

This paper intends to demonstrate how the application of the monitoring and evaluation exercise has successfully compared the initial after opening observed flows and journey times against the equivalent before opening data. These comparisons will also highlight the initial changes in flow patterns across the strategic and local road networks which are being seen following the opening of the M74 Completion scheme.

## 2. BACKGROUND

The Scottish Transport Appraisal Guidance (STAG) outlines the requirement that all transport appraisals submitted to the Scottish Government / Transport Scotland must include proposals for Monitoring and Evaluation i.e. a Monitoring Plan and an Evaluation Plan.

STAG advises that:

*“Once investment is committed and following implementation, Monitoring and Evaluation to assess performance against the original appraisal is essential.”*

The primary driver for monitoring and evaluation being:

*“If an option is implemented and investment committed then it is essential that the project is monitored and evaluated to assess performance against the Transport Planning Objectives established within a STAG study, the STAG Criteria and any additional impacts identified during the Appraisal.”*

Monitoring is the process of gathering and interpreting information on the performance of a project post-implementation whilst Evaluation is aimed at identifying whether or not a project is performing as originally intended and whether it is satisfying its original objectives.

As the Trunk Road Authority, it is Transport Scotland's responsibility to undertake the monitoring and evaluation of any new trunk road asset to demonstrate the extent to which the social, economic and environmental objectives of the project have been met. This includes the evaluation of any environmental mitigation works.

Transport Scotland is currently developing guidance on the project evaluation of trunk road schemes. The guidance, known as STRIPE - Scottish Trunk Road Infrastructure Project Evaluation, details the extent and scale of any

evaluation relative to the size (and cost) of the trunk road scheme being evaluated.

In the case of the M74 Completion scheme, given it is one of the largest trunk road improvements undertaken by Transport Scotland, a detailed and extensive project evaluation is therefore being carried out.

## 2.1 M74 Completion Project Evaluation

For the M74 Completion scheme, given the range of central and local government interests along with community and business interests, together with the influence and interactions between the strategic and local road networks, a partnership approach has been taken to the evaluation. The evaluation is being carried out by Transport Scotland in partnership with Glasgow City Council and will demonstrate to what extent the social, economic and environmental objectives of the scheme are being met.

To be able to report on the Traffic & Transport Economics, Economic Activity and Noise & Air Quality aspects of the project evaluation, it is necessary to assess and report on changes in the operation of the strategic and local road networks.

The overall project evaluation of the M74 Completion scheme will therefore include a comparison of the following:

- The traffic flows, journey times and accident numbers resulting from the implementation of the scheme with those forecast during the scheme's preparation
- The changes in traffic flows across the strategic and local road network following the introduction of the scheme
- The changes in journey times along key routes following the introduction of the scheme
- The accident (casualty) statistics before and after scheme opening
- The carriageway standard provided with that required by observed flows
- The forecast scheme cost used in the pre tender economic assessment with the actual out turn scheme cost
- The environmental mitigation measures put forward in the scheme's Environmental Statement with those included as part of the scheme's construction
- The transport planning objectives put forward in the original scheme assessment

The M74 Completion scheme project evaluation also aims to determine:

- Whether or not the project is performing as originally intended
- Whether, and to what extent, the project is contributing to established policy directives
- Whether the project continues to represent value for money

For the M74 Completion scheme project evaluation Transport Scotland has committed to issue a number of reports based on information collected during the following post opening periods:

- 4 weeks after opening
- 16 weeks after opening, required as the 4 weeks after opening Report is based on data collected during the school holidays
- 6 months after opening
- 1 year after opening
- Annually up to 5 years after opening

The early reports will generally focus on traffic flows and journey times only, given the availability of other data, e.g. accident data, at these early stages will be limited. The later reports will cover all aspects of the evaluation outlined above and will also include an analysis of any trends based on the historic and post opening data available.

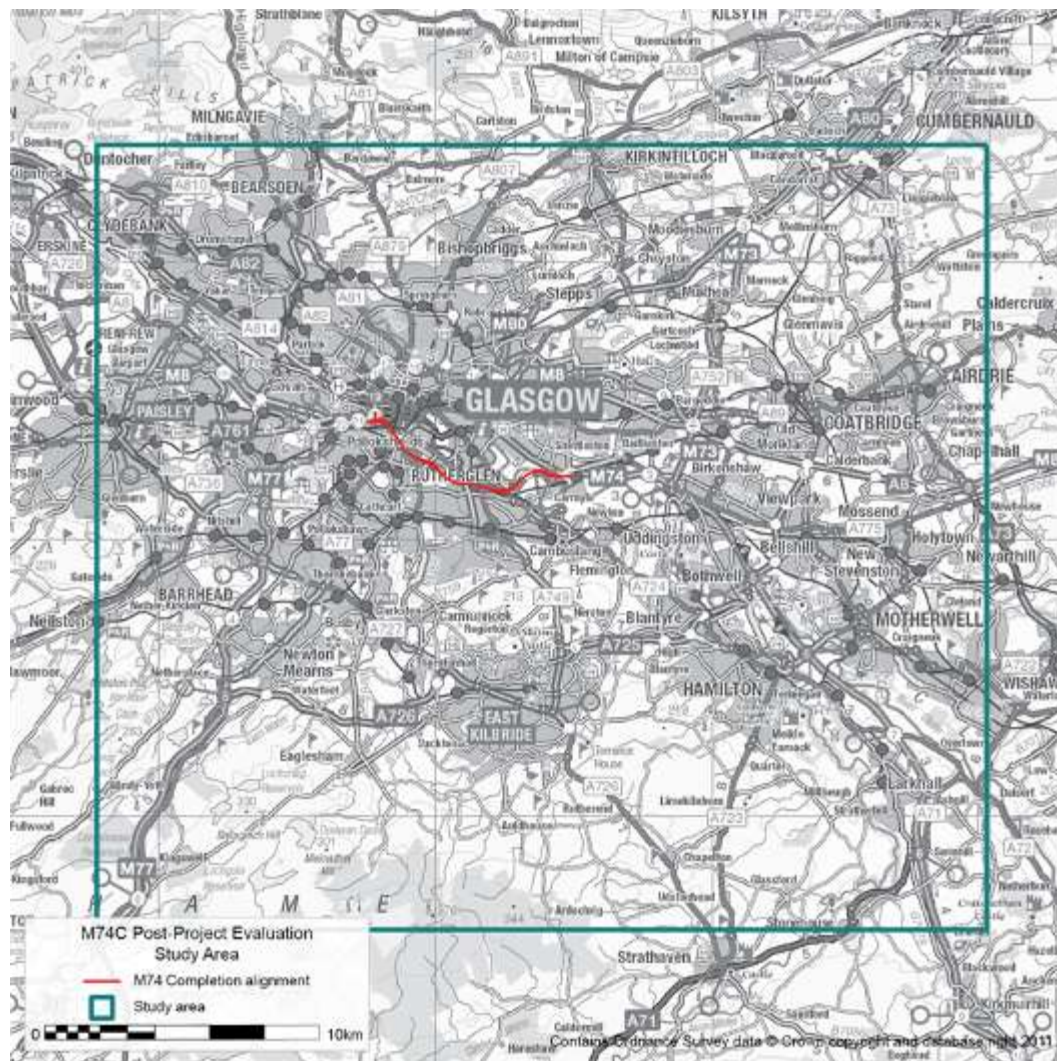
The information available and collected to date includes traffic count data from a wide range of automatic counters across the study area, along with observed journey times along a number of key routes. By comparing the after opening observations with the equivalent before opening observations, it is possible to see the initial impacts of the scheme and to determine whether or not the scheme is on course to meet its key objectives.

The traffic analysis presented in the following sections highlights the initial changes in traffic flows and journey times which have been seen across the study area following the opening of the M74 Completion scheme.

### **3. TRAFFIC & JOURNEY TIME ANALYSIS**

#### **3.1 Traffic Flows**

The study area for the M74 Completion project evaluation is shown in Figure 1. The roads considered focus on those which were forecast to be directly or indirectly impacted by the opening of the new section of motorway. Changes across both the strategic road network i.e. motorway and trunk roads, and the local road network were therefore examined.



**Figure 1: M74 Completion Project Evaluation Study Area**

The project evaluation of any trunk road scheme relies heavily upon the availability of before and after opening traffic flow data. For the M74 Completion scheme project evaluation a large amount of traffic flow data is available from various permanent, long term automatic traffic counter (ATC) sites. The ATC sites are managed by a number of organisations, including:

- Transport Scotland's Scottish Road Traffic Database (SRTDb)
- Partner local authorities, namely Glasgow City Council, South Lanarkshire Council and Renfrewshire Council
- Connect Roads, who operate the Glasgow Southern Orbital

These organisations currently control around 750 ATC sites within the area of interest across Greater Glasgow / west central Scotland, providing in excess of 900 directional counts on regionally and locally important routes. The majority of these counter sites provide classified count data, i.e. the flows are broken down into the different vehicle classifications. For the initial project evaluation however only total traffic volumes were considered.

In addition to the historic long term counters controlled by the various organisations outlined above, where necessary, for example to complete a screenline to allow a comparison of changes in flows across a wide area, additional new counters were installed to support the study. Both Transport Scotland and the local authority partners installed new counters to ensure the project evaluation of the M74 Completion scheme is able to fully satisfy its stated objectives.

Traffic count data from the various ATC sites was summarised for each month before the scheme opening and for each month available for the post opening period. Data for Tuesdays, Wednesdays and Thursdays, were taken to represent an average weekday.

At the time of writing this paper, traffic flow data for the period after the opening of the scheme was available for each month up to and including October 2011. The traffic flow comparisons presented generally represent July 2010 v July 2011 and October 2010 v October 2011 - these being the 4 week and 16 week after opening comparisons.

### 3.2 Journey Times

In order to determine the impact the M74 Completion scheme has had on journey times across the study area, journey time surveys were carried out on a number of routes, including:

- Hamilton to Glasgow Airport
- Hillington to Newhouse
- Newton Mearns to Glasgow City Centre

For the Hamilton to Glasgow Airport route, journey time surveys were carried out along both the 'old' route via the M73 and M8 i.e. before the availability of the M74 Completion, and along the 'new' route via the new scheme itself.

Journey time surveys were carried out using the moving observer method before and after the opening of the scheme in the following months:

- November 2010 (before opening)
- May 2011 (before opening)
- August 2011 (after opening)
- December 2011 (after opening)

The survey periods covered were:

- AM Period 06:30 - 10:00
- IP Period 11:00 - 14:30
- PM Period 15:30 - 19:00

To satisfy the requirements of the Design Manual for Roads & Bridges (DMRB), a minimum of six timed survey runs were carried out along each route, in each direction, during each time period.

### 3.3 Initial Results of Traffic Analysis

#### *Traffic Flows*

A summary of the initial changes in traffic flows and traffic flow patterns across the study area following the opening of the M74 Completion scheme are presented below. The comparisons presented here are confined to 24 hour flows unless otherwise stated. (Comparisons across the full study area and across all time periods available are presented in the 4 Week and 16 Week After Opening Project Evaluation Reports which will be available from the Transport Scotland website.)

Tables 3.1 to 3.6 below present comparisons of the changes in flows across the strategic motorway network and the local road network in the immediate 4 week period following the opening of the scheme i.e. July 2011 v July 2010 flows, as well as 16 weeks after opening i.e. October 2011 v October 2010. A comparison of the equivalent flows across a north-south screenline is also presented in Tables 3.7 & 3.8. The locations considered across the local road network are generally limited to those that were presented as potentially sensitive locations at the December 2003 - March 2004 Public Local Inquiry.

24-hour Total

| Counter location                                 | Direction  | July 2010<br>(vehicles) | July 2011<br>(vehicles) | Difference<br>(vehicles) | Difference<br>(%) |
|--|------------|-------------------------|-------------------------|--------------------------|-------------------|
| A8 east of Baillieston                           | Westbound  | 39,601                  | 37,760                  | - 1,841                  | - 4.6%            |
| M8 J8 to J9                                      | Westbound  | 56,776                  | -                       | -                        |                   |
| M8 J9 to J10                                     | Westbound  | 59,938                  | 49,032                  | - 10,906                 | - 18.2%           |
| M8 J10 to J11                                    | Westbound  | 58,168                  | 47,175                  | - 10,993                 | - 18.9%           |
| M8 J11 to J12                                    | Westbound  | 59,903                  | 48,597                  | - 11,306                 | - 18.9%           |
| M8 J12 to J13                                    | Westbound  | 58,786                  | 48,093                  | - 10,693                 | - 18.2%           |
| M8 J13 to J14                                    | Westbound  | 77,209                  | 68,290                  | - 8,919                  | - 11.6%           |
| M8 J14 to J15                                    | Westbound  | -                       | 74,375                  | -                        |                   |
| M8 J15 to J16                                    | Westbound  | 84,542                  | 73,678                  | - 10,864                 | - 12.9%           |
| M8 J16 to J17                                    | Westbound  | 73,018                  | 63,544                  | - 9,474                  | - 13.0%           |
| M8 J17/J18 to J19                                | Westbound  | 70,519                  | 61,398                  | - 9,121                  | - 12.9%           |
| M8 Kingston Bridge <sup>1</sup>                  | Southbound | 93,116                  | 85,241                  | - 7,875                  | - 8.5%            |
| M8 main carriageway east of J21                  | Westbound  | 72,168                  | 62,861                  | - 9,307                  | - 12.9%           |
| M8 secondary carriageway east of J21             | Westbound  | 8,212                   | 30,174                  | + 21,962                 | + 267.4%          |
| M8 J22 to J23 <sup>2</sup>                       | Westbound  | 57,598                  | 65,016                  | + 7,418                  | + 12.9%           |
| M8 J24 to J25                                    | Westbound  | 58,565                  | 64,415                  | + 5,850                  | + 10.0%           |
| M8 J25 to J25a                                   | Westbound  | 65,499                  | 67,721                  | + 2,222                  | + 3.4%            |
| M8 J25a to J26 <sup>2</sup>                      | Westbound  | 57,030                  | 57,893                  | + 863                    | + 1.5%            |
| M8 J26 to J27                                    | Westbound  | 58,346                  | 59,912                  | + 1,566                  | + 2.7%            |
| M8 J27 to J26                                    | Eastbound  | 58,531                  | 60,769                  | + 2,238                  | + 3.8%            |
| M8 J26 to J25a                                   | Eastbound  | 55,310                  | 60,428                  | + 5,118                  | + 9.3%            |
| M8 J25a to J25                                   | Eastbound  | 61,294                  | 64,637                  | + 3,343                  | + 5.5%            |
| M8 J25 to J24                                    | Eastbound  | 49,676                  | 56,201                  | + 6,525                  | + 13.1%           |
| M8 J23 to J22 <sup>2</sup>                       | Eastbound  | 41,494                  | 50,607                  | + 9,113                  | + 22.0%           |
| M8 secondary carriageway at J21 off slip         | Eastbound  | 7,703                   | 22,073                  | + 14,370                 | + 186.5%          |
| M8 main carriageway east of J21                  | Eastbound  | 60,868                  | 56,808                  | - 4,060                  | - 6.7%            |
| M8 Kingston Bridge <sup>2</sup>                  | Northbound | 76,458                  | 68,468                  | - 7,990                  | - 10.5%           |
| M8 at J18 before Charing Cross ramp <sup>2</sup> | Eastbound  | 59,126                  | 49,305                  | - 9,821                  | - 16.6%           |
| M8 J18/J17 to J16                                | Eastbound  | 80,423                  | 69,111                  | - 11,312                 | - 14.1%           |
| M8 J16 to J15                                    | Eastbound  | 90,967                  | 75,648                  | - 15,319                 | - 16.8%           |
| M8 J15 to J14 <sup>3</sup>                       | Eastbound  | 90,740                  | 73,900                  | - 16,840                 | - 18.6%           |
| M8 J14 to J13                                    | Eastbound  | 82,557                  | 71,041                  | - 11,516                 | - 13.9%           |
| M8 J13 to J12                                    | Eastbound  | 59,559                  | 48,445                  | - 11,114                 | - 18.7%           |
| M8 J12 to J11                                    | Eastbound  | 62,663                  | 51,280                  | - 11,383                 | - 18.2%           |
| M8 J11 to J10                                    | Eastbound  | 57,726                  | 46,924                  | - 10,802                 | - 18.7%           |
| M8 J10 to J9                                     | Eastbound  | 62,042                  | 51,215                  | - 10,827                 | - 17.5%           |
| M8 J9 to J8                                      | Eastbound  | -                       | 42,688                  | -                        |                   |
| A8 east of Baillieston                           | Eastbound  | 41,645                  | 39,264                  | - 2,381                  | - 5.7%            |

<sup>1</sup> October rather than July used in both years.

<sup>2</sup> May 2011 used rather than July 2010.

<sup>3</sup> August 2011 used rather than July 2011.

N.B. A hyphen '-' is used where no summary data are available in this month/in a month required for a difference.

**Table 3.1 - 4 Week After Opening 24 Hr Flow Comparisons: A8/M8**



24-hour Total

| Counter location                       | Direction  | July 2010<br>(vehicles) | July 2011<br>(vehicles) | Difference<br>(vehicles) | Difference<br>(%) |
|--|------------|-------------------------|-------------------------|--------------------------|-------------------|
| M80 J3 to J2                           | Southbound | 25,344                  | 28,814                  | + 3,470                  | + 13.7%           |
| M80 J2 to J1                           | Southbound | 28,469                  | 30,547                  | + 2,078                  | + 7.3%            |
| M80 J1 to J2                           | Northbound | 30,002                  | 30,425                  | + 423                    | + 1.4%            |
| M80 J2 to J3                           | Northbound | 27,137                  | 28,156                  | + 1,019                  | + 3.8%            |
| M73 at J2a between ramps               | Southbound | 20,944                  | 19,998                  | - 946                    | - 4.5%            |
| M73 J2a to J2                          | Southbound | 21,197                  | 20,352                  | - 845                    | - 4.0%            |
| M73 J2 to J1                           | Southbound | 44,853                  | 40,995                  | - 3,858                  | - 8.6%            |
| M73 J1 to J2                           | Northbound | 45,224                  | 40,572                  | - 4,652                  | - 10.3%           |
| M73 J2 to J2a                          | Northbound | 21,845                  | 22,101                  | + 256                    | + 1.2%            |
| M73 at J2a between ramps               | Northbound | 21,063                  | 20,531                  | - 532                    | - 2.5%            |
| M74 J5 to J4                           | Northbound | 38,638                  | 42,050                  | + 3,412                  | + 8.8%            |
| M74 J3a to J3                          | Northbound | 21,576                  | 35,426                  | + 13,850                 | + 64.2%           |
| M74 J3 to J2a <sup>1</sup>             | Northbound | 14,717                  | 29,099                  | + 14,382                 | + 97.7%           |
| M74C J2a to J2                         | Northbound | -                       | 29,237                  | -                        | -                 |
| M74C J2 to J1a                         | Northbound | -                       | 27,892                  | -                        | -                 |
| M74C J1a to J1                         | Northbound | -                       | 30,049                  | -                        | -                 |
| M74C J1 to J1a                         | Southbound | -                       | 30,894                  | -                        | -                 |
| M74C J1a to J2                         | Southbound | -                       | 29,484                  | -                        | -                 |
| M74C J2 to J2a                         | Southbound | -                       | 26,743                  | -                        | -                 |
| M74 J2a to J3                          | Southbound | 13,701                  | 29,405                  | + 15,704                 | + 114.6%          |
| M74 J3 to J3a                          | Southbound | 19,998                  | 32,436                  | + 12,438                 | + 62.2%           |
| M74 J4 to Bothwell Services            | Southbound | 39,795                  | 43,562                  | + 3,767                  | + 9.5%            |
| M77 J4 to J3                           | Northbound | 30,812                  | 32,000                  | + 1,188                  | + 3.9%            |
| M77 J3 to J2                           | Northbound | 36,432                  | 37,666                  | + 1,234                  | + 3.4%            |
| M77 J2 to J1                           | Northbound | 40,174                  | 42,431                  | + 2,257                  | + 5.6%            |
| M77 J1 to M8 J22                       | Northbound | 32,722                  | 36,014                  | + 3,292                  | + 10.1%           |
| M77 between M8 J22 and J1 <sup>1</sup> | Southbound | 41,578                  | 43,283                  | + 1,705                  | + 4.1%            |
| M77 J1 to J2                           | Southbound | 41,278                  | 42,595                  | + 1,317                  | + 3.2%            |
| M77 J2 to J3                           | Southbound | 37,379                  | 38,348                  | + 969                    | + 2.6%            |
| M77 J3 to J4                           | Southbound | 31,599                  | 32,450                  | + 851                    | + 2.7%            |

<sup>1</sup> May 2011 used rather than July 2010.

N.B. A hyphen '-' is used where no summary data are available in this month/in a month required for a difference.

**Table 3.2 - 4 Week After Opening 24 Hr Flow Comparisons: Other Motorways**

## 24-hour Total

| Plan Id | Counter location                              | Direction  | Before opening‡ (vehicles) | July 2011 (vehicles) | Difference (vehicles) | Difference (%) |
|---------|---|------------|----------------------------|----------------------|-----------------------|----------------|
| 1       | Cook St <sup>1</sup>                          | Westbound  | 14,039                     | 10,272               | - 3,767               | - 26.8%        |
| 2       | Cumberland St <sup>1</sup>                    | Eastbound  | 9,353                      | 6,013                | - 3,340               | - 35.7%        |
| 2       | Cumberland St <sup>1</sup>                    | Westbound  | 7,040                      | 4,112                | - 2,928               | - 41.6%        |
| 3       | Cathcart Rd (A728) <sup>1</sup>               | Northbound | 15,347                     | 12,152               | - 3,195               | - 20.8%        |
| 3       | Cathcart Rd (A728) <sup>1</sup>               | Southbound | 11,867                     | 9,701                | - 2,166               | - 18.3%        |
| 4       | Aikenhead Rd (A728) <sup>1</sup>              | Northbound | 7,571                      | 5,644                | - 1,927               | - 25.5%        |
| 4       | Aikenhead Rd (A728) <sup>1</sup>              | Southbound | 7,754                      | 6,124                | - 1,630               | - 21.0%        |
| 5       | Polmadie Rd (B763) sth of M74C <sup>1</sup>   | Northbound | 4,486                      | 9,938                | + 5,452               | + 121.5%       |
| 5       | Polmadie Rd (B763) sth of M74C <sup>1</sup>   | Southbound | 4,535                      | 10,676               | + 6,141               | + 135.4%       |
| 6       | Calder St (B763) west                         | Westbound  | -                          | -                    | -                     | -              |
| 7       | Calder St (B763) east <sup>1</sup>            | Eastbound  | 3,217                      | 2,967                | - 250                 | - 7.8%         |
| 7       | Calder St (B763) east <sup>1</sup>            | Westbound  | 4,619                      | 4,372                | - 247                 | - 5.3%         |
| 8       | Allison St west <sup>2</sup>                  | Eastbound  | 5,927                      | 5,168                | - 759                 | - 12.8%        |
| 9       | Allison St east                               | Eastbound  | -                          | -                    | -                     | -              |
| 10      | Main St (B768), Rutherglen, west <sup>1</sup> | Eastbound  | 9,813                      | 6,976                | - 2,837               | - 28.9%        |
| 10      | Main St (B768), Rutherglen, west <sup>1</sup> | Westbound  | 8,864                      | 5,947                | - 2,917               | - 32.9%        |
| 11      | Main St (B768), Rutherglen, east              | Eastbound  | 6,513                      | -                    | -                     | -              |
| 11      | Main St (B768), Rutherglen, east              | Westbound  | 6,682                      | -                    | -                     | -              |
| 12      | Stonelaw Rd (A749) <sup>3</sup>               | Northbound | 8,404                      | 6,998                | - 1,406               | - 16.7%        |
| 12      | Stonelaw Rd (A749) <sup>3</sup>               | Southbound | 9,164                      | 7,415                | - 1,749               | - 19.1%        |
| 13      | Dalmarnock Rd (A749)                          | Northbound | 8,788                      | 6,508                | - 2,280               | - 25.9%        |
| 13      | Dalmarnock Rd (A749)                          | Southbound | 8,435                      | 5,942                | - 2,493               | - 29.6%        |
| 14      | Cambuslang Rd (A724) sth of M74C              | Northbound | -                          | -                    | -                     | -              |
| 14      | Cambuslang Rd (A724) sth of M74C              | Southbound | -                          | -                    | -                     | -              |
| 15      | Glasgow Rd (A724) <sup>1</sup>                | Eastbound  | 7,221                      | 6,438                | - 783                 | - 10.8%        |
| 15      | Glasgow Rd (A724) <sup>1</sup>                | Westbound  | 8,199                      | 7,103                | - 1,096               | - 13.4%        |
| 16      | Shettleston Rd (A89) <sup>2</sup>             | Eastbound  | 5,571                      | 5,300                | - 271                 | - 4.9%         |
| 16      | Shettleston Rd (A89) <sup>2</sup>             | Westbound  | 5,659                      | 4,878                | - 781                 | - 13.8%        |
| 17      | Drumbreck Rd (B768) <sup>a</sup>              | Northbound | 15,159                     | 13,847               | - 1,312               | - 8.7%         |
| 17      | Drumbreck Rd (B768) <sup>a</sup>              | Southbound | 10,634                     | 9,377                | - 1,257               | - 11.8%        |
| 18      | Barrhead Rd (A736)                            | Eastbound  | 9,792                      | 9,508                | - 284                 | - 2.9%         |
| 18      | Barrhead Rd (A736)                            | Westbound  | 9,567                      | 8,611                | - 956                 | - 10.0%        |
| 19      | Dukes Rd (B762)                               | Northbound | 3,236                      | 3,247                | + 11                  | + 0.3%         |
| 19      | Dukes Rd (B762)                               | Southbound | 3,057                      | 3,175                | + 118                 | + 3.9%         |
| 20      | Glasgow Rd (A749)                             | Northbound | 8,263                      | 13,260               | + 4,997               | + 60.5%        |
| 20      | Glasgow Rd (A749)                             | Southbound | 13,223                     | 12,675               | - 548                 | - 4.1%         |
| 21      | Stewartfield Way                              | Eastbound  | 10,348                     | 8,906                | - 1,442               | - 13.9%        |
| 21      | Stewartfield Way                              | Westbound  | 11,192                     | 9,479                | - 1,713               | - 15.3%        |
| 22      | Glasgow and Edinburgh Rd (A8)                 | Eastbound  | 5,403                      | 5,659                | + 256                 | + 4.7%         |
| 22      | Glasgow and Edinburgh Rd (A8)                 | Westbound  | 4,884                      | 4,975                | + 91                  | + 1.9%         |

‡ Before opening flows from July 2010 unless otherwise noted.

<sup>1</sup> May 2011 used rather than July 2010.

<sup>2</sup> June 2011 used rather than July 2010.

<sup>3</sup> May 2010 used rather than July 2010. August 2011 used rather than July 2011.

<sup>a</sup> September 2011 used rather than July 2011.

N.B. A hyphen '-' is used where no summary data are available in this month/in a month required for a difference.

**Table 3.3 - 4 Week After Opening 24 Hr Flow Comparisons: Local Roads**

## 24-hour Total

| Counter location                                      | Direction  | October<br>2010<br>(vehicles) | October<br>2011<br>(vehicles) | Difference<br>(vehicles) | Difference<br>(%) |
|---|------------|-------------------------------|-------------------------------|--------------------------|-------------------|
| A8 east of Baillieston                                | Westbound  | 42,108                        | 39,768                        | - 2,340                  | - 5.6%            |
| M8 J8 to J9   | Westbound  | 51,855                        | 44,975                        | - 6,880                  | - 13.3%           |
| M8 J9 to J10  | Westbound  | 57,008                        | 48,805                        | - 8,203                  | - 14.4%           |
| M8 J10 to J11   | Westbound  | 56,099                        | 47,355                        | - 8,744                  | - 15.6%           |
| M8 J11 to J12   | Westbound  | 58,007                        | 49,069                        | - 8,938                  | - 15.4%           |
| M8 J12 to J13   | Westbound  | 56,970                        | 48,335                        | - 8,635                  | - 15.2%           |
| M8 J13 to J14   | Westbound  | 76,557                        | 70,502                        | - 6,055                  | - 7.9%            |
| M8 J14 to J15   | Westbound  | 83,446                        | 76,682                        | - 6,764                  | - 8.1%            |
| M8 J15 to J16   | Westbound  | 83,315                        | 75,683                        | - 7,632                  | - 9.2%            |
| M8 J16 to J17   | Westbound  | 68,986                        | 64,580                        | - 4,406                  | - 6.4%            |
| M8 J17/J18 to J19                                     | Westbound  | 70,205                        | 62,616                        | - 7,589                  | - 10.8%           |
| M8 Kingston Bridge                                    | Southbound | 93,116                        | 85,242                        | - 7,874                  | - 8.5%            |
| M8 main carriageway east of J21 <sup>1</sup>          | Westbound  | 73,472                        | 64,590                        | - 8,882                  | - 12.1%           |
| M8 secondary carriageway east of J21 <sup>1</sup>     | Westbound  | 9,214                         | 34,167                        | + 24,953                 | + 270.8%          |
| M8 J22 to J23 <sup>2</sup>                            | Westbound  | 57,598                        | 68,305                        | + 10,707                 | + 18.6%           |
| M8 J24 to J25 <sup>1</sup>                            | Westbound  | 59,585                        | 67,025                        | + 7,440                  | + 12.5%           |
| M8 J25 to J25a  | Westbound  | 65,633                        | 69,782                        | + 4,149                  | + 6.3%            |
| M8 J25a to J26  | Westbound  | 57,457                        | 60,410                        | + 2,953                  | + 5.1%            |
| M8 J26 to J27   | Westbound  | 58,891                        | 60,224                        | + 1,333                  | + 2.3%            |
| M8 J27 to J26   | Eastbound  | 59,049                        | 60,958                        | + 1,909                  | + 3.2%            |
| M8 J26 to J25a <sup>3</sup>                           | Eastbound  | 56,275                        | 60,919                        | + 4,644                  | + 8.3%            |
| M8 J25a to J25  | Eastbound  | 61,174                        | 66,981                        | + 5,807                  | + 9.5%            |
| M8 J25 to J24   | Eastbound  | 50,435                        | 58,525                        | + 8,090                  | + 16.0%           |
| M8 J23 to J22   | Eastbound  | 48,486                        | 58,859                        | + 10,373                 | + 21.4%           |
| M8 secondary carriageway at J21 off slip <sup>a</sup> | Eastbound  | 7,195                         | 22,934                        | + 15,739                 | + 218.7%          |
| M8 main carriageway east of J21 <sup>?</sup>          | Eastbound  | 59,632                        | 57,596                        | - 2,036                  | - 3.4%            |
| M8 Kingston Bridge <sup>2</sup>                       | Northbound | 76,458                        | 71,406                        | - 5,052                  | - 6.6%            |
| M8 at J18 before Charing Cross ramp <sup>3</sup>      | Eastbound  | 59,126                        | 49,271                        | - 9,855                  | - 16.7%           |
| M8 J18/J17 to J16 <sup>3</sup>                        | Eastbound  | 82,048                        | 71,689                        | - 10,359                 | - 12.6%           |
| M8 J16 to J15 <sup>3</sup>                            | Eastbound  | 92,639                        | 82,798                        | - 9,841                  | - 10.6%           |
| M8 J15 to J14 <sup>a</sup>                            | Eastbound  | 92,551                        | 73,901                        | - 18,650                 | - 20.2%           |
| M8 J14 to J13   | Eastbound  | 84,177                        | 73,873                        | - 10,304                 | - 12.2%           |
| M8 J13 to J12   | Eastbound  | 61,192                        | 48,806                        | - 12,386                 | - 20.2%           |
| M8 J12 to J11   | Eastbound  | 64,684                        | 51,921                        | - 12,763                 | - 19.7%           |
| M8 J11 to J10   | Eastbound  | 59,793                        | 47,573                        | - 12,220                 | - 20.4%           |
| M8 J10 to J9  | Eastbound  | 63,548                        | 50,913                        | - 12,635                 | - 19.9%           |
| M8 J9 to J8 <sup>3</sup>                              | Eastbound  | 53,324                        | 42,279                        | - 11,045                 | - 20.7%           |
| A8 east of Baillieston                                | Eastbound  | 42,315                        | 40,693                        | - 1,622                  | - 3.8%            |

<sup>1</sup> September rather than October used in both years.

<sup>2</sup> May 2011 used rather than October 2010. September 2011 used rather than October 2011.

<sup>3</sup> May 2011 used rather than October 2010.

<sup>a</sup> August rather than October used in both years.

<sup>?</sup> September 2010 used rather than October 2010.

N.B. A hyphen '-' is used where no summary data are available in this month/in a month required for a difference.

**Table 3.4 - 16 Week After Opening 24 Hr Flow Comparisons: A8/M8**

## 24-hour Total

| Counter location                         | Direction  | October<br>2010<br>(vehicles) | October<br>2011<br>(vehicles) | Difference<br>(vehicles) | Difference<br>(%) |
|--|------------|-------------------------------|-------------------------------|--------------------------|-------------------|
| M80 J3 to J2                             | Southbound | 25,815                        | 30,274                        | + 4,459                  | + 17.3%           |
| M80 J2 to J1                             | Southbound | 29,099                        | 32,346                        | + 3,247                  | + 11.2%           |
| M80 J1 to J2                             | Northbound | 30,520                        | 33,685                        | + 3,165                  | + 10.4%           |
| M80 J2 to J3                             | Northbound | 27,891                        | 30,793                        | + 2,902                  | + 10.4%           |
| M73 at J2a between ramps                 | Southbound | 20,100                        | 23,292                        | + 3,192                  | + 15.9%           |
| M73 J2a to J2                            | Southbound | 21,084                        | 24,606                        | + 3,522                  | + 16.7%           |
| M73 J2 to J1                             | Southbound | 46,380                        | 44,744                        | - 1,636                  | - 3.5%            |
| M73 J1 to J2                             | Northbound | 44,921                        | 42,558                        | - 2,363                  | - 5.3%            |
| M73 J2 to J2a <sup>1</sup>               | Northbound | 21,047                        | 24,245                        | + 3,198                  | + 15.2%           |
| M73 at J2a between ramps                 | Northbound | 20,407                        | 23,001                        | + 2,594                  | + 12.7%           |
| M74 J5 to J4 <sup>2</sup>                | Northbound | 39,095                        | 43,087                        | + 3,992                  | + 10.2%           |
| M74 J3a to J3                            | Northbound | 23,311                        | 40,184                        | + 16,873                 | + 72.4%           |
| M74 J3 to J2a <sup>1</sup>               | Northbound | 14,717                        | 33,474                        | + 18,757                 | + 127.5%          |
| M74C J2a to J2                           | Northbound | -                             | 34,211                        | -                        | -                 |
| M74C J2 to J1a                           | Northbound | -                             | 34,895                        | -                        | -                 |
| M74C J1a to J1                           | Northbound | -                             | 35,978                        | -                        | -                 |
| M74C J1 to J1a                           | Southbound | -                             | 34,437                        | -                        | -                 |
| M74C J1a to J2                           | Southbound | -                             | 32,676                        | -                        | -                 |
| M74C J2 to J2a                           | Southbound | -                             | 31,964                        | -                        | -                 |
| M74 J2a to J3 <sup>2</sup>               | Southbound | 14,574                        | 32,290                        | + 17,716                 | + 121.6%          |
| M74 J3 to J3a                            | Southbound | 21,224                        | 36,605                        | + 15,381                 | + 72.5%           |
| M74 J4 to Bothwell Services <sup>2</sup> | Southbound | 40,975                        | 45,543                        | + 4,568                  | + 11.1%           |
| M77 J4 to J3 <sup>2</sup>                | Northbound | 31,261                        | 32,136                        | + 875                    | + 2.8%            |
| M77 J3 to J2                             | Northbound | 36,218                        | 38,069                        | + 1,851                  | + 5.1%            |
| M77 J2 to J1                             | Northbound | 39,722                        | 44,009                        | + 4,287                  | + 10.8%           |
| M77 J1 to M8 J22 <sup>1</sup>            | Northbound | 32,463                        | 37,244                        | + 4,781                  | + 14.7%           |
| M77 between M8 J22 and J1                | Southbound | 40,205                        | 45,882                        | + 5,677                  | + 14.1%           |
| M77 J1 to J2                             | Southbound | 41,661                        | 45,510                        | + 3,849                  | + 9.2%            |
| M77 J2 to J3                             | Southbound | 38,464                        | 40,319                        | + 1,855                  | + 4.8%            |
| M77 J3 to J4 <sup>2</sup>                | Southbound | 33,013                        | 33,909                        | + 896                    | + 2.7%            |

<sup>1</sup> May 2011 used rather than October 2010.

<sup>2</sup> September rather than October used in both years.

N.B. A hyphen '-' is used where no summary data are available in this month/in a month required for a difference.

**Table 3.5 - 16 Week After Opening 24 Hr Flow Comparisons: Other Motorways**

## 24-hour Total

| Plan Id | Counter location                              | Direction  | Before opening‡ (vehicles) | October 2011 (vehicles) | Difference (vehicles) | Difference (%) |
|---------|---|------------|----------------------------|-------------------------|-----------------------|----------------|
| 1       | Cook St <sup>1</sup>                          | Westbound  | 14,039                     | 10,759                  | - 3,280               | - 23.4%        |
| 2       | Cumberland St <sup>1</sup>                    | Eastbound  | 9,353                      | 5,726                   | - 3,627               | - 38.8%        |
| 2       | Cumberland St <sup>1</sup>                    | Westbound  | 7,040                      | 3,898                   | - 3,142               | - 44.6%        |
| 3       | Cathcart Rd (A728) <sup>1</sup>               | Northbound | 15,347                     | 12,745                  | - 2,602               | - 17.0%        |
| 3       | Cathcart Rd (A728) <sup>1</sup>               | Southbound | 11,867                     | 9,692                   | - 2,175               | - 18.3%        |
| 4       | Aikenhead Rd (A728) <sup>1</sup>              | Northbound | 7,571                      | 5,844                   | - 1,727               | - 22.8%        |
| 4       | Aikenhead Rd (A728) <sup>1</sup>              | Southbound | 7,754                      | 6,000                   | - 1,754               | - 22.6%        |
| 5       | Polmadie Rd (B763) sth of M74C <sup>1</sup>   | Northbound | 4,486                      | 11,953                  | + 7,467               | + 166.5%       |
| 5       | Polmadie Rd (B763) sth of M74C <sup>1</sup>   | Southbound | 4,535                      | 13,106                  | + 8,571               | + 189.0%       |
| 6       | Calder St (B763) west                         | Westbound  | -                          | -                       | -                     | -              |
| 7       | Calder St (B763) east <sup>1</sup>            | Eastbound  | 3,217                      | 3,238                   | + 21                  | + 0.7%         |
| 7       | Calder St (B763) east <sup>1</sup>            | Westbound  | 4,619                      | 4,703                   | + 84                  | + 1.8%         |
| 8       | Allison St west                               | Eastbound  | -                          | -                       | -                     | -              |
| 9       | Allison St east                               | Eastbound  | -                          | -                       | -                     | -              |
| 10      | Main St (B768), Rutherglen, west <sup>1</sup> | Eastbound  | 9,813                      | 7,101                   | - 2,712               | - 27.6%        |
| 10      | Main St (B768), Rutherglen, west <sup>1</sup> | Westbound  | 8,864                      | 6,110                   | - 2,754               | - 31.1%        |
| 11      | Main St (B768), Rutherglen, east              | Eastbound  | 7,119                      | -                       | -                     | -              |
| 11      | Main St (B768), Rutherglen, east              | Westbound  | 7,263                      | -                       | -                     | -              |
| 12      | Stonelaw Rd (A749) <sup>2</sup>               | Northbound | 8,308                      | 7,198                   | - 1,110               | - 13.4%        |
| 12      | Stonelaw Rd (A749) <sup>2</sup>               | Southbound | 9,128                      | 7,907                   | - 1,221               | - 13.4%        |
| 13      | Dalmarnock Rd (A749)                          | Northbound | 9,062                      | 6,728                   | - 2,334               | - 25.8%        |
| 13      | Dalmarnock Rd (A749)                          | Southbound | 8,807                      | 6,158                   | - 2,649               | - 30.1%        |
| 14      | Cambuslang Rd (A724) sth of M74C              | Northbound | -                          | -                       | -                     | -              |
| 14      | Cambuslang Rd (A724) sth of M74C              | Southbound | -                          | -                       | -                     | -              |
| 15      | Glasgow Rd (A724) <sup>1</sup>                | Eastbound  | 7,221                      | 6,944                   | - 277                 | - 3.8%         |
| 15      | Glasgow Rd (A724) <sup>1</sup>                | Westbound  | 8,199                      | 7,900                   | - 299                 | - 3.6%         |
| 16      | Shettleston Rd (A89) <sup>3</sup>             | Eastbound  | 5,571                      | 5,024                   | - 547                 | - 9.8%         |
| 16      | Shettleston Rd (A89) <sup>3</sup>             | Westbound  | 5,659                      | 4,873                   | - 786                 | - 13.9%        |
| 17      | Drumbreck Rd (B768)                           | Northbound | 15,736                     | 13,682                  | - 2,054               | - 13.1%        |
| 17      | Drumbreck Rd (B768)                           | Southbound | 11,213                     | 9,323                   | - 1,890               | - 16.9%        |
| 18      | Barrhead Rd (A736)                            | Eastbound  | 10,491                     | 10,057                  | - 434                 | - 4.1%         |
| 18      | Barrhead Rd (A736)                            | Westbound  | 10,198                     | 7,444                   | - 2,754               | - 27.0%        |
| 19      | Dukes Rd (B762) <sup>1</sup>                  | Northbound | 3,704                      | 3,684                   | - 20                  | - 0.5%         |
| 19      | Dukes Rd (B762) <sup>1</sup>                  | Southbound | 3,464                      | 3,615                   | + 151                 | + 4.4%         |
| 20      | Glasgow Rd (A749)                             | Northbound | 8,877                      | 14,102                  | + 5,225               | + 58.9%        |
| 20      | Glasgow Rd (A749)                             | Southbound | 14,392                     | 13,453                  | - 939                 | - 6.5%         |
| 21      | Stewartfield Way                              | Eastbound  | 11,152                     | 9,078                   | - 2,074               | - 18.6%        |
| 21      | Stewartfield Way                              | Westbound  | 12,072                     | 9,813                   | - 2,259               | - 18.7%        |
| 22      | Glasgow and Edinburgh Rd (A8)                 | Eastbound  | 5,719                      | 6,117                   | + 398                 | + 7.0%         |
| 22      | Glasgow and Edinburgh Rd (A8)                 | Westbound  | 5,182                      | 5,422                   | + 240                 | + 4.6%         |

‡ Before opening flows from October 2010 unless otherwise noted.

<sup>1</sup> May 2011 used rather than October 2010.

<sup>2</sup> February 2011 used rather than October 2010. November 2011 used rather than October 2011.

<sup>3</sup> June 2011 used rather than October 2010. September 2011 used rather than October 2011.

N.B. A hyphen '-' is used where no summary data are available in this month/in a month required for a difference.

**Table 3.6 - 16 Week After Opening 24 Hr Flow Comparisons: Local Roads**

## 24-hour Total

| Plan Id  | Counter location on screenline               | July 2010<br>(vehicles) | July 2011<br>(vehicles) | Difference<br>(vehicles) | Difference<br>(%) |
|--|--|-------------------------|-------------------------|--------------------------|-------------------|
| a-1  | M8 J13 to J14                                | 77,209                  | 68,290                  | - 8,919                  | - 11.6%           |
| b  | Cumbernauld Road (A8) <sup>1</sup>           | 11,391                  | 10,080                  | - 1,311                  | - 11.5%           |
| c  | Duke Street <sup>1</sup>                     | 7,008                   | 9,651                   | + 2,643                  | + 37.7%           |
| d  | Gallowgate (A89) <sup>1</sup>                | 5,630                   | 4,403                   | - 1,227                  | - 21.8%           |
| e  | London Road (A74)*                           | 9,520                   | -                       | -                        |                   |
| f  | Dalmarnock Road (A749)*                      | 8,788                   | 6,508                   | - 2,280                  | - 25.9%           |
| g-1  | M74C Cambuslang (J2) to Polmadie (J1a)       | -                       | 27,892                  | -                        |                   |
| h  | Main Street (B768), Rutherglen <sup>1</sup>  | 8,864                   | 5,947                   | - 2,917                  | - 32.9%           |
| i  | Blairbeth Road (A730)                        | 5,525                   | -                       | -                        |                   |
| j  | Cathkin Road (B759) <sup>1</sup>             | 2,123                   | 1,729                   | - 394                    | - 18.5%           |
| k  | Glasgow Southern Orbital (A727) <sup>1</sup> | 13,623                  | 11,742                  | - 1,881                  | - 13.8%           |
| l-1  | A726   | 14,219                  | 12,289                  | - 1,930                  | - 13.6%           |
| m  | Eglesham Road (B764) <sup>1</sup>            | 1,991                   | 1,886                   | - 105                    | - 5.3%            |
| <b>Total for Westbound crossing direction§</b> |  | 150,846                 | 160,417                 | + 9,571                  | + 6.3%            |
| a-2  | M8 J14 to J13                                | 82,557                  | 71,041                  | - 11,516                 | - 13.9%           |
| b  | Cumbernauld Road (A8) <sup>1</sup>           | 7,776                   | 6,943                   | - 833                    | - 10.7%           |
| c  | Duke Street <sup>1</sup>                     | 9,538                   | 7,618                   | - 1,920                  | - 20.1%           |
| d  | Gallowgate (A89) <sup>1</sup>                | 4,643                   | 3,740                   | - 903                    | - 19.5%           |
| e  | London Road (A74)*                           | 9,385                   | -                       | -                        |                   |
| f  | Dalmarnock Road (A749)*                      | 8,435                   | 5,942                   | - 2,493                  | - 29.6%           |
| g-2  | M74C Polmadie (J1a) to Cambuslang (J2)       | -                       | 29,484                  | -                        |                   |
| h  | Main Street (B768), Rutherglen <sup>1</sup>  | 9,813                   | 6,976                   | - 2,837                  | - 28.9%           |
| i  | Blairbeth Road (A730)                        | 7,142                   | -                       | -                        |                   |
| j  | Cathkin Road (B759) <sup>1</sup>             | 2,152                   | 1,705                   | - 447                    | - 20.8%           |
| k  | Glasgow Southern Orbital (A727) <sup>1</sup> | 12,745                  | 11,089                  | - 1,656                  | - 13.0%           |
| l-2  | A726   | 14,429                  | 12,467                  | - 1,962                  | - 13.6%           |
| m  | Eglesham Road (B764) <sup>1</sup>            | 2,116                   | 1,962                   | - 154                    | - 7.3%            |
| <b>Total for Eastbound crossing direction§</b> |  | 154,204                 | 158,967                 | + 4,763                  | + 3.1%            |

\* An adjacent counter has been used in place of a counter at the screenline where data are not available.

§ The crossing direction totals omit months where data from both before and after are not available.

<sup>1</sup> May 2011 used rather than July 2010.

N.B. A hyphen '-' is used where no summary data are available in this month/in a month required for a difference.

**Table 3.7 - 4 Week After Opening 24 Hr Flow Screenline Comparison**

## 24-hour Total

| Plan Id  | Counter location on screenline               | October<br>2010<br>(vehicles) | October<br>2011<br>(vehicles) | Difference<br>(vehicles) | Difference<br>(%) |
|--|--|-------------------------------|-------------------------------|--------------------------|-------------------|
| a-1  | M8 J13 to J14                                | 76,557                        | 70,502                        | - 6,055                  | - 7.9%            |
| b  | Cumbernauld Road (A8) <sup>1</sup>           | 7,509                         | 10,319                        | + 2,810                  | + 37.4%           |
| c  | Duke Street <sup>1</sup>                     | 4,065                         | 8,882                         | + 4,817                  | + 118.5%          |
| d  | Gallowgate (A89)                             | 10,233                        | -                             | -                        | -                 |
| e  | London Road (A74)*                           | 9,891                         | -                             | -                        | -                 |
| f  | Dalmarnock Road (A749)*                      | 9,062                         | 6,728                         | - 2,334                  | - 25.8%           |
| g-1  | M74C Cambuslang (J2) to Polmadie (J1a)       | -                             | 34,895                        | -                        | -                 |
| h  | Main Street (B768), Rutherglen <sup>2</sup>  | 8,864                         | 6,110                         | - 2,754                  | - 31.1%           |
| i  | Blairbeth Road (A730)                        | -                             | -                             | -                        | -                 |
| j  | Cathkin Road (B759)                          | -                             | -                             | -                        | -                 |
| k  | Glasgow Southern Orbital (A727) <sup>2</sup> | 13,623                        | 12,733                        | - 890                    | - 6.5%            |
| l-1  | A726   | 15,583                        | 12,157                        | - 3,426                  | - 22.0%           |
| m  | Eglesham Road (B764) <sup>2</sup>            | 1,991                         | 1,866                         | - 125                    | - 6.3%            |
| <b>Total for Westbound crossing direction§</b> |  | 137,254                       | 164,192                       | + 26,938                 | + 19.6%           |
| a-2  | M8 J14 to J13                                | 84,177                        | 73,873                        | - 10,304                 | - 12.2%           |
| b  | Cumbernauld Road (A8) <sup>1</sup>           | 9,994                         | 8,451                         | - 1,543                  | - 15.4%           |
| c  | Duke Street <sup>1</sup>                     | 10,587                        | 8,054                         | - 2,533                  | - 23.9%           |
| d  | Gallowgate (A89)                             | 4,195                         | -                             | -                        | -                 |
| e  | London Road (A74)*                           | 9,799                         | -                             | -                        | -                 |
| f  | Dalmarnock Road (A749)*                      | 8,807                         | 6,158                         | - 2,649                  | - 30.1%           |
| g-2  | M74C Polmadie (J1a) to Cambuslang (J2)       | -                             | 32,676                        | -                        | -                 |
| h  | Main Street (B768), Rutherglen <sup>2</sup>  | 9,813                         | 7,101                         | - 2,712                  | - 27.6%           |
| i  | Blairbeth Road (A730)                        | -                             | -                             | -                        | -                 |
| j  | Cathkin Road (B759) <sup>2</sup>             | 2,152                         | 1,725                         | - 427                    | - 19.8%           |
| k  | Glasgow Southern Orbital (A727) <sup>2</sup> | 12,745                        | 11,383                        | - 1,362                  | - 10.7%           |
| l-2  | A726   | 16,030                        | 13,103                        | - 2,927                  | - 18.3%           |
| m  | Eglesham Road (B764) <sup>2</sup>            | 2,116                         | 2,005                         | - 111                    | - 5.2%            |
| <b>Total for Eastbound crossing direction§</b> |  | 156,421                       | 164,529                       | + 8,108                  | + 5.2%            |

\* An adjacent counter has been used in place of a counter at the screenline where data are not available.

§ The crossing direction totals omit months where data from both before and after are not available.

<sup>1</sup> September rather than October used in both years.

<sup>2</sup> May 2011 used rather than October 2010.

N.B. A hyphen '-' is used where no summary data are available in this month/in a month required for a difference.

**Table 3.8 - 16 Week After Opening 24 Hr Flow Screenline Comparison**

It can be seen from Table 3.1 and 3.2 that immediately following the opening of the M74 Completion scheme the following changes in traffic flows and traffic flow patterns were observed across the strategic motorway network:

- Along the northern section of the M8, between J8 and J17/18, large reductions in flows are observed of around 10,000 vehicles per day in each direction. This equates to reductions in flows of around 18%.
- On the M8 secondary carriageway between J21 and J22, west of the connection with the new road, increases in traffic flows are observed. For example, westbound the observed flow increases by almost 22,000 vehicles after the M74 Completion scheme opened. This increase is accompanied by a decrease of over 9,000 vehicles per day along the adjacent M8 main carriageway as traffic switches to the new route.

[Note: there would however appear to be some potential for the counters in this area to be unreliable due to the various construction works and contraflows during the scheme construction. A degree of care is therefore needed when considering the initial changes being reported in this area.]

- Along the M8 west of the M77, the eastbound and westbound flows increase by around 6,000 vehicles per day in each direction (10 - 12%).
- Across the Kingston Bridge the north and southbound flows reduce by around 8,000 vehicles per day (around 10%) in each direction.
- On the M73 between J1 and J2, the northbound flows reduce by around 4,500 vehicles per day (10%) and by around 3,000 vehicles per day (7%) southbound.
- On the M74 between Fullarton Road (J2a) and Maryville (J4) large increases in flows are observed, in some cases doubling or near doubling. For example, there is an increase of around 14,400 vehicles per day (98%) northbound between Carmyle Avenue (J3) and Fullarton Road (J2a) and an increase of around 15,700 vehicles per day (115%) southbound.
- On the M77 increases in flows are observed in both directions; these are greater in magnitude further north, north of the alternative east west routes. For example, northbound there is an increase of around 1,000 vehicles per day (3%) observed between Crookfur (J4) and Nitshill (J3) increasing to more than 3,200 vehicles per day (around 10%) between Dumbreck (J1) and Plantation Interchange (M8 J22). A similar pattern is observed in the southbound direction, but to a lesser magnitude.

From Tables 3.4 and 3.5, it can be seen that the changes across the strategic motorway network in October 2011 are fairly consistent with the immediate changes seen in July 2011 - both the magnitude and the overall pattern of the changes.

From Table 3.3 it can be seen that immediately following the opening of the M74 Completion scheme a number of changes in traffic flows and traffic flow patterns were observed across the local road network, including:

- Reductions in flows along almost all roads parallel to the M74 Completion scheme e.g. Cumberland Street, and increases in flows along streets accessing the new scheme e.g. Polmadie Road.
- Cumberland Street - potential reductions of almost 42% (westbound)
- Main Street Rutherglen West - potential reductions of almost 30% in each direction
- Dalmarnock Road - potential reductions of around 30% in each direction
- Glasgow Road (A749) - a potential increase of over 60% northbound
- Polmadie Road - increases of over 100% in each direction.



It should be noted however that although the changes across the local road network are generally consistent with what would be expected i.e. reductions on those roads where traffic can re-route to the new scheme and increases along those roads which access the junctions on the new scheme, some of the changes being observed along the local roads should not be considered fully robust due to either potentially faulty counter equipment e.g. Glasgow Road (northbound), or the likelihood of flows being affected by roadworks in the surrounding area e.g. at Dalmarnock Road and Main Street Rutherglen. A degree of care is therefore needed when considering changes along a number of the local roads.

Table 3.6 confirms that the flow changes along the local roads 16 weeks after the opening of the scheme are generally consistent with those in the immediate 4 week period after the opening of the scheme. The main exception to this is westbound Barrhead Road where the reduction in flow increases from around 1,000 vehicles per day (-10%) in the 4 week after opening period to 2,750 vehicles (-27%) in the 16 week after opening period.

The changes in flows across the local road network will be kept under close review as the project evaluation continues.

In addition to examining the changes in flows and flow patterns across the strategic and local road networks, the project evaluation also considered the changes across a north-south screenline. The screenline extended from the M8 motorway in the north to the B764 Eaglesham Road in the south. Although only the main east-west routes crossing the screenline were considered, it was necessary to install a number of new traffic counters along certain routes.

The changes in flows across the screenline are presented in Tables 3.7 and 3.8.

It can be seen from Table 3.7 that in the immediate 4 week period after the scheme opening the flows across nearly all the existing east-west routes reduced as traffic diverted to the new scheme. Across the screenline as a whole the total 2-way flows increased by around 5%.

Although the changes in flows observed in the 16 week after opening period are generally consistent with the 4 week after opening flows, for two of the westbound counters at Cumbernauld Road and Duke Street, the observed flows differ significantly from flows observed during all other months available which suggests that this data may be corrupt.. Similarly, a degree of care is also needed when considering the flows along both Dalmarnock Road and Main Street Rutherglen because of roadworks that were likely to be affecting the observed flows.

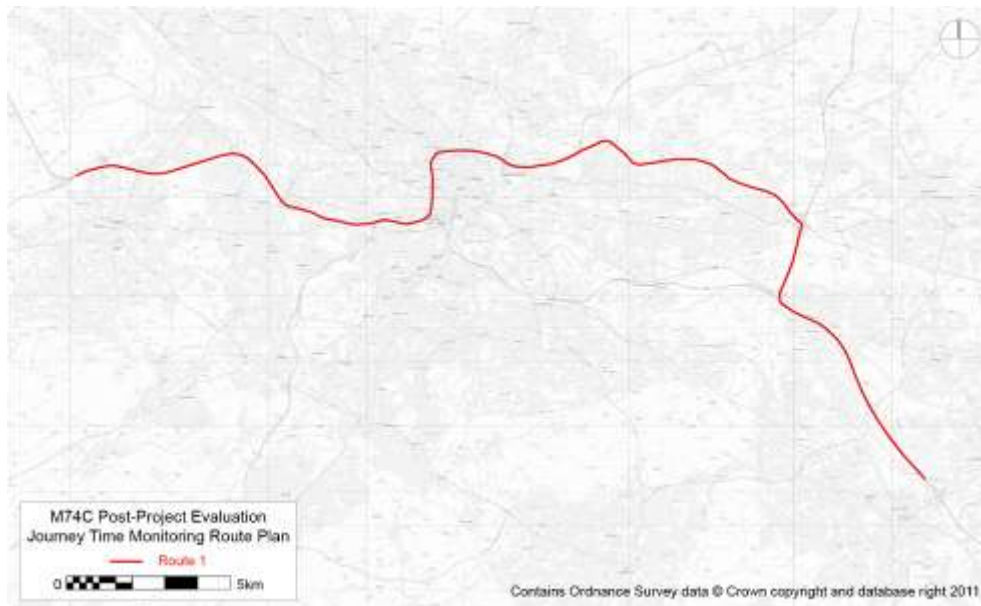
The biggest absolute change on the local road network is therefore seen in either direction along the A726, a parallel route to the south of the M74 Completion scheme. In the 4 week period after opening reductions of around 2,000 vehicles per day (14%) were seen in each direction along the A726, increasing to between 2,900 and 3,400 vehicles per day (18-22%) in the 16 week period.

### *Journey Times*

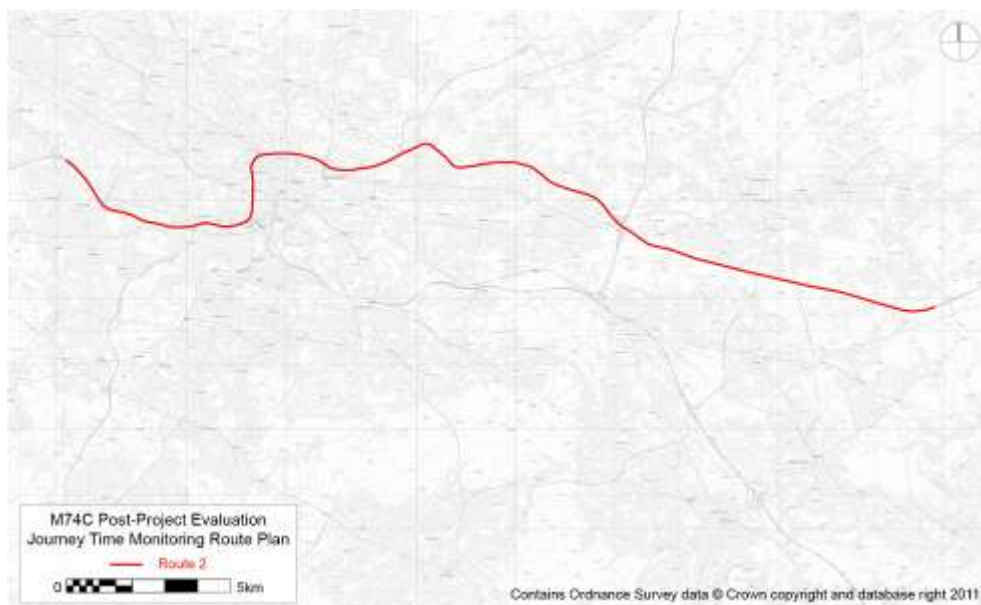
In addition to examining the changes in traffic flows and traffic flow patterns across the study area, the initial project evaluation has also examined journey times along a number of key routes, namely:

- Route 1: Hamilton to Glasgow Airport via M73 & M8
- Route 2: Hillington to Newhouse
- Route 3: Newton Mearns to Glasgow City Centre
- Route 4: Hamilton to Glasgow Airport via M74 Completion & M8

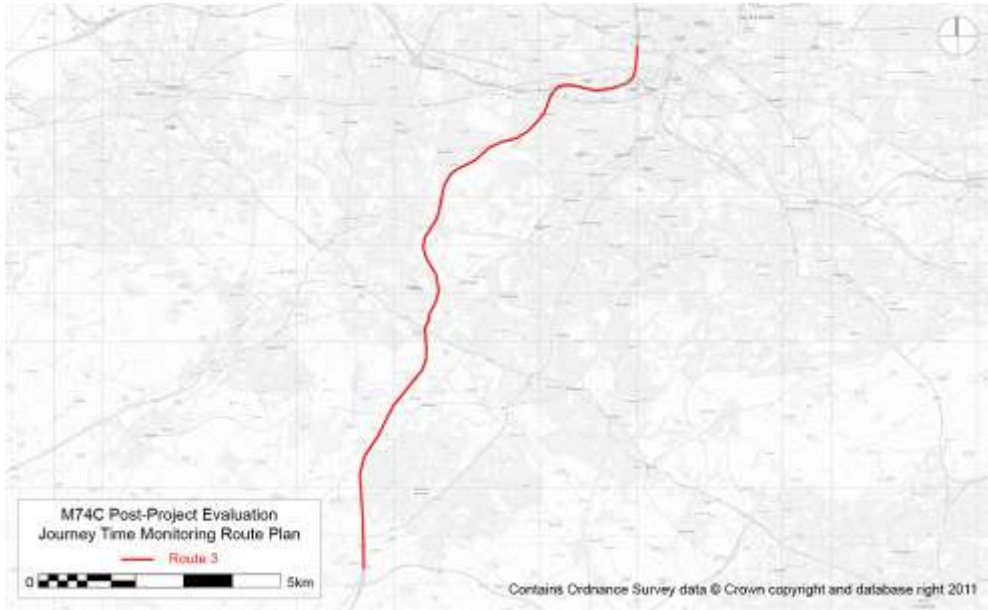
The actual routes surveyed are presented in Figures 3.1 to 3.4.



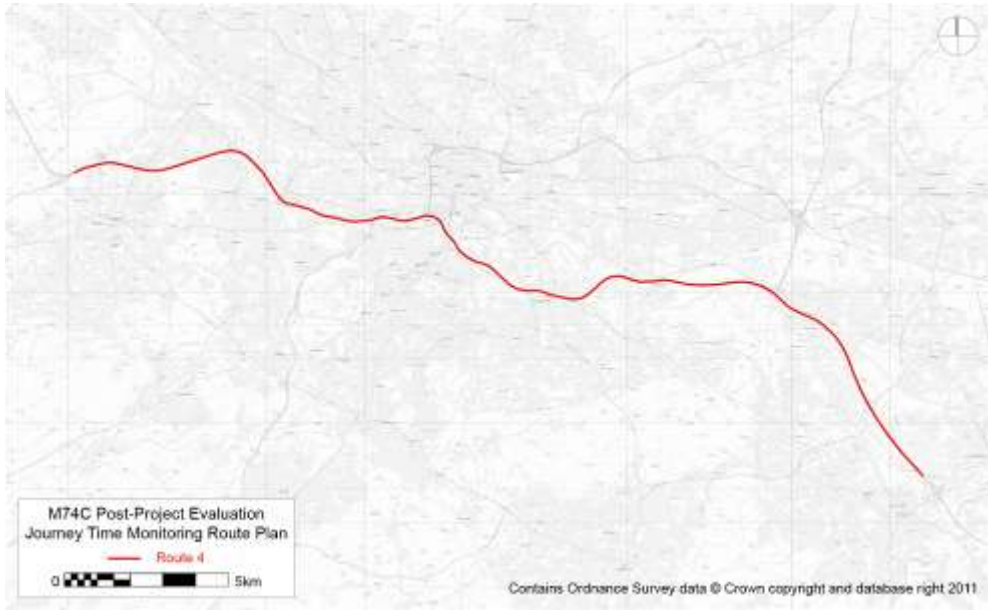
**Figure 3.1 - Route 1: Hamilton to Glasgow Airport via M73 & M8**



**Figure 3.2 - Route 2: Hillington to Newhouse**



**Figure 3.3 - Route 3: Newton Mearns to Glasgow City Centre**



**Figure 3.4 - Route 4: Hamilton to Glasgow Airport via M74 Completion & M8**

Table 3.9 presents the comparison of journey times along the routes before and after the opening of the M74 Completion scheme.

*AM Period: 06:40 - 10:00*

| Route | Direction  | Av. Before* | Aug '11 Mean | Dec '11 Mean | Before vrs. Aug '11†          |                        | Before vrs. Dec '11†          |                        |
|-------|------------|-------------|--------------|--------------|-------------------------------|------------------------|-------------------------------|------------------------|
|       |            | (HH:MM:SS)  | (HH:MM:SS)   | (HH:MM:SS)   | Difference in Mean (HH:MM:SS) | Difference in Mean (%) | Difference in Mean (HH:MM:SS) | Difference in Mean (%) |
| 1     | Westbound  | 00:37:05    | 00:25:09     | 00:30:34     | -00:11:56                     | - 32.2%                | -00:06:31                     | - 17.6%                |
|       | Eastbound  | 00:32:52    | 00:27:06     | 00:32:20     | -00:05:46                     | - 17.5%                | -00:00:32                     | - 1.6%                 |
| 4     | Westbound  | -           | 00:21:00     | 00:23:08     | -00:16:05                     | - 43.4%                | -00:13:57                     | - 37.6%                |
|       | Eastbound  | -           | 00:21:38     | 00:25:28     | -00:11:14                     | - 34.2%                | -00:07:24                     | - 22.5%                |
| 2     | Eastbound  | 00:28:38    | 00:24:45     | 00:27:31     | -00:03:53                     | - 13.6%                | -00:01:07                     | - 3.9%                 |
|       | Westbound  | 00:35:09    | 00:25:41     | 00:30:42     | -00:09:28                     | - 26.9%                | -00:04:27                     | - 12.7%                |
| 3     | Northbound | 00:16:41    | 00:20:23     | 00:25:23     | +00:03:42                     | + 22.2%                | +00:08:42                     | + 52.1%                |
|       | Southbound | 00:10:15    | 00:10:48     | 00:11:32     | +00:00:33                     | + 5.4%                 | +00:01:17                     | + 12.5%                |

\* 'Av. Before' presents a weighted average of observations from the November 2010 and May 2011 data collection programmes.

† Before vrs. after differences compare Route 4 after to Route 1 equivalent before.

*Inter Peak Period: 11:10 - 14:30*

| Route | Direction  | Av. Before* | Aug '11 Mean | Dec '11 Mean | Before vrs. Aug '11†          |                        | Before vrs. Dec '11†          |                        |
|-------|------------|-------------|--------------|--------------|-------------------------------|------------------------|-------------------------------|------------------------|
|       |            | (HH:MM:SS)  | (HH:MM:SS)   | (HH:MM:SS)   | Difference in Mean (HH:MM:SS) | Difference in Mean (%) | Difference in Mean (HH:MM:SS) | Difference in Mean (%) |
| 1     | Westbound  | 00:24:00    | 00:24:00     | 00:26:29     | 00:00:00                      | 0.0%                   | +00:02:29                     | + 10.3%                |
|       | Eastbound  | 00:24:21    | 00:24:09     | 00:27:11     | -00:00:12                     | - 0.8%                 | +00:02:50                     | + 11.6%                |
| 4     | Westbound  | -           | 00:20:06     | 00:20:44     | -00:03:54                     | - 16.3%                | -00:03:16                     | - 13.6%                |
|       | Eastbound  | -           | 00:20:06     | 00:20:58     | -00:04:15                     | - 17.5%                | -00:03:23                     | - 13.9%                |
| 2     | Eastbound  | 00:20:38    | 00:20:17     | 00:22:04     | -00:00:21                     | - 1.7%                 | +00:01:26                     | + 6.9%                 |
|       | Westbound  | 00:19:56    | 00:19:52     | 00:20:25     | -00:00:04                     | - 0.3%                 | +00:00:29                     | + 2.4%                 |
| 3     | Northbound | 00:10:03    | 00:10:27     | 00:10:56     | +00:00:24                     | + 4.0%                 | +00:00:53                     | + 8.8%                 |
|       | Southbound | 00:10:08    | 00:10:22     | 00:11:10     | +00:00:14                     | + 2.3%                 | +00:01:02                     | + 10.2%                |

\* 'Av. Before' presents a weighted average of observations from the November 2010 and May 2011 data collection programmes.

† Before vrs. after differences compare Route 4 after to Route 1 equivalent before.

*PM Peak Period: 15:40 - 19:00*

| Route | Direction  | Av. Before* | Aug '11 Mean | Dec '11 Mean | Before vrs. Aug '11†          |                        | Before vrs. Dec '11†          |                        |
|-------|------------|-------------|--------------|--------------|-------------------------------|------------------------|-------------------------------|------------------------|
|       |            | (HH:MM:SS)  | (HH:MM:SS)   | (HH:MM:SS)   | Difference in Mean (HH:MM:SS) | Difference in Mean (%) | Difference in Mean (HH:MM:SS) | Difference in Mean (%) |
| 1     | Westbound  | 00:33:38    | 00:29:52     | 00:37:18     | -00:03:46                     | - 11.2%                | +00:03:40                     | + 10.9%                |
|       | Eastbound  | 00:39:53    | 00:26:10     | 00:34:25     | -00:13:43                     | - 34.4%                | -00:05:28                     | - 13.7%                |
| 4     | Westbound  | -           | 00:24:34     | 00:26:27     | -00:09:04                     | - 27.0%                | -00:07:11                     | - 21.4%                |
|       | Eastbound  | -           | 00:21:54     | 00:24:40     | -00:17:59                     | - 45.1%                | -00:15:13                     | - 38.2%                |
| 2     | Eastbound  | 00:39:16    | 00:21:30     | 00:32:59     | -00:17:46                     | - 45.2%                | -00:06:17                     | - 16.0%                |
|       | Westbound  | 00:46:23    | 00:26:16     | 00:34:29     | -00:20:07                     | - 43.4%                | -00:11:54                     | - 25.7%                |
| 3     | Northbound | 00:13:00    | 00:10:31     | 00:12:30     | -00:02:29                     | - 19.1%                | -00:00:30                     | - 3.8%                 |
|       | Southbound | 00:13:11    | 00:13:24     | 00:16:35     | +00:00:13                     | + 1.6%                 | +00:03:24                     | + 25.8%                |

\* 'Av. Before' presents a weighted average of observations from the November 2010 and May 2011 data collection programmes.

† Before vrs. after differences compare Route 4 after to Route 1 equivalent before.

**Table 3.9 - Before & After Opening Journey Time Comparisons**

It can be seen from Table 3.9 that for both the east - west routes surveyed (Routes 1 & 2), there were reductions in journey times in both directions in all time periods immediately after the opening of the scheme i.e. August 2011 v Average Before. These reductions were as much as 20 minutes (43%) - westbound along Route 2 in the PM peak.

Whilst the equivalent comparisons for December 2011 generally continue to show reductions in travel times in the AM and PM periods along these routes, albeit it of a lesser magnitude than the August comparisons, the travel times in the Inter Peak period have now increased. As the December 2011 surveys, and in particular the December Inter Peak surveys, would have coincided with Christmas shoppers, a degree of care needs to be taken when considering these changes.

The comparisons of journey times along Route 3, between Newton Mearns and the city centre via the M77 and M8, show that in all the time periods after the opening of the M74 Completion scheme the southbound journey times have increased, although generally by only a small amount. The northbound journey times have increased in both the AM and Interpeak periods but have decreased slightly in the PM peak when traffic is now generally free flowing. The increases in journey times along Route 3 appear to mainly occur along the M77 section of the route. Any increases in journey times are generally larger in the December 2011 surveys than in the equivalent August 2011 surveys.

Some of the largest changes in journey times, across both the AM and PM time periods, are however seen when comparing Routes 1 and 4 i.e. between Hamilton and Glasgow airport via the M73 / M8 and the M74 Completion / M8. With the availability of the new scheme trips between the M74 south and the M8 west no longer need to go via the M73 and M8 northern flank and can instead head straight along the M74 Completion scheme. Journey time savings for these trips are seen to reduce by as much as 16 minutes (43%) in the AM peak (westbound) and by almost 18 minutes (45%) in the PM peak (eastbound). Although both these reductions were associated with the August 2011 journey time comparisons the equivalent December 2011 comparisons remain consistently high i.e. 14 minutes (38%) westbound in the AM peak and 15 minutes (38%) eastbound in the PM peak.

The journey times along the four routes considered will continue to be monitored as the project evaluation continues.

#### **4. SUMMARY & CONCLUSIONS**

The monitoring and evaluation of the M74 Completion scheme is part of Transport Scotland's responsibility as the Trunk Road Authority and reflects the requirements presented in STAG as well as the emerging guidance on project evaluation contained in STRIPE - Scottish Trunk Road Infrastructure Project Evaluation.

The monitoring and evaluation of the M74 Completion scheme will continue for a period of up to five years after the opening of the scheme and will examine all aspects of the scheme's performance. During this time a number of reports will be prepared and presented on the Transport Scotland website.

Since the opening of the scheme in June 2011 traffic flows and journey time information have been collected and it is possible to compare this against the equivalent data collected before the scheme opened. Comparisons of the before and after flows as well as the before and after journey times have therefore been presented in this paper.

These initial comparisons show that the scheme is largely meeting its key objectives of removing traffic from the northern and western flanks of the M8 motorway network i.e. up to 20,000 vehicles per day, as well as off the adjacent local road network. Furthermore the scheme has reduced east-west journey time across the motorway network and greater Glasgow area. Trips between the M74 south and the M8 west are experiencing some very large reductions in travel times by using the new M74 Completion scheme rather than the 'old' route via the M73 and M8 i.e. up to 18 minutes (or 45%).

Although the comparisons presented in this paper only represent a snapshot of the initial impacts within the greater Glasgow area resulting from the opening of the M74 Completion scheme, it is very reassuring and satisfying that they are in line with expectations. The monitoring and evaluation of the M74 Completion scheme will continue until 2016 during which time the wider impacts of the scheme will be considered and reported - these include the environmental impacts, economic impacts and safety impacts.