

# **A9 Data Monitoring Report**

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## **1. Overview**

The A9 Safety Group was set up by Transport Scotland in July 2012. The main aim of the group is to work together to positively influence driver behaviour in a way that helps to reduce road casualty figures on the route before and during the A9 dualling programme.

To assess the impact of the A9 average speed camera system it has been agreed to monitor a number of key performance indicators across the route and compare them on an on-going basis with an established baseline comprising of data gathered prior to the introduction of the camera system. More information on these baselines is contained within this report.

This report is structured as a live document to be updated on a regular basis to allow for regular monitoring against the established baseline. It uses established Transport Scotland data sources and does not contain information on the technical performance of the average speed camera system, the operational management of the system or the number of offenders detected. These aspects all fall within the responsibility of Police Scotland.

## **2. Purpose**

The A9 average speed camera system is the largest route based safety strategy in existence in the UK and is one of the principle strategies introduced by the A9 Safety Group to change driver behaviour on the route. The overall aim is to reduce casualties while improving journey time reliability through reduced incident occurrence on the route.

The A9 strategy key deliverables are:

- Casualty Reduction
- Reduction in excessive speeding
- Incident frequency reduction
- Journey time reliability

From these key deliverables an assessment can be made not only on the key casualty reduction indicator but also an identification of improvements in the operational efficiency on the route. Driver attitude is more of a subjective issue and a repeat of the driver survey carried out in May 2014 has been repeated in March 2015 to provide a comparative analysis on this subject. A synopsis of this report can be found within the Data Analysis report for April 2015 while the full report is published at <http://a9road.info/>

The principle purpose of this report is to provide on-going monitoring of the evidence base emerging from the A9 to support an overall assessment of the impact of the strategy. This will also provide the evidence base for any further supporting engineering or educational measures if required.

### **3. Baseline Statistics from Vehicle Speed and Speed Enforcement Summary Report 2012**

The Vehicle Speed and Speed Enforcement Summary Report 2012 was the primary evidence base for establishing vehicle speeds across the A9 and in respect to the Perth to Inverness section the data has been utilised as the baseline for comparison purposes. This data was gathered during a neutral month to avoid the influence of seasonal variations.

### **4. Casualty Analysis**

The casualty analysis follows established practice for road safety schemes in providing the data for the three years before the introduction of the scheme and the three years after. The casualty classification is also in standard format with the Killed Seriously Injured (KSI) being the key performance indicator.

In respect to the three years after while the scheme was not introduced until October 2014 construction work on the system commenced in March 2014 and immediately impacted on driver behaviour. 2014 has therefore been incorporated within the reporting but is qualified that the system was not fully operational until October.

The Road Accident statistics are compiled from returns made by police forces which follow and agreed national standard known as 'Stats 19'. These returns are subject to a validation process and given the steps involved this effectively means that it can take up to 9 months before accurate statistics are available.

The commencement of the dualling project in late 2015 will create a like for like comparison difficult so an additional comparative spread sheet has been established which identifies the casualties within each of the seven single carriageway sections of the A9 monitored by the average speed cameras. This will cater for comparative analysis within each of these sections as the dualling progresses.

In the longer term the performance of the A9 will also be measured against the casualty reduction targets contained within Scotland's Road Safety Framework to 2020.

## **5. Vehicle Speed Data**

The vehicle speed data has been gathered from existing Transport Scotland infrastructure on the A9 or where this has not been available from mobile data gathering equipment placed on the route. The data gathered is spot speed from the respective counters and not average speed which is assessed by the camera system for enforcement purposes.

Between Perth and Inverness a counter site was identified within each of the seven single carriageway sections and where possible the same counter site used in the 2012 speed survey was utilised. Due to maintenance upgrades and other limitations this was not possible in every section and the closest alternative was used instead.

Between Dunblane and Perth the baseline figure was established in September 2014 using portable equipment positioned near to the then proposed camera sites which had not been constructed at this point. Following construction counter sites positioned close to the original sites were utilised for data collection

To allow for consistency in the analysis data is gathered from all sites during the first week of each month (Mon – Sun). This will allow for seasonal trends to be incorporated within all data sets.

On some occasions data sets were not available from specific sites due to technical reasons. The majority of traffic counter sites are solar powered and prolonged poor weather in winter with limited daylight hours can impact on power availability. Maintenance and resurfacing schemes can also interrupt data collection.

## **6. Incident Frequency & Impact**

The incident frequency data is gathered from Traffic Scotland's incident management database and looks at all incidents on the A9 resulting in a carriageway closure or restriction. It does not include weather related closures (it does include incidents which may happen during weather events) or planned closures such as road works.

The analysis of this data is based on restriction time with the output given in hours. The analysis does not consider anything which may have impacted on the closure times.

The data output does provide an overall comparison in terms of the operational efficiency of the route and the subsequent journey time reliability.

## **7. Journey Time Analysis – Perth to Inverness**

Journey Times on the A9 are measured using Bluetooth technology and the available data is sourced from Transport Scotland's established journey time stations immediately north of Inveralmond Roundabout, Perth and immediately south of the A96 Raigmore junction, Inverness. The data is gathered in a similar fashion to the speed data in that it comprises of the first week of each month. A further filter has also been applied to use only the time period 07:00 to 19:00 each day which provides a more realistic picture of travel time during normal traffic conditions.

Roadworks can significantly impact on journey times and while routine maintenance on the route is to be expected where there have been significant projects leading to delays these are qualified along with an estimation of the delay.

## **9. Traffic Volumes**

To allow for a comparison of traffic volumes on the A9 between Perth & Inverness data has been taken from three counting stations on this stretch of the route to provide an overview of activity. The current baseline shown will be expanded with each month to provide the comparative analysis year on year.

The figures represent the seven day annual average daily flow which is the standard reporting format for this type of data.

**Appendix A Accident & Casualty Analysis – Dunblane to Perth**

| DUNBLANE TO PERTH                     |        |                   |     |                  |       |                                       |        |                   |     |                  |       |
|---------------------------------------|--------|-------------------|-----|------------------|-------|---------------------------------------|--------|-------------------|-----|------------------|-------|
| <b>3 YEARS BEFORE</b>                 |        |                   |     |                  |       | <b>3 YEARS AFTER</b>                  |        |                   |     |                  |       |
| <b>ACCIDENTS - DUNBLANE TO PERTH</b>  |        |                   |     |                  |       | <b>ACCIDENTS - DUNBLANE TO PERTH</b>  |        |                   |     |                  |       |
| Year                                  | Fatal  | Serious           | KSI | Slight           | Total | Year                                  | Fatal  | Serious           | KSI | Slight           | Total |
| 01 January 11 - 31 December 11        | 1      | 3                 | 4   | 14               | 18    | 01 January 14 - 31 December 14        |        |                   |     |                  |       |
| 01 January 12 - 31 December 12        | 0      | 5                 | 5   | 20               | 25    | 01 January 15 - 31 December 15        |        |                   |     |                  |       |
| 01 January 13 - 31 December 13        | 1      | 3                 | 4   | 19               | 23    | 01 January 16 - 31 December 16        |        |                   |     |                  |       |
| Total                                 | 2      | 11                | 13  | 53               | 66    | Total                                 |        |                   |     |                  |       |
| Average Annual                        | 0.7    | 3.7               | 4.3 | 17.7             | 22.0  | Average Annual AFTER                  |        |                   |     |                  |       |
|                                       |        |                   |     |                  |       | Average Annual BEFORE                 |        |                   |     |                  |       |
|                                       |        |                   |     |                  |       | Average Annual DIFFERENCE             |        |                   |     |                  |       |
|                                       |        |                   |     |                  |       | Percentage DIFFERENCE                 |        |                   |     |                  |       |
| <b>CASUALTIES - DUNBLANE TO PERTH</b> |        |                   |     |                  |       | <b>CASUALTIES - DUNBLANE TO PERTH</b> |        |                   |     |                  |       |
| Year                                  | Killed | Seriously Injured | KSI | Slightly Injured | Total | Year                                  | Killed | Seriously Injured | KSI | Slightly Injured | Total |
| 01 January 11 - 31 December 11        | 1      | 3                 | 4   | 20               | 24    | 01 January 14 - 31 December 14        |        |                   |     |                  |       |
| 01 January 12 - 31 December 12        | 0      | 5                 | 5   | 25               | 30    | 01 January 15 - 31 December 15        |        |                   |     |                  |       |
| 01 January 13 - 31 December 13        | 1      | 3                 | 4   | 33               | 37    | 01 January 16 - 31 December 16        |        |                   |     |                  |       |
| Total                                 | 2      | 11                | 13  | 78               | 91    | Total                                 |        |                   |     |                  |       |
| Average Annual                        | 0.7    | 3.7               | 4.3 | 26.0             | 30.3  | Average Annual AFTER                  |        |                   |     |                  |       |
|                                       |        |                   |     |                  |       | Average Annual BEFORE                 |        |                   |     |                  |       |
|                                       |        |                   |     |                  |       | Average Annual DIFFERENCE             |        |                   |     |                  |       |
|                                       |        |                   |     |                  |       | Percentage DIFFERENCE                 |        |                   |     |                  |       |

**Appendix B - Accident & Casualty Analysis – Perth to Inverness**

| PERTH TO INVERNESS                     |        |                   |      |                  |       |  |        |                   |     |                  |       |
|--|--------|-------------------|------|------------------|-------|--|--------|-------------------|-----|------------------|-------|
| <b>3 YEARS BEFORE</b>                  |        |                   |      |                  |       | <b>3 YEARS AFTER</b>                   |        |                   |     |                  |       |
| <b>ACCIDENTS - PERTH TO INVERNESS</b>  |        |                   |      |                  |       | <b>ACCIDENTS - PERTH TO INVERNESS</b>  |        |                   |     |                  |       |
| Year                                   | Fatal  | Serious           | KSI  | Slight           | Total | Year                                   | Fatal  | Serious           | KSI | Slight           | Total |
| 01 January 11 - 31 December 11         | 6      | 5                 | 11   | 29               | 40    | 01 January 14 - 31 December 14         |        |                   |     |                  |       |
| 01 January 12 - 31 December 12         | 5      | 8                 | 13   | 30               | 43    | 01 January 15 - 31 December 15         |        |                   |     |                  |       |
| 01 January 13 - 31 December 13         | 4      | 10                | 14   | 22               | 36    | 01 January 16 - 31 December 16         |        |                   |     |                  |       |
| Total                                  | 15     | 23                | 38   | 81               | 119   | Total                                  |        |                   |     |                  |       |
| Average Annual                         | 5.0    | 7.7               | 12.7 | 27.0             | 39.7  | Average Annual AFTER                   |        |                   |     |                  |       |
|  |        |                   |      |                  |       | Average Annual BEFORE                  |        |                   |     |                  |       |
|  |        |                   |      |                  |       | Average Annual DIFFERENCE              |        |                   |     |                  |       |
|  |        |                   |      |                  |       | Percentage DIFFERENCE                  |        |                   |     |                  |       |
| <b>CASUALTIES - PERTH TO INVERNESS</b> |        |                   |      |                  |       | <b>CASUALTIES - PERTH TO INVERNESS</b> |        |                   |     |                  |       |
| Year                                   | Killed | Seriously Injured | KSI  | Slightly Injured | Total | Year                                   | Killed | Seriously Injured | KSI | Slightly Injured | Total |
| 01 January 11 - 31 December 11         | 8      | 16                | 24   | 60               | 84    | 01 January 14 - 31 December 14         |        |                   |     |                  |       |
| 01 January 12 - 31 December 12         | 8      | 16                | 24   | 91               | 115   | 01 January 15 - 31 December 15         |        |                   |     |                  |       |
| 01 January 13 - 31 December 13         | 6      | 17                | 23   | 39               | 62    | 01 January 16 - 31 December 16         |        |                   |     |                  |       |
| Total                                  | 22     | 49                | 71   | 190              | 261   | Total                                  |        |                   |     |                  |       |
| Average Annual                         | 7.3    | 16.3              | 23.7 | 63.3             | 87.0  | Average Annual AFTER                   |        |                   |     |                  |       |
|  |        |                   |      |                  |       | Average Annual BEFORE                  |        |                   |     |                  |       |
|  |        |                   |      |                  |       | Average Annual DIFFERENCE              |        |                   |     |                  |       |
|  |        |                   |      |                  |       | Percentage DIFFERENCE                  |        |                   |     |                  |       |

**Appendix C - Accident & Casualty Analysis – Perth to Inverness - Single & Dual Carriageway Separation**

| PERTH TO INVERNESS                    |       |         |     |        |       |                                |       |         |     |        |       |
|---------------------------------------|-------|---------|-----|--------|-------|--------------------------------|-------|---------|-----|--------|-------|
| 3 YEARS BEFORE                        |       |         |     |        |       | 3 YEARS AFTER                  |       |         |     |        |       |
| <b>Single Carriageway All Purpose</b> |       |         |     |        |       |                                |       |         |     |        |       |
| ACCIDENTS - PERTH TO INVERNESS        |       |         |     |        |       | ACCIDENTS - PERTH TO INVERNESS |       |         |     |        |       |
| Year                                  | Fatal | Serious | KSI | Slight | Total | Year                           | Fatal | Serious | KSI | Slight | Total |
| 01 January 11 - 31 December 11        | 5     | 4       | 9   | 24     | 33    | 01 January 14 - 31 December 14 |       |         |     |        |       |
| 01 January 12 - 31 December 12        | 4     | 6       | 10  | 24     | 34    | 01 January 15 - 31 December 15 |       |         |     |        |       |
| 01 January 13 - 31 December 13        | 2     | 8       | 10  | 13     | 23    | 01 January 16 - 31 December 16 |       |         |     |        |       |
| Total                                 | 11    | 0       | 29  | 0      | 90    | Total                          |       |         |     |        |       |
| Average Annual                        | 3.7   | 6.0     | 9.7 | 20.3   | 30.0  | Average Annual AFTER           |       |         |     |        |       |
|                                       |       |         |     |        |       | Average Annual BEFORE          |       |         |     |        |       |
|                                       |       |         |     |        |       | Average Annual DIFFERENCE      |       |         |     |        |       |
|                                       |       |         |     |        |       | Percentage DIFFERENCE          |       |         |     |        |       |
| <b>Dual Carriageway All Purpose</b>   |       |         |     |        |       |                                |       |         |     |        |       |
| ACCIDENTS - PERTH TO INVERNESS        |       |         |     |        |       | ACCIDENTS - PERTH TO INVERNESS |       |         |     |        |       |
| Year                                  | Fatal | Serious | KSI | Slight | Total | Year                           | Fatal | Serious | KSI | Slight | Total |
| 01 January 11 - 31 December 11        | 1     | 1       | 2   | 5      | 7     | 01 January 14 - 31 December 14 |       |         |     |        |       |
| 01 January 12 - 31 December 12        | 1     | 2       | 3   | 6      | 9     | 01 January 15 - 31 December 15 |       |         |     |        |       |
| 01 January 13 - 31 December 13        | 2     | 2       | 4   | 9      | 13    | 01 January 16 - 31 December 16 |       |         |     |        |       |
| Total                                 | 4     | 0       | 9   | 0      | 29    | Total                          |       |         |     |        |       |
| Average Annual                        | 1.3   | 1.7     | 3.0 | 6.7    | 9.7   | Average Annual AFTER           |       |         |     |        |       |
|                                       |       |         |     |        |       | Average Annual BEFORE          |       |         |     |        |       |
|                                       |       |         |     |        |       | Average Annual DIFFERENCE      |       |         |     |        |       |
|                                       |       |         |     |        |       | Percentage DIFFERENCE          |       |         |     |        |       |



**Appendix D - Vehicle Speed Data – Dunblane to Perth**

| <b>SPEED ANALYSIS DUNBLANE - PERTH (SPOT SPEED)</b> |                       |         |         |       |                      |         |         |       |                      |         |         |       |                      |         |         |       |
|---|-----------------------|---------|---------|-------|----------------------|---------|---------|-------|----------------------|---------|---------|-------|----------------------|---------|---------|-------|
| <b>Sites</b>  | <b>SEPTEMBER 2014</b> |         |         |       | <b>OCTOBER 2014</b>  |         |         |       | <b>NOVEMBER 2014</b> |         |         |       | <b>DECEMBER 2014</b> |         |         |       |
|   | >70                   | 70 - 80 | 80 - 90 | >90   | >70                  | 70 - 80 | 80 - 90 | >90   | >70                  | 70 - 80 | 80 - 90 | >90   | >70                  | 70 - 80 | 80 - 90 | >90   |
| Dunblane N/B  | 32.70%                | 29.21%  | 3.49%   | 0.00% |                      |         |         |       | NOT AVAILABLE        |         |         |       | 5.99%                | 5.67%   | 0.24%   | 0.08% |
| Crieff N/B  | 28.47%                | 25.10%  | 3.37%   | 0.00% |                      |         |         |       | 4.36%                | 4.26%   | 0.10%   | 0.00% | NOT AVAILABLE        |         |         |       |
| Auchterarder N/B                                    | 29.44%                | 25.42%  | 3.71%   | 0.31% |                      |         |         |       | 4.94%                | 4.73%   | 0.19%   | 0.02% | NOT AVAILABLE        |         |         |       |
| Broxden S/B   | 27.74%                | 25.73%  | 2.01%   | 0.00% |                      |         |         |       | 7.57%                | 7.35%   | 0.19%   | 0.03% | 7.63%                | 7.45%   | 0.16%   | 0.02% |
| Dunning S/B   | 33.28%                | 28.87%  | 4.04%   | 0.37% |                      |         |         |       | 8.65%                | 8.33%   | 0.29%   | 0.03% | 9.59%                | 9.27%   | 0.28%   | 0.04% |
| Blackford S/B                                       | 24.81%                | 21.68%  | 2.89%   | 0.24% |                      |         |         |       | 4.01%                | 3.93%   | 0.06%   | 0.02% | 5.47%                | 5.36%   | 0.10%   | 0.01% |
| <b>Sites</b>  | <b>JANUARY 2015</b>   |         |         |       | <b>FEBRUARY 2015</b> |         |         |       | <b>MARCH 2015</b>    |         |         |       | <b>APRIL 2015</b>    |         |         |       |
|   | >70                   | 70 - 80 | 80 - 90 | >90   | >70                  | 70 - 80 | 80 - 90 | >90   | >70                  | 70 - 80 | 80 - 90 | >90   | >70                  | 70 - 80 | 80 - 90 | >90   |
| Dunblane N/B  | NOT AVAILABLE         |         |         |       | 7.69%                | 7.34%   | 0.26%   | 0.09% | NOT AVAILABLE        |         |         |       | NOT AVAILABLE        |         |         |       |
| Crieff N/B  | NOT AVAILABLE         |         |         |       | 4.87%                | 4.77%   | 0.09%   | 0.01% | 5.44%                | 5.32%   | 0.11%   | 0.01% | 6.30%                | 6.16%   | 0.13%   | 0.01% |
| Auchterarder N/B                                    | NOT AVAILABLE         |         |         |       | NOT AVAILABLE        |         |         |       | 8.01%                | 7.91%   | 0.08%   | 0.02% | NOT AVAILABLE        |         |         |       |
| Broxden S/B   | NOT AVAILABLE         |         |         |       | 9.28%                | 9.05%   | 0.21%   | 0.02% | 10.22%               | 9.91%   | 0.28%   | 0.03% | 13.65%               | 13.25%  | 0.38%   | 0.02% |
| Dunning S/B   | NOT AVAILABLE         |         |         |       | 10.74%               | 10.39%  | 0.31%   | 0.04% | 11.65%               | 11.21%  | 0.39%   | 0.05% | NOT AVAILABLE        |         |         |       |
| Blackford S/B                                       | NOT AVAILABLE         |         |         |       | NOT AVAILABLE        |         |         |       | NOT AVAILABLE        |         |         |       | NOT AVAILABLE        |         |         |       |
| <b>Sites</b>  | <b>MAY 2015</b>       |         |         |       | <b>JUNE 2015</b>     |         |         |       | <b>JULY 2015</b>     |         |         |       | <b>AUGUST 2015</b>   |         |         |       |
|   | >70                   | 70 - 80 | 80 - 90 | >90   | >70                  | 70 - 80 | 80 - 90 | >90   | >70                  | 70 - 80 | 80 - 90 | >90   | >70                  | 70 - 80 | 80 - 90 | >90   |
| Dunblane N/B  |                       |         |         |       |                      |         |         |       |                      |         |         |       |                      |         |         |       |
| Crieff N/B  |                       |         |         |       |                      |         |         |       |                      |         |         |       |                      |         |         |       |
| Auchterarder N/B                                    |                       |         |         |       |                      |         |         |       |                      |         |         |       |                      |         |         |       |
| Broxden S/B   |                       |         |         |       |                      |         |         |       |                      |         |         |       |                      |         |         |       |
| Dunning S/B   |                       |         |         |       |                      |         |         |       |                      |         |         |       |                      |         |         |       |
| Blackford S/B                                       |                       |         |         |       |                      |         |         |       |                      |         |         |       |                      |         |         |       |

Appendix E - Vehicle Speed Data – Perth to Inverness

| <b>SPEED ANALYSIS PERTH - INVERNESS (SPOT SPEED)</b> |               |         |         |       |                 |         |         |       |                    |         |         |       |               |         |         |        |  |
|--|---------------|---------|---------|-------|-----------------|---------|---------|-------|--------------------|---------|---------|-------|---------------|---------|---------|--------|--|
| Sites  | MARCH 2012    |         |         |       | MAY / JUNE 2014 |         |         |       | JULY / AUGUST 2014 |         |         |       | NOVEMBER 2014 |         |         |        |  |
|  | >60           | 60-70   | 70-80   | >80   | >60             | 60 - 70 | 70 - 80 | >80   | >60                | 60 - 70 | 70 - 80 | >80   | >60           | 60 - 70 | 70 - 80 | >80    |  |
| Bankfoot   | 27.60%        | 24.03%  | 3.23%   | 0.34% | 6.07%           | 5.60%   | 0.37%   | 0.10% | 12.40%             | 11.40%  | 1.00%   | 0.00% | 5.12%         | 4.78%   | 0.30%   | 0.04%  |  |
| Biram  | 14.10%        | 12.62%  | 1.31%   | 0.17% | 9.40%           | 8.70%   | 0.60%   | 0.10% | 8.50%              | 7.90%   | 0.50%   | 0.10% | 1.80%         | 1.72%   | 0.07%   | 0.01%  |  |
| Faskally   | NOT AVAILABLE |         |         |       | 2.00%           | 1.60%   | 0.40%   | 0.00% | NOT AVAILABLE      |         |         |       | 2.56%         | 2.50%   | 0.06%   | 0.00%  |  |
| Killiecrankie  | 33.85%        | 27.41%  | 5.63%   | 0.81% | 22.90%          | 19.90%  | 2.50%   | 0.50% | 16.50%             | 14.46%  | 1.81%   | 0.23% | 5.92%         | 5.66%   | 0.23%   | 0.03%  |  |
| Dalwhinnie   | 37.39%        | 28.32%  | 7.53%   | 1.54% | 27.73%          | 22.80%  | 4.20%   | 0.73% | 21.02%             | 17.56%  | 2.93%   | 0.53% | 6.15%         | 5.87%   | 0.26%   | 0.02%  |  |
| Kingussie  | 34.27%        | 26.95%  | 6.16%   | 1.16% | 19.49%          | 16.41%  | 2.64%   | 0.44% | 19.39%             | 16.79%  | 2.36%   | 0.24% | 3.61%         | 3.40%   | 0.19%   | 0.02%  |  |
| Moy  | 42.25%        | 34.22%  | 7.08%   | 0.95% | 25.18%          | 22.66%  | 2.30%   | 0.22% | 8.40%              | 4.40%   | 4.00%   | 0.00% | 3.67%         | 3.54%   | 0.12%   | 0.01%  |  |
| Sites  | DECEMBER 2014 |         |         |       | JANUARY 2015    |         |         |       | FEBRUARY 2015      |         |         |       | MARCH 2015    |         |         |        |  |
|  | >60           | 60 - 70 | 70 - 80 | >80   | >60             | 60 - 70 | 70 - 80 | >80   | >60                | 60 - 70 | 70 - 80 | >80   | >60           | 60 - 70 | 70 - 80 | >80    |  |
| Bankfoot   | 6.06%         | 5.65%   | 0.37%   | 0.04% | NOT AVAILABLE   |         |         |       | NOT AVAILABLE      |         |         |       | NOT AVAILABLE |         |         |        |  |
| Biram  | 2.04%         | 1.93%   | 0.08%   | 0.03% | 1.99%           | 1.91%   | 0.07%   | 0.01% | 2.08%              | 2.01%   | 0.06%   | 0.01% | 3.51%         | 3.36%   | 0.14%   | 0.01%  |  |
| Faskally   | 3.12%         | 3.02%   | 0.10%   | 0.00% | NOT AVAILABLE   |         |         |       | NOT AVAILABLE      |         |         |       | 5.26%         | 5.12%   | 0.14%   | N/A    |  |
| Killiecrankie  | 6.86%         | 6.57%   | 0.26%   | 0.03% | 8.69%           | 8.21%   | 0.45%   | 0.03% | 10.30%             | 9.86%   | 0.41%   | 0.03% | 9.86%         | 9.35%   | 0.46%   | 0.05%  |  |
| Dalwhinnie   | 6.49%         | 6.17%   | 0.28%   | 0.04% | 6.33%           | 6.07%   | 0.24%   | 0.02% | 7.99%              | 7.69%   | 0.27%   | 0.03% | 8.04%         | 7.68%   | 0.34%   | 0.02%  |  |
| Kingussie  | 4.22%         | 3.93%   | 0.25%   | 0.04% | NOT AVAILABLE   |         |         |       | 4.80%              | 4.50%   | 0.25%   | 0.05% | 5.19%         | 4.80%   | 0.34%   | 0.05%  |  |
| Moy  | 3.38%         | 3.32%   | 0.06%   | 0.00% | NOT AVAILABLE   |         |         |       | 4.11%              | 4.01%   | 0.09%   | 0.01% | 5.19%         | 5.12%   | 0.07%   | 0.004% |  |
| Sites  | APRIL 2015    |         |         |       | MAY 2015        |         |         |       | JUNE 2015          |         |         |       | JULY 2015     |         |         |        |  |
|  | >60           | 60 - 70 | 70 - 80 | >80   | >60             | 60 - 70 | 70 - 80 | >80   | >60                | 60 - 70 | 70 - 80 | >80   | >60           | 60 - 70 | 70 - 80 | >80    |  |
| Bankfoot   | 7.39%         | 7.03%   | 0.32%   | 0.04% |                 |         |         |       |                    |         |         |       |               |         |         |        |  |
| Biram  | 3.44%         | 3.27%   | 0.14%   | 0.03% |                 |         |         |       |                    |         |         |       |               |         |         |        |  |
| Faskally   | 5.38%         | 5.18%   | 0.20%   | N/A   |                 |         |         |       |                    |         |         |       |               |         |         |        |  |
| Killiecrankie  | 9.41%         | 8.94%   | 0.42%   | 0.05% |                 |         |         |       |                    |         |         |       |               |         |         |        |  |
| Dalwhinnie   | 9.20%         | 8.77%   | 0.39%   | 0.04% |                 |         |         |       |                    |         |         |       |               |         |         |        |  |
| Kingussie  | 5.03%         | 4.68%   | 0.30%   | 0.05% |                 |         |         |       |                    |         |         |       |               |         |         |        |  |
| Moy  | 6.31%         | 6.18%   | 0.12%   | 0.01% |                 |         |         |       |                    |         |         |       |               |         |         |        |  |

Appendix F - Incident Analysis – Dunblane to Inverness

| INCIDENTS            |                   |             |                  |             |            |             |
|----------------------|-------------------|-------------|------------------|-------------|------------|-------------|
|                      | Perth - Inverness |             | Dunblane - Perth |             | A9 Total   |             |
|                      | Incidents         | Restriction | Incidents        | Restriction | Incident   | Restriction |
| Q1 2013              | 31                | 98          | 20               | 41          | 51         | 139         |
| Q2 2013              | 23                | 37          | 20               | 28          | 43         | 65          |
| Q3 2013              | 22                | 46          | 14               | 21          | 36         | 67          |
| Q4 2013              | 41                | 101         | 14               | 31          | 55         | 132         |
| <b>2013 Baseline</b> | <b>135</b>        | <b>282</b>  | <b>49</b>        | <b>121</b>  | <b>184</b> | <b>403</b>  |
| Q1 2014              | 14                | 40          | 22               | 38          | 36         | 78          |
| Q2 2014              | 10                | 22          | 22               | 30          | 32         | 52          |
| Q3 2014              | 16                | 25          | 25               | 26          | 41         | 51          |
| Q4 2014              | 22                | 37          | 21               | 26          | 43         | 63          |
| <b>2014 Total</b>    | <b>62</b>         | <b>124</b>  | <b>90</b>        | <b>120</b>  | <b>152</b> | <b>244</b>  |
| Q1 2015              | 26                | 57          | 12               | 12          | 38         | 69          |
| Q2 2015              |                   |             |                  |             |            |             |
| Q3 2015              |                   |             |                  |             |            |             |
| Q4 2015              |                   |             |                  |             |            |             |
| 2015 Total           |                   |             |                  |             |            |             |

Incident data is drawn from the TrafficScotland Control Centre Incident Logs. Only data involving physical restriction or closure of network is incorporated. Road works data is not included.

Data reflects number of individual incidents and cumulative time in hours.

## Appendix G - Journey Time Analysis – Perth to Inverness

| <b>JOURNEY TIMES</b>     |            |            |            |            |            |            |            |
|--------------------------|------------|------------|------------|------------|------------|------------|------------|
| <b>PERTH - INVERNESS</b> |            |            |            |            |            |            |            |
|                          | <b>Mon</b> | <b>Tue</b> | <b>Wed</b> | <b>Thu</b> | <b>Fri</b> | <b>Sat</b> | <b>Sun</b> |
| Jun-13 N/B               | 116        | 116        | 115        | 117        | 120        | 111        | 109        |
| Jun-13 S/B               | 115        | 118        | 118        | 116        | 124        | 114        | 110        |
| Jun-14 N/B               | 120        | 122        | 120        | 121        | 118        | 112        | 112        |
| Jun-14 S/B               | 121        | 123        | 124        | 122        | 120        | 115        | 113        |
| Nov-14 N/B               | 124        | 128        | 128        | 128        | 124        | 116        | 115        |
| Nov-14 S/B               | 127        | 130        | 131        | 130        | 127        | 122        | 121        |
| Dec-14 N/B               | 131        | 131        | 132        | 128        | 124        | 116        | 124        |
| Dec-14 S/B               | 134        | 133        | 135        | 134        | 131        | 118        | 127        |
| Jan-15 N/B               | 125        | 126        | 126        | 126        | 124        | 123        | 120        |
| Jan-15 S/B               | 127        | 132        | 129        | 129        | 125        | 125        | 119        |
| Feb-15 N/B               | 126        | 128        | 126        | 125        | 123        | 116        | 116        |
| Feb-15 S/B               | 129        | 129        | 126        | 125        | 123        | 117        | 118        |
| Mar-15 N/B               | 125        | 129        | 128        | 127        | 124        | 114        | 116        |
| Mar-15 S/B               | 127        | 128        | 124        | 124        | 123        | 116        | 116        |
| Apr-15 N/B               | 119        | 121        | 122        | 122        | 119        | 116        | 116        |
| Apr-15 S/B               | 124        | 126        | 125        | 124        | 122        | 118        | 116        |
| <b>VARIATION</b>         |            |            |            |            |            |            |            |
| Jun-14 N/B               | 4          | 6          | 5          | 4          | -2         | 1          | 3          |
| Jun -14 S/B              | 6          | 5          | 6          | 6          | -4         | 1          | 3          |
| Nov-14 N/B               | 8          | 12         | 13         | 11         | 4          | 5          | 6          |
| Nov-14 S/B               | 12         | 12         | 13         | 14         | 3          | 8          | 11         |
| Dec-14 N/B               | 15         | 15         | 17         | 11         | 4          | 5          | 15         |
| Dec-14 S/B               | 19         | 15         | 17         | 18         | 7          | 4          | 17         |
| Jan-15 N/B               | 9          | 10         | 11         | 9          | 4          | 12         | 11         |
| Jan-15 S/B               | 12         | 14         | 11         | 13         | 1          | 11         | 9          |
| Feb-15 N/B               | 10         | 12         | 11         | 8          | 3          | 5          | 7          |
| Feb-15 S/B               | 14         | 11         | 8          | 9          | -1         | 3          | 8          |
| Mar-15 N/B               | 9          | 13         | 13         | 10         | 4          | 3          | 7          |
| Mar-15 S/B               | 12         | 10         | 6          | 8          | -1         | 2          | 6          |
| Apr-15 N/B               | 3          | 5          | 7          | 5          | -1         | 5          | 7          |
| Apr-15 S/B               | 9          | 8          | 7          | 8          | -2         | 4          | 6          |

The journey times are drawn from the TS system and utilise Journeys 178 (N/B) and 179 for the data. The journey time in minutes is the average over the 07:00 - 19:00 period daily on the first week of each month. They are the actual times from the system and not the projected journey times.

The June 13 journey times are the baseline times for evaluation purposes. The times do not take cognisance of traffic volume levels or road works on the route (see speed data for volume information).

Appendix H – Traffic Volumes Perth to Inverness

| Traffic Volume Figures - 7 Day Annual Average Daily Flow (Two Way) |                |                 |              |              |              |              |              |               |                  |                |                 |                 |
|--|----------------|-----------------|--------------|--------------|--------------|--------------|--------------|---------------|------------------|----------------|-----------------|-----------------|
| <b>2013 - 2014</b>   |                |                 |              |              |              |              |              |               |                  |                |                 |                 |
| <b>Birnam</b>  | <b>January</b> | <b>February</b> | <b>March</b> | <b>April</b> | <b>May</b>   | <b>June</b>  | <b>July</b>  | <b>August</b> | <b>September</b> | <b>October</b> | <b>November</b> | <b>December</b> |
| 2013   | N/A            | N/A             | N/A          | 12,252       | 15,000       | N/A          | 15,902       | 17,710        | 15,493           | 14,510         | 12,606          | 10,348          |
| 2014   | 10,212         | 11,433          | 12,708       | 13,989       | 14,849       | 14,799       | 16,460       | 17,768        | 15,896           | 14,726         | 12,071          | 10,799          |
| % Increase/Decrease  | <b>N/A</b>     | <b>N/A</b>      | <b>N/A</b>   | <b>14.2%</b> | <b>-1.0%</b> | <b>N/A</b>   | <b>3.5%</b>  | <b>0.3%</b>   | <b>2.6%</b>      | <b>1.5%</b>    | <b>-4.2%</b>    | <b>4.4%</b>     |
| <b>Dalwhinnie</b>  | <b>January</b> | <b>February</b> | <b>March</b> | <b>April</b> | <b>May</b>   | <b>June</b>  | <b>July</b>  | <b>August</b> | <b>September</b> | <b>October</b> | <b>November</b> | <b>December</b> |
| 2013   | 5,639          | 7,010           | 7,499        | 8,880        | 9,626        | 10,121       | 11,169       | 11,780        | 9,896            | 9,449          | 7,517           | 6,262           |
| 2014   | N/A            | 7,630           | 7,564        | 9,514        | 9,759        | 10,052       | 11,075       | 11,904        | 10,101           | 9,747          | 7,495           | 6,536           |
| % Increase/Decrease  | <b>N/A</b>     | <b>8.8%</b>     | <b>0.9%</b>  | <b>7.1%</b>  | <b>1.4%</b>  | <b>-0.7%</b> | <b>-0.8%</b> | <b>1.1%</b>   | <b>2.1%</b>      | <b>3.2%</b>    | <b>-0.3%</b>    | <b>4.4%</b>     |
| <b>Moy</b>   | <b>January</b> | <b>February</b> | <b>March</b> | <b>April</b> | <b>May</b>   | <b>June</b>  | <b>July</b>  | <b>August</b> | <b>September</b> | <b>October</b> | <b>November</b> | <b>December</b> |
| 2013   | 6,309          | 7,380           | 7,793        | 8,897        | 9,567        | 9,933        | 10,930       | 11,605        | 9,906            | 9,334          | 8,074           | 7,160           |
| 2014   | 6,901          | 7,603           | 7,997        | 9,452        | 9,860        | 10,150       | 11,020       | 11,820        | 10,385           | 9,781          | 7,790           | 7,152           |
| % Increase/Decrease  | <b>9.4%</b>    | <b>3.0%</b>     | <b>2.6%</b>  | <b>6.2%</b>  | <b>3.1%</b>  | <b>2.2%</b>  | <b>0.8%</b>  | <b>1.9%</b>   | <b>4.8%</b>      | <b>4.8%</b>    | <b>-3.5%</b>    | <b>-0.1%</b>    |
| <b>2014 - 2015</b>   |                |                 |              |              |              |              |              |               |                  |                |                 |                 |
| <b>Birnam</b>  | <b>January</b> | <b>February</b> | <b>March</b> | <b>April</b> | <b>May</b>   | <b>June</b>  | <b>July</b>  | <b>August</b> | <b>September</b> | <b>October</b> | <b>November</b> | <b>December</b> |
| 2014   | 10,212         | 11,433          | 12,708       | 13,989       | 14,849       | 14,799       | 16,460       | 17,768        | 15,896           | 14,726         | 12,071          | 10,799          |
| 2015   | 9,436          | 11,701          | 12,426       | 15,256       |              |              |              |               |                  |                |                 |                 |
| % Increase/Decrease  | <b>-7.6%</b>   | <b>2.3%</b>     | <b>-2.2%</b> | <b>9.1%</b>  |              |              |              |               |                  |                |                 |                 |
| <b>Dalwhinnie</b>  | <b>January</b> | <b>February</b> | <b>March</b> | <b>April</b> | <b>May</b>   | <b>June</b>  | <b>July</b>  | <b>August</b> | <b>September</b> | <b>October</b> | <b>November</b> | <b>December</b> |
| 2014   | N/A            | 7,630           | 7,564        | 9,514        | 9,759        | 10,052       | 11,075       | 11,904        | 10,101           | 9,747          | 7,495           | 6,536           |
| 2015   | 5,590          | 7,235           | 7,669        | 9,651        |              |              |              |               |                  |                |                 |                 |
| % Increase/Decrease  | <b>N/A</b>     | <b>-5.2%</b>    | <b>1.4%</b>  | <b>1.4%</b>  |              |              |              |               |                  |                |                 |                 |
| <b>Moy</b>   | <b>January</b> | <b>February</b> | <b>March</b> | <b>April</b> | <b>May</b>   | <b>June</b>  | <b>July</b>  | <b>August</b> | <b>September</b> | <b>October</b> | <b>November</b> | <b>December</b> |
| 2014   | 6,901          | 7,603           | 7,997        | 9,452        | 9,860        | 10,150       | 11,020       | 11,820        | 10,385           | 9,781          | 7,790           | 7,152           |
| 2015   | 6,365          | 7,787           | 8,326        | 9,577        |              |              |              |               |                  |                |                 |                 |
| % Increase/Decrease  | <b>-7.8%</b>   | <b>2.4%</b>     | <b>4.1%</b>  | <b>1.3%</b>  |              |              |              |               |                  |                |                 |                 |