

A9 Data Monitoring and Analysis Report

January 2018

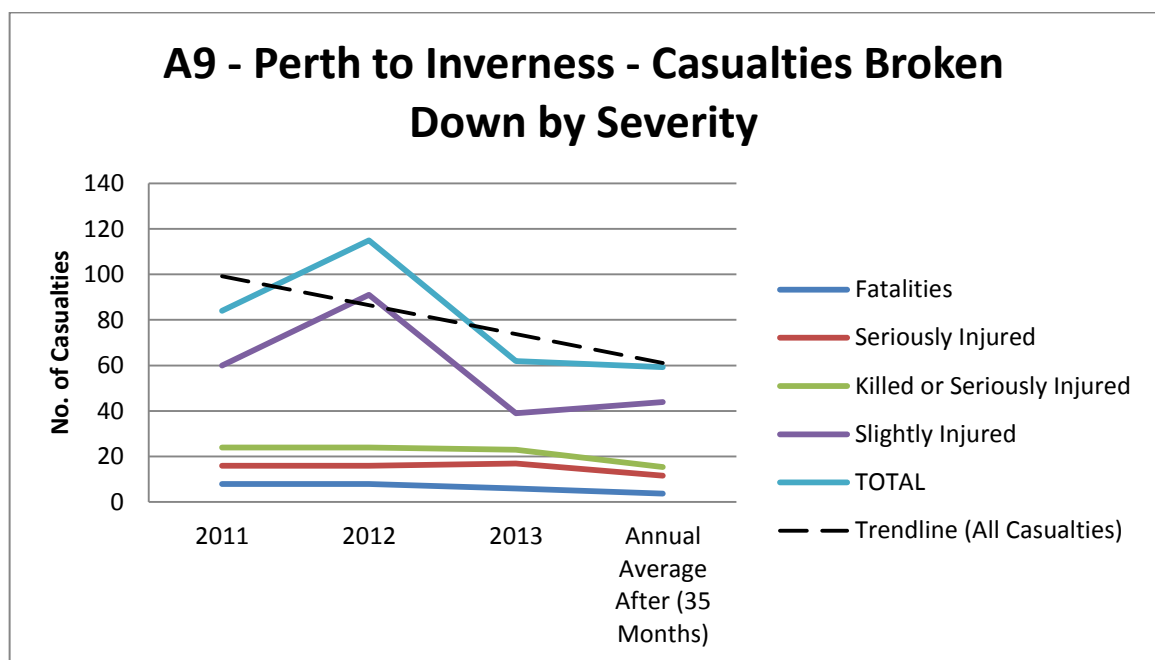
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1. Executive Summary

This latest report updates the comprehensive range of data sets designed to evaluate the impact of the A9 Safety Group's strategy for the route between Dunblane and Inverness. This report contains collision data covering the period to 30 September 2017 unless otherwise stated.

Given that we are now approaching the completion of the evaluation period there is now much more certainty around the data analysis. It is worth remembering though that with performance data being published every three months there is always the risk that short term variations in performance between reporting periods can manifest themselves and provide a slightly misleading picture of the longer term performance, particularly when looking at specific sections of the route. This report demonstrates some variation in some areas but does confirm that the longer-term trend continues to be downward. The graph below highlights the casualty performance of the route using the latest data and highlights the positive downward trend now established.



A9 Casualty Performance – April 2017

The overall summary is highlighting that the sustained improvements in driver behaviour is now influencing the longer term trend of reduced collisions and casualties when compared to the baseline data. The latest data set indicates that based on the first 35 months of operation: the annual average comparison is highlighting:

- The number of fatal casualties between Dunblane and Inverness is down by almost 49% compared to the baseline average
- The number of 'fatal and serious' collisions between Dunblane and Inverness overall is down by over 25%, with fatal and serious casualties down by over 32%
- The number of fatal collisions between Dunblane and Perth is down by over 48% with the number of fatal and serious collisions down by over 44%
- The number of 'fatal and serious' collisions between Perth and Inverness is down by almost 19%, with 'fatal and serious' casualties down by almost 35%
- The number of fatal collisions between Perth and Inverness is down by over 31% with fatal casualties down by almost 49%
- The number of serious injury casualties between Perth and Inverness is down by over 28%
- The overall number of casualties of all classes between Dunblane and Inverness is down by almost 28%
- The significantly reduced number of vehicles exceeding the speed limit continues to be sustained
- The number of vehicles detected by the ASC system which were considered by Police Scotland for further action has continued to average of less than 11 per day since the introduction of the cameras.
- The journey time variation from the established baseline between Perth and Inverness has remained consistent and within the projected estimated range
- Incident frequency and impact has been sustained at a significantly lower level than the baseline promoting significantly improved journey time reliability.

2. 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. Where information on offender numbers is presented within this document it has been sourced from Police Scotland; Transport Scotland do not hold detailed information of this nature.

3. Purpose

The A9 average speed camera system (ASC) is the largest route based safety strategy in existence in the UK and is one of a range of measures introduced by the A9 Safety Group to positively 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 the number of people being killed or seriously injured
- Reduction in excessive speeding and improvements in speed limit compliance
- Incident frequency reduction
- Improved 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 was undertaken in March 2015 to provide a comparative analysis on this subject. The 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.

4. Baseline Data Sources

Casualties

The casualty baseline methodology 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. In respect to the A9 data the baseline data is taken from the 1 January through to 31 December for each calendar year from 2011 through to 2013. Normally data capture would involve the immediate 3 year period preceding the start of the project but given the visible 7 month construction programme during 2014 for the ASC, the A9 Safety Group agreed to exclude this period to ensure that baseline data was not influenced by this activity. This ensures that the data is directly comparable to more effectively measure the impact of the mitigation measures. The casualty classification is also in standard format with the 'Killed Seriously Injured' (KSI) being the key performance indicator.

The Road Accident statistics are compiled from returns made by Police Scotland which follow an 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.

While the above structure will be used to formally evaluate the impact of the cameras and this will be published in due course there is a desire to provide an understanding of how the route is performing in real time. To provide this understanding we have published the information using a rolling average to compare against the equivalent baseline figure. This information is provided in Appendix 'A'.

Speed

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. The report is published at: <http://a9road.info/uploads/publications/>

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 that point.

The analysis data is gathered from counter sites positioned as closely as possible to where the baseline figures were determined. Due to maintenance upgrades and other limitations this was not possible in every section and the closest alternative was used instead.

The data gathered is spot speed from the respective counters and not average speed which is assessed by the camera system for enforcement purposes. 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 are 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.

Incidents

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.

Journey Times

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 is comprised 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. The commencement of the dualling programme may also impact journey times and to cater for this reporting will include by section on either side of dualling works.

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. During the recording period Transport Scotland will be progressively commissioning a new traffic services database which may result in some interruption in data management provision during this process.

5. Casualty Analysis

As indicated in Section 4, collision and casualty figures are subjected to an extended validation process and this report considers the validated data available up until 30 September 2017.

The evaluation for this report uses the 35 months of available data and compares it with the equivalent baseline period. The latest data continues to show a sustained drop in injury collisions and casualties across the route compared to the baseline data. The headline figures from the data are:

- The number of fatal casualties between Dunblane and Inverness is down by almost 49% compared to the baseline average
- The number of 'fatal and serious' collisions between Dunblane and Inverness overall is down by over 25%, with fatal and serious casualties down by over 32%
- The number of fatal collisions between Dunblane and Perth is down by over 48% with the number of fatal and serious collisions down by over 44%
- The number of 'fatal and serious' collisions between Perth and Inverness is down by almost 19%, with 'fatal and serious' casualties down by almost 35%
- The number of fatal collisions between Perth and Inverness is down by over 31% with fatal casualties down by almost 49%

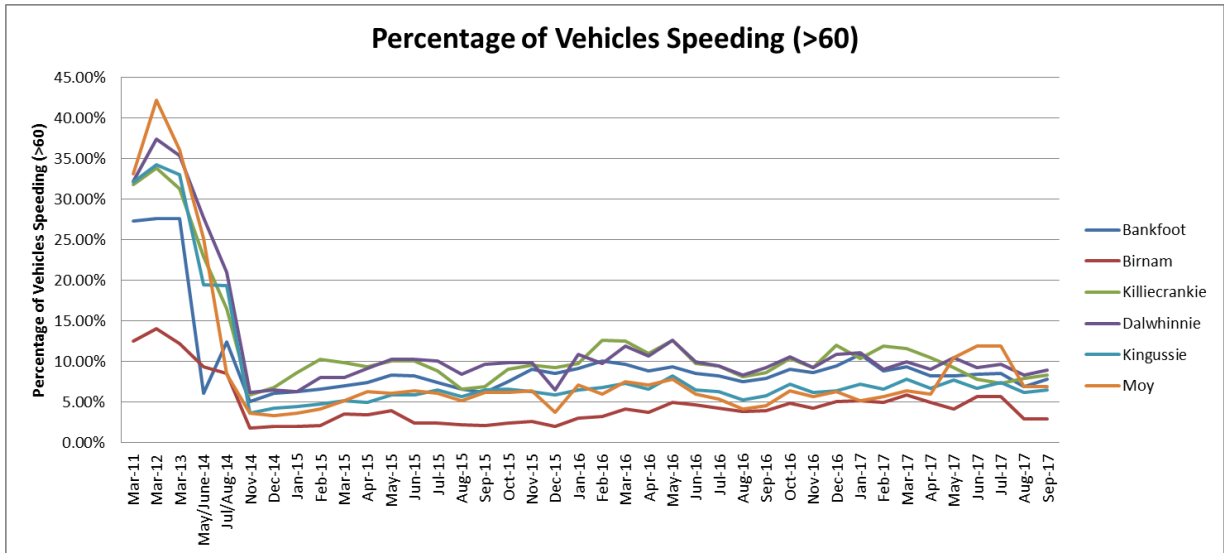
- The number of serious injury casualties between Perth and Inverness is down by over 28%
- The overall number of casualties of all classes between Dunblane and Inverness is down by almost 28%
- The significantly reduced number of vehicles exceeding the speed limit continues to be sustained
- The number of vehicles detected by the ASC system which were considered by Police Scotland for further action has continued to average of less than 11 per day since the introduction of the cameras.
- The journey time variation from the established baseline between Perth and Inverness has remained consistent and within the projected estimated range
- Incident frequency and impact has been sustained at a significantly lower level than the baseline promoting significantly improved journey time reliability.

Whilst there have been no fatal collisions on the A9 within the monitoring area during the reference period of this report, the A9 Safety Group are aware of two fatal collisions during October 2017 details of which will be included in the next report.

6. Vehicle Speed Data

The speed profile along the route continues to support a sustained change in driver behaviour. There has only been a slight degree of variation at the monitoring sites since the cameras went live in October 2014 with compliance levels exceptionally high. The latest data continues to demonstrate this level of compliance with excessive speeding levels extremely low.

For consistency the graph below has been updated from the previous report to highlight the sustained change in driver behaviour.



Perth to Inverness Speed Profile

Police Scotland have advised that since the system went live on the 28th October 2014 through to 24 October 2017 there have been 11,917 vehicles detected by the system exceeding the speed limit which warranted further action. The latest quarterly data (24/07/17 to 24/10/17) indicates that the overall average has been maintained at just under 11 vehicles per day detected exceeding the operational threshold.

As indicated in previous reports, prior to the introduction of the average speed cameras over 12,000 drivers per annum were being reported for fixed and mobile camera speeding offences within the monitoring area. The introduction of the average speed cameras continues to significantly reduce the number of offenders with the latest data continuing to evidence an annual average reduction of over 66% in the number of drivers being detected speeding.

These figures do not include the dualling construction between Kincaig and Dalraddy which was monitored by a separate ASC system and is subject to a temporary 40 mph limit. Police Scotland publishes the figures separately for this stretch.

7. Incident Frequency & Impact

The latest data set incorporates the incident data from the third quarter of 2017 which continues to support the established pattern of sustained reductions in both frequency and impact compared to the baseline data.

With the level of validated data now available the A9 Safety Group will discuss further detailed evaluation using a number of techniques which will consider where resources

should be best placed to respond to incidents on the route. This technique, used successfully elsewhere can contribute to improved journey time reliability.

8. Journey Time Analysis – Perth to Inverness

The Journey Time Analysis for the reporting period is still demonstrating that journey time reliability is within the projected range. Even with major roadworks on the route this has had little impact on the original projected range of journey times. With the continued downward trend in incidents and incident impact, journey time reliability continues to improve on the route. As a point of note the Kincaig to Dalraddy dualling programme was completed in Autumn 2017 which will further support journey time reliability.

9. Traffic Volumes

There continues to be some degree of inconsistency with the data collection from the identified traffic counters due to a number of technical reasons. Available data continues to show year on year traffic growth on the route.

Appendix A Collision & Casualty Analysis – Dunblane to Inverness

DUNBLANE TO INVERNESS - 3 YEAR AVERAGE COMPARISONS - 35 MONTHS OPERATION TO THE END OF SEPTEMBER 2017

DUNBLANE - PERTH COLLISIONS						PERTH - INVERNESS COLLISIONS						DUNBLANE - INVERNESS COLLISIONS COMBINED					
Year	Fatal	Serious	KSI	Slight	TOTAL	Year	Fatal	Serious	KSI	Slight	TOTAL	Year	Fatal	Serious	KSI	Slight	TOTAL
2011	1	3	4	14	18	2011	6	5	11	29	40	2011	7	8	15	43	58
2012	0	5	5	20	25	2012	5	8	13	30	43	2012	5	13	18	50	68
2013	1	3	4	19	23	2013	4	10	14	22	36	2013	5	13	18	41	59
Annual Average Before (3 Years)	0.67	3.67	4.33	17.67	22.00	Annual Average Before (3 Years)	5.00	7.67	12.67	27.00	39.67	Annual Average Before (3 Years)	5.67	11.33	17.00	44.67	61.67
Annual Average After (35 Months)	0.34	2.06	2.40	14.40	16.80	Annual Average After (35 Months)	3.43	6.86	10.29	20.57	30.86	Annual Average After (35 Months)	3.77	8.91	12.69	34.97	47.66
First 35 Months ASC	1	6	7	42	49	First 35 Months ASC	10	20	30	60	90	First 35 Months ASC	11	26	37	102	139
% Annual Average Variation	-48.6%	-43.9%	-44.6%	-18.5%	-23.6%	% Annual Average Variation	-31.4%	-10.6%	-18.8%	-23.8%	-22.2%	% Annual Average Variation	-33.4%	-21.3%	-25.4%	-21.7%	-22.7%

DUNBLANE - PERTH CASUALTIES						PERTH - INVERNESS CASUALTIES						DUNBLANE - INVERNESS CASUALTIES COMBINED					
Year	Fatalities	Seriously Injured	Killed or Seriously Injured	Slightly Injured	TOTAL	Year	Fatalities	Seriously Injured	Killed or Seriously Injured	Slightly Injured	TOTAL	Year	Fatalities	Seriously Injured	Killed or Seriously Injured	Slightly Injured	TOTAL
2011	1	3	4	20	24	2011	8	16	24	60	84	2011	9	19	28	80	108
2012	0	5	5	25	30	2012	8	16	24	91	115	2012	8	21	29	116	145
2013	1	3	4	33	37	2013	6	17	23	39	62	2013	7	20	27	72	99
Annual Average Before (3 Years)	0.67	3.67	4.33	26.00	30.33	Annual Average Before (3 Years)	7.33	16.33	23.67	63.33	87.00	Annual Average Before (3 Years)	8.00	20.00	28.00	89.33	117.33
Annual Average After (35 Months)	0.34	3.09	3.43	21.94	25.37	Annual Average After (35 Months)	3.77	11.66	15.43	43.89	59.31	Annual Average After (35 Months)	4.11	14.74	18.86	65.83	84.69
First 35 Months ASC	1	9	10	64	74	First 35 Months ASC	11	34	45	128	173	First 35 Months ASC	12	43	55	192	247
% Annual Average Variation	-48.6%	-15.8%	-20.9%	-15.6%	-16.4%	% Annual Average Variation	-48.6%	-28.6%	-34.8%	-30.7%	-31.8%	% Annual Average Variation	-48.6%	-26.3%	-32.7%	-26.3%	-27.8%

Appendix B - Vehicle Speed Data – Dunblane to Perth

Sites	SEPTEMBER 2014				DECEMBER 2014				MARCH 2015				JUNE 2015			
	>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%	5.99%	5.67%	0.24%	0.08%	NOT AVAILABLE				8.76%	8.46%	0.26%	0.04%
Crieff N/B	28.47%	25.10%	3.37%	0.00%	NOT AVAILABLE				5.44%	5.32%	0.11%	0.01%	6.03%	5.89%	0.13%	0.01%
Auchterarder N/B	29.44%	25.42%	3.71%	0.31%	NOT AVAILABLE				8.01%	7.91%	0.08%	0.02%	NOT AVAILABLE			
Broxden S/B	27.74%	25.73%	2.01%	0.00%	7.63%	7.45%	0.16%	0.02%	10.22%	9.91%	0.28%	0.03%	13.15%	12.73%	0.39%	0.03%
Dunning S/B	33.28%	28.87%	4.04%	0.37%	9.59%	9.27%	0.28%	0.04%	11.65%	11.21%	0.39%	0.05%	13.22%	12.69%	0.48%	0.05%
Blackford S/B	24.81%	21.68%	2.89%	0.24%	5.47%	5.36%	0.10%	0.01%	NOT AVAILABLE				NOT AVAILABLE			
Sites	SEPTEMBER 2015				DECEMBER 2015				MARCH 2016				JUNE 2016			
	>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	8.32%	8.06%	0.23%	0.03%	NOT AVAILABLE				9.70%	9.40%	0.27%	0.03%	7.25%	6.98%	0.23%	0.04%
Crieff N/B	6.58%	6.45%	0.12%	0.01%	4.29%	4.21%	0.07%	0.01%	NOT AVAILABLE				NOT AVAILABLE			
Auchterarder N/B	NOT AVAILABLE				8.29%	7.93%	0.27%	0.09%	12.72%	12.16%	0.42%	0.14%	11.58%	11.07%	0.39%	0.12%
Broxden S/B	13.87%	13.45%	0.40%	0.02%	11.04%	10.71%	0.31%	0.02%	16.95%	16.42%	0.51%	0.02%	11.30%	10.95%	0.32%	0.03%
Dunning S/B	15.74%	15.16%	0.51%	0.07%	NOT AVAILABLE				NOT AVAILABLE				12.33%	11.76%	0.50%	0.07%
Blackford S/B	NOT AVAILABLE				NOT AVAILABLE				NOT AVAILABLE				NOT AVAILABLE			
Sites	SEPTEMBER 2016				DECEMBER 2016				MARCH 2017				JUNE 2017			
	>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	9.50%	9.24%	0.23%	0.03%	9.09%	8.84%	0.22%	0.03%	NOT AVAILABLE				7.46%	7.20%	0.23%	0.03%
Crieff N/B	NOT AVAILABLE				NOT AVAILABLE				NOT AVAILABLE				NOT AVAILABLE			
Auchterarder N/B	NOT AVAILABLE				NOT AVAILABLE				9.71%	9.61%	0.09%	0.01%	9.74%	9.52%	0.19%	0.03%
Broxden S/B	10.22%	9.96%	0.24%	0.02%	8.84%	8.62%	0.20%	0.02%	10.98%	10.72%	0.24%	0.02%	14.63%	14.14%	0.45%	0.04%
Dunning S/B	17.94%	17.21%	0.62%	0.11%	16.87%	16.29%	0.50%	0.08%	NOT AVAILABLE				NOT AVAILABLE			
Blackford S/B	NOT AVAILABLE				6.39%	5.77%	0.57%	0.05%	NOT AVAILABLE				NOT AVAILABLE			
Sites	SEPTEMBER 2017															
	>70	70 - 80	80 - 90	>90												
Dunblane N/B	6.57%	6.33%	0.22%	0.02%												
Crieff N/B	NOT AVAILABLE															
Auchterarder N/B	11.54%	11.31%	0.21%	0.02%												
Broxden S/B	11.75%	11.42%	0.31%	0.03%												
Dunning S/B	10.33%	9.72%	0.54%	0.07%												
Blackford S/B	NOT AVAILABLE															

Appendix C - Vehicle Speed Data – Perth to Inverness

Sites	MARCH 2012				DECEMBER 2014				MARCH 2015				JUNE 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	27.60%	24.03%	3.23%	0.34%	6.06%	5.65%	0.37%	0.04%	NOT AVAILABLE				8.19%	7.68%	0.47%	0.04%
Biram	14.10%	12.62%	1.31%	0.17%	2.04%	1.93%	0.08%	0.03%	3.51%	3.36%	0.14%	0.01%	2.38%	2.28%	0.07%	0.03%
Faskally	NOT AVAILABLE				3.12%	3.02%	0.10%	0.00%	5.26%	5.12%	0.14%	N/A	5.31%	5.19%	0.12%	N/A
Killiecrankie	33.85%	27.41%	5.63%	0.81%	6.86%	6.57%	0.26%	0.03%	9.86%	9.35%	0.46%	0.05%	10.06%	9.50%	0.50%	0.06%
Dalwhinnie	37.39%	28.32%	7.53%	1.54%	6.49%	6.17%	0.28%	0.04%	8.04%	7.68%	0.34%	0.02%	10.32%	9.76%	0.50%	0.06%
Kingussie	34.27%	26.95%	6.16%	1.16%	4.22%	3.93%	0.25%	0.04%	5.19%	4.80%	0.34%	0.05%	5.88%	5.42%	0.40%	0.06%
Moy	42.25%	34.22%	7.08%	0.95%	3.38%	3.32%	0.06%	0.00%	5.19%	5.12%	0.07%	0.004%	6.45%	6.28%	0.15%	0.02%

Sites	SEPTEMBER 2015				DECEMBER 2015				MARCH 2016				JUNE 2016			
	>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	6.23%	5.81%	0.38%	0.04%	8.55%	8.03%	0.47%	0.05%	9.68%	9.08%	0.54%	0.06%	NOT AVAILABLE			
Biram	NOT AVAILABLE				NOT AVAILABLE				NOT AVAILABLE				NOT AVAILABLE			
Faskally	3.90%	3.79%	0.11%	N/A	5.19%	5.08%	0.11%	N/A	7.49%	7.35%	0.14%	N/A	NOT AVAILABLE			
Killiecrankie	6.90%	6.51%	0.33%	0.06%	9.27%	8.83%	0.40%	0.04%	12.56%	11.88%	0.60%	0.08%	9.77%	9.03%	0.66%	0.08%
Dalwhinnie	9.65%	9.16%	0.43%	0.06%	6.54%	6.27%	0.26%	0.01%	11.95%	11.33%	0.55%	0.07%	10.01%	9.30%	0.62%	0.09%
Kingussie	6.49%	6.00%	0.43%	0.06%	NOT AVAILABLE				7.34%	6.80%	0.49%	0.05%	6.47%	5.75%	0.63%	0.09%
Moy	6.23%	6.10%	0.11%	0.02%	3.78%	3.72%	0.05%	0.01%	7.51%	7.36%	0.14%	0.01%	5.96%	5.77%	0.15%	0.04%

Sites	SEPTEMBER 2016				DECEMBER 2016				MARCH 2017				JUNE 2017			
	>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	NOT AVAILABLE				9.49%	8.68%	0.74%	0.07%	9.34%	8.61%	0.68%	0.05%	8.46%	7.77%	0.65%	0.04%
Biram	NOT AVAILABLE				NOT AVAILABLE				NOT AVAILABLE				NOT AVAILABLE			
Faskally	NOT AVAILABLE				NOT AVAILABLE				NOT AVAILABLE				NOT AVAILABLE			
Killiecrankie	8.68%	8.07%	0.54%	0.07%	12.03%	11.14%	0.80%	0.09%	11.59%	10.73%	0.79%	0.07%	7.84%	7.15%	0.60%	0.09%
Dalwhinnie	9.22%	8.63%	0.53%	0.06%	10.92%	10.26%	0.59%	0.07%	9.94%	9.30%	0.57%	0.07%	9.29%	8.63%	0.59%	0.07%
Kingussie	5.80%	5.21%	0.53%	0.06%	6.39%	5.77%	0.57%	0.05%	7.78%	7.11%	0.61%	0.06%	6.71%	6.02%	0.61%	0.08%
Moy	NOT AVAILABLE				NOT AVAILABLE				6.38%	6.20%	0.17%	0.01%	11.94%	10.32%	1.47%	0.15%

Sites	SEPTEMBER 2017			
	>60	60 - 70	70 - 80	>80
Bankfoot	7.80%	7.14%	0.60%	0.05%
Biram	NOT AVAILABLE			
Faskally	4.63%	4.41%	0.21%	0.01%
Killiecrankie	8.33%	7.69%	0.57%	0.07%
Dalwhinnie	8.94%	8.34%	0.52%	0.08%
Kingussie	6.55%	5.82%	0.65%	0.08%
Moy	6.89%	6.68%	0.20%	0.01%

Appendix D - Incident Analysis – Dunblane to Inverness

INCIDENTS

	Perth - Inverness		Dunblane - Perth		A9 Total	
	Incidents	Restriction	Incidents	Restriction	Incidents	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
2013 Baseline	135	282	49	121	184	403
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
2014 Total	62	124	90	120	152	244
Q1 2015	26	57	12	12	38	69
Q2 2015	14	34	8	5	22	39
Q3 2015	16	32	18	27	34	59
Q4 2015	15	44	15	21	30	65
2015 Total	71	167	53	65	124	232
Q1 2016	11	24	9	11	20	35
Q2 2016	15	31	7	7	22	38
Q3 2016	23	34	23	34	46	68
Q4 2016	17	55	9	17	26	72
2016 Total	66	144	48	69	114	213
Q1 2017	19	41	12	15	31	56
Q2 2017	11	28	12	11	23	39
Q3 2017	27	67	16	17	43	84

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 E - Journey Time Analysis – Perth to Inverness

JOURNEY TIMES

PERTH - INVERNESS

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Jun-13 N/B	116	116	115	117	120	111	109
Jun-13 S/B	115	118	118	116	124	114	110
Dec-14 N/B	131	131	132	128	124	116	124
Dec-14 S/B	134	133	135	134	131	118	127
Mar-15 N/B	125	129	128	127	124	114	116
Mar-15 S/B	127	128	124	124	123	116	116
Jun-15 N/B	123	122	122	124	121	116	116
Jun-15 S/B	125	123	122	124	122	117	115
Sept -15 N/B	122	122	122	122	121	120	116
Sept-15 S/B	122	122	123	122	123	125	130
Dec-15 N/B	129	130	128	135	139	119	120
Dec-15 S/B	129	131	129	140	139	119	120
Mar-16 N/B	123	125	125	126	124	117	119
Mar-16 S/B	124	126	125	126	125	118	118
Jun-16 N/B	125	125	124	125	123	120	118
Jun-16 S/B	124	125	129	124	124	119	119
Sept -16 N/B	130	124	124	124	123	119	120
Sept-16 S/B	133	129	129	129	126	121	121
Dec-16 N/B	126	125	125	124	124	118	119
Dec-16 S/B	125	126	125	125	126	118	119
Mar-17 N/B	130	131	127	130	124	119	118
Mar-17 S/B	126	126	128	127	126	118	118
Jun-17 N/B	128	126	128	126	127	123	122
Jun-17 S/B	124	125	123	125	128	122	120
Sept -17 N/B	126	125	127	127	125	121	121
Sept-17 S/B	126	127	127	128	130	120	121

VARIATION

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dec-14 N/B	15	15	17	11	4	5	15
Dec-14 S/B	19	15	17	18	7	4	17
Mar-15 N/B	9	13	13	10	4	3	7
Mar-15 S/B	12	10	6	8	-1	2	6
Jun-15 N/B	7	6	7	7	1	5	7
Jun-15 S/B	10	5	4	8	-2	3	5
Sept -15 N/B	6	6	7	5	1	9	7
Sept-15 S/B	7	4	5	6	-1	11	20
Dec-15 N/B	13	14	13	18	19	8	11
Dec-15 S/B	14	13	11	24	15	5	10
Mar-16 N/B	7	9	10	9	4	6	10
Mar-16 S/B	9	8	7	10	1	4	8
Jun-16 N/B	9	9	9	8	3	9	9
Jun-16 S/B	9	7	11	8	0	5	9
Sept -16 N/B	14	8	9	7	3	8	11
Sept-16 S/B	18	11	11	13	2	7	11
Dec-16 N/B	10	9	10	7	4	7	10
Dec-16 S/B	10	8	7	9	2	4	9
Mar-17 N/B	14	15	12	13	4	8	9
Mar-17 S/B	11	8	10	11	2	4	8
Jun-17 N/B	12	10	13	9	7	12	13
Jun-17 S/B	9	7	5	9	4	8	10
Sept -17 N/B	10	11	12	10	5	10	12
Sept-17 S/B	11	9	9	12	6	6	11

PERTH - KINGUSSIE

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dec-15 N/B	78	79	79	94	90	75	74
Dec-15 S/B	78	78	79	89	91	74	74
Mar-16 N/B	77	78	78	78	77	73	74
Mar-16 S/B	76	77	78	77	77	72	73
Jun-16 N/B	78	77	77	78	76	74	73
Jun-16 S/B	76	77	83	77	77	73	74
Sept-16 N/B	83	77	77	77	77	74	75
Sept-16 S/B	86	81	82	81	79	75	76
Dec-16 N/B	N/A	N/A	N/A	N/A	77	74	74
Dec-16 S/B	N/A	N/A	N/A	N/A	78	74	74
Mar-17 N/B	82	81	78	81	77	74	73
Mar-17 S/B	77	77	78	78	78	74	73
Jun-17 N/B	81	78	81	79	79	76	75
Jun-17 S/B	77	77	76	77	80	74	74
Sept -17 N/B	77	76	77	77	76	75	75
Sept-17 S/B	77	77	76	79	77	74	75

AVIEMORE - INVERNESS

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Dec-15 N/B	33	34	32	34	32	29	29
Dec-15 S/B	33	35	32	33	31	29	29
Mar-16 N/B	30	30	30	30	30	29	28
Mar-16 S/B	30	31	30	30	30	28	28
Jun-16 N/B	30	30	30	30	30	28	28
Jun-16 S/B	30	30	30	30	29	28	29
Sept-16 N/B	29	30	30	30	29	28	28
Sept-16 S/B	30	31	30	30	29	29	28
Dec-16 N/B	31	30	30	30	30	29	28
Dec-16 S/B	31	31	31	30	30	28	28
Mar-17 N/B	31	32	31	31	30	28	28
Mar-17 S/B	31	31	31	31	31	28	28
Jun-17 N/B	30	30	30	30	30	30	29
Jun-17 S/B	30	30	29	29	30	31	29
Sept -17 N/B	29	29	30	30	30	28	28
Sept-17 S/B	30	30	30	30	30	28	28

Appendix F – Traffic Volumes Perth to Inverness

Traffic Volume Figures - 7 Day Annual Average Daily Flow (Two Way)

2014 COMPARISON WITH 2013 BASELINE	
Birnam Average	2.7%
Dalwhinnie Average	2.5%
Moy Average	2.9%

2015 COMPARISON WITH 2013 BASELINE	
Birnam Average	1.9%*
Dalwhinnie Average	3.2%
Moy Average	5.4%

2016 COMPARISON WITH 2013 BASELINE	
Birnam Average	N/A
Dalwhinnie Average	8.4%
Moy Average	5.4%

2016 - 2017

Birnam	January	February	March	April	May	June	July	August	September	October	November	December
2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2017	Site currently out of operation											
% Increase/Decrease	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Birnam Average N/A

Dalwhinnie	January	February	March	April	May	June	July	August	September	October	November	December
2016	6,340	7,545	8,612	9,632	10,096	10,742	12,111	12,186	11,023	10,608	8,041	N/A
2017	5,869	8,105	8,380	10,638	10,572	11,138	12,455	12,924	11,362	-	-	-
% Increase/Decrease	-7.4%	7.4%	-2.7%	10.4%	4.7%	3.7%	2.8%	6.1%	3.1%	-	-	-

Dalwhinnie Average 3.1%

Moy	January	February	March	April	May	June	July	August	September	October	November	December
2016	7,122	8,182	9,133	9,880	10,460	10,660	10,745	11,144	N/A	10,261	9,003	8,599
2017	7,630	8,600	N/A	N/A	11,116	N/A	NA	NA	11,344	-	-	-
% Increase/Decrease	7.1%	5.1%	N/A	N/A	6.3%	N/A	N/A	N/A	N/A	-	-	-

Moy Average 6.2%