A9 Data Monitoring and Analysis Report

January 2016

Content

1. Executive Summary

This report now combines the previous A9 Data Monitoring and Analysis reports to provide a single location for both baseline data and assessment of performance against the agreed Key Performance Indicators.

This report contains the accident and casualty assessment covering the first 12 months of operation of the Average Speed Cameras (ASC). The data gathered which represents the section of the route within which the ASC operates covers the period 1 November 2014 to 31 October 2015.

The overall summary is that while it is still early in the project, the casualty reductions being experienced are very encouraging and that other data is now pointing towards a sustained change in driver behaviour on the route. The main headlines from the data monitoring are:

- The number of fatal casualties between **Dunblane and Inverness** is down by 25% compared to the baseline average, or 2 fewer people killed
- The number of fatal and serious collisions between **Dunblane and Inverness** overall is down by almost 59%, with fatal and serious casualties down by over 64%.
- There have been no fatal and serious collisions or injuries between **Dunblane and Perth** (down 100%).
- The number of fatal and serious collisions between **Perth and Inverness** is down by almost 45%, with fatal and serious casualties down by almost 58%.
- The number of vehicles exceeding the speed limit remains low, at 1 in 15 compared to the historic benchmark figure of 1 in 3;
- The number of vehicles travelling at excess speed (more than 10 mph above the speed limit) remains low, with the figures indicating a sustained reduction of 95% (this equates to a reduction from 1 in 10 vehicles to 1 in 250);
- The number of vehicles detected by the ASC system which were considered by Police Scotland for further action remains extremely low at less than 0.03% of the overall volume of vehicles using the route.

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 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 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 decided to exclude this period to ensure that baseline data was not influenced by this activity. 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 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.

There is a qualifying condition to be applied to future data as the commencement of the dualling project in late 2015 will create like for like comparison difficult. To counter this 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.

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 this 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.

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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 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. 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

5. Casualty Analysis

With 12 months of data now available it is possible to monitor against the established baseline. The statistical tables within this report are structured to compare calendar years but we are not yet at a position to provide this comparison. For this report we have provided an evaluation period from November 2014 through to October 2015 which provides a full 12 months operational data and comparison against the established baseline. The detailed breakdown is illustrated in Appendix 'I'

- The number of fatal casualties between **Dunblane and Inverness** is down by 25% compared to the baseline average.
- The number of fatal and serious collisions between **Dunblane and Inverness** overall is down by almost 59%, with fatal and serious casualties down by over 64%.
- The number of fatal and serious collisions and fatal and serious injuries between **Dunblane and Perth** is down 100%.
- The number of fatal and serious collisions between **Perth and Inverness** is down by almost 45%, with fatal and serious casualties down by almost 58%.
- The total number of fatal collisions remains the same but the number of fatal casualties between Perth & Inverness is down 18.2%
- The total number of injury collisions and casualties, which includes slight injuries, have also fallen. Between **Dunblane and Inverness** the total number of injury

collisions is down by 40%, with a reduction in injury related casualties of almost 55%.

While data post October 2015 has still to be validated we can confirm that there were no fatal collisions anywhere on the A9 between July and December 2015. This is the longest period that now extends at least to the limits of Transport Scotland's accident database, which reports back to 1978. At that time the A9 was undergoing a major upgrade, making a direct comparison with any earlier period problematic.

While the casualty reductions are encouraging at this early stage in the project six people lost their lives on the A9 during the reporting period and the A9 Safety Group will look at the detailed cause to ascertain what further mitigation measures may be appropriate. Police Scotland have already confirmed that none of the fatal collisions were caused by excessive speed or overtaking manoeuvres.

6. Vehicle Speed Data

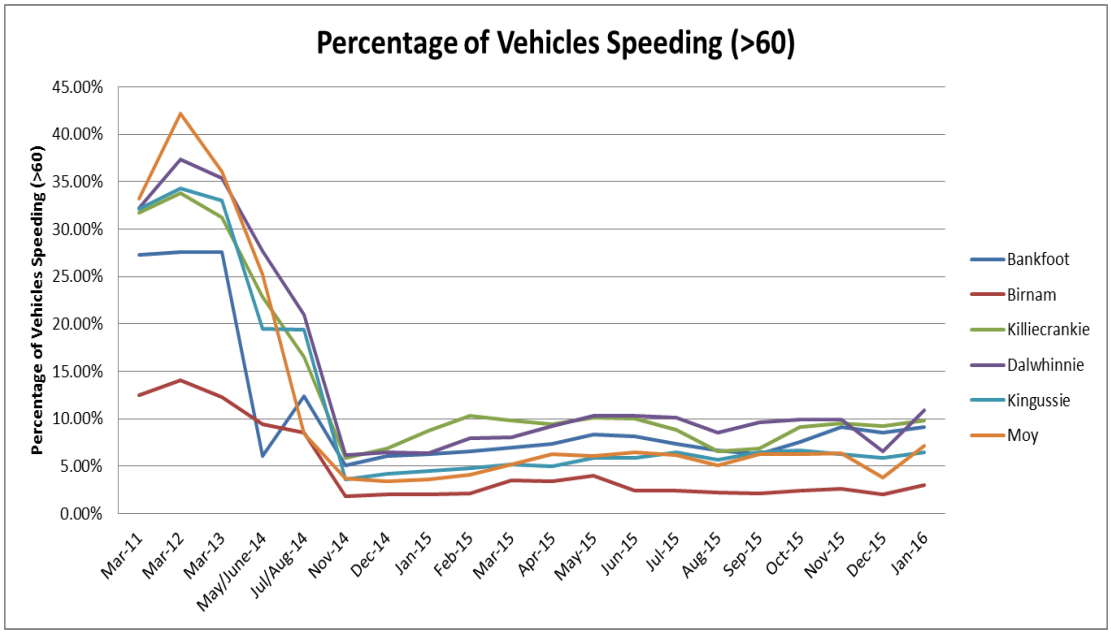
The significant reduction in the number of vehicles exceeding the maximum speed limits along the A9 corridor between Dunblane and Inverness is now an established pattern; evidencing that driver behaviour in terms of speed limit compliance has improved by some considerable margin. This established pattern is in line with early predictions and consistent with performance from other ASC locations in the UK.

The continuing data set from the A9 has established the profile that 1 in 15 vehicles exceed the speed limit compared to the benchmark figure of 1 in 3. The impact of the system on driver behaviour in respect to vehicles travelling at more than 10 mph above the speed remains consistent with monitoring figures confirming a reduction of 95% from the benchmark figure which equates to a reduction from 1 in 10 vehicles to less than 1 in 250.

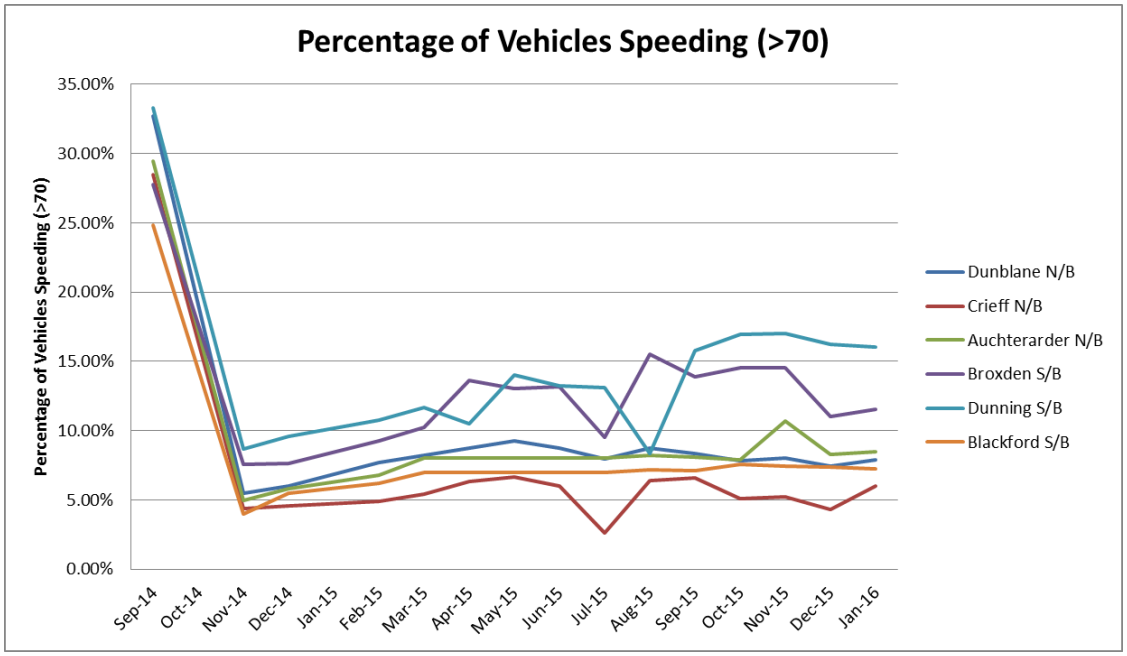
The data incorporates all vehicles including emergency service vehicles which may have been recorded responding to an emergency.

A detailed look at each individual section suggests a small degree of variability in some areas, particularly on the southbound down hill stretches south of Perth. The A9 Safety Group had previously committed to reviewing the data following 12 months of operation to establish if any further mitigation measures may be necessary and this will be discussed at their next meeting.

The graphs below represent the speed profiles of the Perth to Inverness and Perth to Dunblane sections. Both graphs are now clearly indicating the established driver behaviour patterns on both sections of the route.



Perth to Inverness Speed Profile



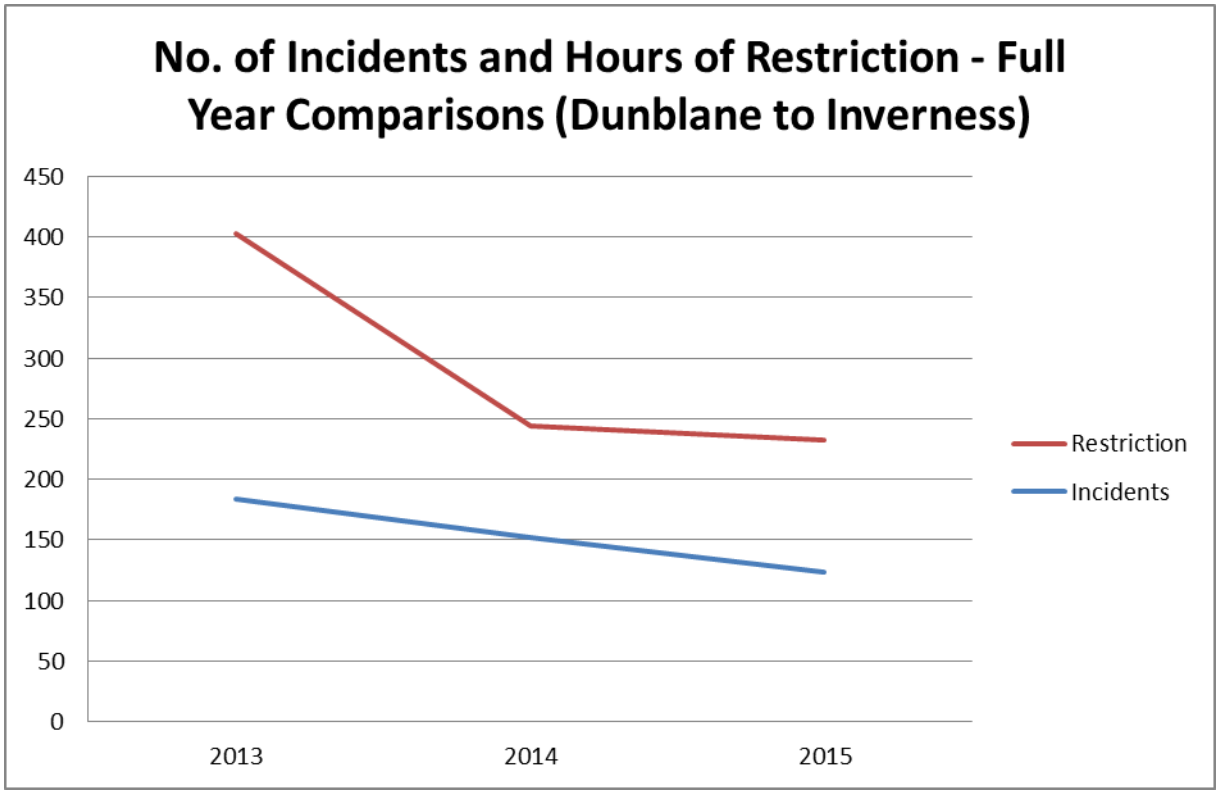
Dunblane to Perth Speed Profile

Police Scotland have advised that since the system went live on the 28th October 2014 through to 24 January 2016 there have been 6,107 vehicles detected by the system exceeding the speed limit which warranted further action. The data over the last two

quarters has seen a decrease pointing towards improvements in the already exceptionally high compliance level. To put some perspective around the figure this equates to an overall average of 13 vehicles per day across the whole of the enforcement area based on an average daily traffic volume in each direction of over 10,000 vehicles between Perth & Inverness and 24,000 vehicles between Dunblane and Perth. The figures for the latest quarter indicate that the average is currently 5 vehicles per day.

7. Incident Frequency & Impact

The collation of this data now allows for a full calendar year (2015) to be compared with the 2013 baseline. Using this baseline the available evidence now supports the previous projection that the significant reduction in incident frequency and impact has been sustained. There has been a 33% reduction in frequency and a 43% reduction in impact in terms of restriction or closure.



A9 Incident Frequency & Impact

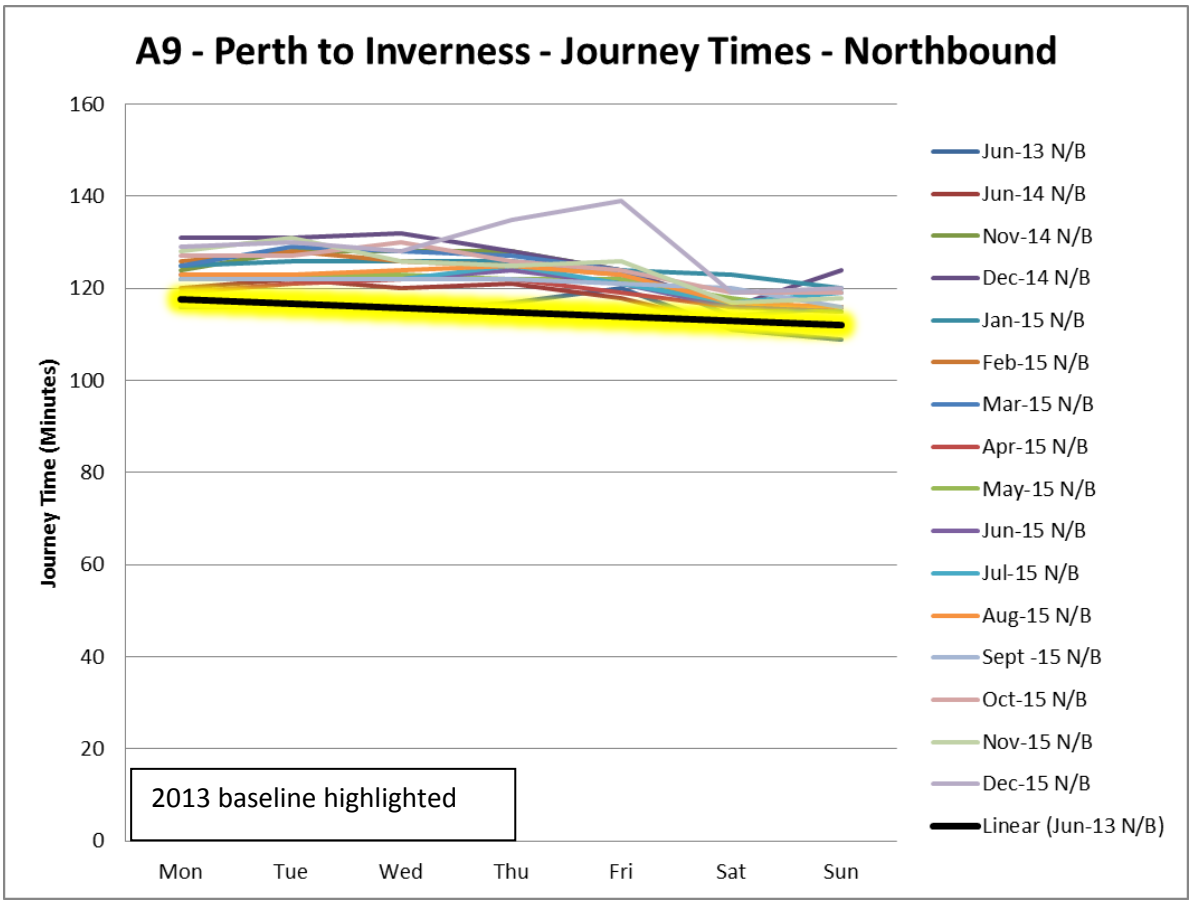
While the overall trend is encouraging, incident causation can be influenced by a variety of factors most notably the weather and this was evident in the early part of 2015 with more than 50% of the total incidents north of Perth occurred during a three day window in January when severe winter weather was being experienced. In contrast the Perth to

Dunblane stretch which was not impacted by winter weather saw a 50% reduction in incident frequency during the same period.

The benefits of the significant reduction in restrictions and closures along the A9 corridor is also highlighted within the journey time analysis which is now also clearly signalling that journey time reliability is now much more consistent than it was pre ASC installation.

8. Journey Time Analysis – Perth to Inverness

The journey time analysis to date has indicated an average rise of 1 – 9 minutes dependent on day of the week and is within the original projections provided prior to the start of the scheme. The reduction in incident frequency and impact has also influenced journey time reliability and the undernoted chart highlights the consistency of journey times between Perth to Inverness (Inverness to Perth has a similar profile). Analysis carried out using 2012 data highlighted significant variation in journey times on the route.



A9 Journey Time Consistency 2015

It was identified at the outset of the project that major road works on the route would influence journey times and with the start of the construction of the dualling programme

towards the end of 2015 on the Kincraig to Dalraddy section this is beginning to have a degree of impact. To separate this out from the rest of the route the tables now include the journey times measured from Perth to Kingussie and from Aviemore to Inverness. When more data becomes available over the coming months a more detailed analysis will be available.

9. Traffic Volumes

Traffic counters are indicating that traffic continues to grow along the length of the A9 being monitored. There was an average 2.7% growth during 2014 compared to the 2013 baseline and although there were some technical difficulties with the monitoring equipment at the Birnam station the data from the other sites strongly evidences sustained traffic growth through 2015.

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Appendix A Accident & Casualty Analysis – Dunblane to Perth

DUNBLANE TO PERTH

3 YEARS BEFORE

ACCIDENTS - DUNBLANE TO PERTH

Year	Fatal	Serious	KSI	Slight	Total
01 January 11 - 31 December 11	1	3	4	14	18
01 January 12 - 31 December 12	0	5	5	20	25
01 January 13 - 31 December 13	1	3	4	19	23
Total	2	11	13	53	66
Average Annual	0.7	3.7	4.3	17.7	22.0

CASUALTIES - DUNBLANE TO PERTH

Year	Killed	Seriously Injured	KSI	Slightly Injured	Total
01 January 11 - 31 December 11	1	3	4	20	24
01 January 12 - 31 December 12	0	5	5	25	30
01 January 13 - 31 December 13	1	3	4	33	37
Total	2	11	13	78	91
Average Annual	0.7	3.7	4.3	26.0	30.3

3 YEARS AFTER

ACCIDENTS - DUNBLANE TO PERTH

Year	Fatal	Serious	KSI	Slight	Total
01 January 15 - 31 December 15					
01 January 16 - 31 December 16					
01 January 17 - 31 December 17					
Total					
Average Annual AFTER					
Average Annual BEFORE					
Average Annual DIFFERENCE					
Percentage DIFFERENCE					

CASUALTIES - DUNBLANE TO PERTH

Year	Killed	Seriously Injured	KSI	Slightly Injured	Total
01 January 15 - 31 December 15					
01 January 16 - 31 December 16					
01 January 17 - 31 December 17					
Total					
Average Annual AFTER					
Average Annual BEFORE					
Average Annual DIFFERENCE					
Percentage DIFFERENCE					

Appendix B - Accident & Casualty Analysis – Perth to Inverness

PERTH TO INVERNESS

3 YEARS BEFORE

ACCIDENTS - PERTH TO INVERNESS

Year	Fatal	Serious	KSI	Slight	Total
01 January 11 - 31 December 11	6	5	11	29	40
01 January 12 - 31 December 12	5	8	13	30	43
01 January 13 - 31 December 13	4	10	14	22	36
Total	15	23	38	81	119
Average Annual	5.0	7.7	12.7	27.0	39.7

CASUALTIES - PERTH TO INVERNESS

Year	Killed	Seriously Injured	KSI	Slightly Injured	Total
01 January 11 - 31 December 11	8	16	24	60	84
01 January 12 - 31 December 12	8	16	24	91	115
01 January 13 - 31 December 13	6	17	23	39	62
Total	22	49	71	190	261
Average Annual	7.3	16.3	23.7	63.3	87.0

3 YEARS AFTER

ACCIDENTS - PERTH TO INVERNESS

Year	Fatal	Serious	KSI	Slight	Total
01 January 15 - 31 December 15					
01 January 16 - 31 December 16					
01 January 17 - 31 December 17					
Total					
Average Annual AFTER					
Average Annual BEFORE					
Average Annual DIFFERENCE					
Percentage DIFFERENCE					

CASUALTIES - PERTH TO INVERNESS

Year	Killed	Seriously Injured	KSI	Slightly Injured	Total
01 January 15 - 31 December 15					
01 January 16 - 31 December 16					
01 January 17 - 31 December 17					
Total					
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

Single Carriageway All Purpose

ACCIDENTS - PERTH TO INVERNESS					
Year	Fatal	Serious	KSI	Slight	Total
01 January 11 - 31 December 11	5	4	9	24	33
01 January 12 - 31 December 12	4	6	10	24	34
01 January 13 - 31 December 13	2	8	10	13	23
Total	11	18	29	61	90
Average Annual	3.7	6.0	9.7	20.3	30.0

Dual Carriageway All Purpose

ACCIDENTS - PERTH TO INVERNESS					
Year	Fatal	Serious	KSI	Slight	Total
01 January 11 - 31 December 11	1	1	2	5	7
01 January 12 - 31 December 12	1	2	3	6	9
01 January 13 - 31 December 13	2	2	4	9	13
Total	4	5	9	20	29
Average Annual	1.3	1.7	3.0	6.7	9.7

3 YEARS AFTER

Single Carriageway All Purpose

ACCIDENTS - PERTH TO INVERNESS					
Year	Fatal	Serious	KSI	Slight	Total
01 January 15 - 31 December 15					
01 January 16 - 31 December 16					
01 January 17 - 31 December 17					
Total					
Average Annual AFTER					
Average Annual BEFORE					
Average Annual DIFFERENCE					
Percentage DIFFERENCE					

Dual Carriageway All Purpose

ACCIDENTS - PERTH TO INVERNESS					
Year	Fatal	Serious	KSI	Slight	Total
01 January 15 - 31 December 15					
01 January 16 - 31 December 16					
01 January 17 - 31 December 17					
Total					
Average Annual AFTER					
Average Annual BEFORE					
Average Annual DIFFERENCE					
Percentage DIFFERENCE					

Appendix D - Vehicle Speed Data – Dunblane to Perth

SPEED ANALYSIS DUNBLANE - PERTH (SPOT SPEED)

Sites	SEPTEMBER 2014 - BENCHMARK				DECEMBER 2014				MARCH 2014				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%	>70	70 - 80	80 - 90	>90	8.76%	8.46%	0.26%	0.04%
Crieff N/B	28.47%	25.10%	3.37%	0.00%	NOT AVAILABLE				NOT AVAILABLE				6.03%	5.89%	0.13%	0.01%
Auchterarder N/B	29.44%	25.42%	3.71%	0.31%	NOT AVAILABLE				5.44%	5.32%	0.11%	0.01%	NOT AVAILABLE			
Broxden S/B	27.74%	25.73%	2.01%	0.00%	7.63%	7.45%	0.16%	0.02%	8.01%	7.91%	0.08%	0.02%	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%	10.22%	9.91%	0.28%	0.03%	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%	11.65%	11.21%	0.39%	0.05%	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											
Crieff N/B	6.58%	6.45%	0.12%	0.01%	4.29%	4.21%	0.07%	0.01%								
Auchterarder N/B	NOT AVAILABLE				8.29%	7.93%	0.27%	0.09%								
Broxden S/B	13.87%	13.45%	0.40%	0.02%	11.04%	10.71%	0.31%	0.02%								
Dunning S/B	15.74%	15.16%	0.51%	0.07%	NOT AVAILABLE											
Blackford S/B	NOT AVAILABLE				NOT AVAILABLE											

Appendix E - Vehicle Speed Data – Perth to Inverness

SPEED ANALYSIS PERTH - INVERNESS (SPOT SPEED)

Sites	MARCH 2012 BENCHMARK				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%
Birnam	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%								
Birnam	NOT AVAILABLE				NOT AVAILABLE											
Faskally	3.90%	3.79%	0.11%	N/A	5.19%	5.08%	0.11%	N/A								
Killiecrankie	6.90%	6.51%	0.33%	0.06%	9.27%	8.83%	0.40%	0.04%								
Dalwhinnie	9.65%	9.16%	0.43%	0.06%	6.54%	6.27%	0.26%	0.01%								
Kingussie	6.49%	6.00%	0.43%	0.06%	NOT AVAILABLE											
Moy	6.23%	6.10%	0.11%	0.02%	3.78%	3.72%	0.05%	0.01%								

Appendix F - Incident Analysis – Dunblane to Inverness

INCIDENTS

	Perth - Inverness		Dunblane - Perth		A9 Total	
	Incidents	Restriction	Incidents	Restriction	Incidents	Restriction
2013 Baseline	**135**	**282**	**49**	**121**	**184**	**403**
2014 Total	**62**	**124**	**90**	**120**	**152**	**244**
2015 Total	**71**	**167**	**53**	**65**	**124**	**232**

Incident data is drawn from the Traffic Scotland 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

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
Sep -15 N/B	122	122	122	122	121	120	116
Sep-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							
Mar 16 S/B							
Jun 16 N/B							
Jun 16 S/B							

PERTH - KINGUSSIE

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Nov-15 N/B	79	80	79	81	80	73	74
Nov-15 S/B	78	82	80	81	78	74	75
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							
Mar 16 S/B							
Jun 16 N/B							
Jun 16 S/B							

VARIATION

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							
Mar-16 S/B							
Jun 16 N/B							
Jun 16 S/B							

AVIEMORE - INVERNESS

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Nov-15 N/B	30	33	32	33	30	29	29
Nov-15 S/B	33	31	32	30	31	30	30
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							
Mar 16 S/B							
Jun 16 N/B							
Jun 16 S/B							

Appendix H – 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%**

2.7% Average

2015 COMPARISON WITH 2013 BASELINE	
Birnam Average	**N/A**
Dalwhinnie Average	**3.20%**
Moy Average	**5.40%**

Full data not available

2016 COMPARISON WITH 2015

Birnam	January	February	March	April	May	June	July	August	September	October	November	December
2015	9,436	11,701	12,426	14,853	14,446	15,364	N/A	N/A	N/A	N/A	N/A	N/A
2016												

Dalwhinnie	January	February	March	April	May	June	July	August	September	October	November	December
2015	5,590	7,235	7,669	9,498	9,822	10,120	11,547	12,256	10,399	9,817	7,315	6,681
2016												

Moy	January	February	March	April	May	June	July	August	September	October	November	December
2015	6,365	7,787	8,326	9,772	10,033	10,347	11,498	12,233	10,663	9,866	8,216	7,680
2016												

Appendix I – Accident & Casualty Analysis – November 2014 to October 2015

DUNBLANE TO INVERNESS - 3 YEAR AVERAGE COMPARISONS

DUNBLANE - PERTH COLLISIONS

Year	Fatal	Serious	KSI	Slight	TOTAL
2011	1	3	4	14	18
2012	0	5	5	20	25
2013	1	3	4	19	23
3 Year Annual Average	0.67	3.67	4.33	17.67	22.00
First 12 Months ASC	0	0	0	12	12
%3 Year Variation	**-100.0%**	**-100.0%**	**-100.0%**	**-32.1%**	**-45.5%**

PERTH - INVERNESS COLLISIONS

Year	Fatal	Serious	KSI	Slight	TOTAL
2011	6	5	11	29	40
2012	5	8	13	30	43
2013	4	10	14	22	36
3 Year Annual Average	5.00	7.67	12.67	27.00	39.67
First 12 Months ASC	5	2	7	18	25
%3 Year Variation	**0.0%**	**-73.9%**	**-44.7%**	**-33.3%**	**-37.0%**

DUNBLANE - INVERNESS COLLISIONS COMBINED

Year	Fatal	Serious	KSI	Slight	TOTAL
2011	7	8	15	43	58
2012	5	13	18	50	68
2013	5	13	18	41	59
3 Year Annual Average	5.67	11.33	17.00	44.67	61.67
First 12 Months ASC	5	2	7	30	37
%3 Year Variation	**-11.8%**	**-82.4%**	**-58.8%**	**-32.8%**	**-40.0%**

DUNBLANE - PERTH CASUALTIES

Year	Fatalities	Seriously Injured	Killed or Seriously Injured	Slightly Injured	TOTAL
2011	1	3	4	20	24
2012	0	5	5	25	30
2013	1	3	4	33	37
3 Year Annual Average	0.67	3.67	4.33	26.00	30.33
First 12 Months ASC	0	0	0	15	15
%3 Year Variation	**-100.0%**	**-100.0%**	**-100.0%**	**-42.3%**	**-50.5%**

PERTH - INVERNESS CASUALTIES

Year	Fatalities	Seriously Injured	Killed or Seriously Injured	Slightly Injured	TOTAL
2011	8	16	24	60	84
2012	8	16	24	91	115
2013	6	17	23	39	62
3 Year Annual Average	7.33	16.33	23.67	63.33	87.00
First 12 Months ASC	6	4	10	28	38
%3 Year Variation	**-18.2%**	**-75.5%**	**-57.7%**	**-55.8%**	**-56.3%**

DUNBLANE - INVERNESS CASUALTIES COMBINED

Year	Fatalities	Seriously Injured	Killed or Seriously Injured	Slightly Injured	TOTAL
2011	9	19	28	80	108
2012	8	21	29	116	145
2013	7	20	27	72	99
3 Year Annual Average	8.00	20.00	28.00	89.33	117.33
First 12 Months ASC	6	4	10	43	53
%3 Year Variation	**-25.0%**	**-80.0%**	**-64.3%**	**-51.9%**	**-54.8%**