

## **A9 Data Monitoring Analysis Report – April 2015**

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### **1. INTRODUCTION**

This paper is designed to provide a broad analysis of the trends emerging from the A9 in respect to the key performance indicators of:

- Casualties
- Vehicle Speed
- Offender Numbers
- Incident Frequency & Impact
- Journey Time Reliability

Police Scotland have advised that the quarterly update in respect to the number of drivers prosecuted will be provided for inclusion in this report going forward. This data is owned by Police Scotland and any queries relating to it must be addressed to them.

Also for this report the analysis incorporates the main findings of the 'Before & After' User Survey; an independent survey of A9 users carried out at various points on the route both before the introduction of the average speed cameras and after.

The data for this report is drawn from the A9 Data Monitoring Report which is published quarterly on the A9 Safety Group website. This analysis covers the period February 2015 to April 2015 (incidents are Q1 Jan – Mar) as an overall assessment of the performance of the route.

### **2. CASUALTY ANALYSIS**

This second quarterly release does not incorporate casualty figures as there is an agreed national standard process for compiling and analysing casualty figures. It is anticipated that figures covering the first six months of operation for the A9 will be available in late July when the appropriate tables will be updated in the Data Report.

Current information from Police Scotland remains encouraging in terms of improving driver behaviour. A Transport Scotland road safety officer visits the scene of every fatal accident on the trunk road with Police Scotland a short time after each incident. Since the 28 October there has been three fatal accidents between Dunblane and Inverness. These accidents are still subject to police investigation and involve:

1. a vehicle being struck within a layby which occurred on a dual carriageway section north of Perth which was not monitored by average speed cameras.
2. a car crossed the carriageway and collided with another on a single carriageway section within a camera monitoring area
3. two HGV's were involved in a head on collision on a single carriageway section within a camera monitoring area

### **3. VEHICLE SPEED DATA**

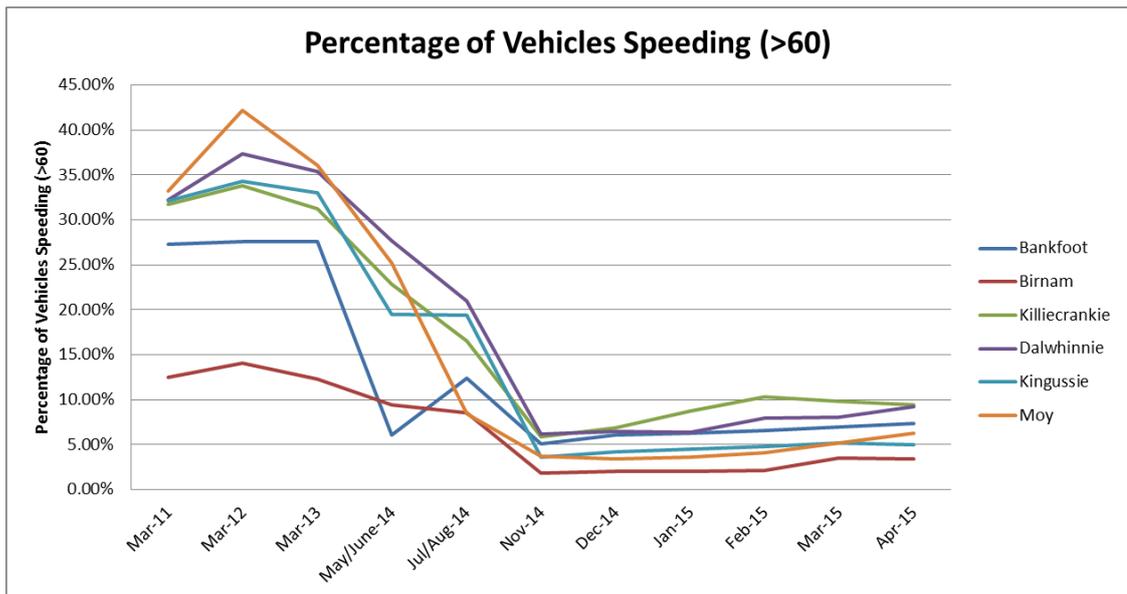
The significant reduction in the number of vehicles exceeding the maximum speed limits along the A9 corridor between Dunblane and Inverness has been maintained since the last analysis was carried out. Historical evidence from other average speed camera locations across the UK, and in particular from the A77 experience suggested that following the initial reaction to the introduction of the cameras there would be a slight rise in the speed profile of the route before an established pattern was identified.

The data from the A9 is pointing firmly towards this pattern with a slight rise in the speed profile, with the April figures suggesting that a more linear pattern has now been established. Since the introduction of the cameras the number of vehicles exceeding the speed limit is 1 in 15 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 limit remains consistent with the latest monitoring figures indicating a reduction of 95% from the benchmark figure which equates to a reduction from 1 in 10 vehicles to 1 in 250.

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

There have been intermittent issues with the data collection on the Dunblane to Perth stretch mainly attributable to maintenance and resurfacing operations. There is however a sufficiency of data since the introduction of the cameras to determine the emerging patterns.

The graph below represents the speed profile of the Perth to Inverness section from each of the monitoring stations and provides a visual indication of the immediate change in driver behaviour and how this has been maintained over the first six months of operation.



Perth to Inverness Speed Profile

**4. OFFENDER NUMBERS**

Since the system went live on the 28<sup>th</sup> October 2014 through to 20 April 2015 there have been 1,744 vehicles detected by the system exceeding the speed limit which warranted further action. This is an extremely high level of compliance when compared to previous enforcement methods. To put some perspective around the figure this equates to an average of less than 10 per day across the whole of the enforcement area based on an average daily traffic volume of over 10,000 vehicles between Perth & Inverness and 24,000 vehicles between Dunblane and Perth.

**5. INCIDENT FREQUENCY & IMPACT**

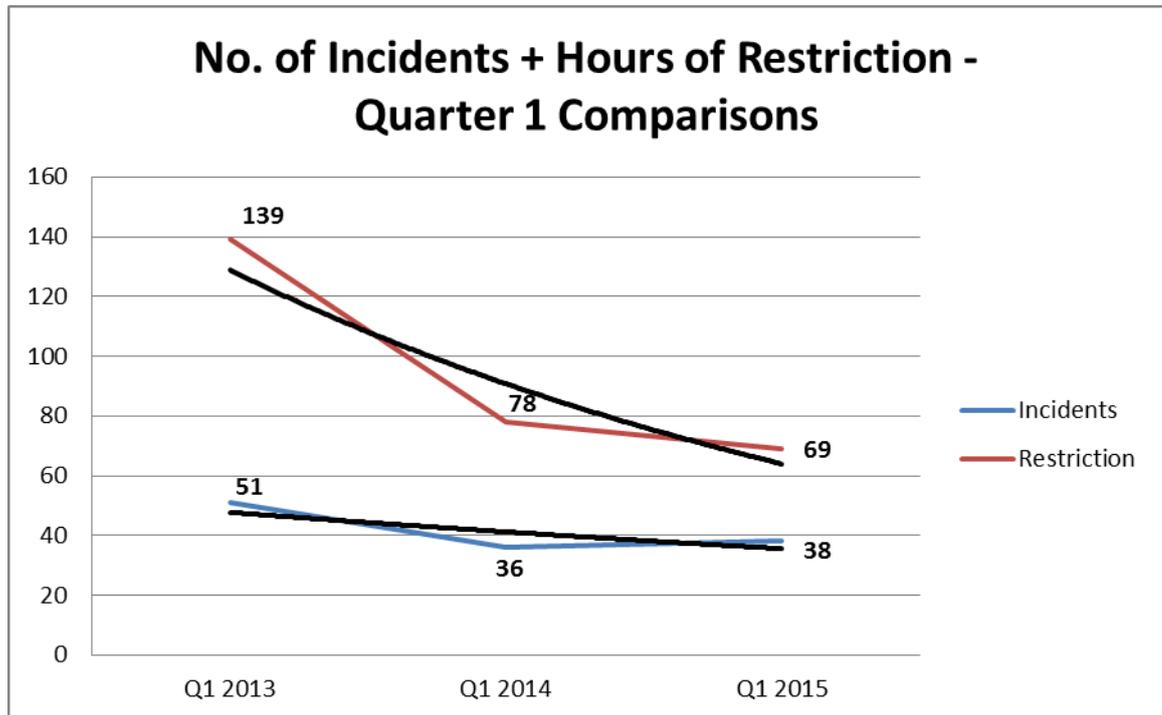
The initial analysis of the data relating to incident frequency and impact used a full calendar year for comparative purposes but now with more data available it is perhaps more appropriate to draw comparison between respective quarterly periods given the variation in traffic volumes and weather patterns on the A9 which can affect the dynamic relating to incidents significantly.

For this analysis period the Q1 data from 2013 to 2015 has been compared and visually as indicated below the identifiable trend is downward overall for both incident frequency and impact relative to closure and restriction times.

There is however significant variation within these figures principally caused by weather related incidents experienced north of Perth. During Q1 2015 more than 50% of the total incidents 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 Q1 in 2015.

Reviewing historical data reveals that there were limited weather related incidents in Q1 2014 and fewer in 2013 compared to 2015.

In summary, the overall downward trend over the three year period (by Q1) is the most reliable indicator in terms of assessing frequency and impact.



Incident Frequency & Impact

#### 6. JOURNEY TIME (Perth – Inverness)

The journey time data for the second quarter remains within the scope of the original predictions of rises between 4 and 14 minutes dependent on the day of the week. There were a number of sets of road works during February involving both ground investigation work for the dualling project and resurfacing operations. None of the road works had reported delays exceeding 5 minutes and the journey times have not been amended to reflect any delays experienced due to the works.

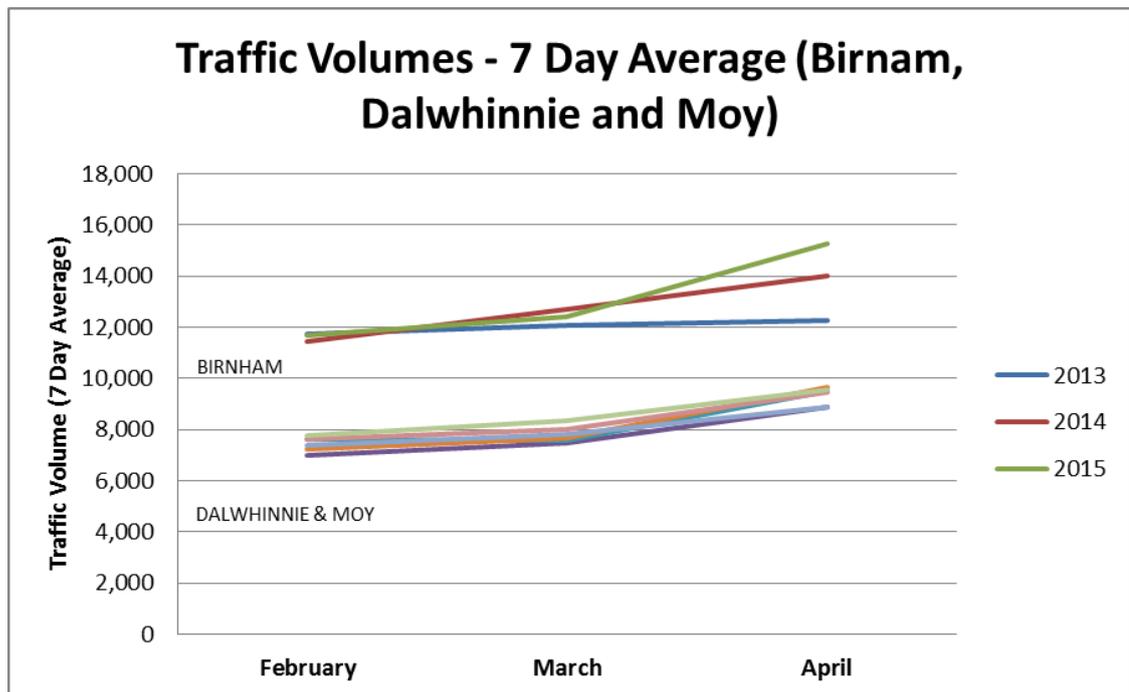
The April figures are much closer to the original benchmarks and on some days of the week the journey times were improved on the benchmark. The smoothing out of the journey times against rising traffic volumes on the route is also a strong indicator in terms of changes to driver behaviour.

#### 7. TRAFFIC VOLUMES (Perth – Inverness)

The traffic volume figures provide a comparison month on month between 2013 and 2015 in respect to three counting stations broadly representing traffic flow along the A9. As previously reported the figures can show a degree of variability in traffic volumes throughout the comparison period but the profile is a rising volume of traffic on the A9.

The graph below illustrates the trend of increased traffic growth on the A9 when comparing the equivalent periods over the past three years. The Pitlochry to Perth volumes represented by the Birnam figure reflect the higher volume of commuting traffic in this area while the

Moy and Dalwhinnie volumes are broadly similar. The percentage growth in traffic across the route in this comparison period is 7.3%.



A9 Traffic Volume Comparison

## 8. BEFORE & AFTER USER SURVEY

An independent survey (AECOM with peer review by the Transport Research Laboratory) of the 'before and after' impact of the cameras was carried out in May 2014 and March 2015 with the questionnaire considering personal experience and viewpoints covering the impact of the cameras, driving behaviour, frustration and safety. Taken as a whole, the results from the survey suggest:

- There has been a reduction in unsafe and undesirable driving, including users travelling at excessive speeds particularly 15 mph above the limit.
- Perceived enjoyment, satisfaction and safety have also all increased.
- It would be difficult to argue that since the introduction of ASCs there has not been a positive change in the behaviour of drivers and how safe they feel whilst travelling along the A9 even if it is difficult to ascertain whether this is down to the presence of ASCs, other factors or a mixture of both".

When asked about the effects of average speed cameras:

- 70% agreed or strongly agreed that they felt safer than if the cameras were not in place
- 70% agreed or strongly agreed that they were less likely to exceed the speed limit
- 70% agreed or strongly agreed that they felt less likely to be involved in an accident

When asked about their own driving behaviours:

- The numbers of drivers acknowledging their own speeding generally fell, particularly for high speeding ranges, with 75% saying they never exceeded 15 miles an hour above the speed limit, compared to 43% previously
- When asked about reasons for speeding, the numbers feeling pressured by other traffic fell from 83% to 47% and those speeding to make up time having been delayed by a slower moving vehicle fell from 85% to 61%. In both cases, it was suggested that decreases in vehicle platooning were responsible

When asked about their feelings generally on using the route

- There has been a significant improvement in drivers feeling safer or enjoying the route more, since the surveys prior to camera installation.
- Instances of “road rage”, tail gating or risky overtaking manoeuvres have fallen markedly.
- The drivers feeling most frustrated and concerned about their journey times are also those most likely to speed, either on single or dual carriageways.

Taken in conjunction with the available data this is another strong indicator of the changing driver behaviour on the A9.

The full survey findings can be found at <http://a9road.info/>