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28 June 2023

Dear John

### **Independent evaluation of the effectiveness and operation of SVD and end-to-end systems**

I'm writing further to my letter of 12 December 2022, to update you on the progress National Highways has made to improve the performance of our radar-based stopped vehicle detection (SVD) technology on all lane running (ALR) motorways. At the outset I would like to acknowledge and thank ORR for the time and support it has devoted to this.

In your "First annual assessment of safety performance on the strategic road network" you included an evaluation of the effectiveness and operation of SVD and end-to-end systems. You noted that National Highways had met its SVD technology installation targets; however, the system was not yet meeting performance expectations.

Safety is our top priority. The rollout of this type of technology for detecting stopped vehicles was the biggest and most complex anywhere in the world, and has been enhancing safety since it has been in place.

We set performance expectations, including for it to detect a minimum 80% of stopped vehicles and within 20 seconds of the vehicles stopping. We also specified that the proportion of times an alert was created, but there was no confirmed stopped vehicle, would be lower than 15%.

I recognised expectations were not being met and in December 2022 I committed that by the end of June 2023, we would aim to have met the performance expectations for SVD where it is in place, in a way which was manageable to our operators.

We set up a team of specialists to analyse every part of the system and determine the required improvements. We also worked with our operators to help ensure they could provide the best service to road users.

We piloted the improvements on three ALR motorways and based on the results of those schemes, we rolled out the improvements to other<sup>1</sup> ALR motorways over a period of a month, concluding on 14 June 2023.

Operational data<sup>2</sup> from the first three schemes shows the technology has improved and is now meeting the performance expectations listed above.

**Performance results – three spearhead schemes**

Scheme	We set performance expectations, including:		
	To detect a minimum 80% of stopped vehicles	Within 20 seconds* of the vehicles stopping	Proportion of times an alert was created, but there was no confirmed stopped vehicle, would be lower than 15%
M20 J3-5	97%	9.6 secs	2%
M1 J16-19	91%	5.8 secs	10%
M6 J2-4	94%	9.7secs	1%

\*20 seconds is the time for the radar system to detect. It must be presented to an operator within 30 seconds.

Since December we have made a small number of improvements to our methodology, which we have discussed with ORR. These were to more accurately reflect the performance of the system. Due to differences in the methodology, any comparisons with previous data should be made with significant caution.

We will continue to work with ORR to further refine the way in which we present SVD performance. And, working closely with ORR, and the Department for Transport, we remain committed to measuring the performance of this technology.

We will also keep looking at ways of enhancing our capability in this area, for example by using video analytics combined with SVD, and to monitor our operators’ workload in this area.

<sup>1</sup> This includes the schemes that were built to the latest requirements. The legacy schemes which were installed as the pilot (M25) and an earlier version (M3) will be subject to a retrofit taking into consideration the lessons learned.

<sup>2</sup> Dated 21 June 2023



We're also working hard to maintain the national 10-minute attendance time for traffic officers on ALR sections, and to deliver our £105 million plan to further improve our wider operational technology.

This is because safety is our top priority, and we want drivers to both be safe and feel safe on all our roads, including smart motorways.

I would like to thank you again for ORR's continued challenge and scrutiny.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Nick Harris', with a large, stylized initial 'N'.

**Nick Harris**

**Chief Executive**

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