

Update to the Regulation 28 response from Highways England concerning the death of Aditya PURI.

A) Traffic data speeds and flows of the A50 between junction 3 and junction 4 will be collected and compared to national averages.

Traffic speed and flow data was collated from permanent Traffic Monitoring Units (TMU) sites. The traffic speeds and flows between junctions 3 and 4 were broadly in line with other sections of the A50 between junction 4 and the M1 motorway. No unusual traffic levels or speeds were apparent on the section between junction 3 and junction 4.

B) Road Surface condition information will be collated and examined.

SCRIM

Sideway-Force Coefficient Routine Investigation Machine (SCRIM) is a surface friction test that is used to measure wet-road skidding resistance.

The vertical load and the sideway force generated by frictional resistance to skidding of a test wheel are measured and the output is used to calculate the Sideway Force Coefficient (SFC) value. The SCRIM operates at 50km/hr with continuous measurement of the SFC value.

SCRIM investigatory levels (IL) are defined for every part of the network. This section of the Eastbound A50 carriageway has been classified with an IL of 0.35.

SCRIM sites with a Polished Stone Value (PSV) between 0 and -0.05 of the classified IL are monitored and would only be reviewed further if a cluster of collisions were identified at the location. Currently sites with a SCRIM value of -0.1 below the classified IL trigger temporary warning sign installation and remedial schemes subject to funding being available.

None of the locations investigated fell below the classified IL, therefore, intervention is not required.

TRACS

Rutting data from TRACS (Traffic Speed Condition Survey) measures longitudinal profile variance, texture, transverse profile, cracking and fretting of the road surface. In deciding whether further maintenance investigations are required it is the rutting, fretting, cracking and texture data that is of most interest.

The results of the rutting data values returned from the TRACS analysis are within prescribed tolerances. None of the locations examined required further investigation.

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C) Detailed investigations will be undertaken on the fatal accidents occurring on the A50 between junction 3 and junction 4 to understand the wider context of the accidents occurring, gathering information pertaining to the highway and its environs.

Five Fatal Accident Reports have been completed by Highways England for the incidents listed below: -

23-2-2017 A50 Eastbound protected layby east of Junction 4, Findern, Derby

10-7-2017 A50 Eastbound Marker Post B80.8 Chellaston, Derby

9-1-2018 A50 Eastbound protected layby east of Junction 4, Findern, Derby

9-4-2018 A50 Eastbound, 500m east of Junction 4 entry slip road, Derby

29-5-2018 A50 Westbound east of protected layby west of Junction 3 Chellaston.

The investigations concluded that there were no highway defects or conditions that contributed to the cause of the collision.

D) Accident analysis will be undertaken to combine data sources of speed and flow and detailed accident investigation with examination of the Police reports.

The initial road accident investigation undertaken by Highways England examined the road accident history on the A50 between junctions 3 and 4 of the A50 using the last three years of available data from the Stats 19 police information. For context, the road accident history was examined on the wider A50 network, to provide a comparison baseline for this section. These investigations established the following:-

- In the last 3 years there is a higher than national average of accidents occurring on a wet road surface.
- In the last 3 years there is a higher than national average of accidents occurring during the hours of darkness.
- Accident rates and accident types occurring on the A50 between junction 3 and junction 4 are not indicative of a wider problem along the length within other lit or unlit sections.
- Examination of historical accident data between 2010 and 2014 for the A50 between junction 3 and junction 4 shows accident rates on wet road and during the hours of darkness to be in line with national averages. The higher than national average levels have occurred more recently on this section of the A50 and are not indicative of a long-term trend.
- Close following and drivers failing to judge the path and speed of other drivers was a common factor along the length.

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- Contributory factors show that the highest proportion of accident causations were behavioural, followed by environmental and vehicle defects to a much lesser extent.

Further investigations into the issues established above resulted in the following conclusions:-

Road Surface - Visual inspections and specific testing has confirmed there is no evidence to suggest that the road surface had deteriorated to a point that may lead to an increase in loss of control accident or accidents on a wet road surface. The high percentage of behavioural contributory factors points to drivers failing to adapt their style of driving to the prevailing road conditions.

Darkness accidents – The Design Manual for Roads and Bridges (DMRB) Advice Note TA 49/07 *Appraisal of New and Replacement Lighting on the Strategic Motorway and All-Purpose Trunk Road Network* states;

New lighting schemes should not be introduced as a standalone improvement to mitigate a high darkness accident rate unless a road safety engineer has examined the types and circumstances of the accidents occurring and concluded that street lighting would be the best solution.

Commonly, the types of accidents that would be treated by the introduction of street lighting would be;

- Loss of control accidents due to the bendiness of the road which leads to a loss of definition and forward visibility of the direction of the carriageway.
- Loss of control type accidents due to the vertical alignment of the road; sharp crests and dips which lead to a loss of definition and forward visibility of the direction of the carriageway.
- Accidents occurring to vulnerable road users where those road users would be expected to use/cross the carriageways and adjacent footways such as in urban/built up areas. High quality, high speed all-purpose trunk roads without footways and motorways would not usually be retrospectively lit for this purpose other than at known conflict points such as junctions or areas where lane change manoeuvres are required.

The next step would be to increase the definition of the carriageway using lining/reflective road studs and/or any other engineering measures specific to the location. Only once all other engineering measures had been introduced or discounted would new street lighting be considered.

Visual inspections undertaken by the road safety team during the hours of darkness concluded that the forward visibility and definition of the carriageway at night was adequate for drivers to understand the gentle sweeping curves and undulations of the route. The lining and reflective road studs were all in good condition.

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The types of accidents occurring during the hours of darkness did not fall into the above three categories. Two of the fatal accidents involved pedestrians, however the A50 has no pedestrian facilities and drivers should not be expecting to see pedestrians in the carriageway. It was only due to other incidents or driver behaviours that the pedestrians were in the carriageway and therefore the introduction of street lighting would not be appropriate to address these incidents.

Three of the fatal accidents involved drivers losing control of their vehicles, however it is either not known why the drivers lost control or some form of driver impairment/behaviour was identified in Coroners proceedings.

Close following

Close following and drivers failing to judge the path and speed of other drivers was a common factor along the length.

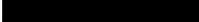
Conclusion

The high percentage of behavioural contributory factors points to drivers failing to adapt their style of driving to the prevailing road conditions and not to any deficiency in the highway environment.

The accident patterns examined on the A50 do not identify any highway improvements that could be introduced to prevent future deaths.

The need for street lighting on this section of the A50 has been examined. The types of accidents identified would not conclusively be prevented by the introduction of street lighting.

	<p>REGULATION 28 REPORT TO PREVENT FUTURE DEATHS</p> <p>THIS RESPONSE IS BEING SENT TO:</p> <p>1. The Assistant Coroner for Derby & Derbyshire, Rachel Syed of St Katherine's House, St Mary's Wharf, Mansfield Road, Derby, DE1 3TQ in response to a 'Regulation 28 Report to Prevent Future Deaths' following an inquest hearing into the death of Aditya PURI that concluded on 09 August 2018.</p>
1	<p>HIGHWAYS ENGLAND</p> <p>I am [REDACTED] Regional Director Operations Midlands responding on behalf of [REDACTED], Chief Executive of Highways England Company Limited of Bridge House, 1 Walnut Tree Close, Guildford, SURREY, GU1 4LZ.</p>
2	<p>CORONER'S MATTERS OF CONCERN</p> <p>The MATTERS OF CONCERN are as follows:-</p> <p>(a) The A50 in question (between Junction 3 and 4, Eastbound and Westbound) does not have street lighting. Street lighting in this area would be beneficial to prevent future deaths occurring.</p>
3	<p>DETAILS OF ACTION TAKEN</p> <p>We have undertaken an initial investigation of the A50 Derby Southern Bypass Junction 3 (Chellaston Roundabout) to Junction 4 (Toyota Roundabout) Eastbound and Westbound to review the available collision data and produce the strategy for detailed analysis as described in Section 4 below. This was completed on 26 September 2018.</p>
4	<p>DETAILS OF FURTHER ACTION PROPOSED</p> <p>The tasks of detailed data collection, analysis and investigation, as outlined at (a) to (d) below, are to run concurrently. It is anticipated this work will take a period of up to six months to complete. The work commenced on 01 October 2018 as planned.</p> <p>(a) Traffic data speeds and flows of the A50 between Junction 3 and Junction 4 will be collected and compared to the national averages;</p> <p>(b) Road surface condition information will be collated and examined;</p> <p>(c) Detailed investigations will be undertaken on the fatal accidents occurring on the A50 between Junction 3 and Junction 4 to understand the wider context of the accidents occurring, gathering information pertaining to the highway and its environs; and</p> <p>(d) Accident analysis will be undertaken to combine data sources of speed and flow, and detailed accident investigation with examination of the police reports.</p> <p>The outcome of the investigations and analysis identified at (a) to (d) above, may require a feasibility study to establish if there are options for changes to the assets (such as lighting) on the A50 Junction 3 to Junction 4 to improve safety. If so, the feasibility study will commence at the beginning of April 2019.</p> <p>Implementation of the above strategy, and the outcome of a feasibility study (if required), will be dependent upon funding being made available for improvement projects using Highways England's value management process.</p>

5	<p>TIMETABLE FOR ACTION</p> <table border="1"> <thead> <tr> <th data-bbox="352 304 582 331"><u>Date</u></th> <th data-bbox="582 304 1334 331"><u>Action</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="352 360 582 387">26 Sept 2018</td> <td data-bbox="582 360 1334 421">Conduct initial investigation and produce the strategy for detailed analysis</td> </tr> <tr> <td data-bbox="352 421 582 481">01 October 2018 - 31 March 2019</td> <td data-bbox="582 421 1334 562">Collect traffic data on speeds and flows. Collate and examine road surface condition information. Detailed investigations on relevant fatal road traffic collisions. Accident analysis to be undertaken with examination of the police reports.</td> </tr> <tr> <td data-bbox="352 562 582 589">April 2019</td> <td data-bbox="582 562 1334 589">Feasibility study to commence (if required).</td> </tr> </tbody> </table>	<u>Date</u>	<u>Action</u>	26 Sept 2018	Conduct initial investigation and produce the strategy for detailed analysis	01 October 2018 - 31 March 2019	Collect traffic data on speeds and flows. Collate and examine road surface condition information. Detailed investigations on relevant fatal road traffic collisions. Accident analysis to be undertaken with examination of the police reports.	April 2019	Feasibility study to commence (if required).
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6	<p>SAFETY OF ROAD USERS</p> <p>Safety is the number one priority for Highways England Company Limited. Our company vision for safety is that “no one should be harmed when travelling or working on the strategic road network”. Any improvements we make must be done in a considered and controlled fashion so that the consequences of any improvements are fully understood, and any safety risks linked to the proposed changes are eliminated or reduced as far as possible. The actions proposed and underway are drawn up with this foremost in mind as we try to help to prevent future deaths at this location.</p> <p>Highways England commit to providing the Assistant Coroner with an update on the actions proposed at Section 4 above at the end of the six-month period to provide a fuller response to the matters giving rise to concern.</p>								
7	<p>03 October 2018 Signed: </p> <p> Regional Director Operations Midlands on behalf of </p>								