

CAMPAIGN FOR BETTER TRANSPORT

WRITTEN REPRESENTATION

HIGHWAYS ENGLAND'S RESPONSE

1. *Relevance of new evidence*

1.1 *Relevance*

The two new reports referred to in this submission are the 12 month evaluation reports for two sections of the M25 which have, in part or whole, been reconfigured to Smart Motorway - All Lane Running (SM-ALR). For some reason, Highways England has chosen to submit only one of these reports to the M4 Examination, yet we believe that both are relevant as they are the only reports to date on the success or otherwise of this motorway configuration. They highlight some interesting traits such as increasing traffic flow on the motorway, over and above regional and national growth, along with some safety issues too.

Highways England Response

- 1.1.1 It is correct that there are two 12 month evaluation reports for the two sections of all lane running ("ALR"). These are for the M25 J5-7 scheme and the M25 J23-27 scheme. Highways England provided an Explanatory Note in relation to the M25 monitoring, which focused on the J23-27 ALR scheme (REP6-12) and submitted the M25 J23-27 twelve month evaluation report (REP6-15) to the Examining Authority at Deadline VI. The M25 J5-7 scheme has only one full link of ALR operation and it was therefore considered that in order to be able to provide an appropriate indication of how the M4 Junctions 3 to 12 Smart Motorway scheme (the "Scheme") would be expected to perform, the M25 J23-27 scheme would give a better overall picture of the performance of ALR.
- 1.1.2 Highways England stated at the Traffic Safety Issue Specific Hearing that it had provided written evidence to the Transport Select Committee. This written evidence was provided to the Examining Authority at Deadline VII, and contained a review of both the M25 J5-7 and M25 J23-27 ALR schemes. On that basis, Highways England considers that the key output from the monitoring of the initial ALR schemes has been provided to the Examining Authority.
- 1.1.3 Whilst the Campaign for Better Transport asserts that there are interesting traits highlighted within the twelve month evaluation reports, in fact, the output from the monitoring shows that the schemes are generally performing in line with expectations. The results show that

the overall safety performance over the initial 12 month period did not worsen and the initial indications are that the objectives of the M25 schemes are being achieved.

1.2 *Missing evidence*

These reports are deficient in a number of ways, which is surprising if a proper evaluation of the impact of these substantial public investments is to be properly understood. On traffic flows, for example, there is no analysis of the wider impact on the surrounding road network to see whether there has been an increase or decline in traffic levels. Equally, there has been no comparison of the figures measured here with what was predicted when the case for the expenditure was being made.

It is also notable that there are ongoing issues around the reliability of some of the traffic flow figures due to the radar detectors under-reporting by up to 6%, which could mean that the actual traffic increase due to the road expansion is even greater than recorded here.

Equally, we are surprised that air quality has not been seriously addressed with rather spurious reasons given as to why the impact of one of the schemes could not be assessed. For the other scheme it did not even feature as a subject for consideration apparently. Given the seriousness of the issue, we find it somewhat surprising that it was not even mentioned.

Highways England Response

1.2.1 The M25 twelve month evaluation reports are specific reports Highways England commissions in order to evaluate the key objectives of a scheme, which focus on journey time performance and safety. On that basis, the reports are not deficient in any way, as they provide initial evidence and indications which suggest whether the schemes are performing as expected. Post Opening Project Evaluation (“POPE”) studies are undertaken for all of Highways England’s Major Schemes and are yet to be issued for the M25 schemes. The key objective of the POPE is to identify the extent to which the expected impacts of the scheme have materialised and to inform thinking on current and future national scheme appraisal methods. The POPE will identify whether the anticipated benefits are being realised and whether the scheme objectives will be met. The evaluation will compare the anticipated costs, benefits and other impacts. This will include further analysis on traffic flows and the wider impact on surrounding roads.

1.2.2 With regard to the reliability of the traffic flow figures, the twelve month evaluation reports explain that the schemes used radar detectors as opposed to the inductive loops and that the radar technology has been found to provide less accurate results than might have been expected. The M25 J5-7 report, however, notes that because the radar units are under reporting traffic flow, the positive impact of the scheme is also likely to be understated. The report noted further that analysis across other data sources has identified no evidence that

other results had been affected. In the M25 J23-27 report, it is noted that the variability of data is overcome as only data from detector sites with complete data has been used in the calculations.

1.2.3 With regard to air quality, the M25 J23-27 report provides an initial indication on the impact and performance of the scheme, which suggests that as journey times have improved and the traffic flow is now smoother with less congestion than before the scheme, the likelihood is that vehicle emissions may be lower, with a resulting improvement in air quality. However, as noted above, the evaluation reports focus on flows, journey times and safety to provide an indication of initial scheme performance, and not air quality.

2. ***M25 J5-J7 12 month evaluation study***

2.1 *Introduction*

The reconfiguration of this section of motorway to Smart Motorway with All Lane Running was completed in April 2014 but was largely focussed on Junctions 5-6. Junctions 6-7 largely retained the hard shoulder apart from one small section near Junction 6 clockwise as its capacity appears to have remained the same¹.

2.2 *Headlines*

The headlines from the study are:

- *Traffic increased by 13% for SM-ALR section clockwise (J5-J6)*
- *Radar based counters under-reporting by up to 6%*
- *KSI data was worse for SM-ALR section and compared with previously, although overall casualty rates down*
- *Large number of non-emergency stops in Emergency Refuge Areas (ERAs) (81% of all stops)*

Highways England Response

2.2.1 Highways England comments are provided below against each specific section of the representation.

2.3 *Traffic Flow*

¹ Figure 1-2, page 8, SM-ALR Monitoring, M25 J5-7 Twelve Month Evaluation Report – Highways England, January 2016

The biggest increase in traffic was seen over J5-J6 clockwise, the section that had been converted to SM-ALR. A 13% increase in Average Daily Traffic (ADT) was found compared to increases in all roads flow nationally of 3.3% and 2.1% in the South East². This is a significant increase in traffic, potentially some of it induced by the road expansion.

Traffic flows anticlockwise increased by a more modest 3%, while between junctions 6 and 7 where there was no expansion on the number of lanes, the traffic increase was lower at 2%.

This would suggest that the scheme was responsible for increasing traffic flows on the motorway, over and above expected levels.

Notably, this report highlights the severe problems that Highways England is experiencing with radar detectors, to such an extent that it had to abandon their use for Junctions 5 – 6 and calculate the traffic flows over this section using the data for Junctions 6 – 7 and the slip roads, where the more accurate loop monitors were used (or remained in place). It is reckoned that the radar detectors could be under-reporting traffic flows by up to 6%³.

Highways England Response

2.3.1 The analysis of the data presented by the Campaign for Better Transport is flawed.

2.3.2 The M25 Junctions 5 to 7 Evaluation Report concludes at Section 5.1:

“For J5 to J6, the SM-ALR section where a lane has been added, flows have increased by 13% clockwise and 3% anticlockwise. The scheme has experienced traffic growth of approximately 2% between J6 and J7, which was not previously at capacity and did not have any lanes added; this is in line with regional growth trends.”

2.3.3 In addition to summarising the changes in traffic flows, the Report provides the following conclusions in Section 5.2 on journey times:

“Average journey times have reduced by 3% overall in the clockwise direction and 2% anticlockwise” and “The biggest journey time reliability improvements relate to the times when journey times were most unreliable in the Before period, i.e. the clockwise AM peaks and the anticlockwise PM peaks.”

² Executive Summary, page 5, SM-ALR Monitoring, M25 J5-7 Twelve Month Evaluation Report – Highways England, January 2016

³ Paragraph 2.1.1, page 11, SM-ALR Monitoring, M25 J5-7 Twelve Month Evaluation Report – Highways England, January 2016

- 2.3.4 Taken together, the above conclusions suggest that, with the exception of junctions 5 to 6 clockwise, the scheme resulted in modest increases in traffic flow and, taken as a whole, delivered improvements in journey times.
- 2.3.5 Section 2.2 of the Evaluation Report states that: “A large number of vehicles leave the motorway at J6 anticlockwise which explains why the J5 to J6 flows are lower.” Whilst not explicitly stated, there is an inference that this is not the case in the clockwise direction.
- 2.3.6 Junction 5 provides a merge between the clockwise M25 and the M26 link from the M20 followed after a short distance by a further merge from the A21 Sevenoaks bypass. Each of these three routes carries high volumes of traffic which, prior to the ALR scheme, merge into three lanes giving rise to queues and delays. This would not be the case in the anticlockwise direction as each of the respective traffic streams undertakes a diverge movement.
- 2.3.7 The A25 provides a parallel route to the M25 between the Sevenoaks bypass and the A22 just south of junction 6. Between these two points it passes through the small town centre of Westerham but to the south of the centre of Oxted, the other town on this section of the A25. Therefore, whilst Campaign for Better Transport has suggested that “*the (M25) scheme was responsible for increasing traffic flows on the motorway, over and above expected levels*”, the more plausible explanation is that the traffic from the Sevenoaks area, wanting to travel west prior to the scheme, sought to avoid the congestion at junction 5 and used the A25 as an alternative route to the A22, and has been reassigned to the M25 as a result of the improvements brought by the scheme. As stated above, the use of the A25 would not be as attractive in the anti-clockwise direction as there are no similar delays at junction 5 in that direction. Notwithstanding these comments, Highways England accepts that without analyses of traffic flows over a wider area, it is not possible to draw firm conclusions. However, it is clear that the assertion that this must be induced traffic is unsustainable and not supported by evidence.

2.4 Traffic Safety

It is difficult to draw any conclusions based on 1 year’s worth of data and indeed given the small numbers of killed and seriously injured (KSI) both before and after the figures could be difficult to compare even with a longer time period available post opening.

However, having said that, while overall collisions appear to have fallen, in the KSI category, they appear to have risen by 51%⁴ post the opening. In addition, 8 of the 9 KSI collisions post opening took place on the SM-ALR section between Junctions 5 and 6⁵.

This would suggest that it is not possible to claim that SM-ALR is indeed safer than the standard motorway configuration.

Related to this, Highways England have previously stated that a safety benefit of All Lane Running (ALR) is that it removes “the risk of hard shoulder misuse...”⁶, yet this report shows extensive misuse of the Emergency Refuge Areas (ERA), recording 69 unique stops in 220 hours of monitoring, with 81% of the stops being classified as non-emergency. Highways England has acknowledged this, yet its only response is to state that it will consider increasing driver awareness which to date has not been that effective in reducing abuse of the hard shoulder on traditional motorways.

In addition, the use of ERAs could be potentially more dangerous for vehicles manoeuvring into and out of them – there are in effect laybys. Unlike a hard shoulder, where a car or lorry can pull over straight away and then coast or brake to a standstill, given the length of the ERA, vehicles will end up slowing down in the actual traffic lane to be able to safely enter the ERA. Leaving the ERA a vehicle may not be able to get to a particularly high speed before it has to pull out into the general traffic lanes, causing an increase of risk at this point. With a hard shoulder, vehicles can get to a speed closer to the moving traffic before pulling out into the running lanes.

In addition, there has been quite a high level of ignoring of the red cross or lane closure signs. While the average figure might be a 7% non-compliance, this hides substantially higher non-compliance on occasions, up to 16%, with hundreds of vehicles ignoring the signs⁷. This could pose a substantial safety risk.

Highways England Response

2.4.1 Highways England acknowledges the comments made by the Campaign for Better Transport, but believes that all matters raised have been addressed in previous responses by Highways England to the Examination, particularly at the Traffic Safety Issue Specific Hearings and in the Explanatory Note submitted by Highways England at Deadline VI (REP6-12).

⁴ Table 4-1, page 22, SM-ALR Monitoring, M25 J5-7 Twelve Month Evaluation Report – Highways England, January 2016. Note this is before any adjustment for falling casualties nationally over this period, which would result in this figure increasing.

⁵ Paragraph 4.2, page 22, SM-ALR Monitoring, M25 J5-7 Twelve Month Evaluation Report – Highways England, January 2016

⁶ Paragraph 6.4.2.4, page 17, Highways England Response to Campaign for Better Transport Written Representation – Summary of representations made at special hearings on environment and safety (with additional evidence)

⁷ Appendix C.2 Red X Compliance, page 48, SM-ALR Monitoring, M25 J5-7 Twelve Month Evaluation Report – Highways England, January 2016

2.4.2 In particular, Highways England has stressed that conclusive results require 3 years of safety data. However, this initial data relating to the first 12 months of ALR, provides reassurance that the M25 schemes are safe. The performance of ALR will continue to be monitored over the coming years, and the statistical significance of the results will continue to increase.

2.4.3 With regard to the number of illegal stops in emergency refuge areas (“ERAs”), there was an increase in the number of illegal stops identified on the M25 J23-27 scheme and this was recognised within the Explanatory Note and also during the Traffic Safety hearing. Highways England is investigating the reasons for the increase. At a strategic level, Highways England is introducing driver education programmes across the network.

3. ***M25 J23-J27 12 month evaluation study***

3.1 *Introduction*

The reconfiguration of this section of motorway to SM-ALR was completed in April 2014 for Junctions 23-25 and November 2014 for Junctions 25-27. The whole length of the motorway was converted to SM-ALR apart from through junctions 23, 25 and 27 where the hard shoulder was retained⁸.

3.2 *Headlines*

The headlines from the study are:

- *Traffic increased between 9-11% (but could be even higher – see point below)*
- *Traffic flow data based on radar detectors which could have under-reported increase (M25 J5-J7 report says there could be under-reporting of flows by up to 6%)*
- *Large number of non-emergency stops in ERAs (85% of all stops)*
- *Air quality report is weak and inconclusive*

3.3 *Traffic Flow*

Unlike the previous study for M25 J5-7, all the post opening traffic flows have been measured using radar detectors which have proved to be so unreliable that flows for J25-27 generally haven't been

⁸ Figure 1-2, page 9, SM-ALR Monitoring, M25 J23-27 Twelve Month Evaluation Report – Highways England, January 2016

assessed⁹. In addition, one of the sectors of the M25 J23-25 provided results at odds with the other three sectors that it has largely been discounted too.

The report says that:

“It is not possible to determine whether the technology consistently over counts or under counts because a direct comparison with a ground truth detection method is not available”¹⁰

but then says later on that:

“Comparison of radar and loop data for M25 J5 to J6 has shown that radars are under-reporting”¹¹

Clearly, a comparison has been made between the two technologies and there is evidence that radar technology is not only unreliable but also under-reporting the traffic flows. In contrast, there is no evidence provided to show that radar detectors are over-reporting traffic flows as suggested here.

This is important as it means that the increase in traffic experienced on this stretch of motorway is likely to be a minimum increase and could well be higher than stated. This is not acknowledged in the report.

The biggest increase in traffic was for J24-25 anti-clockwise which saw an 11% increase in ADT. J23-24 anticlockwise saw a 9% increase in ADT as did J23-24 clockwise. The anomaly was J24-25 clockwise which saw a 3% increase but this was largely discounted as being erroneous¹².

Highways England Response

3.3.1 The M25 J23-27 Twelve Month Evaluation Report states that the monitoring of traffic flows after opening was constrained to a 5-month period due to the phased opening of that scheme. It is also recognised that the use of radar counters and associated uncertainty over the recorded flows adds a degree of further uncertainty to the conclusions. Nonetheless, Highways England considers that it is useful to compare the early evaluation findings with the traffic forecasts produced in 2012. Reference has been made to the Traffic Forecasting Report¹³ for this section of the M25 and Appendix C of that report provides the forecast changes in Annual Average Daily Traffic flows for 2015 tabulated below for the sections between junctions 23-24 and 24-25. Highways England acknowledges that at the time the

⁹ Paragraph 2.1.1, page 12, SM-ALR Monitoring, M25 J23-27 Twelve Month Evaluation Report – Highways England, January 2016

¹⁰ Paragraph 2.1.1, page 12, SM-ALR Monitoring, M25 J23-27 Twelve Month Evaluation Report – Highways England, January 2016

¹¹ Paragraph 2.2, page 12, SM-ALR Monitoring, M25 J23-27 Twelve Month Evaluation Report – Highways England, January 2016

¹² Paragraph 2.2, page 12, SM-ALR Monitoring, M25 J23-27 Twelve Month Evaluation Report – Highways England, January 2016

¹³ M25 DBFO LUS Managed Motorways Stage 3 – Preliminary Design, MM2 Traffic Forecasting Report – Section 5, July 2012

forecasts were produced, it was anticipated that the scheme would be of the dynamic hard shoulder (“DHS”) type, but it is considered that this does not invalidate the comparisons as DHS provides the additional capacity when required.

Section	Clockwise		Anti-clockwise	
	Forecast	Observed	Forecast	Observed
J23-J24	+13%	+9%	+11%	+9%
J24-J25	+14%	(+3%)	+13%	+11%

Comparison of Percentage Changes in Forecast and Observed Annual Average Daily Traffic (“AADT”) Flows M25 J23-25

3.3.2 Accepting the observed results for J24-J25 clockwise are likely to be erroneous for the reasons stated in the Evaluation Report, the comparisons show that the recorded flows are below those forecast in each case. In the worst case that the flows are under-recorded by 6%, the post-opening flows will be between 2% and 4% higher than forecast. Given that the observations are based on a short 5-month period post-opening, these initial conclusions should be treated with caution.

3.4 Traffic Safety

As with the previous study it is difficult to draw any conclusions based on such short time periods, exacerbated in this instance as only 6 months of data is available for J25-27. Indeed given the small numbers of killed and seriously injured (KSI) both before and after the scheme was constructed, the figures could be difficult to compare even with a longer time period available post opening. This is further complicated by the fact that a number of the fatalities both before and after are suspected to be suicides and one was a stowaway incident¹⁴.

Overall figures would suggest a slight fall in collisions but not to the extent that it is possible to claim that SM-ALR is indeed safer than the standard motorway configuration, given that the numbers are not statistically significant¹⁵.

As with the study for J5-7 this report shows even more extensive misuse of the ERAs, recording 392 unique stops in 774 hours of monitoring, with 85% of the stops being classified as non-emergency¹⁶. 96%

¹⁴ Paragraph 4.1, page 22, SM-ALR Monitoring, M25 J23-27 Twelve Month Evaluation Report – Highways England, January 2016

¹⁵ Paragraph 4.2, page 24, SM-ALR Monitoring, M25 J23-27 Twelve Month Evaluation Report – Highways England, January 2016

¹⁶ Paragraph 4.4.4, page 29, SM-ALR Monitoring, M25 J23-27 Twelve Month Evaluation Report – Highways England, January 2016

of HGV stops were classified as non-emergency, which given their slower acceleration and significant mass could mean that they pose an increased risk when they use the ERAs as they will have to slow down in the general traffic lane to enter them and have to pull out into the running lanes, before they have reached their cruising speed.

It should be noted that no misuse of the hard shoulder was observed at J23 and J25¹⁷.

As with the J5-7 report, there has been quite a high level of ignoring of the red cross or lane closure signs. While the average might be a 7% non-compliance, this hides substantially higher non-compliance on occasions, up to 19%, with hundreds of vehicles ignoring the signs¹⁸. This could pose a substantial safety risk.

Highways England Response

3.4.1 Highways England acknowledges the comments made by the Campaign for Better Transport, but believes that all matters raised have been addressed in previous responses by Highways England to the Examination, particularly at the Traffic Safety Issue Specific Hearings and in the Explanatory Note submitted by Highways England at Deadline VI (REP6-12).

3.5 Air Pollution

The results for nitrogen dioxide (NO₂) are, like safety, generally inconclusive with some measurements appearing to rise and others to fall¹⁹. Some sites also have had less data post the scheme opening, particularly between J25-27 where the scheme did not open until November 2014, with the January to April 2015 figures unadjusted and therefore difficult to compare.

It is premature for Highways England to claim that:

“...the results for the M25 J23-27 Scheme demonstrate that air quality is generally better in the post-Scheme opening air quality monitoring results compared to the concentrations of NO₂ monitored pre-Scheme.”²⁰

However, while it does acknowledge that the improvements are not being attributed to the scheme, it nevertheless makes these claims and states that therefore that it is likely that there is little to worry about for the M4.

¹⁷ Paragraph 4.5, page 30, SM-ALR Monitoring, M25 J23-27 Twelve Month Evaluation Report – Highways England, January 2016

¹⁸ Appendix C.2 Red X Compliance, page 48, SM-ALR Monitoring, M25 J5-7 Twelve Month Evaluation Report – Highways England, January 2016

¹⁹ Table 5-1, pages 32-33, SM-ALR Monitoring, M25 J23-27 Twelve Month Evaluation Report – Highways England, January 2016

²⁰ Table 5-1, pages 32-33, SM-ALR Monitoring, M25 J23-27 Twelve Month Evaluation Report – Highways England, January 2016

The evaluation report itself states:

“Although NO₂ concentrations exceeded the NO₂ annual mean criterion in both the Before and After periods, they appear to be lower following the opening of the scheme, which is a positive finding. However, it is not possible to directly attribute the reduction in measured concentrations to the scheme itself, as there are many other factors which can cause variation in air quality monitoring data (including changes in fleet composition and contribution from secondary NO₂ (i.e. NO₂ not directly emitted from vehicle exhausts).”²¹ [italics by Highways England]

Apart from the optimistic statement that levels appear to be lower when this is not universal, it is clear that it is not able to state what impact the road has had on the levels. In itself, this is both an odd statement and slightly worrying, given the impact that air pollution has on human health and the fact that the UK is still non-compliant some 6 years past the original (legal) deadline to reduce NO₂ pollution to below 40µg/m³. We would have expected there to be more robust monitoring in place and greater priority given to assessing the impact of the road expansion.

The last part of the statement about not being able to tell what impact the scheme might have had because of other influences is also slightly strange given that unless there is some heavy industry in the area, most NO₂ emissions will be from traffic. Changes in fleet composition are also modelled or tracked and could be accounted for, although they are unlikely to have altered dramatically in any case. A gradual improvement is likely to be seen over time, but that generally has been much slower than anticipated.

Highways England Response

- 3.5.1 As identified in the M25 Monitoring Report, the general pattern in the monitoring data is lower post-scheme compared to pre-scheme. There are variations to this and any measured improvements in air quality are not, at this stage, being directly attributed to the scheme. This reflects the difficulty in resolving monitored changes in air quality due to road schemes.
- 3.5.2 There are a number of factors that may affect measured concentrations of NO₂. Whilst it may be possible to collect data on the aspects identified above (e.g. fleet composition), it would not be possible to determine if any changes in fleet composition pre and post scheme opening are due to the scheme itself or wider (e.g. regional) effects.

4. Overall Conclusions

²¹ Paragraph 7.4.1, page 43, SM-ALR Monitoring, M25 J23-27 Twelve Month Evaluation Report – Highways England, January 2016

These two studies both show a significant increase in traffic levels post scheme completion for those sections of road where capacity was increased. These figures might even be understated in the case of the J23-27 study because of its reliance on radar detectors which were found to underreport by up to 6% in the J5-7 study.

While there is no wider context for these traffic figures, it would suggest that there is the distinct likelihood that the expansion in road capacity has helped to generate new traffic. It has certainly led to more traffic on the M25 corridor, with all the additional impacts that will create. It is interesting that Highways England did not mention these traffic increases in its explanatory note²² as if the same impact is seen on the M4 it could significantly increase pollution levels alongside the M4.

Highways England Response

4.1.1 These two studies provide results from an initial period immediately following the completion of the respective schemes. In the case of J23-27, the combination of phased opening and uncertainty over the results from the radar counters has meant that these initial findings should be treated with a degree of caution. Nonetheless, comparisons of the results with forecasts suggest that the performance of that scheme is in line with predictions and provides a suitable context for assessing the overall performance of the scheme.

4.1.2 In the case of J5-7, Highways England acknowledges that a wider context would have been useful. However, Highways England does not agree with Campaign for Better Transport that the most likely conclusion is that the expansion in capacity provided by the scheme has generated new traffic. Furthermore, the results from the M25 evaluation do not support the contention that there will be unexpectedly higher levels of traffic on the M4 than forecast or that a significant increase in pollution levels will occur.

On safety, since the results are inconclusive, it is not possible to say that:

“The results show that the overall safety performance over the initial 12 month period has not worsened...”²³

Indeed, given the KSI collision rate on J5-7 which has seen a 51% increase before any adjustment upwards for falling rates over that time period, Highways England should be decidedly cautious in what it claims on safety.

Allied to the high incidence of the misuse of ERAs and non-compliance with Red X signals, it is far from clear that the new SM-ALR configuration is any safer than a standard motorway.

²² Explanatory Note to the M25 J23-27 Twelve Month Evaluation Report – Highways England

²³ Paragraph 3.1, page 2, Explanatory Note to the M25 J23-27 Twelve Month Evaluation Report – Highways England

Highways England Response

- 4.1.3 Both the M25 J5-7 and the M25 J23-27 Twelve Month Evaluation Reports evidence the fact that safety has not worsened. As noted within the Highways England's response to the Examining Authority's first written questions at Deadline II (REP2-002 – Response to First Written Questions: Section 6 – Traffic Safety – TS6.04), Highways England requires that safety will be made 'no worse' than the baseline across all populations by the introduction of a scheme (see ALR generic safety report, Ref: 1039092-GSR-016, section 4.1.2 Road user safety objective).
- 4.1.4 On both schemes, safety has not worsened as a result of the small (but not statistically significant) reduction in collision rates. Whilst the reduction is not significant, the results provide an initial indication that safety has not worsened as a result of the schemes. The evidence provided to the Transport Select Committee by Highways England states that conclusive results will come with 3 years of safety data, however, data relating to the first 12 months of ALR on the M25 shows the schemes are safe.
- 4.1.5 On the M25 J5-7 scheme, Highways England accepts that there was an increase in serious collisions, although it is noted that analysis of these collisions indicate that the road environment (i.e. the ALR environment) was a contributory factor in only a minority of these cases, with driver/rider error being the major contributory factor.
- 4.1.6 The M25 J5-7 and M25 J23-27 schemes' monitoring output show that the schemes are generally performing in-line with expectations. The M25 monitoring output has provided reassurance that the M25 schemes are safe at this stage and consequently, it can be broadly expected that the performance of the M4 J3-12 Scheme will be as good as, if not better, than the M25 schemes.

Air pollution is in a similar situation with inadequate data and analysis to be able to draw any meaningful conclusions. If anything, this highlights the need for robust monitoring both prior to scheme construction and post the scheme opening, with instruments that can flag up immediately, or in fairly short notice, that there is a pollution problem. Waiting 6 months or a year for diffusion tube results and validation is not desirable or appropriate.

Highways England Response

- 4.1.7 The air quality objective value is set for an annual mean, therefore any data collected over a shorter period to establish the effects of a scheme would not be directly comparable to that objective. This is because, whilst it is possible to correct for seasonal variations using other regional monitoring, this procedure would be unlikely to be effective when monitoring data along a scheme has been subject to changes in local conditions for part of that period.

4.1.8 In order to establish trends in air quality datasets, monitoring periods of a number of years are required.