

## Audit Summary Report

									IN PHASE 2	
<b>PCM Link</b>	28445	<b>Road/Location</b>				A56 Haslingden			<b>Area</b>	10
<b>PCM predictions of NO<sub>2</sub> concentrations (µg/m<sup>3</sup>)</b>										
Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	
PCM Modelled NO <sub>2</sub> concentration (µg/m <sup>3</sup> )	41	39	37	35	33	31	30	28	27	
HE Indicative Modelled NO <sub>2</sub> Concentration (µg/m <sup>3</sup> )	30	28	26	25	24	22	21	20	19	
<b>Qualifying Feature</b>										
Satellite imagery indicates that there are Sensitive Receptors (gardens of residential properties) within 15m of the PCM link.										
<b>Air Quality Monitoring?</b>										
No										
<b>Is the Air Quality Monitoring within 10m, to support Phase 2 decision?</b>										
No										
Although the indicative air quality modelling indicates no exceedance of the Limit Value at this stage, it is recommended that further work is carried out in Stage 3 to confirm that no mitigation is required. This is due to no local monitoring data available to confirm validity of modelled predictions.										
<b>Mitigation required?</b>										
Yes										
<b>Possible Mitigation Options</b>										
<b>KEY:</b>		✘ - Not possible			✔ - Possible		? - More research required			
<b>Option</b>	<b>Feasible to bring compliance forward?</b>		<b>Summary</b>							
<b>Source – reducing emissions from the SRN</b>										
Electric vans	✘		Research completed for Highways England indicates that it would only be possible to bring forward a maximum of 250							

		<p>electric vans over the next few years in any one location. To achieve this would require the creation of a specialist centre.</p> <p>Based on the observed speed of 60mph along this PCM link, it has been calculated that 250 electric vans would equate to an NO<sub>2</sub> reduction of approximately 0.2µg/m<sup>3</sup> along this link. As such, the implementation of this measure would not achieve an earlier compliance date.</p>
Traffic Management	?	<p>A panel of specialists including traffic, operations and air quality have reviewed regional traffic management options for the 86 PCM links and for these links it was determined there were no obvious solutions. However, this link will be reviewed and re-assessed at Phase 3.</p>
Speed Management of 50mph	✓ <sup>1</sup>	<p>The existing speed limit along the A56 is partially 50mph and 70mph. WebTRIS data has identified the daily average speed of vehicles travelling along this section of the A45 as being just below 60mph. Consequently, the speed limit would need to be set to 50mph to provide any improvement in NO<sub>2</sub> concentrations along this link.</p> <p>A 50mph speed limit between the B6232 and A680 in both directions has been evaluated using the Regional Transport Model and the traffic data entered in to the DMRB air quality model. Based on the air quality modelling in 2020 (the earliest anticipated year that this measure could be deployed), it has been assessed that the introduction of 50mph speed limit, 24 hours a day, would lead to an indicative reduction of 1µg/m<sup>3</sup> in annual mean NO<sub>2</sub> concentrations.</p> <p>Based on this reduction in NO<sub>2</sub> it could achieve compliance with the limit values in a shorter timescale if following a review in Phase 3 the indicative air quality modelling is shown to be higher than at the end of the Phase 2.</p> <p>A more detailed review of the observed traffic data, impacts on adjoining road network and indicative air quality modelling will be completed as part of the Phase 3 assessment.</p>
Bus Retrofit	✗ <sup>2</sup>	<p><i>No bus stops:</i></p> <p>A review of this PCM link using satellite imagery has not identified any bus stops along the route. As such, it is assumed that there is minimal bus usage along this road which will result in no discernible reduction in NO<sub>x</sub> emissions and therefore, this measure is not being progressed.</p>
HGV Retrofit	?	<p>A review of traffic data for this PCM link has identified approximately 4,326 HGVs travelling along this link. Theoretically, a HGV retrofit scheme could reduce annual mean NO<sub>2</sub> concentrations by 0.7µg/m<sup>3</sup>. However, no accredited retrofit system is currently available for HGVs nor</p>

		is it known the mechanism for delivery. As such, it is anticipated that this measure would require a Government led scheme for delivery and Highways England is not able to progress this measure at this time.
<b>Pathway – preventing the emissions reaching receptors</b>		
9.5m high barrier	✘	Emerging evidence based on from air quality monitoring research undertaken by Highways England indicates a 2 – 5µg/m <sup>3</sup> reduction in annual mean NO <sub>2</sub> concentrations behind a 9.5m overhanging barrier.  This PCM link has been reviewed and it has been determined based on the current PCM modelling, that construction of the barrier would not deliver compliance in a shorter timescale than reported.
Tunnels / canopies, Bypass	✘	The current programme to build a tunnel / canopy or a bypass is estimated to be at least between 5 – 10 years. This means that none of these measures could be delivered earlier than the reported compliance date set out in the PCM model.
<b>Receptor – dealing with concentrations at the affected receptors</b>		
Any other local measures	✘	<b>Footpaths</b>  There are no footpaths located within 15m of this PCM link.  <b>Low Friction Road Surfacing</b>  At this time there is no empirical evidence on the effects on NOx emissions and is not being assessed as a measure to support compliance in the shortest timescale possible.  <b>Mechanical Filtration</b>  There are no residential properties, only gardens, within 15m along this PCM link.
<b>Summary</b>		
<p>This audit report has identified:</p> <ul style="list-style-type: none"> <li>• In addition to the qualifying features within 15m, there are also sensitive receptors within 50m of the PCM link.</li> <li>• There is no existing air quality monitoring along the PCM link.</li> <li>• The indicative air quality modelling does not indicate any exceedances of the Limit Values by 2018, however this link will be taken through to Phase 3 to confirm that no mitigation measures are required.</li> <li>• Retrofit HGVs may also support in bringing forward compliance, however a government led scheme is required for delivery.</li> </ul>		
<b>Recommendation</b>		

It is recommended that PCM link 28445 is taken forward to Phase 3 for more detailed assessment.

**Supporting Activities**

- As part of the Phase 2 assessment it has been identified that there may be a need for additional air quality monitoring to help support the outcomes of the indicative air quality modelling along this PCM link. The need for any monitoring will be confirmed early in the Phase 3 assessment.
- A Traffic Management workshop will review and re-assess the potential for Traffic Management at this link as part of the Phase 3 assessment.

**JAQU Comments**

<sup>1</sup> Legal requirement to make a Temporary Traffic Regulation Order

<sup>2</sup> Requires JAQU to deliver