

Audit Summary Report

									IN PHASE 1	
PCM Link	37913			Road/Location	A631, Sheffield			Area	12	
PCM predictions of NO₂ concentrations (µg/m³)										
Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	
PCM Modelled NO ₂ Concentration (µg/m ³)	33	32	30	29	27	26	25	24	23	
Qualifying Feature										
Satellite imagery indicates Public Access within 15m of the PCM link.										
Air Quality Monitoring?										
Yes										
Is the Air Quality Monitoring within 10m, to support Phase 1 decision?										
No										
Monitoring, undertaken by Sheffield City Council located on an adjacent footpath, recorded an average concentration of 50µg/m ³ in 2019. As such, this PCM link has been reviewed and mitigation measures have been considered as part of this assessment.										
Mitigation required?										
Yes										
Possible Mitigation Options										
KEY:		✘ - Not possible			✔ - Possible			? - More research required		
Option	Feasible to bring compliance forward?			Summary						
Source – reducing emissions from the SRN										
Electric vans	✘			Research completed for Highways England indicates that it would only be possible to bring forward a maximum of 250 electric vans over the next few years in any one location. To achieve this would require the creation of a specialist centre.						

Traffic Management	?	<p>As part of Phase 1, it has not been possible to look into this measure in any great detail. However, as part of Phase 2 we will work with our traffic and operations colleagues to see if there are any attainable local traffic management measures, beyond speed limits, that could be applied in this locality and are likely to result in different driver behaviours to those seen in the research project.</p> <p>As part of Phase 1 we are unable to determine the likelihood of traffic management being an achievable measure along this PCM link.</p>
Speed Management of 60mph	×	The existing speed limit along the A631 is 50mph and consequently, a reduction in the speed limit would not provide any significant improvements in NO ₂ concentrations along this link.
Bus Retrofit	×	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 _x emissions and therefore, this measure is not being progressed.
HGV Retrofit	×	No accredited retrofit system is currently available for HGVs nor 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.
Pathway – preventing the emissions reaching receptors		
9.5m high barrier	×	<p>Emerging evidence based on air quality monitoring research undertaken by Highways England indicates a 2 – 5µg/m³ reduction in annual mean NO₂ concentrations behind a 9.5m overhanging barrier.</p> <p>This PCM link has been reviewed and based on professional judgement it is not considered possible to build a barrier at this location because of the physical constraints.</p>
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 indicative modelled compliance date.
Receptor – dealing with concentrations at the affected receptors		
Any other local measures	×	<p>Footpaths</p> <p>Footpaths are located within 15m along the length of this PCM link. A review of the existing footpaths has identified that there is no potential alternative route for footpath mitigation.</p>

	x	<p>Low Friction Road Surfacing</p> <p>Highways England has recently undertaken research looking into the difference in measured exhaust emissions for a range of vehicles driven on a section of road with the low friction road surface and hot rolled asphalt. The outcomes of the research concluded there was no statistically significant difference in measured NOx emissions between the two road surfaces. Therefore, the empirical evidence does not support this as a measure to achieve compliance in the shortest possible timescales.</p>
<p>Summary</p>		
<p>This audit report has identified:</p> <ul style="list-style-type: none"> • Defra's PCM modelling has identified a modelled annual mean NO₂ concentration of 32µg/m³ in 2019. However, local air quality monitoring has identified exceedances of the limit value over recent years at locations considered representative of relevant receptors along the PCM link. • Public access is located within 15m of the PCM link. • Traffic management will be considered as part of the Phase 2 assessment to determine whether there are potential measures, other than speed limits, which may assist in bringing forward compliance. 		
<p>Recommendation</p>		
<p>It is recommended that PCM link 37913 is taken forward to Phase 2 for more detailed assessment.</p>		
<p>Supporting Activities</p>		
<p>JAQU Comments</p>		