Audit Summary Report

									IN PHASE 1
PCM Link 60026			**Road/Location** A50, Stoke-on-Trent					**Area** 9	
PCM predictions of NO_2 concentrations (µg/m^3)									
Year	2018	2019	2020	2021	2022	2023	2024	2025	2026
PCM Modelled NO_2 Concentration (µg/m^3)	32	30	29	27	26	25	23	22	21
Qualifying Feature									
Satellite imagery indicates Public Access and Sensitive Receptors within 15m of the PCM link.									
Air Quality Monitoring?									
No									
Is the Air Quality Monitoring within 10m, to support Phase 1 decision?									
No									
There is currently no monitoring on this PCM link.									
Mitigation required?									
Whilst PCM modelling is below the annual mean NO_2 limit value, it is recommended for mitigation measures to be considered for this PCM link as part of Commission No. 3.									
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	?	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. As part of Phase 1 we are unable to determine the likelihood of traffic management being an achievable measure along this PCM link.
Speed Management of 60mph	✗	The existing speed limit along the A50 is 50mph. Consequently, speed management would not be appropriate for this part of the network.
Bus Retrofit	✗	It has been agreed with JAQU that given the incredibly small number of bus journeys on the motorway network this mitigation will result in no discernible reduction in NOx emissions along this link 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	✗	Emerging evidence based on air quality monitoring research undertaken by Highways England indicates a 2 – 5µg/m^3 reduction in annual mean NO_2 concentrations behind a 9.5m overhanging barrier. 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.
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	✗ ✗	**Footpaths** 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. **Low Friction Road Surfacing**

		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.

Summary

This audit report has identified:

- Defra's PCM modelling has identified a modelled annual mean NO_2 concentration of 30µg/m^3 in 2019.
- Sensitive receptors and public access are 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, which may assist in bringing forward compliance.

Recommendation

It is recommended that PCM link 60026 is taken forward to Phase 2 for more detailed assessment as part of Commission No. 3.

Supporting Activities

- Air quality monitoring

JAQU Comments