

## Audit Summary Report

									<b>IN PHASE 3</b>	
<b>PCM Link</b> 80427			<b>Road/Location</b> A1 Gateshead						<b>Area</b> 14	
<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> )	<b>50</b>	<b>47</b>	<b>44</b>	<b>41</b>	38	36	34	32	31	
HE Verified Modelled NO <sub>2</sub> Concentration (µg/m <sup>3</sup> )	<b>53</b>	<b>51</b>	<b>49</b>	<b>47</b>	<b>44</b>	<b>42</b>	<b>40</b>	38	36	
<b>Qualifying Feature</b>										
Satellite imagery indicates Sensitive Receptors and Public Access within 15m of the PCM link.										
<b>Air Quality Monitoring?</b>										
Yes										
<b>Is the Air Quality Monitoring within 10m, to support Phase 3 decision?</b>										
No										
<p>Air quality monitoring has been undertaken at a number of locations representative of relevant receptors over recent years, although more than 15m away from the PCM link. NO<sub>2</sub> concentrations were monitored below the annual mean NO<sub>2</sub> concentration of 40µg/m<sup>3</sup> at all locations considered representative of sensitive receptors.</p> <p>The indicative modelling completed at Phase 2 identified there were potential exceedances of the limit values along this PCM link, therefore it was recommended that further work be carried out in Phase 3 to confirm this and consequently, mitigation measures were developed.</p> <p>The more recent verified air quality modelling completed for the Phase 3 assessment has concluded that there are exceedances of the limit values up to and including the year 2025. Therefore, mitigation measures have been reviewed as part of the Phase 3 assessment.</p>										
<b>Mitigation required?</b>										
Yes										
<b>Possible Mitigation Options</b>										
<b>KEY:</b>	✗ - Not possible			✓ - Possible			? - More research required			

Option	Feasible to bring compliance forward?	Summary
<b>Source – reducing emissions from the SRN</b>		
Electric vans	✗	<p>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.</p> <p>Based on the observed speed of 50mph along this PCM link, it has been calculated that 250 electric vans would equate to an NO<sub>2</sub> reduction of approximately 0.1µg/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>Possible traffic management options for this link were discussed in a workshop held during late 2018 into early 2019. The outcomes of the workshop indicated that there may be the possibility for local traffic management measures to help support improvements in air quality.</p> <p>A feasibility study was commissioned in Autumn 2019 to investigate in more detail whether the proposed local traffic measures would deliver changes in traffic that in turn would lead to improvements in air quality and support compliance with the limit values in the shortest timescales possible.</p> <p>However, following detailed investigations to support the feasibility study, it has been concluded that there are no viable local traffic management measure solutions that could be delivered for this SRN PCM link capable of improving air quality.</p>
Speed Management of 60mph	✗ <sup>1</sup>	The existing speed limit along the A1 is 50mph. Speed limit reduction would therefore not be appropriate for this part of the network.
Bus Retrofit	✗ <sup>2</sup>	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.
HGV Retrofit	✗	A review of traffic data for this PCM link has identified approximately 5,110 HGVs travelling along this link. Theoretically, a HGV retrofit scheme could reduce annual mean NO <sub>2</sub> concentrations by 0.8µg/m <sup>3</sup> . However, 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

[illegible]

This audit report has identified:

- Air quality monitoring has identified concentrations below the limit value at a number of locations representative of relevant receptors over recent years, although more than 15m away from the PCM link.
- HE verified modelling indicates that there are exceedances of the Limit Value up until the year 2025.
- Highways England have reviewed all available mitigation measures and unfortunately none were found to be viable on this PCM link, as described above. We are now looking to organise a workshop with the local authority to see if there are any other viable measures that could be considered.
- A possible Air Quality Walking Route has been identified as a complementary measure, although monitoring of this footpath is required before local authority consideration of an alternative walking route.

### Recommendation

The verified air quality modelling completed for the Phase 3 assessment has concluded that there are exceedances of the limit values along PCM link 80427 up until the year 2025.

In completing the assessment for this SRN PCM link, Highways England has considered a range of measures to support compliance in the shortest possible timeframe. These measures have included; speed management measures, however the speed limit along this link is 50mph and no further reduction would improve air quality; traffic management measures, however detailed investigations have concluded no viable measures would improve air quality; and a 9.5m high barrier, although it is not considered possible to build a barrier at this location due to physical constraints.

A possible Air Quality Walking Route has been identified as a complementary measure, although monitoring of this footpath is required before local authority consideration of an alternative walking route.

**Following the completion of the feasibility study, it has been concluded there are no viable measures currently available to Highways England to help meet limit values in a shorter timescale than modelled. However, Highway England continues to investigate whether there are new or emerging ideas and / or technologies that could be considered, alongside any measures put forward by Government for the SRN.**

A workshop will be held with the local authority to determine whether any other viable measures could be considered to help support compliance with limit values along this PCM link in the shortest timescales possible.

### Supporting Activities

- Additional air quality monitoring has been identified for this link as part of the SRN PCM link evaluation strategy, including monitoring of the footpath.
- Workshop to be held with the local authority.

### JAQU Comments

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

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

<sup>3</sup> Subject to legal consideration of proposed local options