

REPLY TO DCO CONSULTATION

FROM: Environmental Protection Team – **Air Quality**

PROJECT: A38 Derby Junctions

PLANNING INSPECTORATE SCHEME REF: TR010022

DOCUMENT: 8.46 Updated Air Quality Compliance Risk Assessment – March 2020

COMMENTS DATE: 9th March 2020

1. I refer to the above-mentioned updated air quality assessment provided by AECOM (on behalf of Highways England) in respect of the A38 Derby Junctions Development Consent Order process.
2. The assessment has been produced in light of updated guidance on air quality assessment issued by Highways England under the DMRB portfolio, namely Guidance Document *LA 105 – Air Quality* (published in November 2019).
3. Whilst it was accepted by Derby City Council (DCiC) prior to the release of the LA 105 guidance, that appropriate assessment work had been carried out in respect of air quality impacts arising from the scheme, it was considered that there was a degree of uncertainty surrounding the compliance assessment with respect to the EU Limit Values (under EU Directive 2008/50/EC) and the associated UK Regulations (The Air Quality (Standards) Regulations 2010) due to a lack of clarity on an appropriate way to determine compliance.
4. Consequently, DCiC was of the view that application of the LA 105 guidance, whilst not a legal requirement, would be beneficial in order to provide further confidence that the scheme would be unlikely to give rise to EU Limit Value compliance.
5. Document 8.46 now provides such an assessment and subsequently, DCiC can comment on the document as follows.

8.46 Updated Air Quality Compliance Risk Assessment

LA 105 Assessment

6. The main difference between the earlier assessment work and the updated investigation, surrounds the determination of relevant receptors, which most notably under LA 105 Guidance, now includes footpaths which are located within 15m of the carriageway.
7. I note that model verification has been reconsidered and a DCiC diffusion tube located adjacent to the carriageway of the A38 (referenced as DT34) was considered, but then excluded from the study-wide verification due to the apparent anomaly against modelling results elsewhere. It has however been utilised within a site-specific verification for the footpath at the location of DT34.
8. I am aware that site DT34 was located at a bus stop and therefore the emissions from buses regularly stopping and pulling away may have been responsible for

skewing the results within this location. The site also experiences a steep rise in levels close to the carriageway, which would affect dispersion of pollutants. These factors do appear to be reflected in the model, which is reported to significantly under-predict concentrations at this location. Consequently, the approach appears reasonable.

9. Modelling is now provided in the document at 'qualifying features' along the DEFRA-defined PCM road links. This is opposite to the previous compliance assessment approach of modelling at a point 4m from the kerb, which was in line with DEFRA's National PCM compliance modelling and DCiC's own CAZ feasibility study modelling. The LA 105 approach is seemingly more logical than the DEFRA approach, as it is more representative of the points of exposure, notwithstanding that footpaths would arguably still not be relevant points of exposure against the long-term standard which uses annual average concentrations.
10. Table 1 in the document provides the results of annual average NO₂ modelling for the completed scheme in 2024, as compared with the do minimum (i.e. without the scheme). This is represented as a single value for each PCM road link, rather than specified modelling points, representing the highest concentration modelled along that link.
11. The data concurs with the earlier assessment work completed as part of the Environmental Statement for the A38 Derby Junctions Scheme, which highlights a net benefit in terms of NO₂ concentrations arising from the completed scheme. According to the data, compliance with the annual average NO₂ Limit Value is achieved in 2024 at all receptors.
12. The document states that modelling was also carried out for '*the three construction scenarios (Scenarios 0, 2 and 4) in 2021 alongside the A38 only*'. The results of this modelling are not presented in the document however and there is no discussion of the results either.

Modelling at 4m from Kerb

13. The document does however include modelling results within Appendix B, which compare AECOM's own modelling against DCiC's CAZ feasibility study modelling, based on points at 4m from the kerb. Whilst this is not relevant to the LA 105 assessment, it is a useful exercise which provides further confidence in terms of compliance against the EU Directive.
14. Due to the different input data used, pertinently the traffic data arising from the transport modelling, the results of this modelling are generally significantly different to the results of the DCiC CAZ feasibility study modelling and DEFRA's National PCM modelling.
15. Whilst the impacts of construction do appear to cause an increase in concentrations at certain points close to the A38, the modelling suggests that the increases do not create any new non-compliances against the EU Limit Value for annual average NO₂.

DCiC Conclusions

16. The updated assessment includes additional assessment work in accordance with the latest LA 105 Guidance.
17. The results of the modelling suggest that the completed scheme (2024) is unlikely to create any new non-compliances against the EU AQ Directive Limit Value for NO₂. In fact, in the majority of cases, the completed scheme is predicted to reduce concentrations of NO₂ at relevant receptors, which concurs with the conclusions of the 2019 Environmental Statement.
18. The results of the LA 105 modelling assessment in relation to construction impacts is omitted from the report however and therefore it is not possible for DCiC to comment on the potential for compliance risks that may arise during the 4 year construction phase of the scheme (using the LA 105 approach).
19. It is worth highlighting that the LA 105 assessment methodology has a subtle difference in approach as compared with that taken by DEFRA under their own national PCM Modelling compliance assessment work, and this relates to the definition of relevant receptor points.
20. Pertinently, neither Highways England nor Local Authorities are in a position to determine compliance with the EU Directive/UK Regulations on air quality, since this duty falls on the Secretary of State for DEFRA.
21. Notwithstanding this point, the results of the submitted compliance assessment are indicative of the completed scheme being unlikely to create any new non-compliances against the EU AQ Directive and associated UK Regulations. Furthermore, the results indicate that the completed scheme is unlikely to affect the ability of the UK to achieve compliance in the shortest possible time.

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