

Stakeholder Air Quality Consultation Queries and Airports Commission Responses May 2015

Request		Response
Information a)	Traffic data used in the assessment for Base, DM and DS (including raw data and any data as processed for emissions calculations) in excel format	Supporting documents that include traffic data for all scenarios, in a format relevant to the EFT and traffic network shapefiles, can be downloaded from the link as published with our consultation documents: http://jeg-aces.s3-website-eu-west-1.amazonaws.com/ . The traffic data provided can be adjusted to the 'raw traffic data' format by extracting the period traffic flow and speed and then summing the (% rigid HGV, % Artic HGV and % bus and coach).
Information b)	Any accompanying traffic report which describes the assumptions and approach utilised to provide the traffic data used in the air quality assessment	No accompanying report is available. However, the traffic data used are provided (see above) and the dynamic modelling approach is described within the methodology.
Information c)	Emissions calculations in EFT spreadsheets;	The emission rates used within the assessment can be reproduced using the traffic data made available in the supporting documents (see above) and EFT V6.0.2 – available from http://laqm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html .
Information d)	Dispersion model road alignment (in ESRI shapefile format)	The road alignments of existing roads have been established using the Ordnance Survey's Integrated Transport Network (ITN). The ITN layer used is subject to licensing agreements and cannot be redistributed; it can be purchased directly from Ordnance Survey. The proposed road alignments have been established based on the Heathrow ENR Saturn network available within the published AQ assessment report and supporting documents.
Information e)	Receptor locations modelled (in ESRI shapefile format) including details of which of those are within 200m of proposed links modelled as straight lines, the baseline, do minimum and do something concentration predictions, together with a breakdown of the NOx contribution from different sources.	The modelled receptors locations can be derived by following the methodology set out within Section 3.4 of the published Report.
Technical a)	Have receptors considered been filtered for being relevant receptors or have all address layer data points within the study area been included in the modelling and reporting of results as in Tables 6.6?	Only receptors which meet the criteria described within Section 3.4 of the Report have been included in Table 6.6
Technical b)	On Bath Road (A4) there are predicted delays to achieving compliance as a result of the proposed LHR-ENR scheme. Can it be explained what airport sources/additional number of road traffic vehicles are driving these changes?	An assessment of the relative source contributions to the predicted concentrations at PCM links on Bath Road was not undertaken. This was not deemed necessary for the Report, but an approximation may be derived through reference to receptor ENR-L in the source apportionment table (Table 6.5).
Technical c)	Please could we see an explanation of how the minimum/maximum benefit	This is a typographical error in the Table only, duly noted.

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	<p>from mitigation measures has been calculated in Table 6.16? When adding the potential changes as a result of the additional mitigation outlined in the table it totals a benefit ranging from -4.45 to -6.05 $\mu\text{g}/\text{m}^3$, whereas at the end of Table 6.16 a range of -2.5 to -3.9 $\mu\text{g}/\text{m}^3$ has been presented.</p>	<p>The correct range should actually be -4.45 to -5.65 $\mu\text{g}/\text{m}^3$</p> <p>The upper bound is not, however, 6.05 $\mu\text{g}/\text{m}^3$ as both LEZ benefits are not available at the same time.</p>
Technical d)	<p>Please can you confirm whether the predicted incremental changes in concentration along PCM links has been calculated through dispersion modelling of hypothetical receptor location 4m back from the road, or from the DM and DS at the nearest relevant receptor location to the PCM link? Following the guidance document the change should be calculated using the nearest relevant receptor.</p>	<p>Receptors were explicitly modelled at a distance of 4m from the kerb. IAN175 guidance acknowledges that it is not practical to specifically model receptors at 4 m from the roadside across an <i>extensive</i> highways network; therefore, an alternative approach is outlined with respect to available receptor locations produced for a local air quality assessment, as a proxy.</p> <p>For this study, only a limited number of road links were required for assessment and therefore receptors were modelled at 4m from the road.</p>
Technical e)	<p>Can you please confirm where the runway-end hold queues have been modelled along the ENR runway?</p>	<p>The hold queues were modelled on the parallel taxiways to the south of the northern and extended northern runway ends.</p>
Technical f)	<p>Please can you provide further detail of the assumption of 'two-thirds departure with Heathrow ENR during all westerly operations'?</p>	<p>An assumption has been made that during westerly operations, the southern runway will be operated in mixed mode, the ENR will be used for departures only and the northern runway for arrivals only. The ENR, due to its use for departures only, is assumed to handle 2/3 of all westerly departures, with the southern runway handling the final third of westerly departures.</p>
Technical g)	<p>Can you please confirm what is meant by the phrase 'the surface access modal share and traffic volumes assumed in this assessment have been built into the dynamic modelling' in reference to mitigation measure 1 for the ENR scheme, "the modal shift of 38-50% of passengers from cars to public transport access to the airport"? We are not completely clear which surface access modal share has been modelled.</p>	<p>The Airports Commission's independent modal share forecasts for both the with and without scheme have been used within the dynamic traffic models. The 38-50% modal share is the scheme promoters and has not been used within the dynamic traffic model. The independent modal share predicted an increase in passengers accessing Heathrow ENR by public transport. This modal share has been used to produce the without and with Heathrow ENR traffic data. Therefore the embedded "mitigations" impact on concentrations can be observed within the results.</p> <p>The mitigation of further increased modal shift (through a "no growth in road traffic above DM" scenario) is considered as a sensitivity only.</p>
Technical h)	<p>In the baseline conditions section Defra PCM concentrations are presented for 2009. Within the most recent version of the PCM network provided by Defra the earliest year of concentration data is 2011. Where has the 09 data come from? Has it been back calculated from a later year? If so how has this been completed?</p>	<p>The methodology used to derive 2009 background 1km^2 is described in Appendix A of the Report.</p> <p>The 2009 PCM roadside concentrations were derived from a dataset held by Jacobs, previously provided by Defra.</p>