

Comments on the Airports Commission Consultation on Air Quality Assessment

1. The time for this consultation was too short and the information provided was somewhat opaque.
The supporting documentation gave traffic forecasts but I was unable to extract the information for the key links around Heathrow to see how traffic volumes were assumed to change with expansion. It was impossible for me to determine which links corresponded to the Bath Road. It was not clear whether the modelled scenarios adopted the revised road network routing the majority of the vehicular traffic to the southern entrance into the airport.
2. It is disappointing that the limitation of surface access forecast information to 2030 means that modelling of airport air quality is based on a third runway that is not used to full capacity. Emissions will continue to rise as more capacity is used in later years. The pollution impact of this has not been assessed.
3. Road vehicle modelling has used Defra's Emission Factor Toolkit (EFT, version 6.0.2) issued in June 2014 based on COPERT 4v10 issued in November 2012. However the recent history of emission factors has been that diesel coefficients have underestimated NO₂ emissions and successive revisions have raised values as more information has been provided. I contend that the current version is still likely to underestimate the problem. The recent Sunday Times article showing that real world emissions of EURO 6 diesels were far away from meeting EU legislation casts doubt on current modelling accurately predicting real values.
4. Health costs from NO₂ are likely to be revised upwards with more recent evidence for the health impact of NO₂ which was unavailable at the time of the preparation of the current Green Book data. "This is currently under review by COMEAP, but is not yet included in the Defra damage costs." I would also argue that the Green Book advocates that a marginal abatement cost approach should be undertaken where there is a likelihood that a project will cause air quality to breach EU limits put in place for the protection of human health. In view of the uncertainty of the modelling of the new road network around the Heathrow North West Runway scheme, I think this should have been referred to, at least in a sensitivity analysis.
5. "For 2030, thrust settings during take-off were assumed to be the same as for 2009." It is apparent from recent flight path trials that the Future Airspace Strategy is changing flight paths and airlines are modifying departure practices to implement Continuous Climb Operations. These probably involve greater initial thrust settings than were in place in 2009 and this assumption is not warranted.
6. "Average aircraft hold times at runway ends have been provided by the Promoters for 2009... Delay times in 2030 have been assumed to be unchanged from 2009." I would mention that changes in airport operating practices can have significant effects on this, particularly in such a congested airport as Heathrow with such a small footprint in relation to

the number of flights it handles. The Operational Freedom Trials allowing mixed mode landings had a considerable effect on departure hold times and, contrary to the undertakings given by the airport, no final report was issued on the deleterious air quality impact of this.

<http://www.caa.co.uk/docs/589/20131119FurtherLtrFromCAAtoAirportsCommissionReCAP1117.pdf>

7. It is worth mentioning that Heathrow participated in a large-scale air quality monitoring study. No reports of its findings have yet appeared.

<http://wwwdev.snaq.org/about.html>

8. “Previous studies have demonstrated that airports have little impact on PM₁₀ or PM_{2.5} concentrations (DfT, 2006).” I should mention the conflicting reports from researchers investigating Los Angeles air quality in the press reports from June 2014

<http://www.latimes.com/local/la-me-0529-lax-pollution-20140529-story.html>

9. Heathrow Energy Plant assumptions : “NO_x emissions for 2030 have been calculated based on predicted energy consumption, assuming a NO_x emission rate of 40 mg/kWh, which is typical of modern gas-fired heating plant.”

This seems unrealistic considering that Heathrow has installed a biomass wood-burning heating plant which produces NO_x at much higher levels (?200mg/kWh).

<http://www.heathrowairport.com/about-us/community-and-environment/responsible-heathrow/case-studies/heathrow-energy-centre>

10. The modelling of the new Heathrow North West Runway road network is inadequate. The report mentions that the Bath Road location would breach the EU limits in 2030 on the basis of the Defra PCM modelling –but no proper PCM modelling of the replacement scheme appears to have been done to show where the analogous hotspots would be.

“ Thus, while the emissions from these new roads have been calculated in detail, the position and alignment of the new roads can only be broadly indicative at this time. The alignment of new roads will, in practice, be different from those simulated in the dispersion model. “

It is not believable without further study that an expanded Heathrow with additional passengers and freight vehicle emissions could meet EU limits. “it is not possible to replicate Defra’s PCM predictions at these realigned links, nor is it possible to confirm whether these new links would be included in the PCM model (due to lack of public exposure) and no further assessment can be provided”.

11. “The unmitigated Heathrow NWR Scheme would thus delay Defra in achieving compliance with the Limit Value.” I would contend that the approach used to assess Heathrow compliance against the values expected in the Marylebone Road in 2030 is completely inappropriate. The Supreme Court ruling that the government is in breach of current limits

and plans should be put in place to ensure compliance in as short a time as possible must mean that all UK locations must be within limits at a much earlier time than 2030. The Heathrow North West Runway “ Scheme would worsen air quality (in terms of annual mean NO2 concentrations) at about 47,000 properties; “

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29th May 2015