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Dear Sir Howard

**Airports Commission: Consultation on Air Quality Assessment**

**Airport expansion at Heathrow would cause aggravated breaches of nitrogen dioxide limit values and be unlawful**

**Airport expansion at Gatwick would not be consistent with sustainable development**

Clean Air in London (CAL) welcomes the opportunity to respond to the Airports Commission's new evidence relating to air quality assessment of the three short-listed options for additional airport capacity. The Consultation can be seen here:

<https://www.gov.uk/government/consultations/airports-commission-air-quality-assessment>

CAL is a voluntary organisation which campaigns to achieve urgently and sustainably full compliance with World Health Organisation (WHO) guidelines for air quality throughout London and elsewhere. Further information about CAL can be found at <http://cleanair.london/>.

CAL is independent of any government funding, has cross party support and a large number of supporters, both individuals in London and organisations. CAL provides a channel for both public concern and expert opinion on air pollution in London. This document provides both general and expert comments in response to the Consultation.

Airport related traffic is a major cause of air pollution in London, which in turn causes thousands of premature deaths per year, and many thousands more illnesses, chronic illness and disability. For this reason, airport expansion impacts on air pollution.

## Background

We refer to the recent judgments of the Supreme Court in ClientEarth versus Defra and the Court of Justice of the European Union:

<https://www.supremecourt.uk/cases/uksc-2012-0179.html>

Separately, it is open to the European Commission to pursue infraction proceedings against the UK for exceedances of NO<sub>2</sub> limit values since 2010, including in the Greater London zone, and it commenced this process in February 2014. You will understand that this is wholly separate to the Government's responsibilities to the Supreme Court. For details:

<http://cleanair.london/hot-topics/europe-at-its-best-takes-legal-action-against-uk-at-its-worst-on-air-pollution/>

You may be aware of guidance published by Environmental Protection UK (EPUK) in 2010. That guidance has been updated by EPUK and the Institute of Air Quality Management<sup>1</sup>. However, neither EPUK's 2010 guidance nor the updated guidance takes account of or correctly states the significance of the very recent legal developments which have clarified the law. For that reason *inter alia* it is our view that the guidance is flawed in important respects.

The legal judgments, letter of clarification previously from the European Commission to CAL (attached), Directive 2008/50/EC on ambient air quality and cleaner air for Europe and prospect of escalating infraction action make clear *inter alia* that: NO<sub>2</sub> limit values must be achieved urgently and 'as soon as possible' to protect public health; limit values are absolute obligations that must be attained irrespective of cost; limit values apply everywhere with three exceptions; limit values must not be exceeded once attained; and where air quality is 'good', Article 12 of the directive applies i.e. Member States shall not only maintain the levels below the limit values but also "endeavour to preserve the best ambient air quality compatible with sustainable development".

You will be aware that Defra identified the roads around Heathrow airport as having among the highest illegal levels of NO<sub>2</sub> in the UK still by 2030 **even without airport expansion**:

<http://www.howpollutedismyroad.org.uk/hotspots.php>

<https://www.gov.uk/government/publications/50-highest-modelled-nitrogen-dioxide-no2-concentrations>

CAL also brings to your attention its analysis and complaint to the European Commission about breaches of air quality laws arising from the suspension of the M4 bus lane:

<http://cleanair.london/legal/government-treats-limit-values-with-contempt-by-m4-bus-lane/>

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<sup>1</sup> [http://cleanair.london/wp-content/uploads/CAL-304-EPUK-IAQM-air-quality-planning-guidance\\_Final-130515.pdf](http://cleanair.london/wp-content/uploads/CAL-304-EPUK-IAQM-air-quality-planning-guidance_Final-130515.pdf)

## Airports Commission options

We have seen Jacobs report titled ‘Module 6: Air Quality Local Assessment Detailed Emissions Inventory and Dispersion Modelling’ prepared for the Airports Commission and dated May 2015:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/426241/air-quality-local-assessment-report.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/426241/air-quality-local-assessment-report.pdf)

This report states that: “*The assessment has considered changes within a “Principal AIRPORTS COMMISSION AIR QUALITY: Executive Summary ASSESSMENT ii Study Area”, which encompasses a 2km radius around each Scheme boundary, and a “Wider Study Area”, which includes all roads for which a significant change in traffic has been forecast” (Executive summary pages i and ii).*

In CAL’s view, this is not sufficient to assess impacts of air pollution since even very slight worsening of air pollution may be unlawful where limit values are exceeded.

## **Gatwick Airport Second Runway Scheme (Gatwick 2R)**

The Conclusions on page 56 of the report are:

*“The principal conclusions of this assessment with respect to the Gatwick 2R Scheme are:*

- *The Scheme would not affect compliance with the current NECD and Gothenburg Protocol obligations. If the NECD obligation is tightened in line with current proposals, the UK would exceed the obligation with or without Gatwick 2R. **The incremental emissions associated with Gatwick 2R represent a very small fraction of the proposed obligations;***
- *The Scheme would not cause any exceedences of the Limit Value or air quality objective for NO<sub>2</sub>, and would not delay Defra achieving compliance with the Limit Value in the relevant zone. The proposals for the Gatwick 2R Scheme include realignment of the A23 to the east, but it is not possible to replicate Defra’s PCM predictions at this realigned link, nor is it possible to confirm whether this new link would be included in the PCM model (due to lack of public exposure) and no further assessment can be provided;*
- *The Scheme would not cause any new exceedences of the Critical Level (for NO<sub>x</sub>) or the lower band of the Critical Load (for nitrogen deposition), at any designated habitat. **The Scheme would increase NO<sub>x</sub> concentrations in locations where the Critical Level is already exceeded** (but as noted in Chapter 2, Defra’s interpretation of the Directive is that the Critical Level does not strictly apply at these sites;*
- ***The Scheme would worsen air quality (in terms of annual mean NO<sub>2</sub> concentrations) at about 21,000 properties;** and*
- *The total costs of the increases in NO<sub>x</sub> and PM<sub>10</sub> emissions over the 60 year appraisal period, based on the unmitigated change in mass emissions with the Gatwick 2R Scheme in place, are £73.6m and £246.9m respectively.” **CAL emphasis***

### Heathrow Airport Northwest Runway Scheme (Heathrow NWR)

The Conclusions on page 79 of the report are:

*“The principal conclusions of this assessment with respect to the NWR Scheme are:*

- *The Scheme would not affect compliance with the current NECD and Gothenburg Protocol obligations. If the NECD obligation is tightened in line with current proposals, the UK would exceed the obligation with or without Heathrow NWR. **The incremental emissions associated with Heathrow NWR represent a very small fraction of the proposed obligations;***
- *The Scheme would not cause any new exceedences of the Limit Value or air quality objective for NO<sub>2</sub>. **However, the incremental change associated with Heathrow NWR would cause the Bath Road (A4) sector PCM road links to have a marginally higher concentration in 2030 (48.7 µg/m<sup>3</sup>) than the Maximum PCM Predicted Concentration in the Greater London Agglomeration (which is 48.6 µg/m<sup>3</sup> and occurs at Marylebone Road). The unmitigated Heathrow NWR Scheme would thus delay Defra’s predicted date for achieving compliance with the Limit Value.** The proposals for the A4 Bath Road in the Heathrow NWR scenario are to realign the road northwards and then to the east around the boundary of the airport, but 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.*
- ***The Scheme would cause a new exceedence of the Critical Level at the South West London Waterbodies RAMSAR/SPA and Wraysbury Reservoir SSSI.** However, the UK Government’s interpretation is that the Critical Level does not strictly apply at this location. The Scheme would not cause any exceedences of the lower band of the Critical Load (for nitrogen deposition) at any designated habitat;*
- ***The Scheme would worsen air quality (in terms of annual mean NO<sub>2</sub> concentrations) at about 47,000 properties; and***
- *The total costs of NO<sub>x</sub> and PM<sub>10</sub> over the 60 year appraisal period, based on the unmitigated change in mass emissions with the Heathrow NWR Scheme in place, are £94.2m and £863.5m respectively.” **CAL emphasis***

### Heathrow Airport Extended Northern Runway Scheme (Heathrow ENR)

The Conclusions on page 103 of the report are:

*“The principal conclusions of this assessment with respect to the ENR Scheme are:*

- *The Scheme would not affect compliance with the current NECD and Gothenburg Protocol obligations. If the NECD obligation is tightened in line with current proposals, the UK would exceed the obligation with or without Heathrow ENR. **The incremental emissions associated with Heathrow ENR represent a very small fraction of the proposed obligations;***
- *The Scheme would not cause any new exceedences of the concentration at which the Limit Value is set, or any exceedences of the air quality objective for NO<sub>2</sub>. **However, the incremental change associated with the unmitigated Heathrow ENR would cause the Bath Road (A4) sector PCM road links to have a higher concentration in 2030 (55.8 µg/m<sup>3</sup>) than the Maximum PCM***

**Predicted Concentration in the Greater London Agglomeration (which is 48.6 µg/m<sup>3</sup>). The unmitigated Heathrow ENR Scheme would thus delay Defra in achieving compliance with the Limit Value:**

- **The Scheme would cause a new exceedence of the Critical Level at the South West London Waterbodies RAMSAR/SPA and Wraysbury Reservoir SSSI.** However, the UK Government's interpretation is that the Critical Level does not strictly apply at this location. The Scheme would not cause any exceedences of the lower band of the Critical Load (for nitrogen deposition) at any designated habitat;
- **The Scheme would worsen air quality (in terms of annual mean NO<sub>2</sub> concentrations) at about 39,000 properties,** but would improve air quality at about 6,600 properties; and
- **The total costs of NO<sub>x</sub> and PM<sub>10</sub> over the 60 year appraisal period, based on the unmitigated change in mass emissions with the Heathrow ENR Scheme in place, are £69.6m and £618.7m respectively.** **CAL emphasis**

### **CAL's response**

It is apparent from the documents published by the Airports Commission that:

- both Schemes for airport expansion at Heathrow would cause aggravated breaches of the NO<sub>2</sub> annual mean limit value in 2030 and perhaps other timescales i.e. the worsening of NO<sub>2</sub> levels where limit values will already be exceeded; and
- the Gatwick scheme is predicted to worsen air quality (in terms of annual mean NO<sub>2</sub> concentrations) at about 21,000 properties. This would not be consistent with the duty on Member States under Directive 2008/50/EC to maintain the levels below the limit values and also "endeavour to preserve the best ambient air quality compatible with sustainable development".

The report for the Airports Commission also misunderstands important obligations under Directive 2008/50/EC. In particular, it wrongly assumes that the worsening of air pollution above limit values (i.e. aggravated breaches) has less significance where an air quality zone or agglomeration has worse air pollution elsewhere e.g. in Marylebone Road. This is not correct. Limit values apply everywhere with three exceptions (see Annex III of Directive 2008/50/EC and the letter of clarification referred to earlier).

In CAL's opinion development proposals that worsen air pollution, where limit values are exceeded or likely to be exceeded, must ensure that their genuine net impact would be to improve air quality during demolition, construction and operation and not worsen it. **Mitigation measures cannot be relied upon to reduce their impact.** Limit values must be attained quickly and cannot thereafter be exceeded.

**It is apparent from the documents that the two Schemes for Heathrow, if approved, would worsen already illegal concentrations of NO<sub>2</sub> in 2030 (and perhaps also in other time frames). The Scheme for Gatwick would not be consistent with sustainable development. To worsen air quality contradicts the duty under Directive 2008/50/EC and would be unlawful. None of the exceptions to attaining limit values applies. Please therefore reject all three Schemes.**

## Aviation emissions

CAL is concerned about aviation emissions as well as ground traffic movements. Please see recent research:

[http://www.researchgate.net/publication/270790911\\_Total\\_and\\_size-resolved\\_particle\\_number\\_and\\_black\\_carbon\\_concentrations\\_in\\_urban\\_areas\\_near\\_Schiphol\\_airport\\_the\\_Netherlands](http://www.researchgate.net/publication/270790911_Total_and_size-resolved_particle_number_and_black_carbon_concentrations_in_urban_areas_near_Schiphol_airport_the_Netherlands)

CAL understands that computer modelling assumes no impact of aviation emissions on ground-level air quality when aircraft are flying above 1,000 metres i.e. outside the landing and take-off cycle.

CAL considers it highly unlikely that aircraft flying over Greater London would have no direct impact on ground level air quality or contribute only to background concentrations.

Further CAL understands that Terminal 5 at Heathrow could not have been built if proper consideration had been given to the effect of limit values. Please do not make this mistake again.

Please contact me if you have any questions or would like more information on any of the points raised in this letter.

I would be pleased to discuss this submission with you.

Yours sincerely

Simon Birkett  
Founder and Director