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3 October 2012

Dear Louise

Review of the Highways Agency's approach to evaluating significant air quality effects

I am writing on behalf of Clean Air in London (CAL) with comments on the above consultation which was dated 7 September 2012 (the Consultation). Please respond to the issues raised in this letter.

CAL is a company limited by guarantee which campaigns to achieve urgently and sustainably full compliance with World Health Organisation (WHO) guidelines for air quality throughout London (and elsewhere). 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.

CAL understands that the Highways Agency distributed the consultation document to just four organisations listed on page 2 of the consultation document. CAL only became aware of the Consultation by chance through its involvement with Environmental Protection UK.

As you know, traffic is a major cause of air pollution which in turn causes thousands of premature deaths per year, and many thousands more instances of illness, chronic illness and disability. The scale of air quality impacts from roads managed by the Highways Agency is very large such that even apparently small 'relative' changes are likely to have significant impacts on public health.

CAL considers that a full public consultation must be carried out on the consultation proposals in order to provide local authorities, NGOs and other interested parties an adequate opportunity to comment. Please therefore follow up this current 'consultation' with a public consultation on the proposals that complies fully with the new guidance issued by the Cabinet Office on 17 July 2012 e.g. "The governing principle is proportionality of the type and scale of consultation to the potential impacts of the proposal or decision being taken, and thought should be given to achieving real engagement rather than following bureaucratic process". See:

<http://www.cabinetoffice.gov.uk/resource-library/consultation-principles-guidance>

You may be aware that CAL wrote to the Secretary of State for Transport in a letter dated 15 May 2012 expressing concern that the suspension of the M4 bus lane is unlawful without full mitigation of breaches of air pollution laws. One consequence of the current Consultation proposals, if adopted, would be to weaken (wrongly) the test of 'significance' for determining the need or otherwise for a statutory Environmental Impact Assessment (EIA) which may, for example, be highly relevant to the M4 situation. CAL is surprised therefore that the Consultation was not mentioned when it met the Highways Agency on 18 September 2012 with officials from the London Borough of Hounslow.

Summary and conclusions

The Highways Agency's approach to air quality assessment needs to address the following considerations with respect to air quality:

1. the consultation document appears to suggest that the Directive 2008/50/EC and/or the National Planning Policy Framework (NPPF) are open to interpretation or the obligations they impose flexible. This is not the case:
 - broadly speaking, Directive 2008/50/EC defines obligations that are absolute in terms of air quality concentrations, timescales and places unless a time extension has been obtained for the zone in question subject to strict conditions; and
 - the NPPF clearly states that 'Planning policies should sustain compliance with and contribute towards EU limit values'
2. under EU law and UK planning law any expansion of road capacity must be within the boundaries set by legally binding limit values for NO₂, PM₁₀ and other pollutants. These limit values are currently exceeded at and near many roads;
3. the UK has not obtained a time extension to comply with NO₂ limit values throughout the Greater London zone or in many other UK air quality assessment zones. Worse, it has already breached the terms of time extensions granted in four of nine zones. This means that the UK faces imminent infraction action by the Commission and must, in any event, meet the limit values as soon as possible i.e. there is no 'breathing space' until 2015 or possibility of delaying compliance until 2025 (or later);
4. evidence is increasingly showing that Euro emission standards for diesel vehicles are failing to have an appreciable impact on NO_x emissions in 'real world' driving conditions. Expected falls in NO_x emissions from road transport have not taken place, removing expected air quality 'headroom' for road expansion. Projections of vehicle emissions used in air quality modeling need to make conservative assumptions and not simply assume a downwards trajectory. The consultation document makes no mention of this issue or that an assessment must take account of the uncertainties that result;
5. the Highways Agency's current approach to considering air quality impacts is too simplistic and fails to take account of the absolute nature of limit values and their deadlines (e.g. 4.1.3 on page 12). There is no consideration of the public health and health inequalities agendas or requirements in the consultation document;
6. the assessment approach appears to pay little regard to Air Quality Management Areas. These areas impose special further requirements for the protection of public health. The Highways Agency needs to work closely with local authorities to help solve air quality problems;
7. the Highways Agency's view that **"it is the criteria listed under Annex III which must inform the determination of whether a project has a significant effect on air quality"** is wrong in excluding possible factors that are not listed. For example, the Highways Agency's current and proposed screening tests of 'significance' might suggest (wrongly) that a statutory

EIA is not required to assess the impact of suspending the M4 bus lane when it clearly is required; and

8. a full public consultation on the consultation proposals is needed in order to provide local authorities, NGOs and other interested parties an adequate opportunity to comment.

Limit values are legally binding and must be complied with in full in order to provide minimum public health protections.

UK has highest proportion of zones exceeding NO₂ standards of any Member State in Europe

Ambient or outdoor air pollution comprises particles and gases. The particles, which can comprise anything from tiny droplets to diesel soot and tyre and brakewear, are called ‘particulate matter’ and classified by their aerodynamic diameter in microns (one-millionth of a metre (µm) which is about one-hundredth of the thickness of a human hair) e.g. PM_{2.5} and PM₁₀. The gases, which can coalesce and become particles, are mainly nitrogen dioxide (NO₂), ozone (O₃) and sulphur dioxide (SO₂).

CAL’s analysis of the latest data confirms that London had the highest levels of NO₂, a toxic gas, of any capital city in Europe in 2010. Concentrations of PM_{2.5} and PM₁₀ are also high in London though not the worst among European cities. Many other UK cities have serious air pollution problems. Detail including supporting information can be seen at:

<http://cleanairinlondon.org/sources/guide-to-sources-london-has-the-highest-levels-of-nitrogen-dioxide-of-any-capital-city-in-europe/>

The WHO says there is little evidence to suggest a threshold below which no adverse health effects would be anticipated for particulate matter or, put another way, there is no safe level of human exposure to it. An ‘Update of WHO air quality guidelines’ (AQG) published in February 2008 said “The AQG have always addressed exposures and health effects of individual pollutants or indicators (such as PM₁₀ mass, an indicator of a complex pollution mixture with multiple sources). However, as understanding of the complexity of the air pollution mixture has improved, the limitations of controlling air pollution and its risk through guidelines for single pollutants have become increasingly apparent. Nitrogen dioxide (NO₂), for example, is a product of combustion processes and is generally found in the atmosphere in close association with other primary pollutants, including ultrafine particles. It is itself toxic and is also a precursor of ozone, with which it coexists along with a number of other photochemically generated oxidants. Concentrations of NO₂ are often strongly correlated with those of other toxic pollutants. Its concentration is readily measured but needs interpretation as a potential surrogate for a set of sources and the resulting mixture. Achieving guideline concentrations for individual pollutants, such as NO₂, may therefore bring public health benefits that exceed those anticipated on the basis of estimates of a single pollutant’s toxicity”. NO₂ is not just a molecule therefore as the Government would have us believe.

Details including supporting information can be seen at:

<http://cleanairinlondon.org/health/guide-to-health-impacts-invisible-air-pollution-is-the-biggest-public-health-failing-or-cover-up-for-decades/>

The UK has the highest proportion of zones exceeding the NO₂ annual limit value plus margin of tolerance of any Member State in Europe according to the latest available analysis. See:

http://ec.europa.eu/environment/air/quality/legislation/public_info.htm

Air quality in the UK – the policy context

The consultation document makes little mention of the UK air quality policy context. This is an important omission as there have been significant developments in the policy landscape in recent years that have an impact on the proposals.

The pollutants most strongly associated with major roads are NO₂ and particulate matter (PM₁₀ and PM_{2.5}). Limit values for both are contained in the EU Directive on ambient air and cleaner air for Europe (Directive 2008/50/EC) with a deadline of compliance for PM₁₀ of 2011 (or 2005) and for NO₂ of 1 January 2010 (since 1999 legislation) (limit values). Broadly speaking, these limit values apply at all locations where the public have access. Limit values are legally binding on Member States and, in the case of the UK, are enforced through two main mechanisms:

- **European enforcement action** – the European Commission (Commission) can take enforcement ('infraction' or 'infringement') action against Member States who fail to comply with the limit values. This process involves five main stages: Letter of Formal Notice (or first written warning); Reasoned Opinion (or second written warning); reference to the Court of Justice of the European Union (CJEU); Reasoned Opinion (final written warning); and reference by the Commission to the CJEU with a request to impose lump sum and/or daily fines on the Member State. The CJEU can impose unlimited fines on Member States which the Localism Act 2011 allows the Government to pass to the Mayor of London and/or local authorities subject to certain protections; and
- **UK planning law** – limit values are a material consideration in the planning system¹. Developments should not proceed if they are likely to cause or contribute to a breach, or the worsening of a breach, of a limit value unless the impacts are fully mitigated. Limit values are concentrations to be attained and not exceeded once attained.

Directive 2008/50/EC is transposed into UK law through the Air Quality Standards Regulations 2010.

Directive 2008/50/EC also permits a process of compliance flexibility, whereby Member States can obtain a time extension of up to five years to comply with NO₂ limit values subject to strict conditions. For the purposes of air quality assessment each Member State is divided into a number of different zones; to obtain a time extension a Member State must submit a plan for each zone in exceedance that demonstrates how compliance with the limit values will be achieved as quickly as possible and in all cases by the latest possible deadline of 1 January 2015.

In June 2012 the Commission announced its decision on the UK's NO₂ time extension applications. The results were²:

¹ Paragraph 124 of the New Planning Policy Framework states that 'Planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas.'

² See http://cleanairinlondon.org/wp-content/uploads/CAL-187-UK-AQ-Zones-and-AQ_Draft-280612.pdf for a full summary

- three zones were considered already compliant (no time extension necessary);
- 12 zones were granted time extensions, although four with deadlines earlier than 2015; and
- 12 zones were denied time extensions (but may reapply).

The UK Government did not apply for time extensions for the remaining 16 zones as it did not expect them to comply by 2015. These zones include Greater London where compliance is not expected until 2025. All zones without a time extension may now be the subject of enforcement action by the Commission, as the original 2010 deadline still applies to them.

On 28 September 2012 the UK reported to the Commission its Compliance Assessment Summary for Air Pollution in the UK 2011. See:

<http://cleanairinlondon.org/sources/four-of-nine-uk-zones-have-already-breached-nitrogen-dioxide-time-extension/>

This report admitted the UK had already breached in four of nine zones the terms of time extensions to comply with NO₂ limit values. These had been granted by the Commission in June 2012 and are: Leicester, Nottingham, Portsmouth and North Wales. As a result, the UK may face prioritised infraction action in 20 zones. This is a further significant development in relation to the Consultation as it demonstrates again the need for urgent, substantial and sustainable reductions in air pollution. **There is clearly no scope for weakening the Highways Agency's interpretation of 'significant'.**

CAL is concerned with the consultation document's statement that 'limit values cannot be taken out of context of [Directive 2008/50/EC's] other requirements and principles' (5.2.1 on page 16), which seems to suggest there is room for interpretation of the limit values. This is not the case as Directive 2008/50/EC imposes absolute requirements for: air quality concentrations; timescales; and places, unless a time extension has been obtained (subject to strict conditions).

Similarly the New Planning Policy Framework is unambiguous on air quality, in that 'Planning policies should **sustain compliance with and contribute towards EU limit values**' (CAL's emphasis). The Highways Agency's current 'approach to identifying significant air quality impacts based on whether or not a scheme makes air quality worse overall in relation to compliance with the air quality limit values' (4.1.2 on page 12) is not compatible with this policy i.e. new schemes should be actively improving air quality rather than just protecting the *status quo*. The Consultation proposals would further distance the Highways Agency's approach from its obligations.

Air quality modelling – the technical context

The Highway's Agency approach to scheme assessment is based on modelling the potential air quality impacts of new schemes. The results of modelling are highly dependent on the emissions factors used to predict emissions from vehicles; in recent years evidence has increasingly demonstrated that anticipated NO_x (and NO₂) emissions from new vehicles have been optimistic at best. However, evidence³ is now increasingly showing that:

- roadside NO₂ concentrations are static or even increasing in some locations;
- vehicle emission standards (Euro standards) for diesel vehicles are having little impact on

³ See http://uk-air.defra.gov.uk/reports/cat05/1103041401_110303_Draft_NOx_NO2_trends_report.pdf

‘real world’ NO_x emissions, with new diesel vehicles showing little improvement in emissions over far older vehicles;

- the new car market has undergone (and continues to undergo) a large shift from petrol to diesel, with diesel cars now making up more than half of new car sales; and
- NO₂ has increased as a percentage of NO_x emissions from around 5% to nearly 25%.

Policy Exchange has estimated that diesel vehicles are responsible for some 91% of PM_{2.5} and 95% of NO₂ road traffic exhaust emissions in London. See:

<http://www.policyexchange.org.uk/publications/category/item/something-in-the-air-the-forgotten-crisis-of-britain-s-poor-air-quality>

This evidence means that it is unrealistic to assume a downwards trend in NO_x emissions and associated NO₂ concentrations to provide ‘headroom’ for increased emissions from road expansion. Even if the forthcoming Euro 6/VI standard successfully addresses the problems of ‘real world’ diesel emissions it will be many years before this has an appreciable impact on emissions from the UK’s vehicle fleet as a whole.

The Government blames the European engine emission standards for its failure to comply with NO₂ limit values. But: Euro standards never set limits on NO₂; and successive Governments have incentivised the purchase of diesel vehicles when they knew doing so would cause more problems than petrol and after they knew the proportion of NO₂ as a fraction of NO_x emissions was rising. Successive Governments have failed to mitigate or adapt to this public health crisis.

CAL is concerned that these issues are not mentioned at all in the consultation document. They are particularly important as the approach to assessment in the document attempts to consider the duration of scheme’s air quality impact which, in most cases, is highly dependent on the future emissions performance of the vehicle fleet. At the very least, air quality assessments should use appropriate sensitivity analysis to explore a range of possible outcomes.

As you will know, the WHO has recently classified diesel exhaust as carcinogenic for humans.

‘Year of Air’ in 2013

The Commission has declared 2013 will be the ‘Year of Air’. See:

http://cleanairinlondon.org/wp-content/uploads/CAL-187-Commissioner-Potocnik-speech-240912_Year-of-Air.pdf

and

http://ec.europa.eu/environment/air/review_air_policy.htm

CAL is calling for proposals from the Commission during the ‘Year of Air’ in 2013 that will ensure continuity and the further tightening of health and legal protections. Such proposals are expected for air quality legislation in September 2013 or later.

In contrast, the Department of Environment Food and Rural Affairs (Defra) has said ‘Working in partnership with other Member States, we will also use the European Commission review of air

quality legislation, expected in 2013, to seek Amendments to Directive 2008/50/EC which reduce the infraction risk faced by most Member States, especially in relation to nitrogen dioxide provisions’.

http://cleanairinlondon.org/wp-content/uploads/CAL-149-Defra-conclusions-after-RTC_March-2012.pdf

http://cleanairinlondon.org/wp-content/uploads/CAL-187-Defra-RTC-implementation-plan_Sept-2012.pdf

If Defra succeeds, it will reduce by around 50% current health and legal protections near the UK’s busiest roads.

CAL is campaigning to protect public health and enforce legal standards for air quality and hopes to achieve other benefits by supporting sustainable development.

Health and inequalities

The key driver behind air quality legislation is the protection and improvement of public health. Air quality is also an equalities issue; air quality impacts are not experienced equally across the UK, with residents of the most polluted (frequently roadside) locations suffering far greater health impacts than people living in relatively unpolluted areas. Improving public health and reducing health inequalities is at the core of the Government’s public health strategy, as described in the White Paper ‘Healthy Lives, Healthy People’⁴.

The Highways Agency’s current policies do not appear to recognise these aims and the evaluation proposals described in the consultation document do not consider public health and inequalities as issues to be assessed e.g. Box 1 on page 19. CAL is particularly concerned that:

- the Highways Agency appears to consider air quality limit values as moveable targets or objectives rather than as absolute binding limits for air pollutants with absolute deadlines (which they are). For several pollutants (e.g. particulate matter) considerable health benefits continue to be accrued if concentrations fall, even if levels are well below EU limit values; and
- the proposed assessment approach implies that a scheme is beneficial if pollutant concentrations fall ‘on balance’ and/or if negative impacts are reversible e.g. they may rise at one group of receptors but fall at others in one or more future years. Such an approach takes no account of existing inequalities; suggests it is acceptable for an area where concentrations are well above limit values to deteriorate further if concentrations fall in other, less polluted areas; and confuses the meaning of reversible in Directive 2011/92/EU with the absolute requirements of Directive 2008/50/EC.

In short, improving public health, complying fully with binding legal limits and deadlines and reducing air quality inequalities must be at the heart of the Highways Agency’s policy and approach to air quality assessment. This is not the case with the current proposals.

Environmental Impact Assessments

The aims and requirements of Environmental Impact Assessments (EIA) can be seen at:

⁴ See www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_121941

<http://ec.europa.eu/environment/eia/eia-legalcontext.htm>

Legal requirements were codified in Directive 2011/92/EU dated 13 December 2011.

The consultation document emphasises criteria under Annex III of Directive 2011/92/EU which must inform the determination of whether a project has a significant effect on air quality (2.1.5 on page 6) and lists them in Appendices A and B (pages 22 and 23). The consultation document also comments in 5.2.2 (on page 17):

‘In relation to the issues presented here, there are two key decision making points:

- a) the decision (determination) of the need for a statutory EIA; and*
- b) the decision to grant or refuse consent of the scheme.’*

Article 4 (3) of Directive 2011/92/EU states:

‘When a case-by-case examination is carried out or thresholds or criteria are set for the purpose of paragraph 2, the relevant selection criteria set out in Annex III shall be taken into account.’

Even a cursory review of the Selection Criteria in Annex III and/or Appendix A identifies, for example, that the suspension of the M4 bus lane triggers the need for a statutory EIA. For example, the characteristics of the potential impact include: a predictable, significant and ongoing worsening of the breaches of the limit values. Table 9.1 on page 40 of the report titled ‘M4 Bus Lane - The Analysis of the Impact of the Suspension of the M4 Bus Lane’ dated 5 April 2012 identified a worsening of NO₂ concentrations of between 0.6 and 1.7 micrograms per cubic metre i.e. an increase of up to three per cent. These are significant increases and may reflect increases in harmful emissions of up to six per cent. It would be challenging for a local authority to reverse such increases which might require perhaps the banning of diesel vehicles in the local area.

Further, the Highways Agency (at 2.1.5 on page 6) seems to limit the evaluation of whether or not there are “significant effects” under the EIA Directive, by reference to a reading of Article 4(3), when it says:

“When a case-by-case examination is carried out or thresholds or criteria are set for the purpose of paragraph 2, the relevant selection criteria set out in Annex III shall be taken into account.”

The Highways Agency interprets this as meaning that the considerations in Annex III are exclusive and exhaustive which cannot be drawn from the wording of the EIA Directive.

The wording of the headings in Annex III is that when considering whether or not the effect is “significant” the following relevant factors:

“...must be considered having regard, in particular, to...”

The inclusion of the words “in particular” means that the list is not exhaustive. Therefore the Highways Agency’s view that **“it is the criteria listed under Annex III which must inform the**

determination of whether a project has a significant effect on air quality” is wrong in excluding possible factors that are not listed.

In CAL’s carefully considered opinion, the requirements of Directive 2011/92/EU, Directive 2008/50/EC and the NPPF impose much greater obligations on the Highways Agency than those which would apply under the guidance issued in 2009 by the Institute of Air Quality Management titled ‘Description of air quality impacts and the Assessment of their significance’. For the last of these please see:

http://iaqm.co.uk/text/news/2009/iaqm_significance_nov09.pdf

Further, in CAL’s opinion, the Highways Agency’s current and proposed screening tests of ‘significance’ might, for example, suggest (wrongly) that a statutory EIA is not required to assess the impact of suspending the M4 bus lane when it clearly is required.

Local Authorities and Air Quality Management Areas

CAL has tremendous respect for the depth of assessment provided by local authorities under their Local Air Quality Management duties. CAL considers the UK’s Air Quality Management Areas (AQMA) to provide a far better picture of air quality in London (and the rest of the UK) than Defra’s national assessment, due to the latter’s relative scarcity of monitoring stations, heavy reliance on modelling and lack of local knowledge.

As the consultation document states, AQMA declarations frequently cover more than the simple area(s) of exceedances. This is not simply administrative convenience: it is also used to acknowledge the fact that poor air quality hotspots are the result of (mainly) traffic movements across a large area, rather than simply the area of exceedance itself. A local authority view heard by CAL is that whilst the Highways Agency will help with the assessment of AQMA caused by, or related to, roads under its management, the Highways Agency is unwilling to take sufficient action to reduce air pollution caused by these roads.

Local authorities are unlikely to welcome aspects of the proposed approach to assessment. For example, point 6 on page 20 appears to suggest that new exceedances would be seen as less significant if they are clustered around existing exceedances, as they may be covered by measures in Air Quality Action Plans. Local authorities are likely to object strongly to the idea of further exceedances being created due to road schemes, even if they attached to existing areas of exceedances.

CAL also takes issue with paragraph 3.2.5 (on page 11) ‘Our assessment approach does not explicitly consider the presence of an AQMA’. The Highways Agency should consider fully the presence of an AQMA in their assessment and undertake a thorough programme of consultation with the local authority where air quality impacts are expected.

Conclusions and summary

The Highways Agency’s approach to air quality assessment needs to address the following considerations with respect to air quality:

1. the consultation document appears to suggest that the Directive 2008/50/EC and/or the

National Planning Policy Framework (NPPF) are open to interpretation or the obligations they impose flexible. This is not the case:

- broadly speaking, Directive 2008/50/EC defines obligations that are absolute in terms of air quality concentrations, timescales and places unless a time extension has been obtained for the zone in question subject to strict conditions; and
 - the NPPF clearly states that ‘Planning policies should sustain compliance with and contribute towards EU limit values’
2. under EU law and UK planning law any expansion of road capacity must be within the boundaries set by legally binding limit values for NO₂, PM₁₀ and other pollutants. These limit values are currently exceeded at and near many roads;
 3. the UK has not obtained a time extension to comply with NO₂ limit values throughout the Greater London zone or in many other UK air quality assessment zones. Worse, it has already breached the terms of time extensions granted in four of nine zones. This means that the UK faces imminent infraction action by the Commission and must, in any event, meet the limit values as soon as possible i.e. there is no ‘breathing space’ until 2015 or possibility of delaying compliance until 2025 (or later);
 4. evidence is increasingly showing that Euro emission standards for diesel vehicles are failing to have an appreciable impact on NO_x emissions in ‘real world’ driving conditions. Expected falls in NO_x emissions from road transport have not taken place, removing expected air quality ‘headroom’ for road expansion. Projections of vehicle emissions used in air quality modeling need to make conservative assumptions and not simply assume a downwards trajectory. The consultation document makes no mention of this issue or that an assessment must take account of the uncertainties that result;
 5. the Highways Agency’s current approach to considering air quality impacts is too simplistic and fails to take account of the absolute nature of limit values and their deadlines (e.g. 4.1.3 on page 12). There is no consideration of the public health and health inequalities agendas or requirements in the consultation document;
 6. the assessment approach appears to pay little regard to Air Quality Management Areas. These areas impose special further requirements for the protection of public health. The Highways Agency needs to work closely with local authorities to help solve air quality problems;
 7. the Highways Agency’s view that “**it is the criteria listed under Annex III which must inform the determination of whether a project has a significant effect on air quality**” is wrong in excluding possible factors that are not listed. For example, the Highways Agency’s current and proposed screening tests of ‘significance’ might suggest (wrongly) that a statutory EIA is not required to assess the impact of suspending the M4 bus lane when it clearly is required; and
 8. a full public consultation on the consultation proposals is needed in order to provide local authorities, NGOs and other interested parties an adequate opportunity to comment.

Limit values are legally binding and must be complied with in full in order to provide minimum public health protections.

Please respond to the issues raised in this letter. I have copied relevant parties.

With best wishes.

Yours sincerely

Simon Birkett
Founder and Director
Clean Air in London

Cc:

Chris Calvi-Freeman, London Borough of Hounslow
Simon Jones, Highways Agency