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Dear Secretary of State and Consultation team

### **TAG Unit 3.3.3c The Air Quality Sub-Objective**

**Consultation makes mistakes of both fact and law, that are so basic that, in our view, the Consultation, in order to be meaningful, should be undertaken again**

**‘Clean Air in London’ (CAL) lodges formal complaint that the Department of Transport and/or Highways Agency have failed to respond to repeated submissions from CAL on these issues**

Clean Air in London (CAL) welcomes the opportunity to respond to the consultation by the Department for Transport (DfT) and/or Highways Agency (HA) on Transport Analysis Guidance (WebTAG) Unit 3.3 on The Air Quality Sub-Objective (the Consultation). Details can be seen at:

**3.3.3c: The Air Quality Sub-Objective – consultation (unit 3.3.3c.php) – February 2013**

<http://www.dft.gov.uk/webtag/documents/expert/unit3.3.3c.php>

**3.3.3: The Air Quality Sub-Objective (unit 3.3.3.php) – August 2012**

<http://www.dft.gov.uk/webtag/documents/expert/unit3.3.3.php>

**3.3.3d: The Local Air Quality Sub-Objective (unit 3.3.3d.php) – Draft – May 2012**

<http://www.dft.gov.uk/webtag/documents/expert/unit3.3.3d.php>

CAL is a company limited by guarantee which campaigns to achieve urgently and sustainably full compliance with World Health Organisation 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 in London and elsewhere. This document provides both general and expert comments in response to the Consultation.

Traffic is a major cause of air pollution in London and elsewhere which in turn causes thousands of premature deaths per year, and many thousands more instances of illness, chronic illness and disability. For this reason, traffic measures are also measures to deal with air quality.

## **Background**

CAL notes updated guidance from the Department for Environment Food and Rural Affairs (Defra) and HM Treasury (HMT) published on 10 May 2013. Details can be seen at:

### **Defra: Abatement cost guidance for valuing changes in air quality**

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/197898/pb13912-airquality-abatement-cost-guide.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/197898/pb13912-airquality-abatement-cost-guide.pdf)

Which states *inter alia*:

*“Where a policy affects compliance the abatement cost approach replaces the existing impact pathway approach, which remains best practice for changes not affecting compliance with legally binding obligations and estimates the social costs of changes in air quality”* Page 1

*“Unit costs help to determine whether more detailed abatement cost analysis is needed. If the air quality impacts are valued at more than £50m using unit costs it is suggested that a full abatement cost analysis might be necessary. This guidance provides an overview of what such analysis entails. We recommend that you contact Defra in such cases for advice on what is proportionate. The advice might be to continue to use the unit costs approach, to use available abatement cost tools, or to undertake bespoke analysis.”* Page 2

### **Defra: Impact pathway guidance for valuing changes in air quality**

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/197900/pb13913-impact-pathway-guidance.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/197900/pb13913-impact-pathway-guidance.pdf)

Which states *inter alia*:

*“A full impact pathway analysis is generally recommended when estimated air quality impacts are valued at more than £50m using damage costs, or when air quality is the main objective of the proposal. Damage costs have been developed from the impact pathway approach to facilitate proportionate analysis of air quality impacts. This guidance provides an overview of how full impact pathway analysis is conducted.”* Page 1

*“Where possible these are monetised to estimate the value of the change in air pollution.”* Page 2

### **HMT: Valuing impacts on air quality**

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/197893/pu1500-air-quality-greenbook-supp2013.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/197893/pu1500-air-quality-greenbook-supp2013.pdf)

Which states *inter alia*:

*“Two approaches are used to value changes in air quality, dependent on the nature of the change. They are:*

- *the impact pathway approach, which is used in the majority of instances to value the consequences of changes in air quality such as on health, crops and buildings; and*
- *the abatement cost approach, which is used in the limited instances where the change in air quality is likely to affect compliance with a legally binding obligation (whether causing, removing or changing the extent of non-compliance).” Page 3*

*“The abatement cost approach is relevant for the minority of situations where the breach of legally binding obligations is an issue. In such instances, it is still only those changes in air quality in excess of the relevant obligation that should be valued using this approach. Changes below the obligation should be valued using the impact pathway approach.” Page 3*

*“If the legally binding obligations are not met, remedial actions will need to be undertaken to restore compliance or fines will be imposed. Consequently decisions that result in noncompliance may create substantial potentially unlimited financial liabilities. **In this case any changes in air quality that exceed the minimum standard must be valued at what it will cost to subsequently restore compliance using the abatement cost approach.** The abatement cost approach is only recommended where pollution is already in breach of legally binding obligations, or where this is expected as a result of the policy under consideration. The approach should not be used for objectives that are not legally binding, nor when setting targets or binding obligations as the impact pathway approach is appropriate in these circumstances.” Page 5 **CAL emphasis.***

#### **CAL comment:**

The abatement costs for NO<sub>x</sub> mentioned in the above guidance is limited and outdated.

The figures seem to be derived from the 2010 MACC work and a subset of this appears to be repeated in the Defra Green Book Supplementary Guidance:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/197898/pb13912-airquality-abatement-cost-guide.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/197898/pb13912-airquality-abatement-cost-guide.pdf)

The “menu of NO<sub>x</sub> abatement options” is particularly limited and other effective options (e.g. London where particular problems occur) such as the introduction of Berlin-style low emission zones, extending to cars and taxis, has not been included.

The recent studies of real world emissions confirm that further revisions are needed to the emission factor calculations on which the abatement costs are derived e.g. to ensure greater discrimination between diesel and petrol engines. For example, see:

[http://www.businessgreen.com/digital\\_assets/6583/KCL\\_Defra\\_RSD\\_report\\_Draft\\_120413\\_%284%29.pdf](http://www.businessgreen.com/digital_assets/6583/KCL_Defra_RSD_report_Draft_120413_%284%29.pdf)

Further, the abatement costs are likely to be wildly optimistic in respect of Euro VI/6 since the standards for such vehicles will be based now, at least initially, on the current, discredited test cycle, and manufacturers may seek to renegotiate those standards with respect to any future real world test cycle. The working assumption for stakeholders had been that the Euro VI/6 standards that were set would be based always on a real world test cycle and would not be at risk of delay or subsequent renegotiation.

## **Response**

CAL considers the approach proposed by the DfT and HA to guidance on assessing the impact of transport options on air quality is fundamentally flawed. This failure includes the matters which are the subject of the Consultation *inter alia* because:

### **1. Failed – Assumes ‘minimal impacts’ can be ‘scoped out’**

The Consultation assumes that ‘minimal impacts’, which are not defined anyway quantitatively or qualitatively in the Consultation, can be ‘scoped out’ of air quality assessments. For example, the Consultation states:

**1.1.4 (page 4):** *Analysis should be no more detailed than is required to support robust decision making. The analyses outlined in this Unit may not be appropriate in all cases, but should provide the basis for less detailed analyses. Where air quality impacts are deemed to be minimal, the analysis of air quality impacts may be scoped out. CAL emphasis.*

**CAL comment:** This approach assumes wrongly that a small relative or absolute change in air quality can be considered minimal when even a tiny change in one or more future years, including weather effects for example, could result in an exceedance of a limit value once attained or a worsening of air quality where limit values are exceeded. The legal requirements are absolute in order to ensure minimum standards of public health not ‘negotiable’ and apply virtually everywhere in ambient air where regular human exposure occurs. The Government’s approach is unlawful.

### **2. Failed – Assumes air quality impacts can be averaged**

The Consultation assumes that air quality impacts can be averaged in several ways and then net impacts reported quantitatively. For example, the Consultation states:

**2.2.2 (page 5):** *This analysis will produce a value that will define the magnitude of the change in concentrations due to the addition, or removal, of pollution from a specific number of properties. The method takes account of all significant changes in concentrations, whether on existing or new routes, or elsewhere on the local network. A negative value will indicate that there are reduced concentrations and therefore a general improvement in air quality, due to an option. A positive value will indicate an increase in concentrations and therefore a general detrimental effect upon air quality due to an option. A qualitative comment will provide an indicator as to whether the option will cause an Air Quality Strategy objective to be exceeded and / or whether an exceedance has been removed. CAL emphasis.*

**5.4.8, page 18:** *The scores for each of the groups under consideration should then be reported in the matrix of social and distributional impacts, described in Step 5 of Detailed Guidance on Social and Distributional Impacts of Transport Interventions (TAG Unit 3.17).*

**CAL comment:** This approach, which is detailed elsewhere in the Consultation (e.g. Table 4 on page 17), assumes that average concentrations can be determined at average locations (e.g. the middle of a band of distance from a road link) for all the properties and/or people(s) in that band and then several types of impacts can be summed to produce 'net' impact(s). Worse, the Consultation assumes that such averaging can be used not just for determining the extent of breaches of limit values but also separately for assessing impacts on people e.g. equalities. The Government's approach is unlawful.

### 3. Failed – Assumes the year of impact is arbitrary

The Consultation assumes that impacts in one or more year only need to be assessed. For example, the Consultation states:

**2.1.2, page 5:** *The approach to appraising local air quality is based on a quantification of the change in concentrations at properties within the vicinity of the transport network. The analysis should be carried out for the project opening year and for at least one other forecast year. The choice of forecast years (other than the opening year) should be consistent with the forecast years adopted for modelling.*

**4.2.1, page 12:** *A TAG Air Quality Valuation spreadsheet tool has been developed alongside this TAG Unit to facilitate the necessary steps for calculating the monetary values for air pollutants.*

**4.2.2, page 12:** *In line with the principles described in TAG Unit 3.5.4 – Cost-Benefit Analysis, analysts should enter the scheme opening year (to determine the appraisal period), forecast year (for interpolation and extrapolation over the appraisal period) and the current year when the appraisal is being undertaken (to determine the correct profile of discount rates when calculating net present values).*

**4.2.3, page 12:** *For  $NO_x$ , the total emissions in the Without Scheme and With Scheme cases for the opening and forecast years should be entered in the "Emissions and concentrations" sheet and the emissions in areas exceeding EU limit values should be entered in the "NO<sub>x</sub> exceedances and extrapolation" sheet For  $PM_{10}$ , the  $PM_{10}$  assessment score for the Without Scheme and With Scheme scenarios should be entered into the "Emissions and concentrations" sheet for the opening and forecast years. **CAL emphasis.***

**CAL comment:** This approach is unlikely to identify circumstances where and when limit values might be exceeded once attained or air pollution worsened where it exceeds limit values. For example, concentrations in the base year might be low temporarily (e.g. due to the Olympics or repair work) or air quality-friendly weather (e.g. rain). In future years, previously approved developments may also come on-line in a year outside the scope of a simplified assessment e.g. supermarkets, waste management plants or major other developments. The Government's approach is unlawful.

#### 4. Failed – Assumes legal breaches can be weighed in cost-benefit terms

The Consultation assumes that limit values can be exceeded once attained and or air pollution worsened if it exceeds limit values. While the Consultation proposals seek to identify exceedances, the approach is to allocate arbitrary higher abatement costs to a project as part of a cost-benefit analysis and seek some qualitative comment. These abatement costs are chosen from a list of abatement measures that arbitrarily exclude some less politically palatable, but feasible and effective, options e.g. banning diesel cars. For example, the Consultation states:

**4.1.2 (page 11):** *Air quality impacts should be valued using a hybrid approach which combines the damage cost and marginal abatement cost (MAC) methodologies. The MAC approach has been developed for interventions that are expected to result in changes to air quality in areas exceeding EU limit values, or where limit values will be exceeded following the intervention. At present compliance problems (outside London) are only expected to continue for NO<sub>2</sub>. Therefore the MAC approach should only be applied to changes in NO<sub>x</sub> emissions in areas where EU limit values are exceeded. Changes in NO<sub>x</sub> emissions in other areas and changes in PM<sub>10</sub> concentrations should be valued using the damage cost approach. CAL emphasis.*

**CAL comment:** This approach assumes wrongly that limit values can be exceeded once attained or air pollution worsened where exceedances occur. It also assumes wrongly that PM<sub>10</sub> limit values will not be exceeded in future outside London and confuses assessments of NO<sub>x</sub> emissions with the requirement to focus on NO<sub>2</sub> concentrations. The Government's approach is unlawful.

#### 5. Failed – Assumes equalities can be considered on an arbitrary basis

The Consultation notes that air pollution can have an adverse impact on equalities on an arbitrary list of groups of people but then dismisses most of these affects completely and permanently. Worse, it often does so inconsistently, judgmentally and without providing supporting evidence. The Consultation seems to conclude broadly speaking that the only equalities to assess are: income; children (at school not home); and older people resident in care homes and people in hospitals. For example, the Consultation states:

**5.2.1, page 14:** *The impacts of air quality are primarily spatial. As poor air quality problems are often experienced in areas of deprivation, in which people already suffer relatively poor health, health problems can be exacerbated for deprived communities. Diabetes sufferers, in particular, have been identified as being at a higher risk of heart disease from increases in transport pollutants. There is evidence of higher rates of Diabetes in lower income groups and amongst certain ethnic groups. We consider, however, that there is not currently enough evidence to conclude that these groups are more prone to heart disease as a result of poor air quality.*

**5.2.2, page 14:** *Evidence also suggests that children are at more risk from air pollution due to the fact that they generally spend more time outside and therefore experience more exposure to harmful pollutants that impact on lung development. Although there is not currently enough evidence to conclude that these groups are more at risk as a result of poor air quality, it is recommended that consideration is given to the changes in air quality that are experienced by children.*

**5.2.3, page 14:** *Air quality has strong distributional impacts. The poor air quality experienced in some areas of low car ownership is a clear issue of social justice as these people experience the impacts of car use, but do not themselves have access to a car. **However it is prudent to***

*concentrate the analysis of changes in air quality on the impacts on households in different income groups.*

**5.3.10, page 16:** *The review of available evidence has suggested that the key ‘potential vulnerable group’ in air quality terms are children. Children are not highlighted as a potential vulnerable group within this Unit, and some additional analysis will therefore be required to assess changes in air quality in the vicinity of schools. In addition, it is recommended that assessment also takes place for hospitals and care homes for older people, reflecting the impacts of poor air quality on people with poor health.*

**5.3.11, page 16:** *The analysis of the potential impacts of air quality on children should focus on catchment areas for local schools and on areas in which there are high proportions of children within the general population. The analyst should examine (using GIS) the changes in air quality that are forecast in these areas, and assess the scale of the change in air quality in comparison with the change in air quality experienced by the population as a whole.*

**5.3.12, page 16:** *A similar approach should be used to assess the impacts of changes in air quality on older people resident in care homes and people in hospitals. CAL emphasis.*

**CAL comment:** This approach fails to take account of the full range of possible inequalities e.g. ethnic, age, health, car ownership, susceptibility to air pollution and actual proximity to a proposed project. Furthermore, it is nothing short of ignorant and wrong to say ‘*Although there is not currently enough evidence to conclude that [children] are more at risk as a result of poor air quality*’. The Government’s approach is unlawful.

## **6. Failed – Assumes less care is needed outside Air Quality Management Areas**

The Consultation assumes that a quantitative only or lesser assessment is needed where no Air Quality Management Area (AQMA) applies. For example, the Consultation states:

**5.4.9, page 18:** *A further qualitative statement should be provided if the transport intervention will result in social and distributional impacts on air quality in an Air Quality Management Area (AQMA). CAL emphasis.*

**CAL comment:** This approach fails to take account of local areas where an AQMA has still not been declared despite limit values being exceeded or expected to be exceeded e.g. parts of London. Further, the latest Queen’s Speech states that the Government intends to introduce legislation ‘*No longer obliging councils to produce assessments after designating air quality zones*’. It is not clear whether this would allow a Council, for example, to scrap an AQMA for PM<sub>10</sub> and cease future assessments which might show the need thereafter for an AQMA e.g. due to an increase in biomass burning. In any event, the presence or absence of an AQMA does not determine of itself whether air pollution levels are unlawful. The Government’s approach is unlawful.

## Conclusions

In CAL's carefully considered opinion, these are gross failures that mean the Government's approach to assessing the impact of transport options on air quality is fundamentally flawed.

These are mistakes of both fact and law, and are so basic that, in our view, the Consultation, in order to be meaningful, should be undertaken again.

## M4 consultation

In related matters, CAL wishes to lodge a formal complaint that the DfT and/or HA have failed to respond to repeated submissions from CAL on these issues. As far as CAL is aware, it has received no substantive response or follow up to any of the following:

- i. letter to Secretary of State dated 15 May 2012 titled 'Suspending M4 bus lane breached air pollution law';

<http://cleanairinlondon.org/olympics/suspending-m4-bus-lane-has-breached-air-pollution-laws/>

- ii. meeting with HA officials on 18 September 2012;

- iii. letter to the HA dated 3 October 2012 titled 'Highways Agency seeking to weaken public health protections';

<http://cleanairinlondon.org/health/highways-agency-seeking-to-weaken-public-health-protections/>

- iv. various chaser emails sent by CAL to the HA after which the HA told CAL in an email dated 20 December 2012:

*"I am writing to advise you that your objection and further correspondence regarding the proposed revocation of the M4 Bus Lane are still undergoing review. Our response will be forwarded once we are satisfied all the required statutory checks have been undertaken. I anticipate this will now be in early 2013."*

It seems the DfT and HA wish simply to ignore the issues raised by CAL and hope they will go away.

I look forward to receiving your response to the substantive issues raised in this letter and previously.

Yours faithfully

Simon Birkett  
Founder and Director  
Clean Air in London