

30 September 2013

34 of 43 UK zones breached the nitrogen dioxide (NO₂) annual limit value in 2012

Cardiff has joined Leicester, North Wales, Nottingham and Portsmouth in breaching the terms of their time extensions. Bournemouth and Coventry failed to meet the pre-condition for theirs

Levels of NO₂ at long-running urban traffic locations have not improved since monitoring began 15 years ago

Government is covering-up breaches of the PM₁₀ daily limit value in London in 2012 by dismissing some monitors and blaming ‘sea salt’ for smog episodes when it admits the worst particle smog episodes occurred when wind speeds were low and/or from the north of mainland Europe. It is misleading the European Commission yet again

Government admits for the first time there was a serious smog episode in the days immediately leading up to the Opening Ceremony of the London 2012 Olympic Games. Scotland faces an air pollution crisis in the lead up to the Commonwealth Games in 2014 after Glasgow is reported as having the highest levels of NO₂ outside London at nearly twice legal limits

‘Clean Air in London’ urges Commissioner Potočnik to launch infraction against the UK and invites Parliament’s Environment Food and Rural Affairs Committee to investigate the Government’s reporting of air pollution and lack of action to tackle to biggest public health risk after smoking

The UK has submitted its official report to the European Commission (Commission) today confirming widespread breaches of air pollution laws across the UK again in 2012. Details for the UK and Gibraltar can be seen at:

<http://cdr.eionet.europa.eu/gb/eu/annualair/envukleya>

http://cdr.eionet.europa.eu/gi/air/colrm_ouq/envuklgsq

Quotes

Simon Birkett, Founder and Director of Clean Air in London, said:

“Clean Air in London (CAL) urges Commissioner Potočnik to launch infraction urgently against the UK prioritising the 16 zones for which no time extension was sought for NO₂ (including London) and the seven zones which have breached the terms of time extensions granted or offered for NO₂.

“The Government is trying to cover-up breaches of the PM₁₀ daily limit value in London in 2012 by dismissing some monitors and blaming ‘sea salt’ when it admits the worst particle smog episodes occurred when wind speeds were low and/or from the north of mainland Europe. The Government has confirmed again it has not consulted other Member States on significant air pollution originating in other Member States.

“CAL therefore calls on Commissioner Potočnik to launch infraction against the UK for breaching the PM₁₀ daily limit value in London in 2012 including in Marylebone Road in Westminster, Neasden Lane in Brent (78 Bad Air Days), Horn Lane in Ealing (48 Bad Air Days), Shepherd’s Bush in Hammersmith (69 Bad Air Days) and Upper Thames Street in the City of London (53 Bad Air Days).

“This Government has tried too hard and for too long to hide the impact of air pollution. CAL invites Parliament’s Environment Food and Rural Affairs Committee to investigate the Government’s reporting of air pollution which is a national disgrace and its lack of action to tackle the biggest public health risk after smoking.”

Analysis

Key points include:

Olympic and Commonwealth Games

1. Government has admitted for the first time there was a serious smog episode in the days leading up to the Opening Ceremony of the Olympic Games (pages 65 and 66 of the full report).
2. The highest levels of NO₂ in the UK outside London were reported for Glasgow at an annual mean of 72 µg/m³ i.e. nearly twice the legal limit and World Health Organisation guideline (WHO) ^{Tab 11f}.

Nitrogen dioxide

3. 34 of 43 UK zones have breached NO₂ limit values in 2012 which have been in legislation since 1999 to be complied with by 1 January 2010.
4. Time extensions granted by the European Commission in June 2012 for Leicester, North Wales, Nottingham and Portsmouth to comply with the NO₂ limit values have been breached again in 2012. Cardiff has now also breached the terms of its time extension. Bournemouth and Coventry have not met the terms of the conditional time extensions granted on 25 June 2012 i.e. to adjust relevant air quality plans with a view to ensuring compliance with the NO₂ annual limit value by 1 January 2013 and 1 January 2014 respectively.
5. Government claims Marylebone Road had the highest exceedances of NO₂ at an annual mean of 94 µg/m³ ^{Tab 11} when far higher levels were recorded at other locations e.g. Putney High Street (155 µg/m³).
6. The Government’s own report shows annual average concentrations of NO₂ have not declined during the last 10 years at eight long-running traffic urban sites that include Bath Roadside, **Camden Roadside**, Glasgow Kerbside, Exeter Roadside, **Haringey Roadside**, **London Marylebone Road**, Oxford Centre Roadside, and **Tower Hamlets Roadside**) (Figure 5-6 on page 43 of the full report).

Dangerous airborne particles (PM_{2.5} and PM₁₀)

7. The Government claims sea salt has reduced the number of exceedances of the PM₁₀ daily limit value from 46 to 35 i.e. the maximum permitted level ^{Tab 23a}.

8. Government is covering-up breaches of the PM₁₀ daily limit value in London in 2012 by ignoring some monitors and blaming ‘sea salt’ for smog episodes when it admits the worst particle smog episodes occurred when wind speeds were low and/or from the north of mainland Europe. It is misleading the European Commission yet again
9. The annual mean concentration of PM_{2.5} in Marylebone Road in London was 22 µg/m³ and 21 µg/m³ after the deduction of sea salt ^{Tab 18}. This exceeded the PM_{2.5} ‘Exposure Concentration Obligation’ (known as the Stage 2 Limit Value) of 20 µg/m³ which must be met by 1 January 2020. It is twice the WHO guideline for PM_{2.5}.
10. The Government has confirmed the UK has not consulted other Member States on significant air pollution originating in other Member States ^{Tab 25a}.

Hundreds of thousands of people affected

11. 246,179 people at background locations alone, including 229,147 in London, were exposed to levels of NO₂ exceeding the legal limit and the WHO guideline in 2012. The UK has refused for many years to comply with Article 5 of the 4th daughter directive requiring it to estimate the total number of people exposed to such levels of air pollution i.e. including urban roadsides ^{Tab 19b}.
12. International health standards have been exceeded for exposure to benzo(a)pyrene (76,777 people affected in the Belfast, North East, Northern Ireland, North Wales, South Wales, Swansea, Teeside, Yorkshire and Humberside zones) ^{Tab 19k}, nickel (3,286 people affected in the Swansea and South Wales zones) ^{Tab 19j} and ozone (millions of people affected) ^{Tab 19g}. In Gibraltar, 29,752 people were exposed to levels of nickel exceeding international health standards ^{Tab 14c} due to local industry including power production.

<http://youtu.be/bdO5-DmbuBI>

Notes

1. European Commission’s time extension webpage
http://ec.europa.eu/environment/air/quality/legislation/time_extensions.htm
2. Requirement to report total population exposed to air pollution exceeding limit values
<http://rod.eionet.europa.eu/obligations/569>
3. European Environment Agency report in 2012 titled ‘Particulate matter from natural sources and related reporting under the EU Air Quality Directive in 2008 and 2009’ stated:

“Since sea salt (mainly NaCl) is quantitatively the major contributor to the marine aerosol mass, it is the component to be considered when evaluating the natural contribution of marine aerosol to PM levels. Sea aerosols in the atmosphere tend to occur as episodic events during strong winds. They are most relevant for the PM₁₀ daily mean limit values: discounting the sea salt contribution can have an impact on the calculation of the exceedances of the daily limit value for PM₁₀.” Page 19

“Given the nature of sea-salt contributions, it is somewhat surprising that this type of event was only reported by two Member States (France and the United Kingdom)” page 29

“Possible clarifications hinge also on whether sodium nitrate (NaNO_3) is regarded as 'natural' or anthropogenic. In practice, the sodium is likely to come from natural origins (sea spray) and the nitrate from anthropogenic origins (NO_x oxidation)” (page 35)

“The UK applied a modelling approach” (pages 31 and 32)

4. Exceedance of the NO_2 annual mean limit value in Putney in 2012

http://www.londonair.org.uk/london/asp/publicstats.asp?mapview=NO2a&statyear=2012&MapType=Google®ion=0&site=WA7&postcode=&la_id=&objective=All&zoom=9&lat=51.431751825946115&lon=-0.17578125&VenueCode=

5. Exceedances of the PM_{10} daily limit value in 2012

Neasden Lane

http://www.londonair.org.uk/london/asp/publicstats.asp?region=0&site=BT5&Maptype=Google&mapview=PM10b&statyear=2012&la_id=&zoom=9&lat=51.50190410761811&lon=-0.0384521484375&laEdge=

Horn Lane

http://www.londonair.org.uk/london/asp/publicstats.asp?region=0&site=EA8&Maptype=Google&mapview=PM10b&statyear=2012&la_id=&zoom=9&lat=51.50190410761811&lon=-0.0384521484375&laEdge=

Shepherd's Bush

http://www.londonair.org.uk/london/asp/publicstats.asp?region=0&site=HF4&Maptype=Google&mapview=PM10b&statyear=2012&la_id=&zoom=9&lat=51.50190410761811&lon=-0.0384521484375&laEdge=

Upper Thames Street

http://www.londonair.org.uk/london/asp/publicstats.asp?region=0&site=CT8&Maptype=Google&mapview=PM10b&statyear=2012&la_id=&zoom=9&lat=51.60437164681676&lon=-0.0384521484375&laEdge=

6. London Air Quality Network annual conference on 28 June 2012

See presentation by David Green titled 'New measurements of PM composition during pollution episodes

<http://www.londonair.org.uk/london/asp/LAQNSeminar/>