

Briefing Note relating to RFI 4789: Air Quality Forecasting and Smog Alerts

The Department has a proactive approach to providing the public with information about current, future and historical air quality data so that they can stay informed and take action according to the air quality situation. Data are available online, by freephone, through email alerts and through a twitter feed. Information on the health effects of pollution is also available online and via the phone service. Additional information on forecasting and alerts is provided below.

1. Air quality forecasting

Routine air quality forecasts are undertaken daily by AEA Technology under contract to Defra using a model called CMAQ.

- Information on forecasts is available online here: <http://uk-air.defra.gov.uk/forecasting/>. This includes information on forecast levels and the methods used to produce the forecasts.
- The forecasts provide information on: Nitrogen Dioxide, Sulphur Dioxide, Ozone, Particles (PM₁₀ and PM_{2.5})
- The forecasts are communicated using the daily air quality index for 16 regions. The level forecast is based on the prediction of the air pollution index for the worst-case of the five pollutants.

Forecasting services are not required by the Air Quality Directive under the public information requirements, except where an exceedance of an alert or information threshold for ozone, NO₂ or SO₂ has been observed. This is an additional service that the Department provides to enable the public to stay informed.

2. Department policy on air quality episodes and alerts

Public information requirements of the Air Quality Directive require the department to ensure that up-to-date information on ambient concentrations of the pollutants is routinely made available to the public. The Directive requires member states to take necessary steps to inform the public, if the alert or information thresholds for ozone, NO₂ or SO₂ are exceeded. Note that there is no defined threshold for PM.

“Where the information threshold specified in Annex XII or any of the alert thresholds laid down therein is exceeded, Member States shall take the necessary steps to inform the public by means of radio, television, newspapers or the Internet.”

In 2011 and years previous to this, the Department has published a press release on the first occasion each year when the ozone information or alert threshold has been exceeded. The purpose of this was to raise awareness via the press of the range of public information services that the Department provides. This was based on ozone only because the Directive specifies an information threshold for this pollutant and due to the health effects associated with elevated levels of this pollutant. This approach has historically had varying levels of success, depending on the news agenda on the day and it is not a reliable method for disseminating public information.

In 2012 the Department reviewed and revised its approach to using the media to communicate awareness of air quality episodes. The Department's new approach for 2012 and for future years is to issue an Information Notice in spring time each year to raise awareness of the public information services provided by Defra. This was issued on 03/04/12 this year.

Recognising the inconsistency with focusing only on the alert and information thresholds in the Directive and not particulate matter, the Department will in future make better use of social media to communicate elevated levels of all pollutants covered by the Daily Air Quality Index (DAQI). A twitter account @DEFRAUKAIR has been set up to provide automated outbound messages about current (nowcast) and future (forecast) air quality across the UK. When levels of any pollutant reach 10/10 on the DAQI, the Defra press office will take a proactive role in disseminating tweets from the @DEFRAUKAIR feed. Defra are also investigating how the "triggers" as proposed by COMEAP in its review of the DAQI can be introduced to UKAIR and to the twitter feed to add an extra forecasting and early warning dimension to our public information services.

To address the requirements of the Directive, UKAIR has embedded alert system within it for the information and alert thresholds and pop up box will appear on the homepage if these thresholds are exceeded. In addition a separate webpage exists to communicate exceedences of these thresholds.

Defra has not sought to restrict or advise any other organisations on issuing pollution alerts. Defra encourages all data providers across the UK to provide public information services for air quality, including alert systems and has provided grant funding for projects like AirText to continue to provide a service.

3. Forecasting and public information provisions for the Olympics

The following non routine services are planned for the Olympics period. The Secretary of State will provide the Health Protection Agency with daily forecast information from mid-June to mid-September 2012 to allow inclusion in daily briefings to the London Organising Committee of the Olympic and Paralympic Games (LOCOG) on risks to public health. To increase the accuracy and timeliness of predictions, daily forecasts will be generated to a higher resolution spatial scale of 2 km for London and the South East throughout the Games period, and longer range forecasts covering 3 days will be implemented to improve the service provision. This forecast service will begin in early July and end in mid September.

Extra air quality grant funding has been allocated to the airTEXT service, which provides free text, email or voicemail alerts of elevated levels of pollution. Around 10,000 Londoners have now signed up to airTEXT. AirTEXT will carry out further promotion work aimed at Londoners and visitors in the run-up to the games. Additional air pollution information is already available in most daily newspapers, and via the website and app: www.londonair.org.uk. This complements online information already provided by DEFRA at: <http://uk-air.defra.gov.uk>.