Broxburn Local Air Quality

Introduction

Air quality in West Lothian generally continues to meet the standards set, but this is not the case in central Broxburn. The exceedence of the Air Quality Objective (AQO) means that the council must declare an Air Quality Management Area (AQMA).

An AQMA for Broxburn is expected to be declared in the near future. Before it can be declared, public consultation must be carried out. This consultation gives interested parties the opportunity to comment on the proposed AQMA.

Measures to deal with the air quality problem will be looked at during the Action Planning process, which takes place after declaration of an AQMA. The Action Planning process will be subject to two rounds of public consultation and it will be during the Action Planning that interested parties should raise specific issues or propose solutions.

Summary

- The Council is required to work towards achieving Air Quality Objectives for seven pollutants, including particulates and Nitrogen dioxide
- A combination of modelling and monitoring has identified a breach of the annual particulate and Nitrogen dioxide Air Quality Objectives in the Greendykes Road /East and West Main Street and at East Main Street/Dunnet Way to the Kilpunt Roundabout. The Council must by law declare an Air Quality Management Area (AQMA) in relation to this breach.
- Following the AQMA declaration, a Further Assessment needs to be produced within 12 months followed by an Action Plan within 18 months of the declaration. The Further Assessment report aims to identify the most specific causes of the particulates and Nitrogen dioxide in the area. The Action Plan will detail and prioritise measures that will aim to reduce the level of particulates and Nitrogen dioxide in the Broxburn area towards meeting the Air Quality Objective level.

Statutory Background

The Environment Act, 1995 required a National Air Quality Strategy to be produced to provide a framework for air quality control. The Strategy contains air quality standards and objectives for major pollutants.

The Local Air Quality Management (LAQM) regime was established under the Environment Act 1995. It falls into two distinct parts: (i) the *review and assessment* of air quality within the local authority area; and (ii) the development and implementation of *action plans* to tackle local air pollution. Local action planning comes into play only in areas where review and assessment has revealed problematic pollution levels, and in consequence a local *Air Quality Management Area* (AQMA) has been declared.

Under the 1995 Act, local authorities are required to regularly review and assess air quality in their areas against these objectives. Local authorities have to consider the current and likely future air quality in their areas, and assess whether the objectives are likely to be achieved by the due dates. Under LAQM local authorities also have a

duty to continue to work towards meeting the Air Quality Objectives beyond the deadlines set out in the regulations.

The air quality standards are considered to be the maximum acceptable level of an air pollutant that will not present a risk to the health of the most susceptible groups of the population. The objectives are set out in Table 1 in **Appendix 1**

Air quality review and Assessment

The role of the local authority review and assessment process is to identify all those areas where Air Quality Objectives are being or are likely to be exceeded. Where Air Quality Objectives are being breached or are close to being breached, the Council is required to declare an Air Quality Management Area (AQMA). The Council is then required to produce and implement an Action Plan that aims to reduce concentrations of the pollutant so that the objectives will be met.

To date 12 Councils in Scotland have declared 26 AQMA's. The vast majority of AQMAs have been declared due to breaches of the Nitrogen dioxide and/or particulate matter objectives in relation to road traffic emissions.

A progress report on West Lothian local air quality was submitted to the Scottish Government in 2010 which highlighted an exceedence of the Air Quality Objective for particulate matter and identified elevated levels of Nitrogen dioxide in East Main Street, Broxburn. A permanently located station has been monitoring pollution levels in a defined area close to the junction of Greendykes Road and East/ West Main Street since June 2008. Current and historical monitoring data can be viewed at www.scottishairquality.co.uk

In order to determine the geographical extent of any likely exceedence of the annual mean Air Quality Objective for particulates and Nitrogen dioxide, dispersion modelling of road traffic emissions has been undertaken by external consultants. The dispersion modelling has predicted pollutant concentrations at both existing monitoring locations and at locations of relevant public exposure. A map showing the proposed boundary of the Air Quality Management Area is reproduced in Appendix 2.

Once an AQMA is declared the Council is then required to prepare and submit to the Scottish Government a Further Assessment report 12 months from the date of declaration. The aim of this report is to identify the specific sources of particulates and Nitrogen dioxide causing the exceedence in the AQMA, for example the specific elements of road traffic.

In conjunction with the Further Assessment an Action Plan needs to be developed within 18 months from the date of declaration. This Plan aims to include proportionate but effective measures to ensure that particulate and Nitrogen dioxide concentrations within the AQMA decrease to meet the objective. The results of the Further Assessment will enable the actions to be targeted against the most significant sources of particulates and Nitrogen dioxide in the AQMA.

Next Stages

The Council is inviting members of the public and other Consultees to make comments on the proposed AQMA declaration.

Once the consultation period has expired the AQMA will be declared by way of a Council Order. Following this the Council is then required to prepare and submit a Further Assessment report within 12 months of declaration. The aim of this report is to identify the specific sources of particulates and Nitrogen dioxide causing the exceedence in the AQMA along with reviewing any further air quality monitoring data that has been collected.

In conjunction with the Further Assessment an Action Plan is to be developed and implemented. The Action Plan should be developed within 18 months of declaration. This Plan aims to include proportionate measures to ensure that the concentrations in the AQMA are brought to within those allowed by the Objective. The results of the Further Assessment will enable the actions to be targeted against the most significant sources of particulate and Nitrogen dioxide in the AQMA.

The deadline for comments is the 15th March 2011. West Lothian Council may publicise responses unless requested to treat a response as confidential. Responses can be sent via:

Online:	http://www.wlonline.org.uk/law-licensing/1101/airquality2/broxburnaqma.
E-mail:	BroxburnAirQuality@westlothian.gov.uk
Post:	Environmental Health, County Buildings, High Street, Linlithgow, EH49 7EZ

Appendix 1: Air Quality Objectives

Table 1: The pollutants and objectives that are covered by the Local Air Quality Management arrangements. The relevant annual nitrogen dioxide (NO2) and particulate (PM10) objectives are highlighted.

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene			
	16.25 $\mu g/m^3$	Running annual mean	31.12.2003
	3.25 $\mu g/m^3$	Running annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu g/m^3$	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5 $\mu g/m^3$	Annual mean	31.12.2004
	0.25 $\mu g/m^3$	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu g/m^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu g/m^3$	Annual mean	31.12.2005
Particles (PM_{10}) (gravimetric)	50 $\mu g/m^3$, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu g/m^3$	Annual mean	31.12.2004
	50 $\mu g/m^3$, not to be exceeded more than 7 times a year	24-hour mean	31.12.2010
	18 $\mu g/m^3$	Annual mean	31.12.2010
Sulphur dioxide	350 $\mu g/m^3$, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu g/m^3$, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu g/m^3$, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

Annual Objective for Nitrogen dioxide and Particulates.

Appendix 2: Map of Proposed AQMA

BROXBURN AIR QUALITY MANAGEMENT AREA 2011