West Lothian Council

2010 Air Quality Progress Report for *West Lothian Council*

Non Technical Summary

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Local Air Quality Management (LAQM) in West Lothian

Air Quality Objectives

The air quality objectives applicable to LAQM in Scotland are set out in the Air Quality (Scotland) Regulations 2000 and the Air Quality (Scotland) (Amendment) Regulations 2002, and are shown in Table 1, Appendix A. This table shows the objectives for a number of pollutants in units of microgrammes per cubic metre μg/m^3 (milligrammes per cubic metre, mg/m^3 for Carbon Monoxide) with the number of exceedences in each year that are permitted (where applicable).

All local authorities are required to regularly review and assess air quality in their areas against objectives for a number of air pollutants of particular concern for human health.

The regulations require the local authority to undertake a Progress Report every year, except every 3rd year when an Updating and Screening Assessment (USA) is needed. The Progress Report, which has recently been completed, reviews air quality to the end of 2009.

Where exceedences of any air quality objectives are considered likely, the local authority must then declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives.

Air Quality Monitoring

During the reporting period, there were three automatic monitoring sites in West Lothian, East Main Street Broxburn, High Street Linlithgow and Pumpherston Road, Uphall Station. The site at Uphall Station (the semi mobile Groundhog unit) now at Whitburn Cross will be moved on to other locations as necessary over the next few years. These sites are included in the Scottish Government's Scottish Air Quality database for Scotland and the Scottish Air Quality Website. Data and information on the monitoring sites can be viewed at www.scottishairquality.co.uk

All three sites are roadside locations, which monitor for Particulate Matter (PM_{10}) and Nitrogen Dioxide (NO_2) that are the main pollutants of interest associated with road traffic.

West Lothian Council has continued monitoring NO_2 with passive diffusion tubes. The diffusion tube survey comprises a total of 10 sites around the district and includes both roadside and urban background locations.

Sources of Air Pollution

The main source of air pollution is associated with road traffic. Both the pollutants PM_{10} and Nitrogen dioxide are by-products of the petrol and diesel engines. Proportionally, heavy-duty vehicles (buses and Heavy Goods Vehicles (HGVs)) contribute greater to emissions of PM_{10} and NO_2 than cars. All three roadside monitoring stations are therefore directly measuring road traffic pollution.

Comparison with Air Quality Objectives

A comparison with the Air Quality Objective values is shown graphically in the attached Appendix B. The graphs show the PM_{10} data results from two automatic monitoring stations at Broxburn and Linlithgow.

The NO_2 diffusion tube screening survey has not indicated any potential exceedence of the air quality objectives.

Main findings of the Progress Report

The Progress Report process has highlighted that monitoring data from the station located at East Main Street Broxburn exceeds the 2010 annual Air Quality Objective for PM_{10}. There are no other exceedences of any of the Air Quality Objectives for the pollutants monitored, which include nitrogen dioxide (NO_2) and Particulates (PM_{10}).

An AQMA is likely to be declared for East Main Street Broxburn.

Monitoring at Linlithgow indicates that the annual PM_{10} 2010 Air Quality Objective is likely to be exceeded in the future. (The current PM_{10} concentration is exactly equivalent to the objective level). A Detailed Assessment will be undertaken for East Main Street Broxburn to establish the likely geographical area of the likely exceedence of the annual PM_{10} objective. A similar assessment will also be carried out for the High Street Linlithgow.

Conclusion

Monitoring data has identified the need to proceed to a Detailed Assessment for Broxburn East Main Street and Linlithgow High Street as a result of exceeding and potentially exceeding respectively the annual PM_{10} air quality objective.

Due to the elevated levels of NO_2 in Broxburn, sets of diffusion tubes will be located within the area of East Main Street, Broxburn.

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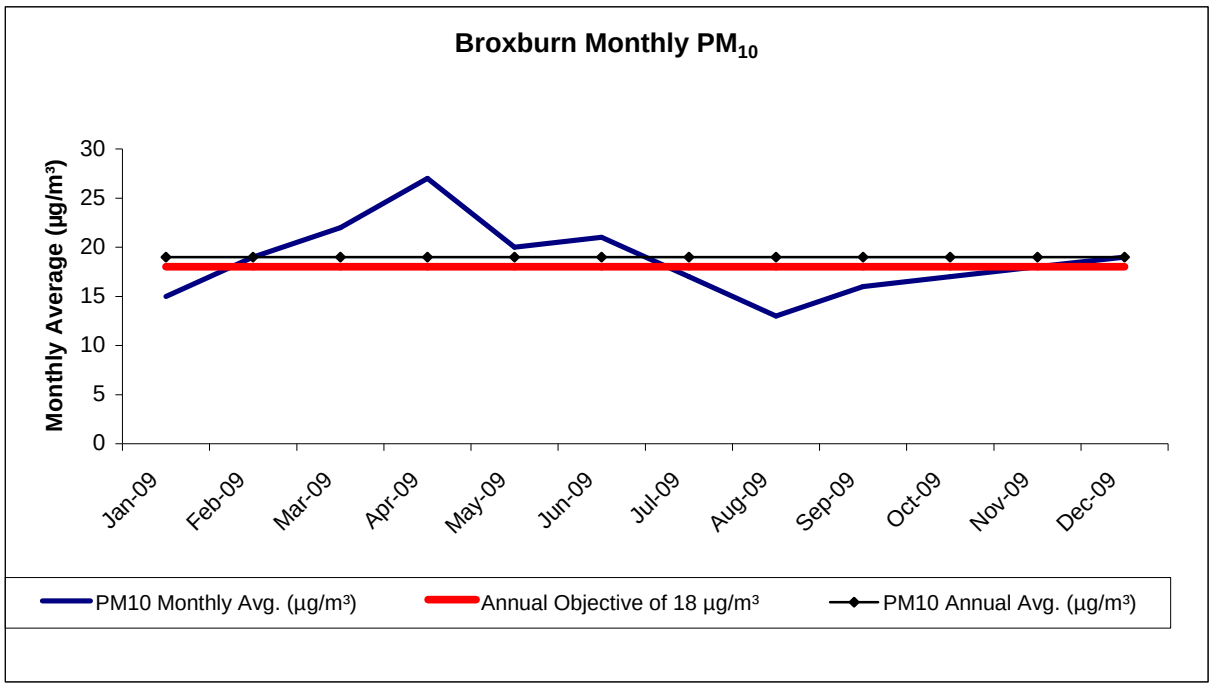
Appendix A

Table 1 Air Quality Objectives included in Regulations for the purpose of Local Air Quality Management in Scotland.

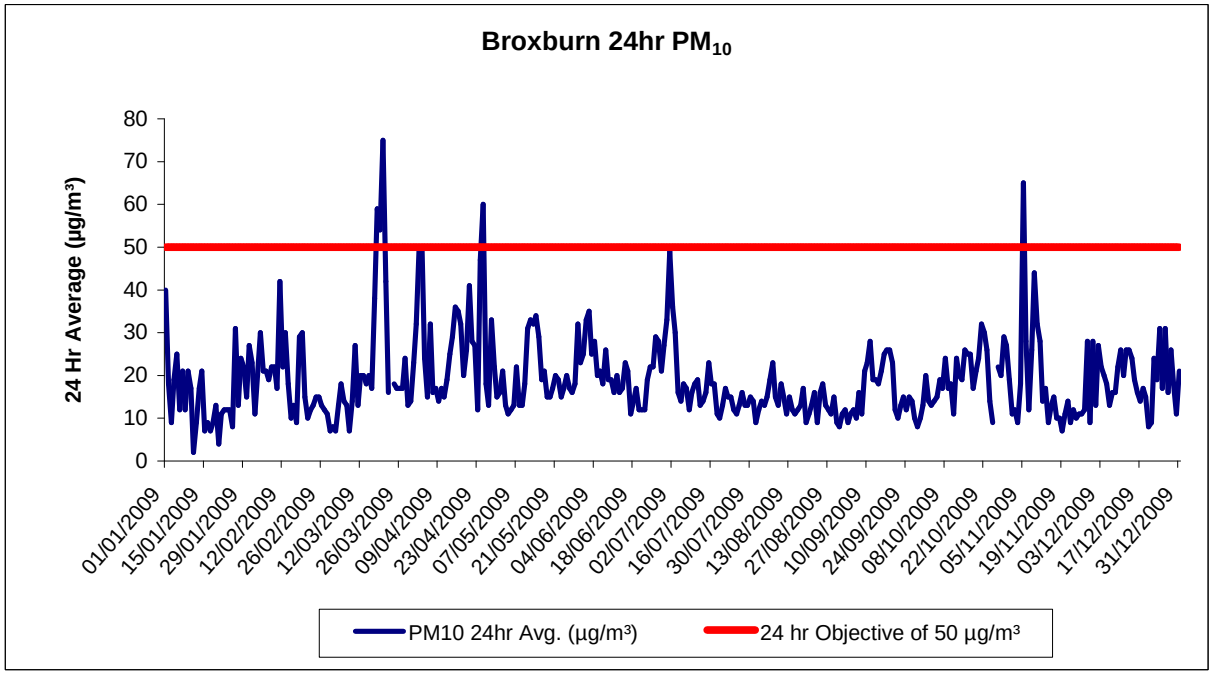
Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Nitrogen dioxide	200 μg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 μg/m^3	Annual mean	31.12.2005
Particles (PM_{10}) (gravimetric)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

Appendix B

Broxburn PM_{10} 2009

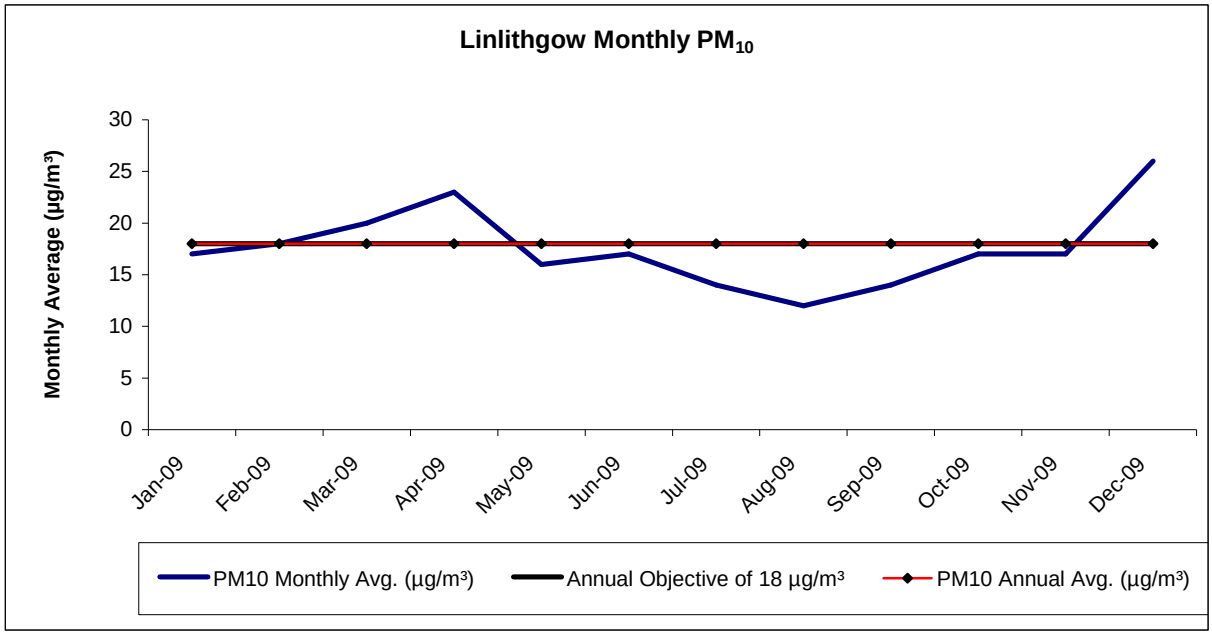


Results of the monitoring data for PM_{10} indicates that the air quality objectives are not being met with the annual average of 19 $\mu g/m^3$ exceeding the annual objective.

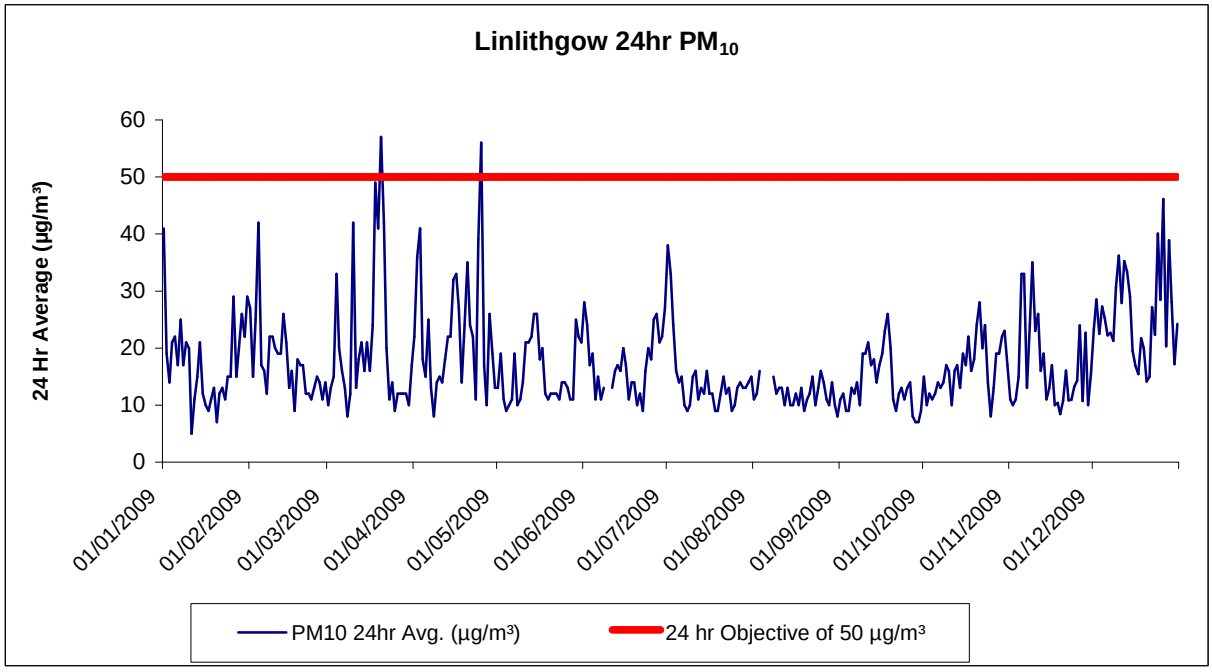


There were 5 occasions where the 24-hour was greater than the objective value. The limit is 7 times a year.

Linlithgow PM_{10} 2009



Results of the monitoring data for PM_{10} indicate that the air quality objectives are being met although the annual average equals the objective value.



There were only two occasions where the 24-hour was greater than the objective value. The limit is 7 times a year.