



West Lothian
Council

2017 Progress Report for *West Lothian*
Council

Non Technical Summary

Local Air Quality Management (LAQM) in West Lothian (January – December 2016)

Local Air Quality Management (LAQM)

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must 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. This non-technical summary of the 2017 Annual Progress Report (APR), outlines the work being undertaken by West Lothian to improve air quality and any progress that has been made.

Air Quality Monitoring

During the reporting period, there were three automatic monitoring sites in West Lothian:

- East Main Street Broxburn;
- High Street Linlithgow;
- Newton Main Street.

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 monitor harmful gases and particulates such as PM₁₀ and NO₂ which are the main pollutants associated with road traffic. The Linlithgow monitoring site also monitors PM_{2.5} which is considered an even more harmful particulate.

West Lothian Council has also continued monitoring NO₂ with passive diffusion tubes. The diffusion tube survey comprises a total of 20 sites around the district and includes both roadside and urban background locations. An AQMesh solar powered mobile monitoring station has been installed in Newton to increase monitoring capacity. The primary use will be to monitor SO₂, as sulphur can be found in coal in domestic fuel burning. However it will also monitor NO₂, PM₁₀ and PM_{2.5}.

Sources of Air Pollution

The main source of air pollution is associated with road traffic. Both the pollutants PM₁₀ and Nitrogen dioxide are by-products of the petrol and diesel engines. Proportionally, heavy/light-duty vehicles (buses and LGVs/HGVs) contribute greater emissions of PM₁₀ and NO₂ than cars. As all three monitoring stations are located at the roadside, they are therefore directly measuring road traffic pollution.

In Newton, domestic fuel burning also contributes significantly to PM₁₀ levels. Depending on location, over 90% of PM₁₀ can be non-road traffic related emissions.

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 PM₁₀ and NO₂ data results from the automatic monitoring stations.

The NO₂ diffusion tube data has not indicated any potential exceedances of the air quality objectives.

There is not enough data capture yet to comment on PM_{2.5} levels in Linlithgow and AQmesh monitoring data in Newton.

Main findings of the Progress Report

Air Quality in Newton

An Air Quality Management Area (AQMA) was declared in Newton in July 2016 due to exceedances of fine particulates (PM₁₀). A draft Air Quality Action Plan (AQAP) is currently being developed by a steering group made up of relevant council services.

Newton Air Quality Monitoring data from 2016 showed a reduction in NO₂ and PM₁₀ annual mean levels compared to 2015 data. Both NO₂ and PM₁₀ are below the respective annual mean air quality objectives for a second consecutive year at the roadside monitoring location.

Air Quality in Linlithgow

An Air Quality Management Area (AQMA) was declared in Linlithgow in April 2016 due to exceedances of fine particulates (PM₁₀) and NO₂. A draft AQAP is currently being developed by a steering group made up of relevant council services.

Linlithgow Air Quality Monitoring data from 2016 showed a reduction in annual mean PM₁₀ levels and an increase in annual mean NO₂ levels compared to 2015 monitoring data. Both NO₂ and PM₁₀ annual mean levels have been below the respective annual mean air quality objectives for a second consecutive year at the roadside monitoring location.

Air Quality in Broxburn

An Air Quality Management Area (AQMA) was declared in Broxburn in March 2011 due to exceedances of fine particulates (PM₁₀) and Nitrogen Dioxide (NO₂). A final AQAP version has been developed and will be subject to public consultation.

2016 Broxburn Air Quality Monitoring data showed unchanged annual mean PM₁₀ levels and an increase in annual mean NO₂ levels compared to 2015 annual mean monitoring data. Both NO₂ and PM₁₀ have now been below the respective annual mean air quality objectives for four consecutive years at the roadside monitoring location. Additional monitoring will take place to measure Particulate Matter (PM_{2.5}) this financial year.

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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	
Nitrogen dioxide (NO ₂)	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
Particulate Matter (PM ₁₀)	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
Particulate Matter (PM _{2.5})	10 µg/m ³	Annual mean	31.12.2020
Sulphur dioxide (SO ₂)	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
Benzene	3.25 µg/m ³	Running annual mean	31.12.2010
1,3 Butadiene	2.25 µg/m ³	Running annual mean	31.12.2003
Carbon Monoxide	10.0 mg/m ³	Running 8-Hour mean	31.12.2003

Appendix B

Figure 1 Trends in Annual Mean Nitrogen dioxide Concentration Measured at Automatic Monitoring Sites.

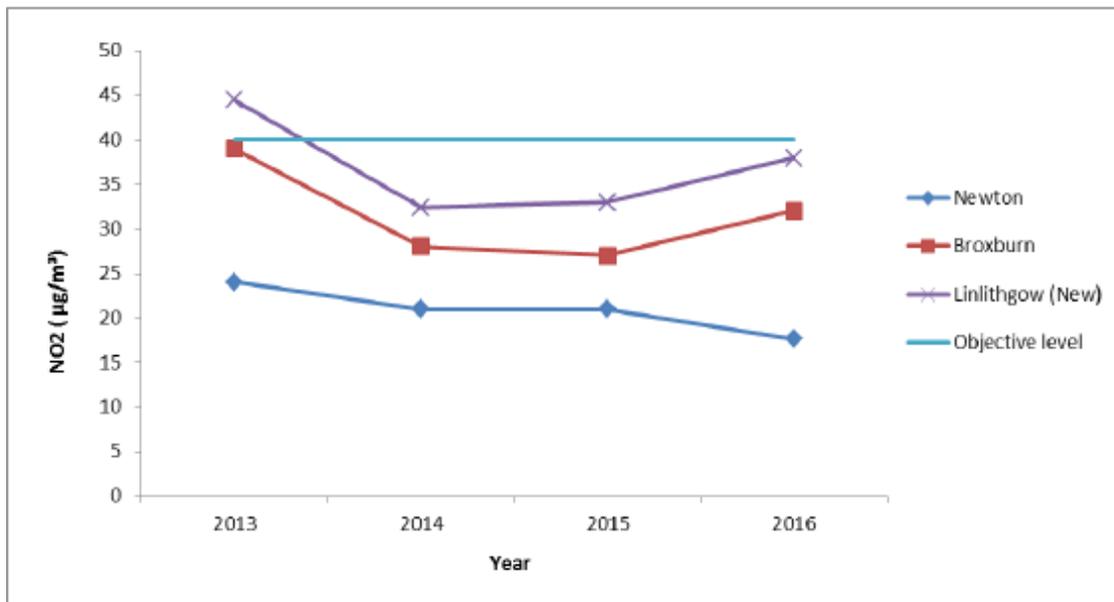


Figure 2 Trends in Annual Mean PM₁₀ measured at automatic monitoring sites

