

EXECUTIVE MANAGEMENT TEAM'S REPORT TO THE
PUBLIC PROTECTION COMMITTEE

Date 4TH August 2014

REPORT TITLE Environment Act 1995 – Part IV
Local Air Quality Management – Progress Report 2014

Submitted by: (Environmental Protection Team Manager – Darren Walters)

Portfolio: Environmental Health

Ward(s) affected: ALL

Purpose of the Report

To advise Committee of the findings of the statutory Progress Report for 2013 in respect of air quality in the Borough and the work required as a result of the findings of poor air quality in areas of the Borough.

Recommendations

1. That the report be received

Reasons

To inform Committee of the findings of the statutory Progress Report for 2014 in respect of air quality in the Borough and the work required as a result of the findings of poor air quality in areas of the Borough.

1. Background

Local authorities in the UK have statutory duties for managing local air quality under [Part IV of the Environment Act 1995](#). District Council's have been required to review and assess air quality within their areas since 1997 for compliance against a range of pollutant objectives summarised in Appendix 1.

The findings of the previous reviews and assessments undertaken by your Officers since 1999 are summarised in Appendix 2 with the associated reports available on www.newcastle-staffs.gov.uk/LAQM/reports. It will be seen that the main pollutant of concern within the Borough is Nitrogen Dioxide (NO₂) which is largely derived from road traffic sources.

Nationally, the UK Government considers that health related air quality has an equivalent impact on the UK economy to that caused by obesity and a greater cost to the economy and mortality than road traffic injuries and deaths. Air pollution is estimated to reduce the life expectancy of every person in the UK by an average of 7-8 months with estimated equivalent health costs of up to £20 billion each year.

Local authorities therefore have an important role in bringing about improvements in air quality and ensuring compliance with statutory requirements to reduce the impact on health and associated costs to the National Health Service and the wider economy.

2. Issues

In accordance with its statutory duties, the Borough Council has recently completed its 2014 Progress Report for air quality in the 2013 calendar year. The report has recently been submitted to DEFRA for its formal approval. Given the format of the report and its findings and recommendations it is envisaged that DEFRA will accept its contents. The full report can be found on the internet at www.newcastle-staffs.gov.uk/laqm

The findings of this report have indicated that there are seven locations in two geographic locations within the Borough which, based on data gathered by the Council for the 2013 calendar year are showing exceedances of the statutory annual mean objective of 40µgm³ for nitrogen dioxide. These locations are:

- **Kidsgrove** (A50 – Liverpool Road)
- **Newcastle Town Centre** (around the town centre ring road, King Street and the A34 London Road southwards of the Barracks Road Roundabout)

There are a further thirteen locations which are at risk of exceeding the statutory annual mean objective of 40µgm³ for nitrogen dioxide, which are in and around the above areas.

There are no locations within the Borough showing any exceedances of the short term nitrogen dioxide objective.

It is considered that the exceedance of the nitrogen dioxide annual mean objective in these areas is due to road traffic emissions and the complex interaction between local geography, traffic levels and congestion as well as atmospheric and weather conditions. Nitrogen dioxide has several health impacts and includes general irritation to the eyes, irritation of the respiratory system and shortness of breath.

Given the findings of this latest Progress Report, the Council is required to proceed to a Detailed and Further Assessment of Air Quality in the exceedance locations in order to model the air quality at relevant receptors. The areas the subject of this report were assessed in detail in 2013 and the findings were the subject of a report to the December 2013 Public Protection Committee. It is not considered that the findings and recommendations of this report are still appropriate for the Kidsgrove and Newcastle Town Centre exceedance area identified in 2013

Work is now underway to consultant on the boundaries of the air quality management areas (AQMA) for exceedance locations identified in this reporting year and the previous year. Once the consultation exercise is complete a report will be presented to a future meeting of this committee with recommendations on the boundaries of the AQMA The adopted boundaries will then be formally declared and work will then commence on developing an Air Quality Action Plan which will identify appropriate measures to improve the air quality in these areas. Work is also about to commence on the preparation of an air quality strategy for the borough.

3. **Reasons for Preferred Solution**

None proposed.

4. **Outcomes Linked to Sustainable Community Strategy and Corporate Priorities**

The action taken achieves the following priorities detailed within the Council Plan

- Priority 1 – A clean, safe and sustainable borough
- Priority 3 –A healthy and active community
- Council Plan Outcome 1.3 The negative impact that the Council, residents and local businesses have on the environment will have reduced

5. **Legal and Statutory Implications**

The Council is required by Part IV of the Environment Act 1995 to take the action outlined in this report in order to fulfil its statutory duties.

6. **Financial and Resource Implications**

Existing budgets have been utilised to fund the work identified in this report. Financial and resource implications arising out of the Detailed and Further Assessment will be detailed in the future report to this committee.

7. **Background Papers**

- Environment Act 1995 – Part IV
- Local Air Quality Management Technical Guidance (LAQM.TG.09) (available at <http://www.defra.gov.uk/publications/files/pb13081-tech-guidance-laqm-tg-09-090218.pdf>)
- 2014 Progress Report on Local Air Quality Management in Newcastle under Lyme (copy in members room (also available at www.newcastle-staffs.gov.uk/laqm))
- Newcastle Under Lyme Air Quality Detailed and Further Assessment – Client Project Report CPR2631 prepared by TRL (available at www.newcastle-staffs.gov.uk/LAQM/DAFA2013)

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Statutory air quality objectives

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
	5.00 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
	0.25 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2005
Particles (PM ₁₀) (gravimetric)	50 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
Sulphur dioxide	350 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

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Findings of previous air quality reports

Air Quality Reports	Description
2013 Detailed and Further Assessment of Air Quality	Detailed modelling has found exceedances of the annual mean nitrogen dioxide objective in the following areas: <ul style="list-style-type: none"> • Newcastle under Lyme Town Centre including the ring road, London Road and King Street, Etruria Road • A single residential property adjacent to the M6 at Collingwood Madeley • The A527 - High Street Maybank, High Street Wolstanton through to the junction with the A500 at Porthill Bank • Kidsgrove Town Centre – A50 Liverpool Road Liverpool Road and Hardingswood Road
2013 Air Quality Progress Report	This report identified exceedances of the nitrogen dioxide annual mean objective in Madeley (M6 motorway) Kidsgrove (A50 – Liverpool Road) Newcastle Town Centre (A34 Northbound - London Road); Newcastle Town Centre (A53 – King Street) A combined detailed and further assessment was already underway in respect of the exceedance areas required in these locations to inform the minimum extent of the required Air Quality Management Areas. There are a further fifteen sites which are at risk of exceedance in future years, these are located in close proximity to the exceedance locations
2012 Update and Screening Assessment(PDF4.31MB) DEFRA's Appraisal Report for 2012 Update and Screening Assessment (PDF 84.5KB)	This report has identified exceedances of the annual mean nitrogen dioxide objective at Madeley (M6 motorway) Kidsgrove (A50 – Liverpool Road) Newcastle Town Centre (A34 Northbound - London Road); Newcastle Town Centre (A53 – King Street) Therefore, detailed assessments are required in these locations to inform the minimum extent of the required Air Quality Management Areas.
2011 Progress Report (PDF 5.4MB) DEFRA's Appraisal of the 2011 Report Progress (PDF68KB)	The report has identified exceedances of the annual mean nitrogen dioxide objective in four areas of the Borough in Newcastle town centre, Kidsgrove, Madeley, Porthill. Therefore, detailed assessments are required in these locations to inform the minimum extent of the required Air Quality Management Areas.
2010 Detailed Assessment (PDF 11.53 MB) DEFRA's appraisal of the 2010 Detailed Assessment (PDF 24 Kb)	The assessment concluded that Air Quality Management Areas should be declared in Kidsgrove and Newcastle.
2010 Progress Report (PDF 3012 Kb) DEFRA's appraisal of the 2010 Progress Report (PDF 27Kb)	The report concluded that monitoring had identified a risk of exceeding the Nitrogen Dioxide annual mean objective at Kidsgrove and Newcastle. Therefore Detailed Assessments were required at these locations.

<p>2009 Updating and Screening Assessment (PDF 6.4mb)</p> <p>DEFRA's appraisal of the 2009 Updating and Screening Assessment (PDF 28Kb)</p>	<p>The assessment concluded that monitoring had indentified a risk of exceeding the Nitrogen Dioxide annual mean objective at Madeley, Kidsgrove, Newcastle and Shraleybrook. Modelling predicted a risk of exceeding the Nitrogen Dioxide annual mean objective at the Church Street/ Wolstanton Link Road Junction. Therefore detailed assessments were required at these locations.</p>
<p>2007 Progress Report (PDF 2.47Mb)</p> <p>DEFRA's appraisal of the 2007 Progress Report (PDF 20Kb)</p>	<p>The report concluded that there were no exceedances of the air quality objectives.</p>
<p>2007 Detailed Assessment (PDF 2.97mb)</p> <p>DEFRA's appraisal of the 2007 Detailed Assessment (PDF 18Kb)</p>	<p>The assessment concluded that no Air Quality Management Area should be declared.</p>
<p>2006 Updating and Screening Assessment (PDF 685Kb)</p>	<p>The assessment indentified a risk of exceeding the Nitrogen Dioxide annual mean objective at Madeley, Kidsgrove, Porthill Bank, Shraleybrook, London Road and Barracks Road. Therefore Detailed Assessments were required at these locations.</p>
<p>2005 Progress Report (PDF 1.38Mb)</p>	<p>The report concluded that there were no exceedances of the air quality objectives.</p>
<p>2004 Progress Report (PDF 1.38Mb)</p>	<p>The report concluded that there were no exceedances of the air quality objectives.</p>
<p>2003 Updating and Screening Assessment (PDF 1.83Mb)</p>	<p>The assessment concluded that no air quality objectives were exceeded at sensitive receptors and there was no need to proceed to a Detailed Assessment.</p>
<p>3rd Round Review and Assessment – April 2001 (PDF 2.51Mb)</p>	<p>The report concluded that no Air Quality Management Area should be declared.</p>
<p>2nd Round Review and Assessment – February 2001 (PDF 1.89Mb)</p>	<p>The report concluded that it was necessary to proceed to Stage Three in order to assess the likelihood of exceedances of the Nitrogen Dioxide and Particulate Matter objectives.</p>
<p>1st Round Review and assessment – January 1999 (PDF 3.46Mb)</p>	<p>The report concluded that it was necessary to proceed to Stage Two to assess Nitrogen Dioxide, Particulate Matter, Sulphur Dioxide, Carbon Monoxide and Lead. Benzene and 1,3 Butadiene were expected to meet the air quality objectives.</p>

Updating and Screening Assessments are required on a three yearly basis and review air quality as a whole to determine whether there is a risk of any air quality objectives being exceeded.

Progress Reports are required annually unless an Updating and Screening Assessment is carried out. They are intended to maintain continuity in the local air quality management process and highlight new monitoring results and update on specific changes.

Detailed Assessments are required when a problem pollutant has been indentified and there is a risk of exceeding an air quality objective. The reports provide an accurate assessment of the likelihood of the air quality objective being exceeded.