

PAPER NO. 9

REPORT TO THE EXECUTIVE MEETING OF 5 SEPTEMBER 2016

Meeting: Executive
Date: 5 September 2016
Subject: Annual Air Quality Update Report
Report of: Ian Bartlett – Regulatory Services
Portfolio Holder: Cllr Neil Bannister
Status: Approval
Relevant Ward(s): ALL

1 Purpose of the Report

1.1 The purpose of the report is to update members on the outcome of the annual review of local air quality and to seek approval of the report to be submitted to DEFRA.

2 Recommendations:

2.1 It is recommended that:

2.1.1 Members approve the Air Quality Annual Status Report (ASR) in fulfilment of Part IV of the Environment Act 1995 Local Air Quality Management.

2.1.2 A further report to be brought back to the Executive following the completion and analysis of the 12 months monitoring of nitrogen dioxide in Kibworth.

3 Summary of Reasons for the Recommendations

3.1 Under the Environment Act 1995 the Council has a duty to assess air quality and take action to improve local air quality issues. The Annual Status Report sets out any monitoring results carried out in the district for the previous year along with any action undertaken to work towards improving air quality.

3.2 This report set out in appendix A fulfils the requirements of the Local Air Quality Management (LAQM) process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 and has been written in accordance with the relevant national Policy and Technical Guidance documents.

- 3.3 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.
- 3.4 Where exceedences 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.

4 Key Facts

- 4.1 Air pollution is associated with a number of adverse health impacts. Generally the air quality in Harborough district is good; however there are issues with the annual average levels of Nitrogen Dioxide in Lutterworth and in 2001 an Air Quality Management Area (AQMA) was declared for an area of Lutterworth and developed an action plan to identify measures which could improve the situation.
- 4.2 The air quality action plan has identified that a reduction in the speed limit could improve air quality within the AQMA. The Council is currently in the process of determining if the implementation of a 20mph zone in the Town Centre will have a positive impact on Nitrogen Dioxide levels in the AQMA
- 4.3 For several years the Council has been using diffusion tubes as a monitoring tool to assess local air quality. Whilst there is a high margin of error using this method (+/-20%) they are a cost effective way of identifying areas of concern which require further investigation.
- 4.4 Prior to the original AQMA being declared, real time monitoring for nitrogen dioxide was undertaken, which was funded through a grant from DEFRA, using a chemiluminescence analyser which confirmed the results of the diffusion tube monitoring.
- 4.5 The general trend for the levels of Nitrogen Dioxide across the district is going down, and this is in line with national projections. This is highlighted in Figures D-1 to D-3 on pages 25-27 of the annual report.
- 4.6 At the end of 2015 the diffusion tube network concluded that 3 tubes within the current AQMA in Lutterworth exceeded the national air quality objective level for Nitrogen Dioxide. The national air quality annual average objective for Nitrogen Dioxide is $40\mu\text{g}/\text{m}^3$. All results are analysed in accordance with the national guidance from DEFRA and necessary correction factors applied to the annual results.
- 4.7 Whilst we have been monitoring air quality in Kibworth for several years, at the beginning of 2015 we moved one of the diffusion tubes which was constantly giving very low results to a new location in Leicester Road Kibworth and at the end of the year (November) an additional tube was also put in place on Leicester Road. The annual results for Kibworth can be found in

table 1 below and the national air quality objective level for Nitrogen Dioxide is $40\mu/m^3$ annual average

2015 Annual Average Results for Kibworth

Location	Bias adjusted results μ/m^3	Façade corrected results μ/m^3
A6 Kibworth	29.72	21.60
Wistow Road Kibworth (tube relocated during the year)	20.22	18.32
Lamppost outside 69 Leicester Road	33.12	29.49
Sign outside 64 Leicester Road	55.00*	52.97*

*only one months data available for this location

The levels of Nitrogen Dioxide do fluctuate during the years and are influenced by weather conditions. Consequently the single result for the tube at 64 Leicester Road would not be sufficient information to confirm a potential exceedance of the air quality objectives, however the results for the first 6 months of 2016 do show that there is the potential for the objective not to be met and further work will be required to determine the extent of the exceedance.

- 4.8 The air quality management regime has changed in 2016. Under the previous regime where a local authority identified a risk in a potential exceedance of the air quality objective there was a requirement to undertake a Detailed Assessment which could take up to 12 months to gather sufficient evidence before declaring an Air Quality Management Area. However a detailed assessment is no longer required provided the local authority has sufficient confidence in the information available at the time.
- 4.9 Following discussions with experts in this area of work, the recommendation is to continue monitoring at the current locations in Kibworth until there is 12 months of reliable data. In addition a further 2 diffusion tubes will be located in the area to help determine the extent of the problem. If the annual average levels of nitrogen dioxide exceed the national air quality objectives, it will be necessary to declare an Air Quality Management Area. Prior to declaring an AQMA it may be necessary to undertake some dispersion modelling to determine the extent of the AQMA. It is anticipated that we will have sufficient information to determine the next steps in spring 2017 and a further report will come to the Executive committee for approval.
- 4.10 With the exception of Lutterworth and potentially Kibworth, the diffusion tube monitoring did not show any other potential exceedances in the district for Nitrogen Dioxide.

- 4.11 In addition to the diffusion tube monitoring undertaken by the council, there are other sources of monitoring or modelling data which provides an overall picture of the local air quality.
- 4.12 DEFRA operates an Automatic Urban and Rural Network (AURN) to monitor at real time various pollutants. A network station is situated at Eye Brooke Reservoir and monitors the rural background levels for Nitrogen Dioxide, and Ozone. In 2015 there were no exceedances of the air quality objective for Nitrogen Dioxide and 11 exceedances of the objective for Ozone. Ozone is not one of the pollutants that fall within the Local Air Quality Management regime and is outside of the control of the local authority.
- 4.13 PM_{2.5} are very fine particulate matter which can cause health effects, especially where there are underlying medical conditions such as asthma. Through EU Directive there is an expectation that the annual average concentration of 25µg/m³ will not be exceeded. The PM_{2.5} background air quality data published by DEFRA shows Harborough district has background concentrations between 9.3µg/m³ and 12.4µg/m³ with the average being 10.5µg/m³

5 Legal Issues

- 5.1 There is a legal duty on local authorities to assess air quality and to take necessary steps to improve local issues.

6 Resource Issues

- 6.1 There are no resource issues in relation to the approval of the annual report, however should the levels of nitrogen dioxide in Kibworth exceed the national air quality objectives, it may be necessary to undertake dispersion modelling. It is anticipated that this work would cost in the region of £5,000 and there is currently no budget specifically for this work.

7 Equality Analysis Implications/Outcomes

- 7.1 There are no equality analysis implications/outcomes.

8. Risk Management Implications

- 8.1 Failure to meet Government Targets on Air Quality may have a direct health impact on the local community
- 8.2 There is the potential for Central Government to pass on fines for failing to meet Air quality standards under powers in Localism Act

9 Consultation

- 9.1 Consultation will be undertaken with Leicestershire County Council Highways.

10. Options

- 10.1 Approve the Air Quality Annual Status Report and submit to DEFRA.
- 10.2 Consideration was given as to whether it would be necessary to undertake real time monitoring in Kibworth to validate the results of the diffusion tubes, however advice from an air quality consultant confirmed that based on the results to date, real time monitoring would not be necessary. The cost of real time monitoring for a 3 month period would be in the region of £6,000.00 raising to £15,000.00 for a 12 month period.

11 Background Papers

- 11.1 Previous air quality reports are available on the Council's website

http://www.harborough.gov.uk/info/20025/environmental_health/101/air_pollution/3

Previous report(s): See section 6.3 of the report which lists previous HDC reports

Information Issued Under Sensitive Issue Procedure: N

Ward Members Notified: N

Appendices:

- A. The Draft Annual Status Air Quality Report.**