
**Meeting of the Executive Member for
Neighbourhood Services and Advisory Panel**

4th September 2008

Report of the Director of Neighbourhood Services

AIR QUALITY UPDATE

Summary

1. The purpose of this report is to update the executive member and advisory panel of the outcome of the recent Air Quality Support Grant (AQSG) applications made to the Department for Environment, Food and Rural Affairs (DEFRA). Three AQSG bids were made in relation to the council's ongoing Local Air Quality Management (LAQM) work. The report provides an overview of the planned expenditure of the AQSG and requires a decision to be taken on the amount of AQSG to be accepted from DEFRA. The report also provides a general update on local air quality management in York.

Air Quality Support Grant

Background

2. The government supports local authorities capital expenditure on LAQM through a direct grant scheme known as the Air Quality Support Grant Programme (AQSG). Previous air quality funding from DEFRA has allowed the establishment of a comprehensive air quality monitoring network in York and the in-house operation of an air quality computer model. The scope of the monitoring network was reviewed and streamlined in 2006, with the main emphasis now on nitrogen dioxide and particulate monitoring.
3. In April 2008 officers submitted three AQSG bids to DEFRA to support the council's air quality work during 2008/2009. The amounts bid for were:

Air quality monitoring =	£176,324
Air quality modelling =	£42,675
Air quality action planning =	£3,000

4. Due to a national shortfall in the amount of grant available, York has been provisionally allocated the following amounts of AQSG for 2008/2009 :

Air quality monitoring =	£12,000
Air quality modelling =	£0
Air quality action planning =	£3,000

It can be seen that these awards fall well below the amounts within the bids.

Consultation

5. No consultation has been undertaken for the purpose of this report.

Proposed expenditure

Air quality monitoring

6. The £176,324 bid for air quality monitoring was to undertake the following four projects:

Project 1 : Monitoring of nitrogen dioxide on the Fulford Road corridor

Project 2 : Upgrade of NO_x analyser at the Fishergate monitoring site

Project 3 : Upgrade of Gillygate monitoring site (NO_x analyser and enclosure)

Project 4 : Upgrade of Lawrence Street monitoring site (NO_x analyser and enclosure).

7. **Project 1** related to the undertaking of more detailed nitrogen dioxide monitoring on Fulford Main Street, close to the junction with Heslington Lane. City of York Council's previous Update and Screening / Progress Reports have highlighted that this area of the city (currently not within the existing Air Quality Management Area) has the potential to be in breach of the annual average nitrogen dioxide objective. Diffusion tube monitoring in this area has indicated that the upper 95% confidence interval for some tubes in this area has exceeded the health based air quality objective of 40µg/m³ in previous years. Diffusion tube monitoring for the 2007 calendar year period has indicated further potential breaches in this area. The proposed installation of real-time monitoring equipment in this area is to confirm the accuracy of diffusion tube results in terms of concentrations of nitrogen dioxide. Such monitoring has been proposed as part of City of York Council's most recent Progress Report to DEFRA (submitted April 2008), and has since been requested by DEFRA as part of a Detailed Assessment report (due for submission by end April 2009).

Projects 2, 3 and 4 are concerned with upgrading existing older air quality monitoring equipment in the city to ensure continuous collection of high quality monitoring information for future rounds of review and assessment.

8. The amount of AQSG funding received from DEFRA for air quality monitoring during 2008/2009 is significantly less than bid for. The £12,000 allocation will be sufficient to upgrade the Lawrence Street air quality monitoring station (project 4). Due to the shortfall in funding received this year, additional funding has been secured from City Strategy as part of the Fulford Road Corridor Study to progress project 1 (Fulford Road project).

Air quality modelling

9. The £42,675 bid was to support air quality modelling work required to progress both statutory air quality review and assessment work and studies associated with City of York Council's second Air Quality Action Plan. As no funding has been received from DEFRA for air quality modelling this year, it is proposed to fund any modelling work required during 2008/09 using a proportion of the £40k allocation from City Strategy (see para 23). It is possible that EPU can also draw on the support of graduates from the University of York (undertaking projects in fulfilment of postgraduate/PhD qualifications) to undertake some of the smaller scale modelling studies required for routine review and assessment work.

Air quality action planning

10. The £3,000 air quality action planning bid was submitted with the intention of carrying out two separate projects as described below :

Project 1 : In 2007/08 City of York Council was successful in obtaining an air quality grant of £9,500 towards air quality action planning. The amount received was significantly less than bid for, but it was enough to commence work on the 'Kids Zone' section of the new JorAir air quality website, which is now nearing completion. The Environmental Protection Unit (EPU) has been working with a local web development company to develop 3 interactive games to teach young children about the cause and consequences of poor air quality. The final game in the series aims to educate children about the actions they can take to improve air quality locally. Current progress with the site can be viewed at <http://www.jorair.co.uk>. In the last nationwide review of air quality websites undertaken by the professional journal 'Air Quality Bulletin', York was one of only five local authorities to receive full marks for the quality and 'findability' of its air quality information. The JorAir website received a very favourable review and once complete is expected to rate amongst the top local authority air quality websites. This year, the funding will be used to purchase additional software to allow 'real-time' data to be published directly to the JorAir website.

Project 2 : York AQAP gives a commitment to continue raising awareness about smoke control and bonfire issues. Funding was sought for the re-printing of the bonfire and smoke control leaflets and annual advertisements in the press and local 'free' magazines delivered to all residents of York. This is to remind people of the law in relation to both smoke control areas and nuisance from bonfires.

11. The funding received in relation to air quality action planning will allow both projects outlined above to proceed.

Update on Local Air Quality Management in York

Local Progress

12. In April 2008, City of York Council submitted a Progress Report to DEFRA. This report provided an update on new air quality monitoring results collected during 2007 and considered historical trends in air quality data. It also provided an

update on the progress made with implementation of the measures within AQAP2. The full Progress Report can be viewed at <http://www.jorair.co.uk/downloads.php>

13. The Progress Report concluded that there appeared to have been a general improvement in nitrogen dioxide concentrations across the city between 2000 and 2007. At most monitoring locations the highest concentrations recorded to date occurred in 2002/03. The lowest concentrations were recorded after 2004.
14. Most real time monitoring within the current AQMA indicated a slight improvement in 2007 when compared with 2006. In each of the five AQMA 'technical breach' areas there remain a number of sites where annual average nitrogen dioxide concentrations remain above the $40\mu\text{g}/\text{m}^3$ annual average objective level. Due to the continued existence of these breaches no changes to the current AQMA 'technical breach' areas are proposed at this time, although some reduction in the size of the technical breach areas may become appropriate in the future.
15. Outside the AQMA the annual average nitrogen dioxide objective is being met at most locations. There are a handful of sites which have given rise to ad-hoc elevated concentrations in recent years, but at present it is not considered necessary to bring them within the AQMA. Of these locations, the ones that indicated possible breaches during 2007 include areas of Salisbury Terrace, Heworth Green, Tadcaster Road (near ORR), Selby Road and the Stonebow. It is proposed to continue monitoring at these sites and to re-assess the situation in 2009.
16. The one exception is Fulford Main Street, where elevated concentrations of nitrogen dioxide have been consistently monitored over recent years. In a bid to improve air quality along this corridor, City of York Council is considering a range of improvement measures as part of the 'Fulford Road Corridor Study'. EPU has already identified a suitable location for an air quality monitoring station, close to the junction with Fulford Main Street and Heslington Lane. Due to the shortfall in AQSG this year, additional funding has been secured from City Strategy for this project (see paragraph 8).
17. Monitoring of other pollutants, including particulate matter (PM_{10}), has not indicated any issues with respect to any air quality objective values, and thus no further AQMAs are proposed at this time. A further, comprehensive screening assessment for other pollutants will be provided as part of City of York Council's Update and Screening Report, due in April 2009.
18. To address the remaining air quality issues in the city, the council published its second Air Quality Action Plan (AQAP2) in March 2006. AQAP2 was developed in conjunction with the city's second Local Transport Plan (LTP2) and built on the measures included in the first AQAP. AQAP2 focuses on promoting sustainable transport in the city, reducing emissions from existing vehicles, improving public transport and reducing congestion through improved traffic management.

19. Progress made in implementing the measures in AQAP2 was reported in the most recent Progress Report (submitted to DEFRA in April 2008). In general, good progress has been made towards implementing the majority of measures within AQAP2. Key staff shortages in the Transport Planning Unit (TPU) throughout much of 2007 have meant that a number of schemes have not progressed as quickly as anticipated. However, as of March 2008, TPU is fully staffed and a number of schemes are progressing, particularly in relation to alternative fuels. Over the following year it is hoped that further progress will be made in relation to the promotion of cleaner vehicles / alternative fuels, low emission zone feasibility and with the concept of freight transshipment. An officer steering group has been set up to progress these issues.

Interim Planning Statement for Air Quality

20. EPU has developed an Interim Planning Statement (IPS) for air quality. The IPS is aimed at developers and their consultants, to outline the conditions under which an air quality assessment will be required, and what should be included in any assessment that is carried out for a proposed development. The IPS also aims to formalise the arrangements for financial contributions for air quality mitigation measures or air quality monitoring.

21. A draft copy of the IPS for air quality is currently being reviewed by City Strategy. The document will then be taken to the LDF working Group / Planning Committee (as appropriate) to seek approval for a period of formal consultation in 2008/09.

AURN Affiliation of Bootham and Fishergate Monitoring Sites

22. In January 2008, two of City of York Council's air quality monitoring stations, Bootham and Fishergate, were affiliated to DEFRA's automatic urban and rural network (AURN). This will improve the council's national air quality reputation and improve data management .

Funding from City Strategy

23. EPU have secured a commitment from City Strategy to allocate £40,000 per annum to support air quality work as part of an agreed work programme.

Low Emission Zone (LEZ) Feasibility Study

24. The Institute of Transport Studies (University of Leeds) have undertaken a Low Emission Zone (LEZ) scoping study for City of York Council using a vehicle emission Remote Sensing Device (RSD). Four days of RSD measurements were collected at the Heworth Green exit of the Monkgate / Foss Bank / Huntington Road roundabout. Measurements included emissions characteristics, vehicle type, speed and acceleration, whilst also collecting a digital picture of the rear licence plate for offline processing. This information was used to quantify the potential impact of a York LEZ scheme on vehicle emissions at the survey location.

25. The objective of a Low Emission Zone (LEZ) is to improve air quality by restricting (or deterring by charging policy) the most polluting vehicles from being driven in the area. Restrictions are typically applied according to vehicle type and emission category.

26. The main findings and conclusions of the study were as follows :

- When averaged across the vehicle fleet, exhaust emissions are generally related to Euro classifications, with newer vehicles being 'cleaner'. Reductions in nitric oxide (NO), carbon monoxide (CO), hydrocarbons (HC) and particulate (PM₁₀) emissions in technical breach areas could be achieved by excluding older vehicle categories.
- The study found that the bus fleet on the section of road chosen for the study was predominantly modern diesel vehicles and it was recommended that a different site, frequently used by older diesel buses is selected for any follow-on studies.
- Excluding all pre-Euro II vehicles (equivalent to less than 9% of private cars) or pre-Euro III vehicles (equivalent to less than 30% of private cars) would remove the vast majority of the most polluting vehicles. However, newer vehicles or newer technologies can also become highly polluting if not well maintained. Therefore an effective LEZ would also need to identify poorly maintained newer vehicles and exclude these using on street road emissions testing such as RSD technology.
- Before the consideration of any LEZ for the city, further research is recommended on the emissions from HGVs and buses, followed by a public information campaign on which vehicles are the highest polluters.

27. EPU and the transport planning unit (TPU) are currently in discussion as to how to jointly progress this work, as TPU are responsible for these measures within LTP2, pending further progress reports to members

Options

28. (a) To accept air quality grants from DEFRA totalling £15,000 and allow the air quality projects outlined in paragraphs 6 to 11 to proceed.

(b) To reject some or all of the air quality grants from DEFRA and revise the planned air quality projects for 2008/2009 accordingly.

Analysis

29. Option (a) will allow the council to continue upgrading its monitoring network and make significant revenue savings over the next three years at the Lawrence Street monitoring site. It will also ensure that the JorAir webpage is developed to its full potential. Awareness raising of air pollution issues relating to smoke control areas and bonfire night will also continue.

Option (b) would prevent the upgrading of monitoring equipment and require CYC to meet the revenue costs of the air pollution station at Lawrence Street. The JorAir webpage would not be completed and other awareness raising campaigns may have to be cancelled.

Corporate Priorities

30. Monitoring air quality, providing information to the public about air quality, and developing strategies to improve air quality contribute towards delivering the corporate priorities on improving the health of residents and encouraging the use of public, and other environmentally friendly modes, of transport.

Implications

Financial

31. No other source of funding exists for the projects outlined in this report. If the AQSGs are not accepted, alternative sources of funding will have to be identified in order to further LAQM in the city. Members should also be aware that the revenue costs (approximately £18.5k for the 2009 calendar year period) of some existing air quality monitors, including that at Lawrence Street, that have been funded by DEFRA grants in previous years are due to cease at the end of the 2008 calendar year and will therefore be subject to a growth bid in 2009/10.

Human Resources

32. There are no human resource implications.

Equalities

33. There are no equalities implications.

Legal

34. The council has a statutory duty to periodically review and assess local air quality against national air quality objectives and report its findings to DEFRA. As the council has declared an AQMA and produced an AQAP it is also obliged to submit regular AQAP progress reports to DEFRA demonstrating that it has a continued commitment to improving air quality in the city. Under the provisions of the Freedom of Information Act 2000 air quality data must be made freely available to members of the public upon request.

Crime and Disorder

35. There are no crime and disorder implications.

Information Technology (IT)

36. There are no IT implications.

Risk Management

37. There is some financial risk associated with purchasing multiple years of equipment maintenance contracts up front, but this is currently the only way these items can be justifiably purchased with AQSG. As the companies involved are well established within the air quality field the financial risk is considered relatively small and is considered proportional to the costs which would have to be incurred by the council in future years if AQSGs are not used in this way. There are always public liability risks associated with the placing of monitoring equipment in the field. These will be minimised by consulting the highways team on the best location for the equipment, using reputable electrical contractors and ensuring all equipment is covered by the council's insurance policies.

Recommendations

38. That the advisory panel advise the Executive Member that :

Option (a) at para 28 should be accepted - to accept air quality grants from DEFRA totalling £15,000 and allow the air quality projects outlined in paragraphs 6 to 11 to proceed.

Reason: It represents the most appropriate way of funding the continuation of LAQM in the city. This is a statutory undertaking that contributes towards the corporate priorities on improving the health of residents and encouraging the use of public, and other environmentally friendly, modes of transport.

Option (b) should be rejected

Reason: No other source of funding for LAQM has been identified. Refusal to accept all, or part of, the provisional grant would limit progress on corporate priorities relating to health and transport.

Contact Details

Author:

Andrew Gillah
Principal Environmental Protection
Officer (Air Quality)
Tel (01904) 551532

Chief Officer Responsible for the report:

Andy Hudson
Assistant Director (Neighbourhoods & Community
Safety)

Report Approved Date 16th July 2008

Specialist Implications Officer(s)

Financial implications: Andrew Green, Senior Accounting Technician, Tel 553294

Wards Affected: *List wards or tick box to indicate all*

All

For further information please contact the author of the report

Background Papers: None.