CITY OF YORK COUNCIL

Agenda Item

Decision Session – Executive Member for Neighbourhoods **15th September 2009**

Report of the Director of Neighbourhood Services

AIR QUALITY UPDATE

Summary

1. The purpose of this report is to update the executive member 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 formal decision to be taken to approve 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 grants from DEFRA have funded 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. Officers submitted three AQSG bids to DEFRA in April 2008. The total amount bid for was £221,999 of which £15,000 was initially awarded. A letter was sent to DEFRA requesting that York should be considered for any further grant that might become available later in the year. In February 2009 an additional grant of £12,000 for monitoring and £15,000 for modelling was awarded.

4. In April 2009 officers submitted three new AQSG bids to DEFRA to support the council's air quality work during 2009/2010. The amounts bid for were:

Air quality monitoring =	£116,600
Air quality modelling =	£44,175
Air quality action planning =	£34,250

5. Due to a national shortfall in the amount of grant available, York has been provisionally allocated the following amounts of AQSG for 2009/2010 :

Air quality monitoring =	£15,000
Air quality modelling =	£1,500
Air quality action planning =	£0

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

Consultation

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

Proposed expenditure

Air quality monitoring

7. The DEFRA grants received for monitoring during 2008 allowed replacement of the old air pollution monitoring station at Lawrence Street, complete with a five year service and maintenance contract. An additional air pollution monitoring station was also established on Fulford Road during 2008. Due to the shortfall in the monitoring allocation from DEFRA, funding for the Fulford Road site was secured from City Strategy as part of the Fulford Road Transport Corridor Scheme. As previously reported the Fulford Road air pollution station was required to allow a detailed assessment of elevated nitrogen dioxide concentrations on Main Street, Fulford to be undertaken. The detailed assessment for Main Street, Fulford is currently being compiled and will be submitted to DEFRA by 30th September 2009 (see paragraph 24).

8. The £116,600 bid for air quality monitoring submitted in April 2009 was to undertake the following five projects:

Project 1 : Upgrade of NO_x analyser at the Fishergate monitoring site

Project 2 : Upgrade of Gillygate monitoring site (NO_x analyser and enclosure)

Project 3 : Upgrade of Nunnery Lane monitoring site (NO_x analyser and enclosure).

Project 4: Re-establish background NO_x monitoring at Dunnington

Project 5: Purchase a car adaptor and laptop cradle to assist with diffusion tube collections

9. Projects 1, 2 and 3 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 air quality review and assessment. Project 4 aims to re-establish a background NO_x monitoring site at Dunnington to improve the accuracy and precision of diffusion tube monitoring, and to allow

better validation of air pollution model outputs. (NO_x was monitored at Dunnington between 1999 and 2005 but was ceased due to lack of funding.) At present real time background monitoring data is only available from the Bootham Hospital air pollution station. This provides urban background concentrations that are not fully representative of the situation in sub-urban and rural York. The re-establishment of NO_x monitoring at Dunnington would improve the accuracy and precision of York's air quality data.

10. Project 5 would significantly speed up the collection and logging of diffusion tubes by allowing the whole process to be carried out electronically. At present manual records are made during the collection process and transferred to an electronic database on return to the office.

11. The amount of AQSG funding received from DEFRA for air quality monitoring during 2009/2010 is significantly less (£101,000) than the £116,600 bid for. The £15,000 allocation, plus £2,495 remaining from last years allocation will be sufficient to replace one of the air quality monitoring stations, with a minimum of a three year maintenance contract (project 4). It would however be preferable to purchase a five year maintenance contract to secure the future of the site for a longer period of time. Negotiations are in progress with the supplier to see if the costs of extending the contract can be off set by trading in some redundant equipment.

12. Gillygate has been identified as the priority site for replacement based on current levels of nitrogen dioxide recorded and likely long term cost savings to the authority. Replacement of the Nunnery Lane site would offer similar levels of cost savings but air quality in this area is not currently of as great concern as that in Gillygate. Replacement of the Fishergate site is not as advantageous in terms of cost savings as currently the service and maintenance of the analyser is being paid for by DEFRA as part of the Automatic Urban and Rural Network (AURN). It is therefore proposed to use the AQSG funding to upgrade the Gillygate site and obtain the longest service and maintenance contract possible with the funding available.

Air quality modelling

13. The £15,000 allocation for modelling received in 2008/09 was used to support the air pollution modelling activities within the environmental protection unit (EPU). The additional bid for £44,175 submitted in April 2009 was for continued support of air quality modelling activities and replacement of the two modelling computers. The computers require upgrading to run the latest versions of the modelling software efficiently. The £1,500 allocation for modelling will be used to upgrade the computers. Any further allocation received from DEFRA later in the year will be used to support the air pollution modelling activities .

Air quality action planning

14. The £3,000 allocation for air quality action planning received in 2008/09 was used to support the continued development of the JorAir website. Software has been purchased which will assist in allowing real time air pollution data to be downloaded directly from the JorAir website but further investment in 2009/10 is needed to fully deliver this project. Other items of expenditure included promotional materials for the JorAir website and reprinting of advisory leaflets and advertisements in relation to bonfires and smoke control.

15. The £34,250 bid for air quality action planning submitted in April 2009 was to undertake the following seven projects:

Project 1:	Undertake a further remote emissions sensing project and campaign to support the development of a low emission strategy (LES) in York
Project 2:	Continued development of JorAir to allow real time data dissemination
Project 3:	Development of a teaching pack for JorAir
Project 4:	Purchase of a further bicycle and equipment to support JorAir school visits
Project 5:	Continued awareness raising of smoke control and bonfire issues through targeted leaflet drops
Project 6:	Further development and launch of the Interim Planning Statement on Air Quality and Planning
Project 7:	Support for Joseph Rowntree School Faraday Project

16. No funding at all has been received from DEFRA to support air quality action planning projects during 2009/10. A sum of approximately £2,000 has been carried forward from last years allocation and this will be used to complete the real time data dissemination project (project 2).

17. Project 1 would have continued the on street emissions monitoring work undertaken in 2007/08 by the Institute of Transport Studies (ITS). The aim would have been to collect further information about in use emissions from buses and HGVs to further inform the development of a Low Emission Strategy (LES) in York. The project would also have identified 'gross' polluters operating in and around York and involved the sending of advisory letters to the owners of such vehicles. ITS are still seeking funding from an alternative source to undertake further on street emissions testing in York. Although this would not be tailored exactly to our needs it may provide a useful source of additional information if they are successful. The project to target gross polluters will not take place unless an alternative source of funding becomes available.

18. Projects 3 and 4 would have supported the continued promotion of the JorAir website in local primary schools. To date JorAir teaching sessions have been run at three primary schools covering five year 5/6 classes. During the sessions pupils are taught about sources, causes and effects of air pollution and use the JorAir website to discover how they can help improve air quality in York. The sessions have been very well received by both teachers and pupils alike. Further bookings have already been received for 2009/2010. At the end of each JorAir session each pupil is asked to make an air quality pledge stating what they are going to do to improve air quality in York. At the end of the 2008/2009 term each of these pledges was placed in a draw to win a bicycle. It was hoped that a similar prize could be offered at the end of 2009/10 and that the teaching materials could be developed into a more formal pack that could be disseminated for use by teachers themselves. Due to the lack of air quality action planning funding this year alternative sponsorship for the JorAir prize will be sought and the JorAir teaching pack will be put on hold. Attempts have been made previously to obtain alternative funding for the JorAir prize without success.

19. Project 5 would have continued the publicity campaigns undertaken in previous years to deter people from causing a nuisance with garden bonfires and to raise awareness about the existence of smoke control areas. The advertising campaign will not run this year unless an alternative source of funding can be found.

20. Project 6 would have assisted with the costs of consulting upon and producing copies of the final Interim Planning Statement on Air Quality. Due to the importance of this document we will continue to progress it in house as far as possible and will seek further funding for the project in the next round of AQSG bids.

21. Project 7 would have allowed us to financially assist Joseph Rowntree School in establishing an air pollution monitoring station on the school grounds as a science teaching resource. The school has already received a significant grant from the Faraday Project to develop two interactive science projects on the site, but unfortunately this is not quite enough to deliver the air pollution station to the standard they would like. EPU staff will continue to assist the project by providing technical advice and loaning some particulate monitoring equipment to the school. EPU staff will also be involved in helping to develop a teaching programme for the pupils once the site is up and running.

Update on Local Air Quality Management in York

Local Progress

22. In April 2009, City of York Council submitted an Updating and Screening Report to DEFRA. This report provided an update on the air quality monitoring data collected during 2008 and considered the potential impact of newly identified sources of air pollution. The full Updating and Screening Report can be viewed at http://www.jorair.co.uk/downloads.php

23. The Updating and Screening Report concluded that there are still a small number of areas within the existing AQMA where annual average concentrations of nitrogen dioxide still exceed the 40μg/m^3 health based objective level. The current Air Quality Management Area (AQMA) must therefore remain in place for the foreseeable future. Trend analysis of annual average nitrogen dioxide concentrations across the AQMA has shown that between 2002 and 2005 concentrations were in decline, but for the past three years concentrations have increased year on year. This increase in concentrations is thought to be a result of both increasing off peak traffic flows and increases in emissions of primary nitrogen dioxide from vehicles.

24. Outside the AQMA annual average nitrogen dioxide concentrations appear to have generally stabilised, with the exception of a few small areas. A detailed assessment is currently being undertaken of annual average nitrogen dioxide concentrations in Main Street, Fulford where it is expected, due to elevated levels, that a further AQMA may need to be declared. As detailed previously this report is due for completion by 30th September 2009.

25. Elevated concentrations of nitrogen dioxide also continue to be recorded on Salisbury Terrace and The Stonebow where compliance with the air quality objective is borderline. On the advice of DEFRA an additional nitrogen dioxide monitoring location has been established on Salisbury Terrace. The installing of real time monitoring in this area is very difficult due to lack of space and the likely noise implications for residents. The need for a detailed assessment in this location will be re-assessed next year.

26. The Updating and Screening Report identified a number of locations in the city where biomass burners have been established or have received planning permission. Biomass burners are increasing in popularity because they offer considerable savings in carbon dioxide emissions and can assist in meeting sustainable energy targets. However, where biomass burners replace natural gas plant, or introduce a new source of emissions into an area they can have detrimental impacts on local air quality, particularly in relation to concentrations of particulate matter. This is an example of where policies for reducing carbon dioxide emissions can conflict with local air quality policies.

27. A detailed assessment needs to be made of the likely emissions from the waste wood biomass burner for which planning permission has been granted at the Harewood Whin landfill. The air quality impact assessment work needed to undertake this detailed assessment should be undertaken by the site operator when they apply to the Environment Agency (EA) for a permit to operate the process under the provisions of the Integrated Pollution Prevention and Control (IPPC) Regulations. The process can not operate without a valid permit that will only be granted if the EA are satisfied that there will not be an unacceptable impact on local air quality. We are currently awaiting the submission of the air quality impact assessment to the EA.

28. Further screening assessments also need to be undertaken for the cluster of biomass burners that have emerged in Acomb as part of the York High School, Oaklands Sports Centre and Acomb library developments. Data for each of

these installations will be collected and screened against a biomass guidance document provided for this purpose. If this screening exercise indicates possible breaches of local air quality objectives a detailed assessment will need to be undertaken. An update on these assessments will be provided in next years Progress Report due for submission in April 2010.

Interim Planning Statement for Air Quality

29. Consultation has taken place with City Development and Development Control (within the City Strategy Directorate) on the content of the Interim Planning Statement (IPS) for air quality. Whilst both City Development and Development Control are supportive of the need for such a document they have some concerns about the proposals to formalise financial contributions for air quality mitigation measures or air quality monitoring. EPU are currently considering how these concerns can be best addressed by looking at examples of good practice from other local authorities. EPU are also considering how the draft IPS may need to be amended to accommodate the requirements of a Low Emission Strategy (LES). Until these matters are resolved the interim planning statement can not be taken to the LDF working Group / Planning Committee for approval.

AURN Affiliation of Bootham and Fishergate Monitoring Sites

30. In January 2008 the Bootham and Fishergate air quality monitoring stations were successfully affiliated to DEFRA's automatic urban and rural network (AURN). This has improved the council's national air quality reputation and has resulted in enhanced monitoring at no extra cost to CYC. DEFRA have installed $PM_{2.5}$ monitoring equipment at the Bootham air pollution station and intend to do the same at Fishergate. The latter will require the provision of a larger enclosure as no further equipment can be fitted inside the existing cabinet. Work is currently ongoing with DEFRA's consultants to resolve this matter.

Funding from City Strategy

31. City Strategy allocate £40,000 per annum to support air quality work as part of an annually agreed work programme.

Low Emission Strategy (LES)

32. Previous reports have presented the results of initial investigations into the feasibility of a Low Emission Zone (LEZ). Whilst this has been shown to have potential for improving air quality in York, attention at a national level has been moving towards the wider concept of Low Emission Strategies (LESs).

33. LESs provide a package of measures aimed at accelerating the uptake of low emission fuels and technologies within a specified area. The aim is to reduce emissions of both local and global pollutants in a clearly defined and measurable way. The success of a LES can be measured through the setting and monitoring of emission reduction targets for a wide area. In this way minimising and offsetting the emissions from every new development and / or

transport scheme becomes important, rather than concentrating solely on larger schemes or those within the air quality management area. This approach is particularly useful for dealing with the problem of cumulative emissions from large numbers of small scale developments. By taking a LES approach conflicting carbon dioxide and local air quality policies can be avoided as total emissions are considered side by side instead of being treated as separate issues with separate targets and indicators.

34. In their simplest form LESs can aim to stabilise and prevent further increases in pollutant emissions through planning based measures. These can range from measures to encourage the uptake of cleaner vehicles, such as preferential parking arrangements or the provision of electric hook up points, through to requirements for detailed sustainable building design and state of the art heating systems. Where emissions from new developments can not be adequately controlled at source, emissions can be offset by requiring contributions into a 'low emission fund'. This fund can be used to support walking, cycling, public transport and energy efficiency schemes across the emissions reduction area.

35. More ambitious LESs aim to achieve a reduction in total emissions by tackling existing building and vehicle emissions alongside those being generated by new development. A more ambitious LES could aim to improve energy efficiency measures within existing buildings and introduce measures to remove the most highly polluting vehicles from York's roads. Through the gradual introduction of a variety of low emission schemes York could be transformed into a 'Low Emission City', making way for longer term projects such as a freight transhipment centre and a Low Emission Zone.

36. The Air Quality Steering Group (AQSG) is currently investigating how the concept of a LES could be introduced in York. The first step is to ensure that policy hooks exist within the LDF to allow planning based low emission measures to be enforced on new developments. EPU are currently liaising with City Development to ensure this occurs through the LDF consultation process. Over the coming months the AQSG will be considering how a LES would fit with other policies such as the Carbon Management Plan (CMP), Air Quality Action Plan (AQAP) and the next Local Transport Plan (LTP3). Members will be fully consulted on proposals for a LES once all the necessary information has been collated.

Options

37. (a) To accept air quality grants from DEFRA totalling £16,500 and allow the air quality projects outlined in paragraphs 12,13,16 and 17 to proceed, and to request that York be considered for any further grant that may become available in the year.

(b) To reject some or all of the air quality grants from DEFRA and revise the planned air quality projects for 2009/2010 accordingly.

Analysis

38. Option (a) will allow the council to continue upgrading it's monitoring network and make significant revenue savings over the next three years at the Gillygate monitoring site. It will also assist in the ongoing work to provide real time monitoring data via JorAir and allow the continued undertaking of air pollution dispersion modelling work in-house.

39. Option (b) would prevent the upgrading of monitoring equipment and require CYC to meet the ongoing revenue costs of the air pollution station at Gillygate. The real time air quality link via JorAir would not be provided and the ability to undertake in-house air pollution modelling may be at risk.

Corporate Priorities

40. Monitoring air quality, providing information to the public about air quality, and developing strategies to improve air quality contribute towards delivering the corporate priorities relating to thriving city, sustainable city and healthy city.

Financial Implications

41. 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.

Human Resources

42. There are no human resource implications.

Equalities

43. There are no equalities implications.

Legal Implications

44. The council has a statutory duty to periodically review and assess local air quality against national air quality objectives and report it's 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

45. There are no crime and disorder implications.

Information Technology (IT)

46. There are no IT implications.

Risk Management

47. 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 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

48. That the advisory panel advise the executive member that :

Option (a) at para 37 should be accepted - to accept air quality grants from DEFRA totalling £16,500 and allow the air quality projects outlined in paragraphs 12,13,16 and 17 to proceed, and to request that York be considered for any further grant that may become available in the year.

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 Thriving City, Sustainable City and Healthy City.

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.

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Report Approved ✓ **Date** 24/08/09

Wards Affected: **All** ✓

For further information please contact the author of the report

Background Papers:

None.