

	
<b>Meeting of Cabinet Member for City Strategy and Air Quality</b>	5 January 2012
Report of the Assistant Director – Housing and Public Protection	

## **Air Quality Update**

### **Summary**

1. The purpose of this report is to update the cabinet member on the outcome of the recent Air Quality Support Grant (AQSG) applications made to the Department for Environment, Food and Rural Affairs (DEFRA). Two 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. The report also provides a general update on local air quality management in York and on progress with the Low Emission Strategy (LES).

### **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. In 2011/12, a new grant scheme was announced, which focused on supporting projects which tackle exceedences of the UK nitrogen dioxide objectives and EU limit values. Eligibility for the grant was limited to English local authorities with one or more Air Quality Management Areas (AQMAs) for nitrogen dioxide (NO<sub>2</sub>). York currently has two AQMAs for NO<sub>2</sub>.
3. Three AQSG bids were submitted to DEFRA in April 2011. The first two bids were for projects to be undertaken by CYC. These

two bids totalled £108,150, of which £68,500 was awarded to progress two projects as outlined under 'Proposed Expenditure' below.

4. The third bid was submitted in partnership with the Low Emission Strategies Partnership (LESP). This is the organisation that previously sponsored York's role as regional low emission champions (January 2010 - March 2011). The bid was for the development of a central database through which local authorities would be able to find out what low emission measures had been provided through the planning system in other areas. The aim was to ensure that opportunities for low emission measures through the planning system could be maximised within all local authorities and examples of good practice could be easily shared.
5. The York / LESP bid was originally deemed unsuccessful but DEFRA liked the idea of a central air quality measures database. The LESP and DEFRA are now discussing options for funding the development of an online database for local air quality action planning, with a view to incorporating all aspects of air quality action planning, including modal shift and traffic engineering solutions as well as low emission technology measures. The proposal is that interfaces to the database would eventually be hosted on both the DEFRA and LESP websites. York has been invited to act as lead authority on this national project, which would begin in Spring 2012.

### **Consultation**

6. No consultation has been undertaken for the purpose of this report. However, the following future consultation exercises are proposed as listed below. Each project is discussed in more detail in this report.
  - **Low Emission Zone (LEZ) Feasibility Study** – future consultation proposed with local bus and coach operators to understand the likely impact of an LEZ on their operations in this city.
  - **Eco-Stars Fleet Recognition Scheme** – future consultation proposed with operators of buses, coaches and heavy goods vehicles (HGVs). Consultation will also be undertaken in relation to the CYC fleet, and expanded later to include taxis and other large fleets that operate in the city.

- **Development of an Air Quality Action Plan (AQAP) for Fulford Road** – future consultation on measures proposed to improve air quality along the Fulford Road corridor.
- **Declaration of an Air Quality Management Area (AQMA) on Salisbury Terrace** – future consultation on the boundary of a new AQMA in the Leeman Road Area.
- **Low Emission Strategy (LES)** – A final draft document, taking into account the outcomes of an internal officer consultation, will be prepared during February 2012 and brought before Cabinet on 3 April 2012. Once approved there will be external consultation with the public and business.

### **Proposed Expenditure**

7. The £108,500 bid for air quality action planning submitted in April 2011 was to undertake the following two projects:

Project 1: Low Emission Zone Feasibility Study	£40,000
Project 2: Eco-Stars Fleet Recognition Scheme	£28,500

A brief overview of these projects is provided below.

#### **Project 1: Low Emission Zone (LEZ) Feasibility Study**

8. The objective of a Low Emission Zone (LEZ) is to improve air quality by restricting the most polluting vehicles from being driven in an area. Restrictions are typically applied according to vehicle type and emission category (Euro 3 or older HGV, for example). The LEZ Feasibility Study will investigate the potential emission reduction and air quality improvement across York's Air Quality Management Areas (AQMAs), achievable through the creation of a city centre low emission zone for buses and coaches. The proposed low emission zone will include a particular examination of the two bridge priority routes as highlighted in the City Centre Movement and Accessibility Framework document (Available online at : <http://democracy.york.gov.uk/ieListDocuments.aspx?CId=128&MIId=6497&Ver=4>). A map is provided at Annex 1.
9. The project will investigate the ability to reduce bus/coach based emissions of oxides of nitrogen (NO<sub>x</sub>) along the proposed corridor and within York's AQMAs. Whilst the emphasis will be on achievable reductions in NO<sub>x</sub> emissions, the study will also

investigate the likely impact on particulate emissions and concentrations and quantify likely carbon dioxide (CO<sub>2</sub>) savings.

10. A number of different bus and coach LEZ entry criteria (i.e. emission standard required to enter the LEZ) will be explored and the project will make recommendations as to the most suitable timescales for implementing these criteria.
11. The project will involve upgrading the council's existing traffic model to cover the whole of the city centre AQMA and the proposed LEZ corridor using the city's recently upgraded strategic transport model. This will then form the basis for a detailed emissions and air quality study, looking at the impact of various LEZ options. A full cost-benefit analysis will be undertaken in accordance with DEFRA's methodology for the assessment of the economic benefits of Low Emission Zones. This will include a review of costs associated with each option and will cover implementation costs, ongoing enforcement costs and costs to operators involved in upgrading their fleet vehicles.
12. Detailed traffic counts have already recently been undertaken in York's AQMAs for the purpose of informing York's emerging low emission strategy (these counts were supported by last year's AQSG allocation). It is proposed to re-use this data for the LEZ study which will significantly reduce costs and the timescale for completion, and add value to the previous AQ grant funding.
13. The LEZ study will be carried out over a 12 month period, during which time there will be extensive engagement with bus and coach operators. The project team will consist of City of York Council (EPU, Sustainable Transport Service and City Strategy), the Institute of Transport Studies (Leeds University) and Halcrow (an external consultancy). Halcrow will have day to day responsibility for project management, but will report regularly to CYC on progress and achievement in relation to project objectives.
14. The results of the study, together with any recommendations for implementation of a low emission corridor, will be brought to members towards the end of 2012.

## **Project 2: Eco-Stars Fleet Recognition Scheme**

15. The ECO (Efficient and Cleaner Operations) Stars Fleet Recognition Scheme is a free, voluntary scheme designed to provide recognition, guidance and advice to operators of goods vehicles, buses and coaches. The Eco-Stars concept was developed by South Yorkshire local authorities and is currently being rolled out to other areas across the UK. Information about the current scheme can be found at:  
<http://www.care4air.org/ecostars/>
16. The project aims to introduce an Eco-Stars fleet recognition scheme into York to help to reduce vehicle emissions, encourage the wider uptake of alternatively fuelled vehicles and raise public awareness about low emission vehicles. It will be initially aimed at buses, coaches, Heavy Goods Vehicles (HGVs) and the CYC fleet, and expanded later to include taxis and other large fleets. The scheme will introduce an 'advanced' rating for alternatively fuelled vehicles and would investigate the possibility of requiring vehicle ratings to be displayed by vehicles entering a proposed LEZ (see Project 1).
17. Positive initial discussions have taken place with the existing provider of the service and with the local authorities that currently hold the intellectual rights to the scheme (South Yorkshire authorities). Based on these discussions, it is anticipated that CYC will be in a position to launch an Eco-Stars scheme in York during 2012. The York scheme will operate similarly to those already in existence, but with two distinct differences:
- It aims to specifically encourage the uptake of alternative vehicles such as electric, bio-methane and hybrids by creating an 'advanced' rating for such vehicles. Under the current scheme in South Yorkshire, these vehicles are not offered significant recognition over and above modern vehicles using 'traditional' fuels (e.g. petrol or diesel). It is hoped that an advanced rating would encourage a greater uptake of alternative fuels and hybrid vehicles in the city. Such vehicles are known to be less polluting when operated in congested urban environments.
  - The scheme would be free to join and voluntary, with the exception of vehicles wishing to operate within a proposed low emission bus corridor (Project 1). Here a possible

requirement for mandatory displaying of vehicle emission ratings is to be explored. This would increase awareness of the LEZ amongst the public and clearly identify those companies doing the most to reduce emissions. It would also help members of the public to identify and report non-compliant vehicles in the LEZ.

18. It is anticipated that administration and management of the scheme would be contracted out, most likely to an existing provider of the service and in partnership with the local authorities that currently hold the intellectual rights to the existing scheme. Adaption of the current scheme is the preferred option, as it adds value to the existing scheme (also funded by AQ grant) and minimises the amount of additional work needed to get the scheme operational in York. It is anticipated that the revised scheme criteria will be adopted by other local authorities, as further Eco-Stars schemes are rolled out across the UK.
19. Adoption of fleet recognition schemes can result in considerable emission savings, particularly in relation to NO<sub>x</sub>, PM<sub>10</sub> and CO<sub>2</sub>. The scheme proposed for York provides an opportunity to go beyond these documented emission savings both by offering more encouragement for the uptake of alternatively fuelled vehicles, and by introducing some mandatory aspects of the scheme in the worst polluted areas of the city.
20. In addition to the emission savings, measures to encourage the wider uptake of alternative technologies such as hybrids, bio-methane and electric, and improved levels of driver training also have the potential to help reduce traffic noise. Hybrid vehicles and gas operated vehicles produce considerably less noise than a conventional diesel engine. In the case of electric vehicles there is virtually no noise at the point of use. Incidents of noise from engine revving and idling will be considerably less within a well trained and emission aware driver workforce. This project therefore has the potential to considerably benefit efforts to tackle air quality, greenhouse gas and noise emissions across the country.

## **Update on Local Air Quality Management in York**

### **Local progress and trends in air quality**

21. City of York Council submitted an Air Quality Progress Report to DEFRA in April 2011. The report provided an update on the air quality monitoring data collected during 2010 and considered the potential impact of newly identified sources of air pollution.
22. The assessment of additional monitoring data collected during 2010 has identified numerous locations within the city centre AQMA (declared in 2002) where annual average nitrogen dioxide concentrations remain above the  $40\mu\text{g}/\text{m}^3$  target level. This reflects the findings of previous review and assessment reports and indicates that the current city centre AQMA must be retained in its current form for the foreseeable future.
23. Between 2002 and 2005 annual average nitrogen dioxide concentrations across the city centre AQMA appeared to be in decline, but this trend was reversed in 2006 and year on year increases have been recorded since this date.
24. Main Street, Fulford, continues to breach the annual average objective for nitrogen dioxide and a new AQMA was declared in Fulford in April 2010. An Air Quality Action Plan for this area is currently being prepared, with a view to incorporating this work into a revised, overarching AQAP for the whole city in 2012.
25. Outside the existing AQMA, the annual average nitrogen dioxide objective is being met at most locations. However, there are a small number of sites which have given rise to sporadic, elevated concentrations of nitrogen dioxide in recent years. In some areas close to the existing AQMA boundary, air quality has deteriorated further, such that places that were not predicted to exceed the air quality objectives in 2002 (when the original AQMA was declared) are now showing potential breaches. An example of this is Queen Street, near the railway station, where exceedances are now being measured. It is likely that these properties will be brought within the boundary of the AQMA in the near future (a review will be undertaken in May 2012, in line with CYC's reporting requirements to DEFRA).
26. At present the AQMA is designated on grounds of predicted exceedances of the annual average nitrogen dioxide objective. EPU has recently gathered evidence to suggest that on Rougier Street, George Hudson Street and Bridge Street, the short term hourly objective for nitrogen dioxide may also be being

breached. Although EPU do not have the resources to confirm this through real time monitoring, EPU has deployed additional diffusion tubes to try to indentify the extent of this possible hourly objective breach (a diffusion tube reading of greater than  $60\mu\text{g}/\text{m}^3$  annual average is indicative of a short term objective breach). If this additional monitoring confirms that the short term objective is also likely to be breached, this will need to be shown on a revised AQMA legal order.

27. To deal with these issues, outside the current AQMA, it is proposed to undertake a review of the current AQMA boundaries in May 2012, following the completion of the next Update and Screening Assessment (USA) report. At this point EPU will bring forward recommendations for expansion of the current AQMA boundaries in some areas of the city.
28. Salisbury Terrace continues to show breaches of the annual average nitrogen dioxide objective (see below).
29. Monitoring of other pollutants, including particulate matter ( $\text{PM}_{10}$ ), has not indicated any breaches of the other air quality objectives. On this basis no further AQMAs are proposed at this time. A further, comprehensive update for other pollutants will be provided as part of our USA, due in April 2012.

### **Salisbury Terrace**

30. As exceedences of the annual average nitrogen dioxide objectives have been monitored along Salisbury Terrace in recent years, a Detailed Assessment of nitrogen dioxide was submitted to DEFRA in September 2011.
31. The most recent monitoring data for this area has indicated breaches of the annual average objective at small number of monitoring sites between the two rows of terraced properties flanking Salisbury Terrace, and suggests that the area of exceedence is limited to the area of Salisbury Terrace between the junctions with Lincoln Street and Balfour Street. Within this area, surveys have indicated that approximately 52 households are being exposed to concentrations of nitrogen dioxide above the governments health based air quality objective for long term exposure to nitrogen dioxide concentrations.



32. In line with the conclusions of this report, the following recommendations are made:

- City of York Council should declare a further AQMA in this area on the basis of breaches of the annual average nitrogen dioxide objective along Salisbury Terrace. The AQMA should be declared within a 12 month period. The geographical extent of the new AQMA will be subject to consultation with members and local residents.
- Monitoring of nitrogen dioxide at the current monitoring locations will continue to ensure that any future changes in air quality are detected, notably locations representative of relevant exposure (i.e. facades of residential properties).
- Additional monitoring work will be presented as part of a 'Further Assessment' report, required within 12 months of designating the new AQMA. Additional monitoring data for 2011 will be used to support the conclusion to declare a further AQMA, to corroborate the assumptions on which the AQMA will be based, and to check that the original designation is still valid and does not need amending in any way.
- Since the extent of the breach on Salisbury Terrace is limited to a small terraced street, it is likely that the AQAP for this area will be incorporated into the wider AQAP for the existing city centre and Fulford AQMAs, expected in 2012.

33. A further report, detailing the outcome of the consultation on the boundary of the new AQMA on Salisbury Terrace will be brought to members in early 2012.

### **Low Emission Strategy**

34. Following approval of the outline framework for a draft Low Emission Strategy (LES) in June 2011, a draft LES has been produced and is currently the subject of an internal consultation. A final draft document taking into account the outcomes of the internal consultation will be prepared during February 2012 and brought before Cabinet on 3 April 2012. At this meeting permission will be sought for public consultation.

35. Once approved for public consultation, the draft LES will be made available on-line and invitations to comment posted in relevant council documents and other local media. The public consultation period will last for 4 weeks and is scheduled to be completed by June 2012. A final LES document, taking into account the results of the public consultation, will be taken to the cabinet in August 2012 for formal adoption.
36. The draft LES contains a number of outline measures aimed at reducing emissions of both carbon dioxide and local air pollutants. Once the strategy approach has been approved some of the longer term strategic LES measures will need to be worked up in more detail and included as specific measures in a revised air quality action plan (AQAP3) for the city. Members of the public will have a further opportunity to comment on delivery of individual measures at this stage. The revised AQAP will take into account matters arising from the City Centre Movement and Accessibility Framework and the outcomes of the LEZ bus corridor feasibility study outlined in this report. AQAP3 will also contain measures for air quality improvement in Fulford and Salisbury Terrace. It is anticipated that a revised AQAP will be available for consultation in late 2012 / early 2013.
37. Delivery of some of the shorter term measures in the LES will commence during 2012, prior to publication of the revised AQAP. Some key areas we hope to progress during 2012 are:
- Delivery of public electric vehicle recharging infrastructure in CYC car parks
  - Introduction of Eco-Stars fleet recognition scheme (as outlined in this report)
  - Development of a LES supplementary planning document (SPD) to ensure new developments incorporate low emission strategy principles and mitigate their emissions. This will include consideration of the potential for developer contributions to fund wider low emission infrastructure in the city such as alternatively fuelled buses and refuse trucks
  - Provision of alternatively fuelled and low emission vehicles in city centre car clubs and use of these vehicles by CYC staff.
  - Promotion of alternatively fuelled vehicles and development of incentives for their use

## **Low Emissions Officer post (LSTF Bid)**

38. CYC's successful LSTF bid will enable EPU to employ a temporary full-time officer to assist with and promote the LES measures. Funding has also been allocated to help set up a back office for administration of CYC's EV infrastructure, once it is in place.
39. The main duties of this new post will include:
- To investigate, identify and report on opportunities for the use of alternatively fuelled vehicles and refuelling infrastructure in York and to draw up a project plan for delivery of EV infrastructure.
  - To encourage and promote the use of alternatively fuelled vehicles by individuals, businesses, transport providers and other organisations.
  - To assist with the roll out and administration of the Eco-Stars scheme in York
  - To assist with development of planning based LES measures
  - To develop incentives for use of alternatively fuelled vehicles
  - To promote use of alternatively-fuelled vehicles within the local bus, the Council's own taxi fleet and other businesses and institutions.
40. The Low Emissions Officer post will commence employment in early 2012.

## **Options**

41. The report is provided for information and members are asked to note the contents of the report. Specifically, members are asked to note air quality grants from DEFRA totalling £68,500, and the proposed consultation on the boundary of a new AQMA in the vicinity of Salisbury Terrace. EPU advise members that DEFRA's AQSG programme is the most appropriate way of funding the continuation of LAQM in the city and projects in relation to council's Low Emission Strategy.

## **Analysis**

42. The outlined projects will allow the council to progress development of low emission measures both locally and regionally, and will ensure that the council carries out its legal duties under the Environment Act 1995.

### **Council Priorities**

43. The development of the low emission strategy and air quality work contribute to the council priorities in the following ways:

- Create jobs and grow the economy – improving transport links to the rest of the UK via the installation of electric charging points and alternative fuels infrastructure, encouraging investment in low emission technology and creating jobs in green industries
- Get York moving - improving local bus services and city centre circulation and campaigning to encourage less reliance on the car via the Low Emission Zone bus corridor feasibility study and the low emission strategy
- Build strong communities – talking with and listening to people about air quality, public health and the environment
- Protect vulnerable people – ensuring the health of people, especially the most vulnerable, by reducing pollution
- Protect the environment – cutting our carbon emissions and improving air quality

### **Implications**

44. The various implications of this report are summarised below:

#### **(a) Financial**

- 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.
- The AQSG funding for the LEZ Feasibility Study is being supplemented with an additional £11,713 from the Statutory Bus Partnership Development fund.

## **(b) Human Resources (HR)**

- A new temporary Low Emission Officer will be recruited to support out low emissions and air quality work.

## **(c) Equalities**

- Vulnerable people with respiratory and other illnesses are more likely to be affected by poor air quality. The proposals in this report seek to mitigate this.

## **(d) Legal**

- 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 monitored elevated levels of nitrogen dioxide in the vicinity of Salisbury Terrace, it is now obliged to declare an AQMA. There is also a requirement 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.

## **(e) Crime and Disorder**

- There are no crime and disorder implications

## **(f) Information Technology (IT)**

- There are no IT implications

## **(g) Property**

- There are no property implications.

## **(h) Other** State here any other known implications i.e. Highways, Planning etc

- There may be Highways implications in implementing a Low Emission Zone within the city centre. This will be explored, consulted upon and fully reported to members, should the

results of the feasibility study suggest that such a scheme is cost-effective for the city.

### **Risk Management**

45. In compliance with the council's risk management strategy. There are no major risks associated with the recommendations of this report.

### **Recommendations**

46. The report is provided for information and the cabinet member is asked to note and endorse the contents. DEFRA's AQSG programme is the most appropriate way of funding the continuation of LAQM in the city and projects in relation to council's Low Emission Strategy. LAQM is a statutory undertaking that contributes towards the corporate priorities on protecting the environment and protecting vulnerable people.

### **Contact Details**

<b>Authors:</b>	<b>Chief Officer Responsible for the report:</b>
<b>Mike Southcombe</b> Environmental Protection Manager (01904) 551514	<b>Steve Waddington</b> Assistant Director - Housing & Public Protection
<b>Andrew Gillah</b> Principal Environmental	<b>Richard Wood</b> Assistant Director – Strategic Planning & Transport

	<b>Report Approved</b>	✓	<b>Date</b>	5/01/12
	<b>Sally Burns</b> Director – Communities and Neighbourhood Services			
	<b>Report Approved</b>	✓	<b>Date</b>	5/01/12
<b>Specialist Implications Officer(s)</b>				
<b>Wards Affected:</b> <i>List wards or tick box to indicate all</i>				<b>All</b> <i>tick</i>
				<b>All wards</b>
<b>For further information please contact the author of the report</b>				

**Background Papers:**



# Annex 1: Map of proposed Low Emission Corridor

