



Executive

8 June 2010

Joint Report of the Director of Communities and Neighbourhoods and the Director of City Strategy

A LOW EMISSION STRATEGY FOR YORK

Summary

1. (i) To obtain support from the Executive for the development of an overarching low emission strategy for York. The strategy is required to ensure a more holistic approach to tackling York's deteriorating local air quality and to achieve a reduction in carbon emissions.

(ii) To provide an update on the successful joint bid with Leeds City Council to become 'Regional Low Emission Champions'.

Background

2. Two of the current challenges facing York are deteriorating local air quality and greenhouse gas reduction. A low emission strategy is a package of measures aimed at accelerating the uptake of low emission fuels and technologies which can assist in meeting both of these challenges.
3. Currently in York local air quality management and greenhouse gas reduction are dealt with as separate issues resulting in some conflicting policies. The modal shift based Air Quality Action Plan (AQAP) is not delivering air quality improvement and planning controls do little to encourage the minimisation and mitigation of emissions. If York is to improve its' air quality, and meet its carbon reduction targets, a new holistic approach to emission reduction is needed.
4. An overarching low emission strategy for York would address the current conflicts arising between local air quality management and greenhouse gas reduction polices and would strengthen the AQAP. It would ensure minimisation of emissions from all developments and an improved level of developer contributions to mitigate against emissions. An overarching LES would also allow the development of emission based policies for the procurement of goods and services, and the management of City of York Council's buildings and vehicle fleet.

Key Issues to Address

5. Despite initial improvements in air quality, it has worsened since 2006, with average nitrogen dioxide (NO₂) concentrations increasing year on year. The highest concentrations occurred during 2009 with 25 of the 40 monitoring locations used to calculate the AQMA average being above the health based objective. The continued deterioration in air quality has led to the recent declaration of a second AQMA along the A19 corridor at Fulford. If further steps are not taken to improve air quality the declaration more AQMAs is likely.
6. As well as helping to prevent the declaration of further AQMAs, an overarching low emission strategy will assist in addressing the following:
 - Reducing the detrimental impact of poor air quality on health, including helping to prevent an estimated 158 air quality related premature deaths per year in York;
 - Reducing air pollution damage to historic buildings and artefacts, including the Minster and the city walls;
 - Reducing emissions of greenhouse gases and mitigating against the impacts of climate change;
 - Protecting and promoting the reputation of York as an attractive historic city in which to live, visit and invest;
 - Avoiding possible government fines and intervention measures due to poor performance on air quality improvement and carbon reduction;
 - Increasing the likelihood of attracting further funding for policies which improve air quality and reduce carbon emissions. For example major transport scheme bids and air quality grant funding bids.

Current approach to air quality improvement in York

7. Air quality is monitored and reported by the environmental protection unit (EPU) within Communities and Neighbourhoods, yet the sources of air pollution and the main decisions which influence them are often managed by other directorates, for example planning and transport decisions within City Strategy. The necessity for cross-directorate consultation and action on air quality measures has long been recognised and resulted in the formation of an air quality steering group (AQSG) in 2004. The AQSG consisted of representatives from EPU, transport planning, sustainable development, city development and economic development. This group have been instrumental in the development of York's current air quality improvement policies.

8. Air quality management in York is currently delivered via two main policy documents:
 - i. The Air Quality Action Plan (AQAP) which forms Annex U of City of York Council's Local Transport Plan (2006-2011)
 - ii. Policy GP4b of the current draft local plan

Air Quality Action Plan

9. The AQAP was drawn up by EPU following public consultation, the final measures in the AQAP being determined by the AQSG and revised in 2006 to allow integration into the second local transport plan (LTP2). The current AQAP contains some low emission measures, but mainly modal shift measures aimed at increasing levels of walking, cycling and public transport use. Only the modal shift measures have been delivered to date.
10. In order to increase the rate of air quality improvement and meet the health-based air quality objectives a greater emphasis needs to be placed on reducing emissions from traffic. This requires a shift to delivering air quality improvement measures that encourage the uptake of ultra low emission vehicles¹ (ULEVs) and also ensure infrastructure is provided for the operation of such vehicles.

Planning Policy GP4b

11. New development gives rise to emissions of both local and global air pollutants from both the new buildings and the transport movements related to their use. Policy GP4b of the draft local plan seeks to control emissions of local pollutants mainly from transport related to development. The policy requires developers to submit air quality impact assessments if their proposal meets one or more specified criteria. For example, if the development has more than 300 car parking spaces and / or if it will give rise to a more than a 5% increase in local traffic flows. Where air quality impact assessments are submitted EPU can advise the planning department on the suitability of the application in terms of air quality and / or require air quality mitigation measures to be put in place.
12. Whilst the current system requires developers to predict the air quality impact of their proposals in terms of changes in on street concentrations of pollutants it is often the case that the predicted changes in on street concentrations turn out to be negligible or insignificant, even where large changes in vehicle numbers are occurring. There are two reasons for this

¹ Ultra low emission vehicles (ULEVs) are vehicles that have zero or close to zero emissions. They include electric vehicles and hydrogen powered vehicles.

- a. There is not a linear relationship between the amount of emissions emitted and the resultant concentrations of NO₂ in the atmosphere
- b. The models used to predict future concentrations of pollutants due to development assume that vehicles become cleaner over time. So even with no change in vehicle numbers developers can report a predicted improvement in air quality.

In practice the uptake of cleaner vehicles may not be as rapid as models assume (due to economic factors), and in some cases the emissions from newer vehicles are not as low as expected. This is particularly the case for newer diesel engines that give rise to a higher proportion of NO₂ emissions than was previously recognised. The real air quality impacts of development can therefore be higher than air quality impact assessments suggest.

13. There are some fundamental flaws in the current air quality planning controls:

- i. Only the largest developments are subject to air quality assessments because only changes in traffic flows greater than 5% are worthwhile modelling. However, most new developments are likely to have a small residual emission impact that will accumulate over time, particularly in areas of intense redevelopment.
- ii. No air quality assessments are currently required for heating and power generation systems, unless they are unusually large or use biomass.
- iii. Developers can generally demonstrate a negligible impact on air quality without making any effort to reduce emissions from vehicles and heat/power systems. This means there is currently no requirement for developers to minimise emissions from their developments.

14. To improve air quality through the planning system more emphasis must be placed on minimising emissions from all new developments. This will require measures such as emission based access restrictions, provision of electric vehicle infrastructure and reduced parking provisions. Developers will also need to be required to contribute more towards the cost of tackling poor air quality, and to use best endeavours to minimise emissions from heating /power systems.

How an Overarching LES would Add Value to Existing Strategies

Carbon management policies

15. Local air pollution and global climate change are often assumed to have the same causes, effects and solutions. In recent years the emphasis both nationally and locally has been on the reduction of greenhouse gas emissions (mainly CO₂) for the purpose of reducing the impact of climate change. Some of the resulting policies have assisted with local air quality improvement, but others have had negative effects. If approached in the right way tackling climate change can provide an excellent opportunity to improve air quality. DEFRA have recently produced a document titled 'Air Pollution – Action in a Changing Climate' which highlights the additional benefits that can be achieved through closer integration of air quality and climate change policies.²
16. Some carbon reduction measures such as more wind and solar power and improving energy efficiency in buildings will also help to improve local air quality. However, other policies may have negative implications for local air quality e.g. the planning requirement for 10% renewable energy provision on new developments. Generally the easiest and cheapest way for developers to meet this obligation is to install a biomass burner. Biomass burners are marketed as being almost carbon neutral as the carbon released through the burning process is taken up again by new plants grown as future fuel for the burner. However, often overlooked, is the increase in particulate and NO_x emissions that can arise when changing from a conventional natural gas plant to biomass plant. These increases may be acceptable in rural environments where there is no population and relatively low background pollutant concentrations, but in city centre and suburban environments single large scale biomass burners, or clusters of smaller installations can result in a deterioration in local air quality. The number of biomass burners in York is likely to increase in future years

Procurement

17. There are currently no specific policies in place, which ensure the impact on local air pollution is considered during the procurement process, yet there are many opportunities to reduce the council's emissions of both local and global pollutants through procurement. Examples of some of the types of goods and services the council procures that could have an impact on local air quality include:
- office supplies – where do they come from, how are they transported and what emissions are produced?
 - School buses / taxis – how old are they? What are their emission standards?

² Air Pollution: Action in a Changing Climate, DEFRA, March 2010

- Council vehicle fleet – what types of vehicle do we buy? What are their emissions in terms of nitrogen dioxide, particulates and carbon dioxide?
- Heating equipment for council buildings? What is the local air quality impact of biomass?

In the current financial climate there may be a tendency to move towards cheaper suppliers, who may use older vehicles and technology. This could be a significant threat to air quality and climate change, unless a strategy is put in place to control all sources of emissions.

Council Fleet

18. The recent green fleet review by the Energy Savings Trust has highlighted a lack of low emission vehicles within the council's own fleet and a reliance on the use of the 'grey' fleet (private vehicles used for council business), with an average age of greater than 10 years old. Phasing out of the grey fleet and switching the fleet to low or zero emission vehicles (electric, hybrid, biomethane, depending on use), potentially via a car club, would lead to considerable savings in emissions and costs.

The National Picture

19. Poor air quality is a feature of most urban environments in the UK with 237 local authorities having declared one or more AQMAs to date. The response to local air quality improvement has been varied, ranging from almost do-nothing in some authorities through to the introduction of congestion charges and low emission zones (LEZ) in London.
20. In recent years there has been increased interest nationally in the uptake of low emission based measures, with Oxford introducing a LEZ for buses and others such as mid-Devon, Sefton and Sheffield developing advanced low emission based planning policies. In South Cambridgeshire a LES is being built into plans for a new town and Cambridge City Council has recently announced plans to introduce an emissions cap for bus companies. In the north east of England an extensive electric vehicle plug in point network has been established and rapid expansion of this network is planned through the Plugged in Places (PiP) initiative. The recently published coalition government agreement indicates that roll out of electric vehicle technology and the production and use of bio-gas are to remain high on the political agenda under the new government.
21. In 2007 the Low Emission Strategies (LES) Partnership was formed to assist in the roll out of low emission measures. Funded by Communities and Local Government (CLG) and the Department for the Environment, Food and Rural affairs (DEFRA), the LES Partnership has been tasked with disseminating good

practice in reducing emissions of both local pollutants and greenhouse gases. The LES Partnership specifically seeks to accelerate the deployment and penetration of low emission transport fuels and technologies by supporting local authorities in the adoption of low emission policies, strategies and measures. In January 2010 York and Leeds successfully bid to become one of three 'Regional Champions' groupings tasked with rolling out low emission measures at a regional level.

22. As 'regional low emission champions', York and Leeds will be expected to roll out low emission measures within their own areas and encourage other local authorities and organisations to do the same. Some of the key aims of the Leeds City Region grouping are:
- To develop an exemplar overarching LES in York
 - To demonstrate the use of bio-methane as a vehicle fuel for HGVs (trials with refuse trucks have already commenced in Leeds)
 - To demonstrate the use of hybrid-electric buses
 - To obtain PiP funding for the development of an extensive electric vehicle plug in network in Yorkshire
 - To develop regional and national LES planning and procurement guidance

Scope of a Low Emission Strategy for York

23. Despite the declaration of two AQMAs, the existence of an AQAP and air quality planning policies, air quality in York is continuing to deteriorate and the Council is failing to meet the health based air quality objectives in York. Some existing climate change actions, procurement and the council's own vehicle fleet are contributing to the deterioration in air quality. Failure to improve air quality will result in adverse impacts on human health, further damage to the historic environment and the declaration of further AQMAs. It may also result in significant government fines.
24. Whilst corporate working within the Council has been good there needs to be a more holistic approach to addressing and balancing the issues of air quality, climate change and other policies and strategies via an overarching low emission strategy. Staff from strategic partnerships, fleet management and procurement have recently joined the AQSG, now renamed the low emission steering group (LESG), to develop this concept.
25. By developing an overarching LES York could become the UK's first low emission city, with a national and international reputation for sustainability and clean air. This may attract tourism, inward investment and new jobs and protect

York's historic buildings. York would be transformed from a polluted, congested city to a cleaner, greener, quieter, less congested city.

Aims and objectives

26. An overarching LES would aim to:

- i. Deliver the health based air quality objectives for NO₂ at all locations in the city to protect the health of York's residents and visitors
- ii. Ensure a holistic approach to the delivery of carbon reduction targets and help minimise the impacts of climate change, avoiding conflict between policies.
- iii. Further reduce all emissions to air from vehicles by incentivising and accelerating the uptake of low emission vehicles and the infrastructure to support them.
- iv. Develop a comprehensive package of planning based emission assessment and mitigation policies for all air pollutants to ensure that the cumulative air quality impacts of development are fully addressed and that emissions from new developments are minimised as far as possible. Obtain funding via the planning process to support low emission measures and infrastructure.
- v. Improve economic development and provide "green" jobs³, needed to support the roll out of such a strategy both locally and beyond
- vi. Minimise all emissions from the council's own vehicle fleet and estates
- vii. Introduce and develop the concept of low emission procurement
- viii. Protect and enhance the city's historic and natural environment
- ix. Develop York's role as 'regional low emission champion' (see paragraph 22) and work towards becoming an internationally recognised exemplar 'low emission city'.
- x. Prepare York for any future legislation to improve air quality and reduce climate change, noting the new government's announcement of their ambitions for a low carbon and eco-friendly economy, including a national recharging network for electric and plug-in hybrid vehicles, reducing carbon emissions and measures to promote energy from waste.

³ Possible new jobs and industries include; specialist car dealerships and technicians to provide and service electric and other low carbon vehicles; suppliers, fitters and maintainers of electric hook up points and other low carbon infrastructure e.g. bio-methane; consultancies and engineers specialising in emission reduction assessments, advice and solutions.

Further information on the key issues to be addressed by the overarching LES, links to current policies and what the LES will mean in practice can be found in a background document to this report available at:

www.jorair.co.uk/reports/background.pdf

Process and timescales

27. Existing staff in EPU would lead development of an overarching LES with support from the LESG and city strategy's sustainability and transport planning teams. A draft overarching LES could be brought forward for Executive Member approval by the end of 2010, prior to consultation with the Environment Partnership and LSP board. The LES will be supported by a revised air quality action plan (AQAP3) to be included in LTP3.

Consultation

28. This report has been discussed with representatives on the LESG and other stakeholders throughout the council. Once the LES and action plan have been developed, stakeholders including business, the public and others will be consulted.

Options

29. (a) Support the development of an overarching LES for York and note the regional champions award

(b) Note regional champions award and decide against the development of an overarching LES for York.

Analysis

30. Option (a) will enable the council to develop a regional and national role in terms of LES and to adopt relevant LES policies across York. This will help to promote the uptake of low emission measures in the city resulting in air quality improvements, health improvements, reduced damage to historic buildings and a more joined up approach to managing local air quality and greenhouse gas emissions. York will also have the opportunity to become the UK's first low emission city and will be able to take advantage of the economic benefits this could bring (including new inward investment opportunities and attracting further grant funding).
31. Option (b) will enable the council to assist in the regional development of low emission strategies but York will miss out on an opportunity to lead nationally on low emission strategies and may be subject to possible fines and the implementation of compulsory air quality improvement measures in the future. Air quality will continue to deteriorate, leading to poor health amongst some local

residents and there will be no effective link with climate change policies. York is also unlikely to attract further grant funding to support low emission measures and other air quality improvements. York's reputation may suffer in terms of funding, inward investment and tourism.

Corporate Priorities

32. The LES feeds into the council's corporate strategy in a number of areas:

- Sustainable City – protection of the local and global environment
- Healthy City – protection of public health
- Thriving City – could attract inward investment and will support sustainable development and tourism
- City of Culture – protects the historic environment and health of people attending outdoor events
- Effective Organisation – promotes partnership working
- Inclusive City – promotes a unified approach to air quality issues across the city

Financial Implications

33. The cost of a LES will be met from existing budgets and from government grants. Therefore there are no financial implications associated with this report.

Human Resources

34. There are no other human resource implications.

Equalities

35. There are no equalities implications.

Legal Implications

36. There are no legal implications.

Crime and Disorder

37. There are no crime and disorder implications.

Information Technology (IT)

38. There are no IT implications.

Risk Management

39. Measured in terms of impact and likelihood, the risk scores for failing to adopt a LES has been assessed as ranging from 12 to 20, placing the issue in the MEDIUM to HIGH category. The development of a LES, together with an AQAP and climate change action plan should reduce the risk to at least MEDIUM and potentially LOW for some of the risks within 5 years.

Recommendations

40. The Executive is advised to:

Approve option (a) - Note the successful joint bid to with Leeds City Council to become regional low emission champions award and support the development of an overarching LES for York

Reason: This option will accelerate the uptake of low emission measures in the city, helping to improve local air quality, protect health and reduce damage to historic buildings. It will also allow a more co-ordinated approach to local air quality management and carbon reduction and allow York to become the UK's first low emission city.

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Wards Affected:

All

For further information please contact the author of the report

Background Papers:

National Air Quality Strategy

Air Quality Update – Executive Member for Neighbourhoods (15th Sept 2009)

Adoption of an AQAP for York – Meeting of the Executive Member for Environment and Sustainability (13th October 2004)

York Climate Change Framework and Action Plan - update and draft consultation version – Report to Executive Meeting on 8th June 2010