

**Environmental Services**  
**Salisbury District Council**  
**PO Box 2126**  
**Salisbury, Wiltshire SP2 1DJ**

**Contact:** Gary Tomsett  
**direct line:** 01722 434340  
**fax:** 01722 434643  
**email:** gtomsett@salisbury.gov.uk  
**web:** www.salisbury.gov.uk

# Report

**Subject:** Improving Air Quality in Salisbury

**Report to:** City Area Committee

**Date:** Tuesday 13 November 2007

**Author:** Gary Tomsett, Team Leader (Pollution & Housing). Environmental Services Unit

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## 1. Purpose of Report

- 1.1. To update Members on the current situation regarding air quality in Salisbury.
- 1.2. To seek Member's approval of an amended Air Quality Management Area which will encompass the whole city centre. There will be new Air Quality Management Areas for Wilton Road, where it meets St Paul's roundabout and London Road where it meets St Marks Roundabout. The draft orders are attached.

## 2. Background:

- 2.1. The Environment Act 1995 places a duty on local authorities to carry out an annual review and assessment of local air quality. The Act requires local authorities to identify those parts of their area where prescribed air quality objectives will not be met by the relevant year, and to designate these areas Air Quality Management Areas. (AQMA's).
- 2.2. The purpose of an AQMA is identify the areas where air quality problems exist and to provide the impetus for delivering improvements.
- 2.3. To date five Air Quality Management Areas have been declared in Salisbury. These are:
  - Brown Street
  - Milford Street
  - Minster Street
  - Exeter Street
  - Upper end of Fisherton Street.



*Awarded in:*  
Housing Services  
Waste and Recycling Services



2.6 The locations referred to above exhibited excessive levels of nitrogen dioxide, due to road traffic. The designation of AQMA's leads to a requirement for the development of an Air Quality Action Plan. This is the piece of work that determines what a local authority intends to do about the poor air quality in its AQMA's. Salisbury's original action plan was formulated based upon the Salisbury Transport Plan as the major transport initiative already in place at the time. Actions that have resulted include:

- Provision of four park & ride sites and the fifth site being at the planning stage
- Bus priority measures
- An Intelligent Transport System (including real-time passenger information and variable message signage for car parking)
- Computerised Urban Traffic Control System & CCTV monitoring of network conditions.
- Reduction of long stay parking and the increase in ultra short stay parking within city centre, implementation of residents parking, and introduction of on-street parking charges.

2.6 Initially trends in nitrogen dioxide were downward, however in recent years an upward trend has emerged. Levels have been particularly high during hotter dryer summers and mild winters. In addition there appears to have been an impact on levels caused by changes in emissions from HGVs. Changes to Euro III engines have resolved problems with emissions of fine particulates but at the same time increased emissions of nitrogen dioxide. (Air Quality Expert Group, Trends in Primary Nitrogen Dioxide in the UK DEFRA 2006).

2.6 Salisbury is not the only city to find itself in this position. Many historic cities including Oxford, York, Cambridge and Winchester are experiencing similar problems. This is because narrow highly trafficked streets with buildings of 3 or more storeys create a "canyon" effect preventing dispersal of pollutants emitted at street level.

### 3. Nitrogen Dioxide

3.1 Nitrogen dioxide is a product of the combustion of fossil fuels. The primary source in Salisbury is from vehicle exhausts. It is just one pollutant involved in complex chemical interactions that as a group have a detrimental impact on human health. Fine particulates, ozone and carbon dioxide are also important players, the latter two of these are being tackled principally at a national level. However as the source of concern in Salisbury is vehicle exhausts it is reasonable to surmise that any measures taken to reduce nitrogen dioxide locally will also have an impact on levels of other pollutants including the greenhouse gas carbon dioxide.

3.2.

The Expert Panel on Air Quality Standards was commissioned by the DoE to examine existing studies on the health effects of nitrogen dioxide and to recommend objectives to be achieved in the UK. Some studies have shown changes in lung function in asthma sufferers at exposures of around 300ppb during exercise. The Panel concluded that an annual average objective of 40ug/m<sup>3</sup> (21ppb) should be adopted for long term exposure and a hourly average of 200ug/m<sup>3</sup> (105ppb) for short term exposure. We are concerned here with the annual exposure. These are reflected in European objectives.

3.3 It is not possible to directly attribute incidents of illness or deaths solely to air pollution as there are so many factors that influence our health. However nitrogen dioxide has been linked with an increased susceptibility to respiratory infection, increased airway resistance in asthmatics, and decreased pulmonary function. Short term exposures to nitrogen dioxide have resulted in a wide range of respiratory problems in school children, such as coughs and sore throats. (Air Pollution from Road Vehicles. LH Watkins Transport Research Laboratory HMSO 1991). It has been reported that one in 25 adults and one in 7 children suffer from asthma. In 2005 one in 6 deaths of women and one in 5 deaths in men was attributed to heart disease. ([www.bbc.co.uk/news](http://www.bbc.co.uk/news) "Heart disease the Biggest Killer" May 2006).

3.4 Reference is made above to greenhouse gases as a constituent of vehicle exhaust emissions. Research has shown that the duration of heat waves has doubled since the late 1800's. (BBC

website Aug 2007). During the heat wave of 2003 which spanned 20 days it is alleged there were an additional 14,000 deaths in France. During the same period in England there were an additional 2000 deaths. ([www.bbc.co.uk/news](http://www.bbc.co.uk/news) "Health experts' Heatwave warning" August 2006)

#### **4. Air Quality Management Area Options**

- 4.1. The most recent report on air quality in Salisbury was published at the end of April 2007. It recommended extending the areas covered by the existing AQMA's. The areas which exhibited pollution levels in excess of targets were the main traffic routes through the city. Furthermore, excessive levels were also noted at London Road/ St Marks Road where they meet St Marks Roundabout and Wilton Road.
- 4.2. Changes to an AQMA does not in itself suggest agreement to any specific measures but represents a step towards developing an action plan within which various projects may emerge. Projects would aim to directly or indirectly improve air quality in the AQMA and could entail changes to road networks or vehicular access to target areas. This report does not represent any approval for such projects and it should be stressed that adequate opportunity will be provided for Member input into the development and approval of options in due course.
- 4.3. The first step is to consider the changes to the AQMA's in Salisbury. There are three main options for the physical boundaries of the AQMA's. These are:
  - 4.3.1. The smallest possible area, i.e. only the area where the air quality standard fails.
  - 4.3.2. A slightly larger area, following physical boundaries such as property or fence lines.
  - 4.3.3. A much larger area, e.g. the whole of the city centre inside the ring road.

#### **5. Consultation**

- 5.1. In order to engage the public and partners, a public consultation exercise was undertaken. This aimed to identify public preference for setting the boundaries of the AQMA's, as well as gaining valuable feedback on the public appetite for potential actions.
- 5.2. The consultation comprised a leaflet with short questionnaire and prepaid tear off section. It was sent out to all residents and businesses within the city centre. The leaflets were also distributed to area offices, local libraries and parish councils. The public consultation closed on the 31<sup>st</sup> August 2007
- 5.3. Over 80% of the public consulted believed that improving air quality should be a high priority and the majority preferred to see the AQMA cover the whole of the city centre. A more detailed summary of the results of the consultation are attached for information.

#### **6. The Way Forward**

- 6.1. An Air Quality Action Plan must be drawn up within the next 12 months. This will involve identifying the measures necessary to deal with poor air quality in the designated AQMA's. The action plan will be the next step following agreement of the revised AQMA's. Its development will engage a range of partners including officers from the Joint Transportation Section, Wiltshire County Council Transport Planning and the City Centre Manager. Portfolio Holders for Environment and Transportation will be involved in the development of a draft report to return to this committee in due course.
- 6.2. In the past, the strategy has been to focus AQMA's on the problem areas ie, specific roads. The reality however is that such a process is very narrow and is likely to result in pushing the problem around the city ie, we achieve progress in one road because the cause of the problem has been moved to another. A more holistic approach is consequently thought to be preferable and it is considered that the wider scope outlined in paragraph 4.3.3 is the most appropriate option to adopt. This proposal received most support amongst respondents to the public consultation.

- 6.3. In view of the comments made above it is proposed to make AQMA orders for the city centre, Wilton Road and London Road/ St Marks Road areas. (see Appendix I)

**7. Recommendation(s):**

- 7.1. Members are recommended to:
- 7.2. Approve the orders designating air quality management areas on Wilton Road and London road as referred to in paragraph 6.3 above, and vary the existing five orders individual orders to form one AQMA for the whole city centre.
- 7.3. Instruct officers to progress the development of proposals for improving air quality in the city, to form the basis for a report back to this committee in due course.

**8. Background Papers:**

Detailed Assessment of Air Quality in Salisbury. April 2007.  
<http://www.salisbury.gov.uk/air-quality-report.pdf>

Air Quality Expert Panel Report on Trends in Nitrogen in Primary Nitrogen Dioxide in The UK.  
Draft report August 2006  
DEFRA, Scottish Executive, Welsh Assembly and DoE N Ireland.  
[www.defra.gov.uk/environment](http://www.defra.gov.uk/environment)

**9. Implications:**

- **Financial:** There are no financial implications for making the orders.
- **Legal:** The Environment Act 1995 Section 83 places a duty on local authorities to designate as air quality management areas those parts of its district identified as failing air quality objectives. The power to make the order is conferred on Salisbury District Council and has not been delegated to the Head of Environmental Services
- **Human Rights:** None
- **Personnel:** None
- **Community Safety:** None.
- **Environmental:** Air Quality is a key indicator of sustainability and quality of life. Air Quality in Salisbury is affected primarily by road traffic.
- **ICT:** None.
- **Council's Core Values:** Reducing traffic congestion in Salisbury and improving public transport. Creating a better place to live an excellent service and a thriving economy.
- **Wards Affected:** All city wards are potentially affected.

**SALISBURY DISTRICT COUNCIL.**

**THE SALISBURY DISTRICT AIR QUALITY MANAGEMENT  
AREA ORDER 2007-XX-XX**

**SECTION 83(1) ENVIRONMENT ACT 1995**

**ORDER DESIGNATING AN AIR QUALITY MANAGEMENT AREA**

Whereas the Salisbury District Council (“the Council”) is satisfied that as a result of its air quality review and assessment dated **xx October 2007** the air quality objective for nitrogen dioxide (annual mean) is not likely to be achieved by the relevant dates prescribed by the Air Quality (England) Regulations 2000 as amended in the area described below.

The Council, in exercise of the powers conferred on it by section 83 (1) of the Environment Act 1995 HEREBY ORDERS THAT:

- 1 The area edged in blue on the attached map shall be designated as an Air Quality Management Area, to be known as **Salisbury Air Quality Management Area (City Centre)**.
- 2 The Air Quality Management Area will be an air quality management area in relation to nitrogen dioxide only
- 3 The order may be cited as Salisbury Air Quality Management Area (City Centre).
- 4 This order varies and supersedes the individual orders made for Milford Street, Minster Street, Minster Street, Brown Street, Fisherton Street and Exeter Street Salisbury.
- 5 The order shall come into force on **XX October 2007** and shall remain in force until varied or revoked by a subsequent Order in accordance with section 83(2) of the Environment Act 1995.

**THE COMMON SEAL OF SALISBURY**

DISTRICT COUNCIL WAS HERETO  
AFFIXED ON THE.....  
2007 IN THE PRESENCE OF:

Solicitor to the Council.

**SALISBURY DISTRICT COUNCIL.**

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The Council, in exercise of the powers conferred on it by section 83 (1) of the Environment Act 1995 HEREBY ORDERS THAT:

- 1 The area edged in blue on the attached map shall be designated as an Air Quality Management Area, to be known as **Salisbury Air Quality Management Area (London Road)**.
- 2 The Air Quality Management Area will be an air quality management area in relation to nitrogen dioxide only
- 3 The order may be cited as Salisbury Air Quality Management Area (London Road).
- 4 The order shall come into force on **XX October 2007** and shall remain in force until varied or revoked by a subsequent Order in accordance with section 83(2) of the Environment Act 1995.

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The Council, in exercise of the powers conferred on it by section 83 (1) of the Environment Act 1995 HEREBY ORDERS THAT:

- 1 The area edged in blue on the attached map shall be designated as an Air Quality Management Area, to be known as **Salisbury Air Quality Management Area (Wilton Road)**.
- 2 The Air Quality Management Area will be an air quality management area in relation to nitrogen dioxide only
- 3 The order may be cited as Salisbury Air Quality Management Area (Wilton Road).
- 4 The order shall come into force on **XX October 2007** and shall remain in force until varied or revoked by a subsequent Order in accordance with section 83(2) of the Environment Act 1995.

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**Results of Air Quality Review & Assessment Public consultation.**

**Q: Do you think the council should give a high priority to improving local air quality?**

Yes	No	Don't Know
80.1%	16.6%	3.3%

**Q: Do you think the following measures should be included in the council's air quality action plan?**

Measures to be included in action plan?	Yes %	No %	Don't Know %
Road user charging	17.90	69.10	13.00
Improved Public Transport	83.60	11.4	5
Low Emission Zones	67.80	25.6	6.6
Roadside emission testing	71.10	21.4	7.5%
More pedestrianisation	72.70	23	4.3
Improved walking/ cycling networks	85.30	10.5	4.2
Permanent parking restrictions	47.10	38.9	14

**Q: Where do you think an Air Quality management Area should be declared?**

An AQMA should be declared?	Yes %	No %
Central Salisbury	88.1	11.9
Salisbury ring road	78.4	21.6
Wilton Road	70.3	29.7
London Road	63.6	36.4

**Q: Would you prefer to see the AQMA to cover the:**

Boundaries of the AQMA?	%
Smallest possible area	21.5
Slightly larger area	16.1
large area, whole of city centre	62.4