

# **Salisbury District Council**

## **Local Air Quality Management – Updating and Screening Assessment**

**Ref: BV/AQ/2407**

**April 2006**





**DOCUMENT INFORMATION AND CONTROL SHEET**

Report Title: Salisbury District Council – Local Air Quality Management – Updating and Screening Assessment

Report Ref: BV/AQ/2407

**Client:**

Salisbury District Council  
 Environmental Services  
 The Council House  
 Bourne Hill  
 Salisbury  
 Wiltshire  
 SP1 3UZ

Project Manager Gary Tomsett  
 Tel: 01722 434319  
 Fax: 01722 434643

**Environmental Consultant**

Bureau Veritas  
 Great Guildford House  
 30 Great Guildford Street  
 London  
 SE1 0ES

Project Manager Lucy Parkin  
 Tel: 020 7902 6126  
 Fax: 020 7902 6149

Project Team Lucy Parkin Erwan Corfa  
 Principal Author Erwan Corfa

**Document Status and Approval Schedule**

Issue	Status	Description	Prepared by: Erwan Corfa Consultant Signed/Dated	Reviewed by: Lucy Parkin Senior Consultant Signed/Dated
	Draft Report	Issued to client by Email	26/04/2006	27/04/2006
	Final Report	Issued to client by Email	28/04/2006	28/04/2006

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## EXECUTIVE SUMMARY

Part IV of the Environment Act 1995 places a statutory duty on local authorities to review and assess the air quality within their area, against air quality objectives set in Regulation, and take account of Government Guidance when undertaking such work. Where pollutant concentrations are not expected to meet the air quality objectives, the Local Authority is required to declare an Air Quality Management Area (AQMA).

Between 1999 and 2003, Salisbury District Council undertook its First Round of review and assessments of air quality. The First Round assessments (Stages 1, 2, and 3) concluded that the annual mean nitrogen dioxide (NO<sub>2</sub>) concentrations were unlikely to meet the air quality objectives in four locations in Salisbury City Centre and further investigation of concentrations in Wilton and near the Ring Road was necessary. As required, Salisbury District Council carried out a further Stage 4 assessment of air quality in these areas. The Stage 4 assessment confirmed that AQMAs would be required for the four sites in Salisbury City Centre (Fisherton Street, Brown Street, Milford Street and Minster Street) and near the A36 in Wilton, but NO<sub>2</sub> concentrations in the vicinity of the Ring Road were likely to meet the objectives by their target dates.

The Second Round of Review and Assessment began with an Updating and Screening Assessment (USA), in 2003. Salisbury District Council's USA concluded that annual mean NO<sub>2</sub> concentrations in 3 of the 4 AQMAs in Salisbury City Centre may meet the air quality objectives. The USA also identified that the annual mean NO<sub>2</sub> objective may not be met in the vicinity of Exeter Street, outside the existing AQMAs. Therefore a Detailed Assessment of NO<sub>2</sub> in these areas was required.

Salisbury District Detailed Assessment report (June 2004) drew upon detailed modelling and monitoring of NO<sub>2</sub> concentrations in Salisbury City Centre. The Detailed Assessment concluded that the AQMAs in Salisbury City Centre should remain, with the Brown Street AQMA being extended to incorporate Winchester Street and a further AQMA should be declared in the vicinity of Exeter Street. The report also recommended that NO<sub>2</sub> concentrations in the vicinity of London Road and Wilton Road remain under close review.

This USA provides an update with respect to air quality issues within the district since the previous (second) round of review and assessment. There have been a number of changes to the technical guidance for the review and assessment process since the last round, which have been taken into account in this assessment.

Having considered each pollutant and presented evidence to support the assessment of each, it is concluded that the air quality objectives for carbon monoxide, benzene, 1,3-butadiene, lead, sulphur dioxide and PM<sub>10</sub> will be met. There will be no requirement to undertake a Detailed Assessment for these pollutants.

The results of the diffusion tubes monitoring have shown that annual mean NO<sub>2</sub> concentrations exceed the AQS objective near the following roads:

- Wilton Road,
- South Western Road,
- Fisherton Street,
- London Road.

All of these locations are outside the current AQMA and monitoring locations are considered to represent relevant exposure. Therefore, progression to Detailed Assessment of NO<sub>2</sub> concentrations is warranted for these roads. It is recommended that the Council continue with its monitoring programme for nitrogen dioxide to confirm the findings of this report.

The NO<sub>2</sub> annual mean AQS objective is also exceeded in Blue Boar Row according to diffusion tubes data, but this site is not considered to be a relevant exposure and therefore a detailed assessment for this road is not required.

### Summary Table

<b>Pollutant</b>	<b>Detailed assessment required?</b>	<b>Sources/Location</b>
Benzene	No	
1, 3 - butadiene	No	
Carbon monoxide	No	
Lead	No	
Nitrogen dioxide	Yes	Wilton Road, South Western Road, Fisherton Street (outside current AQMA) and London Road
PM <sub>10</sub>	No	
Sulphur dioxide	No	

## 1 INTRODUCTION

### 1.1 Project Background

Bureau Veritas (formerly Casella Stanger) was appointed by Salisbury District Council to carry out the third round of Updating and Screening Assessment (USA) of air pollution sources that may affect local air quality within their administrative area based on information provided by the Local Authority. The USA is required to be undertaken as part of the Local Authority's statutory duties under the Local Air Quality Management (LAQM) regime as defined within Part IV of the Environment Act 1995.

### 1.2 Legislative Background

#### 1.2.1 Air Quality Strategy Objectives

The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (AQS)<sup>1</sup> (along with its addendum<sup>2</sup>) contains national air quality standards and objectives established by the Government to protect human health. The objectives for seven pollutants have been prescribed within the Air Quality (England) Regulations 2000<sup>3</sup> and the Air Quality (England) (Amendment) Regulations 2002<sup>4</sup> (benzene, 1,3-butadiene, carbon monoxide, lead, nitrogen dioxide, sulphur dioxide and particulates). The AQS objectives set in regulation in England (not London) are shown in Table 1.1.

**Table 1.1 AQS Objectives in Regulations for England (Not London)**

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 µg/m <sup>3</sup>	Running annual mean	31.12.2003
	5 µg/m <sup>3</sup>	Annual mean	31.12.2010
1,3 Butadiene	2.25 µg/m <sup>3</sup>	Running annual mean	31.12.2003
Carbon monoxide	10 mg/m <sup>3</sup>	Maximum daily 8-hour mean	31.12.2003
Lead	0.5 µg/m <sup>3</sup>	Annual mean	31.12.2004
	0.25 µg/m <sup>3</sup>	Annual mean	31.12.2008

1 DETR (2000) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland – Working together for Clean Air, The Stationery Office

2 Defra (2002) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland: Addendum, The Stationery Office

3 DETR (2000) The Air Quality Regulations 2000, The Stationery Office

4 Defra (2002) The Air Quality Regulations 2002, The Stationery Office

Nitrogen dioxide <sup>a</sup>	200 µg/m <sup>3</sup> not to be exceeded more than 18 times a year	1 hour mean	31.12.2005
	40 µg/m <sup>3</sup>	annual mean	31.12.2005
Particles (PM <sub>10</sub> ) (gravimetric) <sup>b</sup>	50 µg/m <sup>3</sup> not to be exceeded more than 35 times a year	24 hour mean	31.12.2004
	40 µg/m <sup>3</sup>	annual mean	31.12.2004
Sulphur dioxide	350 µg/m <sup>3</sup> not to be exceeded more than 24 times a year	1 hour mean	31.12.2004
	125 µg/m <sup>3</sup> not to be exceeded more than 3 times a year	24 hour mean	31.12.2004
	266 µg/m <sup>3</sup> not to be exceeded more than 35 times a year	15 minute mean	31.12.2005

- a. The objectives for nitrogen dioxide are provisional. These Objectives are equivalent to the EU Limit value to be met by 2010
- b. Measured using the European gravimetric transfer sampler or equivalent.

In February 2003 an addendum to the AQS was published that included provisional objectives for PM<sub>10</sub>, to be achieved by 2010. These objectives have not been incorporated into the regulations for England but local authorities are expected to give them consideration during their review and assessment of air quality and as such have been assessed in this report. These provisional AQS Objectives are shown in Table 1.2.

**Table 1.2 Provisional Objectives for PM<sub>10</sub> in England (not London) Outlined in the AQS Addendum**

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Particles (PM <sub>10</sub> ) (gravimetric)	50 µg/m <sup>3</sup> not to be exceeded more than 7 times a year	24 hour mean	31.12.2010
	20 µg/m <sup>3</sup>	Annual mean	31.12.2010

## 1.2.2 Local Air Quality Management

Part IV of the Environment Act places a statutory duty on local authorities to periodically 'review and assess' the air quality within their area under the Local Air Quality Management (LAQM) regime. This involves consideration of present and likely future air quality against the AQS objectives prescribed within the Air Quality Regulations. Where the LAQM Review and Assessment process finds that pollutant concentrations are unlikely to meet the AQS objectives by their target dates in areas where the AQS objectives apply, the Local Authority is required to declare an Air Quality Management Area (AQMA) under Section 83(1) of the Environment Act 1995. The areas in which the AQS objectives apply are defined in the AQS as locations outside buildings or other natural or man-made structures above or below ground where members of the public are regularly present and might reasonably be expected to be exposed [to pollutant concentrations] over the relevant averaging period of the AQS objective. Typically these include residential properties and schools/ care homes for longer period (i.e. annual mean) pollutant objectives and high streets for short-term (i.e. 1-hour) pollutant objectives.

Guidelines for the 'Review and Assessment' of local air quality were first published in the 1997 National Air Quality Strategy (NAQS)<sup>5</sup> along with associated policy guidance and technical guidance. Within the First Round of Review and Assessment it was recommended that local authorities fulfil their statutory duty under the LAQM regime by undertaking a three-stage assessment, increasing in detail at each stage.

In 2000, Government reviewed the NAQS and published the revised AQS, to which an addendum was issued in February 2003. Associated revised LAQM Technical Guidance (LAQM.TG(03))<sup>6</sup> and Policy Guidance (LAQM.PG(03))<sup>7</sup> were issued on behalf of DEFRA in January 2003. This guidance sets the framework for the requirements of review and assessment for future years, taking account of experiences from the previous rounds of review and assessment. This current framework for review and assessment begins with an Updating and Screening Assessment (USA) which considers the likelihood of all the AQS objectives being achieved across the Local Authority's administrative area. If the USA identifies that an AQS objective may not be met, then the Local Authority must proceed to a Detailed Assessment for that pollutant. If the results of the Detailed Assessment confirm that an AQS objective is unlikely to be met they are required to declare an AQMA.

In March 2004, the review and assessment process had culminated in the declaration of around 120 separate AQMAs across the UK, of these 89 % were apportioned to road traffic emissions. Of the 89% of road traffic AQMAs around 55% represent problems in the attainment of the AQS objectives for NO<sub>2</sub> alone, whilst the remaining 45% have been made on NO<sub>2</sub> in combination with PM<sub>10</sub>.<sup>8</sup>

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<sup>5</sup> DoE (1997) The United Kingdom National Air Quality Strategy The Stationery Office

<sup>6</sup> Defra (2003) Technical Guidance LAQM.TG(03), Part IV of the Environment Act 1995, Local Air Quality Management, The Stationery Office

<sup>7</sup> Defra (2003) Policy Guidance LAQM.PG(03), Part IV of the Environment Act 1995, Local Air Quality Management, The Stationery Office

<sup>8</sup> Evaluation of Local Authority Air Quality Action Planning through Local Air Quality Management. Casella Stanger and Transport Travel Research Ltd on behalf of Department for Environment, Food and Rural Affairs. May 2004

Having declared an AQMA the authority is required to confirm the findings of the Detailed Assessment work through further monitoring or modelling assessments (Further Assessment). The Further Assessment should provide information on the source-apportionment of the pollutant emissions in order to identify the level of pollutant reduction required for the attainment of relevant air quality objectives. Additionally, consideration should be made to evaluating local management practices that could be used to improve air quality, and feed into the formulation of an Action Plan.

The Second Round of Review and Assessment (2003-2005) provided an opportunity for local authorities to update the findings of their first round of review and assessment. In doing so, local authorities were to take into consideration changes in AQS Objectives and revised Technical Guidance (LAQM.TG(03)), new emission sources, and any significant proposed planning developments due to take place before the relevant AQS Objective target date.

Additional guidance has been provided in the form of FAQs and updated LAQM tools in January 2006 to assist with this third round of review and assessment (2006-7). This includes revised modelled background concentration maps for NO<sub>x</sub>, NO<sub>2</sub> and PM<sub>10</sub>, updated future year calculation tools and updates on the assessment of specific sources (rail, shipping, poultry farms).

### **1.3 Aims of the Updating and Screening Assessment**

The purpose of the Updating and Screening Assessment is:

- to identify new or substantially changed emission sources since the last round of review and assessment which may lead to an air quality objective being exceeded. A series of checklist for pollutants, and screening tools for industrial and road traffic sources are used in order determine those new sources that may have significant contributions to pollutant concentrations and the possibility of the air quality objectives being exceeded.
- to assess new monitoring data in terms of relevant exposure and compare with air quality objectives.
- where a risk of exceeding an air quality objective at relevant exposure locations has been identified through the USA, a detailed assessment is required (due to be reported by April 2007). The detailed assessment should identify with reasonable certainty whether or not an exceedence is likely to occur.

### **1.4 Reporting of the Updating and Screening Assessment**

The USA has been reported as one section for each pollutant to be assessed, as per the LAQM.TG(03) Technical Guidance, with reference to updated checklists provided for the third round.

A summary of the responses to the USA checklist criteria for each pollutant has been included within each section.

## **1.5 Summary of the First and Second Rounds of Review and Assessment**

Between 1999 and 2003, Salisbury District Council undertook its First Round of review and assessments of air quality. The First Round assessments (Stages 1, 2, and 3) concluded that the annual mean nitrogen dioxide (NO<sub>2</sub>) concentrations were unlikely to meet the air quality objectives in four locations in Salisbury City Centre and further investigation of concentrations in Wilton and near the Ring Road was required. As required, Salisbury District Council carried out a further Stage 4 assessment of air quality in these areas. The Stage 4 assessment confirmed that AQMAs would be required for the four sites in Salisbury City Centre (Fisherton Street, Brown Street, Milford Street and Minster Street), and near the A36 in Wilton, but NO<sub>2</sub> concentrations in the vicinity of the Ring Road were likely to meet the objectives by their target dates. The AQMA in Wilton was revoked, one year after declaration, as monitoring data indicated that the AQS would be met.

The Second Round of Review and Assessment began with an Updating and Screening Assessment (USA), in 2003. Salisbury District Council's USA concluded that annual mean NO<sub>2</sub> concentrations in 3 of the 4 AQMAs in Salisbury City Centre may meet the air quality objectives. The USA also identified that the annual mean NO<sub>2</sub> objective may not be met in the vicinity of Exeter Street, outside the existing AQMAs. Therefore a Detailed Assessment of NO<sub>2</sub> in these areas was required.

Salisbury District Detailed Assessment report (June 2004) drew upon detailed modelling and monitoring of NO<sub>2</sub> concentrations in Salisbury City Centre. The Detailed Assessment concluded that the AQMAs in Salisbury City Centre should remain, with the Brown Street AQMA being extended to incorporate Winchester Street and a further AQMA should be declared in the vicinity of Exeter Street. The report also recommended that NO<sub>2</sub> concentrations in the vicinity of London Road and Wilton Road remain under close review.

Salisbury District Council completed its annual Progress Report for 2005. Analysis of the monitoring results indicated the annual mean NO<sub>2</sub> AQS objective would not be met by its target date of 2005 but is likely to be met by 2010.

## 2 ASSESSMENT METHODOLOGY

Background concentrations as used in this assessment have been obtained from the national estimated background concentrations available from the Air Quality Archive website [www.airquality.co.uk](http://www.airquality.co.uk). In January 2006, the updated background concentrations for pollutants NO<sub>x</sub>, NO<sub>2</sub> and PM<sub>10</sub> were released, which are projected from a 2004 baseline.

Salisbury District Council's continuous and passive diffusion tube monitoring results are considered within this report.

Traffic data for roads within the area have been provided by Wiltshire County Council (WCC) in the form of Annual Average Daily Traffic (AADT) flow data. Speeds have been based on latest data available from WCC.

Design Manual for Roads and Bridges (DMRB)<sup>9</sup> local air quality assessment method, and accompanying spreadsheet screening tool (V1.02) has been used to predict the traffic flow at relevant receptor locations along significant roads and junctions in the area in order to assess the concentrations of NO<sub>2</sub>, PM<sub>10</sub>, CO and benzene in the relevant AQS objective years.

The Salisbury District Council's air quality officer has provided a current list of industrial processes (Part B) for processes regulated by the Council under LAPPC<sup>10</sup>. This includes a list of current petrol stations which have been screened using the criteria set out in the USA checklists. For the larger Part A1 processes, regulated by the Environment Agency, information has been obtained from the Environment Agency Pollution Inventory for new or changed processes potentially significant to LAQM as set out in LAQM.TG(03) Annex 2. Industrial sources in neighbouring Local Authority areas have also been taken into account.

Other potential sources of pollutant emissions in the area, such as rail, shipping, airports, domestic sources, bus stations, small boilers and fugitive sources of PM<sub>10</sub> (quarries, landfills, construction sites, etc) have been derived if necessary through discussions with the Local Authority and screened using the criteria as set out in the USA checklists.

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<sup>9</sup> Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part1 Air Quality (February 2003) and DMRB Screening Tool V1.02.xls (November 2003)

<sup>10</sup> There are no Part A2 processes within Salisbury District Council's administrative area.

### 3 UPDATING AND SCREENING OF CARBON MONOXIDE

#### 3.1 New monitoring data

There is currently no monitoring of carbon monoxide carried out within the district. Carbon monoxide concentrations measured during 2005 at all sites within the UK automatic monitoring network (operated on behalf of Defra) including busy roadside sites in London, met the AQS objective.

#### 3.2 Very busy roads or junctions in built-up areas

Monitoring data from across the UK indicate that the carbon monoxide objective is only likely to be exceeded near to 'very busy' roads and junctions<sup>11</sup>, where the current year background concentration is greater than 1mg/m<sup>3</sup>. The highest estimated background concentration in 2006 in the district is 0.2mg/m<sup>3</sup>. Therefore the AQS objective is expected to be achieved at all locations within the area.

#### 3.3 Conclusion

No further action is required for carbon monoxide.

#### Checklist Summary for Carbon Monoxide:

Item	Response
New monitoring data	Salisbury is currently not monitoring carbon monoxide
Very busy roads or junctions in built up areas	Background concentrations in the Borough are below the level at which very busy roads and junctions may cause concentrations to exceed the objective
<b>Conclusion</b>	<b>No further action required</b>

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<sup>11</sup> 'Very busy' is defined as single carriageways with greater than 80,000 vehicles per day, dual carriageways with greater than 120,000 vehicles per day and motorways with greater than 140,000 vehicles per day

## **4 UPDATING AND SCREENING OF BENZENE**

### **4.1 Monitoring data outside an AQMA**

There is currently no monitoring of benzene undertaken within the district. Benzene concentrations measured during 2005 at all sites within the UK automatic monitoring network (operated on behalf of Defra) including busy roadside sites in London, met the AQS objective for 2003. The annual mean concentration measured at just one of the 40 monitoring sites in the UK (Barnsley Gawber) was above the AQS objective to be met in England and Wales by 2010. It is expected that concentrations at this site will decrease and meet this AQS objective by its target date.

### **4.2 Monitoring data within an AQMA**

There are no AQMA areas that have been declared for benzene in the district and therefore this section is not relevant.

### **4.3 Very busy roads or junctions in built-up areas**

Monitoring data from across the UK indicate that the benzene objective for 2010 is only likely to be exceeded near to 'very busy' roads and junctions<sup>12</sup>, where the 2010 background concentration is greater than  $2\mu\text{g}/\text{m}^3$ . The highest estimated background concentration for 2010 in the district is  $0.2\mu\text{g}/\text{m}^3$ . Therefore road traffic emissions are unlikely to lead to the AQS objective for benzene being exceeded.

### **4.4 New industrial sources**

There have been no new processes identified in the district or in neighbouring authorities which emit significant quantities of benzene.

### **4.5 Industrial sources with substantially increased emissions, or new relevant exposure**

There are no existing industrial processes that emit significant quantities of benzene. There are therefore industrial emissions are unlikely to result in benzene concentrations exceeding the AQS objective.

### **4.6 Petrol stations**

There are 23 petrol stations within the district. These are listed in Table A3 and illustrated in Figure A2 of Appendix IV.

Petrol stations are only likely to lead to benzene concentrations exceeding the 2010 AQS objective if they have a large throughput of petrol (greater than 2 million litres per

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<sup>12</sup> 'Very busy' is defined as single carriageways with greater than 80,000 vehicles per day, dual carriageways with greater than 120,000 vehicles per day and motorways with greater than 140,000 vehicles per day

annum), are near to a busy road (>30,000 AADT) and have relevant exposure within 10 m of the petrol pumps.

There are no petrol stations within the district that fulfil these criteria, and therefore it is unlikely that petrol stations will lead to benzene concentrations exceeding the AQS objectives.

#### 4.7 Major fuel storage depots (petrol only)

There are no major fuel storage depots in the district.

#### 4.8 Conclusion

No further action is required for benzene.

#### Checklist Summary for Benzene:

Item	Response
Monitoring data outside an AQMA	Monitoring data within the area is well below the objective
Monitoring data within an AQMA	No AQMA, therefore not relevant
Very busy roads or junctions in built up areas	No roads or junctions have been identified which meet this criteria
New industrial sources.	No industrial processes have been identified which meet this criteria
Industrial sources with substantially increased emissions, or new relevant exposure	No industrial processes have been identified which meet this criteria
Petrol stations	No petrol stations have been identified which meet these criteria
Major fuel storage depots (petrol only)	No major fuel storage depots in the area
<b>Conclusion</b>	<b>No further action required</b>

## 5 UPDATING AND SCREENING OF 1,3-BUTADIENE

### 5.1 Monitoring data

There is currently no monitoring of 1,3-butadiene carried out within the district. 1,3-butadiene concentrations measured during 2005 at all sites within the UK automatic monitoring network (operated on behalf of Defra) including busy roadside sites in London, met the AQS objective.

### 5.2 New industrial sources

There are no new processes which handle 1,3-butadiene located in or near Salisbury District.

### 5.3 Existing industrial sources with significantly increased emissions, or new relevant exposure

There are no existing industrial processes located in or near the district which emit significant quantities of 1,3-butadiene.

### 5.4 Conclusion

No further action is required for 1,3-butadiene.

#### Checklist Summary for 1,3-butadiene:

Item	Response
Monitoring data	Salisbury is currently not monitoring 1,3-butadiene
New industrial sources	No industrial processes have been identified which meet this criteria
Existing industrial sources with significantly increased emissions, or new relevant exposure	No industrial processes have been identified which meet this criteria
<b>Conclusion</b>	<b>No further action required</b>

## 6 UPDATING AND SCREENING OF LEAD

### 6.1 Monitoring data

There is currently no monitoring of lead carried out within the district. Lead concentrations measured during 2005 at all sites within the UK automatic monitoring network (operated on behalf of Defra) including busy roadside sites in London, met the AQS objectives for 2004 and 2008.

### 6.2 New industrial sources

There are no new processes, which emit lead, located in or near Salisbury District.

### 6.3 Industrial sources with substantially increased emissions, or new relevant exposure

There are no existing industrial processes in or near the district which emit significant quantities of lead.

### 6.4 Conclusion

No further action is required for lead.

#### Checklist Summary for Lead:

Item	Response
Monitoring data	Salisbury is currently not monitoring lead
New industrial sources	No industrial processes have been identified which meet this criteria
Industrial sources with substantially increased emissions, or new relevant exposure	No industrial processes have been identified which meet this criteria
<b>Conclusion</b>	<b>No further action required</b>

## 7 UPDATING AND SCREENING OF NITROGEN DIOXIDE

### 7.1 Monitoring data outside an AQMA

Salisbury District Council currently undertakes continuous monitoring of NO<sub>2</sub> in Salisbury City Centre at Bridge Street. Monitoring of NO<sub>2</sub> started in April 2005; this monitoring station was previously located in the town of Wilton, King Street, near the A36 where an AQMA had been declared, until the Council revoked the AQMA in 2004.

Salisbury District Council also monitored NO<sub>2</sub> at Salisbury's Ring Road at The Greencroft, Churchill Way until July 2003. The results for all sites are provided in Table 7.1.

The continuous monitoring stations comply with the Salisbury District Council's own Quality Assurance policy. The continuous monitors calibrate automatically every 72 hours. Salisbury District Council officers also check the calibrations manually at least every 2 weeks.

Data capture was high for all sites with results above 98% every year. Technical Guidance LAQM.TG(03) recommends that where less than 9 months monitoring data is available, the annual mean concentration be estimated by comparing the seasonal variation at several nearby AURN sites, following the methodology in LAQM.TG(03). This method uses data from the nearby monitoring sites to find an average ratio between the concentration measured over the short term monitoring period and the annual mean concentration. The concentrations shown in grey have been estimated from the short term monitoring concentrations in accordance to this methodology, using the closest urban background monitoring stations<sup>13</sup> from the Automatic Urban and Rural Network (AURN) as recommend by LAQM.TG(03).

The 2005 annual mean has been projected to 2010 using the updated Year Adjustment Factors spreadsheet from the UK Air Quality Information Archive website<sup>14</sup>.

The continuous monitoring results indicate that the NO<sub>2</sub> annual mean AQS objective is currently not exceeded, although Bridge Street is close to the objective of 40µg/m<sup>3</sup>. The projected annual means to 2010 show that the objectives will be met. No hourly mean was above 200µg/m<sup>3</sup> at Bridge Street in 2005.

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<sup>13</sup> The monitoring stations are Bournemouth, Portsmouth and Reading New Town.

<sup>14</sup> [www.airquality.co.uk](http://www.airquality.co.uk)

**Table 7.1: Continuous NO<sub>2</sub> monitoring outside an AQMA - results 2002 – 2005, µg/m<sup>3</sup>**

Location		X	Y	2002	2003	2004	2005	projected to 2010
Salisbury	Bridge Street	414295.45	129945.73	-	-	-	35.8	29.5
Wilton	Churchill Way East (Ring Road)	414811.45	130073.5	33.1	38.7	-	-	30.2
	Kings Street (A36)			-	34.4	31.7	-	25.4

Nitrogen dioxide is additionally monitored using diffusion tubes at 28 locations in the district. 21 of them are not within an AQMA and are discussed in this section. The other sites are assessed in the next section.

Bristol Scientific Services supply and analyse the diffusion tubes using the 20% TEA<sup>15</sup> in water method. Bristol Scientific Services participates in the UK National Diffusion Tube Network and the Workplace Analysis Scheme for Proficiency (WASP).

Diffusion tubes are often co-located with continuous monitors in order to determine the bias of the diffusion tube measurements relative to the continuous monitor. Co-locating the diffusion tubes in triplicate also allows the precision and accuracy of the diffusion tube measurements to be determined. Bias of diffusion tubes is thought to be largely associated with the laboratory and preparation method used. Data from NO<sub>2</sub> diffusion tube collocation studies across the UK is collated on behalf of Defra, and is available through the Defra's Review and Assessment Helpdesk. This allows the calculation of a default bias factor for the period under consideration and the laboratory. Local authorities are advised to consult the inventory of bias factors and consider combining any locally available factors with the default factor.

With regard to the application of a bias adjustment factor for the diffusion tubes, the technical guidance LAQM.TG(03) and Review and Assessment Helpdesk<sup>16</sup> recommends use of a local bias adjustment factor where available and relevant to diffusion tube sites. Salisbury District Council has triplicate co-located diffusion tubes at their two current continuous monitoring stations in Exeter Street and Bridge Street. As monitoring in Bridge Street started only in April 2005, only data from Exeter Street have been used to derive a local bias adjustment factor for 2005 of 1.137.

The 2005 annual mean has been projected to 2010 using the updated Year Adjustment Factors spreadsheet from the UK Air Quality Information Archive website.

The diffusion tube results, as shown in Table 7.2, show NO<sub>2</sub> annual mean AQS objective is exceeded at 5 locations in 2005:

- Blue Boar Row
- 42 Fisherton Street
- 68 London Road
- 6 Wilton Road

<sup>15</sup> TEA = Triethanolamine

<sup>16</sup> [www.uwe.ac.uk/aqm/review](http://www.uwe.ac.uk/aqm/review)

- 123 South Western Road

The highest concentrations are observed in Wilton Road and South Western Road, the latter indicating that the objective will not be met in 2010. The diffusion tube near 6 Wilton Road is situated at the kerbside, approximately 1m from the façade of the nearest residential property. As the annual mean concentration at this kerbside site was 47µg/m<sup>3</sup> in 2005, it is likely that the AQS objective was also exceeded at the façade of the property. The diffusion tube at 123 Southwestern Road is located at the façade of the property and therefore is representative of relevant exposure. The diffusion tubes at 42 Fisherton Street and London Road are also close to properties and therefore considered to be relevant exposure. However Blue Boar Row is not deemed to be a relevant exposure for the annual average objective as the street is occupied by large shops and banks.

**Table 7.2: NO<sub>2</sub> diffusion tubes outside an AQMA - Annual mean results 2005, µg/m<sup>3</sup>**

	Location	easting	northing	Annual Mean 2005	Bias Adjusted 2005	2005 projected to 2010
Salisbury	44 High Street	414227.3	129835.0	24.5	27.8	23.4
	15 St Martins Church Street	414943.5	129671.4	24.6	28.0	23.6
	3 St Francis Road	414368.6	131699.8	18.8	21.4	18.0
	4 Canadian Avenue	412882.0	130638.9	19.9	22.6	19.0
	Blue Boar Row	414426.9	130049.3	35.5	<b>40.4</b>	34.0
	Fish Row / Queen Street	414516.3	129948.9	27.1	30.8	25.9
	Boots Chemist New Canal	414364.9	129910.6	34.7	39.5	33.2
	82 Crane Street	-	-	31.9	36.3	30.5
	Lloyds Bank Castle Street	414367.9	130133.1	34.2	38.9	32.7
	33 Castle Road	414319.2	130866.1	30.5	34.7	29.2
	85 Estcourt Road	415011.2	130545.2	29.3	33.3	28.0
	42 Fisherton Street*	414118.5	130028.5	35.5	<b>40.4</b>	34.0
	12 Devizes Road	413709.2	130431.4	34.4	39.1	32.9
	68 London Road	415105.3	130641.1	37.4	<b>42.5</b>	35.8
	6 Wilton Road	413682.0	130380.2	<b>41.7</b>	<b>47.4</b>	39.9
	1 High Street	414305.6	129916.0	34.6	39.4	33.1
123 South Western Road	413827.7	130142.3	<b>42.6</b>	<b>48.5</b>	<b>40.8</b>	
Amesbury	No1 Chambers Avenue	416573.9	140786.4	12.2	13.8	11.6
Wilton	12 West Street	409599.9	131236.1	30.7	34.9	29.3
	1 Queen Street	409931.2	131553.1	33.3	37.9	31.9
Stoford	Dairy Cottage. Charity Farm.	408339.6	135488.3	32.6	37.1	31.2

\*This diffusion tube is not located within the declared AQMA in Fisherton Street.

## 7.2 Monitoring data within an AQMA

There are five AQMAs declared for annual mean NO<sub>2</sub> within Salisbury:

- Brown Street
- Fisherton Street
- Milford Street
- Minster Street
- Exeter Street

Salisbury District Council has undertaken continuous monitoring of NO<sub>2</sub> at Exeter Street since 2003. The monitoring station complies with the Council's own Quality Assurance policy. The continuous monitor calibrate automatically every 72 hours. Salisbury District Council officers also check the calibrations manually at least every 2 weeks. Data capture was high with results always above 99% every year.

The 2005 annual mean has been projected to 2010 using the updated Year Adjustment Factors spreadsheet from the UK Air Quality Information Archive website<sup>17</sup>.

The results provided in Table 7.3 show that the annual nitrogen dioxide AQS objective is currently not exceeded at Exeter Street air quality monitoring station but is very close to the objective of 40µg/m<sup>3</sup>. The projected annual means to 2010 show that the objectives will be met.

**Table 7.3: Continuous NO<sub>2</sub> monitoring within an AQMA - results 2004 – 2005, µg/m<sup>3</sup>**

Location	X	Y	2004	2005	projected to 2010
Salisbury Exeter Street AQMS	414546.08	129574.73	38.9	38.6	31.7

Five diffusion tubes are located within an AQMA. They are supplied and analysed by Bristol Scientific Services, as described in section 7.1. Data from Exeter Street continuous monitoring station have been used to derive a local bias adjustment factor for 2005 of 1.137. The 2005 annual mean has been projected to 2010 using the updated Year Adjustment Factors spreadsheet from the UK Air Quality Information Archive website. The result provided in Table 7.4 show that the NO<sub>2</sub> annual mean objective of 40µg/m<sup>3</sup> is exceeded at all sites, confirming the results of previous reports. The predicted 2010 annual means show that the objective will not be met in Minster Street, Winchester Street and Exeter Street.

A difference of about 10µg/m<sup>3</sup> has been noticed in the annual mean between the results of the diffusion tube at 75, Exeter Street and the co-located diffusion tubes at Exeter Street air quality monitoring station, although they are distant from 25m. This

<sup>17</sup> [www.airquality.co.uk](http://www.airquality.co.uk)

may be due to a better dispersion of pollutants at the air quality monitoring station as the location is close to an open area which is not the case of the diffusion tube which is located the other side of the street.

**Table 7.4: NO<sub>2</sub> diffusion tubes within an AQMA - Annual mean results 2005, µg/m<sup>3</sup>**

Location		easting	northing	Annual Mean 2005	Bias Adjusted 2005	2005 projected to 2010
Salisbury	2 Minster Street	414373.3	129979.3	<b>44.9</b>	<b>51.1</b>	<b>42.9</b>
	100 Brown Street	414634.2	129691.5	36.3	<b>41.3</b>	34.7
	16 Winchester Street	414602.0	130053.7	<b>42.9</b>	<b>48.8</b>	<b>41.0</b>
	32 Milford Street	414658.7	129938.6	32.1	36.5	30.7
	75 Exeter Street	414563.8	129593.4	<b>46.8</b>	<b>53.2</b>	<b>44.7</b>

### 7.3 Narrow congested streets with residential properties close to the kerb

NO<sub>2</sub> concentrations were predicted using a DMRB Assessment in the first round of review and assessment at residential properties close to the kerb along relevant roads, which were all located within Salisbury town centre. The results showed that the annual mean objective was likely to be exceeded at these locations and led to the declaration of AQMAs in Brown Street, Fisherton Street, Minster Street and Milford Street.

According to LAQM.TG(03), there is no need to proceed further with these roads as they have been previously assessed. However, the previous results have been mostly based on traffic data from 1998, and therefore it has been considered necessary to reassess the roads using the latest traffic data available together with the updated background concentrations for NO<sub>x</sub> and NO<sub>2</sub>. Wiltshire County Council provided new AADT traffic flow from 2005 automatic traffic counters (ATC) and vehicle speed based on 2003 measurements. NO<sub>2</sub> annual means have been calculated using DMRB for the roads with traffic flows greater than 10000 vehicles per day. The results are provided in Table A2 Appendix III and show that the AQS objectives are not exceeded.

### 7.4 Junctions

The busiest junctions with relevant exposure were identified in the first round of review and assessment. These junctions were not reassessed as no new traffic data were available. The 2003 USA mentioned that all the junctions located outside the current AQMAs were not likely to exceed the NO<sub>2</sub> objectives.

### 7.5 Busy streets where people may spend 1-hour or more close to traffic

Busy streets within the district were assessed in the first round of review and assessment using DMRB and therefore according to LAQM.TG(03) there is no need to proceed further with that section. However, as mentioned above in section 7.3, the

roads with traffic flow greater than 10000 vehicles per day have been reassessed using DMRB when new data were available (see Appendix III).

#### **7.6 Roads with high flow of buses and/or HGVs**

According to the USA 2003, there are no roads identified in the district that have a flow of buses and/or HGVs greater than 25%. There has been no significant change in HDVs traffic and therefore there is no further assessment needed.

#### **7.7 New roads constructed or proposed since the previous round of Review and Assessment**

There have been no new roads constructed since the previous round and therefore this section is not relevant.

#### **7.8 Roads with significantly changed traffic flows**

According to the data provided by Wiltshire County Council, there are no roads identified in the district that have had a substantial change in traffic flow of greater than 25% and no new relevant exposure at previously assessed roads which warrant further assessment. The DMRB assessment results for the main roads with >10000 AADT assessed in the area are shown in Appendix III.

#### **7.9 Bus Stations**

There is no open bus station in the district with more than 1000 bus movements per day, as assessed in previous round USA 2003. There are no significant changes to bus movements. It is unlikely that the bus emissions would lead to NO<sub>2</sub> concentrations exceeding the AQS objectives.

#### **7.10 New industrial sources**

There have been no new processes, which emit significant quantities of nitrogen dioxide in or near the district since the previous round of review and assessment and therefore there is no need for any further assessment.

#### **7.11 Industrial sources with substantially increased emissions, or new relevant exposure**

There are no industrial processes in or near the district which have been identified as likely to emit significant quantities of nitrogen dioxide in the previous round of review and assessment. No existing sources have substantially increased emissions or new relevant exposure.

#### **7.12 Aircraft**

There are no major airports in or near the district meeting the criteria.

### 7.13 Conclusion

Diffusion tubes show that the NO<sub>2</sub> objective is clearly exceeded at Wilton Road and South Western Road and to a lesser extent at Blue Boar Row, London Road and Fisherton Road (outside the current Fisherton Street AQMA). In accordance with LAQM.TG(03), Salisbury District Council should therefore proceed to a Detailed Assessment in these areas.

#### Checklist Summary for Nitrogen Dioxide:

Item	Response
Monitoring data outside an AQMA	Monitoring data indicate a risk of an exceedence of the annual mean objective at Wilton Road and South Western Road, and Fisherton Street (outside current AQMA), London Road and Blue Boar Row. The latter is not considered to be a relevant exposure.
Monitoring data within an AQMA	Monitoring data indicates that all streets are still close to or exceeding the annual mean objective
Narrow congested streets with residential properties close to the kerb	Examined in the first round review and assessment. DMRB with new available data predicted no exceedences of the NO <sub>2</sub> annual; mean objective.
Junctions	Examined in the first round of review and assessment.
Busy streets where people may spend 1-hour or more close to traffic	Examined in the first round review and assessment.
Roads with high flow of buses and/or HGVs	No roads with a flow of buses and/or HGVs greater than 25% and therefore no further assessment needed.
New roads constructed or proposed since the previous round of R&A	No new roads constructed since the previous round
Roads with significantly changed traffic flows, or new relevant exposure	No new roads identified with significantly changed traffic flows, or new relevant exposure
Bus Stations	No open bus station with more than 1000 bus movements. No changes or further assessment required..
New industrial sources	No industrial processes have been identified which meet this criteria
Industrial sources with substantially increased emissions, or new relevant exposure	No industrial processes have been identified which meet this criteria
Aircraft	No airports have been identified which meet this criteria
<b>Conclusion</b>	<b>Detailed Assessment required with respect to monitored NO<sub>2</sub> concentrations exceeding at Wilton Road, South Western Road, Fisherton Street (outside current AQMA) and London Road, as considered to be relevant exposures.</b>

## **8 UPDATING AND SCREENING OF SULPHUR DIOXIDE**

### **8.1 Monitoring data outside an AQMA**

There is currently no continuous monitoring of sulphur dioxide undertaken within the district.

### **8.2 Monitoring data within an AQMA**

No AQMA areas have been declared for sulphur dioxide in the district and therefore this section is not relevant.

### **8.3 New industrial sources**

There have been no new processes, which emit significant quantities of sulphur dioxide, introduced in or near Salisbury District since the first round of review and assessment.

### **8.4 Industrial sources with substantially increased emissions, or new relevant exposure**

No industrial processes in or near the district were found to emit significant quantities of sulphur dioxide in the first round of review and assessment. There have been no substantial changes to industrial sources regarding sulphur dioxide emissions since the last review and assessment.

### **8.5 Areas of domestic coal burning**

There are no areas of Salisbury District where there is a high density of domestic coal burning.

### **8.6 Small boilers (>5MW (thermal)) burning coal or oil**

The last USA mentioned only one boiler with an output of 5MW at Salisbury Hospital, which is gas fired. There has been no new coal or fuel oil fired boiler plant since the last review and assessment.

### **8.7 Shipping**

There is no shipping within the district.

### **8.8 Railway Locomotives**

As mentioned in the USA 2003, the railway station and maintenance depot within central Salisbury are not likely to have diesel locomotives idling for 15 minutes near relevant exposure and therefore the SO<sub>2</sub> short-term objective is unlikely to be exceeded.

## 8.9 Conclusion

A Detailed Assessment is not required for sulphur dioxide.

### Checklist Summary for Sulphur Dioxide:

<b>Item</b>	<b>Response</b>
Monitoring data outside an AQMA	Salisbury is currently not monitoring sulphur dioxide
Monitoring data within an AQMA	No AQMA declared, therefore no relevant
New industrial sources	No industrial processes have been identified which meet this criteria
Industrial sources with substantially increased emissions, or new relevant exposure	No industrial processes have been identified which meet this criteria
Areas of domestic coal burning	No significant domestic coal burning in the area
Small boilers (>5MW(thermal)) burning coal or oil	None of the boiler plants within the area meet the criteria
Shipping	No local sources of shipping emissions in the area
Railway Locomotives	There are no locations where locomotives are idle more than 15 minutes near relevant exposure
<b>Conclusion</b>	<b>No further action required</b>

## 9 UPDATING AND SCREENING OF PARTICULATE MATTER (PM<sub>10</sub>)

### 9.1 Monitoring data outside an AQMA

Salisbury District Council currently undertakes monitoring of PM<sub>10</sub> at two locations in Exeter Street and Bridge Street. Monitoring started in 2004 at Exeter Street and more recently in March 2005 at Bridge Street, as this monitoring station was previously located in Wilton King Street near the A36 (see section 7.1).

The monitoring stations are not part of the national network and therefore comply with the Council's own quality assessment policy. The continuous monitors calibrate automatically every 72 hours. Salisbury District Council officers also check the calibrations manually at least every 2 weeks.

Data capture in 2005 was 99% at Exeter Street and 81% at Bridge Street. The concentrations shown in grey have been annualised as the data were not covering a full year. The annual means were estimated from the short term concentrations using ratios derived from the closest urban background monitoring stations<sup>18</sup> from the Automatic Urban and Rural Network (AURN) as recommend by LAQM.TG(03).

The 2005 annual mean has been projected to 2010 using the updated Year Adjustment Factors spreadsheet from the UK Air Quality Information Archive website<sup>19</sup>.

Table 9.1 shows the PM<sub>10</sub> annual mean for the last 2 years. For that purpose, PM<sub>10</sub> primary and secondary background in Salisbury DC has been derived from the updated background concentration maps, also available at the UK Air Quality Information Archive website<sup>20</sup>. The monitoring locations coordinates were identified and the corresponding background value used to account for the variability of background concentrations within the District. Residual (coarse) PM<sub>10</sub> concentration is assumed to be 5.8µg/m<sup>3</sup>.

Table 9.2 shows the number of 24 hour mean concentrations above 50µg/m<sup>3</sup> for comparison with the AQS objective of 35 per year. LAQM.TG(03) advises to consider the 90<sup>th</sup> percentile instead of the number of 24 hour mean concentrations above 50µg/m<sup>3</sup> when data capture is below 90%; therefore the percentile is provided for Bridge Street.

The results show that the PM<sub>10</sub> objectives are met at both continuous monitoring stations.

#### Table 9.1 PM<sub>10</sub> Monitoring Results in 2004 2005

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<sup>18</sup> The monitoring stations are Portsmouth and Reading New Town.

<sup>19</sup> [www.airquality.co.uk](http://www.airquality.co.uk)

<sup>20</sup> [http://www.airquality.co.uk/archive/laqm/tools/334\\_2004.csv](http://www.airquality.co.uk/archive/laqm/tools/334_2004.csv)

Location		X	Y	2004	2005	projected to 2010
Salisbury	Exeter Street	414546.1	129574.7	25.2	23.9	22.0
	Bridge Street	414295.5	129945.7	#N/A	23.7	21.8

**Table 9.2: No of 24 hour mean PM<sub>10</sub> concentrations above 50µg/m<sup>3</sup> (AQS objective 35 per year)**

No. of 24 Hour Mean PM <sub>10</sub> concentrations > 50µg/m <sup>3</sup>	2005
Exeter Street	6
Bridge Street	< 90% Data Capture
90 <sup>th</sup> Percentile of PM <sub>10</sub> 24 Hour Mean	2005
Bridge Street	34.5

## 9.2 Monitoring data within an AQMA

No AQMA areas have been declared for PM<sub>10</sub> in the district.

## 9.3 Junctions

The busiest junctions with relevant exposure were identified in the first round of review and assessment. These junctions were not reassessed as no new traffic data were available. The 2003 USA mentioned that the PM<sub>10</sub> objectives were met at all junctions.

## 9.4 Roads with high flow of buses and/or HGVs

According to the USA 2003, there are no roads identified in the district that have a flow of buses and/or HGVs greater than 20%. There has been no significant change in HDVs traffic and therefore there is no further assessment needed.

## 9.5 New roads constructed or proposed since the previous round of Review and Assessment

There have been no new roads constructed since the previous round and therefore this section is not relevant.

#### **9.6 Roads with significantly changed traffic flows, or new relevant exposure**

According to the data provided by Wiltshire County Council, there are no roads identified in the district that have had a substantial change in traffic flow of greater than 25% and no new relevant exposure at previously assessed roads which warrant further assessment. The DMRB assessment results for the main roads with >10000 AADT assessed in the area are shown in Appendix III.

#### **9.7 New industrial sources**

There are no new processes, which emit significant quantities of PM<sub>10</sub>, identified in or near the district since the previous round of review and assessment.

#### **9.8 Industrial sources with substantially increased emissions, or new relevant exposure**

There are no industrial processes in or near the district which have been identified as likely to emit significant quantities of PM<sub>10</sub> in the previous round of review and assessment. No existing sources have substantially increased emissions or new relevant exposure.

#### **9.9 Areas with domestic solid fuel burning**

There are no areas of Salisbury District where there is a high density of domestic solid fuel burning. As mentioned in the USA 2003, all major conurbations in the district have mains gas.

#### **9.10 Quarries, landfill sites, opencast coal, handling of dusty cargoes at ports**

According to the USA 2003, none of the quarries and landfill sites in Salisbury is likely to cause an impact at relevant receptors which could exceed the PM<sub>10</sub> objectives.

#### **9.11 Aircraft**

There are no major airports in or near to Salisbury meeting the criteria.

#### **9.12 Conclusion**

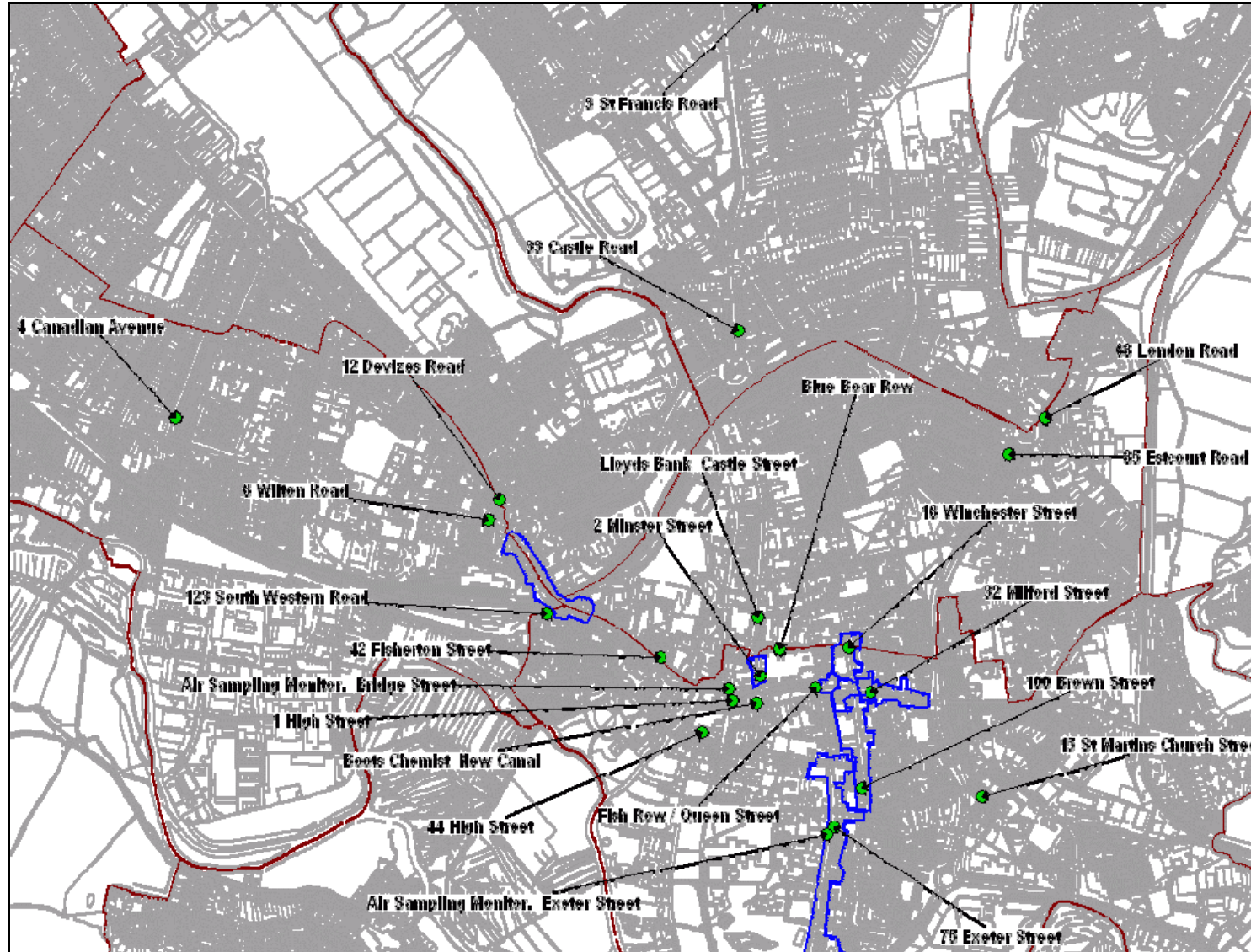
A Detailed Assessment is not required for PM<sub>10</sub>

**Checklist Summary for PM<sub>10</sub>:**

Item	Response
Monitoring data outside an AQMA	Both continuous monitoring stations show no exceedences of the objectives.
Monitoring data within an AQMA	No AQMA declared, therefore no relevant.
Junctions	Examined in the first round of review and assessment.
Roads with high flow of buses and/or HGVs	No roads with a flow of buses and/or HGVs greater than 20% and therefore no further assessment needed.
New roads constructed or proposed since the previous round of Review and Assessment	No new roads constructed since the previous round
Roads with significantly changed traffic flows, or new relevant exposure	No new roads identified with significantly changed traffic flows, or new relevant exposure
New industrial sources	No industrial processes have been identified which meet this criteria
Industrial sources with substantially increased emissions, or new relevant exposure	No industrial processes have been identified which meet this criteria
Areas with domestic solid fuel burning	No area have been identified which meet the criteria
Quarries, landfill sites, opencast coal, handling of dusty cargoes at ports	No areas have been identified which meet the criteria
Aircraft	No airports have been identified which meet this criteria
Conclusion	No further action required

## APPENDIX 1 MONITORING WITHIN SALISBURY

Figure A1: Monitoring within Salisbury town centre



(Current AQMAs  
are shown in blue)

## APPENDIX 2 TRAFFIC DATA

Table A1: Traffic Data for Salisbury District

Road Name	Link	% HGV	Year of count	AADT 2005
A36(T) - Churchill Way East	S1&S2	10.2*	2005	33776
C329 - Fisherton Street, Salisbury	S3	2.6	2005	15935
C369 - Castle Street Salisbury	S5	2.0	2005	12476
C369 - Exeter Street , Salisbury	S7	1.6	2005	19968
A30 - North West of Pitton	B8	10**	2005	11982
A345 - South of High Post	B3	10**	2005	12635
A36(T) - Wilton	A7	15*	2005	11398

\* From Salisbury District Council Stage 3 Review and Assessment

\*\* Assumed as no data available

## APPENDIX 3 DMRB ASSESSMENTS FOR ROADS

**Table A2: Pollutant concentrations calculated near roads using the DMRB local air quality assessment methodology**

Road Name/Receptor	Distance from Centre of Road (m)	PM <sub>10</sub> 2005		NO <sub>2</sub> 2005
		Annual Mean $\mu\text{g}/\text{m}^3$	No. 24-hour means > 50 $\mu\text{g}/\text{m}^3$	Annual Mean $\mu\text{g}/\text{m}^3$
A36(T) - Churchill Way East	5.0	26.4	16	30.1
C329 - Fisherton Street, Salisbury*	6.8	23.5	9	29.0
C369 - Castle Street Salisbury*	5.5	22.4	7	26.0
C369 - Exeter Street, Salisbury*	6.5	23.1	8	27.4
A30 - North West of Pitton	22.0	19.3	3	19.3
A345 - South of High Post	20.0	19.4	3	19.4
A36(T) - Wilton	3.0	22.7	8	22.7

\*Roads identified as street canyon therefore the DMRB predicted road traffic component concentration was multiplied by 2 as advised in LAQM.TG(03).

## APPENDIX 4 LIST OF INDUSTRIAL PROCESSES

**Table A3: Industrial Processes in Salisbury District (LAPPC Part B processes)**

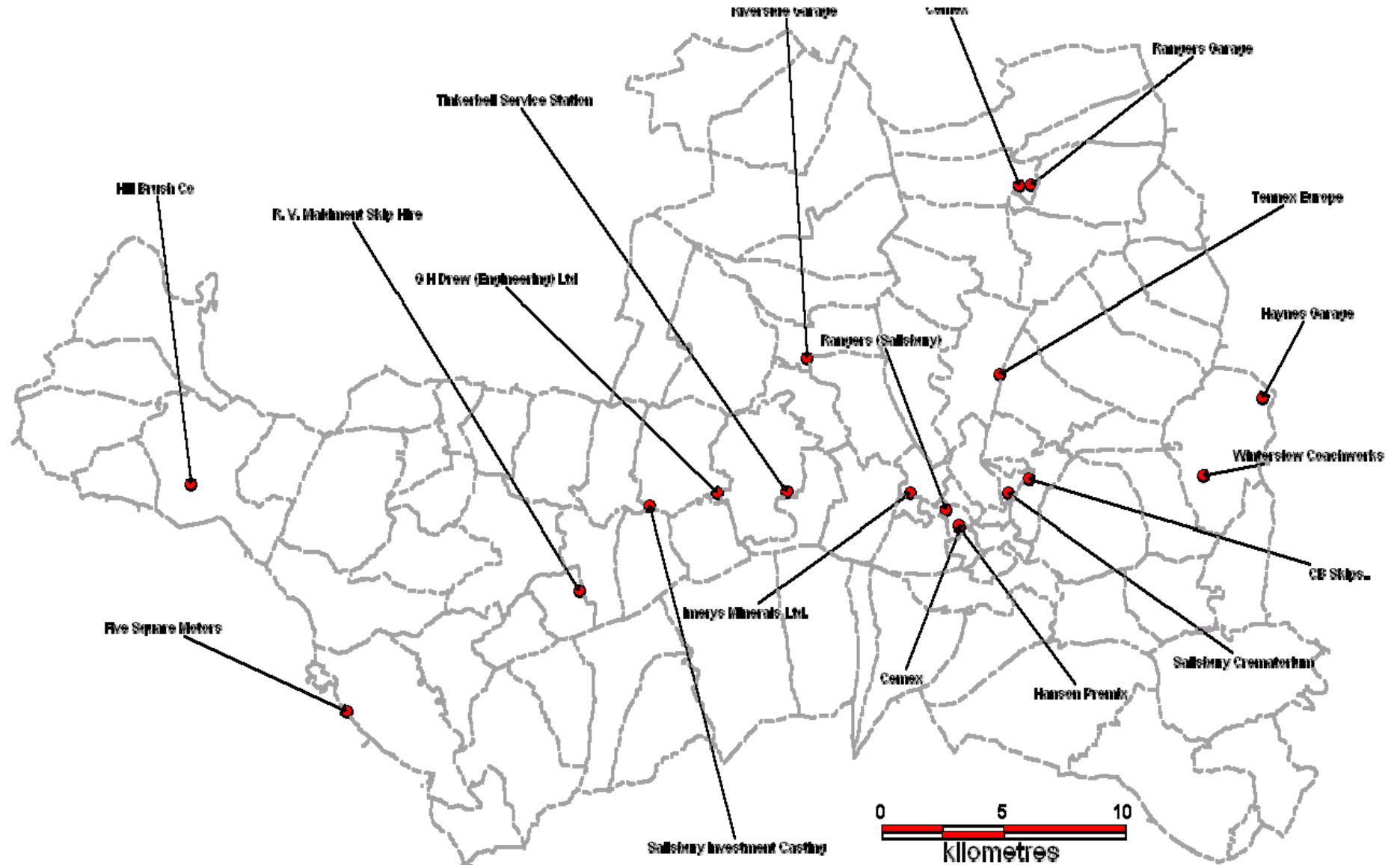
ID	Process Name	Location	Process Type	X	Y
1	Cemex	Stephenson Road, Churchfields, Salisbury	Storage Blending of Cemantious Materials	413269.2	129978.7
2	Salisbury Crematorium	London Road, Salisbury	Cremation of Human Remains	415264	131357.9
3	Cemex	Larkhill Road, Durrington	Storage Blending of Cemantious Materials	415706	143975.5
4	Winterslow Coachworks	Livery Road West Winterslow SP5 1RG	Waste Oil Burner	423253.4	132088.9
5	Hanson Premix	Stephenson Road, Churchfields, Salisbury	Storage Blending of Cemantious Materials	413253.7	130048.6
6	Hill Brush Co	Woodlands Road Mere BA126BS	Timber Processing	381687.9	131721.6
7	Imerys Minerals Ltd.	Broadlands House Quidhampton Quarry Wilton Road SP2 9AD	Natural Mineral Processing	411248	131350.1
8	R. V. Maidment Skip Hire	Swallowcliffe SP3 5NL	Mobile Crushing	397665.3	127383.1
9	Five Square Motors	Donhead, Shaftesbury SP7 8BU	Waste Oil Burner	388148.1	122428
10	Rangers (Salisbury)	114-120 Wilton Road, Salisbury SP2 7JZ	Waste Oil Burner	412711.6	130658.3
11	G H Drew (Engineering) Ltd	Hindon Road Dinton SP3 5EH	Waste Oil Burner	403326.2	131368.1
12	Rangers Garage	Bulford Road, Durrington SP4 8DL	Waste Oil Burner	416201.6	143991
13	Riverside Garage	Stapleford Sp3 4LT	Waste Oil Burner	406964.1	136929.5
14	Haynes Garage	Lopcombe Corner, Winterslow	Waste Oil Burner	425707.9	135290.5
15	Tinkerbell Service Station	Barford St Martin	Waste Oil Burner	406190.5	131415.5
16	Somerfield Amesbury	Solstice Park, Amesbury	Petrol Vapour Recovery	416913.2	142050.3
17	Willoughby Hedge Service Station	A303 West Knoyle BA126AQ	Petrol Vapour Recovery	387079.2	133582.4
18	Tennex Europe	High Post, Durnford, Salisbury SP4 6AT	Di-Isocynate	414929	136248
19	CB Skips..	London Road, Salisbury SP1 3YY.	Storage Blending of Cemantious Materials	416119.1	131944.4
20	BP Four Acres Filling Station	London Road, Salisbury SP1 3HP	Petrol Vapour Recovery	415811.8	131894.1
21	Bridge Garage	Maddington, Shrewton	Petrol Vapour Recovery	406786.6	143918.9

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ID	Process Name	Location	Process Type	X	Y
22	Five Square Motors	Salisbury Road, Shaftesbury	Petrol Vapour Recovery	388148.1	122428
23	Granada Service Station	Chicklade	Petrol Vapour Recovery	390469.6	134465.35
24	Highpost Filling Station	High Post, Durnford, Salisbury SP4 6AT	Petrol Vapour Recovery	415057.9	136526.5
25	Landford Service Station	Southampton Road, Landford	Petrol Vapour Recovery	427496.75	119381.6
26	Longford Service Station	Salisbury Road, Downton SP5 3HZ	Petrol Vapour Recovery	417008.2	121723.6
27	New Sarum Service Station	Southampton Road, Salisbury SP1 2LL	Petrol Vapour Recovery	415811.8	131894.1
28	Malthurst Ltd	Larkhill Road, Durrington	Petrol Vapour Recovery	416148.6	144011.5
29	Riverside Garage	Stapleford	Petrol Vapour Recovery	406964.1	136929.5
30	Salisbury Investment Casting	Building 'D' Dinton Business Park Dinton Salisbury SP3 5HZ	Casting	400560.1	130836.8
31	Shell	Countess Services, Amesbury SP4 7AS	Petrol Vapour Recovery	415428.7	142150.4
32	Shell	Downton Road, Salisbury SP2 8AR	Petrol Vapour Recovery	414630.1	128615.5
33	Shell	Wilton Road, Salisbury	Petrol Vapour Recovery	412948.6	130539.85
34	Stonehenge Filling Station	Winterbourne Stoke (A303)	Petrol Vapour Recovery	407677.4	141096.3
35	Tesco Stores Ltd	Bourne Way, Salisbury Sp1 2NY	Petrol Vapour Recovery	415993.3	129310.7
36	Tilshead Garage	High Street, Tilshead SP3 4SB	Petrol Vapour Recovery	402961	147901.3
37	Tinkerbell Service Station	Barford St Martin	Petrol Vapour Recovery	406190.5	131415.5
38	Waitrose Filling Station	Salisbury	Petrol Vapour Recovery	414031	130579.85
39	Westacre Service Station	108 Wilton Road, Salisbury SP2 7JJ	Petrol Vapour Recovery	412779.9	130632.7
40	Tisbury Motor Company	High Street, Tisbury SP3 6HF	Petrol Vapour Recovery	394396.4	129511.1
41	Central Garage	Salisbury Road, Bulford SP4 9DQ	Petrol Vapour Recovery	416869.5	143521.5



Figure A3: Other Part B Processes in Salisbury District



## GLOSSARY

<b>Abbreviation</b>	<b>Definition</b>
AQMA	Air Quality Management Area
AQS	Air Quality Strategy
DEFRA	Department for Environment, food and Rural Affairs
DETR	Department for Transport and Regions
DMRB	Design Manual for Roads and Bridges
DOE	Department of the Environment
HDV	Heavy Duty Vehicles
LAPPC	Local Authority Pollution Prevention Control
LAQM	Local Air Quality Management
LAQM.TG(03)	Local Air Quality Management Technical guidance document provided by DEFRA to assist local authorities in completion of the LAQM Review & Assessment process
NAQS	National Air Quality Strategy
NRTF	National Road Traffic Forecast
NO <sub>2</sub>	Nitrogen dioxide
NO <sub>x</sub>	Oxides of nitrogen
PM <sub>10</sub>	Fine particle matter less than 10µm diameter
ppb	Parts per billion
SO <sub>2</sub>	Sulphur dioxide
µg/m <sup>3</sup>	Micrograms per cubic metre
USA	Updating and Screening Assessment