2013 Air Quality Progress Report for
Wiltshire Council

In fulfillment of Part IV of the
Environment Act 1995
Local Air Quality Management

April 2013
<table>
<thead>
<tr>
<th><strong>Local Authority Officer</strong></th>
<th>Peter Nobes, Rachel Kent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Department</strong></td>
<td>Public Protection Services</td>
</tr>
</tbody>
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| **Report reference number**| Progress Report 2013     |
| **Date**                   | April 2013               |
Executive Summary

This document summarises the current situation relating to the quality of the air in Wiltshire. The report has been completed by the Environmental Protection Team.

The document summarises all the air quality monitoring carried out by the council across the county, but the purpose of the report is not to offer the detail of the Updating and Screening Assessment Reports. However, if the Progress Report identifies the risk of exceedence of an Air Quality Objective, the Local Authority (LA) should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment.

The report concludes that Detailed Assessments will have to be undertaken for Wilton Road in Salisbury, Bath Road in Bradford on Avon, Fore Street in Westbury, Newtown in Trowbridge and Bath Road adjacent to the Bridge Centre, Chippenham. AQMA’s already exist in Salisbury, Bradford on Avon and Westbury and the focus of the Detailed Assessments in these towns will to examine whether there is a need to extend the existing AQMA’s. No AQMA is currently in place in Chippenham or Trowbridge.
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1 Introduction

1.1 Description of Local Authority Area

Wiltshire Council’s administrative area takes in the whole of the county of Wiltshire with the exception of Swindon, a unitary authority in its own right. The county is roughly rectangular and approximately 45 miles north/south and 33 miles east/west.

The majority of the county is rural in nature, taking in the world heritage sites, Stonehenge and Avebury. Salisbury plain dominates the southern portion of the county and large tracts are utilised by the military for their manoeuvres. Much of the area enjoys the protection of special designations such as SSIs, scheduled ancient monuments and National Park.

The administrative headquarters of Wiltshire are situated in Trowbridge. There are many small settlements and towns across Wiltshire, the largest urban concentrations are in Salisbury, Devizes, Chippenham, Malmesbury, Melksham, Warminster and Westbury.

The main sources of pollutants of concern are road vehicles. Wiltshire has a number of market towns with narrow streets and comparatively tall buildings (3-4 stories) which in many cases are direct onto the street, giving rise to canyon effects that inhibit pollutant dispersal. Added to this we are a popular tourist destination which contributes to summer congestion and Wiltshire’s topography is not flat. This is a factor in some locations that fail to meet an objective as goods vehicles must stop/start as they progress up hill.

1.2 Purpose of Progress Report

This report fulfils the requirements of the Local Air Quality Management process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 and the relevant Policy and Technical...
Guidance documents. The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where exceedences are considered likely, the local authority must then declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives.

Progress Reports are required in the intervening years between the three-yearly Updating and Screening Assessment reports. Their purpose is to maintain continuity in the Local Air Quality Management process.

They are not intended to be as detailed as Updating and Screening Assessment Reports, or to require as much effort. However, if the Progress Report identifies the risk of exceedence of an Air Quality Objective, the Local Authority (LA) should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment.

### 1.3 Air Quality Objectives

The air quality objectives applicable to LAQM in England are set out in the Air Quality (England) Regulations 2000 (SI 928), The Air Quality (England) (Amendment) Regulations 2002 (SI 3043), and are shown in Table 1.1. This table shows the objectives in units of microgrammes per cubic metre µg/m³ (microgrammes per cubic metre, mg/m³ for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).
Table 1.1 Air Quality Objectives included in Regulations for the purpose of LAQM in England

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Air Quality Objective</th>
<th>Date to be achieved by</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Concentration</td>
<td>Measured as</td>
</tr>
<tr>
<td><strong>Benzene</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16.25 µg/m³</td>
<td>Running annual mean</td>
</tr>
<tr>
<td></td>
<td>5.00 µg/m³</td>
<td>Annual mean</td>
</tr>
<tr>
<td><strong>1,3-Butadiene</strong></td>
<td>2.25 µg/m³</td>
<td>Running annual mean</td>
</tr>
<tr>
<td><strong>Carbon monoxide</strong></td>
<td>10 mg/m³</td>
<td>Running 8-hour mean</td>
</tr>
<tr>
<td><strong>Lead</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.50 µg/m³</td>
<td>Annual mean</td>
</tr>
<tr>
<td></td>
<td>0.25 µg/m³</td>
<td>Annual mean</td>
</tr>
<tr>
<td><strong>Nitrogen dioxide</strong></td>
<td>200 µg/m³ not to be exceeded more than 18 times a year</td>
<td>1-hour mean</td>
</tr>
<tr>
<td></td>
<td>40 µg/m³</td>
<td>Annual mean</td>
</tr>
<tr>
<td><strong>Particulate Matter (PM_{10})</strong> (gravimetric)</td>
<td>50 µg/m³, not to be exceeded more than 35 times a year</td>
<td>24-hour mean</td>
</tr>
<tr>
<td></td>
<td>40 µg/m³</td>
<td>Annual mean</td>
</tr>
<tr>
<td><strong>Sulphur dioxide</strong></td>
<td>350 µg/m³, not to be exceeded more than 24 times a year</td>
<td>1-hour mean</td>
</tr>
<tr>
<td></td>
<td>125 µg/m³, not to be exceeded more than 3 times a year</td>
<td>24-hour mean</td>
</tr>
<tr>
<td></td>
<td>266 µg/m³, not to be exceeded more than 35 times a year</td>
<td>15-minute mean</td>
</tr>
</tbody>
</table>
## 1.4 Summary of Previous Review and Assessments

### North Wiltshire District Council

<table>
<thead>
<tr>
<th>Report</th>
<th>Date</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>1998</td>
<td>No exceedences likely therefore no AQMAs to be declared</td>
</tr>
<tr>
<td>Stage II and III</td>
<td>2000</td>
<td>No exceedences identified</td>
</tr>
<tr>
<td>Updating &amp; Screening Assessment</td>
<td>2003</td>
<td>No exceedences identified</td>
</tr>
<tr>
<td>Progress Report</td>
<td>2004</td>
<td>Monitoring has continued for NO(_2) and no areas of exceedences identified</td>
</tr>
<tr>
<td>Progress Report</td>
<td>2005</td>
<td>Monitoring has continued for NO(_2) and no areas of exceedences identified</td>
</tr>
<tr>
<td>Updating &amp; Screening Assessment</td>
<td>2006</td>
<td>Monitoring has continued for NO(_2) and no areas of exceedences identified</td>
</tr>
<tr>
<td>Progress Report</td>
<td>2007</td>
<td>Monitoring has continued for NO(_2) and no areas of exceedences identified</td>
</tr>
<tr>
<td>Progress Report</td>
<td>2008</td>
<td>Monitoring has continued for NO(_2) and no areas of exceedences identified</td>
</tr>
</tbody>
</table>

### Kennet District Council

<table>
<thead>
<tr>
<th>Report</th>
<th>Date</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>1998</td>
<td>No exceedences identified</td>
</tr>
<tr>
<td>Stage II</td>
<td>2000</td>
<td>Monitoring has continued for NO(_2) and no areas of exceedences identified</td>
</tr>
<tr>
<td>Updating &amp; Screening Assessment</td>
<td>2003</td>
<td>Monitoring continued for NO(_2) and no areas of exceedences identified</td>
</tr>
<tr>
<td>Progress Report</td>
<td>2004</td>
<td>Monitoring has continued for NO₂ and no areas of exceedences identified</td>
</tr>
<tr>
<td>-----------------</td>
<td>------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Progress Report</td>
<td>2005</td>
<td>Monitoring has continued for NO₂ and no areas of exceedences identified</td>
</tr>
<tr>
<td>Updating &amp; Screening Assessment</td>
<td>2006</td>
<td>Monitoring has continued for NO₂ and no areas of exceedences identified</td>
</tr>
<tr>
<td>Progress Report</td>
<td>2007</td>
<td>Monitoring has continued for NO₂ and no areas of exceedences identified</td>
</tr>
<tr>
<td>Progress Report</td>
<td>2008</td>
<td>A possible exceedence in Devizes of the NO₂ objective</td>
</tr>
</tbody>
</table>

**Salisbury District Council**

<table>
<thead>
<tr>
<th>Report</th>
<th>Date</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>1998</td>
<td>A Stage II review will be required for particulates and nitrogen dioxide</td>
</tr>
<tr>
<td>Stage II</td>
<td>2000</td>
<td>Will proceed to a Stage III report for nitrogen dioxide and undertake further work in relation to particulates</td>
</tr>
<tr>
<td>Stage III</td>
<td>2001</td>
<td>The declaration of an AQMA for exceedences of the annual average objective NO₂ is recommended</td>
</tr>
<tr>
<td>Stage IV</td>
<td>2003</td>
<td>Confirmed the 4 AQMAs already declared and that a fifth AQMA would be required</td>
</tr>
<tr>
<td>Updating &amp; Screening Assessment</td>
<td>2003</td>
<td>Likely failure of another street within the city centre failing the annual average objective for NO₂. No other standards identified as likely to fail</td>
</tr>
<tr>
<td>AQMA in Wilton Revoked</td>
<td>2004</td>
<td></td>
</tr>
<tr>
<td>Progress Report</td>
<td>2004</td>
<td>The AQMAs shall remain. No new areas identified</td>
</tr>
<tr>
<td>Progress Report</td>
<td>2005</td>
<td>The AQMAs shall remain. No new areas identified</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Updating &amp; Screening Assessment</td>
<td>2006</td>
<td>The AQMAs shall remain. No new areas identified</td>
</tr>
<tr>
<td>Progress Report</td>
<td>2007</td>
<td>The AQMAs shall remain. No new areas identified</td>
</tr>
<tr>
<td>Further Assessment</td>
<td>2007</td>
<td></td>
</tr>
<tr>
<td>Progress Report</td>
<td>2008</td>
<td>The AQMAs shall remain. No new areas identified</td>
</tr>
<tr>
<td>Air Quality Action Plan</td>
<td>2012</td>
<td>On going</td>
</tr>
</tbody>
</table>

**West Wiltshire District Council**

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<thead>
<tr>
<th>Report</th>
<th>Date</th>
<th>Conclusion</th>
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</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>1998</td>
<td>A need to proceed to a Stage II and Stage III due to potentially significant releases of Carbon Monoxide, 1,3-Butadiene, nitrogen dioxide, particulates and sulphur dioxide</td>
</tr>
<tr>
<td>Stage II</td>
<td>2000</td>
<td>No further action is required for carbon monoxide or lead. WWDC will proceed to Stage III for 1,3-Butadiene, Nitrogen Dioxide, Sulphur Dioxide and PM$_{10}$</td>
</tr>
<tr>
<td>Stage III</td>
<td>2001</td>
<td>Likely Exceedences of the NO$<em>{2}$ annual average in Westbury and Bradford On Avon. Likely exceedence of the PM$</em>{10}$ objective in Bradford On Avon</td>
</tr>
<tr>
<td>Stage IV</td>
<td>2003</td>
<td>Further monitoring for PM$<em>{10}$ be carried out in BOA and further monitoring of NO$</em>{2}$ in BOA. The AQMA in Westbury will remain unchanged</td>
</tr>
<tr>
<td>Updating &amp; Screening Assessment</td>
<td>2003</td>
<td>The AQMAs shall remain in BOA and Westbury</td>
</tr>
<tr>
<td>Report</td>
<td>Date</td>
<td>Conclusion</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Progress Report</td>
<td>2004</td>
<td>The AQMAs shall remain in BOA and Westbury. No new areas of concern have been identified.</td>
</tr>
<tr>
<td>Progress Report</td>
<td>2005</td>
<td>The AQMAs shall remain in BOA and Westbury. No new areas of concern have been identified.</td>
</tr>
<tr>
<td>Air Quality Action Plan</td>
<td>2005</td>
<td></td>
</tr>
<tr>
<td>Updating &amp; Screening Assessment</td>
<td>2006</td>
<td>The AQMAs shall remain in BOA and Westbury. No new areas of concern have been identified.</td>
</tr>
<tr>
<td>Progress Report</td>
<td>2007</td>
<td>The AQMAs shall remain in BOA and Westbury. No new areas of concern have been identified.</td>
</tr>
<tr>
<td>Progress Report</td>
<td>2008</td>
<td>The AQMAs shall remain in BOA and Westbury. No new areas of concern have been identified.</td>
</tr>
<tr>
<td>Updating &amp; Screening Assessment</td>
<td>2009</td>
<td>All AQMAs’ already declared still stand and Detailed Assessment work is underway for Wilton, Marlborough and Devizes for exceedences of the annual average objective for NO₂</td>
</tr>
<tr>
<td>Air Quality Action Plan Progress Report</td>
<td>2009</td>
<td></td>
</tr>
<tr>
<td>Progress Report</td>
<td>2010</td>
<td>No Detailed assessments required, however monitoring locations have been reviewed to cover areas where monitoring has not previously been undertaken.</td>
</tr>
<tr>
<td>Detailed Assessment, Shanes Castle, Devizes</td>
<td>2010</td>
<td>An AQMA is required for exceedences of the annual average</td>
</tr>
<tr>
<td>Study</td>
<td>Year</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Detailed Assessment, Wilton</td>
<td>2010</td>
<td>An AQMA is not required for exceedences of the annual average objective for NO$_2$ however monitoring will continue in the town</td>
</tr>
<tr>
<td>Detailed Assessment, Herd Street, Marlborough</td>
<td>2010</td>
<td>An AQMA is required for exceedences of the annual average objective for NO$_2$</td>
</tr>
<tr>
<td>Options for Air Quality Management Area, Marlborough</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Progress Report</td>
<td>2011</td>
<td>Detailed assessment required for NO$_2$ in Calne and Devizes</td>
</tr>
<tr>
<td>Updating &amp; Screening Assessment 2012</td>
<td>2012</td>
<td>No further areas identified requiring Detailed Assessments apart from those currently underway for Calne and Devizes</td>
</tr>
<tr>
<td>Detailed Assessment for Calne</td>
<td>June 2012</td>
<td>AQMA required for New Road and Curzon Street</td>
</tr>
<tr>
<td>Detailed Assessment for Devizes</td>
<td>June 2012</td>
<td>AQMA needs to be extended to include The Nursery, Northgate Street, St James Place, Southgate roundabout.</td>
</tr>
<tr>
<td>Further Assessment for Marlborough</td>
<td>Feb 2013</td>
<td>The AQMA is justified. DEFRA have accepted this conclusion.</td>
</tr>
</tbody>
</table>
1.5 Maps of AQMA Boundaries

Figure 1 Map of AQMA boundary - Salisbury

Figure 2 Map of AQMA boundary - Bradford On Avon
Figure 3 Map of AQMA boundary - Westbury

Figure 4 Map of AQMA boundary – Marlborough
Figure 5 – Map of AQMA boundary - Calne

Figure 6 – Map of AQMA boundary - Devizes
Figure 7 – Map showing original Devizes AQMA boundary, now amended
2 New Monitoring Data

2.1 Summary of monitoring undertaken
During 2012 Wiltshire Council employed 3 automatic air quality monitoring stations as described in Table 2.1. Two further sites in the town of Westbury were closed in 2012 and have since been combined and relocated to Bradford on Avon with monitoring commencing in early 2013.

The sites in Westbury were closed for several reasons, the building where the NOx monitoring has been demolished for development. Both this site and the PM$_{10}$ monitoring station located about 100 m to the north had been in place for over ten years and had not been reporting any significant exceedences of the Air Quality Objectives.

It was decided to combine and relocate the units to Bradford on Avon where a significant exceedence of the annual mean objective for NO$_2$ had been identified by diffusion tube but where no real time monitoring had previously taken place. In addition no real time monitoring of particulates has taken place in the town. All information relating to quality control / quality assurance of our monitoring is set out in Appendix A.

Maps of Automatic Monitoring Sites
Set out below are a series of maps detailing the location of all Wiltshire Council’s air quality continuous monitoring sites.
Figure 8 – Automatic monitoring site, Salisbury (AM1)

Figure 9 - Automatic monitoring site, Bradford on Avon (AM2)
Figure 10 - Automatic monitoring site, Devizes (AM3)
Table 2.1  Details of Automatic Monitoring Sites

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Site Name</th>
<th>Site Type</th>
<th>X OS Grid Reference</th>
<th>Y OS Grid Reference</th>
<th>Inlet Height (m)</th>
<th>Pollutants Monitored</th>
<th>In AQMA?</th>
<th>Monitoring Technique</th>
<th>Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)</th>
<th>Distance to Kerb of Nearest Road (m) (N/A if not applicable)</th>
<th>Does this Location Represent Worst-Case Exposure?</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM1</td>
<td>Exeter Street, Salisbury</td>
<td>Roadside</td>
<td>414547</td>
<td>129575</td>
<td>2</td>
<td>NO\textsubscript{x}, PM\textsubscript{10}</td>
<td>Yes</td>
<td>Chemiluminescence. Beta Attenuation.</td>
<td>Yes</td>
<td>2.5</td>
<td>Yes</td>
</tr>
<tr>
<td>AM2</td>
<td>St Margaret’s Street, Bradford On Avon</td>
<td>Roadside</td>
<td>382528</td>
<td>160798</td>
<td>2.5</td>
<td>NO\textsubscript{x}</td>
<td>Yes</td>
<td>Chemiluminesence</td>
<td>Yes (0.5m)</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>AM3</td>
<td>Sidmouth Street, Devizes</td>
<td>Roadside</td>
<td>400765</td>
<td>161458</td>
<td>2</td>
<td>NO\textsubscript{x}, PM\textsubscript{10}</td>
<td>Yes</td>
<td>Chemiluminescence. Beta Attenuation.</td>
<td>Yes</td>
<td>2.5</td>
<td>Yes</td>
</tr>
</tbody>
</table>
2.1.1 Non-Automatic Monitoring Sites

The only non automatic monitoring of Air Quality carried out by Wiltshire Council is for Nitrogen Dioxide utilising diffusion tubes at a total of 91 sites across the county. Table 2.2 below details the locations of all the sites used and includes a reference number for each site located in 2012 which are shown in the maps set out in Figure 2.2.1 to 2.2.13 below.

Please note that the site reference number prefix P12 is not shown on the location maps, just the final reference number for each tube site.
### Table 2.2 Details of Non-Automatic Monitoring Sites – Salisbury Diffusion Tubes

<table>
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<th>Site ID</th>
<th>Site Name</th>
<th>Site Type</th>
<th>X OS Grid Reference</th>
<th>Y OS Grid Reference</th>
<th>Site Height (m)</th>
<th>Pollutants Monitored</th>
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<th>Is Monitoring Co-located with a Continuous Analyser (Y/N)</th>
<th>Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)</th>
<th>Distance to Kerb of Nearest Road (m) (N/A if not applicable)</th>
<th>Does this Location Represent Worst-Case Exposure?</th>
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## Trowbridge & Staverton Diffusion Tubes

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Bradford On Avon Diffusion Tubes

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### Devizes Diffusion Tubes

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## Marlborough Diffusion Tubes

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## Westbury Diffusion Tubes

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## Wilton Diffusion Tubes

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## Bradford On Avon Co-Location Diffusion Tubes

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Maps showing the locations of all the passive diffusion tube monitoring sites in Wiltshire.

Figure 11 – Salisbury City Centre

Figure 12 – Salisbury general area
Figure 13 – Trowbridge

Figure 14 - Staverton
Figure 15 – Bradford on Avon

Location of 2012 Diffusion Tube Sites in Bradford including AQMA

Figure 16 – Devizes

Location of 2012 Diffusion Tube Sites in Devizes including the AQMA
Figure 17 – Marlborough

Location of 2012 Diffusion Tube Sites in Marlborough including AQMA

Figure 18 – Calne

Location of 2012 Diffusion Tube Sites in Calne including AQMA
Figure 19 – Chippenham

Figure 20 – Chippenham North
Figure 21 - Corsham

Figure 22 – Westbury
Figure 23 – Wilton

Location of 2012 Diffusion Tube Sites in Wilton
2.2 Comparison of Monitoring Results with Air Quality Objectives

2.2.1 Nitrogen Dioxide (NO₂)

Automatic Monitoring Data

The automatic monitoring for NO₂ located on Exeter Street in Salisbury (AM1) for 2012 reported an annual mean of 39 µg/m³, below the relevant Air Quality Objective of 40 µg/m³ and a total of 1 exceedence of the hourly objective of 200 µg/m³ (not to be exceeded more than 18 times a year). Data capture for the period was excellent at 96%.

The automatic monitoring for NO₂ located in St Margarets Street, Bradford on Avon (AM2) for 2012 reported an annual mean of 34µg/m³, below the relevant Air Quality Objective of 40 µg/m³ and a total of 0 exceedences of the hourly objective of 200µg/m³ (not to be exceeded more than 18 times a year). Data capture for the period was good at 88% with a breakdown in September reducing the total data recorded.

The automatic monitoring for NO₂ located on Sidmouth Street, Devizes (AM3) for 2012 reported an annual mean of 44 µg/m³, an exceedence of the relevant Air Quality Objective of 40 µg/m³ and a total of 5 exceedences of the hourly objective of 200 µg/m³ (not to be exceeded more than 18 times a year). Data capture for the period was excellent at 94%. The site is located within the existing Devizes AQMA.
Table 2.3  Results of Automatic Monitoring for NO₂: Comparison with Annual Mean Objective

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Site Type</th>
<th>Within AQMA?</th>
<th>Valid Data Capture for Monitoring Period % (^{a})</th>
<th>Valid Data Capture 2012 % (^{b})</th>
<th>Annual Mean Concentration (µg/m(^3))</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2008* (^{c}) 2009* (^{c}) 2010* (^{c}) 2011* (^{c}) 2012 (^{c})</td>
</tr>
<tr>
<td>AM1</td>
<td>Roadside</td>
<td>Y</td>
<td>96</td>
<td>96</td>
<td>43.2 38.89 42 36 39</td>
</tr>
<tr>
<td>AM2</td>
<td>Roadside</td>
<td>Y</td>
<td>88</td>
<td>88</td>
<td>29 N/A 34.5 34 34</td>
</tr>
<tr>
<td>AM3</td>
<td>Roadside</td>
<td>Y</td>
<td>94</td>
<td>94</td>
<td>N/A N/A N/A 36 44</td>
</tr>
</tbody>
</table>

In bold, exceedence of the NO₂ annual mean AQS objective of 40µg/m\(^3\)

\(^{a}\) i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

\(^{b}\) i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

\(^{c}\) Means should be “annualised” as in Box 3.2 of TG(09) (http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38), if valid data capture is less than 75%

* Annual mean concentrations for previous years are optional
2.3 Trends in Annual Mean NO₂ Concentrations Measured at Automatic Monitoring Sites

Trend charts for NO₂ annual mean results for the automatic monitoring sites where we have monitored for at least the last 5 years are presented and discussed below.

Figure 24 - 5 year trends for annual mean Nitrogen Dioxide concentrations from Automatic Monitoring at Exeter St (AM1), Salisbury

![Nitrogen Dioxide Concentration Automatic Monitoring trends in Salisbury between 2006 & 2012](image)

Figure 25 - 5 year trends for annual mean Nitrogen Dioxide concentrations from Automatic Monitoring at St Margarets St (AM2), Bradford on Avon.

![Nitrogen Dioxide Automatic Monitoring trends in Bradford On Avon between 2006 & 2012](image)
The general 5 year trend for the Salisbury Automatic Monitoring located at Exeter Street (AM1) is down although the result for 2012 was higher than 2011.

The general 5 year trend for the Automatic Monitoring located in St Margarets Street; Bradford on Avon (AM2) is slightly up although the levels reported for 2012 were slightly down on 2011 reporting.

No trend data has been reported for the Devizes Automatic Monitoring Station located on Sidmouth Street as it has only been in place for 2 years.
### Table 2.4 Results of Automatic Monitoring for NO₂: Comparison with 1-hour Mean Objective

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Site Type</th>
<th>Within AQMA?</th>
<th>Valid Data Capture for Monitoring Period %&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Valid Data Capture 2012 %&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Number of Hourly Means &gt; 200µg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2008&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>AM1</td>
<td>Roadside</td>
<td>Y</td>
<td>96</td>
<td>96</td>
<td>0</td>
</tr>
<tr>
<td>AM2</td>
<td>Roadside</td>
<td>Y</td>
<td>88</td>
<td>88</td>
<td>0</td>
</tr>
<tr>
<td>AM3</td>
<td>Roadside</td>
<td>Y</td>
<td>94</td>
<td>94</td>
<td>N/A</td>
</tr>
</tbody>
</table>

In bold, exceedence of the NO₂ hourly mean AQS objective (200µg/m³ – not to be exceeded more than 18 times per year)

<sup>a</sup> i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

<sup>b</sup> i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

<sup>c</sup> If the data capture for full calendar year is less than 90%, include the 99.8<sup>th</sup> percentile of hourly means in brackets

* Number of exceedences for previous years is optional
Diffusion Tube Monitoring Data

2.2.2 Non automatic Nitrogen Dioxide Monitoring

The nitrogen dioxide diffusion tubes used by Wiltshire Council are 20% TEA in water supplied and analysed by Gradko Laboratories. Gradko participate in the WASP Scheme and have performed ‘good’ in 26 out of 26 tube precision studies carried out in 2012. This information was taken from the summary report published on the LA Support Helpdesk. http://laqm.defra.gov.uk/diffusion-tubes/precision.html

Details of the Quality Assurance / Quality Control (QA/QC) for the diffusion tube results reported in this section are set out in Appendix A, QA/QC for diffusion tube data.

Passive diffusion tubes are not as accurate as real time monitoring, however they do give a good indication of what is happening with air quality. Wiltshire currently has 95 sites within the district to monitor for nitrogen dioxide.

A nitrogen dioxide passive diffusion tube is a clear plastic tube open at one end and at the closed end a mesh is impregnated with a pollutant absorbing chemical. The diffusion tube collects the pollutant during the exposure period and then is resealed and returned to a laboratory for analysis. Each tube is exposed for a month period. The laboratory then assesses the quantity of the pollutant absorbed by calculating the average ambient NO₂ concentration over the exposure period.

Each tube is mounted on a lamp-post or similar structure ensuring that the open end is at the bottom to prevent rainwater collection.

Co Location and Bias Correction

Wiltshire has co-location studies at the Exeter Street continuous monitoring site in Salisbury, St Margaret's Street in Bradford On Avon and Sidmouth Street in Devizes.
A bias correction factor of 0.96 has been obtained from the National Bias Correction website on March 26th 2013 and includes two of Wiltshire’s co-location studies. A third co-location survey for a Wiltshire site was submitted but this was too late for inclusion in this round of studies. The figure for all three of the Wiltshire sites was calculated at 0.96 and thus this factor is considered robust and appropriate for use in correcting tube data.

The Review and Assessment helpdesk calculated the National bias adjustment factor for us by adding the results from the Wiltshire sites to the other studies on the Review and Assessment Website (v03_13):


The national bias adjustment factor for Gradko tubes processed using 20% TEA in water will be used for correcting Wiltshire data

**Diffusion Tube Data**

The diffusion tube monitoring results for 2012 presented below confirm that the AQMA’s already declared within Wiltshire are all still valid with a number of exceedences at monitoring sites located within existing AQMA’s. It is also clear that further work is required in lieu of exceedences of the annual mean objective for Nitrogen Dioxide at the following sites:

- P12/62 – Bath Road, Bradford on Avon
- P12/60 - Bath Road, adjacent to the Bridge Centre, Chippenham
- P12/71 – Wilton Road, Salisbury
- P12/56 - Fore Street, Westbury
- P12/58 - Newtown, Trowbridge

Data capture for the diffusion tube monitoring reported below was, in the main, very good with only a couple of sites suffering from tube theft. The site located at Ayleswade Road in Salisbury (P12/93) was only located for part of the year following a request from a concerned member of the public about air quality in the area.
Table 2.5  Results of NO$_2$ Diffusion Tubes 2012

Salisbury Diffusion Tubes

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Site Name</th>
<th>Site Type</th>
<th>In AQMA?</th>
<th>Triplicate or Co-located Tube?</th>
<th>Full Calendar Year Data Capture 2012 (Number of Months or %) $^a$</th>
<th>2012 Annual Mean Concentration (µg/m$^3$) - Bias Adjustment factor = 0.96 $^b$</th>
</tr>
</thead>
<tbody>
<tr>
<td>P12/30</td>
<td>74 London Road</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>P12/31</td>
<td>79 Estcourt Road</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>11</td>
<td>30</td>
</tr>
<tr>
<td>P12/72</td>
<td>6 Castle Street</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>11</td>
<td>32</td>
</tr>
<tr>
<td>P12/33</td>
<td>37 Castle Road</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>33</td>
</tr>
<tr>
<td>P12/37</td>
<td>93 Castle Street</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td>P12/73</td>
<td>161 Castle Street</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>37</td>
</tr>
<tr>
<td>P12/45</td>
<td>95 Crane Street</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>32</td>
</tr>
<tr>
<td>P12/32</td>
<td>1 High Street</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>P12/34</td>
<td>2 Minster Street</td>
<td>Kerbside</td>
<td>Y</td>
<td>N</td>
<td>11</td>
<td>40</td>
</tr>
<tr>
<td>P12/39</td>
<td>Blue Boar Row</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>32</td>
</tr>
<tr>
<td>P12/35</td>
<td>16 Winchester Street</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>32</td>
</tr>
<tr>
<td>P12/36</td>
<td>100 Brown Street</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>36</td>
</tr>
<tr>
<td>P12/38</td>
<td>123 South Western Road</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>11</td>
<td>43</td>
</tr>
<tr>
<td>P12/44</td>
<td>17 Fisherton Street</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>39</td>
</tr>
<tr>
<td>P12/48</td>
<td>88 Park Street</td>
<td>Background</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>P12/89</td>
<td>A36 Opposite Salisbury College</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>11</td>
<td>35</td>
</tr>
<tr>
<td>P12/46</td>
<td>17 Wilton Road</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>62</td>
</tr>
<tr>
<td>P12/91</td>
<td>72 Wilton Road</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>12</td>
<td>28</td>
</tr>
<tr>
<td>P12/71</td>
<td>225 Wilton Road</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>12</td>
<td>47</td>
</tr>
<tr>
<td>P12/47</td>
<td>31 Devizes Road</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>12</td>
<td>42</td>
</tr>
<tr>
<td>Site ID</td>
<td>Site Name</td>
<td>Site Type</td>
<td>In AQMA?</td>
<td>Triplicate or Co-located Tube?</td>
<td>Full Calendar Year Data Capture 2012 (Number of Months or %)</td>
<td>2012 Annual Mean Concentration (µg/m³) - Bias Adjustment factor = 0.96</td>
</tr>
<tr>
<td>---------</td>
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<td>----------</td>
<td>-------------------------------</td>
<td>---------------------------------------------------------------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td>P12/49</td>
<td>91 Exeter Street</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>39</td>
</tr>
<tr>
<td>P12/40</td>
<td>1 St Marks Avenue</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>32</td>
</tr>
<tr>
<td>P12/92</td>
<td>167 Harnham Road</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>P12/90</td>
<td>HSBC Minster Street</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>34</td>
</tr>
<tr>
<td>P12/93</td>
<td>Ayleswade Road</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>P12/41</td>
<td>Exeter Street</td>
<td>Roadside</td>
<td>Y</td>
<td>Y</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td>P12/42</td>
<td>Exeter Street</td>
<td>Roadside</td>
<td>Y</td>
<td>Y</td>
<td>12</td>
<td>37</td>
</tr>
<tr>
<td>P12/43</td>
<td>Exeter Street</td>
<td>Roadside</td>
<td>Y</td>
<td>Y</td>
<td>12</td>
<td>36</td>
</tr>
</tbody>
</table>

**Trowbridge & Staverton Diffusion Tubes**

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Site Name</th>
<th>Site Type</th>
<th>In AQMA?</th>
<th>Triplicate or Co-located Tube?</th>
<th>Full Calendar Year Data Capture 2012 (Number of Months or %)</th>
<th>2012 Annual Mean Concentration (µg/m³) - Bias Adjustment factor = 0.96</th>
</tr>
</thead>
<tbody>
<tr>
<td>P12/79</td>
<td>The Lamb lamppost, 56 County Way</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>12</td>
<td>34</td>
</tr>
<tr>
<td>P12/95</td>
<td>Regal Court, Bythesea Road</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>P12/58</td>
<td>26 Newtown</td>
<td>Kerbside</td>
<td>N</td>
<td>N</td>
<td>11</td>
<td>40</td>
</tr>
<tr>
<td>P12/94</td>
<td>Opposite Stone Masons, County Way</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>12</td>
<td>31</td>
</tr>
<tr>
<td>P12/78</td>
<td>2 Marsh Road, Staverton</td>
<td>Kerbside</td>
<td>N</td>
<td>N</td>
<td>11</td>
<td>35</td>
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</tbody>
</table>
## Bradford On Avon Diffusion Tubes

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Site Name</th>
<th>Site Type</th>
<th>In AQMA?</th>
<th>Triplicate of Co-located Tube?</th>
<th>Full Calendar Year Data Capture 2012 (Number of Months or %)</th>
<th>2012 Annual Mean Concentration (µg/m³) - Bias Adjustment factor = 0.96</th>
</tr>
</thead>
<tbody>
<tr>
<td>P12/74</td>
<td>Ivy Terrace, Masons Lane</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>10</td>
<td>52</td>
</tr>
<tr>
<td>P12/0</td>
<td>9 Masons Lane</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>11</td>
<td>71</td>
</tr>
<tr>
<td>P12/2</td>
<td>16 New Road</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>11</td>
<td>25</td>
</tr>
<tr>
<td>P12/69</td>
<td>12 Market Street</td>
<td>Kerbside</td>
<td>Y</td>
<td>N</td>
<td>11</td>
<td>52</td>
</tr>
<tr>
<td>P12/62</td>
<td>7 Bath Road</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>12</td>
<td>42</td>
</tr>
<tr>
<td>P12/63</td>
<td>8 Mount Pleasant</td>
<td>Kerbside</td>
<td>N</td>
<td>N</td>
<td>12</td>
<td>37</td>
</tr>
<tr>
<td>P12/64</td>
<td>Springfield opposite entrances to no’s 2-54</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>11</td>
<td>26</td>
</tr>
<tr>
<td>P12/65</td>
<td>21 Woolley Street (B&amp;B)</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>9</td>
<td>29</td>
</tr>
<tr>
<td>P12/1</td>
<td>Rear of Tillions, Silver Street</td>
<td>Kerbside</td>
<td>Y</td>
<td>N</td>
<td>11</td>
<td>37</td>
</tr>
<tr>
<td>P12/67</td>
<td>22 Frome Road</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>11</td>
<td>30</td>
</tr>
<tr>
<td>P12/66</td>
<td>Skew Cottage, 40 Frome Road</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>12</td>
<td>37</td>
</tr>
<tr>
<td>P12/68</td>
<td>238 Trowbridge Road</td>
<td>Kerbside</td>
<td>N</td>
<td>N</td>
<td>6</td>
<td>33</td>
</tr>
<tr>
<td>P12/61</td>
<td>224 Winsley Road</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td>P12/75</td>
<td>44 St Margarets Street</td>
<td>Roadside</td>
<td>Y</td>
<td>Y</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td>P12/76</td>
<td>44 St Margarets Street</td>
<td>Roadside</td>
<td>Y</td>
<td>Y</td>
<td>12</td>
<td>34</td>
</tr>
<tr>
<td>P12/77</td>
<td>44 St Margarets Street</td>
<td>Roadside</td>
<td>Y</td>
<td>Y</td>
<td>12</td>
<td>33</td>
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</table>
### Devizes Diffusion Tubes

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Site Name</th>
<th>Site Type</th>
<th>In AQMA?</th>
<th>Triplicate of Co-located Tube?</th>
<th>Full Calendar Year Data Capture 2012 (Number of Months or %)</th>
<th>2012 Annual Mean Concentration (µg/m$^3$) - Bias Adjustment factor = 0.96</th>
</tr>
</thead>
<tbody>
<tr>
<td>P12/10</td>
<td>Hillsborough, Bath Road</td>
<td>Roadside</td>
<td>N</td>
<td>N</td>
<td>12</td>
<td>33</td>
</tr>
<tr>
<td>P12/14</td>
<td>5 The Nursery</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>42</td>
</tr>
<tr>
<td>P12/13</td>
<td>Shanes Castle</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>47</td>
</tr>
<tr>
<td>P12/12</td>
<td>Opposite Wadworths, 41 Northgate Street</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>44</td>
</tr>
<tr>
<td>P12/11</td>
<td>36 Market Place (Mistral)</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>P12/16</td>
<td>Chantry Court, New Park Street</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>P12/17</td>
<td>Sudweeks Court, New Park Street</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>11</td>
<td>25</td>
</tr>
<tr>
<td>P12/15</td>
<td>105 St James Place</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>41</td>
</tr>
<tr>
<td>P12/21</td>
<td>12 Southgate Street</td>
<td>Roadside</td>
<td>Y</td>
<td>N</td>
<td>12</td>
<td>41</td>
</tr>
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### Marlborough Diffusion Tubes

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<th>2012 Annual Mean Concentration (µg/m³) - Bias Adjustment factor = 0.96</th>
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<td>P12/27</td>
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<td>War Memorial, London Road</td>
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<td>N</td>
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<td>P12/29</td>
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### Calne Diffusion Tubes

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<td>N</td>
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<tr>
<td>P12/5</td>
<td>King George, 34 New Road</td>
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<td>P12/70</td>
<td>White Hart Hotel, The Green</td>
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### Chippenham & Corsham Diffusion Tubes

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<td>28</td>
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<td>P12/59</td>
<td>Providence Terrace, Ivy Lane</td>
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<td>P12/60</td>
<td>Bridge Centre, Bath Road</td>
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<tr>
<td>P12/83</td>
<td>Rugby Club, West Cepen Park</td>
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<td>P12/84</td>
<td>Dual Carriageway</td>
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<tr>
<td>P12/9</td>
<td>42 Bath Road, Corsham</td>
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### Westbury Diffusion Tubes

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<td>P12/52</td>
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<td>N</td>
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<td>P12/53</td>
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<tr>
<td>P12/51</td>
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<td>38</td>
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<td>P12/57</td>
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<td>P12/56</td>
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## Wilton Diffusion Tubes

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<th>2012 Annual Mean Concentration (µg/m³) - Bias Adjustment factor = 0.96</th>
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<tbody>
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<td>1 Queen Street</td>
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<td>N</td>
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<td>32</td>
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<td>P12/85</td>
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<td>N</td>
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<td>17</td>
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<tr>
<td>P12/86</td>
<td>Kingsbury Lodge</td>
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<td>P12/88</td>
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<td>22</td>
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<td>Roadside</td>
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<td>23</td>
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In bold, exceedence of the NO₂ annual mean AQS objective of 40µg/m³

Underlined, annual mean > 60µg/m³, indicating a potential exceedence of the NO₂ hourly mean AQS objective

\( ^{a} \) Means should be “annualised” as in Box 3.2 of TG(09) ([http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38](http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38)), if full calendar year data capture is less than 75%

\( ^{b} \) If an exceedence is measured at a monitoring site not representative of public exposure, NO₂ concentration at the nearest relevant exposure should be estimated based on the “NO₂ fall-off with distance” calculator ([http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html](http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html)), and results should be discussed in a specific section. The procedure is also explained in Box 2.3 of Technical Guidance LAQM.TG(09) ([http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=30](http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=30)).
### Table 2.6 Results of NO₂ Diffusion Tubes (2008 to 2012)

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<tr>
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### Wiltshire Council Progress Report 2013

#### Annual Mean Concentration (µg/m³) - Adjusted for Bias

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<th>Site Type</th>
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<td>5 The Nursery</td>
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<td>18</td>
<td>22</td>
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<td>-</td>
<td>44</td>
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<td>P12/17</td>
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<td>-</td>
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<tr>
<td>P12/15</td>
<td>105 St James Place</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>41</td>
</tr>
<tr>
<td>P12/21</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>41</td>
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<td>P12/80</td>
<td>St Josephs School, Bath Road</td>
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<td>Y</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
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<td>Y</td>
<td>57</td>
<td>53</td>
<td>52</td>
<td>59</td>
<td>63</td>
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<tr>
<td>P12/25</td>
<td>27 Herd Street</td>
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<td>Y</td>
<td>-</td>
<td>41</td>
<td>47</td>
<td>47</td>
<td>44</td>
</tr>
<tr>
<td>P12/23</td>
<td>The Green, Barn Street</td>
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<td>38</td>
<td>34</td>
<td>36</td>
<td>35</td>
<td>35</td>
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<tr>
<td>P12/24</td>
<td>116 High Street</td>
<td>Roadside</td>
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<td>33</td>
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<td>P12/27</td>
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<td>41</td>
<td>43</td>
<td>44</td>
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<tr>
<td>P12/28</td>
<td>War Memorial, London Road</td>
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<td>Y</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>33</td>
<td>34</td>
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</table>

---

P12/22

6 Herd Street

Roadside

Y

57

53

52

59

63

---

P12/25

27 Herd Street

Roadside

Y

- 41

47

47

44

---

P12/23

The Green, Barn Street

Roadside

Y

38

34

36

35

35

---

P12/24

116 High Street

Roadside

Y

30

30

33

30

31

---

P12/26

6 Barn Street

Roadside

Y

- 44

- 41

- 43

- 44

---

P12/27

13 Salisbury Road

Roadside

Y

- 41

43

44

---

P12/28

War Memorial, London Road

Roadside

Y

- 33

- 34

---
<table>
<thead>
<tr>
<th>Site ID</th>
<th>Site Name</th>
<th>Site Type</th>
<th>Within AQMA?</th>
<th>Annual Mean Concentration (µg/m³) - Adjusted for Bias a</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td>2008 (Bias Adjustment Factor = 0.87)</td>
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<tr>
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<tr>
<td>CALNE</td>
<td></td>
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<td></td>
<td></td>
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<td>P12/4</td>
<td>Chilvester Shop, 1 Oxford Road</td>
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<tr>
<td>P12/3</td>
<td>18 Curzon Street</td>
<td>Roadside</td>
<td>Y</td>
<td>-</td>
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<td>P12/8</td>
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</tr>
<tr>
<td>P12/5</td>
<td>King George, 34 New Road</td>
<td>Roadside</td>
<td>Y</td>
<td>-</td>
</tr>
<tr>
<td>P12/6</td>
<td>30 London Road</td>
<td>Roadside</td>
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<td>P12/7</td>
<td>Quemerford Road</td>
<td>Kerbside</td>
<td>Y</td>
<td>-</td>
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<tr>
<td>P12/70</td>
<td>White Hart Hotel, The Green</td>
<td>Roadside</td>
<td>Y</td>
<td>-</td>
</tr>
<tr>
<td>CHIPPENHAM &amp; CORSHAM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P12/81</td>
<td>Dentist, Malmesbury Road</td>
<td>Roadside</td>
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<td>-</td>
</tr>
<tr>
<td>P12/82</td>
<td>42 New Road</td>
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<td>P12/59</td>
<td>Providence Terrace, Ivy Lane</td>
<td>Roadside</td>
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<td>P12/60</td>
<td>Bridge Centre, Bath Road</td>
<td>Roadside</td>
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<tr>
<td>P12/83</td>
<td>Rugby Club, West Cepen Park</td>
<td>Roadside</td>
<td>N</td>
<td>-</td>
</tr>
<tr>
<td>P12/84</td>
<td>Dual Carriageway</td>
<td>Roadside</td>
<td>N</td>
<td>-</td>
</tr>
<tr>
<td>P12/9</td>
<td>42 Bath Road, Corsham</td>
<td>Roadside</td>
<td>N</td>
<td>-</td>
</tr>
<tr>
<td>WESTBURY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P12/50</td>
<td>71 Warminster Road</td>
<td>Roadside</td>
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<tr>
<td>P12/52</td>
<td>76 Warminster Road lamppost</td>
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<td>P12/53</td>
<td>114 Warminster Road</td>
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<td>P12/57</td>
<td>23 West End</td>
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## Wiltshire Council Progress Report 2013

### LAQM Progress Report 2013

<table>
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<tr>
<th>Site ID</th>
<th>Site Name</th>
<th>Site Type</th>
<th>Within AQMA?</th>
<th>Annual Mean Concentration (µg/m³) - Adjusted for Bias a</th>
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<tr>
<td>P12/54</td>
<td>1 Queen Street</td>
<td>Roadside</td>
<td>N</td>
<td>40.4 34.3 39 36 32</td>
</tr>
<tr>
<td>P12/55</td>
<td>12 West Street</td>
<td>Roadside</td>
<td>N</td>
<td>35.9 32.6 37 34 32</td>
</tr>
<tr>
<td>P12/85</td>
<td>46A West Street</td>
<td>Roadside</td>
<td>N</td>
<td>- - - -</td>
</tr>
<tr>
<td>P12/86</td>
<td>Kingsbury Lodge</td>
<td>Roadside</td>
<td>N</td>
<td>- - - -</td>
</tr>
<tr>
<td>P12/88</td>
<td>49 Russell Street</td>
<td>Roadside</td>
<td>N</td>
<td>- - - -</td>
</tr>
<tr>
<td>P12/87</td>
<td>Kingsgate</td>
<td>Roadside</td>
<td>N</td>
<td>- - - -</td>
</tr>
<tr>
<td></td>
<td>WILTON</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>P12/54</td>
<td>1 Queen Street</td>
<td>Roadside</td>
<td>N</td>
<td>40.4 34.3 39 36 32</td>
</tr>
<tr>
<td>P12/55</td>
<td>12 West Street</td>
<td>Roadside</td>
<td>N</td>
<td>35.9 32.6 37 34 32</td>
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<tr>
<td>P12/85</td>
<td>46A West Street</td>
<td>Roadside</td>
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</tr>
<tr>
<td>P12/86</td>
<td>Kingsbury Lodge</td>
<td>Roadside</td>
<td>N</td>
<td>- - - -</td>
</tr>
<tr>
<td>P12/88</td>
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<td>N</td>
<td>- - - -</td>
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<tr>
<td>P12/87</td>
<td>Kingsgate</td>
<td>Roadside</td>
<td>N</td>
<td>- - - -</td>
</tr>
</tbody>
</table>

In bold, exceedence of the NO₂ annual mean AQS objective of 40µg/m³

Underlined, annual mean > 60µg/m³, indicating a potential exceedence of the NO₂ hourly mean AQS objective

a Means should be “annualised” as in Box 3.2 of TG(09) ([http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38](http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38)), if full calendar year data capture is less than 75%
2.4  Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Diffusion Tube Monitoring Sites

Trend charts for NO₂ annual mean results for the passive monitoring sites where we have monitored for at least the last 5 years are presented and discussed below.

Figure 26 - 5 year trends for annual mean Nitrogen Dioxide concentrations at South Western Road (P12/38) and Minster Street (P12/34), Salisbury

Figure 27 - 5 year trends for annual mean Nitrogen Dioxide concentrations at Brown Street (P12/36) and Exeter Street (P12/49), Salisbury
Figure 28 - 5 year trends for annual mean Nitrogen Dioxide concentrations at Fisherton Street (P12/44) and 74 London Road (P12/30), Salisbury

![Graph showing 5 year trends for annual mean Nitrogen Dioxide concentrations at Fisherton Street & 74 London Road, Salisbury between 2006 & 2012.](image)

- **Objective**
- **Fisherton Street**
- **74 London Road**

Figure 29 - 5 year trends for annual mean Nitrogen Dioxide concentrations at 93 Castle Street (P12/37) and Winchester Street (P12/35), Salisbury

![Graph showing 5 year trends for annual mean Nitrogen Dioxide concentrations at 93 Castle Street & Winchester Street, Salisbury between 2006 & 2012.](image)

- **Objective**
- **93 Castle Street**
- **Winchester Street**
Figure 30 - 5 year trends for annual mean Nitrogen Dioxide concentrations at The Lamb, Trowbridge (P12/79).

![Nitrogen Dioxide Diffusion Tube trends for Trowbridge between 2006 & 2012](image)

Figure 31 - 5 year trends for annual mean Nitrogen Dioxide concentrations at Masons Lane (P/12/0), St Margarets Street (average of P12/75-77) and Silver Street (P12/1), Bradford on Avon.

![Nitrogen Diffusion Tube trends in Bradford On Avon between 2006 & 2012](image)
Figure 32 - 5 year trends for annual mean Nitrogen Dioxide concentrations at Shanes Castle (P12/13), Hillsborough (P12/10) and the Market Place (P12/11), Devizes.

![Graph of Nitrogen Dioxide Diffusion Tube trends for Devizes between 2006 & 2012](image)

Figure 33 - 5 year trends for annual mean Nitrogen Dioxide concentrations at Barn ST, The Green (P12/23), 6 Herd St (P12/22) and 116 High Street (P12/24), Marlborough.

![Graph of Nitrogen Dioxide Diffusion Tube trends for Marlborough between 2006 & 2012](image)
Figure 34 - 5 year trends for annual mean Nitrogen Dioxide concentrations at Haynes Road (P12/51), 71 Warminster Road (P12/50), Westbury

Figure 35 - 5 year trends for annual mean Nitrogen Dioxide concentrations at 1 Queen Street (P12/54) and 12 West Street (P12/5), Wilton.
The underlying 5 year trend for annual mean levels of Nitrogen Dioxide in Salisbury and in Wilton is down. However, an upward trend has been noted at the site in Trowbridge as well as at the 6 Herd Street site in Marlborough and 71 Warminster Road, Westbury site.

The other trends as measured by diffusion tube monitoring are neither up nor down at all the sites presented in this section.

2.2.2 Particulate Matter (PM$_{10}$)

Wiltshire Council uses, BAM 1020 analysers in order to monitor for PM$_{10}$. These automatically record’s dust concentrations with a built in data logging facility. The sampling head used on this equipment is specific to only allow particles less than 10 microns in size through to ensure that PM$_{10}$ is accurately measured.

The analyser uses the principle of beta absorption to provide sample determination of mass concentration. An energy source of beta particles produces repeatable measurement characteristics. A glass fibre filter tape is used (30mm wide by 20 metres long) which allows for long periods of monitoring. A known amount of electron scattering and attenuation through a clean filter is compared with that of a dust sampled filter. The mass concentration is then calculated by the ratio of the number of detected beta particles passing through the filter and the sample volume.

The BAM 1020 PM$_{10}$ analyser does not require fortnightly calibration checks as it automatically self-calibrates. Zero and span are applied at the beginning of every cycle - every 60 minutes. If the instrument fails to perform to its specification, an error is logged in the memory. The zero testing of the instrument is based on the unit’s ability to hold a constant output when measuring the blank filter paper. The span measurements are made by automatically inserting a reference membrane in the measurement path. The BAMs are serviced once every 6 months and calibrated.
## Table 2.7 Results of Automatic Monitoring for PM$_{10}$: Comparison with Annual Mean Objective

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Site Type</th>
<th>Within AQMA?</th>
<th>Valid Data Capture for Monitoring Period % $^a$</th>
<th>Valid Data Capture 2012 % $^b$</th>
<th>Confirm Gravimetric Equivalent (Y or N/A)</th>
<th>Annual Mean Concentration (µg/m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2008$^c$</td>
</tr>
<tr>
<td>AM1</td>
<td>Roadside</td>
<td>Y</td>
<td>98</td>
<td>98</td>
<td>N/A</td>
<td>17.1</td>
</tr>
<tr>
<td>AM3</td>
<td>Roadside</td>
<td>Y</td>
<td>90</td>
<td>90</td>
<td>N/A</td>
<td>-</td>
</tr>
</tbody>
</table>

In bold, exceedence of the PM$_{10}$ annual mean AQS objective of 40µg/m$^3$

$^a$ i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

$^b$ i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

$^c$ Means should be “annualised” as in Box 3.2 of TG(09) ([http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38](http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38)), if valid data capture is less than 75%

* Annual mean concentrations for previous years are optional
2.5 Trends in Annual Mean PM$_{10}$ Concentrations measured at Automatic Monitoring Stations.

Trend charts for Annual Mean PM$_{10}$ annual mean results for the automatic monitoring sites where we have monitored for at least the last 5 years are presented and discussed below.

Figure 36 - 5 year trends for annual mean PM$_{10}$ concentrations from Automatic Monitoring at Exeter St (AM1), Salisbury

![Trends in Annual Mean Particulates](image)

The general 5 year trend for the Automatic Monitoring of annual mean concentration of PM10 particulates located in Exeter Street, Salisbury (AM1) is down and the 2012 annual mean level reported is also lower than the 2011 reported mean.
Table 2.8  Results of Automatic Monitoring for PM$_{10}$: Comparison with 24-hour Mean Objective

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Site Type</th>
<th>Within AQMA?</th>
<th>Valid Data Capture for Monitoring Period %$^a$</th>
<th>Valid Data Capture 2012 %$^b$</th>
<th>Confirm Gravimetric Equivalent (Y or N/A)</th>
<th>Number of Daily Means &gt; 50µg/m³</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2008$^c$</td>
</tr>
<tr>
<td>AM1</td>
<td>Roadside</td>
<td>Y</td>
<td>98</td>
<td>98</td>
<td>N/A</td>
<td>-</td>
</tr>
<tr>
<td>AM3</td>
<td>Roadside</td>
<td>Y</td>
<td>90</td>
<td>90</td>
<td>N/A</td>
<td>-</td>
</tr>
</tbody>
</table>

In bold, exceedence of the PM$_{10}$ daily mean AQS objective (50µg/m³ – not to be exceeded more than 35 times per year)

$^a$ i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

$^b$ i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

$^c$ if data capture for full calendar year is less than 90%, include the 90.4th percentile of 24-hour means in brackets

* Number of exceedences for previous years is optional

The Air Quality Objective states that the daily mean limit of 50µg/m³ is not to be exceeded more than 35 times a year. Wiltshire experienced 3, 24 hour exceedences of the PM$_{10}$ objective in 2012, 1 in Sidmouth Street, Devizes and 2 in Exeter Street, Salisbury. Data capture at both sites was excellent with only slight breakdowns of the equipment impacting on the data capture rate reported.
2.2.3 Sulphur Dioxide (SO₂)

Wiltshire Council does not undertake any SO₂ monitoring. The former Districts Council's Updating and Screening Assessments 2012 and Progress Reports 2011 did not identify any issues for this pollutant across Wiltshire.

Historically sulphur dioxide was monitored in the Westbury area due to the presence of a large cement plant (Lafarge). The plant has been mothballed and as yet it is unknown what the future of the plant is.

2.2.4 Benzene

Wiltshire Council does not carry out any Benzene monitoring. The former District Council's Updating and Screening Assessments 2012 and Progress Reports 2011 did not identify any issues for this pollutant in any of the former District areas.

2.2.5 Other Pollutants Monitored

Wiltshire does not undertake monitoring for any other pollutants at the present time.
2.2.6 Summary of Compliance with AQS Objectives

Wiltshire Council has examined the results from monitoring in the county and can confirm that:

Concentrations within the AQMA still exceed the annual mean objective for nitrogen dioxide at:

74 London Road, Salisbury
2 Minster Street, Salisbury
123 South Western Road, Salisbury
17 Wilton Road, Salisbury
31 Devizes Road, Salisbury
Ivy Terrace, Bradford on Avon
9 Masons Lane, Bradford on Avon
12 Market Street, Bradford on Avon
The Nursery, Devizes
Shanes Castle, Devizes
Wadworths, 41 Northgate Street, Devizes
Chantry Court, New Park Street, Devizes
105 St James’ Place, Devizes
12 Southgate Street, Devizes
6 Herd Street, Marlborough
27 Herd Street, Marlborough
6 Barn Street, Marlborough
13 Salisbury Road, Marlborough
115 London Road, Marlborough
1 Oxford Road, Calne
18 Curzon Street, Calne
34 New Road, Calne
White Hart Hotel, Calne and
71 Warminster Road, Westbury
It is therefore concluded that the following AQMA’s are still valid: although may need to be amended pending the publication of detailed assessments as set out below.

- Salisbury (may need to be amended)
- Bradford on Avon (may need to be amended)
- Devizes
- Marlborough
- Calne
- Westbury (may need to be amended)

Wiltshire Council has measured concentrations of nitrogen dioxide above the annual mean objective at relevant locations outside of the current AQMA’s in Wiltshire, and will need to proceed to a Detailed Assessment for:

- Bath Road, Bradford on Avon
- Bath Road, adjacent to the Bridge Centre, Chippenham
- Wilton Road, Salisbury
- Fore Street, Westbury
- Newtown, Trowbridge


3  New Local Developments

Planning applications which had air quality assessments undertaken in 2012

<table>
<thead>
<tr>
<th>Planning Reference</th>
<th>Development</th>
<th>Air quality/traffic assessment</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/02920/WCM</td>
<td>Operate a waste recovery facility at Lower Compton, Calne</td>
<td>Yes an air quality assessment and traffic report</td>
<td>No decision to date.</td>
</tr>
</tbody>
</table>

3.1 Road Traffic Sources

Wiltshire Council has identified none of the following which are new since the last Updating and Screening Assessment:

- Narrow congested streets with residential properties close to the kerb.
- Busy streets where people may spend one hour or more close to traffic.
- Roads with a high flow of buses and/or HGVs.
- Junctions.
- New roads constructed or proposed since the last Updating and Screening Assessment.
- Roads with significantly changed traffic flows.
- Bus or coach stations.

A plan to close the Salisbury Bus Station and reroute buses to various locations within the city centre is noted and will be monitored to establish if extra air quality monitoring will be required in the vicinity of bus stops allocated extra bus movements.

3.2 Other Transport Sources

Wiltshire Council has no new potential sources of air pollution relating to the following sources:

- Airports,
• Locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m
• Locations with a large number of movements of diesel locomotives and potential long term relevant exposure within 30m
• Ports for shipping.

3.3 Industrial Sources

Wiltshire Council has identified none of the following as new since the last Updating and Screening Assessment.

• Industrial Installations (new or proposed) for which an air quality assessment has been carried out.
• Existing Industrial Installations which have substantially increased emissions or new relevant exposure introduced.
• New or significantly changed installations with no previous air quality assessment.
• Major fuel storage depots
• Poultry Farms.

One new petrol station has been commissioned in Marlborough on the Marlborough Business Park. The site was planned prior to the declaration of the Air Quality management Area for the town but it is subject to the Environmental Permitting Regulations and has been issued with an Environmental Permit for Stage I & II vapour recovery. The facility will be considered as part of the next upgrading and screening assessment for the area.

3.4 Commercial and Domestic Sources

Wiltshire Council confirms that none of the following have been identified since the last updating and screening assessment was completed in 2012.

• Biomass combustion plant meeting the criteria in Section D1a, Box 5.8 of LAQM.TG(09), i.e. (50kW to 20 MW in size) burning biomass
Areas where the combined impact of several of the above may be relevant.
Areas where domestic solid fuel burning may be relevant.

### 3.5 New Developments with Fugitive or Uncontrolled Sources

No new potential sources of fugitive or uncontrolled particulate matter have been identified since the last Updating and Screening Assessment.

Wiltshire Council has identified the following new or previously unidentified local development which may impact on air quality in the Local Authority area.

Marlborough Service Station, Marlborough Business Park, Marlborough.

This will be taken into consideration in the next Updating and Screening Assessment.
4 Local / Regional Air Quality Strategy

Wiltshire developed an Air Quality Strategy in 2012. It is a high level guiding document to inform policy and direction across a range of council services with the aim to improve air quality in Wiltshire.

The Air Quality Strategy is a key document which identifies the importance of good air quality to the people of Wiltshire. It provides a focus and mechanism to promote communication and cooperation within Wiltshire Council, between external organisations and with the community to address localised areas of poor air quality in the area.

It includes a 17 point plan which focuses on strategic actions to help deliver improved air quality. The progress in this can be seen in table 9.1.

The document provides an overview of air quality across Wiltshire and focuses on key areas where air quality could and should be improved.

The strategy recognises that no one single agency, department or community has all the answers; improvements to air quality can only be achieved by taking an integrated, collaborative approach. It acknowledges that economic growth and improving the local environment are not mutually exclusive.

The Air Quality Strategy forms part of a suite of documents and policies which address air quality in Wiltshire.

The Strategy and other documents can be viewed and downloaded from the Wiltshire Council website:

http://www.wiltshire.gov.uk/communityandliving/publicprotection/pollutionandnoise/airandwaterpollution/airquality/airqualityreportsandsummaries.htm
5 Planning Applications

With the development of draft supplementary air quality planning guidance, planning applications across the county which may impact upon air quality are now being picked up and addressed much earlier and generally at the pre-application stage. Chapter 6 details this work further.

An example of this is currently in Devizes where there are 2 applications for major housing developments within the town which are very close to the AQMA and both applicants are required to produce air quality impact assessments.
6 Air Quality Planning Policies

Wiltshire Core Strategy

The Wiltshire Core Strategy Submission Document was formally approved for publication by Wiltshire Council on 26 June 2012. Following this decision Wiltshire Council submitted the Wiltshire Core Strategy to the Planning Inspectorate on 10 July 2012 for the purpose of initiating an independent public examination.

Since submitting the Wiltshire Core Strategy to the Planning Inspectorate a further focussed consultation has been undertaken.

As part of the air quality work Wiltshire Council have included a core policy on air quality, presented here:

Core Policy 55: Air quality

Air quality in Wiltshire is predominantly good with the majority of the county having clean unpolluted air. There are however a small number of locations where the combination of traffic, road layout and geography has resulted in exceedances of the annual average for nitrogen dioxide (NO₂) and fine particulates (PM₁₀).

It is recognised that improving air quality in these specific locations is difficult due to the increased use and reliance on private motor vehicles. This strategy seeks to contribute to addressing this issue through a multifaceted approach which includes locating new development where there is a viable range of transport choices, seeking to boost the self containment of settlements to reduce commuter flows and through seeking to utilise the benefits from managed development and growth to take the opportunities to help address the areas where particular problems occur. This latter solution will be delivered through developer contributions.

In order to help developers and communities overcome this issue the council has produced a comprehensive Air Quality Strategy, which is a high level guiding document to inform policy and direction across a range of council services with the
aim to improve air quality. The Air Quality Strategy is a key document which identifies the importance of good air quality to the people of Wiltshire. It provides a focus and mechanism to promote communication and cooperation between the council, external organisations and the community to address localised areas of poor air quality in the area. It includes a 17 point plan which focuses on strategic actions to help deliver improved air quality.

**Air Quality Strategy for Wiltshire**

**main aim:**

‘Wiltshire Council working collaboratively will seek to maintain the good air quality in the county and strive to deliver improvements in areas where air quality fails national objectives in order to protect public health and the environment’

Core Policy 55 requires that all development which either because of the size, nature or location will have the potential to exacerbate known areas of poor air quality, is required to overcome this barrier to development by demonstrating the measures they will take to help mitigate these impacts. In line with the Air Quality Strategy, additional guidance incorporating a developer’s toolkit, will be produced which will give positive advice to prospective developers on how to address the issue of air quality effectively so their investment can go ahead. Development which could potentially impact upon Natura 2000 sites through contributions to aerial deposition e.g. industrial process within 10km of a SAC, will require an assessment of the likely impacts in accordance with published guidance. Where mitigation is required this may be delivered through a local emissions strategy.

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**Core Policy 55**

**Air Quality**

Development proposals which by virtue of their scale, nature or location are likely to exacerbate existing areas of poor air quality, will need to demonstrate that measures can be taken to effectively mitigate emission levels in order to protect public health, environmental quality and amenity. Mitigation measures should demonstrate how they will make a positive contribution to the aims of the Air
Quality Strategy for Wiltshire and may include:

i. landscaping, bunding or separation to increase distance from highways and junctions
ii. possible traffic management or highway improvements to be agreed with the local authority
iii. abatement technology and incorporating site layout / separation and other conditions in site planning
iv. traffic routing, site management, site layout and phasing.

**Targets:** No applications permitted contrary to the advice of Wiltshire Council on the grounds of air pollution that cannot be mitigated.

**Monitoring and Review:** Air Quality Strategy Implementation Plan.

**Delivery Responsibility:** Wiltshire Council.

**Examination in Public of the Wiltshire Core Strategy**

An examination in public by the planning inspector is currently underway to undertake an independent examination into the soundness of the Wiltshire Core Strategy.

The role of the inspector is to consider the soundness of the strategy based on the soundness criteria set out in paragraph 182 of the National Planning Policy Framework (the Framework) published on 27 March 2012. The relevant soundness criteria are whether the Wiltshire Core Strategy is:

- **positively prepared** (based on a strategy that seeks to meet objectively assessed development and infrastructure requirements, including unmet requirements from neighbouring authorities where it is reasonable to do so and consistent with achieving sustainable development)
• **justified** (the most appropriate strategy when considered against the reasonable alternatives, based on proportionate evidence)

• **effective** (deliverable over its period and based on effective joint working on cross-boundary strategic priorities) and

• **consistent with national policy** (enabling the delivery of sustainable development in accordance with the policies in the framework).

The inspector will take into account the representations submitted on the Wiltshire Core Strategy as far as they relate to soundness considerations and it is likely that a number of informal debates will take place on the principal matters identified by the inspector, these are termed hearing sessions.

Following the closure of the examination, the inspector will prepare a report to the council with precise recommendations; these recommendations may include modifications to the Local Plan, if such a request is made by the council.

### Air Quality Supplementary Planning Guidance

In order to provide evidence for inclusion of Core Policy 55 in the Wiltshire Core Strategy and help provide consistency in the way potential developments are dealt with in relation to their impact on air quality, supplementary planning guidance has been written.

The document has gone through public consultation and is now being provided alongside the Wiltshire Core Strategy with a view to it being adopted as official supplementary planning guidance.

### Background

Residents, businesses and visitors to Wiltshire all enjoy the extensive areas of unspoilt countryside that the county has to offer, including the very good air quality. However, there are a few specific areas in our market towns and city which have issues with transport related pollution.
These issues are difficult to address because of the increasing dependence we all have upon motor vehicles, whether for pleasure or business or transportation of goods.

A key principle for Wiltshire Council is to integrate air quality considerations with other policy areas, such as planning. It makes sense that every development that has the potential to emit pollution is required to mitigate or offset this, in order to help achieve an overall reduction in Wiltshire’s air pollution.

This supplementary planning document provides technical advice for developers, consultants and the Council in dealing with applications that may have an impact on air quality with a view to ensuring consistency.

**Purpose of the Guidance**

This guidance is aimed at developers, their consultants and officers within the Council. It provides technical advice on how to deal with planning applications that may have an impact on air quality with a view to ensuring consistency in the approach to proposed new development.

The Government Air Quality Expert Group (AQEG) *Air Quality and Climate Change* report (March 2007) recognises the potential for both local and global air quality improvements. Local Authorities will be looking towards improvements in both and developers should take this into account throughout the design, construction and operational phases of a development, bearing in mind any potential trade-offs between global and local air quality improvements.

**Aims of air quality supplementary planning document:**
- Mitigation measures
- Air quality assessments
- Consistency

Air quality has been identified as important to human health and wellbeing for many years. In addition it has a range of occupational, environmental and economic impacts. As a consequence there has been a great deal of research carried out and...
a number of international and national bodies have issued guidance and advice.

The development of recommendations on ambient air quality and their incorporation into UK law can be traced back through the European Commission and World Health Organisation. This has led to the adoption of robust internationally recognised standards.

The Government adopted the UK Air Quality Strategy (AQS) in 1997, to deal with local air quality and its impact on health. This was revised as the AQS for England, Wales, Scotland and Northern Ireland in 2000, which set requirements for local authorities to undertake a process of Local Air Quality Management (LAQM). The latest Air Quality Strategy (AQS) published in July 2007 provides the current overarching strategic framework for air quality in the UK. Air Quality Objectives for ten pollutants (benzene, 1,3-butadiene, carbon monoxide, lead, nitrogen dioxide, sulphur dioxide, particulates - PM$_{10}$ and PM$_{2.5}$, and ozone) have been prescribed within the AQS based on The Air Quality Standards (England) Regulations 2007. As part of this process, local authorities must review and assess air quality and work towards objectives to be achieved between 2003 and 2010. Where the prescribed air quality objectives are unlikely to be met, local authorities must designate Air Quality Management Areas (AQMAs) and produce an Air Quality Action Plan setting out measures they intend to take to work towards objectives. Existing Air Quality Action Plans are currently being updated to form one single Action Plan for Wiltshire.

An Air Quality Strategy Framework for Wiltshire was developed in 2006. This has since been superseded by a Wiltshire Air Quality Strategy 2011-2015 following the formation of Wiltshire Council in April 2009.

http://www.wiltshire.gov.uk/communityandliving/publicprotection/pollutionandnoise/air andwaterpollution/airquality/airqualityreportsandsummaries.htm

The National Air Quality Strategy 2007 proposes an ‘exposure reduction’ approach in line with the proposed EU Thematic Strategy. This approach supplements air quality objectives (which are focused at hot-spots) to achieve a general reduction in pollution.
concentrations in urban areas across the whole country. Any changes in the National AQS will be reflected in future Review and Assessment, and policy work undertaken by Wiltshire Council.

A key principle of LAQM is for local authorities to integrate air quality considerations with other policy areas, such as planning. It is therefore important for Wiltshire to identify how we can best bring air quality considerations into the planning process at the earliest possible stage. It is no longer satisfactory to simply demonstrate that a development is no worse than the existing or previous land use on a particular site. The Wiltshire Air Quality Strategy and the Supplementary Planning Document are key documents in addressing this.

Where developments take place in an AQMA, mitigation measures must be considered as standard practice, particularly in cases where the development is new and does not replace an existing use. This is especially important where the development has provision for a large number of parking spaces, significantly increasing the number of trips, and/or heating plant. In some cases it may be necessary to recommend refusal where a development is so contrary to the objectives of the Air Quality Action Plan and Strategy.

This guidance takes into account the National Planning Policy Framework (NPPF 2012). This sets out planning policy for the UK in one place. It replaces previous planning policy statements including PPS 23 on planning and pollution control. The NPPF contains advice on when air quality should be a material consideration in development control decisions. Existing and likely future air quality should be taken into account, having regard to EU limit values as well as national objectives for pollutants, the presence of any AQMA’s and the appropriateness of both the development for the site and location of the development and aims to help reduce exposure to air pollution across Wiltshire.

This approach should bring health benefits to everyone - not just those living in localised areas (i.e., hotspots) where the objectives are exceeded. This is particularly important for nitrogen dioxide and small particulates, as these pollutants have a significant impact on health. In order to reduce overall exposure, background
pollution will need to be reduced, so it makes sense that every development that has the potential to emit pollution must require mitigation or offsetting to help achieve an overall reduction in Wiltshire’s air pollution.

**Community Infrastructure Levy Bid Document (CIL)**

Wiltshire Council seeks to work constructively with developers to foster a diverse and thriving economy and to safeguard health.

The Community Infrastructure Levy provides a mechanism for achieving these outcomes. Funding is sought in respect of air quality action planning to assist with improving air quality within air quality management areas and to prevent areas of elevated pollution leading to declarations of AQMA.

The CIL document seeks a levy per metre squared of development in order to implement the action plan.

The CIL document also forms part of the evidence base for the Wiltshire Core Strategy (Core Policy 55)
7 Local Transport Plans and Strategies

7.1.1 Local Transport Plan 3 (LTP3)

Wiltshire Council is now working to LTP3 covering the period from 2011 - 2026.

Local Transport Plans (LTP’s) steer the implementation of national transport policies at the local level. As a strategic document, the LTP does not contain details of schemes. Rather, it sets out a long-term transport strategy, a shorter-term implementation plan and a number of supporting strategies.

Transport needs to be ‘joined up’ with wider economic, social and environmental objectives. The LTP3 has therefore been developed within the context provided by a range of policy documents.

The long term transport strategy vision is:

To develop a transport system which helps support economic growth across Wiltshire’s communities, giving choice and opportunity for people to safely access essential services. Transport solutions will be sensitive to the built and natural environment, with a particular emphasis on the need to reduce carbon emissions.

The Wiltshire LTP3 is made up of:

A long-term transport strategy that seeks to:

• support economic growth;
• reduce carbon emissions;
• contribute to better safety, security and health;
• promote equality of opportunity; and
• improve quality of life and promote a healthy natural environment.

A shorter-term implementation plan based on a realistic assessment of available funding.
A number of supporting strategies and technical documents.

In addition, the LTP provides the framework for all other organisations with a direct or indirect involvement in transport in Wiltshire.

A range of strategic transport options have been generated to help meet the LTP3 goals and objectives. These include:

**Freight**

- Work with freight operators and businesses on a voluntary and ad-hoc basis to achieve shared deliveries where possible
- Develop and adopt an advisory freight network based on national, regional and county routes (or equivalent) with local routes to town centres and business/industrial estates
- Manage local freight issues through the council’s freight assessment and priority mechanism
- Utilise a package of traditional (e.g. paper mapping) and electronic (e.g. interactive mapping) measures to disseminate Wiltshire specific freight information to hauliers, businesses, stakeholders and the public
- Maintain a minimum standard of lorry parking facilities on a requirement basis
- Support the development of a freight interchange facility at Westbury railway station including all necessary associated highway infrastructure

Further details are included in the LTP3 Freight Strategy

**Cycling**

- Provide a sympathetically designed, high quality and well maintained network of cycle routes in the market towns, and where appropriate, provide links between the market towns and to national cycle routes
- Provide high quality cycle parking at key destinations and transport
interchanges, Require adequate levels of high quality cycle parking in all new developments with higher levels of provision in the market towns

The Cycling Strategy is currently being consulted on.

**Walking**

- Provide a sympathetically designed, high quality and well maintained network of walking routes in and between significant trip origins and destinations (e.g. housing, shops, employment areas, transport interchanges, tourist attractions, etc.)

The Walking Strategy is currently being consulted on.

**Public Transport**

- Seek to retain overall levels of service that meets identified demand within available resources, meeting accessibility needs for those without private transport and making a contribution towards sustainable transport objectives
- Increase rail connectivity through the provision of bus-rail links and assist with the implementation of some new stations. Support the function of rail stations as transport hubs and proactively work with partners to introduce service and corridor improvements particularly between Chippenham, Salisbury and Trowbridge. Cover the administrative costs of community rail partnerships and where appropriate and necessary, safeguard and purchase land for rail improvement.

Further details are included in the LTP3 Public Transport Strategy

**Smarter Choices**

- Use the planning system to develop, monitor and enforce mandatory residential and business travel plans, and promote the use of voluntary travel plans by organizations generally. Require appropriate contributions to support
sustainable transport measures

- Promote limited smarter choices measures in appropriate new developments and the market towns, and undertake a range of targeted smarter choices promotions

The Smarter Choices Strategy is currently being consulted on.

Local transport Plans: Devizes, Chippenham, Trowbridge and Salisbury

Three towns within Wiltshire have their own specific transport strategy. Details are given below for the Devizes plan which is in a town where there is an AQMA.

Devizes Transport Strategy

The transport strategy aims to address the air quality problems within the town, support local economic activity and enable healthier lifestyles.

A number of objectives have been devised and various measures proposed that will contribute to achieving them. Whilst the impact of each individual measure is expected to be limited, in combination a package of measures will be effective in developing a more sustainable transport culture with an emphasis on walking, cycling, more efficient car use and greater use of public transport use, improving air quality and relieving traffic pressures.

Given the high proportion of local journeys that are made by car in the Devizes area, considerable effort is needed to increase the role of sustainable transport options to a level where the number of car trips in and around Devizes reduces. Nevertheless, it is recognised that key junctions are already overcapacity and that junction improvements are needed to reduce the impact of traffic congestion.

The following measures are included:

- Walking
- Cycling
- Public transport
- Travel plans
Visions for Salisbury, Chippenham and Trowbridge

Vision for Salisbury
The ‘Salisbury Vision’ provides a framework for co-ordinating and achieving the sustainable regeneration of five priority areas in Salisbury: the Maltings and central car park, Churchfields Industrial Estate, Salisbury Guildhall, the Market Place and Southampton Road. This will make a significant contribution to the life and economy of the city by providing much needed additional office, retails, leisure and other employment space. There are three overall strategies to help achieve the Salisbury vision (development, transport and movement, and public realm) details of which can be obtained from http://salisburyvision.co.uk

Vision for Chippenham
The ‘Vision for Chippenham’ is a framework of improvement and change to ensure that Chippenham has a positive future as an active, balanced and sustainable community. The Vision takes a holistic view of the town and its surroundings in the context of its current and future circumstances. It identifies key strengths, weaknesses, opportunities and threats affecting a range of factors and proposes a number of projects for the short, medium and long term that will improve Chippenham’s living, working and leisure environment. Further details about the Chippenham vision is available from http://chippenhamvision.co.uk

Transforming Trowbridge
The aim of ‘Transforming Trowbridge’ is to enhance the town’s prosperity and environment in line with its status as Wiltshire’s county town. This aim, coupled with the development potential of significant sites in the town centre, has provided the impetus to move away from piecemeal, uncoordinated development towards a strategic, comprehensive approach to regeneration. More information on the Transforming Trowbridge partnership initiative is available from http://transformingtrowbridge.co.uk
8 Climate Change Strategies

8.1 Climate Change Strategy

The 2008 Climate Change Act set legally binding carbon targets and aims to cut the country’s carbon emission by 34% by 2020 and 80% by 2050.

Wiltshire Council has set up a Climate Change team to tackle the causes and consequences of climate change in the following ways.

- Reducing the council’s carbon footprint
- Reducing Wiltshire’s carbon footprint
- Preparing for unavoidable climate change
- Preparing the council for the Carbon reduction commitment

The work in these 4 distinct areas forms the council’s climate change strategy. In order to guide and steer the process a climate change board, has been set up. This board is chaired by Cabinet Portfolio holder for Waste, Property and Environment and oversees all projects pertaining to climate change.

8.2 Regional Sustainable Development Framework and Climate Change Partnership

In 2000, Sustainability South West, on behalf of the Government Office for the South West (GOSW), produced the Regional Sustainable Development Framework ‘A Sustainable Future for the South West’\(^1\). The South West’s original RSDF was redeveloped as the Sustainability Shaper website (http://www.shapersw.net/).

Although air quality does not feature as one of the 15 key themes of the Framework, a number of the themes have the potential to impact on local air quality across Wiltshire. These include climate change (with the framework indicator being a minimum of 11-15% of electricity production to be from renewable sources by 2010), transport (the framework indicator being traffic volumes) and tourism (with the indicator being the percentage of tourist trips to the South West by car).

\(^1\) http://www.oursouthwest.com/RegiSus/framework/framework.htm
At a regional level, the South West Climate Change Impacts Partnership (SWCCIP)\(^2\) key role is to raise awareness of the impacts of climate change, inform and advise on the challenges and opportunities of climate change in SW England, and develop practical adaptation responses. SWCCIP was established in 2001 to build upon previous climate change initiatives, and the initial task for the partnership has been to oversee the research, production and dissemination of a South West Region Climate Change Impact Scoping Study which was completed in January 2003. A Forum continues to steer the ongoing work of the partnership, and the partnership has Priority Sector Groups, which look at the effects and impacts of climate change in the South West on specific sectors.

Climate change is a cross-cutting issue affecting all of the other themes. The Regional Environment Strategy document ‘Our Environment Our Future’ (see section 8.13) sets out a range of initiatives which are already under way in the region to address this issue. The Integrated Regional Strategy (see section 8.10) will also provide a mechanism to ensure climate change considerations are incorporated into all relevant strategies and decision-making.

### 8.3 Sustainable Community Strategy for Wiltshire and the Wiltshire Local Area Agreement

The Local Government Act 2000 made it a statutory duty for councils to produce a community strategy for their area, which is designed to act as a ‘strategy of strategies’. The document ‘A Sustainable Community Strategy for Wiltshire 2007 – 2016’ was endorsed by the Wiltshire Strategic Board in September 2007.

The Wiltshire Local Area Agreement 2007-2010 was an agreement between Wiltshire and Central Government on the delivery of partnership arrangements to the benefit of service delivery, overseen by WISB, Wiltshire’s Strategic Board. As required by Government, the agreement was broken down into blocks, of which Environment was one. Within the Environment block, one of the outcomes was to reduce emissions of carbon dioxide. The County Council has been successful in reducing carbon emissions from its own buildings by 6.7% and from business.

\(^2\) [http://www.oursouthwest.com/climate/](http://www.oursouthwest.com/climate/)
mileage by 6.1% (2006-7 figures). This has been achieved through low cost measures such as insulation, better energy management procedures, staff awareness raising and IT enabled ways of working.

The LAA has now been superseded by the Local Agreement for Wiltshire (LAW), which has been approved by the Wiltshire Strategic Board and endorsed by Wiltshire County Council. Under the Environment theme, the ambition is to ‘tackle climate change and promote a high quality, natural environment that enriches the lives of people’. Some of the actions are also likely to reduce emissions of local air pollutants such as increasing the uptake of energy efficient and renewable energy measures, reducing carbon emissions from public sector business and increased use of sustainable energy measures in new developments (delivered though planning development control decisions). Indicators used for assessing progress include NI185 (CO₂ reduction from Local Authority operations) and NI194 (reduction in NOₓ and primary PM₁₀ emissions through local authority’s estate and operations).

8.4 Local economic development

Key aims of economic development functions are to regenerate stagnating local economies through the regeneration of towns and villages, support other policies and strategies as they promote the economic, social and environmental well-being of their communities served and to monitor the economic well-being of the local economies so as to intervene with new policies and action programmes as appropriate. Various partnerships exist to promote economic development, including the South Wiltshire Economic Partnership³, the Wiltshire and Swindon Rural Regeneration Partnership⁴, the West Wiltshire Economic Partnership⁵ and the Wiltshire and Swindon Economic Partnership⁶.

Any future proposals to implement specific initiatives to improve air quality, through AQAPs or an Air Quality Strategy should make use of the economic development partnerships, either for direct information or sounding boards. Financial constraints and public and business perceptions can be a major hurdle when developing specific measures to improve the local environment, and so any such proposals may stand a

³ http://www.salisbury.gov.uk/business/economic-development/swep.htm
⁴ http://www.salisbury.gov.uk/business/economic-development/partners/wsrrp.htm
⁶ http://www.wsep.org/
greater chance of implementation through the involvement of economic development and planning professionals. Through the development control and review
Implementation of Action Plans

An Air Quality Action Plan (AQAP) is a requirement of DEFRA where Air Quality Management Areas (AQMAs) have been declared. It is an essential part of the local air quality management process, providing a practical opportunity for improving air quality where national measures will be insufficient to meet one or more of the air quality objectives.

Wiltshire Council has 2 existing AQAPs which were produced by the District Councils. Many of the Actions have either been implemented or are no longer deliverable. Therefore an updated Wiltshire Air Quality Action Plan is being produced for DEFRA.

The updated Action Plan will also contain actions for AQMA’s that have been declared since the formation of Wiltshire Council.

Following on from the Air Quality Strategy it is proposed to develop the Action Plan along the same lines and develop it around the themes identified within the strategy:

1. Climate Change
2. Transport
3. Planning & Core Strategy
4. Minerals & Waste
5. Community Involvement
6. Public Health (not identified as a specific theme in the AQ Strategy but would hope to include this in future updates)

The actions contained within the Air Quality Strategy and updates on the progress Wiltshire Council has made are detailed in table 9.1. These actions will eventually be transferred to the updated Wiltshire Air Quality Action Plan.
The AQAP will include:

- Quantification of the source contributions to the predicted exceedences of the limit values.
- Identification of how the LA will use its powers and work with others in pursuit of the relevant AQ objectives with clear timescales within which the measures contained within the plan will be implemented.
- Quantification of the expected impacts of the proposed measures and where possible an indication as to whether these will be sufficient to ensure compliance with the objectives.
- Identification of how the LA intends to monitor and evaluate the effectiveness of the plan.

**Community Air Quality Action Plans**

The development of community area boards following the formation of Wiltshire Council has created the ideal platform for creating local community groups with an interest in improving air quality within their area.

Sub groups have been set up in areas with AQMAs to come up with their local air quality action plan. This will details actions that resident themselves can actively engage with and take some ownership of the problem.

Annual progress on producing and implementing measures will be fed back to the Area Board. These updates will then be fed into the AQAP to enable updates to be sent to DEFRA.

By keeping the Community Action Plans separate from the main AQAP, local measures can evolve over time without having to formally amend the AQAP each time.

The community plans are also in line with Wiltshire Council’s Business Plan:

‘To create stronger and more resilient communities’
encouraging and supporting local communities to get involved and work with us to come up with local solutions to improve air quality will be at the heart of the AQAP.

The community is best placed to inform decision making for their area. They have local knowledge, have links with other community groups and projects going on within their community.
<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
<th>Departments required to take forward action</th>
<th>Linked Strategies</th>
<th>Shared strategic objectives</th>
<th>Air Quality Strategic Objective</th>
<th>Timescale</th>
<th>Progress (April 2013)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Set up links with other LAs within the South West</td>
<td>• Public Protection Services</td>
<td>• Wiltshire Air Quality Strategy</td>
<td></td>
<td>SO5, SO6</td>
<td>Currently underway</td>
<td>Met with Bristol Gloucester, Somerset &amp; Wiltshire (BGSW) Environmental Protection Working Group 13th March 2012. Further collaborative work proposed.</td>
</tr>
<tr>
<td>2</td>
<td>Investigate introduction of Eco Stars scheme for commercial freight vehicles</td>
<td>• Highways</td>
<td>• LTP3 Freight Strategy</td>
<td>Efficient freight movements</td>
<td>SO1, SO2, SO4, SO10</td>
<td>End 2012</td>
<td>To be picked up by the review of the Wiltshire Air Quality Action Plan currently underway. Have suggested use in large planning applications where air quality an issue as a potential mitigation measure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Climate Change</td>
<td>• LTP3</td>
<td>Increased usage of low emission vehicles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Public Protection Services</td>
<td>• Air Quality Action Plan</td>
<td>Reduce level of air pollutants and climate change emissions</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Energy Change &amp; Opportunity Strategy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Develop and introduce Supplementary Planning Document and Developer Toolkits</td>
<td>• Public Protection Services</td>
<td>• Air Quality Action Plan</td>
<td>Support planned growth in Wiltshire</td>
<td>SO1, SO4, SO5, SO10</td>
<td>Informal guidance March 2013</td>
<td>Document completed and has been out for public consultation. (Closed on 19th Feb 2013.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Spatial Planning</td>
<td>• Draft National Planning Policy Framework</td>
<td>Reduce impact on quality of life and built and natural</td>
<td></td>
<td>End 2013</td>
<td></td>
</tr>
</tbody>
</table>
### Wiltshire Core Strategy

- **Wiltshire Core Strategy**

**environment**

- Develop an air quality policy for inclusion in the Wiltshire Core Strategy
- Public Protection Services
- Spatial Planning
- Air Quality Action Plan
- Wiltshire Core Strategy

**Reduce impact on quality of life and built and natural environment**

- SO5
- SO7

End 2012

The Wiltshire Core Strategy is subject to examination in public in May 2013.

Amendment requested with respect to community infrastructure Levy.

Working with spatial planning to incorporate Air Quality into CIL.

### Work with relevant authorities and communities to develop and deliver agreed Community Air Quality Action Plans

- Public Transport
- Highways
- Public Protection Services
- Spatial planning
- Highways Agency
- LTP3
- Air Quality Action Plan
- Wiltshire Local Plan
- Infrastructure Delivery Plan

**Efficient freight movements**

- Sustainable transport alternatives

- SO1
- SO4
- SO5

Ongoing

Community air quality action planning groups have been formed in Bradford On Avon, Devizes, Calne and Salisbury.

Marlborough and Westbury are yet...
<p>|    | Improve information on the website – possible formation of independent website page | Public Protection Services | Air Quality Action Plan | Wiltshire Council Business Plan | SO8 | SO9 | Mid 2013 | Website has been improved. And updated with the frequently asked questions and amended Devizes AQMA and newly declared Calne AQMA. Now in discussions with a company to produce an externally hosted website in order to display real time data on an hourly basis to the public from all 4 of our automatic monitoring locations. This is a joint project with Public Health. |</p>
<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
<th>Departments required to take forward action</th>
<th>Linked Strategies</th>
<th>Shared strategic Aims</th>
<th>Air quality Strategic Objective</th>
<th>Timescale</th>
<th>Progress (April 2013)</th>
</tr>
</thead>
</table>
| 8   | Investigate use of the Wiltshire Intelligence Network and South West Observatory websites for displaying AQ information | • Public Protection Services  
• Wiltshire PCT | • Air Quality Action Plan  
• Wiltshire Council Business Plan | | SO8 | Mid 2013 | Now have access to the Wiltshire Intelligence network site to update data. We will therefore be progressing with this. |
| 9   | Produce summary reports on air quality to include in the Joint Strategic Assessment annually for Area Boards | • Public Protection Services | • Wiltshire Air Quality Strategy | | SO7  
SO8 | March 2013 | Information has been contributed to the recent JSA and State of Environment reports. We are regularly contributing to the JSA and State of Environment Reports which are updated annually. |
| 10  | Produce a consolidated and updated Wiltshire Air Quality Action Plan | • Public Protection Services | • Wiltshire Air Quality Strategy | Reduce levels of air pollutants and climate change emissions | SO1  
SO4  
SO8 | End 2013 | AQAP work with Area boards progressing. A number of meetings which have included local interest groups, councilors and area board representatives |
have been held.
In addition to this we have published the following end of year reports for DEFRA:
- Updating & Screening Assessment 2012
- Detailed Assessment Devizes Centre.
- Detailed assessment Calne
- Further Assessment Marlborough all have been submitted to DEFRA.

Devizes AQMA had now been amended and extended.

Calne AQMA has been declared.

Now in process of writing the AQAP.
<table>
<thead>
<tr>
<th></th>
<th>Project Description</th>
<th>Stakeholders</th>
<th>Associated Documents</th>
<th>SO</th>
<th>Due Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Investigate the introduction of a Text Alert System warning of poor air quality to people with respiratory illness</td>
<td>Wiltshire PCT, Public Protection Services, Wiltshire Air Quality Strategy, Health Strategies, Public Health White Paper</td>
<td>SO8</td>
<td>Mid 2013</td>
<td>This is a joint project with Public Health and is now going to be linked with the external website project. Both projects should be live towards the end of 2013.</td>
<td></td>
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<tr>
<td>12</td>
<td>Work with Spatial Planning and Development Services on locations of new residential accommodation for the elderly</td>
<td>Wiltshire PCT, Public Protection Services, Development Control: Planning</td>
<td>Wiltshire Core Strategy</td>
<td>SO5</td>
<td>Mid 2013</td>
<td>This could be incorporated into the Air Quality Action Plan for the reasons detailed above.</td>
</tr>
<tr>
<td>13</td>
<td>Investigate the feasibility of innovative solutions for school travel plans focusing on AMQA areas first</td>
<td>Public Transport, Highways, Education</td>
<td>LTP3 Public transport Strategy, LTP3</td>
<td>SO1, SO4, SO5, SO10</td>
<td>End 2013</td>
<td>To be considered as part of the development of the Wiltshire Sustainable Modes of Travel to School Strategy.</td>
</tr>
<tr>
<td>15</td>
<td>Minimise traffic delays and disruption where they cause air quality exceedances in AQMAs</td>
<td>• Highways</td>
<td>• LTP3 Network Management Plan</td>
<td>Reduce levels of air pollutants and climate change emissions</td>
<td>SO1</td>
<td>As AQAP timescales</td>
</tr>
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</tbody>
</table>
| 16 | Manage identified freight issues through appropriate interventions and improve the enforcement of weight and other restrictions through initiatives such as Lorry Watch. | • Highways  
• Public Protection Services – Trading Standards | • LTP3  
• LTP Freight Strategy |  | SO1  
SO4  
SO5 | End 2013 | Local freight issues managed through the Council’s Freight Assessment & Priority Mechanism. Trading Standards are rolling Lorry Watch out to those communities who request initiative (e.g. Bradford on Avon) |
10 Conclusions and Proposed Actions

10.1 Conclusions from New Monitoring Data

For example, exceedences identified, within and outside of existing AQMAs. Cases where exceedence was previously suspected but monitoring has confirmed that the AQS Objective is met. Significant trends.

Has monitoring identified any potential or actual exceedences at relevant locations outside existing AQMAs?

Are all monitoring results within AQMAs below the air quality objective, such that it may be appropriate to revoke the AQMA?

In both of these cases a Detailed Assessment would be required.

**Please delete this box**

Concentrations within existing AQMA still exceed the annual mean objective for nitrogen dioxide at

- 74 London Road, Salisbury
- 2 Minster Street, Salisbury
- 123 South Western Road, Salisbury
- 17 Wilton Road, Salisbury
- 31 Devizes Road, Salisbury
- Ivy Terrace, Bradford on Avon
- 9 Masons Lane,
- 12 Market Street, Bradford on Avon
- The Nursery, Devizes
- Shanes Castle, Devizes
- Wadworths, 41 Northgate Street, Devizes
- Chantry Court, New Park Street, Devizes
- 105 St James’ Place, Devizes
- 12 Southgate Street, Devizes
It is therefore concluded that the following AQMA’s are still valid: although may need to be amended pending the publication of detailed assessments as set out below.

Salisbury (may need amending)
Bradford on Avon (may need amending)
Devizes
Marlborough
Calne
Westbury (may need amending)

No monitoring has indicated that any of the existing Wiltshire AQMA’s need to be revoked.

10.2 Conclusions relating to New Local Developments

A new petrol service station at Marlborough Business Park will need detailed consideration in the next Upgrading and Screening Assessment although it is not considered that there is a need to proceed to a detailed assessment in the interim.

10.3 Other Conclusions

With the development of draft supplementary air quality planning guidance, planning applications across the county which may impact upon air quality are now being picked up and addressed much earlier and generally at the pre-application stage.
The Wiltshire Air Quality Strategy runs until 2015 but may need to be updated in the interim with the updating of the air quality action plan and the approval of the Wiltshire Core Strategy.

10.4 Proposed Actions

Wiltshire Council has measured concentrations of nitrogen dioxide above the annual mean objective at relevant locations outside of the current AQMA’s in Wiltshire, and will need to proceed to a Detailed Assessment for:

- Bath Road, Bradford on Avon
- Bath Road, adjacent to the Bridge Centre, Chippenham
- Wilton Road, Salisbury
- Fore Street, Westbury
- Newtown, Trowbridge

We have already amended the monitoring locations for 2013 to facilitate these detailed assessments and will report on these results in the 2014 Progress Report.
11 References

WWDC Air Quality Action Plan (Westbury and Bradford on Avon AQMA’s) 2005

Wiltshire Council Updating and Screening Assessment 2012

Wiltshire Air Quality Strategy 2011 - 2015

South Wiltshire Core Strategy Development Plan (2009)

Wiltshire Local Transport Plan 3 (LTP3) and associated documents:

- Accessibility Strategy
- Cycling Strategy
- Powered two wheeler strategy
- Smarter Choices Strategy

Wiltshire Core Strategy 2012 (draft)

Draft Air Quality Supplementary Planning Guidance 2012

Wiltshire Council Progress Report 2011
Appendices

Appendix A: Quality Assurance / Quality Control (QA/QC) Data

QA/QC of automatic monitoring (Salisbury and Devizes Continuous Analysers)

Data management and reporting is carried out mainly through the Ambient Air Quality Central Software package IDAZRW. The station is polled automatically from a PC of Environmental Services via a GSM modem. The poll occurs three times daily at 00:00 hours, 08:00 hours and 13:00 hours. The PC remains switched on constantly. Features of the software include:

- Automatic calibration every 73 hours
- Automatic redial on busy line or after communication failure
- Detailed logs of data requests and transmission problems
- Remote control of stations for zero test, test gas, measuring range and calibrations
- Calculation of scaling factors and application to nearest results following each automatic calibration
- Marking of abnormal readings, negative readings or readings taken during instrument failure or calibration
- Deletion of abnormal readings

Manual scaling is, therefore, not required. The auto-scaling feature means that the figures are more frequently scaled than the accepted manual scaling operation on a two-weekly basis. Data is checked manually at least weekly, more normally daily, to ensure that the software is making the correct adjustments. There should, therefore, be no requirement to manually back-correct and abnormal readings are marked. During the calibration checks a manual note is taken of span and zero and NO2 gas readings, any abnormal conditions or error readings and any actions taken.

Manual calibrations are compared with auto-calibration. At 6 monthly intervals the data is compared with the nearest AURN site. Any abnormal data will be discarded.
unless it can be traced to a local event. The correction factors are recorded in the calibration report and any local anomalous results are investigated for example steam cleaning of the street by Environmental Services to remove chewing gum.

Data capture for the sites is high, with only a small percentage being lost due to calibration, filter changes and head cleaning. It is however reported that there have been problems encountered retrieving data via the modem caused by issues with the IT department who will not proactively check the status of the link following routine server maintenance and upgrades. This has caused loss of data where memory space at the monitoring station has been exceeded. Loss of data has not related to the functioning of the analysers.

**QA/QC of automatic monitoring (Bradford On Avon Continuous Analyser)**

**Automatic Calibration**

To ensure that the information obtained from the analyser is as accurate as possible and to quantify any instrument drifts a stringent QA/QC protocol is followed.

The API M200A analyser is subjected to daily automatic calibration. This provides a daily check on the performance of the instrument. It should be noted that these results are not used for instrument scaling.

The zero air is generated by passing ambient air through purafil charcoal scrubbers before it is passed into the reaction cell. The span gas is generated by an NO\textsubscript{2} permeation tube containing pure liquid NO\textsubscript{2}. The permeation tube is enclosed in an oven, which is maintained at a constant temperature. The zero air is passed across the permeation tube at a constant flow rate. Provided the flow rate and temperature are kept constant, the amount of NO\textsubscript{2} permeating from the tube into the air stream will be constant. The gas then produced then passes into the reaction cell and a span calibration response is determined.

The data is collected as 1-hour averages. The data is downloaded from the analyser and then stored on a desktop computer.
The analyser is subjected to daily automatic calibration. This provides a daily check on the performance of the instrument.

**Manual Calibration**

Every two weeks manual calibration checks are carried out on the API M2000 analysers. This allows the instrument drifts to be fully qualified and documented using traceable calibration gas standards and the results are used to scale data.

At the time of the instrument calibration checks, instrument pre-calibration checks are made to ensure that the condition of the analyser, before the calibration check, is assessed and any faults attended to.

The fortnightly calibration procedure requires a zero check on the analyser. This is achieved by a source of zero air being provided by passing ambient air through the charcoal scrubber before it enters the reaction cell. Once stability has been achieved (this is defined as a variation of less than 0.1ppb over a one minute period for the analyser) three readings are recorded from the instrument display after three ten second intervals. Next the calibration gas bottle is opened at a pressure of 30 psi. The analyser is allowed to stabilise for a minimum of ten minutes. Three consecutive readings are taken from the instrument display, allowing ten seconds between readings. The calibration gas is then isolated.

By considering the previous calibration results and the results obtained from the calibration just performed, the success of the calibration procedure is determined. The zero value should not differ by more than ± 2ppb from the previous calibration. The span calibration should not differ by more than 5% from that obtained during the previous calibration. Additionally, the analyser sample inlet filter is changed when necessary.
Six Monthly Checks

These checks are carried out by our analyser suppliers, Envirotechnology Ltd at the same time as they service the equipment. They ensure that the measurements from the analyser are representative and inter-comparable. The calibrations act as an independent audit of the system performance. Additionally, any site-specific problems that may have remained undetected will be fully quantified.

Data Scaling

The data obtained from the analysers is scaled to take into account instrument drift. The data scaled is that which was collected in the two week period before the calibration check was made.

The corrected data is determined using the following formulae:-

\[
\begin{align*}
\text{Instrument Zero} &= V_z \\
\text{Instrument Span (F)} &= \frac{c}{V_s - V_z} \\
\text{Pollutant Concentration (ppb)} &= F(V_a - V_z) \\
\text{Conversion to } \mu g/m^3 &= \text{Pollutant concentration} \times 1.91
\end{align*}
\]

Vz is the response of the analyser when the pollutant being measured is not in the sample air stream.

Vs is the response of the analyser to an accurately known concentration, c.

Va is the recorded signal from the analyser sampling ambient air.

QA/QC of diffusion tube monitoring

Bias correction information

Factor from Local Co-location Studies
The overall Wiltshire Bias Correction factor obtained from our 3 studies was calculated by the LAQM helpdesk as 0.96

**National Diffusion Tube Bias Adjustment Factors**

The National Bias Correction Factor calculated by the LAQM helpdesk is 0.96 and can be seen in the spreadsheet available at this site:


**Decision to use National Bias Correction Factor**

Wiltshire Council has decided to use the National bias correction factor of 0.96 as this is the factor we have used for all our reports in previous years. Therefore for consistency and to aid in year on year comparisons, Wiltshire Council always report on the National factor rather than the local factor. However in this case Wiltshire’s local factor is identical to the national bias correction factor.

**Laboratory and Preparation Information**

Wiltshire Council utilises diffusion tubes prepared and analysed by Gradko Ltd. The laboratory participates in the Workplace Analysis Scheme for Proficiency (WASP) for nitrogen dioxide tubes. They analyse a solution supplied by Ntcen as part of the QA/QC scheme that they run. The laboratory also participates in a field inter-comparison scheme which is controlled by Ntcen and organised by the Health and Safety Laboratory.

Three tubes are co-located with a continuous analyser which provides a reference value. The tubes are prepared by pipetting $30\mu$l of solution of 20% triethanolamine in water onto the metal grids in the end of the cap, then assembling the tube components. A fresh batch of tubes is prepared each month ready to dispatch in time for the required exposure date. Laboratory blanks are retained so that at least one is run alongside each batch of samples. Travel blanks are supplied monthly as required by the UK survey procedure.
QA/QC

The WASP Scheme is an independent proficiency testing scheme operated by the Health and Safety Laboratory (HSL). Each month a diffusion tube doped with nitrite is distributed to each participating laboratory; participants then analyse the tube and report the results to HSL. The nominal mass of nitrite on the doped tubes is different each month, and is intended to reflect the range encountered in actual monitoring. For the purpose of diffusion tube QA/QC in the context of Local air Quality Management, AEA Energy & Environment carry out an assessment of laboratory performance for each full calendar year. This was based on the following criteria, which were agreed with Defra and HSL:

- Participating laboratories must complete at least 10 of the 12 monthly WASP rounds.
- The year’s single worst result is ignored: this makes some limited allowance for one-off problems with analytical equipment etc.
- Each laboratory’s monthly standardised results are then combined to give a standard uncertainty for the full year, expressed as a relative standard deviation (%RSD).
- The RSD must be within 15%.

Mean Standardised result (actual result / nominal value): 0.98. Mean percentage under/over-estimation of analysis: -1.5%. Comparison with AEA performance criteria for Local Authority Support: RSD of Standardised Results, ignoring worst value: 4.0 % - this is within the performance target of 15%.

Comments: This laboratory's WASP results met AEA Energy & Environment's performance criteria in 2011.

A copy of their most recent WASP report is not yet available.