

STROUD DISTRICT COUNCIL



Updating and Screening Assessment

2006

In fulfillment of Part IV of the Environment Act 1995

Local Air Quality Management

Produced with assistance from the Air Quality Management Resource Centre, University of the West of England, Bristol.



DOCUMENT CONFIRMATION & CONTROL SHEET

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DOCUMENT STATUS	STATUS	DATE	DESCRIPTION
	Draft report	June 2006	Circulated to Stroud DC for comments
	Final report	June 2006	PDF and hardbound copies (x2) supplied to Stroud DC.

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1. Executive Summary

In 1995 the Environment Act provided for a national air quality strategy requiring local authorities carry out Reviews and Assessments of the air quality in their area for seven specific pollutants. These are; Carbon Monoxide (CO), Benzene, 1,3-butadiene, Nitrogen Dioxide (NO₂), Lead, Sulphur Dioxide (SO₂) and PM₁₀ (Particles under 10µm in diameter).

This Updating and Screening Assessment concluded the following:

- The assessment has indicated that the Carbon Monoxide objective is unlikely to be exceeded at any location within the administrative area of Stroud District, and therefore a Detailed Assessment will not be required.
- The assessment has indicated that the Benzene objectives are unlikely to be exceeded within the administrative area of Stroud District Council, and therefore a Detailed Assessment will not be required for Benzene.
- The assessment has indicated that the 1,3-butadiene objective is unlikely to be exceeded at any location within the administrative area of Stroud District Council, and therefore a Detailed Assessment will not be required.
- The assessment has indicated that the 2004 and 2008 objectives for Lead are unlikely to be exceeded in at any location within the administrative area of Stroud District Council, and therefore a Detailed Assessment will not be required.
- The assessment has indicated that the 2005 Nitrogen Dioxide annual mean objective will not be exceeded at any location within the administrative area of Stroud District Council, and therefore a Detailed Assessment will not be required. The assessment also indicated that the 2005 NO₂ hourly objective is unlikely to be exceeded, and therefore a Detailed Assessment will not be required with respect to the hourly mean.
- The assessment has indicated that the PM₁₀ objectives are unlikely to be exceeded at any location within the administrative area of Stroud District Council, and therefore a Detailed Assessment will not be required.
- The assessment has indicated that the Sulphur Dioxide objectives are unlikely to be exceeded in at any location within the administrative area of Stroud District Council, and therefore a Detailed Assessment will not be required.
- New Roads: There are no new roads or roads with significantly changed flows within the administrative area of Stroud District Council since the last round of Review and Assessment.
- New Industry: There are seven additional small waste oil burners (PG 1/1 (95)) in Stroud District Council since the last round of Review and Assessment. It is not considered that these processes will have a significant influence on local air quality within the authority.

2. Introduction

This report is a requirement of the Air Quality Strategy for the UK under the Environment Act 1995, which places a duty on local authorities to review and assess air quality periodically within their local authority. Stroud District Council, in undertaking this Updating and Screening Assessment, is working towards securing the air quality objectives across the District, as set out in the Air Quality Regulations 2000 and Air Quality [Amendment][England] Regulations 2002.

Where an area within the authority is identified as being at risk of exceeding an air quality objective, the local authority must declare an air quality management area (AQMA). The objective of this current round of assessment is to consider any matters that have changed since Round 2 reports carried out in 2003, 2004 and 2005, which may lead to a risk of an air quality objective being exceeded. Such changes include the consideration of new objectives, new monitoring data, new sources or significant changes to existing sources within Stroud District Council's area and surrounding authorities. This assessment considers each of these matters on a pollutant by pollutant basis.

The focus of the last round of air quality assessment was the exposure of members of the public to potential exceedences of the national air quality objectives. Air quality objectives are health-based, and therefore public exposure remains the focus for this assessment. Relevant locations are considered for each pollutant and individual objective in turn.

2.1. Stroud District Council

Stroud District Council is predominantly a rural area covering 175 square miles in the south of Gloucestershire. Approximately three quarters of the District's residents live in or around the area known as the 'Five Valleys' and at Berkeley, Cam, Dursley and Wotton under Edge. The District shares a border with 42 kilometres of the Severn Estuary coastline to the west, Forest of Dean District Council, Tewkesbury Borough Council, Gloucester City Council, Cotswold District Council and South Gloucestershire District Council (See Figure 1). The main routes through the District include the M5 and numerous A-roads (e.g. A38 and the A46).

There are no major industrial areas within the district or close by that make a significant impact on air quality. The industries within the district that emit any of the prescribed pollutants are not located close to relevant public exposure. The scale on which they operate does not produce emissions that contribute significantly to the air quality.

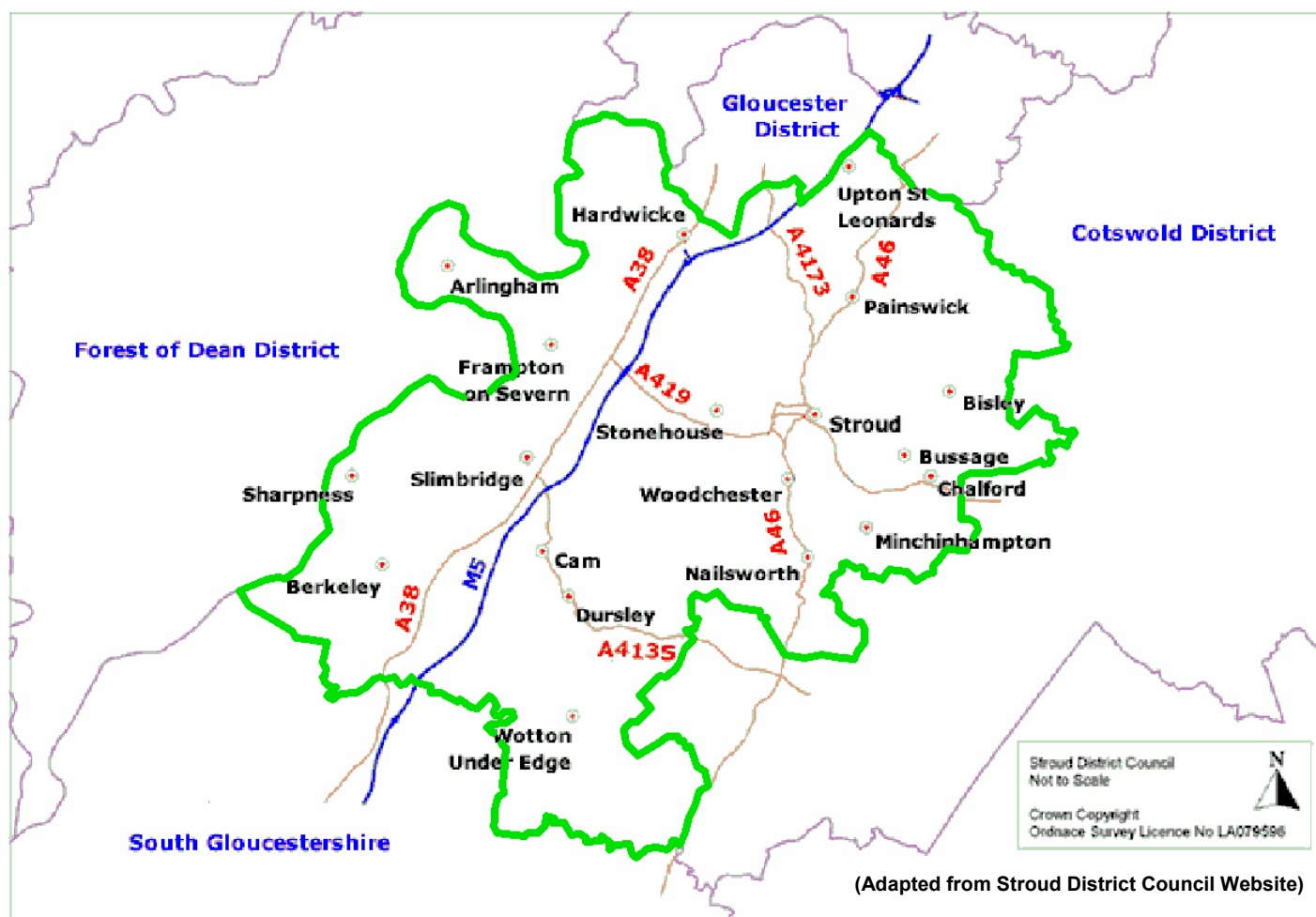


Figure 1: Map of Stroud District Council

2.2. Outcomes of previous reviews and assessments in Stroud District Council

In Round 2, Stroud District Council submitted the following reports:

- 2003: Updating and Screening Assessment
- 2004: Progress Report
- 2005: Progress Report

The 2003 Updating and Screening Assessment, 2004 Progress Report and the 2005 Progress Report did not identify any exceedences of the UK air quality objectives.

3. Updating and Screening Assessment in Round 3

3.1. Overview of Changes

NO₂ data and diffusion tube study:

Stroud District Council have been operating an extensive nitrogen dioxide diffusion tube network since 2003. The number of diffusion tubes that Stroud District Council has utilised in their NO₂ diffusion tube network has remained relatively constant during 2003 and 2004 but the network was reduced to 25 monitoring locations in 2005.

Traffic data:

There have been no significant changes to the traffic flows or new road developments in Stroud District Council since the last round of Review and Assessment.

Other sources:

New Industry: There are no new industrial developments of concern in relation to air quality in Stroud District Council's area, or neighbouring authorities, since the last round of Review and Assessment.

3.2. Carbon Monoxide

The current national policy measures in place are considered sufficient in ensuring that the objective for Carbon Monoxide is achieved by the target date of 31st December 2003 across the UK.

Relevant Carbon Monoxide (CO) Objective
 UK maximum daily running 8-hour mean to be achieved by 31st December 2003:
 10mg/m³

(A) Monitoring data	Stroud District Council does not monitor concentrations of Carbon Monoxide within the local authority. The nearest urban background monitoring sites are located in Bristol City at Old Market and Bristol Centre. The maximum daily running 8-hour mean concentration in 2005 was 1.5 and 3.2mg/m ³ respectively. It is a reasonable assumption that Stroud District's area will not experience Carbon Monoxide exposure substantially above that value; therefore this pollutant is not considered to be of concern.
(B) Very busy roads or junctions in built-up areas	No roads meeting criteria within the District.

Updating & Screening Summary for Carbon Monoxide
 The assessment has indicated that the Carbon Monoxide objective is unlikely to be exceeded at any location in the District, and therefore a Detailed Assessment will not be required.

3.3. Benzene

Petrol-engined vehicle exhausts are considered to constitute a significant source of benzene emitted in the UK. However, emissions from road traffic are considered unlikely to cause exceedences of the benzene air quality objective, even alongside the most heavily trafficked roads¹ across the UK.

Relevant Benzene Objectives
UK running annual mean objective to be achieved by 31 December 2003: 16.25µg/m ³ UK annual mean objective to be achieved by 31 December 2010: 5µg/m ³

(A) Monitoring data outside an AQMA	Stroud District Council does not undertake any local monitoring for Benzene. The closest Automatic Hydrocarbon Network site is located at Harwell, which reported a 2005 annual mean of 0.42µg/m ³ . There is also an non-automatic monitoring (pumped tube data) undertaken at Bristol Old Market which reported a 2005 annual mean of 2.43µg/m ³ . It is a reasonable assumption that the Stroud District will not experience Benzene exposure substantially above that value; therefore this pollutant is not considered to be of concern.
(B) Monitoring data within an AQMA	Currently Stroud District Council do not have an AQMA for Benzene
(C) Very busy roads or junctions in built-up areas	No roads meeting criteria within the District
(D) New industrial sources	No relevant new industrial sources in Stroud District Council's area or neighbouring authorities.
(E) Industrial sources with substantial increased emissions or new relevant exposure.	No industrial sources with substantially increased emissions or new exposure in Stroud District Council's area or neighbouring authorities.
(F) Petrol stations	There are no petrol stations that meet the relevant criteria within the authority.
(G) Major fuel storage depots	There are no major fuel depots within the authority.

Updating & Screening Summary for Benzene
The assessment has indicated that the 2003 and 2010 Benzene objectives are unlikely to be exceeded in the Council's area, and therefore a Detailed Assessment will not be required for Benzene.

3.4. 1,3-butadiene

Vehicle exhausts are the main source of 1,3-butadiene in the UK, although 1,3-butadiene is an important and significant industrial chemical handled in bulk at a small number of industrial premises. Concentrations of 1,3-butadiene measured at all urban background and roadside locations across the UK already experience concentrations $<2.25\mu\text{g}/\text{m}^3$, and the objective is not expected to cause a problem for local authorities in Round 3

Relevant 1,3-Butadiene Objective
 UK Running annual mean Objective to be achieved by 31 December 2003:
 $2.25\mu\text{g}/\text{m}^3$

(A) Monitoring data	Stroud District Council does not monitor concentrations of 1,3-butadiene within the local authority. The closest Automatic Hydrocarbon Network site is located at Harwell, which reported a 2005 annual mean of $0.01\mu\text{g}/\text{m}^3$. There is also a non-automatic monitoring (pumped tube data) undertaken at Bristol Old Market which reported a 2005 annual mean of $0.12\mu\text{g}/\text{m}^3$. It is a reasonable assumption that Stroud District will not experience 1,3-butadiene exposure substantially above that value; therefore this pollutant is not considered to be of concern.
(B) New industrial sources	No relevant new industrial sources in Stroud District Council's area or neighbouring authorities.
(C) Industrial sources with substantial increased emissions or new relevant exposure.	No industrial sources with substantially increased emissions or new exposure in Stroud District Council' area or neighbouring authorities.

Updating & Screening Summary for 1,3-Butadiene
 The assessment has indicated that the 1,3-butadiene objective is unlikely to be exceeded in 2003 at any location within the Council's area, and therefore a Detailed Assessment will not be required.

3.5. Lead

There are no AQMAs declared in respect of either objective, with emissions of lead restricted to specific industrial activity such as alloys, battery manufacture and tank lining and piping.

Relevant Lead (Pb) Objectives

UK Annual mean objective to be achieved by 31 December 2004: 0.5µg/m³
 UK Annual mean objective to be achieved by 31 December 2008: 0.25µg/m³

(A) Monitoring data	Stroud District Council does not monitor concentrations of lead within the District. Bristol City Council has reported a four-month average lead value at Avonmouth (with no significant industrial sources) in 2004 of 0.025µg/m ³ . It is a reasonable assumption that the Stroud District will not experience lead exposure substantially above that value; therefore this pollutant is not considered to be of concern.
(B) New industrial sources	No relevant new industrial sources in Stroud District Council's area or neighbouring authorities.
(C) Industrial sources with substantial increased emissions or new relevant exposure.	No relevant sources with significantly increased emissions or new exposure in Stroud District Council's area or neighbouring authorities.

Updating & Screening Summary for Lead

The assessment has indicated that the lead objectives are unlikely to be exceeded in 2004 and 2008 at any location in the District, and therefore a Detailed Assessment will not be required.

3.6. Nitrogen Dioxide

National studies have shown that whilst the annual mean objective of nitrogen dioxide is likely to be met at urban background locations (outside of London)¹, the objective may be exceeded at roadside locations close to busy road links. The objectives for which this assessment applies are listed below, and relevant locations with respect to the NO₂ objectives are considered by the checklist approach as recommended in the technical guidance.

<p>Relevant NO₂ Objectives</p> <p>Hourly mean</p> <p>UK Objective to be achieved by 31 December 2005 (<18 times a year) 200µg/m³</p> <p>EU Objective to be achieved by 31 December 2010 (<18 times a year) 200µg/m³</p> <p>Annual mean</p> <p>UK Objective to be achieved by 31 December 2005: 40µg/m³</p> <p>EU Objective to be achieved by 31 December 2010: 40µg/m³</p>
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<p>(A) Monitoring data outside an AQMA</p>	<p>Diffusion Tube Monitoring: Stroud District Council currently manages NO₂ diffusion tube monitoring at 25 locations (a reduction of 11 monitoring sites since 2004). The diffusion tubes (20% TEA in water) are supplied and analysed by Bristol Scientific Services. The tubes at all 25 locations through out the Stroud District area have a monthly exposure period. An appropriate bias adjustment factor has been applied and where necessary short term data has been adjusted to determine an annual mean. Further details of the tube locations, bias adjustment and results can be found in Appendix 1. None of the 25 diffusion tubes sites exceeded the annual mean objective in 2005. An exceedence of the annual mean objective was identified at Stinchcombe M5 road bridge in 2003 and 2004 (76.1 and 74.6µg/m³ respectively), there is no relevant exposure at this location. Stroud District Council will not be proceeding to a Detailed Assessment for either the annual mean or the 1-hour objectives.</p> <p>Automatic Monitoring: During 2004, Stroud District Council received real-time air quality monitoring data from Enviro Technology's monitoring station (located at Kingfisher Business Park, Stroud) for NO₂, SO₂, and PM₁₀. The AQMS monitoring data for 2004 indicated that there were no exceedences of the air quality objectives for NO₂ (11.4µg/m³ annual mean).</p>
<p>(B) Monitoring data within an AQMA</p>	<p>Stroud District Council currently has no AQMA(s) for Nitrogen Dioxide.</p>
<p>(C) Narrow congested streets with residential properties close to the kerb</p>	<p>There are no narrow congested streets with residential properties close to the kerb that were not assessed in the last Updating and Screening Assessment.</p>

¹ Technical Guidance LAQM.TG(03). Department for Environment, Food & Rural Affairs and devolved administrations. 2003.

(D) Junctions	There are no junctions that were not assessed in the last Updating and Screening Assessment.
(E) Busy streets where people may spend 1-hour or more close to traffic	There are no busy streets where people may spend 1-hour or more close to traffic that were not assessed in the last Updating and Screening Assessment.
(F) Roads with high flow of buses and/or HGVs	There are no roads with high flows of HGVs or buses that were not assessed in the last Updating and Screening Assessment.
(G) New roads constructed or proposed since the previous round of review and assessment	There no new roads constructed or proposed since the last Updating and Screening Assessment.
(H) Roads with significantly changed traffic flows, or new relevant exposure	There are no roads that have had significantly increased flows, or new relevant exposure, since the last Updating and Screening Assessment.
(I) Bus Stations	There are no bus stations of concern in Stroud District Council's area.
(J) New industrial sources	No relevant new industrial sources in Stroud District Council's area or neighbouring authorities.
(K) Industrial sources with substantially increased emissions or new relevant exposure	There are no new industrial sources with substantially increased emissions or new relevant exposure within Stroud District Council's area.
(L) Aircraft	There are no airports or airfields located in the District.

Updating & Screening Summary for Nitrogen Dioxide

The assessment has indicated that the NO₂ annual mean objective 2005 is unlikely to be exceeded, and therefore a Detailed Assessment will not be required with respect to the annual mean.

The assessment has indicated that the NO₂ hourly objective is unlikely to be exceeded, and therefore a Detailed Assessment will not be required with respect to the hourly mean.

3.7. Particulates (PM₁₀)

Given existing national policy measures, and combined with worst case scenario weather conditions, exceedences of the PM₁₀ annual mean objective and 24-hour mean objective are possible in areas adjacent to busy roads, particularly within major urban areas¹. The objectives for which this assessment applies are listed below, and relevant locations with respect to the PM₁₀ objectives are considered by the checklist approach as recommended in the technical guidance.

<p>Relevant PM₁₀ Objectives</p> <p>24-hour mean</p> <p>UK Objective to be achieved by 31 December 2004 (<35 times a year) 50µg/m³</p> <p>EU Limit Value to be achieved by 31 December 2010 (<7 times a year) 50µg/m³</p> <p>Annual mean</p> <p>UK Objective to be achieved by 31 December 2004: 40µg/m³</p> <p>Proposed EU Limit Value to be achieved by 31 December 2010 20µg/m³</p>

<p>(A) Monitoring data outside an AQMA</p>	<p>Stroud District Council does not monitor concentrations of PM₁₀ within the local authority. Cheltenham Borough Council has an urban background automatic analyser for PM₁₀ and has reported annual mean concentrations of 19.9, 15.3 and 15.1µg/m³ for 2003, 2004 and 2005 respectively. Cheltenham Borough Council has also reported only 2 exceedence of the 24-hour objective over the three years. During 2004, Stroud District Council received real-time air quality monitoring data from Enviro Technology's monitoring station (located at Kingfisher Business Park, Stroud) for NO₂, SO₂, and PM₁₀. The AQMS monitoring data for 2004 indicated that there were no exceedences of the air quality objectives for PM₁₀ (16.1µg/m³ annual mean, no exceedences of the 24-hour objective). It is a reasonable assumption that the Stroud District will not experience PM₁₀ exposure substantially above these values; therefore this pollutant is not considered to be of concern.</p>
<p>(B) Monitoring data within an AQMA</p>	<p>Stroud District Council currently has no AQMA(s) for PM₁₀.</p>
<p>(C) Busy roads and junction in Scotland</p>	<p>Not applicable</p>
<p>(D) Junctions</p>	<p>There are no junctions that were not assessed in the last Updating and Screening Assessment.</p>
<p>(E) Roads with high flow of buses and/or HGVs</p>	<p>There are no roads with high flows of HGVs or buses that were not assessed in the last Updating and Screening Assessment.</p>
<p>(F) New roads constructed or proposed since last round of review and assessment</p>	<p>There are no new roads constructed or proposed since the last Updating and Screening Assessment.</p>
<p>(G) Roads with significantly changed traffic flows, or new relevant exposure</p>	<p>There are no roads that have had significantly increased flows or new relevant exposure since the last Updating and Screening Assessment.</p>

(H) Roads close to the objective during the second round of review and assessment.	No roads that were above or close to the objective levels during the second round of review and assessment.
(I) New industrial sources	No relevant new sources or new exposure in Stroud District Council's area or neighbouring authorities.
(J) Industrial sources with substantially increased emissions, or new relevant exposure	No sources with substantially increased emissions or new exposure in Stroud District Council's area or neighbouring authorities.
(K) Areas of domestic solid fuel burning	There are no significant areas of domestic solid fuel use in the authority.
(L) Quarries/landfill sites/opencast coal/handling of dusty cargoes at ports etc.	There are no sources of concern in Stroud District Council's area that have not been assessed in the last Updating and Screening Assessment.
(M) Aircraft	There are no airports or airfields located in the local authority.

Updating & Screening Summary for PM₁₀

The assessment has indicated that the 2004 PM₁₀ objectives are unlikely to be exceeded at any location with District, and therefore a Detailed Assessment will not be required.

3.8. Sulphur Dioxide

Exceedences of the SO₂ 15-minute objective have been predicted in a small number of locations across the UK from the previous rounds of assessments, though such predictions have been limited to specific industrial processes (coal-fired boilers at a hospital, a cellophane process and food manufacturing plant), and from domestic coal burning, railways, and shipping emissions. Local exceedences may occur in the vicinity of small combustion plants burning coal and oil (<20MW) where there are other sources such as domestic coal burning contributing to SO₂ concentrations locally.

<p>Relevant SO₂ Objectives 15-minute mean UK Objective to be achieved by 31 December 2005 (<35 times a year): 266µg/m³ 1-hour mean UK Objective to be achieved by 31 December 2004 (<24 times a year): 350µg/m³ 24-hour mean UK Objective to be achieved by 31 December 2004 (<3 times a year): 125µg/m³</p>

<p>(A) Monitoring data outside an AQMA</p>	<p>Diffusion Tubes Stroud District Council monitors concentrations of SO₂ within the local authority using monthly exposed diffusion tubes at two locations; Bevington M5 survey and Kingswood M5 survey (Table 4). The usefulness of the data obtained is negligible as the results are in no way comparable to the air quality objectives. However, in future years the annual mean results may be compared to previous year's results to study annual trends. Since 2003 the diffusion tube concentrations have shown little variation.</p> <p>Automatic Monitoring Stroud District Council does not undertake any automatic monitoring for SO₂. However, Cheltenham Borough Council has an urban background automatic analyser for SO₂ and has reported no exceedences of the 15-minute, 1-hour or 24-hour objectives for 2003, 2004 or 2005. During 2004, Stroud District Council received real-time air quality monitoring data from Enviro Technology's monitoring station (located at Kingfisher Business Park, Stroud) for NO₂, SO₂, and PM₁₀. The AQMS monitoring data for 2004 indicated that there were no exceedences of the air quality objectives for SO₂ (no exceedences of the 24-hour, 1 hour or 15-minute objectives). It is a reasonable assumption that the Stroud District will not experience SO₂ concentrations substantially above these values; therefore this pollutant is not considered to be of concern.</p>
<p>(B) Monitoring data within an AQMA</p>	<p>Stroud District Council currently has no AQMA(s) for Sulphur Dioxide.</p>
<p>(C) New industrial sources</p>	<p>No relevant new sources or new exposure in Stroud District Council's area or neighbouring authorities.</p>

(D) Industrial sources with substantially increased emissions, or new relevant exposure	No relevant sources with substantially increased emissions or new exposure in Stroud District Council's area or neighbouring authorities.
(E) Areas of domestic solid fuel burning	There are no significant areas of domestic solid fuel use in the authority.
(F) Small boilers that are >5MW <small>(thermal)</small>	There are no known boilers >5MW thermal run on coal or heavy fuel oil in the authority.
(G) Shipping	There are no significant shipping sources in the authority.
(H) Railway locomotives	There are no significant railway sources in the authority.

Updating & Screening Summary for SO₂

The assessment has indicated that the SO₂ objectives are unlikely to be exceeded at any location within the Council's area, and therefore a Detailed Assessment will not be required.

4. Conclusions

This Updating and Screening Assessment concluded the following:

- The assessment has indicated that the Carbon Monoxide objective is unlikely to be exceeded at any location within the administrative area of Stroud District, and therefore a Detailed Assessment will not be required.
- The assessment has indicated that the Benzene objectives are unlikely to be exceeded within the administrative area of Stroud District Council, and therefore a Detailed Assessment will not be required for Benzene.
- The assessment has indicated that the 1,3-butadiene objective is unlikely to be exceeded at any location within the administrative area of Stroud District Council, and therefore a Detailed Assessment will not be required.
- The assessment has indicated that the 2004 and 2008 objectives for Lead are unlikely to be exceeded in at any location within the administrative area of Stroud District Council, and therefore a Detailed Assessment will not be required.
- The assessment has indicated that the 2005 Nitrogen Dioxide annual mean objective will not be exceeded at any location within the administrative area of Stroud District Council, and therefore a Detailed Assessment will not be required. The assessment also indicated that the 2005 NO₂ hourly objective is unlikely to be exceeded, and therefore a Detailed Assessment will not be required with respect to the hourly mean.
- The assessment has indicated that the PM₁₀ objectives are unlikely to be exceeded at any location within the administrative area of Stroud District Council, and therefore a Detailed Assessment will not be required.
- The assessment has indicated that the Sulphur Dioxide objectives are unlikely to be exceeded in at any location within the administrative area of Stroud District Council, and therefore a Detailed Assessment will not be required.
- New Roads: There are no new roads or roads with significantly changed flows within the administrative area of Stroud District Council since the last round of Review and Assessment.
- New Industry: There are seven additional small waste oil burners (PG 1/1 (95)) in Stroud District Council since the last round of Review and Assessment. It is not considered that these processes will have a significant influence on local air quality within the authority.

Appendix 1: Diffusion Tube Monitoring Data

NO₂ diffusion tube data

Stroud District Council has been undertaking NO₂ diffusion tube monitoring at a number of locations since 2003. Table 1 (2003), Table 2 (2004) and Table 3 (2005) presents the diffusion tube data from monitoring undertaken by Stroud District Council. The annual means have been bias adjusted and projected forward to the relevant years in accordance with TG(03). Any locations and annual mean figures shaded in red indicate an exceedence of the 40 µg/m³ annual mean NO₂ objective. The majority of the locations monitored have been consistently below the annual mean objective; however, Stinchcombe M5 Road Bridge has exceeded the Nitrogen Dioxide annual mean objective in 2003 and 2004. There is no relevant exposure at this location.

Details of Bias Adjustment

Nitrogen dioxide diffusion tubes used by Stroud District Council are 20% TEA in water supplied and analysed by Bristol Scientific Services. The bias adjustment factors for 2003, 2004 and 2005 have been estimated from the published Bias Adjustment Factors Spreadsheet (v03/06). A factor of 0.89 (two studies), 0.95 (six studies) and 1.1 (two studies) was estimated for 2003, 2004 and 2005 respectively. Although in many cases, using an overall correction factor derived from as many co-location studies as possible will provide the 'best estimate' of the 'true' annual mean concentration, it is important to recognise that there will still be uncertainty associated with this bias adjusted annual mean. One analysis has shown that the uncertainty for tubes bias adjusted in this way is ± 20% (at 95% confidence level). This compares with a typical value of ± 10% for chemiluminescence monitors subject to appropriate QA/QC procedures.

Sulphur Dioxide and Ozone diffusion tube data

Stroud District Council has been undertaking Sulphur Dioxide and Ozone diffusion tube monitoring at a number of locations since 2003. Table 4 (SO₂) and Table 5 (Ozone) presents the diffusion tube data from monitoring undertaken by Stroud District Council (2003, 2004 and 2005). The usefulness of the Sulphur Dioxide and Ozone data obtained is negligible as the results are in no way comparable to the air quality objectives. However, in future years the annual mean results may be compared to previous year's results to study annual trends. Since 2003 the Sulphur Dioxide and Ozone diffusion tube concentrations have shown little variation.

NO₂ diffusion tube data (2003)

Table 1 presents the NO₂ diffusion tube data for Stroud District Council. The 2003 annual mean has been bias adjusted and projected forward to 2005 and 2010 in accordance with TG(03). Any locations and annual mean figures shaded in red indicate an exceedence of the 40 µg/m³ annual mean NO₂ objective.

Table 1: NO₂ diffusion tube data for all locations in Stroud District Council (2003)

Tube site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	2003 Mean	2005 Mean	2010 Mean
	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
Bevington - M5 survey	14.7	21.0	13.9	12.0	5.1	7.8	8.1	11.2	13.2	15.4	22.4	20.0	12.2	11.5	9.6
Brimscombe Corner	22.3	25.0	22.8	23.8	15.0	18.1	18.4	20.2	19.6	18.3	29.9	19.8	18.8	17.6	14.8
Brookthorpe-North View	36.5	50.7	35.4	43.5	30.5	36.1	32.1	39.0	36.1	35.1	45.4	31.1	33.5	31.5	26.5
Cainscross - Tricorn	47.6	48.8	40.7	40.1	23.6	30.5	34.0	34.9	33.5	31.3	49.5	45.6	34.1	32.1	27.0
Cam Pitch	40.3	24.4	34.9	32.5	20.9	29.7	25.0	32.0	33.0	32.6	39.5	33.3	28.1	26.4	22.2
Chalford - A419/High St	24.2	27.2	23.3	22.7	11.8	18.3	15.1	17.0	22.4	24.4	27.1	24.6	19.2	18.0	15.1
Chalford-Manor Farm	22.0	26.4	21.2	14.9	7.6	14.2	12.6	13.2	16.0	20.8	27.5	26.7	16.6	15.5	13.1
Dursley – Town Hall	32.4	36.0	28.6	29.2	14.8	23.6	17.8	25.4	26.1	28.9	30.1	32.3	24.1	22.7	19.1
Dursley – Traffic Lights	35.5	-	28.4	28.0	24.5	22.5	-	-	19.3	31.9	31.4	29.5	24.8	23.3	19.6
Hardwicke - X Keys	48.4	43.0	35.0	36.7	28.8	41.7	36.1	35.0	34.4	40.0	30.7	39.0	33.3	31.3	26.3
Hinton-Sharpness Dock	23.3	27.5	21.5	15.6	5.2	14.1	14.6	11.4	21.0	22.4	30.1	26.2	17.3	16.2	13.6
Kingswood - M5 survey	21.4	22.8	18.1	14.0	14.3	12.2	10.9	13.2	11.4	17.2	26.8	22.3	15.2	14.3	12.0
Michaelwood - M5 survey	27.5	29.6	35.5	21.5	16.3	19.7	17.2	25.5	24.8	25.6	34.3	27.3	22.6	21.2	17.9
Minchinhampton Centre	21.4	23.8	24.9	17.9	13.9	13.5	12.7	13.9	18.4	20.3	24.8	23.8	17.0	16.0	13.4
Nailsworth – Bath Rd	48.5	-	28.4	38.0	25.5	-	-	27.2	30.9	29.9	35.9	36.4	29.7	27.9	23.5
Painswick -High St Lights	40.7	38.6	32.8	31.8	28.2	33.6	31.0	39.4	33.3	34.4	38.8	41.1	31.4	29.5	24.8
Rod - Golden X Jct	29.9	38.6	33.8	24.1	11.5	15.2	16.1	23.9	23.6	35.5	39.8	36.5	24.4	22.9	19.2
Stinchcombe -M5 Rd Bridge	81.2	62.8	86.6	95.5	76.5	94.0	72.6	97.1	105.5	78.2	85.8	90.0	76.1	71.5	60.1
Stonehouse -High St	31.5	27.9	29.4	26.3	19.8	18.7	17.2	25.0	23.6	25.8	-	34.8	22.7	21.3	17.9
Stonehouse Roundabout	38.6	48.9	29.9	30.7	23.7	25.1	18.6	32.4	34.2	34.3	35.1	28.9	28.2	26.5	22.3
Stroud - Bowbridge	37.1	37.9	37.8	31.2	29.7	34.1	30.2	40.7	37.3	39.0	40.5	38.5	32.2	30.2	25.4
Stroud - Music Centre	32.3	35.5	37.6	29.1	14.7	26.3	20.2	25.5	30.7	30.6	34.5	35.8	26.2	24.6	20.7
Stroud - Nelson St	33.6	37.7	30.0	22.0	16.3	16.0	15.4	20.0	22.7	24.9	32.5	28.8	22.2	20.9	17.6
Stroud – Taxi rank	29.3	35.0	36.8	23.4	17.7	26.6	19.9	-	28.2	29.0	32.4	32.9	25.2	23.7	19.9
Tresham -M5 survey	20.8	33.9	23.4	16.9	7.5	8.7	11.0	-	12.3	27.8	28.8	29.0	17.8	16.7	14.1
Upton-St-L'nards: 1 W'land Green	37.5	28.7	29.2	-	18.4	18.2	18.7	24.8	21.9	31.9	29.8	36.4	23.9	22.5	18.9
Upton-St-L'nards: 50 W'land Green	39.5	28.2	40.9	34.5	20.4	20.9	22.0	34.0	26.6	35.2	37.5	34.8	27.8	26.1	21.9
Upton-St-L'nards: 26 W'land Green	30.4	32.4	31.7	27.8	23.8	20.1	16.6	31.7	25.0	31.6	33.1	31.2	24.9	23.4	19.7
Upton-St-L'nards: 12 W'land Green	37.2	27.4	31.6	20.8	15.1	19.5	16.4	25.6	21.9	28.8	32.2	31.3	22.8	21.4	18.0
Upton-St-L'nards: 10 Ash Grove	33.5	30.3	25.6	21.8	16.0	14.9	15.0	19.8	17.0	21.8	34.3	30.2	20.8	19.5	16.4
Upton-St-L'nards: Ash Path Bridge	38.3	36.5	30.6	26.4	21.0	28.3	28.7	32.4	30.9	28.3	33.8	31.5	27.2	25.5	21.5
Upton-St-L'nards: Torshaven	37.1	29.5	34.9	28.1	21.9	21.9	20.1	29.7	25.4	31.9	34.0	32.6	25.7	24.2	20.3
Wotton – Bear/High St	30.9	35.0	37.3	32.8	27.8	22.5	25.8	30.4	-	28.8	-	29.7	26.8	25.2	21.2
Wotton - Old Town	35.7	35.8	29.0	26.8	19.6	33.9	-	23.6	-	24.6	-	-	25.5	23.9	20.1

NO₂ diffusion tube data (2004)

Table 2 presents the NO₂ diffusion tube data for Stroud District Council. The 2004 annual mean has been bias adjusted and projected forward to 2005 and 2010 in accordance with TG(03). Any locations and annual mean figures shaded in red indicate an exceedence of the 40 µg/m³ annual mean NO₂ objective.

Table 2: NO₂ diffusion tube data for all locations in Stroud District Council (2004)

Tube site	Jan*	Feb*	Mar*	Apr*	May*	Jun*	Jul*	Aug*	Sept*	Oct*	Nov*	Dec*	2004 [#] Mean µg/m ³	2005 [#] Mean µg/m ³	2010 [#] Mean µg/m ³
	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
Bevington - M5 survey	12.9	14.5	13.1	7.9	9.8	7.0	10.0	11.1	9.6	12.6	13.1	16.6	10.9	10.6	9.2
Brimscombe Corner	19.0	27.0	23.9	19.1	15.7	15.7	16.4	17.9	16.0	17.8	21.1	23.1	18.4	17.9	15.5
Brookthorpe-North View	33.1	33.2	31.2	34.0	28.0	26.1	31.6	34.6	33.3	32.1	38.8	37.3	31.1	30.3	26.2
Cainscross - Tricorn	35.7	42.8	35.2	38.6	31.6	23.5	32.0	34.3	32.1	33.5	36.3	-	32.5	31.5	27.3
Cam Pitch	36.2	42.9	31.7	32.9	31.3	21.0	28.7	31.0	30.4	29.0	40.5	30.0	30.5	29.6	25.7
Chalford - A419/High St	24.2	26.1	21.4	17.8	18.9	15.8	16.1	20.4	17.7	19.2	25.2	23.0	19.5	18.9	16.4
Chalford-Manor Farm	18.7	18.5	16.7	12.7	13.0	8.2	13.2	13.6	16.0	13.8	22.4	22.6	15.0	14.6	12.6
Dursley – Town Hall	29.1	31.2	-	-	20.3	18.0	21.2	20.5	24.9	19.0	31.7	27.8	23.1	22.5	19.5
Dursley – Traffic Lights	29.4	39.0	28.8	23.8	25.9	18.8	21.7	21.3	24.5	27.6	29.1	29.9	25.3	24.6	21.3
Hardwicke - X Keys	43.9	41.9	29.1	33.8	37.3	26.5	37.1	43.7	38.0	35.4	41.1	34.9	35.0	34.0	29.5
Hinton-Sharpness Dock	19.7	20.0	18.3	13.1	13.2	9.9	14.8	16.7	14.7	-	17.9	25.2	15.9	15.4	13.3
Kingswood - M5 survey	17.0	15.6	14.8	10.7	10.7	7.6	8.7	12.2	12.4	14.3	13.8	19.1	12.4	12.1	10.4
Michaelwood - M5 survey	20.7	27.7	23.4	19.3	17.6	13.9	17.1	21.3	20.7	19.7	20.6	22.6	19.4	18.8	16.3
Minchinhampton Centre	16.6	22.8	16.2	14.0	-	12.7	13.8	15.8	-	17.8	21.8	24.1	16.7	16.2	14.0
Nailsworth – Bath Rd	30.9	31.4	28.8	25.5	30.1	27.6	28.3	28.4	32.3	32.1	32.5	31.7	28.5	27.7	23.9
Painswick -High St Lights	35.9	45.2	39.4	38.4	31.5	31.3	36.4	35.8	31.1	31.7	48.3	34.5	34.8	33.8	29.3
Rod - Golden X Jct	25.0	36.7	33.4	19.5	27.3	14.5	16.2	16.3	22.5	21.6	29.1	31.4	23.2	22.6	19.5
Stinchcombe -M5 Rd Bridge	56.5	92.2	94.2	89.5	83.8	53.5	63.8	117.2	79.8	64.7	78.0	69.6	74.6	72.5	62.8
Stonehouse -High St	26.8	32.3	22.2	16.8	22.4	18.4	20.3	-	17.5	21.3	31.5	25.8	22.0	21.4	18.5
Stonehouse Roundabout	30.3	38.9	28.7	21.7	32.2	22.3	18.3	30.0	25.6	30.6	34.9	32.2	27.4	26.6	23.0
Stroud - Bowbridge	29.5	36.8	27.1	34.0	35.6	31.6	28.8	34.1	33.6	16.3	31.8	29.4	29.2	28.3	24.5
Stroud - Music Centre	30.8	33.0	30.3	23.1	23.9	17.6	20.5	26.7	22.9	24.7	32.0	31.8	25.1	24.4	21.1
Stroud - Nelson St	30.8	29.1	25.8	19.0	20.1	16.0	18.9	23.3	19.2	25.9	32.6	28.6	22.9	22.3	19.3
Stroud – Taxi rank	30.0	31.5	24.8	25.2	23.4	19.5	23.0	24.4	26.4	29.1	35.8	25.8	25.2	24.5	21.2
Tresham -M5 survey	15.1	19.9	15.9	11.4	10.5	7.4	10.3	9.9	13.0	16.3	20.2	20.6	13.5	13.1	11.4
Upton-St-L'nards: 1 W'land Green	29.3	35.0	23.8	30.3	20.1	21.1	24.8	-	29.9	20.9	36.2	32.4	26.2	25.5	22.1
Upton-St-L'nards: 50 W'land Green	37.0	45.6	35.6	33.0	24.5	23.8	33.7	30.4	26.8	23.7	36.6	37.1	30.7	29.8	25.8
Upton-St-L'nards: 26 W'land Green	35.4	41.0	29.7	28.7	30.0	23.1	21.0	26.3	26.7	23.7	37.9	34.0	28.3	27.5	23.8
Upton-St-L'nards: 12 W'land Green	31.7	-	28.5	26.4	25.5	22.5	22.6	25.3	-	28.3	-	27.1	25.1	24.4	21.1
Upton-St-L'nards: 10 Ash Grove	30.5	31.2	24.2	22.3	20.1	13.0	19.0	17.8	20.9	21.2	30.0	29.1	22.1	21.5	18.6
Upton-St-L'nards: Ash Path Bridge 1	30.0	40.9	30.6	26.1	28.2	32.0	30.8	32.9	33.6	24.4	39.2	35.3	30.4	29.5	25.6
Upton-St-L'nards: Ash Path Bridge 2	-	-	-	31.5	27.0	24.3	27.4	28.7	25.2	-	49.4	-	29.0	28.1	24.4
Upton-St-L'nards: Ash Path Bridge 3	-	-	-	34.6	31.4	26.8	33.0	30.4	31.1	-	-	-	29.7	28.8	24.9
Upton-St-L'nards: Torshaven	31.5	39.1	26.8	30.3	24.7	24.9	25.1	23.4	24.5	24.7	-	35.2	26.8	26.0	22.5
Wotton – Bear/High St	34.1	35.4	26.7	23.3	-	29.9	-	-	31.6	-	-	-	28.7	27.9	24.1
Wotton - Old Town	-	31.8	-	22.7	-	19.1	21.3	-	-	-	-	31.9	24.1	23.4	20.3

NO₂ diffusion tube data (2005)

Table 3 presents the NO₂ diffusion tube data for Stroud District Council. The 2005 annual mean has been bias adjusted and projected forward to 2010 in accordance with TG(03). Any locations and annual mean figures shaded in red indicate an exceedence of the 40 µg/m³ annual mean NO₂ objective.

Table 3: NO₂ diffusion tube data for all locations in Stroud District Council (2005)

Ref	Class	Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	2005 Mean	2010 Mean
			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
1	R1	Bevington - M5 survey	12.3	12.9	10.2	9.2	7.6	9.1	8.5	8.0	11.3	15.3	16.1	18.2	12.7	10.7
2	U2	Brookthorpe –North View	32.5	28.5	34.6	28.9	26.5	25.7	25.9	24.9	27.6	32.1	42.4	33.2	33.3	28.0
3	U1	Cainscross - Tricorn	35.7	31.2	28.2	31.6	27.4	31.4	25.1	34.1	23.2	45.3	50.8	35.7	36.6	30.8
4	U1	Chalford -Manor Farm	16.0	18.1	19.6	14.9	10.4	9.5	10.1	10.4	15.7	18.8	19.6	23.0	17.0	14.3
5	U1	Dursley - Town Hall	24.4	28.5	31.6	21.9	21.0	17.1	21.6	19.7	14.5	31.0	32.7	30.1	27.0	22.7
6	U1	Hardwicke – Westland Rd	21.7	22.5	24.5	-	13.4	12.6	15.8	15.2	16.8	21.1	28.5	29.9	22.2	18.7
7	R2	Kingswood - M5 survey	17.7	15.7	15.0	-	8.1	7.5	6.6	7.7	9.8	15.5	16.6	20.0	14.0	11.8
8	SP	Michaelwood - M5 survey	20.4	24.2	23.2	17.1	14.8	15.2	12.7	15.3	18.1	24.9	31.9	21.3	21.9	18.4
9	U2	Minchinhampton Centre	16.7	18.9	17.8	-	10.8	10.8	13.5	11.2	13.9	16.2	20.4	21.9	17.2	14.5
10	U1	Nailsworth – Bath Rd	33.1	32.5	33.9	19.6	28.3	22.4	23.3	20.6	28.4	37.5	35.9	25.9	31.3	26.3
11	U1	Painswick –High St Lights	33.5	41.4	36.0	25.4	26.7	28.0	28.8	28.9	37.7	30.8	28.2	38.1	35.1	29.6
12	U1	Rod – Golden X Junction	27.8	23.1	28.1	19.4	17.0	14.3	15.8	17.9	31.6	26.9	39.0	34.1	27.0	22.7
13	U2	Stonehouse roundabout	32.7	28.3	35.5	21.5	25.1	22.8	22.1	32.6	26.1	31.4	37.4	38.9	32.5	27.3
14	U2	Stroud - Bowbridge	33.0	33.6	35.2	23.3	22.6	27.5	27.6	31.8	30.8	30.9	40.2	32.5	33.8	28.5
15	U2	Stroud – Music Centre	26.8	28.0	26.5	27.2	18.0	16.2	18.6	19.8	28.0	36.8	28.1	34.6	28.3	23.8
16	U3	Stroud – Taxi Rank	30.8	28.4	33.3	20.5	19.5	16.8	21.0	22.7	29.8	32.1	36.8	34.7	29.9	25.2
17	R2	Tresham -M5 survey	17.6	14.0	19.4	9.9	6.9	-	-	9.0	12.1	16.0	20.1	-	15.3	12.9
18	SU	Upton-St-L'nards: 1 W'land Grn	32.8	30.5	33.2	22.7	18.2	18.6	18.9	20.6	23.7	26.9	31.7	34.7	28.7	24.1
19	SU	Upton-St-L'nards: 50 W'land Grn	35.5	38.7	42.9	23.5	20.6	17.7	24.2	26.2	26.3	22.8	31.7	40.2	32.1	27.0
20	SU	Upton-St-L'nards: 26 W'land Grn	34.2	35.4	34.0	21.7	19.5	18.0	16.4	19.2	21.2	21.0	33.6	35.6	28.4	23.9
21	SU	Upton-St-L'nards: 12 W'land Grn	30.8	33.8	34.2	18.3	17.7	20.5	21.1	25.3	27.3	21.8	31.0	32.0	28.8	24.2
22	SU	Upton-St-L'nards: 10 Ash Grove	30.8	23.8	24.8	16.6	12.0	11.8	20.0	17.4	18.5	19.7	31.3	32.7	23.8	20.0
23	SU	Upton-St-L'nards: Ash Path Brdg	29.3	-	35.6	26.4	21.9	-	21.7	26.5	28.9	25.8	40.1	33.5	31.9	26.8
24	SU	Upton-St-L'nards: Torshaven	31.2	29.8	35.0	-	17.9	19.3	18.0	23.7	21.7	16.9	34.8	-	27.3	23.0
25	U1	Wotton – Old Town	27.1	24.9	24.9	18.9	-	11.2	14.3	15.1	16.0	19.8	25.3	26.4	22.4	18.8

Table 4: Sulphur Dioxide diffusion tube data

Site	Averaging Period	Year	Mean ($\mu\text{g}/\text{m}^3$)
Bevington – M5 Survey	Annual Mean	2003	2.2
		2004	1.8
		2005	2.2
		2003-04	2.1
Kingswood – M5 Survey	Annual Mean	2003	3.2
		2004	2.0
		2005	3.1
		2003-05	2.8

Table 5: Ozone diffusion tube data

Site	Averaging Period	Year	Mean ($\mu\text{g}/\text{m}^3$)
Bevington – M5 Survey	Annual Mean	2003	68.9
		2004	66.4
		2005	63.6
		2003-05	66.3

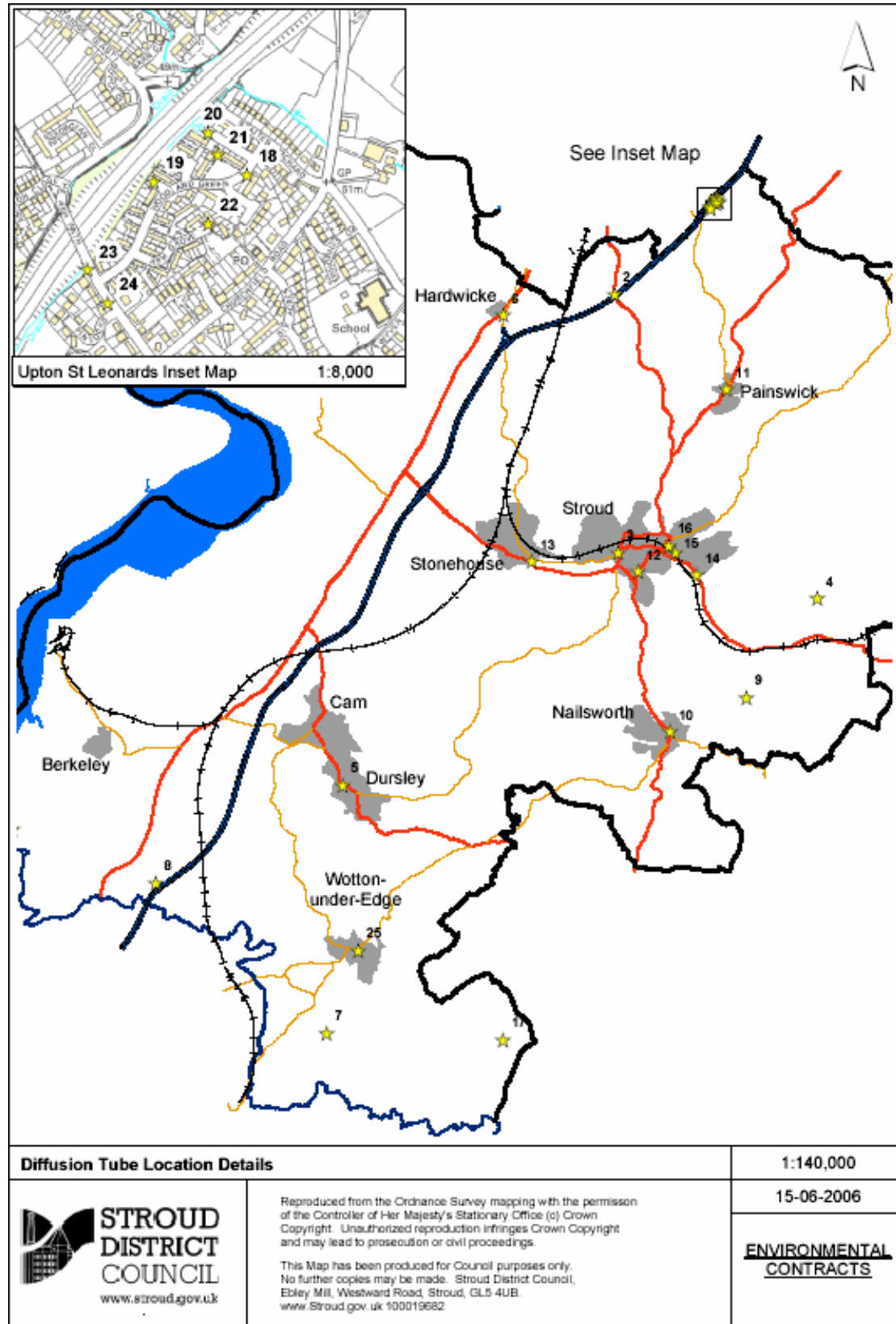


Figure 2: Air quality monitoring locations in Stroud

Appendix 2: Registered Processes

New processes

New Industry: There are seven additional small waste oil burners (PG 1/1 (95)) in Stroud District Council since the last round of Review and Assessment. It is not considered that these processes will have a significant influence on local air quality within the authority.

Table 6: Industrial process summary list for Stroud District Council

Process Classification	Process Description	Number
Part B Processes	General Part B	9
	Waste Oil Burner	11
	Bulk use Cement	3
	Mobile crusher	5
	Petrol Station	18
Total Registered Processes		46

List of LAPPC Permitted Installations on the Public Register in Stroud District Council

Local Authority Pollution Prevention and Control (LAPPC) permitted installations involving Part B prescribed activities regulated under the Pollution Prevention and Control Act 1999.

Table 7: List of LAPPC Permitted Installations on the Public Register in Stroud District Council

Number	Operator Name	Prescribed Activity	PG Note	Date of Original Issue	Date of Last Variance
LAPPC/2	Silvey Brothers Limited	Waste Oil Burner	PG1/1(04)	1-Apr-92	08/01/03
LAPPC/6	Mr J Webb	Waste Oil Burner	PG1/1(04)	1-Apr-92	11/01/03
LAPPC/7	Mr Budgen	Waste Oil Burner	PG1/1(04)	1-Apr-92	11/01/03
LAPPC/9	D M Foundries Ltd	Foundry Operations	PG2/4(02)	30-Mar-93	01/21/99
LAPPC/16	Hampton Stone Ltd	Bulk use of cementPG3	PG3/1(04)	29-Mar-93	11/01/03
LAPPC/17	Dragon Alfa Cement Ltd	Handlingof cement in bulk	PG3/1(04)	29-Oct-92	01/15/99
LAPPC/18	Cullimore's Mix Ltd	Bulk use of cement	PG3/1(04)	23-Sep-92	08/21/03
LAPPC/20	Olympic Varnish Co Ltd	Paper coating processes	PG6/18(97)	17-Dec-92	12/20/01
LAPPC/23	CPC Stroud Flexibles	Printing of flexible packaging	PG6/17(97)	17-Dec-93	02/23/99
LAPPC/24	Sharpness Docks Ltd	Coal, coke & coal product processes	PG3/5(04)	27-Apr-93	08/19/03
LAPPC/32	Smith's (Gloucester) Ltd	Mobile crusher	PG3/16(04)	17-Oct-96	08/19/03
LAPPC/34	Kellaway Building Supplies Ltd	Bulk use of cement	PG3/1(04)	1-Dec-97	08/21/03
LAPPC/38	Snax 24 Ltd	Petrol filling station	PG1/14(04)	24-Aug-98	10/10/02
LAPPC/39	Tesco Stores Ltd	Petrol filling station	PG1/14(04)	1-Jul-98	
LAPPC/40	Dudbridge Superstop	Petrol filling station	PG1/14(04)	7-Dec-98	07/10/03
LAPPC/41	Bear Street Garage	Petrol filling station	PG1/14(04)	24-Sep-98	10/07/02
LAPPC/42	Bristol Street Ford	Petrol filling station	PG1/14(04)	17-Dec-98	10/10/02
LAPPC/43	Millwood Motor Co Ltd	Petrol filling station	PG1/14(04)	7-Dec-98	06/09/03
LAPPC/44	Shell Nailsworth (2015)	Petrol filling station	PG1/14(04)	11-Dec-98	10/07/02
LAPPC/45	UMA (UK) Ltd	Petrol filling station	PG1/14(04)	20-Jan-99	02/03/03
LAPPC/46	Cross Keys Filling Station	Petrol filling station	PG1/14(04)	7-Dec-98	07/04/02
LAPPC/48	Wild Goose Garage	Petrol filling station	PG1/14(04)	10-Feb-99	07/04/02
LAPPC/50	Shell Oldbury	Petrol filling station	PG1/14(04)	7-Dec-98	11/12/02

LAPPC/51	Bridge Service Station	Petrol filling station	PG1/14(04)	3-Apr-99	09/03/03
LAPPC/53	Berkeley Heath Motors	Petrol filling station	PG1/14(04)	4-Mar-99	
LAPPC/54	Fromebridge Self Service	Petrol filling station	PG1/14(04)	21-Dec-98	02/06/03
LAPPC/55	Michaelwood Services Northbound M5	Petrol filling station	PG1/14(04)	8-Jan-99	02/07/03
LAPPC/56	Michaelwood Services Southbound M5	Petrol filling station	PG1/14(04)	8-Jan-99	02/07/03
LAPPC/60	Sundeala	Combustion processes	PG1/12(04)	9-Jul-01	08/21/03
LAPPC/61	Mr J Webb	Petrol filling station	PG1/14(04)	14-Dec-01	
LAPPC/63	Severn Vale Services	Waste Oil Burner	PG1/1(04)	1-Aug-03	
LAPPC/64	Mr Budgen	Petrol filling station	PG1/14(04)	24-Jan-02	
LAPPC/66	Western Trading (UK) Ltd	Mobile crusher	PG3/16(04)	15-Apr-03	
LAPPC/67	Smith's (Gloucester) Ltd	Mobile crusher	PG3/16(04)	5-Aug-03	
LAPPC/68	Car Clinic	Waste Oil Burner	PG1/1(04)	1-Feb-04	
LAPPC/69	M & N Motor Services	Waste Oil Burner	PG1/1(04)	1-Feb-04	
LAPPC/70	Lakeside Garage	Waste Oil Burner	PG1/1(04)	1-Feb-04	
LAPPC/72	Stroud Tyre Co Ltd	Waste Oil Burner	PG1/1(04)	1-Feb-04	
LAPPC/73	Roadspeed	Waste Oil Burner	PG1/1(04)	1-Feb-04	
LAPPC/75	Stonehouse Commercials	Waste Oil Burner	PG1/1(04)	31-Mar-04	
LAPPC/76	Cotswold Crusher Hire	Mobile crusher	PG3/16(04)	1-Aug-04	
LAIPPC/77	Nu-Pro Surface Treatments Ltd			Incomplete application	
LAPPC/78	The Premiere Kitchen Company	Timber Activity & Combustion	PG1/12(04) & PG6/2(04)	1-Jul-05	
LAPPC/79	Smith's (Gloucester) Ltd	Mobile crusher	PG3/16(04)	14-Jul-05	
LAPPC/80	Gloucester Composites Ltd	Manufacture of Fibre Reinforced Plastic	PG4/02(05)	Consultation	
LAPPC/81	STC Services (Stroud) Ltd	Waste Oil Burner	PG1/1(04)	1-Nov-05	
LAPPC/82	Severn Plywoods Ltd	Timber Activity + Combustion	PG6/2(04)	1-Apr-06	
LAPPC/2	Silvey Brothers Limited	Waste Oil Burner	PG1/1(04)	1-Apr-92	08/01/03
LAPPC/6	Mr J Webb	Waste Oil Burner	PG1/1(04)	1-Apr-92	11/01/03
LAPPC/7	Mr Budgen	Waste Oil Burner	PG1/1(04)	1-Apr-92	11/01/03
LAPPC/9	D M Foundries Ltd	Foundry Operations	PG2/4(02)	30-Mar-93	01/21/99
LAPPC/16	Hampton Stone Ltd	Bulk use of cementPG3	PG3/1(04)	29-Mar-93	11/01/03