



2014 Air Quality Progress Report for **Scottish Borders Council**

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

May 2014

Local Authority Officer	David A Brown
Department	Regulatory Services
Address	Council Headquarters Newtown St Boswells
Telephone	0300 100 1800
e-mail	dbrown@scotborders.gov.uk
Report Reference number	SBC/PR/2014/1
Date	27/5/14

Executive Summary

Scottish Borders Council undertakes a program of Air Quality Assessment in accordance with the Guidance produced by the UK Government and Devolved Administrations. Reports are produced annually on a rolling program. Earlier rounds of review and assessment have shown that the main industrial pollutants are unlikely to exceed the UK Air Quality Objectives at any location within the Council's area. And that only NO₂ from road traffic and PM₁₀ from domestic fuel consumption still required to be considered.

A Detailed Assessment of PM₁₀ levels was subsequently undertaken at a location agreed with the Scottish Government and Scottish Environmental Protection Agency as a worst possible case. This work has shown that no part of the Council's area was at risk of exceeding the Air Quality Objective for PM₁₀.

As part of the air quality monitoring programme, the Council monitored nitrogen dioxide (NO₂) using diffusion tubes at 19 different locations. The monitoring of NO₂ has shown no exceedences of the NO₂ Objectives, with levels on average decreasing annually. In 2010 the number of sites was reduced to 14 with the background sites at Peebles, Kelso and Melrose being discontinued.

Since November 2009 an automatic air quality monitoring station has been in operation. This station is part of the AURN network and is situated in the grounds of the Council Area Office at Rosetta Road, Peebles. The pollutants monitored are NO_x and Ozone.

Previous rounds of Review and Assessment have indicated that there were no areas in the Borders at risk of exceeding any of the listed pollutants. The new data and information collected for this report confirms the conclusions of previous reports and that a Detailed Assessment is not required for any pollutant.

(End of page)

Table of Contents

1	Introduction	5
1.1	Description of Local Authority Area	5
1.2	Purpose of Progress Report	6
1.3	Air Quality Objectives	7
1.4	Summary of Previous Review and Assessments	9
2	New Monitoring Data	11
2.1	Summary of Monitoring Undertaken	11
2.2	Comparison of Monitoring Results with Air Quality Objectives	15
3	New Local Developments	26
3.1	Road Traffic Sources	26
3.2	Other Transport Sources	26
3.3	Industrial Sources	26
3.4	Commercial and Domestic Sources	27
3.5	New Developments with Fugitive or Uncontrolled Sources	27
4	Local / Regional Air Quality Strategy	28
5	Planning Applications	29
6	Air Quality Planning Policies	30
7	Local Transport Plans and Strategies	31
8	Climate Change Strategies	33
9	Conclusions and Proposed Actions	34
9.1	Conclusions from New Monitoring Data	34
9.2	Conclusions relating to New Local Developments	34
9.3	Other Conclusions	34
9.4	Proposed Actions	34
10	References	35

List of Tables

Table 1.1 Air Quality Objectives included in Regulations for the purpose of LAQM in Scotland

Table 2.1 Details of Automatic Monitoring Sites

Table 2.2 Details of Non-Automatic Monitoring Sites

Table 2.3 Results of Automatic Monitoring of Nitrogen Dioxide: Comparison with Annual Mean Objective

Table 2.4 Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with 1-hour mean Objective

Table 2.5 Results of Nitrogen Dioxide Diffusion Tubes in 2013

Table 2.6 Results of Nitrogen Dioxide Diffusion Tubes (2009 to 2013) Active Sites

List of Figures

Figure 2.1 Map of Automatic Monitoring Site

Figure 2.2 Trends in Annual Mean Nitrogen Dioxide Concentrations measured at Automatic Monitoring Site

Figure 2.3 Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Diffusion Tube Monitoring Sites

Appendices

Appendix A	QA/QC Data
Appendix B	Automatic Monitoring Data
Appendix C	Maps of Diffusion Tube Sites
Appendix D	Monthly Diffusion Tube Data
End Page	Map of Scottish Borders Council Area

1 Introduction

1.1 Description of Local Authority Area

The Scottish Borders is situated between Edinburgh and the Lothians to the north, and Dumfries & Galloway and England to the south. The Council's area extends westward from the North Sea to South Lanarkshire. Many of the neighbouring Local Authorities are predominantly rural and the prevailing winds over the Council's are south westerly.

A map showing the Council's area is included at the end of the Appendices to this Report.

Consultation responses from earlier rounds of the Review and Assessment process have revealed no major sources of pollution outwith the council's area that might affect air quality in the Borders. Similarly, no sources of pollution have been identified in the Borders that might affect neighbouring Local Authority areas.

The largest Borders towns are Hawick and Galashiels both of which are transected by the A7 from Carlisle to Edinburgh. The A7 through Hawick has been re-routed via Commercial Road, and the town centre area is a one-way system which aims to improve traffic flow and air quality. A similar traffic relief scheme is now in operation in Galashiels. The A68 which links Newcastle to Edinburgh via the A696 passes through the towns of Jedburgh, St Boswells, Earlston and Lauder. The A7 and A696 are linked by the Melrose bypass which serves the Borders General Hospital. The principal east-west route through the area is the A72 which links Galashiels, Walkerburn, Innerleithen and Peebles to the A701 Moffat – Edinburgh Road. In the west the main north-south road is the A1 which runs through the Council's North Sea coastal area from Edinburgh to Berwick-upon-Tweed. The town of Eyemouth is the closest population centre to the A1.

The Borders rail network was closed and demolished in the 1960s, leaving the East Coast mainline as the only railway in the Council's area. However, work to reopen part of the former Waverley Line from Midlothian to Galashiels is expected to be completed in early 2015 and therefore the impact of railway line on local air quality will be assessed in future reports.

Many of the processes within the Council's area authorised by SEPA (Scottish Environmental Pollution Agency) involve quarrying and cement batching. These have the potential to contribute to local low level pollution, mainly by fugitive dust and other particulates. There are also a number of poultry operations in the area, which are now included in the assessment regime.

Input on Air Quality issues has been sought from the SEPA and is incorporated in this Report.

1.2 Purpose of Progress Report

This report fulfils the requirements of the Local Air Quality Management (LAQM) 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 LAQM process.

Progress Reports are not intended to be as detailed as Updating and Screening Assessment Reports, or to require as much data gathering and analysis. 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, before the next round of Review and Assessment.

1.3 Air Quality Objectives

The air quality objectives applicable to LAQM in **Scotland** are set out in the Air Quality (Scotland) Regulations 2000 (Scottish SI 2000 No 97), the Air Quality (Scotland) (Amendment) Regulations 2002 (Scottish SI 2002 No 297), and are shown in Table 1.1. This table shows the objectives in units of microgrammes per cubic metre $\mu\text{g}/\text{m}^3$ (milligrammes per cubic metre, mg/m^3 for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).

(End of page)

Table 1.1 Air Quality Objectives included in Regulations for the purpose of LAQM in Scotland

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 µg/m ³	Running annual mean	31.12.2003
	3.25 µg/m ³	Running annual mean	31.12.2011
1,3-Butadiene	2.25 µg/m ³	Running annual mean	31.12.2003
Carbon monoxide	10 mg/m ³	Running 8-hour mean	31.12.2003
Lead	0.50 µg/m ³	Annual mean	31.12.2004
	0.25 µg/m ³	Annual mean	31.12.2008
Nitrogen dioxide	200 µg/m ³ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m ³	Annual mean	31.12.2005
Particulate Matter (PM ₁₀) (gravimetric)	50 µg/m ³ , not to be exceeded more than 7 times a year	24-hour mean	31.12.2011
	18 µg/m ³	Annual mean	31.12.2011
Sulphur dioxide	350 µg/m ³ , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m ³ , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m ³ , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

1.4 Summary of Previous Review and Assessments

Scottish Borders Council has undertaken an Air Quality Assessment Programme in terms of the guidance on air quality management published by the Scottish Government.

The Updating and Screening Assessment 2003₂ concluded that Galashiels High Street was at risk of exceeding the Objective for Nitrogen Dioxide (NO₂) from traffic. A risk of exceedence for Sulphur Dioxide (SO₂) and PM₁₀ from domestic fuel use was also identified in Newcastleton. Detailed Assessments were therefore required for these pollutants.

A Detailed Assessment of NO₂ from traffic in Galashiels₃ was undertaken and no risk of exceedence was identified. Traffic flow through the High Street street - canyon will be reduced further on completion of the Galashiels A7 Traffic Relief Scheme.

A Detailed Assessment of SO₂ and PM₁₀ levels in Newcastleton₄ took place over the winter and spring of 2004 - 2005. The report concluded that there was no risk of either pollutant exceeding the Air Quality Objectives. Doubt was subsequently raised as to whether or not the monitoring location was representative of the highest predicted concentrations for particulates.

The Council's Updating and Screening Assessment in 2006₅ and Progress Report in 2007₆ both concluded that the Air Quality Objectives for each of the pollutants were unlikely to be exceeded at any location in the Council's area, and therefore a Detailed Assessment would not be required for any pollutant.

Following a review of the data from the Newcastleton Detailed Assessment, it was decided that additional monitoring should take place at a different location. A further twelve-month PM₁₀ monitoring programme at the relevant location was undertaken

between June 2007 and May 2008⁷. The data obtained has shown concentrations to be below the Scottish Objectives for both annual and daily averages and that the Objectives are not likely to be exceeded.

The Progress Report in 2008⁸, which contained interim data from the Newcastleton PM₁₀ study, and the Updating and Screening Assessment Report in 2009⁹, both confirmed that the Air Quality Objectives were not likely to be exceeded at any location in the Scottish Borders.

These conclusions were confirmed in the Council's Progress Reports of 2010¹⁰ and 2011¹¹, the Updating and Screening Assessment of 2012¹² and the Progress Report of 2013¹³.

(End of page)

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

An automatic monitoring station is in operation in the grounds of the Council Offices at Rosetta Road, Peebles. This station is funded by DEFRA / Scottish Government as part of the Automatic Rural and Urban Network.

The station details and pollutants monitored are described in Figure 2.1 and Table 2.1 below.

QA/QC details are included in Appendix A of this Report.

Figure 2.1 Map of Automatic Monitoring Site

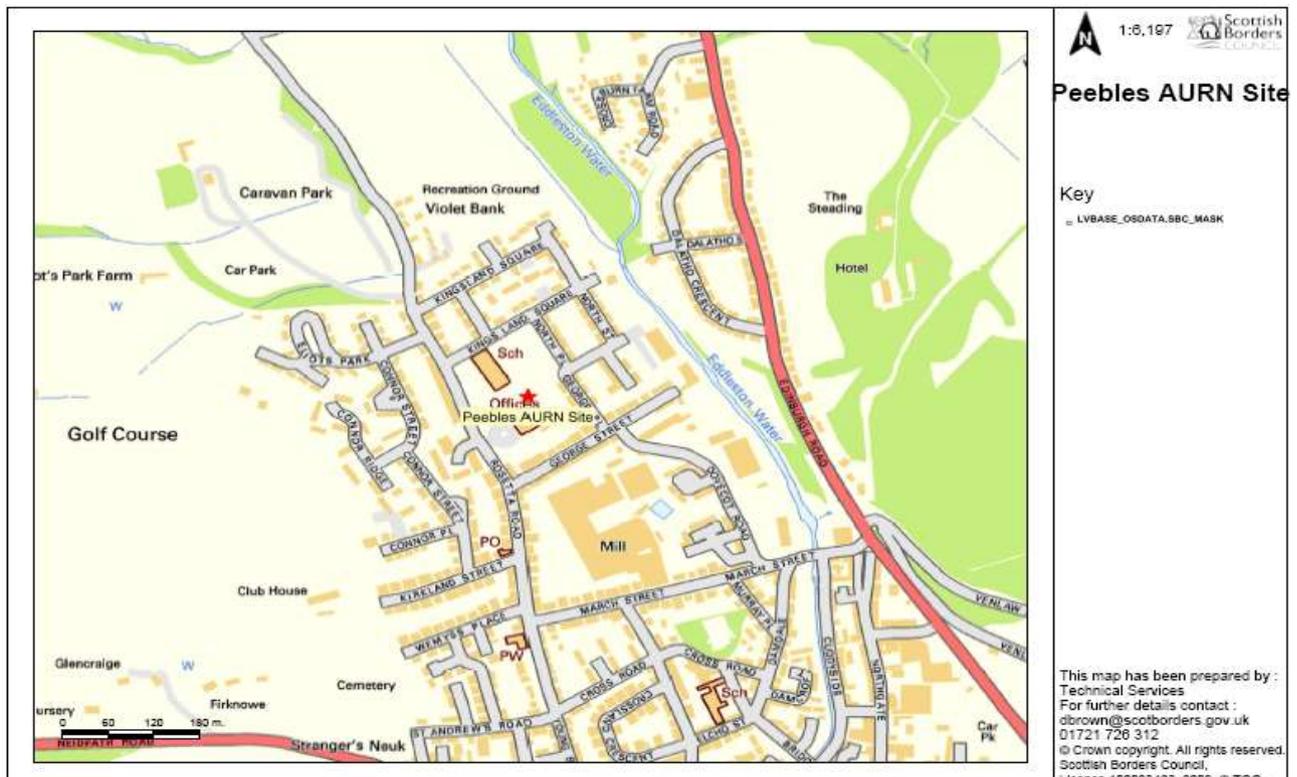


Table 2.1 Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Inlet Height (m)	Pollutants Monitored	In AQMA?	Monitoring Technique	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Does this Location Represent Worst-Case Exposure?
CM1	Peebles	AURN Suburban	324812	641083	2.8	O ₃ /NO _x	N	UV Absorption /Chemilumin.	N/A	N/A	N/A

(End of page)

2.1.2 Non-Automatic Monitoring Sites

In previous years, Scottish Borders Council has carried out monitoring of Nitrogen Dioxide using diffusion tubes at nineteen sites.

These sites were selected to be representative of relevant exposure and the locations agreed with the Scottish Government and SEPA.

Seven sites were located in Galashiels, six in Hawick, two in Kelso, two in Peebles and one in Melrose.

In September 2010 it was decided to discontinue using the sites in Peebles, Kelso and Melrose.

There are continuing problems with tubes disappearing, at the site on Commercial Street, Hawick and Rogerson's High Street, Galashiels. The monitoring location at the top of Galashiels High Street has been lost due to road realignment measures designed to reduce traffic congestion.

The locations of the sites are summarised in Table 2.2 and maps are provided in Appendix C.

The diffusion tubes are analysed by Edinburgh Scientific Services using 50% TEA in Acetone.

The Council has not compared the diffusion tubes with the reference method in any co-location study.

The Council has used the bias adjustment factors provided by the Review and Assessment website.

(END OF PAGE)

Table 2.2 Details of Non- Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Site Height (m)	Pollutants Monitored	In AQMA?	Is Monitoring Co-located with a Continuous Analyser (Y/N)	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Does this Location Represent Worst-Case Exposure?
DT1	Council Chamber, Galashiels	Kerbside	349298	635928	2.5	NO ₂	No	N	Y 1m	2m	Yes
DT2	Stanley / Meigle St., Galashiels	Urban Background	348587	636142	2.5	NO ₂	No	N	Y 1m	1m	Yes
DT3	High St., Galashiels	Kerbside	348953	636445	2.5	NO ₂	No	N	Y 1m	1.5m	Yes
DT4	Sandbed, Hawick	Kerbside	350106	614464	2.5	NO ₂	No	N	Y 1m	3m	Yes
DT5	High St., Hawick	Kerbside	350314	614631	2.5	NO ₂	No	N	Y 1m	1.5m	Yes
DT6	Renwick Ter., Hawick	Urban Background	349803	613961	2.5	NO ₂	No	N	Y 1m	1.5m	Yes
DT7	Silverbuthall Rd., Hawick	Urban Background	350526	615857	2.5	NO ₂	No	N	Y 1m	1.5m	Yes
DT8	Bourtree Pl., Hawick	Kerbside	350497	614888	2.5	NO ₂	No	N	Y 1m	1.5m	Yes
DT9	Mart St., Hawick	Kerbside	350501	615096	2.5	NO ₂	No	N	Y 1m	3m	Yes
DT10	Commercial Rd., Hawick	Kerbside	350222	614899	2.5	NO ₂	No	N	Y 1m	2m	Yes

2.2 Comparison of Monitoring Results with Air Quality Objectives

Over the period covered by this report, Scottish Borders Council has carried out monitoring for Nitrogen Dioxide and Ozone.

Nitrogen Dioxide has been monitored using both automatic monitoring under the AURN Network and by the use of diffusion tubes.

Ozone has been monitored using an automatic monitor under the AURN Network

The results of monitoring undertaken by Scottish Borders Council are given below.

2.2.1 Nitrogen Dioxide (NO₂)

Nitrogen Dioxide (NO₂)

Throughout the monitoring period, no site has been found to exceed the maximum annual mean concentration of 40 microgrammes per cubic metre.

The location of diffusion tubes is representative of public exposure.

In the Galashiels High Street street-canyon, tubes have been located at opposite sides of the street to detect any localised pollution elevation that may arise as a result of local air turbulence effects. No exceedences of the maximum annual mean concentration have been detected.

Automatic Monitoring Data

The automatic monitoring within the Council's area has been undertaken as part of the UK Automatic Urban and Rural Network. The Peebles station was established to monitor urban background levels.

Due to site issue, data capture was only 51% for the year and only limited information is available.

The results are summarised in tables 2.3, & 2.4 below.

Table 2.3 Results of Automatic Monitoring for NO₂: Comparison with Annual Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period % ^a	Valid Data Capture 2013 % ^b	Annual Mean Concentration (µg/m ³)				
					2009* ^c	2010* ^c	2011* ^c	2012* ^c	2013 ^c
CM1	B/ground	N		51	No Data	9	7	8	Not Available

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

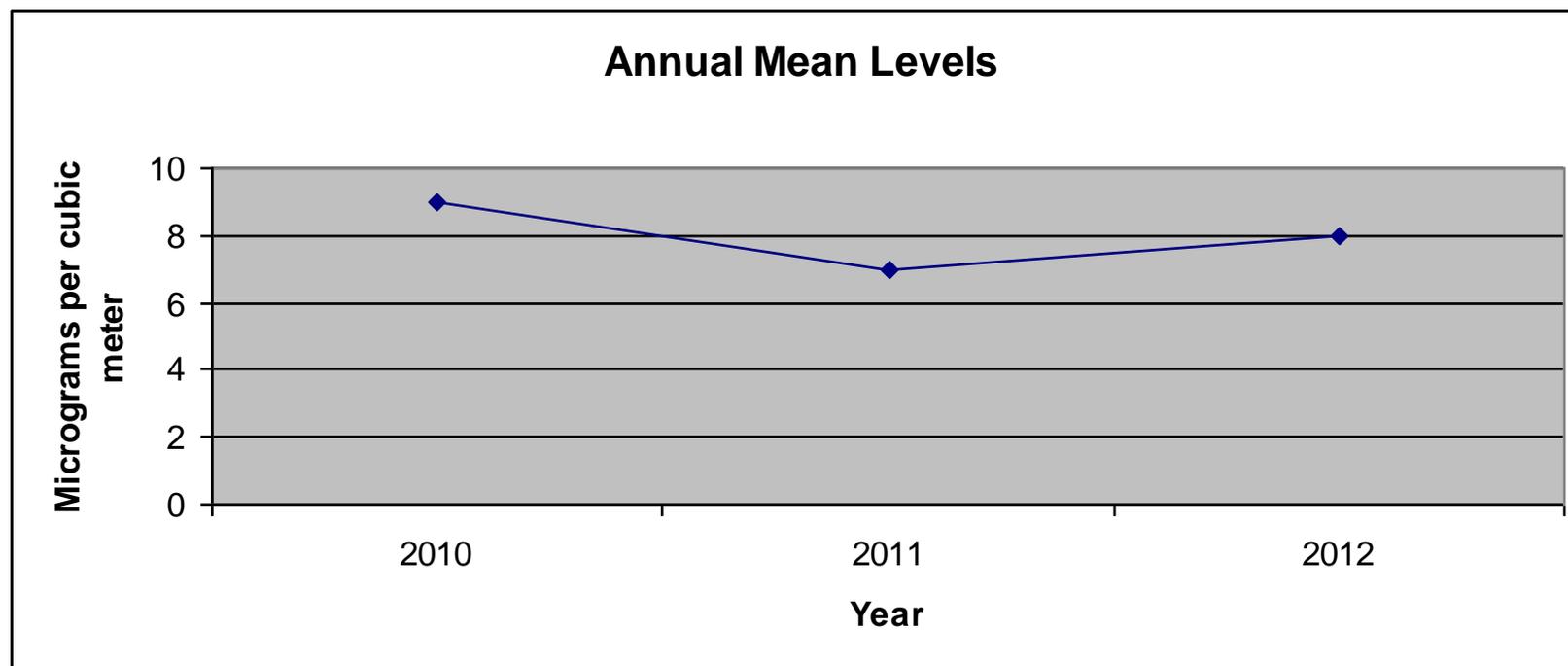
^a i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

^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

Figure 2.2 Trends in Annual Mean NO₂ Concentrations Measured at Automatic Monitoring Sites



No data are available for 2013.

Table 2.4 Results of Automatic Monitoring for NO₂: Comparison with 1-hour Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period % ^a	Valid Data Capture 2013 % ^b	Number of Hourly Means > 200µg/m ³				
					2009* ^c	2010* ^c	2011* ^c	2012* ^c	2013 ^c
CM1	Background	N		51	0	0	0	0	0 (Not Available)

In bold, exceedence of the NO₂ hourly mean AQS objective (200µg/m³ – not to be exceeded more than 18 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 the data capture for full calendar year is less than 90%, include the 99.8th percentile of hourly means in brackets

* Number of exceedences for previous years is optional

Diffusion Tube Monitoring Data

In previous years Scottish Borders Council carried out monitoring of Nitrogen Dioxide using diffusion tubes at nineteen sites. The site locations were selected in consultation with the Scottish Government and SEPA to be representative of relevant public exposure.

The diffusion tubes in Peebles, Kelso and Melrose consistently returned results well below the Annual Mean concentration and so in September 2010 it was agreed to discontinue these sites. The number of sites has now been reduced to fourteen.

Two diffusion tube sites in Hawick and Galashiels have suffered from repeated loss of tubes. The monitoring location at Galashiels High Street has been lost due to road realignment work.

As can be seen from Figure 2.4 below there is a general downward trend in levels.

At the time of writing the report, Web Data from the Scottish Air Quality Website was not available. The short term data from the sites DT10 and DT11 was similar to that captured in previous years so it is not considered likely that there is any risk of exceeding the limit. Accordingly, this data has not been annualised.

The full monthly data set for 2012 is given in Appendix D.

(END OF PAGE)

Table 2.5 Results of NO₂ Diffusion Tubes 2013

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co-located Tube	Full Calendar Year Data Capture 2013 (Number of Months or %) ^a	2013 Annual Mean Concentration (µg/m ³) - Bias Adjustment factor = XX ^b
DT1	Council Chamber, Galashiels	Kerbside	N	N	100%	11
DT2	Stanley / Meikle St., Galashiels	Urban Background	N	N	100%	7
DT3	High St., Galashiels	Kerbside	N	N		
DT4	Sandbed, Hawick	Kerbside	N	N	100%	19
DT5	High St., Hawick	Kerbside	N	N	100%	19
DT6	Renwick Ter., Hawick	Urban Background	N	N	100%	6
DT7	Silverbuthall Rd., Hawick	Urban Background	N	N	100%	6
DT8	Boutree Pl., Hawick	Kerbside	N	N	100%	19
DT9	Mart St., Hawick	Kerbside	N	N	92%	17
DT10	Commercial Rd., Hawick	Kerbside	N	N	33%	15 (< 75& Data)
DT11	Rogerson's High St Galashiels	Kerbside	N	N	42%	18 (< 75& Data)
DT12	Border Angling, High St, Galashiels	Kerbside	N	N	100%	23

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co-located Tube	Full Calendar Year Data Capture 2013 (Number of Months or %) ^a	2013 Annual Mean Concentration ($\mu\text{g}/\text{m}^3$) - Bias Adjustment factor = XX ^b
DT13	Edingtons, High St, Galashiels	Kerbside	N	N	100%	21
DT14	Iceland, High St, Galashiels	Kerbside	N	N	100%	23

In bold, exceedence of the NO₂ annual mean AQS objective of 40 $\mu\text{g}/\text{m}^3$

Underlined, annual mean > 60 $\mu\text{g}/\text{m}^3$, 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>), 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>), 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>).

See note on page 19 above re the highlighted data.

Table 2.6 Results of NO₂ Diffusion Tubes (2009 to 2013)

Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m ³) - Adjusted for Bias ^a				
			2009 (Bias Adjustment Factor = 0.95)	2010 (Bias Adjustment Factor = 1.02)	2011 (Bias Adjustment Factor = 1.01)	2012 (Bias Adjustment Factor = 0.86)	2013 (Bias Adjustment Factor = 0.79)
DT1	Kerbside	N	18	17	15	14	11
DT2	Urban Background	N	10	12	10	10	7
DT3	Kerbside	N	35	38	38	35	
DT4	Kerbside	N	20	24	25	21	19
DT5	Kerbside	N	23	26	22	21	19
DT6	Urban Background	N	7	11	8	8	6
DT7	Urban Background	N	9	11	9	8	6
DT8	Kerbside	N	22	22	25	23	19
DT9	Kerbside	N	20	23	22	18	17
DT10	Kerbside	N	17	22	32	No Data	15 (< 75% Data)
DT11	Kerbside	N	33	24	39	28	18 (< 75% Data)
DT12	Kerbside	N	36	26	31	32	23
DT13	Kerbside	N	28	11	37	29	21
DT14	Kerbside	N	33	11	15	30	23

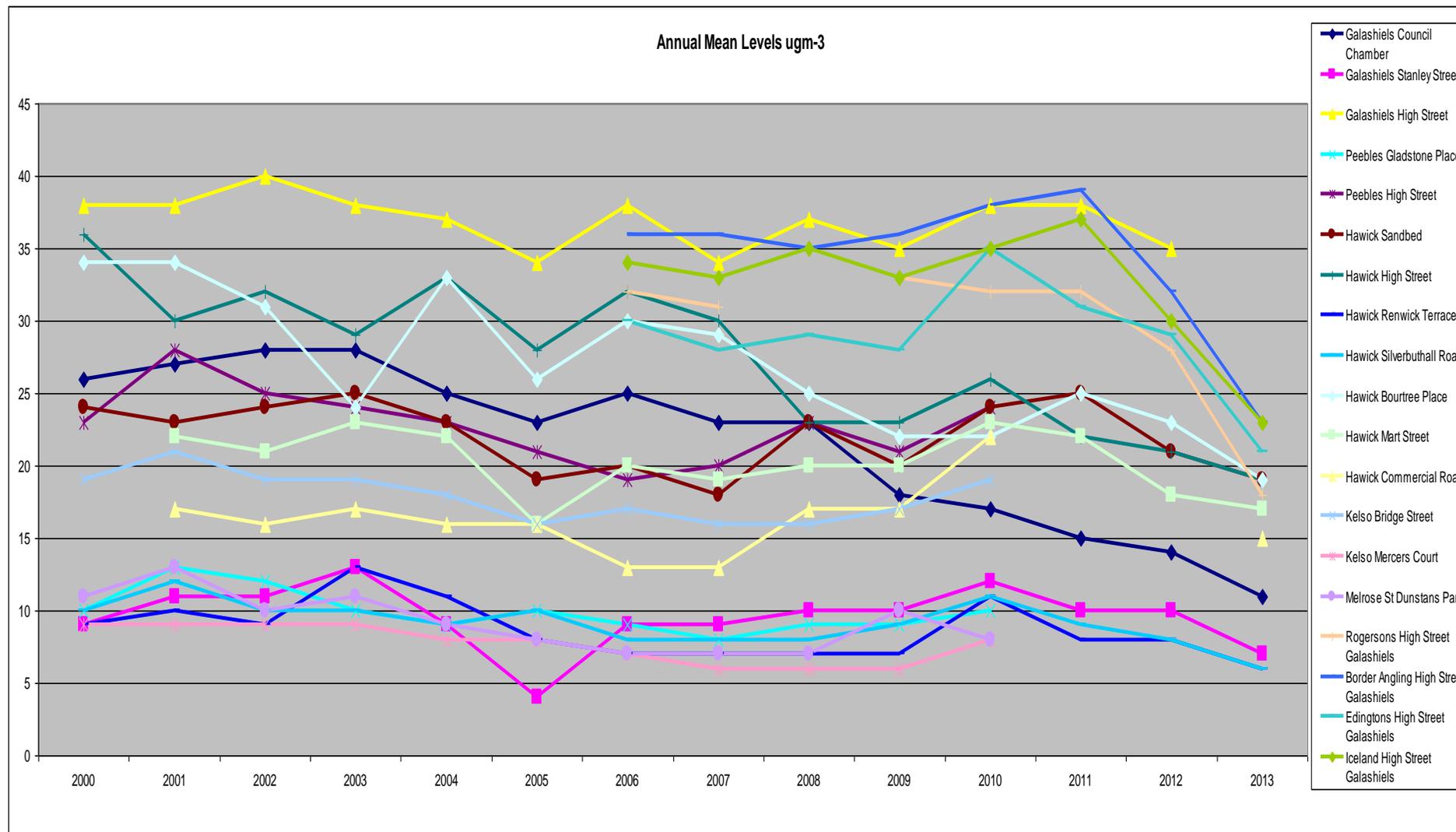
In bold, exceedence of the NO₂ annual mean AQS objective of 40µg/m³

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>), if full calendar year data capture is less than 75%

See note on page 19 above re the highlighted data.

Figure 2.3 Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Diffusion Tube Monitoring Sites



2.2.2 Particulate Matter (PM₁₀)

Previous Review and Assessment work has indicated that there are no areas within the Borders that are at risk of exceeding the Air Quality Objective for PM₁₀.

The estimated background maps for the Council's area, produced by the Review and Assessment Helpdesk¹⁴ indicate that PM₁₀ levels will not be exceeded at any location within the Council's area.

2.2.3 Sulphur Dioxide (SO₂)

Previous Review and Assessment work has indicated that there are no areas within the Borders that are at risk of exceeding the Air Quality Objective for Sulphur Dioxide.

The assessment work undertaken for the production of this report has not revealed any new sources or increased emissions from existing sources.

2.2.4 Benzene

Previous Review and Assessment work has indicated that there are no areas within the Borders that are at risk of exceeding the Air Quality Objective for Benzene.

The assessment work undertaken for the production of this report has not revealed any new sources or increased emissions from existing sources.

2.2.5 Other Pollutants Monitored

As mentioned above the AURN station at Peebles carries out monitoring for Ozone. This station has been operating since November 2009 and a summary of results¹³ is provided in Appendix B.

Previous rounds of Review and Assessment have indicated that Scottish Borders Council does not need to monitor any other pollutants.

The assessment work undertaken for the production of this report has not revealed any new sources or increased emissions from existing sources.

(End of page)

2.2.6 Summary of Compliance with AQS Objectives

Scottish Borders Council has examined the results from monitoring in the Scottish Borders Council area. Concentrations are all below the objectives, therefore there is no need to proceed to a Detailed Assessment.

(End of page)

3 New Local Developments

3.1 Road Traffic Sources

No newly identified road traffic sources have been identified.

3.2 Other Transport Sources

No new non-road traffic sources have been identified.

3.3 Industrial Sources

Emissions from Ahlstrom Chirnside Ltd were reported last year as having been varying significantly for a number of years.

SEPA has reported that the regulation of Ahlstrom has now transferred to SE TSU.

SEPA has just issued a new PPC Part A permit for 64,000 birds at a poultry unit at Kirklawhill near Broughton. The operator has surrendered the PPC Part A permit for the poultry unit located at Station Buildings, Lauder.

SEPA has issued a Variation to the PPC Part A permit for the poultry unit located at Easter Deans, Leadburn. The variation amended the bird numbers from 305,480 hens to 397,500 laying hens and 122,000 rearing pullets.

SEPA has still not received the PPC Part B application for the proposed new crematorium at Houndwood. The application is still expected.

The PPC Part A application to vary Whim poultry unit (new shed and increased bird numbers) was withdrawn. There is a planning application being considered for a new shed with no increase in bird numbers. SEPA is yet to receive an application to vary the PPC permit.

There is a planning application for new poultry sheds at Stow Road in Lauder however the bird numbers remain below the PPC threshold.

A new PPC Part B permit has been issued for a mobile crusher operating on the Borders Rail project.

These developments will be considered further in the Council's Updating and Screening Assessment in 2015

3.4 Commercial and Domestic Sources

The Council's Planning and Building Standards Lists are reviewed weekly to identify applications which may involve biomass combustion.

During 2013 Planning Applications were made for twelve commercial biomass installations. Air Quality Assessments were requested for these developments, all of which are in isolated rural areas. The reports received to date have not revealed any risks of exceedences of any air quality objectives.

Sixty two Applications were identified that involved the installation of domestic biomass heating equipment. No areas were identified where the combined impact of biomass combustion sources might be relevant to local air quality.

No new areas were identified where domestic solid fuel use may be relevant.

3.5 New Developments with Fugitive or Uncontrolled Sources

Scottish Borders Council has identified the following new or previously unidentified local developments which may impact on air quality in the Local Authority area:

- Hazelbank Quarry on the A7 reopened late in 2013 for the extraction of road stone.
- Work is currently progressing on the Borders Railway.

These will be taken into consideration in future Screening and Assessment Reports.

4 Local / Regional Air Quality Strategy

At the time of writing Scottish Borders Council has not identified any areas that are close to the Air Quality objectives.

The Council does not have a Local Air Quality Strategy but the need to produce a Strategy is reviewed annually on the production of our Air Quality Reports.

(END OF PAGE)

5 Planning Applications

Details of planning applications received are posted on the Council's web-based Public Access system.

The Planning and Building Standards Lists are reviewed weekly to identify applications which may impact on local air quality.

Any applications which may have an impact of local air quality are identified and if the impact is likely to be significant, the Applicants are required to produce an Air Quality Impact Assessment for their proposal.

In the case of smaller or individual developments, advice letters detailing steps to be taken to avoid pollution problems are issued to all Planning Applicants.

Since the last Report, applications for several housing developments have been submitted. None of these are off the mains gas supply and traffic assessments have not indicated the likelihood of any air quality problems.

(END OF PAGE)

6 Air Quality Planning Policies

As stated in previous Reports, air quality issues are addressed within the Council's Local Plan Policies.

Policy EP 5 states that any development proposals that could, individually or cumulatively, adversely affect the quality of air in a locality to a level that could potentially harm human health and wellbeing or the integrity of the natural environment, must be accompanied by provisions that the Council is satisfied will minimise such impacts to an acceptable degree.

The Policy is designed to contribute to the Council's obligation with regard to air quality. It applies not just to employment development but to other land uses that may impact on local air quality.

(END OF PAGE)

7 Local Transport Plans and Strategies

The most recent version of the Council's Local Transport Strategy was produced in 2008.

Road transport continues to play an important role in the Council area. It is therefore vital that the Council continues to improve the road network and adequately maintain this asset so that locals and visitors can travel easily and more safely on their chosen routes.

The work to re-establish the Waverley Rail Line to the central Borders is currently progressing and the Council has initiated more frequent bus services to and from Edinburgh together with an element of demand responsive travel in some of the more rural areas.

There have been upgrades to certain sections of road to improve traffic flow and thus reduce vehicle emissions. In particular, the Galashiels A7 traffic relief scheme is now complete. Two-way traffic has been introduced along Ladhope Vale, thus diverting all through traffic on the A7 trunk road North, and West to the A72, away from the street canyon on Galashiels High Street.

The Council is aware of the environmental issues associated with the promotion of the private car and is keen to introduce more sustainable means of transport where possible. It is noted that the introduction of more advanced technology such as faster broadband delivery and more flexible working could also significantly reduce the need to travel in the future.

Cycling and walking are also important elements within the policy and the Council has continued to promote off-road cycling routes and to develop the Core Path Network throughout the area so that the people of the Scottish Borders to have a healthier and more environmentally conscious lifestyle.

Progress continues in promoting healthier travel options, through the Safer Routes to School Policy by encouraging more children to walk and cycle to school.

The Peebles Transport Study was commissioned in 2012 to consider a range of options to help address the traffic issues which may arise in Peebles as the town continues to grow.

The principal finding has been that the capacity of Tweed Bridge could be reached over the next few years and this could encourage localised traffic congestion throughout the town centre.

Eight new bridge options have been considered and appraised in terms of set planning objectives and Scottish Transport Appraisal Guidance (STAG) Criteria.

Other measures were considered, but only a new crossing was seen to meet the long term development needs of the town. The results of the appraisal process have resulted in three bridge options which are still under consideration.

A workshop was organised in Peebles with various public bodies and community groups in early October 2013 to discuss the proposals in more detail. The workshop was facilitated by an independent consultant and was deemed to be successful with a number of views being raised on the night. A [brief summary of the event](#), written by the independent consultant is available.

A three month public consultation exercise in the form of a questionnaire was held between November 2013 and January 2014. Results of this will be published in due course.

(END OF PAGE)

8 Climate Change Strategies

Scottish Borders Council has approved plans to prepare a low carbon economic strategy for the region following a Public Consultation exercise.

The strategy sets out how SBC is to respond to the Scottish Government's view on the importance of developing a low carbon economy.

As part of this, plans to support the establishment of an independent Borders Energy Agency (BEA) will move forward in order to provide support to communities and businesses where there are opportunities to take forward renewable energy projects or energy saving and carbon reduction schemes. It is intended that this will become an on-going, Borders based source of community support, advice and information to all interested parties across the area.

(END OF PAGE)

9 Conclusions and Proposed Actions

9.1 Conclusions from New Monitoring Data

The monitoring undertaken by Scottish Borders Council has not identified any potential or actual exceedences of the Air Quality Objectives at any relevant locations.

Accordingly a Detailed Assessment is not required for any pollutant.

9.2 Conclusions relating to New Local Developments

Scottish Borders Council has not identified any new local developments that require more detailed consideration in the next Updating and Screening Assessment.

The Planning Applications mentioned in Section 3.3 above will be monitored and re-assessed during production of the Council's Updating and Screening Assessment report in 2015.

9.3 Other Conclusions

None

9.4 Proposed Actions

The new monitoring data collected by Scottish Borders Council during the year has not identified the need to proceed to a Detailed Assessment for any pollutant.

At the time of writing, the Council has not identified the need to undertake any additional monitoring.

Review and assessment work will continue towards production of the Council's progress report in 2015.

(End of page)

10 References

- 1). Local Air Quality Management
Technical Guidance LAQM.TG(09)
- 2). Local Air Quality Management
Updating and Screening Assessment for Scottish Borders Council
Cordah/SBC.002/2003
- 3). Air Quality Review and Assessment – Detailed
A Report Produced for Scottish Borders Council
Netcen/ED49294/Issue3 July 2006
- 4). Air Quality Review and Assessment – Detailed
Domestic Fuel Consumption. A Report for Scottish Borders Council
netcen/ED49294/AEAT/ENV/R/2098/Issue3 July 2006
- 5). Updating and Screening Assessment 2006
Scottish Borders Council
USA 2006\Scot Borders\Scots Borders USA 2006 FINAL.
- 6). Air Quality Review and Assessment
Progress Report for Scottish Borders Council 2007
AEAT/ENV/R/2460 Issue 1 August 2007
- 7). Newcastleton Air Quality Monitoring Study 2007 – 2008: PM10
AEAT/ENV/R/2677 Issue 1 September 2008
- 8). Air Quality Review and Assessment
Progress Report for Scottish Borders Council 2008
AEAT/ENV/R/2620 Issue 1 June 2008
- 9). 2009 Updating and Screening Assessment for Scottish Borders Council –
SBC/USA/2009/1
- 10). 2010 Air Quality Progress Report for Scottish Borders Council – SBC/PR/2010/1
- 11). 2011 Air Quality Progress Report for Scottish Borders Council – SBC/PR/2011/1
- 12). 2012 Air Quality Updating and Screening Assessment Scottish Borders Council –
SBC/USA/2012/1
- 13). 2013 Air Quality Progress Report for Scottish Borders Council – SBC/PR/2013/1
- 14). Background NOx, NO2, PM10 and PM2.5 Maps for LAQM and DRMB
<http://laqm.defra.gov.uk/maps/maps2008.html>
- 15). AURN Network Real-time monitoring results
http://www.scottishairquality.co.uk/#site_info

(End of page)

Appendices

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

Appendix B: Automatic Monitoring Data

Appendix C: Maps of Diffusion Tube Sites

Appendix D: Monthly Diffusion Tube Data

End Page: Map of Scottish Borders Council Area

(End of page)

Appendix A: QA:QC Data

Diffusion Tube Bias Adjustment Factors

The Laboratory used for the analysis of the Councils diffusion tubes was Edinburgh Scientific Services.

The laboratory uses the analytical method of 50% TEA in Acetone.

Over the year Edinburgh Scientific Services participated in one co-location study and tube precision was rated as “Good”.

A bias adjustment figure of 0.79 has been used for the results of this laboratory. Spreadsheet Version 03/14.

Diffusion Tube Bias Adjustment Factors

Bias and precision factors have been obtained from the spreadsheet tool V 3/14 on the Review and Assessment website.

Factor from Local Co-location Studies (if available)

Scottish Borders Council has not carried out any co-location studies.

Discussion of Choice of Factor to Use

Not Applicable.

PM Monitoring Adjustment

Not Applicable.

Short-term to Long-term Data adjustment

Not Applicable.

QA/QC of automatic monitoring

The QA/QC work on the Peebles site is carried out under the auspices of the Automatic Urban and Rural Network system. Routine calibrations are undertaken every four weeks by Council Staff as Local Site Operatives.

Data validation and ratification is undertaken by Bureau Veritas, Contractors appointed by DEFRA/Scottish Government.

Site audits are undertaken at regular intervals by AEA Technology and to date, and although data capture in 2013 has been poor no overall issues have been identified.

QA/QC of diffusion tube monitoring

The laboratory used during 2012 for the Council's diffusion tube monitoring data follows the procedures set out in the Harmonisation Practical Guidance as recommended in LAQM.TG(09).

All diffusion tubes used by the Council are mounted and handled in accordance with the guidance contained in LAQM TG(09). Sites have been selected in consultation with the Scottish Government and SEPA to be representative of human exposure.

Tubes are exposed for periods in accordance with the published annual calendar of exposure dates.

Over the year Edinburgh Scientific Services participated in one co-location study. Tube precision as given on the spreadsheet was rated as "Good" for both of these studies.

(End of page)

Appendix B: Automatic Monitoring Data¹⁵

Nitric Oxide

Monthly Statistics (monthly averages) for 2013

The monthly data below are average concentration data, followed by data capture rates (shown as a percentage of each month).

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
6	8	-	-	-	-	-	1	1	1	3	2
100%	12%	-	-	-	-	-	95%	100%	100%	100%	100%

Annual Statistics for 2013

Annual Hourly Mean	-	μgm^{-3}	Ratified	51% DC
Max Daily Mean	19	μgm^{-3}	Ratified	
Max Hourly Mean	-	μgm^{-3}	Ratified	

Key:

- P - Provisional Data
- R - Ratified Data

Exceedence Statistics for 2013

There are no defined exceedence criteria for this pollutant.

Nitrogen dioxide

Monthly Statistics (monthly averages) for 2013

The monthly data below are average concentration data, followed by data capture rates (shown as a percentage of each month).

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
15	15	-	-	-	-	-	3	5	6	11	5
100%	12%	-	-	-	-	-	95%	100%	100%	100%	100%

Annual Statistics for 2013

Annual Hourly Mean	-	μgm^{-3}	Ratified	51% DC
Max Daily Mean	27	μgm^{-3}	Ratified	
Max Hourly Mean	-	μgm^{-3}	Ratified	

Key:

- P - Provisional Data
- R - Ratified Data

Exceedence Statistics for 2013

Air Pollution Bands

Band	Hours in Band	Days in Band
NO2 Low	4458	187
NO2 Moderate	0	0
NO2 High	0	0
NO2 Very High	0	0

Air Quality Strategy Objectives

Air Quality Strategy Objective for 2005 (NO2) Annual Mean > 40 microgrammes per metre cubed

Status: Not Exceeded

Air Quality Strategy Objective for 2005 (NO2) Hourly Mean > 200 microgrammes per

metre cubed for more than 18 hours

Status:	Not Exceeded
---------	--------------

Air Quality Strategy Standards

Air Quality Standard for 2005 (NO₂) Hourly Mean > 200 microgrammes per metre cubed

No of Exceedences:	0
--------------------	---

Air Quality Strategy Guidelines

Not Applicable for this pollutant

EC Limit Values

Not Applicable for this pollutant

Nitrogen oxides as nitrogen dioxide

Monthly Statistics (monthly averages) for 2013

The monthly data below are average concentration data, followed by data capture rates (shown as a percentage of each month).

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
24	27	-	-	-	-	-	5	7	8	16	8
100%	12%	-	-	-	-	-	95%	100%	100%	100%	100%

Annual Statistics for 2013

Annual Hourly Mean	-	µgm ⁻³	Ratified	51% DC
Max Daily Mean	56	µgm ⁻³	Ratified	

Max Hourly Mean	-	μgm^{-3}	Ratified	
------------------------	---	---------------------	----------	--

Key:

- P - Provisional Data
- R - Ratified Data

Exceedence Statistics for 2013

Air Pollution Bands

Band	Hours in Band	Days in Band
Not Applicable for this pollutant		

Air Quality Strategy Objectives

Not Applicable for this pollutant

Air Quality Strategy Standards

Not Applicable for this pollutant

Air Quality Strategy Guidelines

Not Applicable for this pollutant

EC Limit Values

Not Applicable for this pollutant

Ozone

Monthly Statistics (monthly averages) for 2013

The monthly data below are average concentration data, followed by data capture rates (shown as a percentage of each month).

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
47	57	-	-	-	-	-	52	45	56	47	67
100%	12%	-	-	-	-	-	95%	100%	100%	100%	100%

Annual Statistics for 2013

Annual Hourly Mean	-	μgm^{-3}	Ratified	51% DC
Max Daily Mean	88	μgm^{-3}	Ratified	
Max Hourly Mean	-	μgm^{-3}	Ratified	

Key:

- P - Provisional Data
- R - Ratified Data

Exceedence Statistics for 2013

Air Pollution Bands

Band	Hours in Band	Days in Band
O3 Low	4459	187
O3 Moderate	0	0
O3 High	0	0
O3 Very High	0	0

Air Quality Strategy Objectives

Air Quality Strategy Objective for 2005 (O3) Daily maximum 8-hour running mean > 100 microgrammes per metre cubed on more than 10 days

Status:	Not Exceeded
---------	--------------

Air Quality Strategy Standards

Air Quality Standard (O3) 8-hour running mean > 100 microgrammes per metre cubed

No of Exceedences:	0
--------------------	---

Air Quality Strategy Standard for 2005 (O3) daily maximum 8-hour running mean > 100 microgrammes per metre cubed

No of Exceedences:	0
--------------------	---

Air Quality Strategy Guidelines

Not Applicable for this pollutant

EC Limit Values

EC Population Information Threshold (O3) 1-hour mean > 180 microgrammes per metre cubed

No of Exceedences:	0
--------------------	---

EC Population Warning Value (O3) 1-hour mean > 240 microgrammes per metre cubed

No of Exceedences:	0
--------------------	---

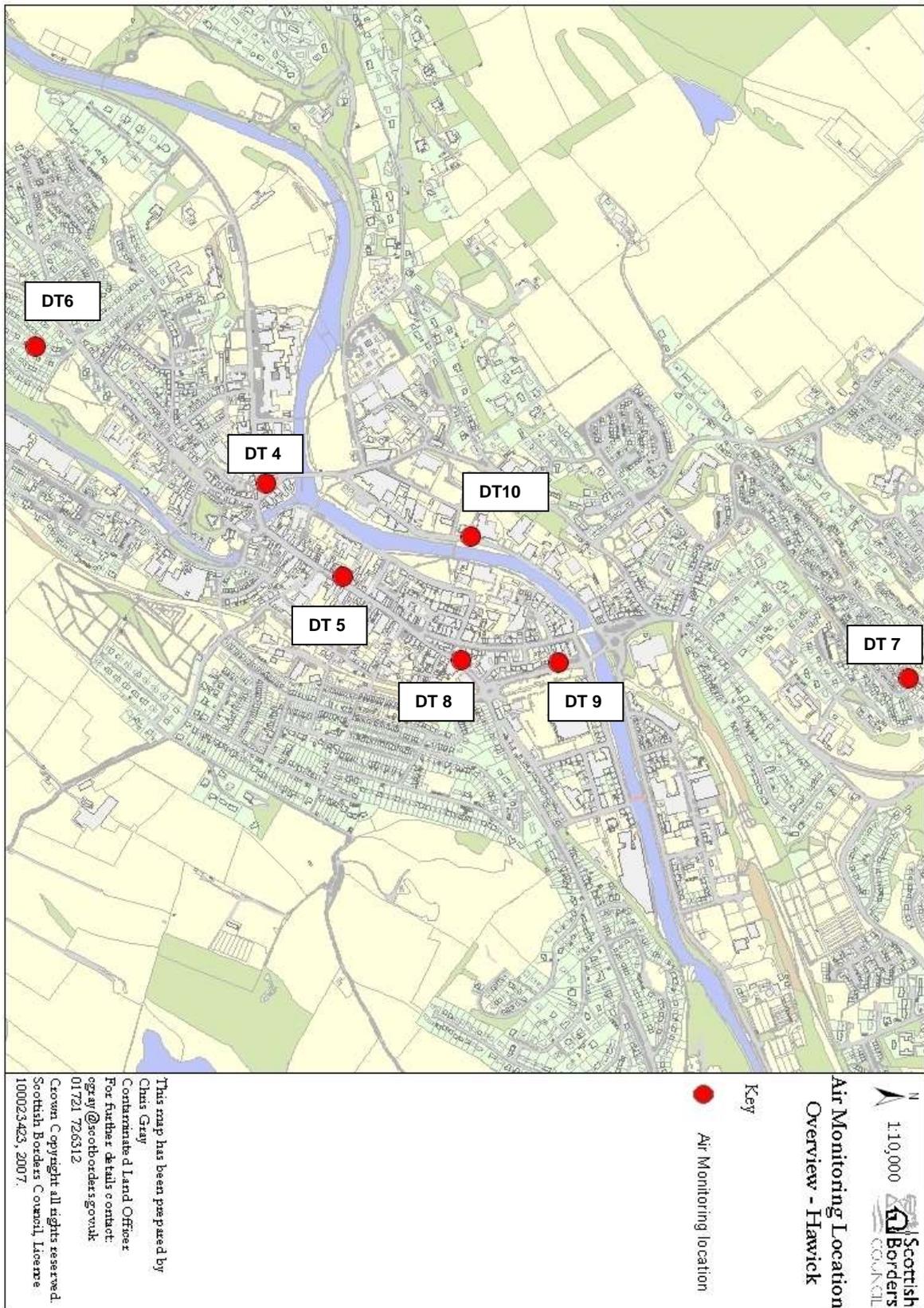
EC Health Protection Target Value (O3) daily maximum 8-hour running mean > 120 microgrammes per metre cubed on more than 25 days

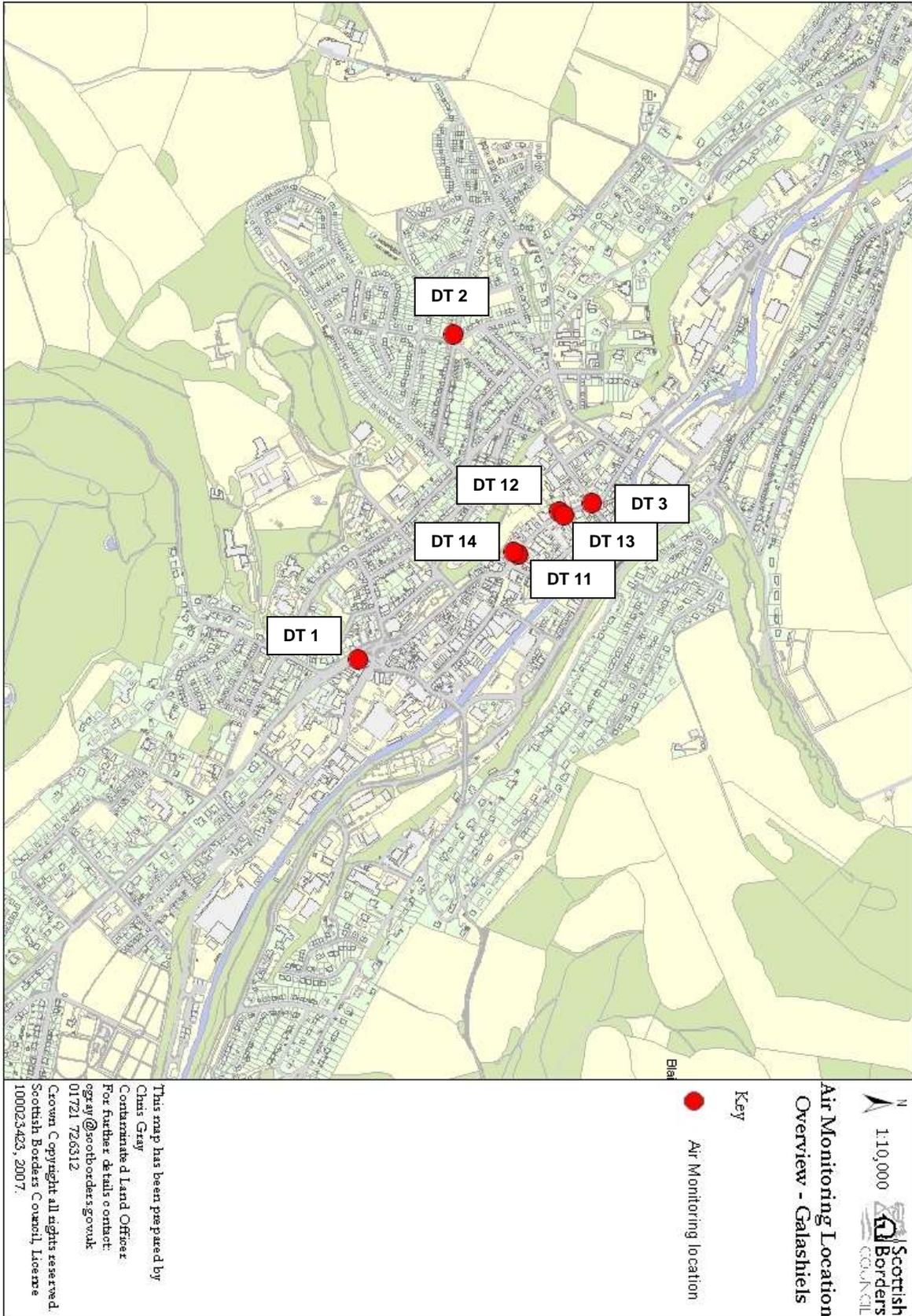
No of Exceedences:	0
--------------------	---

EC Health Protection long-term objective (O3) daily maximum 8-hour running mean > 120 microgrammes per metre cubed

No of Exceedences:	0
--------------------	---

Appendix C: Maps of Diffusion Tube Sites





Appendix D: Monthly Diffusion Tube Data

Nitrogen Dioxide Results - Scottish Borders Council 2013														
January	17.2	13.9		26.9	27.8	10.2	12.5	26.9	26.8		27.5	32.7	26.7	33
February	18.6	10.9		29.2	26.3	10.4	12.2	31.7	29.8			36.1	35.1	34.1
March	31.8	14.4		27.7	26.8	12.4	11.1	24.8	27.2			34.1	43.1	33
April	15.4	10.2		25.7	19.7	6.3	8.1	25.5	18.9			29.3	26.7	31.2
May	10.1	6.8		19.1	24	6.3	6	19.6	18.7			23.8	24.6	30.1
June	10.5	7.1		19.6	19.7	5.8	5.5	20.9	16.8			26.5	23.9	25.7
July	9.6	6.8		16.8	23.3	5.4	5	18	16.7			24.1	19.6	23.3
August	7.3	6.2		16.2	22.9	4.5	4.2	20	17.6			23.6	15.7	25
September	12.9	8.3		20.7	22.2	6.9	6.7	22.6	19.2	20	14.4	25.7	22.4	26.6
October	15.6	9.1		27	24.9	6.7	6.8	23.9	20.7	20.6	26.4	33.5	27.4	29.9
November	14.6	11.1		27.9	32.7	7.5	10.3	27	21.6	23.6	28.9	35.6	30.2	32.9
December	7.4	7.4		25.3	19.8	5.5	6.8	21.2		13.5	17.9	26.9	22.4	27.1
	Galashiels Council Chamber	Galashiels Stanley Street	Galashiels High Street	Hawick Sandbed	Hawick High Street	Hawick Renwick Terrace	Hawick Silverbuthall Road	Hawick Bourtree Place	Hawick Mart Street	Hawick Commercial Road	Rogersons High Street Galashiels	Border Angling High Street Galashiels	Edingtons High Street Galashiels	Iceland High Street Galashiels

