



2015 Updating and Screening
Assessment for
Scottish Borders Council

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

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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. Following recent discussions with SEPA it is likely that some or all of the monitoring sites in Hawick will be 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.

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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 due for completion

and the line is expected to open in late September 2015. The impact of railway line on local air quality has been assessed in conjunction with SEPA. No immediate concerns have been raised but the situation will be reviewed 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 Report

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

The objective of this Updating and Screening Assessment is to identify any matters that have changed which may lead to risk of an air quality objective being exceeded. A checklist approach and screening tools are used to identify significant new sources or changes and whether there is a need for a Detailed Assessment. The USA report should provide an update of any outstanding information requested previously in Review and Assessment reports.

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).

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 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
	3.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
	0.25 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2005
Particles (PM ₁₀) (gravimetric)	50 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 7 times a year	24-hour mean	31.12.2010
	18 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2010
Sulphur dioxide	350 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu\text{g}/\text{m}^3$, 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 Reports of 2013¹³ and 2014¹⁴.

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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(s) of Automatic Monitoring Sites (if applicable)



Table 2.1 Details of Automatic Monitoring Sites

Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Monitoring Technique	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
CM1 Peebles	AURN Background	324812	641083	O ₃ / NO ₂	N	UV Absorption /Chemilumin.	N/A	N/A	N/A

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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.

In view of the consistently low results obtained from the sites in Hawick and after consultation with SEPA it is likely that some or all of the Hawick sites will be discontinued.

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.

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Table 2.2 Details of Non-Automatic Monitoring Sites

Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Is monitoring collocated with a Continuous Analyser (Y/N)	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
DT1 Council Chamber, Galashiels	Kerbside	349298	635928	NO ₂	N	N	Y (1m)	2m	Y
DT2 Stanley / Meikle St., Galashiels	Urban Background	348587	636142	NO ₂	N	N	Y (1m)	1m	Y
DT3 High St Galashiels	Discontinued								
DT4 Sandbed, Hawick	Kerbside	350106	614464	NO ₂	N	N	Y (1m)	3m	Y
DT5 High St., Hawick	Kerbside	350314	614631	NO ₂	N	N	Y (1m)	1.5m	Y
DT6 Renwick Ter., Hawick	Urban Background	349803	613961	NO ₂	N	N	Y (1m)	1.5m	Y
DT7 Rd., Hawick	Urban Background	350526	615857	NO ₂	N	N	Y (1m)	1.5m	Y
DT8 Bourtree Pl., Hawick	Kerbside	350497	614888	NO ₂	N	N	Y (1m)	1.5m	Y
DT9 Mart St., Hawick	Kerbside	350501	615096	NO ₂	N	N	Y (1m)	3m	Y
DT10 Commercial Rd., Hawick	Kerbside	350222	614899	NO ₂	N	N	Y (1m)	2m	Y
DT11 Rogerson's High St Galashiels	Kerbside	349063	636287	NO ₂	N	N	Y (1m)	1m	Y
DT12 Border	Kerbside	348976	636371	NO ₂	N	N	Y (1m)	1m	Y

Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Is monitoring collocated with a Continuous Analyser (Y/N)	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
Angling, High St, Galashiels									
DT13 Edingtons, High St, Galashiels	Kerbside	348982	636384	NO ₂	N	N	Y (1m)	1m	Y
DT14 Iceland, High St, Galashiels	Kerbside	349063	636272	NO ₂	N	N	Y (1m)	1m	Y

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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

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. The results are available on the Public Website¹⁶

Data capture was 99% for the year.

The results are summarised in table 2.3 below.

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

Site ID	Site Type	Within AQMA?	Valid Data Capture for period of monitoring % ^a	Valid Data Capture 2014 % ^b	Annual Mean Concentration $\mu\text{g}/\text{m}^3$				
					2010* ^c	2011* ^c	2012* ^c	2013* ^c	2014 ^c
CM1 Peebles	B/ground	N		99%	9	7	8	Not Available	6

^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), if monitoring was not carried out for the full year.

*Annual mean concentrations for previous years are optional.

Trends in Annual Mean Nitrogen Dioxide Concentrations measures at Automatic Monitoring Sites

As can be seen from the table 2.3 above, there is a slow fall in the very low levels detected at the Peebles site.

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

Site ID	Site Type	Within AQMA?	Valid Data Capture for period of monitoring % ^a	Valid Data Capture 2014 % ^b	Number of Exceedences of Hourly Mean ($200 \mu\text{g}/\text{m}^3$)				
					2010* ^c	2011* ^c	2012* ^c	2013* ^c	2014 ^c
CM1 Peebles	Background	N		99	0	0	0	0 (Not Available)	0

^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 period of valid data is less than 90%, include the 99.8th percentile of hourly means in brackets

*Number of exceedences for previous years are 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.

Following discussions with SEPA some or all of the sites in Hawick will be discontinued in the near future.

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. The site at Commercial Road in Hawick had a data capture level of only 16%. After discussion with the LAQM Help Desk this data has not been reported.

As can be seen from Figure 2.2 below there is a general downward trend in levels.

Towards the end of the year there was a rise in levels on Galashiels High Street. This was due to the temporary closure of the Ladhope Vale for work associated with the Borders Railway, resulting in the return of through traffic to the street-canyon.

Traffic has now returned to the inner relief road and levels are falling to their previous levels.

The full monthly data set for 2014 is given in Appendix D.

Table 2.5 Results of Nitrogen Dioxide Diffusion Tubes in 2014

Site ID	Location	Site Type	Within AQMA?	Triplicate or Collocated Tube	Data Capture 2014 (Number of Months or %)	Data with less than 9 months has been annualised (Y/N)	Confirm if data has been distance corrected (Y/N)	Annual mean concentration (Bias Adjustment factor = 0.78)
								2014 ($\mu\text{g}/\text{m}^3$)
DT1	Council Chamber, Galashiels	Kerbside	N	N	100%	N	N	12
DT2	Stanley / Meigle St., Galashiels	Urban Background	N	N	100%	N	N	7
DT3	High St., Galashiels	Discontinued						
DT4	Sandbed, Hawick	Kerbside	N	N	100%	N	N	16
DT5	High St., Hawick	Kerbside	N	N	91%	N	N	17
DT6	Renwick Ter., Hawick	Urban Background	N	N	100%	N	N	6
DT7	Silverbuthall Rd., Hawick	Urban Background	N	N	100%	N	N	6
DT8	Bourtree Pl., Hawick	Kerbside	N	N	75%		N	18
DT9	Mart St., Hawick	Kerbside	N	N	16%	N/A	N/A	Not Available
DT10	Commercial Rd., Hawick	Kerbside	N	N	100%	N	N	15
DT11	Rogerson's High St Galashiels	Kerbside	N	N	91%	N	N	19
DT12	Border Angling, High St, Galashiels	Kerbside	N	N	100%	N	N	25
DT13	Edingtons, High St, Galashiels	Kerbside	N	N	100%	N	N	23
DT14	Iceland, High St, Galashiels	Kerbside	N	N	100%	N	N	25

Table 2.6 Results of Nitrogen Dioxide Diffusion Tubes (2010 to 2014)

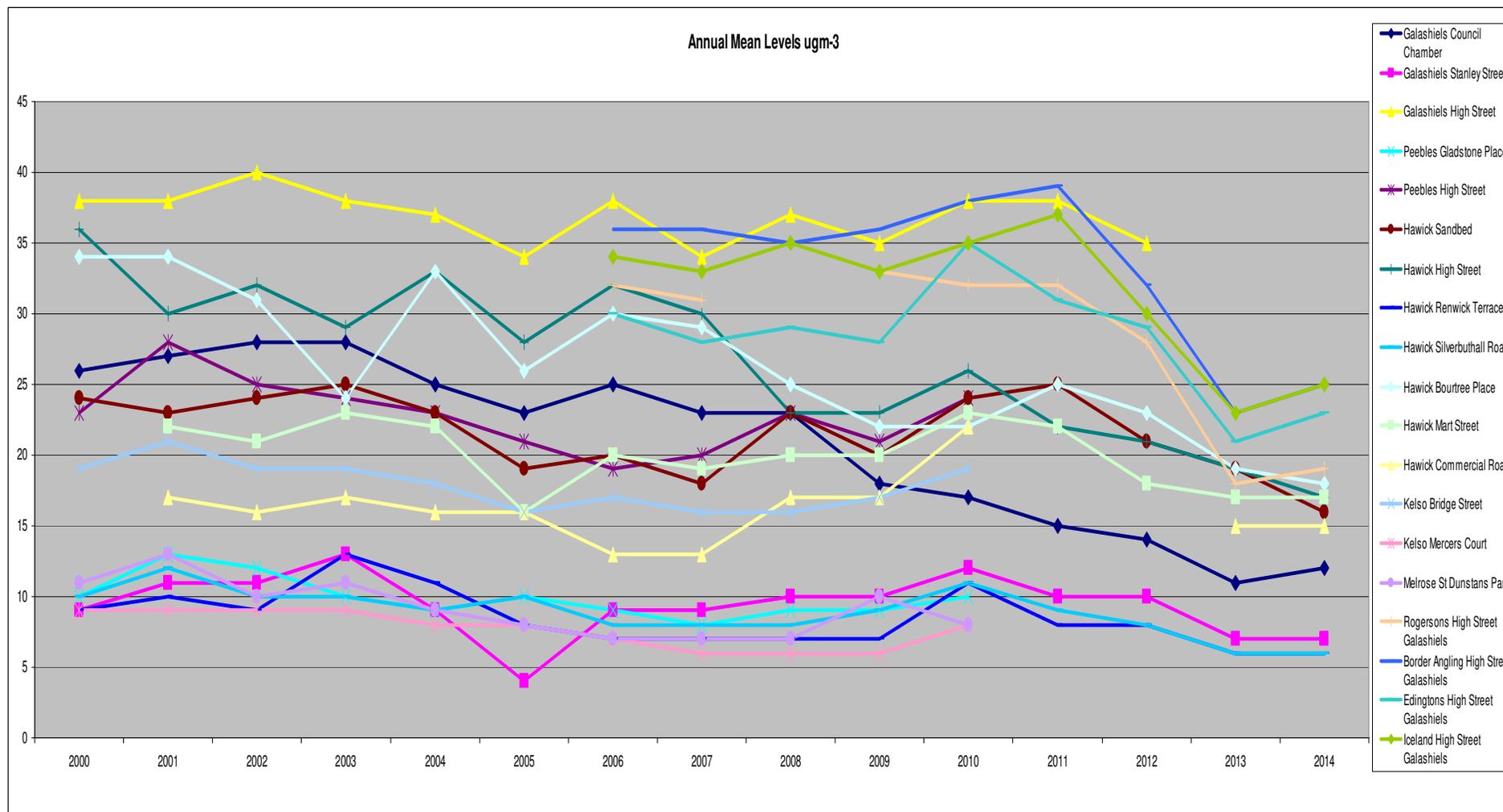
Site ID	Site Type	Within AQMA?	Annual mean concentration (adjusted for bias) µg/m ³				
			2010 (Bias Adjustment Factor = 1.02)	2011 (Bias Adjustment Factor = 1.01)	2012 (Bias Adjustment Factor = 0.86)	2013 (Bias Adjustment Factor = 0.79)	2014 (Bias Adjustment Factor = 0.78)
DT1	Kerbside	N	17	15	14	11	12
DT2	Urban Background	N	12	10	10	7	7
DT3	Discontinued	N	38	38	35		
DT4	Kerbside	N	24	25	21	19	16
DT5	Kerbside	N	26	22	21	19	17
DT6	Urban Background	N	11	8	8	6	6
DT7	Urban Background	N	11	9	8	6	6
DT8	Kerbside	N	22	25	23	19	18
DT9	Kerbside	N	23	22	18	17	Not Available
DT10	Kerbside	N	22	32	No Data	15 (< 75% Data)	15
DT11	Kerbside	N	24	39	28	18 (< 75% Data)	19
DT12	Kerbside	N	26	31	32	23	25
DT13	Kerbside	N	11	37	29	21	23
DT14	Kerbside	N	11	15	30	23	25

*Optional

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Figure 2.2 Trends in Annual Mean Nitrogen Dioxide Concentrations measured at Diffusion Tube Monitoring Sites

A trend chart may be inserted here. Please discuss any trends shown.



2.2.2 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 Helpdesk₁₅ indicate that PM₁₀ levels will not be exceeded at any location within the Council's area.

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2.2.3 Sulphur Dioxide

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.

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 Road Traffic Sources

Traffic survey data supplied by the Council's Traffic section has been examined and roads with vehicle flows above 5000 vehicles per day have been identified. No roads where the average traffic speed is below 15 mph have been identified. These survey sites have been checked against local knowledge of road conditions and likely relevant pedestrian/residential exposure. In cases where local knowledge of the site is lacking, the areas have been visited.

Information received from the Council's Traffic Management staff has not led to the identification of any new congested streets that have not yet already been assessed.

3.1 Narrow Congested Streets with Residential Properties Close to the Kerb

Scottish Borders Council confirms that there are no new/newly identified congested streets with a flow above 5,000 vehicles per day and residential properties close to the kerb, that have not been adequately considered in previous rounds of Review and Assessment.

3.2 Busy Streets Where People May Spend 1-hour or More Close to Traffic

Traffic survey data supplied by the Council's Traffic section has been examined and roads with vehicle flows above 10 000 vehicles per day have been identified. These survey sites have been checked against local knowledge of road conditions and likely relevant pedestrian/residential exposure. In cases where local knowledge of the site is lacking, the areas have been visited.

Information received from the Council's Traffic Management staff has not led to the identification of any new busy streets where people may spend one hour or more close to traffic, that meet the screening criteria.

Scottish Borders Council confirms that there are no new/newly identified busy streets where people may spend 1 hour or more close to traffic.

3.3 Roads with a High Flow of Buses and/or HGVs.

Traffic survey data supplied by the Council's Traffic section has been examined for roads with a high proportion of buses or heavy goods vehicles. These survey sites have been checked against local knowledge of road conditions and pedestrian/residential exposure. In cases where local knowledge of the site is lacking, the areas have been visited.

From the traffic data supplied the following roads have been identified as having more than 20% Goods Class vehicles:-

A1 Camera site, Cockburnspath

A1 Camera site, East Renton

A1 Camera site, Grantshouse

A1 Camera site Heugh Head

A7 Wilton Hill, Hawick

A68 Market Place, Lauder

These sites have all been checked against the screening criteria for relevant exposure.

Information received from the Council's Traffic Management staff has not led to the identification of any new roads with a high flow of buses/HGVs that have not already been assessed.

Scottish Borders Council confirms that there are no new/newly identified roads with high flows of buses/HDVs.

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3.4

3.5 Junctions

Information received from the Council's Traffic Management staff has not led to the identification of any new junction and busy roads that have not already been assessed.

Scottish Borders Council confirms that there are no new/newly identified busy junctions/busy roads.

3.6 New Roads Constructed or Proposed Since the Last Round of Review and Assessment

Information received from the Council's Traffic Management staff has not led to the identification of any new roads constructed or proposed since the last round of Review and Assessment

Scottish Borders Council confirms that there are no new/proposed roads.

3.7 Roads with Significantly Changed Traffic Flows

The Galashiels Inner Relief Road Project has been completed.

This has involved reinstating two-way traffic along Ladhope Vale, thus diverting all through traffic on the A7 trunk road away from the street canyon on Galashiels High Street.

The new through route has been designed to be uncongested and open.

Following consultation with SEPA, it has been determined that no additional monitoring is necessary.

Scottish Borders Council confirms that there are no new/newly identified roads with significantly changed traffic flows.

3.8 Bus and Coach Stations

The new Transport Interchange with the Borders Railway is nearing completion. It is not anticipated that there will be any increase in bus movements and no need to undertake additional monitoring.

Scottish Borders Council confirms that there are no relevant bus stations in the Local Authority area.

(END OF PAGE)

4 Other Transport Sources

4.1 Airports

Scottish Borders Council confirms that there are no airports in the Local Authority area.

4.2 Railways (Diesel and Steam Trains)

The work to reinstate the Borders Railway is nearing completion. It is anticipated that operations will commence in September 2015.

The line is intended to operate using diesel trains for normal services with occasional steam trains for tourists.

Consultation with SEPA has indicated that the route and topography of the line, taken together with the locations of the nearest sensitive receptors will not necessitate any additional monitoring.

The air quality impact of this development will continue to be assessed in future years.

4.2.1 Stationary Trains

Scottish Borders Council confirms that there are no locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m

4.2.2 Moving Trains

Scottish Borders Council confirms that there are no locations with a large number of movements of diesel locomotives, and potential long-term relevant exposure within 30m.

4.3 Ports (Shipping)

Scottish Borders Council confirms that there are no ports or shipping that meet the specified criteria within the Local Authority area.

(END OF PAGE)

5 Industrial Sources

5.1 Industrial Installations

5.1.1 New or Proposed Installations for which an Air Quality Assessment has been Carried Out

Information received from the Scottish Environmental Protection Agency has identified the installations listed below as having commenced or changed operations since the Council's last Report:

Ahlstrom Chirnside Ltd PPC/A/20012 – now regulated by TSU.

Hallmanor – existing poultry rearing site now above threshold for PPC, application received but not issued yet.

Easter Deans PPC/A/1016749 – variation to existing site phased in upgrade to site so may not have operated at capacity for part of year.

Crosshall Complex, Addinstone Complex and Cottage Wood – Grampian Chicken units now mothballed but there may be a change in operator.

ATT/MBT plant, Easter Langlee – no longer going ahead.

Houndwood Crematorium, Grantshouse – new PPC permit received.

PVR at Rutherford Earlston PPC/B/1004931 and Dalgleigh, Melrose PPC/B/1004830 – no longer operating as petrol stations but not surrendered.

None of these sites are anticipated to significantly impact on local air quality.

The undernoted sites have planning Consent but are not yet operational:

Biogas Plant at Charlesfield near St Boswells.

An Air Quality Assessment has been received for this development. This has indicated that there will be no impact on local air quality.

The Scottish Environmental protection Agency have indicated that there are no new sources which they would wish to be included in the Council's air quality assessment

Scottish Borders Council has assessed new/proposed industrial installations, and concluded that it will not be necessary to proceed to a Detailed Assessment.

5.1.2 Existing Installations where Emissions have increased substantially or New Relevant Exposure has been introduced

Information received from the Scottish Environmental protection Agency has indicated that there are no regulated processes that have significantly increased their emissions to the air.

Scottish Borders Council confirms that there are no industrial installations with substantially increased emissions or new relevant exposure in their vicinity within its area or nearby in a neighbouring authority.

5.1.3 New or Significantly Changed Installations with No Previous Air Quality Assessment

Scottish Borders Council has assessed new/proposed industrial installations, and concluded that it will not be necessary to proceed to a Detailed Assessment.

5.2 Major Fuel (Petrol) Storage Depots

There are no major fuel (petrol) storage depots within the Local Authority area.

5.3 Petrol Stations

Sainsbury's Filling Station, Kelso has been identified as having a throughput of petrol in excess of 2000 cubic metres per year.

This is a new installation with a vapour recovery system fitted at the pumps. There is no relevant exposure within 10m of the pumps.

Scottish Borders Council confirms that there are no petrol stations meeting the specified criteria.

5.4 Poultry Farms

The undernoted farms have been identified by SEPA as exceeding the criteria set down in TG(09).

PPC/A 1016822 – Addistone. This is currently mothballed.

PPC/A 1016830 – Crosshall. This is currently mothballed.

PPC/E/20006 – Millennium

Additionally, planning permission has been granted for a new poultry shed at Whim, Lamancha but the proposed numbers of birds have been significantly reduced due to changes in animal welfare legislation. A program of reassurance monitoring will shortly be undertaken by the Operator in connection with this development, the details of which will be agreed with SEPA.

No further assessment work is considered necessary at this time.

Scottish Borders Council confirms that there are no poultry farms meeting the specified criteria.

(END OF PAGE)

6 Commercial and Domestic Sources

6.1 Biomass Combustion – Individual Installations

The assessment work undertaken for this report has not revealed any significant sources of biomass combustion likely to lead to exceedences of the Air Quality Objectives.

Scottish Borders Council has assessed the biomass combustion plant, and concluded that it will not be necessary to proceed to a Detailed Assessment.

6.2 Biomass Combustion – Combined Impacts

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

During 2014 a number of developments were identified that involved the installation of biomass, wood burning or multifuel heating equipment. These were assessed where required, using the Assessment Toolkit for Biomass, and the developments are dispersed throughout the Council's area.

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.

Scottish Borders Council has assessed the biomass combustion plant, and concluded that it will not be necessary to proceed to a Detailed Assessment.

6.3 Domestic Solid-Fuel Burning

Previous Review and Assessment work undertaken by the Council has indicated that there are no areas within the Borders that are at risk of exceeding the Air Quality Objectives for Sulphur Dioxide or PM₁₀.

The work that has been carried out for this Report has not revealed any new or significantly increased sources of domestic fuel burning.

Scottish Borders Council confirms that there are no areas of significant domestic fuel use in the Local Authority area.

(END OF PAGE)

7 Fugitive or Uncontrolled Sources

The sources of fugitive matter identified in earlier rounds of Review and Assessment have been re-checked. No new relevant exposure has been identified.

Scottish Borders Council confirms that there are no potential sources of fugitive particulate matter emissions in the Local Authority area.

(END OF PAGE)

8 Conclusions and Proposed Actions

8.1 Conclusions from New Monitoring Data

Scottish Borders Council has not identified any potential exceedences of any of the Air Quality Objectives.

Nitrogen Dioxide monitoring data indicates that levels will continue to remain well within the prescribed levels and that no detailed assessment work is necessary at this time.

8.2 Conclusions from Assessment of Sources

A number of new developments have been identified as having the potential to impact on local air quality

These developments are detailed in Section 8.3 below.

8.3 Proposed Actions

This Updating and Screening Assessment has not identified the need to proceed to a Detailed Assessment for any pollutant.

The Scottish Environmental Protection Agency have confirmed that they are not aware of any air pollution sources which they would wish the Council to assess.

When the Borders railway becomes operational and the new Galashiels Transport Interchange has been completed, the Council will assess the need to carry out additional monitoring. This will be discussed with the Scottish Environmental Protection Agency.

It is anticipated that the existing network of diffusion tubes will continue to be used to monitor the Galashiels High Street street-canyon.

The new poultry shed at Whim, Lamancha has been Conditioned to requirement monitoring of particulate emissions from the development. This work will commence shortly and the conclusions will be considered further in future Reports. The Council's next action will be to produce our 2016 Progress Report.

(END OF PAGE)

9 References

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Technical Guidance LAQM.TG(09)
- 2). Local Air Quality Management
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- 3). Air Quality Review and Assessment – Detailed
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- 10). 2010 Air Quality Progress Report for Scottish Borders Council – SBC/PR/
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- 11). 2011 Air Quality Progress Report for Scottish Borders Council – SBC/PR/2011/1
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- 13). Air Quality Progress Report 2013 - SBC/PR/2013/1
- 14). Air Quality Progress Report 2014 - SBC/PR/2014/1
- 15). Background NO_x, NO₂, PM₁₀ and PM_{2.5} Maps for LAQM and DRMB
<http://laqm.defra.gov.uk/maps/maps2008.html>
- 16). AURN Network Real-time monitoring results
http://www.scottishairquality.co.uk/#site_info

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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

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Appendix A: QA/QC Data

Factor from Local Co-location Studies (if available)

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

Diffusion Tube Bias Adjustment Factors

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

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 0.78 has been used for the results of this laboratory. Spreadsheet Version 03/15.

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.

To date, no issues have been identified.

QA/QC of Diffusion Tube Monitoring

The laboratory used during 2014 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".

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Appendix B: Automatic Monitoring Data

Nitrogen Dioxide Statistics for Peebles

Year: Parameter:

Monthly Statistics (monthly averages) for 2014

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
9	7	6	6	4	3	2	3	5	5	12	9
100%	96%	100%	100%	100%	100%	100%	96%	100%	100%	100%	100%

Annual Statistics for 2014

Annual Hourly Mean	6	μgm^{-3}	Provisional	99% DC
Max Daily Mean	29	μgm^{-3}	Ratified	
Max Hourly Mean	52	μgm^{-3}	Provisional	

Key:

- P - Provisional Data
- R - Ratified Data

Exceedance Statistics for 2014

Air Pollution Bands

Band	Hours in Band	Days in Band
NO2 Low	8691	365
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 Exceedances: 0

Air Quality Strategy Guidelines

Not Applicable for this pollutant

EC Limit Values

Not Applicable for this pollutant

Ozone Statistics for Peebles

Year: Parameter:

Monthly Statistics (monthly averages) for 2014

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
55	62	64	73	75	61	52	53	47	50	37	54
100%	96%	100%	100%	100%	100%	100%	96%	100%	100%	100%	100%

Annual Statistics for 2014

Annual Hourly Mean	57	µgm ⁻³	Provisional	99% DC
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Max Daily Mean	106	µgm ⁻³	Ratified
Max Hourly Mean	133	µgm ⁻³	Provisional

Key:

- P - Provisional Data
- R - Ratified Data

Exceedance Statistics for 2014

Air Pollution Bands

Band	Hours in Band	Days in Band
O3 Low	8640	365
O3 Moderate	59	8
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 Exceedances:	59
Air Quality Strategy Standard for 2005 (O3) daily maximum 8-hour running mean > 100 microgrammes per metre cubed	
No of Exceedances:	8

Air Quality Strategy Guidelines

Not Applicable for this pollutant

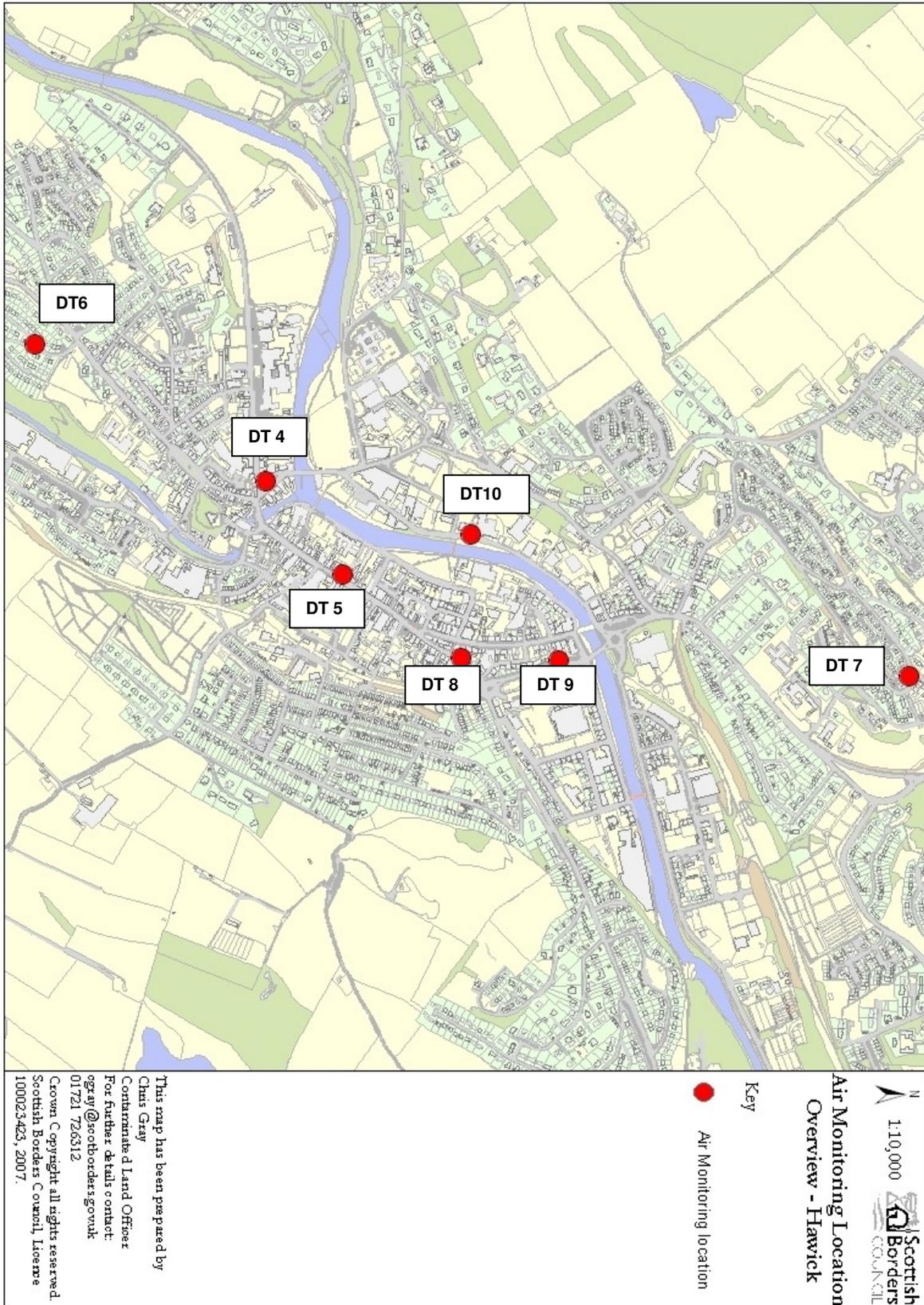
EC Limit Values

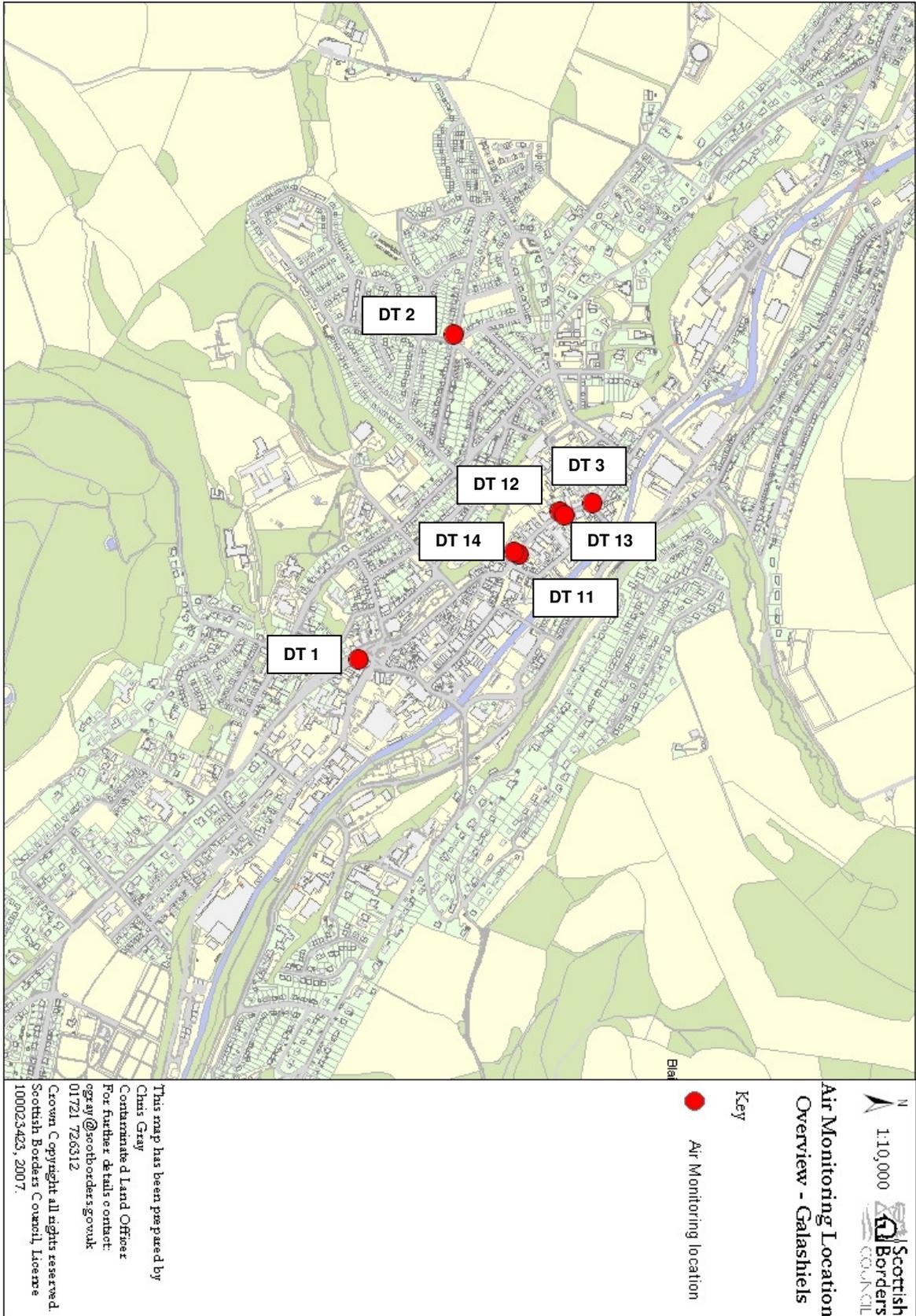
EC Population Information Threshold (O3) 1-hour mean > 180 microgrammes per

metre cubed	
No of Exceedances:	0
EC Population Warning Value (O3) 1-hour mean > 240 microgrammes per metre cubed	
No of Exceedances:	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 Exceedances:	0
EC Health Protection long-term objective (O3) daily maximum 8-hour running mean > 120 microgrammes per metre cubed	
No of Exceedances:	2

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Appendix C: Maps of Diffusion Tube Sites





Appendix D: Monthly Diffusion Tube Raw Data

Nitrogen Dioxide Results - Scottish Borders Council 2014													
Jan	25.2	16.9		29.3	30.4	13.1	12.9	30.7		27.5	32.9	43.3	35.1
Feb	13.9	10.7		24	20.3	6.8	8.7	25.2		24.4	27.5	29.9	26.6
Mar	12.7	8.8		21.3	21.5	8	7.4	22.8		18	22.2	28	24.9
Apr	34.4	7.5		18.6	22.5	6.3	6.2	24.5		19.8	21.2	28.6	30.4
May	10.9	7.1		20.3	19.3	5.4	3.8			19.1	20.7	28.1	23.3
Jun	11.7	7.1		19.4	19.8	4.9	4.8	17		18.8	21.5	25.5	30.7
Jul	8	4.3		14.5	16.8	3.2	3	16.7		14.4		25.5	22.5
Aug	12.6	6.9		17.5	18.9	5.1	4.7			12.6	24.4	33.5	32.2
Sep	12.6	6.9		17.5	18.9	5.1	4.7			12.6	24.4	33.5	32.2
Oct	17.4	11.8		22.6		9	9.3	22		18.1	29.6	39.3	36.5
Nov	24	15.6		27.1	29.4	13.2	13	26.3	26.5	28.8	33.2	51.2	41.6
Dec	8.9	6.3		19.1	24.3	4.9	7.9	18.9	17.1	15.6	13.9	14.9	16.4
	Gala Council Chamber	Gala Stanley Street	Gala High St	Hawick Sandbed	Hawick High Street	Hawick Renwick Terrace	Hawick Sbh Road	Hawick Bourtree Place	Hawick Mart Street	Rogersons High Street Galashiels	Border Angling High Street Gala	Edingtons High Street Galashiels	Iceland High Street Gala

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