



Cyngor Bwrdeisdref Sirol

Blaenau Gwent

County Borough Council

2012 Air Quality Updating & Screening Assessment for Blaenau Gwent CBC

**In fulfillment of Part IV of the Environment
Act 1995**

Local Air Quality Management

Blaenau Gwent County Borough Council

Local Authority Officer	Tim Griffin
Department	Housing and Environmental Health Section , Pollution Control Team.
Address	Blaenau Gwent CBC, Anvil Court, Church Street, Abertillery, NP13 1DB.
Telephone	01495 355967
e-mail	Tim.Griffin@Blaenau-gwent.gov.uk
Report Reference number	BG/ENVH/AQR/USA/2012
Date	30 TH April 2012

Executive Summary

This updating and screening assessment is the latest in a series of reports relating to air quality and has been compiled and published by Blaenau Gwent County Borough Council (hereafter referred to as Blaenau Gwent CBC). The report contains the latest air quality data for the calendar year of 2011 applicable to the County Borough, and provides current information relating to any new local developments or issues that may have an impact on air quality.

The UK's National Air Quality Strategy sets air quality objectives for seven key pollutants which Local Authorities are legally required to have regard to. These include Benzene, 1,3 Butadiene, Carbon Monoxide, Lead, Nitrogen Dioxide, Particulate Matter (PM₁₀) (gravimetric) and Sulphur Dioxide.

Local authorities are obliged to periodically review the air quality within their area to determine the risk of the air quality objectives set out in the national strategy being exceeded. If a Local Authority identifies a risk of any of the objectives being exceeded within its area then they must proceed to a Detailed Assessment for that pollutant.

The previous reports produced by Blaenau Gwent CBC have concluded that it is unlikely that any of the air quality objectives that the Council are required to have regard to, are being exceeded or will be exceeded within the Borough and therefore no Detailed Assessment for any pollutant has been carried out to-date.

This 2012 updating and screening assessment **does not** identify the need for Blaenau Gwent CBC to proceed to a Detailed Assessment for any of the seven pollutants identified in the UK's National Air Quality Strategy.

The progress report for Air Quality within the Borough of Blaenau Gwent is scheduled to be published in April 2013.

Further information regarding the UK's National Air Quality Strategy is available at

<http://uk-air.defra.gov.uk/>

Table of contents

1	Introduction	5
1.1	Description of Local Authority Area	5
1.2	Purpose of Report.....	5
1.3	Air Quality Objectives	6
1.4	Summary of Previous Review and Assessments	8
2	New Monitoring Data	10
2.1	Summary of Monitoring Undertaken.....	10
2.1.1	Automatic Monitoring Sites	10
2.1.2	Non-Automatic Monitoring Sites	11
2.2	Comparison of Monitoring Results with AQ Objectives.....	15
2.2.1	Nitrogen Dioxide.....	15
2.2.2	PM ₁₀	21
2.2.3	Sulphur Dioxide.....	21
2.2.4	Benzene.....	21
2.2.5	Other pollutants monitored	21
2.2.6	Summary of Compliance with AQS Objectives	22
3	Road Traffic Sources	23
3.1	Narrow Congested Streets with Residential Properties Close to the Kerb	23
3.2	Busy Streets Where People May Spend 1-hour or More Close to Traffic.....	23
3.3	Roads with a High Flow of Buses and/or HGVs.....	23
3.4	Junctions.....	23
3.5	New Roads Constructed or Proposed Since the Last Round of Review and Assessment.	24
3.6	Roads with Significantly Changed Traffic Flows.....	25
3.7	Bus and Coach Stations	25
4	Other Transport Sources.....	26
4.1	Airports.....	26
4.2	Railways (Diesel and Steam Trains)	26
4.2.1	Stationary Trains.....	26
4.2.2	Moving Trains	26
4.3	Ports (Shipping)	26
5	Industrial Sources.....	27
5.1	Industrial Installations	27
5.1.1	New or Proposed Installations for which an Air Quality Assessment has been Carried Out	27

Blaenau Gwent County Borough Council

5.1.2	Existing Installations where Emissions have Increased Substantially or New Relevant Exposure has been Introduced	27
5.1.3	New or Significantly Changed Installations with No Previous Air Quality Assessment...	27
5.2	Major Fuel (Petrol) Storage Depots	28
5.3	Petrol Stations.....	28
5.4	Poultry Farms.....	28
6	Commercial and Domestic Sources	29
6.1	Biomass Combustion – Individual Installations	29
6.2	Biomass Combustion – Combined Impacts.....	29
6.3	Domestic Solid-Fuel Burning	29
7	Fugitive or Uncontrolled Sources.....	30
8	Conclusions and Proposed Actions.....	31
8.1	Conclusions from New Monitoring Data	31
8.2	Conclusions from Assessment of Sources	31
8.3	Proposed Actions.....	31
9	References.....	32

List of Tables

Table 1.1	Air Quality Objectives
Table 1.2	Reports Produced By Blaenau Gwent CBC
Table 2.1.2	Details of Non-Automatic Monitoring Sites for 2011
Table 2.2	Results Of Nitrogen Dioxide Diffusion Tubes For 2011
Table 2.3	Results of Nitrogen Dioxide Diffusion Tubes for 2006, 2007, 2008, 2009, 2010 &2011

List of Figures

Figure 1	Measured levels of Nitrogen Dioxide for 2011 compared with UK AQO
Figure 2	Measured levels of Nitrogen Dioxide for 2006, 2007, 2008, 2009, 2010 & 2011 compared with UK AQO

Appendices

Appendix 1	Map Indicating Administrative Area Of Blaenau Gwent
Appendix 2	Map Indicating Locations of Nitrogen Dioxide Diffusion Tube monitoring within Blaenau Gwent for 2011
Appendix 3	Nitrogen Dioxide Diffusion Tube Monitoring Results For 2011

1 Introduction

1.1 Description of Local Authority Area

The County Borough of Blaenau Gwent is located in South East Wales and was formerly part of the County of Gwent. It is approximately 20 miles south to the city of Newport, 30 miles south west to the City of Cardiff and directly north is the Brecon Beacons National Park.

Blaenau Gwent is the smallest of all the Welsh Local Authorities, at about 10,900 hectares. There are three distinctive valleys supporting the five main towns or settlements of Abertillery, Brynmawr, Ebbw Vale, Nantyglo and Blaina, and Tredegar.

Although the towns give the County Borough a busy, urban feel, Blaenau Gwent is actually a largely rural area. Forty five per cent of the land area is undeveloped, and the greater part of this is defined as open countryside.

The Borough has witnessed steady population loss over recent years. The most recent figures suggest that there are 68,400 people living in the area. This compares to 70,064 in 2001, and 69,300 in 2010 (Censuses).

The main trunk route that runs through the County Borough is the A465, Heads of the Valleys road which provides good communication to the Midlands and the North via the M50/M5 and to London via the M4.

Much of the traditional coal and steel industry that historically populated the Borough has been replaced by a diverse industrial base comprising of businesses such as pharmaceuticals, battery and computer systems, electronic and high tech engineering companies. The closure of much of the heavy industry in the area has had an adverse impact on the local economy but conversely it has meant the removal of significant sources of air pollution.

Blaenau Gwent has experienced enormous regeneration investment in recent years, with much more to come. Major projects like the re-opening of the Ebbw Valley railway and the re-development of the former Corus steelworks site in Ebbw Vale will transform the face of the borough.

The map provided in Appendix 1 to this report outlines the administrative area of Blaenau Gwent.

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 **Wales** are set out in the Air Quality (Wales) Regulations 2000, No. 1940 (Wales 138), Air Quality (Amendment) (Wales) Regulations 2002, No 3182 (Wales 298), 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 Wales

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
	5.00 $\mu\text{g}/\text{m}^3$	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 35 times a year	24-hour mean	31.12.2004
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004

Blaenau Gwent County Borough Council

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

Table 1.2 provides a comprehensive list of the reports produced by Blaenau Gwent CBC as a result of previous rounds of review and assessment of the air quality within the Borough, and summarises the main findings of each report.

Table 1.2 - Reports Produced By Blaenau Gwent CBC As A Result Of Previous Rounds Of Local Air Quality Review And Assessment

Report	Review And Assessment Undertaken & Conclusions	Year Published
1999 First Stage Review and Assessment	Initial screening of industrial, transport and other significant sources of air pollution within the Borough. Concluded that it is unlikely that there will be failure to achieve any of the air quality objectives.	1999
2003 Updating and Screening Assessment	In-depth review of any matters which may have changed since the last review and assessment which may lead to a risk of an air quality objective being exceeded. Concluded no significant changes and therefore unlikely that there will be failure to achieve any of the air quality objectives.	2003
2004 Progress Report	Review of any matters which may have changed since the last review and assessment which may lead to a risk of an air quality objective being exceeded. Concluded no significant changes and therefore unlikely that there will be failure to achieve any of the air quality objectives.	2004
2005 Progress Report	Review of any matters which may have changed since the last review and assessment which may lead to a risk of an air quality objective being exceeded. Concluded no significant changes and therefore unlikely that there will be failure to achieve any of the air quality objectives.	2005
2006 Updating and Screening Assessment	In-depth review of any matters which may have changed since the last review and assessment which may lead to a risk of an air quality objective being exceeded. Concluded no significant changes and therefore unlikely that there will be failure to achieve any of the air quality objectives.	2006
2007 Progress Report	Review of any matters which may have changed since the last review and assessment which may lead to a risk of an air quality objective being exceeded. Concluded no significant changes and therefore unlikely that there will be failure to achieve any of the air quality objectives.	2007
2008 Progress Report	Review of any matters which may have changed since the last review and assessment which may lead to a risk of an air quality objective being exceeded. Concluded no significant changes and therefore unlikely that there will be failure to achieve any of the air quality objectives.	2008
2009 Updating and Screening Assessment	In-depth review of any matters which may have changed since the last review and assessment which may lead to a risk of an air quality objective being exceeded. Concluded no significant changes and therefore unlikely that there will be failure to achieve any of the air quality objectives.	2009

Blaenau Gwent County Borough Council

2010 Progress Report	Review of any matters which may have changed since the last review and assessment which may lead to a risk of an air quality objective being exceeded. Concluded no significant changes and therefore unlikely that there will be failure to achieve any of the air quality objectives.	2010
2011 Progress Report	Review of any matters which may have changed since the last review and assessment which may lead to a risk of an air quality objective being exceeded. Concluded no significant changes and therefore unlikely that there will be failure to achieve any of the air quality objectives.	2011

All reports produced from 2004 onwards are available to download and view free of charge at the Blaenau Gwent CBC website:

<http://www.blaenau-gwent.gov.uk/environment/2774.asp>

Copies of earlier reports are available from Blaenau Gwent CBC Environmental Health Section upon request.

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

Blaenau Gwent CBC does not currently undertake any automatic monitoring of any of the pollutants relevant to the UK National Air Quality Objectives.

However, there was an automatic monitoring station within the Borough which was undertaking monitoring for ambient levels of Lead, PM₁₀ and PM_{2.5} at a special source orientated site. Monitoring was required at the site for a minimum period of 12 months during 2008/09. Monitoring at this site has now completed.

The monitoring station was located at Garnlydan Primary School, Ebbw Vale and was run by Environmental Compliance Ltd on behalf of Envirowales Ltd. Envirowales Ltd is a lead acid battery recycling plant sited at the Rassau Industrial Estate, Ebbw Vale which was given planning permission on 21st June 2005.

The provision of the monitoring station arose as a result of compliance with the requirements of a formal agreement between Envirowales Ltd and Blaenau Gwent CBC under Section 106 of the Town and Country Planning Act as previously reported in the 2008 Progress Report (Pg 37/38).

The monitoring site location was selected as it was considered to be one of the nearest sites of relevant exposure to emissions from the processes being undertaken at Envirowales Ltd. A map indicating the location of the monitoring site was provided in Appendix 2 of the 2010 Progress Report.

It was agreed that monitoring would commence at a time when the site had become fully operational and as a result monitoring began in September 2008. The monitoring station was routinely calibrated on a monthly basis, audits of the site were carried out in conjunction with the routine calibration exercises. A summary of the information relevant to the automatic monitoring station was provided in the 2010 Progress Report (Table 2.1).

Reports were provided to the Local Authority by Environmental Compliance Ltd every three months from date of commencement of the monitoring exercise. The outline of the methodology used for monitoring and analysis (including quality assurance and controls used) and the results obtained were provided in each report supplied to Blaenau Gwent CBC. A copy of each of the reports were provided in Appendix 3 to the 2010 Progress Report.

The automatic monitoring undertaken at the site **did not** indicate any exceedence or likely exceedence of the Air Quality Objectives for Lead, PM₁₀ and PM_{2.5} at a level for which a Detailed Assessment would be necessary.

2.1.2 Non-Automatic Monitoring Sites

Blaenau Gwent CBC undertook diffusion tube monitoring at 19 sites throughout the Borough during 2011 for Nitrogen Dioxide, the details of which are presented in Table 2.2. A map indicating the approximate location of each current monitoring site is provided in Appendix 2 to this report.

The diffusion tubes are exposed for four week periods in accordance with the National NO₂ exposure calendar.

Two laboratories were used to analyse and provide data from the NO₂ diffusion tube monitoring. This is due to an historical arrangement where the four of the nineteen sites namely, BGBC1,3,4 and 9, were originally part of a national survey and the remainder were locally determined monitoring sites. As a result of the demise of the national survey, from April 2011 all of our diffusion tubes have been analysed by the same laboratory (Cardiff Scientific Services) to ensure consistency in analysis and reporting.

Harwell Scientifics was the laboratory used to analyse the four former national survey sites (BGBC - 1,3,4 and 9) until April 2011. The laboratory used for the remaining sites and for the former national survey sites since April 2011 is Cardiff Scientific Services, both use the 50% TEA in Acetone method to prepare the diffusion tubes for analysis. As a result the bias adjustment factor for Cardiff Scientific Services was used for the BGBC sites – 1,3,4 and 9 (as well as all the other monitoring locations) as 75% of the diffusion tubes were analysed there.

Both laboratories have indicated that they are following the procedures set out in the Harmonisation Practical Guidance.

It has also been confirmed that both laboratories demonstrated satisfactory performance in both the WASP scheme (run by the Health and Safety Laboratory) and the monthly field inter-comparison exercise run by AEA or own co-location study for the period of 2011. Both laboratories achieved good precision results for Nitrogen Dioxide diffusion tube collocation studies.

Blaenau Gwent CBC does not currently undertake a co-location study for its NO₂ diffusion tube monitoring and so the 'National' bias adjustment factor has been used for the results of the monitoring undertaken during the period of 2011. The 'National' bias adjustment factor was taken from the spreadsheet provided on the Air Quality Review and Assessment Helpdesk Website (<http://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html>.)

The bias adjustment factors that were applied are outlined below:

- Harwell Scientifics – bias adjustment factor of 0.84 for 2011
- Cardiff Scientific Services - bias adjustment factor of 0.82 for 2011

Blaenau Gwent County Borough Council

A full audit of all monitoring sites used by Blaenau Gwent CBC was undertaken during 2009 and as a result minor amendments to the descriptors for some of the sites was carried out and some additional information was provided with regards to all sites.

In addition to the above it was identified as a result of the audit that some of the monitoring locations were no longer required as they were no longer representative of the areas being monitored due to local changes. A number of new sites were also identified as a result of the information obtained during the audit and the Updating and Screening Assessment process carried out in 2009.

So that the ongoing monitoring for 2009 would not be interrupted it was decided that the existing sites would continue until the end of the calendar year for 2009. The new monitoring locations would commence in January 2010 and the redundant sites would cease monitoring at the end of 2009.

The sites which were made redundant at the end of the calendar year for 2009 were BGBC-10 and BGBC-15. Four new monitoring locations were identified in total and these commenced operation in January 2010. The new sites are BGBC-23, 24, 25 and 26.

Table 2.1.2 Details of Non-Automatic Monitoring Sites for 2011

Site Name	LA Reference	Site Type	Location	Easting (X) / Northing (Y)	OS Grid Map Reference	Pollutants Monitored	Within AQMA?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Height between 2 to 4 m? (Y/N)	Distance to kerb of nearest road (N/A if not applicable)	Worst-case Location ?	WAQF Start Date	WAQF End Date
BGBC-01	S1	Near Road	The Darren, Daren-felen Road, Brynmawr	X 319538 Y 211956	SO1911NE	NO ₂	N	Y (on facade)	Y	8m	Y	Jan 1995	N/A
BGBC-03	S3	Urban Background	272 King Street, Brynmawr	X 319292 Y 212030	SO1912SE	NO ₂	N	Y (on façade)	Y	4m	Y	Jan 1995	N/A
BGBC-04	S4	Urban Background	22 Parkhill, Beaufort, Ebbw Vale	X 317298 Y 211287	SO1711SW	NO ₂	N	Y (10m)	Y	N/A	N/A	Jan 1995	N/A
BGBC-05	A3	Urban Background	Willow Tree Bungalow, Aberbeeg	X 321139 Y 201114	SO2101SW	NO ₂	N	Y (1m)	Y	10m	N/A	Jan 1995	N/A
BGBC-07	A1	Urban Background	Aberbeeg Medical Centre, Aberbeeg	X 320942 Y 202011	SO2002SE	NO ₂	N	Y (18m)	Y	25m	N/A	Nov 1995	N/A
BGBC-09	S2	Near Road	Ynys Dawel, Daren-felen Road, Brynmawr	X 319556 Y 211980	SO1911NE	NO ₂	N	Y (7m)	Y	33m	Y	Jan 2001	N/A
BGBC-11	C2	Urban Background	8 Cwm Graig Bungalows, Marine Street, Cwm, Ebbw Vale	X 318785 Y 204592	SO1804NE	NO ₂	N	Y (on facade)	Y	18m	N/A	Jan 2000	N/A
BGBC-13	T2	Roadside	3 Kings Arms Cottages, Trefil, Tredegar	X 312012 Y 212782	SO1212NW	NO ₂	N	Y (on facade)	Y	4m	Y	Oct 2000	N/A
BGBC-16	A5	Near road	49 Aberbeeg Road, Aberbeeg	X 321430 Y 202672	SO2102NW	NO ₂	N	Y (on façade)	Y	7m	Y	Oct 2005	N/A
BGBC-17	C3	Near road	Cwmyrdderch Court, School Terrace, Cwm, Ebbw Vale	X 318429 Y 205535	SO1805NW	NO ₂	N	Y (5m)	Y	7m	Y	Oct 2005	N/A
BGBC-18	BT1	Roadside	Welfare Hall, Beaufort Hill, Ebbw Vale	X 317543 Y 211688	SO1711NE	NO ₂	N	Y (on façade)	Y	5m	Y	Oct 2005	N/A
BGBC-19	BT2	Roadside	42 Beaufort Rise, Ebbw Vale	X 316670 Y 211597	SO1611NE	NO ₂	N	Y (on facade)	Y	3m	Y	Oct 2005	N/A
BGBC-20	TR1	Roadside	122 Beaufort Road, Tredegar	X 314858 Y 210240	SO1410SE	NO ₂	N	Y (on façade)	Y	5.5m	Y	Oct 2005	N/A

Table 2.1.2 Details of Non-Automatic Monitoring Sites for 2011 (continued)

Site Name	LA Reference	Site Type	Location	Easting (X) / Northing (Y)	OS Grid Map Reference	Pollutants Monitored	Within AQMA?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Height between 2 to 4 m? (Y/N)	Distance to kerb of nearest road (N/A if not applicable)	Worst-case Location ?	WAQF Start Date	WAQF End Date
BGBC-21	TR2	Other - Nearest residential premises to busy roundabout on Heads of Valley Road (A465)	14 Bryn Rhosyn, Merthyr Road, Tredegar	X 312846 Y 210586	SO1210NE	NO ₂	N	Y (on façade)	Y	35m	Y	Oct 2005	N/A
BGBC-22	BR1	Near road	2 King Street, Brynmawr	X 319562 Y 212128	SO1912SE	NO ₂	N	Y (on façade)	Y	6m	Y	Nov 2005	N/A
BGBC-23	C4	Near road	Cwm Conservative Club, Mill Terrace, Cwm	X 318453 Y 205308	SO1805SW	NO ₂	N	Y (on façade)	Y	6m	Y	Jan 2010	N/A
BGBC-24	T5	Roadside	4 Glen View, Nantybwich, Tredegar	X 313145 Y 210769	SO1310NW	NO ₂	N	Y (on façade)	Y	5m	Y	Jan 2010	N/A
BGBC-25	E1	Near road	Red Rose Care Centre, Park Road, Ebbw Vale	X 316996 Y 207898	SO1607NE	NO ₂	N	Y (on façade)	Y	8m	Y	Jan 2010	N/A
BGBC-26	E2	Other – near road where this is an increase in traffic expected due to major works nearby	2 The Dingle, Ebbw Vale	X 316980 Y 209842	SO1609NE	NO ₂	N	Y (on façade)	Y	10m	Y	Jan 2010	N/A

2.2 Comparison of Monitoring Results with AQ Objectives

2.2.1 Nitrogen Dioxide

Automatic Monitoring Data

Blaenau Gwent CBC does not currently undertake any automatic monitoring for Nitrogen Dioxide.

Diffusion Tube Monitoring Data

A summary of the results obtained from the Nitrogen Dioxide diffusion tube monitoring undertaken at the 19 sites within the Borough for the period of 2011 is presented in Table 2.2 below. Full details of the monthly mean values for each site are provided in Appendix 3 to this report.

None of the results from the diffusion tube monitoring are based on triplicate or collocated tubes, the results are based on 12 months worth of data for the calendar year 2011 so none of the data has been annualised.

Blaenau Gwent County Borough Council

Table 2.2 Results Of Nitrogen Dioxide Diffusion Tubes For 2011

Site Name	Location	Within AQMA?	Data Capture 2011 %	Annual Mean Concentrations	Air Quality Objective Annual Mean for Nitrogen Dioxide ($\mu\text{g}/\text{m}^3$)
				2011 ($\mu\text{g}/\text{m}^3$) Adjusted for bias	
BGBC-01	The Darren, Daren-felen Road, Brynmawr	N	100	19	40
BGBC-03	272 King Street, Brynmawr	N	100	15.3	40
BGBC-04	22 Parkhill, Beaufort, Ebbw Vale	N	100	10.4	40
BGBC-05	Willow Tree Bungalow, Aberbeeg	N	100	15.5	40
BGBC-07	Aberbeeg Medical Centre, Aberbeeg	N	100	17.8	40
BGBC-09	Ynys Dawel, Daren-felen Road, Brynmawr	N	100	19.1	40
BGBC-11	8 Cwm Graig Bungalows, Marine Street, Cwm, Ebbw Vale	N	100	12.6	40
BGBC-13	3 Kings Arms Cottages, Trefil, Tredegar	N	100	6.4	40
BGBC-16	49 Aberbeeg Road, Aberbeeg	N	100	24	40
BGBC-17	Cwmyrdderch Court, School Terrace, Cwm, Ebbw Vale	N	100	16.5	40
BGBC-18	Welfare Hall, Beaufort Hill, Ebbw Vale	N	100	21.5	40
BGBC-19	42 Beaufort Rise, Ebbw Vale	N	100	24.5	40
BGBC-20	122 Beaufort Road, Tredegar	N	100	26.5	40
BGBC-21	14 Bryn Rhosyn, Merthyr Road, Tredegar	N	100	17.6	40
BGBC-22	2 King Street, Brynmawr	N	100	18.4	40
BGBC-23	Cwm Conservative Club, Mill Terrace, Cwm	N	100	16.1	40
BGBC-24	4 Glen View, Nantybwich, Tredegar	N	100	20.9	40
BGBC-25	Red Rose Care Centre, Park Road, Ebbw Vale	N	100	15.2	40
BGBC-26	2 The Dingle, Ebbw Vale	N	100	16.1	40

Figure 1 provides a graphical representation of the 2011 measured levels of Nitrogen Dioxide at each monitoring location in comparison with the Air Quality Objective for this pollutant.

In previous reporting years the 'Nitrogen Dioxide with distance from Roads Calculator' had been used to predict the annual mean Nitrogen Dioxide concentration for receptors that are close to roadside monitoring locations but are further from the kerb than the monitor.

As a result of the audit of the monitoring locations carried out in 2009 it was noted that this calculation would no longer be required at any of the monitoring locations, as all roadside monitors are now located on the facade of the nearest receptor. There are no roadside monitoring locations where the receptor is nearer to the kerb than the monitoring site. So none of the data has been distance corrected because they are all located at sites of relevant exposure.

The results provided in Table 2.2 indicate that the Nitrogen Dioxide levels at each of the monitoring sites were considerably below the current Annual Mean Air Quality Objective of 40 $\mu\text{g}/\text{m}^3$.

Table 2.3 provides a comparison of the results for the period of 2011 with the results of previous years monitoring (where available) for 2006, 2007, 2008, 2009 and 2010. The results identify that there has been a reduction in the measured levels of nitrogen dioxide in 2011 when compared to the 2010 results in 15 of out the nineteen sites. Also in 2011 minor increases were only identified in three monitoring locations (BGBC- 16, 19, 24) with one location (BGBC- 20) remaining the same when compared to the 2010 monitoring results. Also the measured levels of nitrogen dioxide at eleven out of the fifteen monitoring locations were lower in 2011 than in 2009.

Figure 2 provides a graphical representation of the 2006, 2007, 2008, 2009, 2010 and 2011 measured levels of Nitrogen Dioxide at each monitoring location in comparison with the Air Quality Objective for this pollutant. The bias adjustment factors used for each year are as per the information provided in each corresponding report for the year produced by Blaenau Gwent CBC and which are available at:

<http://www.blaenau-gwent.gov.uk/environment/2774.asp>

Figure 1: Measured levels of Nitrogen Dioxide for 2011 compared with UK AQO

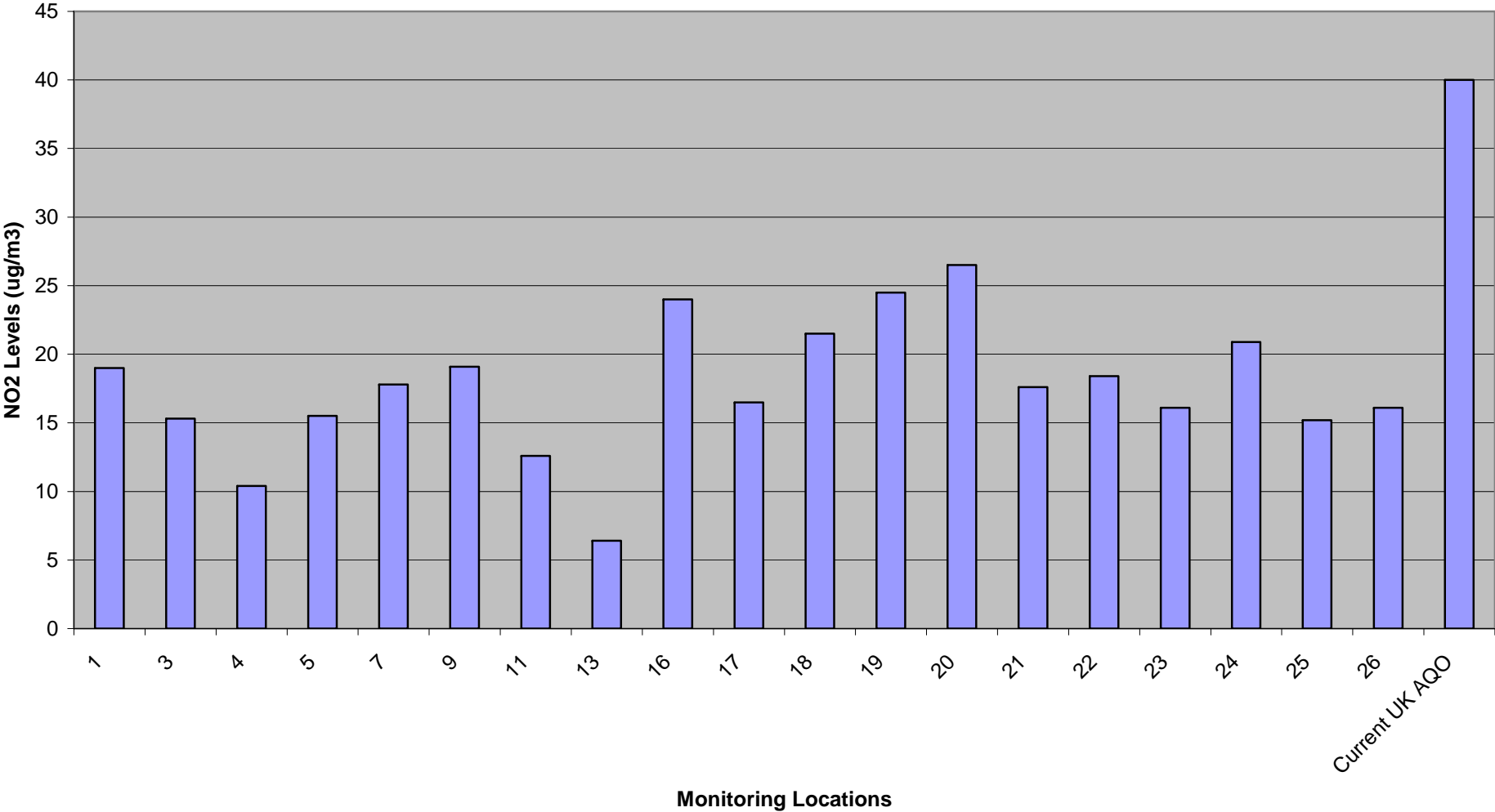
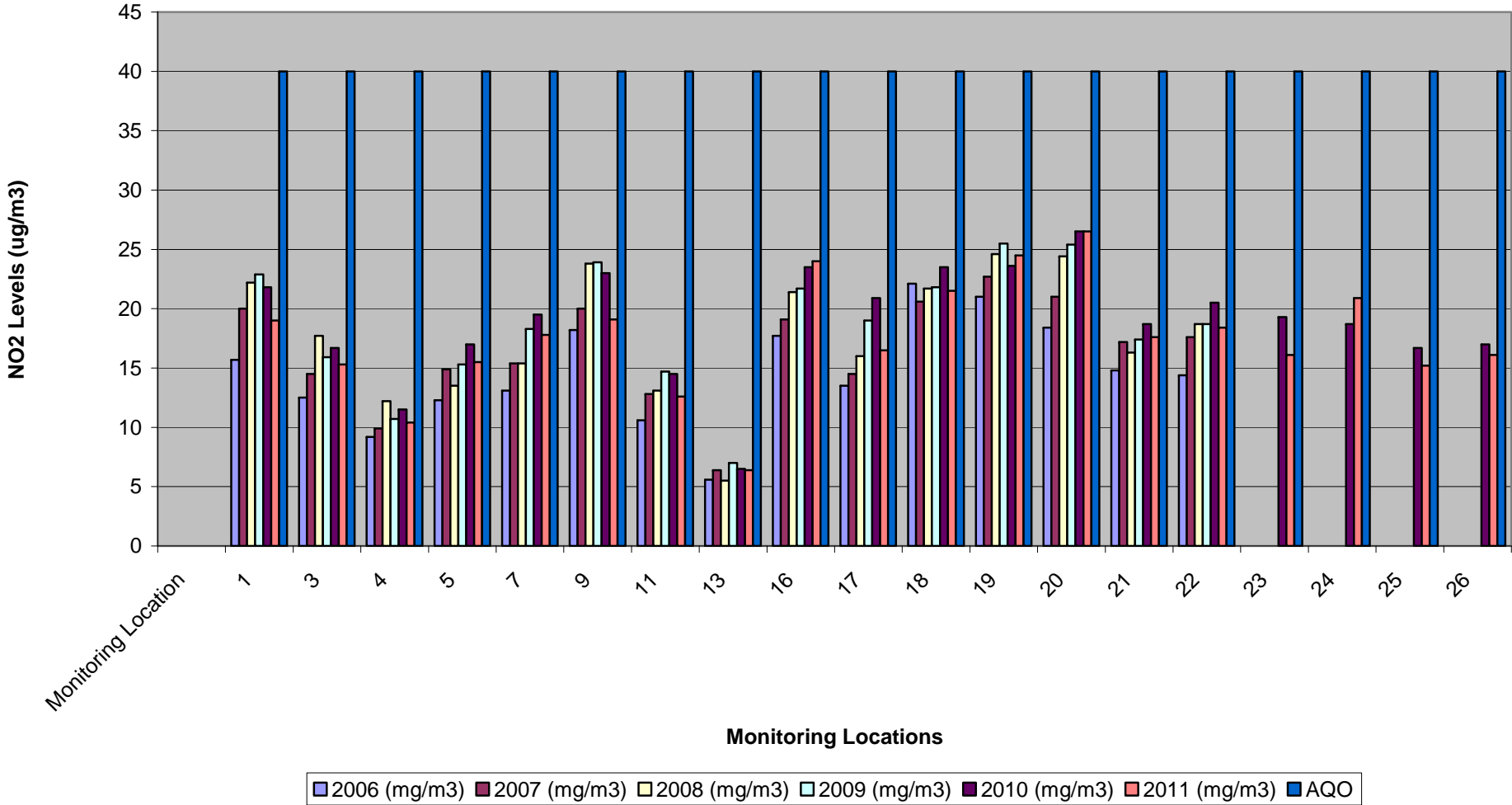


Figure 2: Measured levels of Nitrogen Dioxide for 2006, 2007, 2008, 2009, 2010 & 2011 compared with UK AQO



Blaenau Gwent County Borough Council

Table 2.3 Results of Nitrogen Dioxide Diffusion Tubes for 2006, 2007, 2008, 2009, 2010 & 2011

Site Name	Annual Mean Concentrations					
	2006 ($\mu\text{g}/\text{m}^3$) Adjusted for bias (0.78)	2007 ($\mu\text{g}/\text{m}^3$) Adjusted for bias (0.84 & 0.82)	2008 ($\mu\text{g}/\text{m}^3$) Adjusted for bias (0.79 & 0.86)	2009 ($\mu\text{g}/\text{m}^3$) Adjusted for bias (0.81 & 0.84)	2010 ($\mu\text{g}/\text{m}^3$) Adjusted for bias (0.85)	2011($\mu\text{g}/\text{m}^3$) Adjusted for bias (0.82)
BGBC-01	15.7	20.0	22.2	22.9	21.8	19
BGBC-03	12.5	14.5	17.7	15.9	16.7	15.3
BGBC-04	9.2	9.9	12.2	10.7	11.5	10.4
BGBC-05	12.3	14.9	13.5	15.3	17.0	15.5
BGBC-07	13.1	15.4	15.4	18.3	19.5	17.8
BGBC-09	18.2	20.0	23.8	23.9	23.0	19.1
BGBC-11	10.6	12.8	13.1	14.7	14.5	12.6
BGBC-13	5.6	6.4	5.5	7.0	6.5	6.4
BGBC-16	17.7	19.1	21.4	21.7	23.5	24
BGBC-17	13.5	14.5	16.0	19.0	20.9	16.5
BGBC-18	22.1	20.6	21.7	21.8	23.5	21.5
BGBC-19	21.0	22.7	24.6	25.5	23.6	24.5
BGBC-20	18.4	21.0	24.4	25.4	26.5	26.5
BGBC-21	14.8	17.2	16.3	17.4	18.7	17.6
BGBC-22	14.4	17.6	18.7	18.7	20.5	18.4
BGBC-23	n/a	n/a	n/a	n/a	19.3	16.1
BGBC-24	n/a	n/a	n/a	n/a	18.7	20.9
BGBC-25	n/a	n/a	n/a	n/a	16.7	15.2
BGBC-26	n/a	n/a	n/a	n/a	17	16.1

2.2.2 PM₁₀

No new automatic monitoring was undertaken for PM₁₀ during 2011.

The results obtained from the Automatic Monitoring Station which was located at Garnlydan Primary School obtained during 2009 and which were reported in the 2010 Progress Report remains the most recent information available.

In summary the results that were reported from the above monitoring exercise undertaken during 2009 indicated that the annual mean of 16.3µg/m³ for PM₁₀ was well below the annual mean National Air Quality Objective of 40µg/m³.

2.2.3 Sulphur Dioxide

Blaenau Gwent CBC does not currently undertake any monitoring for Sulphur Dioxide.

2.2.4 Benzene

Blaenau Gwent CBC does not currently undertake any monitoring for Benzene.

2.2.5 Other pollutants monitored

Blaenau Gwent CBC does not currently undertake any monitoring for 1,3 Butadiene or Carbon Dioxide.

No new automatic monitoring was undertaken for Lead during 2011. The results obtained from the Automatic Monitoring Station which was located at Garnlydan Primary School obtained during 2009 and which were reported in the 2010 Progress Report remains the most recent information available.

In summary the results that were reported from the above monitoring exercise undertaken during 2009 indicated that the annual mean of 0.038µg/m³ for Lead was well below the annual mean National Air Quality Objective of 0.25µg/m³.

No new automatic monitoring was undertaken for PM_{2.5} during 2011. The results obtained from the Automatic Monitoring Station which was located at Garnlydan Primary School obtained during 2009 and which were reported in the 2010 Progress Report remains the most recent information available.

In summary the results that were reported from the above monitoring exercise undertaken during 2009 indicated that the annual mean of 5.3µg/m³ for PM_{2.5} was well below the annual mean National Air Quality Objective of 25µg/m³.

2.2.6 Summary of Compliance with AQS Objectives

Blaenau Gwent CBC has examined the results from monitoring in the borough. Concentrations are all below the objectives, therefore there is no need to proceed to a Detailed Assessment.

3 Road Traffic Sources

3.1 Narrow Congested Streets with Residential Properties Close to the Kerb

Blaenau Gwent CBC 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

Blaenau Gwent 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.

Blaenau Gwent CBC confirms that there are no new/newly identified roads with high flows of buses/HGVs.

3.4 Junctions

Blaenau Gwent CBC confirms that there are no new/newly identified busy junctions/busy roads.

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

Blaenau Gwent CBC has assessed new/proposed roads meeting the criteria in Section A.5 of Box 5.3 in TG(09), and concluded that it will not be necessary to proceed to a Detailed Assessment.

A465 Heads of the Valleys Road, Section 3, Brynmawr to Tredegar, Dualling Scheme

The Heads of the Valleys Road (A465) is a trunk road which connects Neath to Abergavenny and which links the Midlands and Northern England to West Wales and Ireland. As part of the National Transport plan the Welsh Government (WG) have commenced a six phased scheme of works to improve and upgrade the road network. The improved road will upgrade links to businesses, ease traffic congestion and improve safety. (WG website, 2012).

The phase of the scheme of road works which is mainly applicable to the Borough of Blaenau Gwent, (A465 Brynmawr to Tredegar), is scheduled to commence during October 2012.

As part of the design and development process Blaenau Gwent CBC have been engaged in consultation in relation to proposed locations for monitoring prior to, during and following the dualling process. In addition to NO₂ monitoring results provided by Blaenau Gwent CBC in the vicinity of the dualling scheme Carillion carried out diffusion tube monitoring for NO₂ at ten locations beginning in November 2010 until December 2011. To assess the impact on air quality from road traffic related to the scheme they used the atmospheric dispersion model ADMS- Roads in relation to both NO₂ and PM 10.

The modelling predicted that annual mean NO₂ concentrations are well below the air quality objective for all assessed receptors and scenarios. The modelling also predicted that the annual mean PM₁₀ concentrations are well below the air quality objective and limit value for all assessed receptors and scenarios. Blaenau Gwent CBC confirms that the assessment is sufficient for review and assessment purposes.

This information is detailed within two reports by the Welsh Government entitled A465 DUALLING SECTION 3, BRYNMAWR TO TREDEGAR, Environmental Statement Volume 1, Technical Assessment Report, August 2011. And A465 DUALLING SECTION 3, BRYNMAWR TO TREDEGAR, Environmental Statement Supplement Volume 1, Technical Assessment Report, February 2012 (draft).

Both of these reports are available upon request.

3.6 Roads with Significantly Changed Traffic Flows

Blaenau Gwent CBC confirms that there are no new/newly identified roads with significantly changed traffic flows.

The Authority has reviewed the most recent report outlining the main findings of the collation of traffic data across Gwent, entitled 'Travel in Greater Gwent 2010' which was published in July 2011. The report indicates that the Borough *'has seen relatively stable low growth since 1999 up until 2010'*.

3.7 Bus and Coach Stations

Blaenau Gwent CBC confirms that there are no relevant bus stations in the Local Authority area.

The two main bus stations within Blaenau Gwent are located in Tredegar and Brynmawr. The number of bus movements per day at both locations are approximately below 500 and therefore well below the screening criteria of 2,500 movements per day as set out in Technical Guidance LAQM.TG(09). A single building at Brynmawr Bus Station has been demolished as it had fallen into disrepair, there was no change to the layout of the bus station, the number of bays or the number of bus movements.

4 Other Transport Sources

4.1 Airports

Blaenau Gwent confirms that there are no airports in the Local Authority area.

4.2 Railways (Diesel and Steam Trains)

4.2.1 Stationary Trains

Blaenau Gwent CBC 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

Blaenau Gwent CBC 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)

Blaenau Gwent CBC confirms that there are no ports or shipping that meet the specified criteria within the Local Authority area.

5 Industrial Sources

5.1 Industrial Installations

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

Blaenau Gwent CBC confirms that there are no new or proposed industrial installations for which planning approval has been granted within its area or nearby in a neighbouring authority.

5.1.2 Existing Installations where Emissions have Increased Substantially or New Relevant Exposure has been Introduced

Blaenau Gwent CBC 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

Blaenau Gwent CBC confirms that there are no new or proposed industrial installations for which planning approval has been granted within its area or nearby in a neighbouring authority.

It should be noted however that whilst there have been no new industrial installations during 2011 for which an Air Quality Assessment would have been required, there have been a number of new businesses established which have required an environmental permit from either Blaenau Gwent CBC or the Environment Agency. None of the new installations have been assessed as being likely to have a significant impact on the Air Quality within the Borough either individually or as a result of the cumulative impact of emissions.

A list of the current Part A1, A2 and B Processes within the Borough previously regulated under the Pollution Prevention (England and Wales) Regulations 2000 (as amended) and the Environmental Permitting (England and Wales) Regulations 2007

(as amended), and which are now regulated under the Environmental Permitting (England and Wales) Regulations 2010 (as amended) was provided in the appendices of the 2011 Progress Report.

There have been no significant changes to any of the existing Part A1, A2 and B processes since the 2011 Progress Report that would be likely to have a significant impact on air quality.

5.2 Major Fuel (Petrol) Storage Depots

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

5.3 Petrol Stations

Blaenau Gwent CBC confirms that there are no petrol stations meeting the specified criteria.

5.4 Poultry Farms

Blaenau Gwent CBC confirms that there are no poultry farms meeting the specified criteria.

6 Commercial and Domestic Sources

6.1 Biomass Combustion – Individual Installations

Blaenau Gwent CBC has assessed the biomass combustion plant, and concluded that it will not be necessary to proceed to a Detailed Assessment.

The biomass combustion plant is located on Ysbyty Aneurin Bevan, Ebbw Vale and has a 1x700kW Wood Fuel Biomass Boiler and 2x700kW gas fired (each with a dual fuel oil/gas burner). The Energy Centre on the Former Steel Works site has received planning permission to install a biomass boiler on the site, however a date for installation has not been confirmed and is unlikely to be during 2012. An air quality review has confirmed that the installation will not have an impact on the air quality of the area.

6.2 Biomass Combustion – Combined Impacts

Blaenau Gwent CBC confirms that there are no biomass combustion plant in the Local Authority area.

The Local Authority is not aware of any commercial biomass installations within the borough other than that identified in section 6.2 above.

6.3 Domestic Solid-Fuel Burning

Blaenau Gwent CBC confirms that there are no areas of significant domestic fuel use in the Local Authority area.

7 Fugitive or Uncontrolled Sources

Blaenau Gwent CBC confirms that there are no potential sources of fugitive particulate matter emissions in the Local Authority area.

8 Conclusions and Proposed Actions

8.1 Conclusions from New Monitoring Data

Blaenau Gwent CBC has examined the results from monitoring in the borough of Blaenau Gwent for the period of 2010. Concentrations are all below the relevant UK National Air Quality Objectives.

8.2 Conclusions from Assessment of Sources

Blaenau Gwent CBC has assessed all new or significantly changed sources in the borough and relevant new or significantly changed sources in nearby local authority areas and has concluded that it is unlikely that the impact of these will result in a potential exceedance of any of the UK National Air Quality Objectives within the borough.

8.3 Proposed Actions

This report has not identified the need to proceed to a Detailed Assessment for any pollutant relevant to the UK National Air Quality Objectives.

Blaenau Gwent CBC will continue to monitor for Nitrogen Dioxide subject to the findings of the continuous review and assessment of the existing monitoring sites. Monitoring for the calendar year of 2012 will be carried out at all monitoring locations identified in Table 2.1.2 of this report.

It is proposed that the results of monitoring carried out during the calendar year of 2012 will be presented in the 2013 Progress Report which will be prepared as part of the Updating and Screening Assessment process.

9 References

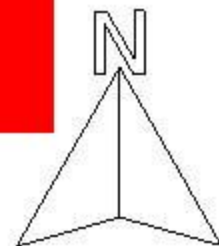
- Blaenau Gwent CBC, (1999), 1999 First Stage Review and Assessment, <http://www.blaenau-gwent.gov.uk/environment/2774.asp>
- Blaenau Gwent CBC, (2003), 2003 Updating and Screening Assessment, <http://www.blaenau-gwent.gov.uk/environment/2774.asp>
- Blaenau Gwent CBC, (2004), 2004 Progress Report , <http://www.blaenau-gwent.gov.uk/environment/2774.asp>
- Blaenau Gwent CBC, (2005), 2005 Progress Report , <http://www.blaenau-gwent.gov.uk/environment/2774.asp>
- Blaenau Gwent CBC, (2006), 2006 Updating and Screening Assessment, <http://www.blaenau-gwent.gov.uk/environment/2774.asp>
- Blaenau Gwent CBC, (2007), 2007 Progress Report , <http://www.blaenau-gwent.gov.uk/environment/2774.asp>
- Blaenau Gwent CBC, (2008), 2008 Progress Report , <http://www.blaenau-gwent.gov.uk/environment/2774.asp>
- Blaenau Gwent CBC, (2009), 2009 Updating and Screening Assessment, <http://www.blaenau-gwent.gov.uk/environment/2774.asp>
- Blaenau Gwent CBC, (2010), 2010 Progress Report , <http://www.blaenau-gwent.gov.uk/environment/2774.asp>
- Blaenau Gwent CBC, (2011) 2011 Progress Report, <http://www.blaenau-gwent.gov.uk/environment/2774.asp>
- Capita Symonds, (2011), Travel In Greater Gwent 2010 – Summary Report, Capita Symonds, Cwmbran.
- DEFRA, (2009), Local Air Quality Management - Technical Guidance LAQM.TG(09), DEFRA.
- Environmental Compliance Ltd, (2009), Ambient Air Quality Survey at Garnlydan School – Prepared for Envirowales Ltd, Rassau Industrial Estate, Environmental Compliance Ltd, Pontypridd.
- Air Quality Review and Assessment Helpdesk Website, <http://laqm.defra.gov.uk/>
- Air Quality Review and Assessment Helpdesk Website, National' bias adjustment factor, Spread sheet Version Number 03/12 (<http://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html>.)
- Welsh Government Website. A465 (Heads of the Valley Road) Dualling Scheme. <http://wales.gov.uk/topics/transport/roads/schemes/ewsouth/a465hov/?jsessionid=cbrhPhcBFyNF2r3ywbYP0VJV1XnyPy8rh2yt5BsDrpvJz1jM08Bb!639923638?lang=en>
- Welsh Government report, entitled A465 DUALLING SECTION 3, BRYNMAWR TO TREDEGAR, Environmental Statement Volume 1, Technical Assessment Report, August 2011.
- Welsh Government report, entitled A465 DUALLING SECTION 3, BRYNMAWR TO TREDEGAR, Environmental Statement Supplement Volume 1, Technical Assessment Report, February 2012 (draft).

Blaenau Gwent County Borough Council

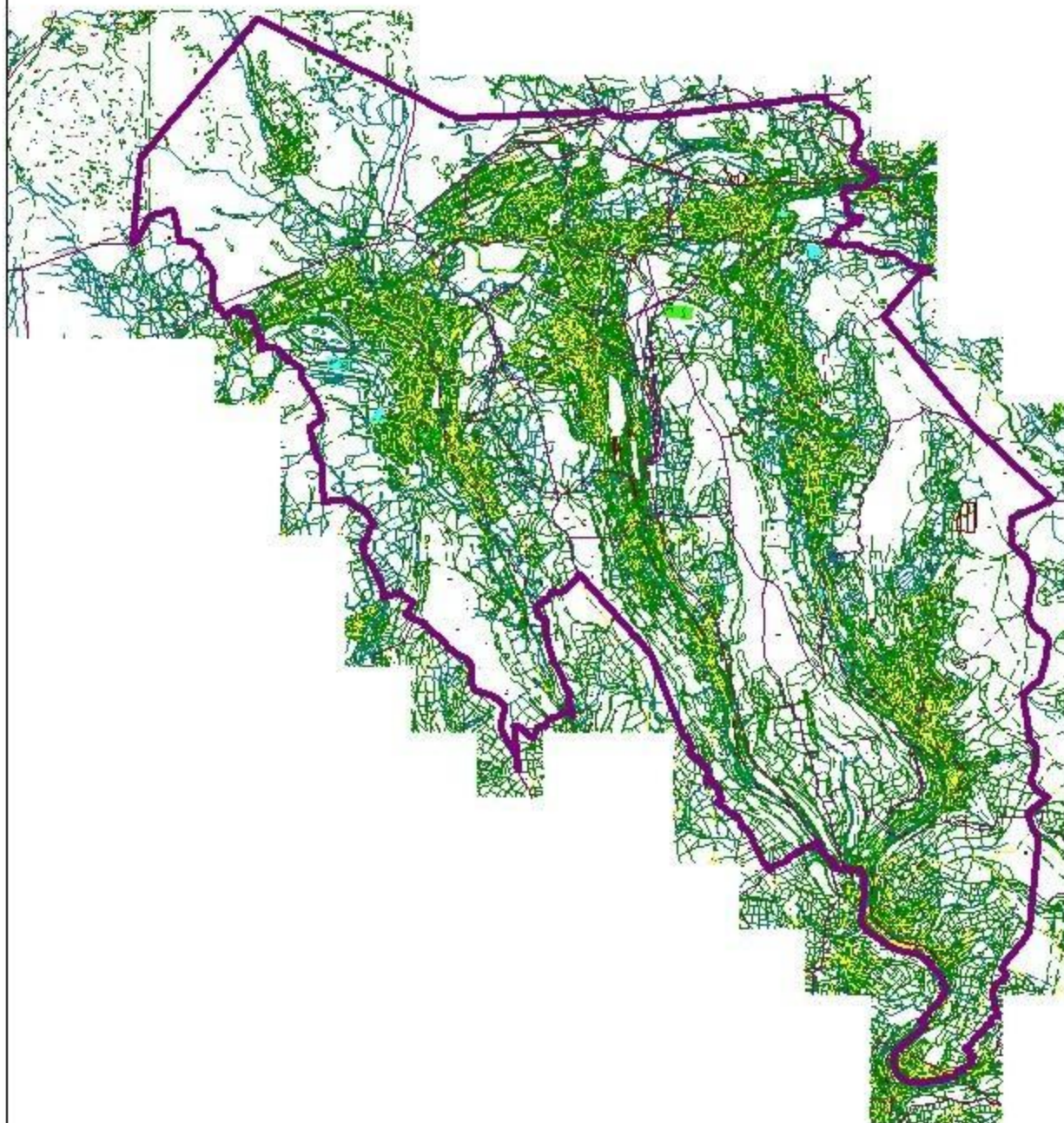
Nitrogen Dioxide Diffusion Tube Precision Results for Laboratories.
<http://laqm.defra.gov.uk/diffusion-tubes/qa-qc-framework.html>

WASP Scheme results for Laboratory- <http://laqm.defra.gov.uk/diffusion-tubes/qa-qc-framework.html>

Appendix 1

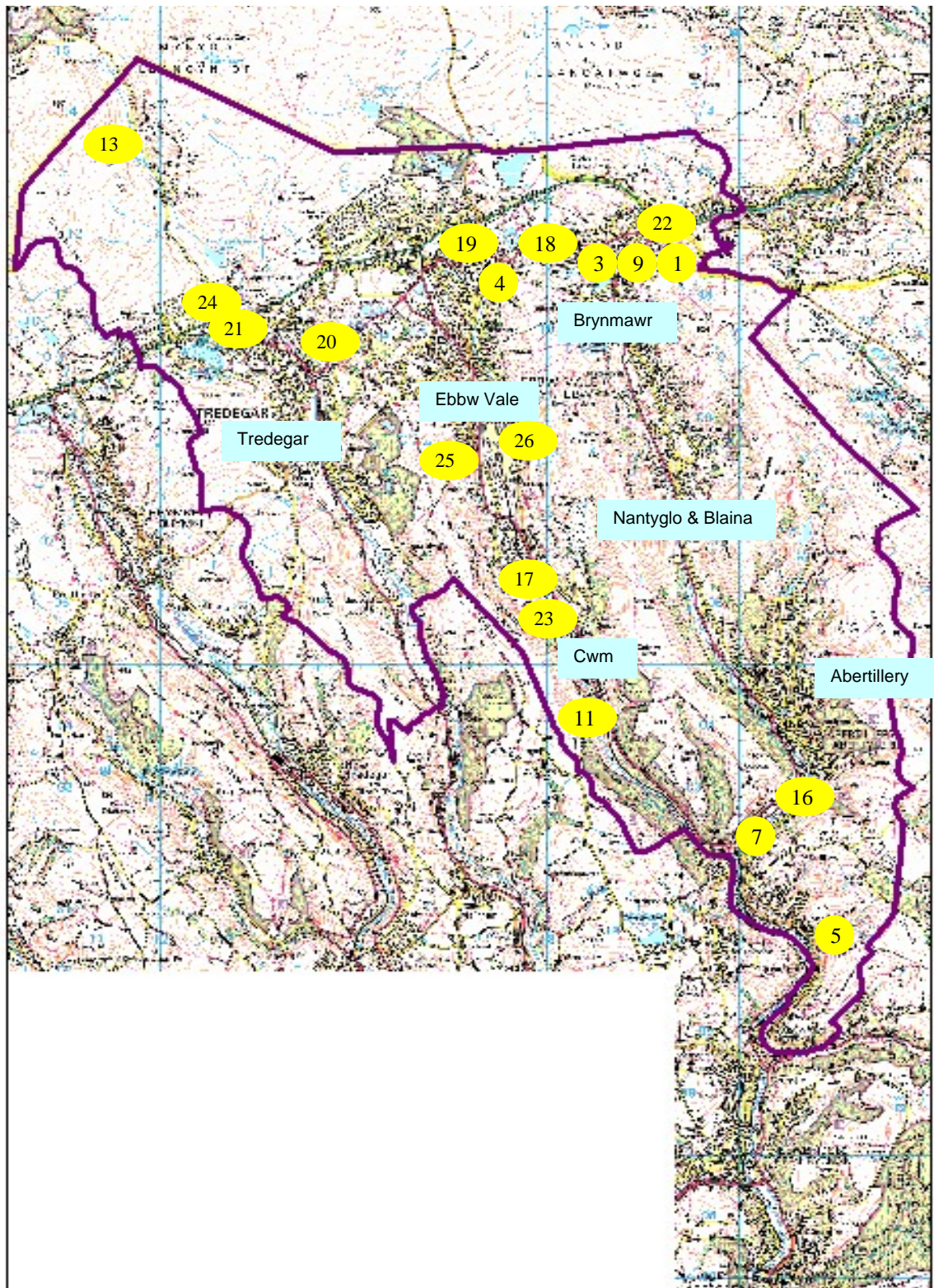


Administrative Area of Blaenau Gwent



Appendix 2

Location of NO₂ Monitoring Sites within Blaenau Gwent 2011



Appendix 3

NO₂ Diffusion Tube Monitoring Monthly Mean Values 2011

SITE	05/01-02/02	02/02-02/03	02/03-30/03	30/03-27/04	27/04-01/06	01/06-29/06	29/06-03/08	03/08-31/08	31/08-28/09	28/09-02/11	02/11-30/11	30/11-04/01	Annual Mean	Bias Factor	Adjusted Annual Mean
BGBC-07	27	23	22	19	11	12	14	14	15	19	24	23	18.6	0.82	17.8
BGBC-05	21	20	22	18	10	13	14	12	11	17	23	15	16.3	0.82	15.5
BGBC-11	21	17	19	14	8	8	10	9	10	15	17	13	13.4	0.82	12.6
BGBC-13	7	12	10	6	4	6	5	3	5	9	14	5	7.2	0.82	6.4
BGBC-16	27	31	30	25	19	20	22	20	23	25	30	26	24.8	0.82	24
BGBC-17	29	22	25	20	10	12	14	13	14	20	27	< 2	17.3	0.82	16.5
BGBC-18	26	33	34	23	15	14	16	13	17	24	30	22	22.3	0.82	21.5
BGBC-19	30	26	32	29	17	19	20	20	22	30	36	23	25.3	0.82	24.5
BGBC-20	30	32	37	30	21	20	22	22	24	29	39	21	27.3	0.82	26.5
BGBC-21	25	17	22	19	14	14	15	15	18	21	23	18	18.4	0.82	17.6
BGBC-22	26	23	31	24	12	11	16	15	13	19	24	16	19.2	0.82	18.4
BGBC-23	22	22	24	18	10	11	13	12	13	21	23	14	16.9	0.82	16.1
BGBC-24	24	29	24	18	15	14	17	19	24	28	30	18	21.7	0.82	20.9
BGBC-25	21	19	23	17	11	12	13	12	13	17	21	13	16	0.82	15.2
BGBC-26	26	22	21	13	10	10	12	10	14	21	26	18	16.9	0.82	16.1
	10/01-02/02														
BGBC-01	29.3	25.7	29.9	22	11	12	17	14	15	21	27	14	19.8	0.82	19
BGBC-09	25.7	23.0	30.5	25	14	14	18	15	15	20	25	13	19.9	0.82	19.1
BCBC-03	22.7	22.7	27.1	18	9	9	11	10	12	16	22	14	16.1	0.82	15.3
BCBC-04	15.4	15.8	16.1	9	7	6	7	6	10	12	20	10	11.2	0.82	10.4