



Cyngor Bwrdeisdref Sirol

Blaenau Gwent

County Borough Council

2015 Updating and 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

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Executive Summary

This progress report 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 2014 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 2015 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 next Air Quality Progress Report for the County Borough of Blaenau Gwent is scheduled to be published in April 2016.

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

<http://www.airquality.co.uk>

Table of contents

1	Introduction	6
1.1	Description of Local Authority Area	6
	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.....	6
1.2	Purpose of Report.....	6
1.3	Air Quality Objectives	7
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 Air Quality Objectives	14
2.2.1	Nitrogen Dioxide	14
2.2.2	PM ₁₀	20
2.2.3	Sulphur Dioxide.....	20
2.2.4	Benzene.....	20
2.2.5	Other pollutants monitored	20
2.2.6	Summary of Compliance with AQS Objectives	20
3	Road Traffic Sources	21
3.1	Narrow Congested Streets with Residential Properties Close to the Kerb	21
3.2	Busy Streets Where People May Spend 1-hour or More Close to Traffic.....	21
3.3	Roads with a High Flow of Buses and/or HGVs	21
3.4	Junctions.....	21
3.5	New Roads Constructed or Proposed Since the Last Round of Review and Assessment.....	22
3.6	Roads with Significantly Changed Traffic Flows.....	22
3.7	Bus and Coach Stations	22
4	Other Transport Sources.....	23
4.1	Airports.....	23
4.2	Railways (Diesel and Steam Trains)	23
4.2.1	Stationary Trains.....	23
4.2.2	Moving Trains	23
4.3	Ports (Shipping)	23
5	Industrial Sources.....	24
5.1	Industrial Installations	24

Blaenau Gwent County Borough Council

5.1.1	New or Proposed Installations for which an Air Quality Assessment has been Carried Out.....	24
5.1.2	Existing Installations where Emissions have Increased Substantially or New Relevant Exposure has been Introduced.....	24
5.1.3	New or Significantly Changed Installations with No Previous Air Quality Assessment.....	24
5.2	Major Fuel (Petrol) Storage Depots.....	25
5.3	Petrol Stations.....	25
5.4	Poultry Farms.....	25
6	Commercial and Domestic Sources	26
6.1	Biomass Combustion – Individual Installations	26
6.2	Biomass Combustion – Combined Impacts.....	26
6.3	Domestic Solid-Fuel Burning	26
7	Fugitive or Uncontrolled Sources.....	27
8	Conclusions and Proposed Actions.....	28
8.1	Conclusions from New Monitoring Data	28
8.2	Conclusions from Assessment of Sources	28
8.3	Proposed Actions.....	28
9	References.....	29
	Appendix 2	30

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 2014
Table 2.2	Results Of Nitrogen Dioxide Diffusion Tubes for 2014
Table 2.3	Results of Nitrogen Dioxide Diffusion Tubes for 2007, 2008, 2009, 2010, 2011, 2012, 2013 & 2014.

List of Figures

Figure 1	Measured Levels of Nitrogen Dioxide for 2014 compared with UK AQO
Figure 2	Measured Levels of Nitrogen Dioxide for 2009-2014 compared with UK AQO.

Appendices

Appendix 1	Map indicating Administrative Area of Blaenau Gwent
Appendix 2	Map Indicating Locations of Nitrogen Dioxide Diffusion Tube
Appendix 3	Nitrogen Dioxide Diffusion Tube Monitoring Results for 2013.

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 from the 2011 census identified that there are 69,814 people living in the area. This compares to 70,064 in 2001 (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

Blaenau Gwent County Borough Council

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), The 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
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

Blaenau Gwent County Borough Council

	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

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	2008

Blaenau Gwent County Borough Council

	objective being exceeded. Concluded no significant changes and therefore unlikely that there will be failure to achieve any of the air quality objectives.	
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
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
2012 Updating and Screening Assessment Report	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.	2012
2013 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.	2013
2014 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.	2014

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 ceased.

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 of 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 21 sites throughout the Borough during 2014, the details of which are presented in Table 2.1. 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. Gradko Environmental were used to analyse and provide data from all of the NO₂ diffusion tubes within Blaenau Gwent during 2014.

Gradko Environmental use the 50% TEA in Acetone method to prepare the diffusion tubes for analysis and have indicated that they are following the procedures set out in the Harmonisation Practical Guidance. It has also been confirmed that Gradko Environmental 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 2014.

Blaenau Gwent CBC does not currently undertake a co-location study for its NO₂ diffusion tube monitoring, in previous years the 'National' bias adjustment factor has been used for the results of the monitoring undertaken during each specific year. The bias adjustment factor for Gradko Environmental for 2014 was 0.97.

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. Two new sites were added at the start of 2014, BGBC-27 and BGBC-28. These were added as a result of the significant road improvement works that are ongoing in relation to the Heads of the Valley Road (A465) area.

Table 2.2 Details of Non-Automatic Monitoring Sites for 2014

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

Blaenau Gwent County Borough Council

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, Nantybwhch, 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
BGBC-27	G1	Other – near road where an increase in traffic expected due to major works nearby	Tyn y Rhyn, Llangynidr Road, Ebbw Vale	X 316720 Y 212796	SO1612NE	NO ₂	N	Y (on façade)	Y	40m	Y	Jan 2014	N/A
BGBC-28	R1	Other – near road where an increase in traffic expected due to major works nearby	1 Coates Row, Rassau, Ebbw Vale	X 314488 Y 211642	SO1411NW	NO ₂	N	Y (on façade)	Y	20m	Y	Jan 2014	N/A

2.2 Comparison of Monitoring Results with Air Quality Objectives

2.2.1 Nitrogen Dioxide

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 monitoring undertaken at the 21 sites within the Borough for the period of 2014 is presented in Table 2.2. 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 2014 so none of the data has been annualised.

Blaenau Gwent County Borough Council

Table 2.2 Results Of Nitrogen Dioxide Diffusion Tubes For 2014

Site Name	Location	Within AQMA?	Data Capture 2014 %	Annual Mean Concentrations	Air Quality Objective Annual Mean for Nitrogen Dioxide ($\mu\text{g}/\text{m}^3$)
				2014 ($\mu\text{g}/\text{m}^3$) Adjusted for bias	
BGBC-01	The Darren, Daren-felen Road, Brynmawr	N	100	16.1	40
BGBC-03	272 King Street, Brynmawr	N	100	12.9	40
BGBC-04	22 Parkhill, Beaufort, Ebbw Vale	N	100	8.3	40
BGBC-05	Willow Tree Bungalow, Aberbeeg	N	100	12.9	40
BGBC-07	Aberbeeg Medical Centre, Aberbeeg	N	100	15.1	40
BGBC-09	Ynys Dawel, Daren-felen Road, Brynmawr	N	100	17.6	40
BGBC-11	8 Cwm Graig Bungalows, Marine Street, Cwm, Ebbw Vale	N	100	11.4	40
BGBC-13	3 Kings Arms Cottages, Trefil, Tredegar	N	100	6.7	40
BGBC-16	49 Aberbeeg Road, Aberbeeg	N	100	18.3	40
BGBC-17	Cwmyrdderch Court, School Terrace, Cwm, Ebbw Vale	N	100	15.3	40
BGBC-18	Welfare Hall, Beaufort Hill, Ebbw Vale	N	100	20.3	40
BGBC-19	42 Beaufort Rise, Ebbw Vale	N	100	20.8	40
BGBC-20	122 Beaufort Road, Tredegar	N	100	23.4	40
BGBC-21	14 Bryn Rhosyn, Merthyr Road, Tredegar	N	100	15.4	40
BGBC-22	2 King Street, Brynmawr	N	100	16	40
BGBC-23	Cwm Conservative Club, Mill Terrace, Cwm	N	100	15.5	40
BGBC-24	4 Glen View, Nantybwich, Tredegar	N	100	17.5	40
BGBC-25	Red Rose Care Centre, Park Road, Ebbw Vale	N	91.6	12.2	40
BGBC-26	2 The Dingle, Ebbw Vale	N	100	13.6	40
BGBC-27	Tyn y Rhyn, Llangynidr Road, Ebbw Vale	N	100	12.4	40
BGBC-28	1 Coates Row, Rassau, Ebbw Vale	N	100	10	40

Blaenau Gwent County Borough Council

Figure 1 provides a graphical representation of the 2014 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.

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 2014 with the results of previous years monitoring (where available) for 2007, 2008, 2009, 2010, 2011, 2012 and 2013. The results identify that there has been a decrease in the measured levels of nitrogen dioxide in 2014 when compared with the 2013 results in eleven of the nineteen monitoring locations. (Not taking into account the results of the two new monitoring locations at BGBC-27 and BGBC-28).

Figure 2 provides a graphical representation of the 2009, 2010, 2011, 2012, 2013 and 2014 measured levels of Nitrogen Dioxide at each monitoring location in comparison with the Air Quality Objective for this pollutant. The 2014 monitoring results show there has been a decrease in the nitrogen dioxide levels at all of the nineteen monitoring locations when compared to the 2012 monitoring results. (Please note that the 2012 monitoring results were not adjusted for bias).

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 2014 compared with UK AQO



Figure 2: Measured levels of nitrogen dioxide for 2009-2014 compared with UK AQO

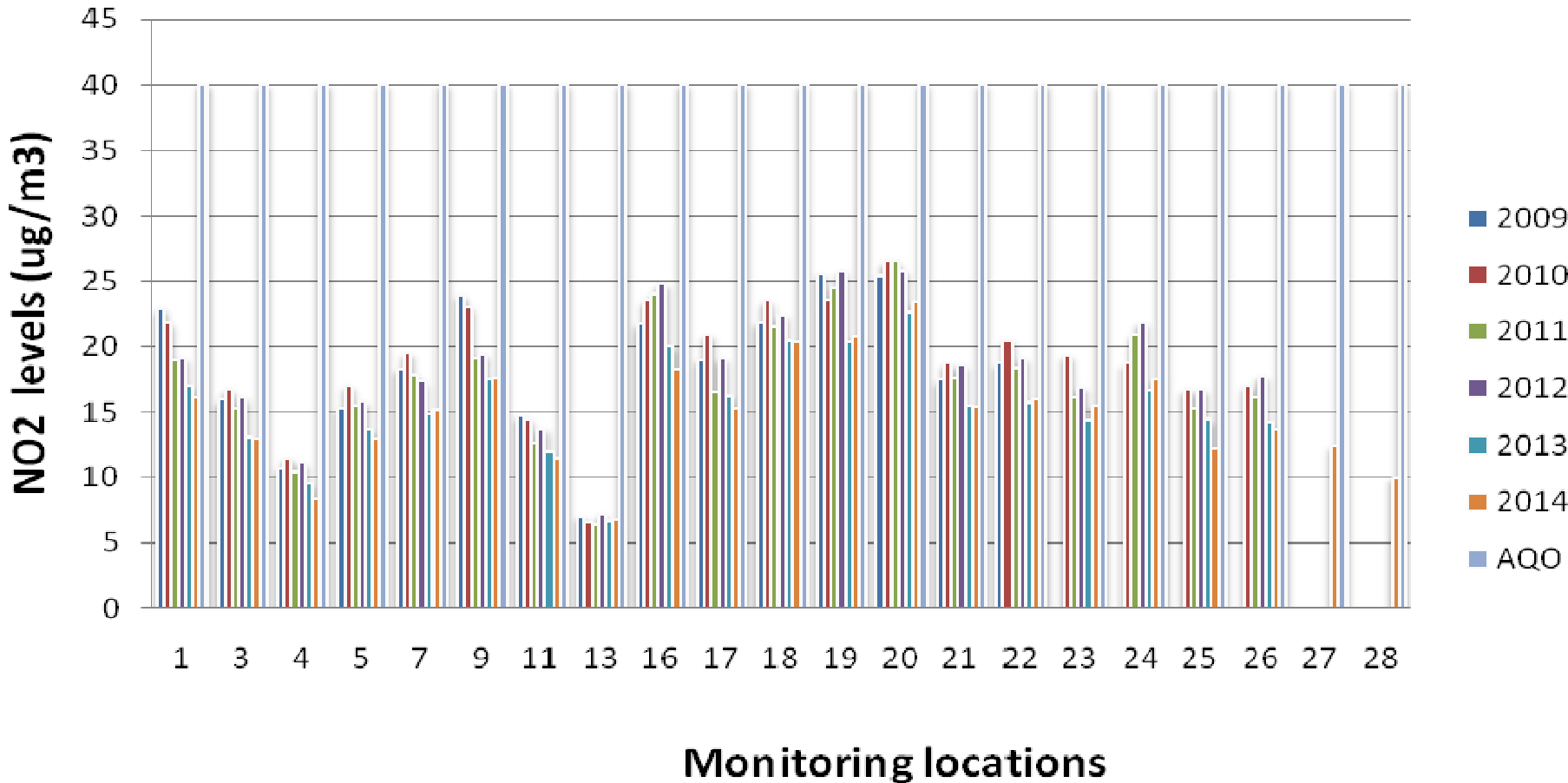


Table 2.3 Results of Nitrogen Dioxide Diffusion Tubes for 2007 through to and including 2014.

Site Name	Annual Mean Concentrations							
	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)	2012($\mu\text{g}/\text{m}^3$) Not Adjusted for bias	2013($\mu\text{g}/\text{m}^3$) Adjusted for bias (0.87)	2014 ($\mu\text{g}/\text{m}^3$) Adjusted for bias (0.97)
BGBC-01	20.0	22.2	22.9	21.8	19	19.1	17	16.1
BGBC-03	14.5	17.7	15.9	16.7	15.3	16.1	13.1	12.9
BGBC-04	9.9	12.2	10.7	11.5	10.4	11.1	9.5	8.3
BGBC-05	14.9	13.5	15.3	17.0	15.5	15.8	13.6	12.9
BGBC-07	15.4	15.4	18.3	19.5	17.8	17.3	14.8	15.1
BGBC-09	20.0	23.8	23.9	23.0	19.1	19.4	17.4	17.6
BGBC-11	12.8	13.1	14.7	14.5	12.6	13.7	11.9	11.4
BGBC-13	6.4	5.5	7.0	6.5	6.4	7.2	6.6	6.7
BGBC-16	19.1	21.4	21.7	23.5	24	24.8	20	18.3
BGBC-17	14.5	16.0	19.0	20.9	16.5	19.1	16.2	15.3
BGBC-18	20.6	21.7	21.8	23.5	21.5	22.4	20.5	20.3
BGBC-19	22.7	24.6	25.5	23.6	24.5	25.7	20.3	20.8
BGBC-20	21.0	24.4	25.4	26.5	26.5	25.8	22.6	23.4
BGBC-21	17.2	16.3	17.4	18.7	17.6	18.6	15.5	15.4
BGBC-22	17.6	18.7	18.7	20.5	18.4	19.1	15.7	16
BGBC-23	n/a	n/a	n/a	19.3	16.1	16.9	14.3	15.5
BGBC-24	n/a	n/a	n/a	18.7	20.9	21.8	16.6	17.5
BGBC-25	n/a	n/a	n/a	16.7	15.2	16.7	14.4	12.2
BGBC-26	n/a	n/a	n/a	17	16.1	17.7	14.2	13.6
BGBC-27	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12.4
BGBC-28	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10

2.2.2 PM₁₀

No new automatic monitoring was undertaken for PM₁₀ during 2014.

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 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.

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 CBC 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/HDVs.

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 confirms that there are no new/proposed roads.

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.

3.7 Bus and Coach Stations

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

4 Other Transport Sources

4.1 Airports

Blaenau Gwent CBC 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 has assessed new/proposed industrial installations, and concluded that it will not be necessary to proceed to a Detailed Assessment.

In 2015 Blaenau Gwent CBC has approved planning permission for three short term operating reserve (STOR) power plants to be built on Waun Y Pound Industrial Estate, Ebbw Vale and Rassau Industrial Estate, Ebbw Vale. Two of the STOR power plants are gas powered and the third is powered by diesel generators. Air quality assessments have been provided for all three of the STOR power plants, the assessments of the two gas powered plants identified that there will be no exceedances of the air quality objectives. However the air quality assessment for diesel powered STOR power plant has identified possible exceedances of the hourly NO₂ objectives at relevant receptors under certain weather conditions, the assessment also demonstrated that statistically the chances of 18 exceedances of objective in any one year is extremely small. As a result the development of the diesel powered STOR has been conditioned to provide an air quality monitoring programme to demonstrate what the operational impact is on local air quality.

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 2014 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 Natural Resources Wales. 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 the emissions.

A list of the installations regulated by Blaenau Gwent CBC under the Environmental Permitting (England and Wales) Regulations 2010 can be provided upon request. There have been no significant changes to any of the existing part A1, A2 and B processes since the 2014 progress report that would 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 confirms that there are no biomass combustion plant in the Local Authority area.

6.2 Biomass Combustion – Combined Impacts

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

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 2014. 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 new 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

Blaenau Gwent CBC will continue to monitor for Nitrogen Dioxide subject to the continuous review and assessment of the existing monitoring sites. Monitoring for the calendar year of 2015 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 2015 will be presented in the 2016 Air Quality 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>

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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.

Air Quality Review and Assessment Helpdesk Website, <http://laqm.defra.gov.uk/>

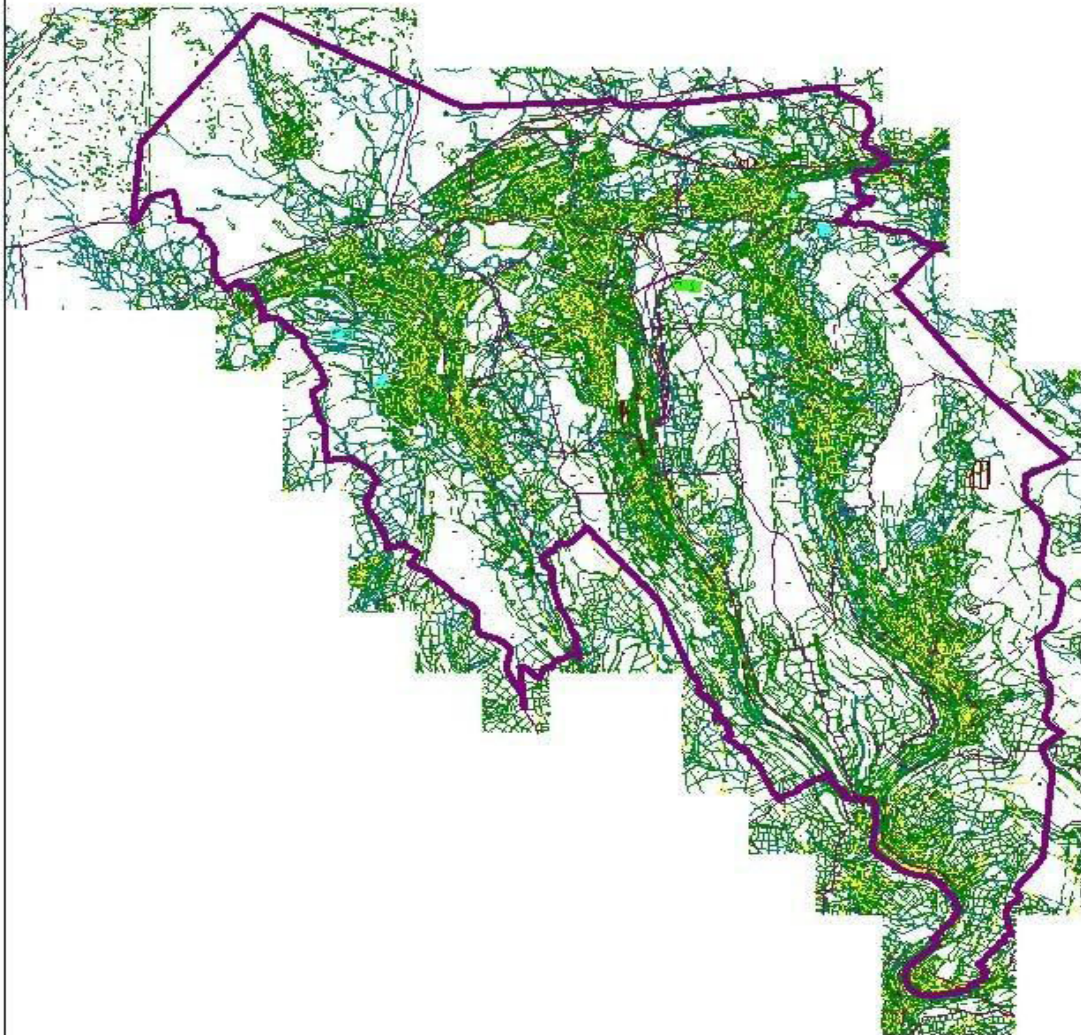
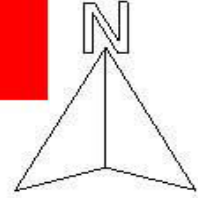
Nitrogen Dioxide Diffusion Tube Precision Results for Laboratories. <http://laqm.defra.gov.uk/diffusion-tubes/precision.html>

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

Appendices

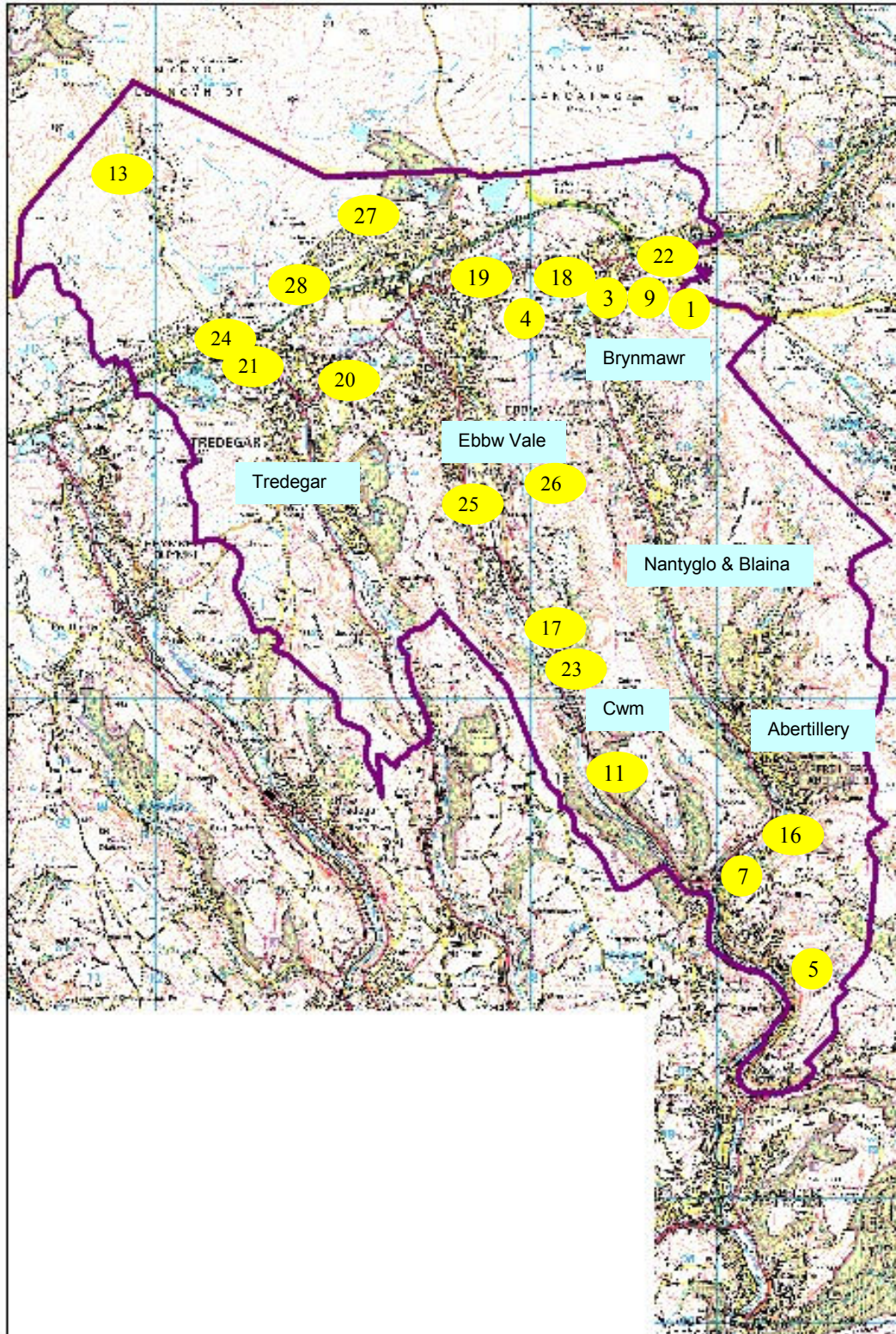
Appendix 1

Administrative Area of Blaenau Gwent



Appendix 2

Location of NO₂ Monitoring Sites within Blaenau Gwent 2014



Appendix 3

NO₂ Diffusion Tube Monitoring Monthly Mean Values 2014

SITE	08/01-05/02	05/02-05/03	05/03-02/04	02/04-30/04	30/04-28/05	28/05-02/07	02/07-30/07	30/07-27/08	27/08-01/10	01/10-29/10	29/10-03/12	03/12-07/01	Annual Mean
BGBC-01	16	12	17	17	16	19	14	10	27	14	24	13	16.6
BGBC-03	16	13	17	13	11	10	9	8	16	14	19	14	13.3
BGBC-04	17	14	20	17	19	20	17	12	29	16	23	14	8.6
BGBC-05	13	13	14	12	11	13	10	10	18	12	18	15	13.3
BGBC-07	20	18	14	11	12	13	10	13	15	17	21	23	15.6
BGBC-09	17	14	20	17	19	20	17	12	29	16	23	14	18.2
BGBC-11	14	10	10	11	10	10	10	10	14	12	17	14	11.8
BGBC-13	10	7	8	7	6	4	5	4	7	7	13	5	6.9
BGBC-16	25	22	20	19	18	12	15	19	20	20	23	14	18.9
BGBC-17	17	14	17	15	12	14	13	12	19	16	24	16	15.8
BGBC-18	30	24	22	22	21	15	13	14	21	25	22	22	20.9
BGBC-19	22	17	22	21	21	19	19	18	25	25	30	19	21.5
BGBC-20	26	22	26	22	24	25	22	19	28	24	32	20	24.1
BGBC-21	16	14	21	16	15	14	14	15	20	10	19	17	15.9
BGBC-22	18	10	20	16	15	17	14	10	23	15	22	18	16.5
BGBC-23	20	14	17	16	15	14	12	12	16	16	24	17	16
BGBC-24	23	18	18	15	14	13	11	16	21	21	27	19	18
BGBC-25	16	12	14	13	x	13	12	11	17	12	19	13	12.6
BGBC-26	16	15	11	12	2	11	13	13	16	17	22	20	14
BGBC-27	11	12	15	14	13	10	10	17	12	13	14	12	12.8
BGBC-28	13	13	12	9	9	8	8	8	11	11	17	6	10.4