



Cyngor Bwrdeisdref Sirol

**Blaenau Gwent**

County Borough Council

# Blaenau Gwent County Borough Council 2016 Air Quality Progress Report

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

**Blaenau Gwent County Borough Council**

<b>Local Authority Officer</b>	Tim Griffin
<b>Department</b>	Public Protection Service, Environmental Protection Team.
<b>Address</b>	Municipal Offices, Civic Centre, Ebbw Vale, NP23 6XB
<b>Telephone</b>	01495 357813
<b>E-mail</b>	Tim.Griffin@Blaenau-gwent.gov.uk
<b>Report Reference number</b>	BG/ENVH/AQR/PR/2016
<b>Date</b>	May 2016

## 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 2015 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 (PM<sub>10</sub>) (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 2016 air quality progress report **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 2017.

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

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

# Table of Contents

<b>Executive Summary</b> .....	<b>i</b>
<b>1 Introduction</b> .....	<b>1</b>
1.1 Description of Local Authority Area.....	1
1.2 Purpose of Progress Report .....	1
1.3 Air Quality Objectives .....	2
1.4 Summary of Previous Review and Assessments.....	4
<b>2 New Monitoring Data</b> .....	<b>6</b>
2.1 Summary of Monitoring Undertaken .....	6
2.2 Comparison of Monitoring Results with Air Quality Objectives .....	10
<b>3 New Local Developments</b> .....	<b>17</b>
3.1 Road Traffic Sources .....	17
3.2 Other Transport Sources .....	17
3.3 Industrial Sources .....	17
3.4 Commercial and Domestic Sources.....	18
3.5 New Developments with Fugitive or Uncontrolled Sources .....	18
<b>4 Local / Regional Air Quality Strategy</b> .....	<b>19</b>
<b>5 Planning Applications</b> .....	<b>20</b>
<b>6 Air Quality Planning Policies</b> .....	<b>23</b>
<b>7 Local Transport Plans and Strategies</b> .....	<b>24</b>
<b>8 Climate Change Strategies</b> .....	<b>25</b>
<b>9 Conclusions and Proposed Actions</b> .....	<b>26</b>
9.1 Conclusions from New Monitoring Data.....	26
9.2 Conclusions relating to New Local Developments.....	26
9.3 Other Conclusions .....	26
9.4 Proposed Actions.....	26
<b>10 References</b> .....	<b>27</b>

**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 2015.
- Table 2.2 Results Of Nitrogen Dioxide Diffusion Tubes for 2015.
- Table 2.3 Results of Nitrogen Dioxide Diffusion Tubes for 2008, 2009, 2010, 2011, 2012, 2013, 2014 and 2015.
- Table 3.1 Applications for major developments received and approved in 2015.

**List of Figures**

- Figure 1 Measured Levels of Nitrogen Dioxide for 2015 compared with UK AQO.
- Figure 2 Measured Levels of Nitrogen Dioxide for 2010-2015 compared with UK AQO.

**Appendices**

- Appendix 1 Map indicating Administrative Area of Blaenau Gwent.
- Appendix 2 Map Indicating Locations of Nitrogen Dioxide Diffusion Tubes.
- Appendix 3 Maps of individual monitoring locations for Nitrogen Dioxide Diffusion Tubes.
- Appendix 4 Nitrogen Dioxide Diffusion Tube Results for 2015.

# 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 Progress Report

This report fulfils the requirements of the Local Air Quality Management (LAQM) process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 and the relevant Policy and Technical Guidance documents. The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where

exceedences are considered likely, the local authority must then declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives.

For Local Authorities in Wales, Progress Reports are required in the intervening years between the three-yearly Updating and Screening Assessment reports. Their purpose is to maintain continuity in the LAQM process.

They are not intended to be as detailed as Updating and Screening Assessment Reports, or to require as much effort. However, if the Progress Report identifies the risk of exceedence of an Air Quality Objective, the Local Authority (LA) should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment.

### **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,  $\text{mg}/\text{m}^3$  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 µg/m <sup>3</sup>	Running annual mean	31.12.2003
	5.00 µg/m <sup>3</sup>	Annual mean	31.12.2011
1,3-butadiene	2.25 µg/m <sup>3</sup>	Running annual mean	31.12.2003
Carbon monoxide	10 mg/m <sup>3</sup>	Running 8-hour mean	31.12.2003
Lead	0.50 µg/m <sup>3</sup>	Annual mean	31.12.2004
	0.25 µg/m <sup>3</sup>	Annual mean	31.12.2008
Nitrogen dioxide	200 µg/m <sup>3</sup> not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m <sup>3</sup>	Annual mean	31.12.2005
Particulate matter (PM <sub>10</sub> ) (gravimetric)	50 µg/m <sup>3</sup> , not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 µg/m <sup>3</sup>	Annual mean	31.12.2004
Sulphur dioxide	350 µg/m <sup>3</sup> , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m <sup>3</sup> , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m <sup>3</sup> , 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**

<b>Report</b>	<b>Review And Assessment Undertaken &amp; Conclusions</b>	<b>Year Published</b>
<b>1999 First Stage Review and Assessment</b>	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
<b>2003 Updating and Screening Assessment</b>	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
<b>2004 Progress Report</b>	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
<b>2005 Progress Report</b>	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
<b>2006 Updating and Screening Assessment</b>	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
<b>2007 Progress Report</b>	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
<b>2008 Progress Report</b>	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
<b>2009 Updating and Screening Assessment</b>	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

<b>2010 Progress Report</b>	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
<b>2011 Progress Report</b>	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
<b>2012 Updating and Screening Assessment Report</b>	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
<b>2013 Progress Report</b>	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
<b>2014 Progress Report</b>	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
<b>2015 Updating and Screening Assessment Report</b>	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.	2015

## 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, PM<sub>10</sub> and PM<sub>2.5</sub> 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 21<sup>st</sup> 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, PM<sub>10</sub> and PM<sub>2.5</sub> 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 2015, the details of which are presented in Table 2.1. A map indicating the approximate location of each current monitoring site within the borough is provided in Appendix 2 and individual maps for each monitoring location is provided in Appendix 3 to this report.

The diffusion tubes are exposed for four week periods in accordance with the National NO<sub>2</sub> exposure calendar. Gradko Environmental were used to analyse and provide data from all of the NO<sub>2</sub> diffusion tubes within Blaenau Gwent during 2015.

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 Air- PT/ 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 2015.

Blaenau Gwent CBC does not currently undertake a co-location study for its NO<sub>2</sub> 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 2015 was 0.95.

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 2.1.2 Details of Non-Automatic Monitoring Sites for 2015

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
BGBC-01	S1	Near Road	The Darren, Daren-felen Road, Brynmawr	X 319538 Y 211956	SO1911NE	NO <sub>2</sub>	N	Y (on facade)	Y	8m	Y	Jan 1995
BGBC-03	S3	Urban Background	272 King Street, Brynmawr	X 319292 Y 212030	SO1912SE	NO <sub>2</sub>	N	Y (on façade)	Y	4m	Y	Jan 1995
BGBC-04	S4	Urban Background	22 Parkhill, Beaufort, Ebbw Vale	X 317298 Y 211287	SO1711SW	NO <sub>2</sub>	N	Y (10m)	Y	N/A	N/A	Jan 1995
BGBC-05	A3	Urban Background	Willow Tree Bungalow, Aberbeeg	X 321139 Y 201114	SO2101SW	NO <sub>2</sub>	N	Y (1m)	Y	10m	N/A	Jan 1995
BGBC-07	A1	Urban Background	Aberbeeg Medical Centre, Aberbeeg	X 320942 Y 202011	SO2002SE	NO <sub>2</sub>	N	Y (18m)	Y	25m	N/A	Nov 1995
BGBC-09	S2	Near Road	Ynys Dawel, Daren-felen Road, Brynmawr	X 319556 Y 211980	SO1911NE	NO <sub>2</sub>	N	Y (7m)	Y	33m	Y	Jan 2001
BGBC-11	C2	Urban Background	8 Cwm Graig Bungalows, Marine Street, Cwm, Ebbw Vale	X 318785 Y 204592	SO1804NE	NO <sub>2</sub>	N	Y (on facade)	Y	18m	N/A	Jan 2000
BGBC-13	T2	Roadside	3 Kings Arms Cottages, Trefil, Tredegar	X 312012 Y 212782	SO1212NW	NO <sub>2</sub>	N	Y (on facade)	Y	4m	Y	Oct 2000
BGBC-16	A5	Near road	49 Aberbeeg Road, Aberbeeg	X 321430 Y 202672	SO2102NW	NO <sub>2</sub>	N	Y (on façade)	Y	7m	Y	Oct 2005
BGBC-17	C3	Near road	Cwmyrdderch Court, School Terrace, Cwm, Ebbw Vale	X 318429 Y 205535	SO1805NW	NO <sub>2</sub>	N	Y (5m)	Y	7m	Y	Oct 2005
BGBC-18	BT1	Roadside	Welfare Hall, Beaufort Hill, Ebbw Vale	X 317543 Y 211688	SO1711NE	NO <sub>2</sub>	N	Y (on façade)	Y	5m	Y	Oct 2005
BGBC-19	BT2	Roadside	42 Beaufort Rise, Ebbw Vale	X 316670 Y 211597	SO1611NE	NO <sub>2</sub>	N	Y (on facade)	Y	3m	Y	Oct 2005
BGBC-20	TR1	Roadside	122 Beaufort Road, Tredegar	X 314858 Y 210240	SO1410SE	NO <sub>2</sub>	N	Y (on façade)	Y	5.5m	Y	Oct 2005

## 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
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 <sub>2</sub>	N	Y (on façade)	Y	35m	Y	Oct 2005
BGBC-22	BR1	Near road	2 King Street, Brynmawr	X 319562 Y 212128	SO1912SE	NO <sub>2</sub>	N	Y (on façade)	Y	6m	Y	Nov 2005
BGBC-23	C4	Near road	Cwm Conservative Club, Mill Terrace, Cwm	X 318453 Y 205308	SO1805SW	NO <sub>2</sub>	N	Y (on façade)	Y	6m	Y	Jan 2010
BGBC-24	T5	Roadside	4 Glen View, Nantybwh, Tredegar	X 313145 Y 210769	SO1310NW	NO <sub>2</sub>	N	Y (on façade)	Y	5m	Y	Jan 2010
BGBC-25	E1	Near road	Red Rose Care Centre, Park Road, Ebbw Vale	X 316996 Y 207898	SO1607NE	NO <sub>2</sub>	N	Y (on façade)	Y	8m	Y	Jan 2010
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 <sub>2</sub>	N	Y (on façade)	Y	10m	Y	Jan 2010
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 <sub>2</sub>	N	Y (on façade)	Y	40m	Y	Jan 2014
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 <sub>2</sub>	N	Y (on façade)	Y	20m	Y	Jan 2014

## **2.2 Comparison of Monitoring Results with Air Quality Objectives**

### **2.2.1 Nitrogen Dioxide (NO<sub>2</sub>)**

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 2015 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 2015 so none of the data has been annualised.

## Blaenau Gwent County Borough Council

**Table 2.2 Results Of Nitrogen Dioxide Diffusion Tubes For 2015**

Site Name	Location	Within AQMA?	Data Capture 2015 %	Annual Mean Concentrations	Air Quality Objective Annual Mean for Nitrogen Dioxide ( $\mu\text{g}/\text{m}^3$ )
				2015 ( $\mu\text{g}/\text{m}^3$ ) Adjusted for bias	
BGBC-01	The Darren, Daren-felen Road, Brynmawr	N	100	13.7	40
BGBC-03	272 King Street, Brynmawr	N	100	10.4	40
BGBC-04	22 Parkhill, Beaufort, Ebbw Vale	N	100	6.9	40
BGBC-05	Willow Tree Bungalow, Aberbeeg	N	100	11.1	40
BGBC-07	Aberbeeg Medical Centre, Aberbeeg	N	100	13.8	40
BGBC-09	Ynys Dawel, Daren-felen Road, Brynmawr	N	100	14.4	40
BGBC-11	8 Cwm Graig Bungalows, Marine Street, Cwm, Ebbw Vale	N	100	9.5	40
BGBC-13	3 Kings Arms Cottages, Trefil, Tredegar	N	100	4.8	40
BGBC-16	49 Aberbeeg Road, Aberbeeg	N	100	18.3	40
BGBC-17	Cwmyrdderch Court, School Terrace, Cwm, Ebbw Vale	N	100	13.1	40
BGBC-18	Welfare Hall, Beaufort Hill, Ebbw Vale	N	91.6	17.3	40
BGBC-19	42 Beaufort Rise, Ebbw Vale	N	100	19.8	40
BGBC-20	122 Beaufort Road, Tredegar	N	100	18.9	40
BGBC-21	14 Bryn Rhosyn, Merthyr Road, Tredegar	N	100	12.4	40
BGBC-22	2 King Street, Brynmawr	N	100	13.7	40
BGBC-23	Cwm Conservative Club, Mill Terrace, Cwm	N	100	12.2	40
BGBC-24	4 Glen View, Nantybwich, Tredegar	N	100	13.6	40
BGBC-25	Red Rose Care Centre, Park Road, Ebbw Vale	N	91.6	9.9	40
BGBC-26	2 The Dingle, Ebbw Vale	N	100	13.1	40
BGBC-27	Tyn y Rhyn, Llangynidr Road, Ebbw Vale	N	100	9.4	40
BGBC-28	1 Coates Row, Rassau, Ebbw Vale	N	100	6.8	40



Figure 1 provides a graphical representation of the 2015 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  $\mu\text{g}/\text{m}^3$ .

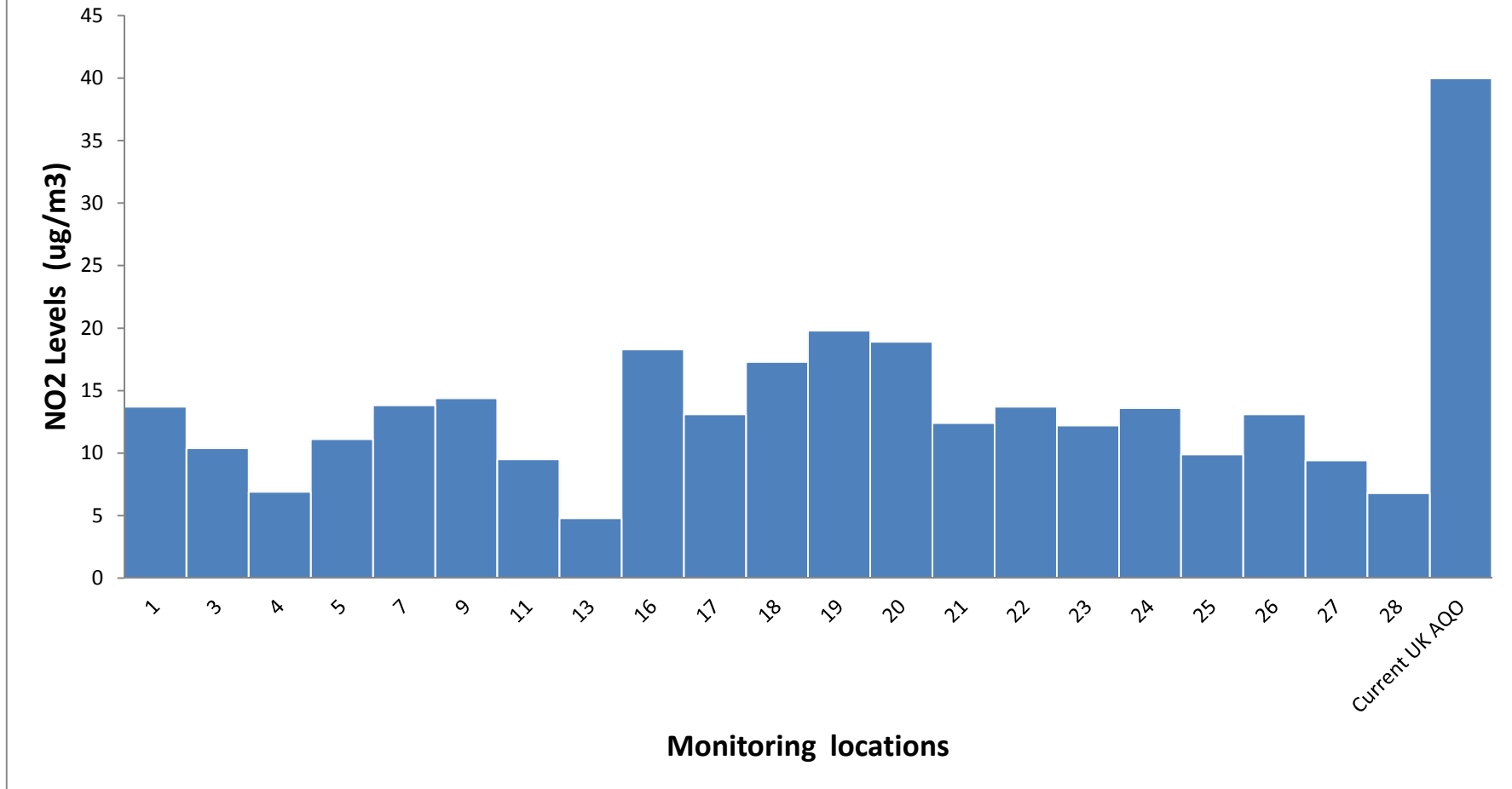
Table 2.3 provides a comparison of the results for the period of 2015 with the results of previous years monitoring (where available) for 2008, 2009, 2010, 2011, 2012, 2013 and 2014. The results identify that there has been a decrease in the measured levels of nitrogen dioxide in 2015 when compared with the 2014 results in twenty out of the twenty one monitoring locations. The results at a single monitoring location remained the same (BGBC-16).

Figure 2 provides a graphical representation of the 2010, 2011, 2012, 2013, 2014 and 2015 measured levels of Nitrogen Dioxide at each monitoring location in comparison with the Air Quality Objective for this pollutant. The 2015 monitoring results show there has been a decrease in the nitrogen dioxide levels at all of the nineteen monitoring locations when compared to the 2013 monitoring results. (Not taking into account the results of the two new monitoring locations at BGBC-27 and BGBC-28 which began in 2014).

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 2015 compared with AQO**



**Figure 2: Measured levels of nitrogen dioxide for 2010 -2015 compared with UK AQO**

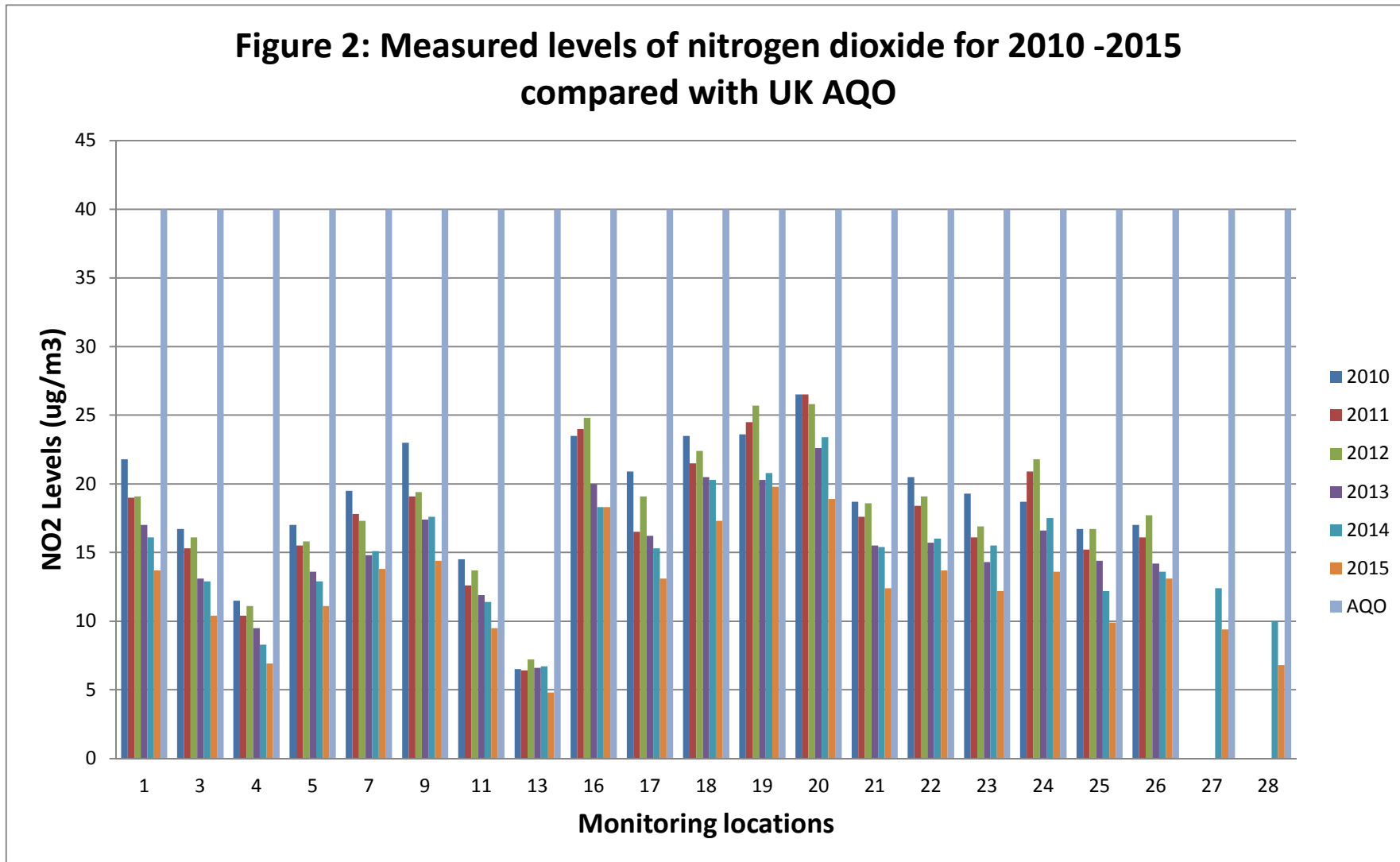


Table 2.3 Results of Nitrogen Dioxide Diffusion Tubes for 2008 through to and including 2015.

Site Name	Annual Mean Concentrations							
	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)	2015 ( $\mu\text{g}/\text{m}^3$ ) Adjusted for bias (0.95)
BGBC-01	22.2	22.9	21.8	19	19.1	17	16.1	13.7
BGBC-03	17.7	15.9	16.7	15.3	16.1	13.1	12.9	10.4
BGBC-04	12.2	10.7	11.5	10.4	11.1	9.5	8.3	6.9
BGBC-05	13.5	15.3	17.0	15.5	15.8	13.6	12.9	11.1
BGBC-07	15.4	18.3	19.5	17.8	17.3	14.8	15.1	13.8
BGBC-09	23.8	23.9	23.0	19.1	19.4	17.4	17.6	14.4
BGBC-11	13.1	14.7	14.5	12.6	13.7	11.9	11.4	9.5
BGBC-13	5.5	7.0	6.5	6.4	7.2	6.6	6.7	4.8
BGBC-16	21.4	21.7	23.5	24	24.8	20	18.3	18.3
BGBC-17	16.0	19.0	20.9	16.5	19.1	16.2	15.3	13.1
BGBC-18	21.7	21.8	23.5	21.5	22.4	20.5	20.3	17.3
BGBC-19	24.6	25.5	23.6	24.5	25.7	20.3	20.8	19.8
BGBC-20	24.4	25.4	26.5	26.5	25.8	22.6	23.4	18.9
BGBC-21	16.3	17.4	18.7	17.6	18.6	15.5	15.4	12.4
BGBC-22	18.7	18.7	20.5	18.4	19.1	15.7	16	13.7
BGBC-23	n/a	n/a	19.3	16.1	16.9	14.3	15.5	12.2
BGBC-24	n/a	n/a	18.7	20.9	21.8	16.6	17.5	13.6
BGBC-25	n/a	n/a	16.7	15.2	16.7	14.4	12.2	9.9
BGBC-26	n/a	n/a	17	16.1	17.7	14.2	13.6	13.1
BGBC-27	n/a	n/a	n/a	n/a	n/a	n/a	12.4	9.4
BGBC-28	n/a	n/a	n/a	n/a	n/a	n/a	10	6.8

### **2.2.2 Particulate Matter (PM<sub>10</sub>)**

No new automatic monitoring was undertaken for PM<sub>10</sub> during 2015.

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/m<sup>3</sup> for PM<sub>10</sub> was well below the annual mean National Air Quality Objective of 40µg/m<sup>3</sup>.

### **2.2.3 Sulphur Dioxide (SO<sub>2</sub>)**

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 New Local Developments**

### **3.1 Road Traffic Sources**

Blaenau Gwent CBC confirms that there are no new/ newly identified narrow congested streets with residential properties close to the kerb or busy streets where people may spend one hour or more close to traffic. Also there are no new/newly identified roads with high flows of buses and/or HGVs.

Blaenau Gwent CBC confirms that there are no new/newly identified busy junctions or roads with significantly changed traffic flows within the local authority area. Also there are no new bus stations within the local authority area.

Construction works are continuing on the A465 Heads of the Valleys Road, Section 3 Brynmawr to Tredegar, Dualling scheme. The scheme has been reported previously in the 2012 Air Quality Updating & Screening Assessment Report for Blaenau Gwent CBC.

### **3.2 Other Transport Sources**

Blaenau Gwent CBC confirms there are no airports or ports within the local authority area. Also 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. Blaenau Gwent CBC also confirms that there are no locations with a large number of movements of diesel locomotives, and long term relevant exposure within 30m.

### **3.3 Industrial Sources**

Blaenau Gwent CBC confirms that there are no new or proposed industrial installations for which an air quality assessment has been carried out and there are no existing industrial installations where emissions have increased substantially or new relevant exposure has been introduced. Blaenau Gwent CBC also confirms that there are no new or significantly changed installations with no previous air quality assessment within the local authority area.

It should be noted however that whilst there have been no new industrial installations during 2015 for which an Air Quality Assessment would have been required, there have been a number of new businesses 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 emissions.

A list of the current Part A1, A2 and Part 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 this 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.

Blaenau Gwent CBC confirms that there are no major fuel (petrol) storage depots, no new petrol stations or no poultry farms with the local authority area.

### **3.4 Commercial and Domestic Sources**

Blaenau Gwent CBC confirms that there are no biomass combustion plant and there are no areas of significant domestic solid fuel burning within the local authority area.

### **3.5 New Developments with Fugitive or Uncontrolled Sources**

Blaenau Gwent CBC confirms that there no new potential sources of fugitive or uncontrolled particulate matter, new landfill sites, quarries, unmade haulage roads on industrial sites within the local authority area.

Blaenau Gwent CBC confirms that there are no new or newly identified local developments which may have an impact on air quality within the Local Authority area.

Blaenau Gwent CBC confirms that all the following have been considered:

- **Road traffic sources**
- **Other transport sources**
- **Industrial sources**
- **Commercial and domestic sources**
- **New developments with fugitive or uncontrolled sources.**

## **4 Local / Regional Air Quality Strategy**

### **4.1 Local Air Quality Management Strategy**

Blaenau Gwent CBC produced a Departmental Air Pollution Control Policy and Procedure document in 2007 to facilitate the management of Air Quality with the Borough. A copy of the Air Pollution Control Policy and Procedure Document was provided in Appendix 5 of the 2011 Air Quality Progress Report.

It has been identified that in light of current changes to national guidance regarding Air Quality Management the Policy and Procedure document requires some revision and it is hoped that this work will be undertaken within 2016 in conjunction with other Departments within Blaenau Gwent CBC to produce a more strategic and overarching strategy for the management of Air Quality within the Borough.

### **4.2 Regional Air Quality Management Strategy**

Blaenau Gwent CBC actively participates in the work of the Welsh Air Quality Forum which assists in co-ordinating the management of Air Quality at an all Wales level amongst the 22 Local Authorities and other partners.

Further information regarding the work of the Welsh Air Quality Forum is available at

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



## 5 Planning Applications

### 5.1 Planning Consultation Policy

Each week a list of new planning applications that are received by the Planning Division is provided to the Environmental Protection Team within the Environmental Health Department. The Environmental Protection Team then examines the applications that have been received and requests further details in relation to any applications that may have the potential to impact of local air quality.

Consultation with the Planning Applicant and the Planning Division will take place for any developments that are identified as having the potential to have a significant impact on air quality. The applicant may then be required to submit an Environmental Impact Assessment or an air quality assessment as necessary prior to any planning permission being granted.

### 5.2 New Planning Applications

Each planning application is judged on its merits and due regard is given to the Planning Policy Wales document regarding Air Quality published by the Welsh Assembly Government, and other relevant guidance.

A copy of Blaenau Gwent CBC Unitary Development Plan (UDP) and further information regarding the planning process within Blaenau Gwent and the Local Authorities policies regarding land use and development control is available at <http://www.blaenau-gwent.gov.uk/business/7725.asp>

A link to the Local Development Plan (LDP) is also available at the above website.

The Planning Division classify applications that are received into minor and major developments in accordance with the Welsh Office Planning Statistics guidance. Major developments are classified as being the following:

- major dwelling is 10 or more dwellings or if an outline application 0.5 hectares
- For other types of applications major equates to 1000m<sup>2</sup> floor area or 1 hectare if the application is in outline

Table 3.1 below provides a breakdown of the major applications that were received and approved during 2015 and comments in relation to potential impact on air quality with Blaenau Gwent.

**Table 3.1: Applications For Major Developments Received And Approved During 2015**

Planning Reference	Type of development	Location	Potential Impact on Local Air Quality
C/2014/0238	Outline planning for construction of dwellings	Pochin Works Newport Road Tredegar	Negligible
C/2012/0232	Outline proposal for residential development and demolition of existing boiler house with some matters reserved	Former Remploy Unit Old Blaina Road Abertillery	Negligible
C/2015/0135	Residential development of 15 units consisting of 10 no. houses (semi-detached), 4 no. flats & 1 no. adapted	Former Waunlwyd Junior and Infant School Site Hillside Terrace Waunlwyd Ebbw Vale	Negligible
C/2015/0435	Residential development for 13 dwellings (outline)	Plots 8-19 Beech Tree Crescent (Tanglewood Phase IV) Blaina	Negligible
C/2014/0013	Construction of 23 dwellings and associated works	Former Sirhowy Infants School, Rhoslan Sirhowy Tredegar	Negligible
C/2015/0057	Extension to the existing Waste Transfer Station. Comprising of reinforced concrete slabs, portal framed	Beechwood House Silent Valley Landfill Land adjacent to the existing waste Transfer Station Cwm	Negligible
C/2015/0444	Engineering works to prepare land for residential development and provision of public footpath between plots	Land at Beech Tree Crescent Tanglewood Phase IV (plots 1-19) Blaina	Negligible

### **5.3 Major Planning Applications Approved 2015**

In 2015 Blaenau Gwent CBC 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. All three of the STOR power plants are gas powered and air quality assessments have been provided for all three. Two of these assessment reports identified there would be no exceedances of the air quality objectives for NO<sub>2</sub>, while one report identified that there could be two exceedances of the hourly 200 µg/m<sup>3</sup> standard for NO<sub>2</sub> during a 12 month period at relevant receptors. All of these approved developments have been conditioned through the planning process to provide Air Quality Management Plans to the Local Authority to determine what the operational impact is of these processes on air quality and to demonstrate that there are no exceedances of the air quality objectives. Two of these power plants were originally proposed to be powered by diesel generators, as reported in the 2015 Updating and Screening Assessment, but have since received planning permission to be gas powered which means the impacts on air quality are significantly less.

### **5.4 Major Planning Applications 2016**

No major planning applications were received by Blaenau Gwent CBC in 2016, at the time of writing this report, that were identified as having the potential to impact on local air quality.

## 6 Air Quality Planning Policies

Blaenau Gwent CBC does not have a specific air quality planning policy however it is outlined as a development management policy within the Local Development Plan that 'the proposal does not result in airborne emissions which have an unacceptable effect on the health, amenity or natural environment of the surrounding area, taking into account cumulative effects of other proposed or existing sources of air pollution in the vicinity.'

Over the next 12 months the environmental health section and planning section of Blaenau Gwent CBC will be working together to produce supplementary planning guidance for developers for air quality.

## 7 Local Transport Plans and Strategies

Local Authorities are now required to produce individual transport plans however the South East Wales Valleys Authorities (Blaenau Gwent, Caerphilly, Merthyr Tydfil, Rhondda Cynon Taff and Torfean) got together produced a joint plan that was published in January 2015.

The South East Wales Valleys Local Transport Plan (January 2015) can be viewed at the following website:

<http://www.rctcbc.gov.uk/EN/Resident/ParkingRoadsandTravel/Travel/TransportSchemesandPolicies/TransportPolicyandlocalTransportPlan.aspx>

The local transport plan sets down the vision and objectives for transport in the SE Wales Valleys area and provides a short and long term programme for interventions to work towards achieving these goals. The short term programme sets down those schemes that are priorities for 5 years up to 2020. The longer term programme identifies aspirations up to 2030.

Part of the process of the development of the Local Transport Plan requires the production of a Strategic Environmental Assessment (SEA) which will give consideration to air quality issues.

The Strategic Environmental Assessment Baseline Study Report and Scoping Report are also available at the above website.

## 8 Climate Change Strategies

As part of its commitment to corporate contribution towards the reduction of greenhouse gases emissions from all its activities and as part of the Climate Change programme Blaenau Gwent CBC has developed an Energy Policy to ensure the effective and efficient use and management of energy.

The Energy Policy compliments the seven core values of the Councils Community plan and contributes to the overall strategic aims of the Local Authority.

At present the Energy Policy is not available on the Blaenau Gwent CBC website and the document currently subject to ongoing review.

A copy of the current document will be made available to the Welsh Assembly Government on request and it is envisaged that upon the finalisation of the review of the current policy and its subsequent publication this document will be made available on the Blaenau Gwent CBC website.

## **9 Conclusions and Proposed Actions**

### **9.1 Conclusions from New Monitoring Data**

Blaenau Gwent CBC has examined the results from monitoring in the Borough of Blaenau Gwent for the period of 2015. Concentrations are all below the relevant UK National Air Quality Objectives.

### **9.2 Conclusions relating to New Local Developments**

Blaenau Gwent CBC has assessed all new or significantly changed sources in the Borough and relevant new or significantly changes 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.

### **9.3 Other Conclusions**

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

### **9.4 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 2016 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 2016 will be presented in the 2017 Air Quality Progress Report which will be prepared as part of the Updating and Screening Assessment process.

## 10 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.
- 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-qc-framework.html>



## Appendices

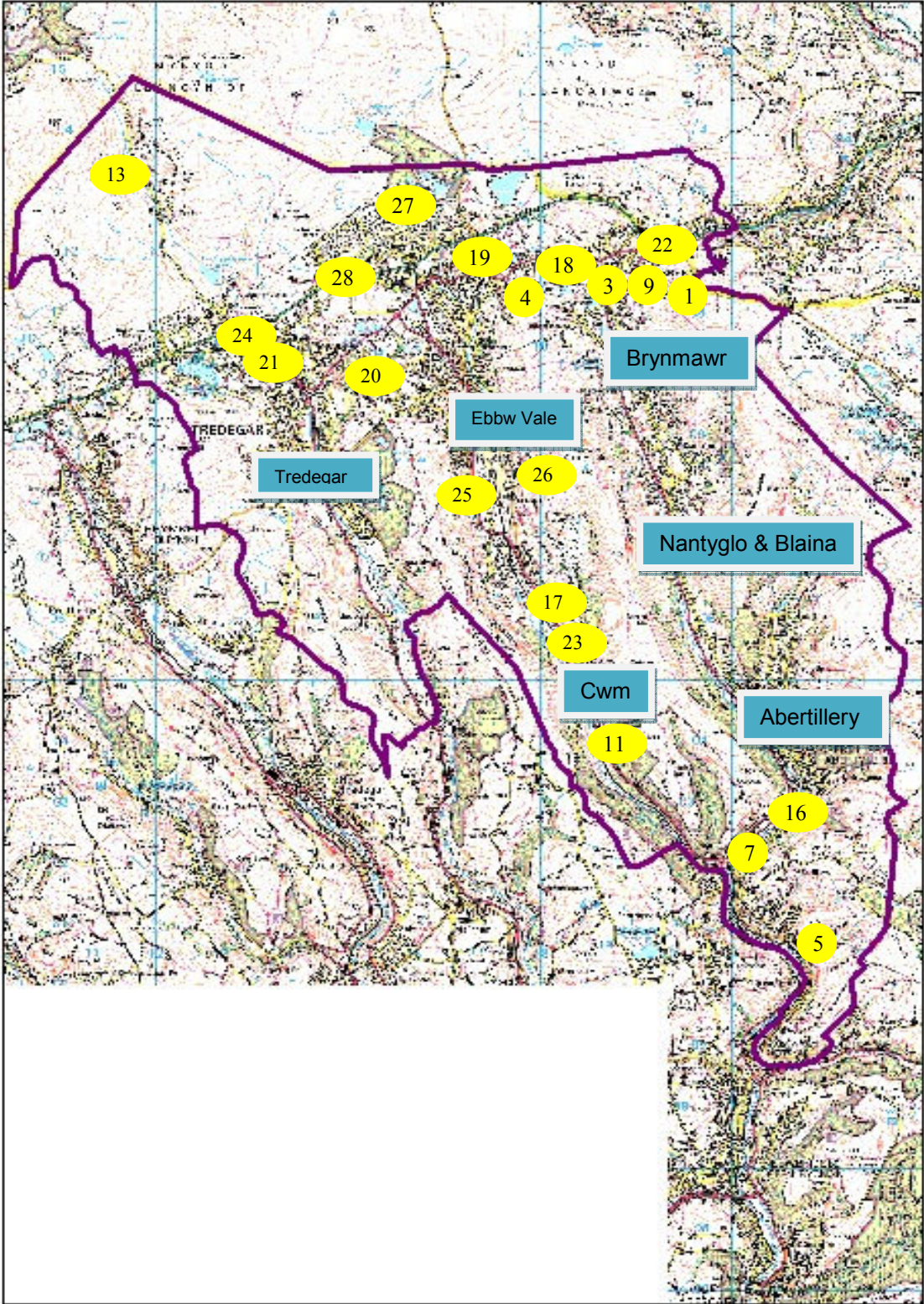
# Appendix 1

Administrative area of Blaenau Gwent CBC



# Appendix 2

Map Indicating Locations of Nitrogen Dioxide Diffusion Tubes.



## Appendix 3

Location plans of all diffusion tubes monitoring within Blaenau Gwent 2015

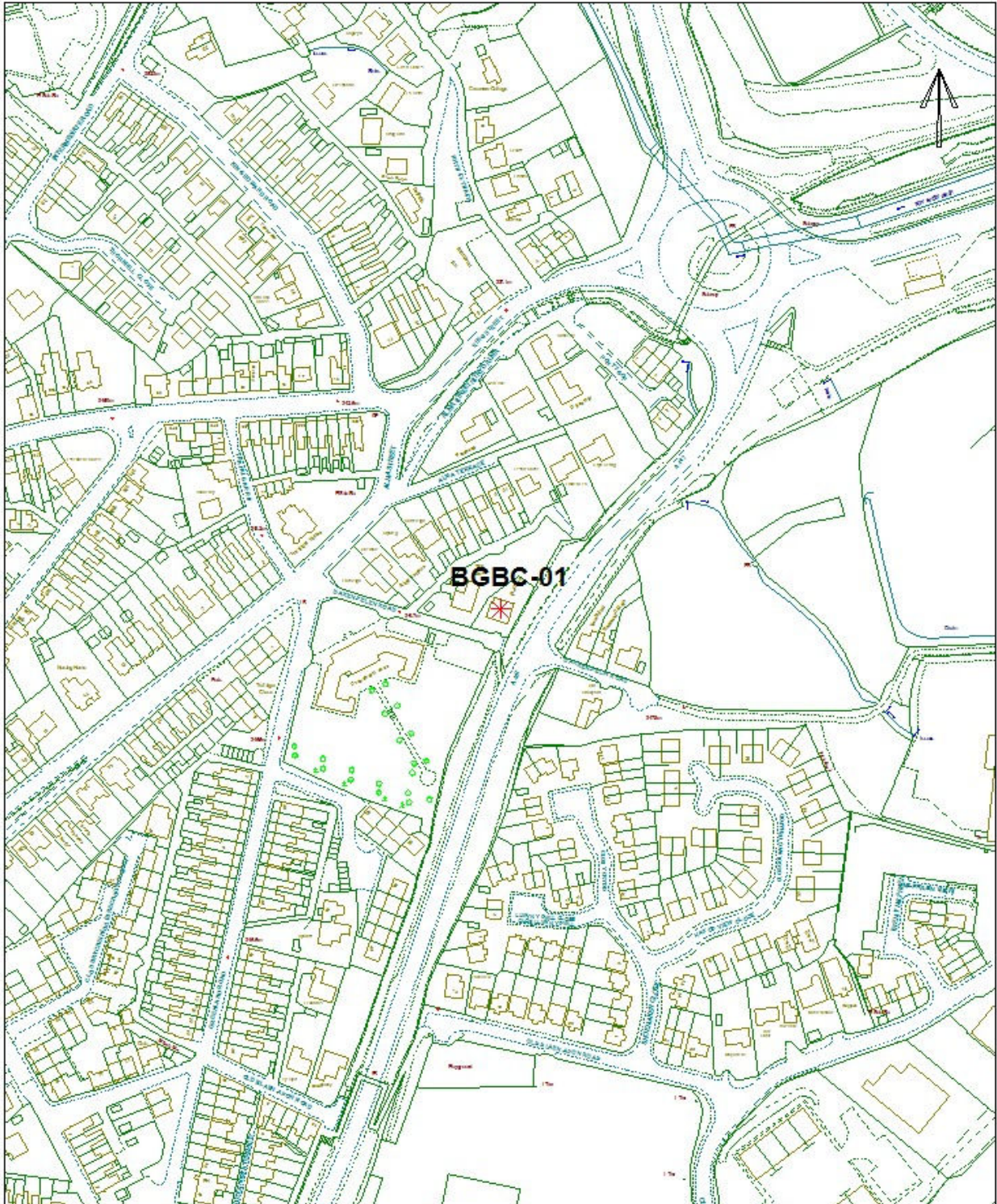


# Blaenau Gwent County Borough Council

**Location:** BGBC-01, The Darren, Daren- Felen Road, Brynmawr

**Easting:** 319532 **Northing:** 211958

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBC - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfrfa Ei Mawrhydi (c) Hawffraint y Goron. Y mae atgynhychu heb awdurdod yn torri Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBC - LA09002L



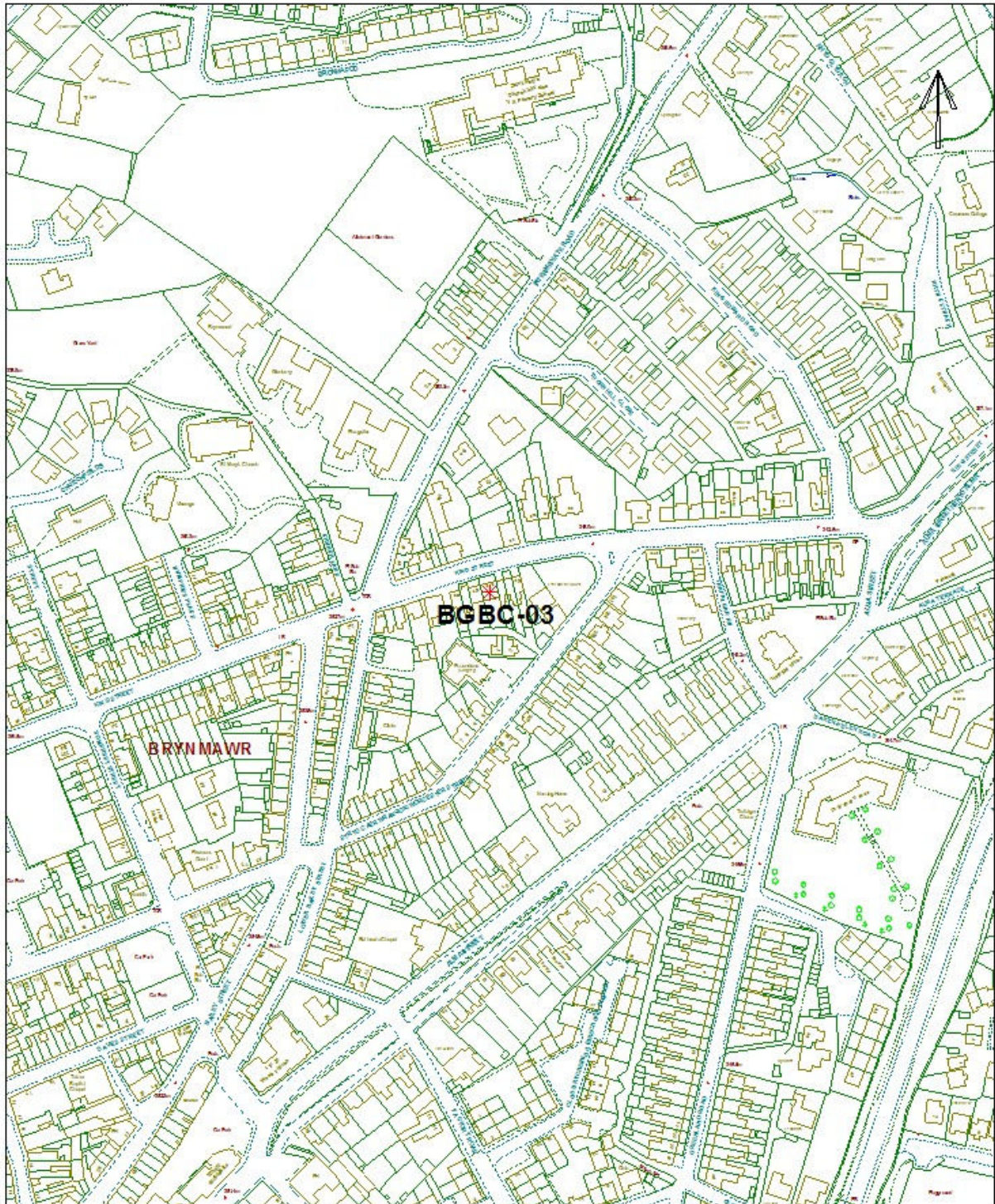


## Blaenau Gwent County Borough Council

**Location:** BGBC-03, 272 King Street, Brynmawr.

**Easting:** 319299 **Northing:** 212018

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBC - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfrfa Ei Mawrhydi (c) Hawlfraint y Goron. Y mae atgynhychu heb awdurdod yn tori Hawlfraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBC - LA09002L



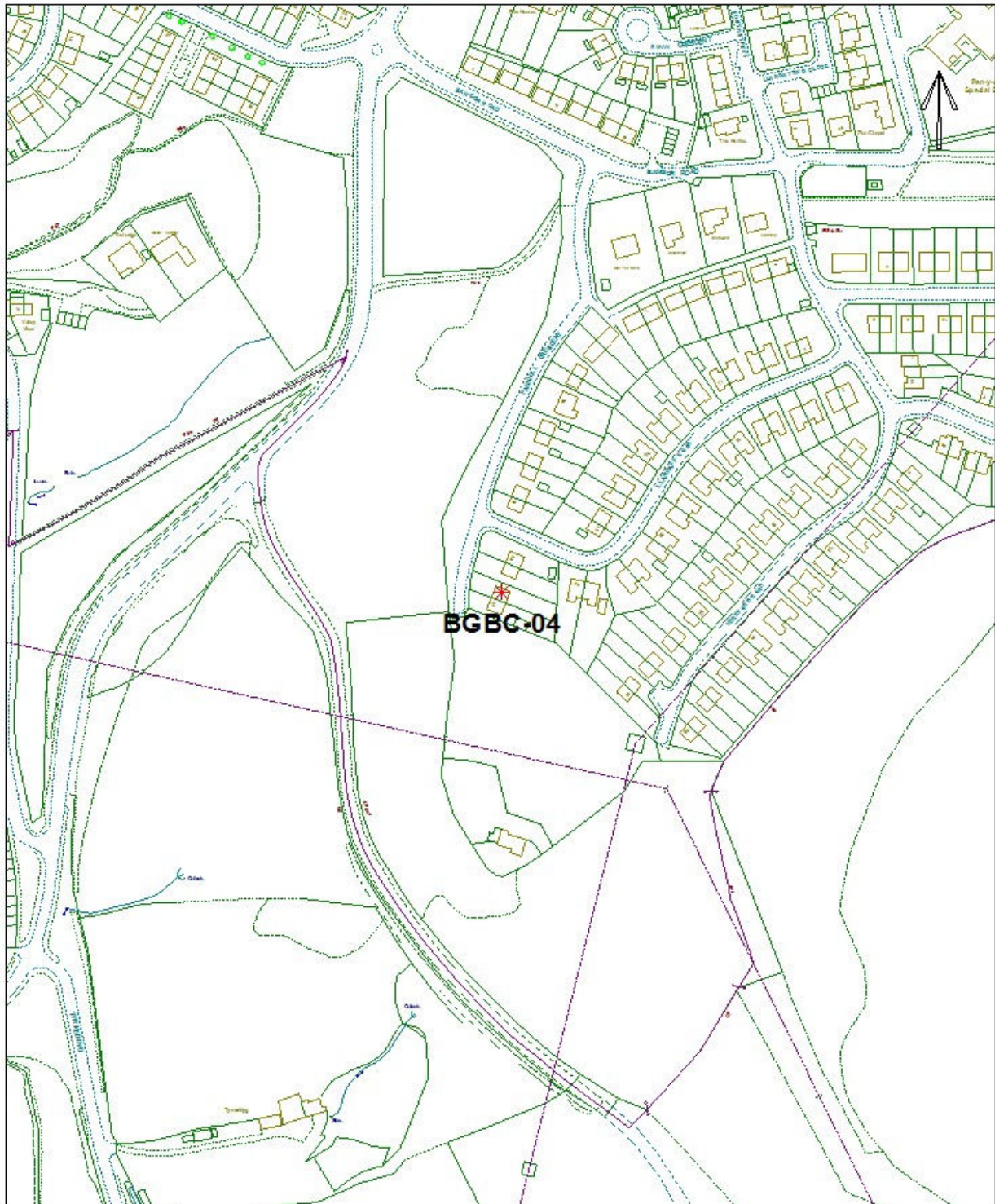


## Blaenau Gwent County Borough Council

**Location:** BGBC-04, 22 Parkhill, Beaufort, Ebbw Vale.

**Easting:** 317299 **Northing:** 211282

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBCB - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniatod Rheolwr Llyfrfa Ei Mawrhydi (c) Hawffraint y Goron. Y mae atgynhychu heb awdurdod yn torri Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBCB - LA09002L



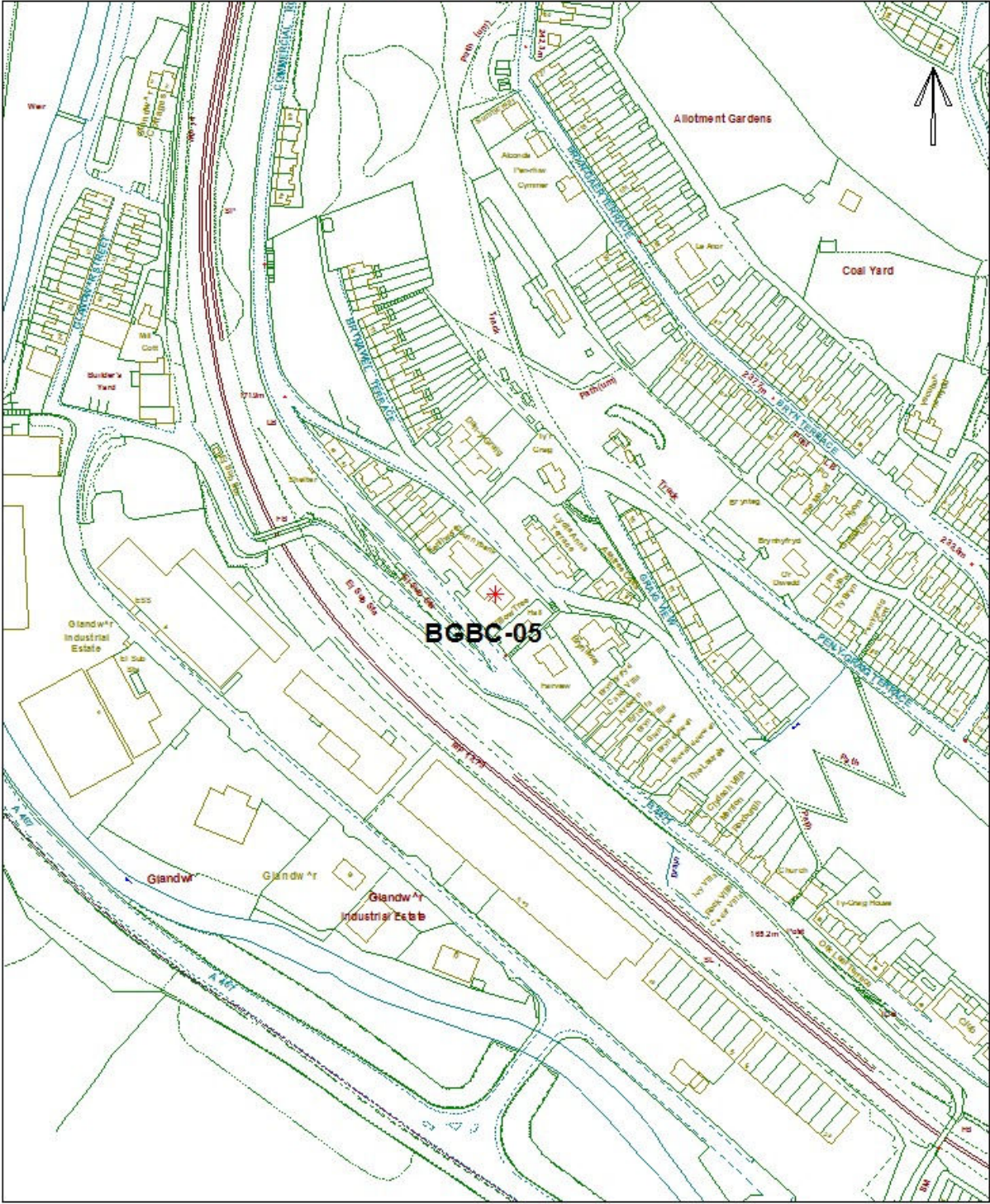


# Blaenau Gwent County Borough Council

Location: BGBC-05, Willow Tree Bungalow, Aberbeeg

Easting: 321144 Northing: 201114

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBCBC - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfrfa Ei Mawrhydi (c) Hawffraint y Goron. Y mae atgynhychu heb awdurdod yn torri Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBCBC - LA09002L





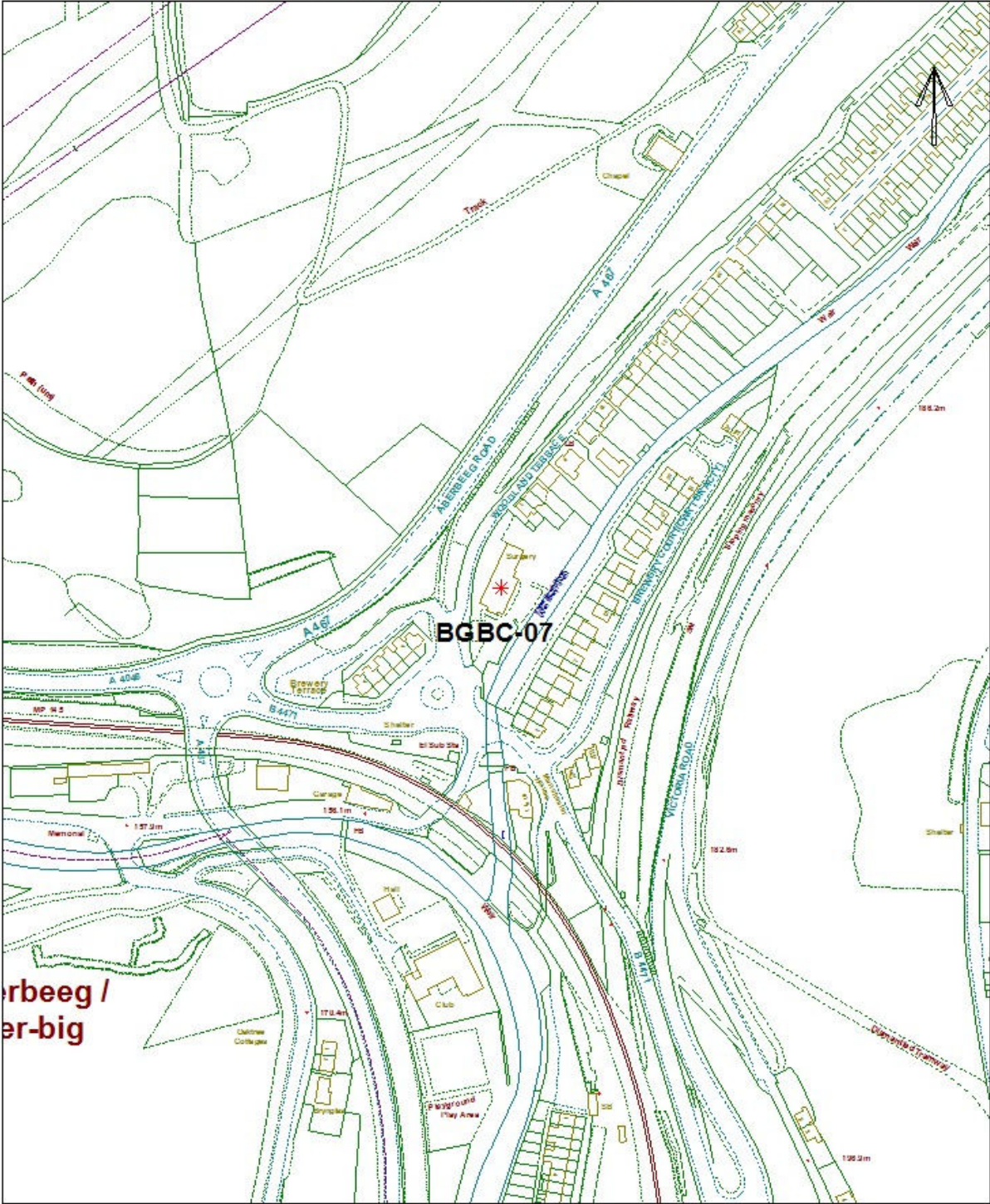


# Blaenau Gwent County Borough Council

**Location:** BGBC-07, Aberbeeg Medical Centre, Aberbeeg.

**Easting:** 320955 **Northing:** 202018

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBC - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfrfa Ei Mawrhydi (c) Hawffraint y Goron. Y mae atgynhychu heb awdurdod yn torri Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBC - LA 09002L





## Blaenau Gwent County Borough Council

Location: BGBC-09, Ynys Dawel, Brynmawr

Easting: 319554 Northing: 211995

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBCB - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfrfa Ei Mawrhydi (c) Hawlfraint y Goron. Y mae atgynhychu heb awdurdod yn tori Hawlfraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBCB - LA09002L





## Blaenau Gwent County Borough Council

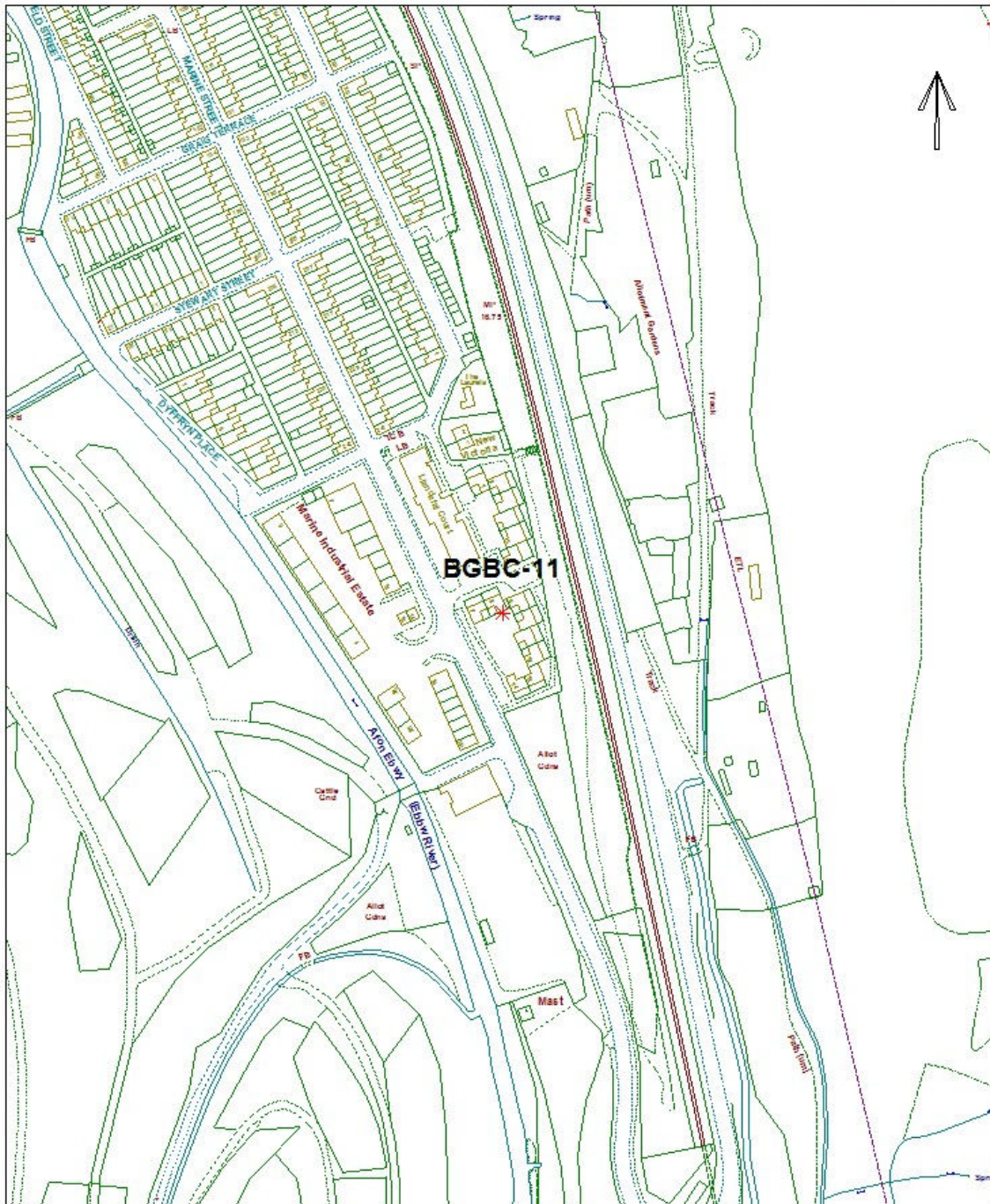
Location: BGBC-11, 8 Cwm Graig Bungalows, Marine Street, Cwm

Easting: 318793 Northing: 204589

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGCBC - LA09002L.

Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfrfa Ei Mawrhydi (c) Hawffraint y Goron.

Y mae atgynhychu heb awdurdod yn torri Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGCBC - LA09002L



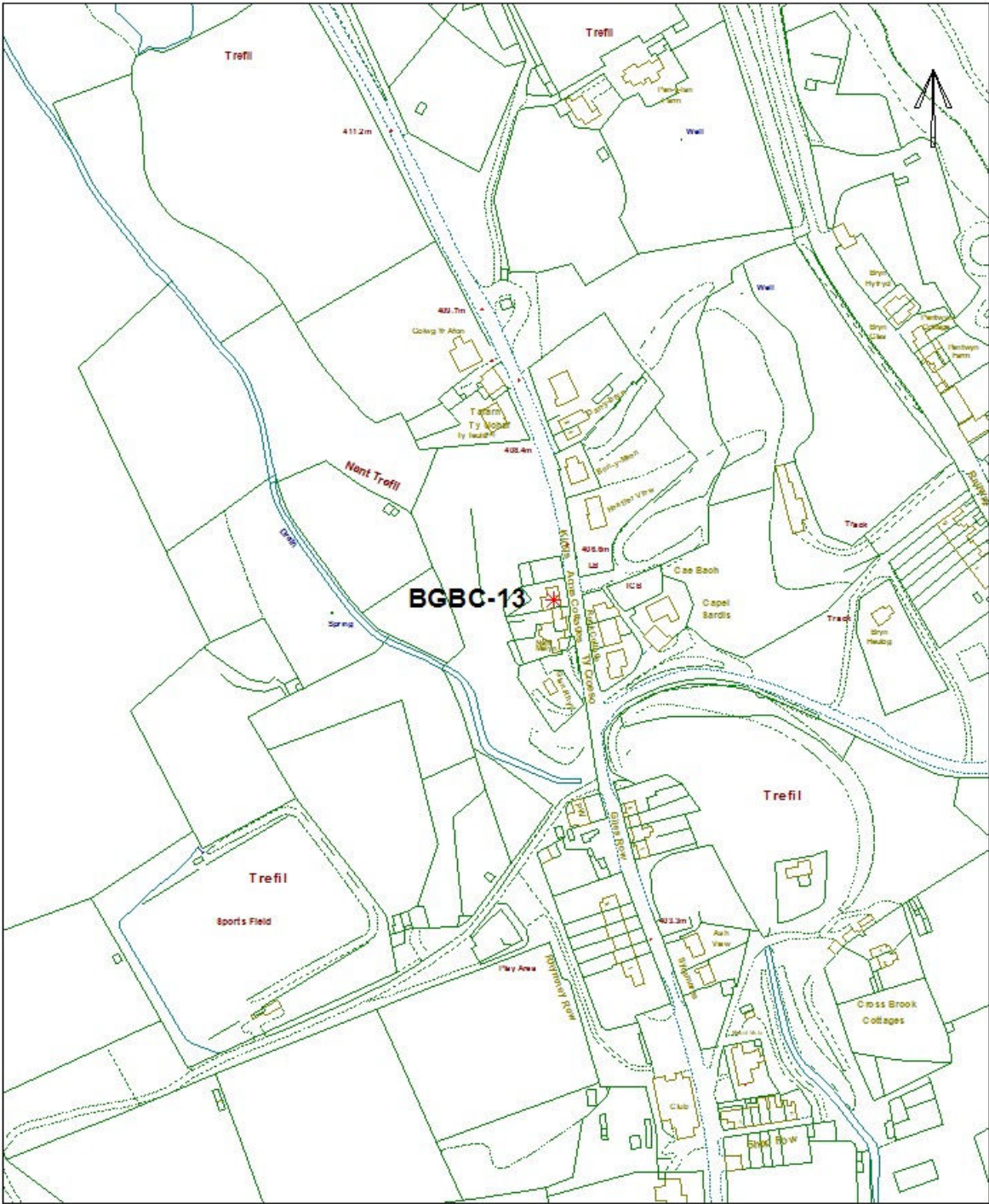


# Blaenau Gwent County Borough Council

**Location:** BGBC-13, 3 Kings Arms Cottages, Trefil.

**Easting:** 311983 **Northing:** 212779

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBC - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfya Ei Mawrhydi (c) Hawffraint y Goron. Y mae atgynhychu heb awdurdod yn torri Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBC - LA09002L



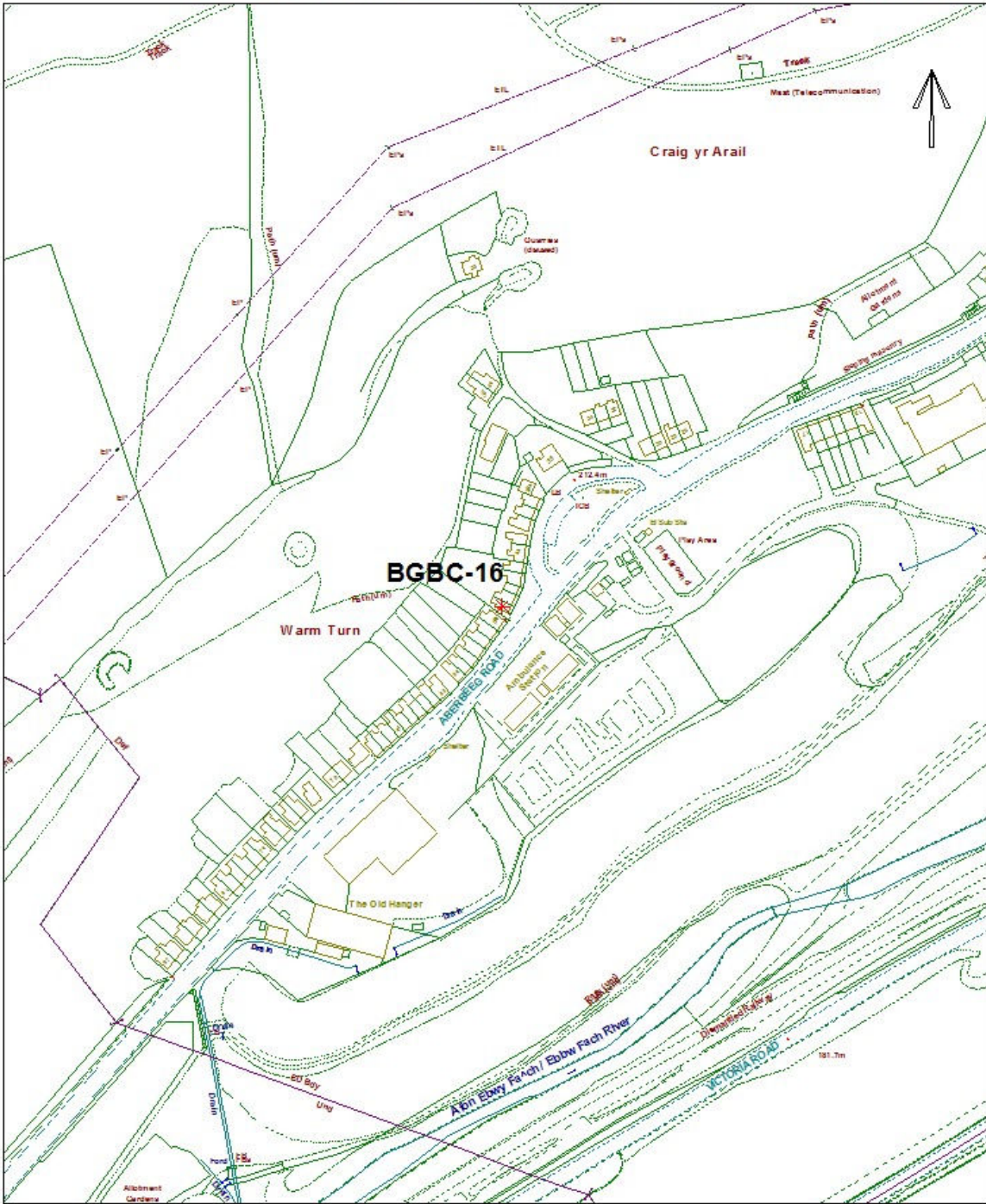


# Blaenau Gwent County Borough Council

**Location:** BGBC-16, 49 Aberbeeg Road, Aberbeeg.

**Easting:** 321428 **Northing:** 202672

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBC - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfrfa Ei Mawrhydi (c) Hawffraint y Goron. Y mae atgynhychu heb awdurdod yn tori Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBC - LA09002L



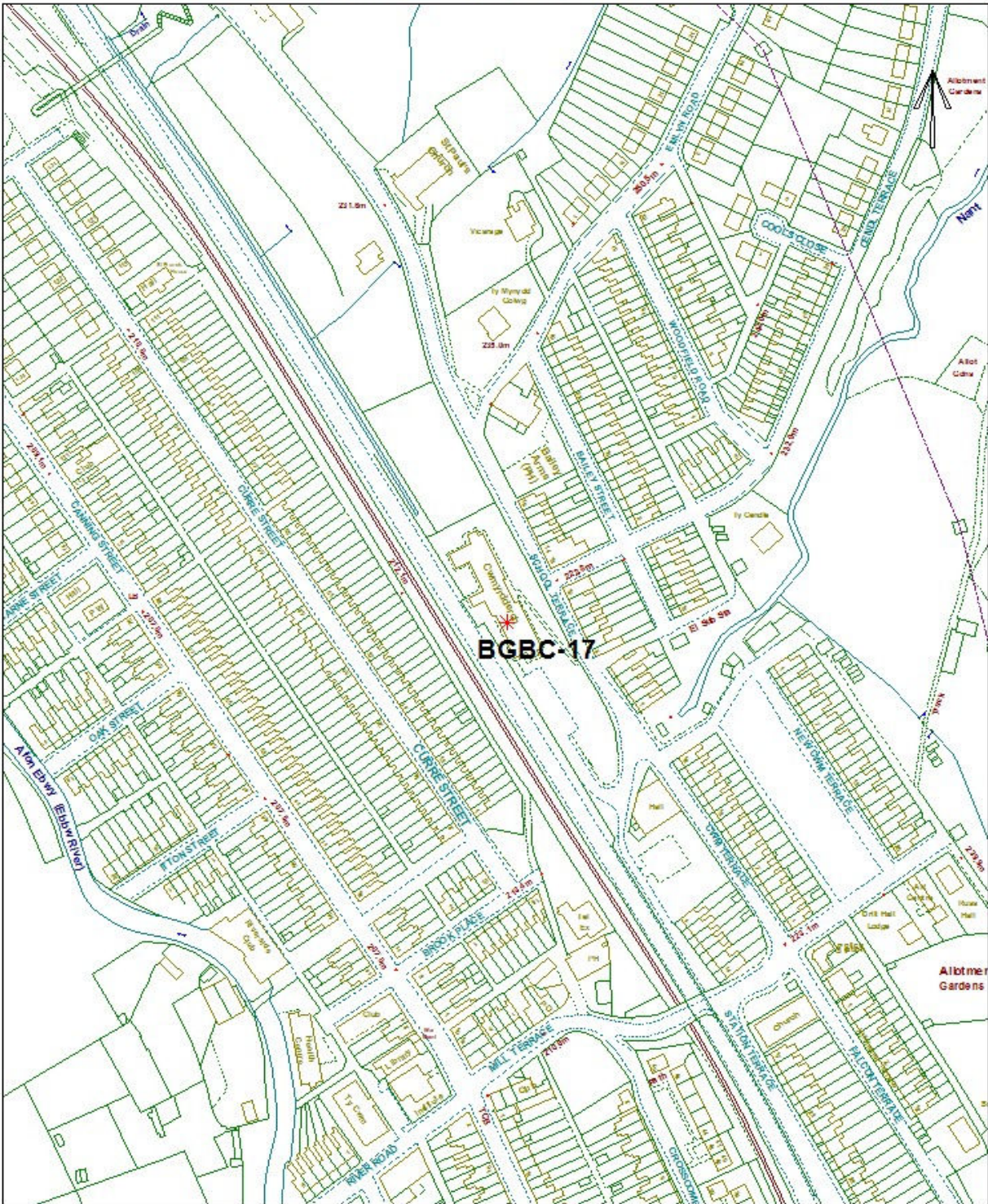


# Blaenau Gwent County Borough Council

**Location:** BGBC-17, Cwmyrdderch Court, School Terrace, Cwm,,

**Easting:** 318441 **Northing:** 205540

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBCBC - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfifa Ei Mawrhydi (c) Hawffr faint y Goron. Y mae atgynhychu heb awdurdod yn torri Hawffr faint y Goron a gall arwain at erlyniad neu achosion sifil. BGBCBC - LA09002L



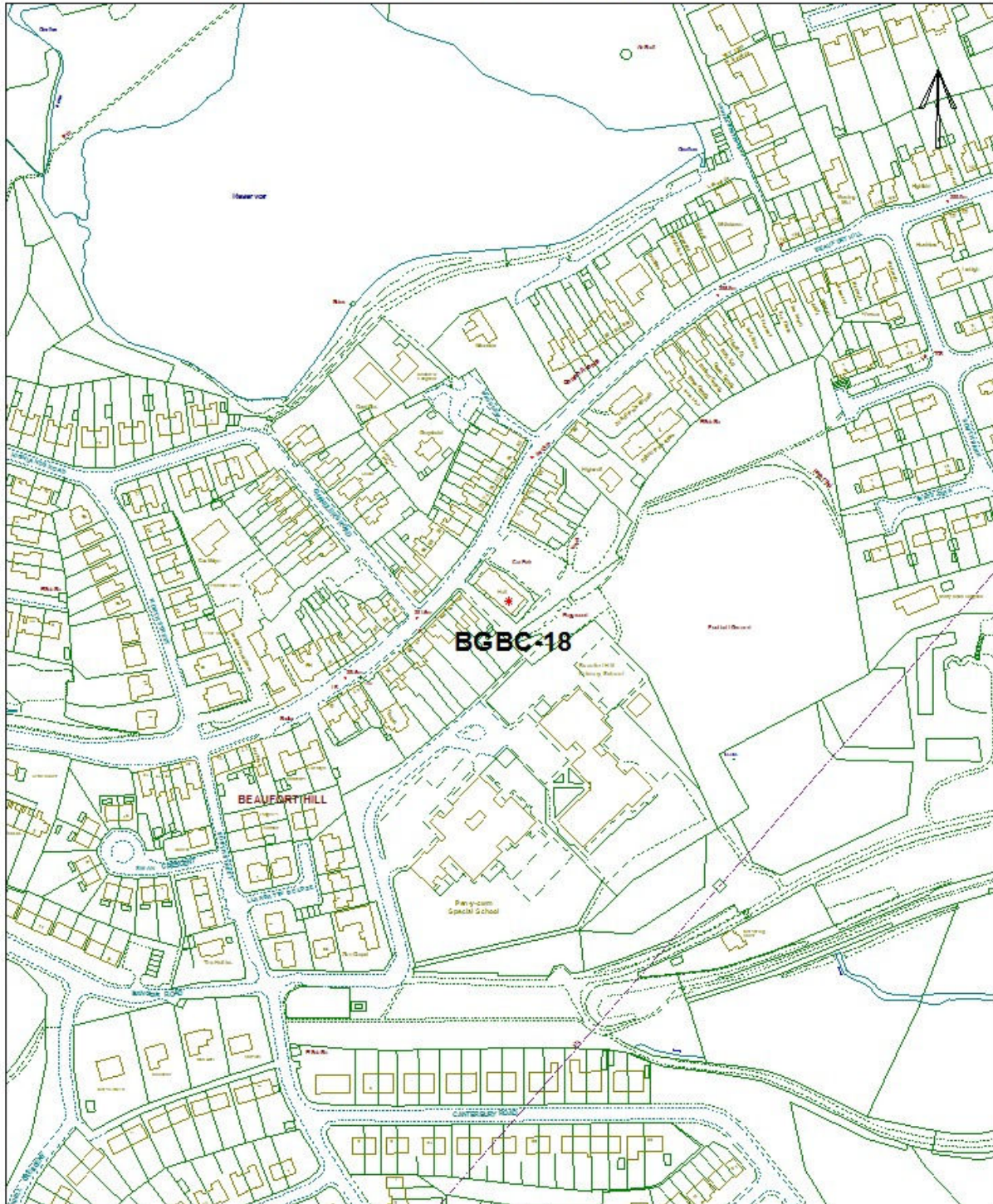


## Blaenau Gwent County Borough Council

**Location:** BGBC-18, Welfare Hall, Beaufort Hill, Ebbw Vale

**Easting:** 317549 **Northing:** 211681

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBCB - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfrfa Ei Mawrhydi (c) Hawffraint y Goron. Y mae atgynhychu heb awdurdod yn tori Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBCB - LA09002L





## Blaenau Gwent County Borough Council

Location: BGBC-19, 42 Beaufort Rise, Ebbw Vale

Easting: 316674 Northing: 211582

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBC - LA09002L.  
Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfrfa Ei Mawrhydi (c) Hawffraint y Goron.  
Y mae atgynhychu heb awdurdod yn torri Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBC - LA09002L





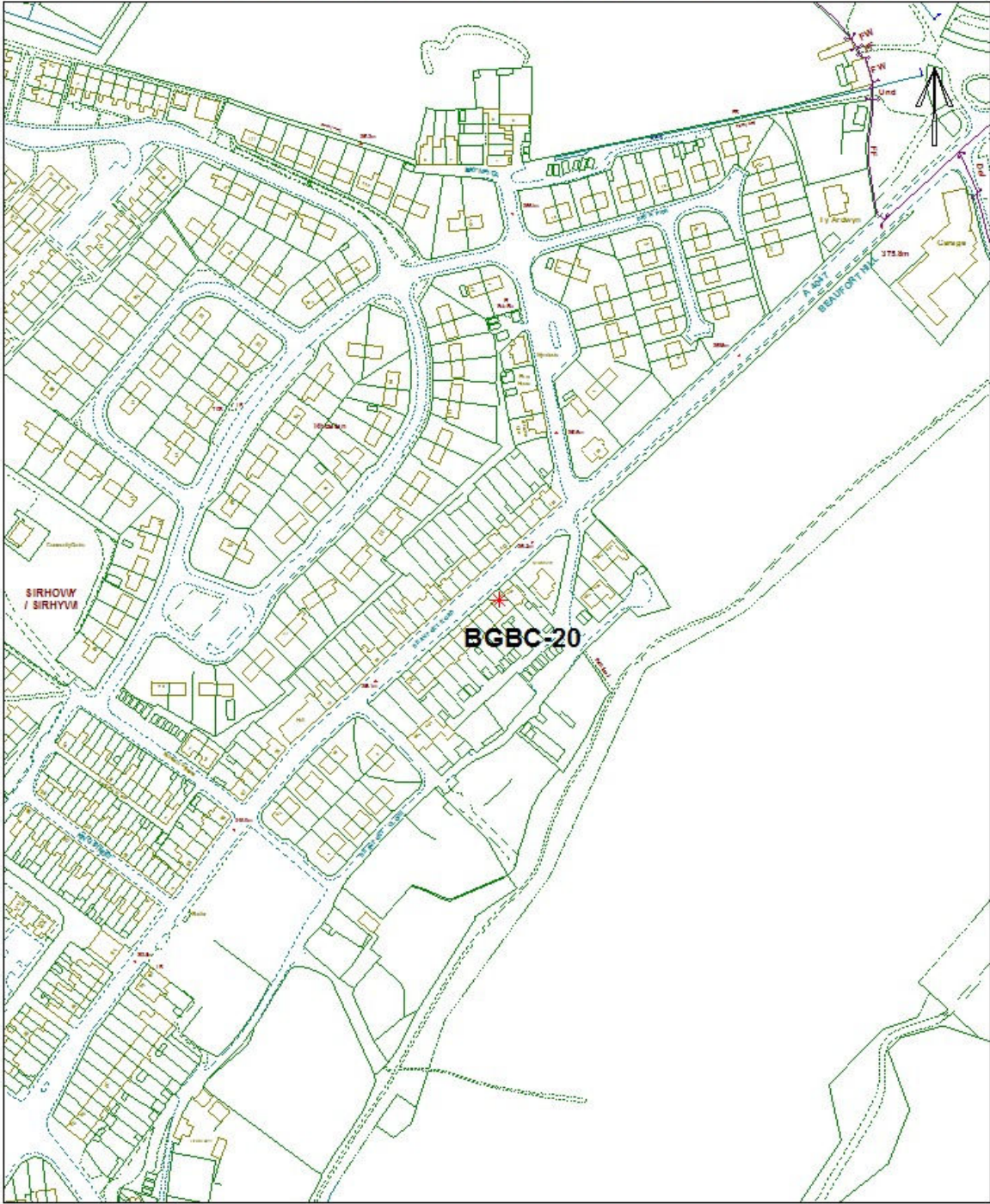


# Blaenau Gwent County Borough Council

**Location:** BGBC-20, 122 Beaufort Road, Tredegar.

**Easting:** 314854 **Northing:** 210243

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBC - LA09002L.  
*Atgynhychwyd o Fapiau'r Ordnance Survey chaniatod Rheolwr Llyfrfa E I Mawrhydi (c) Hawffraint y Goron.  
Y mae atgynhychu heb awdurdod yn torri Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBC - LA09002L*



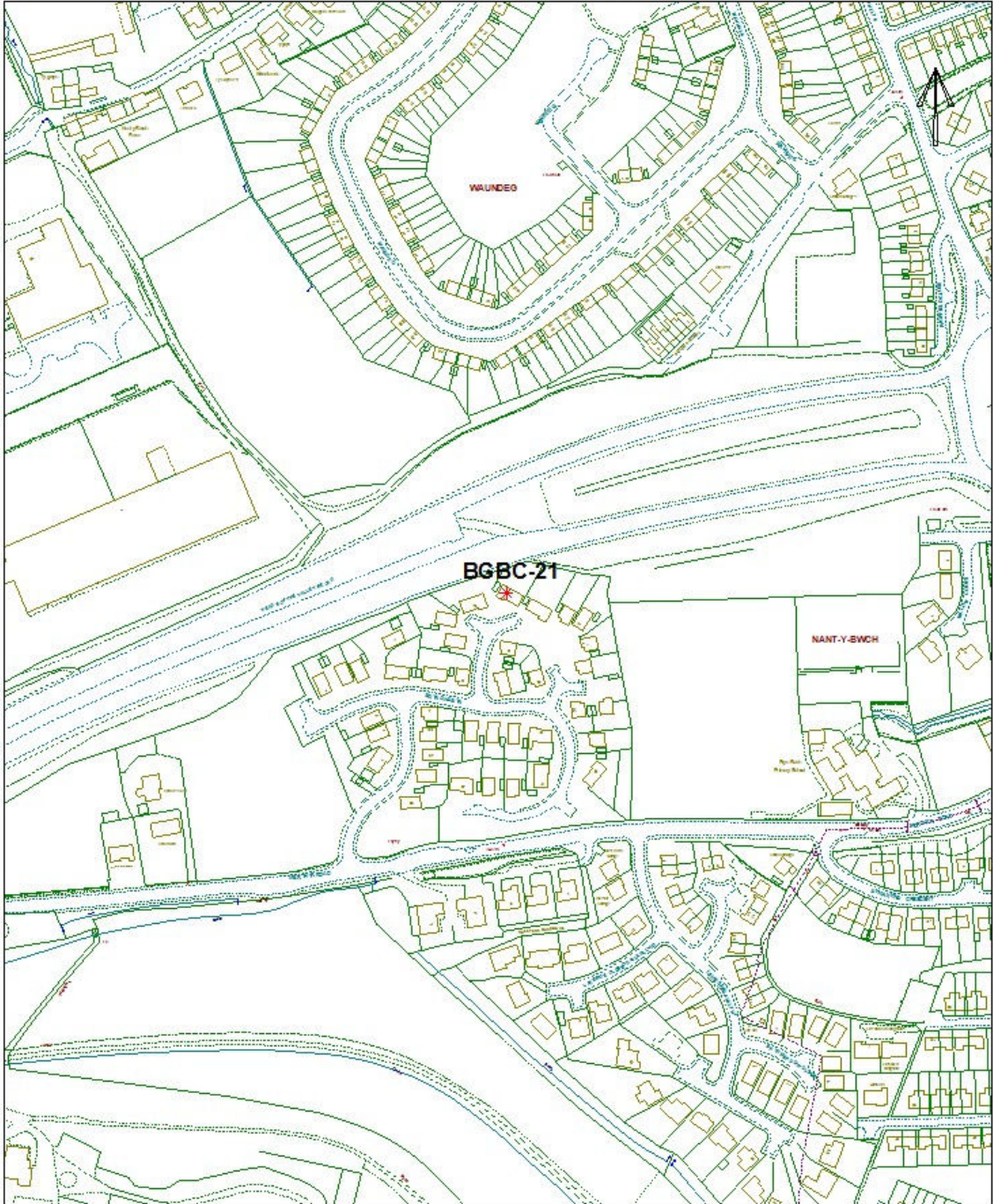


# Blaenau Gwent County Borough Council

Location: BGBC-21, 14 Bryn Rhosyn, Merthyr Road, Tredegar.

Easting: 312846 Northing: 210583

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBC - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfrfa Ei Mawrhydi (c) Hawffraint y Goron. Y mae atgynhychu heb awdurdod yn torri Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBC - LA09002L



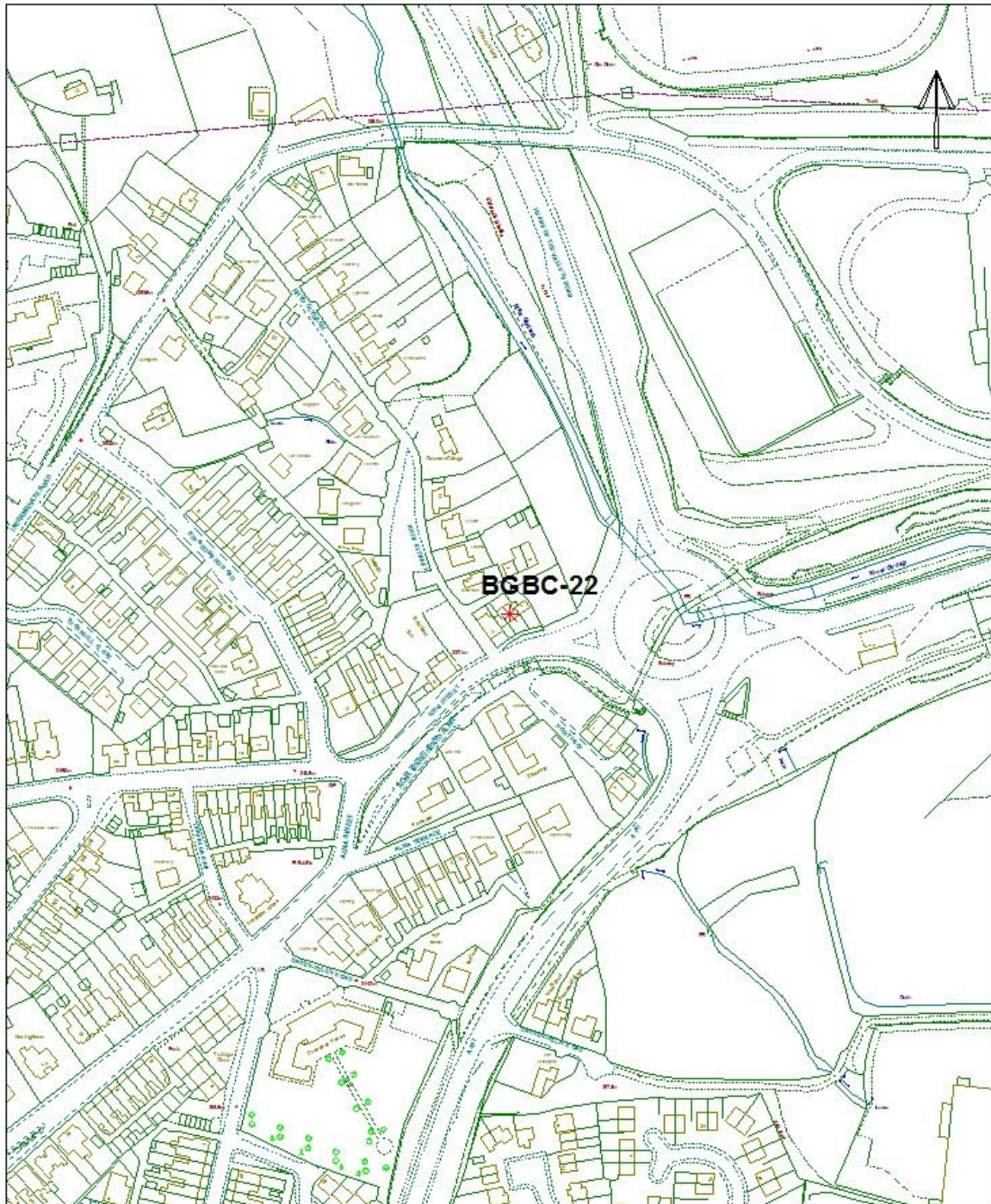


## Blaenau Gwent County Borough Council

Location: BGBC-22, 2 King Street, Brynmawr.

Easting: 319553 Northing: 212137

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBC - LA09002L.  
*Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfrfa E I Mawrhydi (c) Hawlfraint y Goron.  
Y mae atgynhychu heb awdurdod yn torri Hawlfraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBC - LA09002L*



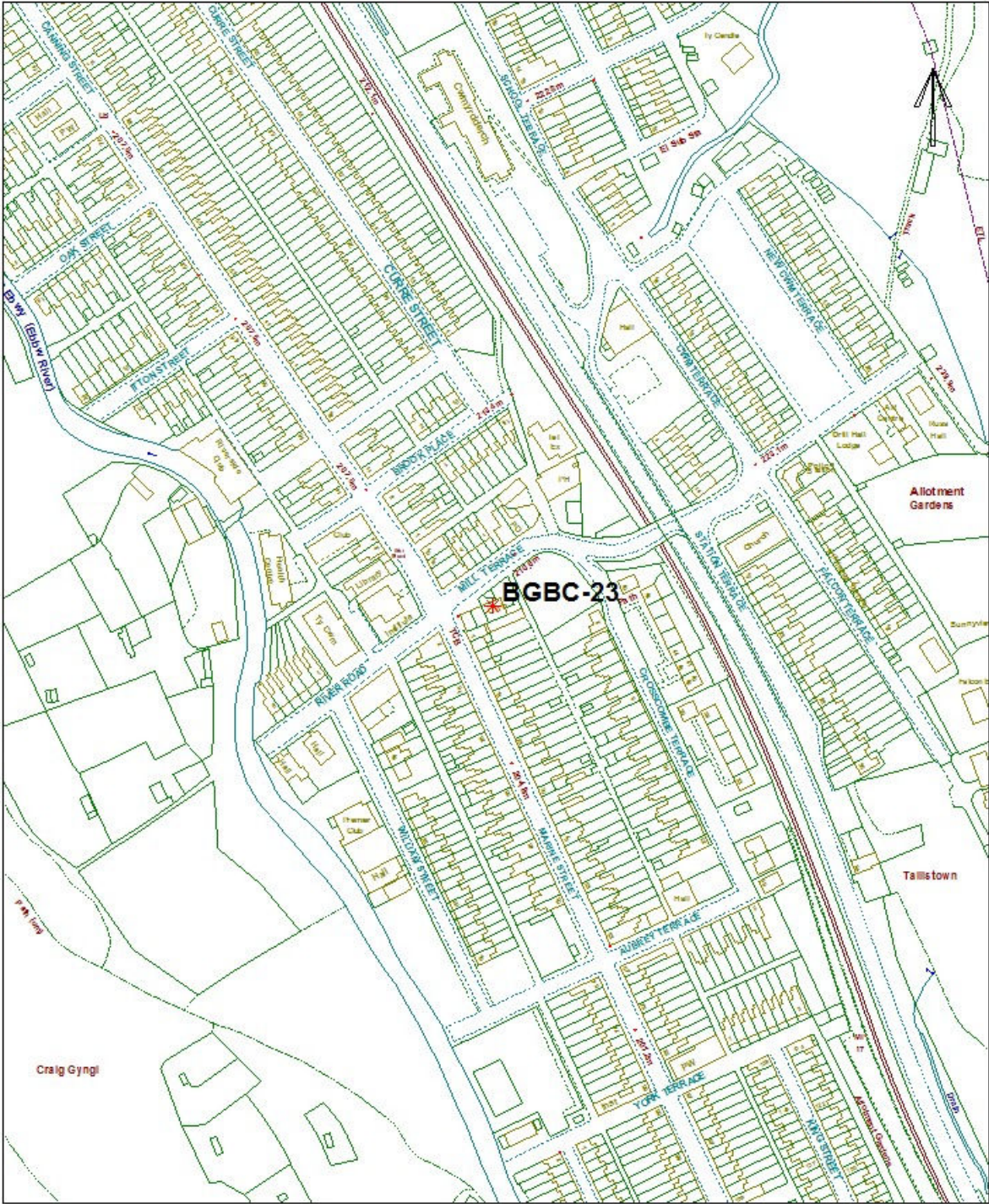


# Blaenau Gwent County Borough Council

**Location:** BGBC-23, Cwm Conservative Club, Mill Terrace, Cwm

**Easting:** 318456 **Northing:** 205308

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBC - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfya Ei Mawrhydi (c) Hawffraint y Goron. Y mae atgynhychu heb awdurdod yn torri Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBC - LA09002L





## Blaenau Gwent County Borough Council

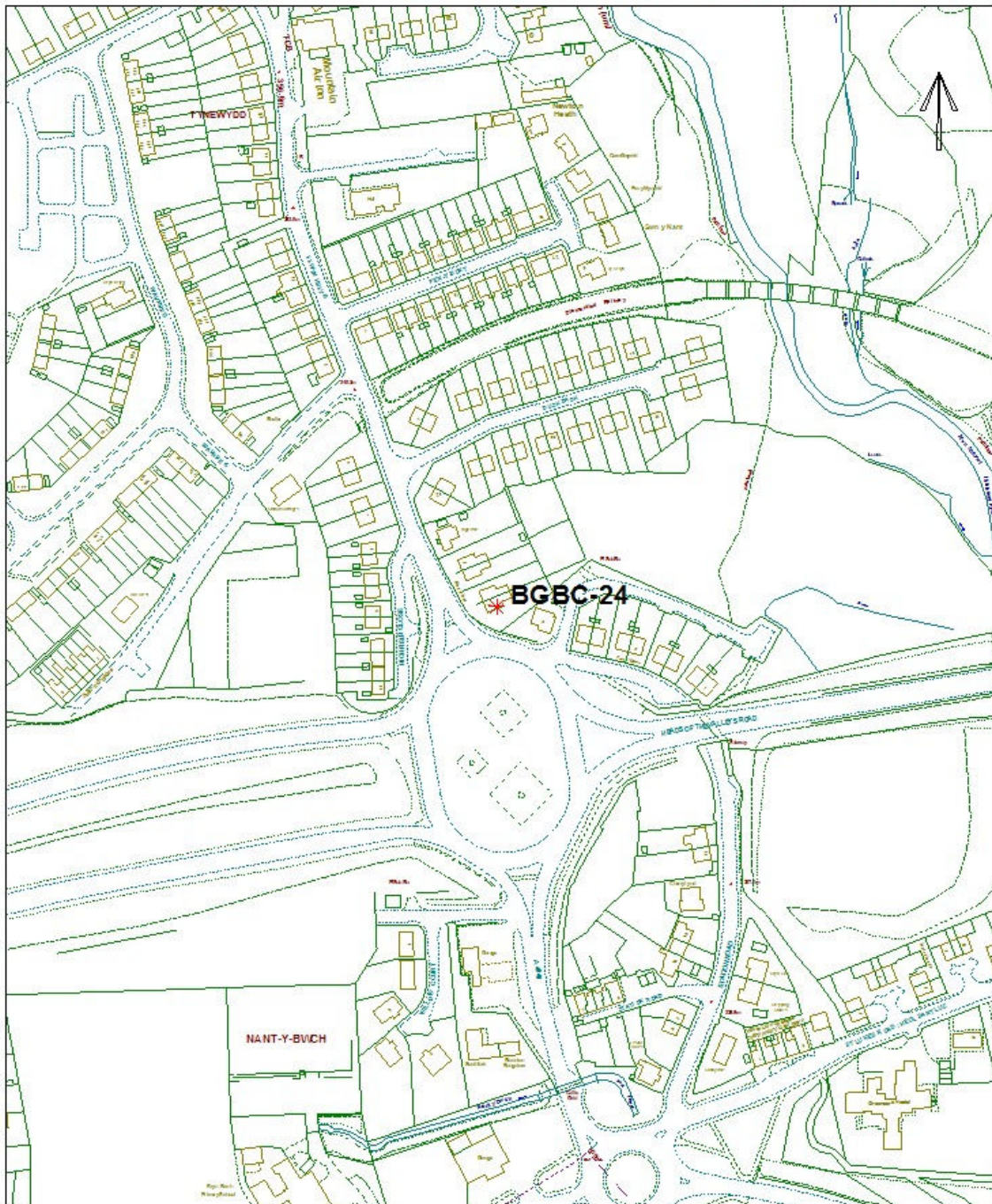
Location: BGBC-24, 4 Glen View, Nantybwich, Tredegar.

Easting: 313152 Northing: 210772

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBC - LA09002L.

Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfrfa Ei Mawrhydi (c) Hawffraint y Goron.

Y mae atgynhychu heb awdurdod yn torri Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBC - LA09002L



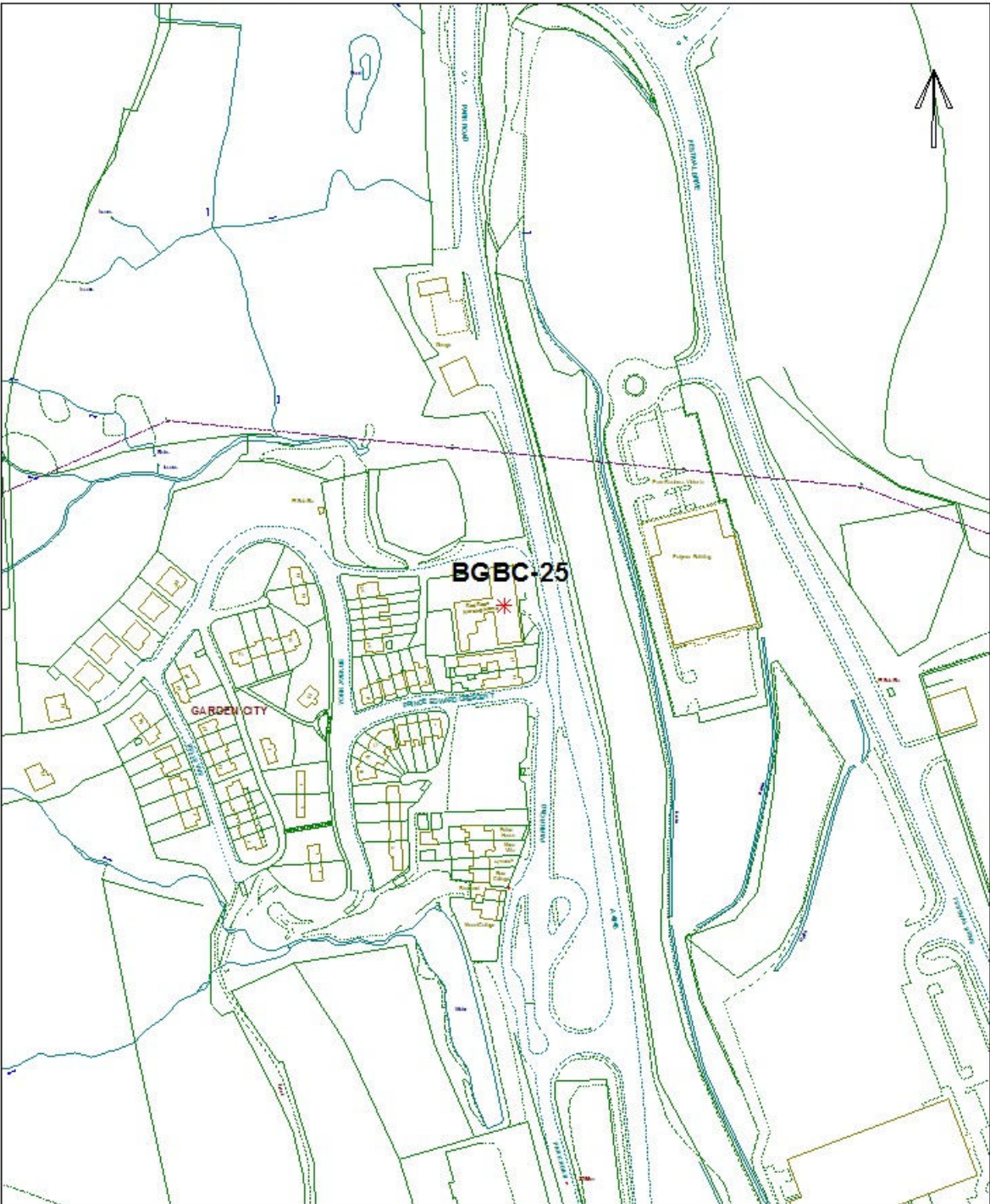


# Blaenau Gwent County Borough Council

**Location:** BGBC-25, Red Rose Care Centre, Park Road,

**Easting:** 316983 **Northing:** 207894

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBC - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfya Ei Mawrhydi (c) Hawffraint y Goron. Y mae atgynhychu heb awdurdod yn torri Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBC - LA09002L





## Blaenau Gwent County Borough Council

Location: BGBC-26, 2 The Dingle, Ebbw Vale.

Easting: 316984 Northing: 209840

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBCB - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfffa E i Mawrhydi (c) Hawffraint y Goron. Y mae atgynhychu heb awdurdod yn torri Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBCB - LA09002L



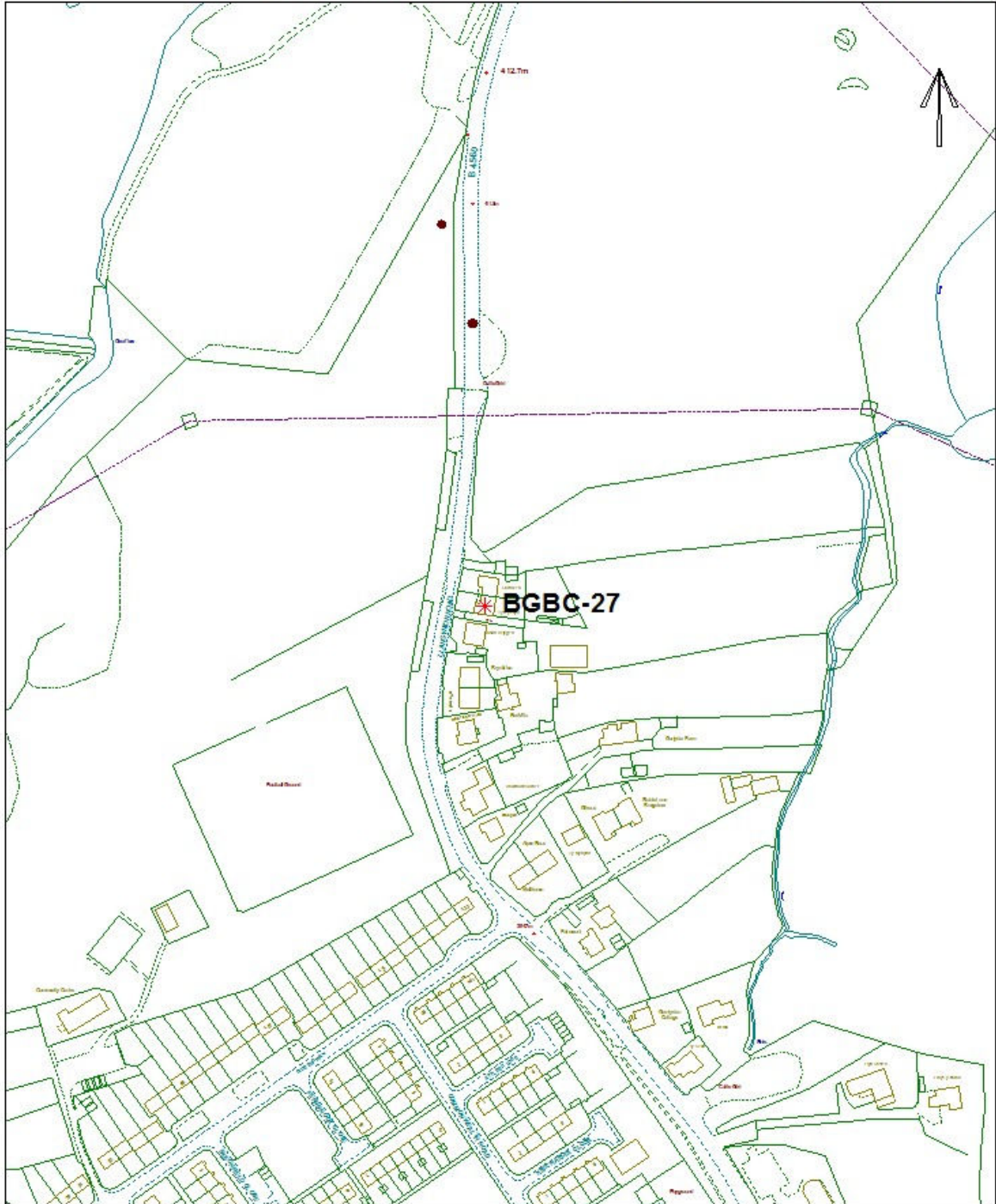


## Blaenau Gwent County Borough Council

Location: BGBC-27, Tyn y Rhyn, Llangynidr Road, Ebbw Vale

Easting: 316731 Northing: 212797

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBC - LA09002L.  
Atgynhychwyd o Fapiau'r Ordnance Survey chaniatad Rheolwr Llyfrfa E I Mawrhydi (c) Hawlfraint y Goron.  
Y mae atgynhychu heb awdurdod yn torri Hawlfraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBC - LA09002L





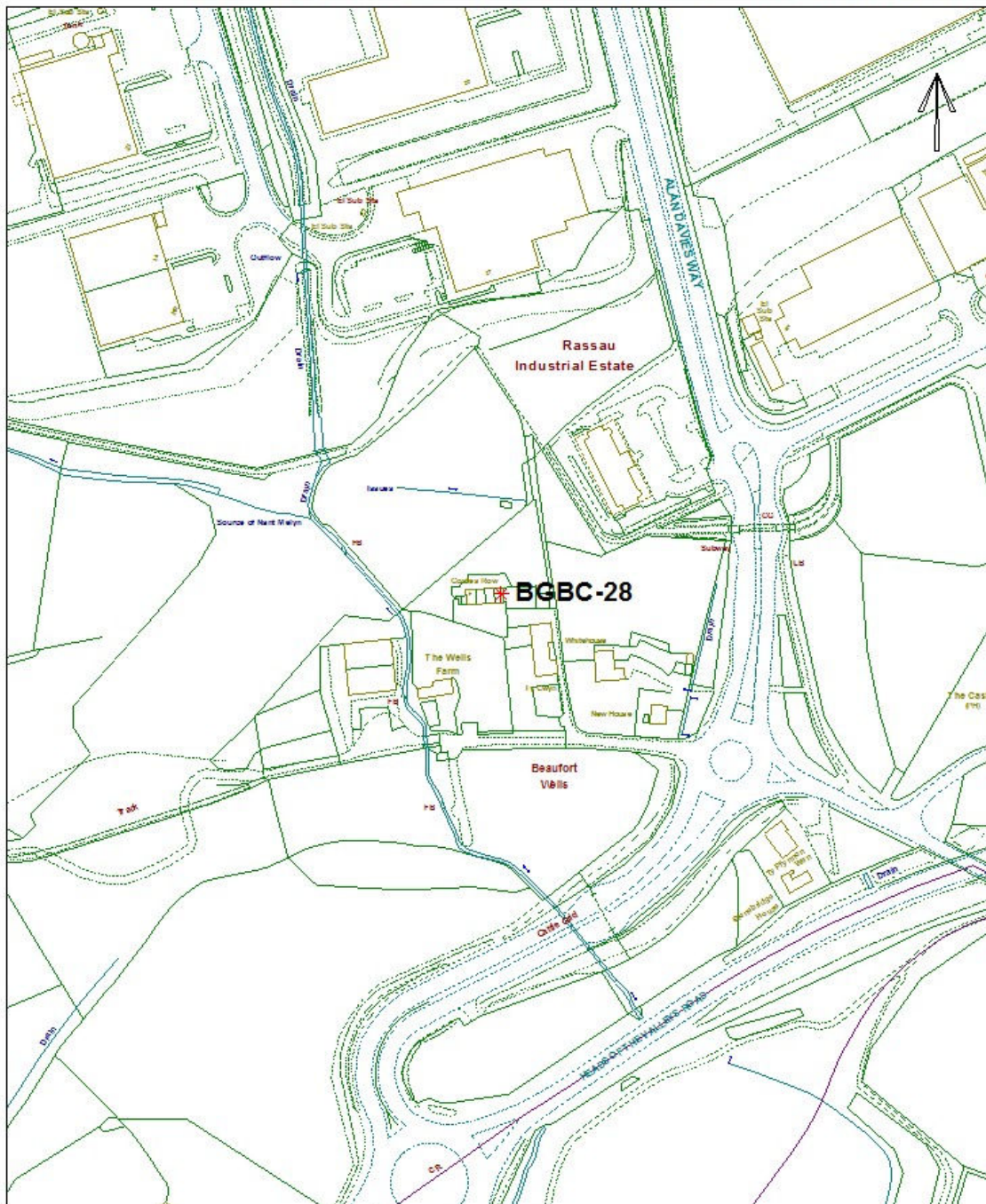


## Blaenau Gwent County Borough Council

Location: BGBC-28, 1 Coates Row, Rassau, Ebbw Vale.

Easting: 314490 Northing: 211637

Reproduced from the Ordnance Survey Mapping with the permission of Her Majesty's Stationary Office (C) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. BGBC - LA09002L. Atgynhychwyd o Fapiau'r Ordnance Survey chaniated Rheolwr Llyfrfa Ei Mawrhydi (c) Hawffraint y Goron. Y mae atgynhychu heb awdurdod yn torri Hawffraint y Goron a gall arwain at erlyniad neu achosion sifil. BGBC - LA09002L



# Appendix 4

## NO<sub>2</sub> Diffusion Tube Monitoring Monthly Mean Values 2015

SITE	07/01-04/02	04/02-04/03	04/03-01/04	01/04-29/04	29/04-27/05	27/05-02/07	02/07-28/07	28/07-26/08	26/08-30/09	30/09-23/10	23/10-01/12	01/12-06/01	Annual Mean
BGBC-01	14	15	16	17	9	13	10	14	18	26	10	12	14.5
BGBC-03	15	14	14	13	7	8	8	9	11	14	11	9	11
BGBC-04	12	8	9	7	5	5	5	5	7	9	9	6	7.3
BGBC-05	16	14	12	12	9	9	9	10	13	15	10	11	11.7
BGBC-07	21	17	16	12	10	10	11	11	13	14	24	16	14.6
BGBC-09	15	15	14	18	10	14	11	14	19	26	15	11	15.2
BGBC-11	14	12	12	9	7	7	7	9	10	12	11	10	10
BGBC-13	6	7	6	5	4	4	4	4	4	6	5	6	5.1
BGBC-16	27	24	19	19	17	16	19	16	16	18	21	20	19.3
BGBC-17	17	15	16	14	12	11	11	13	14	19	14	10	13.8
BGBC-18	25	24	25	22	17	15	13	14	16	22	x	27	18.3
BGBC-19	22	21	20	22	16	19	21	22	22	24	21	21	20.9
BGBC-20	9	22	17	24	16	19	19	24	22	25	22	20	19.9
BGBC-21	16	14	14	15	13	12	12	11	13	15	13	9	13.1
BGBC-22	17	16	16	18	11	11	11	14	15	18	14	13	14.5
BGBC-23	16	15	15	14	10	9	9	11	12	16	14	14	12.9
BGBC-24	18	17	12	15	13	15	15	15	13	10	15	15	14.4
BGBC-25	x	12	12	12	10	9	11	10	13	16	11	10	10.5
BGBC-26	20	17	15	12	9	10	10	12	13	17	17	14	13.8
BGBC-27	15	16	11	12	11	6	6	7	8	10	10	7	9.9
BGBC-28	7	7	8	7	4	5	6	7	7	11	9	8	7.2