Torfaen County Borough Council

Economy and Environment

Housing Safety and Environmental Protection

2025 Air Quality Progress Report

In fulfillment of Part IV of the Environment Act 1995, as amended by the Environment Act 2021

Local Air Quality Management

Date: September 2025

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Executive Summary: Air Quality in Our Area

Air Quality in Torfaen County Borough Council

Air pollution results from the introduction of a range of substances into the atmosphere from a wide variety of sources. It can cause both short term and long-term effects on health, but also on the wider environment. The air quality in Wales is generally better now than it has been at any time since before the Industrial Revolution.

These improvements have been achieved through the introduction of legislation enforcing tighter controls on emissions of pollutants from key sources, notably industry, domestic combustion and transport. However, despite the improvements made, air pollution is still recognised as a risk to health, and many people are concerned about pollution in the air that they breathe.

Government statistics estimate that air pollution in the UK reduces the life expectancy of every person by an average of 7–8 months, with an associated cost of up to £20 billion each year. Legislation and policies aiming to further minimise and track the impact of air pollution on health and the environment have been introduced in Europe, the UK and Wales.

Air Quality Management Areas (AQMAs) can be declared when there is an exceedance or likely to be an exceedance of an air quality objective. In Torfaen in 2019, a single air quality monitoring diffusion tube breached the national objective of 40µg/m^3 with an annual average of 47µg/m^3. More information and data was required in order to establish the spatial extent of any potential breach of the national objective before moving forward to declare an AQMA. In 2020. The diffusion tube network was expanded around the identified ‘hotspot’ and although 2020 results did not reveal any further national objective breaches, we considered that the reductions in traffic pollution due to pandemic lockdowns gave atypical results. Comparisons of traffic pollution levels between years with and without lockdowns were examined in the appendices of the 2021 Torfaen Air Quality Progress Report. Since traffic levels have normalised, we have not seen a recurrence of the 2019 exceedance of the national objective.

Torfaen Council continuously monitors ozone, particulates and the oxides of nitrogen at an automatic, urban background site located in the grounds of Croesyceiliog comprehensive school. Each month in 2024, we also deployed 25 passive diffusion tubes on lamp posts to monitor nitrogen dioxide across the borough. Out of the 300 diffusion tubes deployed over the year, 3 went missing and one was found damaged.

The automatic site had a high level of data collection throughout the year. However, some of the initially verified data for nitrogen dioxide during January, February and March 2024 was subsequently rejected from the verified data set by the QA/QC team due to an issue with the sampling head. The data capture rate for nitrogen dioxide still exceeded 75% for 2024 and so annualisation of the data was not required.

Monitoring data shows the background trend of particulates since 2004 to be quite static. Furthermore, background nitrogen dioxide levels have remained quite static since 2006.

The 2024 diffusion tube results are very similar to the 2021 data set and have not shown a repeat of the 2019 exceedance of the national objective.

In conclusion, the 2024 monitoring results do not show any exceedances of any of the national objectives.

Actions to Improve Air Quality

Torfaen County Borough Council has not yet declared any AQMAs and is continuing to closely monitor the ‘hotspot’ area identified in 2019. The 2024 results for this area have not exceeded national objectives and have shown a year-on-year reduction in nitrogen dioxide concentrations since 2022. The remainder of the borough generally has low traffic pollution levels.

The Council seeks to maintain and improve the current air quality within the borough, through working relationships with the Welsh Government, other Council departments and external organisations. We also undertake scrutiny of planning applications potentially detrimental to air quality, the monitoring of Environmental Permit emission limits along with Statutory Nuisance and Clean Air Act regulation and enforcement.

Torfaen County Borough Council works with local industry and Natural Resources Wales through the Environmental Permitting regime to help manage air quality. The Council is also a member of the Welsh Air Quality forum.

The council’s Housing Safety & Environmental Protection Team deal with complaints of nuisance burning, dark and black smoke and provide advice on appropriate fuels for domestic wood burning stoves. The Council is also involved in a number of schemes to improve green infrastructure, to promote active travel and improve to the active travel routes in the borough.

Local Priorities and Challenges

Torfaen County Borough Council is keen to increase its understanding of air quality in the borough and we review the number and location of diffusion tube monitoring locations annually. Since 2016 the Council has expanded the diffusion tube network from 13 to 25 tubes with more of a focus on air quality around schools.

How to Get Involved

Further information regarding air quality both in the Torfaen area and in general can be obtained by visiting the air quality section of our website here;

Pollution | Torfaen County Borough Council

By visiting the Welsh Government, air quality website here;

Cwmbran Crownbridge Site Air Pollution | Air Quality In Wales

The Welsh Government Air Quality Website

If you have specific questions, you can contact the Housing Safety & Environmental Protection Team by emailing public.health@torfaen.gov.uk

Alternatively, you can call us on 01495 762200.

The latest published report and the Welsh translation of the executive summary can be found here.

Torfaen County Borough Council Website

Copies of previous reports are available on request.

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1 Actions to Improve Air Quality

1.1 Previous Work in Relation to Air Quality

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. It represents Torfaen County Borough Council's eighteenth progress report on air quality. Results from monitoring in the borough are presented and any potentially significant sources of air pollution are identified. The progress report evaluates those changes since the last assessment, which could lead to the risk of an air quality objective being exceeded.

Table 1 Previous Reports

REPORT TITLE	PUBLISHED	OUTCOME
Updating and Screening Assessment 2003	October 2003	No breaches of Objectives
Air Quality Progress Report 2003	September 2004	No breaches of Objectives
Air Quality Progress Report 2004	August 2005	No breaches of Objectives
Updating and Screening Assessment 2006	November 2006	No breaches of Objectives
Air Quality Progress Report 2006	July 2007	No breaches of Objectives
Air Quality Progress Report 2007	April 2008	No breaches of Objectives
Updating and Screening Assessment 2009	April 2009	No breaches of Objectives
Air Quality Progress Report 2010	April 2010	No breaches of Objectives
Air Quality Progress Report 2011	April 2011	No breaches of Objectives
Updating and Screening Assessment 2012	April 2012	No breaches of Objectives
Air Quality Progress Report 2013	March 2013	No breaches of Objectives
Air Quality Progress Report 2014	April 2014	No breaches of Objectives
Updating and Screening Assessment 2015	April 2015	No breaches of Objectives
Air Quality Progress Report 2016	May 2016	No breaches of Objectives
Air Quality Progress Report 2017	May 2017	No breaches of Objectives
Air Quality Progress Report 2018	August 2018	No breaches of Objectives
Air Quality Progress Report 2019	September 2019	No breaches of Objectives
Air Quality Progress Report 2020	September 2020	Single diffusion tube breaches objective
Air Quality Progress Report 2021	October 2021	No breaches of Objectives
Air Quality Progress Report 2022	September 2022	No breaches of Objectives
Air Quality Progress Report 2023	September 2023	No breaches of Objectives
Air Quality Progress Report 2024	August 2024	No breaches of Objectives

1.2 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when air quality is close to or above an acceptable level of pollution (known as the air quality objective (Please see Appendix A). After declaring an AQMA the local authority must prepare an Air Quality Action Plan (AQAP) within 18 months setting out measures it intends to put in place to improve air quality to at least the air quality objectives, if not even better. AQMA(s) are seen by local authorities as the focal points to channel resources into the most pressing areas of pollution as a priority.

Torfaen County Borough Council currently does not have any AQMAs.

1.3 Top Three Air Quality Actions

To improve transparency of local air quality management information, Torfaen County Borough Council is implementing three key air quality improvement measures as follows.

1. Increase air quality monitoring around schools in Torfaen

Undertake a full review of diffusion tube deployment in the borough with a view to removing tubes from low reading sites and redeploying them around schools. The purpose of monitoring around schools is to ensure that the air quality complies with air quality standards to protect the health of children.

2. Active Travel – Infrastructure Improvements

Enhancing active travel routes by installing lighting in four subways, resurfacing two subways, and adding drainage systems. In collaboration with a local college, we are also introducing artwork to make these spaces more inviting and encourage walking and cycling to town centres in Cwmbran and Pontypool. Additional improvements include the installation of cycle and scooter storage facilities, as well as public cycle repair stations.

3. Active Travel – Behaviour Change Initiatives

Working closely with schools to develop tailored Active School Travel Plans. Pupils are encouraged to make active journeys through badge reward schemes using journey trackers. Activities include active travel-themed assemblies and consultations to gather feedback on current routes and identify areas for improvement. Each school now has a distance map showing 10–15 minute walking zones to promote walking from nearby areas. Also offering free bike repair sessions to support safe and sustainable travel.

2 Air Quality Monitoring Data and Comparison with Air Quality Objectives

2.1 Summary of Monitoring Undertaken in 2024

2.1.1 Automatic Monitoring Sites

This section sets out what monitoring has taken place and how results compare with the objectives.

Torfaen County Borough Council undertook automatic (continuous) monitoring at the Cwmbran Crownbridge site throughout 2024. Table 2.1 presents the details of the site.

National monitoring results are available at Front page | Air Quality In Wales

Maps showing the location of the Cwmbran Crownbridge monitoring site are provided in Figure 2.1 and further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C.

Torfaen County Borough Council currently operates one automatic monitoring site located in the grounds of Croesyceiliog Comprehensive School in the town of Cwmbran in the south of the County Borough. Nitrogen dioxide is monitored continuously as part of the National Automatic Urban and Rural Network (AURN) by means of a chemiluminescent analyser manufactured by API. Levels of PM_{10} are continuously measured at the Cwmbran Crownnbridge monitoring site using a Tapered Element Oscillating Microbalance (TEOM) monitor manufactured by Rupprecht and Pattaschnick. Ozone is also continuously monitored at the site as part of the National AURN using a dual cell ultraviolet photometric analyser manufactured by Thermo Instruments.

Figure 2.1 (x2 maps) shows the location of the Cwmbran Crownbridge Automatic Monitoring site. More detailed tube maps can be found in Appendix D. Figure 2.2 shows a map of the non-automatic monitoring site. Quality control procedures as detailed in the AEA site operator's manual are followed. The analysers are calibrated once every four weeks using gases traceable to national standards. All data are scaled in line with four weekly calibration checks. The analysers also perform internal overnight checks and are serviced every 6 months. Routine monthly calibration visits are carried out by Torfaen County Borough Council officers. Other calibrations and audits are carried out by Bureau Veritas and Ricardo who also ratify the data. Services were also carried out twice a year by Enviro Technology Ltd. who also hold the repair contract for the site.

2.1.2 Non-Automating Monitoring Sites

Torfaen County Borough Council undertook non-automatic (passive) monitoring of NO_2 at 25 sites during 2024.

Appendix A provides more details of the results from these sites.

A map showing the relative location of all the monitoring sites is provided in Figure 2.2 and maps showing the location of individual monitoring sites are included in Appendix D.

Further details on Quality Assurance/Quality Control (QA/QC) and bias adjustment for the diffusion tubes are included in Appendix C.

Table 2.1 – Details of Automatic Monitoring Sites

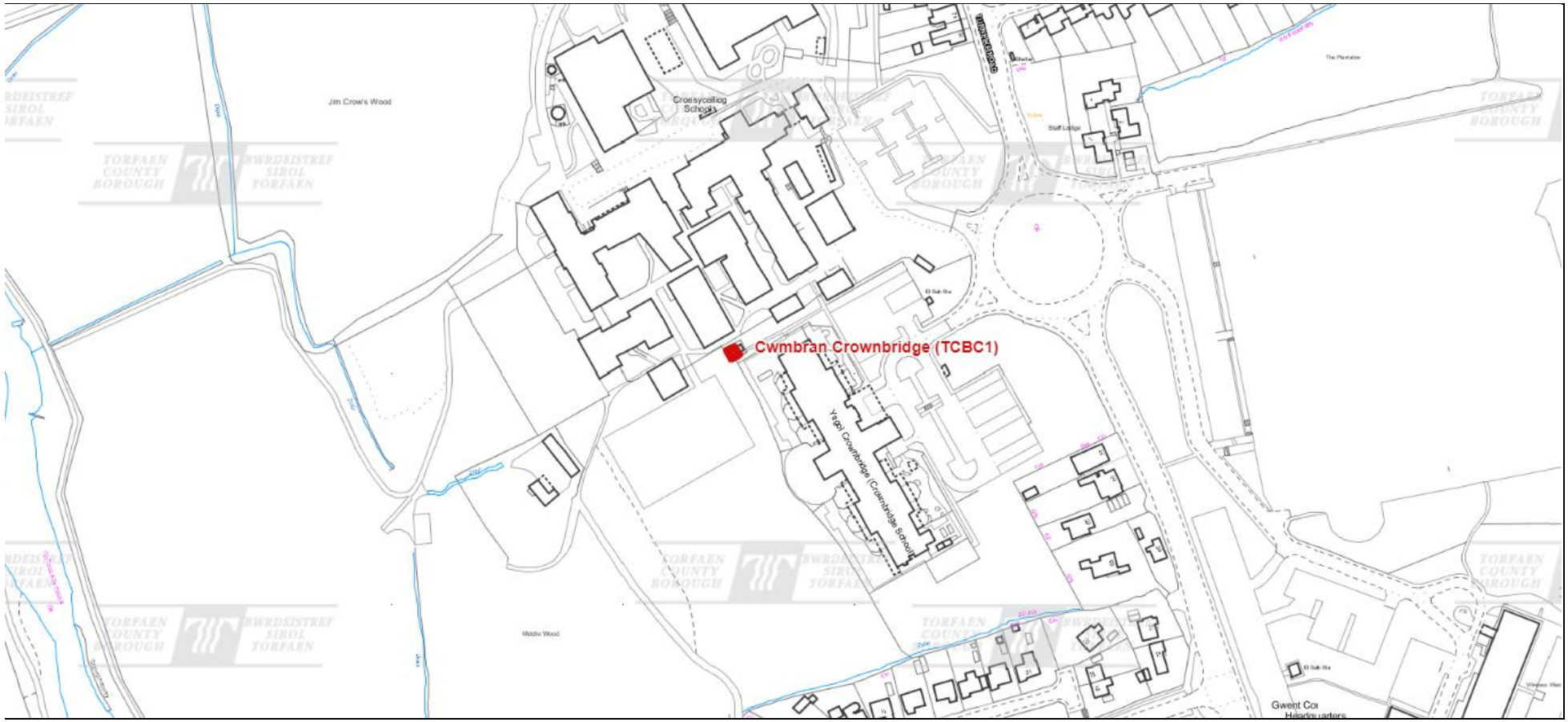
Site ID	Site Name	Site Type	In AQMA?	X OS Grid Reference	Y OS Grid Reference	Pollutants Monitored	Monitoring Technique	Inlet Height (m)	Distance from monitor to nearest relevant exposure (m) (2)	Distance from Kerb to Nearest Relevant Exposure (m)	Distance from Kerb to Monitor (m)
Cwmbran Crownbridge	Cwmbran Crownbridge	Urban Background	No	330476	195483	NO_2	Chemiluminesce	3.0	0	1	135
Cwmbran Crownbridge	Cwmbran Crownbridge	Urban Background	No	330476	195483	NO	Chemiluminesce	3.0	0	1	135
Cwmbran Crownbridge	Cwmbran Crownbridge	Urban Background	No	330476	195483	PM_{10}	TEOM	3.0	0	1	135
Cwmbran Crownbridge	Cwmbran Crownbridge	Urban Background	No	330476	195483	O_3	Ultraviolet absorption	3.0	0	1	135

Notes:

(1) N/A if not applicable

(2) 0m indicates that the sited monitor represents exposure and as such no distance calculation is required.

Figure 2.1 – Maps of Automatic Monitoring Site [Link to Welsh Air Quality Forum (WAQF) Website GIS]



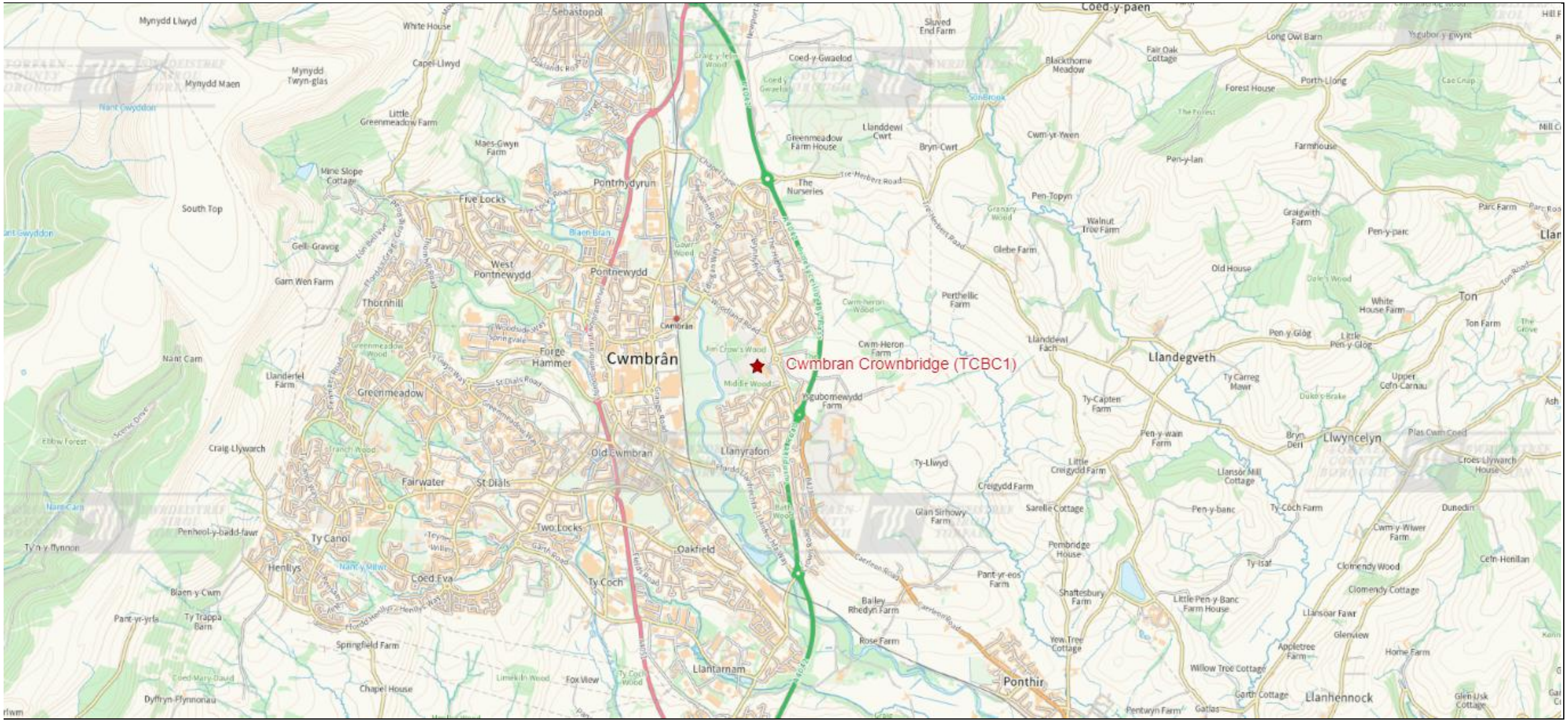

Cwmbran Crownbridge (TCBC1)
Cwmbrân
Coed-y-paen
Sebastopol
Pontrhydyrun
Pontnewydd
West Pontnewydd
Five Locks
Thornhill
Greenmeadow
Forge Hammer
Old Cwmbran
Llanyrafon
Fairwater
St Dials
Two Locks
Ty Canol
Henllys
Coed Eva
Ty Coch
Oakfield
Llantarnam
Ponthir
Llandegveth
Llwyncelyn
Llanhennock
Ton
South Top
Mynydd Llwyd
Mynydd Maen
Mynydd Twyn-glas
White House
Capel-Llwyd
Little Greenmeadow Farm
Maes-Gwyn Farm
Mine Slope Cottage
Gelli-Gravog
Garn Wen Farm
Nant Cam
Llanderfel Farm
Craig-Llywarch
Penheol-y-badd-fawr
Ty'n-y-ffynnon
Blaen-y-Cwm
Pant-yr-yrfa
Ty Trappa Barn
Springfield Farm
Chapel House
Dyffryn-Ffynnonau
Fox View
Coed-y-Gwaelod
Sluved End Farm
Greenmeadow Farm House
Llanddewi Cwrt
Bryn-Cwrt
The Nurseries
Blackthorne Meadow
Fair Oak Cottage
Long Owl Barn
Forest House
Porth-Llong
Farmhouse
Pen-y-lan
Cwm-yr-Ywen
Pen-Topyn
Walnut Tree Farm
Glebe Farm
Perthellic Farm
Cwm-Heron Farm
Llanddewi Fach
Ty-Capten Farm
Pen-y-wain Farm
Ysguborewydd Farm
Ty-Llwyd
Little Creigydd Farm
Creigydd Farm
Glan Sirhowy Farm
Sarelle Cottage
Pembridge House
Pant-yr-eos Farm
Bailey Rhedyn Farm
Shaftesbury Farm
Rose Farm
Yew Tree Cottage
Old House
Graigwith Farm
Pen-y-parc
Parc Farm
White House Farm
Ton Farm
Pen-y-Glôg
Little Pen-y-Glôg
Ty Carreg Mawr
Upper Cofn Carnau
Bryn Deri
Plas Cwm Coed
Croes Llywarch House
Llansôr Mill Cottage
Pen-y-banc
Ty-Coch Farm
Dunedin
Cwm-y-Wiwer Farm
Ty-Isaf
Clomendy Wood
Clomendy Cottage
Cefn-Henllan
Little Pen-y-Banc Farm House
Llansoar Fawr
Glenview
Appletree Farm
Home Farm
Willow Tree Cottage
Garth Cottage
Glen Usk Cottage
Pentwyn Farm

Table 2.2 – Details of Non-Automatic Monitoring Sites

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
TCBC3	Pontypool Town Centre	Roadside	328264	200781	NO_2	No	0	2	No	3
TCBC5	Cwmbran Drive Mosely Terrace	Roadside	329430	197006	NO_2	No	4	1	No	3
TCBC6	Henllys Way	Roadside	328500	194522	NO_2	No	5	2	No	3
TCBC8	Caerleon Rd Ponthir	Roadside	332672	192878	NO_2	No	1	1	No	3
TCBC9	Llanyrafon Way	Roadside	330400	194857	NO_2	No	N/A	3	No	3
TCBC10	Edlogan Way	Roadside	330011	196009	NO_2	No	2	1	No	3
TCBC11	Golf Road New Inn	Urban background	330498	199884	NO_2	No	N/A	2	No	3
TCBC15	Station Road Griffithstown	Roadside	329539	198464	NO_2	No	1	1	No	3
TCBC16	Richmond Road Pontnewydd	Roadside	329147	196408	NO_2	No	1	1	No	3
TCBC17	Turnpike Road Croesyceiliog	Roadside	330578	195735	NO_2	No	10	1	No	3
TCBC18	Rockhill Road Pontymoile	Roadside	328978	200434	NO_2	No	1	1	No	3
TCBC19	21 Station St Abersychan	Roadside	326974	203354	NO2	No	1	0	No	3
TCBC20	Cwmbran Drive (Sainsbury)	Roadside	329240	195210	NO_2	No	20	1	No	3
TCBC21	Pen y Lan Lane Mamhilad	Roadside	330801	201731	NO_2	No	10	15	No	3
TCBC22	Church Road Blaenavon	Roadside	325111	208826	NO_2	No	3.5	1	No	3
TCBC23	Sebastopol South Street	Roadside	329308	198177	NO_2	No	0.5	1	No	3

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
TCBC24	Pontnewynydd St Lukes Road	Roadside	327274	201928	NO_2	No	0.5	0.5	No	3
TCBC24/1	Nisa shop lamppost	Roadside	327237	201967	NO_2	No	1	1	No	3
TCBC24/2	12 St Lukes Road	Roadside	327214	202005	NO2	No	3	1	No	3
TCBC24/3	1 Groveside Villas	Roadside	327187	202051	NO_2	No	2	1	No	3
TCBC24/5	Flat 24 / Tonic Hairdressers	Roadside	327308	201912	NO_2	No	1	1	No	3
TCBC25	Penygarn Hill	Roadside	328206	201300	NO_2	No	6	1	No	3
TCBC26	A4042 Croyseyceiliog By-pass	Roadside	330743	196609	NO_2	No	11.5	3	No	3
TCBC27	Snatchwood, 3 Hollyoake Terrace	Roadside	326914	202933	NO_2	No	3	1	No	3
TCBC28	Snatchwood Rd 57	Roadside	326907	202741	NO_2	No	4	1	No	3

Notes:

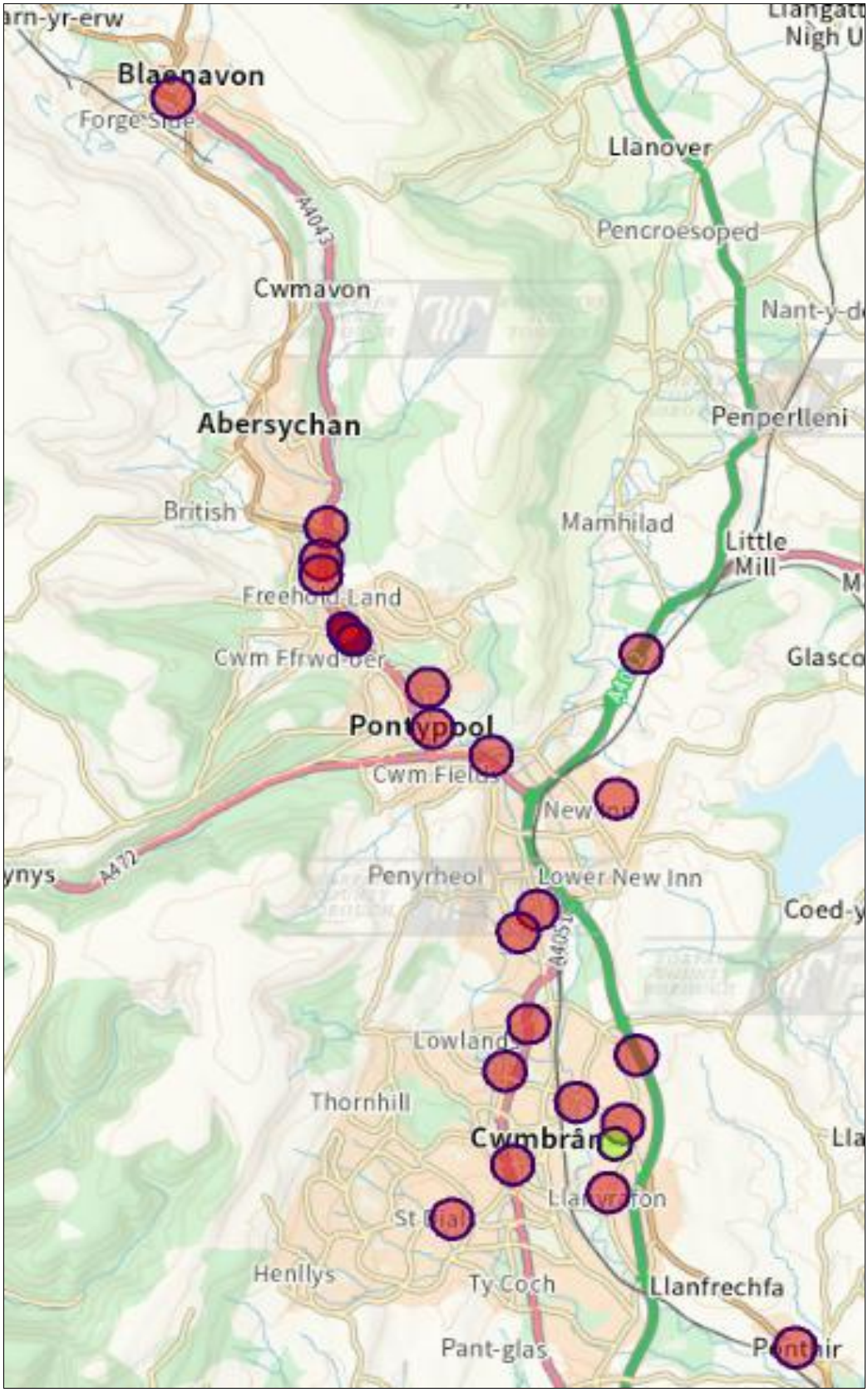
(1) 0m indicates that the sited monitor represents exposure and as such no distance calculation is required.

(2) N/A if not applicable

Figure 2.2 – Map of Non-Automatic Monitoring Sites

More detailed maps are provided in Appendix D.

(Red circles represent diffusion tubes and the green circle shows the automatic monitoring station)



2.2 2024 Air Quality Monitoring Results

Table 2.3 – Annual Mean NO_2 Monitoring Results: Automatic Monitoring (µg/m^3)

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2019	2020	2021	2022	2023	2024
Cwmbran Crownbridge	Urban background	Automatic	75.3	75.3	12	9	10	10	8.4	7

Notes:

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

NO_2 annual means exceeding 60µg/m^3 indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined.**

Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Table 2.4 – Annual Mean NO_2 Monitoring Results: Non-Automatic Monitoring (µg/m^3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
TCBC3	328264	200781	Roadside	100	100	22	21	23	18.9	18.4
TCBC5	329430	197006	Roadside	100	100	27	29	29	24.6	24.4
TCBC6	328500	194522	Roadside	100	100	16	16	16	14.3	12.3
TCBC8	332672	192878	Roadside	100	100	13	13	13	11.2	10.3
TCBC9	330400	194857	Roadside	100	92	13	12	13	10.9	11.1
TCBC10	330011	196009	Roadside	100	100	17	18	19	16	14.2
TCBC11	330498	199884	Urban background	100	92	11	11	11	9.5	8.9
TCBC15	329539	198464	Roadside	100	100	15	16	17	14.4	13.5
TCBC16	329147	196408	Roadside	100	100	22	24	25	21.5	22.5
TCBC17	330578	195735	Roadside	100	100	13	14	14	12.5	10.4
TCBC18	328978	200434	Roadside	100	100	23	24	25	21.7	20.5
TCBC19	326974	203354	Roadside	100	100	25	24	24	20.5	18.8
TCBC20	329240	195210	Roadside	100	100	24	26	27	22.8	23.3
TCBC21	330801	201731	Roadside	100	100	13	13	13	11.3	9.6
TCBC22	325111	208826	Roadside	100	100	13	13	14	11.5	10.3
TCBC23	329308	198177	Roadside	100	92	15	16	15	13.9	13.8
TCBC24	327274	201928	Roadside	100	100	37	37	39	33.1	30.0
TCBC24/1	327237	201967	Roadside	100	100	30	30	29	26.1	26.0
TCBC24/2	327214	202005	Roadside	100	100	33	34	34	28.9	26.3
TCBC24/3	327187	202051	Roadside	100	100	29	31	31	26.5	25.3
TCBC24/5	327308	201912	Roadside	100	100	30	32	32	29	28.1
TCBC25	328206	201300	Roadside	100	100	20	22	24	21.1	20.4
TCBC26	330743	196609	Roadside	100	100	23	26	27	21.5	20.4
TCBC27	326914	202933	Roadside	100	92	33	33	31	25.5	26.7
TCBC28	326907	202741	Roadside	100	100	29	30	30	24.3	23.6

☐ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22**

☐ **Diffusion tube data has been bias adjusted using a national factor of 0.78 derived from 37 co-location studies**

☐ **Reported concentrations are those at the location of the monitoring site (bias adjusted and annualised, as required), i.e. prior to any fall-off with distance correction**

Notes:

The annual mean concentrations are presented as µg/m^3.

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

NO_2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined**.

Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Figure 2.3 – Trends in Annual Mean NO_2 Concentrations

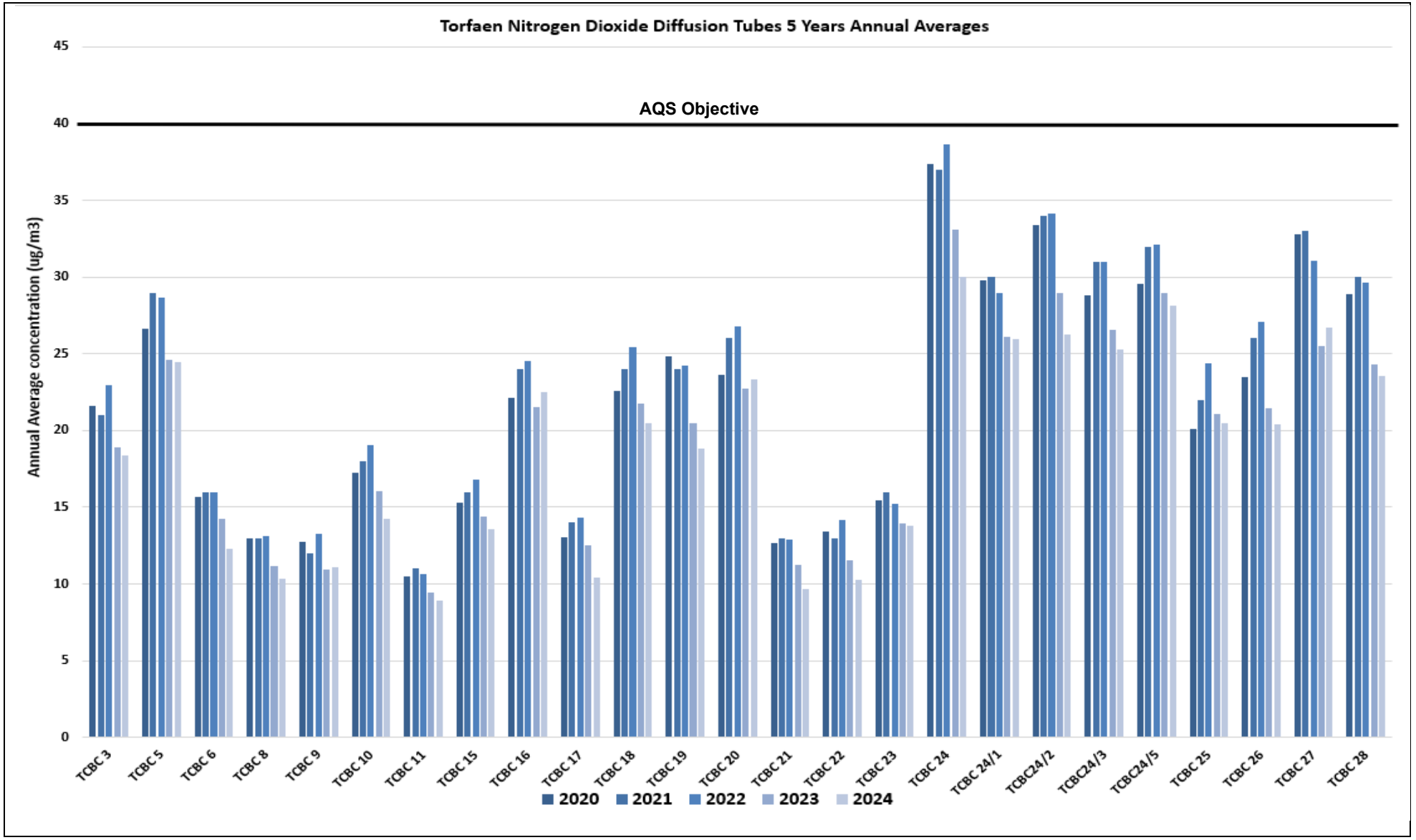


Table 2.5 – 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
Cwmbran Crownbridge	330476	195483	Urban background	Automatic	75.3	75.3	0	0	0	0(69.9)	0

Notes:

Exceedances of the NO_2 1-hour mean objective (200µg/m^3 not to be exceeded more than 18 times/year) are shown in **bold**.

If the period of valid data is less than 85%, the 99.8th percentile of 1-hour mean is provided in brackets.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Table 2.6 – Annual Mean PM_{10} Monitoring Results (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
Cwmbran Crownbridge	330476	195483	Urban Background	98.6	98.6	18	18.5	20.2	19.5	18.2

Notes:

Exceedances of the PM_{10} annual mean objective of 40µg/m^3 are shown in **bold**.

All means have been "annualised" as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Figure 2.5 – Trends in Annual Mean PM_{10} Concentrations

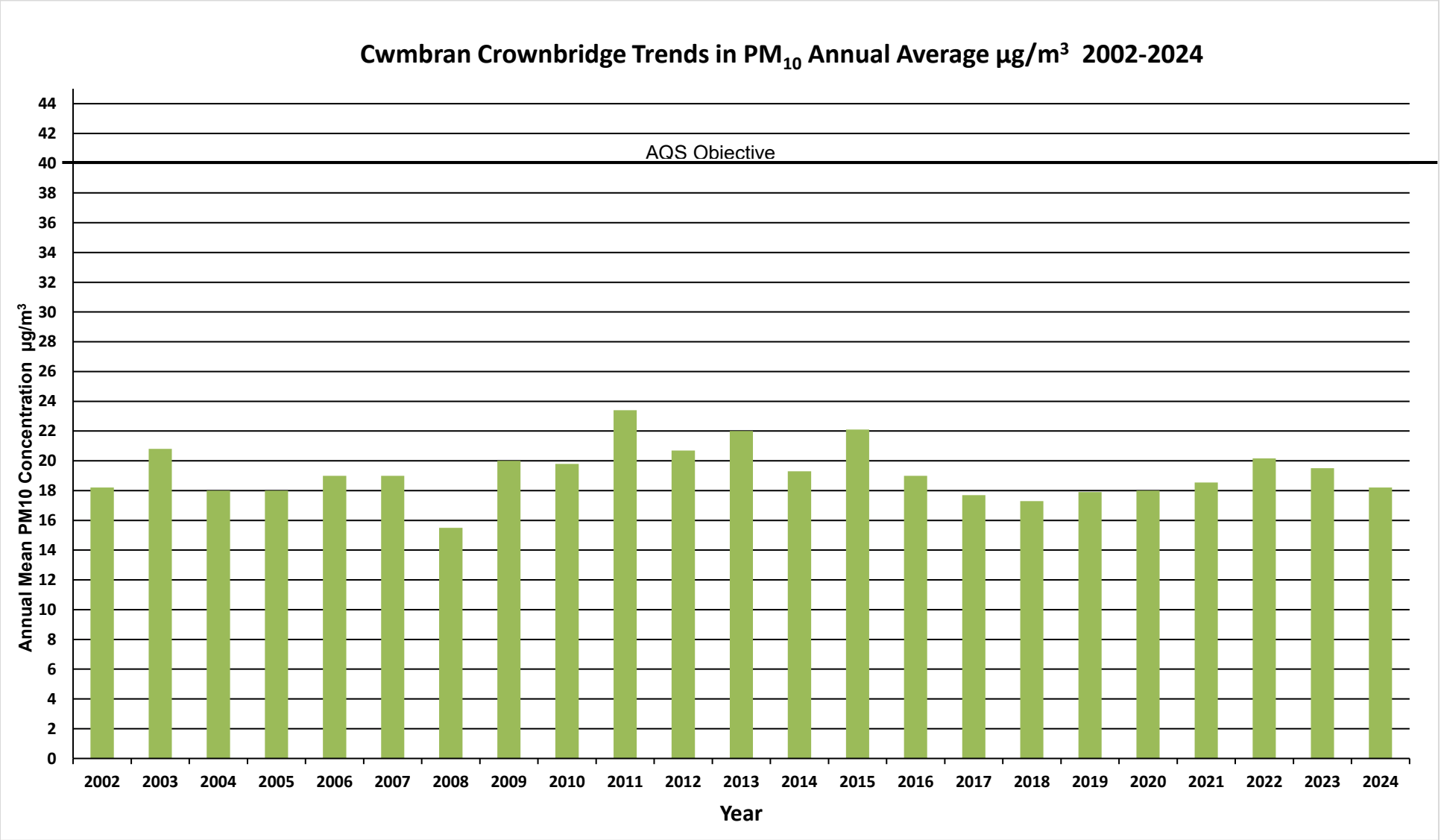


Table 2.7 – 24-Hour Mean PM_{10} Monitoring Results, Number of PM_{10} 24-Hour Means > 50µg/m^3

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
Cwmbran Crownbridge	Urban Background	98.6	98.6	2 (29)	2	1	1	1

Notes:

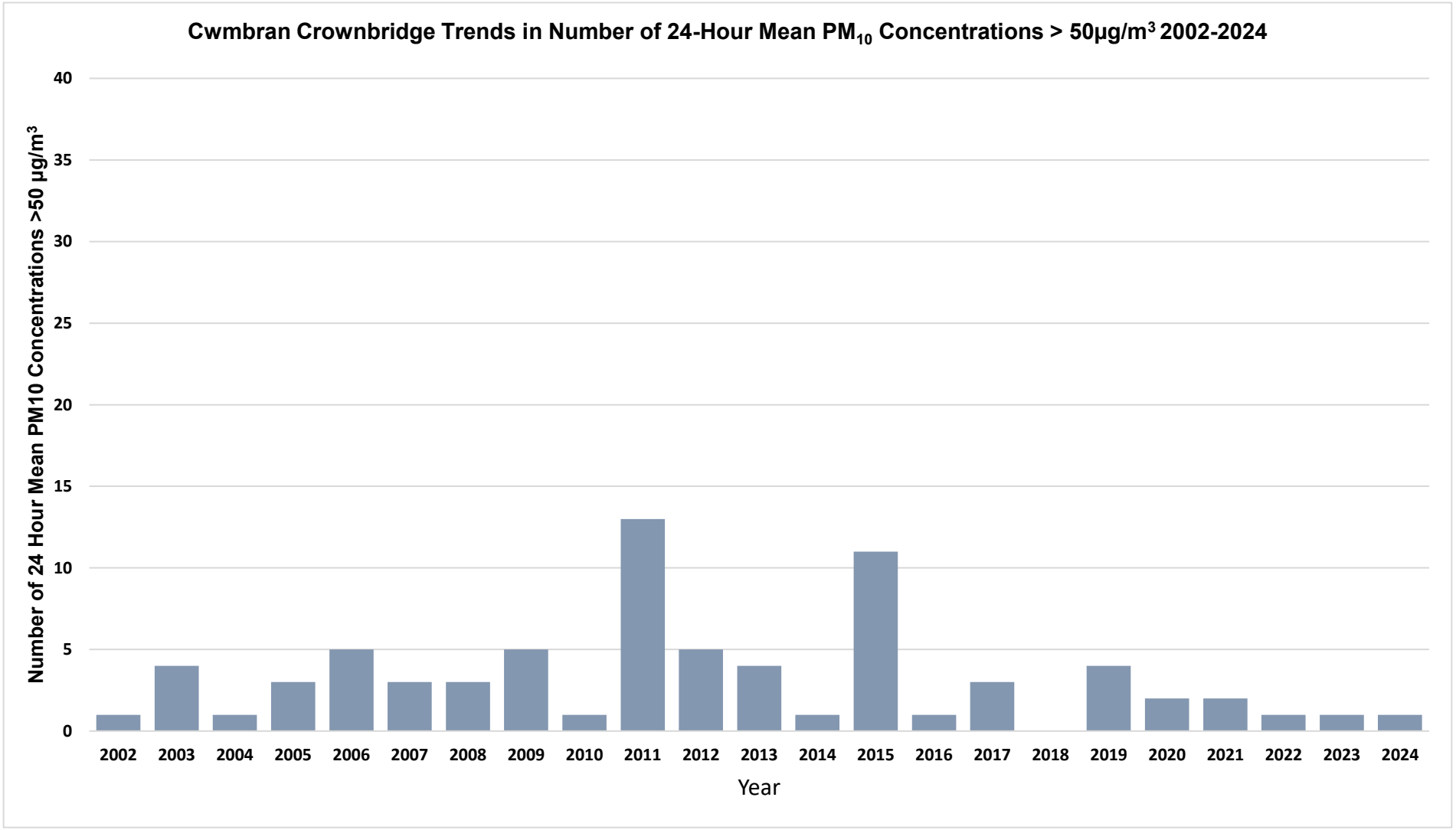
Exceedances of the PM_{10} 24-hour mean objective (50µg/m^3 not to be exceeded more than 35 times/year) are shown in **bold**.

If the period of valid data is less than 85%, the 90.4th percentile of 24-hour means is provided in brackets.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Figure 2.6 – Trends in Number of 24-Hour Mean PM_{10} Results > 50µg/m^3



2.3 Comparison of 2024 Monitoring Results with Previous Years and the Air Quality Objectives

2.3.1 Nitrogen Dioxide (NO_2)

Automatic and diffusion tube monitoring of nitrogen dioxide in Torfaen in 2024 has not identified any exceedances of the air quality objectives (see Tables 2.3 & 2.4) and there has been no need to declare an AQMA.

The nitrogen dioxide results from the automatic monitor show that both the annual mean and the hourly mean objectives have been met once again. Trends have remained similar for the previous 5 years with a slight reduction in the annual mean since 2022 (10 µg/m^3 in 2022 compared to 7 µg/m^3 in 2024). There were no exceedances of the 200µg/m^3 1 hour mean objective during 2024. For information, the maximum hourly mean recorded for NO_2 during 2024 was 76µg/m^3.

Non-Automatic, Diffusion Tube Monitoring Data

The nitrogen dioxide concentrations measured by diffusion tubes show that the annual mean objective has been met at all locations. There has been a gradual reduction in the annual mean nitrogen dioxide concentrations at most diffusion tube locations (20 out of 25) since 2022.

2.3.2 Particulate Matter (PM_{10})

Automatic monitoring of PM_{10} in Torfaen in 2024 has not identified any exceedance of the air quality objectives and there has been no need to declare an AQMA. Trends have remained broadly similar for the previous 5 years.

Tables 2.6 and 2.7 display the PM_{10} monitoring results from the automatic monitor operated by Torfaen County Borough Council. These results show that both the annual mean and the 24-hour mean objectives for PM_{10} have been met. Results for previous years up to and including 2020 have been corrected using the appropriate Volatile Correction Model (VCM) to provide a more accurate estimate of the gravimetric concentration. The 2021 to 2024 data set could not be corrected in this way due to a lack of TEOM Filter Dynamics Measurement System (FDMS) data.

Section 7.161 of TG(22) states;

"It should be noted that due to the gradual withdrawal of TEOM-FDMS instruments and phased replacement with new compliant PM monitoring equipment on the AURN, the extent of data available to maintain the VCM has significantly reduced in recent years. As such, the extent of geographical coverage for the applicability and future viability of the VCM has become limited".

Despite the recent modification the VCM correction website to allow FDMSs to be within 200km to be used for VCM correction (up from the previous 130 km), unfortunately Torfaen still had no known sites within the valid range of the correction model.

For 2021 to 2024 data, we have therefore reverted to the historical recommendation of applying a 1.3 multiplication factor to the TEOM results, this being the best method available to account for the loss of volatile particulates in the monitor. Any comparisons made in this report of the 2024 data, with data prior to 2021, are therefore merely indicative.

2024 results for PM_{10} were broadly similar to the previous 5 years. The monitor was moved 40m northeast in 2020 and subsequent results are considered comparable. There was one day in 2024 where the 24-hour average level was above 50µg/m^3 (not to be exceeded more than 35 times per year). For information, this highest recorded 24-hour average during 2024 was 53.3µg/m^3.

The particulate monitor performed well and data capture for the 2024 period was 98.6%.

2.3.3 Particulate Matter ($PM_{2.5}$)

Torfaen County Borough Council does not currently monitor $PM_{2.5}$ and have no plans to do so in the future. This position may change if it becomes necessary to comply with the proposed new clean air legislation for Wales.

2.3.4 Other Pollutants Monitored

The Cwmbran Crownbridge site also monitors Ozone. Whilst the results are not reported in this document, the monitoring results for Ozone from the Cwmbran Crownbridge site can be found here: Cwmbran Crownbridge Site Air Pollution | Air Quality In Wales

2.4 Summary of Compliance with AQS Objectives as of 2024

Torfaen County Borough Council has examined the results from monitoring in the County Borough. Concentrations are all below the Objectives, therefore no further action is required.

3 New Local Developments

3.1 Road Traffic Sources (and Other Transport)

Torfaen County Borough Council has no new road traffic (and other transport) sources since the last assessment.

3.2 Industrial / Fugitive or Uncontrolled Sources / Commercial Sources

Torfaen County Borough Council has no new Industrial / Fugitive or Uncontrolled Sources / Commercial Sources since the last assessment.

3.3 Other Sources

There have been no significant pollution incidents reflected in monitoring data in Torfaen during 2024. The council's Housing Safety & Environmental Protection Team respond to between 80 and 100 complaints of domestic and industrial smoke each year and this figure does not appear to be rising. Domestic wood burning stoves account for around 0.5% of these complaints and do not appear to be rising.

Torfaen County Borough Council confirms that there are no new or newly identified local developments which may have an impact on air quality within the Local Authority area.

Torfaen County Borough Council 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 Policies and Strategies Affecting Airborne Pollution

4.1 Local / Regional Air Quality Strategy

The requirement for all Local Authorities who have not designated an AQMA to draw up a Local Air Quality Strategy only applies in England and is not a requirement in Wales under Chapter 3, LAQM, TG22.

4.2 Air Quality Planning Policies

Torfaen County Borough Council's approach to air quality and planning is considered within the sustainability appraisal objectives of the Local Development Plan (LDP). A statutory review of the LDP was completed in 2018 and the replacement plan is expected to be adopted in October 2026, the replacement plan will cover the 2022-2037 period with the section on air quality revised.

All planning applications are considered under the guidance of Planning Policy Wales, edition 11 that approaches air quality and planning more robustly in the light of The Well-being of Future Generations Act (Wales) 2015. It is also noted that the associated Technical Advice Note 11 on 'Noise' (October 1997) is expected to be replaced shortly with a new TAN11 on 'Air Quality, Noise and Soundscape'.

4.3 Local Transport Plans and Strategies

The South East Wales Valleys Local Transport Plan, which has been jointly produced by Blaenau Gwent, Caerphilly, Merthyr Tydfil, Rhondda Cynon Taff and Torfaen County Borough Councils, sets out the local authority's priorities for transport schemes in the five year period 2015 to 2020, and their medium and longer term aspirations up to 2030. The document also sets out the Councils' policies for safe, integrated, efficient and economic transport facilities and services to, from and within their area. Air quality is referenced within Table 1 (Issues, Opportunities and Interventions in the South East Valleys Area) and Table 17 (Monitoring and Evaluation Plan for Highway Improvement Schemes).

The Transport Plan can be found here.

The South East Wales Valleys Local Transport Plan [2]

1. https://datamap.gov.wales/maps/active-travel-network-maps/edit#/

2. https://www.torfaen.gov.uk/en/Related-Documents/Roads-Highways-and-Pavements/Local-Transport-Plan/South-East-Wales-Valleys-Local-Transport-Plan.pdf

4.4 Active Travel Plans and Strategies

Fewer car journeys will generate less vehicle-based traffic emissions and less pollution. We are encouraging people to choose to leave the car at home and walk, wheel or cycle for their everyday journeys to work, school and other local destinations. Since year 2000 Torfaen Highways have been actively developing our walking and cycling network initially with specific focus on walking and cycling routes to school. In 2008 this was broadened out to also include key destinations in the local communities. The introduction of the Active Travel (Wales) Act 2013 profoundly impacted the road user hierarchy and progressively funded a much greater expansion of the non-motorised transport network so that more people can more easily get around by bicycle or as a pedestrian, scooter, mobility scooter and wheelchair user.

The whole of Wales Active Travel Network Map (ATNM) Consultation was undertaken in 2021, following an extensive consultation process a final ATNM map identifying 175 future routes and 64 existing active travel routes was produced. The completed ATNM and supporting documentation was submitted to Welsh Government in March 2022 and approved on 1st December 2022. The ATNM became live and available for the public to view on DataMap Wales on 7 December 2022, which can be found here -

Wales Active Travel Network Map [1]

Torfaen County Borough Council are currently undertaking another ATNM consultation and results will be sent to Welsh Government for approval and publication the end of 2026.

Road safety teams have led many initiatives to reduce school gate congestion and associated pollution from vehicle emissions. In recent years, this work is increasingly jointly promoted by active travel groups. A new generation Active Travel School Plans have been produced in conjunction with several schools in Torfaen. This has resulted in an increase in walking wheeling and cycling to our school sites at the majority of schools whom have taken part in the plans, evidence from the results of the annual Public Health Wales hands up surveys have shown.

To support sustainable travel and provide a viable alternate to car use, Cwmbran railway station was substantially redeveloped and expanded several years ago as a transport interchange. The redevelopment of Pontypool & New Inn railway station as a second transport interchange are nearing completion. This is an out of town location that serves a wide catchment area including rural communities of Torfaen & neighbouring Monmouthshire

and will offer the opportunity for multi-mode journeys through park & ride facilities, reducing the need for car journeys and associated vehicle pollution.

The Active Travel Plan can be found here -

Torfaen Active Travel Plan [2]

4.5 Local Authorities Well-being Objectives

The Council has set nine interconnected well-being objectives in its County Plan which can be found here.

County Plan 2022-27 [1].

An update on progress towards achieving the Council's Well-being Objectives can be found here.

Our annual self-assessment and well-being report | Torfaen County Borough Council

The Council's Climate and Nature Emergency Action Plan was approved by Cabinet in February 2022. The Plan forms part of the Council's Strategic Framework of strategies and policies that are supporting delivery of the County Plan and its Wellbeing Objectives. The Plan also responds to the Council's declaration of both climate and a nature emergency.

The Climate and Nature Emergency Action Plan's actions are set out under 4 work streams, that reflect the Council's overall objectives in relation to the climate and nature emergency:

1: The Council itself becomes net zero carbon by 2030.

2: The Council leads, supports, facilitates, and encourages Torfaen's communities, residents, and businesses towards net zero carbon by 2050.

3: Our changing climate is factored into the way we plan, so that our communities and the services we deliver are resilient.

4: Torfaen's precious natural resources, and the biodiversity they support are protected and enhanced.

A wide range of officers from across the Council are involved in delivering the plan and many of the actions are contributing towards supporting good air quality in the borough.

During 2024-25 we have:

- Generated 606,907 kWh of renewable energy
- Installed heat pumps at 4 sites, with a 5th site nearing completion

- Constructed a new net zero school (which was completed early 2025/26)
- Completed a net zero school extension at Crownbridge School
- Approved Phase 2 of our Carbon Reduction Plan (Project Apollo)
- Introduced a new cycle-to-work scheme
- Installed 31 charging points
- Undertook a review of the Council's fleet.
- Supported 38 efficiency measures / renewable energy projects in community & sport centres, charities and businesses.
- Delivered a suite of Active Travel schemes in 24/25 as per the approved Active Travel Delivery Plan.

The Torfaen Climate and Nature Emergency Action Plan can be found here -

Climate and Nature Emergency Action Plan [3.]

Partnership working through the Public Services Board (PSB)

The 5 Public Services Boards in Gwent merged in September 2021 to form one regional PSB for Gwent simplifying and strengthening existing partnership arrangements.

Gwent PSB adopted its first Well-being Plan in July 2023, setting out how public services will collaborate to respond to some of the key issues identified in Gwent Well-being Assessment which included information on air quality and can be found here:

·Gwent Well-being Assessment [4.]

The plan sets out two interconnecting well-being objectives and five underpinning steps across the five-year delivery period of 2023-28. It also provides a framework for the next 25 – 30 years recognising that Gwent's well-being challenges are big and complex and will require much longer-term solutions that will begin with acting in the short and medium term.

Gwent PSB well-being objectives:

1. *We want to create a fairer, more equitable and inclusive Gwent for all.*
2. *We want a climate-ready Gwent, where our environment is valued and protected, benefitting our well-being now and for future generations.*

1. *https://www.torfaen.gov.uk/en/AboutTheCouncil/ImprovingTorfaen/County-Plan/County-Plan-2022-2027.aspx*
2. *https://www.torfaen.gov.uk/en/Related-Documents/Performance-Improvement/Our-Performance/2022-2023-Annual-Self-Assessment-and-Wellbeing-Report.pdf*
3. *https://www.torfaen.gov.uk/en/Related-Documents/Climate-Change/Climate-and-Nature-Emergency-Action-Plan.pdf*
4. *https://www.gwentpsb.org/en/well-being-plan/well-being-assessment/*

4.6 Green Infrastructure Plans and Strategies

A Public Service Board, green infrastructure strategy to fulfil Objective 1 in the Torfaen Well-being Plan has been adopted which aims to bring all publicly owned land in Torfaen under prescriptive management regime aimed at maximising ecosystem services provision including improved air quality. The Strategy includes a 15 year Action Plan. This has informed Torfaen Council's own GI Assessment which looks at how the Council can implement the PSB GI Strategy on its own land.

The GI Strategy can be found here -

Green Infrastructure Strategy

Green Infrastructure, Supplementary Planning Guidance (SPG) was approved at Council in Feb 24, this provides guidance to developers on what is required to safeguard and enhance green infrastructure within new developments

The SPG can be found here

Green Infrastructure, Supplementary Planning Guidance

Opportunity mapping is underway to look at where interventions can take place to reduce flood risk and noise pollution and improve air quality through nature-based solutions. The Council has published the Tree Strategy for Torfaen which focuses on the multi-functional benefits of trees for society and future generations, including the role of trees in tackling air pollution. A review and updating of the Grounds Maintenance GIS layer has been undertaken to identify potential grassland sites which can be managed for biodiversity and this is now being used to inform grassland management regime. The Gwent Green Grid project and Local Places for Nature funding is increasing tree cover across the borough through a series of planting schemes with plans to improve the management of publicly owned woodlands. Through the auspices of the Torfaen Climate and Nature Emergency Plan, work is also taking place to assess the potential for enhanced tree planting on road verges and other urban green space within the county borough.

Stakeholder consultations are underway on the Preferred Strategy for the Replacement LDP which aims to protect all existing green infrastructure assets from development.

A Green Infrastructure and separate Biodiversity Supplementary Planning Guidance (SPG) have been formally adopted to assist developers to protect and enhance existing GI on development sites and inform design decisions which will reduce impact of and amount of noise pollution on any site.

A joint draft Nature Recovery Action Plan (NRAP) has been produced setting out the priorities for the recovery of nature across Blaenau Gwent and Torfaen. The plan highlights the importance of urban green infrastructure and its contribution to mitigating the impacts of air and noise pollution. A review of the Torfaen Biodiversity and Ecosystem Resilience Plan has also commenced. The draft version has gone out to all Torfaen Council departments for consultation and the final draft will be completed imminently. This will set the priorities for 2025-2030 for compliance with the Council's public bodies biodiversity under section 6 of the Environment (Wales) Act 2016.

[1] *https://www.torfaen.gov.uk/en/Related-Documents/Green-Infrastructure/Green-Infrastructure-Strategy.pdf*

2. https://www.torfaen.gov.uk/en/Related-Documents/Forward-Planning/Supplementary-Planning-Guidance/Green-Infrastructure-Supplementary-Planning-Guidance.pdf

5 Conclusion and Proposed Actions

5.1 Conclusions from New Monitoring Data

This Progress Report confirms that measured air quality within Torfaen continues to meet national standards, as concentrations of all monitored pollutants are within the stipulated limits.

The exceedance of the annual objective for Nitrogen Dioxide recorded at St Lukes Road, Pontnewynydd (Tube TCBC 24) and reported in the 2020 Progress report has not been repeated in subsequent years including 2024, despite traffic returning to pre-pandemic levels. The local authority has continued to closely monitor this section of highway in 2024 using an additional 6 diffusion tubes sited along the road.

5.2 Conclusions relating to New Local Developments

There have been no new industrial installations and no new or substantially altered roads within Torfaen. There are no new significant fugitive sources of emissions. Emissions from domestic solid fuel burning have been assessed and the results indicate that there is an insufficient density of coal-fired homes to be considered significant. This assessment therefore determines that further investigation is not necessary.

5.3 Proposed Actions

This Progress Report confirms that during 2024 the Air Quality in Torfaen met national objectives. There is therefore no requirement to proceed to a fast track AQMA declaration.

Torfaen council intends to continue the annual review of diffusion tube deployment with a particular emphasis on increasing air quality monitoring around schools.

The results of monitoring carried out during 2025 will be presented in the 2026 Air Quality Progress Report.

References

1. Department for Environment, Food and Rural Affairs (2022), *Part IV of the Environment Act 1995: as amended by The Environment Act 2021. Local Air Quality Management, Technical Guidance (TG22),* DEFRA, London. August 2022

2. Torfaen County Borough Council (2003), *Updating and Screening Assessment of Air Quality within Torfaen*, Department for the Environment, October 2003.

3. Torfaen County Borough Council (2004), *Air Quality Progress Report for 2003*, Department for the Environment, September 2004.

4. Torfaen County Borough Council (2005), *Air Quality Progress Report for 2004*, Department for the Environment, August 2005.

5. Torfaen County Borough Council (2006), *Updating and Screening Assessment of Air Quality within Torfaen*, Department for the Environment, November 2006.

6. Torfaen County Borough Council (2007), *Air Quality Progress Report for 2006*, Planning and Public Protection Department, July 2007.

7. Torfaen County Borough Council (2008), *Air Quality Progress Report for 2007*, Planning and Public Protection Department, April 2008.

8. Torfaen County Borough Council (2009), *Updating and Screening Assessment of Air Quality within Torfaen*, Planning and Public Protection Department 2009.

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11. Torfaen County Borough Council (2012), *Updating and Screening Assessment of Air Quality within Torfaen*, Planning and Public Protection Department 2012.

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22. Torfaen County Borough Council (2023), *Air Quality Progress Report for 2023*, Economy and Environment, Housing Safety and Environmental Protection 2023

23. Torfaen County Borough Council (2024), *Air Quality Progress Report for 2024*, Economy and Environment, Housing Safety and Environmental Protection 2024

24. AEA (2008), *Diffusion Tubes for Ambient NO_2 Monitoring: Practical Guidance for Laboratories and Users*. Report to Defra and the Devolved Administrations. ED48673043. February 2008

25. South East Wales Local Authorities (2015), *South East Wales Valleys Local Transport Plan* 2015.

26. DEFRA (2007) *The Air Quality Strategy for England, Scotland, Wales and Northern Ireland,* 2007.

27. Welsh Government (2017) *Local Air Quality Management in Wales, Policy Guidance.*

28. Welsh Government (2024) *Environment (Air Quality and Soundscapes) (Wales) Act 2024*

29. Torfaen Public Service Board (2022), *Well-being Plan for Torfaen 2022-2027*

30. Torfaen Public Service Board (2023), *Torfaen Well-being Assessment. May 2023*

Appendices

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

Appendix B: A Summary of Local Air Quality Management.

Appendix C: Air Quality Monitoring Data QA/QC.

Appendix D: Individual Diffusion Tube Maps for 2024.

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

Table A.1 – Full Monthly Diffusion Tube Results for 2024 (µg/m^3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	NO_2 Mean Concentrations (µg/m^3)												Annual Mean (µg/m3)			
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Raw Data	Bias Adjusted (0.78)	Distance Corrected to Nearest Exposure	Comment
TCBC3	328264	200781	15.7	35.2	28.5	26.5	20.9	24.0	16.1	23.0	20.4	24.7	30.3	17.6	23.6	18.4	-	
TCBC5	329430	197006	36.6	44.3	36.4	29.9	29.4	25.1	25.5	28.2	30.1	37.4	39.3	13.5	31.3	24.4	-	
TCBC6	328500	194522	20.4	24.1	16.0	13.1	14.3	13.3	9.7	12.7	15.8	10.9	26.3	12.8	15.8	12.3	-	
TCBC8	332672	192878	21.3	18.7	13.0	12.5	9.1	8.7	7.3	10.2	11.6	14.4	20.6	11.7	13.3	10.3	-	
TCBC9	330400	194857	22.0	21.7	15.7	11.2	8.5	8.2	6.5		10.5	15.2	22.1	15.2	14.3	11.1	-	1 missing tube
TCBC10	330011	196009	28.7	25.6	18.5	15.2	13.7	15.1	14.1	16.8	16.1	15.2	27.5	12.3	18.2	14.2	-	
TCBC11	330498	199884	19.4	12.7	12.1	8.4	7.2	7.4	11.5		8.2	10.1	19.7	8.5	11.4	8.9	-	1 missing tube
TCBC15	329539	198464	25.5	21.9	20.1	13.8	14.4	14.4	10.0	13.1	15.3	18.0	26.2	15.7	17.4	13.5	-	
TCBC16	329147	196408	37.0	38.8	32.8	23.3	26.9	23.7	21.7	23.4	27.0	29.0	34.1	29.0	28.9	22.5	-	
TCBC17	330578	195735	10.5	21.2	17.7	12.6	10.7	11.8	7.8	12.1	12.8	6.2	25.6	11.1	13.3	10.4	-	
TCBC18	328978	200434	28.5	35.0	33.0	24.0	21.9	23.2	20.7	25.0	25.4	26.4	34.4	18.1	26.3	20.5	-	
TCBC19	326974	203354	25.6	36.0	26.5	25.3	22.6	21.1	16.8	19.4	24.6	18.0	31.5	21.8	24.1	18.8	-	
TCBC20	329240	195210	34.6	37.7	33.4	23.2	27.4	26.0	22.6	26.6	23.5	34.5	40.6	28.9	29.9	23.3	-	
TCBC21	330801	201731	18.3	14.8	14.7	11.0	10.1	11.2	6.5	12.4	11.0	14.4	17.2	6.6	12.4	9.6	-	
TCBC22	325111	208826	15.0	12.8	13.4	12.6	14.1	12.4	9.8	12.8	10.9	19.3	18.9	5.7	13.1	10.3	-	
TCBC23	329308	198177	24.4	22.2	16.1	15.8	15.2		9.7	13.2	11.4	22.6	28.8	14.8	17.7	13.8	-	1 tube removed (damaged)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	NO_2 Mean Concentrations (µg/m^3)												Annual Mean (µg/m3)			
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Raw Data	Bias Adjusted (0.706)	Distance Corrected to Nearest Exposure	Comment
TCBC24	327274	201928	34.9	49.6	50.9	41.9	36.6	39.5	33.3	38.0	36.2	23.6	50.2	27.6	38.5	30.0	-	
TCBC24/1	327237	201967	35.5	43.0	35.7	28.4	27.6	28.3	24.0	32.5	30.9	45.1	43.4	25.0	33.3	26.0	-	
TCBC24/2	327214	202005	40.0	49.2	35.6	33.8	27.3	33.3	29.2	35.2	34.5	38.5	29.9	17.4	33.7	26.3	-	
TCBC24/3	327187	202051	25.6	37.7	38.0	31.8	29.5	28.2	25.1	32.9	32.9	36.8	45.8	24.9	32.4	25.3	-	
TCBC24/5	327308	201912	44.1	46.4	36.3	37.0	36.8	32.1	23.1	33.3	36.2	26.3	48.4	32.9	36.1	28.1	-	
TCBC25	328206	201300	31.4	26.1	28.1	26.0	23.6	23.6	18.1	23.2	25.2	33.6	33.8	21.9	26.2	20.4	-	
TCBC26	330743	196609	21.2	35.4	28.8	21.1	26.3	24.1	16.8	17.4	29.0	35.4	39.7	19.1	26.2	20.4	-	
TCBC27	326914	202933	39.0	48.0	38.7	34.2	31.9	30.1	25.8		31.9	23.9	45.9	27.4	34.3	26.7	-	1 missing tube
TCBC28	326907	202741	34.3	36.3	35.7	29.3	28.2	24.6	23.2	23.4	28.2	25.9	45.0	28.5	30.2	23.6	-	

☒ **All erroneous data has been removed from the NO_2 diffusion tube dataset presented in Table A.1**

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22**

☒ **National bias adjustment factor used.**

☒ **Where applicable, data has been distance corrected for relevant exposure in the final column.**

☒ **Torfaen County Borough Council confirm that all 2024 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System**.

Notes:

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

NO_2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined**.

See Appendix C for details on bias adjustment and annualisation.

Appendix B: A Summary of Local Air Quality Management

5.4 Purpose of an Annual Progress Report

This report fulfils the requirements of the Local Air Quality Management (LAQM) process as set out in the Environment Act 1995, as amended by the Environment Act 2021, and associated government guidance. 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 being achieved. Where exceedances occur, or are likely to occur, the local authority must then declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) within 18 months of declaration setting out the measures it intends to put in place in pursuit of the objectives. Action plans must then be reviewed and updated no later than every five years; or if a local authority considers there is a need for further or different measures to be taken in order to achieve air quality standards; or if significant changes to sources occur within your local area.

For Local Authorities in Wales, an Annual Progress Report replaces all other formal reporting requirements and have a very clear purpose of updating the general public on air quality, including what ongoing actions are being taken locally to improve it if necessary.

5.5 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 B.1.

The table shows the objectives in units of micrograms per cubic metre μg/m^3 (milligrams per cubic metre, mg/m^3 for carbon monoxide) with the number of exceedances in each year that are permitted (where applicable).

Table B.1 – Air Quality Objectives Included in Regulations for the Purpose of LAQM in Wales

Pollutant	Air Quality Objective: Concentration	Air Quality Objective: Measured as	Date to be achieved by
Nitrogen Dioxide (NO_2)	200µg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
Nitrogen Dioxide (NO_2)	40µg/m^3	Annual mean	31.12.2005
Particulate Matter (PM_{10})	50µg/m^3, not to be exceeded more than 35 times a year	24-hour mean	31.12.2010
Particulate Matter (PM_{10})	40µg/m^3	Annual mean	31.12.2010
Sulphur dioxide (SO_2)	350µg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
Sulphur dioxide (SO_2)	125µg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
Sulphur dioxide (SO_2)	266µg/m^3, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005
Benzene	16.25µg/m^3	Running annual mean	31.12.2003
Benzene	5µg/m^3	Annual mean	31 12 2010
1,3 Butadiene	2.25µg/m^3	Running annual mean	31.12.2003
Carbon Monoxide	10.0mg/m^3	Maximum Daily Running 8-Hour mean	31.12.2003
Lead	0.25µg/m^3	Annual Mean	31.12.2008

Appendix C: Air Quality Monitoring Data QA/QC

5.6 QA/QC of Diffusion Tube Monitoring

Torfaen County Borough Council uses tubes provided and analysed by SOCOTEC (formerly Environmental Scientifics Group (ESG) using 50% TEA (Triethanolamine) in acetone, which are typically exposed for four-week periods in accordance with the National NO_2 Network exposure calendar.

SOCOTEC is accredited to NAMAS and UKAS BS EN ISO 9001 and has implemented the methodology set out in the Harmonisation Practical Guidance. In the AIR PT intercomparison scheme for comparing spiked Nitrogen Dioxide diffusion tubes, 100% of the available SOCOTEC results for 2024 scored the highest possible result of '**satisfactory'**.

Diffusion Tube Annualisation

All diffusion tube monitoring locations within Torfaen County Borough Council recorded data capture of 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

Diffusion Tube Bias Adjustment Factors

Torfaen County Borough Council have applied a national bias adjustment factor of **0.78** to the 2024 monitoring data. This bias adjustment factor was derived from 37 studies across the UK. A summary of bias adjustment factors used by Torfaen County Borough Council over the past five years is presented in Table C.1 below.

Table C.1 – Bias Adjustment Factors

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	06/25 (37 studies)	0.78
2023	Local	-	0.706
2022	Local	-	0.74
2021	Local	-	0.74
2020	National	03/21	0.77

NO_2 Fall-off with Distance from the Road

No automatic NO_2 monitoring locations within Torfaen County Borough Council required distance correction during 2024.

5.7 QA/QC of Automatic Monitoring

Torfaen County Borough Council operates one automatic monitoring site 'Cwmbran Crownbridge' which is located in the grounds of Croesyceiliog Comprehensive School in the town of Cwmbran in the south of the County Borough. The Council's own officers undertake the Local Site Operator duties. Quality control procedures as detailed in AEA Technology's site operator's manual are followed. The analysers are calibrated once every four weeks using gases traceable to national standards. All data are scaled in line with four weekly calibration checks. The analysers also perform an internal overnight span check and are serviced every 6 months. Routine monthly calibration visits are carried out by the Council. Site audits and QA/QC calibrations are carried out by Bureau Veritas and Ricardo and who also manage and ratify the data. The data presented in this report are ratified. Live and historic data are available here - Air Quality in Wales

PM_{10} and $PM_{2.5}$ Monitoring Adjustment

Levels of PM_{10} are continuously measured at the Cwmbran monitoring site using a Tapered Element Oscillating Microbalance (TEOM) particulate monitor manufactured by Rupprecht and Pattaschnick. As in 2023, the 2024 data set could not be corrected as previous years by using a Volatile Correction Model (VCM). This was due to a lack of TEOM Filter Dynamics Measurement System (FDMS) data.

Section 7.149 of TG(16) states;

> *"It should be noted that due to the gradual withdrawal of TEOM-FDMS instruments and phased replacement with new compliant PM monitoring equipment on the AURN, the extent of data available to maintain the VCM has significantly reduced in recent years. As such, the extent of geographical coverage for the applicability and future viability of the VCM has become limited".*

Despite the recent modification the VCM correction website to allow FDMSs to be within 200km to be used for VCM correction (up from the previous 130 km), unfortunately Torfaen still had no coverage.

For 2024 data, we have therefore reverted to the historical recommendation of applying a 1.3 multiplication factor to the TEOM results, this being the best method available to account for the loss of volatile particulates in the monitor. Any comparisons made in this report of the 2024 data, with data prior to 2021, are therefore merely indicative.

Automatic Monitoring Annualisation

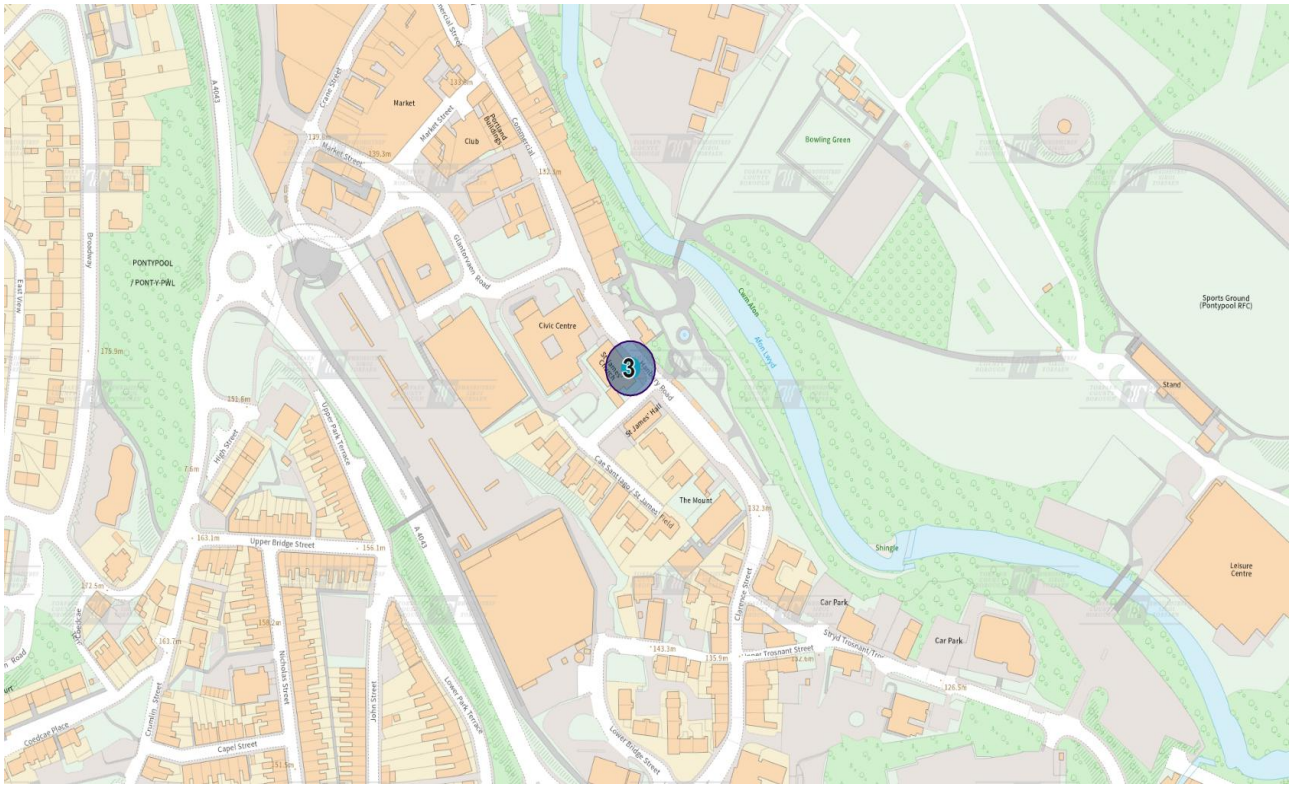
All automatic monitoring locations within Torfaen County Borough Council recorded data capture of greater than 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

NO_2 Fall-off with Distance from the Road

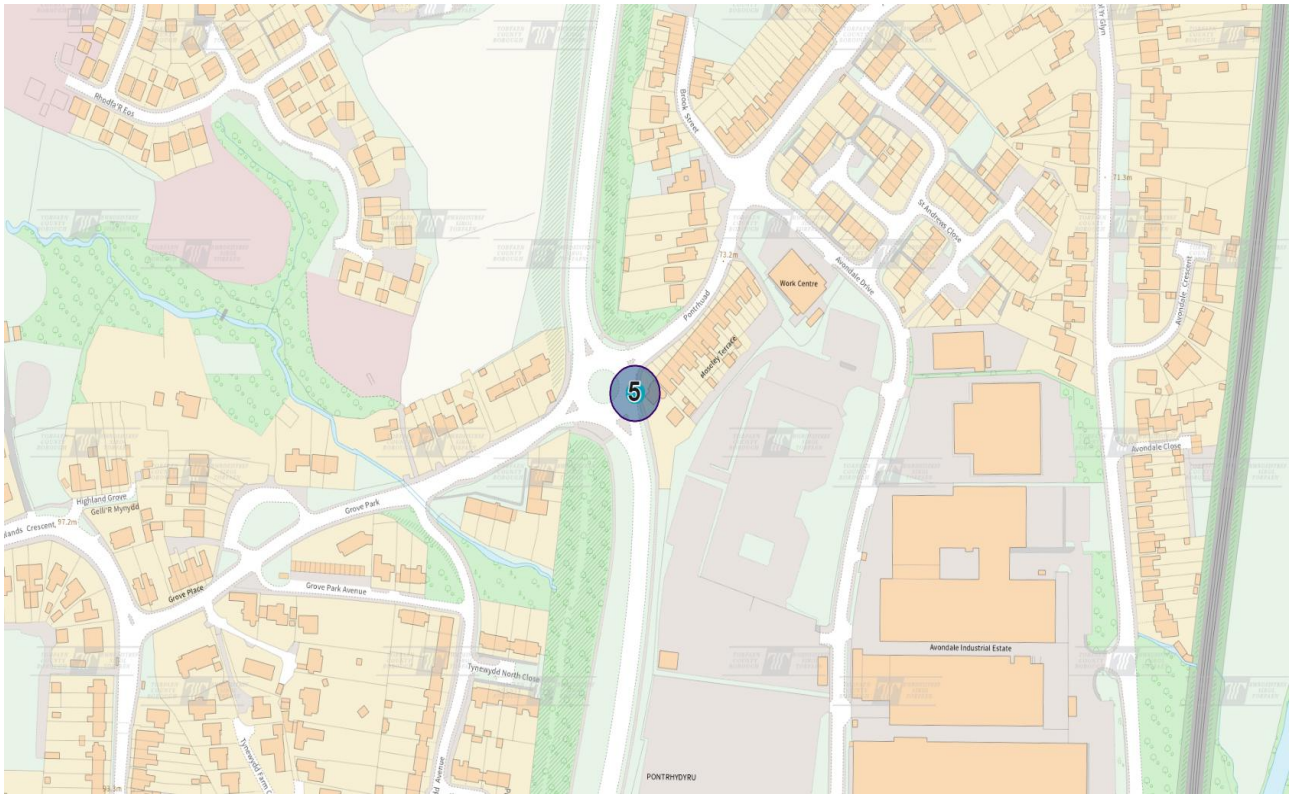
No automatic NO_2 monitoring locations within Torfaen County Borough Council required distance correction during 2024.

Appendix D: Individual Diffusion Tube Maps

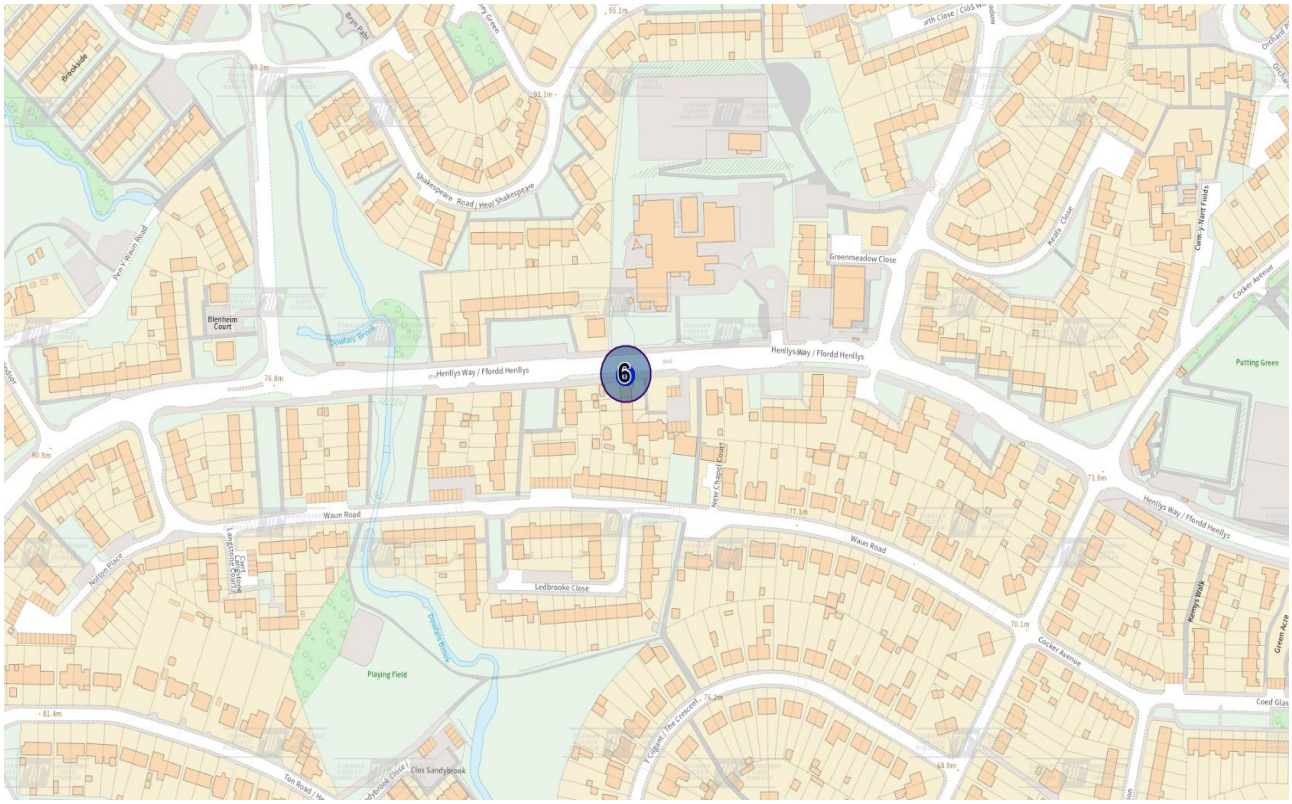
TCBC3	Pontypool Town Centre	Roadside	X328264 , Y200781



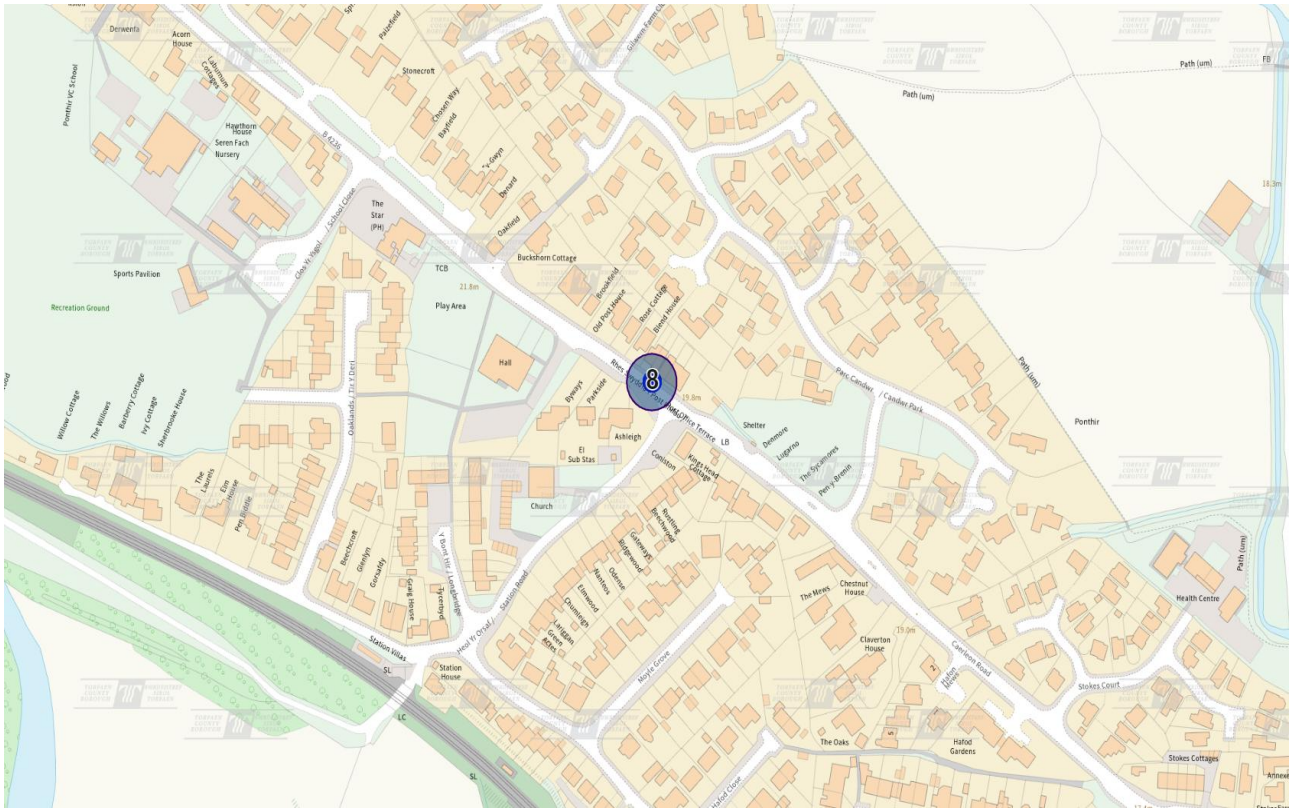
TCBC5	A4051, Cwmbran Drive, Cwmbran	Roadside	X328500, Y194522



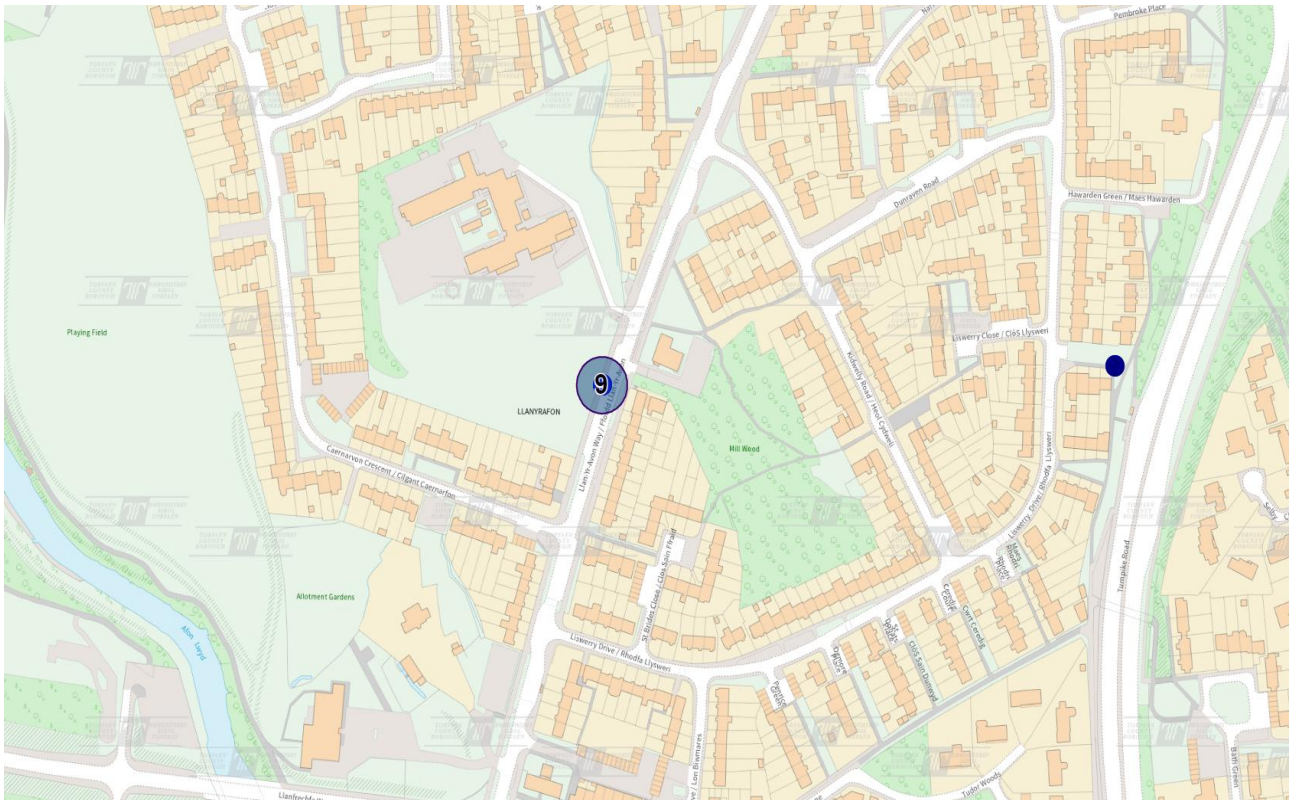
TCBC6	Henllys Way, Cwmbran	Roadside	X328500, Y194522



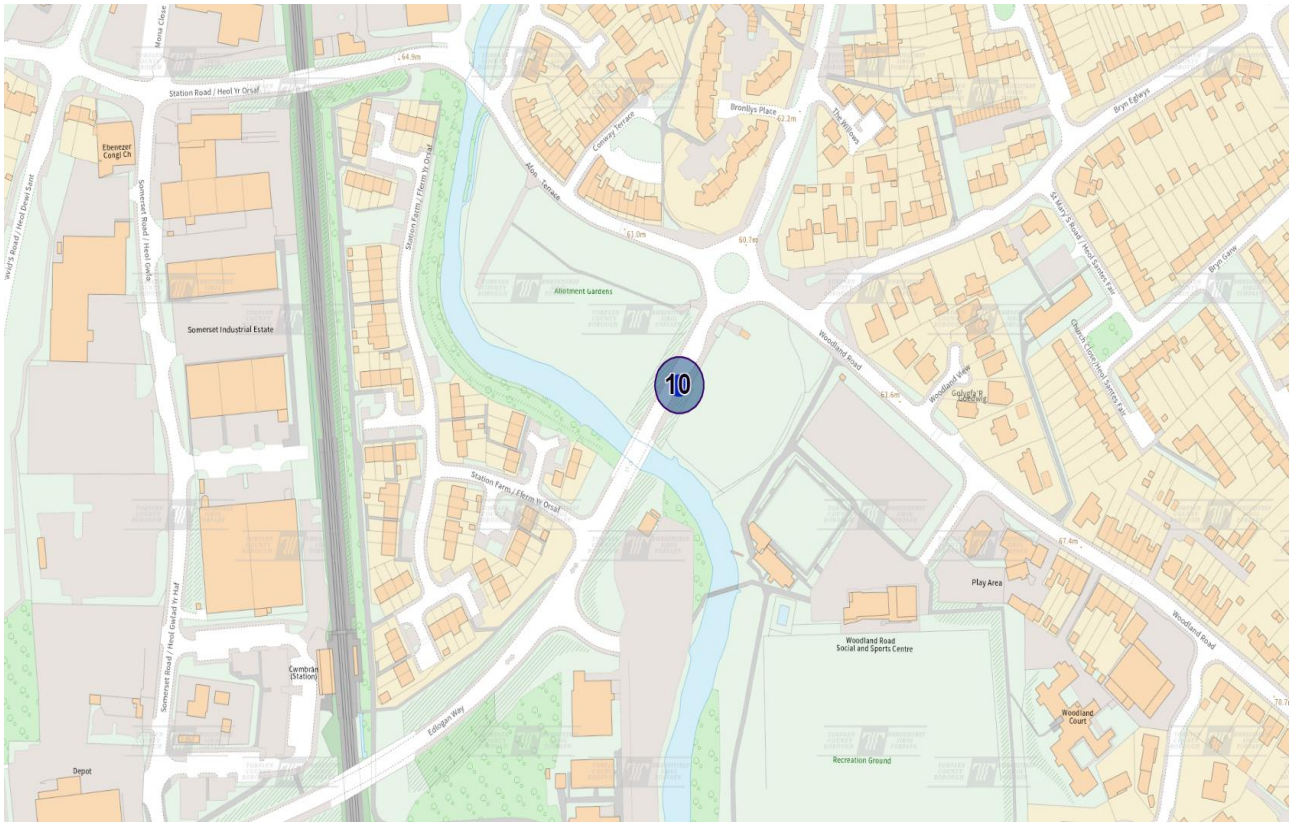
TCBC8	Caerleon Road, Ponthir	Roadside	X332672, Y192878



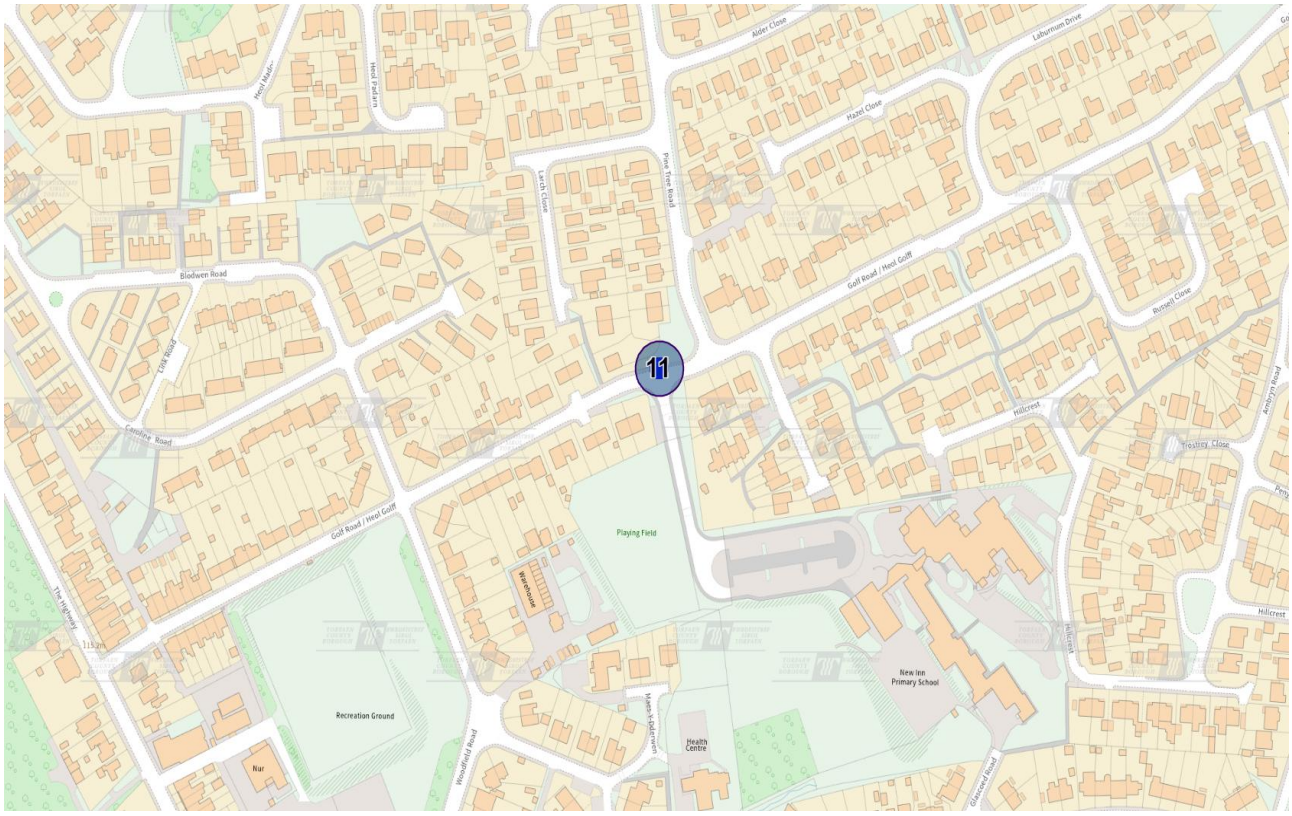
TCBC9	Llanyravon Way, Cwmbran	Roadside	X330400, Y194857



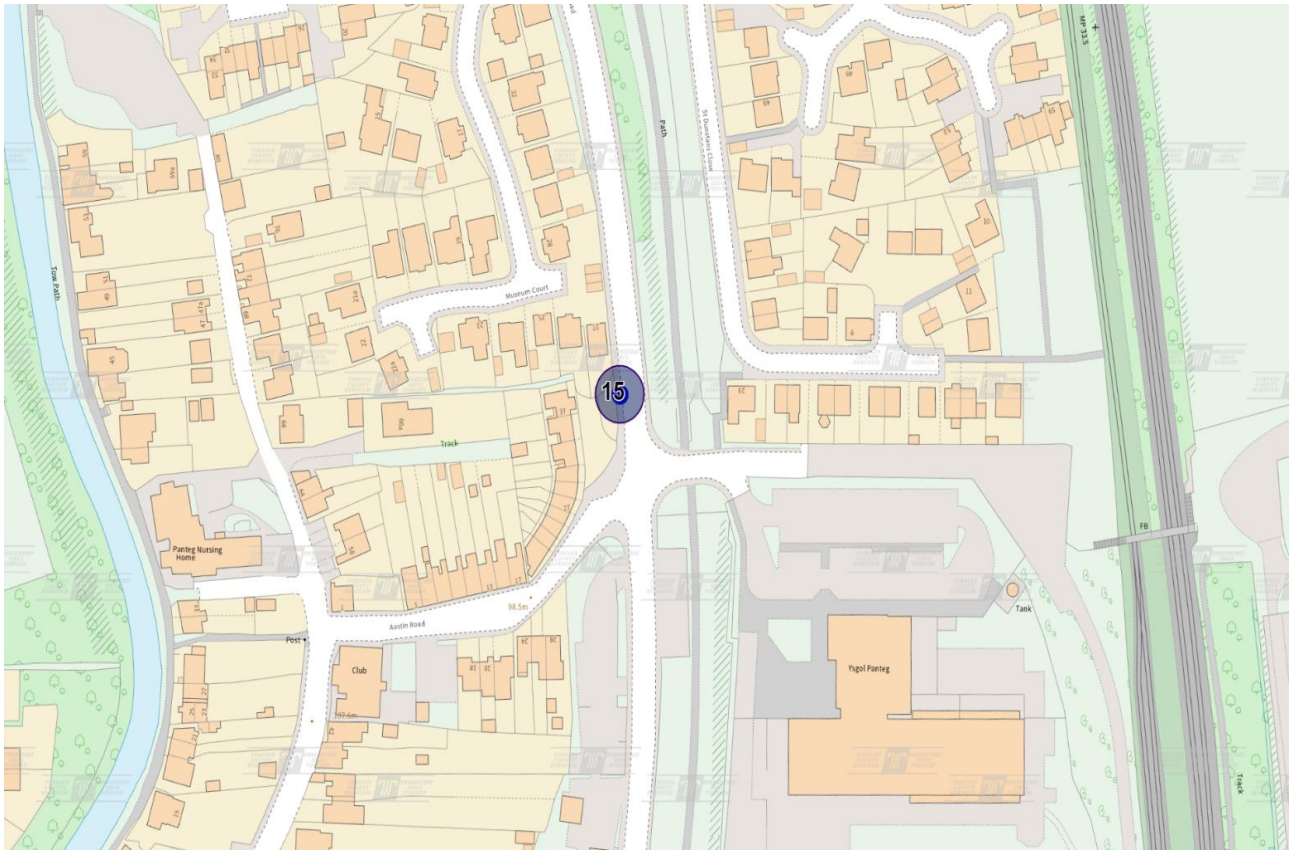
TCBC10	Edlogan Way, Cwmbran	Roadside	X330011, Y196009



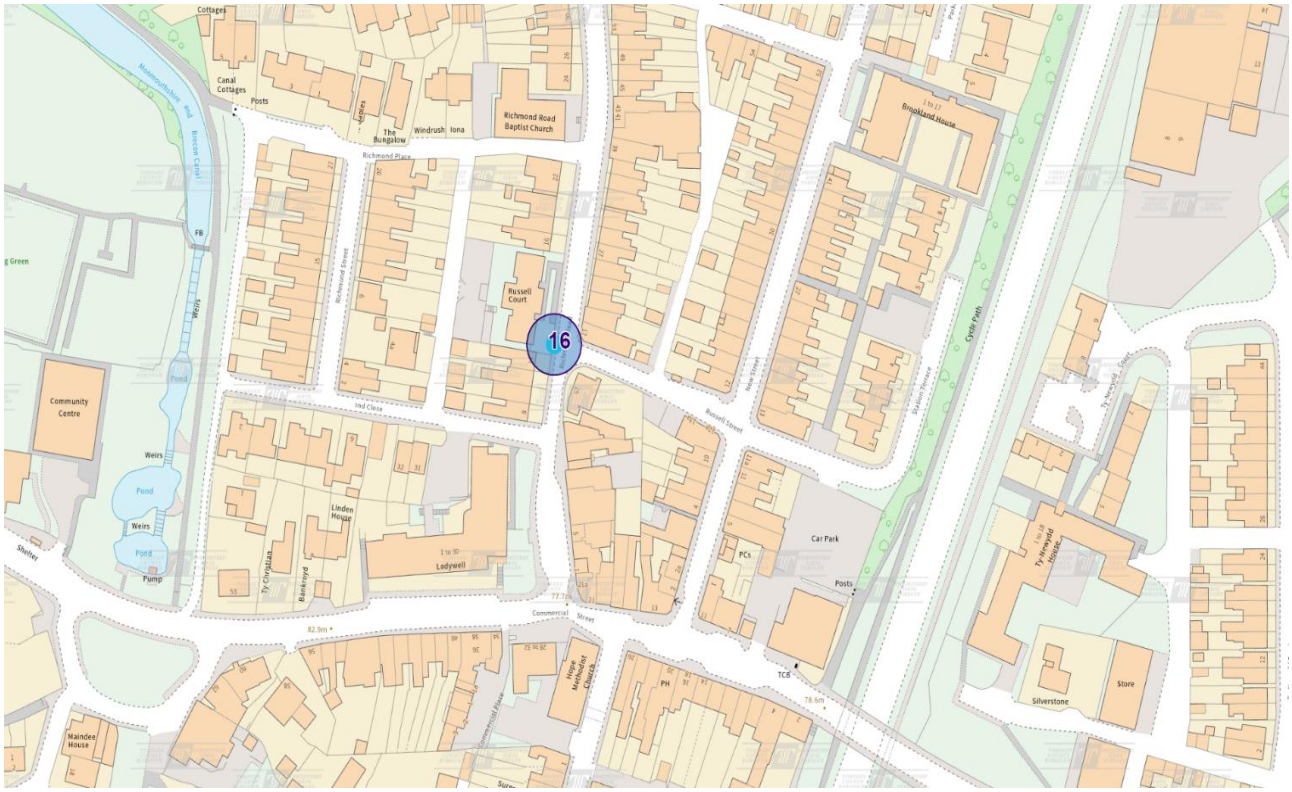
TCBC11	Golf Road, New Inn, Pontypool	Urban Background	X330498, Y199884



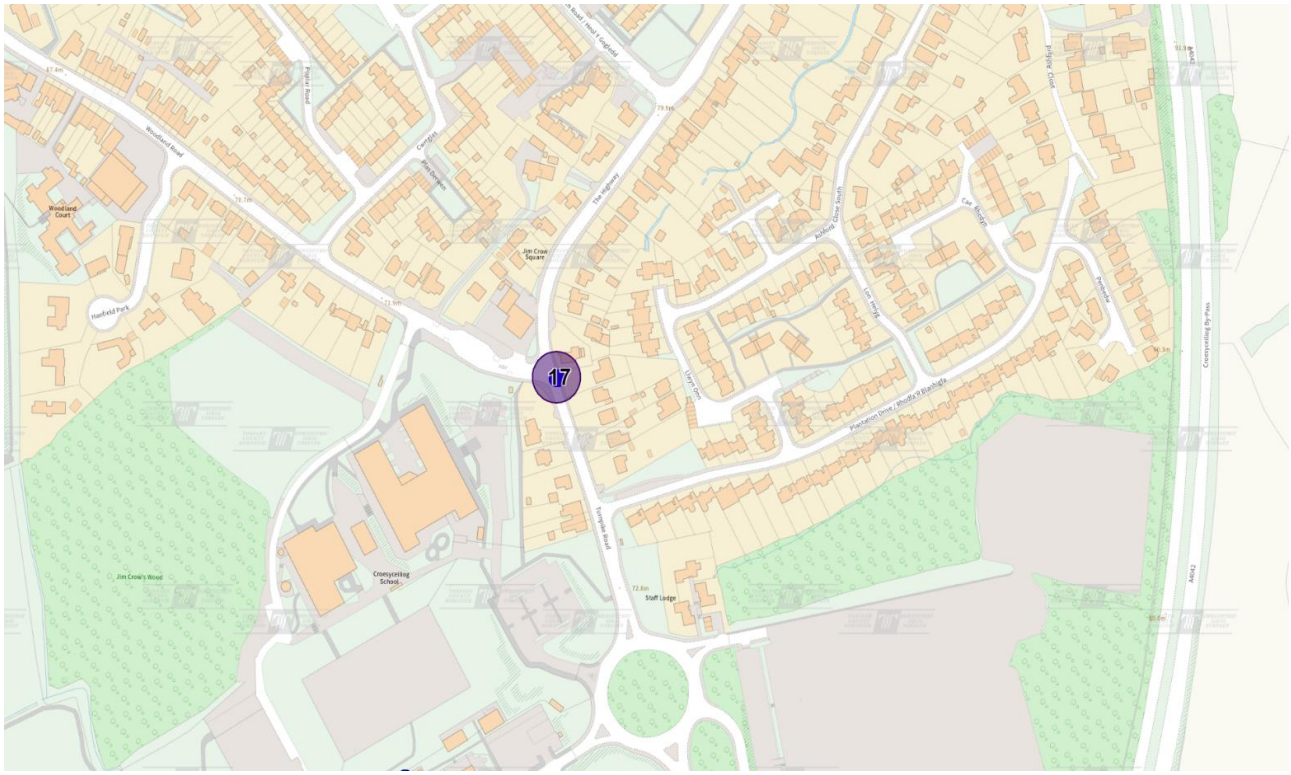
TCBC15	Station Rd, Griffithstown	Roadside	X 329540, Y198458



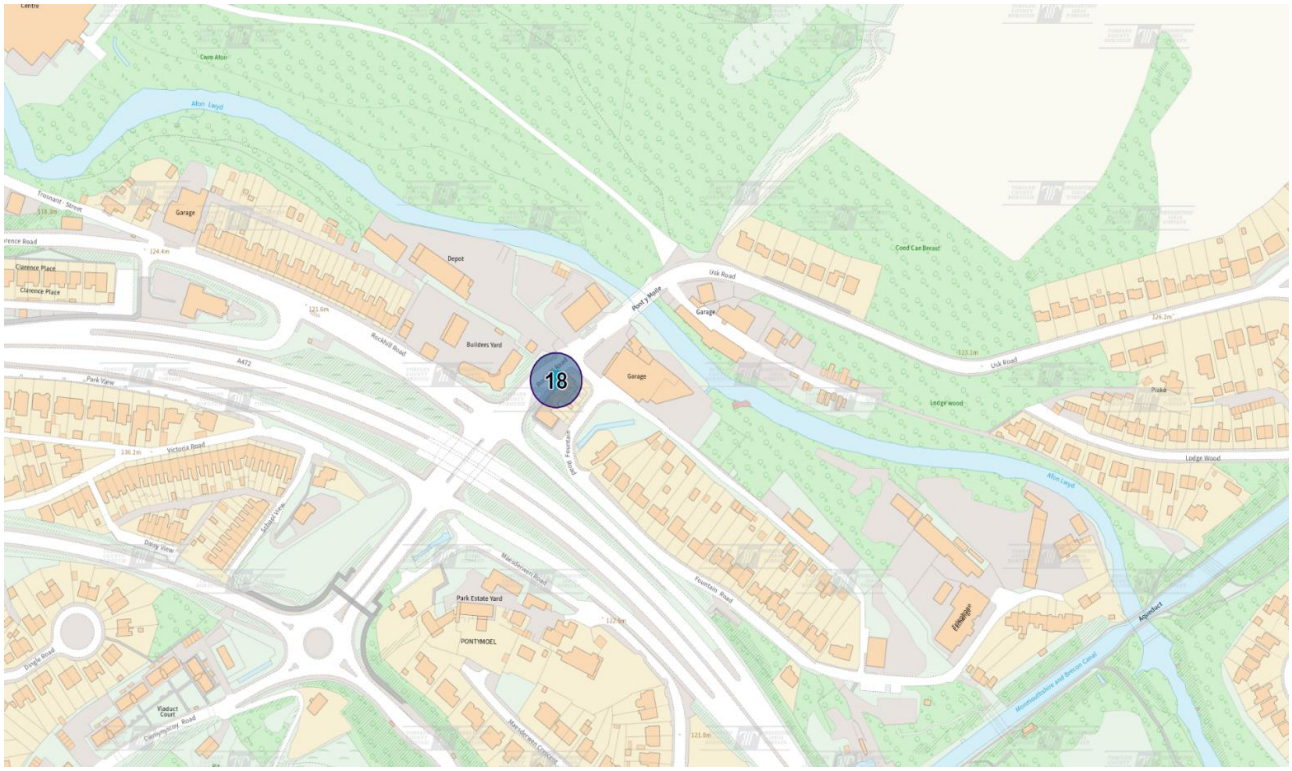
TCBC16	Richmond Rd, Pontnewydd	Roadside	X329147, Y196408



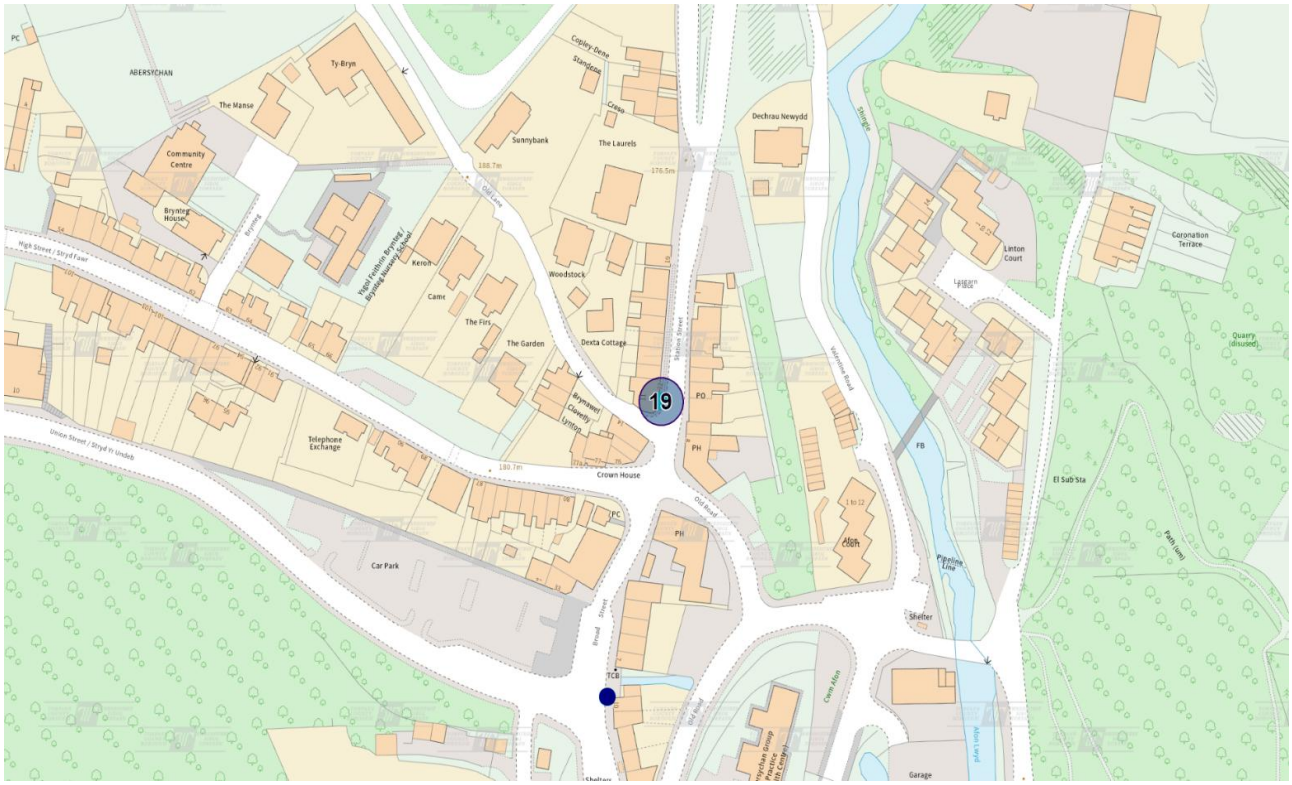
TCBC17	Turnpike Rd, Croesyceiliog	Roadside	X330578, Y195735



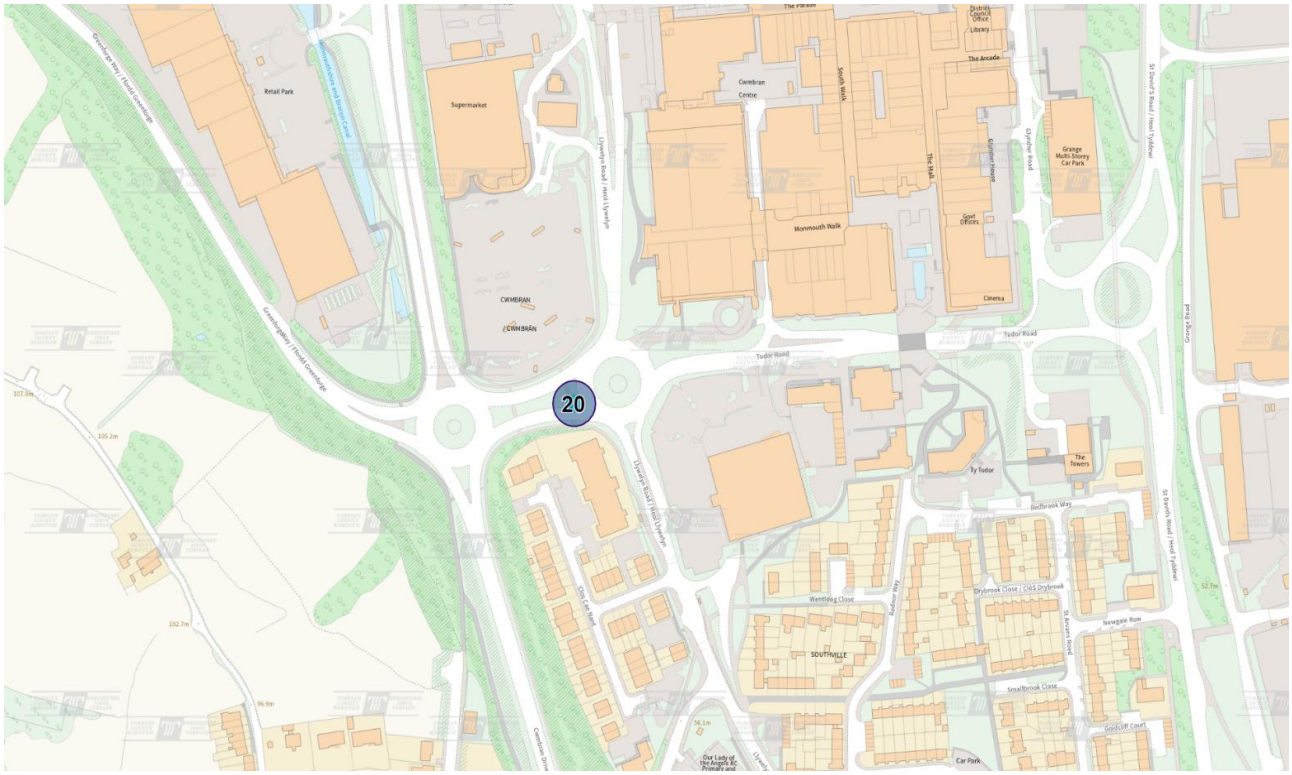
TCBC18	Rockhill Rd, Pontymoile	Roadside	X328978, Y200434



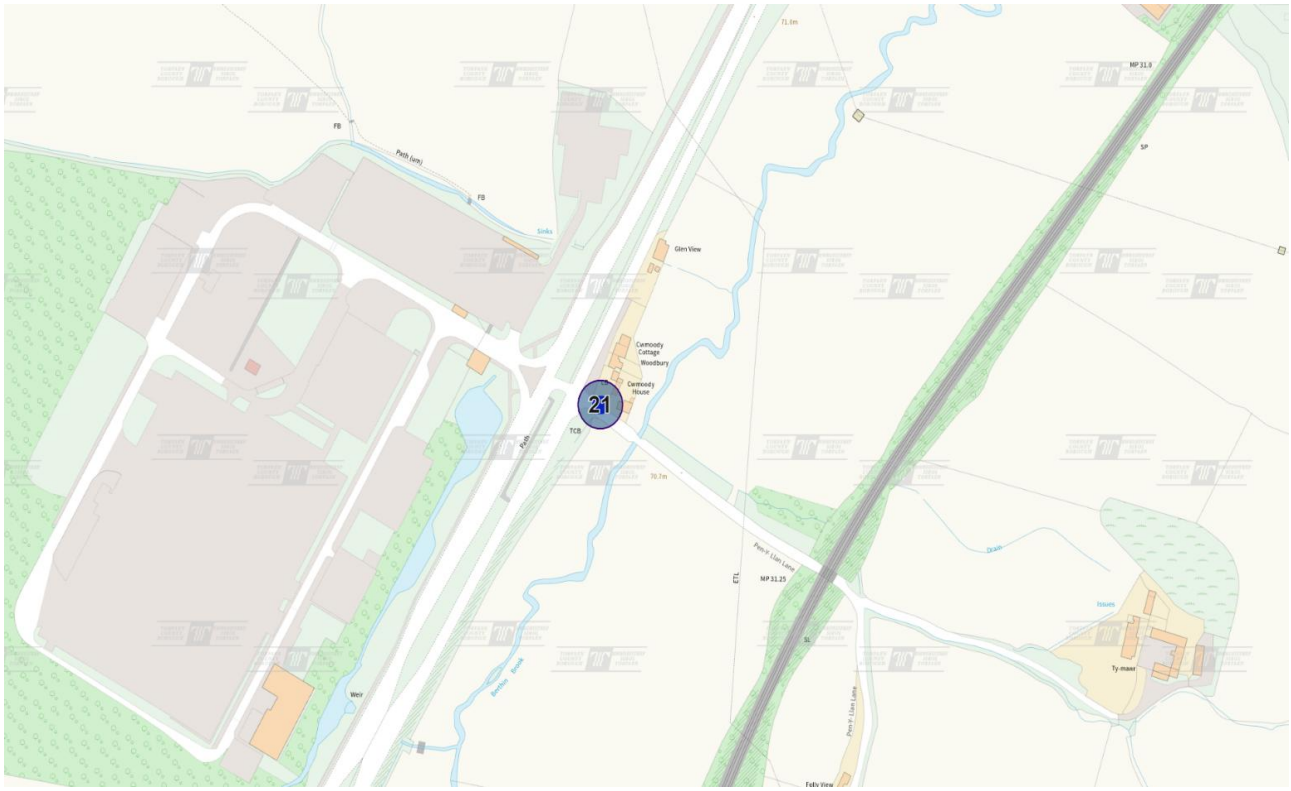
TCBC19	12 Station St, Abersychan	Roadside	X326974, Y203354



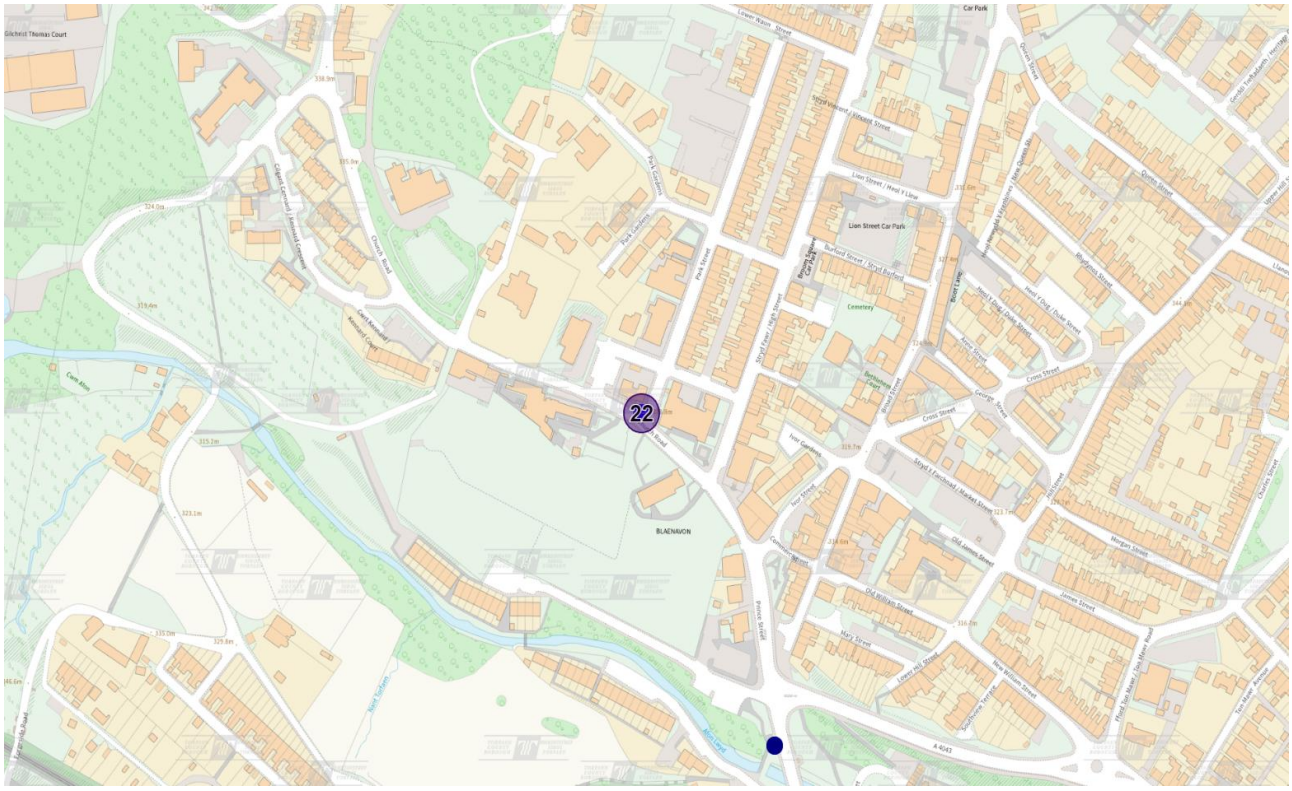
TCBC20	Cwmbran Drive, Sainsbury	Roadside	X329240, Y195210



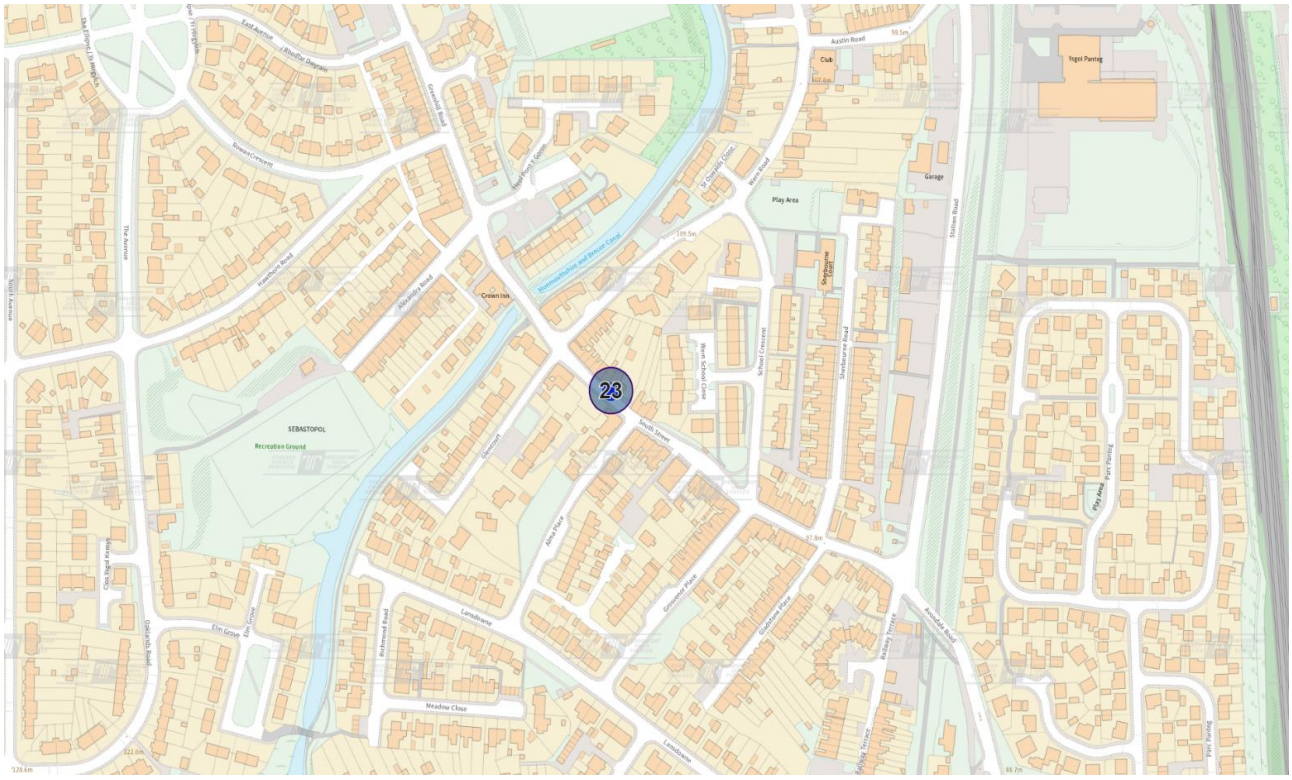
TCBC21	Pen y Llan Lane, Mamhilad	Roadside	X330801, Y201731



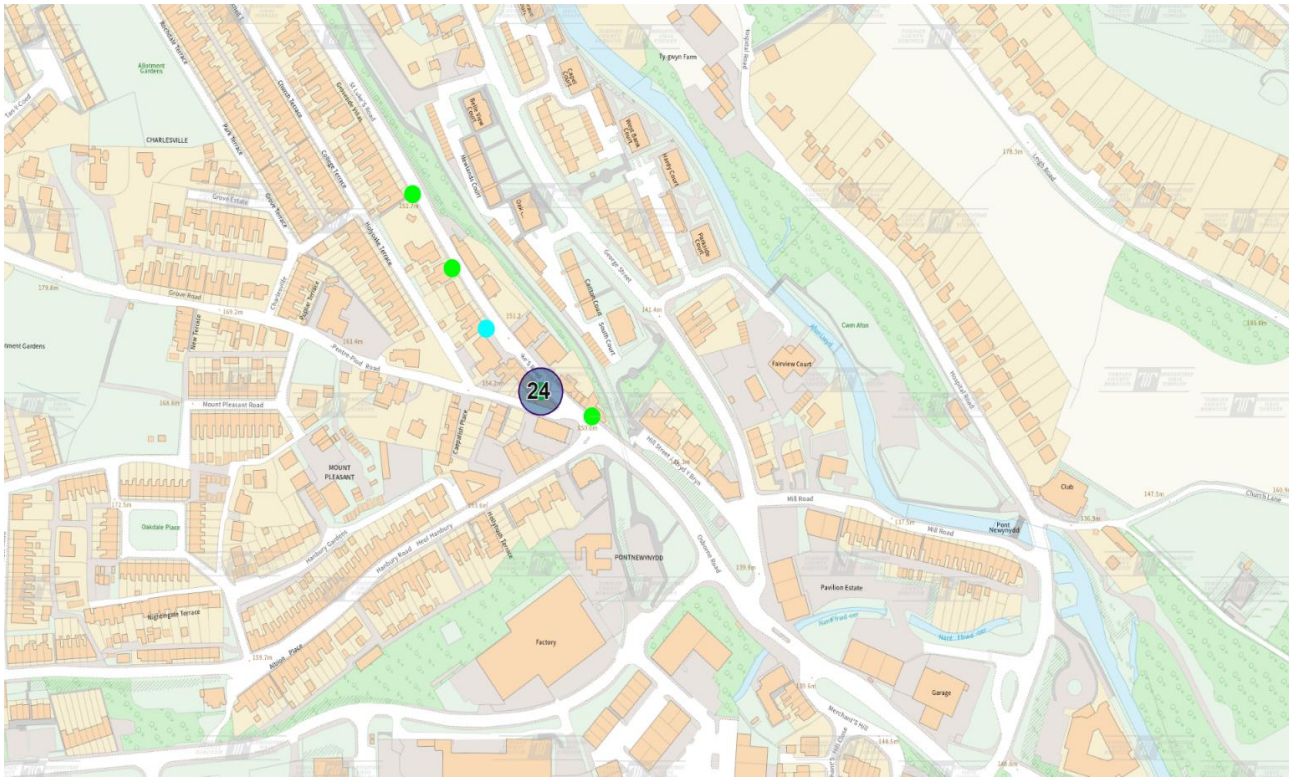
TCBC22	Church Road, Blaenavon	Roadside	X325111, Y208826



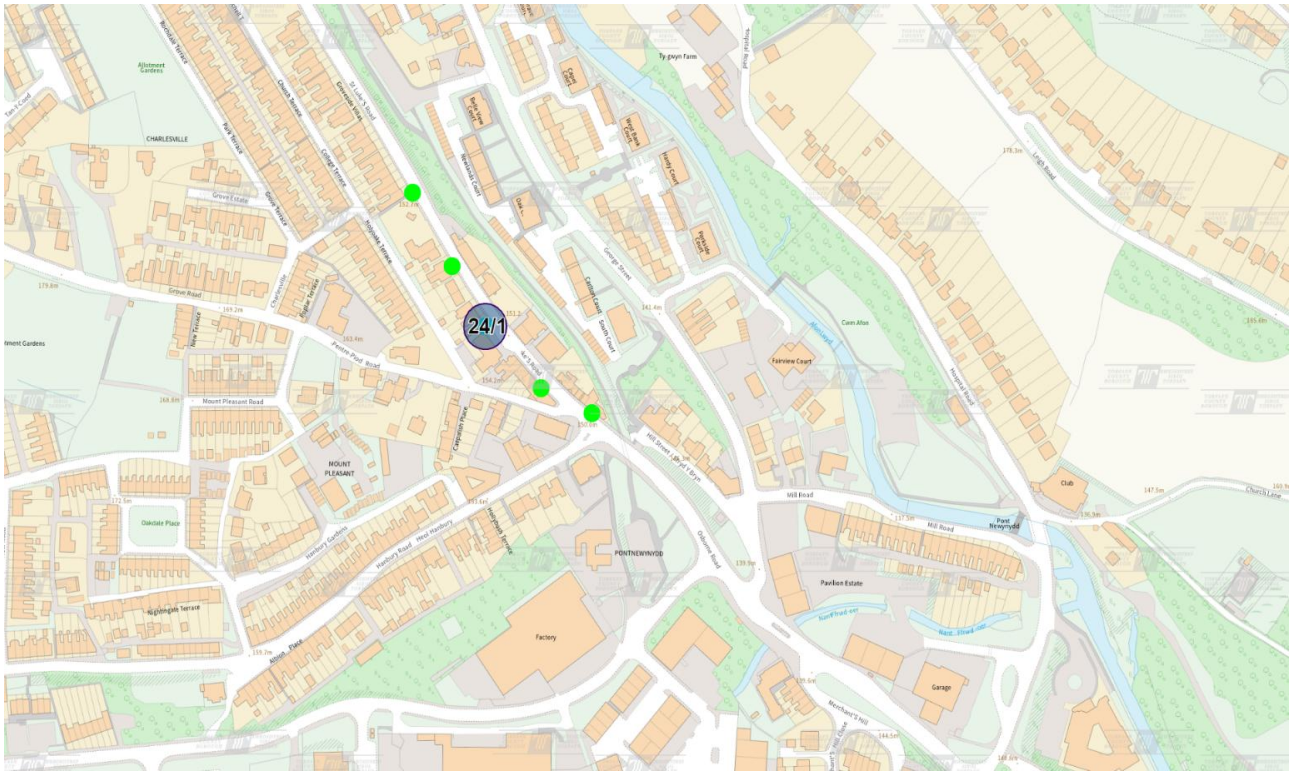
TCBC23	South Street, Sebastopol	Roadside	X329308, Y198177



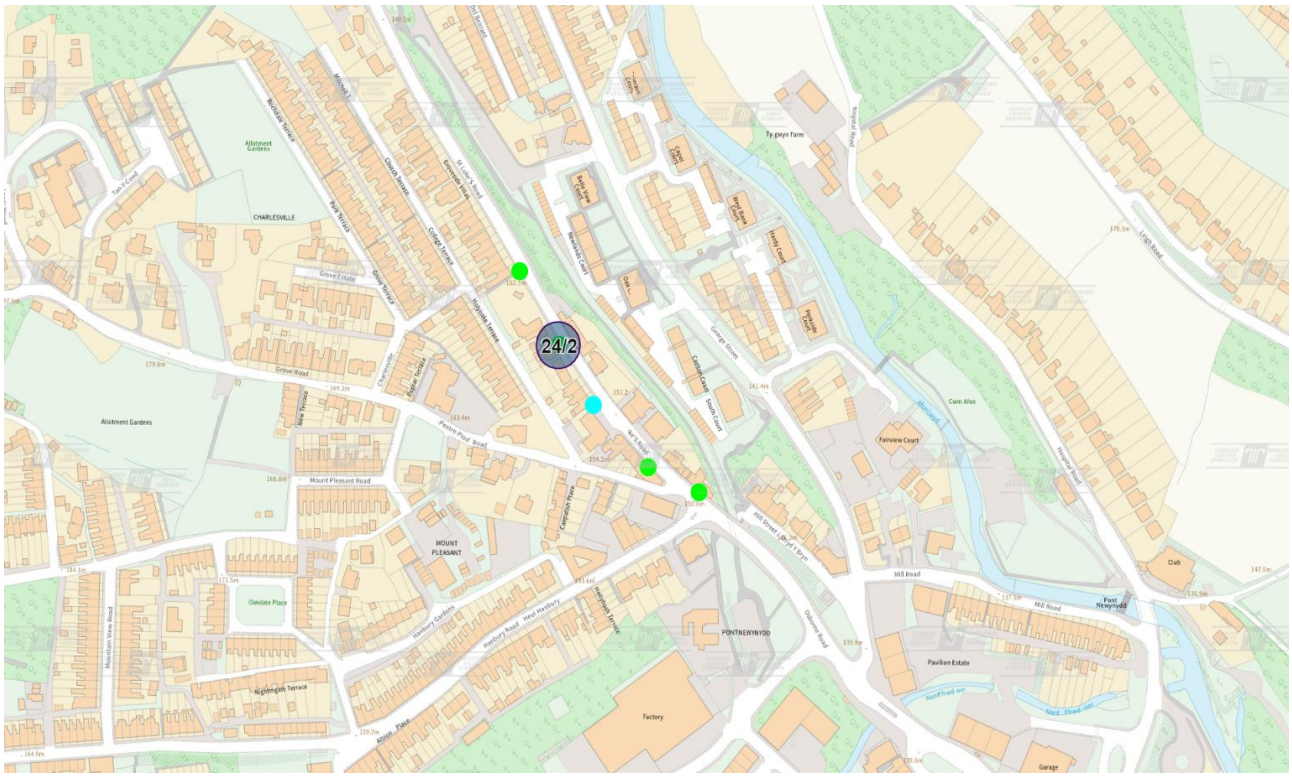
TCBC24	St Lukes Road, Pontnewynydd	Roadside	X327274, Y201928



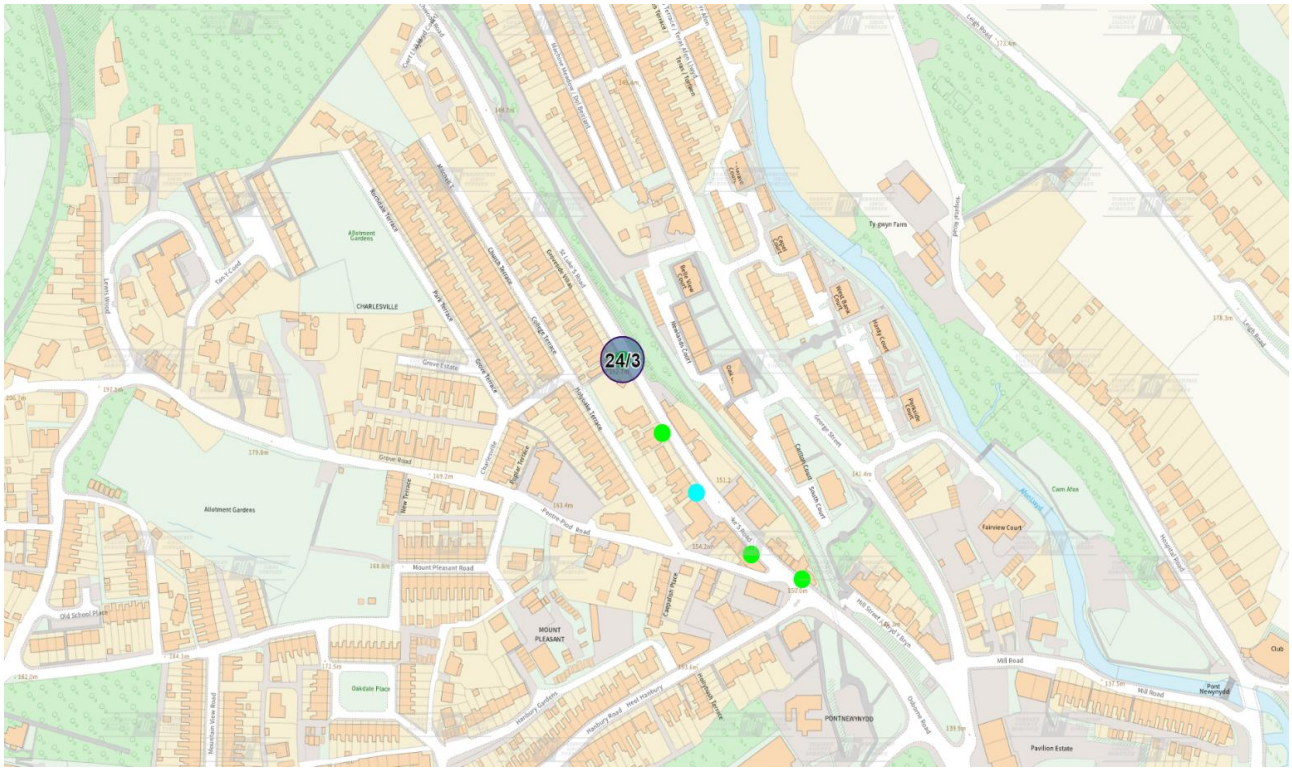
TCBC24/1	Nisa Shop Lamppost	Roadside	X327237,Y201967



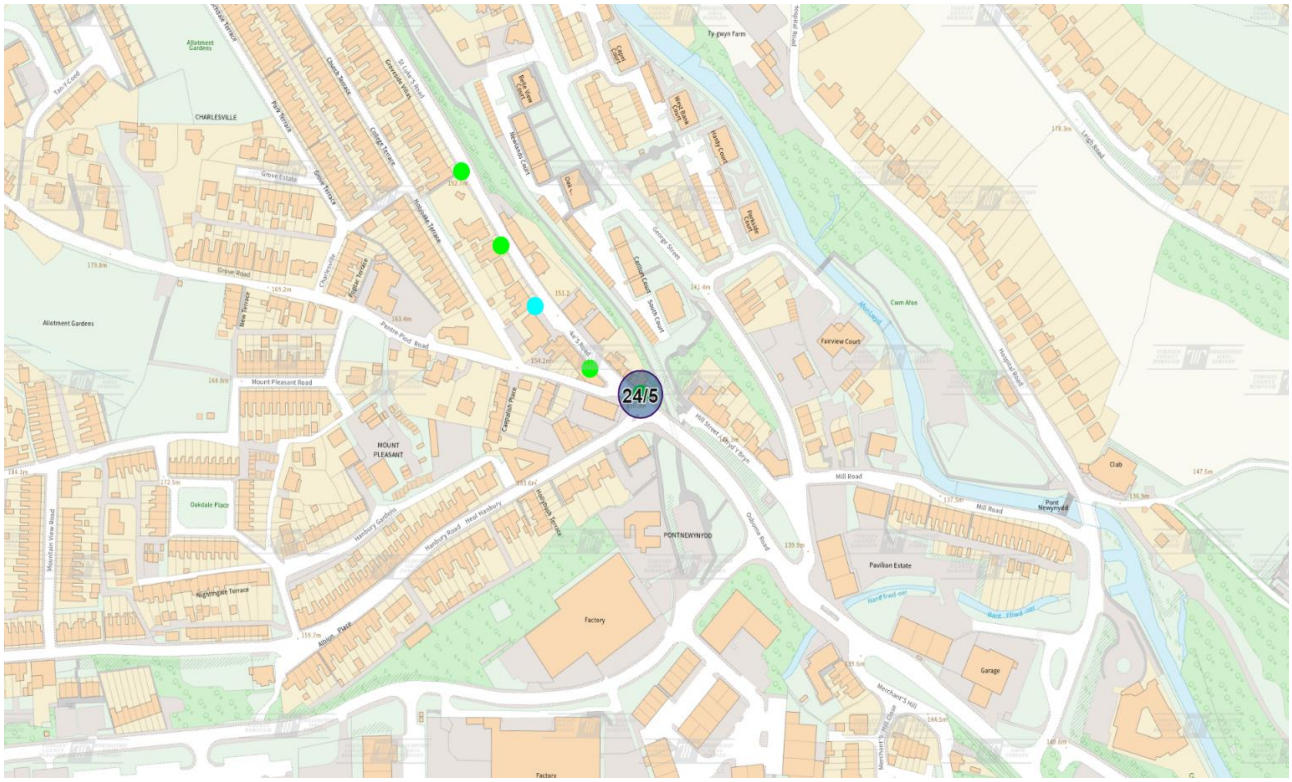
TCBC24/2	12 St Lukes Road	Roadside	X327214,Y202005



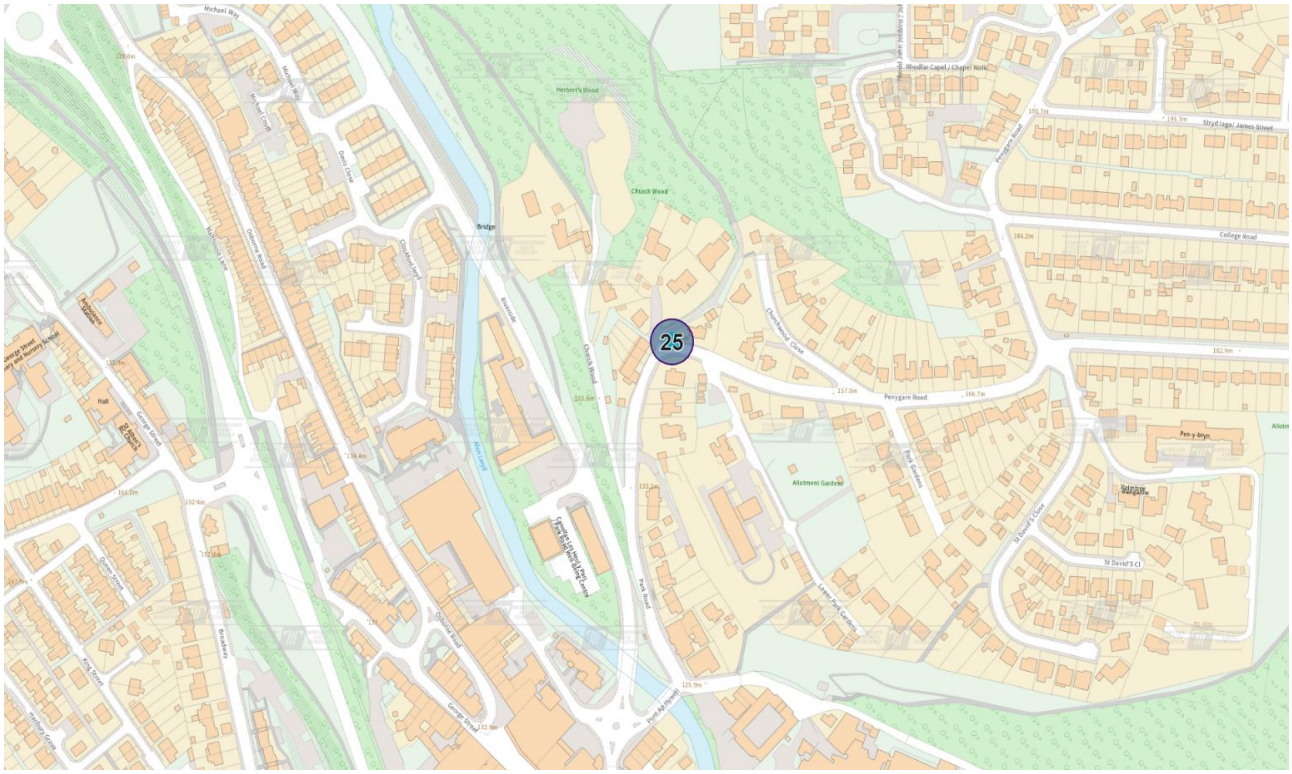
TCBC24/3	1 Groveside Villas	Roadside	X327187,Y202051



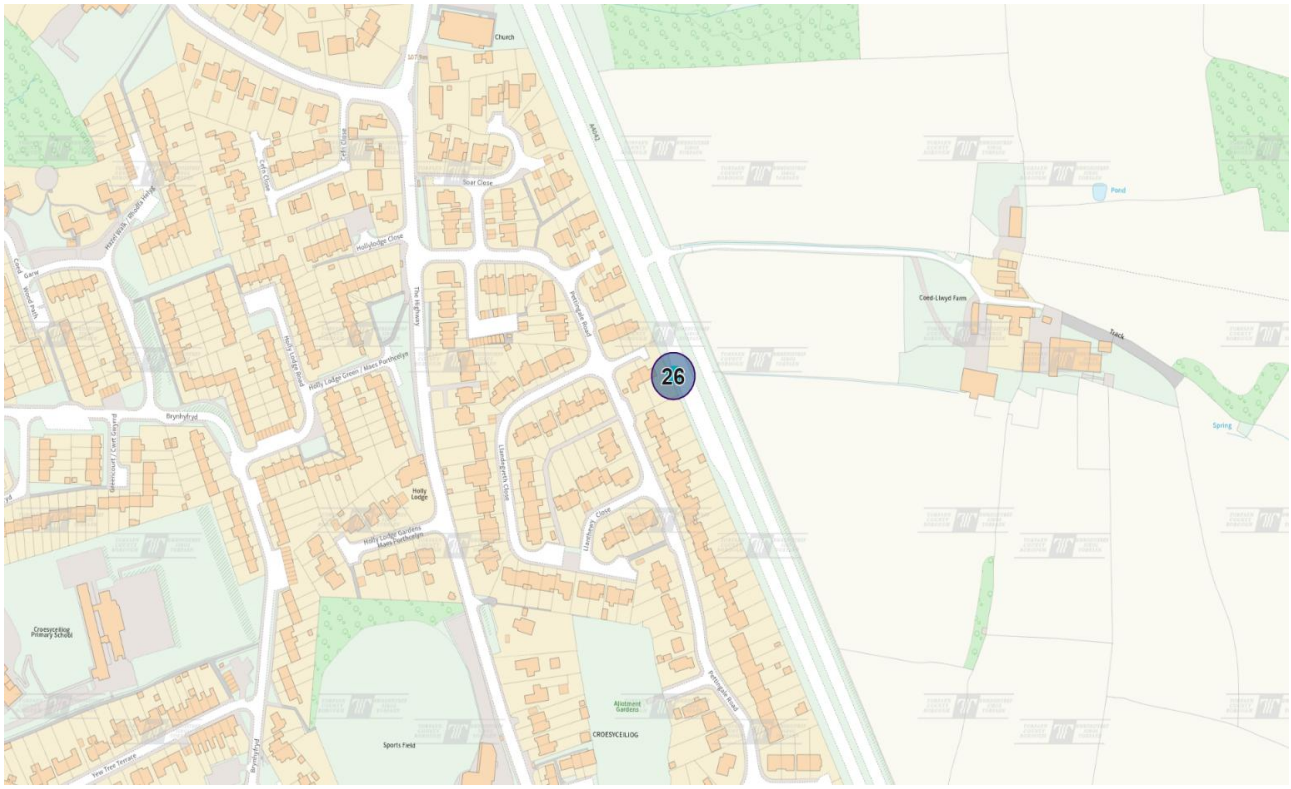
TCBC24/5	Flat 24 & Tonic Hairdressers	Roadside	X327308,Y201912



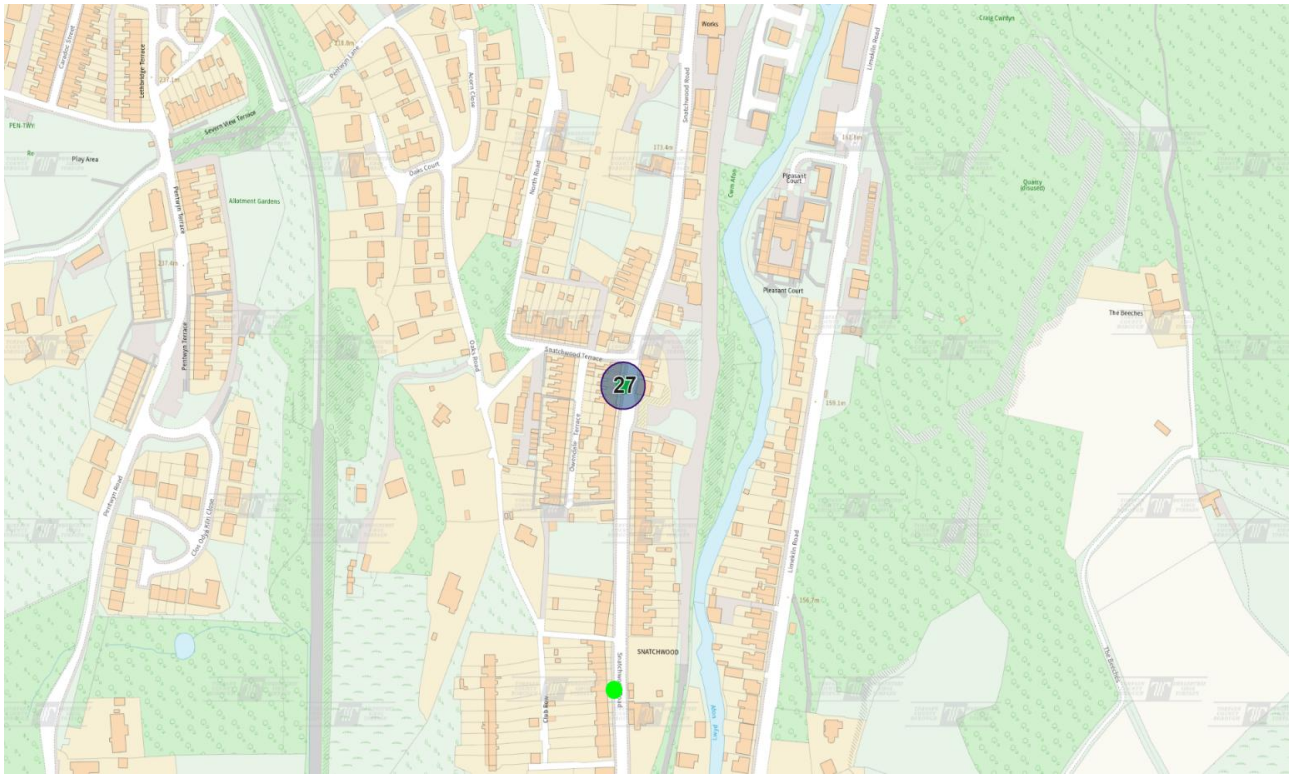
TCBC25	Penygarn Road	Roadside	X328206,Y201300



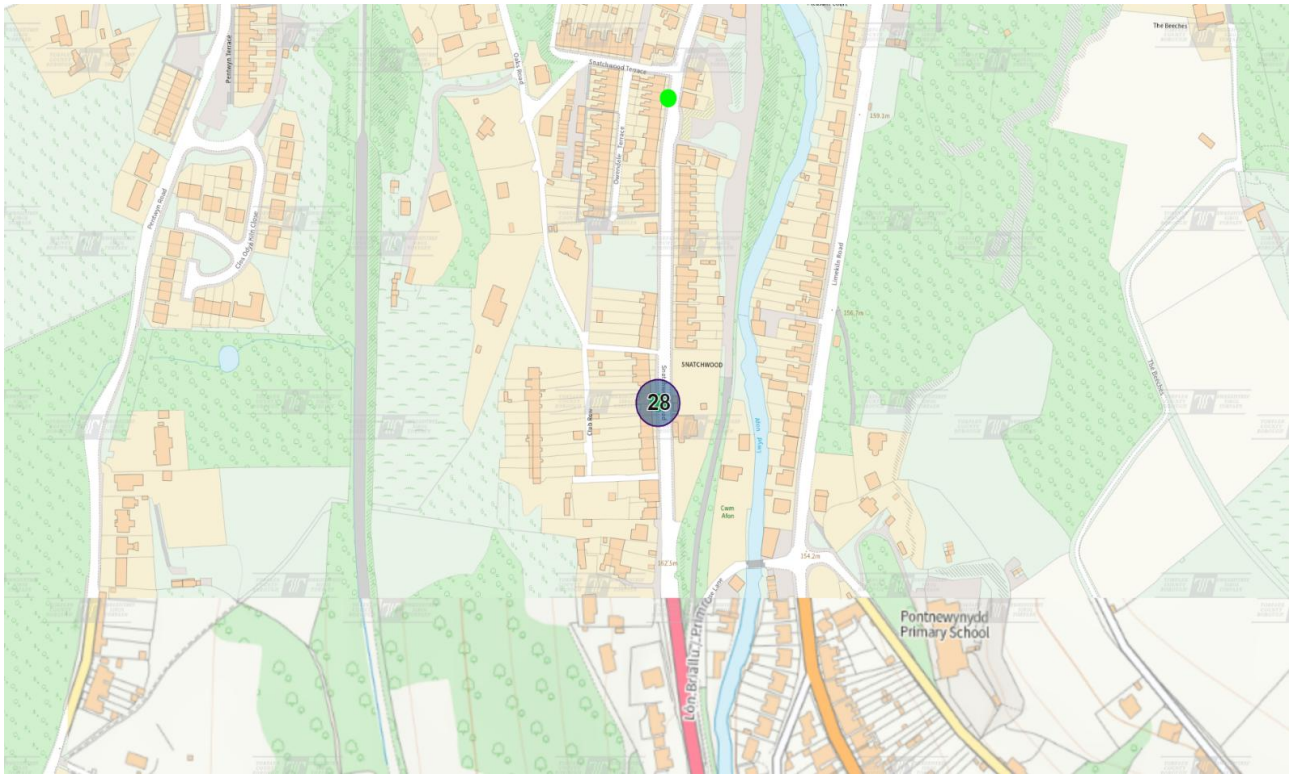
TCBC26	A4042 Croyseyceiliog By-pass	Roadside	X330743,Y196609



TCBC27	3 Hollyoake Terrace, Snatchwood, Road	Roadside	X326914,Y202933



TCBC28	57 Snatchwood Rd	Roadside	X326907,Y202741



Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the LA intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
APR	Air quality Annual Progress Report
AURN	Automatic Urban and Rural Network (UK air quality monitoring network)
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide