2025 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the Environment Act 1995 Local Air Quality Management, as amended by the Environment Act 2021

Date: June 2025

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Local Responsibilities and Commitment

This ASR was prepared by the Environmental and Regulatory Services Department of Forest of Dean District Council with the support and agreement of the following officers and departments:

- Phil Measures (Environmental Protection)
- Karen Toomer (Environmental Protection)

In addition, support was also provided by the following officers at Gloucestershire County Council:

- Scott Macaulay-Lowe (Public Health and Communities)
- Sophia Beglinger (Climate Change & Air Quality Officer)

This ASR has been signed off by the Director of Public Health for Gloucestershire County Council.

If you have any comments on this ASR please send them to the Air Quality Officer using the contact details provided above.

Executive Summary: Air Quality in Our Area

Air Quality in Forest of Dean District

Breathing in polluted air affects our health and costs the NHS and our society billions of pounds each year. Air pollution is recognised as a contributing factor in the onset of heart disease and cancer and can cause a range of health impacts, including effects on lung function, exacerbation of asthma, increases in hospital admissions and mortality.

Air pollution particularly affects the most vulnerable in society, children, the elderly, and those with existing heart and lung conditions. Low-income communities are also disproportionately impacted by poor air quality, exacerbating health and social inequalities.

Table ES 1 provides a brief explanation of the key pollutants relevant to Local Air Quality Management and the kind of activities they might arise from.

Table ES 1 - Description of Key Pollutants

Pollutant	Description
Nitrogen Dioxide (NO_2)	Nitrogen dioxide is a gas which is generally emitted from high-temperature combustion processes such as road transport or energy generation.
Sulphur Dioxide (SO_2)	Sulphur dioxide (SO_2) is a corrosive gas which is predominantly produced from the combustion of coal or crude oil.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Particulate matter is everything in the air that is not a gas. Particles can come from natural sources such as pollen, as well as human made sources such as smoke from fires, emissions from industry and dust from tyres and brakes. PM_{10} refers to particles under 10 micrometres. Fine particulate matter or $PM_{2.5}$ are particles under 2.5 micrometres.

The monitoring reported within this 2025 Annual Status Report for Forest of Dean District Council (FoDDC) took place during the whole of 2024. It does not indicate any additional areas of general concern with regard to air quality. As with last year's results, this year's annual mean levels did not exceed the national objective of 40 µg/m^3, which is set to protect health.

The results of NO_2 monitoring during 2024 have shown concentrations have, in general, fallen across the district. This has had a particularly positive effect on the Air Quality Management Area (AQMA), which has had average annual concentrations of NO_2 below the national objective for three consecutive years (post-pandemic). This will now trigger the process of revoking the AQMA, which will commence later this year. This is discussed in more detail in Section 3.2.1.

Actions to Improve Air Quality

Whilst air quality has improved significantly in recent decades, there are some areas where local action is needed to protect people and the environment from the effects of air pollution.

The main source of air pollution (NO_2) in the Forest of Dean District is road traffic. Consequently, we find the highest concentration where there is frequently idling or stop - start traffic, e.g. at busy junctions. Actions which are likely to improve air quality are those which reduce the number of vehicles on the road, e.g. encourage active transport and the use of public transport; or, increase the number of low and ultra low emission vehicles on the road e.g. expanding the electric vehicle charging network or setting up electric car clubs. All three levels of government covering Lydney are committed to actions which will promote active travel, improve public transport and make electric vehicle charging more convenient. The key documents include:

- Gloucestershire's Local Transport Plan 2020-2041
- Gloucestershire's Bus Improvement Plan 2024
- Forest of Dean District Council Local Plan 2041 (Draft)
- Lydney Town Council Neighbourhood Plan 2025-2041 (Draft)

These are discussed in more detail in Section 2.2.

In 2024, other actions included the addition a new electric bus serving the 777 Robin on demand service, and the installation of new electric vehicle charging points across the district.

Finally, planning applications for large developments are reviewed and assessed with regard to their potential impact on local air quality. There is also an expectation that developers design such developments to encourage alternative modes of travel to petrol or diesel vehicles, and provide provision for charging electric vehicles.

Air Quality Partners

The source of air pollution across the district is principally road vehicles. The majority of the roads in our district are under the control of Gloucestershire County Council and, as the district's highway authority, the county council is FoDDC's main air quality partner. The two councils regularly work together within a planning context, regarding highways and new developments, either directly or via consultations through the planning process.

FoDDC is also beginning to engage with town and parish councils to support them with projects which may benefit air quality, regardless of their current status.

District Air Quality Group

Cotswold Air Quality Officer continues to meet with other officers in the county to share experiences and ideas relating to improving air quality. The aim continues to be the development of a more co-ordinated approach to air quality across Gloucestershire, with the support of GCC's air quality officer and Healthy Place Shaping team. GCC continue to update and maintain the air quality webpage as part of the InformGloucestershire site.

Conclusions and Priorities

To conclude, air quality continues to show a steady improvement across the district, with 15 of the 28 locations monitored showing concentrations of NO_2 below half of the national objective. NO_2 concentrations in the AQMA remained below the national air quality objective for the third consecutive year (post Covid), with all locations monitored showing a decrease in this pollutant. It is intended to revoke the AQMA this year.

Despite the continued decrease in the concentrations of NO_2 across the district, air pollution remains a contributing factor to poor health. Consequently, the County Council, District Council, residents and businesses continue to have a part to play in reducing emissions and improving the quality of the air we breathe. It is important that GCC Transport Department are kept informed of proposed developments and that developers are aware of the need for appropriate mitigation in respect of associated air pollution.

Over the coming years, we anticipate further improvements as a consequence of changes in the way we travel, how our roads are used and further improvements in car technology. FoDDC will continue to work with GCC to explore and develop highway improvements, and ensure future large developments include, or provide funding for, mitigation measures to minimise the impact of the consequential additional traffic.

Over the next year we will continue the diffusion tube monitoring in accordance with Defra guidance LAQM TG(22), as well as continuing to seek funding for particulate monitors or sensors.

The 2005 – 2024 FoDDC Air Quality reports are available online at:

Forest of Dean District Council - Air Quality pages

How to get Involved

We can all contribute to improving air quality our district by:

- Reducing how much we use petrol/diesel vehicles;
- Where driving diesel/petrol cars is necessary, using 'eco-driving' styles, which reduces fuel usage, and consequently reduces emissions;
- Consider car sharing – encourage your workplace to co-ordinate car sharing;
- Using car clubs instead of buying a car. Even better, join an electric car club;
- Using public transport; and,
- If you are able, use alternative travel modes such as walking or cycling;

These measures not only improve air quality, but also will contribute to tackling climate change and, in the case of cycling and walking, will improve your health too!

Other ways which you can get involved include:

- Participating in consultations on plans and strategies at county (https://haveyoursaygloucestershire.uk.engagementhq.com/) and district level (https://www.fdean.gov.uk/about-the-council/having-your-say/current-consultations/);
- Joining local campaign groups;
- Communicating issues or ideas to town/parish councils, district council or county council;

More information on air quality can be found on the following websites:

- Defra UK Air
- Action for Clean Air
- Inform Gloucestershire

Any queries about Air Quality should be directed to the Environmental Protection team within FoDDC. This team can be contacted by email on: ers@fdean.gov.uk

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1 Local Air Quality Management

This report provides an overview of air quality in Forest of Dean District during 2024. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), 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 an exceedance is considered likely the local authority must 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 order to achieve and maintain the objectives and the dates by which each measure will be carried out. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by Forest of Dean District Council (FoDDC) to improve air quality and any progress that has been made.

The statutory air quality objectives applicable to LAQM in England are presented in Table E.1.

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 18 months. The AQAP should specify how air quality targets will be achieved and maintained, and provide dates by which measures will be carried out.

A summary of AQMAs declared by FoDDC can be found in Table 2.1. The table presents a description of the AQMA that is currently designated within Forest of Dean District. Appendix D provides a map of the AQMA and also the air quality monitoring locations in relation to the AQMA (Figure D.20). The air quality objectives pertinent to the current AQMA designation is as follows:

- NO_2 annual mean;

The AQMA in Lydney was declared in July 2010. It was identified that traffic congestion (at the T-junction between the High Street and the Bream Road) was the most likely cause of the elevated NO_2 levels, which exceeded the national air quality objectives at the time the AQMA was declared. The district's centralised national AQMA page can be found here: Link to Forest of Dean AQMA details.

NO_2 concentrations in the Lydney AQMA have now been compliant for three consecutive years. Local Air Quality Management guidance from Defra states that where compliance has been achieved for this length of time, the Local Authority should consider revoking the AQMA. It is the intention of the council to begin the process of revocation in 2025. Following revocation the council will begin to compile an Air Quality Strategy in accordance with Policy Guidance LAQM TG22.

Table 2.1 – Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Number of Years Compliant with Air Quality Objective	Name and Date of AQAP Publication	Web Link to AQAP
High Street Lydney	July 2010	Annual Mean NO_2; 40µg/m^3	High Street, Hill Street and Newerne Street from Temple Way junction to Albert Street Junction; and Bream Road from High Street junction to approximately 75m past the entrance to Lydney C of E Primary School; and Forest Road from Hill Street to just past 17 Forest Road.	NO	50µg/m^3	27.3µg/m^3	4 (including Covid pandemic)	A draft Lydney AQMA Action Plan dated January 2015 has been prepared with the assistance of a steering group and after local consultation with stakeholders.	

☒ **Forest of Dean District Council confirm the information on UK-Air regarding their AQMA(s) is up to date.**

☒ **Forest of Dean District Council confirm that all current AQAPs have been submitted to Defra.**

2.2 Progress and Impact of Measures to address Air Quality in Forest of Dean District

Defra's appraisal of last year's ASR concluded "*The report is well structured, detailed, and provides the information specified in the Guidance"*. The appraisal provided the following suggested improvements to subsequent reports:

Comment	Action
The council have reported that they have begun reviewing their AQMA as their AQAP is currently over 5 years old. Progress on this is expected in next year's ASR.	The council intend to revoke the Lydney AQMA this year (2025). Further discussion is presented in Section 2.1.
The council have provided good QA/QC measures including details of the AIR-PT rounds and screenshots of the national bias adjustment factor calculations spreadsheet, which is commended. Though it can be viewed from the screenshot of the calculations spreadsheet, it is not explicitly stated in the report which lab and methodology were used for diffusion tube analysis, it would be good to clearly state this in future reports for clarification.	The lab and extraction methodology is now detailed in Appendix C.

FoDDC has taken forward a number of direct measures during the current reporting year of 2024 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. Twelve measures are included within Table 2.2, with the type of measure and the progress FoDDC or their Air Quality Partners have made during the reporting year of 2024 presented. Where there have been, or continue to be, challenges or barriers restricting the implementation of the measure, these are also presented within Table 2.2.

More detail on these measures can also be found in the following documents:

- Gloucestershire Local Transport Plan 2020-2041
- Gloucestershire Climate Change Strategy
- Forest of Dean Local Plan
- Gloucestershire County Council Ultra Low Emission Vehicle Strategy
- Bus Service Improvement Plan 2024

- Forest of Dean Allocations Plan 2006 to 2026
- Lydney Neighbourhood Development Plan
- Lydney Town Council Strategic Plan 2015-2024
- Forest of Dean District Council Climate Emergency Strategy and Action Plan 2022-25

Table 2.2 – Progress on Measures to Improve Air Quality

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
1	Gloucestershire's Local Transport Plan 2020-2041	Transport Planning and Infrastructure	Other	2021	2040	Gloucestershire County Council	Gloucestershire County Council	Partially Funded	£10k - 50k	Implementation	Reduced vehicle emissions	Improvements to: Lydney rail station and services; walking/cycle networks; bus services; key road junctions. Also introduction of transport interchange hubs.	Implementation on-going	Funding
2	Forest of Dean District Local Plan 2041	Policy Guidance and Development Control	Other policy	2023	2040	FoDDC	FoDDC	Funded	£10k - 50k	Planning	Potential to improve: public transport and active transport facilities; infrastructure for electric vehicles; traffic flow to reduce congestion.	Improvements in overall population health. Increase in cycling and walking. Reduced concentrations of NO_2	Public Consultation commencing June/July 2024	Funding and changing attitudes and behaviours
3	Gloucestershire's Bus Service Improvement Plan (BSIP) 2024	Transport Planning and Infrastructure	Bus route improvements & Public transport improvements- interchanges stations and services	2024	2026	Gloucestershire County Council Private & Community Bus Operators	Gloucestershire County Council / BSIP	Funded	£1m - £10m	Implementation	Reduced vehicle emissions	Annual average NO_2 to be reduced to meet AQ objective. Increase in public transport services and passenger numbers	Implementation on-going	Changing attitudes to public transport. Funding to improve active travel infrastructure and public transport services
4	ThinkTravel	Promoting Travel Alternatives	Promotion of walking	2020	2025	Gloucestershire County Council & FODD Council	Gloucestershire County Council	Funded	< £10k	Implementation	Reduced vehicle emissions & improve health	Improvements in overall population health. Increase in cycling and walking. Reduced concentrations of NO_2	Implementation on-going	Changing behaviours and attitudes to active travel.
5	Air Quality Technical Guidance for Forest of Dean District Council 2015	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2015	2015	District Council	Local Authority, Funding: Defra Air Quality Grant	Funded	< £10k	Completed	Address potential increase in vehicular emissions due to vehicle usage associated with new residential and business developments	Approved policy in place and in use, with associated technical guidance available on FODDC website	Policy approved and in use from 30 July 2015	Developer awareness of the guidance
6	Dean Forest Greenway	Promoting Travel Alternatives	Promotion of cycling	2022		West Dean Parish Council	West Dean Parish Council, Lydney Town Council, Forestry England, Dean Forest Railway and Lydney Park Estate	Funded	Not known	Planning	Reduced vehicle emissions	Provision of a traffic free walking & cycling route from Parkend to Lydney, as an alternative to driving.	Awaiting approval of revised route	Potential impact on designated site and ancient woodland. Changing attitudes and behaviours with regards to active travel
7	The Robin	Transport Planning and Infrastructure	Bus route improvements	2022	Ongoing	Gloucestershire County Council & Lydney Dial-a-Ride	Gloucestershire County Council	Funded	Not known	Pilot Trial ongoing	Reduce number of private cars on the road, and consequently emissions	Uptake of the service	Pilot Trial – passenger numbers continue to rise in 2024	Ongoing funding and continued uptake of the service
8	Climate Emergency Strategy and Action Plan 2022-25	Policy Guidance and Development Control	Other policy	2023	2025	Gloucestershire County Council & FODD Council	Gloucestershire County Council & FODD Council	Partially funded	Not known	Adopted January 2023	Reduced vehicle emissions, Reduced number of vehicles on the road.	Number of actions successfully implemented	Progress on EV charger installation, and Active Travel Strategy	Funding
9	Installation of electric vehicle charging points	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low	2022	2025	Gloucestershire County Council & FODD Council	Gloucestershire County Council - Local Electric Vehicle	Partially funded	£500k - £1 million	Implementation	Reduced vehicle emissions	Frequency of use	Up to 62 chargers planned for 2025	Identification of suitable locations with adequate electric supply.

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
			Emission Vehicles, EV recharging, Gas fuel recharging				Infrastructure (LEVI) Capital Fund; FoDDC - On-Street Residential Chargepoint Scheme							
10	The Lydney Cycle Improvement Scheme	Promoting Travel Alternatives	Promotion of cycling	2020	2021	Gloucestershire County Council, with First LEP Growth Deal	Gloucestershire County Council	Funded	£500k - £1 million	Completed	Provides alternatives for travel around Lydney, especially within the AQMA	The Scheme involves the construction of an integrated cycleway network incorporating 5 individual “links” throughout Lydney.	Completed	None
11	Facilitating home working among council personnel	Promoting Travel Alternatives	Encourage / Facilitate home-working	2020	2025	Gloucestershire County Council & FODD Council	Gloucestershire County Council & FODD Council	Funded	< £10k	Implementation	Reduced vehicle emissions	Reduced NO_2 concentrations	Completed	None
12	Targeted speed limit reductions	Traffic Management	Reduction of speed limits, 20mph zones	2018	2018	Gloucestershire County Council	Gloucestershire County Council	Funded	£100k - £500k	Completed	Reduced vehicle emissions	Improved traffic flow at peak hours in the Lydney Town Centre	Completed	None

Gloucestershire's Local Transport Plan

Gloucestershire's Local Transport Plan 2020-2041 (LTP) sets out the County Council's ambitions to improve transport across the county. It includes policies to improve public transport and active travel, as well as improving traffic flow in areas where congestion is frequently an issue. Many of the polices relating to Lydney are mirrored in other county, district and town council policies and plans, demonstrating a unified approach.

The plan includes:

- Highways and junction improvements within Lydney town centre (FOD 3, FOD 6, FOD 18).
- Cycling and Walking access improvements to Lydney Station and Lydney Harbour (FOD 14, Completed 2022)
- Cycling and Walking access improvements – Lydney Town Centre (FOD 15, Completed 2020)
- Bus stop and bus advantage improvements for Gloucester - Lydney / Coleford / Cinderford corridors (FOD 7, FOD 9, FOD 11)
- Lydney Railway Station Enhancements (FOD 16, partially complete)
- Provision of electric vehicle charging facilities in interchange hubs and other key locations (Policy LTP PD 0.1, Policy LTP PD0.2, Policy LTP PD 0.3, Policy LTP PD0.4, Policy LTP PD0.6)

Updates on the progress of the LTP can be found here.

Forest of Dean Local Plan

The FoDDC is currently in the process of developing a new local plan to replace the existing plan which runs to 2026. In May 2024, the Draft Local Plan 2041 was endorsed by full council for public consultation. The consultation period, including statutory consultation, was completed in August. The plan is expected to be adopted in spring 2027.

The new plan includes the following policies which may benefit air quality in Lydney:

- Policy LP.1 Sustainable Development – large developments are expected to provide easy and safe access to public transport and facilities for active travel.
- Policy LP.15 Design Principles – development design to integrate walking and cycle routes and support public transport.

- Policy LP.24 Active Travel - Active travel will be promoted throughout the district. Development proposals will be required to integrate active travel routes and networks, enabling access to services and to points (hubs) where other transport (including public transport and other services) available.
- Policy LP.25 Cycle Routes – to establish and improve cycle connections, particularly those connecting settlements. The local plan will support the increased use of cycling as a means of travel as well as the expansion of recreational opportunities.
- Policy LP.27 Strategic Sites – strategic sites to be developed where transport linkages can be created, enhanced or used which promote the use of public transport, reduce the need to travel overall and allow and encourage cycling and walking.
- Policy LP.71 Lydney Railway Station – including additional car and cycle parking, bus service improvements, improvements to mainline services, better passenger facilities and improved access to the Dean Forest Railway.
- Policy LP.73 Lydney Town Centre Highway Strategy – including the Newerne Link and improvements to the Bream Road/Hill Street junction.

Lydney Town Council

Lydney Town Council are currently reviewing The Lydney Town Neighbourhood Plan, with the new plan running from 2025 – 2041. The revision process began in early 2022, with consultation on the draft plan currently underway. The draft plan includes the following policy which will improve air quality in the town:

- LYD TRAN1: Sustainable and Active Travel and Improvements to transport infrastructure –
    a. The transport implications of development must be addressed as part of all relevant planning applications.
    b. Where relevant to the development, proposals must:
        i. Contribute proportionately and positively towards the protection of, connection to and enhancement of Lydney's sustainable travel network defined on map 14, in accordance with the sustainable transport hierarchy.
        ii. Provide effective and safe access to egress to the existing highway network;

iii. Include appropriate measures to avoid, mitigate and manage any significant impacts on highway capacity, congestion or on highway safety including any contribution to cumulative impacts;
iv. Minimise conflict between different modes of transport;
v. Create accessible development which reduces the need to travel by car and maximises the use of sustainable modes of transport;
vi. Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
vii. Ensure delivery of cycle parking and supporting infrastructure;
viii. Protect, enhance and support public rights of way identified on map 6 and shown on map 14;
ix. Be designed to enable charging of plug-in and other ultra low emission vehicles in safe, accessible, convenient locations;
x. Are within easy walking distance of public transport with good service frequency;
xi. Minimise any adverse impact on communities and the environment, including noise and air quality.

c. Particular support will be given to proposals which:
i. Provide or contribute proportionately to direct and accessible pedestrian and cycle connections to local facilities, employment centres and Lydney town centre and Harbour;
ii. Improve the public right of way and wildlife corridor network as shown on map 6; and/or
iii. Assist with the development of a sign-posted network of public rights of way connecting the town centre, the railway station, the harbour and leisure areas.

Lydney Town Council have carried out various projects to improve air quality in 2024. They continue to implement green infrastructure improvements, including planting wildflower areas on roadsides, leaving some grassed areas uncut and planting community orchards in association with community schools.

Public Transport

Community transport service Lydney Dial-A-Ride has purchased an electric bus to operate its 777 Robin service in the south of the district. The bus was funded by the Rural

England Prosperity Fund and Zero Emission Bus Regional Areas 2 programme as part of a scheme run by Gloucestershire County Council (GCC).

2024 saw the publication of Gloucestershire's Bus Service Improvement Plan (BSIP) 2024. The plan outlines the county's ambitious plans to improve the service throughout the county, through the development of transport hubs and corridors, linking the main settlements both within the county, as well as links to key out-of-county towns and cities. The plan also includes: upgrading of bus stops, including Real Time Information (RTI) at key stops; upgrading of the fleet; a review of fares and ticketing; and, improving reliability. The plan also includes the use of demand responsive transport serving more isolated, rural communities.

Improvements to services in the Forest of Dean district in 2024 and into 2025 include:

- Expansion of the 72 service, between Newport and Lydney, to Drybrook. This service now calls at a number of the districts towns and villages including Ruspidge, Cinderford and Harrow on the Hill.
- The development of an express bus route running from Gloucester to Lydney, then Coleford, and a second route from Lydney to Chepstow.

The plan includes an ambitious network of transport corridors and hubs, where Lydney will play a strategic part.

Active Travel

GCC have produced an interactive cycling map which shows all cycle routes within the county, as well as those included in LTP. The county also has dedicated cycling webpages, and has set up a Cycling Advisory Group to assist in delivering the councils cycling projects and schemes.

GCC support and promote the Love to Ride platform, which supports and encourages people to use cycling as one of their main modes of transport. This included promotion of the Cycle September challenge and Winter Wheelers Challenge, both launched in 2024.

The County Council also promotes ModeShift Stars scheme run by the organisation Modeshift. The scheme promotes active travel in schools, providing help and support to schools wanting to increase the number of pupils who walk, wheel or cycle to and from school.

FoDDC are in the process of developing an Active Travel Strategy, which is expected to be published later this year following public consultation. More details on the content of this strategy will be presented in the 2026 report.

Dean Forest Greenway

There was further work to progress the Dean Forest Greenway multi use path, connecting Lydney and Parkend. The original planning application (P1913/21/FUL), submitted in 2021, raised the following concerns regarding the proposed route:

- Impact on ancient woodland
- Health and safety at junctions with main roads
- Impact on the amenity of residential housing
- Potential of flooding

To address these concerns, the route has now been revised. Updated documentation was submitted to the local planning authority in November 2024, followed by consultation with relevant parties and the general public. A decision on the application is expected this year. More information on the project can be found at Dean Forest Greenway.

Waste Collection Vehicles

FoDDC's new waste service partner, Ubico, invested in two new electric recycling trucks in 2024, following an earlier successful trial. The District Council believes it is among the first rural authorities in England to embrace the heavy-fleet technology for kerbside-sort recycling.

Electric Vehicle (EV) Charging

2024 saw a continuation of the roll out of EV chargers across the district by Gloucester County Council, as well as additional points installed privately for public use.

Installation of chargers under the 'On Street Residential ChargePoint Scheme', was completed in January 2025, which saw 33 chargers installed on for use by residents without off-street parking.

Private Vehicle Use

GCC have teamed up with Liftshare to promote car sharing for commuting to school and work. There are currently 2484 members of the scheme in the county.

2.3 $PM_{2.5}$ – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy[1], local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter ($PM_{2.5}$). There is clear evidence that $PM_{2.5}$ (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

The Environment Act 2021 required the Secretary of State to set $PM_{2.5}$ objectives for the UK, which were laid out in The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023. The targets set within the 2023 Regulations are:

- The annual mean concentration target is that by the end of 31st December 2040 the annual mean level of $PM_{2.5}$ in ambient air must be equal to or less than 10 µg/m³
- The population exposure reduction target is that there is at least a 35% reduction in population exposure by the end of 31st December 2040, as compared with the average population exposure in the three-year period from 1st January 2016 to 31st December 2018.

To monitor progress in meeting these objectives, new monitors have been installed across the country to provide concentration data for fine particles in the air. These are predominantly in urban areas.

2.3.1 Particulate Matter in the Forest of Dean District

FoDDC currently does not measure particulate matter within the district.

The main sources of particulate matter in the district are likely to be vehicles and domestic combustion. No other significant source of $PM_{2.5}$ have been identified within the district in 2024. Measures to reduce vehicle emissions will be aligned with many of the measures in

[1] Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

Table 2.2 above, which focus on reducing private vehicle use. FoDDC is also taking the following measures to address $PM_{2.5}$:

- Highlighting the issues of $PM_{2.5}$ including the impacts on health and activities which generate the particles. This will be achieved through campaigns such as responsible use of wood burners, fire pits, garden bonfires etc.
- Seek funding to install $PM_{2.5}$ monitors within the AQMAs and other areas of the Cotswold district.

From Defra background mapping, the calculated background concentration of $PM_{2.5}$ in the Cotswold District in 2024 was an average of 6.15µg/m^3, 0.06µg/m^3 lower than that predicted for 2023 (6.21µg/m^3). Background concentrations are modelled from measured data generated by reference analysers and meteorological data from a specific year, and do not include local sources such as roads and chimney stacks.

Trends in $PM_{2.5}$ in the UK, at urban background and roadside sites, between 2009 and 2023 have been published by DEFRA: Link to: Particulate matter (PM10/PM2.5). The report has yet to be updated to reflect 2024 concentrations, however, headlines from the report detailing data up to 2023 include the following:

- Annual average concentration of the fine particles peaked in 2011 and have since shown a steady decline. In 2023 concentrations fell to their lowest since 2019.
- Concentrations in 2023 showed temporal changes in $PM_{2.5}$, with concentrations peaking during the winter and spring months.
- Peaks were also recorded in April and September during 2023, thought to be due to agricultural operations across UK and continental Europe during the spring, and the significantly warm and dry start to September.
- Residential combustion of wood and coal in stoves and open fires is a large contributor to emissions of particulate matter both in the UK, contributing factor towards elevated concentrations in winter months.

Many of the sources of $PM_{2.5}$ are often trans-boundary or out of the control of the local authority and its residents. However, residents can assist in reducing the concentrations of this pollutant in the air we breathe by minimising the combustion of solid fuels as much as possible. This means:

- only using your solid fuel appliance when you really have to keep warm, not solely for aesthetic purposes;
- making sure the wood you burn meets with the 'Ready to Burn' criteria;

- not burning treated or painted wood, household waste or wet wood; and,
- Keeping your stove/fireplace and chimney clean and well maintained.

For more advice on using an open fire or stove, including what to burn and what not to burn, please visit:

- https://www.hetas.co.uk/consumer/advice-hub/
- Open fires and wood-burning stoves - A practical guide

2.3.2 Public Health Outcomes Framework

UK Health Security Agency (UKHSA) and the Office for Health Improvements and Disparities (OHID) publish various information related to the health of the general public through its Public Health Profiles. The importance of the effect of air pollution on public health is reflected by the inclusion of an indicator described as "D01 - Fraction of mortality attributable to particulate air pollution". This indicator provides an insight into the probable number of deaths which occur within the UK as a direct consequence of particulate air pollution. Data can be broken down into region, county, district, unitary authority, NHS region or integrated care board.

For Gloucestershire as a whole, the estimated Fraction of Mortality attributable to particulate air pollution (2023 data) is 4.3% of the county's population which is over a 1% decrease on the previous year (5.4%). In comparison, the average for the southwest region was 4.3% in 2023, which fell from 4.6% in 2022.

For the Forest of Dean District, the estimated fraction of mortality attributable to particulate air pollution is 3.9% (a fall of 0.9% from 2022) compared with the southwest regional average of 4.3%.

The fall in mortality attributed to particulate matter coincides with an increase in physical activity in adults[2] (19 and over) across the district from 68.2% (2022) to 69.9% (2023).

[2] Based on the number of respondents aged 19 and over, with valid responses to questions on physical activity, doing at least 150 moderate intensity equivalent (MIE) minutes physical activity per week in bouts of 10 minutes or more in the previous 28 days expressed as a percentage of the total number of respondents aged 19 and over.

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance

This section sets out the monitoring undertaken within 2024 by FoDDC and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2020 and 2024 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

FoDDC has no automatic (continuous) monitoring sites within its area.

3.1.2 Non-Automatic Monitoring Sites

FoDDC undertook non- automatic (i.e. passive) monitoring of NO_2 at 28 sites during 2024. Table A.1 in Appendix A presents the details of the non-automatic sites.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on Quality Assurance/Quality Control (QA/QC) for the diffusion tubes, including bias adjustments and any other adjustments applied (e.g. annualisation and/or distance correction), are included in Appendix C.

3.2 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for bias, annualisation (where the annual mean data capture is below 75% and greater than 25%), and distance correction. Further details on adjustments are provided in Appendix C.

3.2.1 Nitrogen Dioxide (NO_2)

Table A.2 in Appendix A compares the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40µg/m^3. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

For diffusion tubes, the full 2024 dataset of monthly mean values is provided in Appendix B. Note that the concentration data presented in Table B.1 includes distance corrected values, only where relevant.

Overall NO_2 levels are somewhat lower across the District in comparison with 2023 data, with the exceptions only showing a marginal increase (max 0.7µg/m^3). This continual decline is thought to be a result in the increase in the number of people working from home, coupled with improvements in engine technology and the uptake of hybrid and fully electric vehicles.

Trends

The trend of nitrogen dioxide levels, at a representative selection of sites monitored in our Lydney AQMA, over the last 12 years are presented in Appendix A, Figure A.1. The graph illustrates a general fall in NO_2 concentration during 2024 compared with 2023. A similar trend can be seen in Figure A.2, which presents changes in NO_2 concentration at locations in other areas of the district. It is notable that NO_2 concentrations remained below the national objective of 40µg/m^3 across the district. In addition, during 2024 no annual mean was greater than 60µg/m^3, which indicates that an exceedance of the 1-hour mean objective was unlikely at any of the locations.

The results from 2024 are positive and indicate a general improvement in the air quality within the Lydney AQMA and across the district as a whole. With the implementation of the measures described in Section 2.2, we hope to see this trend continue. In addition, NO_2 concentrations in the AQMA have been below the national objective for three consecutive years. Technical Guidance TG22 states that where compliance has been achieved for three consecutive years the local authority should revoke the AQMA as soon as possible. Consequently, the council will be revoking the Lydney AQMA this year (2025). FoDDC will continue to work with the county and town councils to implement measures to tackle air pollution within the district.

Appendix A: Monitoring Results

Table A.1 – 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)
CIN03	Cinderford: 167 High Street	Kerbside	365290	214733	NO_2		0.2	0.9	No	3.0
CIN06	Cinderford: zebra crossing, opposite side to Factory shop	Urban Centre	365659	214171	NO_2		1.2	1.8	No	2.9
CIN07	Cinderford: 30 Belle Vue Road	Roadside	365920	213743	NO_2		6.0	2.2	No	2.8
COL03	Coleford: 17 Old Vicarage Court (closer to 11)	Roadside	357741	210598	NO_2		3.6	1.2	No	2.9
COL04	Coleford: crossroads by former King's Head Hotel (new 05/01/2022)	Roadside	357609	210774	NO_2		0.4	3.9	No	2.7
COL05	Coleford - 29, Market Place	Urban Centre	357559	210740	NO_2		0.9	3.2	No	3.1
LYD01	Lydney: 57 High Street	Roadside	363147	203074	NO_2	Lydney AQMA	0.1	3.7	No	2.9
LYD02	Lydney: Tucker, Bridge House, Newerne Street	Urban Centre	363527	203261	NO_2	Lydney AQMA	0.1	7.7	No	2.8

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)
LYD04	Lydney: 13 High Street	Urban Centre	362954	202898	NO_2	Lydney AQMA	0.1	3.6	No	2.9
LYD05	Lydney: Unit 1, Regents Arcade, Newerne Street	Urban Centre	363439	203207	NO_2	Lydney AQMA	0.6	1.5	No	2.8
LYD06	Lydney: Inspirations Gallery, Hill Street	Urban Centre	363185	203111	NO_2	Lydney AQMA	0.4	1.5	No	2.9
LYD08	Lydney: 13 Bream Road (bottom)	Urban Background	363109	203213	NO_2	Lydney AQMA	0.1	3.8	No	2.9
LYD09	Lydney: 17 Bream Road (top)	Urban Background	363042	203322	NO_2	Lydney AQMA	0.3	1.0	No	2.8
LYD10	Lydney: Forest Road, opposite Forest Parade (former chip shop)	Roadside	363408	203226	NO_2	Lydney AQMA	0.1	2.2	No	2.7
LYD12	Lydney: Kaplans, 61 Newerne Street	Urban Centre	363607	203320	NO_2	Lydney AQMA	0.1	1.6	No	2.9
LYD15	Lydney: Tegfan, Highfield Lane	Suburban	364042	204125	NO_2		0.1	>15	No	2.0
LYD16	Lydney: Lydney Laundrette, 55 High Street	Urban Centre	363142	203069	NO_2	Lydney AQMA	0.1	2.3	No	2.2

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)
LYD17, LYD18, LYD19	Lydney: 61 High Street (3 of 3)	Urban Centre	363160	203088	NO_2	Lydney AQMA	0.1	2.1	No	2.9
LYD20	Lydney: 2 Cross Hands, Highfield Road	Roadside	364301	203968	NO_2		2.5	1.5	No	2.5
MIT03	Mitcheldean: 5 Hawker Hill	Kerbside	366475	218403	NO_2		1.7	0.5	No	2.8
MIT04	Mitcheldean: 20 The Merrin	Roadside	366469	218245	NO_2		3.0	3.5	No	2.9
NAI01	Nailbridge: pedestrian crossing (location amended 05/01/2022)	Roadside	364566	216246	NO_2		0.3	3.3	No	2.8
NEW03	Newent: 12 High Street	Roadside	372117	226049	NO_2		0.6	1.6	No	2.9
NEW05	Newent: 3 Ross Road (05/01/2022)	Roadside	371943	226212	NO_2		2.0	1.7	No	2.7
NEW06	Newent: Picklenash Junior School, Ross Road (new 05/01/2022)	Roadside	371675	226149	NO_2		3.0	1.5	No	2.7
NOS02	Newnham-on-Severn: Galen House, High	Roadside	369038	211590	NO_2		2.9	1.9	No	2.7

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)
	Street (location amended Dec 2021)									
STM01	1 Steam Mills near junction with Greengables (new 2024)	Roadside	364837	215686	NO_2		0.2	2.3	No	2.5
TUT02	Tutshill: Beachley Road (near Wyedean School)	Roadside	354269	193951	NO_2		13.0	3.0	No	2.7

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

(2) N/A if not applicable.

Table A.2 – 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
CIN03	365290	214733	Kerbside	100.0	100.0	16.5	19.2	18.2	18.8	17.5
CIN06	365659	214171	Urban Centre	75.0	75.0	23.4	27.5	26.1	24.6	24.6
CIN07	365920	213743	Roadside	90.8	90.8	-	-	-	16.3	15.5
COL03	357741	210598	Roadside	100.0	100.0	16.7	19.4	18.6	16.6	16.8
COL04	357609	210774	Roadside	100.0	100.0	-	-	22.2	20.9	20.3
COL05	357559	210740	Urban Centre	100.0	100.0	-	-	15.4	13.2	12.5
LYD01	363147	203074	Roadside	100.0	100.0	30.3	31.5	28.5	28.8	27.3
LYD02	363527	203261	Urban Centre	100.0	100.0	15.6	15.4	14.8	14.2	12.2
LYD04	362954	202898	Urban Centre	100.0	100.0	27.0	29.1	27.1	25.3	24.8
LYD05	363439	203207	Urban Centre	100.0	100.0	26.5	28.7	26.0	25.9	24.1
LYD06	363185	203111	Urban Centre	100.0	100.0	27.5	31.1	26.3	26.7	25.2
LYD08	363109	203213	Urban Background	100.0	100.0	25.2	31.2	28.4	25.9	25.6

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
LYD09	363042	203322	Urban Background	100.0	100.0	26.2	28.9	27.1	25.2	24.8
LYD10	363408	203226	Roadside	100.0	100.0	18.6	20.3	19.4	18.2	17.1
LYD12	363607	203320	Urban Centre	100.0	100.0	20.4	22.2	19.8	19.4	17.8
LYD15	364042	204125	Suburban	100.0	100.0	6.9	7.1	7.0	6.2	6.0
LYD16	363142	203069	Urban Centre	100.0	100.0	28.4	30.0	27.4	27.7	25.4
LYD17, LYD18, LYD19	363160	203088	Urban Centre	100.0	100.0	26.3	28.2	25.3	25.2	23.3
LYD20	364301	203968	Roadside	100.0	100.0	18.5	22.1	21.4	20.5	21.2
MIT03	366475	218403	Kerbside	100.0	100.0	-	-	-	22.3	21.3
MIT04	366469	218245	Roadside	92.4	92.4	-	-	-	16.8	16.5
NAI01	364566	216246	Roadside	100.0	100.0	22.1	23.2	27.1	25.5	24.2
NEW03	372117	226049	Roadside	100.0	100.0	20.1	23.1	20.9	19.8	19.2
NEW05	371943	226212	Roadside	100.0	100.0	-	-	16.6	16.7	14.5
NEW06	371675	226149	Roadside	100.0	100.0	-	-	18.1	18.2	16.1

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
NOS02	369038	211590	Roadside	100.0	100.0	19.4	21.0	21.9	20.7	19.1
STM01	364837	215686	Roadside	100.0	100.0	-	-	-	-	17.6
TUT02	354269	193951	Roadside	100.0	100.0	12.6	11.2	11.4	10.2	9.0

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

☒ **Diffusion tube data has been bias adjusted.**

☒ **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%).

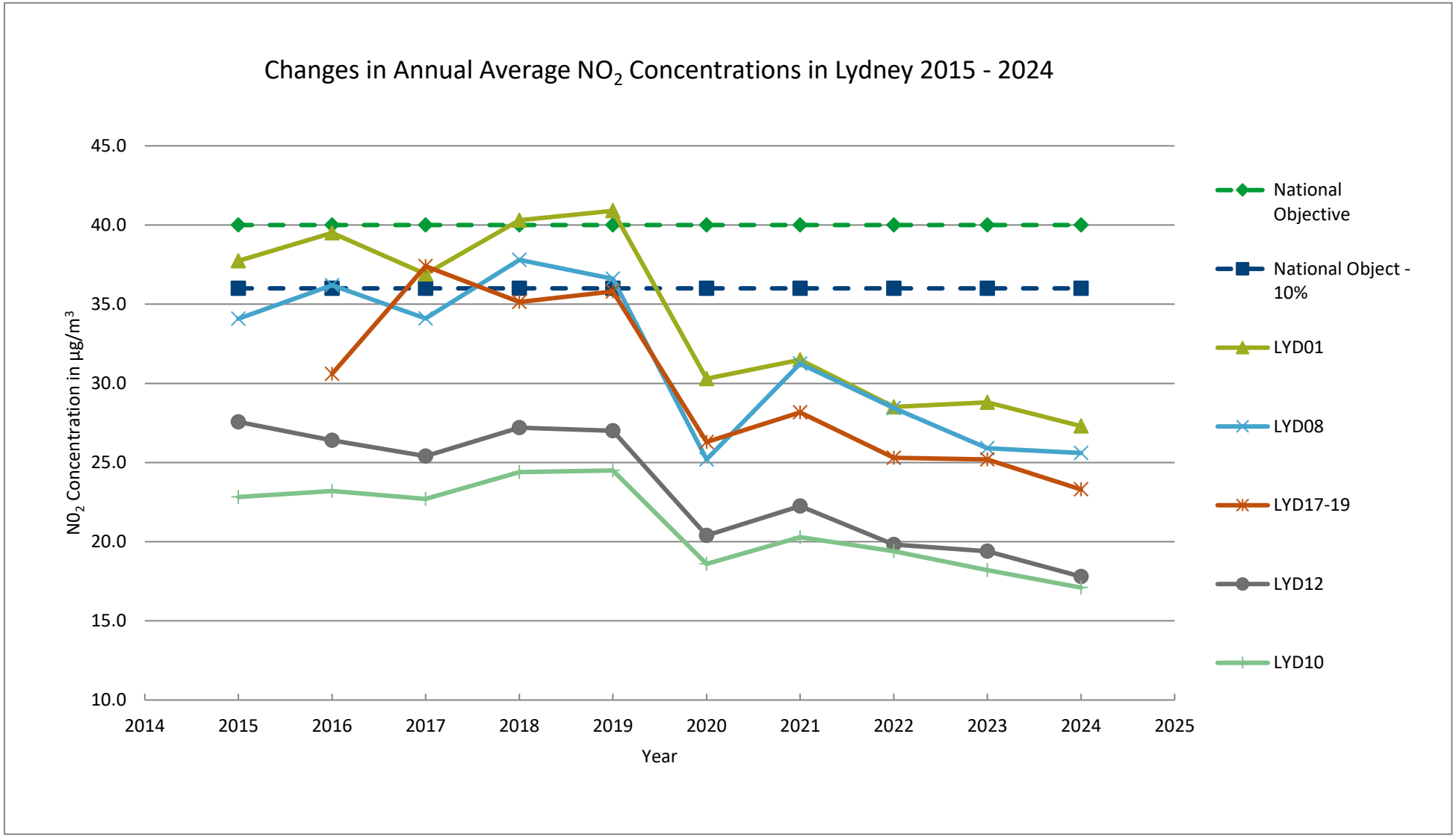


Figure A.1 -Trends in Annual Mean NO_2 Concentrations in Lydney AQMA

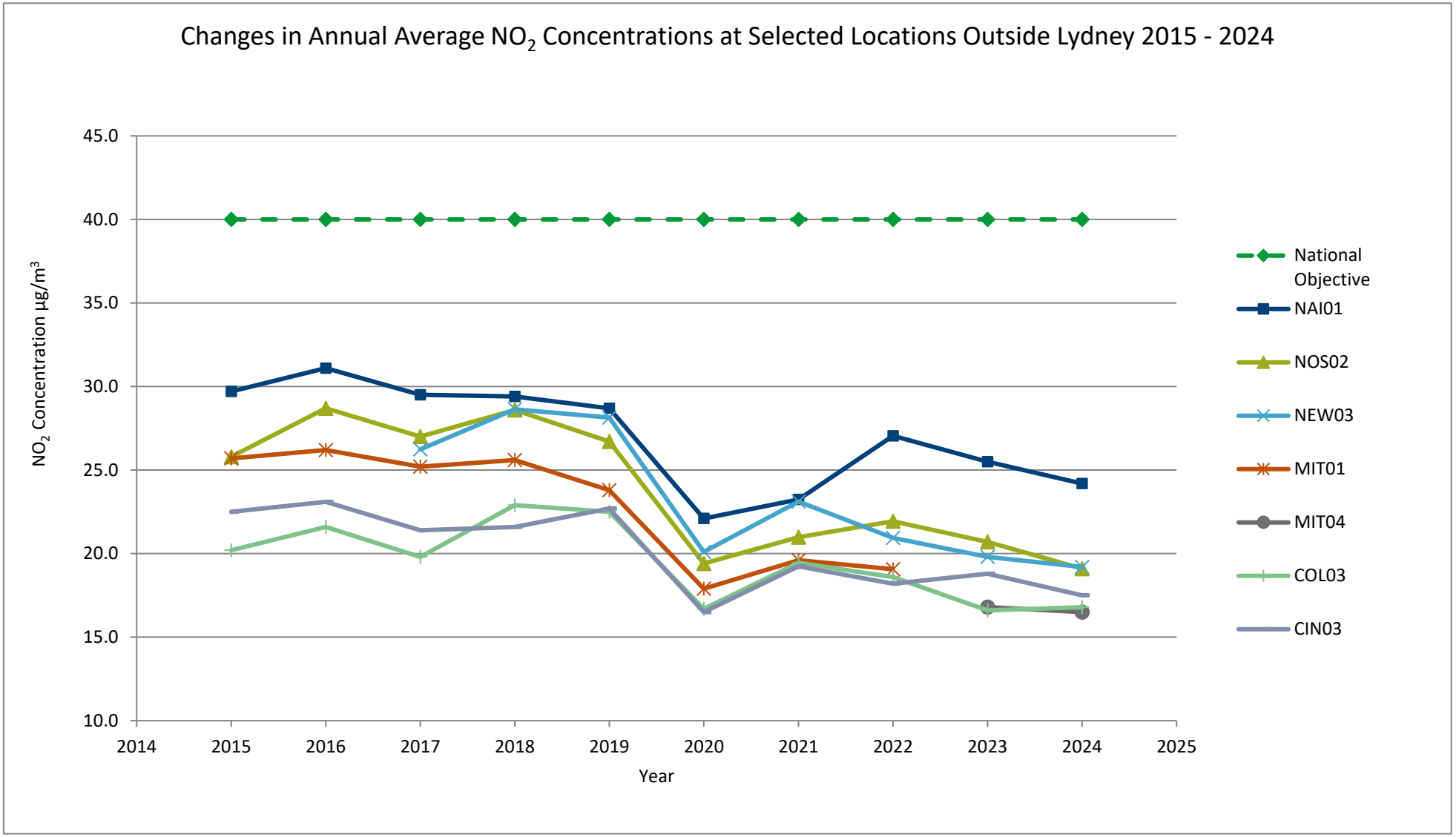


Figure A.2 - Trends in Annual Mean NO_2 Concentrations in Selected Areas Across the District

Appendix B: Full Monthly Diffusion Tube Results for 2024

Table B.1 – NO_2 2024 Diffusion Tube Results (µg/m^3)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
CIN03	365290	214733	22.8	23.7	21.4	17.4	20.9	16.5	16.7	16.4	22.4	25.8	24.2	21.5	20.8	17.5	-	
CIN06	365659	214171	Missing	Missing	30.6	27.2	31.1	24.7	24.2	Missing	30.0	33.7	36.9	25.7	29.3	24.6	-	
CIN07	365920	213743	20.5	20.0	16.9	16.5	19.5	15.6	15.4	15.5	19.6	21.3	22.4	Missing	18.5	15.5	-	
COL03	357741	210598	25.8	21.9	17.3	17.9	19.1	16.9	17.0	17.3	21.6	21.5	26.6	17.5	20.0	16.8	-	
COL04	357609	210774	28.3	24.6	22.4	24.1	26.0	21.2	20.1	21.7	25.8	23.6	29.0	23.5	24.2	20.3	-	
COL05	357559	210740	18.4	17.5	17.5	13.1	13.7	9.6	12.2	11.3	11.4	18.7	20.9	14.4	14.9	12.5	-	
LYD01	363147	203074	35.1	35.1	30.9	31.9	34.5	29.6	30.5	29.3	34.5	32.8	35.7	29.6	32.5	27.3	-	
LYD02	363527	203261	19.8	22.5	16.4	13.4	12.5	6.9	13.9	13.9	12.4	14.0	17.2	11.7	14.5	12.2	-	
LYD04	362954	202898	35.1	32.2	26.8	27.7	28.5	24.9	25.7	24.5	33.4	31.0	36.1	28.3	29.5	24.8	-	
LYD05	363439	203207	28.5	36.1	34.6	28.6	30.7	27.0	30.2	27.3	23.2	30.7	28.0	19.0	28.7	24.1	-	
LYD06	363185	203111	33.3	30.9	31.6	29.4	30.4	26.4	28.1	26.6	33.1	33.2	33.0	24.4	30.0	25.2	-	
LYD08	363109	203213	34.4	32.2	30.3	28.1	33.1	28.0	30.8	27.1	31.0	33.3	30.1	26.8	30.4	25.6	-	
LYD09	363042	203322	33.9	33.8	31.6	26.1	30.5	27.8	30.2	26.2	28.0	28.1	30.6	27.9	29.5	24.8	-	
LYD10	363408	203226	21.7	24.0	20.0	19.5	22.5	15.7	16.8	16.7	17.6	23.0	25.5	21.1	20.3	17.1	-	
LYD12	363607	203320	26.1	23.6	22.4	20.8	22.9	18.6	16.3	17.8	24.5	23.5	25.1	13.2	21.2	17.8	-	
LYD15	364042	204125	10.1	9.3	8.2	4.9	4.6	3.6	4.8	5.1	5.2	8.5	12.5	8.2	7.1	6.0	-	
LYD16	363142	203069	33.1	33.6	30.4	29.3	30.9	28.0	29.4	27.5	31.5	27.9	30.6	30.7	30.2	25.4	-	
LYD17	363160	203088	32.9	34.5	29.7	25.7	25.9	24.3	28.2	27.3	24.9	29.1	30.9	26.7	-	-	-	Triplicate Site with LYD17, LYD18 and LYD19 - Annual data provided for LYD19 only

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
LYD18	363160	203088	30.3	36.3	29.6	25.4	26.1	25.6	27.8	26.1	22.5	29.7	31.3	26.3	-	-	-	Triplicate Site with LYD17, LYD18 and LYD19 - Annual data provided for LYD19 only
LYD19	363160	203088	29.2	33.3	28.6	22.8	28.1	24.4	28.1	22.8	20.0	29.7	31.5	25.3	27.8	23.3	-	Triplicate Site with LYD17, LYD18 and LYD19 - Annual data provided for LYD19 only
LYD20	364301	203968	26.2	25.6	24.1	23.0	24.2	23.9	25.2	24.7	21.8	26.4	31.6	26.5	25.3	21.2	-	
MIT03	366475	218403	26.4	27.4	26.7	24.2	26.9	20.2	20.9	20.1	25.7	31.1	30.0	24.1	25.3	21.3	-	
MIT04	366469	218245	22.3	20.5	15.9	17.5	18.4	17.5	Missing	17.0	21.8	21.2	24.5	18.8	19.6	16.5	-	
NAI01	364566	216246	32.1	30.9	27.2	25.5	30.0	26.5	26.8	22.6	30.8	28.7	34.6	29.6	28.8	24.2	-	
NEW03	372117	226049	27.9	23.3	22.3	19.0	22.9	17.5	18.8	17.2	26.0	26.9	30.4	22.7	22.9	19.2	-	
NEW05	371943	226212	19.8	20.2	19.8	13.5	17.6	13.3	15.4	16.1	14.4	21.9	20.3	14.8	17.3	14.5	-	
NEW06	371675	226149	23.0	19.5	19.1	15.2	17.3	14.4	18.2	15.3	18.1	26.4	28.4	15.2	19.2	16.1	-	
NOS02	369038	211590	24.9	24.4	23.1	19.8	23.8	18.4	21.4	20.1	19.0	29.1	27.8	21.0	22.7	19.1	-	
STM01	364837	215686	25.3	22.0	19.3	19.2	21.7	17.3	16.0	15.2	21.8	22.6	28.7	22.5	21.0	17.6	-	
TUT02	354269	193951	16.2	14.2	11.7	9.4	8.7	7.0	8.1	7.6	6.4	13.9	14.1	10.9	10.7	9.0	-	

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

☒ **Forest of Dean District 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 C: Supporting Technical Information / Air Quality Monitoring Data QA/QC

New or Changed Sources Identified Within Forest of Dean District During 2024

FoDDC has not identified any new sources relating to air quality within the reporting year of 2024.

Additional Air Quality Works Undertaken by Forest of Dean District Council During 2024

FoDDC has not completed any additional works within the reporting year of 2024.

QA/QC of Diffusion Tube Monitoring

FoDDC diffusion tubes are analysed by Gradko International, using 20% TEA / Water preparation method.

Gradko International laboratories participate in the AIR NO_2 Proficiency Scheme, which assesses the analytical performance of laboratories analysing NO_2 diffusion tubes. In 2024, four rounds of proficiency testing were carried out, round 62 between January and February, round 63 between April and June, round 65 between July and August and round 66 between September and October. During each round, Gradko International laboratories scored 100%, which provides confidence in the diffusion tube analysis for the district. The full results from 2015 onwards can be found at https://laqm.defra.gov.uk/air-quality/air-quality-assessment/qa-qc-framework/.

DEFRA recommend the dates when the diffusion tubes are exchanged, and local authorities are expected to adhere to these dates +/- 2 days wherever possible. During the reporting period of 2024, all tubes were exchanged within +/- 2 days of the recommended dates.

Diffusion Tube Annualisation

All diffusion tube monitoring locations recorded data capture of >75% and therefore annualisation was not required.

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2025 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG22 provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO_x/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

FoDDC have applied a national bias adjustment factor of 0.84 to the 2024 monitoring data. A summary of bias adjustment factors used by FoDDC over the past five years is presented in Table C.1.

Table C.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	04/25	0.84
2023	National	03/24	0.81
2022	National	03/23	0.83
2021	National	03/22	0.84
2020	National	09/19	0.81

A copy of the National Diffusion Tube Bias Adjustment Factor Spreadsheet is provided below.

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 06/25

Follow the steps below **in the correct order** to show the results of **relevant** co-location studies
Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods
Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet
This spreadsheet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.

This spreadsheet will be updated at the end of September 2025
LAQM Helpdesk Website

The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.

Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.

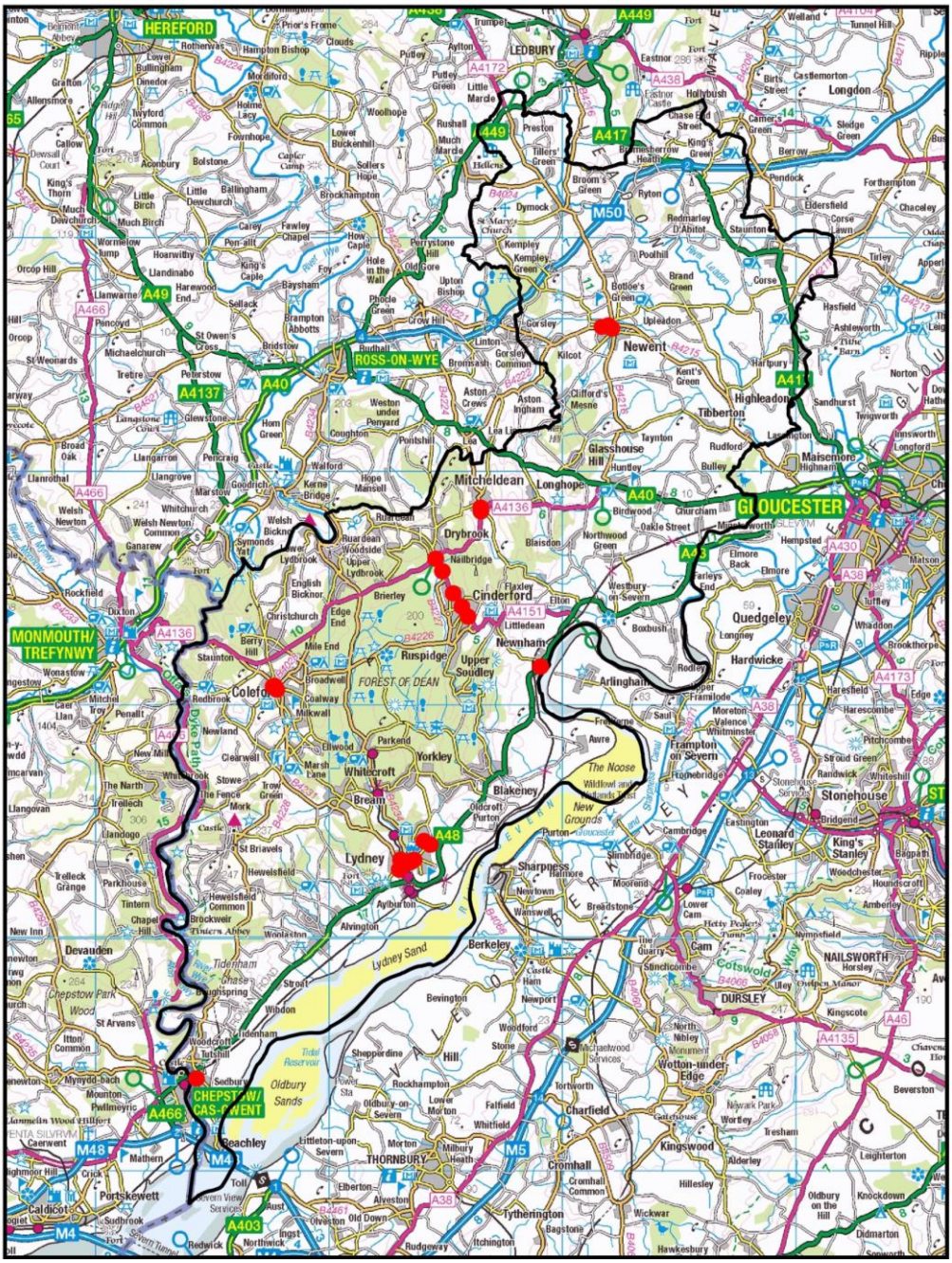
Step 1:	Step 2:	Step 3:	Step 4:
Select the Laboratory that Analyses Your Tubes from the Drop-Down List	Select a Preparation Method from the Drop-Down List	Select a Year from the Drop-Down List	Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.
If a laboratory is not shown, we have no data for this laboratory.	If a preparation method is not shown, we have no data for this method at this laboratory.	If a year is not shown, we have no data[2]	If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953

Analysed By[1]	Method (To undo your selection, choose (All) from the pop-up list)	Year[5] (To undo your selection, choose (All))	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision[6]	Bias Adjustment Factor (A) (Cm/Dm)
Gradko	20% TEA in water	2024	UV	Belfast City Council	10	24	20	19.9%	G	**0.83**
Gradko	20% TEA in water	2024	R	Belfast City Council	12	43	34	28.8%	G	**0.78**
Gradko	20% TEA in water	2024	R	Belfast City Council	12	24	21	13.9%	G	**0.88**
Gradko	20% TEA in water	2024	R	Belfast City Council	12	34	27	25.5%	G	**0.80**
Gradko	20% TEA in water	2024	R	Blackburn With Darwen Bc	12	22	17	32.9%	G	**0.75**
Gradko	20% TEA in water	2024	R	Bath & North East Somerset	12	25	20	22.6%	G	**0.82**
Gradko	20% TEA in water	2024	R	Cambridge City Council	12	19	15	28.5%	G	**0.78**
Gradko	20% TEA in water	2024	UB	Plymouth City Council	12	16	14	13.8%	G	**0.88**
Gradko	20% TEA in water	2024	R	Plymouth City Council	12	31	23	33.4%	S	**0.75**
Gradko	20% TEA in water	2024	R	Monmouthshire County Council	12	29	24	19.4%	G	**0.84**
Gradko	20% TEA in water	2024	KS	Marylebone Road Intercomparison	11	41	36	16.1%	G	**0.86**
Gradko	20% TEA in water	2024	R	Lisburn & Castlereagh City Council	12	24	19	27.8%	G	**0.78**
Gradko	20% TEA in water	2024	R	Ards And North Down Borough Council	11	28	20	44.5%	G	**0.69**
Gradko	20% TEA in water	2024	R	Eastleigh Borough Council	12	29	24	20.3%	G	**0.83**
Gradko	20% TEA in water	2024	UB	Eastleigh Borough Council	12	19	17	12.4%	G	**0.89**
Gradko	20% TEA in water	2024	R	Eastleigh Borough Council	12	19	17	12.0%	G	**0.89**
Gradko	20% TEA in water	2024	R	Gateshead Council	12	20	18	13.9%	G	**0.88**
Gradko	20% TEA in water	2024	R	Gateshead Council	11	20	17	19.7%	G	**0.84**
Gradko	20% TEA in water	2024	R	Gateshead Council	12	24	20	21.7%	G	**0.82**
Gradko	20% TEA in water	2024	R	Gateshead Council	12	27	23	19.0%	G	**0.84**
Gradko	20% TEA in water	2024	R	Gateshead Council	12	28	30	-6.0%	G	**1.06**
Gradko	20% TEA in water	2024	R	Brighton & Hove City Council	11	34	27	26.3%	G	**0.79**
Gradko	20% TEA in water	2024	R	Liverpool City Council	12	34	25	35.7%	G	**0.74**
Gradko	20% TEA in water	2024	KS	Liverpool City Council	10	52	47	10.2%	G	**0.91**
Gradko	20% TEA in water	2024	R	Nottingham City Council	10	29	26	12.2%	G	**0.89**
Gradko	20% TEA in water	2024	R	Wychavon District Council	10	29	26	14.7%	G	**0.87**
Gradko	20% TEA in water	2024	R	Worcestershire	12	12	12	-3.4%	G	**1.04**
Gradko	20% TEA in water	2024	R	Cheshire West And Chester	12	33	27	21.7%	G	**0.82**
Gradko	20% TEA in water	2024	R	Cheshire West And Chester	11	30	27	12.9%	G	**0.89**
Gradko	20% TEA in water	2024	R	The Highland Council	12	19	18	6.9%	G	**0.94**
Gradko	20% TEA in water	2024	R	The Highland Council	11	15	11	35.3%	G	**0.74**
Gradko	20% TEA in water	2024		**Overall Factor[3] (31 studies)**				**Use**		**0.84**

NO_2 Fall-off with Distance from the Road

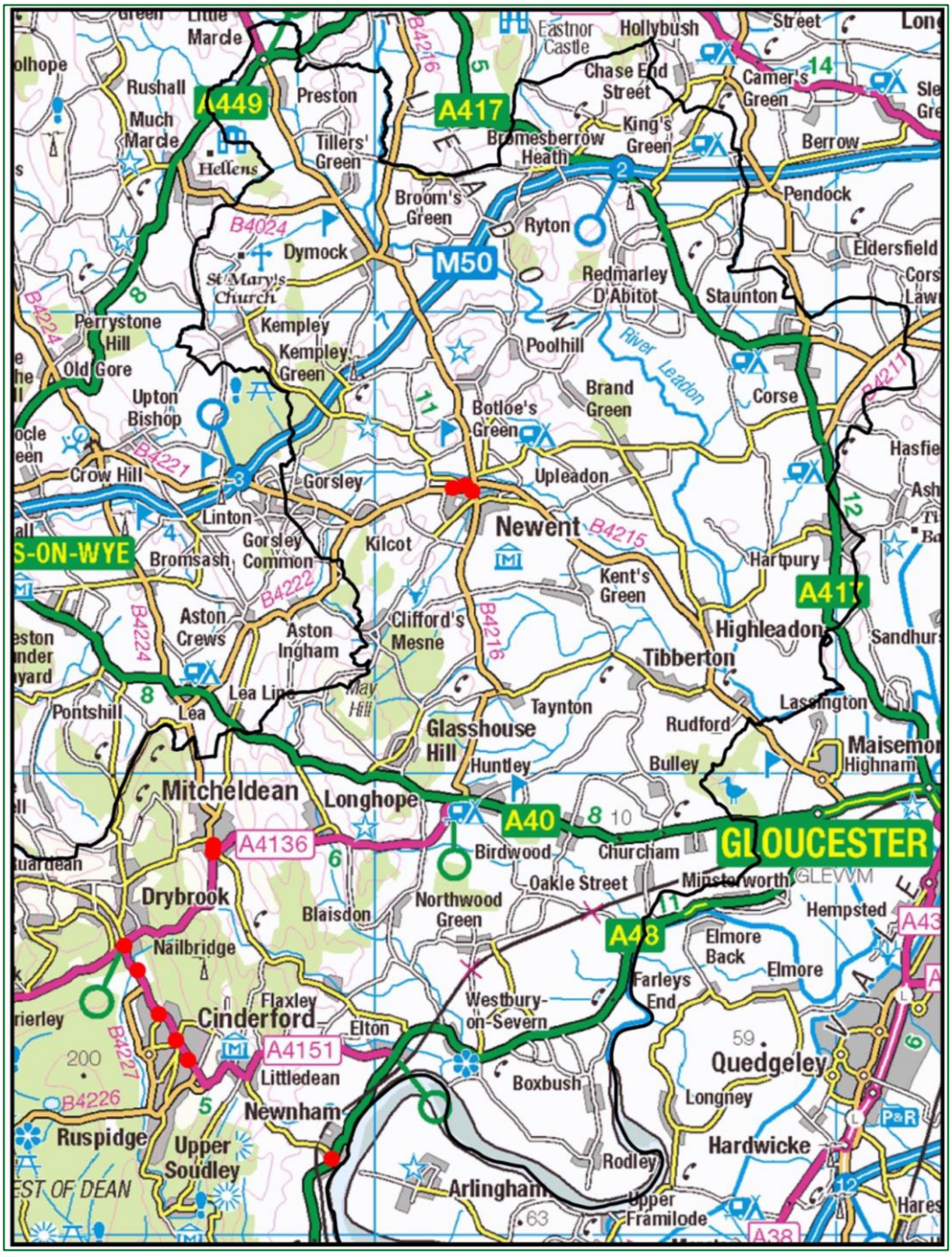
No diffusion tube NO_2 monitoring locations within Forest of Dean District required distance correction during 2024.

Appendix D: Map(s) of Monitoring Locations and AQMAs



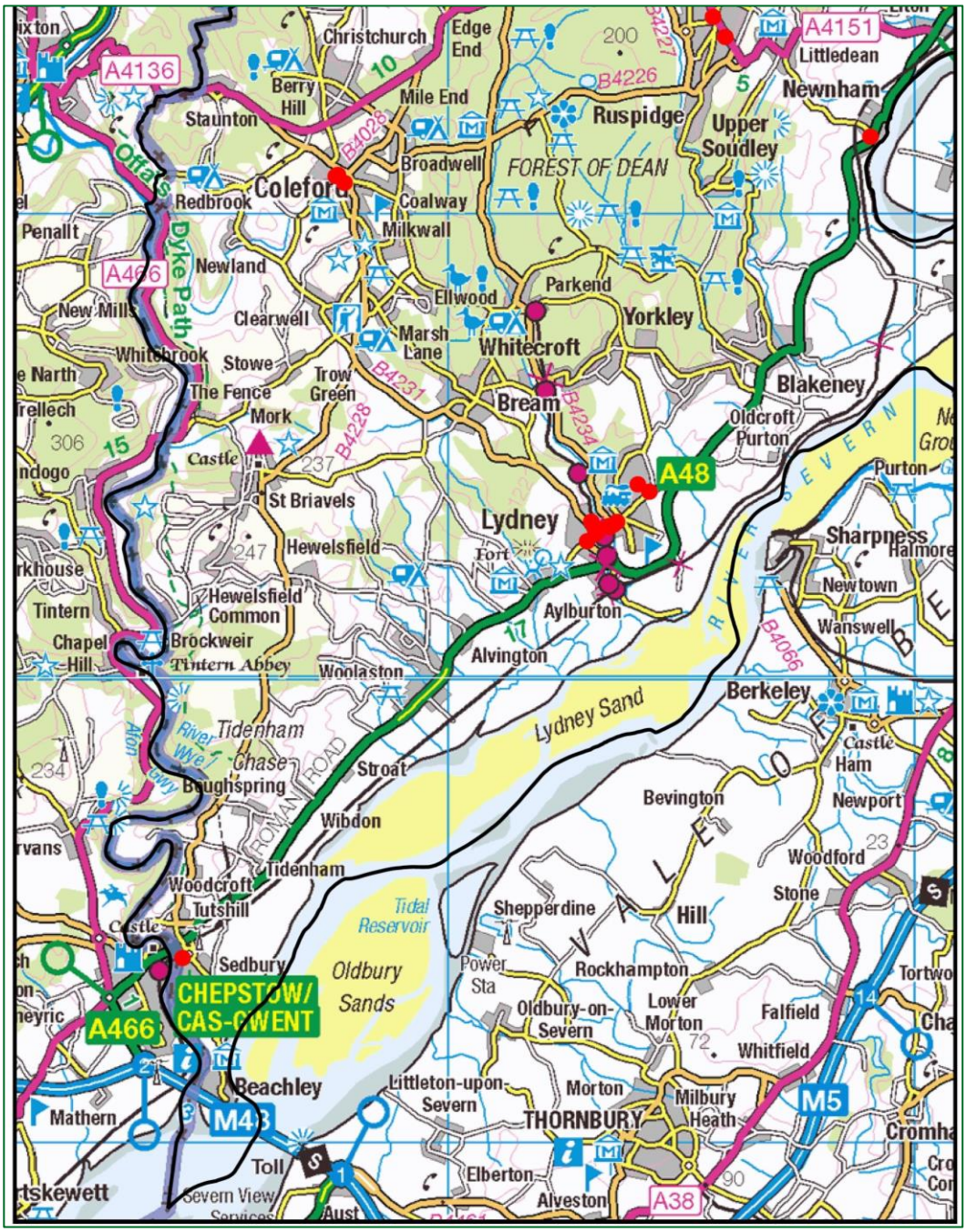
Title **Diffusion Tube Locations**	**Legend:** NO_2 Monitoring Location District Boundary	
Location: **Forest of Dean District**	**Date** June 2024	**Figure No.** D1
Contains Ordnance Survey Data Crown Copyright and Database Right [2024]		

Figure D.1 - Map of Non-Automatic Sites



Title **Diffusion Tube Location**	**Legend:** NO_2 Monitoring Location District Boundary	
Location: **Forest of Dean District - North**	**Date** June 2024	**Figure No.** D2
Contains Ordnance Survey Data Crown Copyright and Database Right [2024]		

Figure D.2 - Map of Non-Automatic Monitoring Sites North



Title **Diffusion Tube Location**	**Legend:** NO_2 Monitoring Location District Boundary	
Location: **Forest of Dean District - South**	**Date** June 2024	**Figure No.** D3
Contains Ordnance Survey Data Crown Copyright and Database Right [2024]		

Figure D.3 - Map of Non-Automatic Monitoring Sites - South

Legend

Diffusion Tube Locations

AQMA Boundary

Contains Ordnance Survey Data Crown Copyright and Database Right [2022]

Location:

CIN03 - Bottom High Street, Cinderford

Title

Diffusion Tube Location

Date	**Figure No.**
Jun 2024	D4

Figure D.4 - Map of Non-Automatic Monitoring Site CIN03

Legend

Diffusion Tube Locations

AQMA Boundary

Contains Ordnance Survey Data Crown Copyright and Database Right [2022]

Location:

CIN06 High Street, Cinderford, Zebra Crossing (Top, near Factory Shop)

Title

Diffusion Tube Locations

Date	**Figure No.**
June 2024	D5

Figure D.5 - Map of Non-Automatic Monitoring Site CIN06

Legend

Diffusion Tube Locations

AQMA Boundary

Contains Ordnance Survey Data Crown Copyright and Database Right [2022]

Location:

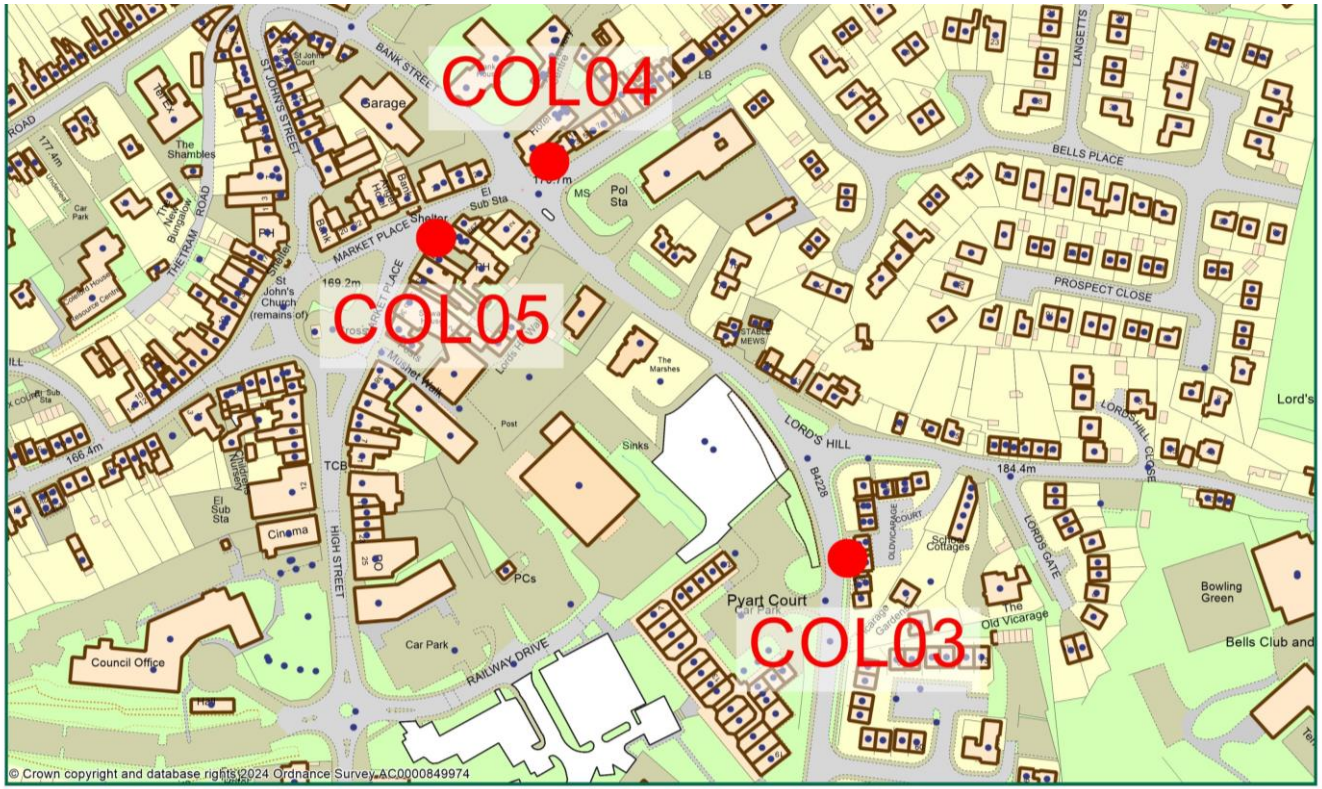
CIN07 30 Belle Vue Road

Title

Diffusion Tube Locations

Date	**Figure No.**
June 2024	D6

Figure D.6 - Map of Non-Automatic Monitoring Site CIN07



Scale: 1:2000

Legend

Diffusion Tube Locations

AQMA Boundary

Contains Ordnance Survey Data Crown Copyright and Database Right [2022]

Location:

COL03 – 17 Old Vicarage Court

COL04 – Gloucester Road, Coleford

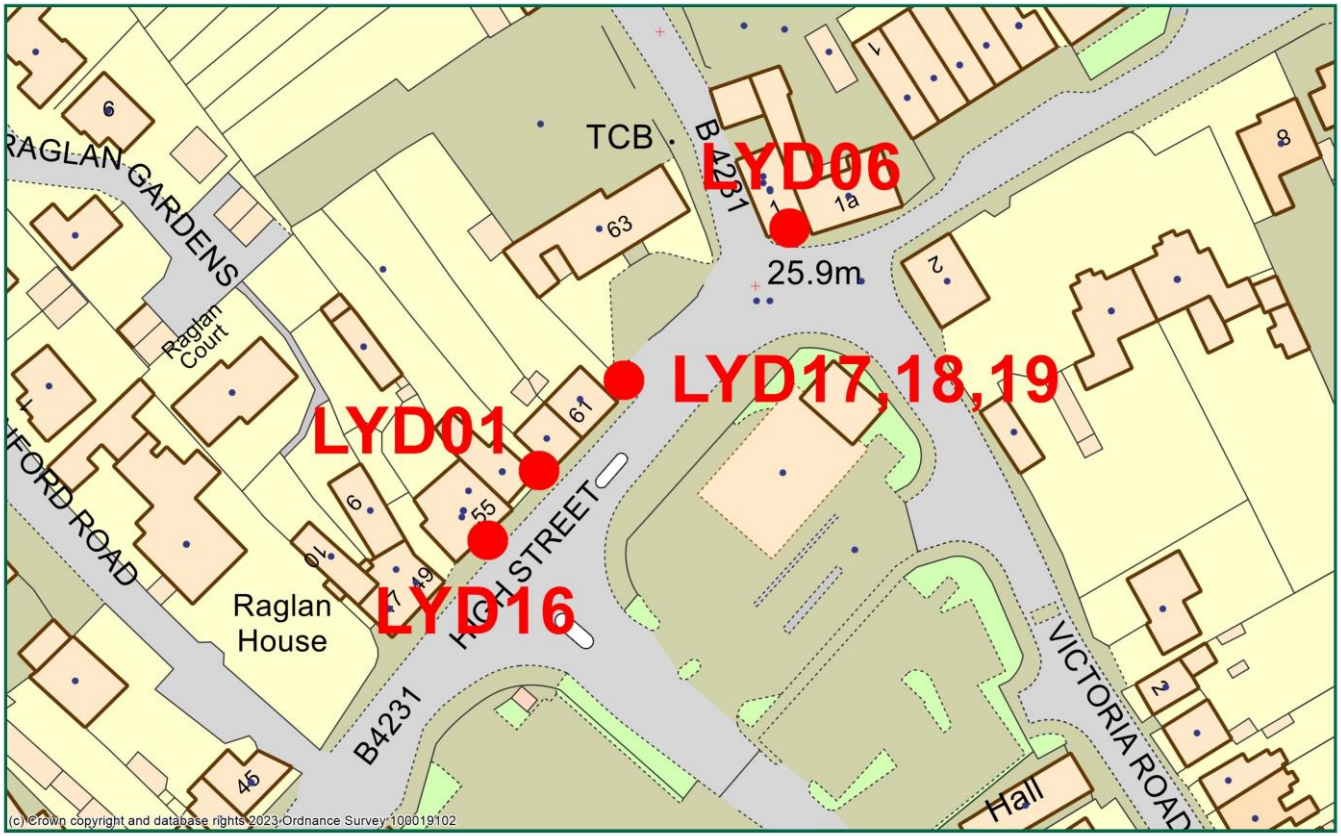
COL05 – Market Place, Coleford

Title

Diffusion Tube Locations

Date	**Figure No.**
June 2024	D7

Figure D.7 - Map of Non-Automatic Sites COL03, COL04 & COL05



Legend

Diffusion Tube Locations

AQMA Boundary

Contains Ordnance Survey Data Crown Copyright and Database Right [2022]

Location:

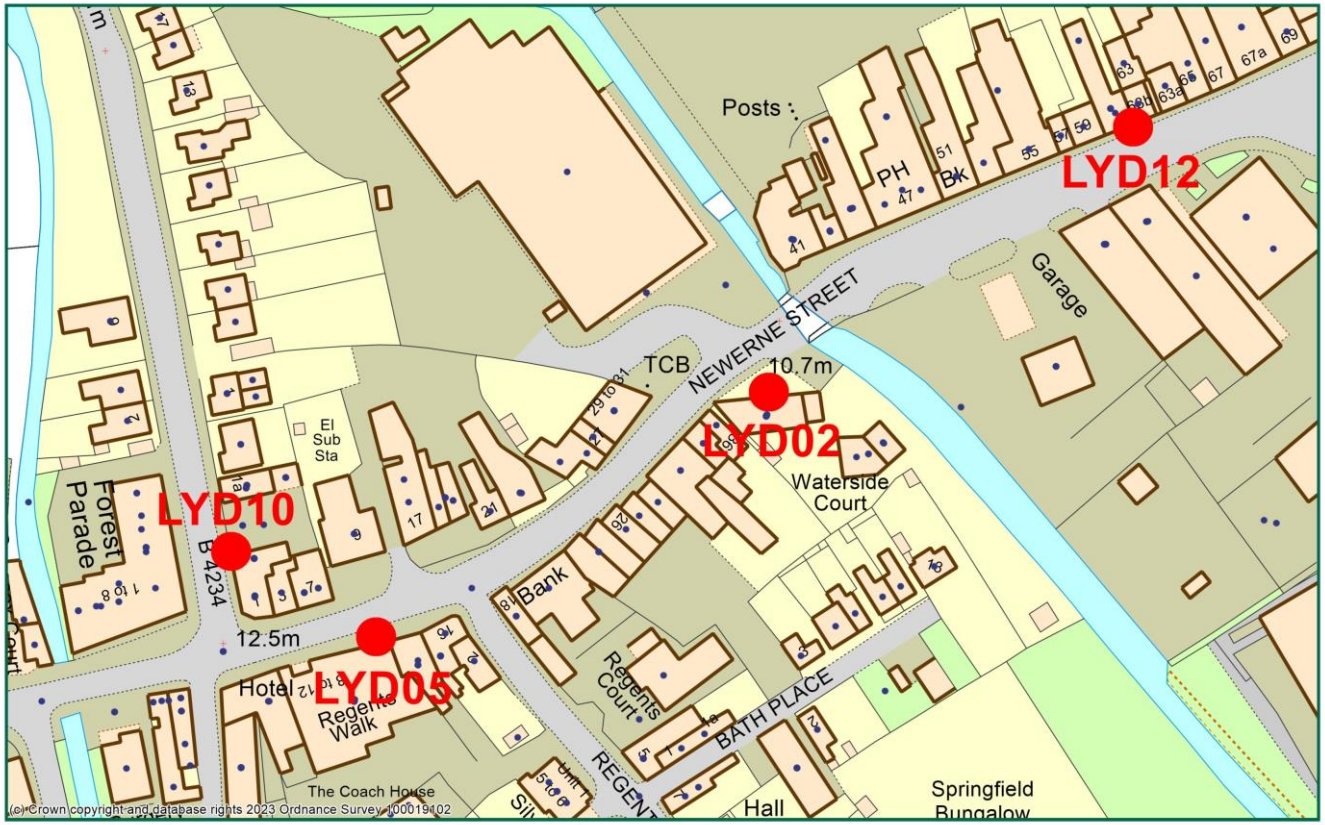
LYD01, LYD06, LYD16, LYD17,18,19 – High Street, Lydney

Title

Diffusion Tube Locations

Date	**Figure No.**
June 2024	D8

Figure D.8 - Map of Non-Automatic Sites LYD01, LYD06, LYD16 & LYD17 – 19



Legend

Diffusion Tube Locations

AQMA Boundary

Contains Ordnance Survey Data Crown Copyright and Database Right [2022]

Location:

LYD02, LYD05, LYD10 & LYD12 – Newerne St, Lydney

Title

Diffusion Tube Locations

Date	**Figure No.**
June 2024	D9

Figure D.9 - Map of Non-Automatic Monitoring Sites LYD02, LYD05, LYD10 & LYD12

Legend

Diffusion Tube Locations

AQMA Boundary

Contains Ordnance Survey Data Crown Copyright and Database Right [2022]

Location:

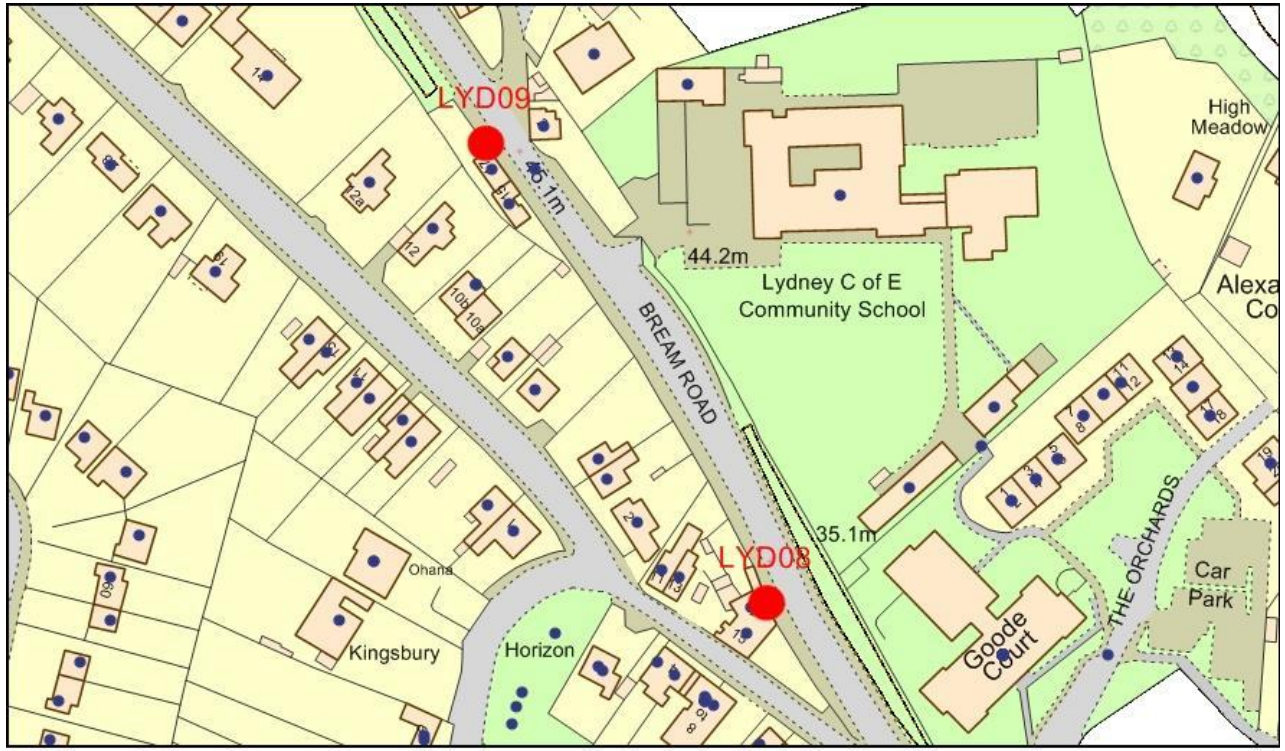
LYD04 - 13 High Street, Lydney

Title

Diffusion Tube Locations

Date	**Figure No.**
June 2024	D10

Figure D.10 - Map of Non-Automatic Monitoring Site LYD04



Legend

Diffusion Tube Locations

AQMA Boundary

Location:

LYD08 & LYD09 Bream Road, Lydney

Title

Diffusion Tube Locations

Date	**Figure No.**
June 2024	D11

Figure D.11 - Map of Non-Automatic Monitoring Sites LYD08 & LYD09

Legend

Diffusion Tube Locations

AQMA Boundary

Contains Ordnance Survey Data Crown Copyright and Database Right [2022]

Location:

LYD15 & LYD20, Highfield Lane & Highfield Road, Lydney (background)

Title

Diffusion Tube Locations

Date	**Figure No.**
June 2024	D12

Figure D.12 - Map of Non-Automatic Monitoring Sites LYD15 & LYD20

Legend

Diffusion Tube Locations

AQMA Boundary

Contains Ordnance Survey Data Crown Copyright and Database Right [2022]

Location:

MIT03 Hawker Hill, Mitcheldean

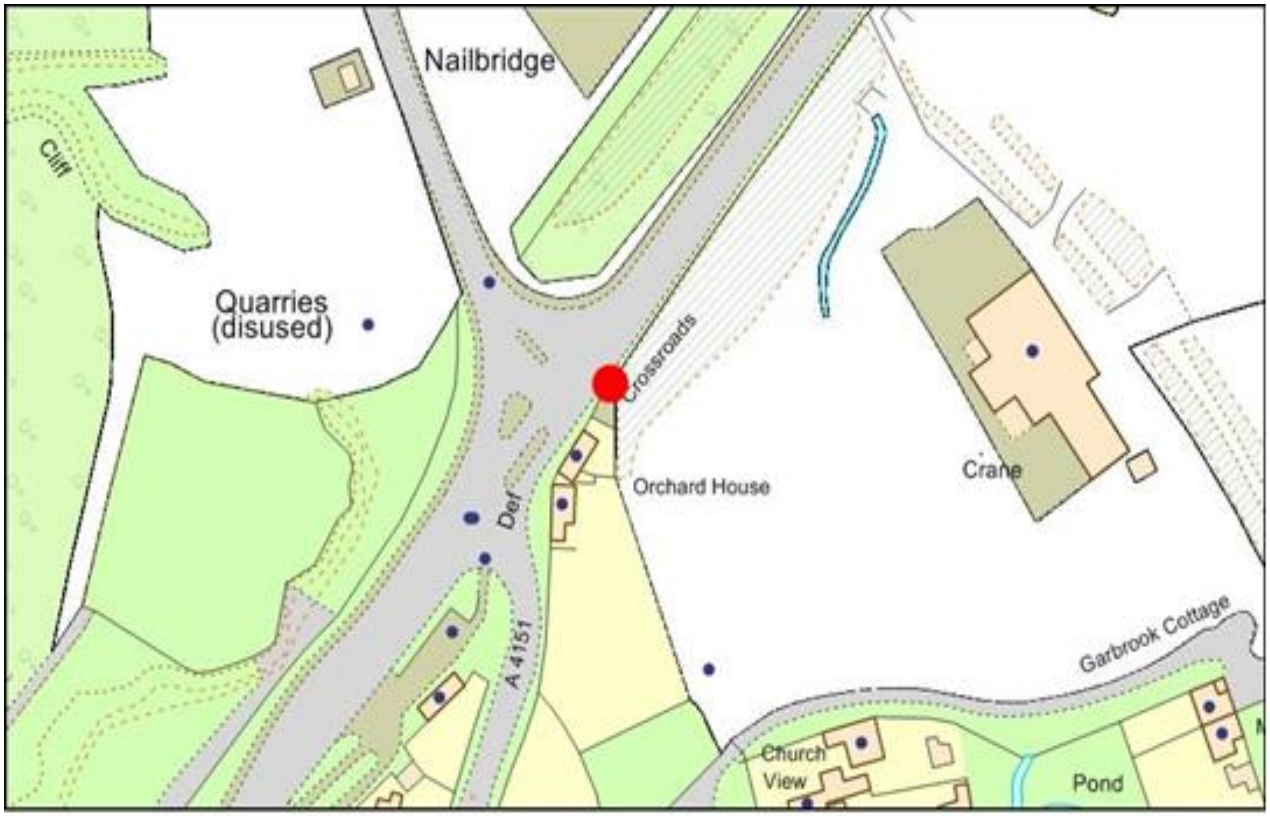
MIT04 20 The Merrin, Mitcheldean

Title

Diffusion Tube Locations

Date	**Figure No.**
June 2024	D13

Figure D.13 - Map of Non-Automatic Monitoring Sites MIT03 & MIT04



Legend

Diffusion Tube Locations

AQMA Boundary

Contains Ordnance Survey Data Crown Copyright and Database Right [2022]

Location:

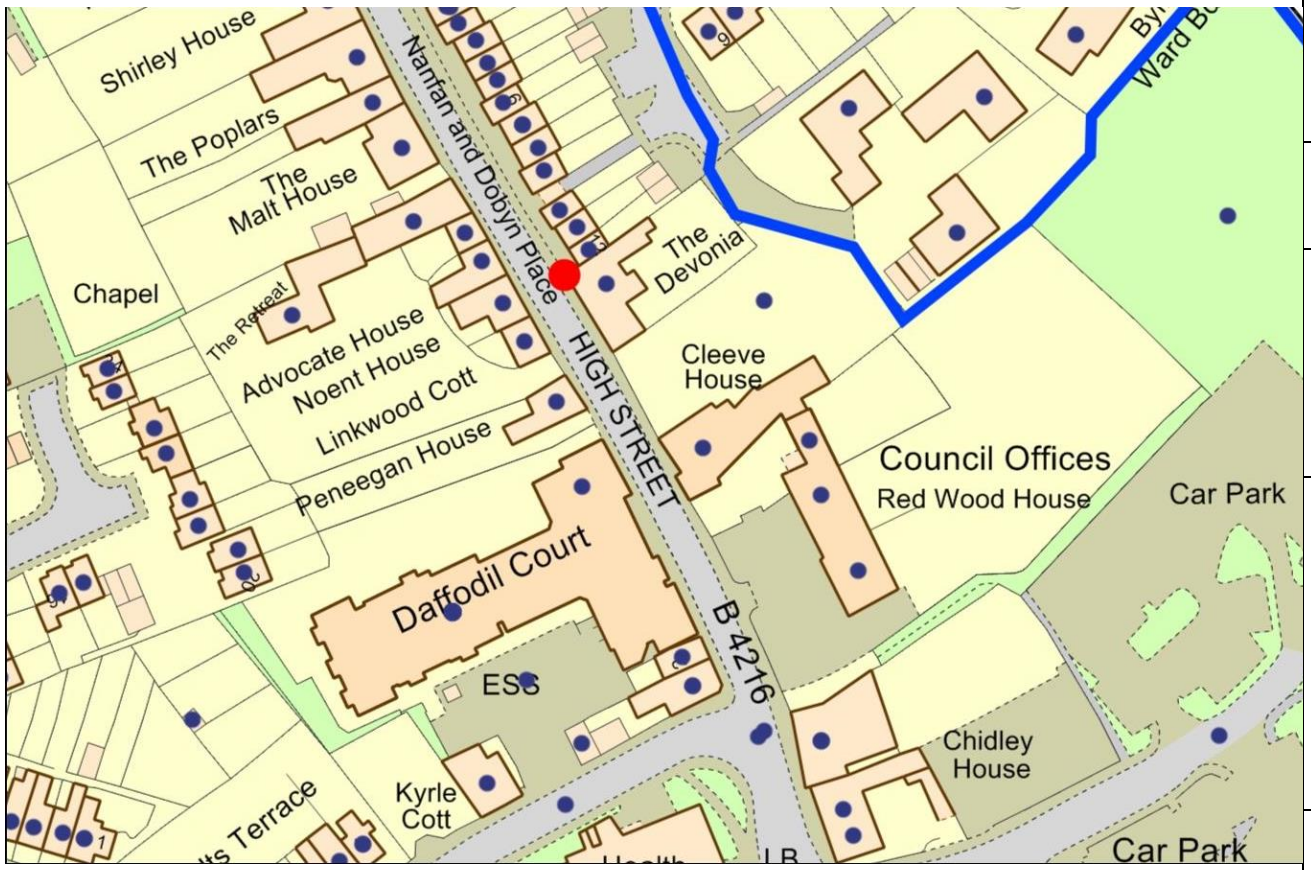
NAI01 Crossroads, Nailbridge

Title

Diffusion Tube Locations

Date	**Figure No.**
June 2024	D14

Figure D.14 - Map of Non-Automatic Monitoring Site NAI01



Legend

Diffusion Tube Locations

AQMA Boundary

Contains Ordnance Survey Data Crown Copyright and Database Right [2022]

Location:

NEW03 High Street, Newent

Title

Diffusion Tube Locations

Date	**Figure No.**
June 2024	D15

Figure D.15 - Map of Non-Automatic Monitoring Site NEW03

Legend

Diffusion Tube Locations

AQMA Boundary

Contains Ordnance Survey Data Crown Copyright and Database Right [2022]

Location:

NEW05 & NEW06 - Ross Road

Title

Diffusion Tube Locations

Date	**Figure No.**
June 2024	D16

Figure D.16 - Map of Non-Automatic Monitoring Sites NEW05 & NEW06

Legend

Diffusion Tube Locations

AQMA Boundary

Contains Ordnance Survey Data Crown Copyright and Database Right [202]

Location:

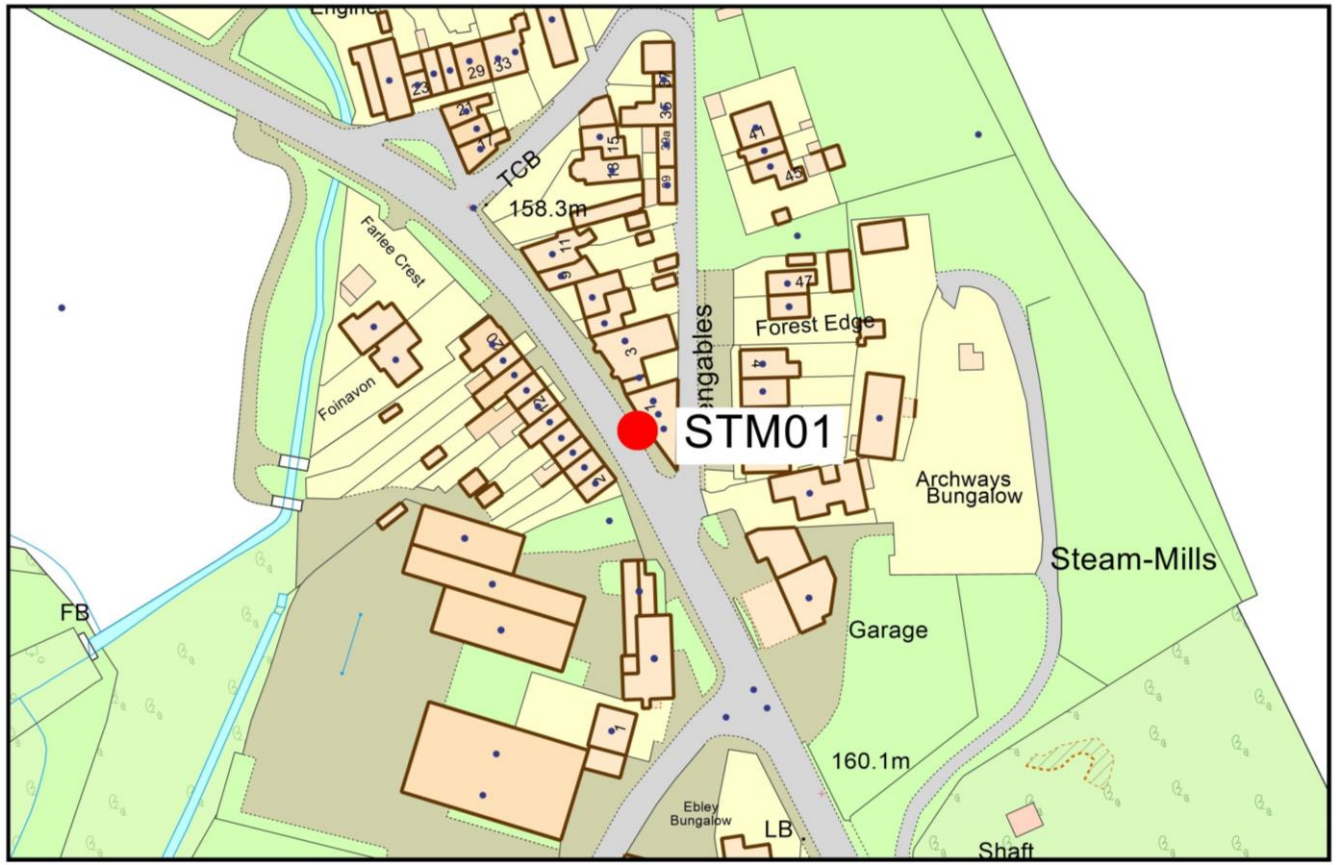
NOS02 - High St - Galen House, Newnham-on-Severn

Title

Diffusion Tube Locations

Date	**Figure No.**
June 2024	D17

Figure D.17 - Map of Non-Automatic Monitoring Site NOS02



Legend

Diffusion Tube Locations

AQMA Boundary

Location:

STM01 – 1 Steam Mills

Title

Diffusion Tube Locations

Date	**Figure No.**
May 2025	D18

Figure D.18 - Map of Non-Automatic Monitoring Site STM01

Legend

Diffusion Tube Locations

AQMA Boundary

Contains Ordnance Survey Data Crown Copyright and Database Right [2022]

Location:

TUT02 Tutshill - Beachley Rd - Wyedean School

Title

Diffusion Tube Locations

Date	**Figure No.**
June 2024	D19

Figure D.19 - Map of Non-Automatic Monitoring Site TUT02

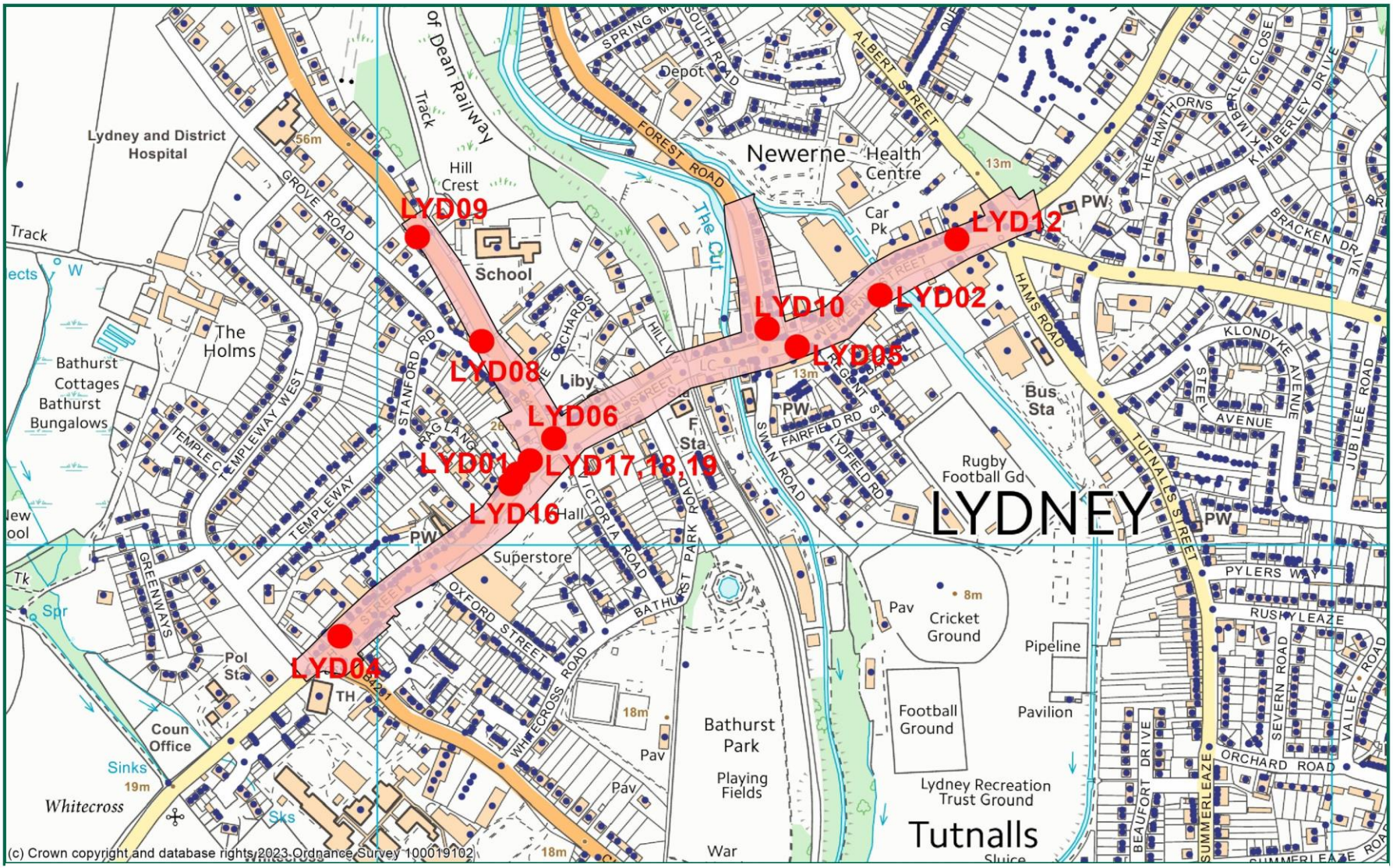


Figure D.20 - Map of Lydney AQMA Showing Monitoring Locations

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England

Pollutant	Air Quality Objective: Concentration	Air Quality Objective: Measured as
Nitrogen Dioxide (NO_2)	200µg/m^3 not to be exceeded more than 18 times a year	1-hour mean
Nitrogen Dioxide (NO_2)	40µg/m^3	Annual mean
Particulate Matter (PM_{10})	50µg/m^3, not to be exceeded more than 35 times a year	24-hour mean
Particulate Matter (PM_{10})	40µg/m^3	Annual mean
Sulphur Dioxide (SO_2)	350µg/m^3, not to be exceeded more than 24 times a year	1-hour mean
Sulphur Dioxide (SO_2)	125µg/m^3, not to be exceeded more than 3 times a year	24-hour mean
Sulphur Dioxide (SO_2)	266µg/m^3, not to be exceeded more than 35 times a year	15-minute mean

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority 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
ASR	Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
LAQM	Local Air Quality Management
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm 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

References

- Local Air Quality Management Technical Guidance LAQM.TG22. August 2022. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- Local Air Quality Management Policy Guidance LAQM.PG22. August 2022. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- Chemical hazards and poisons report: Issue 28. June 2022. Published by UK Health Security Agency
- Air Quality Strategy – Framework for Local Authority Delivery. August 2023. Published by Defra.